فروشگاه کانون ابزار
فروش انواع فنر های قالب
نماینده شرکت kalipyansan ترکیه
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CATALOGO GENERALE **2022**









Nuova Ret Srl è una società di produzione nata nel 1964, operante nell'ambito della costruzione di elementi normalizzati per stampi da più di 50 anni.

La nostra lunga esperienza nel settore ha permesso all'azienda di apportare una profonda conoscenza sia delle caratteristiche del settore che delle tecniche produttive.

La nostra produzione offre una vasta gamma di prodotti complementari agli stampi, sia per plastica che per acciaio. In questo modo i nostri clienti possono trovare da noi tutti i prodotti di cui necessitano ottenendo un servizio completo.

Negli ultimi 30 anni Nuova Ret si è specializzata nella produzione di prodotti speciali a disegno e personalizzabili per soddisfare qualunque tipo di esigenza. Siamo in grado di realizzare componenti partendo dagli acciai più tradizionali come HSS, HWS e WS passando ai sinterizzati come l'ASP 23, 30 e 60 per arrivare infine al metallo duro (inserendo nuovamente il link che riporti alla sezione prodotti).

Il connubio di materie prime di alta qualità, macchine a controllo numerico con tolleranze millesimali e operatori altamente specializzati garantiscono la realizzazione di prodotti dalle performance uniche.

L'insourcing del 90 % delle attività produttive, ad esclusione dei trattamenti termici, ci permette di raggiungere elevati livelli di flessibilità e velocità all'interno del processo produttivo stesso, permettendoci di offrire tempi di consegna competitivi.









Nuova Ret is an Italian manufacturer specialized in the production of standard and customized components of the moulds and dies industry, born is 1964.

Our 50 years-experience within the mechanical industry allowed us to master the knowledge of every aspect of the production and become on of the leading company in our sector.

Our production offers a wide range of components for injection moulding, dies and die casting, in order to provide the customers all the products they need and offer a 360 degrees service.

During the last 30 years Nuova Ret specialized its production in the offer of customized components in order to satisfy any kind of needs and request coming from the customers.

We are able to manufacture components in a wide variety of steels, starting from the more traditional such as HSS, HWS and WS moving to the powder ones, ASP 23/30/60 as well as the carbide.

The mix made up of first quality raw materials, CNC machines with millesimal tolerances and high skilled workers guarantee the realization of products with unique performances.

Nuova Ret manages internally the 90% of the phases of its production process with the exception of the heat treatment, guaranteeing high flexibility levels on all the line and fast delivery times.

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Acciaio
Steel
Acier
Werkstoff

WS = Acciaio al Cromo-Vanadio-Volframio
WS = Special alloy steel
WS = Acier Tungsténe Vanadium
WS = Werkzeugstahl

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
71 - 80 - 100 mm
Standard lengths:
71 - 80 - 100 mm
Longueurs normalisées:
71 - 80 - 100 mm
Länge:
71 - 80 - 100 mm

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

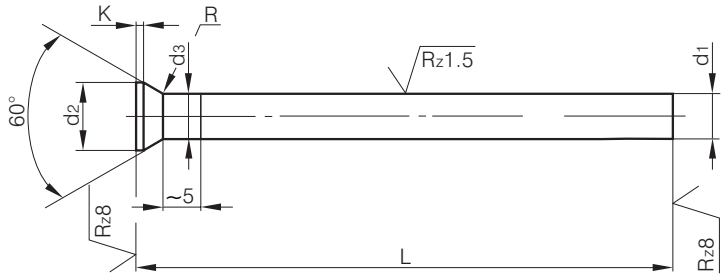
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni di precisione
Round precision piercing punches
Poinçons de precision rondes
Präzisions Lochstempel

DIN 9861
Form DA - WS



d1 h6	d2 ± 0,05	d3 max	K +0,2	L + 0,5		
				71	80	100
0,5	0,9	d1+0,02	0,2	●	●	●
0,6	1,1			●	●	●
0,7	1,3			●	●	●
0,8	1,4		0,4	●	●	●
0,9	1,6			●	●	●
1,0/1,1	1,8	d1+0,03	0,5	●	●	●
1,2/1,3	2,0			●	●	●
1,4/1,5	2,2			●	●	●
1,6/1,7	2,5	d1+0,03	0,5	●	●	●
1,8/1,9	2,8			●	●	●
2,0	3,0			●	●	●
2,1/2,2	3,2	d1+0,03	0,5	●	●	●
2,3/2,5	3,5			●	●	●
2,6/2,9	4,0			●	●	●
3,0/3,4	4,5	d1+0,03	0,5	●	●	●
3,5/3,9	5,0			●	●	●
4,0/4,4	5,5			●	●	●
4,5/4,9	6,0			●	●	●
5,0/5,4	6,5	d1+0,03	0,5	●	●	●
5,5/5,9	7,0			●	●	●
6,0/6,4	8,0			●	●	●
6,5/7,4	9,0	d1+0,04	1,0	●	●	●
7,5/8,4	10,0			●	●	●
8,5/9,4	11,0			●	●	●
9,5/10,4	12,0	d1+0,04	1,0	●	●	●
10,5/11,4	13,0			●	●	●
11,5/12,4	14,0			●	●	●
12,5/13,4	15,0			●	●	●
13,5/14,4	16,0	d1+0,04	1,5	●	●	●
14,5/15	17,0			●	●	●
15,1/16	18,0			●	●	●
16,1/17	19,0	d1+0,04	1,5	●	●	●
17,1/18	20,0			●	●	●
18,1/19	21,0			●	●	●
19,1/20	22,0			●	●	●
20,1/21	23,0			●	●	●
21,1/22	24,0	d1+0,04	1,5	●	●	●

Acciaio
Steel
Acier
Werkstoff

HWS = Acciaio speciale al 12% di Cromo
HSS = Acciaio Super rapido

HWS = 12% Chrome alloy steel
HSS = High speed steel

HWS = Acier Spécial 12% Chrome
HSS = Acier rapid

HWS = 12% Chromlegiert Stahl
HSS = Hochleistungs - Schnellstahl

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
71 - 80 - 100 mm
Standard lengths:
71 - 80 - 100 mm
Longueurs normalisées:
71 - 80 - 100 mm
Länge:
71 - 80 - 100 mm

Durezza
Hardness
Dureté
Härte

Gambo:	HWS	60/62	HRC
Testa:	HWS	45±5	HRC
Gambo:	HSS	62/64	HRC
Testa:	HSS	52±3	HRC
Shaft:	HWS	60/62	HRC
Head:	HWS	45±5	HRC
Shaft:	HSS	62/64	HRC
Head:	HSS	52±3	HRC
Corp:	HWS	60/62	HRC
Tête:	HWS	45±5	HRC
Corp:	HSS	62/64	HRC
Tête:	HSS	52±3	HRC
Schaft:	HWS	60/62	HRC
Kopf:	HWS	45±5	HRC
Schaft:	HSS	62/64	HRC
Kopf:	HSS	52±3	HRC

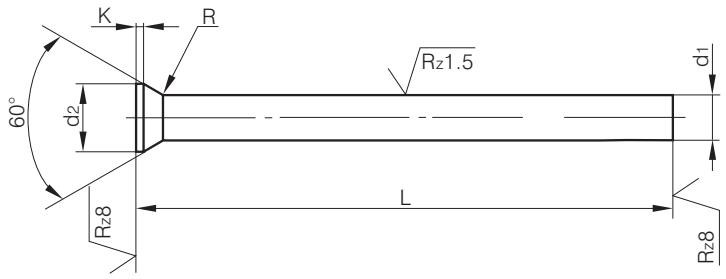
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni di precisione
Round precision piercing punches
Poinçons de precision rondes
Präzisions Lochstempel

DIN 9861
Form D - HWS-HSS



d1 h6	d2 ± 0,05	K +0,2	L +0,5		
			71	80	100
0,5	0,9	0,2	●	●	●
0,6	1,1		●	●	●
0,7	1,3		●	●	●
0,8	1,4	0,4	●	●	●
0,9	1,6		●	●	●
1,0/1,1	1,8	0,5	●	●	●
1,2/1,3	2,0		●	●	●
1,4/1,5	2,2		●	●	●
1,6/1,7	2,5	0,5	●	●	●
1,8/1,9	2,8		●	●	●
2,0	3,0		●	●	●
2,1/2,2	3,2	0,5	●	●	●
2,3/2,5	3,5		●	●	●
2,6/2,9	4,0		●	●	●
3,0/3,4	4,5	0,5	●	●	●
3,5/3,9	5,0		●	●	●
4,0/4,4	5,5		●	●	●
4,5/4,9	6,0		●	●	●
5,0/5,4	6,5	0,5	●	●	●
5,5/5,9	7,0		●	●	●
6,0/6,4	8,0		●	●	●
6,5/7,4	9,0	1,0	●	●	●
7,5/8,4	10,0		●	●	●
8,5/9,4	11,0		●	●	●
9,5/10,4	12,0	1,0	●	●	●
10,5/11,4	13,0		●	●	●
11,5/12,4	14,0		●	●	●
12,5/13,4	15,0		●	●	●
13,5/14,4	16,0	1,5	●	●	●
14,5/15	17,0		●	●	●
15,1/16	18,0		●	●	●
16,1/17	19,0	1,5	●	●	●
17,1/18	20,0		●	●	●
18,1/19	21,0		●	●	●
19,1/20	22,0		●	●	●
20,1/21	23,0		●	●	●
21,1/22	24,0	1,5	●	●	●

Acciaio
Steel
Acier
Werkstoff

ASP 2023

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
71 - 80 - 100 mm
Standard lengths:
71 - 80 - 100 mm
Longueurs normalisées:
71 - 80 - 100 mm
Länge:
71 - 80 - 100 mm

Durezza
Hardness
Dureté
Härte

Gambo: 62/66 HRC
Testa: 45±5 HRC
Shaft: 62/66 HRC
Head: 45±5 HRC
Corp: 62/66 HRC
Tête: 45±5 HRC
Schaft: 62/66 HRC
Kopf: 45±5 HRC

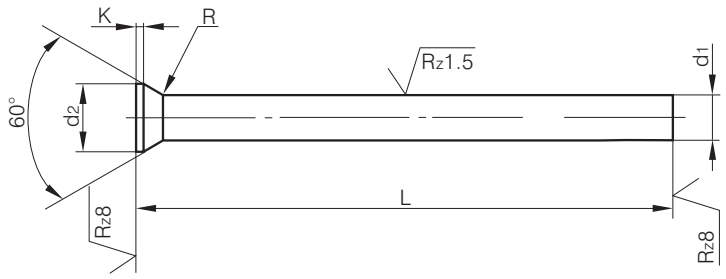
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni di precisione
Round precision piercing punches
Poinçons de precision rondes
Präzisions Lochstempel

DIN 9861
Form D - ASP 2023



d1 h6	d2 ± 0,05	K +0,2	L +0,5		
			71	80	100
0,5	0,9	0,2	●	●	●
0,6	1,1		●	●	●
0,7	1,3		●	●	●
0,8	1,4	0,4	●	●	●
0,9	1,6		●	●	●
1,0/1,1	1,8	0,5	●	●	●
1,2/1,3	2,0		●	●	●
1,4/1,5	2,2		●	●	●
1,6/1,7	2,5	0,5	●	●	●
1,8/1,9	2,8		●	●	●
2,0	3,0		●	●	●
2,1/2,2	3,2	0,5	●	●	●
2,3/2,5	3,5		●	●	●
2,6/2,9	4,0		●	●	●
3,0/3,4	4,5	0,5	●	●	●
3,5/3,9	5,0		●	●	●
4,0/4,4	5,5		●	●	●
4,5/4,9	6,0		●	●	●
5,0/5,4	6,5	0,5	●	●	●
5,5/5,9	7,0		●	●	●
6,0/6,4	8,0		●	●	●
6,5/7,4	9,0	1,0	●	●	●
7,5/8,4	10,0		●	●	●
8,5/9,4	11,0		●	●	●
9,5/10,0	12,0	1,0	●	●	●
10,5/11,0	13,0		●	●	●
11,5/12,0	14,0		●	●	●
12,5/13,0	15,0		●	●	●
13,5/14,0	16,0	1,5	●	●	●
14,5/15,0	17,0		●	●	●
15,5/16,0	18,0		●	●	●

Acciaio
Steel
Acier
Werkstoff

HSS = Acciaio Super rapido
HSS = High speed steel
HSS = Acier rapid
HSS = Hochleistungs - Schnellstahl

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
130 - 160 - 200 mm
Standard lengths:
130 - 160 - 200 mm
Longueurs normalisées:
130 - 160 - 200 mm
Länge:
130 - 160 - 200 mm

Durezza
Hardness
Dureté
Härte

Gambo:	62/64	HRC
Testa:	52±3	HRC
Shaft:	62/64	HRC
Head:	52±3	HRC
Corp:	62/64	HRC
Tête:	52±3	HRC
Schaft:	62/64	HRC
Kopf:	52±3	HRC

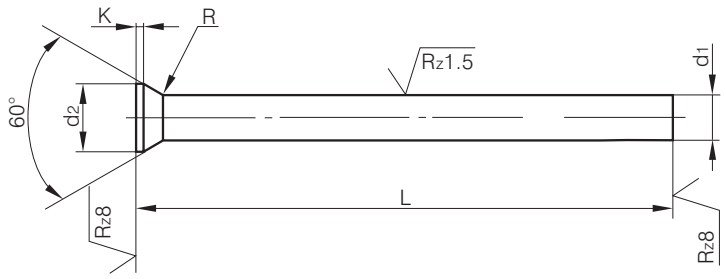
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni di precisione
Round precision piercing punches
Poinçons de precision rondes
Präzisions Lochstempel

DIN 9861
Form D - HSS



d1 h6	d2 ± 0,05	K +0,2	L +0,5		
			130	160	200
2,0	3,0	0,5	●	●	
2,1/2,2	3,2	0,5	●	●	
2,3/2,5	3,5		●	●	
2,6/2,9	4,0		●	●	
3,0/3,4	4,5	0,5	●	●	●
3,5/3,9	5,0		●	●	●
4,0/4,4	5,5		●	●	●
4,5/4,9	6,0		●	●	●
5,0/5,4	6,5	0,5	●	●	●
5,5/5,9	7,0		●	●	●
6,0/6,4	8,0		●	●	●
6,5/7,4	9,0	1,0	●	●	●
7,5/8,4	10,0		●	●	●
8,5/9,4	11,0		●	●	●
9,5/10,0	12,0	1,0	●	●	●
10,5/11,0	13,0		●	●	●
11,5/12,0	14,0		●	●	●
12,5/13,0	15,0		●	●	●
13,5/14,0	16,0	1,5	●	●	●
14,5/15	17,0		●	●	●
15,5/16	18,0		●	●	●
16,5/17	19,0	1,5	●	●	●
17,5/18	20,0		●	●	●
18,5/19	21,0		●	●	●
19,5/20	22,0		●	●	●

Acciaio
Steel
Acier
Werkstoff

HSS

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
40 - 60 - 70 - 80 - 90 - 100 - 120 mm
Standard lengths:
40 - 60 - 70 - 80 - 90 - 100 - 120 mm
Longueurs normalisées:
40 - 60 - 70 - 80 - 90 - 100 - 120 mm
Länge:
40 - 60 - 70 - 80 - 90 - 100 - 120 mm

Durezza costante
Constant Hardness
Dureté constante
Durchgehend Gehärtet

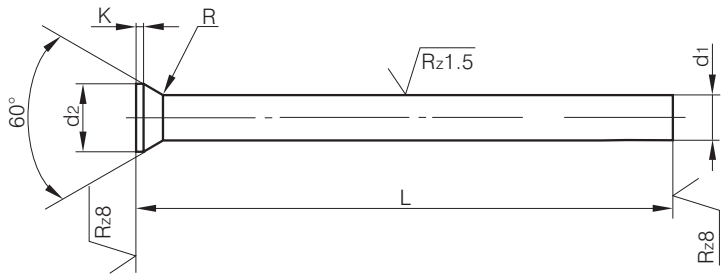
64 +2 HRC

Esecuzione
Finish
Exécution
Ausführung

Rettificato
Ground
Rectifiés
Geschliffen

Espulsori per viti
Upsetting ejector pins
Poinçons pour visserie
Vorstaucher - Auswerferstifte

DIN 9861
Form D - HSS



d1 h6	d2 ± 0,05	K +0,2	L +0,5						
			40	60	70	80	90	100	120
1,0/1,1	1,8	0,5	●	●	●	●	●	●	●
1,2/1,3	2,0		●	●	●	●	●	●	●
1,4/1,5	2,2		●	●	●	●	●	●	●
1,6/1,7	2,5	0,5	●	●	●	●	●	●	●
1,8/1,9	2,8		●	●	●	●	●	●	●
2,0	3,0		●	●	●	●	●	●	●
2,1/2,2	3,2	0,5	●	●	●	●	●	●	●
2,3/2,5	3,5		●	●	●	●	●	●	●
2,6/2,9	4,0		●	●	●	●	●	●	●
3,0/3,4	4,5	0,5	●	●	●	●	●	●	●
3,5/3,9	5,0		●	●	●	●	●	●	●
4,0/4,4	5,5		●	●	●	●	●	●	●
4,5/4,9	6,0		●	●	●	●	●	●	●
5,0/5,4	6,5	0,5	●	●	●	●	●	●	●
5,5/5,9	7,0		●	●	●	●	●	●	●
6,0/6,4	8,0		●	●	●	●	●	●	●
6,5/7,4	9,0	1,0	●	●	●	●	●	●	●
7,5/8,4	10,0		●	●	●	●	●	●	●
8,5/9,4	11,0		●	●	●	●	●	●	●
9,5/10,0	12,0	1,0	●	●	●	●	●	●	●
10,5/11,0	13,0		●	●	●	●	●	●	●
11,5/12,0	14,0		●	●	●	●	●	●	●
12,5/13,0	15,0		●	●	●	●	●	●	●

Acciaio · Steel
Acier · Werkstoff

WS

Durezza gambo: 60/62 HRC
Shaft hardness: 60/62 HRC
Dureté corp: 60/62 HRC
Härte Schaft: 60/62 HRC

Testa: 45±5 HRC
Head: 45±5 HRC
Tête: 45±5 HRC
Kopf: 45±5 HRC

Esecuzione · Finish
Exécution · Ausführung

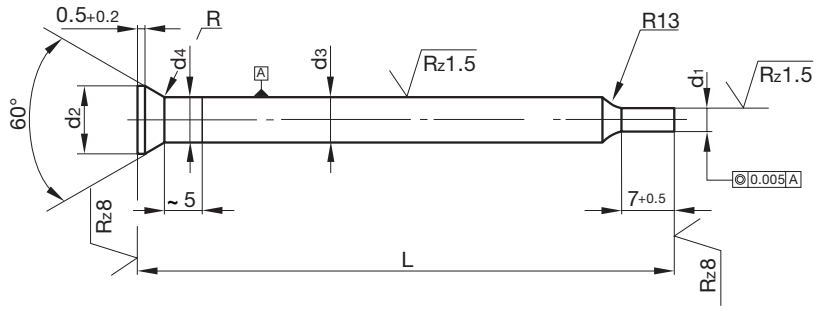
Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Altre misure, materiali ed esecuzioni a richiesta
Other dimensions, materials and executions on request
Autres dimensions, matières et formes sur demande

Punzoni di precisione forma CA
Round precision piercing punches form CA
Poinçons de precision forme CA
Präzisions Lochstempel Form CA

DIN 9861
Form CA



d1 h6	d2 ± 0,05	d3 h6	L+0,5
0,5 - 1,5	3,0	2,0	71/80/100
1,55 - 2,95	4,5	3,0	71/80/100

Acciaio · Steel
Acier · Werkstoff

HWS
HSS

Durezza gambo: HWS 60/62
HSS 62/64 HRC
Shaft hardness: HWS 60/62
HSS 62/64 HRC
Dureté corp: HWS 60/62
HSS 62/64 HRC
Härte Schaft: HWS 60/62
HSS 62/64 HRC

Testa: HWS 45±5
HSS 52±3 HRC
Head: HWS 45±5
HSS 52±3 HRC
Tête: HWS 45±5
HSS 52±3 HRC
Kopf: HWS 45±5
HSS 52±3 HRC

Esecuzione · Finish
Exécution · Ausführung

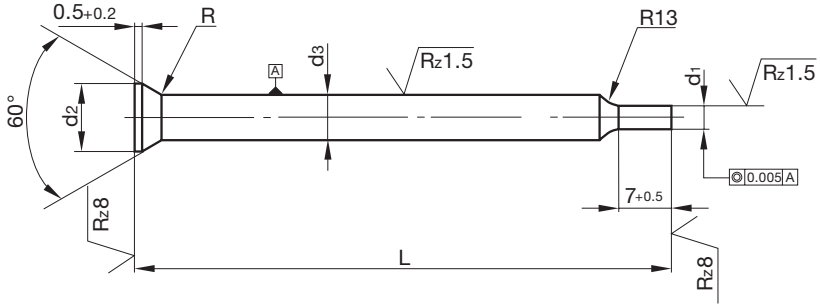
Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Altre misure, materiali ed esecuzioni a richiesta
Other dimensions, materials and executions on request
Autres dimensions, matières et formes sur demande

Punzoni di precisione forma C
Round precision piercing punches form C
Poinçons de precision forme C
Präzisions Lochstempel Form C

DIN 9861
Form C



d1 h6	d2 ± 0,05	d3 h6	d4 max	L+0,5
0,5 - 1,5	3,0	2,0	d1 + 0,03	71/80/100
1,55 - 2,95	4,5	3,0	d1 + 0,03	71/80/100

Acciaio
Steel
Acier
Werkstoff

HSS = Acciaio Super rapido
HSS = High speed steel
HSS = Acier rapid
HSS = Hochleistungs - Schnellstahl

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
71 - 80 - 100 mm
Standard lengths:
71 - 80 - 100 mm
Longueurs normalisées:
71 - 80 - 100 mm
Länge:
71 - 80 - 100 mm

Durezza
Hardness
Dureté
Härte

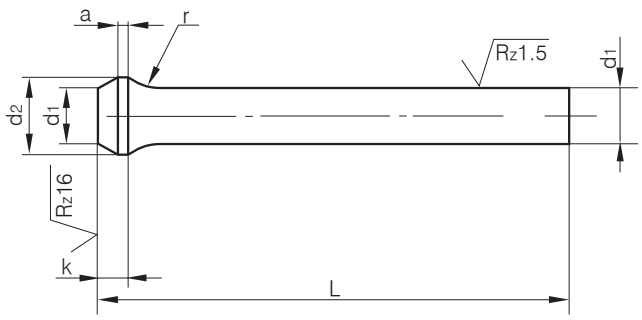
Gambo:	62/64	HRC
Testa:	52±3	HRC
Shaft:	62/64	HRC
Head:	52±3	HRC
Corp:	62/64	HRC
Tête:	52±3	HRC
Schaft:	62/64	HRC
Kopf:	52±3	HRC

Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni a collo di bottiglia
Punches with bottle neck head
Poinçons à tête évasée
Lochstempel mit Posaunenhals



d1 h6	in steps of **d1**	**L** +0,5 0	**d2**	**k**	**a** ±0,1	fase **f**	**r** 0 -0,2
from 2,0	0,1	71 80 100	3,0	3,0	1,0	15°	3,5
from 2,1			3,2				
from 2,3			3,5				5
from 2,6			4,0			20°	6,5
from 3,0			4,5				
from 3,5			5,0				8
from 4,0			5,5	4,0	1,5	15°	
from 4,5			6,0				
from 5,0			7,0			20°	10,0
from 5,5			8,0			25°	
from 6,0			9,0			30°	
from 6,5	0,5		10,0			35°	12,0
from 7,5			11,0			35°	12,0
from 8,5			13,2			40°	15
from 9,5			14,5				
from 10,5			15,0				
from 11,5			16,5				
from 12,5			17,0				
from 13,5			18,5				
from 14,5			19,0				
from 15,5			20,0				
from 16,5			21,0				
from 17,5			22,0				
from 18,5			23,0				
19,5 - 20,00			25,0			45°	

Acciaio
Steel
Acier
Werkstoff

HSS = Acciaio Super rapido
HSS = High speed steel
HSS = Acier rapid
HSS = Hochleistungs - Schnellstahl

Lunghezza
Length
Longueur
Länge

Lunghezze standard:
80 - 100 - 120 mm
Standard lengths:
80 - 100 - 120 mm
Longueurs normalisées:
80 - 100 - 120 mm
Länge:
80 - 100 - 120 mm

Durezza
Hardness
Dureté
Härte

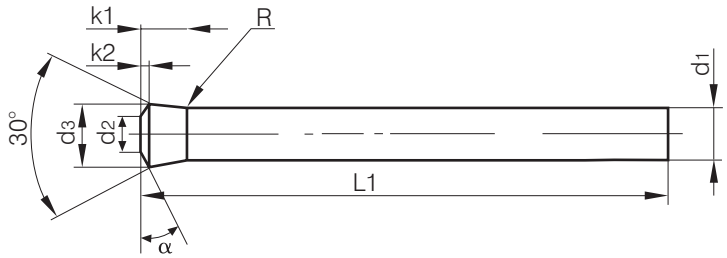
Gambo:	62/64	HRC
Testa:	52±3	HRC
Shaft:	62/64	HRC
Head:	52±3	HRC
Corp:	62/64	HRC
Tête:	52±3	HRC
Schaft:	62/64	HRC
Kopf:	52±3	HRC

Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged
Tête matrice à chaud
Kopf Gestaucht

Punzoni testa rinforzata a 30°
Punches with tapered head 30°
Poinçons tête renforcée 30°
Präzisions-Lochstempel mit Kopf 30°



d1 h6	d2 -0,3	d3 -0,3	k1 ±0,2	k2 ±0,2	α (°)	L1 +0,5 / - 0		
						80	100	120
5	5	8,8	7	1	-	●	●	
6	6	9,75	8	1	28,1	●	●	
7	7	11,8	10	1	22,5	●	●	
8	8	12,8	10	1	22,5	●	●	
9	9	14,3	11	1	20,7	●	●	
10	10	15,9	12	1	18,7	●	●	●
11	11	17,4	13	1,5	-	●	●	●
12	12	18,7	14	1,5	24,1	●	●	●
13	13	20,2	15	1,5	22,5	●	●	●
14	14	21,8	16	1,5	21,2	●	●	●
16	16	24,6	18	2	25	●	●	●
18	18	27,6	20	2	-	●	●	●
20	20	30,7	22	2	-	●	●	●
22	22	34,3	25	2	-	●	●	●

Acciaio
Steel
Acier
Werkstoff

HWS
HSS

Durezza
Hardness
Dureté
Härte

Gambo HWS:	60-62	
Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC
Gambo HSS:	62-64	HRC
Testa:	52±3	HRC
Head:	52±3	HRC
Tête:	52±3	HRC
Kopf:	52±3	HRC

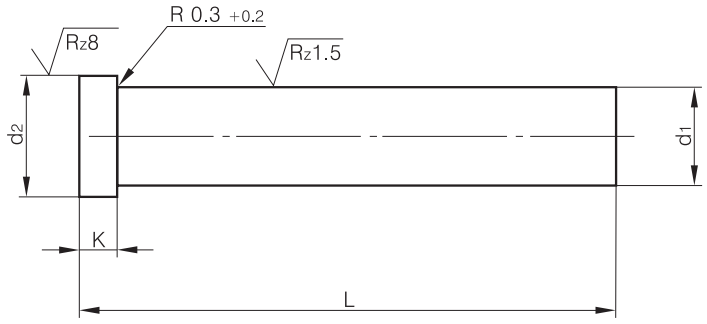
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni con testa cilindrica
Round precision punches with cylindrical head
Poinçons ronds avec tête cylindrique
Präzisions Lochstempel mit zyl. Kopf

ISO 8020



d1 m5	d2 0/-0,15	K +0,1/+0,2	L+0,5 71	 80	 100
3	5	3	●	●	●
4	6	3	●	●	●
5	8	5	●	●	●
6	9	5	●	●	●
8	11	5	●	●	●
10	13	5	●	●	●
13	16	5	●	●	●
16	19	5	●	●	●
20	23	5	●	●	●
25	28	5	●	●	●
32	35	5	●	●	●

Ø 3 a richiesta
Ø 3 on request
Ø 3 sur demande
Ø 3 auf Anfrage

Acciaio
Steel
Acier
Werkstoff

HWS
HSS

Durezza
Hardness
Dureté
Härte

Gambo HWS:	60-62	HRC
Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC
Gambo HSS:	62-64	HRC
Testa:	52±3	HRC
Head:	52±3	HRC
Tête:	52±3	HRC
Kopf:	52±3	HRC

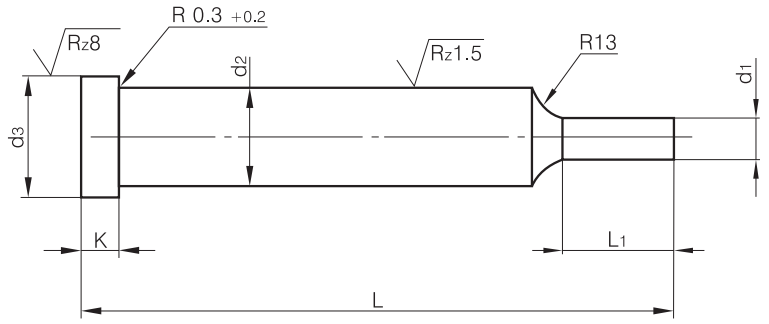
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni con testa cilindrica forma C
Round precision punches with cylindrical head f. C
Poinçons ronds avec tête cylindrique forme C
Präzisions Lochstempel mit zyl. Kopf Form C

ISO 8020



d2 m5	d3 -0,15	K +0,1/+0,2	L1 +0,5	d1 +0,01	L +0,5 71	L +0,5 80	L +0,5 100
3	5	3	10	0,8 - 2,9	●	●	●
4	6	3	10	2 - 3,9	●	●	●
5	8	5	10	2 - 4,9	●	●	●
6	9	5	10	3 - 5,9	●	●	●
8	11	5	13	3 - 7,9	●	●	●
10	13	5	17	4,5 - 9,9	●	●	●
13	16	5	17	6,5 - 12,9	●	●	●
16	19	5	17	9,5 - 15,9	●	●	●
20	23	5	17	12,5 - 19,9	●	●	●
25	28	5	17	16,5 - 24,9	●	●	●

Ø 32 a richiesta
Ø 32 on request
Ø 32 sur demande
Ø 32 auf Anfrage

Acciaio
Steel
Acier
Werkstoff

HWS
HSS

Durezza
Hardness
Dureté
Härte

Gambo HWS:	60-62	
Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC
Gambo HSS:	62-64	HRC
Testa:	52±3	HRC
Head:	52±3	HRC
Tête:	52±3	HRC
Kopf:	52±3	HRC

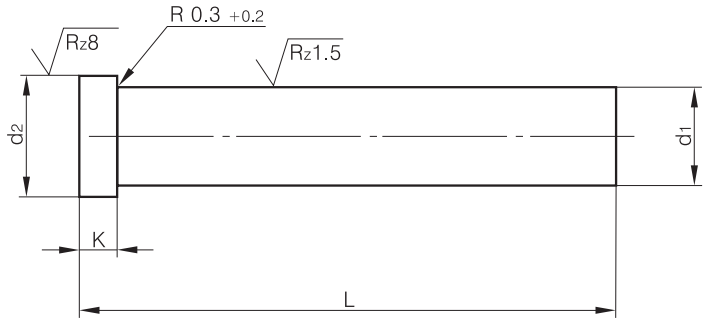
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni con testa cilindrica
Round precision punches with cylindrical head
Poinçons ronds avec tête cylindrique
Präzisions Lochstempel mit zyl. Kopf

DIN 9844



d1 h6	d2 +0/-0,25	K +0,25/-0	L+0,5/-0 80	L+0,5/-0 100
1,0 - 1,4	3	4	●	●
1,5 - 2,0	3,5		●	●
2,1 - 2,5	4		●	●
2,6 - 3,0	4,5		●	●
3,1 - 3,9	5,5		●	●
4,0 - 4,4	6		●	●
4,5 - 5,4	8		●	●
5,5 - 6,4	9		●	●
6,5 - 7,4	10		●	●
7,5 - 8,4	11		●	●
8,5 - 9,4	12		●	●
9,5 - 10,0	13	5	●	●
10,1 - 11,0	14		●	●
11,1 - 12,0	15		●	●
12,1 - 13,0	16		●	●
13,1 - 14,0	17		●	●
14,1 - 15,0	18		●	●
15,1 - 16,0	19		●	●
20	24		●	●

Acciaio
Steel
Acier
Werkstoff

HSS

Durezza
Hardness
Dureté
Härte

Gambo HSS:	62/64	HRC
Shaft HSS:	62/64	HRC
Corp HSS:	62/64	HRC
Schaft HSS:	62/64	HRC
Testa HSS:	52±3	HRC
Head HSS:	52±3	HRC
Tête HSS:	52±3	HRC
Kopf HSS:	52±3	HRC

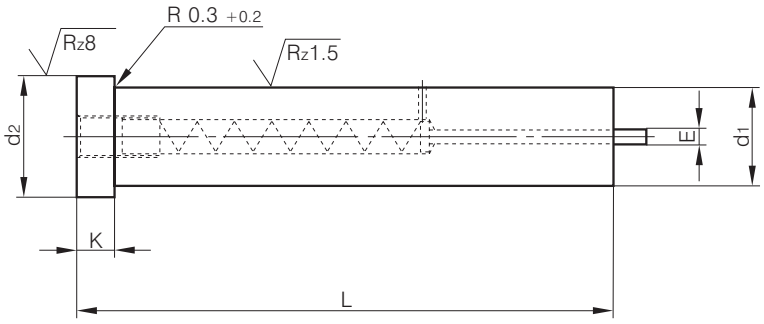
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni con testa cilindrica forati con estrattore e molla
Punches cyl. head with ejector pin
Poinçons à tête cylindrique à éjecteur central
Schneidstempel mit Abstoßer

ISO 8020



d1 m5	d2 +0/-0,15	K +0/+0,2	E	L+0,5			
				63	71	80	100
6	9	5	1,0	●	●	●	●
8	11	5	1,0	●	●	●	●
10	13	5	1,4	●	●	●	●
13	16	5	1,4	●	●	●	●
16	19	5	2,1	●	●	●	●
20	23	5	2,1	●	●	●	●
25	28	5	2,1	●	●	●	●
32	35	5	2,1	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

HSS

Durezza
Hardness
Dureté
Härte

Gambo HSS:	62/64	HRC
Shaft HSS:	62/64	HRC
Corp HSS:	62/64	HRC
Schaft HSS:	62/64	HRC
Testa HSS:	52±3	HRC
Head HSS:	52±3	HRC
Tête HSS:	52±3	HRC
Kopf HSS:	52±3	HRC

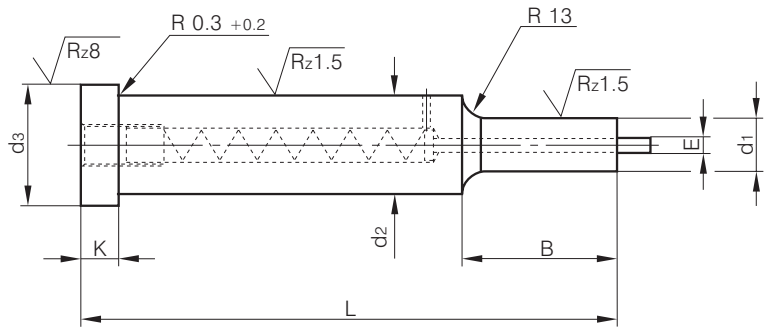
Esecuzione
Finish
Exécution
Ausführung

Rettificato - Lappato
Ground - Lapped
Rectifiés - Polis
Geschliffen - Geläppt

Testa ricalcata a caldo
The head is hot forged

Punzoni con testa cilindrica forati con estrattore e molla forma C
Punches cyl. head with ejector pin form C
Poinçons à tête cylindrique à éjecteur central forme C
Schneidstempel mit Abstoßer Form C

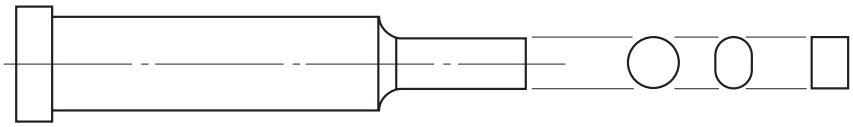
ISO 8020

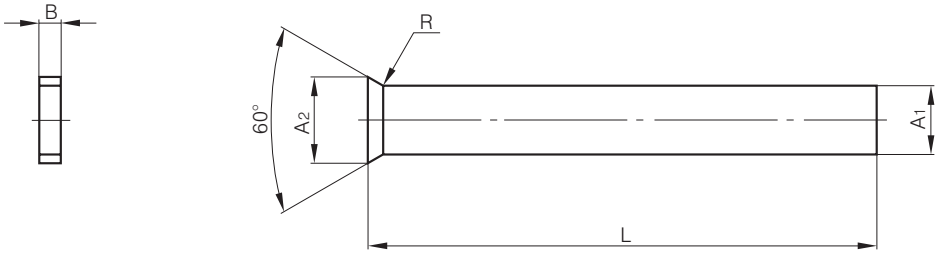


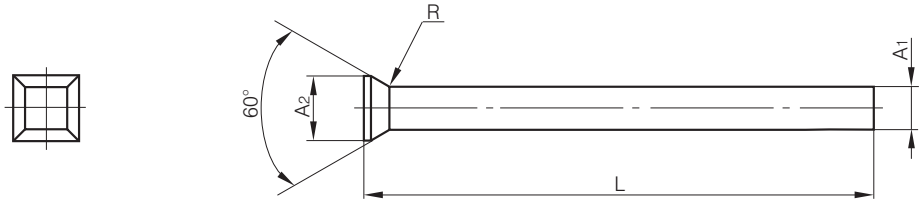
d2 m5	d3 +0/-0,15	d1 -0,00/+0,01	K +0,1/+0,2	E	B		L +0,5			
					Standard	Max	63	71	80	100
6	9	2,5 - 5,9	5	1,0	13	25	●	●	●	●
8	11	3,0 - 7,9	5	1,0	14	32	●	●	●	●
10	13	4,0 - 9,9	5	1,4	16	32	●	●	●	●
13	16	5,0 - 12,9	5	1,4	21	32	●	●	●	●
16	19	8,0 - 15,9	5	2,1	24	32	●	●	●	●
20	23	12,0 - 19,9	5	2,1	27	32	●	●	●	●
25	28	17,0 - 24,9	5	2,1	32	32	●	●	●	●
32	35	20 - 31,9	5	2,1	32	32	●	●	●	●

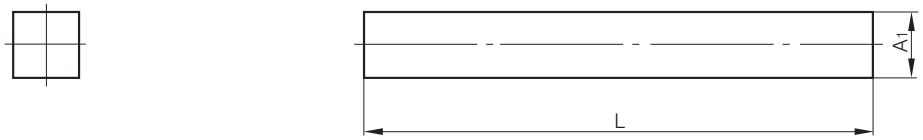
Punzoni sagomati a richiesta
Punches as per drawing on request
Poinçons selon plan sur demande
Speziale Lochstempel auf Anfrage

Acciai WS/HWS/HSS/ASP23/ASP30/
METALLO DURO – CARBIDE

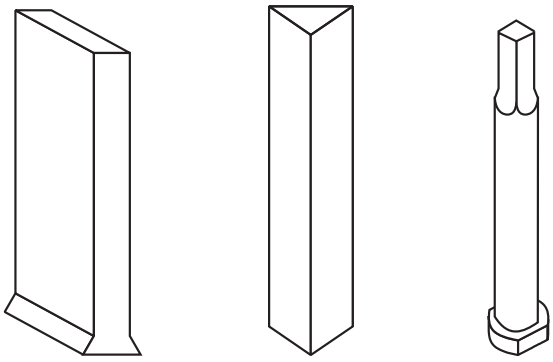




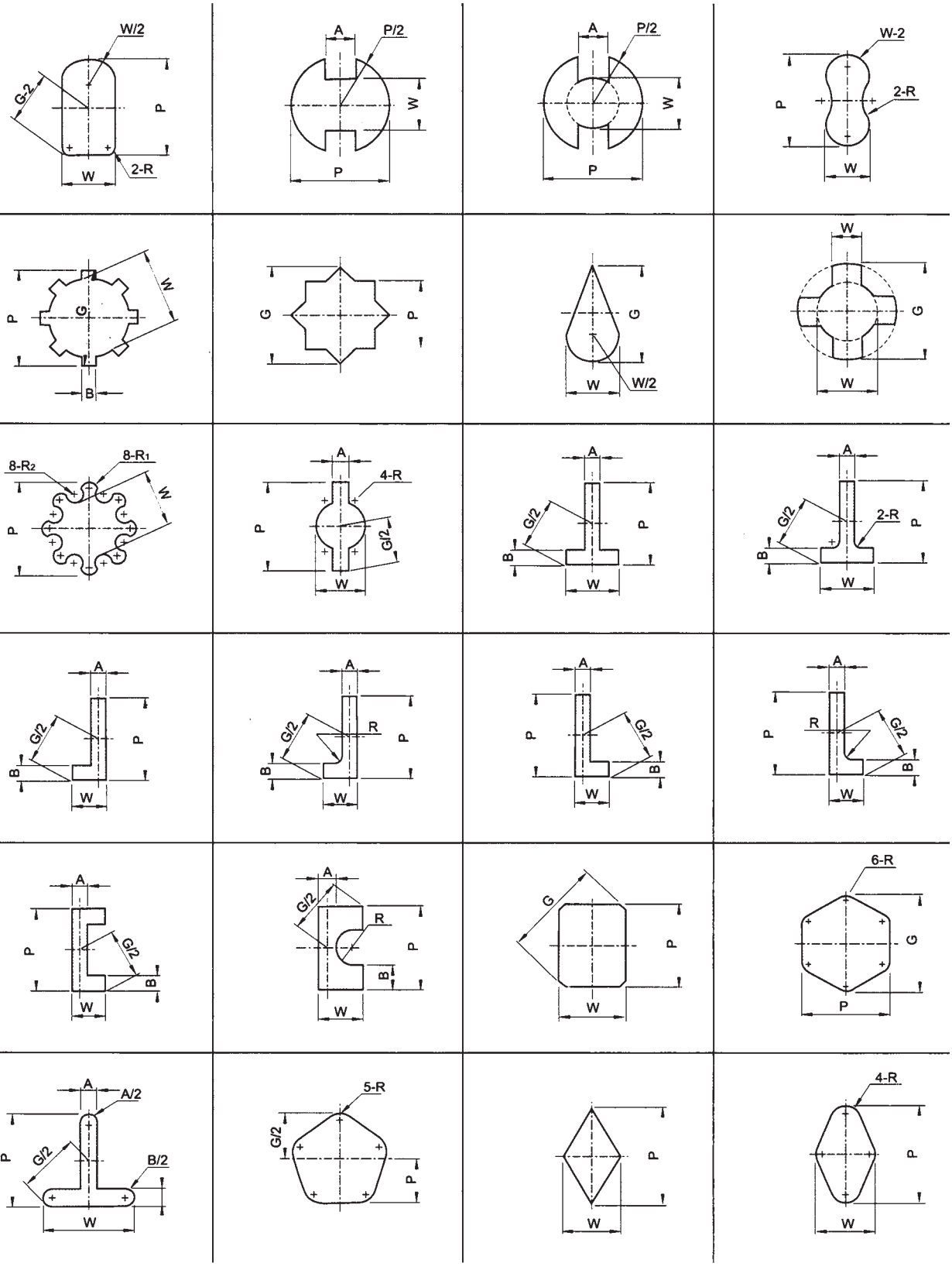




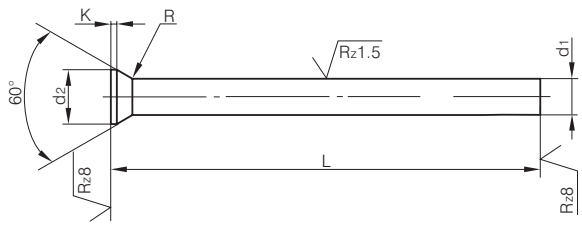


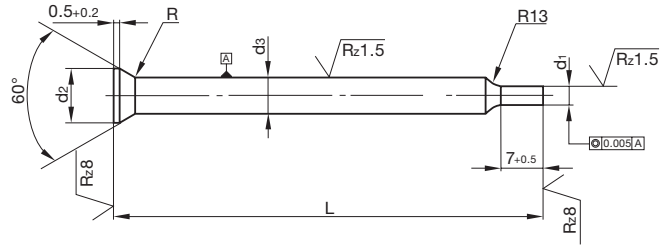


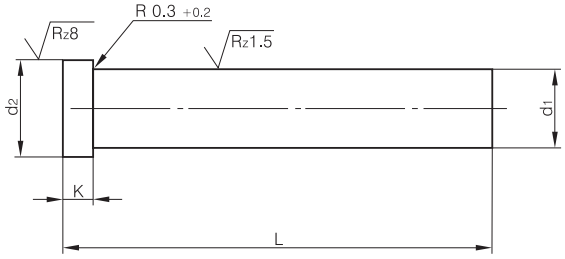
Punzoni sagomati a richiesta
Punches as drawing on request
Poinçons speciales sur demande
Speziale Lochstempel auf Anfrage

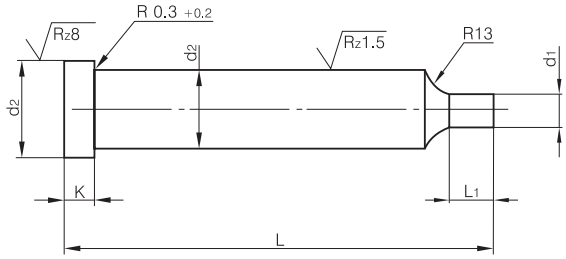


Punzoni DIN 9861 / ISO8020
FORMA D-C / ISO8020 FORMA C
Punzoni speciali a disegno in metallo duro
Punches DIN 9861 / ISO8020
FORM D-C / ISO8020 FORM C
Special punches as drawing in carbide
Poinçons DIN 9861 / ISO8020
FORME D-C / ISO8020 FORME C
Poinçons speciaux selon plan en carbure
Lochstempel DIN 9861 / ISO8020
FORM D-C / ISO8020 FORM C
Lochstempel nach zeichnung in hartmetall

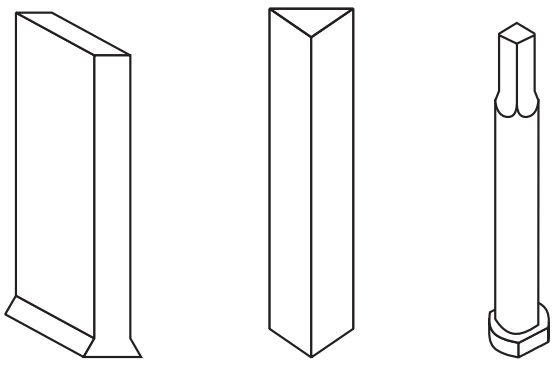












Acciaio
Steel
Acier
Werkstoff

Acciaio per utensili
Tool steel
Acier pour outils
Werkzeugstahl

Durezza
Hardness
Dureté
Härte

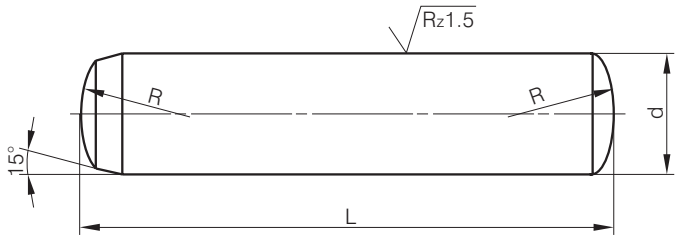
60±2 HRC

Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute, rettificate, lucidate
Hardened, annealed, precision ground and lapped
Trempées, revenues et finement rectifiées
Gehärtet, angelassen, geschliffen und geläppt

Spine cilindriche di precisione
Precision dowel pins
Goupilles cylindriques de precision
Präzisions Zylinderstifte

DIN 6325
Tolleranza: m6 - h6



L \ d	1	1,5	2	2,5	3	4	5	6	8	10	12	14	16	18	20
10	●	●	●	●	●	●	●	●							
12	●	●	●	●	●	●	●	●	●						
14	●	●	●	●	●	●	●	●	●	●					
16	●	●	●	●	●	●	●	●	●	●	●				
18		●	●	●	●	●	●	●	●	●	●				
20			●	●	●	●	●	●	●	●	●				
24			●	●	●	●	●	●	●	●	●		●		
28			●	●	●	●	●	●	●	●	●	●	●		
30			●	●	●	●	●	●	●	●	●	●	●		
32			●	●	●	●	●	●	●	●	●	●	●		
36					●	●	●	●	●	●	●	●	●		
40					●	●	●	●	●	●	●	●	●	●	●
45					●	●	●	●	●	●	●	●	●	●	●
50					●	●	●	●	●	●	●	●	●	●	●
55					●	●	●	●	●	●	●	●	●	●	●
60					●	●	●	●	●	●	●	●	●	●	●
70						●	●	●	●	●	●	●	●	●	●
80						●	●	●	●	●	●	●	●	●	●
90								●	●	●	●	●	●	●	●
100								●	●	●	●	●	●	●	●
120									●	●	●	●	●	●	●
130									●	●	●	●	●	●	●
140									●	●	●	●	●	●	●
150										●	●	●	●	●	●
160										●	●	●	●	●	●

A richiesta	Ø 13-25-30
On request	Ø 13-25-30
Sur demande	Ø 13-25-30
Auf Anfrage	Ø 13-25-30

Acciaio
Steel
Acier
Werkstoff

Acciaio per utensili
Tool steel
Acier pour outils
Werkzeugstahl

Durezza
Hardness
Dureté
Härte

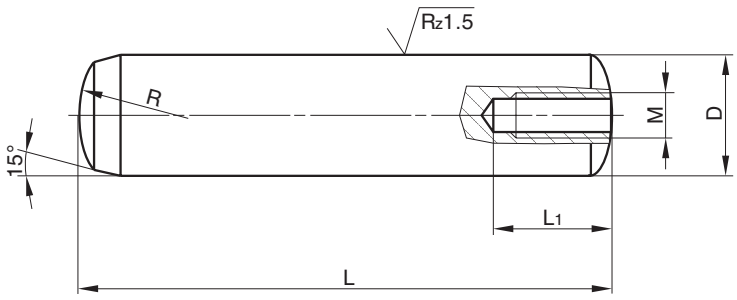
60±2 HRC

Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute, rettificate, lucidate
Hardened, annealed, precision ground and lapped
Trempées, revenues et finement rectifiées
Gehärtet, angelassen, geschliffen und geläppt

Spine cilindriche con foro filettato
Precision dowel pins with tapped hole
Goupilles à trou taraudé
Präzisions Zylinderstifte mit Innengewinde

DIN 7979
Tolleranza: m6 - h6



L1	10	10	12	16	16	20	20	22	25	30	36	48
L \ D	5x3 MA	6x4 MA	8x5 MA	10x6 MA	12x6 MA	14x8 MA	16x8 MA	18x10 MA	20x10 MA	25x16 MA	30x20 MA	40x20 MA
16	●	●	●									
20	●	●	●	●	●							
24	●	●	●	●	●							
28	●	●	●	●	●							
30	●	●	●	●	●	●						
32	●	●	●	●	●	●						
36	●	●	●	●	●	●						
40	●	●	●	●	●	●	●	●	●			
45	●	●	●	●	●	●	●	●	●			
50	●	●	●	●	●	●	●	●	●	●		
55		●	●	●	●	●	●	●	●	●	●	
60		●	●	●	●	●	●	●	●	●	●	
70		●	●	●	●	●	●	●	●	●	●	
80		●	●	●	●	●	●	●	●	●	●	
90		●	●	●	●	●	●	●	●	●	●	●
100		●	●	●	●	●	●	●	●	●	●	●
120			●	●	●	●	●	●	●	●	●	●
130				●	●	●	●	●	●	●	●	●
140				●	●	●	●	●	●	●	●	●
150				●	●	●	●	●	●	●	●	●
160						●	●	●	●	●	●	●
170										●	●	●
180										●	●	●
190										●	●	●
200										●	●	●

A richiesta	Ø 13-25-30
On request	Ø 13-25-30
Sur demande	Ø 13-25-30
Auf Anfrage	Ø 13-25-30

Acciaio
Steel
Acier
Werkstoff

88 MN V8

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute, rettificate, lucidate

Hardened, annealed, precision ground and lapped

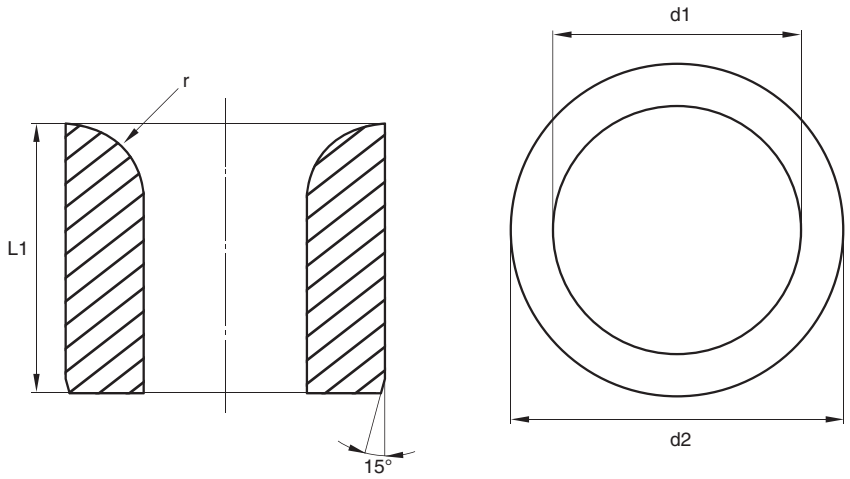
Trempées, revenues et finement rectifiées

Gehärtet, angelassen, geschliffen und geläppt

Diametri superiori a richiesta
Bigger diameters on request

Bussole di mascheraggio
Drill bushes
Bagues
Bohrbuchsen

DIN 179



d1 F7	PROGRESSIONE	d2 n6	L1 CORTA	L1 LUNGA
0,9 - 1,0	0,1	3	6	9
1,1 - 1,8	0,1	4	6	9
1,9 - 2,6	0,1 - 0,25	5	6	9
2,7 - 3,3	0,1 - 0,25	6	8	12
3,4 - 4,0	0,1 - 0,25	7	8	12
4,1 - 5,0	0,1 - 0,25	8	8	12
5,1 - 6,0	0,1 - 0,25	10	10	16
6,1 - 8,0	0,1 - 0,25	12	10	16
8,1 - 10	0,1 - 0,25	15	12	20
10,1 - 12	0,1 - 0,25	18	12	20
12,1 - 15	0,1 - 0,25	22	16	28
15,25 - 18	0,25	26	16	28
18,25 - 22	0,25	30	20	36
22,25 - 26	0,25	35	20	36
26,25 - 30	0,25	42	20/25	36/45
30,25 - 35	0,25	48	25	45
35,5 - 42	0,5	55	25/30	45/56
42,5 - 48	0,5	62	30	56
48,5 - 55	0,5	70	30	56
56 - 63	1,0	78	35	67/72

Acciaio
Steel
Acier
Werkstoff

88 MN V8

Durezza
Hardness
Dureté
Härte

60-62 HRC

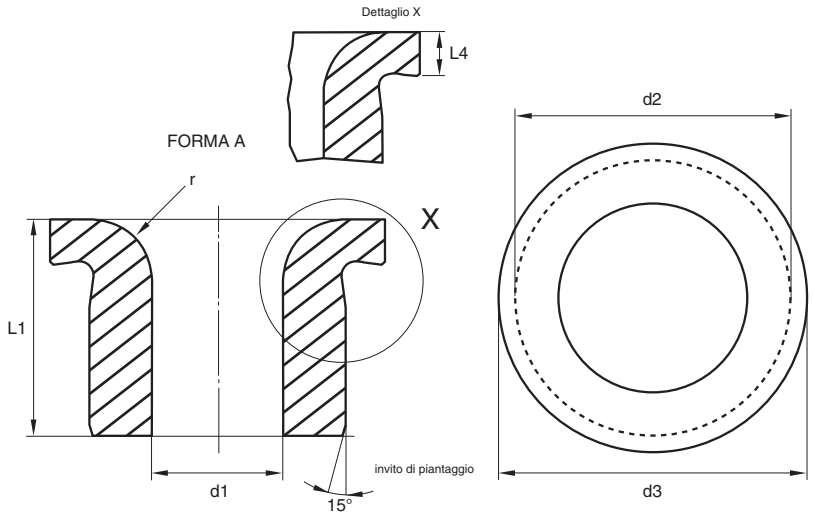
Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute, rettificate, lucidate
Hardened, annealed, precision ground and lapped
Trempées, revenues et finement rectifiées
Gehärtet, angelassen, geschliffen und geläppt

Diametri superiori a richiesta
Bigger diameters on request

Bussole di mascheraggio
Drill bushes
Bagues
Bohrbuchsen

DIN 172



d1 F7	PROGRESSIONE	d2 n6	d3	Corte		Lunghe	
				L1	L4	L1	L4
0,9 - 1,0	0,1	3	6	6	2	9	2
1,1 - 1,8	0,1	4	7	6	2	9	2
1,9 - 2,6	0,1 - 0,25	5	8	6	2	9	2
2,7 - 3,3	0,1 - 0,25	6	9	8	2*/2,5	12	2,5
3,4 - 4,0	0,1 - 0,25	7	10	8	2,5	12	2,5
4,1 - 5,0	0,1 - 0,25	8	11	8	2,5	12	2,5
5,1 - 6,0	0,1 - 0,25	10	13	10	3	16	3
6,1 - 8,0	0,1 - 0,25	12	15	10	3	16	3
8,1 - 10	0,1 - 0,25	15	18	12	3	20	3
10,1 - 12	0,1 - 0,25	18	22	12	4	20	4
12,1 - 15	0,1 - 0,25	22	26	16	4	28	4
15,25 - 18	0,25	26	30	16	4	28	4
18,25 - 22	0,25	30	34	20	5	36	5
22,25 - 26	0,25	35	39	20	5	36	5
26,25 - 30	0,25	42	46	20/25	5	36/45	5
30,25 - 35	0,25	48	52	25	5	45	5
35,5 - 42	0,5	55	59	25/30	5	45/56	5
42,5 - 48	0,5	62	66	30	6	56	6
48,5 - 55	0,5	70	74	30	6	56	6
56 - 63	1,0	78	82	35	6	67/72	6

Acciaio
Steel
Acier
Werkstoff

16 Cr Ni 4

Durezza
Hardness
Dureté
Härte

60±2 HRC

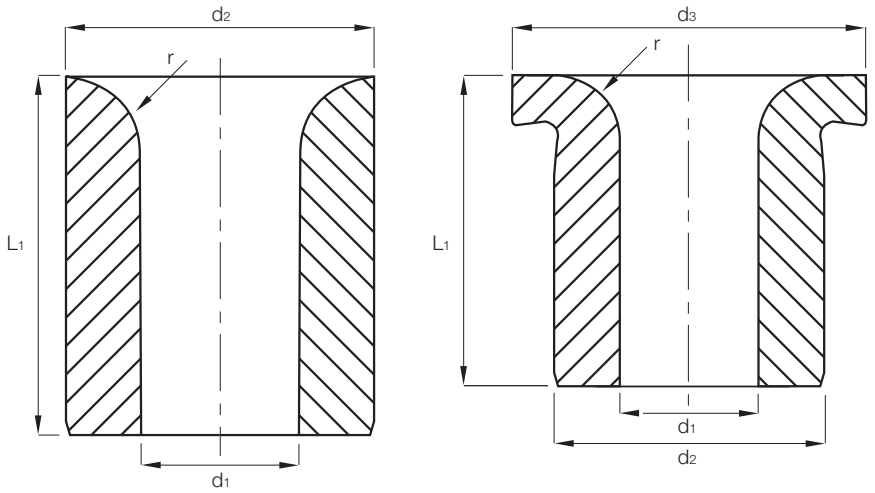
Esecuzione
Finish
Exécution
Ausführung

Cementate, temperate
Cementing, hardening

Tolleranza
Foro F7 - Diam. esterno n6
Tollerances of grinding
Hole in F7 - outside in n6

Bussole extralunghe
Drill bushesextra long size
Bagues extra longue
Bohrbuchsen extra lang

DIN 179
DIN 172



Ø d1	Ø d2	Ø d3	L1	DIN 179	DIN 172
2,7 - 2,75 - 3,0 - 3,25	6	9	16	●	●
3,4 - 3,5 - 3,75 - 4,0	7	10	16	●	●
4,1 - 4,25 - 4,5 - 4,75 - 5,0	8	11	16	●	●
5,1 - 5,25 - 5,5 - 5,75 - 6,0	10	13	20	●	●
6,1 - 6,25 - 6,5 - 6,75 - 7,0 7,25 - 7,5 - 7,75 - 8,0	12	15	20	●	●
8,1 - 8,25 - 8,5 - 8,75 - 9,0 9,25 - 9,5 - 9,75 - 10,0	15	18	25	●	●
10,1 - 10,5 - 11 - 11,5 - 12	18	22	25	●	●
12,1 - 12,5 - 13 - 13,5 14,0 - 14,5 - 15,0	22	26	36	●	●
15,25 - 15,5 - 16 - 16,5 17,0 - 17,5 - 18,0	26	30	36	●	●

Acciaio
Steel
Acier
Werkstoff

UX 200 C13
HSS 1.3343

Durezza
Hardness
Dureté
Härte

60-62 HRC

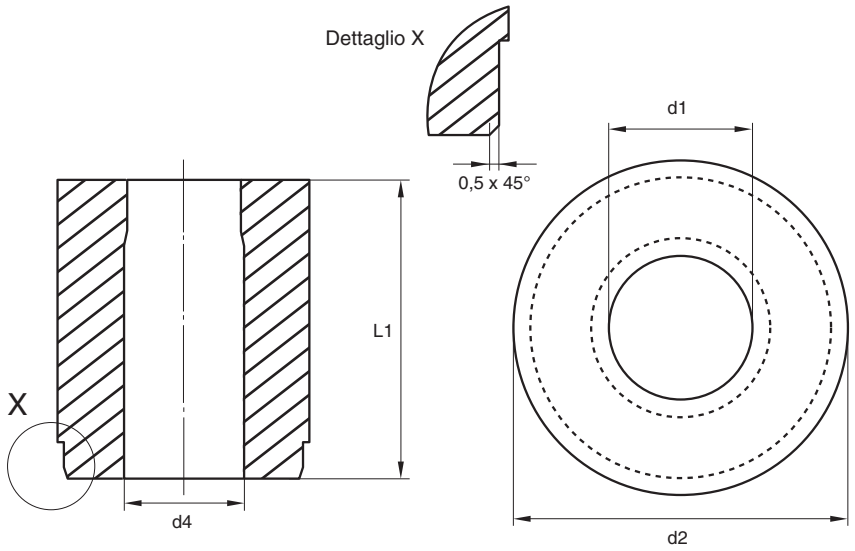
Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute, rettificate, lucidate
Hardened, annealed, precision ground and lapped
Trempées, revenues et finement rectifiées
Gehärtet, angelassen, geschliffen und geläppt

Diametri superiori a richiesta
Bigger diameters on request

Matrici
Dies
Matrices
Schneidbuchsen

DIN 9845
Form A



d1 H8	PROGRESSIONE	d2 n6	d4	L1 20	L1 28
0,8 - 1,0	0,1	5	d1 + 0,3	●	●
1,1 - 2,0	0,1	6	d1 + 0,3	●	●
2,1 - 3,3	0,1	7	d1 + 0,5	●	●
3,4 - 4,0	0,1	8	d1 + 0,5	●	●
4,1 - 5,0	0,1	10	d1 + 0,7	●	●
5,1 - 6,0	0,1	12	d1 + 0,7	●	●
6,1 - 8,0	0,1	15	d1 + 0,7	●	●
8,1 - 10	0,1	18	d1 + 1,0	●	●
10,1 - 12	0,1	22	d1 + 1,0	●	●
12,1 - 15	0,1	26	d1 + 1,0	●	●
15,5 - 18	0,5	30	d1 + 1,0	●	●
18,5 - 22	0,5	35	d1 + 1,0	●	●
22,5 - 26	0,5	42	d1 + 1,0	●	●
26,5 - 30	0,5	48	d2 + 2,0	●	●

Acciaio
Steel
Acier
Werkstoff

UX 200 C13
HSS 1.3343

Durezza
Hardness
Dureté
Härte

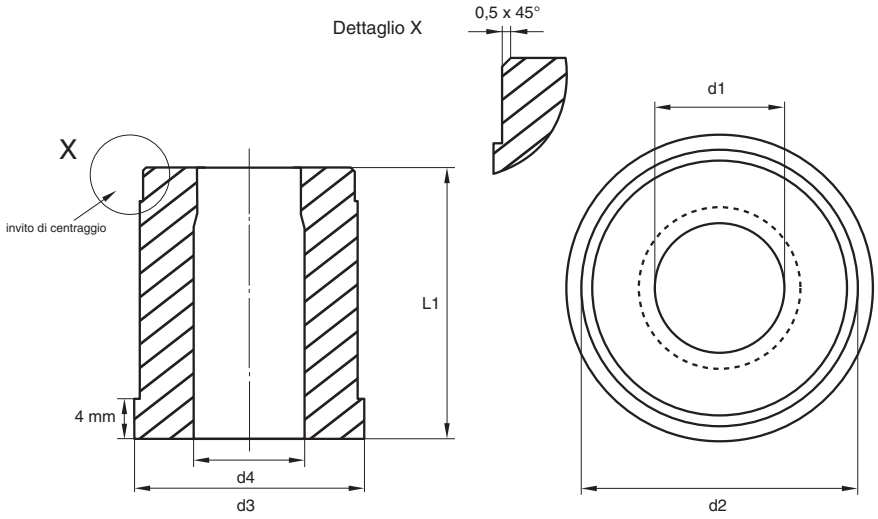
60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute, rettificate, lucidate
Hardened, annealed, precision ground and lapped
Trempées, revenues et finement rectifiées
Gehärtet, angelassen, geschliffen und geläppt

Matrici
Dies
Matrices
Schneidbuchsen

DIN 9845
Form B



d1 H8	PROGRESSIONE	d2 n6	d3	d4	L1 20	L1 28
0,8 - 1,0	0,1	5	7	d1 + 0,3	●	●
1,1 - 2,0	0,1	6	8	d1 + 0,3	●	●
2,0 - 3,3	0,1	7	9	d1 + 0,5	●	●
3,1 - 4,0	0,1	8	10	d1 + 0,5	●	●
4,1 - 5,0	0,1	10	12	d1 + 0,7	●	●
5,1 - 6,0	0,1	12	14	d1 + 0,7	●	●
6,1 - 8,0	0,1	15	17	d1 + 0,7	●	●
8,1 - 10	0,1	18	20	d1 + 1,0	●	●
10,1 - 12	0,1	22	24	d1 + 1,0	●	●
12,1 - 15	0,1	26	28	d1 + 1,0	●	●
15,5 - 18	0,5	30	32	d1 + 1,0	●	●
18,5 - 22	0,5	35	37	d1 + 1,0	●	●
22,5 - 26	0,5	42	44	d1 + 1,0	●	●
26,5 - 30	0,5	48	50	d2 + 2,0	●	●

Diametri superiori a richiesta
Bigger diameters on request

Acciaio
Steel
Acier
Werkstoff

HWS

Durezza
Hardness
Dureté
Härte

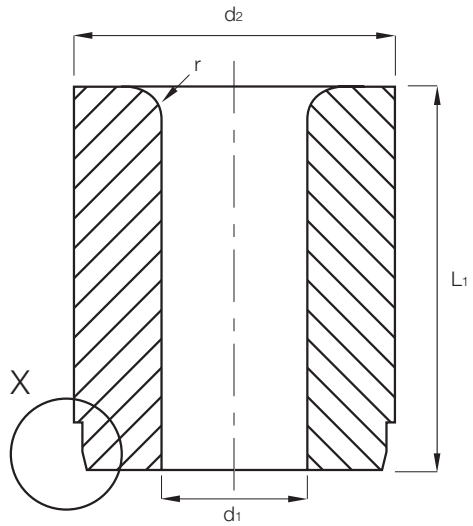
60±2 HRC

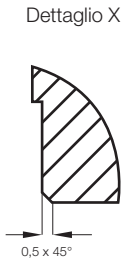
Esecuzione
Finish
Exécution
Ausführung

Temprate, rinvenute
Hardened, annealed

Bussole guida punzoni
Punch guide bushes
Bagues de guidage pour poingous
Führungsbuchse

DIN 9845 C





Ø d1 H7	PROGRESSIONE Advancement	Ø d2 n6	L1	
2,1 - 3,0	0,1	7	12	●
3,1 - 4,0	0,1	8	12	●
4,1 - 5,0	0,1	10	16	●
5,1 - 6,0	0,1	12	16	●
6,1 - 8,0	0,1	15	20	●
8,1 - 10,0	0,1	18	20	●
10,1 - 12,0	0,1	22	28	●
12,1 - 15,0	0,1	26	28	●
15,5 -18,0	0,5	30	36	●

Acciaio
Steel
Acier
Werkstoff

HSS

Durezza
Hardness
Dureté
Härte

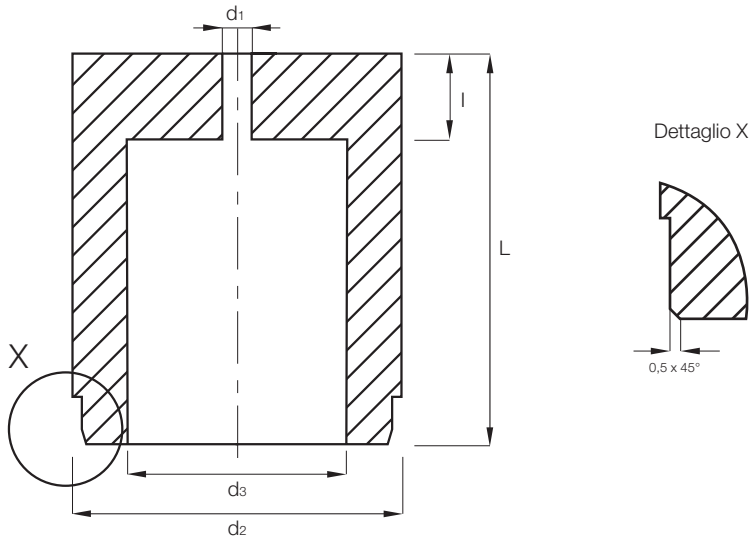
63-64 HRC

Esecuzione
Finish
Exécution
Ausführung

Tempra sottovuoto
Vacuum Hardening

Matrici con preforo
Dies with start hole
Matrices
Schneidbuchsen

ISO 8977 A



d2 n5	d1	L +0 / +0,5				d3	l
		16	20	25	32		
5	1,0	●	●	●		2,8	2,0
6	1,0	●	●	●		3,5	3,0
8	1,0	●	●	●	●	4,0	4,0
10	1,0	●	●	●	●	5,8	4,0
13	1,2		●	●	●	8,0	5,0
16	1,2		●	●	●	9,5	5,0
20	1,5		●	●	●	12	8,0
25	1,5		●	●	●	17,3	8,0
32	1,5		●	●	●	20,7	8,0
40	1,5		●	●	●	27,7	8,0

Acciaio
Steel
Acier
Werkstoff

HSS

Durezza
Hardness
Dureté
Härte

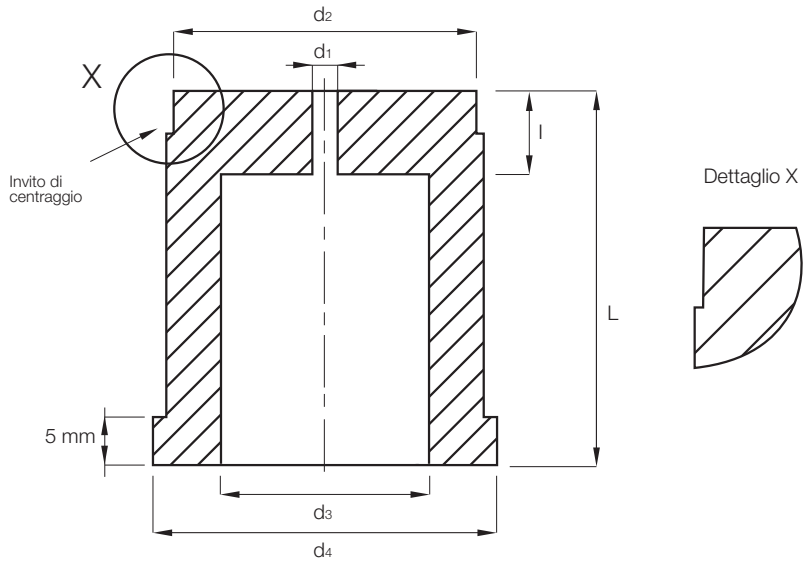
63-64 HRC

Esecuzione
Finish
Exécution
Ausführung

Tempra sottovuoto
Vacuum Hardening

Matrici con preforo
Dies with start hole
Matrices
Schneidbuchsen

ISO 8977 B



d2 m5	d1	L +0 / +0,5				d4	d3	l
		16	20	25	32			
5	1,0	●	●	●		8	2,8	2
6	1,0	●	●	●		9	3,5	3
8	1,0	●	●	●	●	11	4,0	4
10	1,0	●	●	●	●	13	5,8	4
13	1,2		●	●	●	16	8,0	5
16	1,2		●	●	●	19	9,5	5
20	1,5		●	●	●	24	12,0	8
25	1,5		●	●	●	29	17,3	8
32	1,5		●	●	●	36	20,7	8
40	1,5		●	●	●	44	27,7	8

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

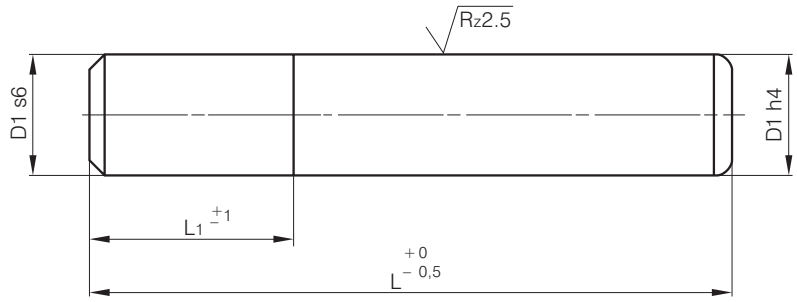
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Colonne guida
Precision guide pillars
Colonne de guidage
Präzisions Führungssäulen

Tipo F.A.



D1	L1	L																
		85	95	105	115	125	135	145	155	170	185	200	225	250	275	300	325	350	400
15-16	16	●	●	●	●	●	●	●	●										
17-18	18	●	●	●	●														
	18					●	●	●	●	●	●	●							
19-20	20	●	●	●															
	20				●	●	●	●	●	●	●	●							
24-25	25				●	●	●												
	25							●	●	●	●	●	●	●					
30-31	30				●	●	●	●	●										
	30									●	●	●	●	●	●	●			
40-41	40							●	●	●	●	●							
	40												●	●	●	●	●	●	●
50-51	50									●	●	●	●	●	●	●	●	●	●
63	63													●	●	●		●	●

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

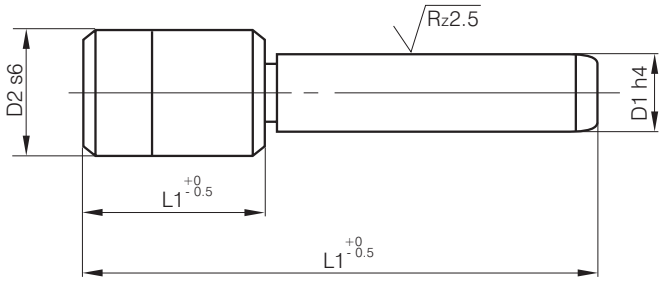
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Colonne guida
Precision guide pillars
Colonnes de guidage
Präzisions Führungssäulen

Tipo F.B.



D1	D2	L1	L																	
			85	95	105	115	125	135	145	155	170	185	200	225	250	275	300	325	350	400
15-16	26	30	●	●	●	●	●	●	●	●										
17-18	28	30	●	●	●	●														
		35					●	●	●	●	●	●	●							
19-20	30	30	●	●	●															
		35				●	●	●	●	●	●	●	●							
24-25	36	35				●	●	●												
		40							●	●	●	●	●	●	●					
30-31	45	40				●	●	●	●	●										
		45									●	●	●	●	●	●	●			
40-41	55	60							●	●										
		70									●	●	●	●	●	●	●	●	●	●
50-51	70	70									●	●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

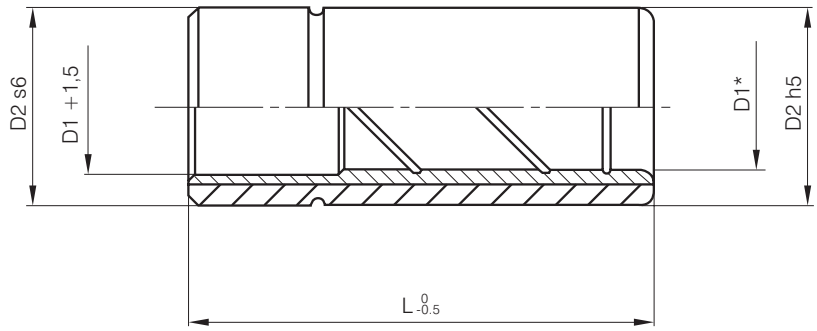
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Bussole guida
Precision bushings fixed type
Bagues de guidage de precision type fixe
Präzisions Führungsbuchse

Tipo - Type A



D1*	D1	D2	Serie normale L	Serie corta L
+0,006 +0,010	15 - 16	26	50	35
	17 - 18	28	55	45
	19 - 20	30	60	45
	24 - 25	36	70	50
+0,008 +0,012	30 - 31	45	80	55
	40 - 41	55	100	60
	50 - 51	70	100	60
	63	85	100	/

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

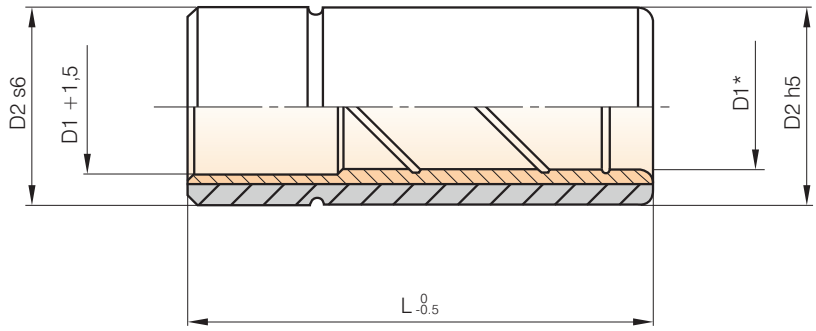
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Bussole guida con scorrimento in bronzo
Precision bushings fixed type with bronze sleeve
Bagues de guidage de precision type fixe avec bronze rapporté
Präzisions Führungsbuchse mit Bronze Auflage

Tipo - Type A



D1*	D1	D2	Serie normale L	Serie corta L
+0,006 +0,010	15 - 16	26	50	35
	17 - 18	28	55	45
	19 - 20	30	60	45
	24 - 25	36	70	50
+0,008 +0,012	30 - 31	45	80	55
	40 - 41	55	100	60
	50 - 51	70	100	60
	63	85	100	/

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

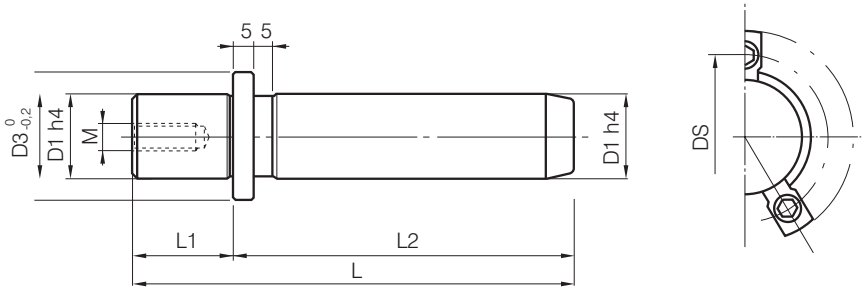
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

- Staffette e viti a richiesta
- Clamps and screws on request

Colonne estraibili
Removable precision guide pillars
Colonnes de guidage de precision type demontable
Präzisions - Wechselsäule

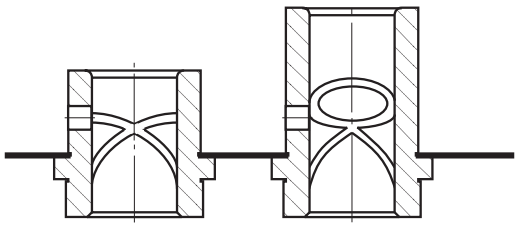


D1	D3	M	DS	STAFF	L1
18/19	25	8	33	M6	20
24/25	32	10	40	M6	25
30/32	40	10	50	M8	30
40/42	50	12	60	M8	35
50/52	62	12	72	M8	45
63	73	12	83	M8	49
63	77	12	87	M8	49

Diametri	Lunghezza L2																	
	100	110	120	130	140	150	160	170	180	200	220	240	260	280	300	320	360	400
18/19	●	●	●	●	●	●	●											
24/25	●	●	●	●	●	●	●	●	●	●								
30/32	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
40/42	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
50/52		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
63				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
63				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

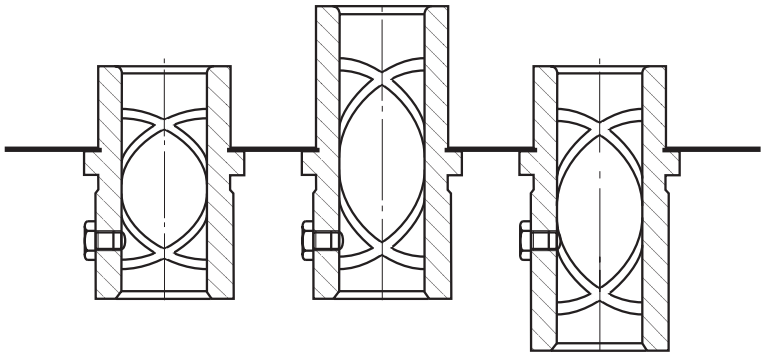
Bussole in acciaio estraibili
Bussole con scorrimento in bronzo estraibili
Demountable Steel bushes -
Demountable bushes with bronze
Bagues demontable en acier -
Bagues demontable avec bronze
Führungbuchse - Führungbuchse mit Bronze Auflage

SIGLE PER BRONZO - BRONZE
BSBS - BSBL - BNBS - BLBS - BLXS



•BSBS
•BSBSA

•BSBL
•BSBLA



•BNBS
•BNBSA

•BLBS
•BLBSA

•BLXS
•BLXSA

SIGLE PER ACCIAIO - STEEL - ACIER - STAHL

● BSBSA ● BSBLA ● BNBSA ● BLBSA ● BLXSA

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - temprate - rinvenute - rettificate

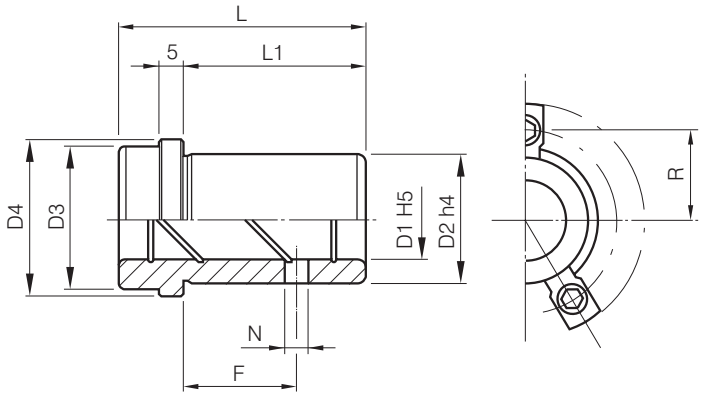
Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

- Sede di montaggio h6
- Ogni bussola deve essere fissata con 2 o 3 staffette e viti a seconda la dimensione

- Staffette e viti a richiesta
- Clamps and screws on request

Bussole estraibili in acciaio
Demountable steel bushes
Bagues demontable en acier
Stahl Führungsbuchse



Tipo	BSBSA								BSBLA							
D1	L	D2	D3	D4	L1	R	N	F	L	D2	D3	D4	L1	R	N	F
18/19	31	28	29	34	18	21	5	8	50	28	29	34	37	21	5	8
24/25	36	38	39	44	23	26	5	9	55	38	39	44	42	26	5	12
30/32	43	45	48	53	30	31,5	5	11	60	45	48	53	47	31,5	5	16
40/42	51	54	58	63	38	36,5	8	11	67	54	58	63	54	36,5	8	19
50/52	61	65	74	79	48	44,5	8	14	75	65	74	79	62	44,5	8	19
63	74	81	87	92	61	51	8	19	90	81	87	32	77	51	8	19

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - temprate - rinvenute - rettificate

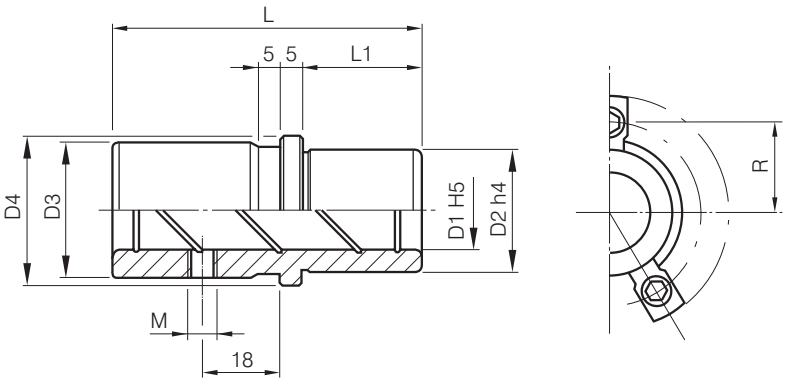
Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

- Sede di montaggio h6
- Ogni bussola deve essere fissata con 2 o 3 staffette e viti a seconda la dimensione

- Staffette e viti a richiesta
- Clamps and screws on request

Bussole estraibili in acciaio
Demountable steel bushes
Bagues demontable en acier
Stahl Führungsbuchse



Tipo	BNBSA							BLXSA							BLBSA						
D1	L	D2	D3	D4	L1	R	M	L	D2	D3	D4	L1	R	M	L	D2	D3	D4	L1	R	M
18/19	50	28	31	34	18	21	6X1	70	28	31	34	18	21	6X1	70	28	31	34	27	21	6X1
24/25	55	38	41	44	23	26	10X1	80	38	41	44	23	26	10X1	80	38	41	44	32	26	10X1
30/32	60	45	50	53	26	31,5	10X1	90	45	50	53	26	31,5	10X1	90	45	50	53	37	31,5	10X1
40/42	67	54	60	63	30	36,5	10X1	100	54	60	63	30	36,5	10X1	100	54	60	63	47	36,5	10X1
50/52	75	65	76	79	35	44,5	10X1	110	65	76	79	35	44,5	10X1	110	65	76	79	57	44,5	10X1
63	90	81	89	92	48	51	10X1	130	81	89	92	48	51	10X1	130	81	89	92	67	51	10X1

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - temprate - rinvenute - rettificate

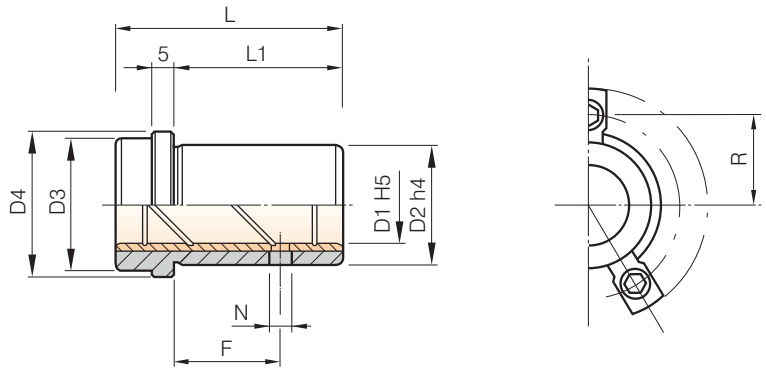
Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

- Il diametro interno è rivestito in bronzo
- Sede di montaggio h6
- Ogni bussola deve essere fissata con 2 o 3 staffette e viti a seconda della dimensione

- Staffette e viti a richiesta
- Clamps and screws on request

Bussole estraibili con scorrimento in bronzo
Demountable bushes with bronze
Bagues demontable avec bronze
Führungsbuchse mit Bronze Auflage



D1	BSBS								BSBL							
	L	D2	D3	D4	L1	R	N	F	L	D2	D3	D4	L1	R	N	F
18/19	31	28	29	34	18	21	5	8	50	28	29	34	37	21	5	8
24/25	36	38	39	44	23	26	5	12	55	38	39	44	42	26	5	12
30/32	43	45	48	53	30	31,5	5	16	60	45	48	53	47	31,5	5	16
40/42	51	54	58	63	38	36,5	8	19	67	54	58	63	54	36,5	8	19
50/52	61	65	74	79	48	44,5	8	19	75	65	74	79	62	44,5	8	19
63	74	81	87	92	61	51	8	19	63	90	81	92	77	51	8	19
80	91	100	106	111	78	60,5	8	19								

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - temprate - rinvenute - rettificate

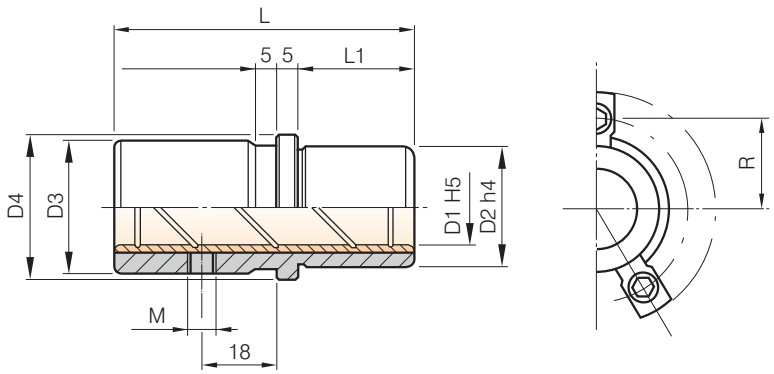
Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

- Il diametro interno è rivestito in bronzo
- Sede di montaggio h6
- Ogni bussola deve essere fissata con 2 o 3 staffette e viti a seconda della dimensione

- Staffette e viti a richiesta
- Clamps and screws on request

Bussole estraibili con scorrimento in bronzo
Demountable bushes with bronze
Bagues demontable avec bronze
Führungsbuchse mit Bronze Auflage



D1	BNBS							BLXS							BLBS						
	L	D2	D3	D4	L1	R	M	L	D2	D3	D4	L1	R	M	L	D2	D3	D4	L1	R	M
18/19	50	28	31	34	18	21	6X1	70	28	31	34	18	21	6X1	70	28	31	34	27	21	6X1
24/25	55	38	41	44	23	26	10X1	80	38	41	44	23	26	10X1	80	38	41	44	32	26	10X1
30/32	60	45	50	53	26	31,5	10X1	90	45	50	53	26	31,5	10X1	90	45	50	53	37	31,5	10X1
40/42	67	54	60	63	30	36,5	10X1	100	54	60	63	30	36,5	10X1	100	54	60	63	47	36,5	10X1
50/52	75	65	76	79	35	44,5	10X1	110	65	76	79	35	44,5	10X1	110	65	76	79	57	44,5	10X1
63	90	81	89	92	48	51	10X1	130	81	89	92	48	51	10X1	130	81	89	92	67	51	10X1
80	100	100	108	111	48	60,5	10X1	150	100	108	111	48	60,5	10X1	150	100	108	111	77	60,5	10X1

Acciaio
Steel
Acier
Werkstoff

18 Ni cr Mo

Durezza
Hardness
Dureté
Härte

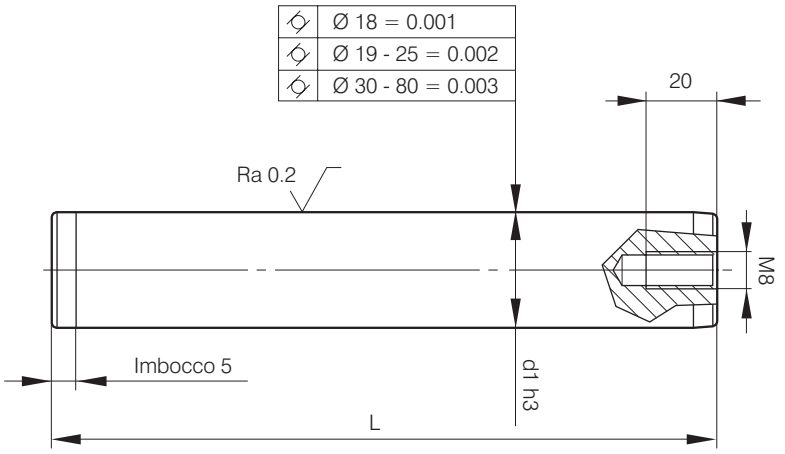
60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - Temprate - Rettificate - Lappate
Hardened - Case Hardened - Ground - Superfinished
Cementés - Trempés - Rectifiées - Polies

Colonne guida per bussole con gabbie a sfera
Guide pillars
Colonnes
Präzisions Führungssäulen

DIN 9825 ISO 9182



d1 / l1	SENZA FILETTO		CON FILETTO M8													
	10	12	15	16	19	20	24	25	30	32	38	40	48	50	63	80
90	●	●	●	●												
100	●	●	●	●	●	●	●	●								
112	●	●	●	●	●	●	●	●								
125	●	●	●	●	●	●	●	●	●	●						
140	●	●	●	●	●	●	●	●	●	●						
160			●	●	●	●	●	●	●	●	●	●				
180			●	●	●	●	●	●	●	●	●	●	●	●		
190																
200			●	●	●	●	●	●	●	●	●	●	●	●		
224					●	●	●	●	●	●	●	●	●	●		
250							●	●	●	●	●	●	●	●	●	
260																
280							●	●	●	●	●	●	●	●	●	
300																
315									●	●	●	●	●	●	●	
355											●	●	●	●	●	
400											●	●	●	●	●	
450													●	●	●	
500													●	●	●	
550																
600																
700																
800																

ø 80 A richiesta
ø 80 On request
ø 80 Sur demande
ø 80 Auf Anfrage

Acciaio
Steel
Acier
Werkstoff

18 Ni cr Mo5

Gabbia: Bronzo B14
Sfere: Acciaio

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - Temprate - Rettificate - Lappate

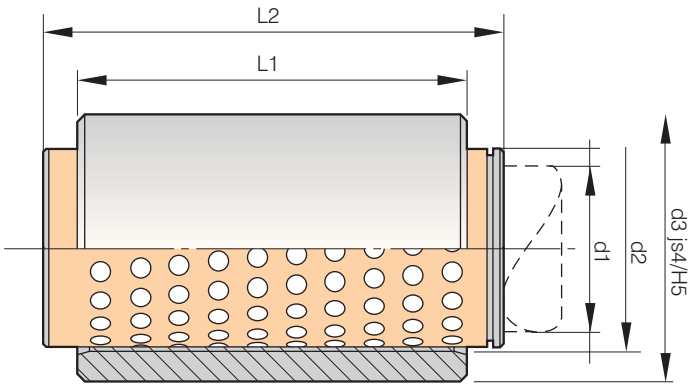
Hardened - Case Hardened - Ground - Superfinished

Cementés - Trempés - Rectifiées - Polies

Questo tipo di guida è composta: da bussola di guida e gabbie a sfera. Si possono adattare con colonne toll H3 tipo DIN 9825. La bussola può essere inserita nel foro con esecuzione di un gioco di 0,4-0,6 mm. fra foro e bussola con collante oppure eseguendo un foro con tolleranza h6.

Bussole guida con gabbia a sfere
Guide bushes with ball bearing sleeves
Bague de guidage avec cage à billes
Präzisions Führungsbuchse mit Kugelkäfige

Tipo R92



d1		10	12	15	16	19	20	24	25	30	32	38	40	48	50	63	80
d2		14	16	21	22	25	26	30	31	38	40	46	48	56	58	71	92
d3		22	22	28	28	32	32	40	40	48	48	58	58	70	70	85	105
N 409	N 411																
L1	L2																
23	30	●	●	●	●	●	●	●	●								
23	40	●	●	●	●	●	●	●	●								
23	45			●	●	●	●	●	●								
30	40	●	●														
30	45			●	●	●	●	●	●	●	●	●	●				
35	40																
35	45																
37	40	●	●														
37	45			●	●	●	●	●	●								
37	50									●	●	●	●	●	●		
40	45																
47	56			●	●	●	●	●	●	●	●						
47	63											●	●	●	●		
50	56																
50	63																
60	71			●	●	●	●	●	●	●	●						
60	80											●	●	●	●		
60	95															●	
70	80																
77	95					●	●	●	●	●	●	●	●	●	●	●	
80	90																
90	105																
95	120									●	●	●	●	●	●	●	
100	120																
120	140											●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

18 Ni cr Mo5

Gabbia: Bronzo B14
Sfere: Acciaio

Durezza
Hardness
Dureté
Härte

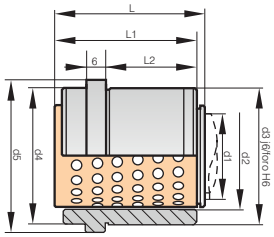
60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - Temprate - Rettificate - Lappate
Hardened - Case Hardened - Ground - Superfinished
Cementés - Trempés - Rectifiées - Polies

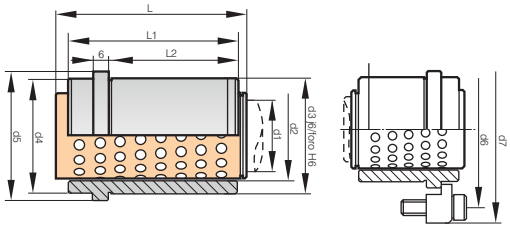
Unità di guida a sfere
Unit guide for ball bearing sleeves
Unité de guidage avec cage à bille
Führungeinheit mit Kugelkäfige

Tipo R93C*



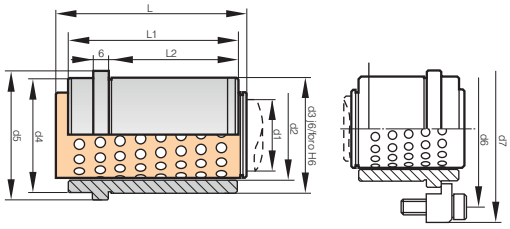
d1	19/20	24/25	30/32	38/40	48/50	63	80
L	45	45	56	63	80	95	120
L1	35	35	42	52	65	80	80
L2	23	23	30	37	47	60	60

Tipo R93M*



d1	19/20	24/25	30/32	38/40	48/50	63	80
L		71	80	95	120		
L1		55	69	79	96		
L2		30	37	47	60		

Tipo R93ML*



d1	19/20	24/25	30/32	38/40	48/50	63	80
L	56	71	95	105	120	140	140
L1	43	59	75	82	97	116	120
L2	23	23	30	37	47	60	60

*** N.B.**
Per quote mancanti vedi tabella R93EL

La guida a sfera con collare deve essere inserita nel foro con tolleranza h6/j6.

Acciaio
Steel
Acier
Werkstoff

18 Ni cr Mo5

Gabbia: Bronzo B14
Sfere: Acciaio

Durezza
Hardness
Dureté
Härte

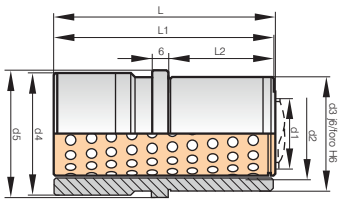
60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Cementate - Temprate - Rettificate - Lappate
Hardened - Case Hardened - Ground - Superfinished
Cementés - Trempés - Rectifiées - Polies

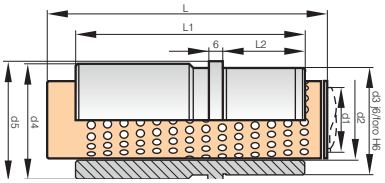
Unità di guida a sfere
Unit guide for ball bearing sleeves
Unité de guidage avec cage à bille
Führungeinheit mit Kugelkäfige

Tipo R93L*



d1	19/20	24/25	30/32	38/40	48/50	63	80
L		95	120	140	160		
L1		80	93	110	131		
L2		30	37	47	60		

Tipo R93EL



d1	19/20	24/25	30/32	38/40	48/50	63	80
d2	25/26	30/31	38/40	46/48	56/58	71	92
d3	32	40	48	58	70	85	105
d4	40	48	56	66	80	95	118
d5	39	46	53	63	77	92	115
d6	52	60	67	77	91	106	129
d7	67,9	75,8	82,7	92,7	106,6	121,5	144,4
b	22,3	24,3	26	28,5	32	35,8	41,5
b1	32	35,4	38,5	42,8	48,8	55,3	65,3
M	M6	M6	M8	M8	M8	M8	M8
c	12	12	13	13	13	13	13
L	71	95	120	120	140	160	160
L1	59	79	93	108	127	150	150
L2	23	23	30	37	47	60	60

*** N.B.**
Per quote mancanti vedi tabella R93EL

La guida a sfera con collare deve essere inserita nel foro con tolleranza h6/j6.

Serie trancia ISO
ISO guide elements
Série de trancheurs ISO
ISO führungselemente



Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

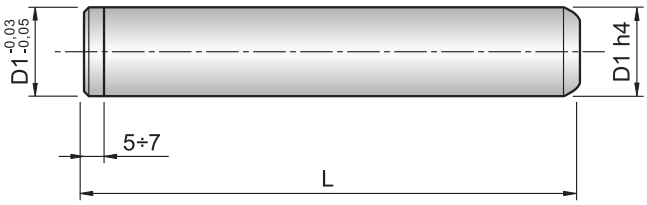
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna liscia
Straight guide pillar
Colonnes lisses
Führungssäule

Tipo CIS / ~ DIN 9825 / ISO 9182-2



D1	L
15	90
	100
	112
	125
	140
	160
	180
	200
	224
	250
18	120
	130
	140
	150
	160
	170
	180
	190
	200
20	100
	112
	125
	140
	160
	180
	200
	224
	250
24	125
	140
	150
	160

D1	L
16	90
	100
	112
	125
	140
	160
	180
	200
	224
	250
19	100
	112
	120
	125
	130
	140
	150
	160
	170
	180
	190
	200
	224
	250
25	125
	140
	150
	160

D1	L
24	170
	180
	190
	200
	210
	220
	224
	230
	240
	250
	260
	270
	280
	300
	315
	355
	400
	450
	500
30	125
	140
	150
	160
	170
	180
	190
	200
	210
	220
	224
	230
	240
	250
	260
	270
	280
	300

D1	L
25	170
	180
	190
	200
	210
	220
	224
	230
	240
	250
	260
	270
	280
	300
	315
	355
	400
	450
	500
32	125
	140
	150
	160
	170
	180
	190
	200
	210
	220
	224
	230
	240
	250
	260
	270
	280
	300

Colonna liscia
Straight guide pillar
Colonnes lisses
Führungssäule

Tipo CIS / ~ DIN 9825 / ISO 9182-2

D1	L
30	315
	355
	400
	450
	500
38	160
	180
	200
	224
	250
	280
	315
	355
	400
	450
	500
42	170
	180
	190
	200
	210
	220
	230
	240
	250
	260
	270
	280
	300
	320
	350
	400
50	180
	190
	200
	210

D1	L
32	315
	355
	400
	450
	500
40	160
	170
	180
	190
	200
	210
	220
	224
	230
	240
	250
	260
	270
	280
	300
	315
	320
	350
	355
	400
	450
	500
48	200
	224
	250
	280
	315
	355
	400
	450
	500
52	180
	190
	200
	210

D1	L
50	220
	224
	230
	240
	250
	260
	270
	280
	300
	315
	320
	350
	355
	400
	450
	500
60	250
	280
	315
	355
	400
	450
	500
80	280
	300
	315
	320
	355
	360
	400
	450
	500
	600
	700
	800

D1	L
52	220
	230
	240
	250
	260
	270
	280
	300
	320
	350
	400
63	200
	220
	240
	250
	260
	280
	300
	315
	320
	355
	360
	400
	450
	500

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

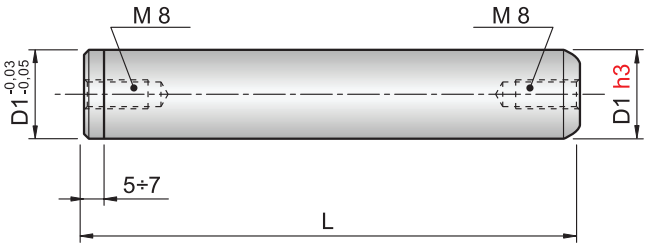
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna liscia con filetti
Straight guide pillar with thread
Colonnes lisses avec filettage
Führungssäule innengewinde beidseitig

Tipo CIAF / ~ DIN 9825 / ISO 9182-2



D1	L
15	90
	100
	112
	125
	140
	160
	180
	200
	224
	250
19	100
	112
	125
	140
	160
	180
	200
	224
	250
24	125
	140
	160
	180
	200
	224
	250
	280
	315
	355
	400
	450
	500
30	125
	140
	160
	180
	200

D1	L
16	90
	100
	112
	125
	140
	160
	180
	200
	224
	250
20	100
	112
	125
	140
	160
	180
	200
	224
	250
25	125
	140
	160
	180
	200
	224
	250
	280
	315
	355
	400
	450
	500
32	125
	140
	160
	180
	200

D1	L
30	224
	250
	280
	315
	355
	400
	450
	500
38	160
	180
	200
	224
	250
	280
	315
	355
	400
	450
	500
48	200
	224
	250
	280
	315
	355
	400
	450
	500
60	250
	280
	315
	355
	400
	450
	500

D1	L
32	224
	250
	280
	315
	355
	400
	450
	500
40	160
	180
	200
	224
	250
	280
	315
	355
	400
	450
	500
50	200
	224
	250
	280
	315
	355
	400
	450
	500
63	250
	280
	315
	355
	400
	450
	500

D1	L
24	280
	315
	355
	400
	450
	500
	600
	700
	800

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

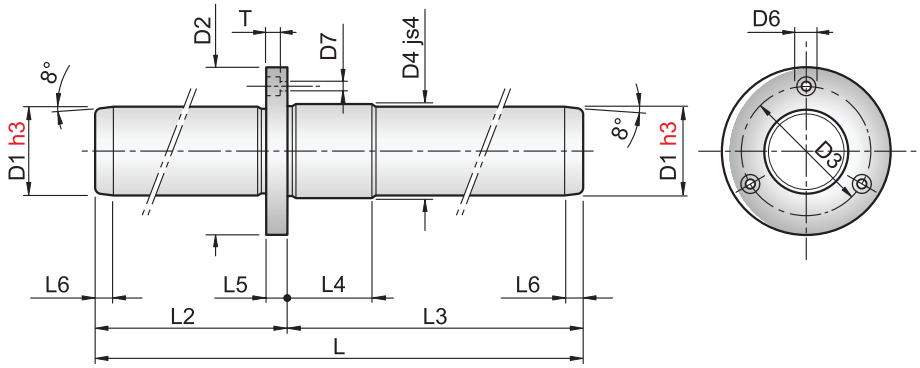
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna con flangia
Stripper mounted pillar
Colonnes avec brides
Mittenbundsäule

Tipo CEAS



D1	L2	L3	L	D2	D3	D4	D6	D7	L4	L5	L6	T
19	70	90	160	42	32	22	8	4,5	20	8	4	4,6
		100	170									
	80	100	180									
		110	190									
	90	110	200									
	100	110	210									
25	80	100	180	48	38	26	8	4,5	22	8	6	4,6
		110	190									
	90	110	200									
		120	210									
	100	120	220									
	110	120	230									
32	80	100	180	60	48	34	10	5,5	25	10	7	5,7
		110	190									
	90	110	200									
		120	210									
	100	120	220									
		130	230									
	110	130	240									
		140	250									
40	90	110	200	70	56	42	11	6,6	27	12	7	6,8
		120	210									
	100	120	220									
		130	230									
	110	130	240									
		140	250									
	120	140	260									

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

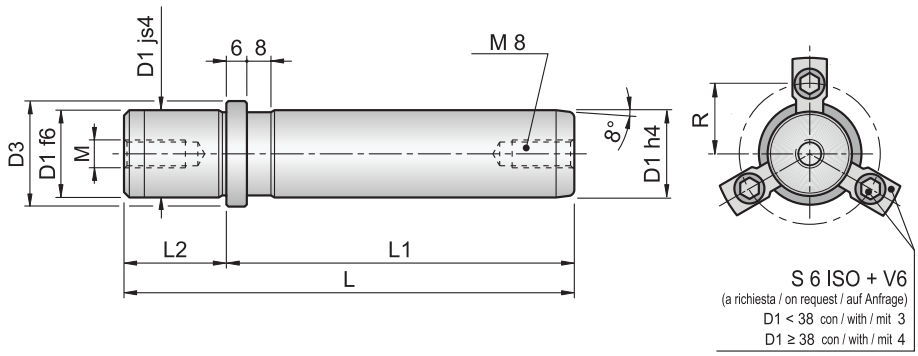
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna estraibile
Demountable guide pillar
Colonnes de guidage demontables
Führungssäule mit bund

Tipo CEA



D1	L1	L2	D3	M	R
19	100 112 125 140 160 180 200	23	25	M8	18
24	100 112 125 140 160 180 200 224 250	30	32	M8	21,5
30	112 125 140 160 180 200 224 250 280 315	37	40	M8	25,5
38	125 140 160 180 200 224 250 280 315 355	37	50	M8	30,5

D1	L1	L2	D3	M	R
20	100 112 125 140 160 180 200	23	25	M8	18
25	100 112 125 140 160 180 200 224 250	30	32	M8	21,5
32	112 125 140 160 180 200 224 250 280 315	37	40	M8	25,5
40	125 140 160 180 200 224 250 280 315 355	37	50	M8	30,5

Colonna estraibile
Demountable guide pillar
Colonnes de guidage demontables
Führungssäule mit bund

Tipo CEA

D1	L1	L2	D3	M	R
48	140	47	63	M8	37
	160				
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				
60	160	47	80	M8	45,5
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				

D1	L1	L2	D3	M	R
50	140	47	63	M8	37
	160				
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				
63	160	47	80	M8	45,5
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				
80	200	60	95	M12	53
	224				
	250				
	280				
	315				
	355				
	400				

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

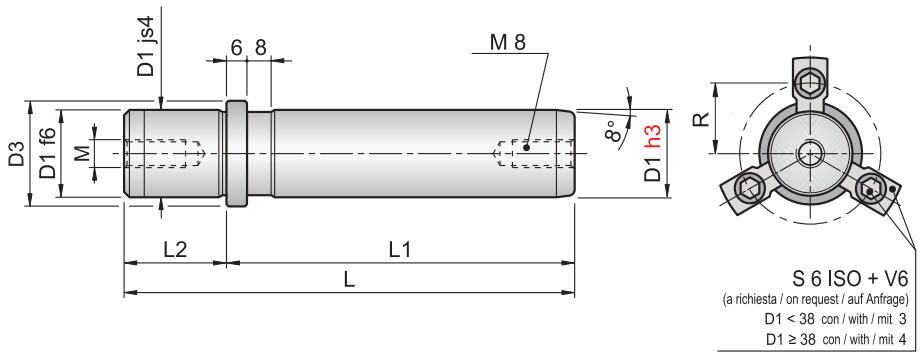
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna estraibile
Demountable guide pillar
Colonnes de guidage demontables
Führungssäule mit bund

Tipo CEAQ / DIN 9825 / ~ ISO 9182-5



D1	L1	L2	D3	M	R
15	100	20	22	M8	16,5
	112				
	125				
	140				
	160				
	180				
	200				
19	100	23	25	M8	18
	112				
	125				
	140				
	160				
	180				
	200				
24	100	30	32	M8	21,5
	112				
	125				
	140				
	160				
	180				
	200				
	224				
	250				
30	112	37	40	M8	25,5
	125				
	140				
	160				
	180				
	200				
	224				
	250				
	280				
	315				
30	125	37	50	M8	30,5
	140				
	160				

D1	L1	L2	D3	M	R
16	100	20	22	M8	16,5
	112				
	125				
	140				
	160				
	180				
	200				
20	100	23	25	M8	18
	112				
	125				
	140				
	160				
	180				
	200				
25	100	30	32	M8	21,5
	112				
	125				
	140				
	160				
	180				
	200				
	224				
	250				
32	112	37	40	M8	25,5
	125				
	140				
	160				
	180				
	200				
	224				
	250				
	280				
	315				
40	125	37	50	M8	30,5
	140				
	160				

Colonna estraibile
Demountable guide pillar
Colonnes de guidage demontables
Führungssäule mit bund

Tipo CEAQ / DIN 9825 / ~ ISO 9182-5

D1	L1	L2	D3	M	R
38	180	37	50	M8	30,5
	200				
	224				
	250				
	280				
	315				
	355				
48	140	47	63	M8	37
	160				
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				
60	160	47	80	M8	45,5
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				

D1	L1	L2	D3	M	R
40	180	37	50	M8	30,5
	200				
	224				
	250				
	280				
	315				
	355				
50	140	47	63	M8	37
	160				
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				
63	160	47	80	M8	45,5
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				
80	200	60	95	M12	53
	224				
	250				
	280				
	315				
	355				
	400				

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

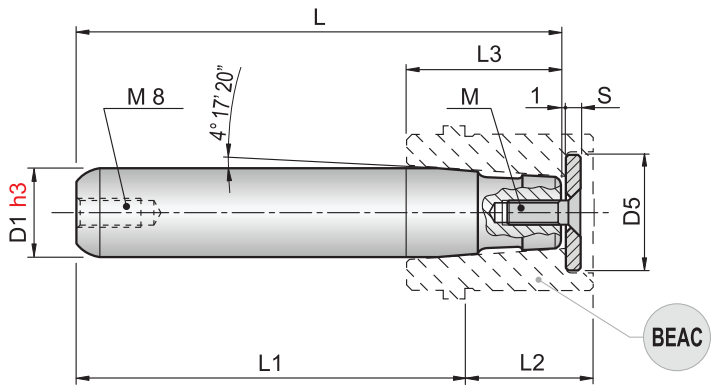
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna conica (completa di rondella e vite)
Demountable conical pillar (with washer and screw)
Colonnes conique (avec rondelles et vises)
International führungssäule mit konischem schaft (mit scheibe und schraube)

Tipo C5A / DIN 9825 / ISO 9182-4



D1	L1	L3	L	M	S	D5
24	100 112 125 140 160 180 200 224 250	35	123 135 148 163 183 203 223 247 273	M 8x20	3	25
30	112 125 140 160 180 200 224 250 280	48	145 158 173 193 213 233 257 283 313	M 8x20	3	32
30	125 140 160 180 200 224 250 280 315	48	158 173 193 213 233 257 283 313 348	M 8x20	3	32
48	140 160 180 200 224 250 280 315 355	58	180 200 220 240 264 290 320 355 395	M 10x20	5	50
60	160 180 200 224 250 280 315 355	69	211 231 251 275 301 331 366 406	M 12x20	6	63

D1	L1	L3	L	M	S	D5
25	100 112 125 140 160 180 200 224 250	35	123 135 148 163 183 203 223 247 273	M 8x20	3	25
32	112 125 140 160 180 200 224 250 280	48	145 158 173 193 213 233 257 283 313	M 8x20	3	32
40	125 140 160 180 200 224 250 280 315	48	158 173 193 213 233 257 283 313 348	M 8x20	3	32
50	140 160 180 200 224 250 280 315 355	58	180 200 220 240 264 290 320 355 395	M 10x20	5	50
63	160 180 200 224 250 280 315 355	69	211 231 251 275 301 331 366 406	M 12x20	6	63

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

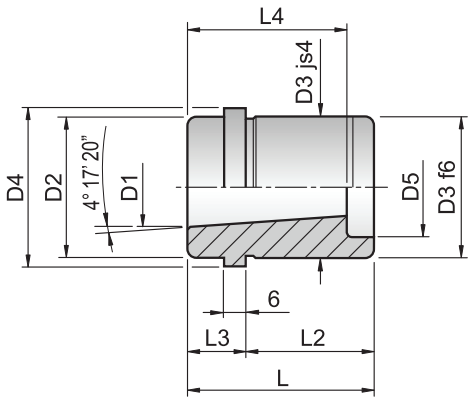
Cementate - temprate - rettificate

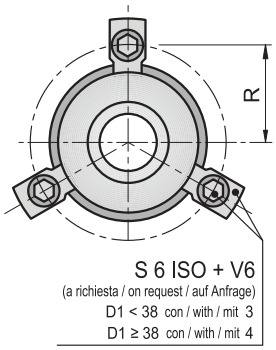
Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola conica
Demountable conical bush
Bagues conique
Haltebuchse für konische führungssäule c5a

Tipo BEAC / DIN 9825 / ISO 9182-4





D1	L	D2	D3	D4	D5	R	L2	L3	L4
24	49	40	40	48	26	30	37	12	36
24	59	40	40	48	26	30	47	12	36
25	49	40	40	48	26	30	37	12	36
25	59	40	40	48	26	30	47	12	36
30	52	48	48	56	33	33,5	37	15	49
30	62	48	48	56	33	33,5	47	15	49
32	52	48	48	56	33	33,5	37	15	49
32	62	48	48	56	33	33,5	47	15	49
38	62	58	58	66	41	38,5	47	15	49
38	75	58	58	66	41	38,5	60	15	49
40	62	58	58	66	41	38,5	47	15	49
40	75	58	58	66	41	38,5	60	15	49
48	65	70	70	80	51	45,5	47	18	59
48	78	70	70	80	51	45,5	60	18	59
50	65	70	70	80	51	45,5	47	18	59
50	78	70	70	80	51	45,5	60	18	59
60	78	85	85	95	64	53	77	18	70
63	78	85	85	95	64	53	60	18	70
63	95	85	85	95	64	53	77	18	70

Acciaio
Steel
Acier
Werkstoff

Brass

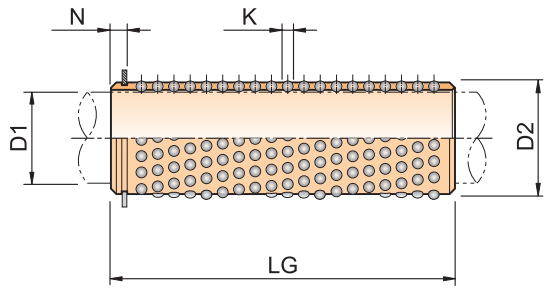
Durezza
Hardness
Dureté
Härte

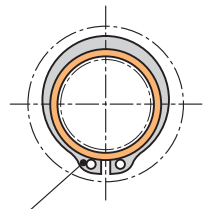
Hardened Steel (DIN 5401)

Esecuzione
Finish
Exécution
Ausführung

Gabbia a sfere con scanalatura per anello d'arresto
Ball cage with circlip groove
Cages à billes avec rainur pour arret
Kugelkäfig mit sicherungsring

Tipo GSA





SEEGER (DIN 471) compreso
CIRCLIP GROVE (DIN 471) included
SICHERUNGSRING (DIN 471) enthalten

D1	D2	LG	K	BALLS	N
12	16	40	2	176	2,20
		56		272	
15	21	31	3	96	2,90
		40		128	
		45		144	
		56		192	
		63		224	
		71		256	
16	22	31	3	96	2,90
		40		128	
		45		144	
		56		192	
		63		224	
		71		256	
18	24	45	3	180	2,90
		56		240	
		71		320	
19	25	45	3	180	2,90
		56		240	
		71		320	
		80		360	
		95		440	
20	26	45	3	180	2,90
		56		240	
		71		320	
		80		360	
		95		440	
24	30	40	3	160	3,20
		45		180	
		56		240	
		71		320	
		80		360	
		95		440	
		105		500	
		120		560	

D1	D2	LG	K	BALLS	N
25	31	40	3	160	3,20
		45		180	
		56		240	
		71		320	
		80		360	
		95		440	
		105		500	
		120		560	
30	38	40	3	120	3,95
		45		140	
		50		160	
		56		180	
		71		240	
		75		260	
		80		280	
		95		340	
		105		380	
		120		440	
		140		520	
		160		600	
32	40	40	4	120	3,95
		45		140	
		50		160	
		56		180	
		71		240	
		75		260	
		80		280	
		95		340	
		105		380	
		120		440	
		140		520	
		160		600	
38	46	45	4	168	3,95
		50		192	
40	48	45	4	168	3,95
		50		192	

Gabbia a sfere con scanalatura per anello d'arresto
Ball cage with circlip groove
Cages à billes avec rainur pour arret
Kugelkäfig mit sicherungsring

Tipo GSA

D1	D2	LG	K	BALLS	N
38	46	56	4	216	3,95
		63		264	
		80		336	
		95		408	
		105		456	
		120		528	
		140		624	
		160		720	
		180		816	
		200		912	
		240		1104	
48	56	50	4	224	4,25
		63		308	
		80		392	
		95		476	
		105		532	
		120		616	
		140		728	
		160		840	
		180		952	
		200		1064	
		240		1288	
60	68	95	4	544	4,75
		105		608	
		120		704	
		140		832	
		160		960	
		180		1088	
		200		1216	
		240		1472	

D1	D2	LG	K	BALLS	N
40	48	56	4	216	3,95
		63		264	
		80		336	
		95		408	
		105		456	
		120		528	
		140		624	
		160		720	
		180		816	
		200		912	
		240		1104	
50	58	50	4	224	4,25
		63		308	
		80		392	
		95		476	
		105		532	
		120		616	
		140		728	
		160		840	
		180		952	
		200		1064	
		240		1288	
63	71	95	4	544	4,75
		105		608	
		120		704	
		140		832	
		160		960	
		180		1088	
		200		1216	
		240		1472	
80	92	120	6	540	6,15
		140		648	
		160		756	
		180		864	
		200		972	
		240		1152	

Acciaio
Steel
Acier
Werkstoff

Brass

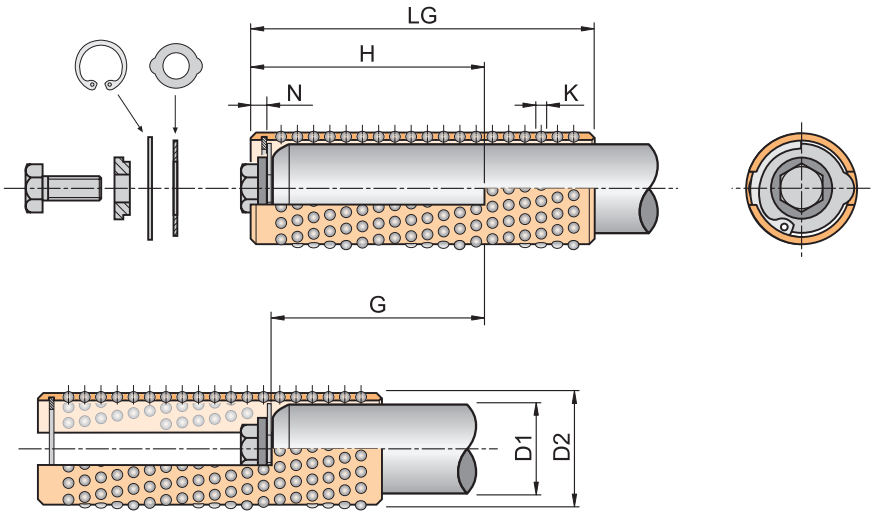
Durezza
Hardness
Dureté
Härte

Hardened Steel (DIN 5401)

Esecuzione
Finish
Exécution
Ausführung

Gabbia a sfere con bloccaggio
Ball cage with arrest groove
Cages à billes avec bloccage
Kugelkäfig mit käfighalter

Tipo GSAB



D1	L	LG	H	G	K	N
19	25	56	31	26,9	3	2,6
		72	41	36,9		
		80	51	46,9		
24	30	56	31	26,9	3	2,6
		72	41	36,9		
		80	51	46,9		
30	38	70	41	36,9	4	2,6
		80	51	46,9		
		95	61	56,9		
		105	61	56,9		
38	46	80	51	45,5	4	3,5
		95	61	55,5		
		105	61	55,5		
		120	73	67,5		
48	56	80	51	44,7	4	4,3
		95	61	54,7		
		105	61	54,7		
		120	73	66,7		
60	68	95	61	54,7	4	4,3
		120	73	66,7		
		140	83	76,7		

D1	L	LG	H	G	K	N
20	26	56	31	26,9	3	2,6
		72	41	36,9		
		80	51	46,9		
25	31	56	31	26,9	3	2,6
		72	41	36,9		
		80	51	46,9		
32	40	70	41	36,9	4	2,6
		80	51	46,9		
		95	61	56,9		
		105	61	56,9		
40	48	80	51	45,5	4	3,5
		95	61	55,5		
		105	61	55,5		
		120	73	67,5		
50	58	80	51	44,7	4	4,3
		95	61	54,7		
		105	61	54,7		
		120	73	66,7		
63	71	95	61	54,7	4	4,3
		120	73	66,7		
		140	83	76,7		
80	92	95	61	54	6	5
		120	73	66		
		140	83	76		

Acciaio
Steel
Acier
Werkstoff

Polyacetat

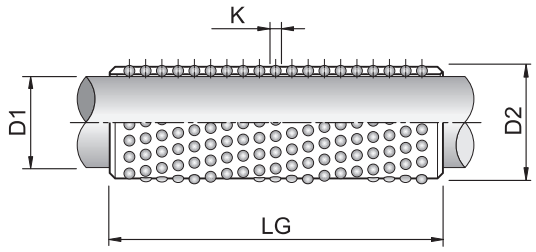
Durezza
Hardness
Dureté
Härte

Hardened Steel (DIN 5401)

Esecuzione
Finish
Exécution
Ausführung

Gabbia a sfere in plastica
Plastic ball cage
Cages à billes au plastique
Kugelkäfig aus kunststoff

Tipo GSAP



D1	LG	D2	K
10	10	14	2
	15		
	20		
	25		
	30		
	35		
	40		
	45		
	50		
12	10	16	2
	15		
	20		
	25		
	30		
	35		
	40		
	45		
	50		
15	10	22	2
	15		
	20		
	25		
	30		
	35		
	40		
	45		
	50		
	60		

Acciaio
Steel
Acier
Werkstoff

CM
100 Cr 6
Colonna
Pillar
Führungssäulen

GSA / GSAS1
Brass
Gabbia a sfera
Ball cage
Kugelkäfige

BGA
100 Cr 6
Bussola
Bush
Führungsbuchsen

Durezza
Hardness
Dureté
Härte

CM
60÷64 HRC
Colonna
Pillar
Führungssäulen

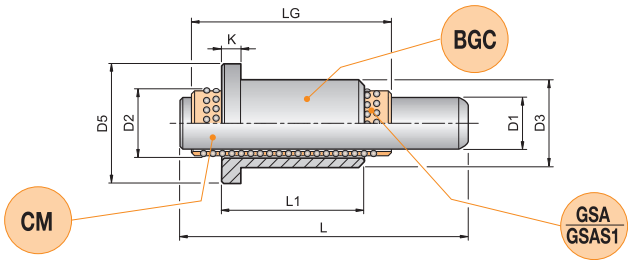
GSA / GSAS1
Hardened Steel (DIN 5401)
Gabbia a sfera
Ball cage
Kugelkäfige

BGA
60÷64 HRC
Bussola
Bush
Führungsbuchsen

Esecuzione
Finish
Exécution
Ausführung

Set colonne bussole gabbie a sfera, piccole dimensioni
Guide pillars guide bushes ball cages, small dimensions
Set colonnes, cagues à billes, petit dimensions
Führungssäulen kugelkäfige führungsbuchsen, kleine abmessungen

Tipo SET A



CM

D1	L
3	30
	x
	x
	x
	60
4	30
	x
	x
	x
	60
5	40
	x
	x
	x
	80
6	40
	x
	x
	x
	x
	x
	80
8	50
	x
	x
	x
	x
	x
	100
10	60
	x
	x
	x
	x
	x
	120
12	60
	x
	x
	x
	120

GSA / GSAS1

D1	LG	D2
3	10	5
	15	
	20	
4	10	6
	15	
	20	
5	10	7
	15	
	20	
	25	
6	10	8
	15	
	20	
	25	
	30	
8	10	10
	15	
	20	
	25	
	30	
10	15	12
	20	
	25	
	30	
12	20	14
	25	
	30	
	40	

BGA

D2	L1	D3
5	10	7
	15	
	20	
	25	
	30	
6	10	8
	15	
	20	
	25	
	30	
7	10	10
	15	
	20	
	25	
	30	
8	10	11
	15	
	20	
	25	
	30	
	35	
	40	
10	10	14
	15	
	20	
	25	
	30	
	35	
	40	
12	10	18
	15	
	20	
	25	
	30	
	35	
	40	
14	20	20
	25	
	30	
	35	
	40	

Acciaio
Steel
Acier
Werkstoff

CM
100 Cr 6
Colonna
Pillar
Führungssäulen

GSA / GSAS1
Brass
Gabbia a sfera
Ball cage
Kugelkäfige

BGA
100 Cr 6
Bussola
Bush
Führungsbuchsen

Durezza
Hardness
Dureté
Härte

CM
60÷64 HRC
Colonna
Pillar
Führungssäulen

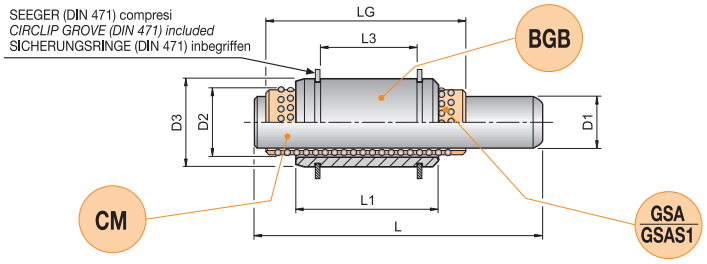
GSA / GSAS1
Hardened Steel (DIN 5401)
Gabbia a sfera
Ball cage
Kugelkäfige

BGA
60÷64 HRC
Bussola
Bush
Führungsbuchsen

Esecuzione
Finish
Exécution
Ausführung

Set colonne bussole gabbie a sfera, piccole dimensioni
Guide pillars guide bushes ball cages, small dimensions
Set colonnes, cagues à billes, petit dimensions
Führungssäulen kugelkäfige führungsbuchsen, kleine abmessungen

Tipo SET B



CM

D1	L
3	30
	x
	x
	60
4	30
	x
	x
	60
5	40
	x
	x
	x
	80
6	40
	x
	x
	x
	x
	x
	80
8	50
	x
	x
	x
	x
	x
	100
10	60
	x
	x
	x
	x
	x
	120
12	60
	x
	x
	x
	120

GSA / GSAS1

D1	LG	D2
3	10	5
	15	
	20	
4	10	6
	15	
	20	
5	10	7
	15	
	20	
	25	
6	10	8
	15	
	20	
	25	
	30	
8	10	10
	15	
	20	
	25	
	30	
10	15	12
	20	
	25	
	30	
12	20	14
	25	
	30	
	40	

BGB

D2	L1	L3	D3
5	10		7
	20		
	30		
6	10		8
	20		
	30		
7	20	10	10
	30	20	
8	20	10	11
	30	20	
	40	30	
10	20	10	12
	30	20	
	40	30	
12	30	20	16
	40	30	
	50	40	
14	30	20	18
	40	30	
	50	40	

Acciaio
Steel
Acier
Werkstoff

CM
100 Cr 6
Colonna
Pillar
Führungssäulen

GSA / GSAS1
Brass
Gabbia a sfera
Ball cage
Kugelkäfige

BGA
100 Cr 6
Bussola
Bush
Führungsbuchsen

Durezza
Hardness
Dureté
Härte

CM
60÷64 HRC
Colonna
Pillar
Führungssäulen

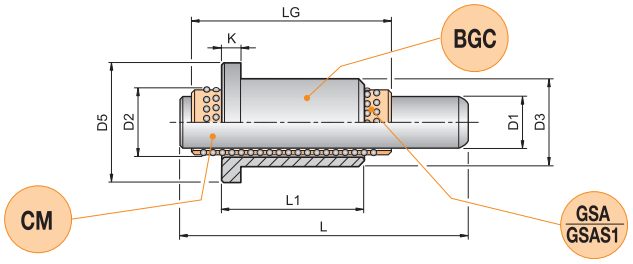
GSA / GSAS1
Hardened Steel (DIN 5401)
Gabbia a sfera
Ball cage
Kugelkäfige

BGA
60÷64 HRC
Bussola
Bush
Führungsbuchsen

Esecuzione
Finish
Exécution
Ausführung

Set colonne bussole gabbie a sfera, piccole dimensioni
Guide pillars guide bushes ball cages, small dimensions
Set colonnes, cagues à billes, petit dimensions
Führungssäulen kugelkäfige führungsbuchsen, kleine abmessungen

Tipo SET C



CM

D1	L
3	30
	x
	x
	x
	60
4	30
	x
	x
	x
	60
5	40
	x
	x
	x
	80
6	40
	x
	x
	x
	x
	x
	80
8	50
	x
	x
	x
	x
	x
	100
10	60
	x
	x
	x
	x
	x
	120
12	60
	x
	x
	x
	120

GSA / GSAS1

D1	LG	D2
3	10	5
	15	
	20	
4	10	6
	15	
	20	
5	10	7
	15	
	20	
	25	
6	10	8
	15	
	20	
	25	
	30	
8	10	10
	15	
	20	
	25	
	30	
10	15	12
	20	
	25	
	30	
12	20	14
	25	
	30	
	40	

BGC

D2	L1	K	D3	D5
5	10	2,5	7	9
	20			
	30			
6	10	3	8	10
	20			
	30			
7	10	3	10	12
	20			
	30			
8	20	4	11	13
	30			
	40			
10	20	4	12	14
	30			
	40			
12	30	4	16	18
	40			
	50			
14	30	4	18	20
	40			
	50			

Acciaio
Steel
Acier
Werkstoff

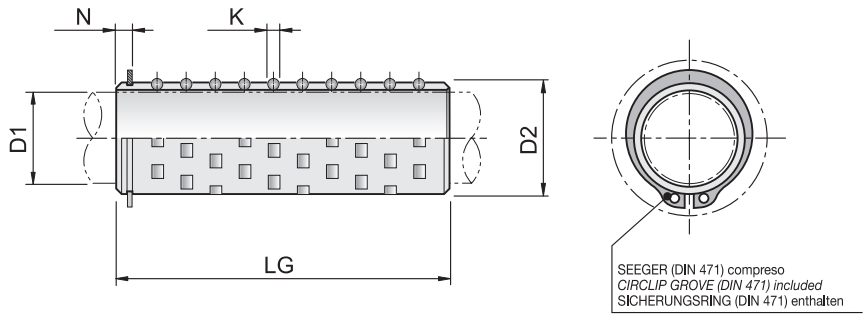
Aluminum

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Gabbia a rulli
Roller cage
Cage à rouleaux
Rollenkäfig

Tipo GR



D1	D2	LG	K	ROLLERS	N
12	16	45	3	40	1,6
		55		48	
		65		56	
		75		64	
24	30	45	3	40	1,6
		55		48	
		65		56	
		75		64	
		85		72	
30	38	45	4	48	2,1
		55		60	
		65		72	
		75		84	
		85		96	
		95		108	
		105		120	
38	46	55	4	72	2,1
		65		84	
		75		96	
		85		108	
		95		120	
		105		120	
		115		144	
		125		156	
48	56	65	4	105	2,1
		75		120	
		85		135	
		95		150	
		105		165	
		115		165	
		125		195	

D1	D2	LG	K	ROLLERS	N
20	26	45	3	40	1,6
		55		48	
		65		56	
		75		64	
25	31	45	3	40	1,6
		55		48	
		65		56	
		75		64	
		85		72	
32	40	45	4	48	2,1
		55		60	
		65		72	
		75		84	
		85		96	
		95		108	
		105		120	
40	48	55	4	72	2,1
		65		84	
		75		96	
		85		108	
		95		120	
		105		120	
		115		144	
		125		156	
50	58	65	4	105	2,1
		75		120	
		85		135	
		95		150	
		105		165	
		115		165	
		125		195	

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

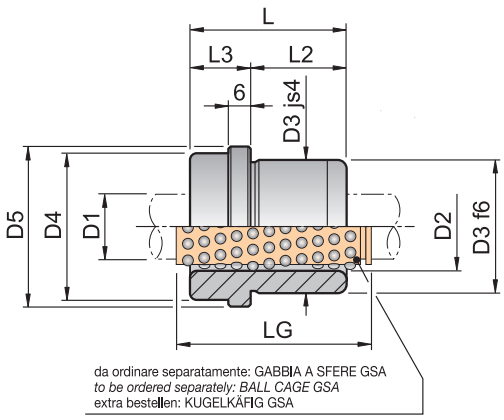
Cementate - temprate - rettificate

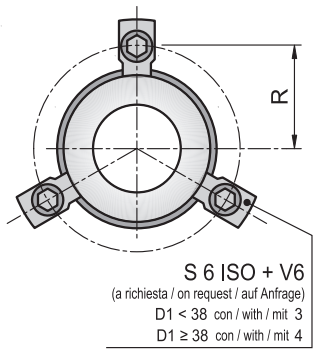
Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile per gabbia a sfere
Demountable bush for ball cage
Bagues demontables pour cages à billes
Kugelführungsbuchse mit bund

Tipo BEAG / ISO 9448-7





BEAG-7

D1	D2	D3	D4	D5	R	L	L2	L3	LG
19	25	32	32	40	26	35	23	12	45
20	26	32	32	40	26	35	23	12	45
24	30	40	40	48	30	35	23	12	45
25	31	40	40	48	30	35	23	12	45
30	38	48	48	56	33,5	42	30	12	56
32	40	48	48	56	33,5	42	30	12	56
38	46	58	58	66	38,5	52	37	15	63
48	56	70	70	80	45,5	65	47	18	80
50	58	70	70	80	45,5	65	47	18	80
60	68	85	85	95	53	80	60	20	95
63	71	85	85	95	53	80	60	20	95
63	71	85	85	95	53	80	60	20	95
80	92	105	105	118	64,5	80	60	20	120

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

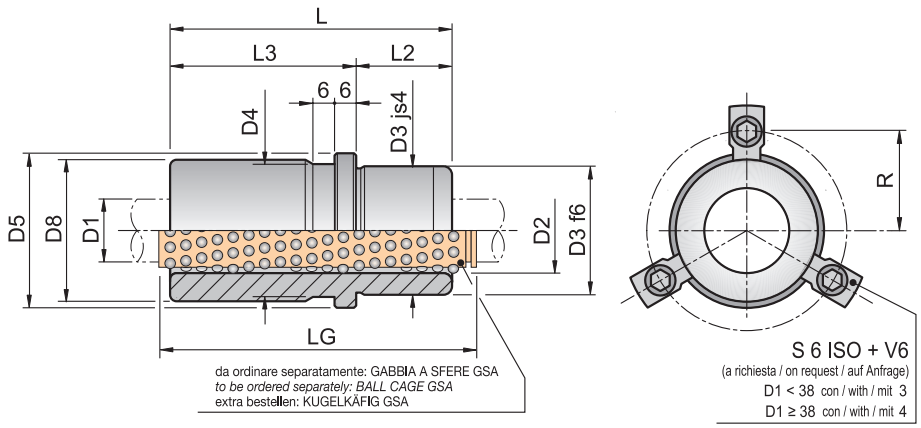
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile per gabbia a sfere
Demountable bush for ball cage
Bagues demontables pour cages à billes
Kugelführungsbuchse mit bund

Tipo BEAG / ISO 9448-7



BEAG-4

D1	D2	D3	D4	D5	D8	R	L	L2	L3	LG
19	25	32	32	40	39	26	59	23	36	71
20	26	32	32	40	39	26	59	23	36	71
24	30	40	40	48	46	30	79	23	56	95
25	31	40	40	48	46	30	79	23	56	95
30	38	48	48	56	53	33,5	93	30	63	120
32	40	48	48	56	53	33,5	93	30	63	120
38	46	58	58	66	63	38,5	108	37	71	120
40	48	58	58	66	63	38,5	108	37	71	120
48	56	70	70	80	77	45,5	127	47	80	140
50	58	70	70	80	77	45,5	127	47	80	140
60	68	85	85	95	92	53	150	60	90	160
63	71	85	85	95	92	53	150	60	90	160
80	92	105	105	118	115	64,5	150	60	90	160

BEAG-5

D1	D2	D3	D4	D5	D8	R	L	L2	L3	LG
24	30	40	40	48	46	30	80	30	50	95
25	31	40	40	48	46	30	80	30	50	95
30	38	48	48	56	53	33,5	93	37	56	120
32	40	48	48	56	53	33,5	93	37	56	120
38	46	58	58	66	63	38,5	110	47	63	140
40	48	58	58	66	63	38,5	110	47	63	140
48	56	70	70	80	77	45,5	131	60	71	160
50	58	70	70	80	77	45,5	131	60	71	160

BEAG-6

D1	D2	D3	D4	D5	D8	R	L	L2	L3	LG
19	25	32	32	40	39	26	43	23	50	56
20	26	32	32	40	39	26	43	23	20	56
24	30	40	40	48	46	30	59	23	36	71
25	31	40	40	48	46	30	59	23	36	71
30	38	48	48	56	53	33,5	75	30	45	95
32	40	48	48	56	53	33,5	75	30	45	95
38	46	58	58	66	63	38,5	82	37	45	105
40	48	58	58	66	63	38,5	82	37	45	105
48	56	70	70	80	77	45,5	97	47	50	120
50	58	70	70	80	77	45,5	97	47	50	120
60	68	85	85	95	92	53	116	60	56	140
63	71	85	85	95	92	53	116	60	56	140
80	92	105	105	118	115	64,5	120	60	60	140

BEAG-9

D1	D2	D3	D4	D5	D8	R	L	L2	L3	LG
24	30	40	40	48	46	30	55	30	25	71
25	31	40	40	48	46	30	55	30	25	71
30	38	48	48	56	53	33,5	69	37	32	80
32	40	48	48	56	53	33,5	69	37	32	80
38	46	58	58	66	63	38,5	79	47	32	95
40	48	58	58	66	63	38,5	79	47	32	95
48	56	70	70	80	77	45,5	96	60	36	120
50	58	70	70	80	77	45,5	96	60	36	120

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

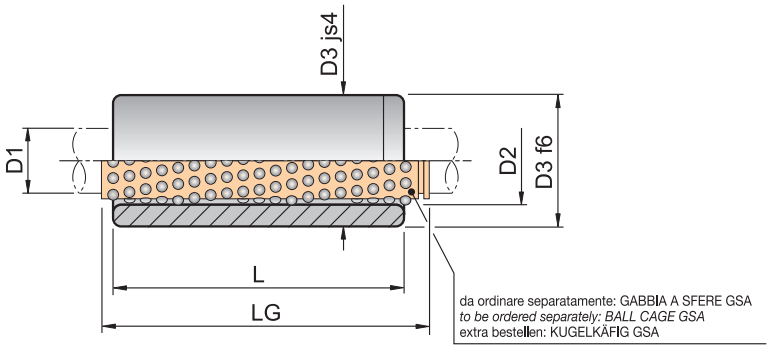
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola liscia per gabbia a sfere
Guide bush for ball cage
Bagues lisses pour cages à billes
Kugelführungsbuchse

Tipo BLAG / ISO 9448-3



D1	L	LG	D2	D3
15	23	45	21	28
	30	45		
	37	45		
	47	56		
	60	71		
16	23	45	22	28
	30	45		
	37	45		
	47	56		
	60	71		
19	23	45	25	32
	30	45		
	37	45		
	47	56		
	60	71		
	77	95		
20	23	45	26	32
	30	45		
	37	45		
	47	56		
	60	71		
	77	95		
24	23	45	30	40
	30	45		
	37	45		
	47	56		
	60	71		
	77	95		
25	23	45	31	40
	30	45		
	37	45		
	47	56		
	60	71		
	77	95		
30	30	45	38	48
	37	50		
	47	56		

D1	L	LG	D2	D3
30	60	71	38	48
	77	95		
	95	120		
32	30	45	40	48
	37	50		
	47	56		
	60	71		
	77	95		
	95	120		
38	30	45	46	58
	37	50		
	47	63		
	60	80		
	77	95		
	95	120		
	120	140		
40	30	45	48	58
	37	50		
	47	63		
	60	80		
	77	95		
	95	120		
	120	140		
48	37	50	56	70
	47	63		
	60	80		
	77	95		
	95	120		
	120	140		
50	37	50	58	70
	47	63		
	60	80		
	77	95		
	95	120		
	120	140		
60	60	95	68	85
	77	95		

D1	L	LG	D2	D3
60	95	120	68	85
	120	140		
63	60	95	71	85
	77	95		
	95	120		
	120	140		
80	120	140	92	105

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

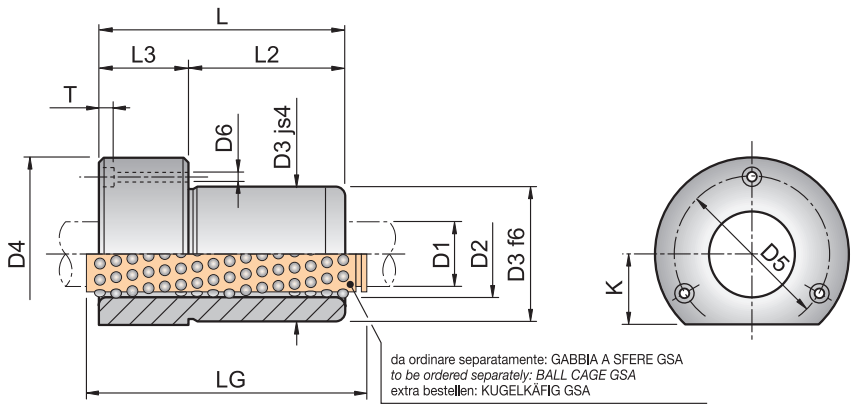
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola a collare per gabbia a sfere
Flanged guide bush for ball cage
Bagues a collarette pour cages à billes
Kugelführungsbuchse mit flansch

Tipo B5AG / DIN 9831 / ISO 9448-5



B5AG-4

D1	D2	D3	D4	D5	K	L	L	L2	L3
19	25	35	50	40	18	52	37	15	71
20	26	32	50	40	18	52	37	15	71
24	30	40	63	50	23	62	37	25	71
25	31	40	63	50	23	62	37	25	71
30	38	48	72	58	28	72	47	25	80
32	40	48	72	58	28	72	47	25	80
38	46	58	85	70	33	77	47	30	95
40	48	58	85	70	33	77	47	30	95
48	56	70	104	86	38	102	60	42	120
50	58	70	104	86	38	102	60	42	120
60	68	85	120	100	46	102	60	42	120
63	71	85	120	100	46	102	60	42	120
80	92	105	148	125	56	125	75	50	140

B5AG-5

D1	D2	D3	D4	D5	K	L	L	L2	L3
15	21	28	45	35	15	36	30	6	45
16	22	28	45	35	15	36	30	6	45
19	25	32	50	40	18	45	30	15	56
20	26	32	50	40	18	45	30	15	56
24	30	40	63	50	23	55	30	25	71
25	31	40	63	50	23	55	30	25	71
30	38	48	72	58	28	62	37	25	71
32	40	48	72	58	28	62	37	25	71
38	46	58	85	70	33	67	37	30	80
40	48	58	85	70	33	67	37	30	80
48	56	70	104	86	38	89	47	42	95
50	58	70	104	86	38	89	47	42	95
60	68	85	120	100	46	89	47	42	95
63	71	85	120	100	46	89	47	42	95

D1	D6	T
15	4,5	3,4
16	4,5	3,4
19	4,5	4,6
20	4,5	4,6
24	5,5	5,7
25	5,5	5,7
30	5,5	5,7
32	5,5	5,7
38	6,6	6,8
40	6,6	6,8
48	9	9
50	9	9
60	9	9
63	9	9
80	11	11

B5AG-6

D1	D2	D3	D4	D5	K	L	L2	L3	LG
15	21	28	45	35	15	29	23	6	45
16	22	28	45	35	15	29	23	6	45
19	25	32	50	40	18	38	23	15	45
20	26	32	50	40	18	38	23	15	45
24	30	40	63	50	23	38	23	15	45
25	31	40	63	50	23	38	23	15	45
30	38	48	72	58	28	45	30	15	56
32	40	48	72	58	28	45	30	15	56
38	46	58	85	70	33	55	30	25	63
40	48	58	85	70	33	55	30	25	63
48	56	70	104	86	38	62	37	25	80
50	58	70	104	86	38	62	37	25	80

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

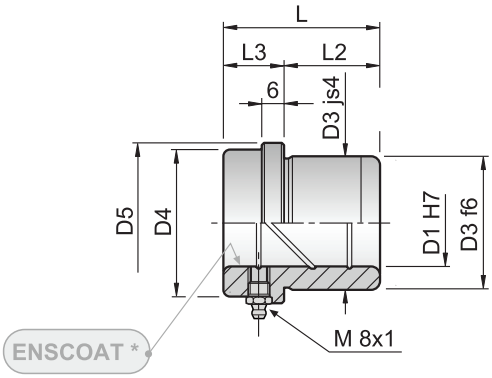
Cementate - temprate - rettificate

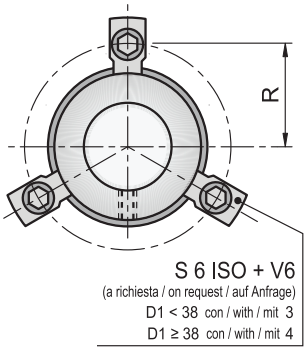
Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile autolubrificante
Demountable bush self-lube
Bagues demontables autolubrifiant
Selbstschmierende führungsbuchse mit bund

Tipo BEA / ISO 9448-6





BEA-5

D1	D3	D4	D5	R	L	L2	L3
19	32	32	40	26	35	23	12
20	32	32	40	26	35	23	12
24	40	40	48	30	35	23	12
25	40	40	48	30	35	23	12
30	48	48	56	33,5	42	30	12
32	48	48	56	33,5	42	30	12
38	58	58	66	38,5	52	37	15
40	58	58	66	38,5	52	37	15
48	70	70	80	45,5	65	47	18
50	70	70	80	45,5	65	47	18
60	85	85	95	53	80	60	20
63	85	85	95	53	80	60	20

Rivestimento ENSCOAT *
Mediante un trattamento meccanico si creano superficialmente delle microporosità che vengono riempite da polimeri fluorocarbonici. Grazie a questo processo, l'usura superficiale dei polimeri non preclude le caratteristiche del trattamento. Buone proprietà antigrippanti, basso coefficiente di attrito (0,06) sono sviluppate grazie alla combinazione fluoropolimeri-grafite.

ENSCOAT * coating
By a mechanical treatment, superficially some micropores are forming. This microporosity is filled with fluorocarbon polymers. Thanks to this process, the surface wear of polymers does not change characteristics of treatment.
Good anti-seized properties and low friction coefficient (0,06) are developed through the combinationof fluoropolymers and graphite.

ENSCOAT *- Beschichtung
Die ENSCOAT-Beschichtung ist eine Oberflächenbeschichtung auf Basis von Fluoropolymeren, die auf die Oberfläche der Führungsbuchse aufgetragen wird und in die äußere Schicht des Materials eindringt. Da diese Beschichtung in die Poren des Materials eindringt, gehen auch bei verschleißten Teilen die Gleiteigenschaften nicht verloren. Dank der Kombination Fluoropolymere-Grafit verbindet die ENSCOATBeschichtung gute selbstschmierende Eigenschaften und einen niedrigen Reibungskoeffizienten (0,06).

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

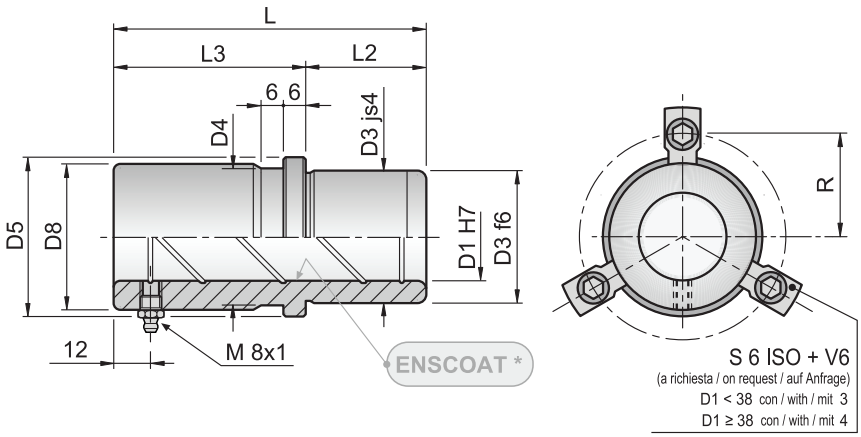
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile autolubrificante
Demountable bush self-lube
Bagues demontables autolubrifiant
Selbstschmierende führungsbuchse mit bund

Tipo BEA / ISO 9448-6



BEA-4

D1	D3	D4	D5	D8	R	L	L2	L3
19	32	32	40	39	26	43	23	20
20	32	32	40	39	26	43	23	20
24	40	40	48	46	30	59	23	36
25	40	40	48	46	30	59	23	36
30	48	48	56	53	33,5	75	30	45
32	48	48	56	53	33,5	75	30	45
38	58	58	66	63	38,5	82	37	45
40	58	58	66	63	38,5	82	37	45
48	70	70	80	77	45,5	97	47	50
50	70	70	80	77	45,5	97	47	50
60	85	85	95	92	53	116	60	56
63	85	85	95	92	53	116	60	56

BEA-1

D1	D3	D4	D5	D8	R	L	L2	L3
19	32	32	40	39	26	59	23	36
20	32	32	40	39	26	59	23	36
24	40	40	48	46	30	79	23	56
25	40	40	48	46	30	79	23	56
30	48	48	56	53	33,5	93	30	63
32	48	48	56	53	33,5	93	30	63
38	58	58	66	63	38,5	108	37	71
40	58	58	66	63	38,5	108	37	71
48	70	70	80	77	45,5	127	47	80
50	70	70	80	77	45,5	127	47	80
60	85	85	95	92	53	150	60	90
63	85	85	95	92	53	150	60	90

Rivestimento ENSCOAT *
Mediante un trattamento meccanico si creano superficialmente delle microporosità che vengono riempite da polimeri fluorocarbonici. Grazie a questo processo, l'usura superficiale dei polimeri non preclude le caratteristiche del trattamento. Buone proprietà antigrippanti, basso coefficiente di attrito (0,06) sono sviluppate grazie alla combinazione fluoropolimeri-grafite.

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By a mechanical treatment, superficially some micropores are forming. This microporosity is filled with fluorocarbon polymers. Thanks to this process, the surface wear of polymers does not change characteristics of treatment.
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Die ENSCOAT-Beschichtung ist eine Oberflächenbeschichtung auf Basis von Fluoropolymeren, die auf die Oberfläche der Führungsbuchse aufgetragen wird und in die äußere Schicht des Materials eindringt. Da diese Beschichtung in die Poren des Materials eindringt, gehen auch bei verschleißten Teilen die Gleiteigenschaften nicht verloren. Dank der Kombination Fluoropolymere-Grafit verbindet die ENSCOATBeschichtung gute selbstschmierende Eigenschaften und einen niedrigen Reibungskoeffizienten (0,06).

Acciaio
Steel
Acier
Werkstoff

1.7131 Bronze

Durezza
Hardness
Dureté
Härte

52÷54 HRC

Esecuzione
Finish
Exécution
Ausführung

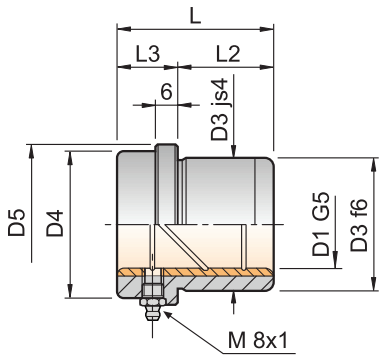
Cementate - temprate - rettificate

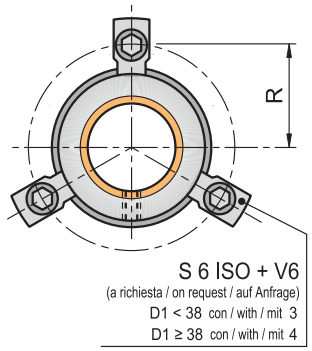
Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile acciaio / bronzo
Demountable bush steel / bronze
Bagues demonatble avec bronze
Führungsbuchse mit bund mit bronzeeinsatz

Tipo BEBA / ISO 9448





BEBA-5

D1	D3	D4	D5	R	L	L2	L3
19	32	32	40	26	35	23	12
20	32	32	40	26	35	23	12
24	40	40	48	30	35	23	12
25	40	40	48	30	35	23	12
30	48	48	56	33,5	42	30	12
32	48	48	56	33,5	42	30	12
38	58	58	66	38,5	52	37	15
40	58	58	66	38,5	52	37	15
48	70	70	80	45,5	65	47	18
60	85	85	95	53	80	60	20
63	85	85	95	53	80	60	20
80	105	105	118	64,5	80	60	20

Acciaio
Steel
Acier
Werkstoff

1.7131 Bronze

Durezza
Hardness
Dureté
Härte

52÷54 HRC

Esecuzione
Finish
Exécution
Ausführung

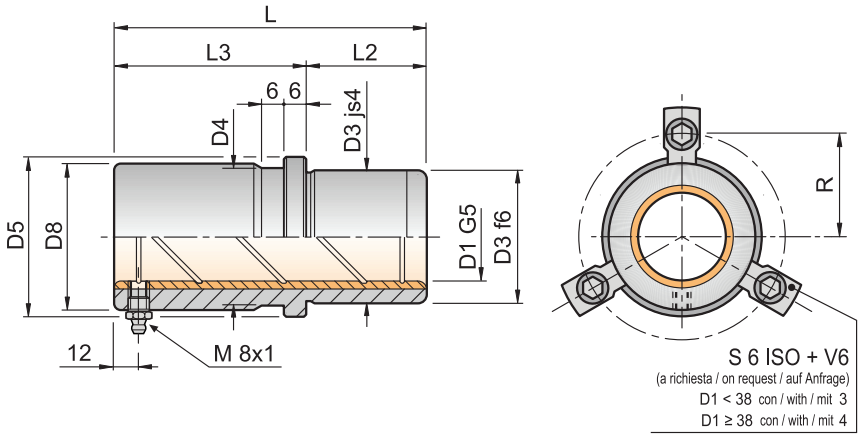
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile acciaio / bronzo
Demountable bush steel / bronze
Bagues demonatble avec bronze
Führungsbuchse mit bund mit bronzeeinsatz

Tipo BEBA / ISO 9448



BEBA-4

D1	D3	D4	D5	D8	R	L	L2	L3
19	32	32	40	39	26	43	23	20
20	32	32	40	39	26	43	23	20
24	40	40	48	46	30	59	23	36
25	40	40	48	46	30	59	23	36
30	48	48	56	53	33,5	75	30	45
32	48	48	56	53	33,5	75	30	45
38	58	58	66	63	38,5	82	37	45
40	58	58	66	63	38,5	82	37	45
48	70	70	80	77	45,5	97	47	50
50	70	70	80	77	45,5	97	47	50
60	85	85	95	92	53	116	60	56
63	85	85	95	92	53	116	60	56
80	105	105	118	115	64,5	120	60	60

BEBA-1

D1	D3	D4	D5	D8	R	L	L2	L3
19	32	32	40	39	26	59	23	36
20	32	32	40	39	26	59	23	36
24	40	40	48	46	30	79	23	56
25	40	40	48	46	30	79	23	56
30	48	48	56	53	33,5	93	30	63
32	48	48	56	53	33,5	93	30	63
38	58	58	66	63	38,5	108	37	71
40	58	58	66	63	38,5	108	37	71
48	70	70	80	77	45,5	127	47	80
50	70	70	80	77	45,5	127	47	80
60	85	85	95	92	53	150	60	90
63	85	85	95	92	53	150	60	90
80	105	105	118	115	64,5	150	60	90

Acciaio
Steel
Acier
Werkstoff

C45 + Bronze

Durezza
Hardness
Dureté
Härte

54÷58 HRC

Esecuzione
Finish
Exécution
Ausführung

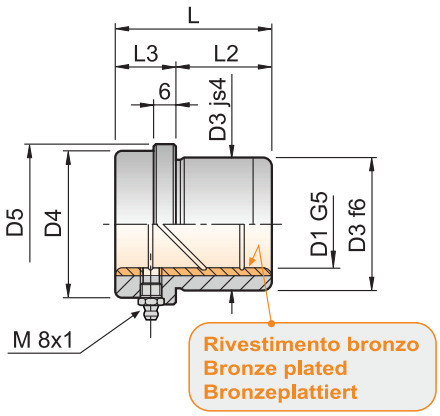
Cementate - temprate - rettificate

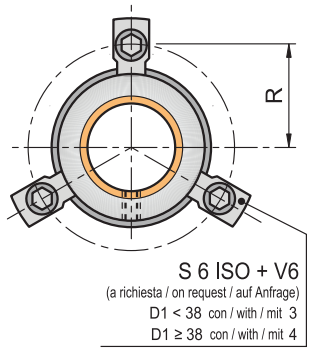
Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile con bronzo
Demountable bush bronze plated
Bagues demonatble avec bronze
Führungsbuchse mit bund bronzeplattiert

Tipo BEBC / ISO 9448-6





BEBC-5

D1	D3	D4	D5	R	L	L2	L3
19	32	32	40	26	35	23	12
20	32	32	40	26	35	23	12
24	40	40	48	30	35	23	12
25	40	40	48	30	35	23	12
30	48	48	56	33,5	42	30	12
32	48	48	56	33,5	42	30	12
38	58	58	66	38,5	52	37	15
40	58	58	66	38,5	52	37	15
48	70	70	80	45,5	65	47	18
60	85	85	95	53	80	60	20
63	85	85	95	53	80	60	20
80	105	105	118	64,5	80	60	20

Acciaio
Steel
Acier
Werkstoff

C45 + Bronze

Durezza
Hardness
Dureté
Härte

54÷58 HRC

Esecuzione
Finish
Exécution
Ausführung

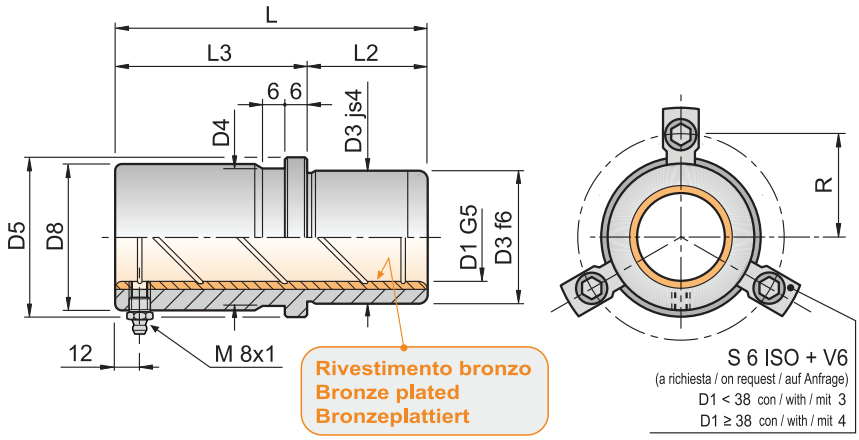
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola estraibile con bronzo
Demountable bush bronze plated
Bagues demonatble avec bronze
Führungsbuchse mit bund bronzeplattiert

Tipo BEBC / ISO 9448-6



BEBC-4

D1	D3	D4	D5	D8	R	L	L2	L3
19	32	32	40	39	26	43	23	20
20	32	32	40	39	26	43	23	20
24	40	40	48	46	30	59	23	36
25	40	40	48	46	30	59	23	36
30	48	48	56	53	33,5	75	30	45
32	48	48	56	53	33,5	75	30	45
38	58	58	66	63	38,5	82	37	45
40	58	58	66	63	38,5	82	37	45
48	70	70	80	77	45,5	97	47	50
50	70	70	80	77	45,5	97	47	50
60	85	85	95	92	53	116	60	56
63	85	85	95	92	53	116	60	56
80	105	105	118	115	64,5	120	60	60

BEBC-1

D1	D3	D4	D5	D8	R	L	L2	L3
19	32	32	40	39	26	59	23	36
20	32	32	40	39	26	59	23	36
24	40	40	48	46	30	79	23	56
25	40	40	48	46	30	79	23	56
30	48	48	56	53	33,5	93	30	63
32	48	48	56	53	33,5	93	30	63
38	58	58	66	63	38,5	108	37	71
40	58	58	66	63	38,5	108	37	71
48	70	70	80	77	45,5	127	47	80
50	70	70	80	77	45,5	127	47	80
60	85	85	95	92	53	150	60	90
63	85	85	95	92	53	150	60	90
80	105	105	118	115	64,5	150	60	90

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

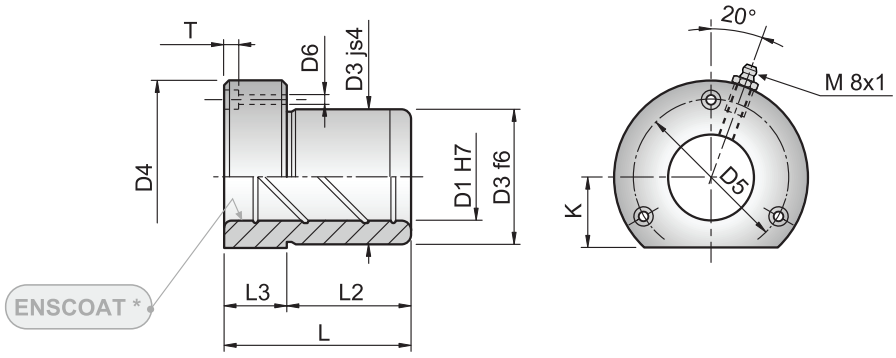
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola a collare autolubrificante
Flanged guide bush self-lube
Bagues a collarette autolubrifiant
Selbstschmierende führungsbuchse mit flansc

Tipo B5A / ISO 9448-4



B5A-1

D1	D3	D4	D5	D6	T	K	L	L2	L3
19	32	50	40	4,5	4,6	18	52	37	15
20	32	50	40	4,5	4,6	18	52	37	15
24	40	63	50	5,5	5,7	23	62	37	25
25	40	63	50	5,5	5,7	23	62	37	25
30	48	72	58	5,5	5,7	28	72	47	25
32	48	72	58	5,5	5,7	28	72	47	25
38	58	85	70	6,6	6,8	33	77	47	30
40	58	85	70	6,6	6,8	33	77	47	30
48	70	104	86	9	9	38	102	60	42
50	70	104	86	9	9	38	102	60	42
60	85	120	1400	9	9	46	102	60	42
63	85	120	100	9	9	46	102	60	42
80	105	148	125	11	11	56	125	75	50

Rivestimento ENSCOAT *
Mediante un trattamento meccanico si creano superficialmente delle microporosità che vengono riempite da polimeri fluorocarbonici. Grazie a questo processo, l'usura superficiale dei polimeri non preclude le caratteristiche del trattamento. Buone proprietà antigrippanti, basso coefficiente di attrito (0,06) sono sviluppate grazie alla combinazione fluoropolimeri-grafite.

ENSCOAT * coating
By a mechanical treatment, superficially some micropores are forming. This microporosity is filled with fluorocarbon polymers. Thanks to this process, the surface wear of polymers does not change characteristics of treatment. Good anti-seized properties and low friction coefficient (0,06) are developed through the combinationof fluoropolymers and graphite.

ENSCOAT *- Beschichtung
Die ENSCOAT-Beschichtung ist eine Oberflächenbeschichtung auf Basis von Fluoropolymeren, die auf die Oberfläche der Führungsbuchse aufgetragen wird und in die äußere Schicht des Materials eindringt. Da diese Beschichtung in die Poren des Materials eindringt, gehen auch bei verschleißten Teilen die Gleiteigenschaften nicht verloren. Dank der Kombination Fluoropolymere-Grafit verbindet die ENSCOATBeschichtung gute selbstschmierende Eigenschaften und einen niedrigen Reibungskoeffizienten (0,06).

B5A-2

D1	D3	D4	D5	D6	T	K	L	L2	L3
15	28	45	35	4,5	3,47	15	36	30	6
16	28	45	35	4,5	3,47	15	36	30	6
19	32	50	40	4,5	4,6	18	45	30	15
20	32	50	40	4,5	4,6	18	45	30	15
24	40	63	50	5,5	5,7	23	55	30	25
25	40	63	50	5,5	5,7	23	55	30	25
30	48	72	58	5,5	5,7	28	62	37	25
32	48	72	58	5,5	5,7	28	62	37	25
38	58	85	70	6,6	6,8	33	67	37	30
40	58	85	70	6,6	6,8	33	67	37	30
48	70	104	86	9	9	38	89	47	42
50	70	104	86	9	9	38	89	47	42
60	85	120	100	9	9	46	89	47	42
63	85	120	100	9	9	46	89	47	42

B5A-4

D1	D3	D4	D5	D6	T	K	L	L2	L3
15	28	45	35	4,5	3,4	15	29	23	6
16	28	45	35	4,5	3,4	15	29	23	6
19	32	50	40	4,5	4,6	18	38	23	15
20	32	50	40	4,5	4,6	18	38	23	15
24	40	63	50	5,5	5,7	23	38	23	15
25	40	63	50	5,5	5,7	23	38	23	15
30	48	72	58	5,5	5,7	28	45	30	15
32	48	72	58	5,5	5,7	28	45	30	15
38	58	85	70	6,6	6,8	33	55	30	25
40	58	85	70	6,6	6,8	33	55	30	25
48	70	104	86	9	9	38	62	37	25
50	70	104	86	9	9	38	62	37	25

Acciaio
Steel
Acier
Werkstoff

1.7131 Bronze

Durezza
Hardness
Dureté
Härte

52÷54 HRC

Esecuzione
Finish
Exécution
Ausführung

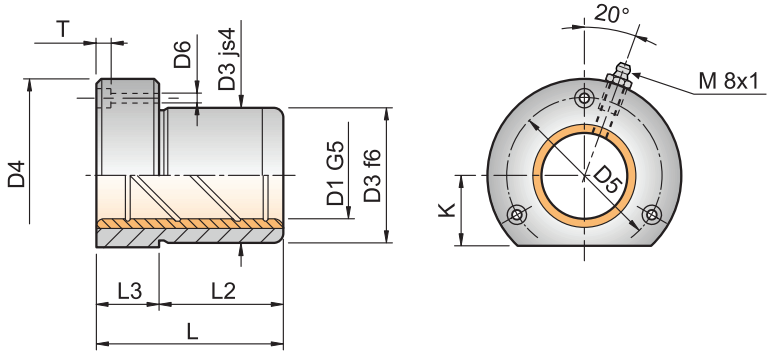
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola a collare con fori di fissaggio acciaio / bronzo
Flanged guide bush, steel / bronze
Bagues a collarette avec trou de fissage
Führungsbuchse mit flansch mit bronzeeinsatz

Tipo B5BA / ISO 9448-4



B5BA-1

D1	D3	D4	D5	D6	T	K	L	L2	L3
19	32	50	40	4,5	4,6	18	52	37	15
20	32	50	40	4,5	4,6	18	52	37	15
24	40	63	50	5,5	5,7	23	62	37	25
25	40	63	50	5,5	5,7	23	62	37	25
30	48	72	58	5,5	5,7	28	72	47	25
32	48	72	58	5,5	5,7	28	72	47	25
38	58	85	70	6,6	6,8	33	77	47	30
40	58	85	70	6,6	6,8	33	77	47	30
48	70	104	86	9	9	38	102	60	42
50	70	104	86	9	9	38	102	60	42
60	85	120	1400	9	9	46	102	60	42
63	85	120	100	9	9	46	102	60	42
80	105	148	125	11	11	56	125	75	50

B5BA-2

D1	D3	D4	D5	D6	T	K	L	L2	L3
15	28	45	35	4,5	3,47	15	36	30	6
16	28	45	35	4,5	3,47	15	36	30	6
19	32	50	40	4,5	4,6	18	45	30	15
20	32	50	40	4,5	4,6	18	45	30	15
24	40	63	50	5,5	5,7	23	55	30	25
25	40	63	50	5,5	5,7	23	55	30	25
30	48	72	58	5,5	5,7	28	62	37	25
32	48	72	58	5,5	5,7	28	62	37	25
38	58	85	70	6,6	6,8	33	67	37	30
40	58	85	70	6,6	6,8	33	67	37	30
48	70	104	86	9	9	38	89	47	42
50	70	104	86	9	9	38	89	47	42
60	85	120	100	9	9	46	89	47	42
63	85	120	100	9	9	46	89	47	42

B5BA-4

D1	D3	D4	D5	D6	T	K	L	L2	L3
15	28	45	35	4,5	3,4	15	29	23	6
16	28	45	35	4,5	3,4	15	29	23	6
19	32	50	40	4,5	4,6	18	38	23	15
20	32	50	40	4,5	4,6	18	38	23	15
24	40	63	50	5,5	5,7	23	38	23	15
25	40	63	50	5,5	5,7	23	38	23	15
30	48	72	58	5,5	5,7	28	45	30	15
32	48	72	58	5,5	5,7	28	45	30	15
38	58	85	70	6,6	6,8	33	55	30	25
40	58	85	70	6,6	6,8	33	55	30	25
48	70	104	86	9	9	38	62	37	25
50	70	104	86	9	9	38	62	37	25

Acciaio
Steel
Acier
Werkstoff

1.1730

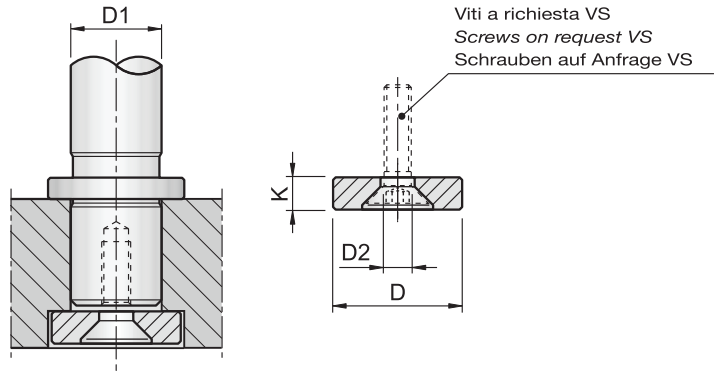
Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

Rondella per colonna CEA / CEAQ
Washer for pillar CEA / CEAQ
Rondelles Pour Colonnes
Halteschreibe CEA / CEAQ

Tipo RTI



D1	D	K	D2
15-16	22	6	8,5
19-20	25	6	8,5
24-25	32	6	8,5
30-32	40	6	8,5
38-40	50	6	8,5
48-50	60	6	8,5
60-63	70	6	8,5
80	93	12	12,5

Acciaio
Steel
Acier
Werkstoff

1.1730

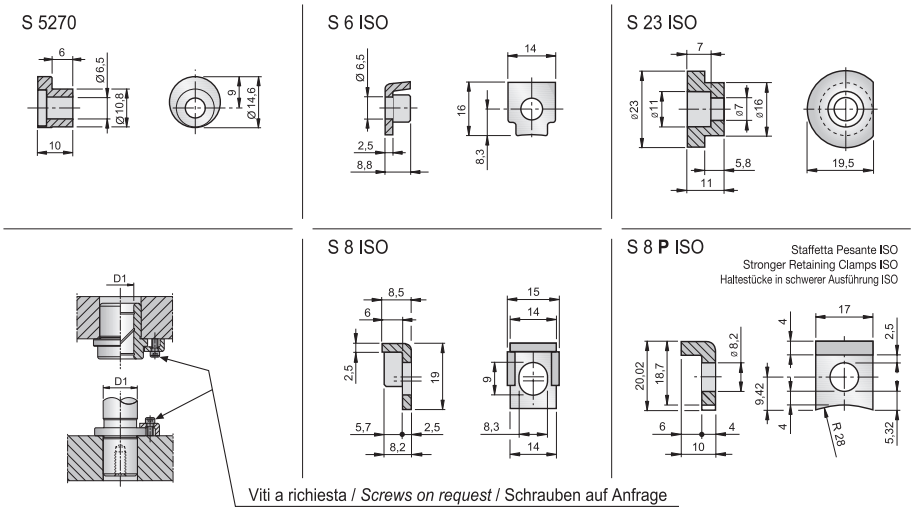
Durezza
Hardness
Dureté
Härte

61÷63 HRC

Esecuzione
Finish
Exécution
Ausführung

Staffette di ritegno
Retaining clamps
Brides de serrage
Haltestücke

Tipo S



Viti a richiesta / *Screws on request* / Schrauben auf Anfrage

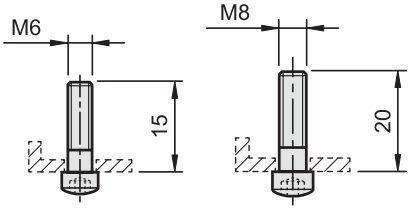
Acciaio
Steel
Acier
Werkstoff

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Viti per staffette
Screws for clamps
Vises pour brides
Schraube

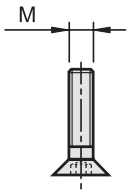
Tipo V / ISO 7380



M
M 6 x 15
M 8 x 20

Viti per rondelle
Screws for washers
Vises pour rondelles
Schraube für haltescheibe

Tipo VS / DIN 7991 / ISO 10642



M
M 8 x 20
M 10 x 20
M 12 x 30

Note

Elementi di guida automotive
Automotive guide elements
Éléments de guidage automobile
Führungselemente nach automobilherstellernorm



Acciaio
Steel
Acier
Werkstoff

< Ø 100 Material: 1.7131
Ø 100 Material: C50

Durezza
Hardness
Dureté
Härte

< Ø 100 Material: 60÷64 HRC
Ø 100 Material: 60÷64 HRC

Esecuzione
Finish
Exécution
Ausführung

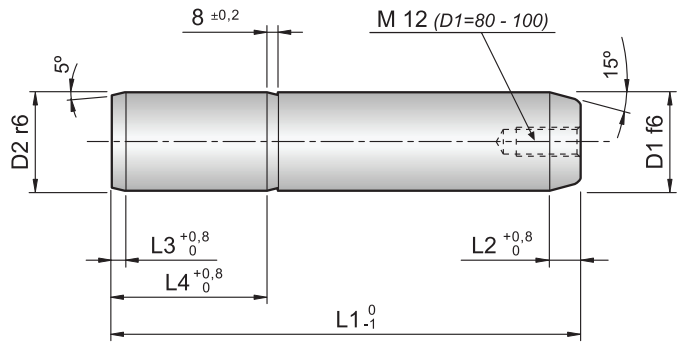
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna DIN 9833
Guide pillar DIN 9833
Colonnes DIN 9833
Führungssäule DIN 9833

Tipo CAU / DIN 9833 / ISO 9182-3



D1	L1	D2	L2	L3	L4
12	125	25	8	4	40
	140				
	160				
	180				
	200				
	224				
32	125	32	8	4	45
	140				
	160				
	180				
	200				
	224				
	250				
40	140	40	8	4	56
	160				
	180				
	200				
	224				
	250				
	280				
50	160	50	10	4	70
	180				
	200				
	224				
	250				
	280				
	315				
63	355	63	10	4	80
	180				
	200				
	224				
	250				
	280				
	315				
	355				
	400				

D1	L1	D2	L2	L3	L4
80	200	80	10	4	100
	224				
	250				
	280				
	315				
	355				
	400				
	450				
	500				
100	224	100	10	4	125
	250				
	280				
	315				
	355				
	400				
	450				
	500				

Acciaio
Steel
Acier
Werkstoff

< Ø 100 Material: 1.7131
Ø 100 Material: C50

Durezza
Hardness
Dureté
Härte

< Ø 100 Material: 60÷64 HRC
Ø 100 Material: 60÷64 HRC

Esecuzione
Finish
Exécution
Ausführung

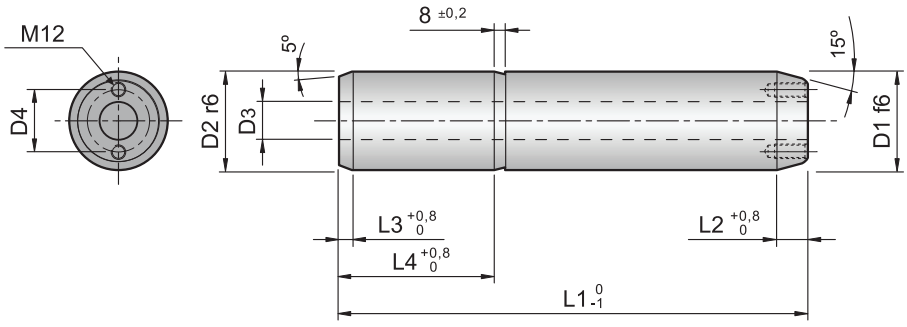
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna forata DIN 9833
Guide pillar with hole DIN 9833
Colonnes avec trou selon DIN 9833
Führungssäule mit hohlbohrung DIN 9833

Tipo CAUBQ / DIN 9833 / ISO 9182-3



D1	L1	D2	D3	D4	L2	L3	L4
80	200	80	40	58	10	4	100
	224						
	250						
	280						
	315						
	355						
	400						
	450						
	500						
100	224	100	50	72	10	4	125
	250						
	280						
	315						
	355						
	400						
	450						
	500						
125	315	125	65	90	12	5	140
	355						
	400						
	450						
	500						
160	400	160	95	132	12	5	180
	450						
	500						
	560						

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60÷64 HRC

Esecuzione
Finish
Exécution
Ausführung

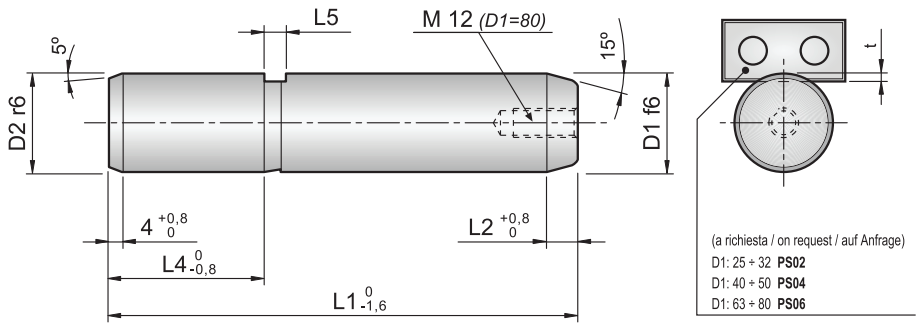
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna con fresatura VW
Guide pillar with milling VW
Colonnes avec gorge VW
Führungssäule mit nut VW

Tipo CAUR / VW 39D969



D1	L1	D2	L2	L4	L5	t
25	125	25	8	40	7	3
	140					
	160					
	180					
	200					
	224					
32	125	32	8	45	7	3
	140					
	160					
	180					
	200					
	224					
	250					
40	140	40	8	56	10	4
	160					
	180					
	200					
	224					
	250					
	280					
50	160	50	10	70	10	5
	180					
	200					
	224					
	250					
	280					
	315					
	355					
63	180	63	10	80	12	6,5
	200					
	224					
	250					
	280					
	315					
	355					
	400					

D1	L1	D2	L2	L4	L5	t
80	224	80	10	100	12	8
	250					
	280					
	315					
	355					
	400					
	450					
	500					

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

58÷62 HRC

Esecuzione
Finish
Exécution
Ausführung

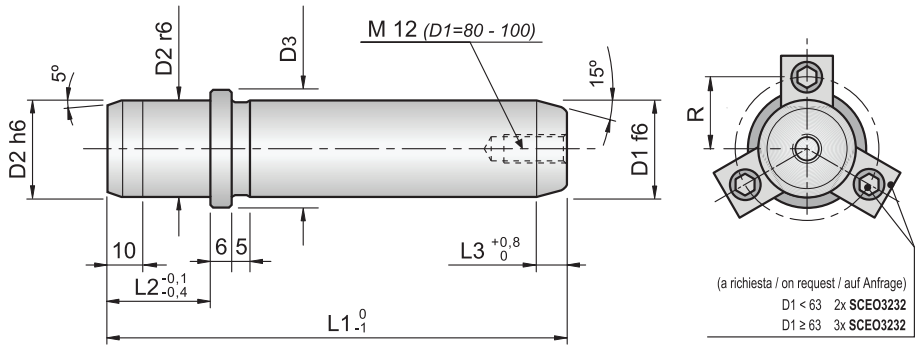
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna estraibile WDX
Demountable guide pillar WDX
Colonnes demontables WDX
Führungssäule mit bund WDX

Tipo CEOT / WDX 13-65



D1	L1	D2	D3	R	L2	L3
25	125	25	33	34	40	4
	140					
	160					
	180					
	200					
	224					
32	140	32	40	37,5	45	8
	160					
	180					
	200					
	224					
	250					
40	160	40	50	41,5	56	8
	180					
	200					
	224					
	250					
	280					
50	160	50	60	46,5	70	10
	180					
	200					
	224					
	250					
	280					
	315					
63	200	63	80	53	80	10
	224					
	250					
	280					
	315					
	355					
	400					
80	224	80	90	61,5	100	50
	250					
	280					
	315					
	355					

D1	L1	D2	D3	R	L2	L3
80	400	80	90	61,5	100	10
	500					
100	280	100	110	71,5	125	10
	315					
	355					
	400					
	500					

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60÷64 HRC

Esecuzione
Finish
Exécution
Ausführung

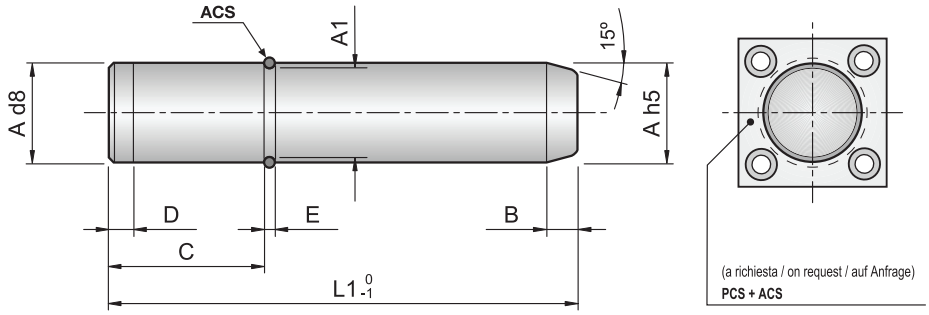
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonna afnor
Guide pillar afnor
Colonnes selon afnor
Führungssäule mit halteringeinstich afnor

Tipo CS / WDX 13-65



A	L1	A1	B	C	D	E
25	100	22,8	8	25	8	2,7
	125					
	140					
	160					
	180					
	200					
	220					
32	125	27,8	10	32	12	4,2
	140					
	160					
	180					
	200					
	220					
	250					
40	180	35,8	12	63	12	4,2
	200					
	220					
	250					
	280					
	315					
50	200	45,8	16	80	12	4,2
	220					
	250					
	280					
	315					
	355					
	400					
63	250	56,8	16	100	18	6,2
	280					
	315					
	355					
	400					
	450					
	500					
80	315	73,8	16	125	18	6,2
	355					
	400					

D1	L1	A1	B	C	D	E
80	450	73,8	16	125	18	6,2
	500					
100	355	93,8	16	160	18	6,2
	400					
	450					
	500					

Acciaio
Steel
Acier
Werkstoff

Bronze + Graphite

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

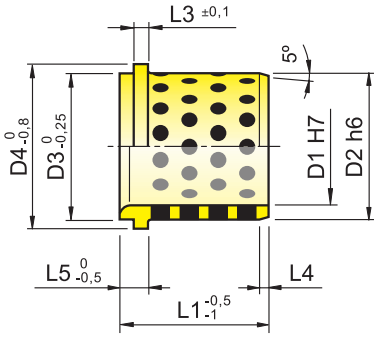
Cementate - temprate - rettificate

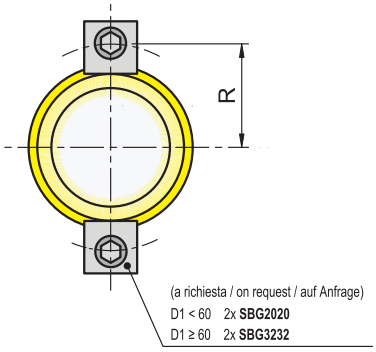
Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussola autolubrificante DIN 9834
Bush self-lubricating DIN 9834
Bagues autolubrifiantes DIN 9834
Führungsbuchse bronze mit festschmierstoff DIN 9834

Tipo BG9834 / DIN 9834 / ISO 9448





BG9834

D1	D2	D3	D4	L1	L3	L4	L5	R
25	32	32	40	40	6,3	3	10	29
32	40	40	50	50	6,3	4	12	33
40	50	50	63	63	6,3	5	15	39,5
50	63	63	71	71	6,3	6,3	17	44,5
63	80	80	90	80	10	8	19	61,5
80	100	100	112	100	10	10	22	71,5
100	125	125	140	125	10	12,5	21	84
125	160	160	180	160	10	16	30	101,5
160	200	200	220	200	10	16	32	121,5

Acciaio
Steel
Acier
Werkstoff

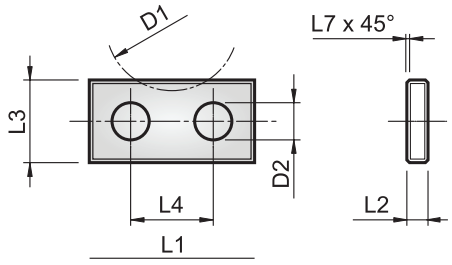
1.1730

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Piastrina di sicurezza vw
Locating plate vw
Plaquettes de securitè vw
Sicherugsplatte für führungssäule nach vw

Tipo PS



D1	D2	L1	L2	L3	L4	L7
25-32	9	40	5	20	20	1
40-50	11	48	8	25	24	2
63-80	14	60	10	34	30	2

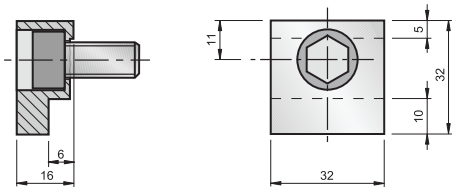
Acciaio
Steel
Acier
Werkstoff

Durezza
Hardness
Dureté
Härte

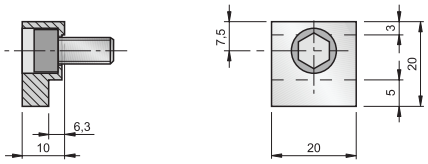
Esecuzione
Finish
Exécution
Ausführung

Staffette (viti incluse)
Clamps (incl. Screws)
Bride de fixation (vis incluses)
Haltestücke (incl. Schrauben)

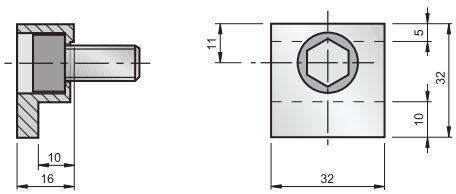
Tipo S



SCEO3232



SBG2020



SBG3232

Acciaio
Steel
Acier
Werkstoff

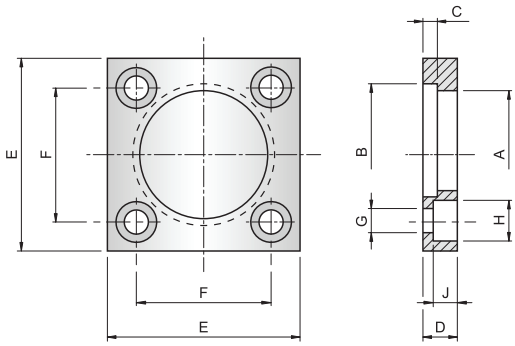
1.1730

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Staffa di bloccaggio per colonna afnor
Retainer for guide pillar afnor
Brides de bloccage pour colonnes afnor
Haltestück für führungssäule afnor

Tipo PCS



A	B	G	H	J	D	C	E	F
25	28	6,6	11	7	10	2,7	45	31
32	37	6,6	11	7	10	4,2	56	36
40	45	6,6	11	7	12	4,2	70	50
50	55	9	16	9	14	4,2	80	55
63	70	11	18	11	18	6,2	100	70
80	87	13	22	14	20	6,2	110	80
100	107	13	22	14	20	6,2	140	100

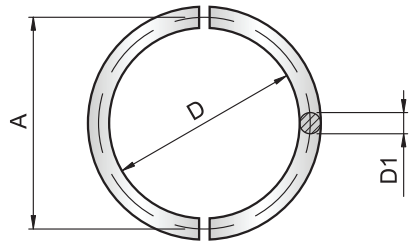
Acciaio
Steel
Acier
Werkstoff

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Anello di tenuta per colonna afnor
Ring for guide pillar afnor
Anneau de bloccage pour colonnes afnor
Haltering für führungssäule afnor

Tipo ACS



A	B	G
25	22,5	2,5
32	28	4
40	36	4
50	46	4
63	57	6
80	74	6
100	94	6

Molle per stampi
Die springs
Ressortes de compression
Schraubendruckfedern



ISO 10243

Consigli, raccomandazioni e limiti

Le innovazioni tecnologiche introdotte ed utilizzate, permettono per la prima volta di fornire un'indicazione di durata minima delle molle alle deflessioni di lavoro minima e media.

Per un'ottimale utilizzo delle molle e per il rispetto dei valori indicativi di durata minima si raccomanda sempre:
- selezionare accuratamente le molle sempre in fase di progettazione;
- guida interna con spina o esterna con foro di alloggiamento assolutamente necessari per rapporti tra lunghezza libera e diametro superiori a 3.5;
- massima perpendicolarità delle molle rispetto ai piani di appoggio e compressione;
- precarico minimo del 5% della lunghezza libera;
- utilizzo di molle con lunghezza maggiore e carico inferiore. Sarà conseguentemente aumentata la freccia di precarico;
- non utilizzare le molle (precarico e corsa lavoro) oltre la deflessione massima prevista a catalogo, colonna "C";
- verificare sempre le altezze di alloggiamento e le corse di lavoro degli elementi elastici dopo la riaffilatura degli utensili nello stampo. Normalmente tale operazione aumenta la freccia complessiva di compressione;
- proteggere le molle da elementi corrosivi;
- non superare temperature di utilizzo di 250°C. Fino alla temperatura di 120°C non si hanno perdite di carico significative, oltre considerare una perdita di carico del 1% circa ogni 40°C;
- non sostituire solo una molla, ma procedere con una manutenzione programmata di tutte le molle utilizzate;
- non alterare le condizioni fisiche delle molle (tagli, molature interne e/o esterne).

I valori indicativi di durata minima decadono sempre qualora non soddisfatti i punti di cui sopra. Per contro l'utilizzo corretto delle molle è sempre garanzia di massime prestazioni ben superiori alle indicazioni di durata minima fornite come confermano con soddisfazione tutti gli utilizzatori.

Advice, prescriptions and limitations

For the first time, technological innovations introduced and used make it possible to indicate the minimum lifetime of springs under minimum and average working deflections.

For optimum use of the springs, and to obtain the minimum lifetime values indicated, observe the following guide lines:
- select springs carefully at the design stage;
- use a guide pin, a locating bore as a guide – this is essential for springs having a free length/diameter ratio exceeding 3.5;
- assure perpendicularity of the springs to the supporting and compression surfaces;
- apply a minimum pre-load of 5% of the free length;
- use longer springs at lower loadings where possible (pre-loading must be suitably increased);
- never compress springs beyond the maximum deflection (pre-load and working stroke) specified in column "C" of the catalogue;
- always check spring holder heights and working strokes of moving elements after die tools have been re-ground. Normally this operation causes an increase in the overall compression of the springs;
- protect springs from corrosive agents;
- do not exceed a working temperature of 250 °C. Up to 120 °C no significant load reduction occurs, beyond this temperature an average loss of 1% for every 40 °C must be calculated;
- do not replace one spring at a time; instead, adopt a programmed maintenance procedure in which all the springs are changed at the same time;
- do not alter the physical caracteristics of springs (cutting, internal and/or external grinding).

Guideline minimum lifetime indications are invalidated immediately if the above conditions are not complied with.
When used correctly, the springs ensure performance levels well above the minimum lifetime values indicated, as confirmed by feedback from all the end users.

ISO 10243

Ratschläge, empfehlungen und grenzen

Die von unsere eingeführten und angewandten technologischen Innovationen gestatten zum ersten Mal, Angaben bezüglich der Mindesthaltbarkeit der Federn unter Berücksichtigung der geringsten bis mittleren Durchbiegungen während des Einsatzes zu machen.

Für eine optimale Verwendung der Federn und für die Einhaltung der Richtwerte der Mindesthaltbarkeit wird immer empfohlen:
- die Federn immer schon bei der Planung akkurat wählen;
- innere Führung mit Stift oder Außenführung mit Aufnahmebohrung sind unbedingt notwendig für Verhältnisse zwischen freier Länge und Durchmesser über 3.5;
- maximale Rechtwinkligkeit der Federn zu den Auflage- und Einfederungsebenen;
- mindestvorspannung 5% der freien Länge;
- Verwendung der Federn mit größerer Länge und geringerer Belastung. Folglich wird die Vorspannungsweite erhöht;
- bei Benutzung der Federn nicht die im Katalog, Spalte "C" genannte maximal zulässige Durchbiegung (Vorspannung und Arbeitsfederweg) übersteigen;
- nach dem Nachschliff der Werkzeuge in der Form immer die Höhe der Aufnahmen und die Arbeitshübe der elastischen Elemente kontrollieren. Normalerweise wird durch diesen Vorgang die Gesamteinfederung erhöht;
- die Federn vor korrosiven Elementen schützen;
- die Einsatztemperatur von 250 °C nicht überschreiten. Bis zur Temperatur von 120 °C gibt es keine nennenswerten Spannungsverluste, darüber muss ein Spannungsverlust von ca. 1% alle 40 °C berücksichtigt werden;
- niemals nur eine Feder ersetzen, sondern die Wartung aller verwendeten Federn programmieren;
- den physischen Zustand der Federn nicht verändern (Schnitte, innerer und/oder äußerer Schliff).

Die Richtwerte der Mindesthaltbarkeit haben keine Gültigkeit, wenn die obengenannten Punkte nicht eingehalten werden.
Die korrekte Benutzung der Federn ist dagegen immer eine Garantie für maximale Leistungen, die weit über der angegebenen Mindesthaltbarkeit liegen, wie die Zufriedenheit aller Benutzer bestätigt.

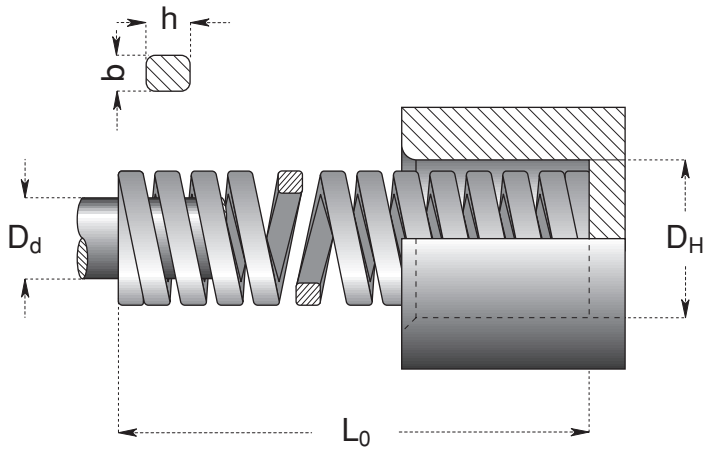
Conseils, recommandations et limites

Les innovations technologiques introduites et utilisées permettent pour la première fois de fournir une indication de durée minimale des ressorts par rapport aux déflexions minimales et moyennes.

Pour une utilisation optimale des ressorts et pour le respect des valeurs de durée minimale fournies à titre indicatif, il est recommandé de:
- toujours sélectionner soigneusement les ressorts pendant la phase de conception;
- assurer un guidage intérieur par goujon ou extérieur par trou de logement, absolument nécessaires afin d'obtenir des rapports supérieurs à 3.5 entre ongueur libre et diamètre;
- obtenir une perpendicularité maximale des ressorts par rapport aux plans d'appui et de compression;
- avoir une précontrainte minimale de 5% de la longueur libre;
- utiliser des ressorts ayant une longueur supérieure et une compression inférieure. Par conséquent, la flèche de précontrainte augmentera;
- ne pas utiliser les ressorts (précontrainte et course travail) au-delà de la déflexion maximale prévue sur catalogue, colonne "C";
- toujours vérifier les hauteurs de logement et les courses de travail des éléments élastiques après le réaffutage des outils dans le moule. Normalement, cette opération augmente la flèche de compression globale;
- protéger les ressorts contre les éléments corrosifs;
- ne pas dépasser des températures d'utilisation de 250 °C. Jusqu'à une température de 120 °C, il n'y a pas de pertes de charge significatives; en outre, considérer une perte de charge de 1% environ tous les 40 °C;
- ne pas remplacer un seul ressort mais effectuer un entretien programmé de tous les ressorts utilisés;
- ne pas altérer les caractéristiques physiques des ressorts (par coupures, meulages internes et/ou externes).

Les valeurs relatives à la durée minimale fournies à titre indicatif ne sont pas valables si les conditions indiquées ci-dessus ne sont pas remplies.
Par contre, l'utilisation correcte des ressorts est toujours une garantie de performances nettement supérieures aux indications de durée minimale fournies, comme le confirment avec satisfaction tous les utilisateurs.

Legenda delle tabelle
Explanation of the spring table
Tabellenangaben
Légende des tableaux

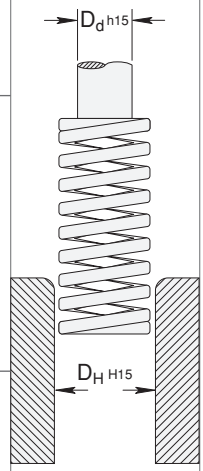


D_H / D_d b x h, d	L_0	N. di catalogo / Catalogue No. / Bestellnummer / N° de catalogue	R	A XXX	B YYY	C Max. Defl.	D Approx.
mm mm	mm		N / mm	mm N	mm N	mm N	mm N

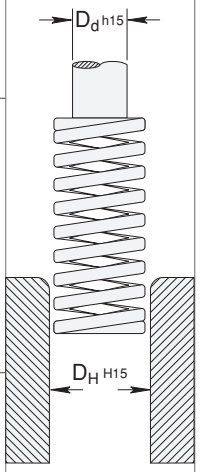
D_H	diametro del foro di alloggiamento	D_H	hole diameter
D_d	diametro della spina di guida	D_d	rod diameter
bxh, d	sezione del profilo	bxh, d	cross wire section
L_0	lunghezza libera della molla	L_0	spring free length
R	carico (N) necessario per deflettere la molla di 1 millimetro	R	spring rate (load required for 1mm deflection)
A	deflessione totale consigliata per una lunga durata della molla	A	advised working deflection for long spring life
XXX	indicazione di durata minima	XXX	minimum estimated life
B	deflessione totale consigliata per una media durata della molla	B	advised working deflection for medium spring life
YYY	indicazione di durata minima	YYY	minimum estimated life
C	deflessione totale massima consentita	C	maximum operating deflection
D	deflessione approssimativa per molla a blocco	D	solid deflection (approximate value)

D_H	Außenführungsdurchmesser	D_H	diamètre du trou de logement
D_d	Innenführungdurchmesser	D_d	diamètre de l'arbre de guidage
bxh, d	Profilquerschnitt	bxh, d	section du profile
L_0	Länge der unbelasteten Feder	L_0	longueur libre du ressort
R	Federrate	R	charge exigée pour comprimer le ressort 1mm
A	Empfohlene Federweg für lange Lebensdauer	A	course conseillée pour une longue durée du ressort
XXX	Minimale geschätzte lebensdauer	XXX	indication de durée minimale
B	Empfohlene Federweg für mittlere Lebensdauer	B	course conseillée pour durée moyenne du ressort
YYY	Minimale geschätzte lebensdauer	YYY	indication de durée minimale
C	maximal erlaubter Federweg	C	flèche maximale pour le fonctionnement
D	Federweg bis Blocklänge	D	flèche à bloc (valeur approximative)

Caratteristiche e tolleranze
Characteristics and tolerances
Merkmale und toleranzen
Caractéristiques et tolérances

Serie Series Serie Série	**Sez. profilo** Cross wire section Profilquerschnitt Section du profilé	**Colore** Color Kennfarbe Couleur	**Carico** Load Belastung Charge	**Mass. defless.** Max. deflection Max. federweg Flèche max.	**Diametri** Diameters Durchmesser Diamètre	**Lungh. libera** Free length Lange Long. libre	**Rigidità** Rate Rigidez Raideur
CXL 		**Verde chiaro** Light green Hellgrün Verte claire **(RAL 6019)**	**Extra-leggero** Extra-light Leichte Extra-légère	**50 % L_0**		**± 1 % L_0** **± 0,75 min.**	**± 10 %**
CLV ISO 10243 		**Verde** Green Grün Verte **(RAL 6002)**	**Leggero** Light Normale Lègère	**40 % L_0**			
CMB ISO 10243 		**Blu** Blue Blau Bleu **(RAL 5003)**	**Medio** Medium Mittlere Moyenne	**37,5 % L_0**			
CFR ISO 10243 		**Rosso** Red Rot Rouge **(RAL 3000)**	**Forte** Heavy Hohe Forte	**30 % L_0**			
CXF ISO 10243 		**Giallo** Yellow Gelb Jaune **(RAL 1004)**	**Extra-Forte** Extra-Heavy Höchste Extra-Forte	**25 % L_0**			

Caratteristiche e tolleranze
Characteristics and tolerances
Merkmale und toleranzen
Caractéristiques et tolérances

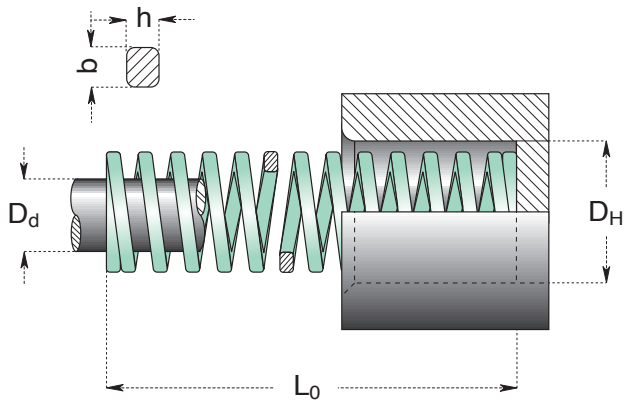
Serie Series Serie Série	**Sez. profilo** Cross wire section Profilquerschnitt Section du profilé	**Colore** Color Kennfarbe Couleur	**Carico** Load Belastung Charge	**Mass. defless.** Max. deflection Max. federweg Flèche max.	**Diametri** Diameters Durchmesser Diamètre	**Lungh. libera** Free length Lange Long. libre	**Rigidità** Rate Rigidez Raideur
A 		**Argento** Silver Silber- Argent	**Ultra-forte** Ultra-strong Ultra-hohe Ultra-forte	**15 % L_0** 		**± 1 % L_0** **± 0,75 min.**	**± 10 %**
T 		**Titanio** Titanium Titan Titane	**Super-forte** Super-strong Super-hohe Super-forte				
W 		**Bianco** White Weiß Blanc	**Iper-forte** Hyper-strong Hyper-starke Hyper-forte				

Molle carico extra-leggero
Extra-light load springs
Federn für leichte belastung
Ressorts charge extra-lègére

Colore verde chiaro
Light green color
Kennfarbe hellgrün
Couleur verte claire

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire

Serie Series Serie Série **CXL**



D_H / D_d d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	30% 3 mln		40% 1,5 mln		45% 300 / 500.000		50% Max. Defl.		D Approx.	
mm / mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
10 / 5	25	**CXL 10 - 025**	8.5	7.5	64	10.0	85	11.25	96	12.5	409	14.1	
	32	**CXL 10 - 032**	6.5	9.6	62	12.8	83	14.40	94	16.0	411	18.5	
	38	**CXL 10 - 038**	5.5	11.4	63	15.2	84	17.10	94	19.0	409	22.5	
	44	**CXL 10 - 044**	4.8	13.2	63	17.6	84	19.80	95	22.0	405	23.2	
	51	**CXL 10 - 051**	4.2	15.3	64	20.4	86	22.95	96	25.5	415	27.5	
	64	**CXL 10 - 064**	3.3	19.2	63	25.6	84	28.80	95	32.0	440	34.0	
	76	**CXL 10 - 076**	2.7	22.8	62	30.4	82	34.20	92	38.0	461	40.4	
1.65 x 1.0	305	**CXL 10 - 305**	0.65	91.5	59	122	79	137.25	89	152.5	462	172.7	
12.5 / 6.3	25	**CXL 13 - 025**	16	7.5	120	10.0	160	11.25	180	12.5	200	13.6	
	32	**CXL 13 - 032**	12.2	9.6	117	12.8	156	14.40	176	16.0	195	17.9	
	38	**CXL 13 - 038**	10.3	11.4	117	15.2	157	17.10	176	19.0	196	21.9	
	44	**CXL 13 - 044**	8.7	13.2	115	17.6	153	19.80	172	22.0	191	26.4	
	51	**CXL 13 - 051**	7.5	15.3	115	20.4	153	22.95	172	25.5	191	29.6	
	64	**CXL 13 - 064**	5.8	19.2	111	25.6	148	28.80	167	32.0	186	37.1	
	76	**CXL 13 - 076**	4.7	22.8	107	30.4	143	34.20	161	38.0	179	44.9	
	89	**CXL 13 - 089**	4.1	26.7	109	35.5	146	40.05	164	44.5	182	53.2	
	102	**CXL 13 - 102**	3.6	30.6	110	40.8	147	45.90	165	51.0	184	59.4	
2.3 x 1.3	305	**CXL 13 - 305**	1.25	91.5	114	122	153	137.25	172	152.5	191	186.6	
16 / 8	25	**CXL 16 - 025**	20.2	7.5	152	10.0	202	11.25	227	12.5	253	14.0	
	32	**CXL 16 - 032**	16	9.6	154	12.8	205	14.40	230	16.0	256	18.7	
	38	**CXL 16 - 038**	12.3	11.4	140	15.2	187	17.10	210	19.0	234	22.0	
	44	**CXL 16 - 044**	10.6	13.2	140	17.6	187	19.80	210	22.0	233	26.1	
	51	**CXL 16 - 051**	8.9	15.3	136	20.4	182	22.95	204	25.5	227	30.4	
	64	**CXL 16 - 064**	7	19.2	134	25.6	179	28.80	202	32.0	224	38.8	
	76	**CXL 16 - 076**	5.8	22.8	132	30.4	176	34.20	198	38.0	220	46.4	
	89	**CXL 16 - 089**	4.8	26.7	128	35.6	171	40.05	192	44.5	214	54.2	
	102	**CXL 16 - 102**	4.1	30.6	125	40.8	167	45.90	188	51.0	209	62.4	
	115	**CXL 16 - 115**	3.9	34.5	135	46.0	179	51.75	202	57.5	224	70.6	
3.05 x 1.5	305	**CXL 16 - 305**	1.5	91.5	137	122	183	137.25	206	152.5	229	190.2	

Note: 1 N = 0,102 Kg (force)

D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	30% 3 mln		40% 1,5 mln		45% 300 / 500.000		50% Max. Defl.		D Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
32	16	25	**CXL 20 - 025**	29.4	7.5	221	10.0	294	11.3	331	12.5	368	13.9	409
		32	**CXL 20 - 032**	22.6	9.6	217	12.8	289	14.4	325	16.0	362	18.2	411
		38	**CXL 20 - 038**	18.6	11.4	212	15.2	283	17.1	318	19.0	353	22.0	409
		44	**CXL 20 - 044**	15.7	13.2	207	17.6	276	19.8	311	22.0	345	25.8	405
		51	**CXL 20 - 051**	13.7	15.3	210	20.4	279	23.0	314	25.5	349	30.3	415
		64	**CXL 20 - 064**	11.3	19.2	217	25.6	289	28.8	325	32.0	362	38.9	440
		76	**CXL 20 - 076**	9.8	22.8	223	30.4	298	34.2	335	38.0	372	47.0	461
		89	**CXL 20 - 089**	8.3	26.7	222	35.6	295	40.1	332	44.5	369	55.7	462
		102	**CXL 20 - 102**	7.4	30.6	226	40.8	302	45.9	340	51.0	377	64.2	475
		115	**CXL 20 - 115**	6.4	34.5	221	46.0	294	51.8	331	57.5	368	72.9	467
		127	**CXL 20 - 127**	5.9	38.1	225	50.8	300	57.2	337	63.5	375	80.7	476
		139	**CXL 20 - 139**	5.4	41.7	225	55.6	300	62.6	338	69.5	375	88.4	477
		152	**CXL 20 - 152**	4.9	45.6	223	60.8	298	68.4	335	76.0	372	96.7	474
	6.5 x 2.6	305	**CXL 20 - 305**	2.5	91.5	229	122.0	305	137	343	152.5	381	196.3	491
32	16	25	**CXL 25 - 025**	53.9	7.5	404	10.0	539	11.3	606	12.5	674	12.9	695
		32	**CXL 25 - 032**	42.2	9.6	405	12.8	540	14.4	608	16.0	675	17.2	726
		38	**CXL 25 - 038**	35.8	11.4	408	15.2	544	17.1	612	19.0	680	20.7	741
		44	**CXL 25 - 044**	31.4	13.2	414	17.6	553	29.8	622	22.0	691	24.4	766
		51	**CXL 25 - 051**	27.0	15.3	413	20.4	551	23.0	620	25.5	689	28.5	770
		64	**CXL 25 - 064**	21.6	19.2	415	25.6	553	28.8	622	32.0	691	36.5	788
		76	**CXL 25 - 076**	18.1	22.8	413	30.4	550	34.2	619	38.0	688	43.9	795
		89	**CXL 25 - 089**	15.2	26.7	406	35.6	541	40.1	609	44.5	676	51.4	781
		102	**CXL 25 - 102**	13.2	30.6	404	40.8	539	45.9	606	51.0	673	59.3	783
		115	**CXL 25 - 115**	11.8	34.5	407	46.0	543	51.8	611	57.5	679	67.2	793
		127	**CXL 25 - 127**	10.6	38.1	404	50.8	538	57.2	606	63.5	673	74.4	789
		139	**CXL 25 - 139**	9.6	41.7	400	55.6	534	62.6	600	69.5	667	81.6	783
		152	**CXL 25 - 152**	8.8	45.6	401	60.8	535	68.4	602	76.0	669	89.5	788
		178	**CXL 25 - 178**	7.6	53.4	406	71.2	541	80.1	609	89.0	676	105.4	801
		203	**CXL 25 - 203**	6.7	60.9	408	81.2	544	91.4	612	101.5	680	120.7	809
	6.5 x 2.6	305	**CXL 25 - 305**	4.4	91.5	403	122.0	537	137	604	152.5	671	182.4	803
32	16	38	**CXL 32 - 038**	43.1	11.4	491	15.2	655	17.1	737	19.0	819	19.9	858
		44	**CXL 32 - 044**	37.3	13.2	492	17.6	656	19.8	739	22.0	821	23.5	877
		51	**CXL 32 - 051**	32.4	15.3	496	20.4	661	23.0	744	25.5	826	27.6	894
		64	**CXL 32 - 064**	25.5	19.2	490	25.6	653	28.8	734	32.0	816	35.2	898
		76	**CXL 32 - 076**	21.6	22.8	492	30.4	657	34.2	739	38.0	821	42.4	916
		89	**CXL 32 - 089**	18.1	26.7	483	35.6	644	40.1	725	44.5	805	50.0	905
		102	**CXL 32 - 102**	15.7	30.6	480	40.8	641	45.9	721	51.0	801	57.6	904
		115	**CXL 32 - 115**	14.2	34.5	490	46.0	653	51.8	735	57.5	817	65.5	930
		127	**CXL 32 - 127**	12.7	38.1	484	50.8	645	57.2	726	63.5	806	72.5	921
		139	**CXL 32 - 139**	11.6	41.7	484	55.6	645	62.6	726	69.5	806	79.4	921
		152	**CXL 32 - 152**	10.6	45.6	483	60.8	644	68.4	725	76.0	806	87.3	925
		178	**CXL 32 - 178**	9.0	53.4	481	71.2	641	80.1	721	89.0	801	102.9	926
		203	**CXL 32 - 203**	7.8	60.9	475	81.2	633	91.4	713	101.5	792	117.7	918
		254	**CXL 32 - 254**	6.4	76.2	488	101.6	650	114	732	127.0	813	148.1	948
	6.5 x 2.6	305	**CXL 32 - 305**	5.3	91.5	485	122.0	647	137	727	152.5	808	178.3	945
40	20	51	**CXL 40 - 051**	48.1	15.3	736	20.4	981	23.0	1104	25.5	1227	28.0	1347
		64	**CXL 40 - 064**	39.2	19.2	753	25.6	1004	28.8	1129	32.0	1254	36.2	1419
		76	**CXL 40 - 076**	33.3	22.8	759	30.4	1012	34.2	1139	38.0	1265	43.7	1455
		89	**CXL 40 - 089**	28.4	26.7	758	35.6	1011	40.1	1137	44.5	1264	51.7	1468
		102	**CXL 40 - 102**	24.5	30.6	750	40.8	1000	45.9	1125	51.0	1250	59.8	1465
		115	**CXL 40 - 115**	22.1	34.5	762	46.0	1017	51.8	1144	57.5	1271	67.9	1501
		127	**CXL 40 - 127**	19.6	38.1	747	50.8	996	57.2	1120	63.5	1245	75.2	1474
		139	**CXL 40 - 139**	17.7	41.7	738	55.6	984	62.6	1107	69.5	1230	82.4	1458
		152	**CXL 40 - 152**	16.2	45.6	739	60.8	985	68.4	1108	76.0	1231	90.6	1468
		178	**CXL 40 - 178**	13.7	53.4	732	71.2	975	80.1	1097	89.0	1219	106.5	1459
		203	**CXL 40 - 203**	12.3	60.9	749	81.2	999	91.4	1124	101.5	1248	122.2	1503
		254	**CXL 40 - 254**	9.8	76.2	747	101.6	996	114	1120	127.0	1245	153.6	1505
	8.0 x 3.4	305	**CXL 40 - 305**	8.3	91.5	759	122.0	1013	137	1139	152.5	1266	185.4	1539
50	25	64	**CXL 50 - 064**	86.3	19.2	1657	25.6	2209	28.8	2485	32.0	2762	35.1	3029
		76	**CXL 50 - 076**	70.6	22.8	1610	30.4	2146	34.2	2415	38.0	2683	42.2	2979
		89	**CXL 50 - 089**	59.8	26.7	1597	35.6	2129	40.1	2395	44.5	2661	50.3	3008
		102	**CXL 50 - 102**	52.0	30.6	1591	40.8	2122	45.9	2387	51.0	2652	58.4	3037
		115	**CXL 50 - 115**	46.1	34.5	1590	46.0	2121	51.8	2386	57.5	2651	66.1	3047
		127	**CXL 50 - 127**	42.2	38.1	1608	50.8	2144	57.2	2412	63.5	2680	73.8	3114
		139	**CXL 50 - 139**	38.2	41.7	1593	55.6	2124	62.6	2389	69.5	2655	80.9	3090
		152	**CXL 50 - 152**	34.3	45.6	1564	60.8	2085	68.4	2346	76.0	2607	89.0	3053
		178	**CXL 50 - 178**	29.4	53.4	1570	71.2	2093	80.1	2355	89.0	2617	105.3	3096
		203	**CXL 50 - 203**	25.5	60.9	1553	81.2	2071	91.4	2329	101.5	2588	120.6	3075
		254	**CXL 50 - 254**	20.6	76.2	1570	101.6	2093	114	2355	127.0	2616	152.2	3135
	10.5 x 4.1	305	**CXL 50 - 305**	17.2	91.5	1574	122.0	2098	137	2361	152.5	2623	183.7	3160
63	38	76	**CXL 63 - 076**	57.8	22.8	1318	30.4	1757	34.2	1977	38.0	2196	47.3	
		89	**CXL 63 - 089**	51.4	26.7	1372	35.6	1830	40.0	2059	44.5	2287	54.9	
		102	**CXL 63 - 102**	44.4	30.6	1359	40.8	1812	45.9	2038	51.0	2264	64.1	
		115	**CXL 63 - 115**	38	34.5	1311	46.0	1748	51.7	1967	57.5	2185	75.6	
		127	**CXL 63 - 127**	33.2	38.1	1265	50.8	1687	57.1	1897	63.5	2108	82.6	
		152	**CXL 63 - 152**	27.4	45.6	1249	60.8	1666	68.4	1874	76.0	2082	99.8	
		178	**CXL 63 - 178**	24	53.4	1282	71.2	1709	80.1	1922	89.0	2136	118.4	
		203	**CXL 63 - 203**	21	60.9	1279	81.2	1705	91.3	1918	101.5	2132	135.9	
		254	**CXL 63 - 254**	16.4	76.2	1250	101.6	1666	114.3	1875	127	2083	172.8	
	11 x 4.9	305	**CXL 63 - 305**	13.6	91.5	1244	122	1659	137.2	1867	152.5	2074	208.6	

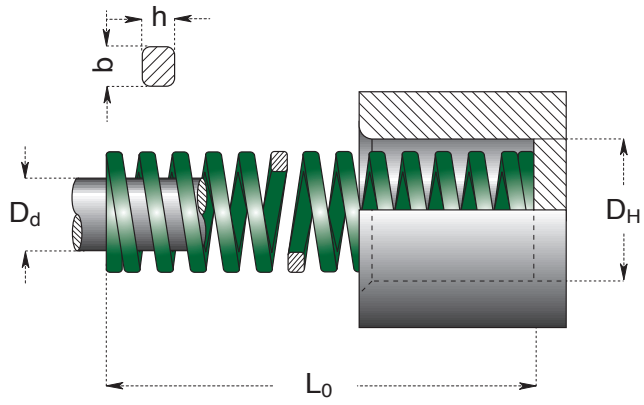
Note: 1 N = 0,102 Kg (force)

Molle carico leggero
Light load springs
Federn für normale Spannung
Ressorts charge lègére

Serie Series Serie Série **CLV**
ISO 10243

Colore verde
Green color
Kennfarbe grün
Couleur verte

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire



D_H	D_d d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	25% 3 mln		30% 1,5 mln		35% 300 / 500.000		40% Max. Defl.		D Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
10	5	25	**CLV 10 - 025**	10	6.3	63	7.5	75	8.8		10.0	100	13.5	135
		32	**CLV 10 - 032**	8.5	8.0	68	9.6	82	11.2		12.8	109	17.5	149
		38	**CLV 10 - 038**	6.8	9.5	65	11.4	78	13.3		15.2	103	20.8	141
		44	**CLV 10 - 044**	6.0	11.0	66	13.2	79	15.4		17.6	106	23.9	143
		51	**CLV 10 - 051**	5.0	12.8	64	15.3	77	17.9		20.4	102	28.9	145
		64	**CLV 10 - 064**	4.3	16.0	69	19.2	83	22.4		25.6	110	36.1	155
		76	**CLV 10 - 076**	3.2	19.0	61	22.8	73	26.6		30.4	97	43.2	138
1.7 x 1.1		305	**CLV 10 - 305**	1.1	76.3	84	91.5	101	107		122.0	134	178.7	197
12.5	6.3	25	**CLV 13 - 025**	17.9	6.3	113	7.5	134	8.8		10.0	179	13.2	236
		32	**CLV 13 - 032**	16.4	8.0	131	9.6	157	11.2		12.8	210	18.0	295
		38	**CLV 13 - 038**	13.6	9.5	129	11.4	155	13.3		15.2	207	21.0	286
		44	**CLV 13 - 044**	12.1	11.0	133	13.2	160	15.4		17.6	213	24.0	290
		51	**CLV 13 - 051**	11.4	12.8	146	15.3	174	17.9		20.4	233	28.7	327
		64	**CLV 13 - 064**	9.3	16.0	149	19.2	179	22.4		25.6	238	35.8	333
		76	**CLV 13 - 076**	7.1	19.0	135	22.8	162	26.6		30.4	216	42.7	303
		89	**CLV 13 - 089**	5.4	22.3	120	26.7	144	31.2		35.6	192	50.4	272
		102	**CLV 13 - 102**	4.1	25.5	105	30.6	125	35.7		40.8	167	58.4	239
2.4 x 1.4		305	**CLV 13 - 305**	1.4	76.3	107	91.5	128	107		122.0	171	172.0	241
16	8	25	**CLV 16 - 025**	23.4	6.3	147	7.5	176	8.8		10.0	234	12.6	295
		32	**CLV 16 - 032**	22.9	8.0	183	9.6	220	11.2		12.8	293	16.4	376
		38	**CLV 16 - 038**	19.3	9.5	183	11.4	220	13.3		15.2	293	19.7	380
		44	**CLV 16 - 044**	17.1	11.0	188	13.2	226	15.4		17.6	301	22.5	385
		51	**CLV 16 - 051**	15.7	12.8	201	15.3	240	17.9		20.4	320	26.3	413
		64	**CLV 16 - 064**	10.7	16.0	171	19.2	205	22.4		25.6	274	33.3	356
		76	**CLV 16 - 076**	10.0	19.0	190	22.8	228	26.6		30.4	304	40.2	402
		89	**CLV 16 - 089**	8.6	22.3	192	26.7	230	31.2		35.6	306	47.6	409
		102	**CLV 16 - 102**	7.8	25.5	199	30.6	239	35.7		40.8	318	55.4	432
		115	**CLV 16 - 115**	6.6	28.8	190	34.5	228	40.3		46.0	304	60.8	401
3.2 x 1.5		305	**CLV 16 - 305**	2.5	76.3	191	91.5	229	107		122.0	305	165.3	413
20	10	25	**CLV 20 - 025**	55.8	6.3	352	7.5	419	8.8		10.0	558	12.1	675
		32	**CLV 20 - 032**	45.0	8.0	360	9.6	432	11.2		12.8	576	15.3	689
		38	**CLV 20 - 038**	33.3	9.5	316	11.4	380	13.3		15.2	506	18.9	629
		44	**CLV 20 - 044**	30.0	11.0	330	13.2	396	15.4		17.6	528	21.5	645
		51	**CLV 20 - 051**	24.5	12.8	314	15.3	375	17.9		20.4	500	25.0	613
		64	**CLV 20 - 064**	20.0	16.0	320	19.2	384	22.4		25.6	512	31.1	622
		76	**CLV 20 - 076**	16.0	19.0	304	22.8	365	26.6		30.4	486	37.3	597
		89	**CLV 20 - 089**	14.0	22.3	312	26.7	374	31.2		35.6	498	44.5	623
		102	**CLV 20 - 102**	12.0	25.5	306	30.6	367	35.7		40.8	490	51.1	613
		115	**CLV 20 - 115**	10.9	28.8	314	34.5	376	40.3		46.0	501	58.2	634
		127	**CLV 20 - 127**	9.5	31.8	302	38.1	362	44.5		50.8	483	64.9	617
		139	**CLV 20 - 139**	8.4	35.0	294	42.0	353	48.7		56.0	470	71.5	601
		152	**CLV 20 - 152**	7.5	38.0	285	45.6	342	53.2		60.8	456	78.8	591
4.0 x 2.1		305	**CLV 20 - 305**	4.0	76.3	305	91.5	366	107		122.0	488	157.4	630

Note: 1 N = 0,102 Kg (force)

D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	25% 3 mln		30% 1,5 mln		35% 300 / 500.000		40% Max. Defl.		D Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
25	12.5	25	**CLV 25 - 025**	100.0	6.3	630	7.5	750	10.0	1000	8.8		11.9	1190
		32	**CLV 25 - 032**	80.3	8.0	642	9.6	771	12.8	1028	11.2		16.0	1285
		38	**CLV 25 - 038**	62.0	9.5	589	11.4	707	15.2	942	13.3		18.3	1135
		44	**CLV 25 - 044**	52.9	11.0	582	13.2	698	17.6	931	15.4		21.4	1132
		51	**CLV 25 - 051**	44.0	12.8	563	15.3	673	20.4	898	17.9		24.9	1096
		64	**CLV 25 - 064**	35.2	16.0	563	19.2	676	25.6	901	22.4		31.4	1105
		76	**CLV 25 - 076**	28.0	19.0	532	22.8	638	30.4	851	26.6		37.5	1050
		89	**CLV 25 - 089**	24.0	22.3	535	26.7	641	35.6	854	31.2		43.5	1044
		102	**CLV 25 - 102**	21.1	25.5	538	30.6	646	40.8	861	35.7		51.1	1078
		115	**CLV 25 - 115**	18.7	28.8	539	34.5	645	46.0	860	40.3		58.1	1086
		127	**CLV 25 - 127**	16.7	31.8	531	38.1	636	50.8	848	44.5		64.1	1070
		139	**CLV 25 - 139**	15.3	35.0	536	42.0	643	56.0	857	48.7		70.4	1077
		152	**CLV 25 - 152**	14.0	38.0	532	45.6	638	60.8	851	53.2		77.1	1079
		178	**CLV 25 - 178**	12.5	44.5	556	53.4	668	71.2	890	62.3		93.1	1164
		203	**CLV 25 - 203**	10.4	50.8	528	60.9	633	81.2	844	71.1		102.7	1068
5.4 x 2.7		305	**CLV 25 - 305**	7.0	76.3	534	91.5	641	122.0	854	107		155.9	1091
32	16	38	**CLV 32 - 038**	94.0	9.5	893	11.4	1072	15.2	1429	13.3		18.3	1720
		44	**CLV 32 - 044**	79.5	11.0	875	13.2	1049	17.6	1399	15.4		21.5	1709
		51	**CLV 32 - 051**	67.0	12.8	858	15.3	1025	20.4	1367	17.9		25.5	1709
		64	**CLV 32 - 064**	53.0	16.0	848	19.2	1018	25.6	1357	22.4		31.9	1691
		76	**CLV 32 - 076**	44.0	19.0	836	22.8	1003	30.4	1338	26.6		38.6	1698
		89	**CLV 32 - 089**	37.2	22.3	830	26.7	993	35.6	1324	31.2		46.5	1730
		102	**CLV 32 - 102**	32.0	25.5	816	30.6	979	40.8	1306	35.7		53.2	1702
		115	**CLV 32 - 115**	29.0	28.8	835	34.5	1001	46.0	1334	40.3		60.0	1740
		127	**CLV 32 - 127**	25.0	31.8	795	38.1	953	50.8	1270	44.5		66.7	1668
		139	**CLV 32 - 139**	23.0	35.0	805	42.0	966	56.0	1288	48.7		71.8	1651
		152	**CLV 32 - 152**	21.5	38.0	817	45.6	980	60.8	1307	53.2		78.5	1688
		178	**CLV 32 - 178**	18.2	44.5	810	53.4	972	71.2	1296	62.3		94.4	1718
		203	**CLV 32 - 203**	15.8	50.8	803	60.9	962	81.2	1283	71.1		107.1	1692
		254	**CLV 32 - 254**	12.5	63.5	794	76.2	953	101.6	1270	88.9		136.5	1706
6.8 x 3.3		305	**CLV 32 - 305**	10.3	76.3	786	91.5	942	122.0	1257	107		162.7	1676
40	20	51	**CLV 40 - 051**	92.0	12.8	1178	15.3	1408	20.4	1877	17.9		25.5	2346
		64	**CLV 40 - 064**	73.0	16.0	1168	19.2	1402	25.6	1869	22.4		31.4	2292
		76	**CLV 40 - 076**	63.0	19.0	1197	22.8	1436	30.4	1915	26.6		37.8	2381
		89	**CLV 40 - 089**	51.0	22.3	1137	26.7	1362	35.6	1816	31.2		44.3	2259
		102	**CLV 40 - 102**	43.0	25.5	1097	30.6	1316	40.8	1754	35.7		50.7	2180
		115	**CLV 40 - 115**	39.6	28.8	1140	34.5	1366	46.0	1822	40.3		58.1	2301
		127	**CLV 40 - 127**	37.0	31.8	1177	38.1	1410	50.8	1880	44.5		64.6	2390
		139	**CLV 40 - 139**	32.0	35.0	1120	42.0	1344	56.0	1792	48.7		70.1	2243
		152	**CLV 40 - 152**	28.0	38.0	1064	45.6	1277	60.8	1702	53.2		76.6	2145
		178	**CLV 40 - 178**	25.2	44.5	1121	53.4	1346	71.2	1794	62.3		90.4	2278
		203	**CLV 40 - 203**	22.7	50.8	1153	60.9	1382	81.2	1843	71.1		102.4	2324
		254	**CLV 40 - 254**	17.0	63.5	1080	76.2	1295	101.6	1727	88.9		128.8	2190
8.1 x 4.0		305	**CLV 40 - 305**	14.8	76.3	1129	91.5	1354	122.0	1806	107		156.1	2310
50	25	64	**CLV 50 - 064**	156	16.0	2496	19.2	2995	25.6	3994	22.4		31.0	4836
		76	**CLV 50 - 076**	125	19.0	2375	22.8	2850	30.4	3800	26.6		37.2	4650
		89	**CLV 50 - 089**	109	22.3	2431	26.7	2910	35.6	3880	31.2		43.6	4752
		102	**CLV 50 - 102**	94.0	25.5	2397	30.6	2876	40.8	3835	35.7		50.3	4728
		115	**CLV 50 - 115**	81.0	28.8	2333	34.5	2795	46.0	3726	40.3		58.1	4706
		127	**CLV 50 - 127**	71.0	31.8	2258	38.1	2705	50.8	3607	44.5		63.7	4523
		139	**CLV 50 - 139**	66.5	35.0	2328	42.0	2793	56.0	3724	48.7		69.5	4622
		152	**CLV 50 - 152**	60.0	38.0	2280	45.6	2736	60.8	3648	53.2		76.5	4590
		178	**CLV 50 - 178**	52.0	44.5	2314	53.4	2777	71.2	3702	62.3		91.9	4779
		203	**CLV 50 - 203**	44.0	50.8	2235	60.9	2680	81.2	3573	71.1		104.7	4607
		254	**CLV 50 - 254**	35.0	63.5	2223	76.2	2667	101.6	3556	88.9		130.6	4571
10.9 x 5.3		305	**CLV 50 - 305**	28.5	76.3	2175	91.5	2608	122.0	3477	107		154.9	4415
63	38	76	**CLV 63 - 076**	189	19.0	3591	22.8	4309	30.4	5746	26.6		36.5	6899
		89	**CLV 63 - 089**	158	22.3	3523	26.7	4219	35.6	5625	31.2		43.4	6857
		102	**CLV 63 - 102**	131	25.5	3341	30.6	4009	40.8	5345	35.7		49.7	6511
		115	**CLV 63 - 115**	116	28.8	3341	34.5	4002	46.0	5336	40.3		55.6	6450
		127	**CLV 63 - 127**	103	31.8	3275	38.1	3924	50.8	5232	44.5		62.7	6458
		152	**CLV 63 - 152**	84.3	38.0	3203	45.6	3844	60.8	5125	53.2		77.1	6500
		178	**CLV 63 - 178**	71.5	44.5	3182	53.4	3818	71.2	5091	62.3		92.2	6592
		203	**CLV 63 - 203**	61.7	50.8	3134	60.9	3758	81.2	5010	71.1		103.5	6386
		254	**CLV 63 - 254**	47.0	63.5	2985	76.2	3581	101.6	4775	88.9		130.4	6129
11.0 x 7.8		305	**CLV 63 - 305**	38.2	76.3	2915	91.5	3495	122.0	4660	107		157.4	6013

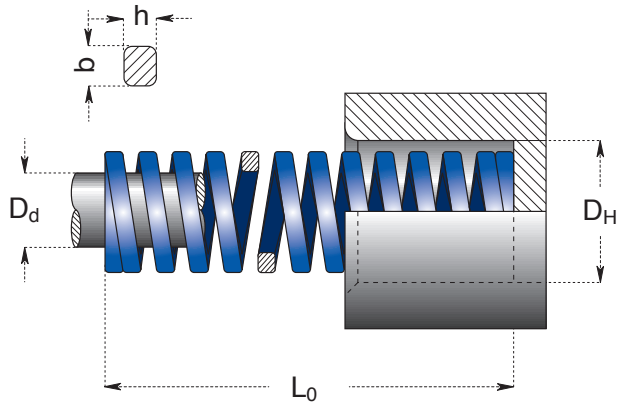
Note: 1 N = 0,102 Kg (force)

Molle carico medio
Medium load springs
Federn für mittlere belastung
Ressorts charge moyenne

Serie Series Serie Série **CMB**
ISO 10243

Colore blu
Blue color
Kennfarbe blau
Couleur bleu

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire



D_H / D_d d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	25% 3 mln		30% 1,5 mln		33.75% 300 / 500.000		37.5% Max. Defl.		D Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
10	5	25	**CMB 10 - 025**	16.0	6.3	101	7.5	120	8.4	135	9.4	150	10.2	163
		32	**CMB 10 - 032**	13.0	8.0	104	9.6	125	10.8	140	12.0	156	14.2	185
		38	**CMB 10 - 038**	11.9	9.5	113	11.4	136	12.8	153	14.3	170	16.8	200
		44	**CMB 10 - 044**	10.3	11.0	113	13.2	136	14.9	153	16.5	170	19.4	200
		51	**CMB 10 - 051**	8.9	12.8	114	15.3	136	17.2	153	19.1	170	23.4	208
		64	**CMB 10 - 064**	7.5	16.0	120	19.2	144	21.6	162	24.0	180	28.2	212
		76	**CMB 10 - 076**	5.3	19.0	101	22.8	121	25.7	136	28.5	151	34.2	181
1.9 x 1.3		305	**CMB 10 - 305**	1.6	76.3	122	91.5	146	103	165	114.4	183	133.8	214
12.5	6.3	25	**CMB 13 - 025**	30.0	6.3	189	7.5	225	8.4	253	9.4	282	11.9	357
		32	**CMB 13 - 032**	24.8	8.0	198	9.6	238	10.8	268	12.0	298	16.2	402
		38	**CMB 13 - 038**	21.4	9.5	203	11.4	244	12.8	274	14.3	306	18.7	400
		44	**CMB 13 - 044**	18.5	11.0	204	13.2	244	14.9	275	16.5	305	21.3	394
		51	**CMB 13 - 051**	15.5	12.8	198	15.3	237	17.2	267	19.1	296	25.6	397
		64	**CMB 13 - 064**	12.1	16.0	194	19.2	232	21.6	261	24.0	290	32.4	392
		76	**CMB 13 - 076**	10.2	19.0	194	22.8	233	25.7	262	28.5	291	39.0	398
		89	**CMB 13 - 089**	8.4	22.3	187	26.7	224	30.0	252	33.4	281	45.9	386
		102	**CMB 13 - 102**	6.3	25.5	161	30.6	193	34.4	217	38.3	241	52.3	329
2.5 x 1.5		305	**CMB 13 - 305**	2.1	76.3	160	91.5	192	103	216	114.4	240	152.5	320
16	8	25	**CMB 16 - 025**	49.4	6.3	311	7.5	371	8.4	417	9.4	464	10.5	519
		32	**CMB 16 - 032**	37.1	8.0	297	9.6	356	10.8	401	12.0	445	13.2	490
		38	**CMB 16 - 038**	33.9	9.5	322	11.4	386	12.8	435	14.3	485	17.2	583
		44	**CMB 16 - 044**	30.0	11.0	330	13.2	396	14.9	446	16.5	495	19.4	582
		51	**CMB 16 - 051**	26.4	12.8	338	15.3	404	17.2	454	19.1	504	24.2	639
		64	**CMB 16 - 064**	20.5	16.0	328	19.2	394	21.6	443	24.0	492	29.2	599
		76	**CMB 16 - 076**	17.8	19.0	338	22.8	406	25.7	457	28.5	507	36.3	646
		89	**CMB 16 - 089**	15.2	22.3	339	26.7	406	30.0	457	33.4	508	41.7	634
		102	**CMB 16 - 102**	13.5	25.5	344	30.6	413	34.4	465	38.3	517	48.9	660
		115	**CMB 16 - 115**	11.8	28.8	340	34.5	407	38.8	458	43.1	509	53.1	627
3.2 x 2.0		305	**CMB 16 - 305**	4.8	76.3	366	91.5	439	103	494	114.4	549	141.6	680
20	10	25	**CMB 20 - 025**	98.0	6.3	617	7.5	735	8.4	827	9.4	921	10.5	1029
		32	**CMB 20 - 032**	72.6	8.0	581	9.6	697	10.8	784	12.0	871	13.9	1009
		38	**CMB 20 - 038**	56.0	9.5	532	11.4	638	12.8	718	14.3	801	16.6	930
		44	**CMB 20 - 044**	47.5	11.0	523	13.2	627	14.9	705	16.5	784	18.8	893
		51	**CMB 20 - 051**	41.7	12.8	534	15.3	638	17.2	718	19.1	796	23.1	963
		64	**CMB 20 - 064**	32.3	16.0	517	19.2	620	21.6	698	24.0	775	27.5	888
		76	**CMB 20 - 076**	25.1	19.0	477	22.8	572	25.7	644	28.5	715	33.8	848
		89	**CMB 20 - 089**	22.0	22.3	491	26.7	587	30.0	661	33.4	735	39.7	873
		102	**CMB 20 - 102**	19.8	25.5	505	30.6	606	34.4	682	38.3	758	47.3	937
		115	**CMB 20 - 115**	18.1	28.8	521	34.5	624	38.8	703	43.1	780	52.5	950
		127	**CMB 20 - 127**	16.6	31.8	528	38.1	632	42.9	712	47.6	790	56.9	945
		139	**CMB 20 - 139**	15.1	35.0	529	42.0	634	46.9	708	52.5	793	62.1	938
		152	**CMB 20 - 152**	13.2	38.0	500	45.6	600	51.3	677	57.0	750	67.6	889
4.1 x 2.4		305	**CMB 20 - 305**	6.1	76.3	465	91.5	558	103	628	114.4	698	143.4	875

Note: 1 N = 0,102 Kg (force)

D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	25% 3 mln		30% 1,5 mln		33.75% 300 / 500.000		37.5% Max. Defl.		D Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
25	12.5	25	**CMB 25 - 025**	147	6.3	926	7.5	1103	8.4		9.4	1382	10.2	1499
		32	**CMB 25 - 032**	118	8.0	944	9.6	1133	10.8		12.0	1416	13.7	1617
		38	**CMB 25 - 038**	93.0	9.5	884	11.4	1060	12.8		14.3	1330	15.7	1460
		44	**CMB 25 - 044**	80.8	11.0	889	13.2	1067	14.9		16.5	1333	18.2	1471
		51	**CMB 25 - 051**	68.6	12.8	878	15.3	1050	17.2		19.1	1310	21.7	1489
		64	**CMB 25 - 064**	53.0	16.0	848	19.2	1018	21.6		24.0	1272	26.0	1378
		76	**CMB 25 - 076**	43.2	19.0	821	22.8	985	25.7		28.5	1231	32.3	1395
		89	**CMB 25 - 089**	38.2	22.3	852	26.7	1020	30.0		33.4	1276	38.0	1452
		102	**CMB 25 - 102**	33.0	25.5	842	30.6	1010	34.4		38.3	1264	43.0	1419
		115	**CMB 25 - 115**	28.0	28.8	806	34.5	966	38.8		43.1	1207	48.6	1361
		127	**CMB 25 - 127**	25.9	31.8	824	38.1	987	42.9		47.6	1233	53.7	1391
		139	**CMB 25 - 139**	23.2	35.0	812	42.0	974	46.9		52.5	1218	59.4	1378
		152	**CMB 25 - 152**	20.8	38.0	790	45.6	948	51.3		57.0	1186	63.8	1327
		178	**CMB 25 - 178**	17.8	44.5	792	53.4	951	60.1		66.8	1189	76.6	1363
		203	**CMB 25 - 203**	15.8	50.8	803	60.9	962	68.5		76.1	1202	88.4	1397
5.4 x 3.3		305	**CMB 25 - 305**	10.2	76.3	778	91.5	933	103		114.4	1167	135.1	1378
32	16	38	**CMB 32 - 038**	185	9.5	1758	11.4	2109	12.8		14.3	2646	16.3	3016
		44	**CMB 32 - 044**	158	11.0	1738	13.2	2086	14.9		16.5	2607	18.9	2986
		51	**CMB 32 - 051**	134	12.8	1715	15.3	2050	17.2		19.1	2559	23.1	3095
		64	**CMB 32 - 064**	99.0	16.0	1584	19.2	1901	21.6		24.0	2376	28.5	2822
		76	**CMB 32 - 076**	80.5	19.0	1530	22.8	1835	25.7		28.5	2294	34.2	2753
		89	**CMB 32 - 089**	69.1	22.3	1541	26.7	1845	30.0		33.4	2308	40.4	2792
		102	**CMB 32 - 102**	58.8	25.5	1499	30.6	1799	34.4		38.3	2252	48.0	2822
		115	**CMB 32 - 115**	51.5	28.8	1483	34.5	1777	38.8		43.1	2220	54.3	2796
		127	**CMB 32 - 127**	44.8	31.8	1425	38.1	1707	42.9		47.6	2132	59.2	2652
		139	**CMB 32 - 139**	42.3	35.0	1481	42.0	1777	46.9		52.5	2221	65.3	2762
		152	**CMB 32 - 152**	37.8	38.0	1436	45.6	1724	51.3		57.0	2155	73.0	2759
		178	**CMB 32 - 178**	32.5	44.5	1446	53.4	1736	60.1		66.8	2171	84.5	2746
		203	**CMB 32 - 203**	28.9	50.8	1468	60.9	1760	68.5		76.1	2199	96.9	2800
		254	**CMB 32 - 254**	21.4	63.5	1359	76.2	1631	85.7		95.3	2039	120.9	2587
6.8 x 4.0		305	**CMB 32 - 305**	18.3	76.3	1396	91.5	1674	103		114.4	2094	146.9	2688
40	20	51	**CMB 40 - 051**	181.6	12.8	2324	15.3	2778	17.2		19.1	3469	21.4	3886
		64	**CMB 40 - 064**	140.0	16.0	2240	19.2	2688	21.6		24.0	3360	26.8	3752
		76	**CMB 40 - 076**	108.0	19.0	2052	22.8	2462	25.7		28.5	3078	32.7	3532
		89	**CMB 40 - 089**	90.7	22.3	2023	26.7	2422	30.0		33.4	3029	39.0	3537
		102	**CMB 40 - 102**	81.0	25.5	2066	30.6	2479	34.4		38.3	3102	44.1	3572
		115	**CMB 40 - 115**	71.8	28.8	2068	34.5	2477	38.8		43.1	3095	50.6	3633
		127	**CMB 40 - 127**	62.7	31.8	1994	38.1	2389	42.9		47.6	2985	55.9	3505
		139	**CMB 40 - 139**	57.5	35.0	2013	42.0	2415	46.9		52.5	3019	61.8	3554
		152	**CMB 40 - 152**	51.6	38.0	1961	45.6	2353	51.3		57.0	2941	67.5	3483
		178	**CMB 40 - 178**	44.1	44.5	1962	53.4	2355	60.1		66.8	2946	77.2	3405
		203	**CMB 40 - 203**	36.7	50.8	1864	60.9	2235	68.5		76.1	2793	91.8	3369
		254	**CMB 40 - 254**	30.1	63.5	1911	76.2	2294	85.7		95.3	2869	112.7	3392
8.2 x 4.7		305	**CMB 40 - 305**	24.6	76.3	1877	91.5	2251	103		114.4	2814	138.1	3397
50	25	64	**CMB 50 - 064**	209	16.0	3344	19.2	4013	21.6		24.0	5016	28.2	5894
		76	**CMB 50 - 076**	168	19.0	3192	22.8	3830	25.7		28.5	4788	34.9	5863
		89	**CMB 50 - 089**	140	22.3	3122	26.7	3738	30.0		33.4	4676	39.2	5488
		102	**CMB 50 - 102**	119	25.5	3035	30.6	3641	34.4		38.3	4558	47.3	5629
		115	**CMB 50 - 115**	106	28.8	3053	34.5	3657	38.8		43.1	4569	52.6	5576
		127	**CMB 50 - 127**	97.0	31.8	3085	38.1	3696	42.9		47.6	4617	59.8	5801
		139	**CMB 50 - 139**	87.0	35.0	3045	42.0	3654	46.9		52.5	4568	65.1	5664
		152	**CMB 50 - 152**	80.0	38.0	3040	45.6	3648	51.3		57.0	4560	70.8	5664
		178	**CMB 50 - 178**	69.5	44.5	3093	53.4	3711	60.1		66.8	4643	84.2	5852
		203	**CMB 50 - 203**	59.8	50.8	3038	60.9	3642	68.5		76.1	4551	96.5	5771
		229	**CMB 50 - 229**	50.9	57.3	2917	68.7	3497	77.3		85.9	4372	108.5	5523
		254	**CMB 50 - 254**	43.9	63.5	2788	76.2	3345	85.7		95.3	4184	121.8	5347
11.1 x 5.8		305	**CMB 50 - 305**	38.6	76.3	2945	91.5	3532	103		114.4	4416	146.8	5666
63	38	76	**CMB 63 - 076**	312	19.0	5928	22.8	7114	25.7		28.5	8892	30.7	9578
		89	**CMB 63 - 089**	260	22.3	5798	26.7	6942	30.0		33.4	8684	36.5	9490
		102	**CMB 63 - 102**	221	25.5	5636	30.6	6763	34.4		38.3	8464	43.6	9636
		115	**CMB 63 - 115**	187	28.8	5386	34.5	6452	38.8		43.1	8060	48.9	9144
		127	**CMB 63 - 127**	168	31.8	5342	38.1	6401	42.9		47.6	7997	54.2	9106
		152	**CMB 63 - 152**	136	38.0	5168	45.6	6202	51.3		57.0	7752	65.7	8935
		178	**CMB 63 - 178**	114	44.5	5073	53.4	6088	60.1		66.8	7615	76.5	8721
		203	**CMB 63 - 203**	100	50.8	5080	60.9	6090	68.5		76.1	7610	88.0	8800
		229	**CMB 63 - 229**	89.2	57.3	5111	68.7	6128	77.3		85.9	7662	103.9	9268
		254	**CMB 63 - 254**	78.4	63.5	4978	76.2	5974	85.7		95.3	7472	112.4	8812
11.5 x 9.1		305	**CMB 63 - 305**	64.7	76.3	4937	91.5	5920	103		114.4	7402	133.8	8657

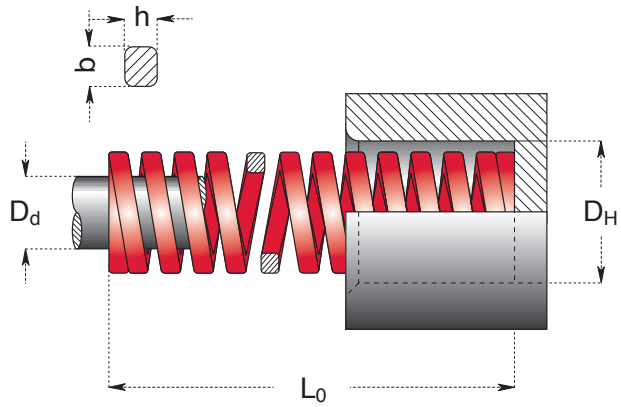
Note: 1 N = 0,102 Kg (force)

Molle carico forte
Heavy load springs
Federn für hohe belastung
Ressorts charge forte

Serie Series Serie Série **CFR**
ISO 10243

Colore rosso
Red color
Kennfarbe rot
Couleur rouge

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire



D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	20% 3 mln		25% 1,5 mln		27.5% 300 / 500.000		30% Max. Defl.		D Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
10	5	25	**CFR 10 - 025**	22.1	5.0	111	6.3	139	6,9	152	7.5	166	9.2	203
		32	**CFR 10 - 032**	17.5	6.4	112	8.0	140	8.8	154	9.6	168	12.1	212
		38	**CFR 10 - 038**	17.1	7.6	130	9.5	162	10.5	179	11.4	195	13.2	226
		44	**CFR 10 - 044**	15.0	8.8	132	11.0	165	12.1	182	13.2	198	15.1	227
		51	**CFR 10 - 051**	12.8	10.2	131	12.8	164	14.0	180	15.3	196	19.5	250
		64	**CFR 10 - 064**	10.7	12.8	137	16.0	171	17.6	188	19.2	205	21.8	233
		76	**CFR 10 - 076**	7.5	15.2	114	19.0	143	20.9	157	22.8	171	27.9	209
1.9 x 1.5		**305**	**CFR 10 - 305**	2.1	61.0	128	76.3	160	83.9	176	91.5	192	127.2	267
12.5	6.3	25	**CFR 13 - 025**	42.1	5.0	211	6.3	265	6.9	289	7.5	316	9.8	413
		32	**CFR 13 - 032**	33.2	6.4	212	8.0	266	8.8	292	9.6	319	13.6	452
		38	**CFR 13 - 038**	29.3	7.6	223	9.5	278	10.5	306	11.4	334	14.6	428
		44	**CFR 13 - 044**	24.6	8.8	216	11.0	271	12.1	298	13.2	325	18.1	445
		51	**CFR 13 - 051**	19.6	10.2	200	12.8	251	14.0	275	15.3	300	22.3	437
		64	**CFR 13 - 064**	15.0	12.8	192	16.0	240	17.6	264	19.2	288	27.3	410
		76	**CFR 13 - 076**	13.2	15.2	201	19.0	251	20.9	276	22.8	301	33.1	437
		89	**CFR 13 - 089**	11.4	17.8	203	22.3	254	24.5	279	26.7	304	38.9	443
		102	**CFR 13 - 102**	8.4	20.4	171	25.5	214	28.1	236	30.6	257	43.8	368
2.4 x 1.9		305	**CFR 13 - 305**	2.8	61.0	171	76.3	214	83.9	235	91.5	256	139.7	391
16	8	25	**CFR 16 - 025**	75.7	5.0	379	6.3	477	6.9	520	7.5	568	8.4	636
		32	**CFR 16 - 032**	52.8	6.4	338	8.0	422	8.8	465	9.6	507	10.5	554
		38	**CFR 16 - 038**	48.5	7.6	369	9.5	461	10.5	507	11.4	553	13.6	660
		44	**CFR 16 - 044**	42.8	8.8	377	11.0	471	12.1	518	13.2	565	15.9	681
		51	**CFR 16 - 051**	37.1	10.2	378	12.8	475	14.0	520	15.3	568	18.9	701
		64	**CFR 16 - 064**	30.3	12.8	388	16.0	485	17.6	533	19.2	582	24.9	754
		76	**CFR 16 - 076**	25.7	15.2	391	19.0	488	20.9	537	22.8	586	29.2	750
		89	**CFR 16 - 089**	21.7	17.8	386	22.3	484	24.5	531	26.7	579	34.5	749
		102	**CFR 16 - 102**	19.3	20.4	394	25.5	492	28.1	541	30.6	591	39.1	755
		115	**CFR 16 - 115**	15.7	23.0	361	28.8	452	31.6	497	34.5	542	44.0	691
3.1 x 2.5		305	**CFR 16 - 305**	7.1	61.0	433	76.3	542	83.9	596	91.5	650	103.6	736
20	10	25	**CFR 20 - 025**	216	5.0	1080	6.3	1361	6.9	1485	7.5	1620	8.3	1793
		32	**CFR 20 - 032**	168	6.4	1075	8.0	1344	8.8	1478	9.6	1613	10.9	1831
		38	**CFR 20 - 038**	129	7.6	980	9.5	1226	10.5	1348	11.4	1471	12.5	1613
		44	**CFR 20 - 044**	112	8.8	986	11.0	1232	12.1	1355	13.2	1478	15.0	1680
		51	**CFR 20 - 051**	94.0	10.2	959	12.8	1203	14.0	1318	15.3	1438	17.6	1654
		64	**CFR 20 - 064**	72.1	12.8	923	16.0	1154	17.6	1269	19.2	1384	22.6	1629
		76	**CFR 20 - 076**	59.7	15.2	907	19.0	1134	20.9	1248	22.8	1361	27.5	1642
		89	**CFR 20 - 089**	50.5	17.8	899	22.3	1126	24.5	1236	26.7	1348	31.7	1601
		102	**CFR 20 - 102**	44.2	20.4	902	25.5	1127	28.1	1240	30.6	1353	37.5	1658
		115	**CFR 20 - 115**	38.4	23.0	883	28.8	1106	31.6	1214	34.5	1325	42.6	1636
		127	**CFR 20 - 127**	34.1	25.4	866	31.8	1084	34.9	1191	38.1	1299	45.5	1552
		139	**CFR 20 - 139**	31.0	28.0	868	35.0	1085	38.2	1185	42.0	1302	50.1	1553
		152	**CFR 20 - 152**	28.2	30.4	857	38.0	1072	41.8	1179	45.6	1286	55.8	1574
4.0 x 3.3		305	**CFR 20 - 305**	15.0	61.0	915	76.3	1145	83.9	1258	91.5	1373	114.1	1712

Note: 1 N = 0,102 Kg (force)

D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	20% 3 mln		25% 1,5 mln		27.5% 300 / 500.000		30% Max. Defl.		D Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
25	12.5	25	**CFR 25 - 025**	375	5.0	1875	6.3	2363	6.9	2578	7.5	2813	8.5	3188
		32	**CFR 25 - 032**	297	6.4	1901	8.0	2376	8.8	2614	9.6	2851	11.0	3267
		38	**CFR 25 - 038**	219	7.6	1664	9.5	2081	10.5	2289	11.4	2497	12.6	2759
		44	**CFR 25 - 044**	187	8.8	1646	11.0	2057	12.1	2263	13.2	2468	14.8	2768
		51	**CFR 25 - 051**	156	10.2	1591	12.8	1997	14.0	2188	15.3	2387	17.9	2792
		64	**CFR 25 - 064**	123	12.8	1574	16.0	1968	17.6	2165	19.2	2362	23.1	2841
		76	**CFR 25 - 076**	99.0	15.2	1505	19.0	1881	20.9	2069	22.8	2257	26.3	2604
		89	**CFR 25 - 089**	84.0	17.8	1495	22.3	1873	24.5	2056	26.7	2243	30.5	2562
		102	**CFR 25 - 102**	73.0	20.4	1489	25.5	1862	28.1	2048	30.6	2234	37.3	2723
		115	**CFR 25 - 115**	65.0	23.0	1495	28.8	1872	31.6	2056	34.5	2243	41.9	2724
		127	**CFR 25 - 127**	57.7	25.4	1466	31.8	1835	34.9	2015	38.1	2198	46.2	2666
		139	**CFR 25 - 139**	52.7	28.0	1476	35.0	1845	38.2	2014	42.0	2213	49.3	2598
		152	**CFR 25 - 152**	47.8	30.4	1453	38.0	1816	41.8	1998	45.6	2180	55.7	2662
		178	**CFR 25 - 178**	41.0	35.6	1460	44.5	1825	49.0	2007	53.4	2189	65.1	2669
		203	**CFR 25 - 203**	35.8	40.6	1453	50.8	1819	55.8	1999	60.9	2180	74.5	2667
5.5 x 4.2		305	**CFR 25 - 305**	22.9	61.0	1397	76.3	1747	83.9	1921	91.5	2095	110.2	2524
32	16	38	**CFR 32 - 038**	388	7.6	2949	9.5	3686	10.5	4055	11.4	4423	12.5	4850
		44	**CFR 32 - 044**	324	8.8	2851	11.0	3564	12.1	3920	13.2	4277	14.9	4828
		51	**CFR 32 - 051**	272	10.2	2774	12.8	3482	14.0	3815	15.3	4162	17.8	4842
		64	**CFR 32 - 064**	212	12.8	2714	16.0	3392	17.6	3731	19.2	4070	22.4	4749
		76	**CFR 32 - 076**	172	15.2	2614	19.0	3268	20.9	3595	22.8	3922	26.1	4489
		89	**CFR 32 - 089**	141	17.8	2510	22.3	3144	24.5	3451	26.7	3765	30.8	4343
		102	**CFR 32 - 102**	122	20.4	2489	25.5	3111	28.1	3422	30.6	3733	36.8	4490
		115	**CFR 32 - 115**	107	23.0	2461	28.8	3082	31.6	3384	34.5	3692	41.4	4430
		127	**CFR 32 - 127**	93.0	25.4	2362	31.8	2957	34.9	3248	38.1	3543	44.4	4129
		139	**CFR 32 - 139**	86.0	28.0	2408	35.0	3010	38.2	3287	42.0	3612	48.5	4171
		152	**CFR 32 - 152**	78.0	30.4	2371	38.0	2964	41.8	3260	45.6	3557	54.8	4274
		178	**CFR 32 - 178**	67.2	35.6	2392	44.5	2990	49.0	3289	53.4	3588	63.6	4274
		203	**CFR 32 - 203**	59.1	40.6	2399	50.8	3002	55.8	3299	60.9	3599	72.5	4285
		254	**CFR 32 - 254**	46.4	50.8	2357	63.5	2946	69.9	3241	76.2	3536	92.8	4306
7.1 x 5.4		305	**CFR 32 - 305**	38.0	61.0	2318	76.3	2899	83.9	3187	91.5	3477	111.8	4248
40	20	51	**CFR 40 - 051**	350	10.2	3570	12.8	4480	14.0	4909	15.3	5355	17.0	5950
		64	**CFR 40 - 064**	269	12.8	3443	16.0	4304	17.6	4734	19.2	5165	21.9	5891
		76	**CFR 40 - 076**	219	15.2	3329	19.0	4161	20.9	4577	22.8	4993	26.7	5847
		89	**CFR 40 - 089**	190	17.8	3382	22.3	4237	24.5	4650	26.7	5073	31.3	5947
		102	**CFR 40 - 102**	163	20.4	3325	25.5	4157	28.1	4572	30.6	4988	37.1	6047
		115	**CFR 40 - 115**	142	23.0	3266	28.8	4090	31.6	4491	34.5	4899	41.0	5822
		127	**CFR 40 - 127**	128	25.4	3251	31.8	4070	34.9	4470	38.1	4877	46.5	5952
		139	**CFR 40 - 139**	115	28.0	3220	35.0	4025	38.2	4396	42.0	4830	53.1	6107
		152	**CFR 40 - 152**	105	30.4	3192	38.0	3990	41.8	4389	45.6	4788	56.1	5891
		178	**CFR 40 - 178**	89	35.6	3168	44.5	3961	49.0	4357	53.4	4753	67.4	5999
		203	**CFR 40 - 203**	77	40.6	3126	50.8	3912	55.8	4299	60.9	4689	76.2	5867
		254	**CFR 40 - 254**	61	50.8	3099	63.5	3874	69.9	4261	76.2	4648	96.2	5868
8.4 x 6.2		305	**CFR 40 - 305**	51	61.0	3111	76.3	3891	83.9	4278	91.5	4667	114.8	5855
50	25	64	**CFR 50 - 064**	413	12.8	5286	16.0	6608	17.6	7269	19.2	7930	22.4	9251
		76	**CFR 50 - 076**	339	15.2	5153	19.0	6441	20.9	7085	22.8	7729	26.5	8984
		89	**CFR 50 - 089**	288	17.8	5126	22.3	6422	24.5	7049	26.7	7690	31.5	9072
		102	**CFR 50 - 102**	245	20.4	4998	25.5	6248	28.1	6872	30.6	7497	37.6	9212
		115	**CFR 50 - 115**	215	23.0	4945	28.8	6192	31.6	6799	34.5	7418	42.7	9181
		127	**CFR 50 - 127**	192	25.4	4877	31.8	6106	34.9	6706	38.1	7315	47.5	9120
		139	**CFR 50 - 139**	168	28.0	4704	35.0	5880	38.2	6422	42.0	7056	51.8	8702
		152	**CFR 50 - 152**	154	30.4	4682	38.0	5852	41.8	6437	45.6	7022	57.8	8901
		178	**CFR 50 - 178**	134	35.6	4770	44.5	5963	49.0	6559	53.4	7156	68.5	9179
		203	**CFR 50 - 203**	117	40.6	4750	50.8	5944	55.8	6532	60.9	7125	77.6	9079
		254	**CFR 50 - 254**	89	50.8	4521	63.5	5652	69.9	6217	76.2	6782	97.9	8713
11.1 x 7.6		305	**CFR 50 - 305**	73	61.0	4453	76.3	5570	83.9	6123	91.5	6680	120.7	8811
63	38	76	**CFR 63 - 076**	618	15.2	9394	19.0	11742	20.9	12916	22.8	14090	24.7	15265
		89	**CFR 63 - 089**	515	17.8	9167	22.3	11485	24.5	12605	26.7	13751	30.0	15450
		102	**CFR 63 - 102**	438	20.4	8935	25.5	11169	28.1	12286	30.6	13403	35.1	15374
		115	**CFR 63 - 115**	370	23.0	8510	28.8	10656	31.6	11701	34.5	12765	37.5	13875
		127	**CFR 63 - 127**	333	25.4	8458	31.8	10589	34.9	11630	38.1	12687	45.9	15285
		152	**CFR 63 - 152**	269	30.4	8178	38.0	10222	41.8	11244	45.6	12266	56.5	15199
		178	**CFR 63 - 178**	226	35.6	8046	44.5	10057	49.0	11063	53.4	12068	66.8	15097
		203	**CFR 63 - 203**	198	40.6	8039	50.8	10058	55.8	11053	60.9	12058	78.8	15602
		254	**CFR 63 - 254**	155	50.8	7874	63.5	9843	69.9	10827	76.2	11811	101.7	15763
11.6 x 12.3		305	**CFR 63 - 305**	128	61.0	7808	76.3	9766	83.9	10736	91.5	11712	122.4	15667

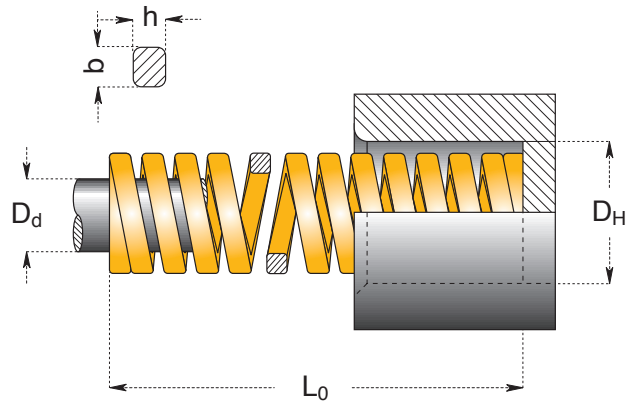
Note: 1 N = 0,102 Kg (force)

Molle carico extra-forte
Extra-heavy load springs
Federn für höchste belastung
Ressorts charge extra-forte

Serie Series Serie Série **CXF**
ISO 10243

Colore giallo
Yellow color
Kennfarbe gelb
Couleur jaune

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire



D_H / D_d d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	17% 3 mln		20% 1,5 mln		22.5% 300 / 500.000		25% Max. Defl.		D Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
10	5	25	**CXF 10 - 025**	36.8	4.3	158	5.0	184	5.6	207	6.3	232	7.7	283
		32	**CXF 10 - 032**	27.9	5.4	151	6.4	179	7.2	201	8.0	223	10.6	296
		38	**CXF 10 - 038**	23.7	6.5	154	7.6	180	8.6	203	9.5	225	12.6	299
		44	**CXF 10 - 044**	19.2	7.5	144	8.8	169	9.9	190	11.0	211	13.8	265
		51	**CXF 10 - 051**	16.5	8.7	144	10.2	168	11.5	189	12.8	211	16.2	267
		64	**CXF 10 - 064**	13.2	10.9	144	12.8	169	14.4	190	16.0	211	20.4	269
		76	**CXF 10 - 076**	10.9	12.9	141	15.2	166	17.1	186	19.0	207	25.2	275
1.9 x 1.6		305	**CXF 10 - 305**	2.6	51.9	135	61.0	159	68.6	178	76.3	198	110.8	288
12.5	6.3	25	**CXF 13 - 025**	58.5	4.3	252	5.0	293	5.6	329	6.3	369	8.1	474
		32	**CXF 13 - 032**	43.9	5.4	237	6.4	281	7.2	316	8.0	351	9.9	435
		38	**CXF 13 - 038**	36.0	6.5	234	7.6	274	8.6	308	9.5	342	12.9	464
		44	**CXF 13 - 044**	30.3	7.5	227	8.8	267	9.9	300	11.0	333	14.1	427
		51	**CXF 13 - 051**	26.2	8.7	228	10.2	267	11.5	301	12.8	335	17.4	456
		64	**CXF 13 - 064**	21.2	10.9	231	12.8	271	14.4	305	16.0	339	21.0	445
		76	**CXF 13 - 076**	17.1	12.9	221	15.2	260	17.1	292	19.0	325	26.4	451
		89	**CXF 13 - 089**	14.5	15.1	219	17.8	258	20.0	290	22.3	323	31.5	457
		102	**CXF 13 - 102**	12.7	17.3	220	20.4	259	23.0	291	25.5	324	36.0	457
2.6 x 2.0		305	**CXF 13 - 305**	4.3	51.9	223	61.0	262	68.6	295	76.3	328	111.3	479
16	8	25	**CXF 16 - 025**	118	4.3	507	5.0	590	5.6	664	6.3	743	8.5	1003
		32	**CXF 16 - 032**	89.0	5.4	481	6.4	570	7.2	641	8.0	712	11.0	979
		38	**CXF 16 - 038**	72.1	6.5	469	7.6	548	8.6	616	9.5	685	13.2	952
		44	**CXF 16 - 044**	60.9	7.5	457	8.8	536	9.9	603	11.0	670	14.7	895
		51	**CXF 16 - 051**	52.3	8.7	455	10.2	533	11.5	600	12.8	669	17.7	926
		64	**CXF 16 - 064**	41.2	10.9	449	12.8	527	14.4	593	16.0	659	21.9	902
		76	**CXF 16 - 076**	34.1	12.9	440	15.2	518	17.1	583	19.0	648	27.8	948
		89	**CXF 16 - 089**	29.5	15.1	445	17.8	525	20.0	591	22.3	658	31.2	920
		102	**CXF 16 - 102**	25.6	17.3	443	20.4	522	23.0	588	25.5	653	37.9	970
		115	**CXF 16 - 115**	22.4	19.6	439	23.0	515	25.9	580	28.8	645	44.5	997
3.2 x 2.9		305	**CXF 16 - 305**	8.4	51.9	436	61.0	512	68.6	576	76.3	641	113.5	953
20	10	25	**CXF 20 - 025**	293	4.3	1260	5.0	1465	5.6	1648	6.3	1846	6.9	2022
		32	**CXF 20 - 032**	224	5.4	1210	6.4	1434	7.2	1613	8.0	1792	9.4	2106
		38	**CXF 20 - 038**	177	6.5	1151	7.6	1345	8.6	1513	9.5	1682	12.0	2124
		44	**CXF 20 - 044**	149	7.5	1118	8.8	1311	9.9	1475	11.0	1639	13.5	2012
		51	**CXF 20 - 051**	128	8.7	1114	10.2	1306	11.5	1469	12.8	1638	16.2	2074
		64	**CXF 20 - 064**	99.0	10.9	1079	12.8	1267	14.4	1426	16.0	1584	21.2	2099
		76	**CXF 20 - 076**	81.7	12.9	1054	15.2	1242	17.1	1397	19.0	1552	24.7	2018
		89	**CXF 20 - 089**	69.5	15.1	1049	17.8	1237	20.0	1392	22.3	1550	28.8	2002
		102	**CXF 20 - 102**	60.6	17.3	1048	20.4	1236	23.0	1391	25.5	1545	34.8	2109
		115	**CXF 20 - 115**	53.0	19.6	1039	23.0	1219	25.9	1371	28.8	1526	39.0	2067
		127	**CXF 20 - 127**	47.5	21.6	1026	25.4	1207	28.6	1357	31.8	1511	43.0	2043
		139	**CXF 20 - 139**	43.0	23.8	1023	28.0	1204	31.3	1346	35.0	1505	45.3	1948
		152	**CXF 20 - 152**	39.0	25.8	1006	30.4	1186	34.2	1334	38.0	1482	50.4	1966
4.1 x 3.8		305	**CXF 20 - 305**	21.2	51.9	1100	61.0	1293	68.6	1455	76.3	1618	103.5	2194

Note:
1 N = 0,102 Kg (force)

D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	17% 3 mln		20% 1,5 mln		22.5% 300 / 500.000		25% Max. Defl.		D Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
25	12.5	25	**CXF 25 - 025**	459.0	4.3	1974	5.0	2295	5.6	2570	6.3	2892	7.3	3351
		32	**CXF 25 - 032**	374.4	5.4	2022	6.4	2396	7.2	2693	8.0	2995	10.7	4006
		38	**CXF 25 - 038**	346.0	6.5	2249	7.6	2630	8.6	2580	9.5	3287	12.0	4152
		44	**CXF 25 - 044**	244.0	7.5	1830	8.8	2147	9.9	2416	11.0	2684	14.4	3514
		51	**CXF 25 - 051**	207.5	8.7	1805	10.2	2117	11.5	2392	12.8	2656	17.4	3611
		64	**CXF 25 - 064**	161.0	10.9	1755	12.8	2061	14.4	2318	16.0	2576	21.4	3445
		76	**CXF 25 - 076**	130.8	12.9	1687	15.2	1988	17.1	2240	19.0	2485	26.9	3519
		89	**CXF 25 - 089**	110.5	15.1	1669	17.8	1967	20.0	2220	22.3	2464	30.9	3414
		102	**CXF 25 - 102**	96.3	17.3	1666	20.4	1965	23.0	2210	25.5	2456	36.7	3534
		115	**CXF 25 - 115**	85.7	19.6	1680	23.0	1971	25.9	2217	28.8	2468	40.3	3454
		127	**CXF 25 - 127**	76.3	21.6	1648	25.4	1938	28.6	2180	31.8	2426	45.1	3441
		139	**CXF 25 - 139**	68.9	23.8	1640	28.0	1929	31.3	2066	35.0	2412	47.6	3280
		152	**CXF 25 - 152**	63.5	25.8	1638	30.4	1930	34.2	2172	38.0	2413	53.5	3397
		178	**CXF 25 - 178**	53.9	30.3	1633	35.6	1919	40.1	2159	44.5	2399	63.9	3444
		203	**CXF 25 - 203**	47.0	34.5	1622	40.6	1908	45.7	2147	50.8	2388	70.2	3299
5.4 x 4.6		305	**CXF 25 - 305**	30.9	51.9	1604	61.0	1885	68.6	2121	76.3	2358	110.1	3402
32	16	38	**CXF 32 - 038**	528.2	6.5	3433	7.6	4014	8.6	4128	9.5	5018	11.4	6021
		44	**CXF 32 - 044**	424.4	7.5	3183	8.8	3735	9.9	3861	11.0	4668	13.7	5814
		51	**CXF 32 - 051**	353.0	8.7	3071	10.2	3601	11.5	3680	12.8	4518	15.6	5507
		64	**CXF 32 - 064**	269.2	10.9	2934	12.8	3446	14.4	3876	16.0	4307	20.0	5384
		76	**CXF 32 - 076**	218.5	12.9	2819	15.2	3321	17.1	3745	19.0	4152	24.4	5331
		89	**CXF 32 - 089**	180.3	15.1	2723	17.8	3209	20.0	3611	22.3	4021	29.7	5355
		102	**CXF 32 - 102**	155.0	17.3	2682	20.4	3162	23.0	3557	25.5	3953	35.1	5441
		115	**CXF 32 - 115**	140.0	19.6	2744	23.0	3220	25.9	3623	28.8	4032	39.0	5460
		127	**CXF 32 - 127**	124.0	21.6	2678	25.4	3150	28.6	3543	31.8	3943	42.8	5307
		139	**CXF 32 - 139**	112.3	23.8	2673	28.0	3144	31.3	3506	35.0	3931	48.6	5458
		152	**CXF 32 - 152**	102.0	25.8	2632	30.4	3101	34.2	3488	38.0	3876	52.4	5345
		178	**CXF 32 - 178**	88.2	30.3	2672	35.6	3140	40.1	3532	44.5	3925	60.9	5371
		203	**CXF 32 - 203**	76.0	34.5	2622	40.6	3086	45.7	3471	50.8	3861	69.2	5259
		254	**CXF 32 - 254**	60.8	43.2	2627	50.8	3089	57.2	3475	63.5	3861	88.1	5356
7.3 x 5.9		305	**CXF 32 - 305**	49.0	51.9	2543	61.0	2989	68.6	3363	76.3	3739	104.2	5106
40	20	51	**CXF 40 - 051**	628	8.7	5464	10.2	6406	11.5	7206	12.8	8038	15.0	9420
		64	**CXF 40 - 064**	487	10.9	5308	12.8	6234	14.4	7013	16.0	7792	19.5	9497
		76	**CXF 40 - 076**	379	12.9	4889	15.2	5761	17.1	6481	19.0	7201	23.3	8831
		89	**CXF 40 - 089**	321	15.1	4847	17.8	5714	20.0	6428	22.3	7158	26.7	8571
		102	**CXF 40 - 102**	281	17.3	4861	20.4	5732	23.0	6449	25.5	7166	33.8	9498
		115	**CXF 40 - 115**	245	19.6	4802	23.0	5635	25.9	6339	28.8	7056	36.2	8869
		127	**CXF 40 - 127**	221	21.6	4774	25.4	5613	28.6	6315	31.8	7028	40.7	8995
		139	**CXF 40 - 139**	190	23.8	4522	28.0	5320	31.3	5352	35.0	6650	44.5	8455
		152	**CXF 40 - 152**	168	25.8	4334	30.4	5107	34.2	5746	38.0	6384	49.6	8333
		178	**CXF 40 - 178**	146	30.3	4424	35.6	5198	40.1	6015	44.5	6497	59.9	8745
		203	**CXF 40 - 203**	132	34.5	4554	40.6	5359	45.7	6029	50.8	6706	67.1	8857
		254	**CXF 40 - 254**	107	43.2	4622	50.8	5436	57.2	6115	63.5	6795	86.3	9234
8.4 x 7.5		305	**CXF 40 - 305**	87.8	51.9	4557	61.0	5356	68.6	6025	76.3	6699	103.6	9096
50	25	64	**CXF 50 - 064**	709	10.9	7728	12.8	9075	14.4	10210	16.0	11344	19.3	13684
		76	**CXF 50 - 076**	572	12.9	7379	15.2	8694	17.1	9781	19.0	10868	24.2	13842
		89	**CXF 50 - 089**	475	15.1	7173	17.8	8455	20.0	9512	22.3	10593	28.0	13300
		102	**CXF 50 - 102**	405	17.3	7007	20.4	8262	23.0	9295	25.5	10328	33.5	13568
		115	**CXF 50 - 115**	352	19.6	6899	23.0	8096	25.9	9108	28.8	10138	38.6	13587
		127	**CXF 50 - 127**	316	21.6	6826	25.4	8026	28.6	9030	31.8	10049	41.4	13082
		139	**CXF 50 - 139**	274	23.8	6521	28.0	7672	31.3	9046	35.0	9590	47.3	12960
		152	**CXF 50 - 152**	239	25.8	6166	30.4	7266	34.2	8174	38.0	9082	50.2	11998
		178	**CXF 50 - 178**	215	30.3	6515	35.6	7654	40.1	8611	44.5	9568	61.1	13137
		203	**CXF 50 - 203**	187	34.5	6452	40.6	7592	45.7	8541	50.8	9500	67.7	12660
		254	**CXF 50 - 254**	153	43.2	6610	50.8	7772	57.2	8744	63.5	9716	87.0	13311
11.5 x 9.0		305	**CXF 50 - 305**	127	51.9	6591	61.0	7747	68.6	8715	76.3	9690	103.4	13132
63	38	76	**CXF 63 - 076**	952	12.9	12280	15.2	14470	*	*	*	*	15.5	14756
		89	**CXF 63 - 089**	819	15.1	12360	17.8	14580	*	*	*	*	20.0	19040
		102	**CXF 63 - 102**	700	17.3	12110	20.4	14280	23.0	16065	25.5	17850	30.7	21449
		115	**CXF 63 - 115**	620	19.6	12152	23.0	14260	25.9	16043	28.8	17860	34.9	21640
		127	**CXF 63 - 127**	565	21.6	12204	25.4	14351	28.6	16145	31.8	17967	38.0	21470
		152	**CXF 63 - 152**	458	25.8	11816	30.4	13923	34.2	15664	38.0	17404	47.2	21618
		178	**CXF 63 - 178**	384	30.3	11635	35.6	13670	40.1	15379	44.5	17088	55.8	21427
		203	**CXF 63 - 203**	337	34.5	11627	40.6	13682	45.7	15392	50.8	17120	64.8	21838
		254	**CXF 63 - 254**	263	43.2	11362	50.8	13360	57.2	15030	63.5	16701	86.7	22802
11.6 x 14.9		305	**CXF 63 - 305**	218	51.9	11314	61.0	13298	68.6	14960	76.3	16633	105.7	23043

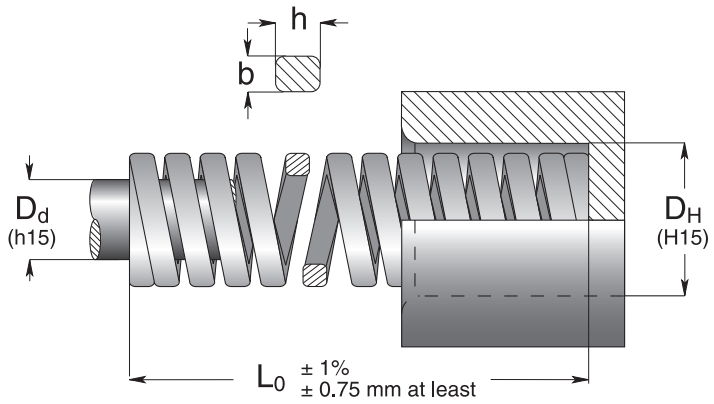
Note: 1 N = 0,102 Kg (force)

Molle carico ultra-forte
Ultra-strong load springs
Federn für extrem starke Lasten
Ressorts charge ultra-forte

Colore argento
Silver color
Silberne farbe
Couleur argent

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire

Serie Series Serie Série **A**



D_H / D_d d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	10% 3 mln		12% 1,5 mln		13.5% 300 / 500.000		15% 100 / 200.000		E Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
10	5	25	**A 10 - 025**	167	2.5	418	3.0	501	3.4	564	3.8	626	5.9	
		32	**A 10 - 032**	130	3.2	416	3.8	499	4.3	562	4.8	624	7.5	
		38	**A 10 - 038**	105	3.8	399	4.6	479	5.1	539	5.7	599	8.2	
		44	**A 10 - 044**	86	4.4	378	5.3	454	5.9	511	6.6	568	11.0	
		51	**A 10 - 051**	79	5.1	403	6.1	483	6.9	544	7.7	604	12.5	
		64	**A 10 - 064**	62	6.4	397	7.7	476	8.6	536	9.6	595	15.8	
		76	**A 10 - 076**	51	7.6	388	9.1	465	10.3	523	11.4	581	19.0	
2.0 x 2.8		305	**A 10 - 305**	11.5	30.5	351	36.6	421	41.2	474	45.8	526	89.0	
12.5	6.3	25	**A 13 - 025**	288	2.5	720	3.0	864	3.4	972	3.8	1080	5.6	
		32	**A 13 - 032**	216	3.2	691	3.8	829	4.3	933	4.8	1037	7.3	
		38	**A 13 - 038**	176	3.8	669	4.6	803	5.1	903	5.7	1003	9.2	
		44	**A 13 - 044**	149	4.4	656	5.3	787	5.9	885	6.6	983	11.1	
		51	**A 13 - 051**	128	5.1	653	6.1	783	6.9	881	7.7	979	12.6	
		64	**A 13 - 064**	100	6.4	640	7.7	768	8.6	864	9.6	960	16.1	
		76	**A 13 - 076**	84	7.6	638	9.1	766	10.3	862	11.4	958	19.3	
		89	**A 13 - 089**	71	8.9	632	10.7	758	12.0	853	13.4	948	23.3	
		102	**A 13 - 102**	61	10.2	622	12.2	747	13.8	840	15.3	933	26,9	
2.75 x 3.4		305	**A 13 - 305**	22	30.5	671	36.6	805	41.2	906	45.8	1007	94.0	
16	8	32	**A 16 - 032**	449	3.2	1437	3.8	1724	4.3	1940	4.8	2155	6.6	
		38	**A 16 - 038**	363	3.8	1379	4.6	1655	5.1	1862	5.7	2069	8.1	
		44	**A 16 - 044**	309	4.4	1360	5.3	1632	5.9	1835	6.6	2039	10.1	
		51	**A 16 - 051**	256	5.1	1306	6.1	1567	6.9	1763	7.7	1958	11.3	
		64	**A 16 - 064**	203	6.4	1299	7.7	1559	8.6	1754	9.6	1949	14.3	
		76	**A 16 - 076**	166	7.6	1262	9.1	1514	10.3	1703	11.4	1892	18.0	
		89	**A 16 - 089**	139	8.9	1237	10.7	1485	12.0	1670	13.4	1856	20.5	
		102	**A 16 - 102**	114	10.2	1163	12.2	1395	13.8	1570	15.3	1744	24.3	
		115	**A 16 - 115**	105	11.5	1208	13.8	1449	15.5	1630	17.3	1811	27.0	
		127	**A 16 - 127**	94	12.7	1194	15.2	1433	17.1	1612	19.1	1791	31.5	
		152	**A 16 - 152**	78	15.2	1186	18.2	1423	20.5	1601	22.8	1778	38.0	
3.5 x 4.75		305	**A 16 - 305**	38.8	30.5	1183	36.6	1420	41.2	1598	45.8	1775	77.2	
20	10	44	**A 20 - 044**	452	4.4	1989	5.3	2387	5.9	2685	6.6	2983	8.9	
		51	**A 20 - 051**	378	5.1	1928	6.1	2313	6.9	2603	7.7	2892	10.6	
		64	**A 20 - 064**	301	6.4	1926	7.7	2312	8.6	2601	9.6	2890	13.8	
		76	**A 20 - 076**	247	7.6	1877	9.1	2253	10.3	2534	11.4	2816	16.2	
		89	**A 20 - 089**	208	8.9	1851	10.7	2221	12.0	2499	13.4	2777	20.1	
		102	**A 20 - 102**	188	10.2	1918	12.2	2301	13.8	2589	15.3	2876	22.3	
		115	**A 20 - 115**	159	11.5	1829	13.8	2194	15.5	2468	17.3	2743	25.5	
		127	**A 20 - 127**	146	12.7	1854	15.2	2225	17.1	2503	19.1	2781	27.9	
		152	**A 20 - 152**	120	15.2	1824	18.2	2189	20.5	2462	22.8	2736	34.1	
4.0 x6.0		305	**A 20 - 305**	60	30.5	1830	36.6	2196	41.2	2471	45.8	2745	68.8	

Note:
1 N = 0,102 Kg (force)

D_H	D_d d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	10% 3 mln		12% 1,5 mln		13.5% 300 / 500.000		15% 100 / 200.000		E Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
25	12.5	44	**A 25 - 044**	1158	4.4	5095	5.3	6114	5.9	6879	6.6	7643	9.8	
		51	**A 25 - 051**	933	5.1	4758	6.1	5710	6.9	6424	7.7	7137	11.0	
		64	**A 25 - 064**	644	6.4	4122	7.7	4959	8.6	5564	9.6	6182	13	
		76	**A 25 - 076**	556	7.6	4226	9.1	5060	10.3	5705	11.4	6338	16	
		89	**A 25 - 089**	462	8.9	4112	10.7	4943	12.0	5551	13.4	6168	20	
		102	**A 25 - 102**	390	10.2	3978	12.2	4758	13.8	5370	15.3	5967	23	
		115	**A 25 - 115**	360	11.5	4140	13.8	4968	15.5	5589	17.3	6210	26	
		127	**A 25 - 127**	326	12.7	4140	15.2	4955	17.1	5589	19.1	6210	28	
		152	**A 25 - 152**	255	15.2	3876	18.2	4641	20.5	5233	22.8	5814	34	
		178	**A 25 - 178**	230	17.8	4094	21.4	4922	24.0	5527	26.7	6141	39	
		203	**A 25 - 203**	202	20.3	4101	24.4	4929	27.4	5536	30.5	6151	45	
5.6 x 7.5		305	**A 25 - 305**	136	30.5	4148	36.6	4978	41.2	5600	45.8	6222	63	
32	16	44	**A 32 - 044**	1300	4.4	5720	5.3	6890	5.9	7670	6.6	8643	9.3	
		51	**A 32 - 051**	1150	5.1	5865	6.1	7015	6.9	7935	7.7	8855	10.4	
		64	**A 32 - 064**	1077	6.4	6892	7.7	8270	8.6	9305	9.6	10337	13	
		76	**A 32 - 076**	874	7.6	6642	9.1	7971	10.3	8967	11.4	9964	16	
		89	**A 32 - 089**	721	8.9	6419	10.7	7702	12.0	8663	13.4	9628	20	
		102	**A 32 - 102**	620	10.2	6324	12.2	7589	13.8	8537	15.3	9486	23	
		115	**A 32 - 115**	560	11.5	6440	13.8	7728	15.5	8694	17.3	9660	26	
		127	**A 32 - 127**	496	12.7	6299	15.2	7559	17.1	8504	19.1	9449	28	
		152	**A 32 - 152**	408	15.2	6202	18.2	7442	20.5	8372	22.8	9302	34	
		178	**A 32 - 178**	353	17.8	6280	21.4	7536	24.0	8483	26.7	9420	39	
		203	**A 32 - 203**	304	20.3	6171	24.4	7405	27.4	8331	30.5	9257	45	
		254	**A 32 - 254**	243	25.4	6177	30.5	7413	34.3	8332	38.1	9266	62	
7.5 x 9.2		305	**A 32 - 305**	196	30.5	5978	36.6	7174	41.2	8070	45.8	8967	75	
40	20	64	**A 40 - 064**	1128	6.4	7219	7.7	8663	8.6	9746	9.6	10829	12	
		76	**A 40 - 076**	1027	7.6	7729	9.1	9275	10.3	10434	11.4	11594	14.5	
		89	**A 40 - 089**	880	8.9	7832	10.7	9416	12.0	10573	13.4	11748	20	
		102	**A 40 - 102**	762	10.2	7772	12.2	9296	13.8	10493	15.3	11659	23	
		115	**A 40 - 115**	679	11.5	7809	13.8	9370	15.5	10541	17.3	11713	26	
		127	**A 40 - 127**	622	12.7	7899	15.2	9454	17.1	10664	19.1	11849	28	
		152	**A 40 - 152**	509	15.2	7737	18.2	9264	20.5	10445	22.8	11605	36	
		178	**A 40 - 178**	429	17.8	7636	21.4	9181	24.0	10309	26.7	11454	43	
		203	**A 40 - 203**	374	20.3	7592	24.4	9126	27.4	10249	30.5	11388	49	
		254	**A 40 - 254**	296	25.4	7518	30.5	9028	34.3	10150	38.1	11278	62	
8.5 x 11.0		305	**A 40 - 305**	246	30.5	7530	36.6	9004	41.2	10129	45.8	11255	75	
50	25	64	**A 50 - 064**	1980	6.4	12672	7.7	15206	8.6	17107	9.6	19008	13.4	
		76	**A 50 - 076**	1811	7.6	13764	9.1	16516	10.3	18581	11.4	20645	16.3	
		89	**A 50 - 089**	1410	8.9	12549	10.7	15087	12.0	16941	13.4	18824	19	
		102	**A 50 - 102**	1215	10.2	12393	12.2	14823	13.8	16731	15.3	18590	22	
		115	**A 50 - 115**	1076	11.5	12374	13.8	14849	15.5	16705	17.3	18561	25	
		127	**A 50 - 127**	968	12.7	12294	15.2	14714	17.1	16596	19.1	18440	28	
		152	**A 50 - 152**	806	15.2	12251	18.2	14669	20.5	16539	22.8	18377	34	
		178	**A 50 - 178**	698	17.8	12424	21.4	14937	24.0	16773	26.7	18637	40	
		203	**A 50 - 203**	612	20.3	12424	24.4	14933	27.4	16772	30.5	18635	45	
		254	**A 50 - 254**	472	25.4	11989	30.5	14396	34.3	16185	38.1	17983	58	
11.8 x 13.5		305	**A 50 - 305**	388	30.5	11834	36.6	14201	41.2	15976	45.8	17751	70	
63	38	76	**A 63 - 076**	1900	7.6	14440	9.1	17328	10.3	19494	11.4	21660	13	
		89	**A 63 - 089**	1517	8.9	13501	10.7	16202	12.0	18227	13.4	20252	20	
		102	**A 63 - 102**	1295	10.2	13209	12.2	15851	13.8	17832	15.3	19814	23	
		115	**A 63 - 115**	1070	11.5	12305	13.8	14766	15.5	16612	17.3	18458	27	
		127	**A 63 - 127**	979	12.7	12433	15.2	14920	17.1	16785	19.1	18650	30	
		152	**A 63 - 152**	775	15.2	11780	18.2	14136	20.5	15903	22.8	17670	35	
		178	**A 63 - 178**	630	17.8	11214	21.4	13457	24.0	15139	26.7	16821	44	
		203	**A 63 - 203**	546	20.3	11084	24.4	13301	27.4	14963	30.5	16626	48	
		254	**A 63 - 254**	423	25.4	10744	30.5	12893	34.3	14505	38.1	16116	62	
11.8 x 17.8		305	**A 63 - 305**	349	30.5	10645	36.6	12773	41.2	14370	45.8	15967	77	

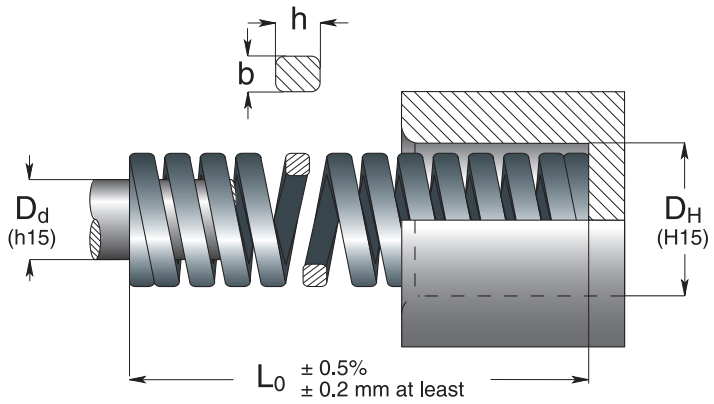
Note: 1 N = 0,102 Kg (force)

Molle carico super-forte
Super-strong load springs
Superstarke Lastfedern
Ressorts charge super-forte

Colore titanio
Titanium color
Titanfarbe
Couleur titane

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire

Serie Series Serie Série **T**



D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	F max	
d						
mm	mm	mm		N / mm	mm	N
10	5	20	**T 10 - 020**	580	2.2	1250
		30	**T 10 - 030**	360	3.5	
		40	**T 10 - 040**	260	4.8	
2.1 x 4.0		50	**T 10 - 050**	200	6.8	
12.5	6.3	20	**T 13 - 020**	970	2.4	2000
		30	**T 13 - 030**	590	3.3	
		40	**T 13 - 040**	400	5.0	
2.65 x 5.35		50	**T 13 - 050**	320	6.0	
16	8	20	**T 16 - 020**	1650	2.1	3500
		35	**T 16 - 035**	920	3.8	
		50	**T 16 - 050**	580	6.0	
		75	**T 16 - 075**	410	8.5	
3.4 x 6.9		100	**T 16 - 100**	280	12.5	
19	10	25	**T 19 - 025**	2270	2.2	5000
		40	**T 19 - 040**	1160	4.3	
		50	**T 19 - 050**	830	6.0	
		75	**T 19 - 075**	500	10.0	
4.1 x 8.3		100	**T 19 - 100**	380	14.0	
25	12.5	30	**T 25 - 030**	4550	2.2	10000
		50	**T 25 - 050**	2000	5.0	
		60	**T 25 - 060**	1500	6.5	
		75	**T 25 - 075**	1250	8.0	
		100	**T 25 - 100**	900	11.1	
6 x 11		125	**T 25 - 125**	710	14.0	
32	16	35	**T 32 - 035**	5360	2.8	15000
		50	**T 32 - 050**	3000	5.0	
		75	**T 32 - 075**	1670	9.0	
		100	**T 32 - 100**	1200	12.5	
		125	**T 32 - 125**	940	16.0	
7.4 x 13		150	**T 32 - 150**	810	18.5	
38	20	40	**T 38 - 040**	5710	3.5	20000
		50	**T 38 - 050**	4000	5.0	
		75	**T 38 - 075**	2220	9.0	
		100	**T 38 - 100**	1540	13.0	
		150	**T 38 - 150**	1050	19.0	
8.25 x 16		200	**T 38 - 200**	740	27.0	
50	25	60	**T 50 - 060**	4605	7.6	35000
		75	**T 50 - 075**	3932	8.9	
		100	**T 50 - 100**	2650	13.2	
		125	**T 50 - 125**	2000	17.5	
		150	**T 50 - 150**	1605	21.8	
11.8 x 17.8		200	**T 50 - 200**	1167	30.0	

Note: 1 N = 0,102 Kg (force)

IT

CARICO MASSIMO FINO A 6 VOLTE LA SERIE EXTRA-FORTE (colore giallo) ISO
CARICO MASSIMO OLTRE 2 VOLTE LA SERIE SUPER-FORTE (colore argento) - STANDARD SPECIAL SPRINGS

Ideali per carichi estremamente elevati con piccole corse di lavoro.
Massima durata in ambienti difficili con contaminanti e temperature elevate.

EN

MAXIMUM LOAD UP TO 6 TIMES THE EXTRA-STRONG ISO SERIES (yellow color)
MAXIMUM LOAD OVER 2 TIMES THE SUPER-FORTE SERIES (silver color) - STANDARD SPECIAL SPRINGS

Ideal for extremely high loads with small working strokes.
Maximum durability in harsh environments with contaminants and high temperatures.

FR

CHARGE MAXIMALE JUSQU'À 6 FOIS LA SÉRIE ISO EXTRA-FORTE (jaune)
CHARGE MAXIMALE SUR 2 FOIS LA SÉRIE SUPER-FORTE (couleur argentée) - RESSORTS SPÉCIAUX STANDARD

Idéal pour des charges extrêmement élevées avec de petites courses de travail.
Durabilité maximale dans des environnements difficiles avec des contaminants et des températures élevées.

DE

MAXIMALE BELASTUNG BIS ZU 6 MAL DER EXTRA-STARKEN ISO-SERIE (gelbe Farbe)
MAXIMALE LAST ÜBER 2 MAL DIE SUPER-FORTE-SERIE (silberne Farbe) - STANDARD SPECIAL SPRINGS

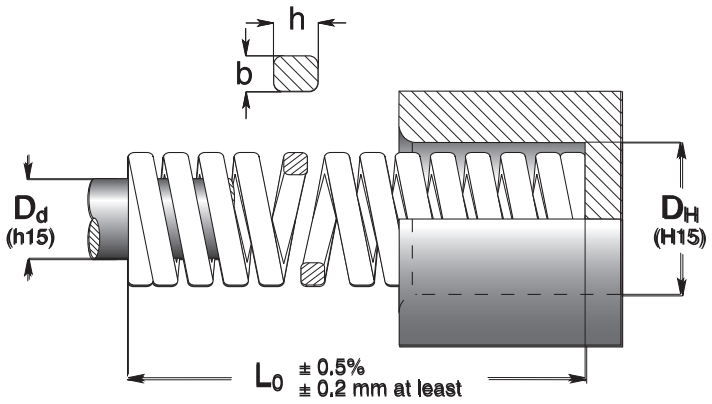
Ideal für extrem hohe Lasten mit kleinen Arbeitshüben.
Maximale Haltbarkeit in rauen Umgebungen mit Verunreinigungen und hohen Temperaturen.

Molle carico iper-forte
Hyper-strong load springs
Hyperstarke Lastfedern
Ressorts charge hyper-forte

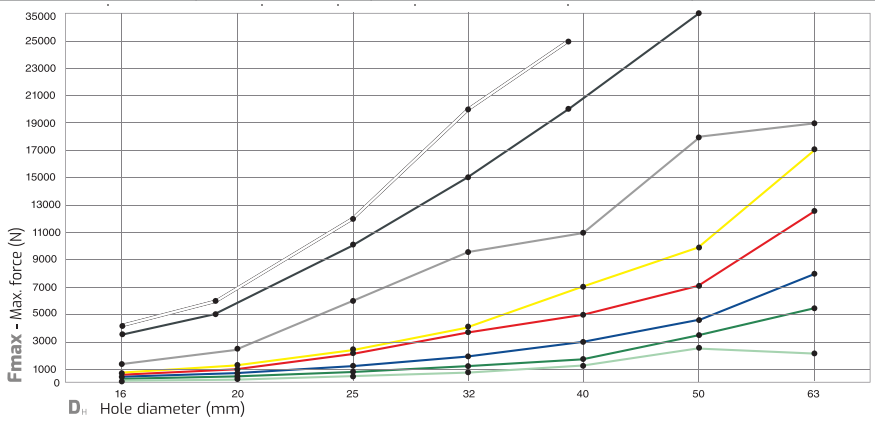
Colore bianco
White color
Weiße Farbe
Couleur blanche

Filo rettangolare
Rectangular wire
Reckteckigem drahtquerschnitt
Fil rectangulaire

Serie Series Serie Série **W**



D_H	D_d	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	F max
d					
mm	mm	mm		N / mm	mm	N
16	6.3	20	**W 16 - 020**	1818	2.2	4000
		35	**W 16 - 035**	1000	4.0	
		50	**W 16 - 050**	615	6.5	
		75	**W 16 - 075**	400	10.0	
4.6 x 5.0		100	**W 16 - 100**	286	14.0	
19	8	25	**W 19 - 025**	2400	2.5	6000
		40	**W 19 - 040**	1333	4.5	
		50	**W 19 - 050**	1000	6.0	
		75	**W 19 - 075**	600	10.0	
5.1 x 6.5		100	**W 19 - 100**	429	14.0	
25	10	30	**W 25 - 030**	4800	2.5	12000
		50	**W 25 - 050**	2400	5.0	
		75	**W 25 - 075**	1500	8.0	
		100	**W 25 - 100**	1000	12.0	
6.9 x 9.1		100	**W 25 - 125**	857	14.0	
32	12.5	35	**W 32 - 035**	6667	3.0	20000
		50	**W 32 - 050**	3636	5.5	
		75	**W 32 - 075**	2222	9.0	
		100	**W 32 - 100**	1538	13.0	
		125	**W 32 - 125**	1250	16.0	
9.25 x 10.8		150	**W 32 - 150**	1053	19.0	
38	16	40	**W 38 - 040**	7143	3.5	25000
		50	**W 38 - 050**	5000	5.0	
		75	**W 38 - 075**	2778	9.0	
		100	**W 38 - 100**	1923	13.0	
		150	**W 38 - 150**	1316	19.0	
10.5 x 12.6		200	**W 38 - 200**	926	27.0	



	SERIES	STD.	LOAD
	W	Sp. Sp.	Hyper-strong
	T	Sp. Sp.	Super-Strong
	A	Sp. Sp.	Ultra-Strong
	G	ISO	Extra-Strong
	R	ISO	Strong
	B	ISO	Medium
	V	ISO	Light
	VL	Sp. Sp.	Extra-light

Note: 1 N = 0,102 Kg (force)

IT

CARICO MASSIMO FINO A 6 VOLTE LA SERIE EXTRA-FORTE (colore giallo) ISO
CARICO MASSIMO OLTRE 2 VOLTE LA SERIE SUPER-FORTE (colore argento) - STANDARD SPECIAL SPRINGS

Ideali per carichi estremamente elevati con piccole corse di lavoro.
Massima durata in ambienti difficili con contaminanti e temperature elevate.

EN

MAXIMUM LOAD UP TO 6 TIMES THE EXTRA-STRONG ISO SERIES (yellow color)
MAXIMUM LOAD OVER 2 TIMES THE SUPER-FORTE SERIES (silver color) - STANDARD SPECIAL SPRINGS

Ideal for extremely high loads with small working strokes.
Maximum durability in harsh environments with contaminants and high temperatures.

FR

CHARGE MAXIMALE JUSQU'À 6 FOIS LA SÉRIE ISO EXTRA-FORTE (jaune)
CHARGE MAXIMALE SUR 2 FOIS LA SÉRIE SUPER-FORTE (couleur argentée) - RESSORTS SPÉCIAUX STANDARD

Idéal pour des charges extrêmement élevées avec de petites courses de travail.
Durabilité maximale dans des environnements difficiles avec des contaminants et des températures élevées.

DE

MAXIMALE BELASTUNG BIS ZU 6 MAL DER EXTRA-STARKEN ISO-SERIE (gelbe Farbe)
MAXIMALE LAST ÜBER 2 MAL DIE SUPER-FORTE-SERIE (silberne Farbe) - STANDARD SPECIAL SPRINGS

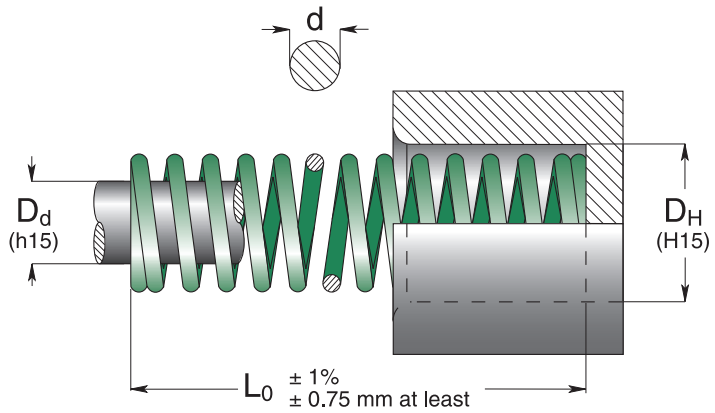
Ideal für extrem hohe Lasten mit kleinen Arbeitshüben.
Maximale Haltbarkeit in rauen Umgebungen mit Verunreinigungen und hohen Temperaturen.

Molle carico leggero
Light load springs
Federn für normale Spannung
Ressorts charge lègére

Colore verde
Green color
Grüne farbe
Couleur verte

Filo tondo
Round wire
Runddraht
Fil rond

Serie Series Serie Série **TV**



DH	Dd	L0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	25% 3 mln		30% 1,5 mln		35% 300 / 500.000		40% 100 / 200.000		E Approx.	
d														
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
6.3	4.4	16	**TV 6 - 016**	1.6	4.0	6.2	4.8	7.4	5.6	8.7	6.4	9.9	5.6	
		25	**TV 6 - 025**	1.0	6.3	6.1	7.5	7.3	8.8	8.5	10.0	9.7	8.2	
		38	**TV 6 - 038**	0.6	9.5	5.9	11.4	7.1	13.3	8.2	15.2	9.4	11.9	
0.6		51	**TV 6 - 051**	0.5	12.8	6.4	15.3	7.7	17.9	8.9	20.4	10.2	16.0	
8.3	5.9	16	**TV 8 - 016**	2.5	4.0	9.8	4.8	11.8	5.6	13.8	6.4	15.7	5.2	
		25	**TV 8 - 025**	1.6	6.3	9.8	7.5	11.7	8.8	13.7	10.0	15.6	7.7	
		38	**TV 8 - 038**	1.1	9.5	10.4	11.4	12.4	13.3	14.5	15.2	16.6	10.9	
0.8		51	**TV 8 - 051**	0.8	12.8	9.9	15.3	11.9	17.9	13.9	20.4	15.9	14.1	
10	5	25	**TV 10 - 025**	4.4	6.3	28	7.5	33	8.8	39	10.0	44	13.2	
		32	**TV 10 - 032**	3.4	8.0	27	9.6	33	11.2	38	12.8	44	16.5	
		38	**TV 10 - 038**	2.8	9.5	26	11.4	32	13.3	37	15.2	42	19.8	
		44	**TV 10 - 044**	2.4	11.0	26	13.2	31	15.4	37	17.6	42	23.1	
		51	**TV 10 - 051**	2.1	12.8	27	15.3	32	17.9	37	20.4	43	26.9	
		64	**TV 10 - 064**	1.6	16.0	26	19.2	31	22.4	36	25.6	42	33.3	
		76	**TV 10 - 076**	1.3	19.0	25	22.8	30	26.6	35	30.4	40	39.6	
1.1		305	**TV 10 - 305**	0.3	76.3	24	91.5	29	107	32	122	38	157	
12.5	6.3	25	**TV 13 - 025**	8.5	6.3	53	7.5	64	8.8	74	10.0	85	13.5	
		32	**TV 13 - 032**	6.5	8.0	52	9.6	62	11.2	73	12.8	83	16.8	
		38	**TV 13 - 038**	5.3	9.5	51	11.4	61	13.3	70	15.2	81	20.3	
		44	**TV 13 - 044**	4.4	11.0	49	13.2	59	15.4	68	17.6	78	23.9	
		51	**TV 13 - 051**	3.8	12.8	48	15.3	58	17.9	68	20.4	78	26.9	
		64	**TV 13 - 064**	2.9	16.0	47	19.2	56	22.4	65	25.6	75	33.3	
		76	**TV 13 - 076**	2.5	19.0	48	22.8	57	26.6	67	30.4	76	41.1	
		89	**TV 13 - 089**	2.1	22.3	48	26.7	57	31.2	65	35.6	76	48.3	
1.5		305	**TV 13 - 305**	0.6	76.3	45	91.5	54	107	64	122	73	163	
16	8	25	**TV 16 - 025**	17.9	6.3	112	7.5	134	8.8	157	10.0	179	14.7	
		32	**TV 16 - 032**	13.5	8.0	108	9.6	129	11.2	151	12.8	173	18.5	
		38	**TV 16 - 038**	10.5	9.5	100	11.4	120	13.3	140	15.2	160	22.4	
		44	**TV 16 - 044**	8.8	11.0	96	13.2	116	15.4	136	17.6	154	25.9	
		51	**TV 16 - 051**	7.6	12.8	97	15.3	116	17.9	136	20.4	155	30.0	
		64	**TV 16 - 064**	5.9	16.0	95	19.2	114	22.4	132	25.6	152	37.8	
		76	**TV 16 - 076**	4.8	19.0	91	22.8	109	26.6	128	30.4	145	45.2	
		89	**TV 16 - 089**	4.0	22.3	90	26.7	108	31.2	125	35.6	144	52.8	
		102	**TV 16 - 102**	3.5	25.5	90	30.6	108	35.7	125	40.8	144	60.7	
2		305	**TV 16 - 305**	1.1	76.3	85	91.5	103	107	117	122	137	184	

RoHS | °C 250 120 -30 °F 482 248 -22 | PAINT Green COAT

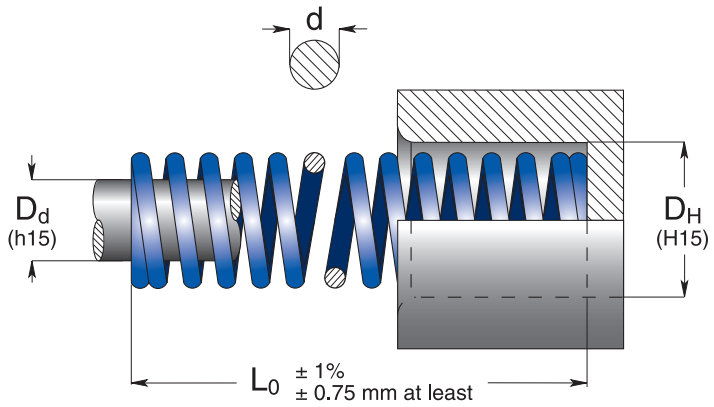
Note:
1 N = 0,102 Kg (force)

Molle carico medio
Medium load springs
Federn für mittlere Spannung
Ressorts charge moyenne

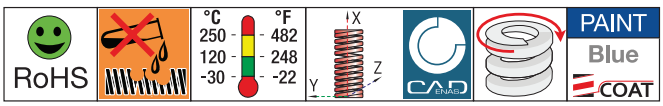
Colore blu
Blue color
Blaue farbe
Couleur bleue

Filo tondo
Round wire
Runddraht
Fil rond

Serie Series Serie Série **TB**



D_H / D_d d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	25% 3 mln		30% 1,5 mln		33.75% 300 / 500.000		37.5% 100 / 200.000		E Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
6.3	3.9	16	**TB 6 - 016**	4.7	4.0	18.8	4.8	22.6	5.4	25.4	6.0	28.2	6.7	
		25	**TB 6 - 025**	2.9	6.3	17.8	7.5	21.4	8.4	24.0	9.4	26.7	10.1	
		38	**TB 6 - 038**	1.8	9.5	17.5	11.4	21.0	12.8	23.6	14.3	26.2	14.4	
0.8		51	**TB 6 - 051**	1.5	12.8	18.7	15.3	22.5	17.2	25.3	19.1	28.1	18.7	
8.3	5.5	16	**TB 8 - 016**	5.4	4.0	21.5	4.8	25.8	5.4	29.1	6.0	32.3	6.9	
		25	**TB 8 - 025**	3.6	6.3	22.8	7.5	27.3	8.4	30.7	9.4	34.1	9.5	
		38	**TB 8 - 038**	2.4	9.5	22.9	11.4	27.5	12.8	30.9	14.3	34.3	13.9	
1.0		51	**TB 8 - 051**	1.9	12.8	24.4	15.3	29.2	17.2	32.9	19.1	36.5	18.4	
10	5	25	**TB 10 - 025**	12.3	6.3	77	7.5	92	8.4	104	9.4	115	10.4	
		32	**TB 10 - 032**	9.5	8.0	76	9.6	91	10.8	103	12.0	113	13.2	
		38	**TB 10 - 038**	7.8	9.5	74	11.4	88	12.8	100	14.3	111	16.0	
		44	**TB 10 - 044**	6.5	11.0	72	13.2	86	14.9	97	16.5	108	18.5	
		51	**TB 10 - 051**	5.6	12.8	72	15.3	86	17.2	96	19.1	108	21.1	
		64	**TB 10 - 064**	4.5	16.0	71	19.2	86	21.6	97	24.0	107	26.4	
		76	**TB 10 - 076**	3.7	19.0	70	22.8	84	25.7	95	28.5	105	31.8	
1.5		305	**TB 10 - 305**	0.9	76.3	68	91.5	82	103	93	114	102	129	
12.5	6.3	25	**TB 13 - 025**	21.7	6.3	53	7.5	163	8.4	183	9.4	204	11.2	
		32	**TB 13 - 032**	16.8	8.0	52	9.6	161	10.8	181	12.0	202	14.0	
		38	**TB 13 - 038**	13.8	9.5	51	11.4	158	12.8	177	14.3	197	17.3	
		44	**TB 13 - 044**	11.6	11.0	49	13.2	153	14.9	172	16.5	191	19.8	
		51	**TB 13 - 051**	10.0	12.8	48	15.3	153	17.2	172	19.1	191	22.9	
		64	**TB 13 - 064**	7.8	16.0	47	19.2	150	21.6	168	24.0	187	28.4	
		76	**TB 13 - 076**	6.4	19.0	48	22.8	146	25.7	164	28.5	183	34.3	
		89	**TB 13 - 089**	5.6	22.3	48	26.7	150	30.0	168	33.4	188	41.4	
1.8		305	**TB 13 - 305**	1.5	76.3	45	91.5	141	103	154	114	176	139	
16	8	25	**TB 16 - 025**	31.9	6.3	112	7.5	239	8.4	269	9.4	299	10.9	
		32	**TB 16 - 032**	24.0	8.0	108	9.6	230	10.8	259	12.0	288	13.7	
		38	**TB 16 - 038**	19.4	9.5	100	11.4	222	12.8	249	14.3	277	16.5	
		44	**TB 16 - 044**	16.1	11.0	96	13.2	213	14.9	239	16.5	266	19.3	
		51	**TB 16 - 051**	13.8	12.8	97	15.3	212	17.2	238	19.1	265	22.1	
		64	**TB 16 - 064**	10.7	16.0	95	19.2	205	21.6	231	24.0	256	27.4	
		76	**TB 16 - 076**	8.8	19.0	91	22.8	200	25.7	226	28.5	250	33.0	
		89	**TB 16 - 089**	7.5	22.3	90	26.7	200	30.0	225	33.4	250	38.6	
		102	**TB 16 - 102**	6.5	25.5	90	30.6	200	34.4	224	38.3	250	44.5	
2.2		305	**TB 16 - 305**	2.1	76.3	85	91.5	191	103	216	114	238	134	



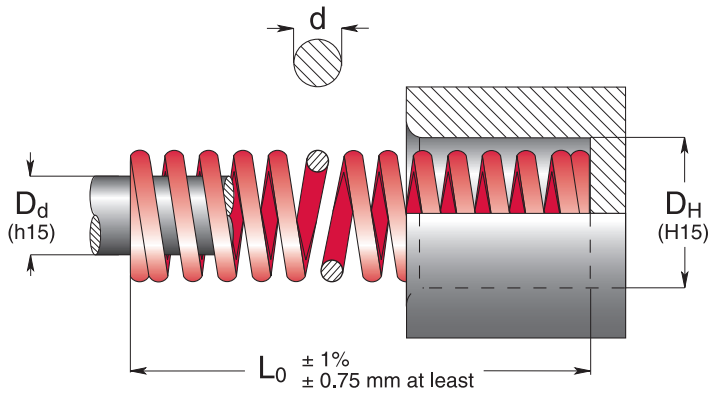
Note:
1 N = 0,102 Kg (force)

Molle carico forte
Strong load springs
Federn für hohe Spannung
Ressorts charge forte

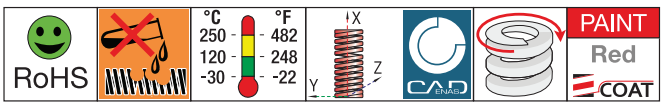
Colore rosso
Red color
Kennfarbe rot
Couleur rouge

Filo tondo
Round wire
Runddraht
Fil rond

Serie Series Serie Série **TR**



D_H / D_d d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	20% 3 mln		25% 1,5 mln		27.5% 300 / 500.000		30% 100 / 200.000		E Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
6.3	3.6	16	**TR 6 - 016**	12.7	3.2	40.8	4.0	51.0	4.4	56.1	4.8	61.2	7.9	
		25	**TR 6 - 025**	7.7	5.0	38.7	6.3	48.4	6.9	53.2	7.5	58.1	12.1	
		38	**TR 6 - 038**	4.9	7.6	37.3	9.5	46.6	10.5	51.3	11.4	56.0	17.4	
1.0		51	**TR 6 - 051**	3.7	10.2	37.4	12.8	46.8	14.0	51.5	15.3	56.2	23.1	
8.3	5.2	16	**TR 8 - 016**	12.5	4.0	50.0	4.0	50.0	4.4	55.0	4.8	60.0	8.2	
		25	**TR 8 - 025**	6.9	5.0	34.5	6.3	43.1	6.9	47.4	7.5	51.8	12.4	
		38	**TR 8 - 038**	5.1	7.6	38.4	9.5	48.0	10.5	52.8	11.4	57.6	16.9	
1.2		51	**TR 8 - 051**	4.0	10.2	40.8	12.8	51.0	14.0	56.1	15.3	61.2	23.2	
10	5	25	**TR 10 - 025**	20.7	5.0	103	6.3	142	7.5	142	7.5	155	8.6	
		32	**TR 10 - 032**	16.1	6.4	103	8.0	142	9.6	142	9.6	155	10.9	
		38	**TR 10 - 038**	13.0	7.6	98	9.5	136	11.4	136	11.4	148	13.2	
		44	**TR 10 - 044**	10.9	8.8	96	11.0	132	13.2	132	13.2	143	14.7	
		51	**TR 10 - 051**	9.6	10.2	98	12.8	135	15.3	135	15.3	147	17.8	
		64	**TR 10 - 064**	7.7	12.8	98	16.0	136	19.2	136	19.2	147	22.9	
		76	**TR 10 - 076**	6.3	15.2	96	19.0	132	22.8	132	22.8	143	26.9	
1.6		305	**TR 10 - 305**	1.5	61.0	93	76.3	126	91.5	126	91.5	139	110	
12.5	6.3	25	**TR 13 - 025**	37.5	5.0	187	6.3	258	7.5	258	7.5	281	8.9	
		32	**TR 13 - 032**	28.9	6.4	185	8.0	254	9.6	254	9.6	277	11.2	
		38	**TR 13 - 038**	23.5	7.6	178	9.5	246	11.4	246	11.4	268	13.7	
		44	**TR 13 - 044**	19.6	8.8	173	11.0	237	13.2	237	13.2	259	15.7	
		51	**TR 13 - 051**	17.3	10.2	177	12.8	243	15.3	243	15.3	265	18.8	
		64	**TR 13 - 064**	13.5	12.8	173	16.0	238	19.2	238	19.2	259	23.6	
		76	**TR 13 - 076**	11.2	15.2	170	19.0	234	22.8	234	22.8	256	28.4	
		89	**TR 13 - 089**	9.5	17.8	168	22.3	233	26.7	233	26.7	252	33.0	
2.2		305	**TR 13 - 305**	2.7	61.0	162	76.3	226	91.5	226	91.5	244	114	
16	8	25	**TR 16 - 025**	81.6	5.0	408	6.3	561	7.5	561	7.5	612	9.1	
		32	**TR 16 - 032**	61.3	6.4	392	8.0	539	9.6	539	9.6	588	11.4	
		38	**TR 16 - 038**	49.9	7.6	379	9.5	521	11.4	521	11.4	569	14.2	
		44	**TR 16 - 044**	40.8	8.8	359	11.0	494	13.2	494	13.2	539	16.3	
		51	**TR 16 - 051**	35.6	10.2	363	12.8	499	15.3	499	15.3	544	18.8	
		64	**TR 16 - 064**	27.8	12.8	356	16.0	489	19.2	489	19.2	535	23.9	
		76	**TR 16 - 076**	22.8	15.2	346	19.0	477	22.8	477	22.8	519	29.0	
		89	**TR 16 - 089**	19.6	17.8	349	22.3	480	26.7	480	26.7	524	34.3	
		102	**TR 16 - 102**	17.0	20.4	347	25.5	477	30.6	477	30.6	520	39.4	
2.8		305	**TR 16 - 305**	5.4	61.0	330	76.3	453	91.5	453	91.5	495	119	



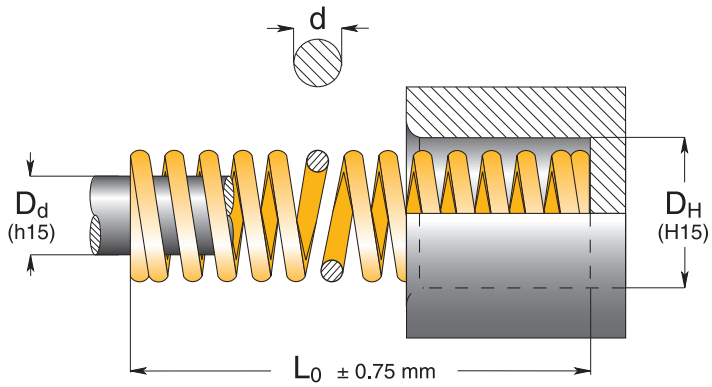
Note:
1 N = 0,102 Kg (force)

Molle carico extra-forte
Extra-heavy load springs
Federn für höchste belastung
Ressorts charge extra-forte

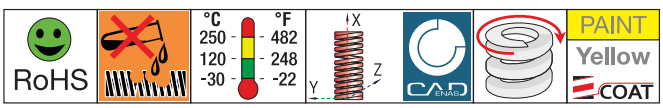
Colore giallo
Yellow color
Kennfarbe gelb
Couleur jaune

Filo tondo
Round wire
Runddraht
Fil rond

Serie Series Serie Série **TG**



DH / Dd d		L0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	17% 3 mln		20% 1,5 mln		22.5% 300 / 500.000		25% Max. Defl.		E Approx.	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N	mm	N
6.3	3.2	16	**TG 6 - 016**	33.0	2.7	89.8	3.2	105.6	3.6	118.8	4.0	132.0	9.2	
		25	**TG 6 - 025**	19.8	4.3	84.2	5.0	99.1	5.6	111.4	6.3	123.8	14.4	
		38	**TG 6 - 038**	11.9	6.5	77.0	7.6	90.6	8.6	101.9	9.5	113.2	21.6	
1.2		51	**TG 6 - 051**	9.5	8.7	82.5	10.2	97.0	11.5	109.1	12.8	121.3	27.8	
8.3	4.5	16	**TG 8 - 016**	30.9	2.7	83.9	3.2	98.7	3.6	111.1	4.0	123.4	9.3	
		25	**TG 8 - 025**	23.0	4.3	97.8	5.0	115.0	5.6	129.4	6.3	143.8	13.8	
		38	**TG 8 - 038**	13.2	6.5	85.5	7.6	100.5	8.6	113.1	9.5	125.7	22.9	
1.5		51	**TG 8 - 051**	9.3	8.7	80.3	10.2	94.5	11.5	106.3	12.8	118.1	29.3	



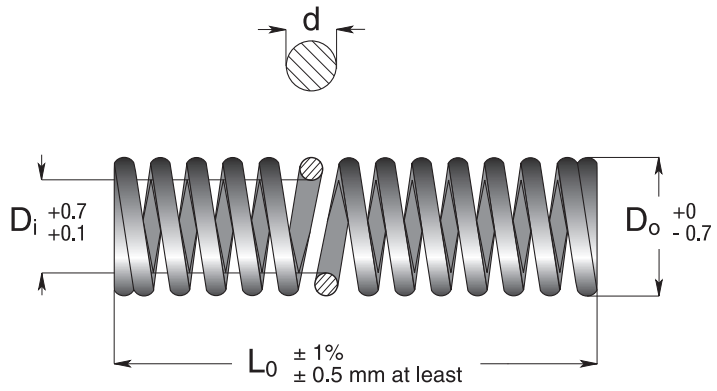
Note:
1 N = 0,102 Kg (force)

Molle non colorate con oliatura antiruggine
Not painted springs with anti-rust lubricant
Unlackierte Federn mit Rostschutzölung
Ressorts non-peints avec huilage antirouille

Non colorate
Not painted
Unlackierte
Non-peints

Filo tondo
Round wire
Runddraht
Fil rond

Serie Series Serie Série **L**



D_o / D_i / d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	16% 3 mln		24% 1,5 mln		28% 300 / 500.000		32% 100 / 200.000	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N
3	2	10	**L 3 - 010**	2.94	1.6	4.4	2.4	6.62	2.8	6.9	3.2	8.8
		15	**L 3 - 015**	1.96	2.4		3.6		4.2		4.8	
		20	**L 3 - 020**	0.98	3.2		4.8		5.6		6.4	
0.4		25	**L 3 - 025**	0.98	4		6		7.0		8	
4	2.6	10	**L 4 - 010**	4.9	1.6	7.8	2.4	11.6	2.8	14.5	3.2	15.7
		15	**L 4 - 015**	2.94	2.4		3.6		4.2		4.8	
		20	**L 4 - 020**	2.94	3.2		4.8		5.6		6.4	
		25	**L 4 - 025**	1.96	4		6		7.0		8	
0.6		30	**L 4 - 030**	1.96	4.8		7.2		8.4		9.6	
6	4	15	**L 6 - 015**	7.85	2.4	17.7	3.6	26.5	4.2	32.4	4.8	35.5
		20	**L 6 - 020**	5.88	3.2		4.8		5.6		6.4	
		25	**L 6 - 025**	4.9	4		6		7.0		8	
		30	**L 6 - 030**	3.92	4.8		7.2		8.4		9.6	
0.9		35	**L 6 - 035**	2.94	5.6		8.4		9.8		11.2	
8	5.4	15	**L 8 - 015**	12.75	2.4	31.4	3.6	47.1	4.2	55.6	4.8	62.8
		20	**L 8 - 020**	9.81	3.2		4.8		5.6		6.4	
		25	**L 8 - 025**	7.85	4		6		7.0		8	
		30	**L 8 - 030**	6.86	4.8		7.2		8.4		9.6	
		35	**L 8 - 035**	5.88	5.6		8.4		9.8		11.2	
1.2		40	**L 8 - 040**	4.90	6.4		9.6		11.2		12.8	
10	6.5	25	**L 10 - 025**	12.75	4	49	6	73.6	7.0	85.8	8	98
		30	**L 10 - 030**	9.81	4.8		7.2		8.4		9.6	
		35	**L 10 - 035**	8.83	5.6		8.4		9.8		11.2	
		40	**L 10 - 040**	7.85	6.4		9.6		11.2		12.8	
		45	**L 10 - 045**	6.86	7.2		10.8		12.6		14.4	
1.5		50	**L 10 - 050**	5.88	8		12		14.0		16	
12	8	25	**L 12 - 025**	17.65	4	70.6	6	106.9	7.0	124.1	8	141.2
		30	**L 12 - 030**	14.71	4.8		7.2		8.4		9.6	
		35	**L 12 - 035**	12.75	5.6		8.4		9.8		11.2	
		40	**L 12 - 040**	10.79	6.4		9.6		11.2		12.8	
		45	**L 12 - 045**	9.81	7.2		10.8		12.6		14.4	
		50	**L 12 - 050**	8.83	8		12		14.0		16	
		55	**L 12 - 055**	6.86	8.8		13.2		15.4		17.6	
1.8		60	**L 12 - 060**	7.85	9.6		14.4		16.8		19.2	

Note:
1 N = 0,102 Kg (force)

D_o	D_i	L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	16% 3 mln		24% 1,5 mln		28% 300 / 500.000		32% 100 / 200.000	
d												
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N
14	9.3	25	**L 14 - 025**	24.52	4	96.1	6	144.2	7.0	167.7	8	192.2
		30	**L 14 - 030**	19.61	4.8		7.2		8.4		9.6	
		35	**L 14 - 035**	17.65	5.6		8.4		9.8		11.2	
		40	**L 14 - 040**	14.71	6.4		9.6		11.2		12.8	
		45	**L 14 - 045**	13.73	7.2		10.8		12.6		14.4	
		50	**L 14 - 050**	11.77	8		12		14.0		16	
		55	**L 14 - 055**	10.79	8.8		13.2		15.4		17.6	
		60	**L 14 - 060**	9.81	9.6		14.4		16.8		19.2	
		65	**L 14 - 065**	8.83	10.4		15.6		18.2		20.8	
2.2		70	**L 14 - 070**	8.83	11.2		16.8		19.6		22.4	
16	10.7	25	**L 16 - 025**	31.38	4	125.5	6	188.3	7.0	219.8	8	251.1
		30	**L 16 - 030**	26.48	4.8		7.2		8.4		9.6	
		35	**L 16 - 035**	22.56	5.6		8.4		9.8		11.2	
		40	**L 16 - 040**	19.61	6.4		9.6		11.2		12.8	
		45	**L 16 - 045**	17.65	7.2		10.8		12.6		14.4	
		50	**L 16 - 050**	15.69	8		12		14.0		16	
		55	**L 16 - 055**	14.71	8.8		13.2		15.4		17.6	
		60	**L 16 - 060**	12.75	9.6		14.4		16.8		19.2	
		65	**L 16 - 065**	11.77	10.4		15.6		18.2		20.8	
		70	**L 16 - 070**	10.79	11.2		16.8		19.6		22.4	
		75	**L 16 - 075**	10.79	12		18		21.0		24	
2.4		80	**L 16 - 080**	9.81	12.8		19.2		22.4		25.6	
18	12	25	**L 18 - 025**	40.21	4	158.9	6	238.3	7.0	280.4	8	317.7
		30	**L 18 - 030**	33.34	4.8		7.2		8.4		9.6	
		35	**L 18 - 035**	28.44	5.6		8.4		9.8		11.2	
		40	**L 18 - 040**	24.52	6.4		9.6		11.2		12.8	
		45	**L 18 - 045**	22.56	7.2		10.8		12.6		14.4	
		50	**L 18 - 050**	19.61	8		12		14.0		16	
		55	**L 18 - 055**	17.65	8.8		13.2		15.4		17.6	
		60	**L 18 - 060**	16.67	9.6		14.4		16.8		19.2	
		65	**L 18 - 065**	15.69	10.4		15.6		18.2		20.8	
		70	**L 18 - 070**	14.71	11.2		16.8		19.6		22.4	
		75	**L 18 - 075**	13.73	12		18		21.0		24	
		80	**L 18 - 080**	12.75	12.8		19.2		22.4		25.6	
2.8		90	**L 18 - 090**	10.79	14.4		21.6		25.2		28.8	
20	13.5	25	**L 20 - 025**	49.03	4	196.1	6	249.2	7.0	346.3	8	392.3
		30	**L 20 - 030**	41.19	4.8		7.2		8.4		9.6	
		35	**L 20 - 035**	35.3	5.6		8.4		9.8		11.2	
		40	**L 20 - 040**	30.4	6.4		9.6		11.2		12.8	
		45	**L 20 - 045**	27.46	7.2		10.8		12.6		14.4	
		50	**L 20 - 050**	24.52	8		12		14.0		16	
		55	**L 20 - 055**	22.56	8.8		13.2		15.4		17.6	
		60	**L 20 - 060**	20.59	9.6		14.4		16.8		19.2	
		65	**L 20 - 065**	18.63	10.4		15.6		18.2		20.8	
		70	**L 20 - 070**	17.65	11.2		16.8		19.6		22.4	
		75	**L 20 - 075**	16.67	12		18		21.0		24	
		80	**L 20 - 080**	15.69	12.8		19.2		22.4		25.6	
		90	**L 20 - 090**	13.73	14.4		21.6		25.2		28.8	
3		100	**L 20 - 100**	12.75	16		24		28.0		32	
22	14.7	25	**L 22 - 025**	59.82	4	237.3	6	356	7.0	415.9	8	474.6
		30	**L 22 - 030**	49.03	4.8		7.2		8.4		9.6	
		35	**L 22 - 035**	42.17	5.6		8.4		9.8		11.2	
		40	**L 22 - 040**	37.27	6.4		9.6		11.2		12.8	
		45	**L 22 - 045**	33.34	7.2		10.8		12.6		14.4	
		50	**L 22 - 050**	29.42	8		12		14.0		16	
		55	**L 22 - 055**	27.46	8.8		13.2		15.4		17.6	
		60	**L 22 - 060**	24.52	9.6		14.4		16.8		19.2	
		65	**L 22 - 065**	22.56	10.4		15.6		18.2		20.8	
		70	**L 22 - 070**	21.57	11.2		16.8		19.6		22.4	
		75	**L 22 - 075**	19.61	12		18		21.0		24	
		80	**L 22 - 080**	18.63	12.8		19.2		22.4		25.6	
		90	**L 22 - 090**	16.67	14.4		21.6		25.2		28.8	
3.4		100	**L 22 - 100**	14.71	16		24		28.0		32	
25	17	25	**L 25 - 025**	76.49	4	307	6	459.9	7.0	537.9	8	613.9
		30	**L 25 - 030**	63.74	4.8		7.2		8.4		9.6	
		35	**L 25 - 035**	54.92	5.6		8.4		9.8		11.2	
		40	**L 25 - 040**	48.05	6.4		9.6		11.2		12.8	
		45	**L 25 - 045**	42.17	7.2		10.8		12.6		14.4	
		50	**L 25 - 050**	38.25	8		12		14.0		16	
		55	**L 25 - 055**	35.3	8.8		13.2		15.4		17.6	
		60	**L 25 - 060**	32.36	9.6		14.4		16.8		19.2	
		65	**L 25 - 065**	29.42	10.4		15.6		18.2		20.8	
		70	**L 25 - 070**	27.46	11.2		16.8		19.6		22.4	
		75	**L 25 - 075**	25.5	12		18		21.0		24	
		80	**L 25 - 080**	23.54	12.8		19.2		22.4		25.6	
		90	**L 25 - 090**	21.57	14.4		21.6		25.2		28.8	
3.8		100	**L 25 - 100**	19.61	16		24		28.0		32	

Note: 1 N = 0,102 Kg (force)

D_o / D_i d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	Rigidità Rate Rigidez Raideur	16% 3 mln		24% 1,5 mln		28% 300 / 500.000		32% 100 / 200.000	
mm	mm	mm		N / mm	mm	N	mm	N	mm	N	mm	N
30	20	50	**L 30 - 050**	51.94	8	414	12	621	14.0	724.1	16	828
		60	**L 30 - 060**	44.1	9.6		14.4		16.8		19.2	
		70	**L 30 - 070**	37.24	11.2		16.8		19.6		22.4	
		80	**L 30 - 080**	32.34	12.8		19.2		22.4		25.6	
		90	**L 30 - 090**	28.42	14.4		21.6		25.2		28.8	
		100	**L 30 - 100**	25.48	16		24		28.0		32	
4.5		125	**L 30 - 125**	20.58	20		30		35.0		40	

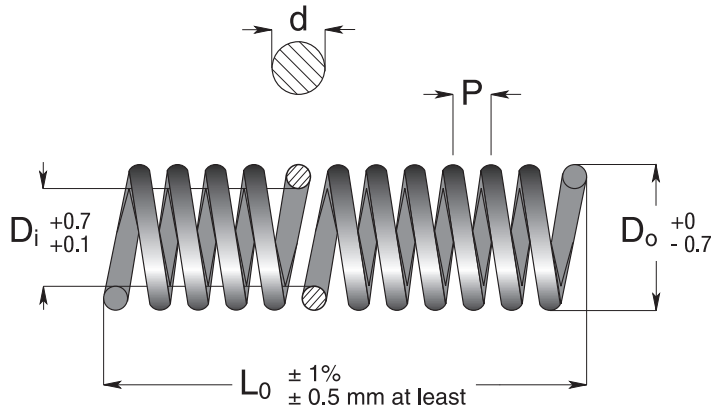
Note: 1 N = 0,102 Kg (force)

Spezzoni con terminali aperti
Long size open ends
Meterware
Ressorts avec longueur ébauché

Non colorate
Not painted
Unlackierte
Non-peints

Filo tondo
Round wire
Runddraht
Fil rond

Serie Series Serie Série **L**



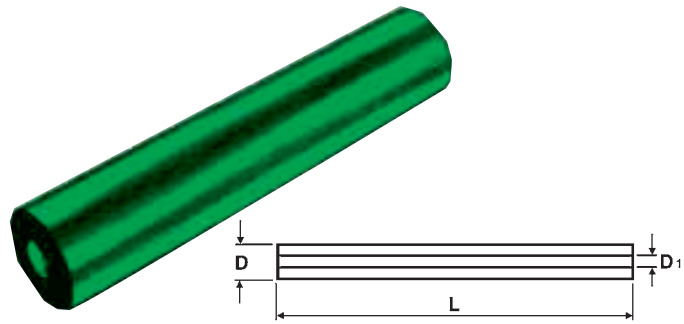
D_o / D_i d		L_0	N. di catalogo Catalogue No. Bestellnummer N° de catalogue	d	P
mm	mm	mm		mm	mm
3	2.0	300	**L 03 - 300**	0.4	1.04
4	2.6	300	**L 04 - 300**	0.6	1.50
6	4.0	300	**L 06 - 300**	0.9	2.00
8	5.4	300	**L 08 - 300**	1.2	2.80
10	6.5	300	**L 10 - 300**	1.5	3.50
12	8.0	300	**L 12 - 300**	1.8	4.30
14	9.3	300	**L 14 - 300**	2.2	4.80
16	10.7	300	**L 16 - 300**	2.4	5.50
18	12	300	**L 18 - 300**	2.8	5.30
20	13.5	300	**L 20 - 300**	3.0	6.80
22	14.7	300	**L 22 - 300**	3.4	6.70
25	17.0	300	**L 25 - 300**	3.8	8.20

Note: 1 N = 0,102 Kg (force)

Barre tonde in poliuretano
Polyurethan springs
Ressort en poliuretano
Schraubenfeder Poliuretano

D	D1	L
16	6,50	500
20	8,50	500
25	10,50	500
32	13,50	500
40	13,50	500
50	17	500
63	17	500
80	21	500
100	21	500
125	27	500

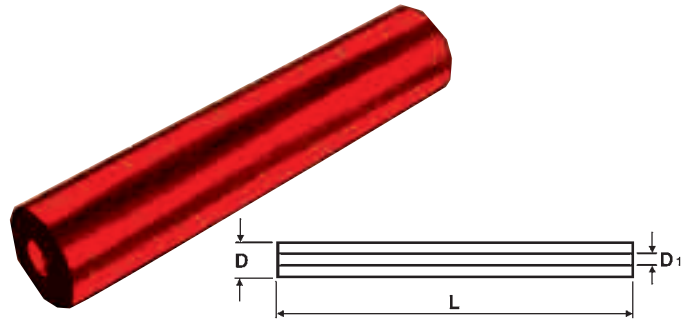
Verde SH.80
Green SH.80
Vert SH.80
Grün SH.80



Massimo schiacciamento 30% della lunghezza libera
Max deflection 30% of the free length

D	D1	L
16	6,50	500
20	8,50	500
25	10,50	500
32	13,50	500
40	13,50	500
50	17	500
63	17	500
80	21	500
100	21	500
125	27	500

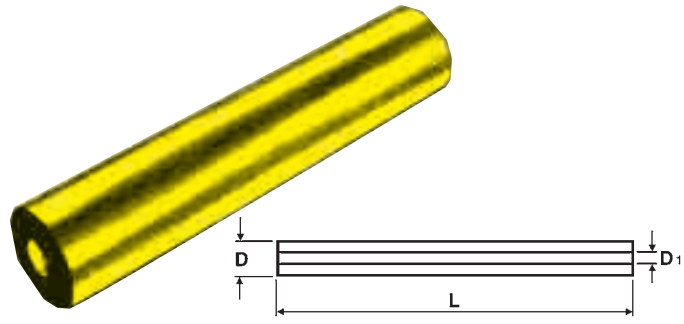
Rosso SH. 90
Red SH. 90
Rouge SH. 90
Rot SH. 90



Massimo schiacciamento 25% della lunghezza libera
Max deflection 25% of the free length

D	D1	L
16	6,50	500
20	8,50	500
25	10,50	500
32	13,50	500
40	13,50	500
50	17	500
63	17	500
80	21	500
100	21	500
125	27	500

Giallo SH.95
Yellow SH.95
Jaune SH.95
Gelb SH.95



Massimo schiacciamento 20% della lunghezza libera
Max deflection 20% of the free length

A richiesta Barre piene -
Full bars on request

Quando da queste barre si ricavano molle per stampi, l'altezza non deve essere mai maggiore del doppio del diametro D.

When bars are to be cut to obtain die springs, the height should never exceed twice the diameter (D) height.

Nei casi di alloggiamento nelle piastre lasciare spazio per il rigonfiamento.

When springs are to be housed in the plates, sufficient space has to be left for the expansion.

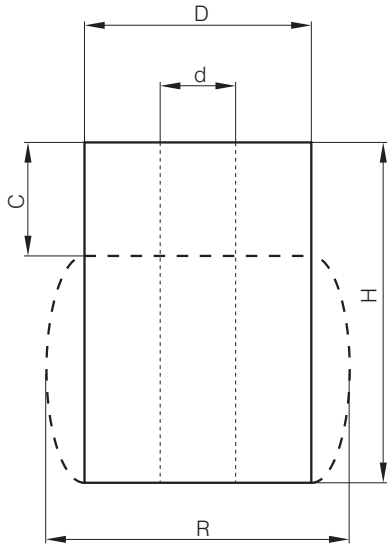
È intaccabile dagli oli, idrocarburi.

It cannot be damaged by oils and hydrocarbons.

Temperatura max di esercizio 80°C.

Max. operating temperature 80°C.

Barre tonde forate "Retflex"
Polyurethan springs "Retflex"
Ressortes en poliuretano "Retflex"
Poliuretano Federn "Retflex"



C = Compressione massima della molla comprensiva della precarica.
Max. spring compression, inclusive of preloading.

R = Diametro di rigonfiamento della molla alla massima compressione.
Spring expansion diameter under the max. compression.

H = Alt. libera della molla.
Spring free height.

Le diverse durezze sono contraddistinte da diversi colori:
Different hardnesses are marked by different colours.

GIALLO / YELLOW ..... 80 Sh

ARANCIO / ORANGE ..... 90 Sh

OCRA / OCHRE ..... 95 Sh

COMPRESSIONE MAX.	80 SH A	35%	90 SH A	30%	95 SH A	25%

BARRE FORATE TONDE

ø esterno D	16	20	25	32	40	50	63	80	100	125
ø interno d	6,50	8,50	10,50	13,50	13,50	17	17	21	21	27
Lunghezza L	250	250	250	500	500	500	500	500	500	500

A richiesta si possono fare pezzi non unificati.

Non-standard parts can be made on request

Barre forate in poliuretano “Retflex”
Polyurethan springs “Retflex”
Ressortes en poliuretano “Retflex”
Poliuretano Federn “Retflex”

Molle forate a lunghezza unificate

Durezza			80 SH A			90 SH A5			95 SH A		
Compressione max.			35%			30%			25%		
D	d	H	C	R	kp	C	R	kp	C	R	kp
16	**6,5**	16 20 25 32	5,6 7 8,7 11,2	21	50	4,8 6 7,5 9,6	20	130	4 5 6,2 8	19	200
20 32	**8,5** 11,2	16 20 25 40	5,6 7 8,7 14	28 9,6	100	4,8 6 7,5 12	27 8	200	4 5 6,2 10	25	340
25	**10,5**	16 20 25 32 40 50	5,6 7 8,7 11,2 14 17,5	35	190	4,8 6 7,5 9,6 12 15	32	340	4 5 6,2 8 10 12,5	30	500
32	**13,5**	16 20 25 32 40 50 63	5,6 7 8,7 11,2 14 17,5 22	42	250	4,8 6 7,5 9,6 12 15 19	39	500	4 5 6,2 8 10 12,5 15,7	38	800
40	**13,5**	20 25 32 40 50 63 80	7 8,7 11,2 14 17,5 22 28	52	450	6 7,5 9,6 12 15 19 24	49	800	5 6,2 8 10 12,5 15,7 20	46	1300
50	**17**	25 32 40 50 63 80 100	8,7 11,2 14 17,5 22 28 35	66	900	7,5 9,6 12 15 19 24 30	62	1700	6,2 8 10 12,5 15,7 20 25	59	2100
63	**17**	32 40 50 63 80 100 125	11,2 14 17,5 22 28 35 43,7	80	1300	9,6 12 15 19 24 30 37,5	79	2200	8 10 12,5 15,7 20 25 31,2	75	3500
80	**21**	40 50 63 80 100 125 160 200	14 17,5 22 28 35 43,7 56 70	105	210	12 15 19 24 30 37,5 48 60	102	4500	10 12,5 15,7 20 25 31,2 40 50	98	700
100	**21**	50 63 80 100 125 160 200	17,5 22 28 35 43,7 56 70	127	4000	15 19 24 30 37,5 48 60	125	7700	12,5 15,7 20 25 31,2 40 50	121	10700
125	**27**	50 63 80 100 125 160	17 22 28 35 43 56	175	5500	15 19 24 30 37 48	170	8000	12 15 20 25 31 40	160	1200

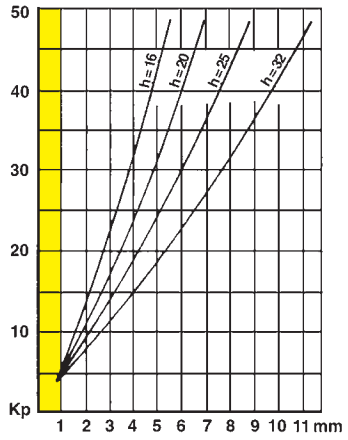
A richiesta si possono fare pezzi non unificati.

Non-standard parts can be made on request

Diagramma di carico Molle Retflex
Load diagram for Retflex Springs
Diagramme de charge pour Ressortes Retflex

80 Sh

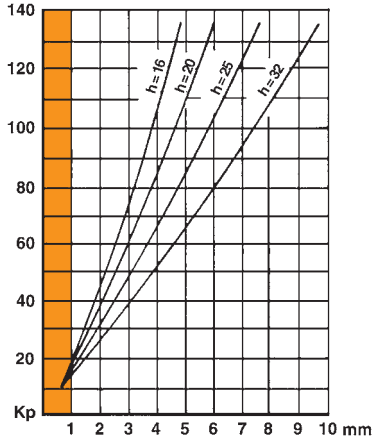
Giallo
Yellow
Jaune
Gelb



ø 16 - 80 SH
35% di compres. max

90 Sh

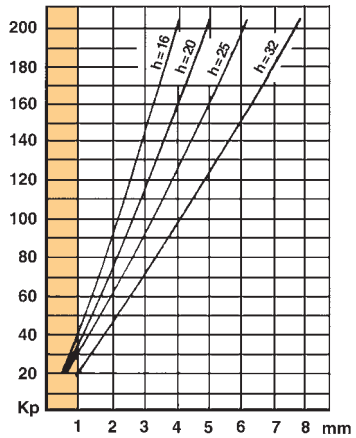
Arancio
Orange
Orange
Orange



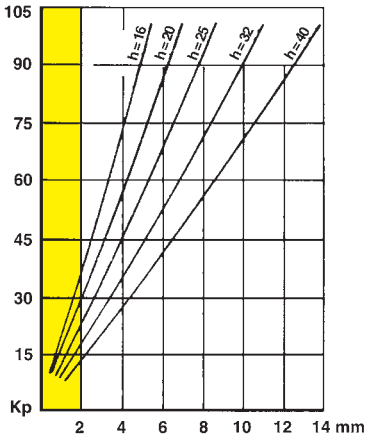
ø 16 - 90 SH
30% di compres. max

95 Sh

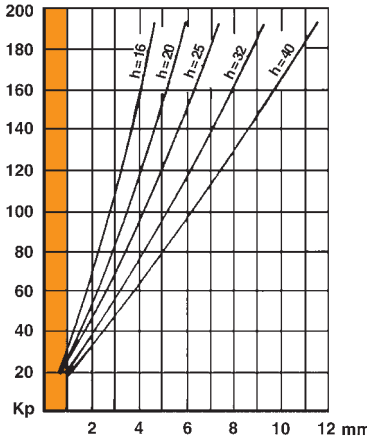
Ocra
Ochre
Ochre
Ocker



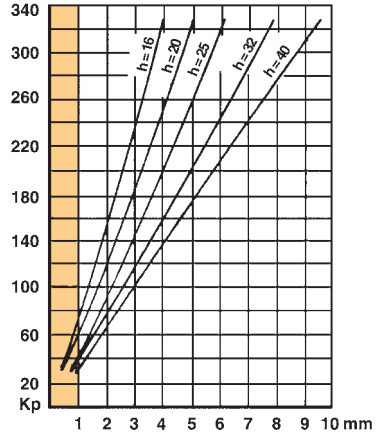
ø 16 - 95 SH
25% di compres. max



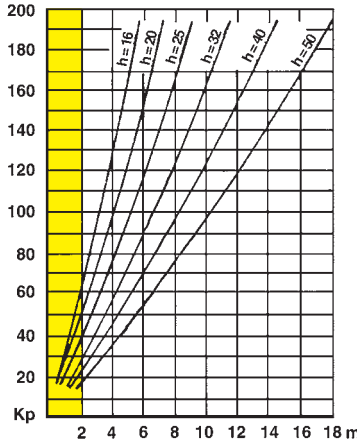
ø 20 - 80 SH
35% di compres. max



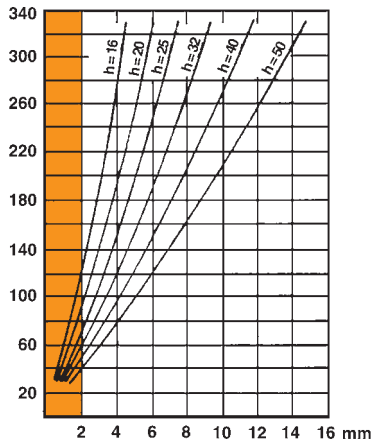
ø 20 - 90 SH
30% di compres. max



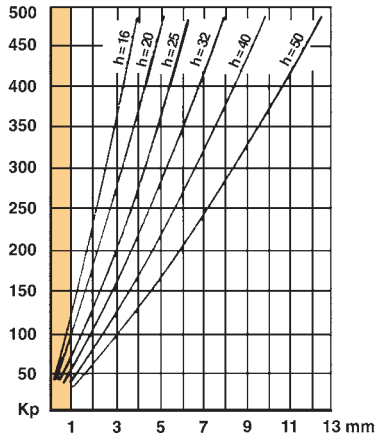
ø 20 - 95 SH
25% di compres. max



ø 25 - 80 SH
35% di compres. max



ø 25 - 90 SH
30% di compres. max

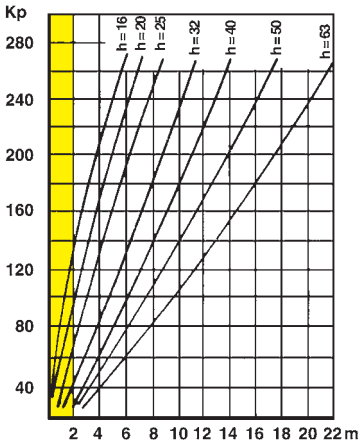


ø 25 - 95 SH
25% di compres. max

Diagramma di carico Molle Retflex
Load diagram for Retflex Springs
Diagramme de charge pour Ressortes Retflex

80 Sh

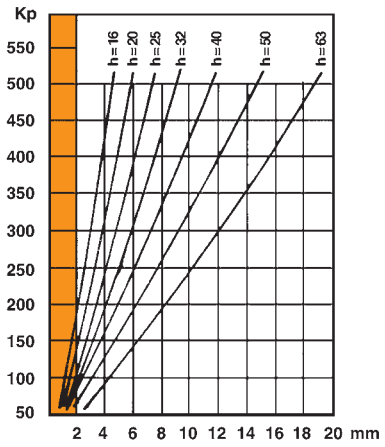
Giallo
Yellow
Jaune
Gelb



ø 32 - 80 SH
35% di compres. max

90 Sh

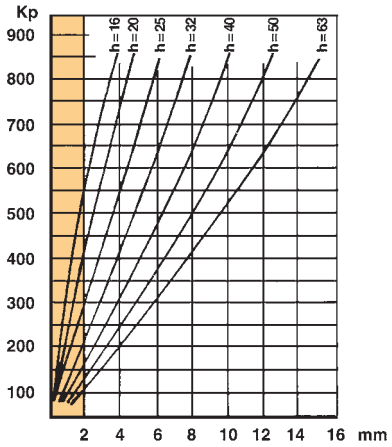
Arancio
Orange
Orange
Orange



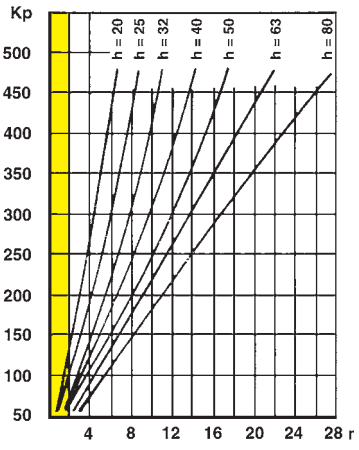
ø 32 - 90 SH
30% di compres. max

95 Sh

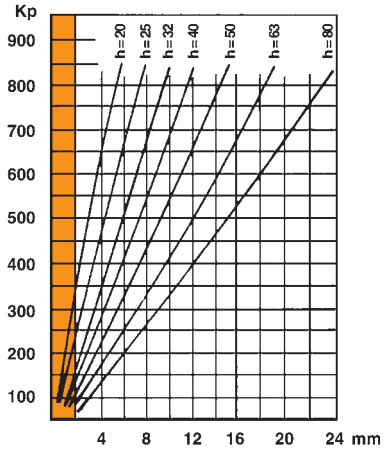
Ocra
Ochre
Ochre
Ocker



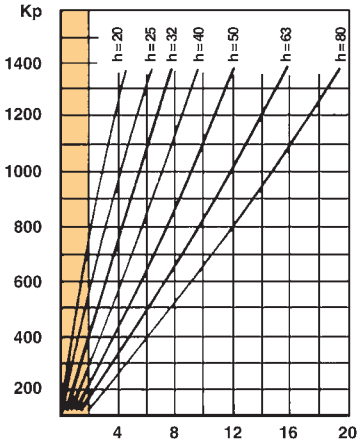
ø 32 - 95 SH
25% di compres. max



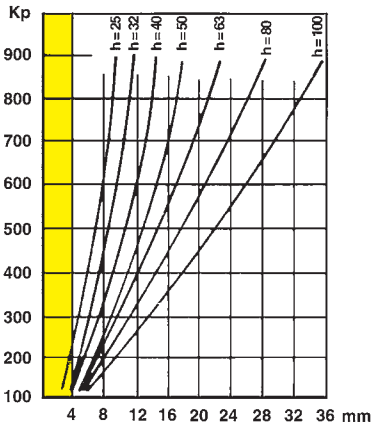
ø 40 - 80 SH
35% di compres. max



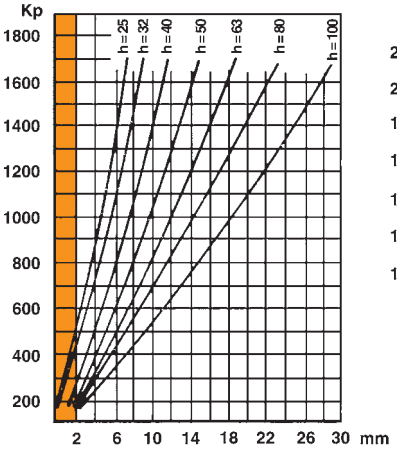
ø 40 - 90 SH
30% di compres. max



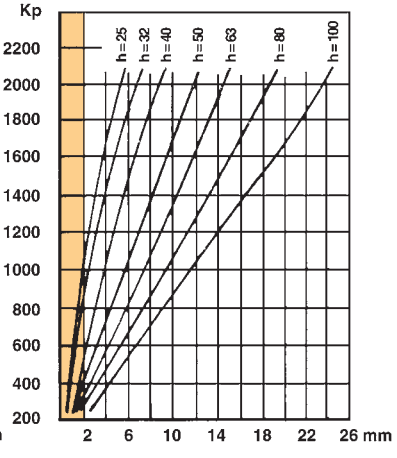
ø 40 - 95 SH
25% di compres. max



ø 50 - 80 SH
35% di compres. max



ø 50 - 90 SH
30% di compres. max

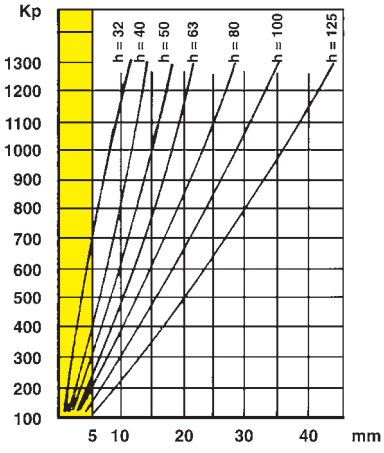


ø 50 - 95 SH
25% di compres. max

Diagramma di carico Molle Retflex
Load diagram for Retflex Springs
Diagramme de charge pour Ressortes Retflex

80 Sh

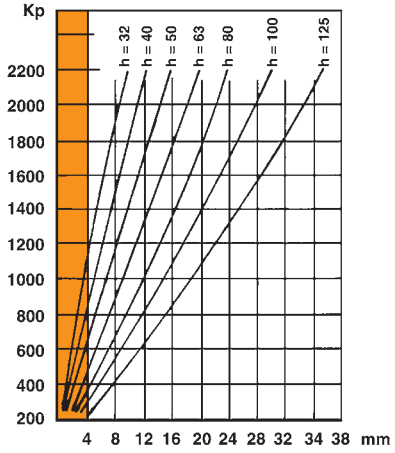
Giallo
Yellow
Jaune
Gelb



ø 63 - 80 SH
35% di compres. max

90 Sh

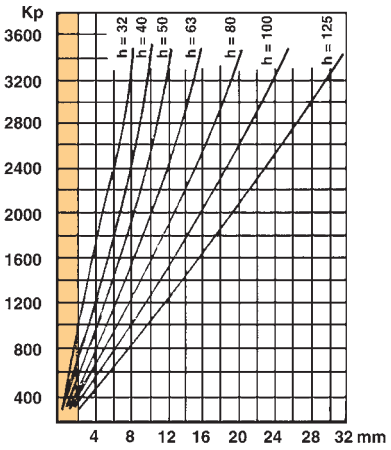
Arancio
Orange
Orange
Orange



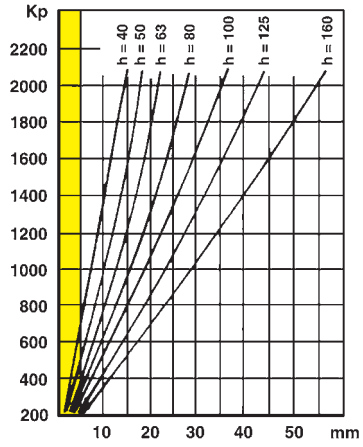
ø 63 - 90 SH
30% di compres. max

95 Sh

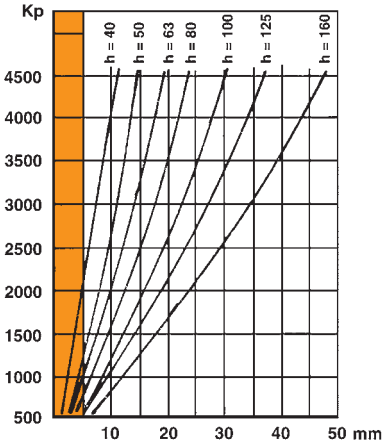
Ocra
Ochre
Ochre
Ocker



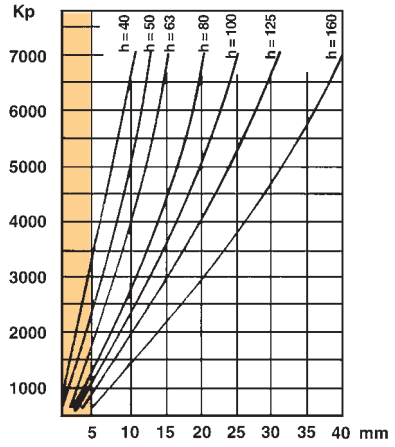
ø 63 - 95 SH
25% di compres. max



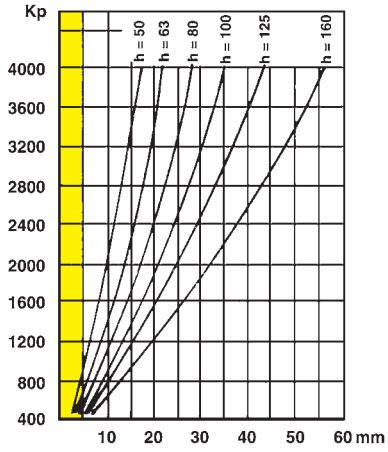
ø 80 - 80 SH
35% di compres. max



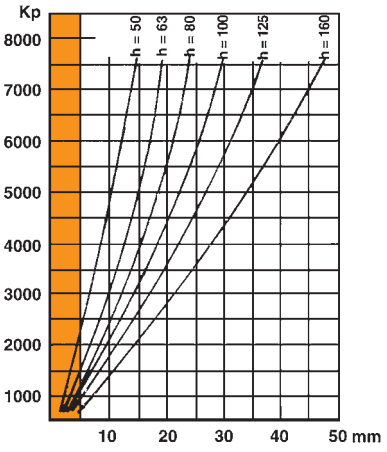
ø 80 - 90 SH
30% di compres. max



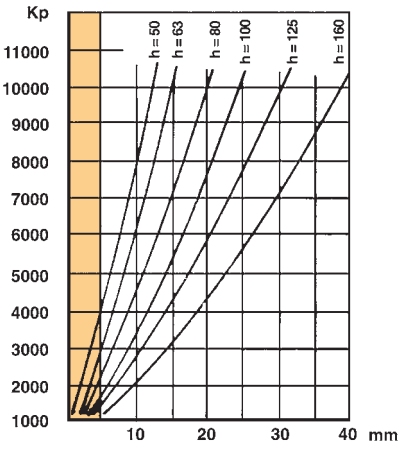
ø 80 - 95 SH
25% di compres. max



ø 100 - 80 SH
35% di compres. max



ø 100 - 90 SH
30% di compres. max

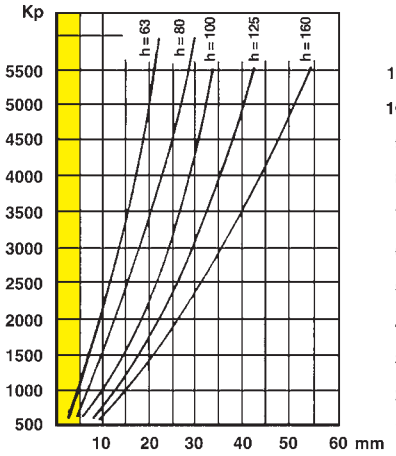


ø 100 - 95 SH
25% di compres. max

Diagramma di carico Molle Retflex
Load diagram for Retflex Springs
Diagramme de charge pour Ressortes Retflex

80 Sh

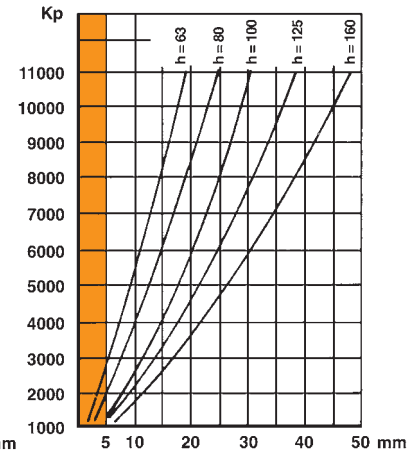
Giallo
Yellow
Jaune
Gelb



ø 125 - 80 SH
35% di compres. max

90 Sh

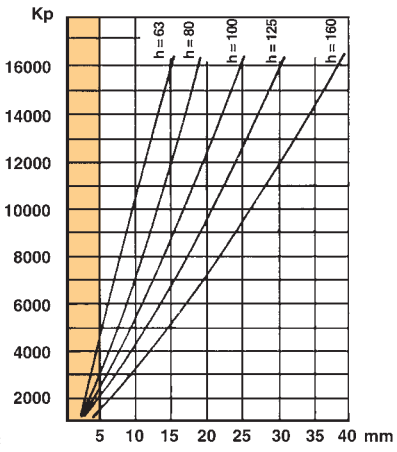
Arancio
Orange
Orange
Orange



ø 125 - 90 SH
30% di compres. max

95 Sh

Ocra
Ochre
Ochre
Ocker



ø 125 - 95 SH
25% di compres. max

ESEMPIO DI LETTURA DIAGRAMMI

Si vuole sapere quanti Kg. di carico può dare una molla di ø 40H. 80, durezza 90SH. (arancio) per una compressione di 16 mm., pari al 20% dell'altezza.
Nel diagramma relativo riportiamo in ascissa i valori relativi alla compressione espressi in mm., in ordinata quelli relativi al carico KP espressi in Kg.
Dal punto di ascissa pari a 16 mm, saliamo sulla retta delle ordinate fino ad incontrare la curva relativa ad una molla H. 80.
In tale punto la curva assumerà un determinato valore del carico (Kp), in ordinata, di Kg. 525. Vi raccomandiamo di non superare i limiti di compressione del 35% per il giallo 80 Sh. del 30% per il rosso 90 Sh. del 25% il grigio 95 Sh; in questo modo le molle avranno una lunga durata.
Tutte le molle sollecitate dinamicamente si surriscaldano; tale calore è provocato dalla compressione, dalla frequenza dei colpi e dagli atriti sul sistema di guida, tale temperatura non deve mai superare i 70°C.

EXAMPLE TO HELP DIAGRAMS INTERPRETATION

To know the load in kgs of one spring having diam. 40H. 80, hardness 90SH (orange), under a compression of 16 mm, which is equal to 20% of the height.
In the relevant diagram we gave, in vertical, the values covering the compression in mm and in horizontal those covering the KP load in kgs.
From the vertical point, the curve will have a specific load value (Kp), in horizontal, of 525 kgs. We strongly recommend not to exceed the compression limits, namely:
- 35% for 80 Sh., yellow
- 30% for 90 Sh., red
- 25% for 95 Sh., grey

In this way the springs will have a longer life.
All dinamically stressed springs will overheat, the heat being caused by the compression, by the number of strokes and by the friction on the guides.
Please note that this temperature should never exceed 70° C.

Acciaio
Steel
Acier
Werkstoff

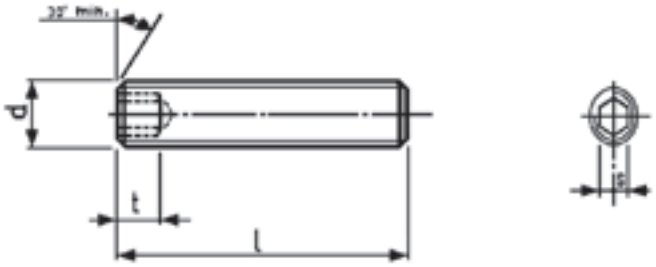
5.8

Esecuzione
Finish
Exécution
Ausführung

Grezzo

Grani a cava esagonale punta piana
Flat point hexagon socket set screws
Vis de réglage à six pans creux à pointe plate
Stellschrauben mit Innensechskant

UNI 5923 - DIN 913 - ISO 4026
FORNIBILI ANCHE A PASSO FINE



passo	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5	2,5	3
S	1,5	2	2,5	3	4	5	6	6	8	8	10	12	12
t	2,5	3	3,5	4	5	6	8	8	10	10	12	15	15

L (lunghezza in mm)													
3	●												
4	●	●											
5	●	●	●										
6	●	●	●	●									
8	●	●	●	●	●								
10	●	●	●	●	●	●							
12	●	●	●	●	●	●	●						
14	●	●	●	●	●	●	●						
16	●	●	●	●	●	●	●	●	●				
18	●	●	●	●	●	●	●	●	●				
20	●	●	●	●	●	●	●	●	●	●	●		
25	●	●	●	●	●	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●	●	●	●	●	●
35		●	●	●	●	●	●	●	●	●	●	●	●
40		●	●	●	●	●	●	●	●	●	●	●	●
45			●	●	●	●	●	●	●	●	●	●	●
50			●	●	●	●	●	●	●	●	●	●	●
60					●	●	●	●	●	●	●	●	●
70					●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

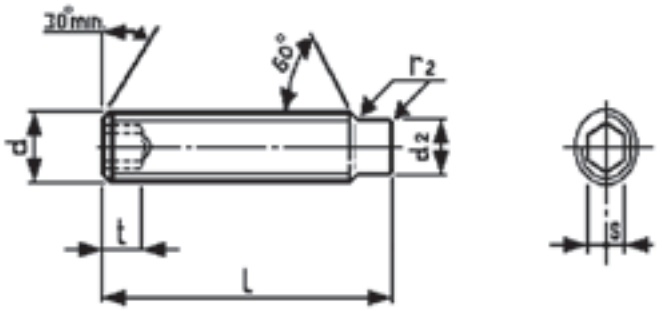
5.8

Esecuzione
Finish
Exécution
Ausführung

Grezzo

Grani a cava esagonale a punta cilindrica
Hexagon socket set screws with cylindrical point
Vis de pression à six pans creux à pointe cylindrique
Zylinderschrauben mit Zylinderkantschraube

UNI 5925 - DIN 915 - ISO 4028
FORNIBILI ANCHE A PASSO FINE



passo	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5	2,5	3
S	1,5	2	2,5	3	4	5	6	6	8	8	10	12	12
t	2,5	3	3,5	4	5	6	8	8	10	10	12	15	15

L (lunghezza in mm)													
3	●												
4	●	●											
5	●	●	●										
6	●	●	●	●									
8	●	●	●	●	●								
10	●	●	●	●	●	●							
12	●	●	●	●	●	●	●						
14	●	●	●	●	●	●	●						
16	●	●	●	●	●	●	●	●	●				
18	●	●	●	●	●	●	●	●	●				
20	●	●	●	●	●	●	●	●	●	●	●		
25	●	●	●	●	●	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●	●	●	●	●	●
35		●	●	●	●	●	●	●	●	●	●	●	●
40		●	●	●	●	●	●	●	●	●	●	●	●
45			●	●	●	●	●	●	●	●	●	●	●
50			●	●	●	●	●	●	●	●	●	●	●
60					●	●	●	●	●	●	●	●	●
70					●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

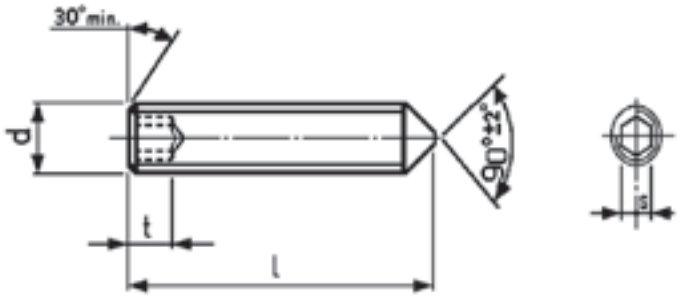
5.8

Esecuzione
Finish
Exécution
Ausführung

Grezzo

Grani a cava esagonale a punta conica
Cone point hexagon socket set screws point
Vis de pression à six pans creux à pointe conique
Konische Innensechskantschrauben

UNI 5927 - DIN 914 - ISO 4027
FORNIBILI ANCHE A PASSO FINE



passo	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5	2,5	3
S	1,5	2	2,5	3	4	5	6	6	8	8	10	12	12
t	2,5	3	3,5	4	5	6	8	8	10	10	12	15	15

L (lunghezza in mm)													
3	●												
4	●	●											
5	●	●	●										
6	●	●	●	●									
8	●	●	●	●	●								
10	●	●	●	●	●	●							
12	●	●	●	●	●	●	●						
14	●	●	●	●	●	●	●						
16	●	●	●	●	●	●	●	●	●				
18	●	●	●	●	●	●	●	●	●				
20	●	●	●	●	●	●	●	●	●	●	●		
25	●	●	●	●	●	●	●	●	●	●	●	●	●
30	●	●	●	●	●	●	●	●	●	●	●	●	●
35		●	●	●	●	●	●	●	●	●	●	●	●
40		●	●	●	●	●	●	●	●	●	●	●	●
45			●	●	●	●	●	●	●	●	●	●	●
50			●	●	●	●	●	●	●	●	●	●	●
60					●	●	●	●	●	●	●	●	●
70					●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

5.8

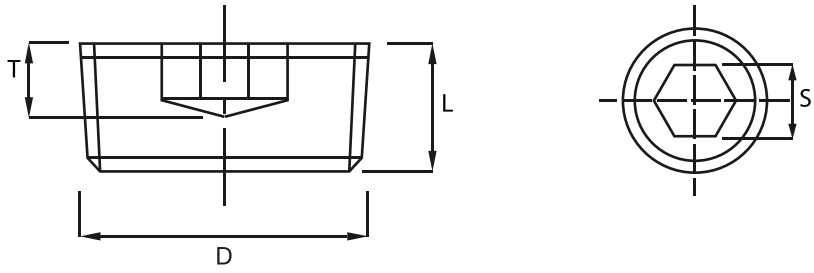
Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Zincati/Fosfatati

Tappi conici tipo DIN 906
Conical plug type DIN 906
Bouchons coniques type DIN 906
Konische Stecker Typ DIN 906

Fornibili anche 8.8



D	L	S	T	Acciaio Steel	Ottone Brass
M8X1	8	4	4	●	
M8X1	8	4	4		●
M10X1	8	5	4	●	
M10X1	8	5	4		●
M12X1,5	10	6	5	●	
M12X1,5	10	6	5		●
M14X1,5	10	7	5	●	
M14X1,5	10	7	5		●
M16X1,5	10	8	5	●	
M16X1,5	10	8	5		●
R 1/8"	8	5	4	●	
R 1/8"	8	5	4		●
R 1/4"	10	7	5	●	
R 1/4"	10	7	5		●
R 3/82	10	8	5	●	
R 3/82	10	8	5		●
R 1/2"	10	10	5	●	
R 1/2"	10	10	5		●
R 3/4"	12	12	6	●	
R 3/4"	12	12	6		●

Acciaio
Steel
Acier
Werkstoff

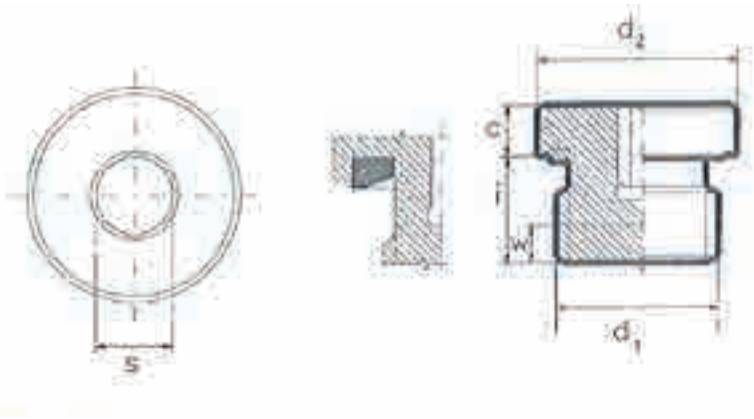
12.9 (8.8)

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Brunito

Tappi cilindrici esagono incassato con guarnizione trapezioidale
Cylindrical plugs with hexagon socket
Bouchons cylindriques à six pans creux
Zylinderstecker mit Innensechskant



d1	filettatura	s	d2	i	c	w
G 1/8"	ISO 228	5	14	8	4	3
G 1/4"	ISO 228	6	19	12	5	3
G 3/8"	ISO 228	8	22	12	5	3
G 1/2"	ISO 228	10	27	14	5	4
G 3/4"	ISO 228	12	32	16	5	4
G 1"	ISO 228	17	40	16	6,5	4
G 1.1/4"	ISO 228	22	50	16	6,5	4
G 1.1/2"	ISO 228	24	55	16	6,5	4
M 10X1	DIN 13	5	14	8	4	3
M 12X1,5	DIN 13	6	17	12	5	3
M 14X1,5	DIN 13	6	19	12	5	3
M 16X1,5	DIN 13	8	22	12	5	3
M 18X1,5	DIN 13	8	24	12	5	3
M 20X1,5	DIN 13	10	26	14	5	4
M 22X1,5	DIN 13	10	27	14	5	4
M 24X1,5	DIN 13	12	30	14	5	4
M 26X1,5	DIN 13	12	32	16	5	4
M 27X2	DIN 13	12	32	16	5	4
M 33X2	DIN 13	17	40	16	6,5	4
M 42X2	DIN 13	22	50	16	6,5	4
M 48X2	DIN 13	24	55	16	6,5	4

Acciaio
Steel
Acier
Werkstoff

Brunito

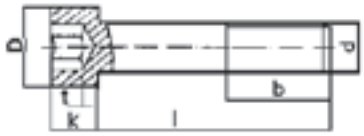
Durezza
Hardness
Dureté
Härte

BLACK - 12.9

Esecuzione
Finish
Exécution
Ausführung

Viti testa cilindrica con cava esagonale
Hexagon socket head cap screws
Vis à tête cylindrique à six pans creux
Zylinderkopfschrauben mit Innensechskant

UNI 5931 - DIN 912 - ISO 4762



d	3	4	5	6	8	10	12	14	16	18	20	22	24
passo	0,5	0,7	0,8	1	1,25	1,5	1,75	2	2	2,5	2,5	2,5	3
D	5,5	7	8,5	10	13	16	18	21	24	27	30	33	36
K	3	4	5	6	8	10	12	14	16	18	20	22	24
S	2,5	3	4	5	6	8	10	12	14	14	17	17	19
t	1,3/1,7	2,2	2,9	3,5	4,5	5,9	7	8,3	9,3	10,3	11,2	11,8	13,5
b	12	20	22	24	28	32	36	40	44	48	52	56	60

L (lunghezza in mm)													
6	●	●	●										
8	●	●	●	●									
10	●	●	●	●	●								
12	●	●	●	●	●								
14	●	●	●	●	●								
16	●	●	●	●	●	●							
18	●	●	●	●	●	●							
20	●	●	●	●	●	●	●						
22	●			●	●	●	●						
25	●	●	●	●	●	●	●	●	●				
30	●	●	●	●	●	●	●	●	●				
35	●	●	●	●	●	●	●	●	●	●	●		
40		●	●	●	●	●	●	●	●	●	●		●
45		●	●	●	●	●	●	●	●	●	●		●
50			●	●	●	●	●	●	●	●	●		●
55			●	●	●	●	●	●	●	●	●		●
60			●	●	●	●	●	●	●	●	●		●
65				●	●	●	●	●	●	●	●		●
70				●	●	●	●	●	●	●	●		●
75				●	●	●	●	●	●	●	●		●
80				●	●	●	●	●	●	●	●		●
85													
90				●	●	●	●	●	●	●	●		●
100				●	●	●	●	●	●	●	●		●
110				●	●	●	●	●	●	●	●		●
120				●	●	●	●	●	●	●	●		●
130				●	●	●	●	●	●	●	●		●
140				●	●	●	●	●	●	●	●		●
150				●	●	●	●	●	●	●	●		●
160													
170													
180													
190													
200													
220													
240													
260													
280													
300													

Disponibile anche 8.8

Fornibile anche testa svasata (UNI 5933)

Le misure sopra la linea in grassetto hanno il gambo interamente filettato

Acciaio
Steel
Acier
Werkstoff

per viteria
for bolts and screws
pour visserie
für Schrauben

Resistenza alla rottura per trazione / Tensile strength:
120 Kg/mm2

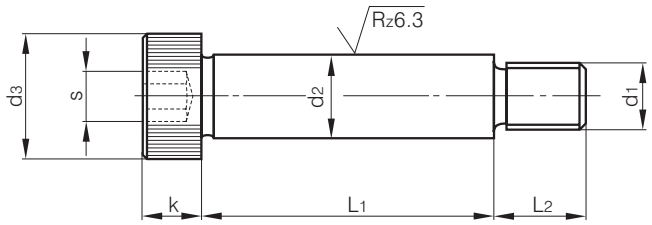
Limite di elasticità / Limit of elasticity:
90/Kg/mm2 min.

Allungamento / Stretch:
9% min.

Grado di tolleranza del gambo rettificato / Tolerance rate of the ground shaft:
h 8

Viti a testa cilindrica con gambo rettificato esagono incassato
Shoulder screws
Vises epaulées
Paßschrauben

ISO 7379 - 12.9



d2h8	5	6	8	10	12	16	20	24
d1	4 x	5 x 0,8	6 x 1	8 x 1,25	10 x 1,5	12 x 1,75	16 x 2	20 x 2,5
d3	8	10	13	16	18	24	30	36
K	4	4,5	5,5	7	9	10	14	16
L2	8	9,5	11	13	16	18	22	27
S = esagono	2,5	3	4	5	6	8	10	12
Kg. / mm	0,49	0,68	1,15	3	6	11	28	55
L1	L1							
10	●	●	●					
12	●	●	●					
16	●	●	●	●	●			
20	●	●	●	●	●			
25	●	●	●	●	●			
30	●	●	●	●	●	●		
35	●	●	●	●	●	●		
40	●	●	●	●	●	●	●	
45	●	●	●	●	●	●	●	
50	●	●	●	●	●	●	●	●
55		●	●	●	●	●	●	●
60			●	●	●	●	●	●
65			●	●	●	●	●	●
70			●	●	●	●	●	●
80			●	●	●	●	●	●
90				●	●	●	●	●
100				●	●	●	●	●
120					●	●	●	●
140					●	●	●	●
160						●	●	●
200						●	●	●

A richiesta si eseguono misure fuori catalogo

Non-standard dimensions can be made on request

Acciaio
Steel
Acier
Werkstoff

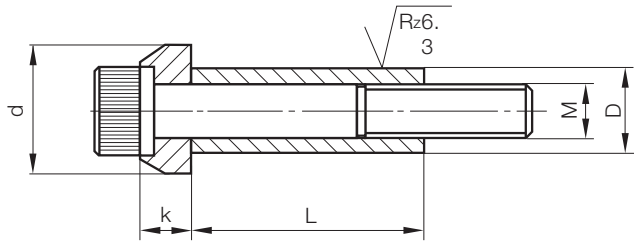
per viteria
for bolts and screws
pour visserie
für Schrauben

Rondella / Washer:
acciaio temprato e brunito,
resistenza 100 Kg/mm2
steel heat-treated and
burnished,
strenght 100 Kg/mm2

Distanziale / Spacer Data:
acciaio temprato e rettificato,
resistenza 120-140 Kg/mm2
steel heat-treated and grinded,
strenght 120-140 Kg/mm2

Tolleranza di rettifica /
Tolerance of grinding:
D = h 7

Viti a colletto con distanziale rettificato
Shoulder screws with ground spacer
Vises avec entretoise rectifiée
Schrauben mit Distanzrohr geschliffen



filetto M	6 MA	8 MA	10 MA	12 MA	16 MA
k	6	6,5	7,5	9	11
d	15	19	23	27	34
D	10	12,5	15	17,5	23
L	L = ±0,05 mm				
15	●				
20	●	●	●		
25	●	●	●		
30	●	●	●	●	
35	●	●	●	●	
40	●	●	●	●	●
45	●	●	●	●	●
50	●	●	●	●	●
55	●	●	●	●	●
60	●	●	●	●	●
65	●	●	●	●	●
70	●	●	●	●	●
80	●	●	●	●	●
90	●	●	●	●	●
100	●	●	●	●	●
110	●	●	●	●	●
120		●	●	●	●
140		●	●	●	●
150			●	●	●
160			●	●	●
180			●	●	●
200			●	●	●
220				●	●
230					●

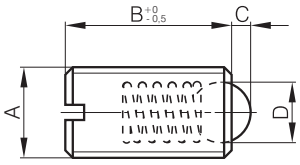
Acciaio
Steel
Acier
Werkstoff

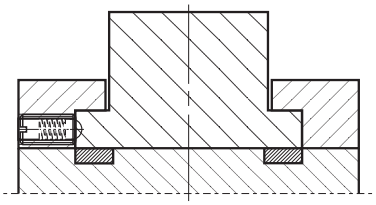
Class 5,8

Trattamento superficiale
Brunito
Sfera completamente temperata lucida
Acciaio inox, lucido

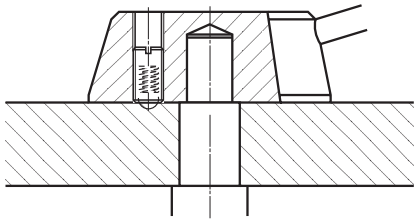
Surface treatment
Burnished
Sphere completely hardened and lapped
Bright stainless steel

Pressori con molla taglio cacciavite
Thrust springs screws
Vises à bille à ressort
Federne Druckstücke

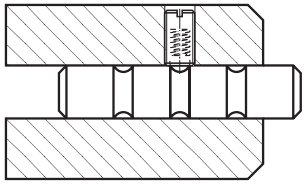




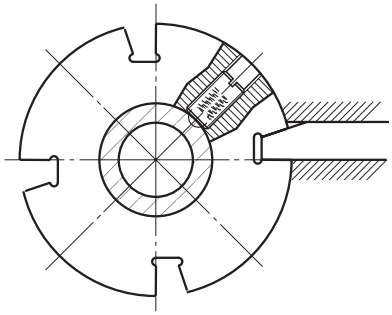
Pressore a molla come riferimento innestabile a spinta



Pressore a molla come riferimento innestabile a mezzo leva



Pressore a molla come posizionamento su albero scanalato



Pressore a molla come arresto supplementare su divisore

A	B	C	D	Forza iniziale Initial force N	Forza finale Final force N
M3	7	0,5	1,5	2,0	4,5
M4	9	0,8	2,5	6	12
M5	12	0,9	3	7	13
M6	14	1,0	3,5	9	15
M8	16	1,5	5	20	35
M10	19	2,0	6	25	45
M12	22	2,5	8	35	60
M16	24	3,5	10	65	110
M20	30	5	12	70	120
M24	35	6	15	81	237

A richiesta in inox
On request stainless steel
Sure demande inox
Auf Anfrage in Edelstahl

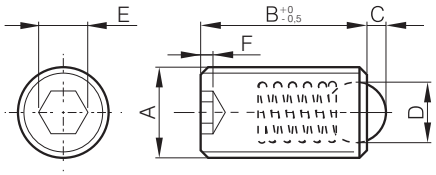
Acciaio
Steel
Acier
Werkstoff

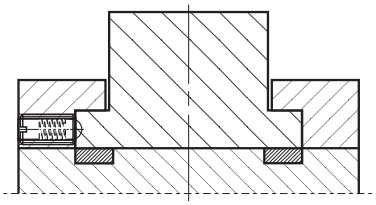
Class 5,8

Trattamento superficiale
Brunito
Sfera completamente temperata lucida
Acciaio inox, lucido

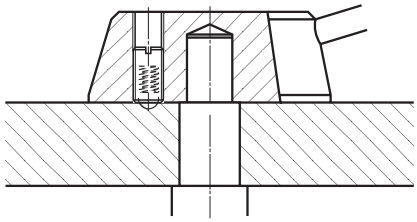
Surface treatment
Burnished
Sphere completely hardened and lapped
Bright stainless steel

Pressori con molla con esagono incassato
Thrust springs screws with exagon socket
Vises à bille à ressort avec six pans creux
Federne Druckstücke Mit Innensechskant

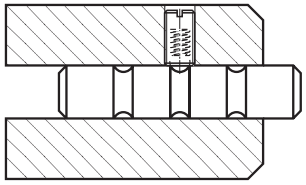




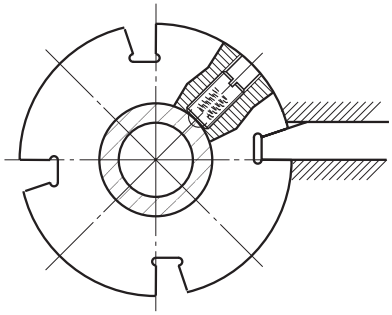
Pressore a molla come riferimento innestabile a spinta



Pressore a molla come riferimento innestabile a mezzo leva



Pressore a molla come posizionamento su albero scanalato



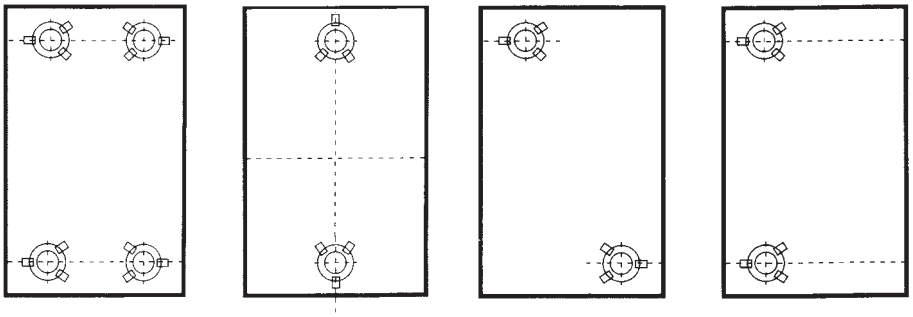
Pressore a molla come arresto supplementare su divisore

A	B	C	D	E	Forza iniziale Initial force N	Forza finale Final force N	F
M3	7	0,5	1,5	1,5	1,5	2,9	1
M4	9	0,7	2,38	2	3,9	9,8	2,4
M5	12	0,8	3	2,5	4,9	19,6	2,5
M6	13	1,2	3,5	3	4,9	29,4	2,5
M8	16	1,5	5	4	12,7	39,2	2,5
M10	20	2	6	5	18,6	49	3
M12	25	3	8	6	19,6	58,8	3
M16	25	4	10	8	29,4	98	3
M20	40	5	12	10	35	120	6
M24	48	6	15	12	81	237	9

A richiesta in inox
On request stainless steel
Sure demande inox
Auf Anfrage in Edelstahl

Blocchi portastampo
Die sets
Blocs à Colonnes

A richiesta / On request
Sur demande / Auf Anfrage



La nostra azienda presenta in questo catalogo la produzione di serie relativa a-:
- basi portastampo a 2 o 3 piastre con colonne e bussole del tipo fisso nei montaggi a 4 colonne e 2 colonne nelle 3 diverse conformazioni: arretrate, centrali, diagonali.

Su richiesta siamo in grado di:
- eseguire piastre e basi con dimensioni diverse da quelle di seguito riportate
- eseguire lavorazioni a disegno del cliente
- fornire basi con scorrimenti guida frutto della combinazione, a scelta del cliente, fra i diversi tipi di bussole e colonne illsutrati nell'ultima parte di questo catalogo
- fornire piastre spianate e squadrate con esecuzione delle alesature sedi delle colonne e bussole

Tutte le piastre sia singole che costituenti una base montata sono realizzate in UNI C 45, finite di rettifica sui piani e di fresa sui lati.
Le tolleranze di serie sono:
- sulle dimensioni esterne ± 1% della misura nominale
- sugli spessori ± 2 mm
- parallelismo dei piani a base montata 0,015 su 100 mm

Le illustrazioni, le dimensioni e i pesi riportati nel presente catalogo sono indicativi.

Our company presents in this catalogue her standard production of:
- Die-sets of 2 or 3 plates with fixed pins and bushings in the 4 guides type and/or in the 2 guides type diagonal, central or rear mounted.

On special request, we are able to:
- manufacture plates and die-sets in special sizes;
- make tooling according to customer's drawing;
- supply die-sets with guide elements chosen by the customer among those showed in the last section of this catalogue;
- Supply plates with ground surfaces, milled sides and bored holes fit to the pins and bushings assembling.

All standard die-sets and plates are made in UNI C 45 steel.
Standard margins are as follow:
- on overall dimensions ± 1% of nominal dimensions;
- on thickness ± 2 mm;
- parallelism on mounted die-sets surfaces 0,015 mm/100 mm.

All illustrations, sizes and weights are given for general guidance only.

Dans ce catalogue, notre Société présente l'esemble de production standard concernant:
- Blocs à colonnes à 2 et 3 plaques avec colonnes et bagues de guidage du type fixe, à 4 colonnes ou à 2 colonnes dans les 3 positionnements suivants: en diagonal, dans l'axe ou à l'arriere.

Selon les besoins du client, nous sommes a même:
- de réaliser des plaques et des blocs de dimensions spéciales;
- d'exécuter des usinages suivant plan client (creusures, embrèvements, dégagements pour bidage etc…) proposés dans les dernières pages du present catalogue;
- de fournir des plazues rectifiées et chanfreinées avec alésage des sièges des colonnes et des bagues.

Toutes les plaques, autant les plaques simples que celles formant bloc, sont réalisées en acier UNI C 45.
Les tolérances de fabrication standards sont les suivantes:
- sur les dimensions hors tout ± 1% des dimensions nominales
- sur les épaisseurs ± 2 mm
- parallélisme des plans su blocs montés 0,015 sur 100 mm.

Les illustrations, cotes et poids mintionnés dans le present catalogue sont fournis à titre indicatif.

Componenti normalizzati stampi plastica + pressofusione

Standard components for plastic and die casting industry

Elements normalisés pour plasturgie et injection de metal

Standard normeile für formenbau und druckguss

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

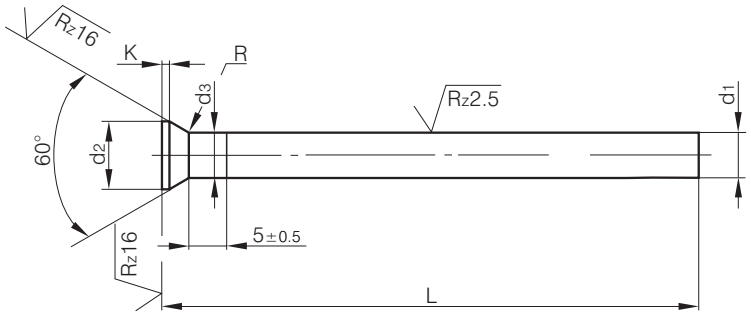
Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Estrattori con testa svasata
Conical head ejectors
Éjecteurs à tête conique
Auswerferstifte

DIN 1530
Forma D



d1 g6	d2 -0,2	K 0/+0,2	R 0/+0,2	d3	L 0/+2				
					125	160	200	250	315
0,5	0,9	0,2			●	●			
0,6	1,1	0,2			●	●			
0,7	1,3	0,2		d1	●	●			
0,8	1,4	0,4		+0,02	●	●			
0,9	1,6	0,4			●	●			
1,0-1,1	1,8	0,5			●	●	●	●	
1,2-1,3	2,0	0,5			●	●	●	●	
1,4-1,5	2,2	0,5			●	●	●	●	
1,6-1,7	2,5	0,5			●	●	●	●	
1,8-1,9	2,8	0,5	0,3		●	●	●	●	
2,0	3,0	0,5			●	●	●	●	
2,1-2,2	3,2	0,5			●	●	●	●	
2,3-2,5	3,5	0,5			●	●	●	●	
2,6-2,9	4,0	0,5			●	●	●	●	
3,0-3,4	4,5	0,5		d1	●	●	●	●	
3,5-3,9	5,0	0,5		+0,03	●	●	●	●	
4,0-4,4	5,5	0,5			●	●	●	●	●
4,5-4,9	6,0	0,5			●	●	●	●	●
5,0-5,4	6,5	0,5			●	●	●	●	●
5,5-5,9	7,0	0,5			●	●	●	●	●
6,0-6,4	8,0	0,5			●	●	●	●	●
6,5-7,4	9,0	1,0			●	●	●	●	●
7,5-8,4	10,0	1,0	0,5		●	●	●	●	●
8,5-9,4	11,0	1,0			●	●	●	●	●
9,5-10,4	12,0	1,0			●	●	●	●	●
10,5-11,4	13,0	1,0			●	●	●	●	●
11,5-12,4	14,0	1,0			●	●	●	●	●
12,5-13,4	15,0	1,0			●	●	●	●	●
13,5-14,4	16,0	1,0			●	●	●	●	●
14,5-15,0	17,0	1,5			●	●	●	●	●
15,1-16,0	18,0	1,5		d1	●	●	●	●	●
16,1-17,0	19,0	1,5	0,8	+0,04	●	●	●	●	●
17,1-18,0	20,0	1,5			●	●	●	●	●
18,1-19,0	21,0	1,5			●	●	●	●	●
19,1-20,0	22,0	1,5			●	●	●	●	●
20,1-22,0	24,0	1,5			●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

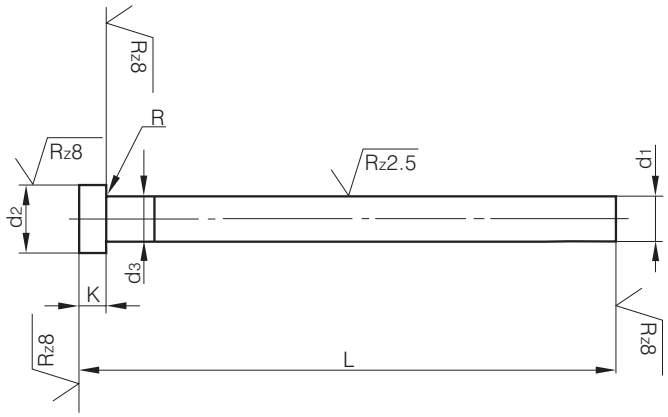
Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Espulsori con testa cilindrica temprati forma AH
Hardened ejector pins cyl head form AH
Éjecteurs tête cylindrique trempés forme AH
Auswerferstifte zyl. Kopf Form AH

DIN ISO 6751 AH



d1 g6	d2 0 -0,2	k 0 -0,05	R +0,2 0	d3	L 0 / +2										
					40	80	100	125	160	200	250	315	400	500	630
1,0	2,5	1,2	0,2	d_1 + 0,03	●	●	●	●	●	●					
1,1					●	●	●	●	●	●					
1,2					●	●	●	●	●	●					
1,3	3	1,5			●	●	●	●	●	●					
1,4					●	●	●	●	●	●					
1,5					●	●	●	●	●	●					
1,6					●	●	●	●	●	●					
1,7					●	●	●	●	●	●					
1,8					●	●	●	●	●	●					
1,9					●	●	●	●	●	●					
2,0	4	2			●	●	●	●	●	●	●	●			
2,2						●	●	●	●	●	●	●			
2,5	5		0,3			●	●	●	●	●	●	●			
2,7						●	●	●	●	●	●	●			
3,0	6	3			●	●	●	●	●	●	●	●	●		
3,2						●	●	●	●	●	●	●			
3,5	7					●	●	●	●	●	●	●			
3,7						●	●	●	●	●	●	●			
4,0	8				●	●	●	●	●	●	●	●	●	●	●
4,2						●	●	●	●	●	●	●	●		
4,5						●	●	●	●	●	●	●	●		
4,7							●	●	●	●	●	●	●		
5,0	10				●	●	●	●	●	●	●	●	●	●	●
5,2						●	●	●	●	●	●	●	●		
5,5						●	●	●	●	●	●	●	●		
6,0	12	5	0,5		●	●	●	●	●	●	●	●	●	●	●
6,2						●	●	●	●	●	●	●	●		
6,5						●	●	●	●	●	●	●	●		
7,0							●	●	●	●	●	●	●	●	●
8,0	14					●	●	●	●	●	●	●	●	●	●
8,2						●	●	●	●	●	●	●	●	●	●
8,5							●	●	●	●	●	●	●	●	●
9,0							●	●	●	●	●	●	●	●	●
10,0	16					●	●	●	●	●	●	●	●	●	●
10,2						●	●	●	●	●	●	●	●	●	●
10,5							●	●	●	●	●	●	●	●	●
11,0							●	●	●	●	●	●	●	●	●
12,0	18	7	0,8			●	●	●	●	●	●	●	●	●	●
12,2							●	●	●	●	●	●	●	●	●
12,5							●	●	●	●	●	●	●	●	●
14,0	22					●	●	●	●	●	●	●	●	●	●
16,0						●	●	●	●	●	●	●	●	●	●
18,0	24			d_1 + 0,07			●	●	●	●	●	●	●	●	●
20,0	26	8	1,0				●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

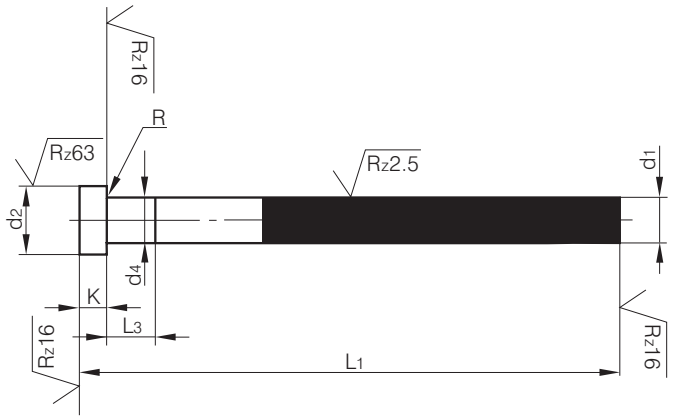
Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Espulsori con testa cilindrica temprati rivestiti al DLC
Hardened ejector pins cyl head with DLC-coating
Éjecteurs tête cylindrique trempés avec DLC
Auswerferstifte zyl. Kopf gehärtet mit DLC-Beschichtung

DIN ISO 6751 AH



d1 g6	d2 0 -0,2	d4	k 0 -0,05	R +0,2 0	L1 +2 / 0													L3
					40	50	63	80	100	125	160	200	250	315	400	500	630	
1,0	2,5	d_1 + 0,03	1,2	0,2	●	●	●	●	●	●	●	●						5
1,1					●	●	●	●	●	●	●	●						
1,2					●	●	●	●	●	●	●	●						
1,3	3		1,5		●	●	●	●	●	●	●	●						
1,4					●	●	●	●	●	●	●	●						
1,5					●	●	●	●	●	●	●	●	●					
1,6					●		●	●	●	●	●	●	●					
1,7					●	●	●	●	●	●	●	●						
1,8					●	●	●	●	●	●	●	●						
1,9					●	●	●	●	●	●	●	●						
2,0	4		2,0		●		●	●	●	●	●	●	●	●				
2,1									●									
2,2									●	●	●	●	●	●				
2,3									●									
2,5	5			0,3	●		●	●	●	●	●	●	●	●	●			
2,7												●						
2,8									●									
2,9									●									
3,0	6		3,0		●		●	●	●	●	●	●	●	●	●			
3,2									●	●	●	●	●	●	●			
3,5	7								●	●	●	●	●	●	●			
3,7									●	●	●	●	●					
4,0	8				●		●	●	●	●	●	●	●	●	●	●		
4,2									●	●	●	●	●	●				
4,5									●	●	●	●	●	●	●			
4,7									●		●		●					
5,0	10				●		●	●	●	●	●	●	●	●	●	●		
5,2									●	●	●	●	●	●				
5,5									●	●	●	●	●					
6,0	12		5,0	0,5	●		●	●	●	●	●	●	●	●	●	●		6
6,2									●	●	●	●	●	●				
6,5									●	●	●	●	●	●	●			
7,0									●	●	●	●	●	●	●	●		
7,5									●	●	●	●	●					
8,0	14						●	●	●	●	●	●	●	●	●	●		8
8,2									●	●	●	●	●	●				
8,5									●	●	●	●	●	●				
9,0								●	●	●	●	●	●	●			●	
10,0	16	d_1 + 0,04	7,0	0,8				●	●	●	●	●	●	●	●	●		10
10,2									●	●	●	●	●	●				
10,5									●	●	●	●	●	●	●			
12,0	18							●	●	●	●	●	●	●	●	●		12
12,2											●	●		●				
12,5											●	●	●	●				
13,0									●	●	●	●	●	●	●			13
14,0	22								●	●	●	●	●	●	●	●		14
14,5									●	●	●	●	●	●				
16,0									●	●	●	●	●	●	●	●		16
20,0	26	d_1+ 0,07	8,0	1,1					●	●	●	●	●	●	●	●		20
25,0	32	d_1+ 0,1	10,0								●	●	●	●				25

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

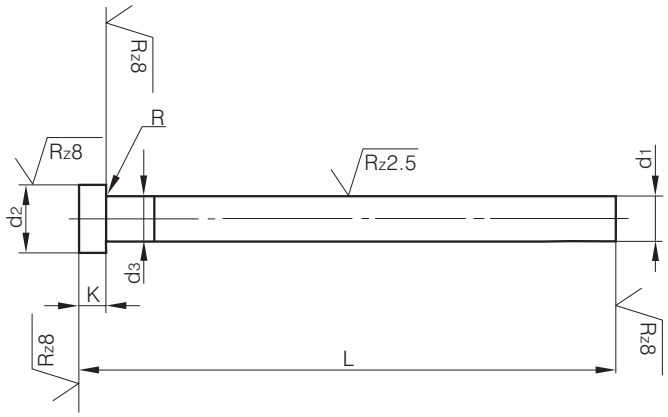
Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Espulsori con testa cilindrica temprati
Hardened ejector pins cyl. head
Éjectèurs tête cylindrique trempés
Auswerferstifte zyl. Kopf gehärtet

Tipo Fiat



d1 g6	d2 -0,2	K -0,05	R +0,2 0	d3	L /0 +2						
					100	125	160	200	250	315	400
2	4	2	0,2	d1 +0,03	●	●	●	●	●	●	
2,2					●	●	●	●	●		
2,5	5		0,3		●	●	●	●	●	●	
3	6	3			●	●	●	●	●	●	●
3,5	7				●	●	●	●	●	●	●
4	8	4			●	●	●	●	●	●	●
5	10	5			●	●	●	●	●	●	●
6	12		0,5		●	●	●	●	●	●	●
7					●	●	●	●	●	●	●
8	14	6,5			●	●	●	●	●	●	●
10	17			d1 +0,04	●	●	●	●	●	●	●
12	20	7	0,8		●	●	●	●	●	●	●
14	22				●	●	●	●	●	●	●
16	24				●	●	●	●	●	●	●
18	26			d1 +0,07	●	●	●	●	●	●	●
20	28		1,0		●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

DIN 1.2344

Durezza
Hardness
Dureté
Härte

Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC

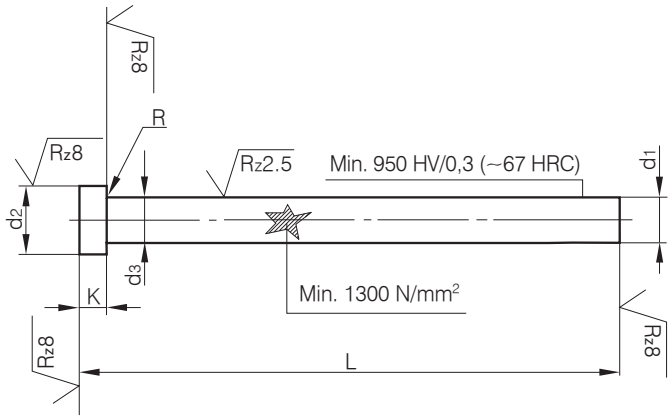
Esecuzione
Finish
Exécution
Ausführung

Nitrurati - Rettificati
Nitrided - Ground
Nitrurés - Rectifiés
Nitriert - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Espulsori con testa cilindrica nitrurati
Nitrided ejector pins form A
Ejecteur nitrurés forme A
Auswerferstifte mit zyl. Kopf nitriert Form A

DIN ISO 6751 A



d1 g6	d2 -0,2	K -0,05	R	d3	L / 0 +2 100	125	160	200	250	315	400	500	630	800	1000
1,0	2,5	1,2	0,2	d_1 + 0,03	●	●	●	●							
1,1					●	●	●	●	●	●					
1,2					●	●	●	●	●						
1,3	3	1,5			●	●	●	●	●	●					
1,4					●	●	●	●	●	●	●				
1,5					●	●	●	●	●	●	●				
1,6					●	●	●	●	●	●	●				
1,7					●	●	●	●	●	●					
1,8					●	●	●	●	●	●	●	●	●		
1,9					●	●	●	●	●	●	●	●			
2,0	4	2			●	●	●	●	●	●	●	●			
2,2					●	●	●	●	●	●	●	●	●	●	
2,5	5		0,3		●	●	●	●	●	●	●	●			
2,7					●	●	●	●	●	●	●	●	●	●	●
3,0	6	3			●	●	●	●	●	●	●	●	●		
3,2					●	●	●	●	●	●	●	●	●	●	●
3,5	7				●	●	●	●	●	●	●	●	●		
3,7					●	●	●	●	●	●	●	●	●	●	●
4,0	8				●	●	●	●	●	●	●	●	●		
4,2					●	●	●	●	●	●	●	●	●		
4,5					●	●	●	●	●	●	●	●	●	●	●
4,7					●	●	●	●	●	●	●	●	●	●	
5,0	10				●	●	●	●	●	●	●	●	●	●	
5,2					●	●	●	●	●	●	●	●	●	●	●
5,5					●	●	●	●	●	●	●	●	●	●	●
6,0	12	5	0,5		●	●	●	●	●	●	●	●	●	●	●
6,2					●	●	●	●	●	●	●	●	●	●	●
6,5					●	●	●	●	●	●	●	●	●	●	●
7,0					●	●	●	●	●	●	●	●	●	●	●
8,0	14				●	●	●	●	●	●	●	●	●	●	●
8,2				d_1 + 0,04	●	●	●	●	●	●	●	●	●	●	●
8,5					●	●	●	●	●	●	●	●	●	●	●
9,0					●	●	●	●	●	●	●	●	●	●	●
10,0	16				●	●	●	●	●	●	●	●	●	●	●
10,2					●	●	●	●	●	●	●	●	●	●	●
10,5					●	●	●	●	●	●	●	●	●	●	●
11,0					●	●	●	●	●	●	●	●	●	●	●
12,0	18	7	0,8		●	●	●	●	●	●	●	●	●	●	●
12,2					●	●	●	●	●	●	●	●	●	●	●
12,5					●	●	●	●	●	●	●	●	●	●	●
14,0	22				●	●	●	●	●	●	●	●	●	●	●
16,0					●	●	●	●	●	●	●	●	●	●	●
18,0	24			d_1 + 0,07	●	●	●	●	●	●	●	●	●	●	●
20,0	26	8	1,0		●	●	●	●	●	●	●	●	●	●	●
25,0	32	10		d_1 + 0,1	●	●	●	●	●	●	●	●	●	●	●
32,0	40				●	●	●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

DIN 1.2344

Durezza
Hardness
Dureté
Härte

Gambo:	65+2	HRC
Testa:	45±5	HRC
Shaft:	65+2	HRC
Head:	45±5	HRC
Corp:	65+2	HRC
Tête:	45±5	HRC
Schaft:	65+2	HRC
Kopf:	45±5	HRC

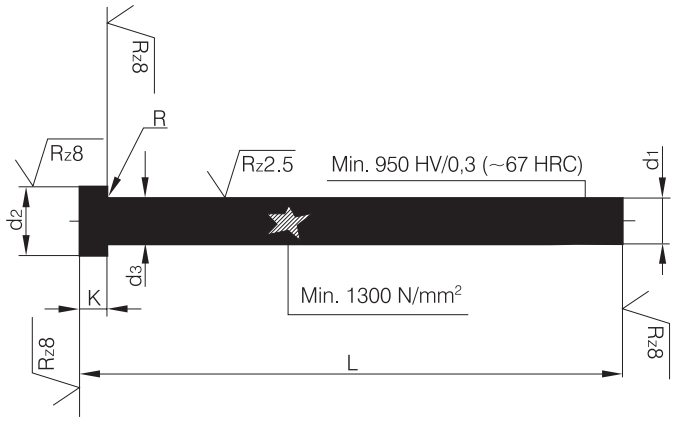
Esecuzione
Finish
Exécution
Ausführung

Nitrurati - Rettificati
Nitrided - Ground
Nitrurés - Rectifiés
Nitriert - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Espulsori con testa cilindrica nitrurati neri
Nitrided ejector pins form A black
Ejecteur nitrurés forme A noire
Auswerferstifte mit zyl. Kopf nitriert Form A Schwarz

DIN ISO 6751 A



d1 g6	d2 -0,2	K -0,05	R	d3	L / 0 +2										
					100	125	160	200	250	315	400	500	630	800	1000
1,0	2,5	1,2	0,2	d_1 + 0,03	●	●	●	●							
1,1					●	●	●	●	●	●					
1,2					●	●	●	●	●						
1,3	3	1,5			●	●	●	●	●	●					
1,4					●	●	●	●	●	●	●				
1,5					●	●	●	●	●	●	●				
1,6					●	●	●	●	●	●	●				
1,7					●	●	●	●	●	●					
1,8					●	●	●	●	●	●	●	●	●		
1,9					●	●	●	●	●	●	●	●			
2,0	4	2			●	●	●	●	●	●	●	●			
2,2					●	●	●	●	●	●	●	●	●	●	
2,5	5		0,3		●	●	●	●	●	●	●	●			
2,7					●	●	●	●	●	●	●	●	●	●	●
3,0	6	3			●	●	●	●	●	●	●	●	●		
3,2					●	●	●	●	●	●	●	●	●	●	●
3,5	7				●	●	●	●	●	●	●	●	●		
3,7					●	●	●	●	●	●	●	●	●	●	●
4,0	8				●	●	●	●	●	●	●	●	●		
4,2					●	●	●	●	●	●	●	●	●		
4,5					●	●	●	●	●	●	●	●	●	●	●
4,7					●	●	●	●	●	●	●	●	●	●	
5,0	10				●	●	●	●	●	●	●	●	●	●	
5,2					●	●	●	●	●	●	●	●	●	●	●
5,5					●	●	●	●	●	●	●	●	●	●	●
6,0	12	5	0,5		●	●	●	●	●	●	●	●	●	●	●
6,2					●	●	●	●	●	●	●	●	●	●	●
6,5					●	●	●	●	●	●	●	●	●	●	●
7,0					●	●	●	●	●	●	●	●	●	●	●
8,0	14				●	●	●	●	●	●	●	●	●	●	●
8,2				d_1 + 0,04	●	●	●	●	●	●	●	●	●	●	●
8,5					●	●	●	●	●	●	●	●	●	●	●
9,0					●	●	●	●	●	●	●	●	●	●	●
10,0	16				●	●	●	●	●	●	●	●	●	●	●
10,2					●	●	●	●	●	●	●	●	●	●	●
10,5					●	●	●	●	●	●	●	●	●	●	●
11,0					●	●	●	●	●	●	●	●	●	●	●
12,0	18	7	0,8		●	●	●	●	●	●	●	●	●	●	●
12,2					●	●	●	●	●	●	●	●	●	●	●
12,5					●	●	●	●	●	●	●	●	●	●	●
14,0	22				●	●	●	●	●	●	●	●	●	●	●
16,0					●	●	●	●	●	●	●	●	●	●	●
18,0	24			d_1 + 0,07	●	●	●	●	●	●	●	●	●	●	●
20,0	26	8	1,0		●	●	●	●	●	●	●	●	●	●	●
25,0	32	10		d_1 + 0,1	●	●	●	●	●	●	●	●	●	●	●
32,0	40				●	●	●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

DIN 1.2344

Durezza
Hardness
Dureté
Härte

Gambo:	65+2	HRC
Testa:	45±5	HRC
Shaft:	65+2	HRC
Head:	45±5	HRC
Corp:	65+2	HRC
Tête:	45±5	HRC
Schaft:	65+2	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

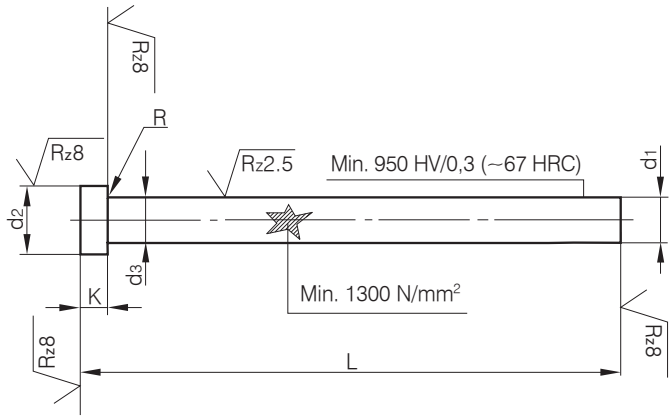
Nitrurati - Rettificati
Nitrided - Ground
Nitrurés - Rectifiés
Nitriert - Geschliffen

Testa ricalcata a caldo
The head is hot forged

A richiesta nitrurati neri

Espulsori con testa cilindrica nitrurati
Nitrided ejector pins form A
Ejecteur nitrurés forme A
Auswerferstifte mit zyl. Kopf nitriert Form A

Tipo Fiat



d1 g6	d2 -0,2	K -0,05	R	d3	L / 0 +2										
					100	125	160	200	250	315	400	500	630	800	1000
2	4	2	0,2	d1 +0,03	●	●	●	●	●	●					
2,2			0,3		●	●	●	●	●	●					
2,5	5				●	●	●	●	●	●	●				
3	6	3			●	●	●	●	●	●	●				
3,2					●	●	●	●	●	●	●				
3,5	7				●	●	●	●	●	●	●				
4	8	4			●	●	●	●	●	●	●				
5	10	5			●	●	●	●	●	●	●	●	●	●	●
6	12		0,5		●	●	●	●	●	●	●	●	●	●	●
6,5					●	●	●	●	●	●	●	●			
7					●	●	●	●	●	●	●	●	●		
8	14	6,5			●	●	●	●	●	●	●	●	●	●	●
10	17			d1 +0,04	●	●	●	●	●	●	●	●	●	●	●
12	20	7	0,8		●	●	●	●	●	●	●	●	●	●	●
14	22				●	●	●	●	●	●	●	●	●	●	●
16	24				●	●	●	●	●	●	●	●	●	●	●
18	26			d1	●	●	●	●	●	●	●	●	●	●	●
20	28		1,0	+0,07	●	●	●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

DIN 1.2344

Durezza
Hardness
Dureté
Härte

Gambo:	40/46	HRC
Testa:	45±5	HRC
Shaft:	40/46	HRC
Head:	45±5	HRC
Corp:	40/46	HRC
Tête:	45±5	HRC
Schaft:	40/46	HRC
Kopf:	45±5	HRC

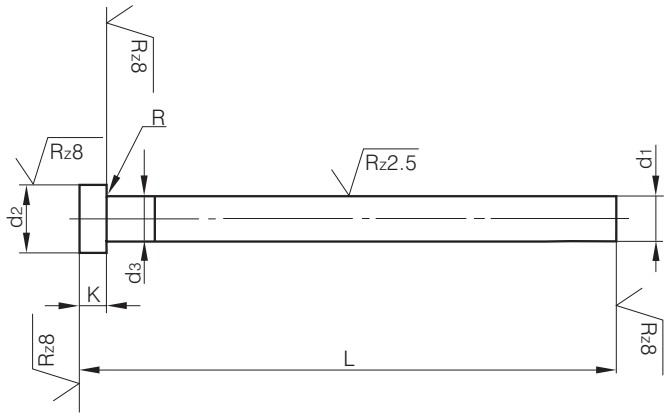
Esecuzione
Finish
Exécution
Ausführung

Rettificati
Ground
Rectifiés
Geschliffen

Testa ricalcata a caldo
The head is hot forged

Espulsori non nitrurati lavorabili
Core pins
Éjecteurs Broche
Kernstifte Unnitriert

DIN ISO 6751 A



d1 g6	d2 -0,2	K -0,05	R	d3	L / 0 +2								
					100	125	160	200	250	315	400	500	630
1,5	3	1,5	0,2		●	●	●	●					
2,0	4	2			●	●	●	●					
2,2			0,3		●	●	●	●					
2,5	5				●	●	●	●					
3,0	6	3			●	●	●	●	●				
3,2					●	●	●	●					
3,5	7				●	●	●	●	●				
3,7				d1	●	●	●	●					
4,0	8			+0,03	●	●	●	●	●	●			
4,2					●	●	●	●	●	●			
4,5					●	●	●	●	●	●			
5,0	10				●	●	●	●	●	●	●		
5,2/5,5					●	●	●	●	●	●			
6,0	12	5	0,5		●	●	●	●	●	●	●	●	●
6,2/6,5/7					●	●	●	●	●	●			
8,0	14				●	●	●	●	●	●	●	●	●
8,2/8,5/9					●	●	●	●	●	●	●		
10,0	16				●	●	●	●	●	●	●	●	●
10,2/10,5					●	●	●	●	●	●	●		
11,0					●	●	●	●	●	●	●		
12,0	18	7	0,8	d1	●	●	●	●	●	●	●	●	●
12,2				+0,04	●	●	●	●	●	●	●		
12,5					●	●	●	●	●	●	●		
14,0	22				●	●	●	●	●	●	●	●	●
16,0					●	●	●	●	●	●	●	●	●
18	24			d1	●	●	●	●	●	●	●	●	●
20	26	8	1,0	+0,07	●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

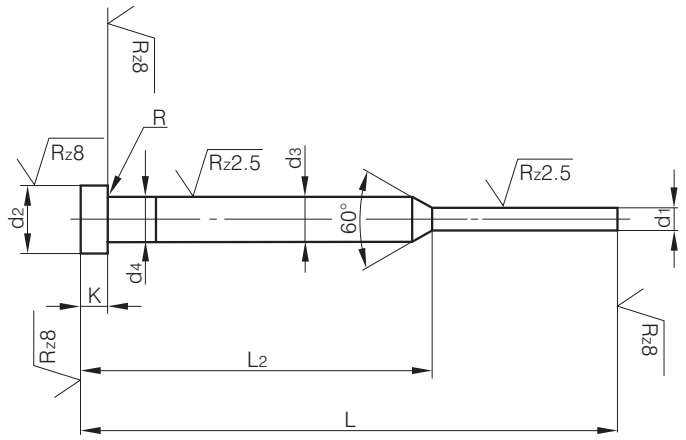
Testa ricalcata a caldo
The head is hot forged

Altre misure a richiesta
Other dimensions on request
Autres dimensions sur demande
Sonderabmessung auf Anfrage

Nitrurati a richiesta
Nitrided on request
Nitrurées sur demande
Nitriert auf Anfrage

Espulsori con testa cilindrica temprati forma C
Hardened ejector pins form C
Éjecteurs trempés form C
Auswerferstifte mit zyl. Kopf gehärtet Form C

DIN ISO 8694 CH



d1 g6	d2 0 -0,2	d3 g6	d4	k 0 -0,05	R +0,2 0	L +2 0			
						100	125	160	200
						L_2 -1 -2			
						50	50	75	75
da 0,8 a 1,4	4	2		2	0,2	●	●	●	●
da 1,5 a 2,4	6	3	d_1 + 0,03	3	0,3	●	●	●	●
da 2,5 a 2,9	6	3		3	0,3	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.2343

Durezza
Hardness
Dureté
Härte

Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

Nitrurati - Rettificati
Nitrided - Ground
Nitrurés - Rectifiés
Nitriert - Geschliffen

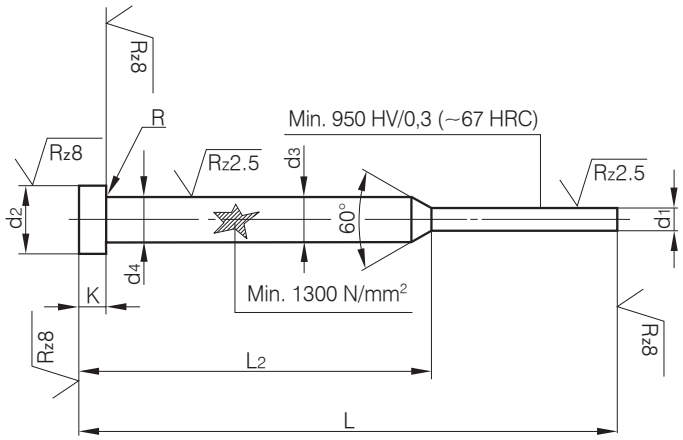
Testa ricalcata a caldo
The head is hot forged

Altre misure a richiesta
Other dimensions on request
Autres dimensions sur demande
Sonderabmessung auf Anfrage

Nitrurati a richiesta
Nitrided on request
Nitrurées sur demande
Nitriert auf Anfrage

Espulsori con testa cilindrica nitrurati forma C
Nitrided ejector pins form C
Éjecteurs nitrurés form C
Auswerferstifte mit zyl. Kopf nitriert Form C

DIN ISO 8694 C



d1 g6	d2 0 -0,2	d3 g6	d4	k 0 -0,05	R +0,2 0	L +2 0			
						100	125	160	200
						L_2 -1 -2			
						50	50	75	75
da 0,8 a 1,4	4	2	d_1 + 0,03	2	0,2	●	●	●	●
da 1,5 a 2,4	6	3		3	0,3	●	●	●	●
da 2,5 a 2,9	6	3		3	0,3	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.2343

Durezza
Hardness
Dureté
Härte

Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

Temprati - Nitrurati
Hardened - Nitrided
Trempés - Nitrurés
Gehärtet - Nitriert

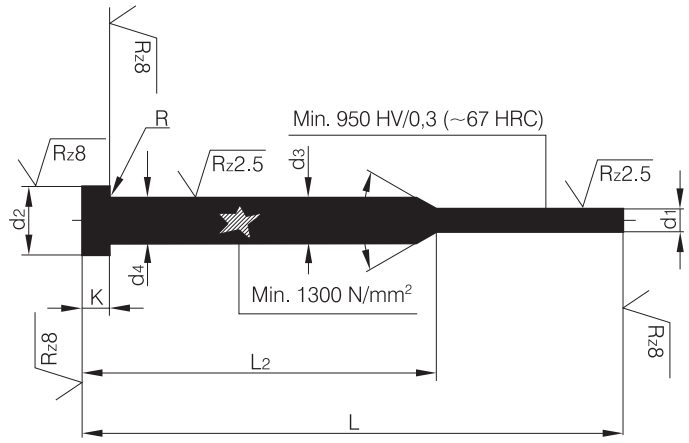
Testa ricalcata a caldo
The head is hot forged

Altre misure a richiesta
Other dimensions on request
Autres dimensions sur demande
Sonderabmessung auf Anfrage

Nitrurati a richiesta
Nitrided on request
Nitrurées sur demande
Nitriert auf Anfrage

Espulsori con testa cilindrica nitrurati neri forma C
Black nitrided ejector pins form C
Éjecteurs nitrurés noirs form C
Auswerferstifte mit zyl. Kopf nitriert schwarz Form C

DIN ISO 8694 C



d1 g6	d2 0 -0,2	d3 g6	d4	k 0 -0,05	R +0,2 0	L +2 0			
						100	125	160	200
						L_2 -1 -2			
						50	50	75	75
da 0,8 a 1,4	4	2	d_1 + 0,03	2	0,2	●	●	●	●
da 1,5 a 2,4	6	3		3	0,3	●	●	●	●
da 2,5 a 2,9	6	3		3	0,3	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

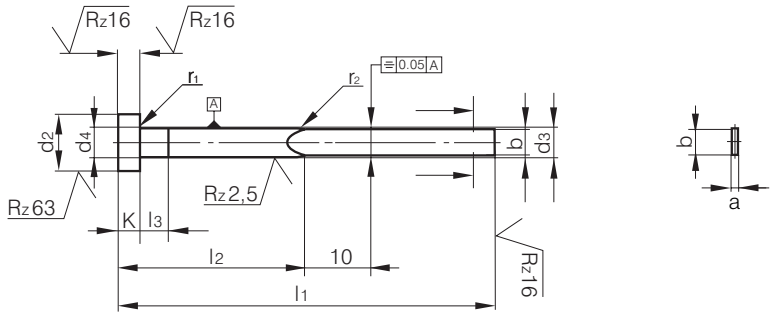
Testa ricalcata a caldo
The head is hot forged

Altre misure a richiesta
Other dimensions on request
Autres dimensions sur demande
Sonderabmessung auf Anfrage

Nitrurati a richiesta
Nitrided on request
Nitrurées sur demande
Nitriert auf Anfrage

Espulsori con testa cilindrica temprati a lamella
Blade ejectors hardened
Ejecteurs à lame trempés
Flachauswerferstifte gehärtet

DIN ISO 8693 FH



a 0 -0,015	b 0 -0,015	d_3 0 -0,1	d_2 0 -0,2	d_4	k 0 -0,05	r_1 +0,2 0	r_2 min	l_1 + 2 / 0									l_3
								63	80	100	125	160	200	250	315	400	
								l_2 - 1 / 2									
								32	40	50	60	80	100	125	160	200	
1,0	3,5	4	8	d_3 +0,03	3	0,3	10	●	●	●	●						5
0,8	3,8	4,2	8					●	●	●	●						
1,0								●	●	●	●	●					
1,2									●	●	●	●					
1,0	4,5	5	10						●	●	●	●					
1,2									●	●	●	●					
1,5									●	●	●	●	●				
1,0	5,5	6	12		5	0,5			●	●	●	●	●				6
1,2									●	●	●	●	●				
1,5										●	●	●	●				
2,0										●	●	●	●				
1,2	7,5	8	14							●	●	●	●				8
1,5											●	●	●	●			
2,0												●	●	●	●		
1,5	9,5	10	16	d_3 +0,04								●	●	●	●		10
2,0													●	●	●	●	
2,0	11,5	12	18		7	0,8							●	●	●	●	12
2,5													●	●	●	●	

Acciaio
Steel
Acier
Werkstoff

1.2343

Durezza
Hardness
Dureté
Härte

Testa:	45±5	HRC
Head:	45±5	HRC
Tête:	45±5	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

Nitrurati - Rettificati
Nitrided - Ground
Nitrurés - Rectifiés
Nitriert - Geschliffen

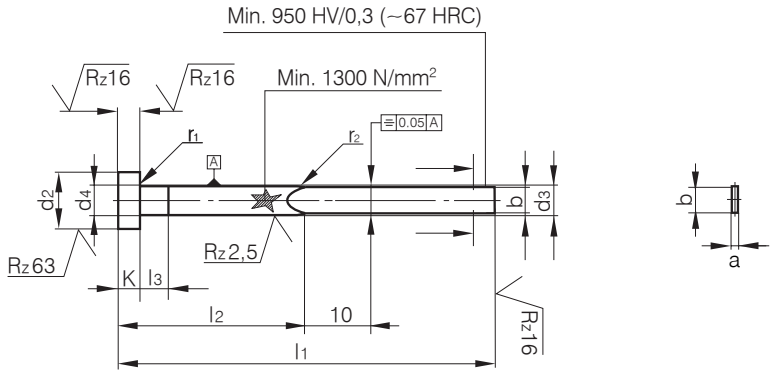
Testa ricalcata a caldo
The head is hot forged

Altre misure a richiesta
Other dimensions on request
Autres dimensions sur demande
Sonderabmessung auf Anfrage

Nitrurati a richiesta
Nitrided on request
Nitrurées sur demande
Nitriert auf Anfrage

Espulsori con testa cilindrica nitrurati a lamella
Blade ejectors nitrided
Ejecteurs à lame nitrurés
Flachauswerferstifte nitriert

DIN ISO 8693 F



a 0 -0,015	b 0 -0,015	d_3 0 -0,1	d_2 0 -0,2	d_4	k 0 -0,05	r_1 +0,2 0	r_2 min	l_1 + 2 / 0									l_3
								63	80	100	125	160	200	250	315	400	
								l_2 - 1 / 2									
								32	40	50	60	80	100	125	160	200	
1,0	3,5	4	8	d_3 +0,03	3	0,3	10	●	●	●	●						5
0,8	3,8	4,2	8					●	●	●	●						
1,0								●	●	●	●	●					
1,2									●	●	●	●					
1,0	4,5	5	10						●	●	●	●					
1,2									●	●	●	●					
1,5									●	●	●	●	●				
1,0	5,5	6	12		5	0,5			●	●	●	●	●				6
1,2									●	●	●	●	●				
1,5										●	●	●	●				
2,0										●	●	●	●				
1,2	7,5	8	14							●	●	●	●				8
1,5											●	●	●	●			
2,0												●	●	●	●		
1,5	9,5	10	16	d_3 +0,04								●	●	●	●		10
2,0													●	●	●	●	
2,0	11,5	12	18		7	0,8							●	●	●	●	12
2,5													●	●	●	●	

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

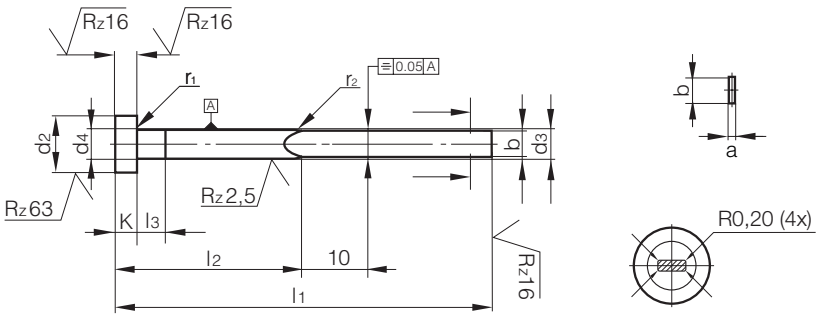
Testa ricalcata a caldo
The head is hot forged

Altre misure a richiesta
Other dimensions on request
Autres dimensions sur demande
Sonderabmessung auf Anfrage

Nitrurati a richiesta
Nitrided on request
Nitrurées sur demande
Nitriert auf Anfrage

Espulsori con testa cilindrica temprati a lamella con 4 raggi d'angolo 0,2 mm
Blade ejectors hardened with 4 corner radiuses 0,2 mm
Ejecteurs à lame trempés avec 4 radions angulaires 0,2 mm
Flachauswerferstifte gehärtet mit 4 eckenradien 0,2 mm

DIN ISO 8693 FH



a 0 -0,015	b 0 -0,015	d3 0 -0,1	d2 0 -0,2	d4	K 0 -0,05	r1 +0,2 0	r2 min	l1 + 2 / 0 63	80	100	125	160	200	250	315	l2 - 1 / 2 32	40	50	60	80	100	125	160	l3
1,0	3,5	4	8	d3 +0,03	3	0,3	10	●	●	●						●	●	●						5
0,8	3,8	4,2	8					●	●	●						●	●	●	●					
1,0								●	●	●	●					●	●	●	●					
1,2								●	●	●	●					●	●	●	●					
1,0	4,5	5	10					●	●	●	●					●	●	●	●					
1,2								●	●	●	●	●				●	●	●	●	●				
1,5					5	0,5		●	●	●	●	●				●	●	●	●	●				6
1,0	5,5	6	12					●	●	●	●	●				●	●	●	●	●				
1,2									●	●	●	●					●	●	●	●				
1,5									●	●	●	●					●	●	●	●				
2,0									●	●	●	●					●	●	●	●				
1,2	7,5	8	14							●	●	●	●					●	●	●	●			
1,5											●	●	●	●					●	●	●	●		8
2,0												●	●	●	●				●	●	●	●		
1,5	9,5	10	16	d3 +0,04								●	●	●	●				●	●	●	●		10
2,0												●	●	●	●				●	●	●	●		

Acciaio
Steel
Acier
Werkstoff

WS

Durezza
Hardness
Dureté
Härte

Gambo:	58/60	HRC
Testa:	45±5	HRC
Shaft:	58/60	HRC
Head:	45±5	HRC
Corp:	58/60	HRC
Tête:	45±5	HRC
Schaft:	58/60	HRC
Kopf:	45±5	HRC

Esecuzione
Finish
Exécution
Ausführung

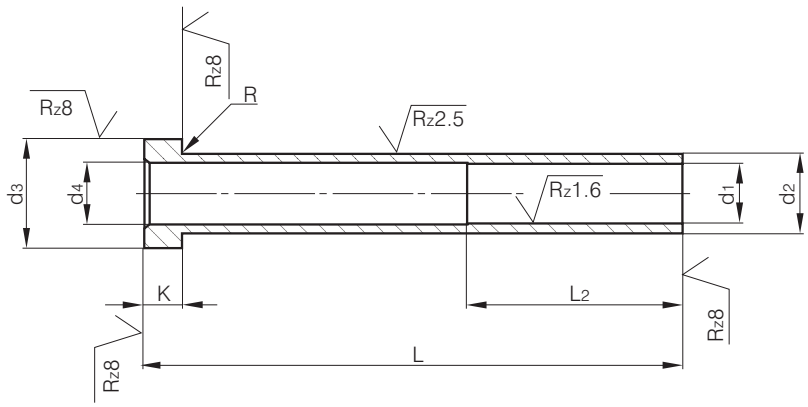
Temprati - Rettificati
Hardened - Ground
Trempés - Rectifiés
Gehärtet - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Altre dimensioni a richiesta
Other measures on request
Autres dimensions sur demande

Bussole di espulsione temprate
Ejector Sleeves hardened
Éjecteurs tubulaires trempés
Auswerferhülsen gehärtet

DIN ISO 8405



d1 H5	d2 g6	d4	d3 0 -0,2	k 0 -0,05	R +0,2 0	l2 +2 0	L -1							
							75	100	125	150	175	200	225	250
1,5	3	2	6	3	0,3	35	●	●	●	●				
1,6							●	●	●	●				
2	4	2,4	8				●	●	●	●	●	●	●	●
2,2		2,6					●	●	●	●	●	●	●	●
2,5	5	2,9	10				●	●	●	●	●	●	●	●
2,7		3					●	●	●	●	●	●	●	●
3		3,4				45	●	●	●	●	●	●	●	●
3,2		3,6					●	●	●	●	●	●	●	●
3,5	6	3,9	12	5	0,5		●	●	●	●	●	●	●	●
3,7		4					●	●	●	●	●	●	●	●
4		4,4					●	●	●	●	●	●	●	●
4,2	8	4,6	14				●	●	●	●	●	●	●	●
5		5,4					●	●	●	●	●	●	●	●
5,2		5,6					●	●	●	●	●	●	●	●
6	10	6,4	16				●	●	●	●	●	●	●	●
6,2		6,6					●	●	●	●	●	●	●	●
8	12	8,4	20	7	0,7		●	●	●	●	●	●	●	●
8,2		8,6					●	●	●	●	●	●	●	●
10	14	10,4	22				●	●	●	●	●	●	●	●
10,5		11					●	●	●	●	●	●	●	●
12	16	12,4					●	●	●	●	●	●	●	●
12,5		13					●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.2343

Durezza
Hardness
Dureté
Härte

Testa:	50±5	HRC
Head:	50±5	HRC
Tête:	50±5	HRC
Kopf:	50±5	HRC

Esecuzione
Finish
Exécution
Ausführung

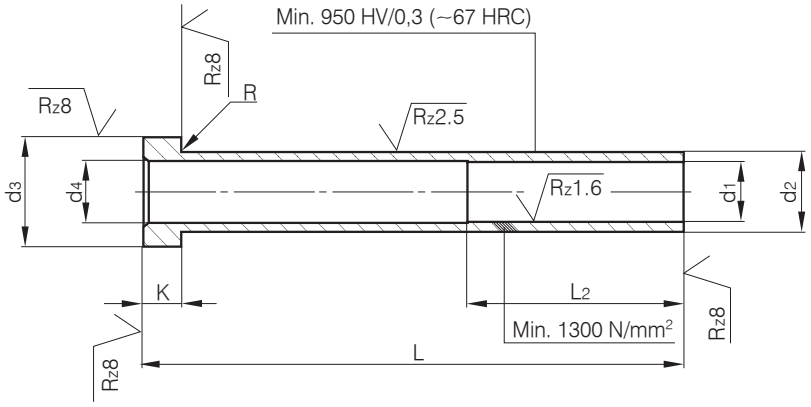
Nitrurati - Rettificati
Nitrided - Ground
Nitrurés - Rectifiés
Nitriert - Geschliffen

Testa ricalcata a caldo
The head is hot forged

Altre dimensioni a richiesta
Other measures on request
Autres dimensions sur demande

Bussole di espulsione nitrurate
Ejector Sleeves nitrided
Éjecteurs tubulaires nitrurés
Auswerferhülsen nitriert

DIN ISO 8405



d1 H5	d2 g6	d4	d3 0 -0,2	k 0 -0,05	R +0,2 0	l2 +2 0	L -0 +1							
							75	100	125	150	175	200	225	250
1,5	3	2	6	3	0,3	35	●	●	●	●				
1,6							●	●	●	●				
2	4	2,4	8				●	●	●	●	●	●	●	●
2,2		2,6					●	●	●	●	●	●	●	●
2,5	5	2,9	10				●	●	●	●	●	●	●	●
2,7		3					●	●	●	●	●	●	●	●
3		3,4				45	●	●	●	●	●	●	●	●
3,2		3,6					●	●	●	●	●	●	●	●
3,5	6	3,9	12	5	0,5		●	●	●	●	●	●	●	●
3,7		4					●	●	●	●	●	●	●	●
4		4,4					●	●	●	●	●	●	●	●
4,2	8	4,6	14				●	●	●	●	●	●	●	●
5		5,4					●	●	●	●	●	●	●	●
5,2		5,6					●	●	●	●	●	●	●	●
6	10	6,4	16				●	●	●	●	●	●	●	●
6,2		6,6					●	●	●	●	●	●	●	●
8	12	8,4	20	7	0,7		●	●	●	●	●	●	●	●
8,2		8,6					●	●	●	●	●	●	●	●
10	14	10,4	22				●	●	●	●	●	●	●	●
12	16	12,4					●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

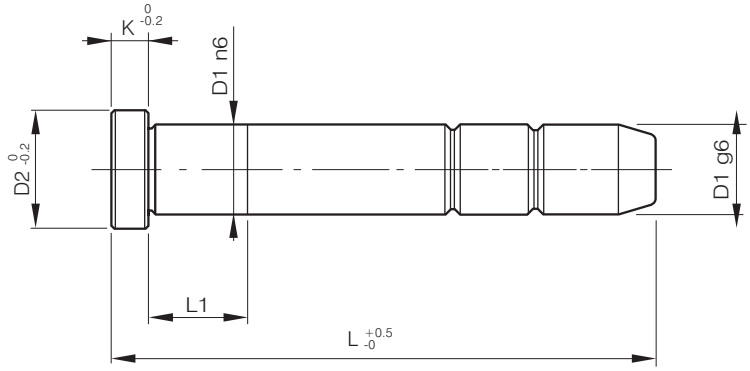
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Colonne per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Abstreiferführungssäulen

Tipo 32P



D1	D2	K	L=	50	60	70	80	90	100	110	120	130	140	150	160	180	200	220	240	260	280	300	350	400	450	500	600	800
			L1=	8	8	8	15	15	20	20	20	20	20	20	20	25	25	25	30	30	30	45	55	55	65	65	75	75
12	16	5		●	●	●	●	●	●		●		●		●													
14	18	5		●	●	●	●	●	●	●	●	●	●	●	●	●												
16	20	5		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
18	22	5		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
20	24	6			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
25	30	7					●	●	●		●		●		●	●	●	●	●	●	●	●	●	●				
32	37	7									●		●		●	●	●	●	●	●	●	●	●	●	●			
40	45	8									●		●		●	●	●	●	●	●	●	●	●	●	●	●		
50	55	10																	●	●	●	●	●	●	●	●	●	
60	68	12																					●	●	●	●	●	●

Altre dimensioni a richiesta
Other measures on request
Autres dimensions sur demande

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

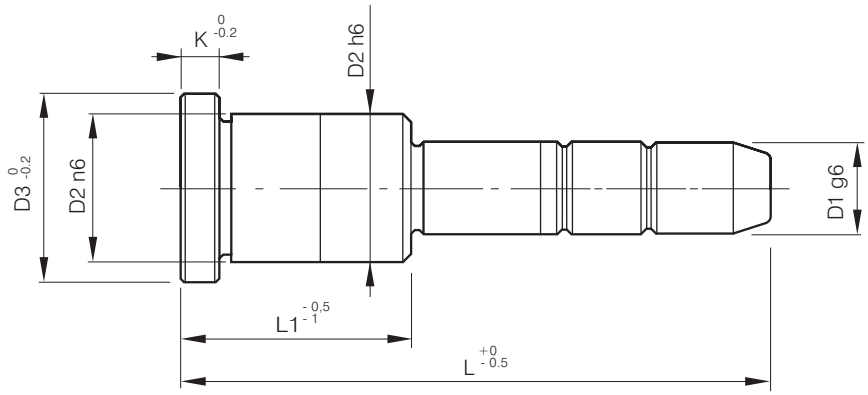
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Colonne per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

Tipo 33 PT



D1	D2	D3	K	L1	50	60	70	80	90	100	120	140	160	180	200	220	240	260	280	300	340
12	18	22	5	22	●	●	●	●	●	●											
				26	●	●	●	●	●	●											
				36	●	●	●	●	●	●	●										
				46			●	●	●	●	●										
				56					●	●	●										
14	20	24	5	22	●	●	●	●	●	●											
				26		●	●	●	●	●	●										
				36			●	●	●	●	●										
				46			●	●	●	●	●										
				56					●	●	●										
16	22	26	5	22	●	●	●	●	●	●	●										
				26	●	●	●	●	●	●	●	●									
				36		●	●	●	●	●	●	●									
				46			●	●	●	●	●	●	●								
				56				●	●	●	●	●	●	●	●						
				66						●	●	●	●	●	●						
				76						●	●	●	●	●	●						
				96								●	●	●	●						
18	26	30	5	26		●	●	●	●	●											
				36		●	●	●	●	●	●	●									
				46			●	●	●	●	●	●	●								
				56				●	●	●	●	●	●	●							
				66						●	●	●	●	●							
				76							●	●	●	●							
20	28 30	32 34	6	26		●	●	●	●	●	●	●									
				36		●	●	●	●	●	●	●	●								
				46			●	●	●	●	●	●	●								
				56				●	●	●	●	●	●	●	●						
				66						●	●	●	●	●	●						
				76							●	●	●	●	●						
				86								●	●	●	●						
				96								●	●	●	●						

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

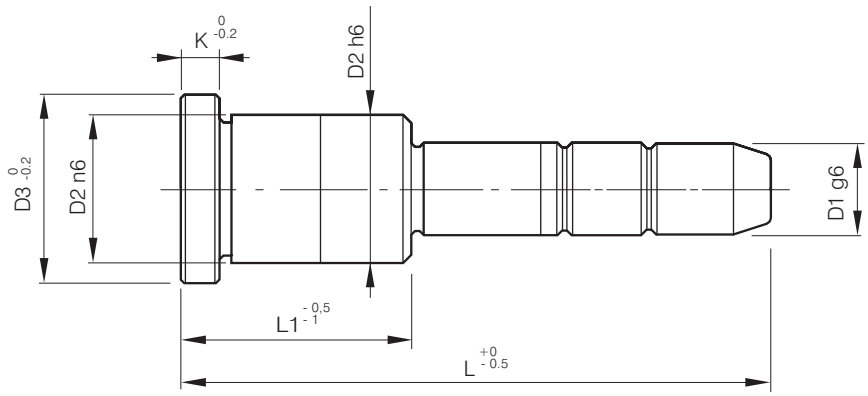
Cementate - temprate - rinvenute - rettificate

Case hardened - hardened throughout - annealed and ground

Trempés - cementés - revenues et rectifiées

Colonne per stampi plastica
Guide pillars for plastic moulds
Colonne de guidage moulds
Führungssäulen

Tipo 33 PT



D1	D2	D23	K	L1	60	70	80	90	100	120	140	160	180	200	220	240	260	280	300	340	400
25	34 36	38 40	7	26			●	●	●												
				36			●	●	●	●	●	●	●								
				46			●	●	●	●	●	●	●	●							
				56					●	●	●	●	●	●							
				66						●	●	●	●	●	●						
				76						●	●	●	●	●	●	●					
				86							●	●	●	●	●	●	●	●			
				96							●	●	●	●	●	●	●	●			
				116									●	●	●	●	●	●			
32	40	45	7	36					●	●											
				46					●	●	●	●									
				56						●	●	●	●	●	●	●					
				66							●	●	●	●	●	●	●	●			
				76							●	●	●	●	●	●	●	●			
				86								●	●	●	●	●	●	●			
				96								●	●	●	●	●	●	●	●	●	
				106									●	●	●	●	●	●	●	●	
				116									●	●	●	●	●	●	●	●	●
				126									●	●	●	●	●	●	●	●	●
				146										●	●	●	●	●	●	●	●
40	48	52	8	46						●	●	●	●	●							
				56						●	●	●	●	●	●						
				66								●	●	●	●	●					
				76								●	●	●	●	●	●				
				86								●	●	●	●	●	●	●			
				96								●	●	●	●	●	●	●	●	●	
				106									●	●	●	●	●	●	●	●	
				116									●	●	●	●	●	●	●	●	●
				126									●	●	●	●	●	●	●	●	●
				146												●	●	●	●	●	●
50	60	65	10	96									●	●	●	●	●	●	●	●	
				126											●	●	●	●	●	●	●
				146												●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

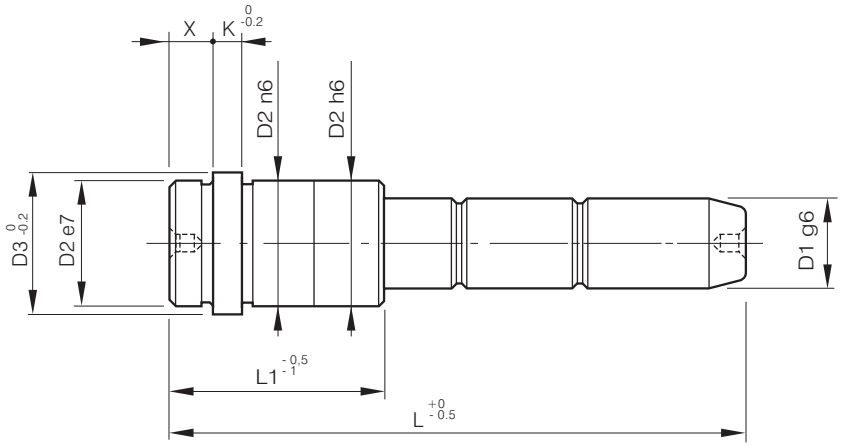
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Colonne per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen mit Bund

Tipo PTR



D1	D2	D3	K	X	L1	L = lunghezza totale							
						80	90	110	130	150	170	190	210
16	22	26	5	10	36	●	●	●	●				
					46		●	●	●	●			
					56			●	●	●	●		
					66			●	●	●	●		
					76				●	●	●	●	
					86					●	●	●	
20	28 30*	32 34*	6	10	46	●	●	●	●	●			
					56		●	●	●	●	●		
					66			●	●	●	●		
					76				●	●	●		
					86					●	●	●	
					106					●	●	●	●
25	34 36*	38 40*	7	10	46		●	●	●	●			
					56		●	●	●	●	●		
					66			●	●	●	●		
					76				●	●	●	●	
					86					●	●	●	
					106					●	●	●	●
32	40	45	7	10	46			●	●	●			
					56			●	●	●	●		
					66			●	●	●	●	●	
					76				●	●	●	●	
					86					●	●	●	
					106						●	●	●
40	48	52	8	10	56				●	●			
					66				●	●	●		
					76					●	●	●	●
					86					●	●	●	●
					106						●	●	●

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

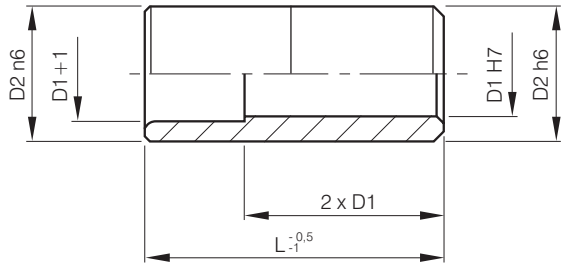
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussole di guida per stampi plastica
Guide bushes
Bagues de guidages lisses
Führungsbuchsen

Tipo PA / A RICHIESTA ANCHE BRONZO INTEGRALE



D1	D2	L= LUNGHEZZA mm.																
		22	26	36	46	56	66	76	86	96	106	116	126	136	146	156	176	196
12	18	●	●	●	●	●												
14	20	●	●	●	●	●	●											
16	22	●	●	●	●	●	●	●	●	●								
18	26	●	●	●	●	●	●	●	●	●								
20	28/30*		●	●	●	●	●	●	●	●								
25	34/36*		●	●	●	●	●	●	●	●	●	●						
32	40		●	●	●	●	●	●	●	●	●	●						
40	48				●	●	●	●	●	●	●	●						

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

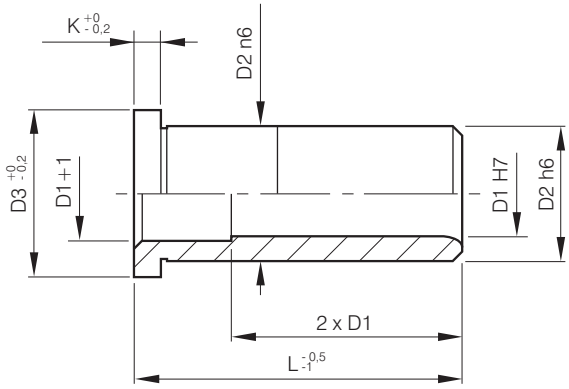
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussole con collare per stampi plastica
Headed guide bushes
Bagues à collarette
Führungsbuchsen mit Bund

Tipo PB / A RICHIESTA ANCHE BRONZO INTEGRALE



D1	D2	D3	K	L															
				22	26	36	46	56	66	76	86	96	106	116	126	136	146	156	176	196
12	18	22	5	●	●	●	●	●												
14	20	24	5	●	●	●	●	●	●											
16	22	26	5	●	●	●	●	●	●	●	●	●								
18	26	30	5	●	●	●	●	●	●	●	●	●								
20	30*/28	34*/32	6	●	●	●	●	●	●	●	●	●	●	●	●					
25	36*/34	40*/38	7		●	●	●	●	●	●	●	●	●	●	●					
32	40	45	7		●	●	●	●	●	●	●	●	●	●	●	●	●			
40	48	52	8			●	●	●	●	●	●	●	●	●	●	●	●			
50	60	65	10							●	●	●	●	●	●	●	●	●		
60	74	84	12									●	●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

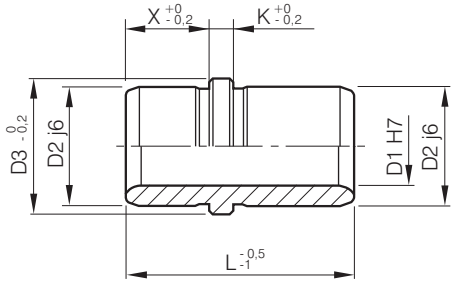
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussole spallate
Shouldered bushes
Bagues de guidage epaulées
Führungsbuchsen mit Bund und Ansatz

Tipo PR / A RICHIESTA ANCHE BRONZO INTEGRALE



D1	D2	D3	X	K	L	
12	18	22	16	5	32	40
14	20	24	16	5	32	40
16	22	26	16	5	32	40
18	26	30	16	5	32	40
20	28/30*	32/34*	16	6	32	40
25	34/36*	38/40*	16	7	32	40
32	40	45	25	7	50	65
40	48	52	32	8	65	80
50	60	65	32	10	70	90

Acciaio
Steel
Acier
Werkstoff

1.7131

Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

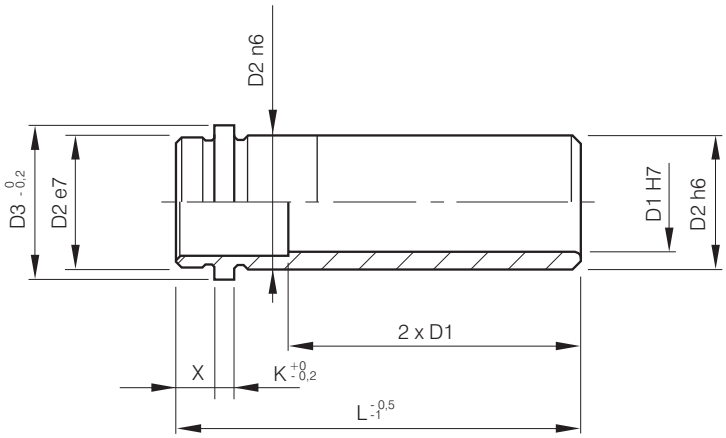
Cementate - temprate - rettificate

Case hardened - hardened throughout - annealed and ground

Cementés - trempés - revenues et rectifiées

Bussole di guida
Headed guide bushes
Bagues à collarette
Führungsbuchsen mit Bund

Tipo PBR



D1	D2	D3	K	X	L = lunghezza totale									
					26	36	46	56	66	76	86	96	106	124
16	22	26	5	10	●	●	●	●	●	●	●	●	●	
20	28/30*	32/34*	6	10	●	●	●	●	●	●	●	●	●	
25	34/36*	38/40*	7	10		●	●	●	●	●	●	●	●	
32	40	45	7	10		●	●	●	●	●	●	●	●	
40	48	52	8	10			●	●	●	●	●	●	●	●

Acciaio
Steel
Acier
Werkstoff

38 NCD4

Durezza
Hardness
Dureté
Härte

50-55 HRC

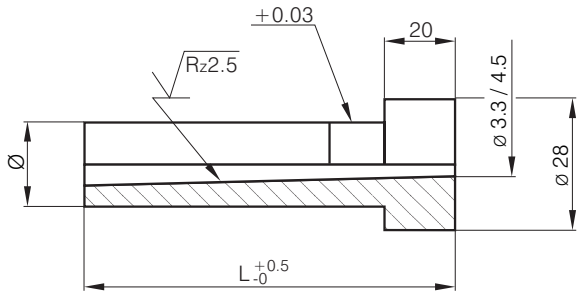
Esecuzione
Finish
Exécution
Ausführung

Temprate - non temprate -rettificate
Hardened - not hardened - ground
Trempés - pas trempés - Rectifiées
Gehärtet - nicht gehärtet - Geschliffen

Foro conico 1° 50'

A richiesta misure fuori catalogo

Bussole per iniezione plastica
Sprue bushings
Buses d'injection
Angussbuchsen



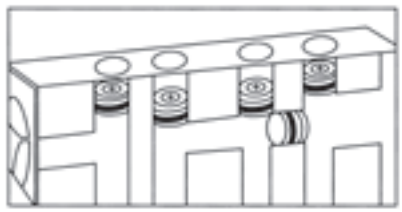
ø	L	non temprate	temprate
ø mm. 14/18	50	●	●
ø mm. 14/18	65	●	●
ø mm. 14/18	75	●	●
ø mm. 14/18	85	●	●
ø mm. 14/18	95	●	●
ø mm. 14/18	105	●	●
ø mm. 14/18	115	●	●
ø mm. 14/18	125	●	●
ø mm. 14/18	135	●	●
ø mm. 14/18	150	●	●

Acciaio
Steel
Acier
Werkstoff

Ottone
Brass or viton

Tappi per circuiti di raffreddamento
Plugs with O-ring seal
Bouchon avec anneau torique
Verschluss stopfen





D	L	
6	10	●
8	10	●
10	11	●
12	12	●

Acciaio
Steel
Acier
Werkstoff

16 NCR 4

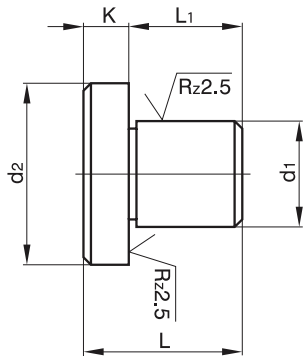
Durezza
Hardness
Dureté
Härte

60-62 HRC

Esecuzione
Finish
Exécution
Ausführung

Temprati - non temprati -rettificati
Hardened - not hardened - ground
Trempés - pas trempés - Rectifiés
Gehärtet - nicht gehärtet - Geschliffen

Piedini appoggio tavolino
Stop pins
Butées de course d'ejection
Anschlage



d1	d2	K	L	L1
8	16	5	17	12
14	24	6	21	15

Acciaio
Steel
Acier
Werkstoff

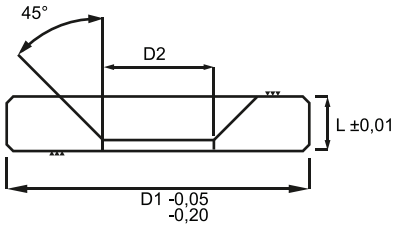
16 Cr Ni 4

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Cementazione + Tempra
Cementing + Hardening

Piedini e rondelle appoggio tavolino
Stop pins and table bank
Goupilles d'arrêt et banque de table
Stop Pins und Tischbank



D1	D2	L
18	4,3	3
20	5,3	5
26	4,3	4
28	4,3	3

Acciaio
Steel
Acier
Werkstoff

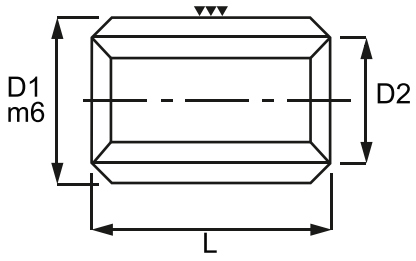
16 Cr Ni 4

Durezza
Hardness
Dureté
Härte

Esecuzione
Finish
Exécution
Ausführung

Cementazione + Tempra
Cementing + Hardening

Bussole filettate per centraggio piastre
Threaded bush for entering of plates
Douille filetée pour aenterig de plaques
Gewindebuchse zum Eindringen von Platten



D1	D2	L
12	8 MA	16
14	10 MA	16
18	12 MA	16
18	14 MA	16
20	16 MA	16
22	18 MA	16

Acciaio
Steel
Acier
Werkstoff

38 NCD4

Durezza
Hardness
Dureté
Härte

50-55 HRC

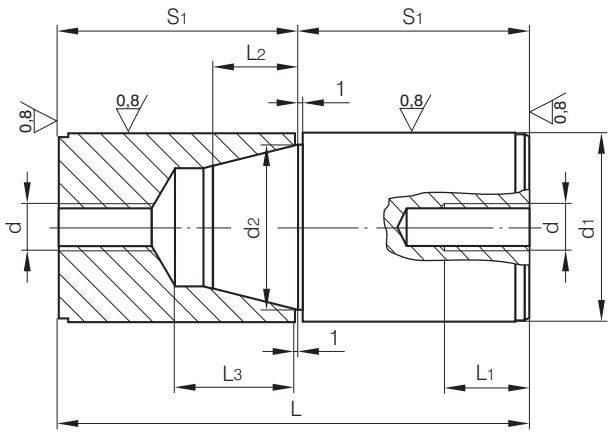
Esecuzione
Finish
Exécution
Ausführung

Temprate - non temprate -rettificate
Hardened - not hardened - ground
Trempés - pas trempés - Rectifiées
Gehärtet - nicht gehärtet - Geschliffen

Foro conico 1° 50'

Centraggi conici
Locating elements
Plots de centrage
Zentriereinheiten

● Normalizzazione Europea - Euro Norm



d	d-1	d-2	L-1	L-2	L-3	S1	L
● M5	14	9	12	6	8	16	34
M5	16	10	12	6	8	24	50
● M5	16	9	12	6	8	16	34
● M8	20	14	15	10	13	26	54
M8	20	15	15	9	13	31	64
● M8	25	18.5	15	10	13	26	54
● M8	26	18.5	15	10	13	26	54
M8	25	20	15	10	13	31	64
● M10	30	23.5	18	14	20	35	72
M10	32	25	18	14	20	39	80
● M10	32	23.5	18	14	20	35	72
● M10	40	31.5	18	17	25	45	92
M10	40	35	18	18	25	48	100
● M10	42	33.5	18	17	25	45	92

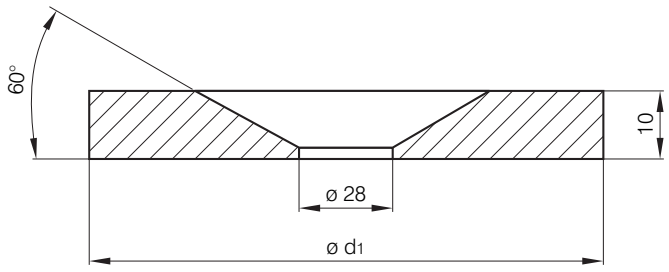
Acciaio
Steel
Acier
Werkstoff

C40

Esecuzione
Finish
Exécution
Ausführung

Tornito - Turned
Decolté - Gedreht

Anelli di centraggio
Locating rings
Bagues de centrage
Zentrierscheiben



d1	60	70	80	90	100	125	150	175

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR01 Ø9/12/45

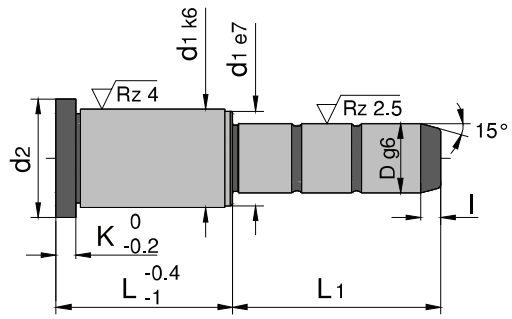
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR01 Ø10/12/45

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR01



K	d1	d2	l	D	L	L1
3	14	16	4	**9/10**	**12**	**45**
3	14	16	4	**9/10**	**17**	**20**
						30
						35
3	14	16	4	**9/10**	**22**	**25**
						35
						55
3	14	16	4	**9/10**	**27**	**25**
						30
						35
						45
						50
3	14	16	4	**9/10**	**36**	**25**
						35
						45
3	14	16	4	**9/10**	**46**	**30**
						45
						55
						75
6	20	25	5	**14/15**	**17**	**35**
						55
						75
						95
6	20	25	5	**14/15**	**22**	**20**
						35
						40
						45
						50
						55
						65
						70
						90
						110

K	d1	d2	l	D	L	L1
6	20	25	5	**14/15**	**27**	**20**
						35
						40
						45
						55
						65
						85
						105
6	20	25	5	**14/15**	**36**	**20**
						35
						40
						45
						55
						65
						75
						95
6	20	25	5	**14/15**	**46**	**20**
						35
						45
						65
						85
						105
6	20	25	5	**14/15**	**56**	**20**
						35
						55
						75
						95
6	20	25	5	**14/15**	**66**	**55**
						65
						95
6	20	25	5	**14/15**	**76**	**55**
						95
6	20	25	5	**14/15**	**86**	**55**
						95
6	20	25	5	**14/15**	**96**	**55**
						95

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR01 Ø18/22/20

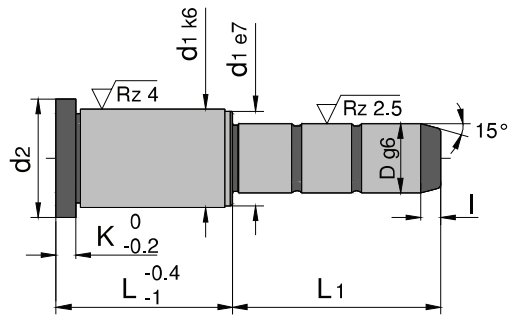
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR01 Ø18/22/20

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR01



K	d1	d2	l	D	L	L1
6	26	31	7	18/20	22	20
						35
						40
						45
						50
						55
						60
						65
						70
						80
						85
						115
6	26	31	7	18/20	27	20
						35
						40
						45
						50
						55
						60
						65
						70
						80
						85
						105
						125
6	26	31	7	18/20	36	20
						35
						40
						45
						50
						55
						60
						65
						70
						75
						80
						95
						115
						135

K	d1	d2	l	D	L	L1
6	26	31	7	18/20	46	20
						45
						65
						85
						105
						135
						165
6	26	31	7	18/20	56	20
						35
						55
						75
						95
6	26	31	7	18/20	66	55
						75
						95
6	26	31	7	18/20	76	55
						75
						95
6	26	31	7	18/20	86	55
						75
						95
6	26	31	7	18/20	96	55
						95
6	26	31	7	18/20	116	115
6	30	35	7	22/24	27	25
						45
						50
						60
						65
						70
						80
						85
						105
						125
						165

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR01 Ø22/36/25

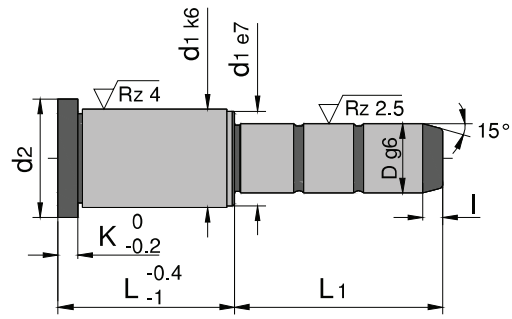
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR01 Ø24/36/25

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR01



K	d1	d2	l	D	L	L1
6	30	35	7	**22/24**	**36**	**25**
						45
						50
						55
						60
						70
						75
						80
						95
						115
						135
						165
6	30	35	7	**22/24**	**46**	**25**
						45
						50
						60
						65
						70
						80
						85
						105
						125
						165
6	30	35	7	**22/24**	**56**	**25**
						45
						55
						75
						95
						115
						165
6	30	35	7	**22/24**	**66**	**55**
						75
						95
						95
						115
						135

K	d1	d2	l	D	L	L1
6	30	35	7	**22/24**	**76**	**25**
						45
						55
						75
						95
						115
6	30	35	7	**22/24**	**86**	**55**
						75
						95
6	30	35	7	**22/24**	**96**	**55**
						75
						95
6	30	35	7	**22/24**	**116**	**75**
						115
						155
6	30	35	7	**22/24**	**136**	**135**
6	42	47	7	**30/32**	**27**	**45**
						65
						105
						165
6	42	47	7	**30/32**	**36**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**46**	**45**
						65
						85
						105
						125
						165

Acciaio
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1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR01 Ø30/56/55

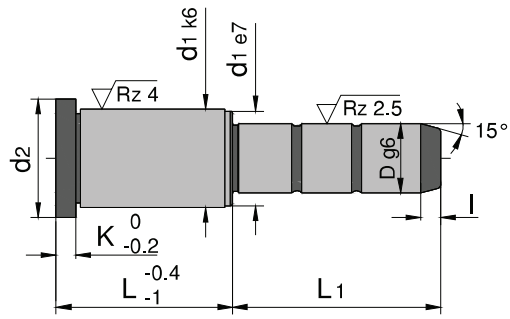
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR01 Ø32/56/55

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR01



K	d1	d2	l	D	L	L1
6	42	47	7	**30/32**	**56**	**55**
						75
						95
						115
						135
						175
6	42	47	7	**30/32**	**66**	**55**
						75
						95
						115
						135
						175
6	42	47	7	**30/32**	**76**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**86**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**96**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**116**	**75**
						115
						155
6	42	47	7	**30/32**	**136**	**95**
						115
						155
6	42	47	7	**30/32**	**156**	**115**
						155

K	d1	d2	l	D	L	L1
6	42	47	7	**30/32**	**176**	**135**
						175
6	42	47	7	**30/32**	**196**	**155**
						195
10	54	59	10	**40/42**	**56**	**75**
						115
						155
						195
10	54	59	10	**40/42**	**66**	**75**
						135
10	54	59	10	**40/42**	**76**	**75**
						115
						175
10	54	59	10	**40/42**	**86**	**75**
						135
10	54	59	10	**40/42**	**96**	**75**
						115
						155
10	54	59	10	**40/42**	**116**	**95**
						135
						195
10	54	59	10	**40/42**	**136**	**95**
						135
						215
10	54	59	10	**40/42**	**156**	**115**
						155
						215
10	54	59	10	**40/42**	**176**	**135**
						155
						175

Acciaio
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1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR01 Ø40/196/155

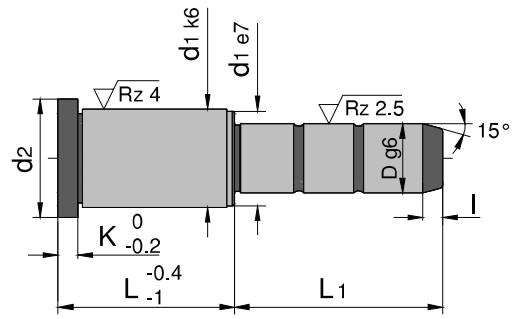
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR01 Ø42/196/155

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR01



K	d1	d2	l	D	L	L1
10	54	59	10	**40/42**	**196**	**155**
						195
						235
10	54	59	10	**40/42**	**246**	**165**
						245
10	66	71	10	**50/52**	**96**	**115**
						155
						195
10	66	71	10	**50/52**	**116**	**135**
						155
						195
10	66	71	10	**50/52**	**136**	**135**
						155
						195
10	66	71	10	**50/52**	**156**	**155**
						195
						235
10	66	71	10	**50/52**	**196**	**175**
						195
						235
20	80	86	10	**60/62**	**96**	**115**
						155
						195
20	80	86	10	**60/62**	**116**	**135**
						155
						195
20	80	86	10	**60/62**	**136**	**135**
						155
						195

K	d1	d2	l	D	L	L1
20	80	86	10	**60/62**	**156**	**155**
						195
						235
20	80	86	10	**60/62**	**196**	**175**
						195
						235
20	80	86	10	**60/62**	**246**	**195**
						235
						275
						315

Acciaio
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1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR011 Ø 9/12/45

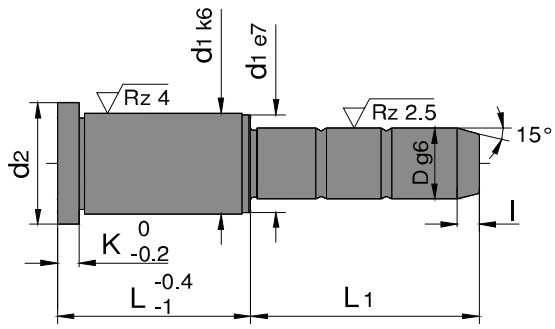
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR011 Ø10/12/45

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR011



K	d1	d2	l	D	L	L1
3	14	16	4	**9/10**	**12**	**45**
3	14	16	4	**9/10**	**17**	**20**
						30
						35
3	14	16	4	**9/10**	**22**	**25**
						35
						55
3	14	16	4	**9/10**	**27**	**25**
						30
						35
						45
						50
3	14	16	4	**9/10**	**36**	**25**
						35
						45
3	14	16	4	**9/10**	**46**	**30**
						45
						55
						75
6	20	25	5	**14/15**	**17**	**35**
						55
						75
						95
6	20	25	5	**14/15**	**22**	**20**
						35
						40
						45
						50
						55
						65
						70
						90
						110

K	d1	d2	l	D	L	L1
6	20	25	5	**14/15**	**27**	**20**
						35
						40
						45
						55
						65
						85
						105
6	20	25	5	**14/15**	**36**	**20**
						35
						40
						45
						55
						65
						75
						95
6	20	25	5	**14/15**	**46**	**20**
						35
						45
						65
						85
						105
6	20	25	5	**14/15**	**56**	**20**
						35
						55
						75
						95
6	20	25	5	**14/15**	**66**	**55**
						65
						95
6	20	25	5	**14/15**	**76**	**55**
						95
6	20	25	5	**14/15**	**86**	**55**
						95
6	20	25	5	**14/15**	**96**	**55**
						95

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Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR011 Ø18/22/20

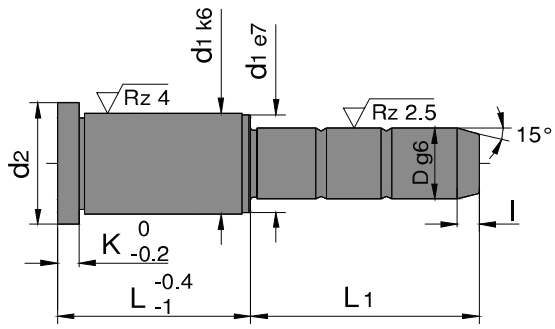
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR011 Ø20/22/20

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR011



K	d1	d2	l	D	L	L1
6	26	31	7	18/20	22	20
						35
						40
						45
						50
						55
						60
						65
						70
						80
						85
						115
6	26	31	7	18/20	27	20
						35
						40
						45
						50
						55
						60
						65
						70
						80
						85
						105
						125
6	26	31	7	18/20	36	20
						35
						40
						45
						50
						55
						60
						65
						70
						75
						80
						95
						115
						135

K	d1	d2	l	D	L	L1
6	26	31	7	18/20	46	20
						45
						65
						85
						105
						135
						165
6	26	31	7	18/20	56	20
						35
						55
						75
						95
6	26	31	7	18/20	66	55
						75
						95
6	26	31	7	18/20	76	55
						75
						95
6	26	31	7	18/20	86	55
						75
						95
6	26	31	7	18/20	96	55
						95
6	26	31	7	18/20	116	115
6	30	35	7	22/24	27	25
						45
						50
						60
						65
						70
						80
						85
						105
						125
						165

Acciaio
Steel
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Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR011 Ø22/36/25

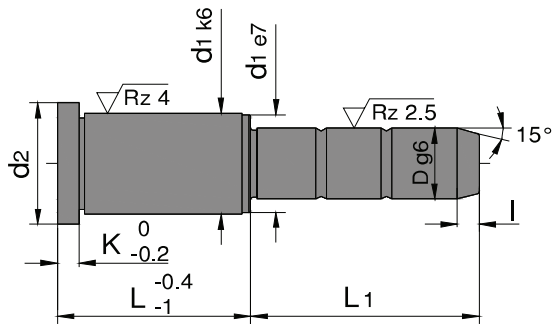
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR011 Ø24/36/25

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR011



K	d1	d2	l	D	L	L1
6	30	35	7	22/24	36	25
						45
						50
						55
						60
						70
						75
						80
						95
						115
						135
						165
6	30	35	7	22/24	46	25
						45
						50
						60
						65
						70
						80
						85
						105
						125
						165
6	30	35	7	22/24	56	25
						45
						55
						75
						95
						115
						165
6	30	35	7	22/24	66	55
						75
						95
						95
						115
						135

K	d1	d2	l	D	L	L1
6	30	35	7	22/24	76	25
						45
						55
						75
						95
						115
6	30	35	7	22/24	86	55
						75
						95
6	30	35	7	22/24	96	55
						75
						95
6	30	35	7	22/24	116	75
						115
						155
6	30	35	7	22/24	136	135
6	42	47	7	30/32	27	45
						65
						105
						165
6	42	47	7	30/32	36	55
						75
						95
						115
						155
6	42	47	7	30/32	46	45
						65
						85
						105
						125
						165

Acciaio
Steel
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Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR011 Ø30/56/55

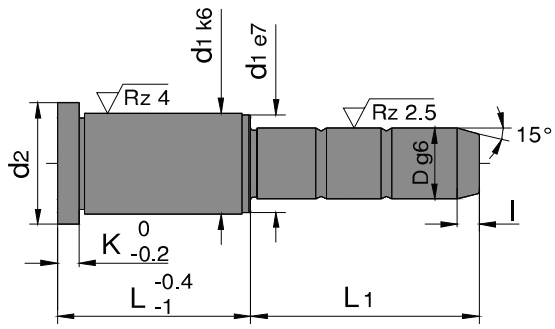
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR011 Ø32/56/55

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR011



K	d1	d2	l	D	L	L1
6	42	47	7	**30/32**	**56**	**55**
						75
						95
						115
						135
						175
6	42	47	7	**30/32**	**66**	**55**
						75
						95
						115
						135
						175
6	42	47	7	**30/32**	**76**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**86**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**96**	**55**
						75
						95
						115
						155
6	42	47	7	**30/32**	**116**	**75**
						115
						155
6	42	47	7	**30/32**	**136**	**95**
						115
						155
6	42	47	7	**30/32**	**156**	**115**
						155

K	d1	d2	l	D	L	L1
6	42	47	7	**30/32**	**176**	**135**
						175
6	42	47	7	**30/32**	**196**	**155**
						195
10	54	59	10	**40/42**	**56**	**75**
						115
						155
						195
10	54	59	10	**40/42**	**66**	**75**
						135
10	54	59	10	**40/42**	**76**	**75**
						115
						175
10	54	59	10	**40/42**	**86**	**75**
						135
10	54	59	10	**40/42**	**96**	**75**
						115
						155
10	54	59	10	**40/42**	**116**	**95**
						135
						195
10	54	59	10	**40/42**	**136**	**95**
						135
						215
10	54	59	10	**40/42**	**156**	**115**
						155
						215
10	54	59	10	**40/42**	**176**	**135**
						155
						175

Acciaio
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1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR011 Ø40/196/155

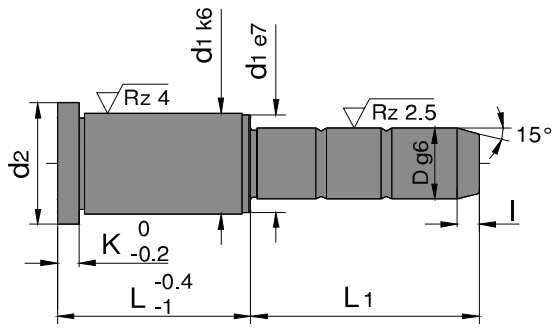
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR011 Ø42/196/155

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR011



K	d1	d2	l	D	L	L1
10	54	59	10	**40/42**	**196**	**155**
						195
						235
10	54	59	10	**40/42**	**246**	**165**
						245
10	66	71	10	**50/52**	**96**	**115**
						155
						195
10	66	71	10	**50/52**	**116**	**135**
						155
						195
10	66	71	10	**50/52**	**136**	**135**
						155
						195
10	66	71	10	**50/52**	**156**	**155**
						195
						235
10	66	71	10	**50/52**	**196**	**175**
						195
						235
20	80	86	10	**60/62**	**96**	**115**
						155
						195
20	80	86	10	**60/62**	**116**	**135**
						155
						195
20	80	86	10	**60/62**	**136**	**135**
						155
						195

K	d1	d2	l	D	L	L1
20	80	86	10	**60/62**	**156**	**155**
						195
						235
20	80	86	10	**60/62**	**196**	**175**
						195
						235
20	80	86	10	**60/62**	**246**	**195**
						235
						275
						315

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR02 Ø 9/12/25

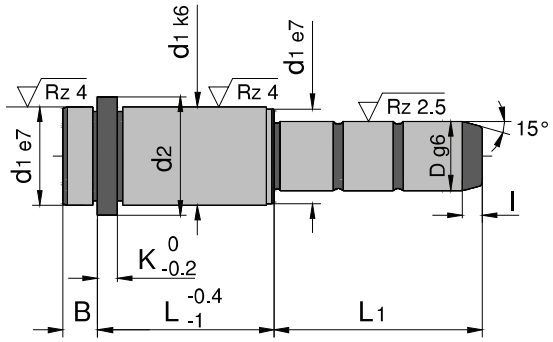
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR02 Ø10/12/25

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR02



B	K	d1	d2	l	D	L	L1
3	3	14	16	4	**9/10**	**12**	**25**
							45
							65
3	3	14	16	4	**9/10**	**17**	**20**
							25
							30
							35
							50
							55
							70
							75
3	3	14	16	4	**9/10**	**22**	**25**
							35
							55
							75
							95
3	3	14	16	4	**9/10**	**27**	**20**
							25
							30
							35
							45
							50
							70
							90
3	3	14	16	4	**9/10**	**36**	**25**
							35
							45
							55
							65
							85

B	K	d1	d2	l	D	L	L1
3	3	14	16	4	**9/10**	**46**	**30**
							35
							45
							55
							70
3	3	14	16	4	**9/10**	**56**	**35**
							60
9	6	20	25	5	**14/15**	**17**	**35**
							55
							75
							95
9	6	20	25	5	**14/15**	**22**	**25**
							30
							35
							50
							70
							90
							110
							125
							150
9	6	20	25	5	**14/15**	**27**	**25**
							30
							45
							65
							85
							95
							105
							115
							125
							145
							165

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR02 Ø14/36/35

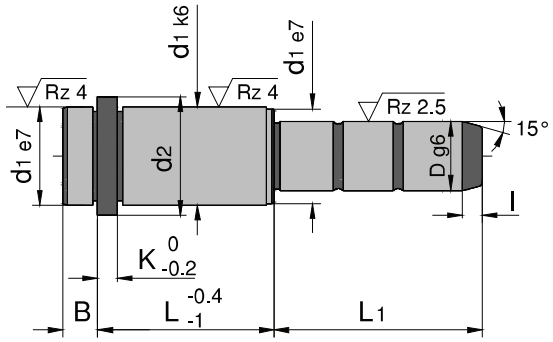
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR02 Ø15/36/35

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR02



B	K	d1	d2	l	D	L	L1
9	6	20	25	5	**14/15**	**36**	**35**
							55
							75
							95
							115
							125
							155
9	6	20	25	5	**14/15**	**46**	**35**
							45
							65
							85
							105
							125
							145
9	6	20	25	5	**14/15**	**56**	**35**
							55
							75
							95
							115
							135
9	6	20	25	5	**14/15**	**66**	**55**
							65
							95
							125
9	6	20	25	5	**14/15**	**76**	**55**
							95
9	6	20	25	5	**14/15**	**86**	**55**
							75
							95
9	6	20	25	5	**14/15**	**96**	**55**
							95

B	K	d1	d2	l	D	L	L1
9	6	20	25	5	**14/15**	**116**	**75**
9	6	26	31	7	**18/20**	**17**	**35**
							55
							75
							120
9	6	26	31	7	**18/20**	**22**	**35**
							45
							65
							85
							115
9	6	26	31	7	**18/20**	**27**	**35**
							45
							65
							85
							105
							125
							165
							225
							245
9	6	26	31	7	**18/20**	**36**	**35**
							55
							75
							95
							115
							135
							165
							225
							255

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR02 Ø18/46/35

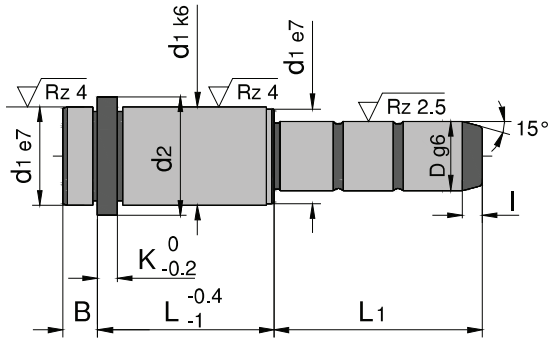
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR02 Ø20/46/35

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR02



B	K	d1	d2	l	D	L	L1
9	6	26	31	7	18/20	46	35
							45
							65
							85
							105
							115
							135
							165
							245
9	6	26	31	7	18/20	56	35
							55
							75
							95
							155
9	6	26	31	7	18/20	66	35
							55
							75
							95
							145
9	6	26	31	7	18/20	76	55
							75
							95
							135
9	6	26	31	7	18/20	86	55
							75
							95
							125
9	6	26	31	7	18/20	96	55
							95
9	6	26	31	7	18/20	116	75
							115
9	6	26	31	7	18/20	136	135

B	K	d1	d2	l	D	L	L1
9	6	30	35	7	22/24	17	35
							55
							75
9	6	30	35	7	22/24	22	35
							55
							75
							105
							130
9	6	30	35	7	22/24	27	35
							45
							55
							65
							75
							85
							95
							105
							115
							125
							155
							165
							205
							245
							285
9	6	30	35	7	22/24	36	35
							55
							75
							95
							115
							135
							155
							165
							205
							245
							285

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR02 Ø22/46/35

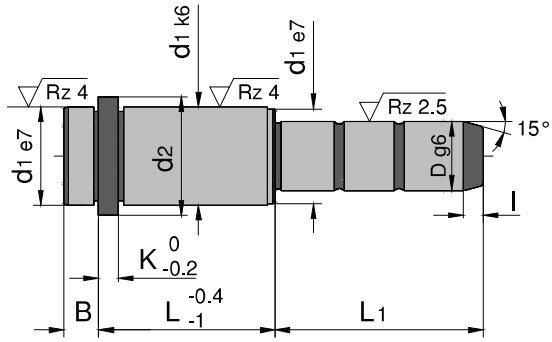
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR02 Ø24/46/35

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR02



B	K	d1	d2	l	D	L	L1
9	6	30	35	7	22/24	46	35
							45
							65
							85
							105
							125
							155
							165
							205
9	6	30	35	7	22/24	56	35
							55
							75
							95
							115
							165
							205
9	6	30	35	7	22/24	66	35
							55
							75
							95
							155
9	6	30	35	7	22/24	76	55
							75
							95
							115
							135
							145
							155
9	6	30	35	7	22/24	86	55
							75
							95
							135
							155
							195

B	K	d1	d2	l	D	L	L1
9	6	30	35	7	22/24	96	55
							75
							95
							125
9	6	30	35	7	22/24	116	75
							115
							135
							155
9	6	30	35	7	22/24	136	95
							135
9	6	30	35	7	22/24	156	155
9	6	42	47	7	30/32	27	45
							65
							105
							165
							185
							245
							285
9	6	42	47	7	30/32	36	55
							75
							95
							115
							155
							245
							285
							165
							205
							245
							285

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR02 Ø30/46/45

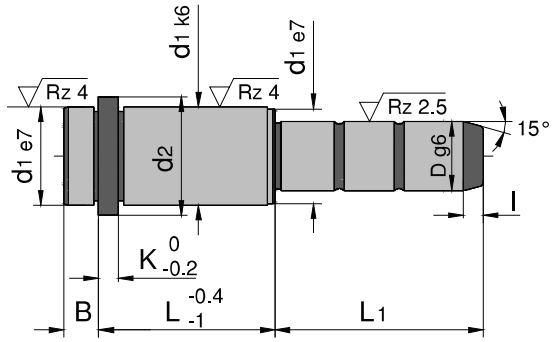
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR02 Ø32/46/45

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR02



B	K	d1	d2	l	D	L	L1
9	6	42	47	7	**30/32**	**46**	**45**
							65
							75
							85
							95
							105
							125
							165
							245
							285
9	6	42	47	7	**30/32**	**56**	**55**
							75
							95
							115
							135
							155
							175
							245
							295
9	6	42	47	7	**30/32**	**66**	**55**
							75
							95
							115
							135
							155
							175
							245
							275
							295
9	6	42	47	7	**30/32**	**76**	**55**
							75
							95
							115
							155
							225
							235

B	K	d1	d2	l	D	L	L1
9	6	42	47	7	**30/32**	**86**	**55**
							75
							95
							115
							155
							225
9	6	42	47	7	**30/32**	**96**	**55**
							75
							95
							115
							155
							205
9	6	42	47	7	**30/32**	**116**	**75**
							115
							155
9	6	42	47	7	**30/32**	**136**	**95**
							115
							155
9	6	42	47	7	**30/32**	**156**	**115**
							155
9	6	42	47	7	**30/32**	**176**	**115**
							135
							155
							175
							195
9	6	42	47	7	**30/32**	**196**	**155**
							195

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR02 Ø40/36/75

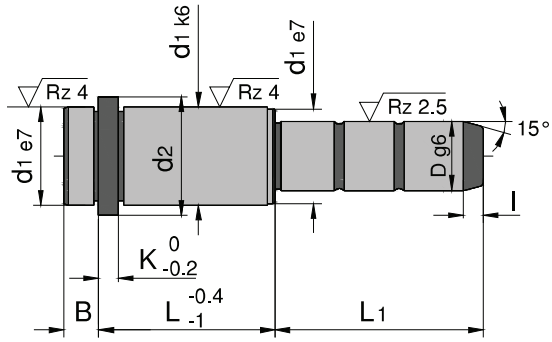
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR02 Ø42/36/75

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR02



B	K	d1	d2	l	D	L	L1
12	10	54	59	10	**40/42**	**36**	**75**
							115
12	10	54	59	10	**40/42**	**46**	**95**
							165
12	10	54	59	10	**40/42**	**56**	**75**
							95
							115
							155
							195
12	10	54	59	10	**40/42**	**66**	**75**
							135
12	10	54	59	10	**40/42**	**76**	**75**
							95
							115
							155
							175
12	10	54	59	10	**40/42**	**86**	**75**
							135
12	10	54	59	10	**40/42**	**96**	**75**
							95
							115
							155
							195

B	K	d1	d2	l	D	L	L1
12	10	54	59	10	**40/42**	**116**	**95**
							115
							135
							155
							195
12	10	54	59	10	**40/42**	**136**	**95**
							115
							135
							155
							195
							215
12	10	54	59	10	**40/42**	**156**	**115**
							155
							195
							215
12	10	54	59	10	**40/42**	**176**	**135**
							155
							175
							195
12	10	54	59	10	**40/42**	**196**	**115**
							155
							195
							235
12	10	54	59	10	**40/42**	**246**	**165**
							245

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR021 Ø9/12/25

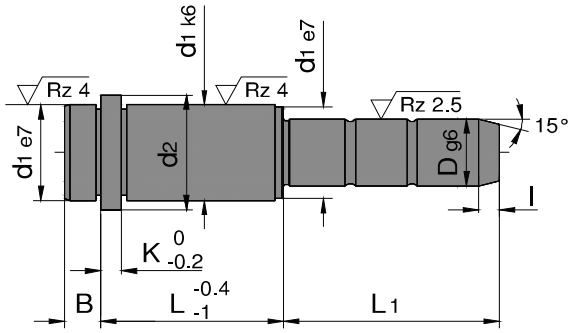
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR021 Ø10/12/25

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR021



B	K	d1	d2	l	D	L	L1
3	3	14	16	4	**9/10**	**12**	**25**
							45
							65
3	3	14	16	4	**9/10**	**17**	**20**
							25
							30
							35
							50
							55
							70
							75
3	3	14	16	4	**9/10**	**22**	**25**
							35
							55
							75
							95
3	3	14	16	4	**9/10**	**27**	**20**
							25
							30
							35
							45
							50
							70
							90
3	3	14	16	4	**9/10**	**36**	**25**
							35
							45
							55
							65
							85

B	K	d1	d2	l	D	L	L1
3	3	14	16	4	**9/10**	**46**	**30**
							35
							45
							55
							70
3	3	14	16	4	**9/10**	**56**	**35**
							60
9	6	20	25	5	**14/15**	**17**	**35**
							55
							75
							95
9	6	20	25	5	**14/15**	**22**	**25**
							30
							35
							50
							70
							90
							110
							125
							150
9	6	20	25	5	**14/15**	**27**	**25**
							30
							45
							65
							85
							95
							105
							115
							125
							145
							165

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR021 Ø14/36/35

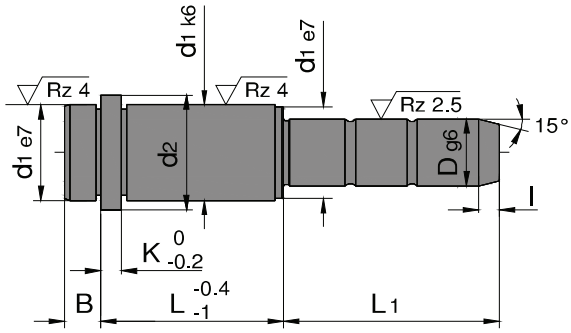
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR021 Ø15/36/35

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR021



B	K	d1	d2	l	D	L	L1
9	6	20	25	5	14/15	36	35
							55
							75
							95
							115
							125
							155
9	6	20	25	5	14/15	46	35
							45
							65
							85
							105
							125
							145
9	6	20	25	5	14/15	56	35
							55
							75
							95
							115
							135
9	6	20	25	5	14/15	66	55
							65
							95
							125
9	6	20	25	5	14/15	76	55
							95
9	6	20	25	5	14/15	86	55
							75
							95
9	6	20	25	5	14/15	96	55
							95

B	K	d1	d2	l	D	L	L1
9	6	20	25	5	14/15	116	75
9	6	26	31	7	18/20	17	35
							55
							75
							120
9	6	26	31	7	18/20	22	35
							45
							65
							85
							115
9	6	26	31	7	18/20	27	35
							45
							65
							85
							105
							125
							165
							225
							245
9	6	26	31	7	18/20	36	35
							55
							75
							95
							115
							135
							165
							225
							255

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR021 Ø18/46/35

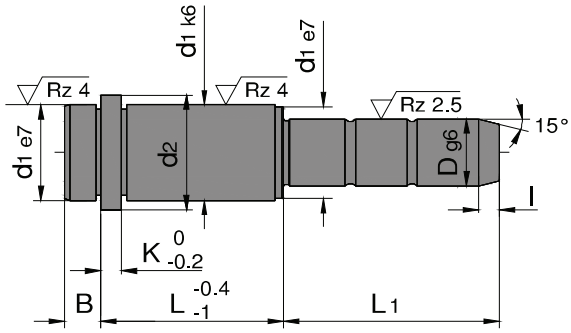
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR021 Ø20/46/35

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR021



B	K	d1	d2	l	D	L	L1
9	6	26	31	7	18/20	46	35
							45
							65
							85
							105
							115
							135
							165
							245
9	6	26	31	7	18/20	56	35
							55
							75
							95
							155
9	6	26	31	7	18/20	66	35
							55
							75
							95
							145
9	6	26	31	7	18/20	76	55
							75
							95
							135
9	6	26	31	7	18/20	86	55
							75
							95
							125
9	6	26	31	7	18/20	96	55
							95
9	6	26	31	7	18/20	116	75
							115
9	6	26	31	7	18/20	136	135

B	K	d1	d2	l	D	L	L1
9	6	30	35	7	22/24	17	35
							55
							75
9	6	30	35	7	22/24	22	35
							55
							75
							105
							130
9	6	30	35	7	22/24	27	35
							45
							55
							65
							75
							85
							95
							105
							115
							125
							155
							165
							205
							245
							285
9	6	30	35	7	22/24	36	35
							55
							75
							95
							115
							135
							155
							165
							205
							245
							285

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR021 Ø22/46/35

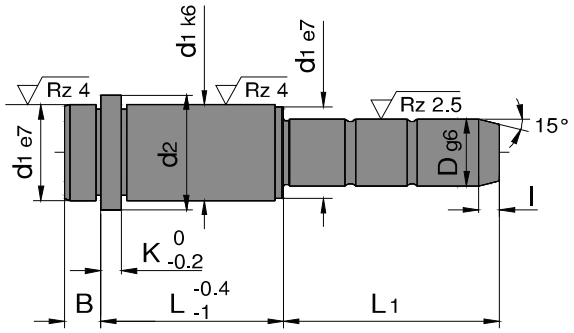
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR021 Ø24/46/35

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR021



B	K	d1	d2	l	D	L	L1
9	6	30	35	7	22/24	46	35
							45
							65
							85
							105
							125
							155
							165
							205
9	6	30	35	7	22/24	56	35
							55
							75
							95
							115
							165
							205
9	6	30	35	7	22/24	66	35
							55
							75
							95
							155
9	6	30	35	7	22/24	76	55
							75
							95
							115
							135
							145
							155
9	6	30	35	7	22/24	86	55
							75
							95
							135
							155
							195

B	K	d1	d2	l	D	L	L1
9	6	30	35	7	22/24	96	55
							75
							95
							125
9	6	30	35	7	22/24	116	75
							115
							135
							155
9	6	30	35	7	22/24	136	95
							135
9	6	30	35	7	22/24	156	155
9	6	42	47	7	30/32	27	45
							65
							105
							165
							185
							245
							285
9	6	42	47	7	30/32	36	55
							75
							95
							115
							155
							245
							285
							165
							205
							245
							285

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR021 Ø30/46/45

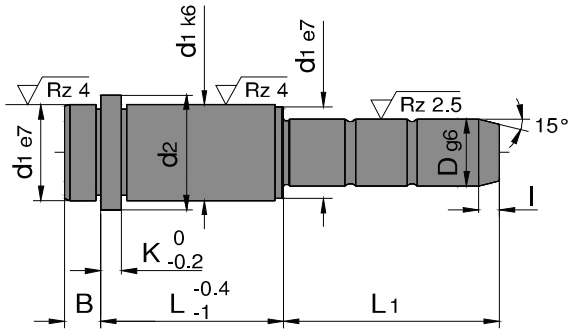
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR021 Ø32/46/45

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR021



B	K	d1	d2	l	D	L	L1
9	6	42	47	7	**30/32**	**46**	**45**
							65
							75
							85
							95
							105
							125
							165
							245
							285
9	6	42	47	7	**30/32**	**56**	**55**
							75
							95
							115
							135
							155
							175
							245
							295
9	6	42	47	7	**30/32**	**66**	**55**
							75
							95
							115
							135
							155
							175
							245
							275
							295
9	6	42	47	7	**30/32**	**76**	**55**
							75
							95
							115
							155
							225
							235

B	K	d1	d2	l	D	L	L1
9	6	42	47	7	**30/32**	**86**	**55**
							75
							95
							115
							155
							225
9	6	42	47	7	**30/32**	**96**	**55**
							75
							95
							115
							155
							205
9	6	42	47	7	**30/32**	**116**	**75**
							115
							155
9	6	42	47	7	**30/32**	**136**	**95**
							115
							155
9	6	42	47	7	**30/32**	**156**	**115**
							155
9	6	42	47	7	**30/32**	**176**	**115**
							135
							155
							175
							195
9	6	42	47	7	**30/32**	**196**	**155**
							195

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR021 Ø40/36/75

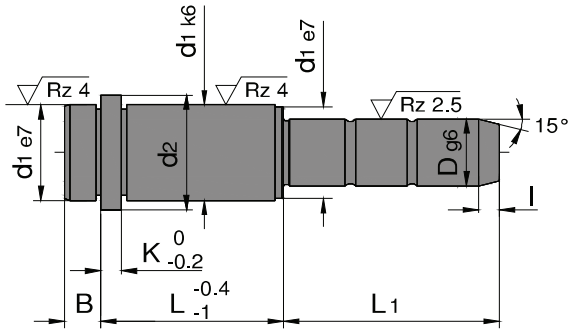
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR021 Ø42/36/75

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica con rivestimento DLC
Guide pillars for plastic moulds with DLC coating
Colonnes de guidage avec revetement DLC
Führungssäulen mit DLC

NR021



B	K	d1	d2	l	D	L	L1
12	10	54	59	10	**40/42**	**36**	**75**
							115
12	10	54	59	10	**40/42**	**46**	**95**
							165
12	10	54	59	10	**40/42**	**56**	**75**
							95
							115
							155
							195
12	10	54	59	10	**40/42**	**66**	**75**
							135
12	10	54	59	10	**40/42**	**76**	**75**
							95
							115
							155
							175
12	10	54	59	10	**40/42**	**86**	**75**
							135
12	10	54	59	10	**40/42**	**96**	**75**
							95
							115
							155
							195
9	6	42	47	7	**30/32**	**76**	**55**
							75
							95
							115
							155
							225
							235

B	K	d1	d2	l	D	L	L1
12	10	54	59	10	**40/42**	**116**	**95**
							115
							135
							155
							195
12	10	54	59	10	**40/42**	**136**	**95**
							115
							135
							155
							195
							215
12	10	54	59	10	**40/42**	**156**	**115**
							155
							195
							215
12	10	54	59	10	**40/42**	**176**	**135**
							155
							175
							195
12	10	54	59	10	**40/42**	**196**	**115**
							155
							195
							235
12	10	54	59	10	**40/42**	**246**	**165**
							245

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Bussole di guida con collare
Headed guide bushes
Bagues a collarette
Führungsbuchsen mit bund

NR03

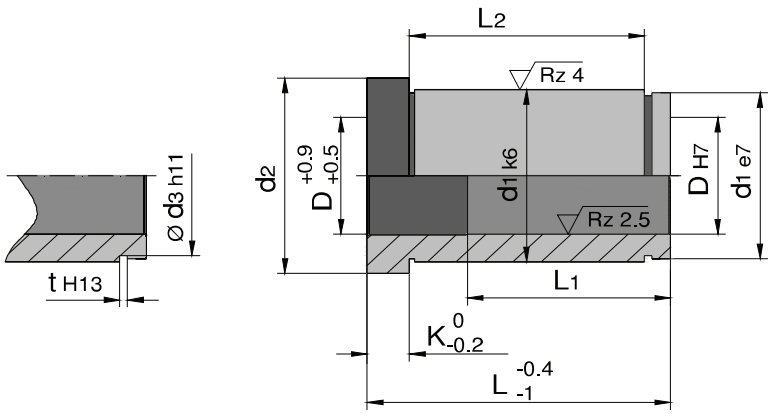
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR03 Ø 9/9

3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR03 Ø10/9



K	d1	d2	d3	t	L1	L2	D	L
3	14	16	13,4	1,1	-	-	9/10	**9**
						5,5		**12**
						10,5		**17**
						15,5		**22**
						20,5		**27**
					27	29,5		**36**
						39,5		**46**
						49,5		**56**
						59,5		**66**
6	18	23	17	1,3	-	7	12	**17**
						12		**22**
						17		**27**
						26		**36**
					36	36		**46**
						46		**56**
6	20	25	19	1,3	-	-	14/15	**12**
						7		**17**
						12		**22**
						17		**27**
						26		**36**
						36		**46**
					46	46		**56**
						56		**66**
						66		**76**
						76		**86**
						86		**96**

K	d1	d2	d3	t	L1	L2	D	L
6	22	27	21	1,3	-	7	16	**17**
						12		**22**
						17		**27**
						26		**36**
						36		**46**
						46		**56**
					56	66		**76**
6	26	31	24,9	1,3	-	7	18/20	**17**
						12		**22**
						17		**27**
						26		**36**
						36		**46**
						46		**56**
					56	56		**66**
						66		**76**
						76		**86**
						86		**96**
						106		**116**
6	30	35	28,6	1,6	-	-	22/24	**17**
						11		**22**
						16		**27**
						25		**36**
						35		**46**
						45		**56**
						55		**66**
						65		**76**
					76	75		**86**
						85		**96**
						105		**116**
						125		**136**
						145		**156**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Bussole di guida con collare
Headed guide bushes
Bagues a collarette
Führungsbuchsen mit bund

NR03

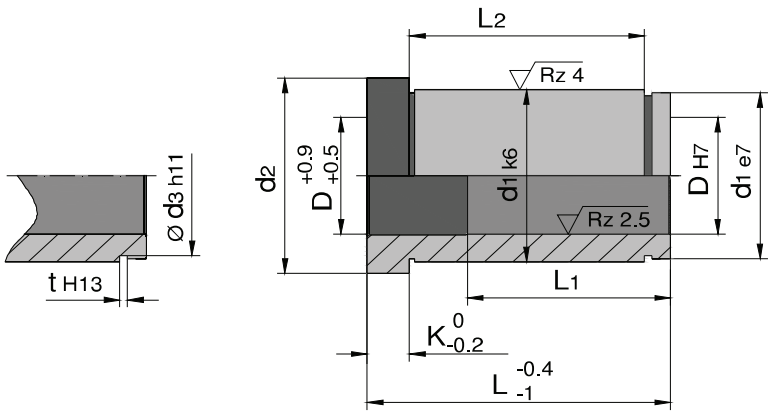
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR03 Ø30/22

3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR03 Ø32/22



K	d1	d2	d3	t	L1	L2	D	L
6	42	47	39,5	1,85	-	-	30/32	**22**
						14		**27**
						23		**36**
						33		**46**
						43		**56**
						53		**66**
						63		**76**
						73		**86**
						83		**96**
					96	103		**116**
						123		**136**
						143		**156**
						163		**176**
						173		**186**
						183		**196**
						223		**236**
10	54	59	51	2,15	-	18	40/42	**36**
						28		**46**
						38		**56**
						48		**66**
						58		**76**
						68		**86**
						78		**96**
						98		**116**
					116	118		**136**
						138		**156**
						158		**176**
						178		**196**
						198		**216**
						228		**246**

K	d1	d2	d3	t	L1	L2	D	L
10	66	71	62	2,65	-	38	50/52	**56**
						58		**76**
						78		**96**
						98		**116**
					116	118		**136**
						138		**156**
						158		**176**
						178		**196**
20	80	86	76,5	-	-	28	60/62	**56**
						48		**76**
						68		**96**
						88		**116**
						108		**136**
					136	128		**156**
						148		**176**
						168		**196**
						188		**216**
						218		**246**
20	104	112	-	-	-	-	80	**96**
								116
								136
								156
					156			**176**
								196
								216
								246

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

Bronze

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR035 Ø 9/12

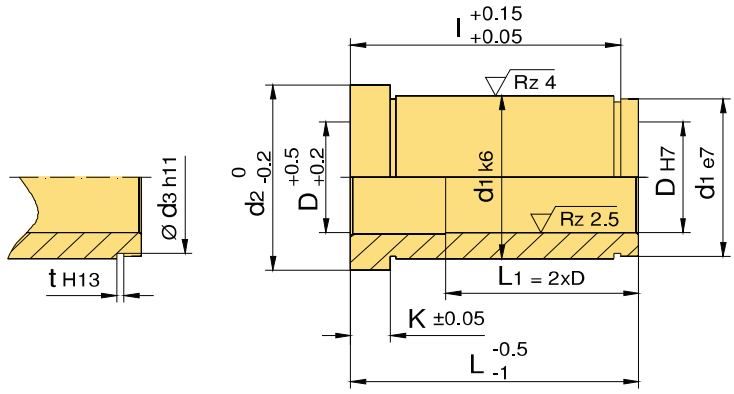
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR035 Ø10/12

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole di guida con collare in bronzo
Headed guide bushes made of bronze
Bagues a collarette en bronze
Führungsbuchsen mit bund aus messing

NR035



t max = 200°C

K	d1	d2	d3	t	l	D	L
3	14	16	13,4	1,10	9,6	9/10	12
					14,6		17
					19,6		22
					24,6		27
					33,6		36
					43,6		46
					53,6		56
6	18	23	17,0	1,30	14,3	12	17
					19,3		22
					24,3		27
					33,3		36
					43,3		46
					53,3		56
6	20	25	19,0	1,30	14,3	14/15	17
					19,3		22
					24,3		27
					33,3		36
					43,3		46
					53,3		56
6	22	27	21,0	1,30	19,3	16	22
					24,3		27
					33,3		36
					43,3		46
					53,3		56
6	26	31	24,9	1,30	14,3	18/20	17
					19,3		22
					24,3		27
					33,3		36
					43,3		46
					53,3		56
					63,3		66
					73,3		76

K	d1	d2	d3	t	l	D	L
6	30	35	28,6	1,60	18,6	22/24	22
					23,6		27
					32,6		36
					42,6		46
					52,6		56
					62,6		66
					72,6		76
					82,6		86
					92,6		96
6	42	47	39,5	1,85	21,9	30/32	27
					30,9		36
					40,9		46
					50,9		56
					60,9		66
					70,9		76
					80,9		86
					90,9		96
					110,9		116
10	54	60	51,0	2,15	40,2	40/42	46
					50,2		56
					60,2		66
					70,2		76
					80,2		86
					90,2		96
					110,2		116
					130,2		136

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR04 Ø 9/12

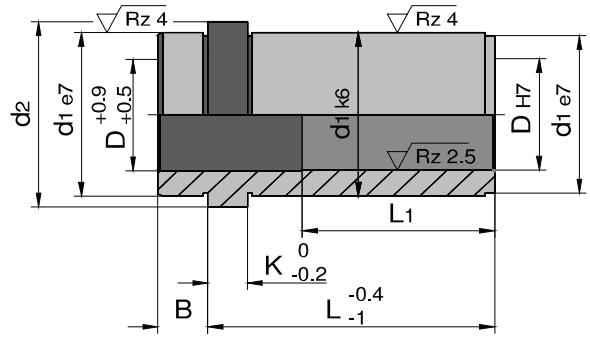
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR04 Ø10/12

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole di guida con collare di centraggio
Guide bushes with centring collar
Bagues avec collarette de centrage
Führungsbuchsen mit bund

NR04



B	K	d1	d2	L1	D	L
3	3	14	16	-	9/10	12
						17
						22
				27		27
						36
						46
						56
						66
9	6	20	25	-	14/15	17
						22
						27
						36
						46
				46		56
						66
						76
						86
						96
						116
9	6	26	31	-	18/20	17
						22
						27
						36
						46
						56
				56		66
						76
						86
						96
						116
						136
9	6	30	35	-	22/24	17
						22
						27
						36
						46

B	K	d1	d2	L1	D	L
9	6	30	35	-	22/24	56
						66
						76
				76		86
						96
						116
						136
						156
9	6	42	47	-	30/32	22
						27
						36
						46
						56
						66
						76
						86
						96
				96		116
						136
						156
						176
						196
12	10	54	59	-	40/42	36
						46
						56
						66
						76
						86
						96
						116
				116		136
						156
						176
						196
						216
						246

Acciaio
Steel
Acier
Werkstoff

Bronze

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR045 Ø 9/12

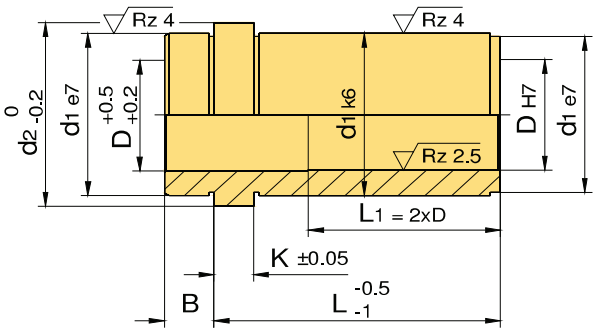
3 Pezzi
3 Pieces
3 Pièces
3 Stück

NR045 Ø10/12

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole di guida con collare di centraggio in bronzo
Guide bushes with centring collar made fo bronze
Bagues avec collarette de centrage en bronze
Führungsbuchsen mit bund aus messing

NR045



t max = 200°C

B	K	d1	d2	D	L
5	3	14	16	**9/10**	**12**
					17
					22
					27
					36
					46
					56
6	6	20	25	**14/15**	**17**
					22
					27
					36
					46
					56
					66
					76
8	6	26	31	**18/20**	**17**
					22
					27
					36
					46
					56
					66
					76
8	6	30	35	**22/24**	**22**
					27
					36
					46
					56
					66
					76
					86
					96
					116

B	K	d1	d2	D	L
8	6	42	47	**30/32**	**27**
					36
					46
					56
					66
					76
					86
					96
					116
					136
10	10	54	60	**40/42**	**46**
					56
					66
					76
					86
					96
					116
					136
					156
					196

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

Bronze

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR046 Ø14/17

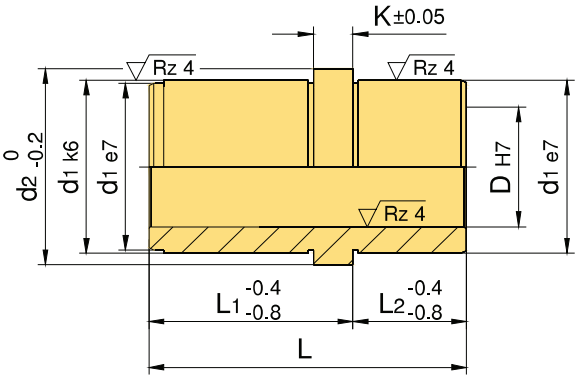
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR046 Ø15/17

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole di guida con collare di centraggio in bronzo
Guide bushes with centring collar made fo bronze
Bagues avec collarette de centrage en bronze
Führungsbuchsen mit bund aus messing

NR046



t max = 200 °C

K	d1	d2	L	L2	D	L1
6	20	25	24,3	8,5	**14/15**	**17**
6	26	31	37,3	16,5	**18/20**	**22**
6	30	35	47,3	21,5	**22/24**	**27**
6	42	46	61,3	26,5	**30/32**	**36**

Acciaio
Steel
Acier
Werkstoff

Bronze

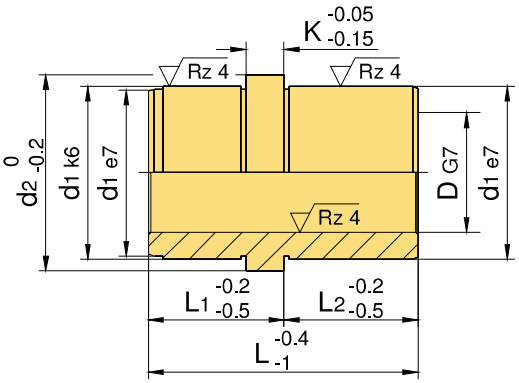
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR047 Ø12/6

Bussole di guida con collare di centraggio in bronzo
Guide bushes with centring collar made fo bronze
Bagues avec collarette de centrage en bronze
Führungsbuchsen mit bund aus messing

NR047



t max = 200 °C

K	d1	d2	L	L2	D	L1
3	16	19	15	9	**12**	**6**
3	16	19	21	12	**12**	**9**
3	16	19	29	17	**12**	**12**
6	25	29	29	17	**18**	**12**
6	25	29	39	22	**18**	**17**
6	25	29	49	27	**18**	**22**
6	42	46	39	22	**30**	**17**
6	42	46	49	27	**30**	**22**
6	42	46	63	36	**30**	**27**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

Bronze

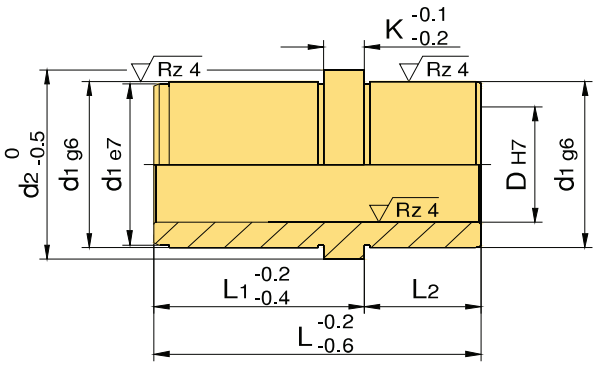
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR048 Ø10/5/10

Bussole di guida con collare di centraggio in bronzo
Guide bushes with centring collar made fo bronze
Bagues avec collarette de centrage en bronze
Führungsbuchsen mit bund aus messing

NR048



t max = 200 °C

K	d1	d2	L	D	L2	L1
3	14	16	15	**10**	**5**	**10**
6	14	17	21	**10**	**9**	**12**
6	14	17	26	**10**	**9**	**17**
3	14	16	20	**10**	**10**	**10**
6	16	19	26	**12**	**9**	**17**
6	16	19	29	**12**	**12**	**17**
6	18	21	29	**14**	**12**	**17**
6	18	21	34	**14**	**12**	**22**
6	18	21	29	**14**	**17**	**22**
6	24	27	29	**18**	**12**	**17**
6	24	27	34	**18**	**12**	**22**
6	24	27	39	**18**	**17**	**22**
6	24	27	44	**18**	**17**	**27**
6	24	27	49	**18**	**22**	**27**
6	26	29	39	**20**	**17**	**22**
6	26	29	49	**20**	**22**	**27**
6	28	31	39	**22**	**17**	**22**
6	28	31	49	**22**	**22**	**27**
6	30	33	39	**24**	**17**	**22**
6	30	33	44	**24**	**17**	**27**
6	30	33	49	**24**	**22**	**27**
6	30	33	63	**24**	**27**	**36**
6	38	41	49	**30**	**22**	**27**
6	38	41	63	**30**	**27**	**36**
6	38	41	73	**30**	**27**	**46**
6	38	41	82	**30**	**36**	**46**
6	48	51	82	**40**	**36**	**46**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

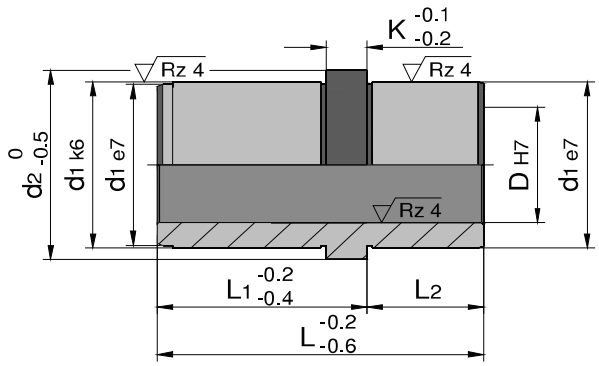
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR0481 Ø10/9/12

Bussole di guida con collare di centraggio
Guide bushes with centring collar
Bagues avec collarette de centrage
Führungsbuchsen mit bund

NR0481



K	d1	d2	L	D	L2	L1
6	14	17	21	**10**	**9**	**12**
6	14	17	26	**10**	**9**	**17**
6	16	19	26	**12**	**9**	**17**
6	16	19	29	**12**	**12**	**17**
6	18	21	29	**14**	**12**	**17**
6	18	21	34	**14**	**12**	**22**
6	18	21	29	**14**	**17**	**22**
6	24	27	29	**18**	**12**	**17**
6	24	27	34	**18**	**12**	**22**
6	24	27	39	**18**	**17**	**22**
6	24	27	44	**18**	**17**	**27**
6	24	27	49	**18**	**22**	**27**
6	26	29	39	**20**	**17**	**22**
6	26	29	49	**20**	**22**	**27**
6	28	31	39	**22**	**17**	**22**
6	28	31	49	**22**	**22**	**27**
6	30	33	39	**24**	**17**	**22**
6	30	33	44	**24**	**17**	**27**
6	30	33	49	**24**	**22**	**27**
6	30	33	63	**24**	**27**	**36**
6	38	41	49	**30**	**22**	**27**
6	38	41	63	**30**	**27**	**36**
6	38	41	73	**30**	**27**	**46**
6	38	41	82	**30**	**36**	**46**
6	48	51	82	**40**	**36**	**46**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

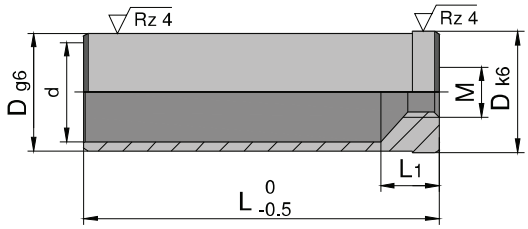
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR05 Ø14/20

Distanziali di centraggio
Centring sleeves
Canons de centrage
Distanzstück

NR05



L1	M	d	D	L
8	8	11	**14**	**20**
				30
				40
				50
				60
				70
				80
				100
12	12	16	**20**	**30**
				40
				50
				60
				70
				80
				100
				120
				140
				160
12	12	21	**26**	**30**
				40
				50
				60
				70
				80
				100
				120
				140
				160
				180
12	12	25	**30**	**40**
				50
				60
				80
				100
				120
				140
				160
				180
				200
				220
				240

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

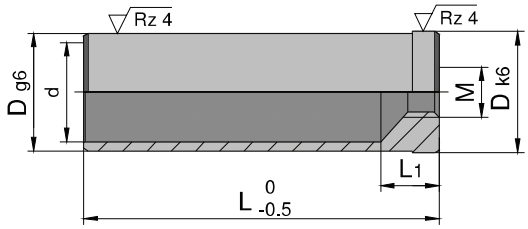
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR05 Ø42/40

Distanziali di centraggio
Centring sleeves
Canons de centrage
Distanzstück

NR05



L1	M	d	D	L
12	12	33	**42**	**40**
				60
				80
				100
				120
				140
				160
				180
				200
				220
				240
				260
				280
				300
12	12	43	**54**	**60**
				80
				100
				120
				140
				160
				200
				240
				280
				320
18	12	54	**66**	**80**
				100
				120
				140
				160
				180
				200
				240
				280
				320
18	20	64	**80**	**100**
				120
				140
				160
				200
				240
				280
				320

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

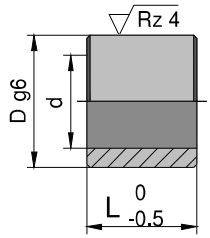
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR051 Ø14

Distanziali di centraggio
Centring sleeves
Canons de centrage
Distanzstück

NR051



d	D	L
9	**14**	11,5
11	**16**	13,5
13	**20**	15,5
16	**26**	17,5
18	**30**	19,5
22	**36**	19,5
26	**42**	19,5
32	**54**	19,5

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

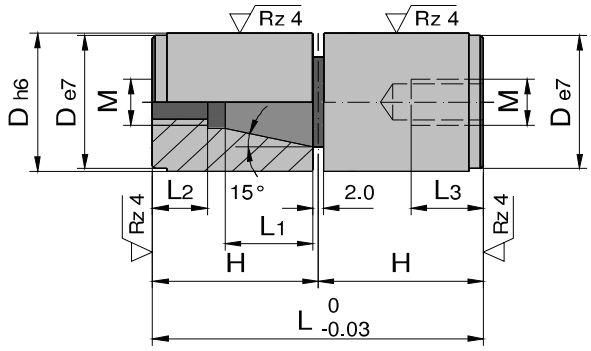
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR06 Ø12

Centraggi conici
Centring elements set
Plots de centrage
Zentriereinheiten

NR06



L1	L2	M	L3	H	L	D
4	9	4	10	17	34	**12**
6	9	5	10	17	34	**14**
6	9	5	10	17	34	**16**
9	11	8	16	27	54	**20**
10	11	8	16	27	54	**25**
10	11	8	16	27	54	**26**
14	13	10	20	36	72	**30**
14	13	10	20	36	72	**32**
18	13	10	20	46	92	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Disponibile anche in acciaio inossidabile
Also available in stainless steel
Sur demande acier inoxidable
Auf anfrage rostfrei stahl

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

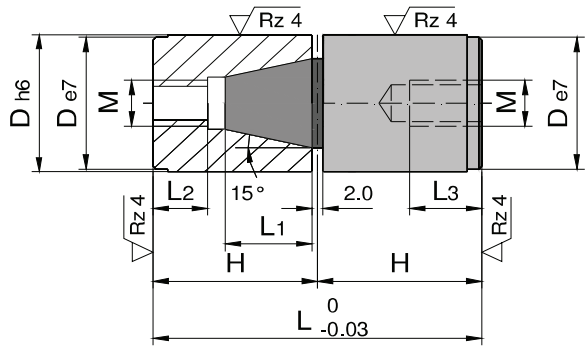
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR06 Ø12 M

Maschi centraggi conici
Centring elements separately
Plots de centrage separé
Zentriereinheiten

NR06M



L1	L2	M	L3	H	L	D
4	9	4	10	17	34	**12**
6	9	5	10	17	34	**14**
6	9	5	10	17	34	**16**
9	11	8	16	27	54	**20**
10	11	8	16	27	54	**25**
10	11	8	16	27	54	**26**
14	13	10	20	36	72	**30**
14	13	10	20	36	72	**32**
18	13	10	20	46	92	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Disponibile anche in acciaio inossidabile
Also available in stainless steel
Sur demande acier inoxidable
Auf anfrage rostfrei stahl

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

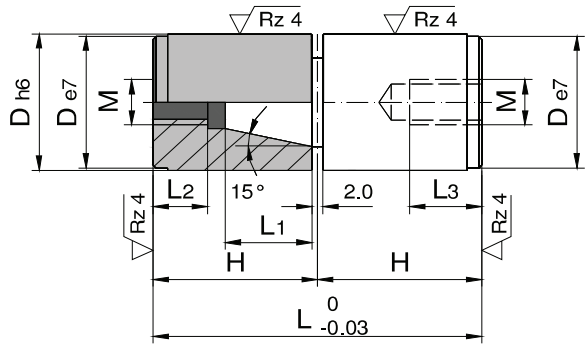
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR06 Ø12 W

Maschi centraggi conici
Centring elements separately
Plots de centrage separé
Zentriereinheiten

NR06W



L1	L2	M	L3	H	L	D
4	9	4	10	17	34	**12**
6	9	5	10	17	34	**14**
6	9	5	10	17	34	**16**
9	11	8	16	27	54	**20**
10	11	8	16	27	54	**25**
10	11	8	16	27	54	**26**
14	13	10	20	36	72	**30**
14	13	10	20	36	72	**32**
18	13	10	20	46	92	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Disponibile anche in acciaio inossidabile
Also available in stainless steel
Sur demande acier inoxidable
Auf anfrage rostfrei stahl

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

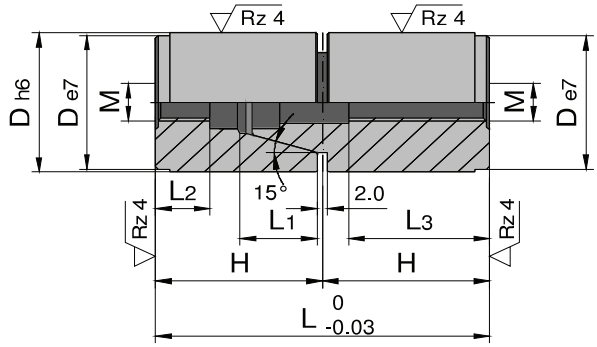
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR065 Ø10

Centraggi conici
Centring elements set
Plots de centrage
Zentriereinheiten

NR065



L1	L2	M	L3	H	L	D
3,7	5	4	11,5	12	24	**10**
5	8,5	4	9,6	17	34	**12**
7	6	5	12,4	17	34	**14**
7	6	5	12,4	17	34	**16**
10	10,5	8	19,7	27	54	**20**
11	9	8	19,7	27	54	**25**
11	9	8	19,7	27	54	**26**
16	12,2	10	25	36	72	**30**
16	12,2	10	25	36	72	**32**
20	16,5	10	27	46	92	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Disponibile anche in acciaio inossidabile
Also available in stainless steel
Sur demande acier inoxidable
Auf anfrage rostfrei stahl

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

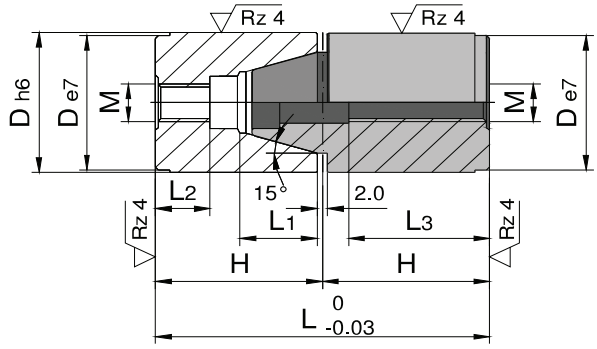
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

N065 Ø10 M

Maschi centraggi conici
Centring elements separately
Plots de centrage separé
Zentriereinheiten

NR065M



L1	L2	M	L3	H	L	D
3,7	5	4	11,5	12	24	**10**
5	8,5	4	9,6	17	34	**12**
7	6	5	12,4	17	34	**14**
7	6,0	5	12,4	17	34	**16**
10	10,5	8	19,7	27	54	**20**
11	9	8	19,7	27	54	**25**
11	9,0	8	19,7	27	54	**26**
16	12,2	10	25	36	72	**30**
16	12,2	10	25	36	72	**32**
20	16,5	10	27	46	92	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Disponibile anche in acciaio inossidabile
Also available in stainless steel
Sur demande acier inoxidable
Auf anfrage rostfrei stahl

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

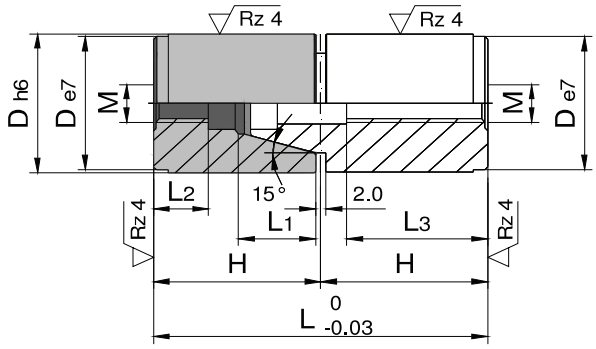
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR065 Ø10 W

Maschi centraggi conici
Centring elements separately
Plots de centrage separé
Zentriereinheiten

NR065W



L1	L2	M	L3	H	L	D
3,7	5	4	11,5	12	24	**10**
5	8,5	4	9,6	17	34	**12**
7	6	5	12,4	17	34	**14**
7	6,0	5	12,4	17	34	**16**
10	10,5	8	19,7	27	54	**20**
11	9	8	19,7	27	54	**25**
11	9,0	8	19,7	27	54	**26**
16	12,2	10	25	36	72	**30**
16	12,2	10	25	36	72	**32**
20	16,5	10	27	46	92	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Disponibile anche in acciaio inossidabile
Also available in stainless steel
Sur demande acier inoxidable
Auf anfrage rostfrei stahl

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

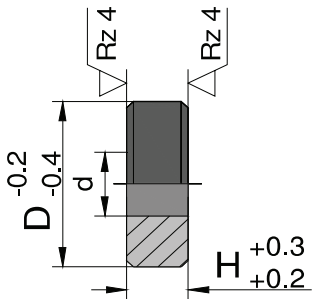
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR61 Ø12/3

Distanziali
Spacers
Do ville de centrage
Zentrier hilse

NR61



d	D	H
4,5	**12**	**3**
4,5	**12**	**9**
4,5	**12**	**10**
5,5	**14**	**3**
5,5	**14**	**5**
5,5	**14**	**9**
5,5	**14**	**10**
5,5	**14**	**14**
5,5	**14**	**19**
5,5	**16**	**3**
5,5	**16**	**5**
5,5	**16**	**9**
5,5	**16**	**10**
5,5	**16**	**19**
8,5	**20**	**3**
8,5	**20**	**9**
8,5	**20**	**10**
8,5	**20**	**20**
8,5	**25**	**9**
8,5	**25**	**10**
8,5	**25**	**20**

d	D	H
8,5	**26**	**3**
8,5	**26**	**9**
8,5	**26**	**10**
8,5	**26**	**20**
8,5	**26**	**30**
11,0	**30**	**4**
11,0	**30**	**10**
11,0	**30**	**20**
11,0	**30**	**30**
11,0	**32**	**10**
11,0	**32**	**20**
11,0	**42**	**4**
11,0	**42**	**10**
11,0	**42**	**20**
11,0	**42**	**30**
13,5	**54**	**20**
13,5	**54**	**40**
17,5	**80**	**20**
17,5	**80**	**40**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

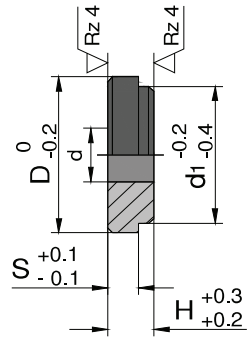
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR62 Ø14

Distanziali
Spacers
Do ville de centrage
Zentrier hilse

NR62



H	S	d	D	D1
5	3,2	5,5	16,0	**14**
9	6,3	8,5	25,5	**20**
9	6,3	8,5	31,5	**26**
10	6,3	11,0	35,5	**30**
10	6,3	11,0	47,5	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

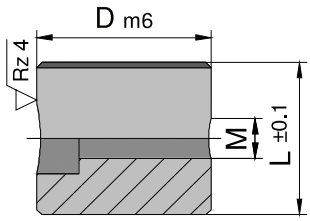
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR63 Ø20

Distanziali
Spacers
Do ville de centrage
Zentrier hilse

NR63

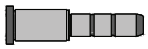
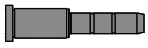
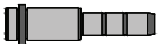
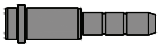
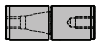
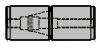
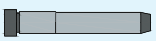
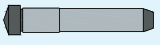
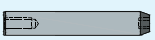
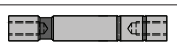


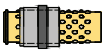
M	L	D
6	20	**20**
6	25	**26**
8	30	**30**
8	40	**42**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	 Bronzo *Bronze*	2
NR04		2
NR045	 Bronzo *Bronze*	2
NR046	 Bronzo *Bronze*	3
NR047	 Bronzo *Bronze*	3
NR048	 Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	 R 15,5 t=1,5	10
NR32	 R 40 t=1,5	10
NR33	 R 15,5 t=1,5	10
NR34	 R 40 t=1,5	10
NR40		10
NR41		10
NR50	 600 N/mm²	11
NR51	 600 N/mm²	11
NR54	 600 N/mm²	11
NR55	 600 N/mm²	11
NR52	 330 N/mm²	12
NR53	 330 N/mm²	12
NR56	 330 N/mm²	12
NR57	 330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

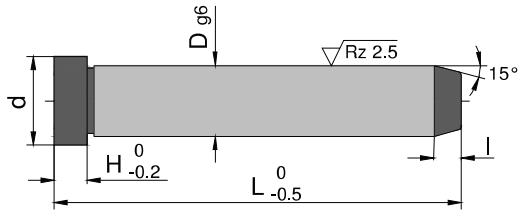
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR07 Ø8/40

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR07



d	L	H	D	L
10	4	3	**8**	**40**
				50
				60
				80
				100
12	4	3	**9**	**40**
				60
				80
				100
				120
12	4	3	**10**	**40**
				60
				80
				100
				120
				140
				160
16	5	6	**12**	**40**
				60
				80
				100
				120
				140
				160
				180
				200
18	5	8	**14**	**60**
				80
				100
				120
				140
				160
				180
				200
				220
				240

d	L	H	D	L
18	5	8	**15**	**60**
				80
				100
				120
				140
				160
				180
				200
				220
				240
20	5	8	**16**	**40**
				60
				80
				100
				120
				140
				160
				180
				200
				220
				240
				300
22	7	8	**18**	**60**
				80
				100
				120
				140
				160
				180
				200
				220
				240
				260
				280
				300
				320
24	7	8	**20**	**60**
				80
				100

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

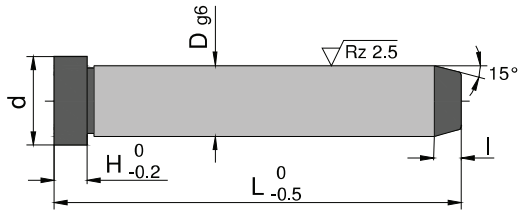
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR07 Ø20/120

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR07



d	L	H	D	L
24	7	8	**20**	**120**
				140
				160
				180
				200
				220
				240
				260
				280
				300
				320
26	7	15	**22**	**80**
				100
				120
				140
				160
				180
				200
				220
				240
				260
				280
				300
				320
				340
				360
28	7	15	**24**	**80**
				100
				120
				140
				160
				180
				200
				220
				240
				260
				280
				300
				320
				340
				360

d	L	H	D	L
36	7	15	**30**	**100**
				120
				140
				160
				180
				200
				240
				300
				360
				400
36	7	15	**32**	**100**
				120
				140
				160
				180
				200
				240
				300
				360
				400
48	10	15	**40**	**160**
				200
				240
				300
				360
				400
				420
				500
58	15	15	**50**	**160**
				200
				240
				300
				360
				400
				500
68	20	20	**60**	**280**
				300
				340
				360
				400
				500

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

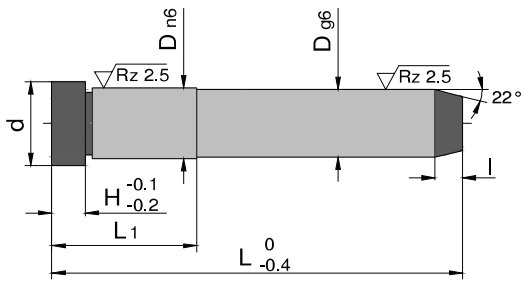
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR071 Ø9/400

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR071



d	H	l	L1	D	L
11	3	4	11	9	40
					60
					70
					80
					90
					100
					120
12	3	4	11	10	40
					50
					60
					70
					80
					90
					100
					120
15	6	5	16	12	60
					70
					80
					90
					100
					110
					120
					140
					160
17	8	5	21	14	60
					70
					80
					90
					100
					110
					120
					140
					160
					180

d	H	l	L1	D	L
19	8	5	21	16	60
					70
					80
					90
					100
					110
					120
					140
					160
					180
					200
					220
21	8	7	21	18	60
					70
					80
					90
					100
					110
					120
					140
					160
					180
					200
					220
					240
23	8	7	21	20	80
					90
					100
					110
					120
					140
					160
					180
					200
					220
					240
					260
					280

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

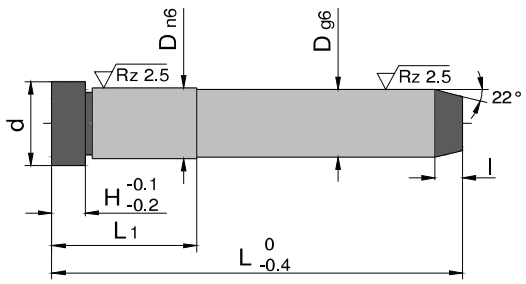
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR071 Ø22/80

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR071



d	H	l	L1	D	L
25	10	7	26	**22**	**80**
					100
					120
					140
					160
					180
					200
					220
					240
					280
27	10	7	26	**24**	**80**
					100
					120
					140
					160
					180
					200
					220
					240
					280
35	10	7	35	**30**	**100**
					120
					140
					160
					180
					200
					220
					240
					280
					320
					360
					400

d	H	l	L1	D	L
35	10	7	35	**32**	**100**
					120
					140
					160
					180
					200
					220
					240
					280
					320
					360
45	10	7	35	**40**	**140**
					160
					180
					200
					250
					280
					320
					360
					400

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

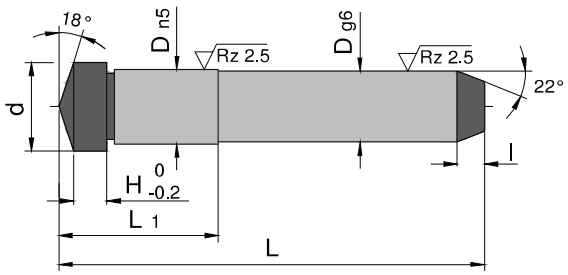
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR072 Ø10/40

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR072



d	H	l	L1	D	L
12	2	4	13	**10**	**40**
					50
					60
					70
					80
					90
					100
					120
					140
15	3	5	17	**12**	**60**
					70
					80
					90
					100
					110
					120
					140
					160
					180
17	3	5	17	**14**	**60**
					70
					80
					90
					100
					110
					120
					140
					160
					180
					200

d	H	l	L1	D	L
19	3	5	22	**16**	**60**
					70
					80
					90
					100
					110
					120
					140
					160
					180
					200
					220
21	3	7	22	**18**	**60**
					70
					80
					90
					100
					110
					120
					140
					160
					180
					200
					220
					240

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

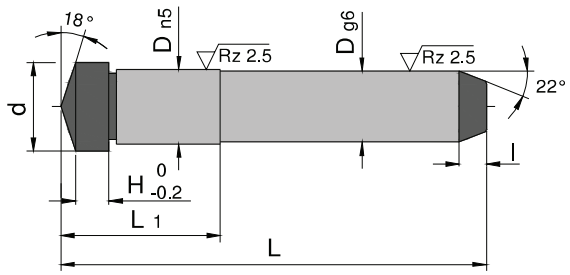
Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR072

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR072 Ø20/80



d	H	l	L1	D	L
23	4	7	22	**20**	**80**
					90
					100
					110
					120
					140
					160
					180
					200
					220
					240
25	4	7	27	**22**	**60**
					80
					100
					120
					140
					160
					180
					200
					220
					240
					90
					100
					110
					120
					140
					160
					180
					200

d	H	l	L1	D	L
27	4	7	27	**24**	**80**
					100
					120
					140
					160
					180
					200
					220
					240
					280
35	5	7	36	**30**	**100**
					120
					140
					160
					180
					200
					220
					240
					280
					320
					360
					200
					220
					240

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

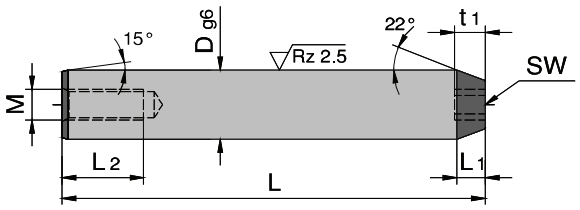
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR074 Ø8/40

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR074



M	L2	L1	Sw	t1	D	L
5	10	2,3	4	4	**8**	**40**
						60
						80
						100
6	10	4	4	4	**10**	**40**
						60
						70
						80
						100
						120
6	10	5	5	5	**12**	**50**
						60
						80
						100
						120
						140
						160
6	10	5	5	5	**14**	**50**
						60
						70
						75
						80
						90
						100
						120
						140
						160
						180
8	17	5	5	5	**15**	**50**
						60
						70
						80
						90

M	L2	L1	Sw	t1	D	L
8	17	5	6	6	**16**	**60**
						80
						90
						100
						110
						120
						130
						140
						160
						180
						200
						220
8	17	7	6	6	**18**	**60**
						70
						80
						90
						100
						110
						120
						125
						140
						150
						160
						170
						180
						200
						220
10	17	7	6	6	**18**	**60**
						70
						80
						90
						100
						125
						140
						150
						170

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

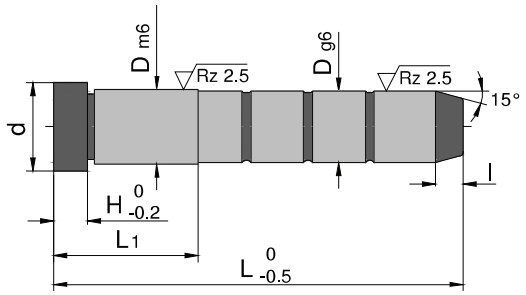
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR08 Ø10/40

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR08



d	H	l	L1	D	L
12	3	5	17	10	**40**
			17		**60**
			22		**80**
			27		**100**
16	6	5	17	12	**60**
			22		**80**
			27		**100**
			27		**120**
18	8	5	17	14	**60**
			22		**80**
			27		**100**
			27		**120**
			36		**140**
			36		**160**
			36		**180**
20	8	5	17	16	**60**
			22		**80**
			27		**100**
			27		**120**
			36		**140**
			36		**160**
			36		**180**
			36		**200**
			46		**240**

d	H	l	L1	D	L
22	8	7	22	18	**80**
			27		**100**
			27		**120**
			36		**140**
			36		**160**
			46		**180**
			56		**200**
			56		**240**
			56		**280**
24	8	7	22	20	**80**
			27		**100**
			27		**120**
			36		**140**
			36		**160**
			56		**180**
			56		**200**
			56		**240**
			56		**280**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

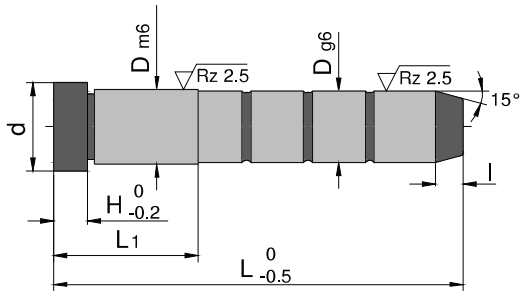
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

N08 Ø22/100

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR08



d	H	l	L1	D	L
26	15	7	27	22	**100**
			27		**120**
			36		**140**
			36		**160**
			46		**180**
			56		**200**
			56		**220**
			56		**240**
			56		**280**
			56		**300**
			56		**320**
			56		**360**
28	15	7	27	24	**100**
			27		**120**
			36		**140**
			36		**160**
			46		**180**
			56		**200**
			56		**220**
			56		**240**
			56		**280**
			56		**300**
			56		**320**
			56		**360**
36	15	7	36	30	**160**
			56		**200**
			56		**240**
			56		**280**
			56		**300**
			56		**360**

d	H	l	L1	D	L
36	15	7	36	32	**160**
			56		**200**
			56		**240**
			56		**280**
			56		**300**
			56		**360**
48	15	10	56	40	**200**
			56		**240**
			56		**300**
			76		**360**
			76		**400**
			96		**500**
58	15	15	46	50	**200**
			56		**240**
			56		**300**
			76		**360**
			76		**400**
			96		**500**
68	20	20	56	60	**240**
			56		**300**
			76		**360**
			76		**400**
			96		**500**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

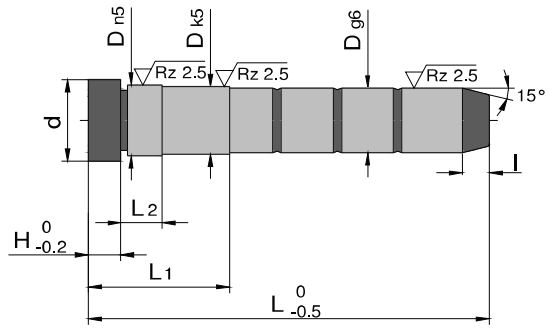
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR081 Ø9/40

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR081



d	H	l	L1	L2	D	L
12	3	4	17	6	9	40
						60
			22			80
			27	10		100
12	3	4	17	6	10	40
						60
			22			80
			27	10		100
15	6	5	22	6	12	60
						80
						100
						120
			27	10		140
						160
17	6	5	22	6	14	60
						80
						100
						120
			27	10		140
						160
18	6	5	22	6	15	60
						80
						100
						120
			27	10		140
						160
19	6	5	22	6	16	80
						100
						120
			27	10		140
						160

d	H	l	L1	L2	D	L
21	6	7	22	6	18	80
						100
						120
			27	10		140
						160
						180
			36			200
						220
23	6	7	22	6	20	80
						100
						120
			27	10		140
						160
						180
			36			200
						220
25	6	7	27	10	22	100
						120
						140
						160
						180
			36			200
						220
						250
			46			280
27	6	7	27	10	24	100
						120
						140
						160
						180
			36			200
						220
						250
			46			280

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

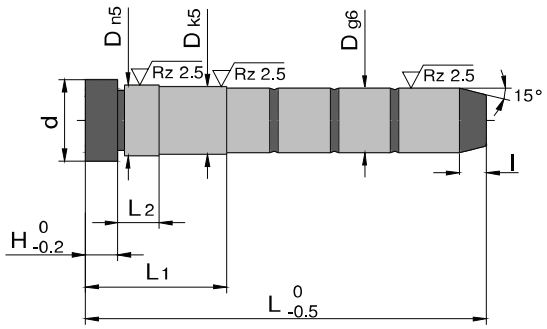
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR081 Ø30/120

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR081



d	H	l	L1	L2	D	L
35	6	7	36	10	**30**	**120**
						140
						160
						180
						200
						220
						250
			46			**280**
						320
			56			**360**
37	6	7	36	10	**32**	**120**
						140
						160
						180
						200
						220
						250
			46			**280**
						320
			56			**360**
45	10	10	46	15	**40**	**160**
						180
						200
						220
						250
						280
			56			**320**
						360
			66			**400**
						450

d	H	l	L1	L2	D	L
47	10	10	46	15	**42**	**160**
						180
						200
						220
						250
						280
			56			**320**
						360
			66			**400**
						450
55	10	10	56	15	**50**	**200**
						250
						280
						320
			66			**360**
						400
			76			**450**
						500
57	10	10	56	15	**52**	**200**
						250
						280
						320
			66			**360**
						400
			76			**450**
						500

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

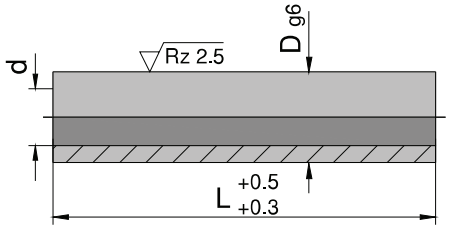
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR09 Ø10/20

Distanziali
Spacers
Do ville de centrage
Zentrier hilse

NR09



d	D	L
6,2	10	20
		30
		40
		50
		60
		70
		80
		100
		120
		140
8,5	14	30
		40
		50
		60
		70
		80
		100
		120
		140
		160
		180
10,5	18	40
		60
		80
		100
		120
		140
		160
		180
		200
		220
		240

d	D	L
13,0	24	60
		80
		100
		120
		140
		160
		180
		200
		240
17,0	30	80
		100
		120
		140
		160
		180
		200
		220
		240
		260
		280
		300

Misure fuori catalogo a richiesta
Special sizes available on request
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Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

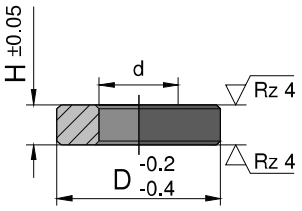
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR091 Ø14

Dischi per distanziali NR09
Disc for spacers NR09
Disques pour douvilles NR09
Distanzheit für NR 09

NR091



d	H	D
6,2	**3**	**14**
8,5	**4**	**18**
10,5	**5**	**24**
13,0	**6**	**30**
17,0	**8**	**40**

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

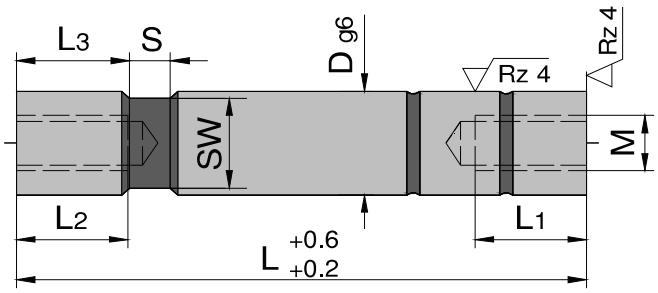
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR10 Ø10/60

Perni d'espulsione
Ejection pins
Goupilles d'éjection
Ruck Auswerfer

NR10



L1	L2	L3	M	S	SW	D	L
10	16	14	6	8	8	**10**	**60**
							70
							80
							100
							120
							140
							160
17	25	14	8	8	12	**14**	**60**
							70
							80
							100
							120
							140
							160
							180
							200
20	30	16	10	8	14	**18**	**70**
							80
							100
							120
							140
							160
							180
							200
							220
							240
20	30	16	12	8	14	**18**	**70**
							80
							100
							120
							140
							160
							180
							200
							220
							240

L1	L2	L3	M	S	SW	D	L
20	30	16	12	10	17	**20**	**70**
							80
							100
							120
							140
							160
							180
							200
							220
							240
25	35	22	12	12	19	**24**	**70**
							80
							100
							120
							140
							160
							180
							200
							220
							240
							260
							280
30	45	28	16	16	24	**30**	**100**
							120
							140
							160
							180
							200
							220
							260
							300
							340
35	55	36	20	20	36	**40**	**160**
							180
							200
							220
							240
							260
							300
							340
							380

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

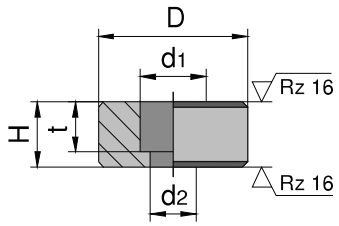
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR101 Ø15

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole di fissaggio per perni NR10
Fixing bushes for ejection pins
Bagues de fixage pour goupilles d'éjection
Druckscheibe für ausstoßerführung

NR101



d1	d2	t	H	D
11,0	6,6	8,4	10	**15**
14,5	9,0	11,0	14	**22**
17,5	11,0	13,5	20	**36**
20,0	14,0	15,5	25	**46**
26,0	18,0	21,0	32	**56**

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

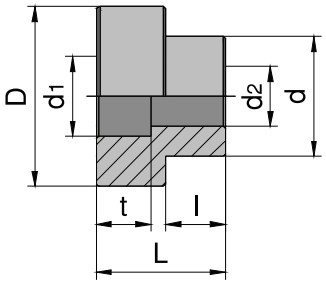
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR102 Ø40/7

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole di fissaggio per perni NR10
Fixing bushes for ejection pins
Bagues de fixage pour goupilles d'éjection
Druckscheibe für ausstoßerführung

NR102



t	d	d1	d2	L	D	l
11	25	18	10,5	27	**40**	**7**
11	25	18	10,5	27	**40**	**12**
13	31	20	13,0	32	**48**	**8**
13	31	20	13,0	32	**48**	**17**
17,5	39	26	17	34	**58**	**9**
17,5	39	26	17	34	**58**	**19**

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

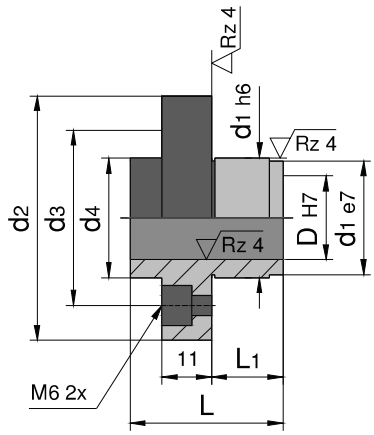
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR11 Ø14

Bussola guida per dispositivo d'estrazione
Guide bushes for pusher guide
Douilles de guidage pour guide de démoulage
Führungsbuchsen für Schieberführung

NR11



L1	L	d4	d3	d2	d1	D
12	29	19	32	46	18	**14**
16	34	25	38	52	24	**18**
21	40	31	44	58	30	**24**
26	46	39	52	68	38	**30**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

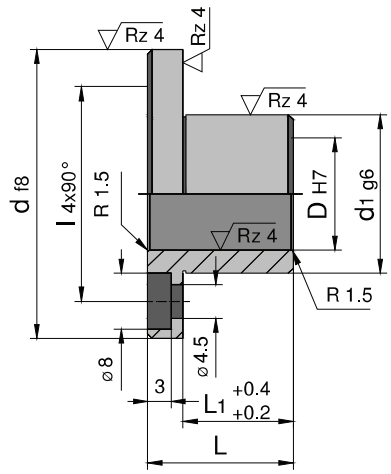
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR12 Ø10/17/40

Bussola guida per dispositivo d'estrazione
Guide bushes for pusher guide
Douilles de guidage pour guide de démoulage
Führungsbuchsen für Schieberführung

NR12



l	d1	S	L1	D	L	d
30	22	-	11,9	**10**	**17**	**40**
30	22	-	11,9	**14**	**17**	**40**
30	22	-	16,9	**10**	**22**	**40**
30	22	-	16,9	**14**	**22**	**40**
30	22	-	11,9	**14**	**17**	**60**
30	22	-	16,9	**14**	**22**	**60**
50	32	-	22,0	**18**	**27**	**100**
50	32	-	31,0	**20**	**36**	**100**
50	32	-	31,0	**24**	**36**	**100**
50	32	-	22,0	**18**	**27**	**110**
50	32	-	31,0	**20**	**36**	**110**
50	32	-	31,0	**24**	**36**	**110**
50	32	-	22,0	**18**	**27**	**125**
50	32	-	31,0	**20**	**36**	**125**
50	32	-	31,0	**24**	**36**	**125**
30	22	3	14,9	**10**	**20**	**40**
30	22	3	14,9	**14**	**20**	**40**
30	22	3	14,9	**14**	**20**	**60**
30	22	3	19,9	**14**	**25**	**60**
30	22	3	21,9	**14**	**27**	**60**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

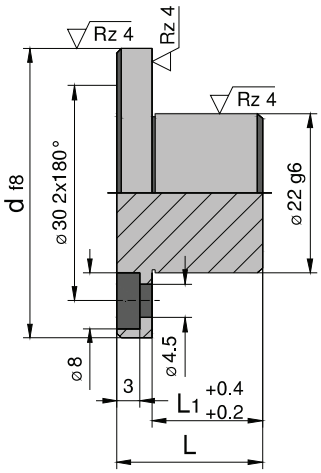
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR121 17/40

Bussola guida per dispositivo d'estrazione
Guide bushes for pusher guide
Douilles de guidage pour guide de démoulage
Führungsbuchsen für Schieberführung

NR121

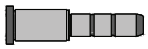
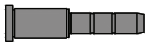
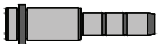
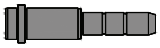
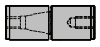
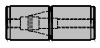
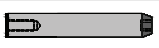


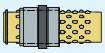
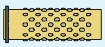
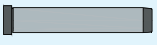
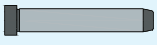
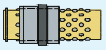
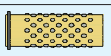
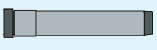
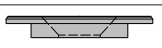
S	L1	L	D
-	12	**17**	**40**
-	12	**17**	**60**
3	15	**20**	**40**
5	17	**22**	**40**
3	15	**20**	**60**
5	17	**22**	**60**
3	20	**25**	**60**
5	22	**27**	**60**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	 Bronzo *Bronze*	2
NR04		2
NR045	 Bronzo *Bronze*	2
NR046	 Bronzo *Bronze*	3
NR047	 Bronzo *Bronze*	3
NR048	 Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	 R 15,5 t=1,5	10
NR32	 R 40 t=1,5	10
NR33	 R 15,5 t=1,5	10
NR34	 R 40 t=1,5	10
NR40		10
NR41		10
NR50	 600 N/mm²	11
NR51	 600 N/mm²	11
NR54	 600 N/mm²	11
NR55	 600 N/mm²	11
NR52	 330 N/mm²	12
NR53	 330 N/mm²	12
NR56	 330 N/mm²	12
NR57	 330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV / Ottone

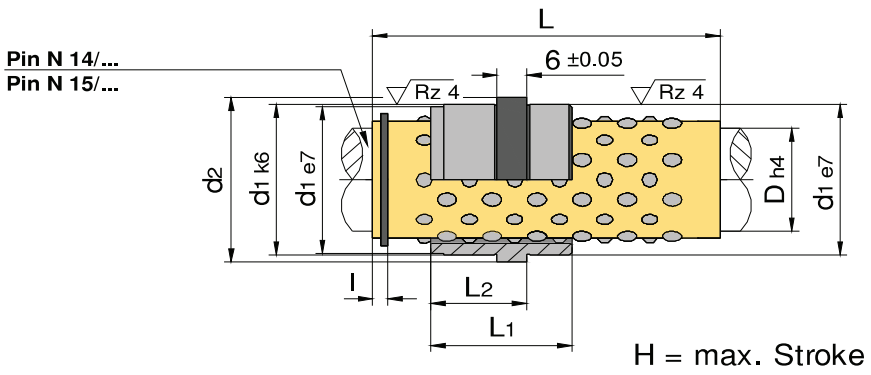
Unità di guida a sfera
Ball guiding complete
Unité de guidage avec cage à bille
Führungseinheit mit KugelKäfige

NR13

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR13 Ø12/40



l	d1	d2	L1	L2	H	D	L
2,5	22	26	24	18	50	**12**	**40**
					82		**56**
2,8	30	35	34	23	44	**18**	**45**
					66		**56**
					96		**71**
4,8	46	52	54	33	32	**30**	**56**
					70		**75**
					110		**95**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

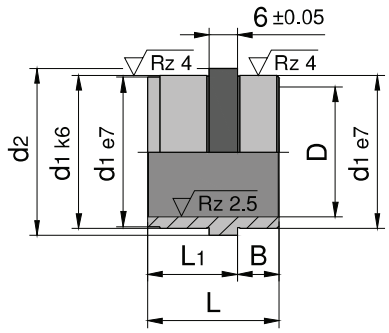
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR130 Ø16

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole per unità di guida a sfera NR13
Bushes for ball units NR13
Bagues pour unité de guidage NR13
Buchsen für Führungseinheit NR13

NR130



d1	d2	B	L1	L	D
22	26	6	18	24	**16**
30	35	11	23	34	**24**
46	52	21	33	54	**38**

Acciaio
Steel
Acier
Werkstoff

Ottone

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

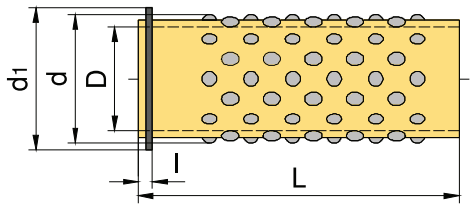
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR131 Ø12/40

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Gabbie a sfere per unità NR13
Ball cages for ball units NR13
Cages a bille pour unité NR13
Kugelkäfige für Führungseinheit NR13

NR131



l	d	d1	D	L
2,5	16	20,5	**12**	**40**
				56
2,8	24	28,6	**18**	**45**
				56
				71
4,8	38	43,5	**30**	**56**
				75
				95

Acciaio
Steel
Acier
Werkstoff

1.7139 + Ottone / Brass

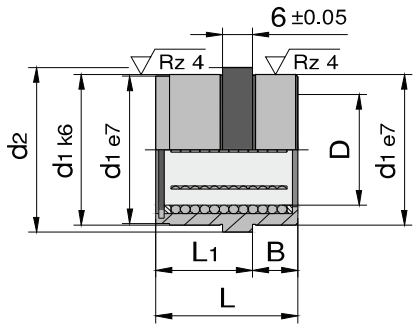
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR1310 Ø12/17/9

Bussole a ricircolo di sfere per tavolino estrazione
Recirculating ball bushing
Roulement à billes lineaire
Endlos Kugelfuhrinken

NR1310



d1	d2	L	D	L1	B
24	28	26	**26**	**17**	**9**
32	36	39	**39**	**22**	**17**
39	43	29	**29**	**17**	**12**
50	54	39	**39**	**22**	**17**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

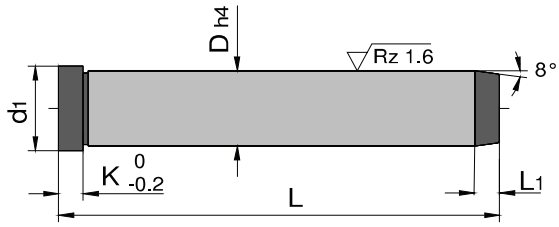
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR14 Ø12/80

Colonne guida tavolini per stampi plastica
Guide pillars for ejector set
Colonnes de guidage
Führungssäulen

NR14



K	L1	d1	D	L
4	4	16	**12**	**80**
				100
				120
				140
6	7	22	**18**	**80**
				100
				120
				140
				160
				180
				200
				240
6	7	35	**30**	**160**
				200
				240
				280
				300

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

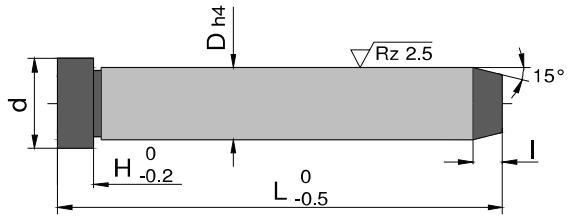
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR140 Ø9/60

Colonne guida tavolini per stampi plastica
Guide pillars for ejector set
Colonnes de guidage
Führungssäulen

NR140



d	l	H	D	L
12	4	3	**9**	**60**
				80
				100
				120
16	5	6	**12**	**60**
				80
				100
				120
				140
				160
18	5	8	**14**	**60**
				80
				100
				120
				140
				160
				180
22	7	8	**18**	**80**
				100
				120
				140
				160
				180
				200
				240

d	l	H	D	L
28	7	15	**24**	**100**
				120
				140
				160
				180
				200
				220
				240
				300
36	7	15	**30**	**100**
				120
				160
				200
				240
				300
				360
36	7	15	**32**	**100**
				120
				160
				200
				240
				300
				360

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

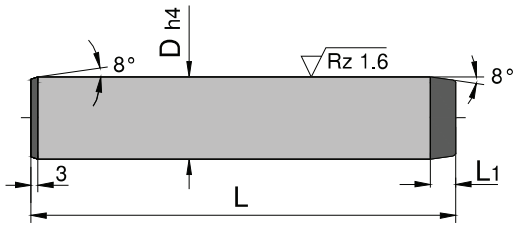
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR15 Ø12/80

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR15



L1	D	L
4	12	80
		100
		125
7	18	100
		125
		140
		160
		180
		200
7	30	160
		240

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 Ottone / Brass

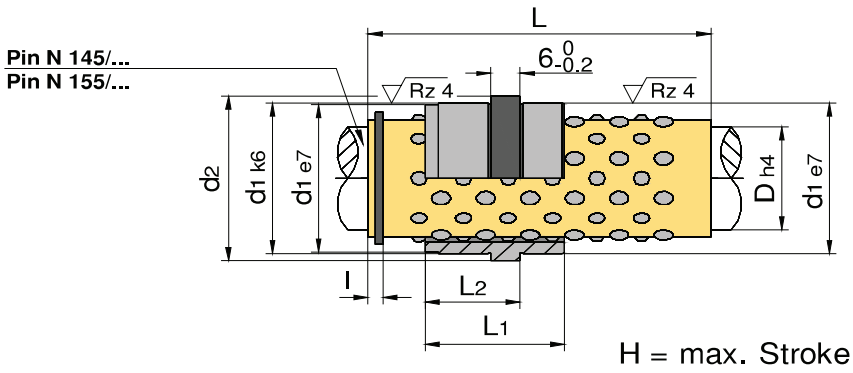
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR135 Ø12/35

Unità di guida a sfera
Ball guiding complete
Unité de guidage avec cage à bille
Führungseinheit mit KugelKäfige

NR135



l	d1	d2	L1	L2	H	D	L
2,5	22	25	26	17	35	12	**35**
					55		**48**
					80		**56**
2,8	30	33	34	22	45	18	**45**
					65		**56**
					90		**71**

l	d1	d2	L1	L2	H	D	L
2,8	38	41	44	27	45	24	**50**
					75		**70**
					105		**84**
4,8	46	49	54	32	32	30	**56**
					55		**70**
					95		**95**
					135		**110**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

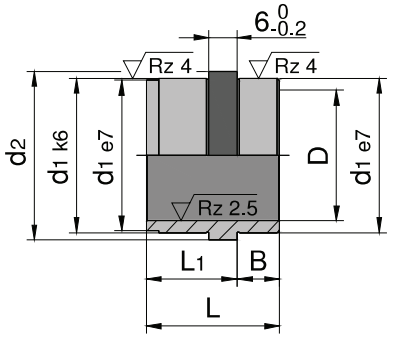
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR1305 Ø17

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Bussole per unità di guida a sfera NR135
Bushes for ball units NR135
Bagues pour unité de guidage NR135
Buchsen für Führungseinheit NR135

NR135



d1	d2	B	L1	L	D
22	25	9	17	26	**17**
30	33	12	22	34	**24**
38	41	17	27	44	**30**
46	49	22	32	54	**38**

Acciaio
Steel
Acier
Werkstoff

Brass

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

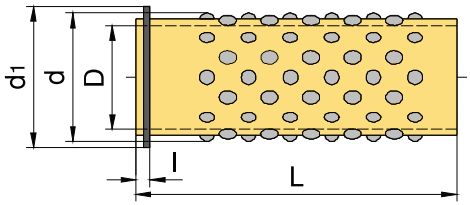
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR1315 Ø12/35

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Gabbie a sfere per unità NR135
Ball cages for ball units NR135
Cages a bille pour unité NR135
Kugelkäfige für Führungseinheit NR135

NR1315



l	d	d1	D	L
2,5	17	20,5	**12**	**35**
				48
				56
2,8	24	28,6	**18**	**45**
				56
				71
2,8	30	35,7	24	**50**
				70
				84
4,8	38	43,5	30	**56**
				70
				95
				110

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

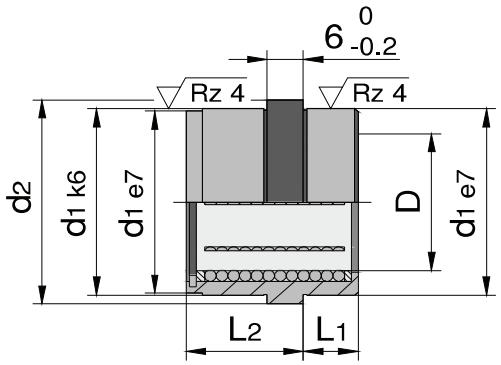
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR1320 Ø10/9/12

Bussole a ricircolo di sfere
Recirculating ball bushing
Roulement à billes lineaire
Endlos Kugelfuhrinken

NR1320



d1	d2	L	D	L1	B
24	28	26	**12**	**17**	**9**
32	36	39	**18**	**22**	**17**
39	43	29	**24**	**17**	**12**
50	54	39	**30**	**22**	**17**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

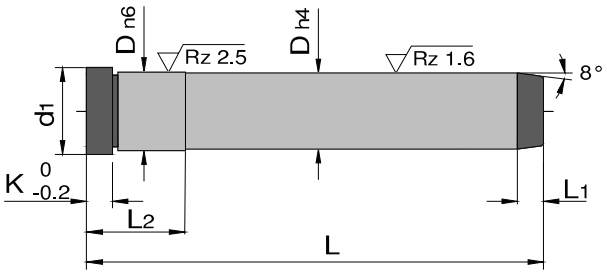
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR145 Ø10/60

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR145



K	L1	L2	d1	D	L
3	4	12	12	**10**	**60**
					80
					100
					120
					140
4	4	17	15	**12**	**80**
					100
					120
					140
					160
6	5	22	21	**18**	**80**
					100
					120
					140
					160
					180
6	6	27	27	**24**	**100**
					120
					140
					160
					180
					200
6	7	36	35	**30**	**140**
					160
					180
					200
					250

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

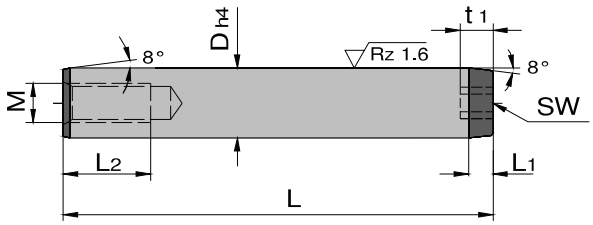
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR155 Ø10/60

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Colonne guida per stampi plastica
Guide pillars for plastic moulds
Colonnes de guidage
Führungssäulen

NR155



M	L1	L2	SW	T1	D	L
6	4	16	4	4	**10**	**60**
						80
						100
						120
						140
8	4	17	5	5	**12**	**80**
						100
						120
						140
						160
10	5	20	6	6	**18**	**80**
						100
						120
						140
						160
						180
12	6	25	8	8	**24**	**100**
						120
						140
						160
						180
						200
16	7	30	8	8	**30**	**140**
						160
						180
						200
						250

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

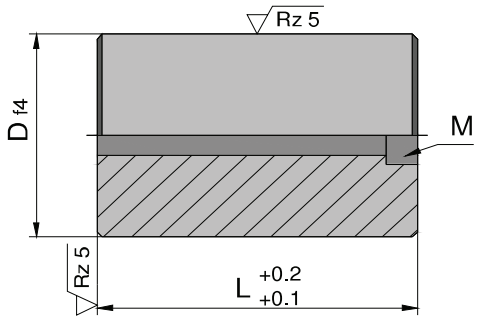
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR165 Ø24/50

Distanziali
Support pillars
Colonnes de guidage
Stützbolzen

NR165



M	D	L
M8	24	50
		60
		70
		80
		90
		100
		120
		140
		160
		180
M10	36	50
		60
		70
		80
		90
		100
		120
		140
		160
		180
M12	48	60
		70
		80
		90
		100
		120
		140
		160
		180

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Materiale
Material

Bronze

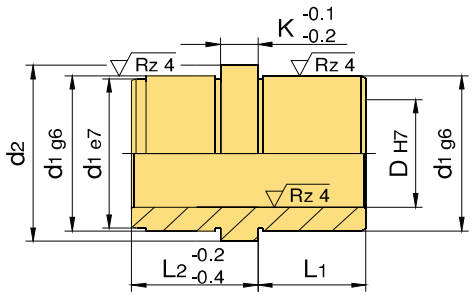
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR166 Ø24/9/17

Bussole di guida con collare in bronzo
Headed guide bushes made of bronze
Bagues a collarette en bronze
Führungsbuchsen mit bund aus messing

NR166



K	d1	d2	D	L1	L2
5	32	36	**24**	**9**	**17**
5	32	36	**24**	**12**	**17**
5	32	36	**24**	**6**	**20**
5	44	48	**36**	**12**	**17**
5	44	48	**36**	**12**	**22**
5	44	48	**36**	**17**	**22**
5	44	48	**36**	**6**	**24**
6	58	62	**48**	**17**	**22**
6	58	62	**48**	**17**	**27**
6	58	62	**48**	**10**	**30**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 + Ottone / Brass

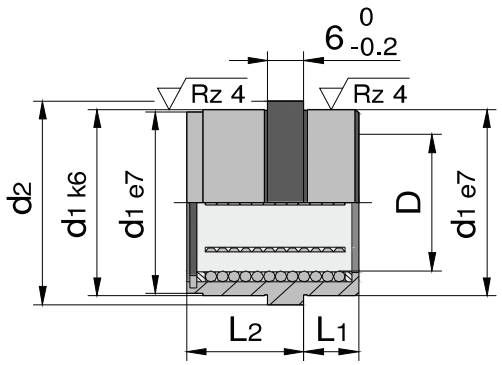
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR167 Ø24/12/17

Bussole a ricircolo di sfere
Recirculating ball bushing
Roulement à billes lineaire
Endlos Kugelfuhrinken

NR167

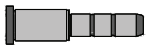
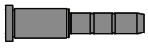
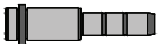
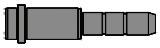
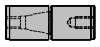
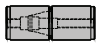
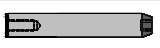
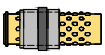
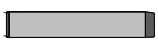
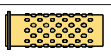
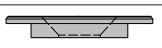


d1	d2	D	L1	L2
38	41	**24**	**12**	**17**
38	41	**24**	**17**	**22**
54	58	**36**	**17**	**22**
54	58	**36**	**22**	**27**
68	73	**48**	**22**	**27**
68	73	**48**	**27**	**36**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	 Bronzo *Bronze*	2
NR04		2
NR045	 Bronzo *Bronze*	2
NR046	 Bronzo *Bronze*	3
NR047	 Bronzo *Bronze*	3
NR048	 Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	 R 15,5 t=1,5	10
NR32	 R 40 t=1,5	10
NR33	 R 15,5 t=1,5	10
NR34	 R 40 t=1,5	10
NR40		10
NR41		10
NR50	 600 N/mm²	11
NR51	 600 N/mm²	11
NR54	 600 N/mm²	11
NR55	 600 N/mm²	11
NR52	 330 N/mm²	12
NR53	 330 N/mm²	12
NR56	 330 N/mm²	12
NR57	 330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.7139

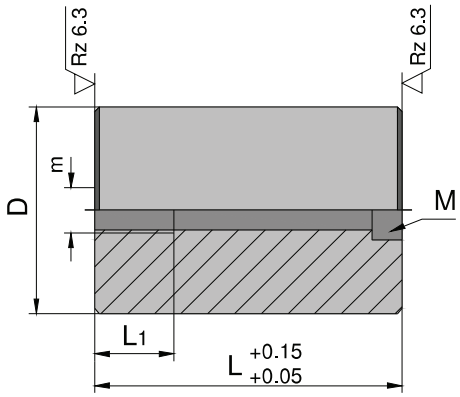
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR16 Ø32/467

Distanziali
Support pillars
Colonnes de guidage
Stützbolzen

NR16



M	m	L1	D	L
M6	M8	15	**32**	**46**
				56
				66
				76
				86
				96
				116
				136
M8	M10	20	**40**	**46**
				56
				66
				76
				86
				96
				116
				136
				156
M8	M10	20	**50**	**46**
				56
				66
				76
				86
				96
				116
				136
				156
M8	M10	20	**60**	**56**
				66
				76
				86
				96
				116
				136
				156
				176

M	m	L1	D	L
M8	M10	20	**63**	**56**
				66
				76
				86
				96
				116
				136
				156
M10	M12	25	**70**	**66**
				76
				86
				96
				116
				136
				156
				176
M10	M12	25	**80**	**66**
				76
				86
				96
				116
				136
				156
				176
				196
M10	M12	25	**100**	**96**
				116
				136
				156
				176
				196
				236
				276

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 700HV

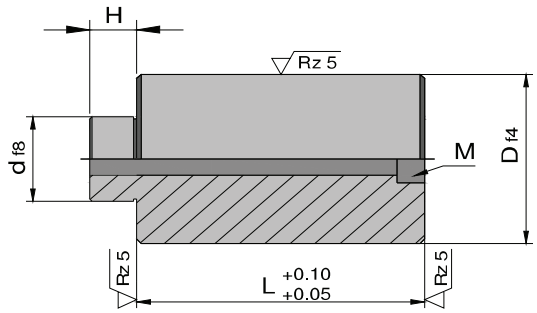
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR161 Ø24/36

Distanziali
Support pillars
Colonnes de guidage
Stützbolzen

NR161



M	H	d	D	L
M8	7	14	**24**	**36**
				46
				56
				66
				76
				86
				96
				116
M10	9	18	**36**	**46**
				56
				66
				76
				86
				96
				116
				136
M12	10	20	**48**	**46**
				56
				66
				76
				86
				96
				116
				136
				156

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 980 N/mm²

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

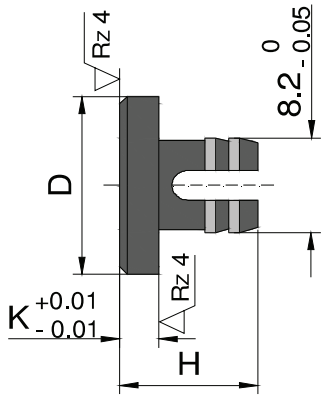
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR17 Ø16

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Piedini appoggio tavolino con spina elastica
Buffer plates with sprin clutches for ejector set
Butées avec griffes à ressort pour éjection
Anschlagplatichen mit Federkrallen für Auswerfen paket

NR17



H	K	D
11	3	**16**
12	4	**20**

H	K	D
11	3	**25**
12	4	**30**

Acciaio
Steel
Acier
Werkstoff

1.7139 ca. 980 N/mm²

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

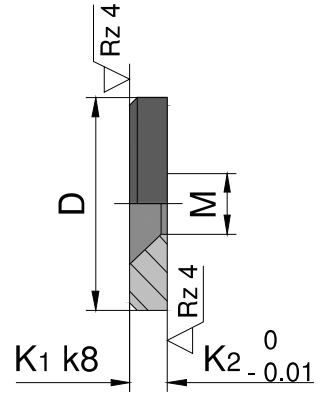
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR18 Ø18

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Piedini appoggio tavolino
Buffer discs for ejector set
Butées pour batterie d'éjection
Anschlagplatichen für Auswerfen paket

NR18

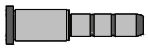
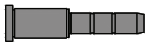
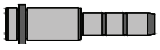
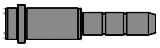
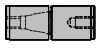
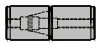
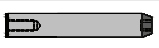


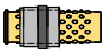
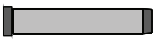
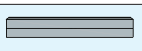
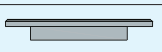
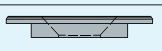
M	K1	D
M4	3	**18**
M4	3	**28**

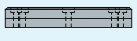
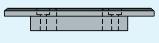
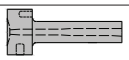
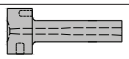
M	K1	D
M5	4	**20**
M5	4	**30**

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	 Bronzo *Bronze*	2
NR04		2
NR045	 Bronzo *Bronze*	2
NR046	 Bronzo *Bronze*	3
NR047	 Bronzo *Bronze*	3
NR048	 Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	 R 15,5 t=1,5	10
NR32	 R 40 t=1,5	10
NR33	 R 15,5 t=1,5	10
NR34	 R 40 t=1,5	10
NR40		10
NR41		10
NR50	 600 N/mm²	11
NR51	 600 N/mm²	11
NR54	 600 N/mm²	11
NR55	 600 N/mm²	11
NR52	 330 N/mm²	12
NR53	 330 N/mm²	12
NR56	 330 N/mm²	12
NR57	 330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.1191

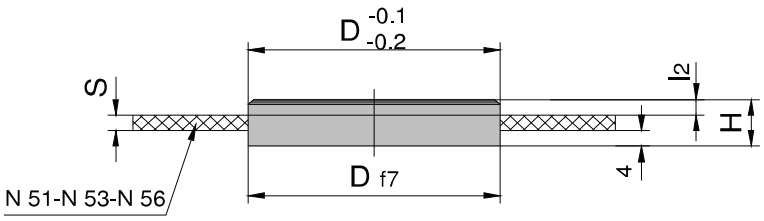
Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR19

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR19 Ø40/6



S	l2	D	H
-	-	40	6
3			9
-	4	60	8
3			11
5			13
-	4	80	8
3	8		15
5			17
-	8	90	12
3			15
5			17
6			18
7			19
8,5	8,5		21
-	4	100	8
-	8		12
6			18
8,5	8,5		21
-	8	110	12
6			18
8,5	8,5		21
-	8	120	12
8,5	8,5		21

S	l2	D	H
-	4	125	8
-	8		12
6			18
8			20
8,5	8,5		21
-	8	130	12
-	8	140	12
-	8	150	12
8,5	8,5		21
-	4	160	8
-	8		12
6	10		20
8			22
8,5	10,5		23
-	8	175	12
8,5	8,5		21
-	8	200	12
5	11		20
8	10		22
8,5	10,5		23
-	8	250	12
8	10		22
8,5	10,5		23

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

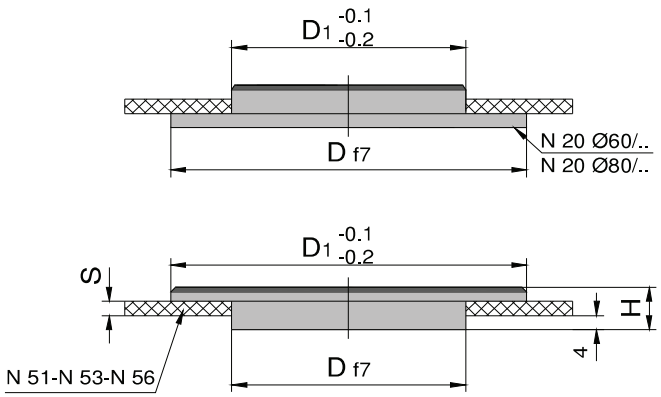
Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR20

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR20 Ø60/8



S	D	D1	H
-	90	**60**	**8**
3			**11**
5			**13**
6			**14**
-	90	**80**	**12**
3			**15**
5			**17**
-	90	**100**	**8**
-			**12**
3			**15**
5			**17**
6			**18**
7			**19**
8,5			**21**
-	90	**110**	**12**
3			**15**
5			**17**
6			**18**
7			**19**
8			**20**
8,5			**21**
-	90	**120**	**12**
3			**15**
5			**17**
6			**18**
7			**19**
8			**20**
8,5			**21**

S	D	D1	H
-	90	**125**	**12**
3			**15**
5			**17**
6			**18**
7			**19**
8			**20**
8,5			**21**
-	90	**140**	**12**
-	90	**150**	**12**
-	90	**160**	**12**
3			**15**
5			**17**
6			**18**
7			**19**
8			**20**
8,5			**21**
-	90	**175**	**12**
3			**15**
5			**17**
6			**18**
7			**19**
8			**20**
8,5			**21**
-	90	**200**	**12**
8	160		**22**
-	90	**250**	**12**
8	160		**22**

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Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

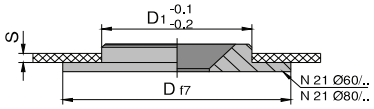
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

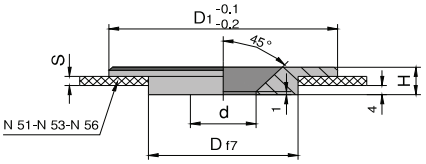
1 Pezzo
1 Piece
1 Pièce
1 Stück

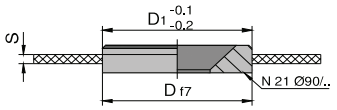
NR21 Ø60/8

Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR21







S	d	D	D1	H
-	36	90	**60**	**8**
3	26			**11**
5	26			**13**
6	26			**14**
-	36	90	**80**	**12**
3	26			**15**
5	26			**17**
-	36	90	**90**	**12**
3				**15**
5				**17**
6				**18**
7				**19**
8,5				**21**
-	36	90	**100**	**8**
-				**12**
3				**15**
5				**17**
6				**18**
7				**19**
8,5				**21**
-	36	90	**110**	**12**
3				**15**
5				**17**
6				**18**
7				**19**
8				**20**
8,5				**21**
-	36	90	**120**	**12**
3				**15**
5				**17**
6				**18**
7				**19**
8				**20**
8,5				**21**

S	d	D	D1	H
-	36	90	**125**	**12**
3				**15**
5				**17**
6				**18**
7				**19**
8				**20**
8,5				**21**
-	36	90	**130**	**12**
-	36	90	**140**	**12**
-	36	90	**150**	**12**
-	36	90	**160**	**12**
3				**15**
5				**17**
6				**18**
7				**19**
8				**20**
8,5				**21**
-	36	90	**175**	**12**
3				**15**
5				**17**
6				**18**
7				**19**
8				**20**
8,5				**21**
-	36	90	**180**	**12**
-	36	90	**200**	**12**
-	36	90	**250**	**12**

Misure fuori catalogo
a richiesta
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Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

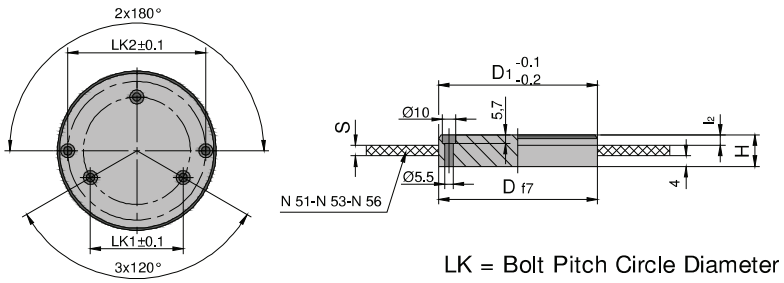
Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR22

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR22 Ø60/8



LK = Bolt Pitch Circle Diameter

S	l2	LK1	LK2	D	H
-	4	48	48	**60**	**8**
3					**11**
5					**13**
-	4	68	-	**80**	**8**
3	8				**15**
5					**17**
-	8	78	76	**90**	**12**
3					**15**
5					**17**
6					**18**
7					**19**
8,5	8,5				**21**
-	4	82	82	**100**	**8**
-	8				**12**
6					**18**
8,5	8,5				**21**
-	8	90	90	**110**	**12**
6					**18**
8,5	8,5				**21**
-	8	104	104	**120**	**12**
8,5	8,5				**21**

S	l2	LK1	LK2	D	H
-	4	104	104	**125**	**8**
-	8				**12**
6					**18**
8					**20**
8,5	8,5				**21**
-	8	109	-	**130**	**12**
-	8	119	-	**140**	**12**
-	4	144	144	**160**	**8**
-	8				**12**
6	10				**20**
8					**22**
8,5	10,5				**23**
-	8	144	-	**175**	**12**
8,5	8,5				**21**
-	8	144	144	**200**	**12**
5	11				**20**
8	10				**22**
8,5	10,5				**23**
-	8	194	194	**250**	**12**
8	10				**22**
8,5	10,5				**23**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

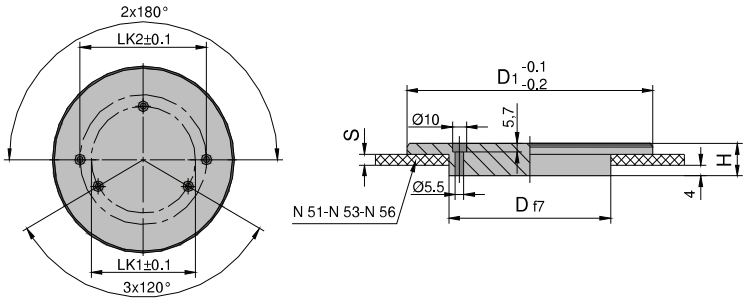
Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR23

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR23 Ø100/8



LK = Bolt Pitch Circle Diameter

S	LK1	LK2	D	D1	H
-	78	-	90	**100**	**8**
-		82			**12**
3					**15**
5					**17**
6					**18**
7					**19**
8,5					**21**
-	78	98	90	**110**	**12**
3					**15**
5					**17**
6					**18**
7					**19**
8					**20**
8,5					**21**
-	78	104	90	**120**	**12**
3					**15**
5					**17**
6					**18**
7					**19**
8					**20**
8,5					**21**
-	78	104	90	**125**	**12**
3					**15**
5					**17**
6					**18**
7					**19**
8					**20**
8,5					**21**

S	LK1	LK2	D	D1	H
-	78	-	90	**140**	**12**
-	78	-	90	**150**	**12**
-	78	128	90	**160**	**12**
3					**15**
5					**17**
6					**18**
7					**19**
8					**20**
8,5					**21**
-	78	128	90	**175**	**12**
3					**15**
5					**17**
6					**18**
7					**19**
8					**20**
8,5					**21**
-	78	144	90	**200**	**12**
-	78	144	90	**250**	**12**

Misure fuori catalogo
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Special sizes available
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Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

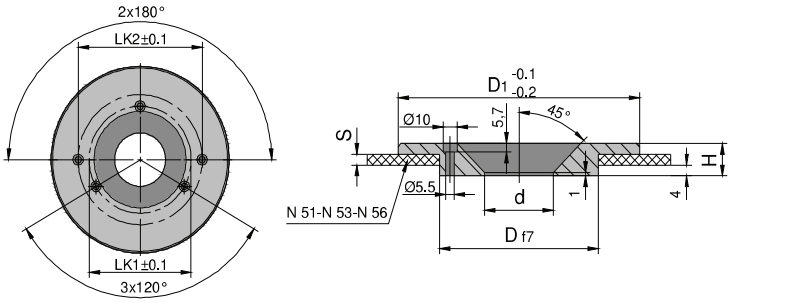
Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR24

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR24 Ø90/12



LK = Bolt Pitch Circle Diameter

S	LK1	LK2	d	D	D1	H
-	78	76	36	90	**90**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8,5						**21**
-	78	-	36	90	**100**	**8**
-	78	82	36	90	**100**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8,5						**21**
-	78	98	36	90	**110**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8						**20**
8,5						**21**
-	78	104	36	90	**120**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8						**20**
8,5						**21**

S	LK1	LK2	d	D	D1	H
-	78	104	36	90	**125**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8						**20**
8,5						**21**
-	78	-	36	90	**130**	**12**
-	78	-	36	90	**140**	**12**
-	78	-	36	90	**150**	**12**
-	78	128	36	90	**160**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8						**20**
8,5						**21**
-	78	128	36	90	**175**	**12**
3						**15**
5						**17**
6						**18**
7						**19**
8						**20**
8,5						**21**
-	78	-	36	90	**180**	**12**
-	78	-	36	90	**200**	**12**
-	78	-	36	90	**250**	**12**

Misure fuori catalogo
a richiesta
Special sizes available
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Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

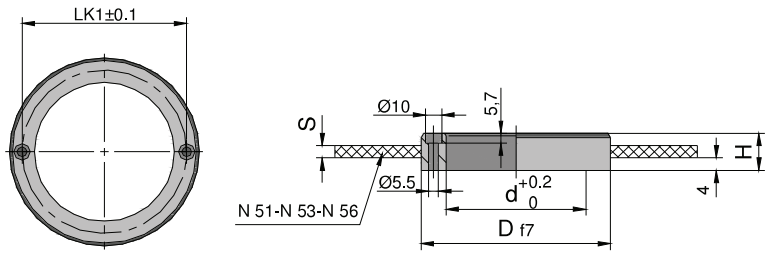
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR25 Ø125/12

Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR25



LK = Bolt Pitch Circle Diameter

S	LK1	d	D	H
-	104	82	**125**	**12**
6				**18**
8				**20**
-	144	120	**160**	**14**
6				**20**
8				**22**

S	LK1	d	D	H
-	144	120	**200**	**14**
8				**22**
-	144	120	**250**	**14**
8				**22**
6				**20**
8				**22**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.1191

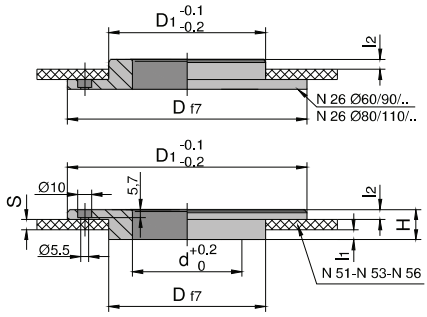
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

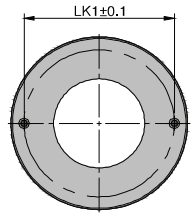
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR26 Ø60/90/18

Anelli di centraggio
Locating ring
Bagues de centrage
Zentrierscheiben

NR26





LK = Bolt Pitch Circle Diameter

l1	l2	S	LK1	d	D1	D	H
8	10	-	75	50	**60**	**90**	**18**
		6					**24**
		8					**26**
4	8	-	98	82	**110**	**90**	**12**
		6					**18**
		8					**20**
4	8	-	104	82	**120**	**90**	**12**
		6					**18**
		8					**20**
4	8	-	104	82	**125**	**90**	**12**
		6					**18**
		8					**20**
4	8	-	104	82	**160**	**90**	**12**
		6					**18**
		8					**20**

l1	l2	S	LK1	d	D1	D	H
4	8	-	104	82	**175**	**90**	**12**
		6					**18**
		8					**20**
8	10	-	95	70	**80**	**110**	**18**
		6					**24**
		8					**26**
4	10	-	144	120	**175**	**160**	**14**
		6					**20**
		8					**22**
4	10	-	144	120	**200**	**160**	**14**
		8					**22**
4	10	-	144	120	**250**	**160**	**14**
		8					**22**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Normalizzati per costruzione stampi plastica e pressofusione
Standard parts for tool making and mould construction

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

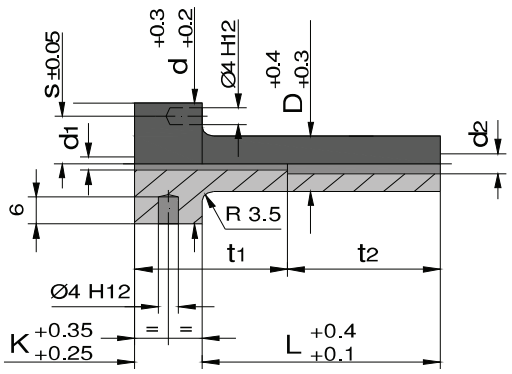
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR30 Ø12/22/R

Bussole d'iniezione
Sprue bushings
Buses d'injection
Angussbuchsen

NR30R



s	K	d	d1	t1	d2	t2	D	L
11	13	28	2,0	35	-	-	12	**22**
				40				**27**
				49				**36**
			2,0		2,5	10		**46**
						20		**56**
						30		**66**
						40		**76**
15	18	38	2,0	45	-	-	18	**27**
				54				**36**
			2,0	49	2,5	15		**46**
						25		**56**
						35		**66**
						45		**76**
						55		**86**
						65		**96**
						85		**116**
20	23	48	3,5	69	-	-	24	**46**
				79				**56**
				89				**66**
				99				**76**
				109				**86**
				119				**96**
				139				**116**
				159				**136**

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

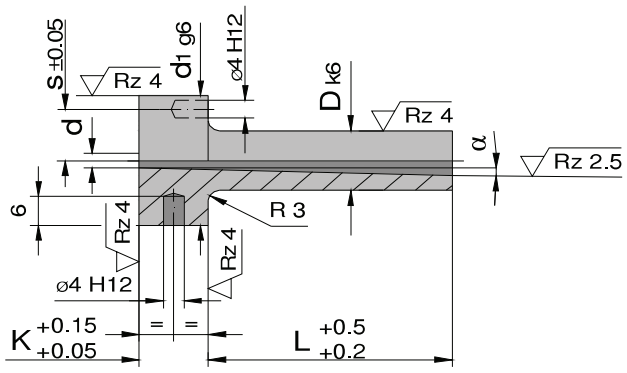
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR30 Ø12/22/2.5/0,5°

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Bussole d'iniezione α = 0,5° / 1,0° / 1,5°
Sprue bushings α = 0,5° / 1,0° / 1,5°
Buses d'injection α = 0,5° / 1,0° / 1,5°
Angussbuchsen α = 0,5° / 1,0° / 1,5°

NR30



α	s	K	d1	D	L	d
0,5°	11	13	28	**12**	**22**	**2,5**
					27	
					36	
					46	
					56	
0,5°	11	13	28	**12**	**27**	**3,5**
					36	
					46	
					56	
					66	
					76	
0,5°	15	18	38	**18**	**46**	**3**
					56	
					66	
					76	
					86	
					96	
					116	
0,5°	15	18	38	**18**	**46**	**4**
					56	
					66	
					76	
					86	
					96	
					116	
1°	11	13	28	**12**	**22**	**2,5**
					27	
					36	
					46	
					56	
1°	11	13	28	**12**	**22**	**3**
					27	
					36	
					46	
					56	
					66	
1°	11	13	28	**12**	**22**	**3,5**
					27	
					36	
					46	
					56	

α	s	K	d1	D	L	d
1°	15	18	38	**18**	**27**	**3**
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	15	18	38	**18**	**27**	**4**
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	20	23	48	**24**	**46**	**5**
					56	
					66	
					76	
					86	
					96	
					116	
					136	
1,5°	15	18	38	**18**	**27**	**3,5**
					36	
					46	
					56	
1,5°	15	18	38	**18**	**27**	**4,5**
					36	
					46	
					56	
					76	
1,5°	20	23	48	**24**	**46**	**4,5**
					56	
					76	
1,5°	20	23	48	**24**	**56**	**6,5**
					76	

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

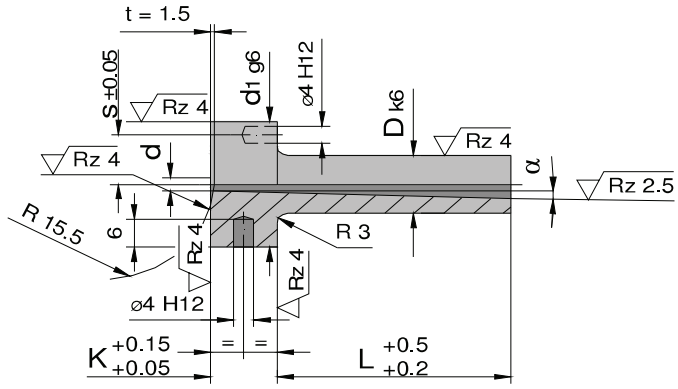
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR31 Ø12/27/2,5/0,5°

Bussole iniezione con raggio 15,5 α = 0,5° / 1,0° / 1,5°
Sprue bushings with radius 15,5 α = 0,5° / 1,0° / 1,5°
Buses d'injection avec rayon 15,5 α = 0,5° / 1,0° / 1,5°
Angussbuchsen mit radius 15,5 α = 0,5° / 1,0° / 1,5°

NR31



α	s	K	d1	D	L	d
0,5°	11	13	28	12	27	2,5
					36	
					46	
					56	
0,5°	11	13	28	12	27	3,5
					36	
					46	
					56	
					66	
					76	
0,5°	15	18	38	18	46	3
					56	
					66	
					76	
					86	
					96	
					116	
0,5°	15	18	38	18	46	4
					56	
					66	
					76	
					86	
					96	
					116	
1°	11	13	28	12	22	2,5
					27	
					36	
					46	
					56	
1°	11	13	28	12	22	3
					27	
					36	
					46	
					56	
					66	
1°	11	13	28	12	22	3,5
					27	
					36	
					46	
					56	

α	s	K	d1	D	L	d
1°	15	18	38	18	27	3
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	15	18	38	18	27	4
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	20	23	48	24	46	5
					56	
					66	
					76	
					86	
					96	
					116	
					136	
1,5°	15	18	38	18	27	3,5
					36	
					46	
					56	
1,5°	15	18	38	18	27	4,5
					36	
					46	
					56	
					76	
1,5°	20	23	48	24	46	4,5
					56	
					76	
1,5°	20	23	48	24	56	6,5
					76	

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

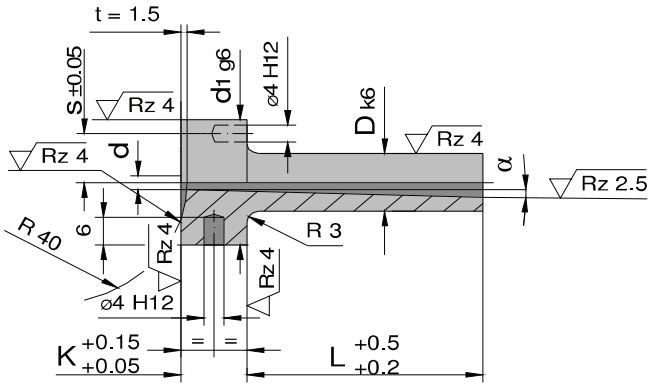
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR32 Ø12/27/2,5/0,5°

Bussole iniezione con raggio 40 α = 0,5° / 1,0° / 1,5°
Sprue bushings with radius 40 α = 0,5° / 1,0° / 1,5°
Buses d'injection avec rayon 40 α = 0,5° / 1,0° / 1,5°
Angussbuchsen mit radius 40 α = 0,5° / 1,0° / 1,5°

NR32



α	s	K	d1	D	L	d
0,5°	11	13	28	**12**	**27**	**2,5**
					36	
					46	
					56	
0,5°	11	13	28	**12**	**27**	**3,5**
					36	
					46	
					56	
					66	
					76	
0,5°	15	18	38	**18**	**46**	**3**
					56	
					66	
					76	
					86	
					96	
					116	
0,5°	15	18	38	**18**	**46**	**4**
					56	
					66	
					76	
					86	
					96	
					116	
1°	11	13	28	**12**	**22**	**2,5**
					27	
					36	
					46	
					56	
1°	11	13	28	**12**	**22**	**3**
					27	
					36	
					46	
					56	
					66	
1°	11	13	28	**12**	**22**	**3,5**
					27	
					36	
					46	
					56	

α	s	K	d1	D	L	d
1°	15	18	38	**18**	**27**	**3**
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	15	18	38	**18**	**27**	**4**
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	20	23	48	**24**	**46**	**5**
					56	
					66	
					76	
					86	
					96	
					116	
					136	
1,5°	15	18	38	**18**	**27**	**3,5**
					36	
					46	
					56	
1,5°	15	18	38	**18**	**27**	**4,5**
					36	
					46	
					56	
					76	
1,5°	20	23	48	**24**	**46**	**4,5**
					56	
					76	
1,5°	20	23	48	**24**	**56**	**6,5**
					76	

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

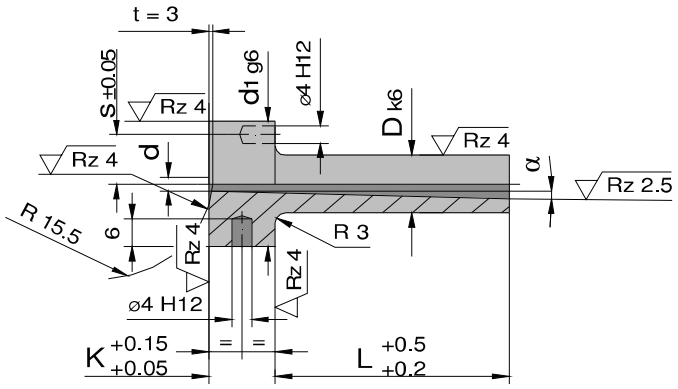
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR33 Ø18/46/3/0,5°

Bussole iniezione con raggio 15,5 α = 0,5° / 1,0° / 1,5°
Sprue bushings with radius 15,5 α = 0,5° / 1,0° / 1,5°
Buses d'injection avec rayon 15,5 α = 0,5° / 1,0° / 1,5°
Angussbuchsen mit radius 15,5 α = 0,5° / 1,0° / 1,5°

NR33



α	s	K	d1	D	L	d
0,5°	15	18	38	18	46	3
					56	
					66	
					76	
					86	
					96	
					116	
0,5°	15	18	38	18	46	4
					56	
					66	
					76	
					86	
					96	
					116	
1°	15	18	38	18	27	3
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	15	18	38	18	27	4
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	

α	s	K	d1	D	L	d
1°	20	23	48	24	46	5
					56	
					66	
					76	
					86	
					96	
					116	
					136	
					136	
1,5°	15	18	38	18	27	3,5
					36	
					46	
					56	
1,5°	15	18	38	18	27	4,5
					36	
					46	
					56	
					76	
1,5°	20	23	48	24	46	4,5
					56	
					76	
1,5°	20	23	48	24	56	6,5
					76	

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

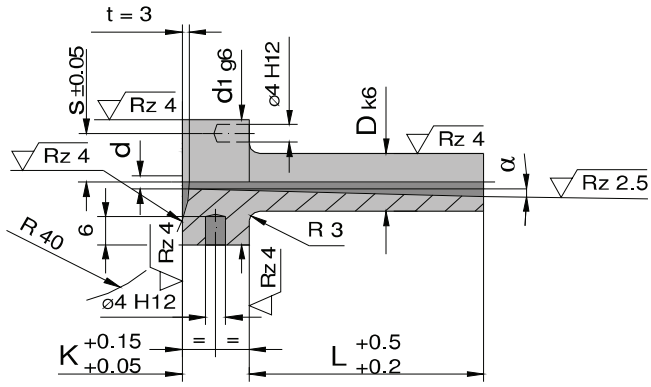
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR34 Ø18/46/3/0,5°

Bussole iniezione con raggio 40 α = 0,5° / 1,0° / 1,5°
Sprue bushings with radius 40 α = 0,5° / 1,0° / 1,5°
Buses d'injection avec rayon 40 α = 0,5° / 1,0° / 1,5°
Angussbuchsen mit radius 40 α = 0,5° / 1,0° / 1,5°

NR34



α	s	K	d1	D	L	d
0,5°	15	18	38	18	46	3
					56	
					66	
					76	
					86	
					96	
					116	
0,5°	15	18	38	18	46	4
					56	
					66	
					76	
					86	
					96	
					116	
					86	
					96	
					116	
1°	15	18	38	18	27	3
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	
1°	15	18	38	18	27	4
					36	
					46	
					56	
					66	
					76	
					86	
					96	
					116	

α	s	K	d1	D	L	d
1°	20	23	48	24	46	5
					56	
					66	
					76	
					86	
					96	
					116	
					136	
1,5°	15	18	38	18	27	3,5
					36	
					46	
					56	
1,5°	15	18	38	18	27	4,5
					36	
					46	
					56	
					76	
1,5°	20	23	48	24	46	4,5
					56	
					76	
1,5°	20	23	48	24	56	6,5
					76	

Misure fuori catalogo a richiesta
Special sizes available on request
Dimensions spécifiques sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

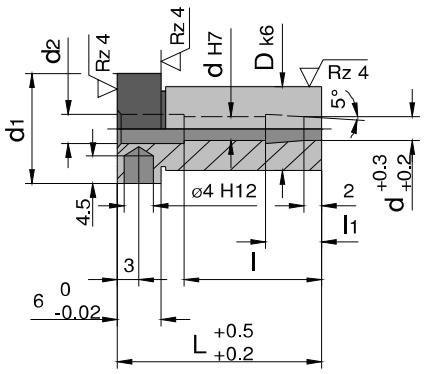
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR40 Ø12/22

Boccola strappamaterozza
Sprue retainers
Douille arrache-carotte
Haltebuchsen

NR40



l1	l	d2	d1	d	D	L
7	18	4,5	16	4	**12**	**22**
						27
						36
						46
						56
						66
7	27	6,5	22	6	**18**	**22**
						27
						36
						46
						56
						66
						76
9,5	28	8,5	28	8	**24**	**36**
						46
						56
						66
						76
						86
						96
						116
						136
						156

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

Acciaio
Steel
Acier
Werkstoff

1.2826 ca. 580HV

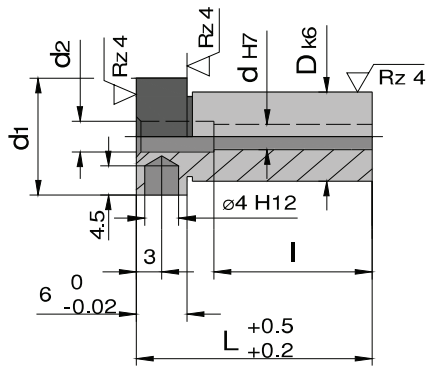
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR41 Ø12/22

Boccola strappamaterozza con guida lunga
Sprue retainers with long guide
Douille arrache-carotte avec guidage long
Haltebuchsen mit lange führung

NR41



l	d2	d1	d	D	L
22	-	16	4	12	22
27					27
36					36
46					46
	4,5				56
					66
22	-	22	6	18	22
27					27
36					36
46					46
56					56
	6,5				66
			8	24	76
36	-	28			36
46					46
56					56
66					66
	8,5				76
					86
					96

Misure fuori catalogo a richiesta
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Sonderteile auf Anfrage

NORMALIZZAZIONE EUROPA EURONORM

Piastre isolanti
Insulating boards
Plaques d'isolation thérmique
Wärmeschlitzplatte

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

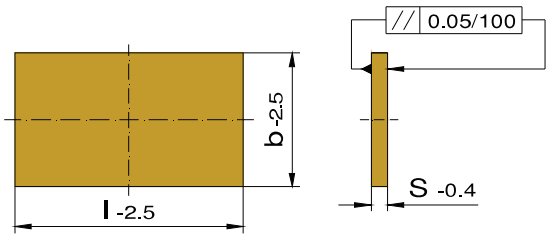
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

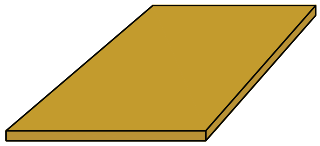
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR50 95/95/3

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR50





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

b	l	S
95	95	3
100	130	
156	156	
	196	
	246	
190	246	
196	196	
	246	
206	156	
	196	
95	95	5
100	130	
156	156	
	196	
	246	
	296	
	396	
190	246	
	296	
196	196	
	246	
	296	
	346	
206	156	
	196	
218	246	
	296	
246	246	
	296	
	346	
	396	
254	246	
276	246	
126	156	6
	246	
156	156	
	196	
	206	
	246	
	296	
	346	
	396	
	446	

b	l	S
196	196	6
	206	
	246	
	296	
	346	
	396	
	446	
	496	
216	246	
	296	
	396	
246	246	
	266	
	296	
	346	
	396	
	446	
	496	
	546	
	596	
266	296	
196	296	7
	346	
	396	
	446	
218	396	
246	246	
	296	
	346	
	396	
	446	
254	246	
276	296	
296	296	
	346	
	396	
	446	
346	346	
	396	
	446	
	496	
	546	

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

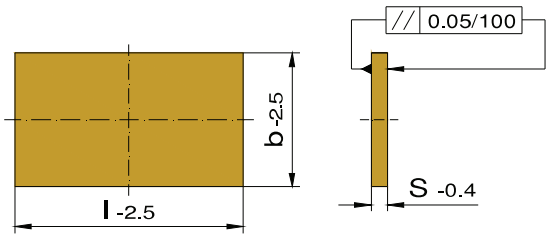
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

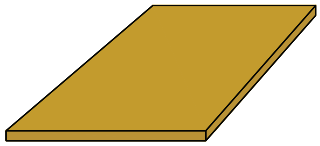
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR50 396/396/7

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR50





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

b	l	S
396	396	7
	446	
	496	
	546	
496	546	
296	296	8
	346	
	396	
	446	
	496	
	546	
	596	
	646	
	696	
346	346	
	396	
	446	
	496	
	546	
	596	
	646	
	696	
	796	
396	396	
	446	
	496	
	546	
	596	
	646	
	696	
	796	
446	446	
	496	
	546	
	596	
	646	
	696	
	796	
496	496	
	546	
	596	
	646	
	696	

b	l	S
496	796	8
546	546	
	596	
	646	
	696	
	796	
596	596	
	646	
	696	
	796	
	896	
	996	
646	646	
	696	
	796	
	896	
	996	
696	696	
	746	
	796	
	896	
	996	
746	796	
	896	
	996	
796	796	
	846	
	896	
	996	
846	896	
	996	

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

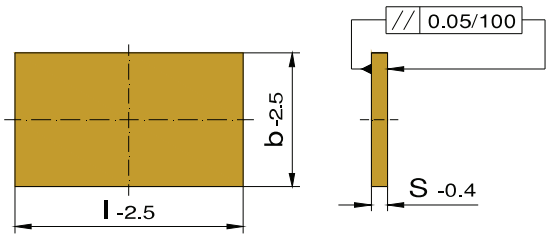
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

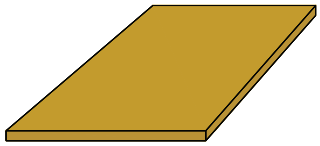
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR50 246/496/8,5

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR50





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

b	l	S
246	496	8,5
296	296	
	346	
	396	
	446	
	496	
	546	
	596	
	696	
346	346	
	396	
	446	
	496	
	546	
	596	
	696	
	796	
396	396	
	446	
	496	
	546	
	596	
	696	
	796	
	896	
446	446	
	496	
	546	
	596	
	696	
	796	
	896	
496	496	
	546	
	596	
	696	
	796	
	896	
	996	
	546	
	596	
	646	
	696	

b	l	S
546	546	8,5
	596	
	646	
	696	
	796	
	896	
	996	
596	596	
	696	
	796	
	896	
	996	
646	596	
	696	
	796	
	896	
	996	
696	696	
	796	
	896	
	996	
796	796	
	896	
	996	
896	896	
	996	

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

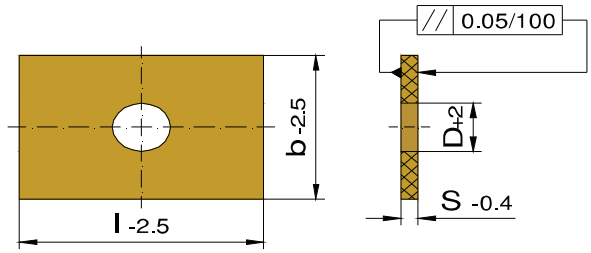
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

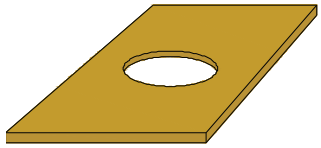
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR51 95/95/3/22

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR51





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

b	l	S	D
95	95	3	**22**
100	130		**22**
156	156		**90**
	196		**90**
	246		**90**
190	246		**90**
196	196		**90**
	246		**90**
206	156		**90**
	196		**90**
95	95	5	**22**
100	130		**22**
156	156		**90**
	196		**90**
	246		**90**
	296		**90**
	396		**90**
190	246		**90**
	296		**90**
196	196		**90**
	246		**90**
	296		**90**
	346		**90**
206	156		**90**
	196		**90**
218	246		**90**
	296		**90**
246	246		**90**
	296		**90**
	346		**90**
	396		**90**
254	246		**90**
276	246		**90**

b	l	S	D
126	156	6	**90**
	246		**90**
156	156		**90**
	196		**90**
	206		**90**
	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
196	196		**90**
	206		**90**
	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
216	246		**90**
	296		**90**
	396		**90**
246	246		**90**
	266		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
266	296		**90**

Misure fuori catalogo
a richiesta
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Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

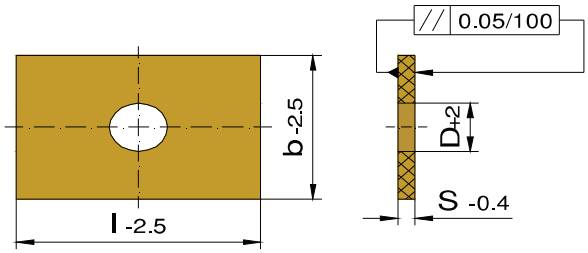
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

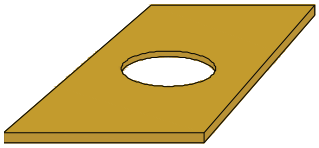
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR51 196/296/7/90

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR51





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

b	l	S	D
196	296	7	**90**
	346		**90**
	396		**90**
	446		**90**
218	396		**90**
246	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
254	246		**90**
276	296		**90**
296	296		**90**
	346		**90**
	396		**90**
	446		**90**
346	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
396	396		**90**
	446		**90**
	496		**90**
	546		**90**
496	546		**90**
296	296	8	**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**

b	l	S	D
346	346	8	**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
396	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
446	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
496	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
546	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
596	596		**90**
	646		**90**
	696		**90**
	796		**90**
646	646		**90**
	696		**90**
	796		**90**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

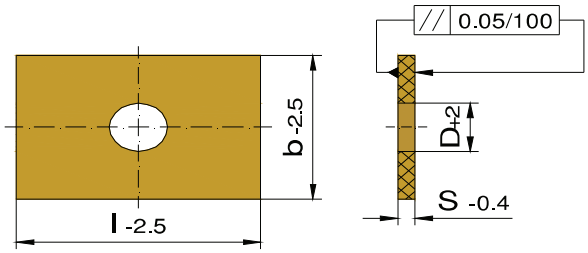
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

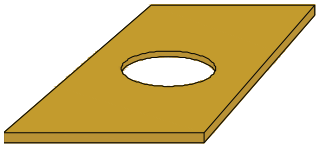
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR51 246/496/8,5/90

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR51





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

b	l	S	D
246	496	8,5	**90**
296	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
346	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
396	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
	896		**90**
446	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
	896		**90**
496	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**

b	l	S	D
546	546	8,5	**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
596	596		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
646	596		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
696	696		**90**
	796		**90**
	896		**90**
	996		**90**
796	796		**90**
	896		**90**
	996		**90**
896	896		**90**
	996		**90**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

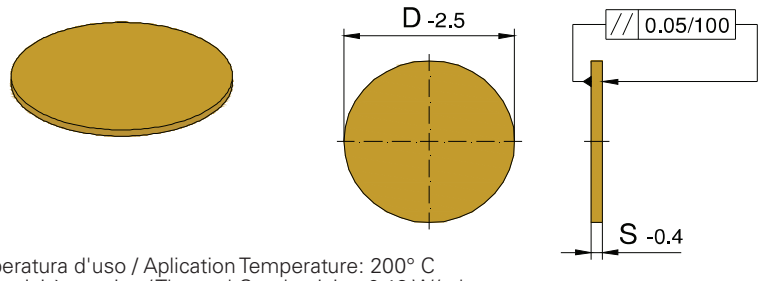
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR54 95/3

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR54



Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

S	D
3	**95**
	116
	156
5	**156**
	196
	246
	296
7	**344**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

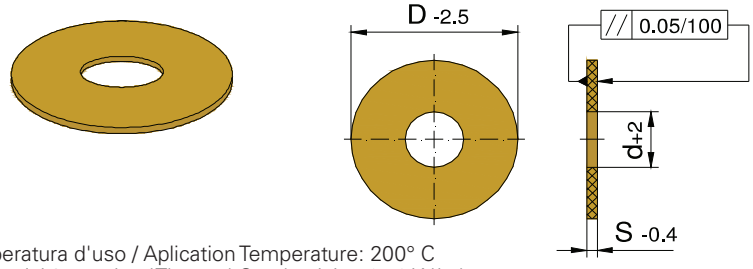
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Wie bestellen

1 Pezzo
1 Piece
1 Pièce
1 Stück

NR55 95/3/22

Piastre di isolamento P = 600 N/mm²
Insulating Board P = 600 N/mm²
Plaques d'isolation thermique P = 600 N/mm²
Wärmeschutzplatte P = 600 N/mm²

NR55



Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,19 W/mk
Densità / Dense: 1,9 g/cm³

S	D
3	**95**
	116
	156
5	**156**
	196
	246
	296
7	**344**

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NORMALIZZAZIONE EUROPA EURONORM

Piastre isolanti
Insulating boards
Plaques d'isolation thérmique
Wärmeschlitzplatte

Descrizione / *Description*		Gruppo / *Group*
NR01		1
NR011		1
NR02		1
NR021		1
NR03		2
NR035	Bronzo *Bronze*	2
NR04		2
NR045	Bronzo *Bronze*	2
NR046	Bronzo *Bronze*	3
NR047	Bronzo *Bronze*	3
NR048	Bronzo *Bronze*	3
NR0481		3
NR05		4
NR051		4
NR06		4
NR065		4
NR61		4
NR62		4
NR63		4
NR07		5
NR071		5
NR072		5
NR074		5
NR08		5
NR081		5
NR09		6
NR091		6
NR10		6

Descrizione / *Description*		Gruppo / *Group*
NR101		6
NR102		6
NR11		6
NR12		6
NR121		6
NR13		7
NR130		7
NR131		7
NR1310		7
NR14		7
NR140		7
NR15		7
NR135		7
NR1305		7
NR1315		7
NR1320		7
NR145		7
NR155		7
NR165		7
NR166		7
NR167		7
NR16		8
NR161		8
NR17		8
NR18		8
NR19		9
NR20		9
NR21		9

Descrizione / *Description*		Gruppo / *Group*
NR22		9
NR23		9
NR24		9
NR25		9
NR26		9
NR30R		10
NR30		10
NR31	R 15,5 t=1,5	10
NR32	R 40 t=1,5	10
NR33	R 15,5 t=1,5	10
NR34	R 40 t=1,5	10
NR40		10
NR41		10
NR50	600 N/mm²	11
NR51	600 N/mm²	11
NR54	600 N/mm²	11
NR55	600 N/mm²	11
NR52	330 N/mm²	12
NR53	330 N/mm²	12
NR56	330 N/mm²	12
NR57	330 N/mm²	12

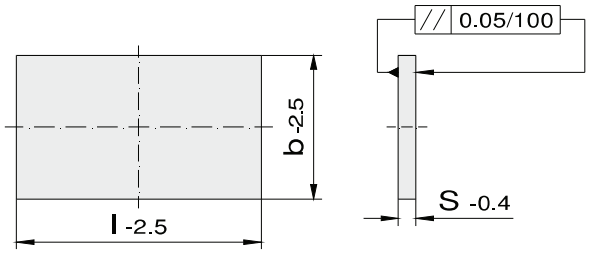
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Wie bestellen

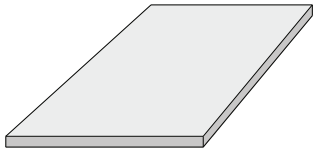
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR52 95/95/3

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR52





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

b	l	S	D
95	95	3	-
100	130		
156	156		
	196		
	246		
	296		
	396		
190	246		
	296		
196	196		
	246		
	296		
	346		
206	156		
	196		
218	246		
	296		
246	246		
	296		
254	246		
276	246		
	296		
296	296		
95	95	5	
100	130		
156	156		
	196		
	246		
	296		
	396		
190	246		
	296		
196	196		
	246		
	296		
	346		
	396		
	446		
206	156		
	196		
218	246		
	296		
	396		

b	l	S	D
246	246	5	-
	296		
	346		
	396		
	446		
	496		
254	246		
276	246		
296	296		
	346		
	396		
	446		
	496		
	546		
	596		
346	346		
	396		
	446		
	496		
	546		
396	396		
	446		
	496		
126	156	6	
	246		
156	156		
	196		
	206		
	246		
	296		
	346		
	396		
	446		
196	196		
	206		
	246		
	296		
	346		
	396		
	446		
	496		
216	246		
	296		

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Sonderteile auf Anfrage

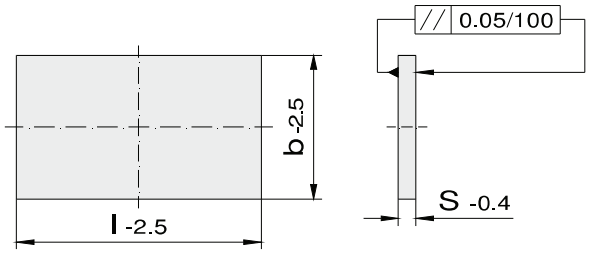
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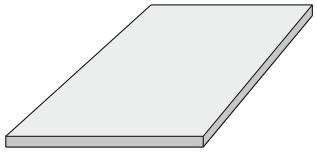
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR52 216/396/6

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR52





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

b	l	S	D
216	396	6	-
246	246		
	266		
	296		
	346		
	396		
	446		
	496		
	546		
	596		
266	296		
196	296	7	
	346		
	396		
	446		
218	396		
246	246		
	296		
	346		
	396		
	446		
254	246		
276	296		
296	296		
	346		
	396		
	446		
346	346		
	396		
	446		
	496		
	546		
396	396		
	446		
	496		
	546		
496	546		
296	296	8	
	346		
	396		
	446		
	496		
	546		

b	l	S	D
296	596	8	-
	646		
	696		
346	346		
	396		
	446		
	496		
	546		
	596		
	646		
	696		
	796		
396	396		
	446		
	496		
	546		
	596		
	646		
	696		
	796		
446	446		
	496		
	546		
	596		
	646		
	696		
	796		
496	496		
	546		
	596		
	646		
	696		
	796		
546	546		
	596		
	646		
	696		
	796		
596	596		
	646		
	696		
	796		
	896		

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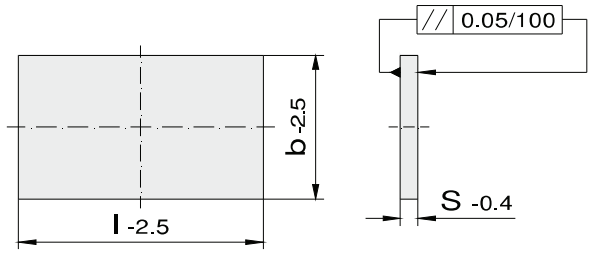
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

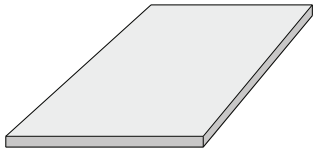
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR52 596/996/8

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR52





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

b	l	S	D
596	996	8	-
646	646		
	696		
	796		
	896		
	996		
696	696		
	746		
	796		
	896		
	996		
746	796		
	896		
	996		
796	796		
	846		
	896		
	996		
846	896		
	996		
246	496	8,5	
296	296		
	346		
	396		
	446		
	496		
	546		
	596		
	696		
346	346		
	396		
	446		
	496		
	546		
	596		
	696		
	796		
396	396		
	446		
	496		
	546		
	596		
	696		

b	l	S	D
396	796	8,5	-
	896		
446	446		
	496		
	546		
	596		
	696		
	796		
	896		
496	496		
	546		
	596		
	696		
	796		
	896		
	996		
546	546		
	596		
	646		
	696		
	796		
	896		
	996		
596	596		
	696		
	796		
	896		
	996		
646	596		
	696		
	796		
	896		
	996		
696	696		
	796		
	896		
	996		
796	796		
	896		
	996		
896	896		
	996		

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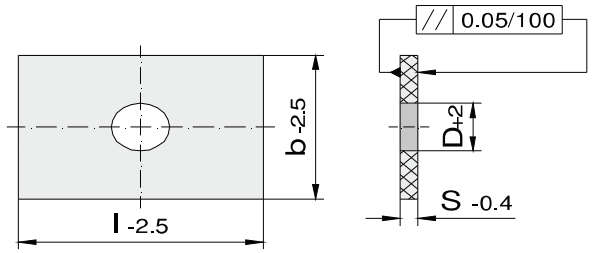
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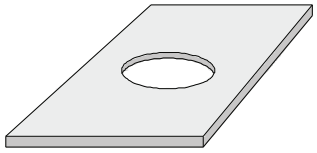
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR53 95/95/3/22

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR53





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

b	l	S	D
95	95	3	**22**
100	130		**22**
156	156		**90**
	196		**90**
	246		**90**
	296		**90**
	396		**90**
190	246		**90**
	296		**90**
196	196		**90**
	246		**90**
	296		**90**
	346		**90**
206	156		**90**
	196		**90**
218	246		**90**
	296		**90**
246	246		**90**
	296		**90**
254	246		**90**
276	246		**90**
	296		**90**
296	296		**90**
95	95	5	**22**
100	130		**22**
156	156		**90**
	196		**90**
	246		**90**
	296		**90**
	396		**90**
190	246		**90**
	296		**90**
196	196		**90**
	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
206	156		**90**
	196		**90**

b	l	S	D
218	246	5	**90**
	296		**90**
	396		**90**
246	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
254	246		**90**
276	246		**90**
296	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
346	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
396	396		**90**
	446		**90**
	496		**90**
126	156	6	**90**
	246		**90**
156	156		**90**
	196		**90**
	206		**90**
	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**

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sur demande
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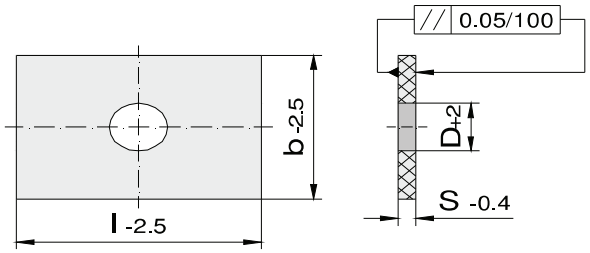
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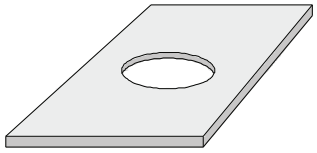
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR53 196/196/6

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR53





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

b	l	S	D
196	196	6	**90**
	206		**90**
	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
216	246		**90**
	296		**90**
	396		**90**
246	246		**90**
	266		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
266	296		**90**
196	296	7	**90**
	346		**90**
	396		**90**
	446		**90**
218	396		**90**
246	246		**90**
	296		**90**
	346		**90**
	396		**90**
	446		**90**
254	246		**90**
276	296		**90**
296	296		**90**
	346		**90**
	396		**90**
	446		**90**
346	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
396	396		**90**

b	l	S	D
396	446	7	**90**
	496		**90**
	546		**90**
496	546		**90**
296	296	8	**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
346	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
396	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
446	446		**90**
	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
496	496		**90**
	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**

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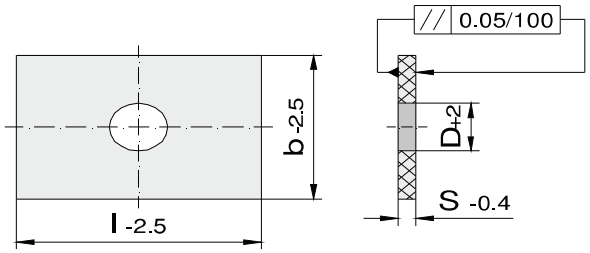
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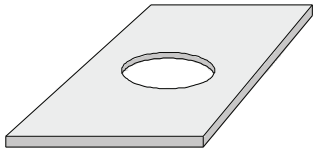
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR53 546/546/8/90

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR53





Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

b	l	S	D
546	546	8	**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
596	596		**90**
	646		**90**
	696		**90**
	796		**90**
646	646		**90**
	696		**90**
	796		**90**
246	496	8,5	**90**
296	296		**90**
	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
346	346		**90**
	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
396	396		**90**
	446		**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
	896		**90**

b	l	S	D
446	446	8,5	**90**
	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
	896		**90**
496	496		**90**
	546		**90**
	596		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
546	546		**90**
	596		**90**
	646		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
596	596		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
646	596		**90**
	696		**90**
	796		**90**
	896		**90**
	996		**90**
696	696		**90**
	796		**90**
	896		**90**
	996		**90**
796	796		**90**
	896		**90**
	996		**90**
896	896		**90**
	996		**90**

Misure fuori catalogo
a richiesta
Special sizes available
on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

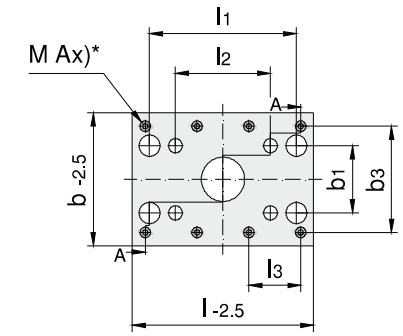
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

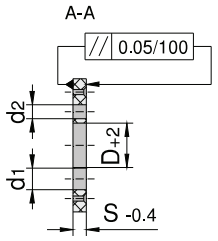
1 Pezzo
1 Piece
1 Pièce
1 Stück

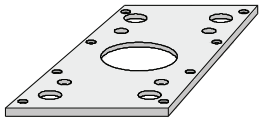
NR56096096001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR56







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	D	s	b	l	b1	l2	l1	Codice
14	16	74	50	4	M3	60	6	96	96	74	24	74	56096096001
			80					96	126		54	104	56096126001
			134					96	156		24	74	56096156001
								96	156		54	104	56096156002
14	16	104	80	4	M3	60	6	126	126	104	54	104	56126126001
			134					126	156				56126156001
20	19	94	92		M4	90		126	156	94	60	124	56126156002
			214					126	246				56126246001
14	16	134	74	4	M3	60	6	156	96	74	24	74	56156096001
			104					156	126		54	104	56156126001
								156	126	104			56156126002
			134					156	156	74	24	74	56156156001
								156	156		54	104	56156156002
								156	156	104			56156156003
20	19	124	124		M4	90		156	156	94	60	124	56156156004
			92					156	156	124			56156156005
			164					156	196				56156196001
			132					156	196		100	164	56156196002
			214					156	246		60	124	56156246001
			182					156	246		150	214	56156246002
			132	6				156	296		100	164	56156296001
								156	296		150	214	56156296002
			116					156	296		200	264	56156296003
			141					156	346		250	314	56156346001
			182					156	396		200	264	56156396001
			207					156	446		250	314	56156446001
20	19	164	92	4	M4	90	6	196	156	164	60	124	56196156001
			164					196	196				56196196001
26		156	118					196	196	156	86	156	56196196002
20		164	214					196	246	124	150	214	56196246001
								196	246	164	60	124	56196246002
26								196	246	156	86	156	56196246003
		156	168					196	246		136	206	56196246004
20		164	132	6				196	296	124	200	264	56196296001
26								196	296	156	86	156	56196296002
								196	296		136	206	56196296003
		156	109					196	296		186	256	56196296004
20		164	157					196	346	124	250	314	56196346001

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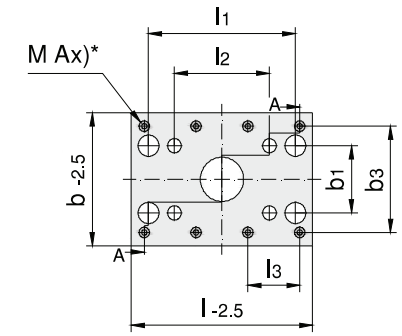
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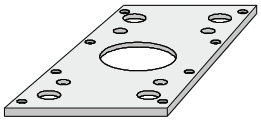
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR56196346002

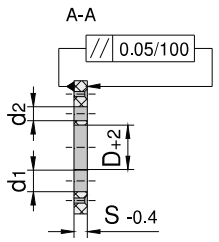
Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR56





Ax)* Number Of Screw Holes



Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	D	s	b	l	b1	l2	l1	Codice
30	21	178	164	6	M4	90	6	196	346	148	220	298	56196346002
26	19	164	182					196	396	156	186	256	56196396001
30	21	178	189					196	396	148	270	348	56196396002
		164	207					196	446		220	298	56196446001
								196	446		270	348	56196446002
		178	214					196	446		320	398	56196446003
			159	8				196	496		370	448	56196496001
20	19	174	124	4	M4	90	6	206	156	124	60	124	56206156001
			164					206	196				56206196001
								206	196		100	164	56206196002
26	19	176	168	4	M4	90	6	216	246	176	136	260	56216246001
		184	132					216	296			206	56216296001
		176	109	6				216	296		186	256	56216296002
		184	182					216	396				56216396001
20	19	214	124	4	M4	90	6	246	156	164	60	124	56246156001
			164					246	196				56246196001
26								246	196	156	86	156	56246196002
		206	118					246	196	206			56246196003
		214	214					246	246	156			56246246001
								246	246		136	206	56246246002
								246	246	206	86	156	56246246003
		206	168					246	246		136	206	56246246004
		214	132	6				246	296	156	186	256	56246296001
								246	296	206	86	156	56246296002
								246	296		136	206	56246296003
								246	296				56246296004
30	21	228	139					246	296	198	170	248	56246296005
		214	157					246	346	148	220	298	56246346001
26	19							246	346	206	136	206	56246346002
30	21	228	164	6				246	346	198	220	298	56246346003
		214	182					246	396	148	270	348	56246396001
								246	396	198	170	248	56246396002
		228	189					246	396		270	348	56246396003
		214	207					246	446	148	320	398	56246446001
								246	446	198	220	298	56246446002
								246	446		270	348	56246446003
		228	214					246	446		320	398	56246446004

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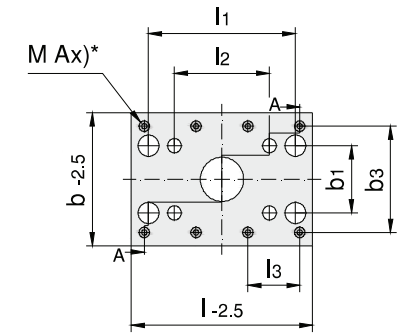
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Exemple d'ordination
Wie bestellen

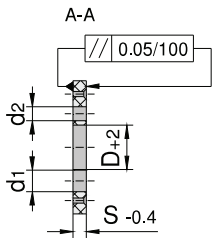
1 Pezzo
1 Piece
1 Pièce
1 Stück

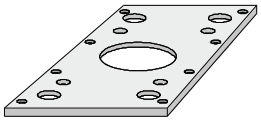
NR56246496001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR56







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	D	s	b	l	b1	l2	l1	Codice
30	21	214	155	8	M4	90	6	246	496	148	370	448	56246496001
		228	159					246	496	198			56246496002
			176					246	546		420	498	56246546001
			193					246	596		470	548	56246596001
26	19	234	214	4	M4	90	6	266	246	176	136	206	56266246001
			132	6				266	296		186	256	56266296001
26	19	264	164	4	M4	90	6	296	196	206	86	156	56296196001
			214				8	296	246				56296246001
							6	296	246		136	206	56296246002
30	21	278	228					296	246	248	120	198	56296246003
26	19	264	132	6	M4	90	8	296	296	206	136	206	56296296001
30	21							296	296	198	170	248	56296296002
								296	296	248	120	198	56296296003
		278	139					296	296		170	248	56296296004
		264	157					296	346	198	220	298	56296346001
								296	346	248	120	198	56296346002
								296	346		170	248	56296346003
		278	164					296	346		220	298	56296346004
		264	182					296	396	198	270	348	56296396001
								296	396	248	170	248	56296396002
		278	189					296	396		270	348	56296396003
		264	207					296	446	198	320	398	56296446001
								296	446	248	220	298	56296446002
								296	446		270	348	56296446003
		278	214					296	446		320	398	56296446004
		264	155	8				296	496	198	370	448	56296496001
		278	159					296	496	248			56296496002
		264	171					296	546	198	420	498	56296546001
		278	176					296	546	248			56296546002
		264	188					296	596	198	470	548	56296596001
								296	596	248	320	398	56296596002
								296	596		370	448	56296596003
		278	193					296	596		470	548	56296596004
			209					296	646		520	598	56296646001
			226					296	696		570	648	56296696001
30	21	298	164	6	M4	90	8	316	346	268	220	298	56316346001
			189					316	396		270	348	56316396001

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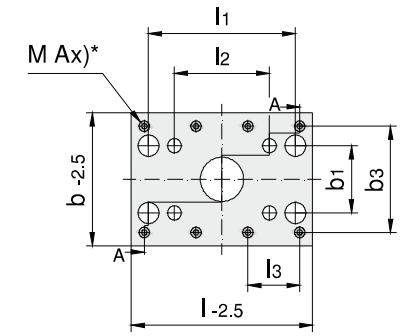
Esempio d'ordinazione
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Exemple d'ordination
Wie bestellen

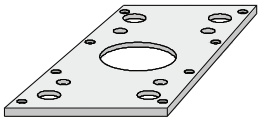
1 Pezzo
1 Piece
1 Pièce
1 Stück

NR56316446001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR56





Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	D	s	b	l	b1	l2	l1	Codice
30	21	284	207	6	M4	90	8	**316**	**446**	**268**	**220**	**298**	**56316446001**
								316	**446**	**268**	**270**	**348**	**56316446002**
30	21	314	214	4	M4	90	6	**346**	**246**	**248**	**120**	**198**	**56346246001**
			132	6			8	**346**	**296**				**56346296001**
								346	**296**		**170**	**248**	**56346296002**
		328	139					**346**	**296**	**298**			**56346296003**
		314	157					**346**	**346**	**248**			**56346346001**
								346	**346**		**220**	**298**	**56346346002**
								346	**346**	**298**	**170**	**248**	**56346346003**
		328	164					**346**	**346**		**220**	**298**	**56346346004**
		314	182					**346**	**396**	**248**	**270**	**348**	**56346396001**
								346	**396**	**298**	**170**	**248**	**56346396002**
								346	**396**		**220**	**298**	**56346396003**
42	27	322	186		M5			**346**	**396**	**274**	**230**	**324**	**56346396004**
30	21	314	207		M4			**346**	**446**	**248**	**320**	**398**	**56346446001**
								346	**446**	**298**	**220**	**298**	**56346446002**
42	27	306	203		M5			**346**	**446**	**274**	**230**	**324**	**56346446003**
		322	211					**346**	**446**		**280**	**374**	**56346446004**
30	21	314	155	8	M4			**346**	**496**	**248**	**370**	**448**	**56346496001**
42	27	322	157		M5			**346**	**496**	**274**	**330**	**424**	**56346496002**
30	21	314	171		M4			**346**	**546**	**248**	**420**	**498**	**56346546001**
42	27	322	174		M5			**346**	**546**	**274**	**380**	**474**	**56346546002**
30	21	314	188		M4			**346**	**596**	**248**	**470**	**548**	**56346596001**
42	27	306	185		M5			**346**	**596**	**274**	**280**	**374**	**56346596002**
								346	**596**		**330**	**424**	**56346596003**
		322	191					**346**	**596**		**430**	**524**	**56346596004**
30	21	314	204		M4			**346**	**646**	**248**	**520**	**598**	**56346646001**
42	27	322	207		M5			**346**	**646**	**274**	**480**	**574**	**56346646002**
30	21	314	221		M4			**346**	**696**	**248**	**570**	**648**	**56346696001**
42	27	322	224		M5			**346**	**696**	**274**	**530**	**624**	**56346696002**
			257					**346**	**796**		**630**	**724**	**56346796001**
30	21	334	157	6	M4	90	8	**366**	**346**	**268**	**220**	**298**	**56366346001**
			182					**366**	**396**		**270**	**348**	**56366396001**
30	21	364	132	6	M4	90	8	**396**	**296**	**298**	**170**	**248**	**56396296001**
			157					**396**	**346**				**56396346001**
								396	**346**		**220**	**298**	**56396346002**
			182					**396**	**396**				**56396396001**

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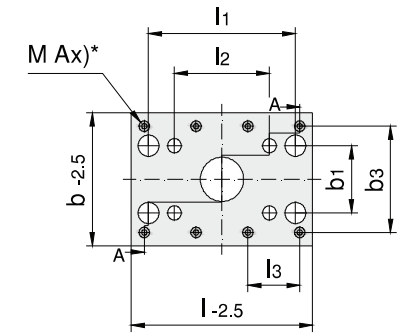
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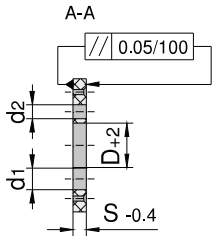
1 Pezzo
1 Piece
1 Pièce
1 Stück

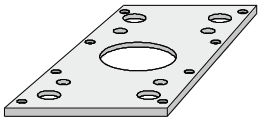
NR56396396002

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR56







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	D	s	b	l	b1	l2	l1	Codice
42	27	356	178	6	M5	90	8	396	396	274	230	324	56396396002
		372	186					396	396	324			56396396003
		356	203					396	446	274	280	374	56396446001
								396	446	324	230	324	56396446002
		372	211					396	446		280	374	56396446003
		356	152	8				396	496	274	330	424	56396496001
		372	157					396	496	324			56396496002
		356	169					396	546	274	380	474	56396546001
		372	174					396	546	324			56396546002
		356	185					396	596	274	430	524	56396596001
								396	596	324	280	374	56396596002
								396	596		330	424	56396596003
		372	191					396	596		430	524	56396596004
		356	202					396	646	274	480	574	56396646001
		372	207					396	646	324			56396646002
		356	219					396	696	274	530	624	56396696001
		372	224					396	696	324			56396696002
		356	252					396	796	274	630	724	56396796001
		372	257					396	796	324			56396796002
42	27	406	178	6	M5	90	8	446	396	324	230	324	56446396001
			203					446	446		280	374	56446446001
		422	211					446	446	374			56446446002
		406	152	8				446	496	324	330	424	56446496001
		422	157					446	496	374			56446496002
		406	169					446	546	324	380	474	56446546001
		422	174					446	546	374			56446546002
		406	185					446	596	324	430	524	56446596001
								446	596	374	280	374	56446596002
								446	596		330	424	56446596003
		422	191					446	596		430	524	56446596004
		406	202					446	646	324	480	574	56446646001
		422	207					446	646	374			56446646002
		406	219					446	696	324	530	624	56446696001
		422	224					446	696	374			56446696002
		406	252					446	796	324	630	724	56446796001
		422	257					446	796	374			56446796002
42	27	456	203	6	M5	90	8	496	446	374	280	374	56496446001

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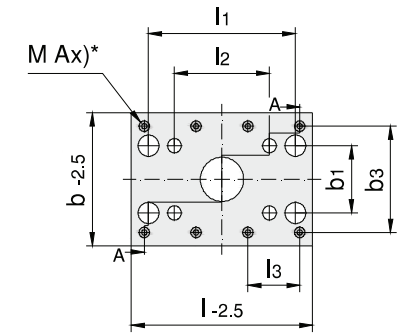
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How to order
Exemple d'ordination
Wie bestellen

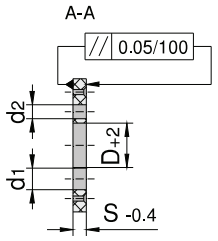
1 Pezzo
1 Piece
1 Pièce
1 Stück

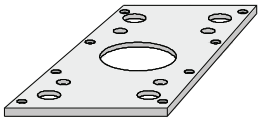
NR56496496001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR56







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	D	s	b	l	b1	l2	l1	Codice
42	27	456	152	8	M5	90	8	496	496	374	330	424	56496496001
		472	157					496	496	424			56496496002
		456	169					496	546	374	380	474	56496546001
		472	174					496	546	424			56496546002
		456	185					496	596	374	430	524	56496596001
								496	596	424	330	424	56496596002
		472	191					496	596		430	524	56496596003
		456	202					496	646	374	480	574	56496646001
		472	207					496	646	424			56496646002
		456	219					496	696	374	530	624	56496696001
		472	224					496	696	424			56496696002
		456	252					496	796	374	630	724	56496796001
54	33	468	256					496	796	408	590	708	56496796002
42	27	506	152	8	M5	90	8	546	496	424	330	424	56546496001
			169					546	546		380	474	56546546001
		522	174					546	546	474			56546546002
		506	185					546	596	424	430	524	56546596001
54	33	518	189					546	596	458	390	508	56546596002
42	27	506	202					546	646	424	480	574	56546646001
54	33	518	206					546	646	458	440	558	56546646002
42	27	506	219					546	696	424	530	624	56546696001
54	33	518	223					546	696	458	490	608	56546696002
		506	252					546	796	408	590	708	56546796001
		518	256					546	796	458			56546796002
42	27	556	169	8	M5	90	8	596	546	474	380	474	56596546001
54	33		185					596	596	458	390	508	56596596001
		568	189					596	596	508			56596596002
		556	202					596	646	458	440	558	56596646001
		568	206					596	646	508			56596646002
		556	219					596	696	458	490	608	56596696001
		568	223					596	696	508			56596696002
		556	252					596	796	458	590	708	56596796001
		568	256					596	796	508			56596796002
54	33	606	185	8	M5	90	8	646	596	508	390	508	56646596001
			202					646	646		440	558	56646646001
			219					646	696		490	608	56646696001
			252					646	796		590	708	56646796001

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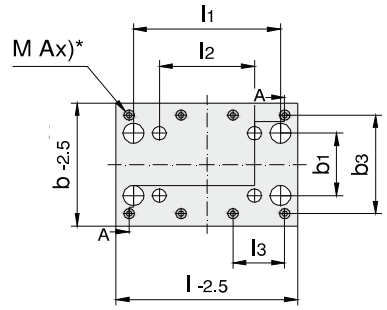
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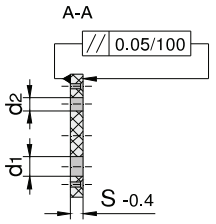
1 Pezzo
1 Piece
1 Pièce
1 Stück

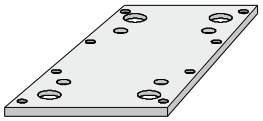
NR57096096001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR57







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	s	b	l	b1	l2	l1	Codice
14	16	74	50	4	M3	6	96	96	74	24	74	57096096001
			80				96	126		54	104	57096126001
			134				96	156		24	74	57096156001
							96	156		54	104	57096156002
14	16	104	80	4	M3	6	126	126	104	54	104	57126126001
			134				126	156				57126156001
20	19	94	92		M4		126	156	94	60	124	57126156002
			214				126	246				57126246001
14	16	134	74	4	M3	6	156	96	74	24	74	57156096001
			104				156	126		54	104	57156126001
							156	126	104			57156126002
			134				156	156	74	24	74	57156156001
							156	156		54	104	57156156002
							156	156	104			57156156003
20	19	124	124		M4		156	156	94	60	124	57156156004
			92				156	156	124			57156156005
			164				156	196				57156196001
			132				156	196		100	164	57156196002
			214				156	246		60	124	57156246001
			182				156	246		150	214	57156246002
			132	6			156	296		100	164	57156296001
			132				156	296		150	214	57156296002
			116				156	296		200	264	57156296003
			141				156	346		250	314	57156346001
			182				156	396		200	264	57156396001
			207				156	446		250	314	57156446001
20	19	164	92	4	M4	6	196	156	164	60	124	57196156001
			164				196	196				57196196001
26		156	118				196	196	156	86	156	57196196002
20		164	214				196	246	124	150	214	57196246001
							196	246	164	60	124	57196246002
26							196	246	156	86	156	57196246003
		156	168				196	246		136	206	57196246004
20		164	132	6			196	296	124	200	264	57196296001
26							196	296	156	86	156	57196296002
							196	296		136	206	57196296003
		156	109				196	296		186	256	57196296004
20		164	157				196	346	124	250	314	57196346001

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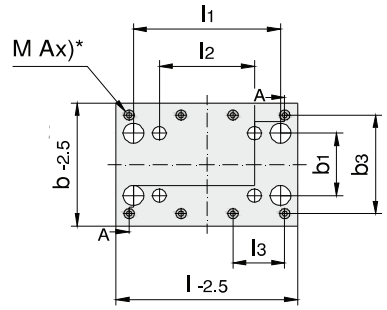
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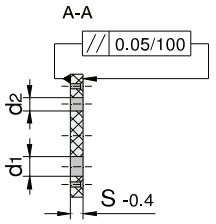
1 Pezzo
1 Piece
1 Pièce
1 Stück

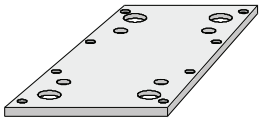
NR57196346002

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR57







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	s	b	l	b1	l2	l1	Codice
30	21	178	164	6	M4	6	196	346	148	220	298	57196346002
26	19	164	182				196	396	156	186	256	57196396001
30	21	178	189				196	396	148	270	348	57196396002
		164	207				196	446		220	298	57196446001
							196	446		270	348	57196446002
		178	214				196	446		320	398	57196446003
			159	8			196	496		370	448	57196496001
20	19	174	124	4	M4	6	206	156	124	60	124	57206156001
			164				206	196				57206196001
							206	196		100	164	57206196002
26	19	176	168	4	M4	6	216	246	176	136	260	57216246001
		184	132	6			216	296			206	57216296001
		176	109				216	296		186	256	57216296002
		184	182				216	396				57216396001
20	19	214	124	4	M4	6	246	156	164	60	124	57246156001
			164				246	196				57246196001
26							246	196	156	86	156	57246196002
		206	118				246	196	206			57246196003
		214	214				246	246	156			57246246001
							246	246		136	206	57246246002
							246	246	206	86	156	57246246003
		206	168				246	246		136	206	57246246004
		214	132	6			246	296	156	186	256	57246296001
							246	296	206	86	156	57246296002
							246	296		136	206	57246296003
							246	296				57246296004
30	21	228	139				246	296	198	170	248	57246296005
		214	157				246	346	148	220	298	57246346001
26	19						246	346	206	136	206	57246346002
30	21	228	164	6			246	346	198	220	298	57246346003
		214	182				246	396	148	270	348	57246396001
							246	396	198	170	248	57246396002
		228	189				246	396		270	348	57246396003
		214	207				246	446	148	320	398	57246446001
							246	446	198	220	298	57246446002
							246	446		270	348	57246446003
		228	214				246	446		320	398	57246446004

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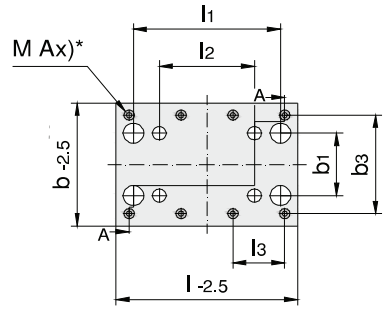
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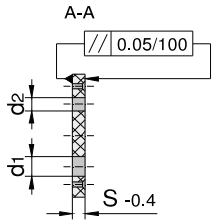
1 Pezzo
1 Piece
1 Pièce
1 Stück

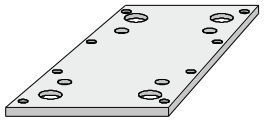
NR57246496001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR57







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	s	b	l	b1	l2	l1	Codice
30	21	214	155	8	M4	6	246	496	148	370	448	57246496001
		228	159				246	496	198			57246496002
			176				246	546		420	498	57246546001
			193				246	596		470	548	57246596001
26	19	234	214	4	M4	6	266	246	176	136	206	57266246001
			132	6			266	296		186	256	57266296001
26	19	264	164	4	M4	6	296	196	206	86	156	57296196001
			214			8	296	246				57296246001
						6	296	246		136	206	57296246002
30	21	278	228				296	246	248	120	198	57296246003
26	19	264	132	6	M4	8	296	296	206	136	206	57296296001
30	21						296	296	198	170	248	57296296002
							296	296	248	120	198	57296296003
		278	139				296	296		170	248	57296296004
		264	157				296	346	198	220	298	57296346001
							296	346	248	120	198	57296346002
							296	346		170	248	57296346003
		278	164				296	346		220	298	57296346004
		264	182				296	396	198	270	348	57296396001
							296	396	248	170	248	57296396002
		278	189				296	396		270	348	57296396003
		264	207				296	446	198	320	398	57296446001
							296	446	248	220	298	57296446002
							296	446		270	348	57296446003
		278	214				296	446		320	398	57296446004
		264	155	8			296	496	198	370	448	57296496001
		278	159				296	496	248			57296496002
		264	171				296	546	198	420	498	57296546001
		278	176				296	546	248			57296546002
		264	188				296	596	198	470	548	57296596001
							296	596	248	320	398	57296596002
							296	596		370	448	57296596003
		278	193				296	596		470	548	57296596004
			209				296	646		520	598	57296646001
			226				296	696		570	648	57296696001
30	21	298	164	6	M4	8	316	346	268	220	298	57316346001
			189				316	396		270	348	57316396001

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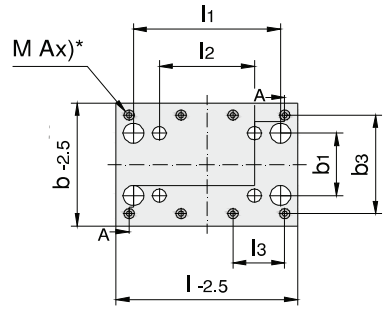
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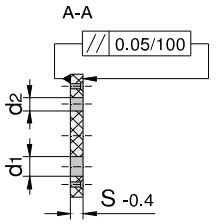
1 Pezzo
1 Piece
1 Pièce
1 Stück

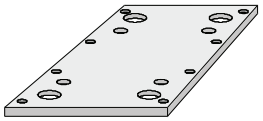
NR57316446001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR57







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	s	b	l	b1	l2	l1	Codice
30	21	284	207	6	M4	8	**316**	**446**	**268**	**220**	**298**	**57316446001**
							316	**446**		**270**	**348**	**57316446002**
30	21	314	214	4	M4	6	**346**	**246**	**248**	**120**	**198**	**57346246001**
			132	6		8	**346**	**296**				**57346296001**
							346	**296**		**170**	**248**	**57346296002**
		328	139				**346**	**296**	**298**			**57346296003**
		314	157				**346**	**346**	**248**			**57346346001**
							346	**346**		**220**	**298**	**57346346002**
							346	**346**	**298**	**170**	**248**	**57346346003**
		328	164				**346**	**346**		**220**	**298**	**57346346004**
		314	182				**346**	**396**	**248**	**270**	**348**	**57346396001**
							346	**396**	**298**	**170**	**248**	**57346396002**
							346	**396**		**220**	**298**	**57346396003**
42	27	322	186		M5		**346**	**396**	**274**	**230**	**324**	**57346396004**
30	21	314	207		M4		**346**	**446**	**248**	**320**	**398**	**57346446001**
							346	**446**	**298**	**220**	**298**	**57346446002**
42	27	306	203		M5		**346**	**446**	**274**	**230**	**324**	**57346446003**
		322	211				**346**	**446**		**280**	**374**	**57346446004**
30	21	314	155	8	M4		**346**	**496**	**248**	**370**	**448**	**57346496001**
42	27	322	157		M5		**346**	**496**	**274**	**330**	**424**	**57346496002**
30	21	314	171		M4		**346**	**546**	**248**	**420**	**498**	**57346546001**
42	27	322	174		M5		**346**	**546**	**274**	**380**	**474**	**57346546002**
30	21	314	188		M4		**346**	**596**	**248**	**470**	**548**	**57346596001**
42	27	306	185		M5		**346**	**596**	**274**	**280**	**374**	**57346596002**
							346	**596**		**330**	**424**	**57346596003**
		322	191				**346**	**596**		**430**	**524**	**57346596004**
30	21	314	204		M4		**346**	**646**	**248**	**520**	**598**	**57346646001**
42	27	322	207		M5		**346**	**646**	**274**	**480**	**574**	**57346646002**
30	21	314	221		M4		**346**	**696**	**248**	**570**	**648**	**57346696001**
42	27	322	224		M5		**346**	**696**	**274**	**530**	**624**	**57346696002**
			257				**346**	**796**		**630**	**724**	**57346796001**
30	21	334	157	6	M4	8	**366**	**346**	**268**	**220**	**298**	**57366346001**
			182				**366**	**396**		**270**	**348**	**57366396001**
30	21	364	132	6	M4	8	**396**	**296**	**298**	**170**	**248**	**57396296001**
			157				**396**	**346**				**57396346001**
							396	**346**		**220**	**298**	**57396346002**
			182				**396**	**396**				**57396396001**

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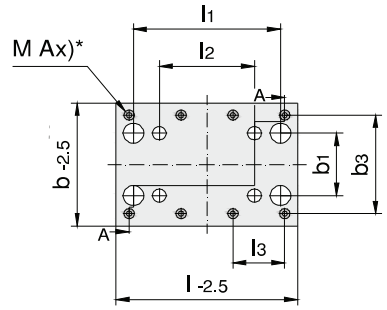
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Exemple d'ordination
Wie bestellen

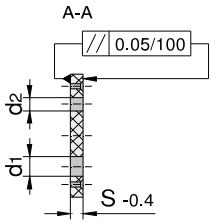
1 Pezzo
1 Piece
1 Pièce
1 Stück

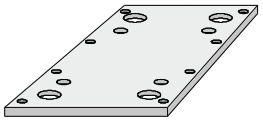
NR57396396002

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR57







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	s	b	l	b1	l2	l1	Codice
42	27	356	178	6	M5	8	396	396	274	230	324	57396396002
		372	186				396	396	324			57396396003
		356	203				396	446	274	280	374	57396446001
							396	446	324	230	324	57396446002
		372	211				396	446		280	374	57396446003
		356	152	8			396	496	274	330	424	57396496001
		372	157				396	496	324			57396496002
		356	169				396	546	274	380	474	57396546001
		372	174				396	546	324			57396546002
		356	185				396	596	274	430	524	57396596001
							396	596		280	374	57396596002
							396	596	324	330	424	57396596003
		372	191				396	596		430	524	57396596004
		356	202				396	646	274	480	574	57396646001
		372	207				396	646	324			57396646002
		356	219				396	696	274	530	624	57396696001
		372	224				396	696	324			57396696002
		356	252				396	796	274	630	724	57396796001
		372	257				396	796	324			57396796002
42	27	406	178	6	M5	8	446	396	324	230	324	57446396001
			203				446	446		280	374	57446446001
		422	211				446	446	374			57446446002
		406	152	8			446	496	324	330	424	57446496001
		422	157				446	496	374			57446496002
		406	169				446	546	324	380	474	57446546001
		422	174				446	546	374			57446546002
		406	185				446	596	324	430	524	57446596001
							446	596		280	374	57446596002
							446	596	374	330	424	57446596003
		422	191				446	596		430	524	57446596004
		406	202				446	646	324	480	574	57446646001
		422	207				446	646	374			57446646002
		406	219				446	696	324	530	624	57446696001
		422	224				446	696	374			57446696002
		406	252				446	796	324	630	724	57446796001
		422	257				446	796	374			57446796002
42	27	456	203	6	M5	8	496	446	374	280	374	57496446001

Misure fuori catalogo
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on request
Dimensions spécifiques
sur demande
Sonderteile auf Anfrage

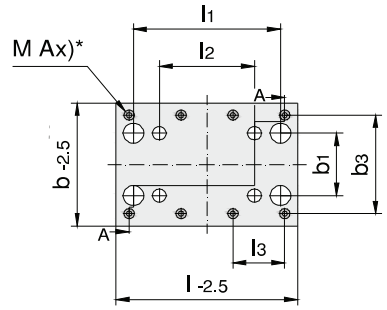
Esempio d'ordinazione
How to order
Exemple d'ordination
Wie bestellen

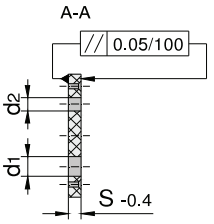
1 Pezzo
1 Piece
1 Pièce
1 Stück

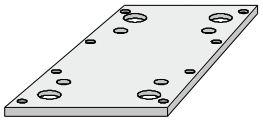
NR57496496001

Piastre di isolamento P = 330 N/mm²
Insulating Board P = 330 N/mm²
Plaques d'isolation thermique P = 330 N/mm²
Wärmeschutzplatte P = 330 N/mm²

NR57







Ax)* Number Of Screw Holes

Temperatura d'uso / Aplication Temperature: 200° C
Conduttività termica / Thermal Conductivity: 0,18 W/mk
Densità / Dense: 1,8 g/cm³

d1	d2	b3	l3	Ax	M	s	b	l	b1	l2	l1	Codice
42	27	456	152	8	M5	8	496	496	374	330	424	57496496001
		472	157				496	496	424			57496496002
		456	169				496	546	374	380	474	57496546001
		472	174				496	546	424			57496546002
		456	185				496	596	374	430	524	57496596001
							496	596	424	330	424	57496596002
		472	191				496	596		430	524	57496596003
		456	202				496	646	374	480	574	57496646001
		472	207				496	646	424			57496646002
		456	219				496	696	374	530	624	57496696001
		472	224				496	696	424			57496696002
		456	252				496	796	374	630	724	57496796001
54	33	468	256				496	796	408	590	708	57496796002
42	27	506	152	8	M5	8	546	496	424	330	424	57546496001
			169				546	546		380	474	57546546001
		522	174				546	546	474			57546546002
		506	185				546	596	424	430	524	57546596001
54	33	518	189				546	596	458	390	508	57546596002
42	27	506	202				546	646	424	480	574	57546646001
54	33	518	206				546	646	458	440	558	57546646002
42	27	506	219				546	696	424	530	624	57546696001
54	33	518	223				546	696	458	490	608	57546696002
		506	252				546	796	408	590	708	57546796001
		518	256				546	796	458			57546796002
42	27	556	169	8	M5	8	596	546	474	380	474	57596546001
54	33		185				596	596	458	390	508	57596596001
		568	189				596	596	508			57596596002
		556	202				596	646	458	440	558	57596646001
		568	206				596	646	508			57596646002
		556	219				596	696	458	490	608	57596696001
		568	223				596	696	508			57596696002
		556	252				596	796	458	590	708	57596796001
		568	256				596	796	508			57596796002
54	33	606	185	8	M5	8	646	596	508	390	508	57646596001
			202				646	646		440	558	57646646001
			219				646	696		490	608	57646696001
			252				646	796		590	708	57646796001

Misure fuori catalogo
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Informazioni tecniche per piastre isolanti
Technical details of insulating plates

Piastre isolanti N50 / N51 / N54 / N55 (giallo/marroni)

Insulating plates N50 / N51 / N54 / N55 (yellowbrown)

Materiale composto da resine di fibre di vetro; spessori 3 - 30 mm
Compound material made of resinated glass fibres; thickness 3 - 30 mm

Caratteristiche Characteristics	Unità Unit	Valore Value
Caratteristiche fisiche / Physical characteristics		
Densità / Density	**g/cm³**	**1,9**
Caratteristiche termiche / Thermal characteristics		
Temperatura d'utilizzo, permanente / Working temperature, permanent	**°C**	**200**
Temperatura d'utilizzo, temporanea / Application temperature, temporary	**°C**	**210**
Conduttività termica / Thermal conductivity	**W/mK**	**0,19**
Coefficiente d'espansione lineare / Coefficient of linear expansion	**10^{-6} x K^{-1}**	**13**
Caratteristiche meccaniche / Mechanical characteristics		
Resistenza alla compressione a 23 °C / Compressive strength at 23 °C	**Mpa**	**600**
Resistenza alla compressione a 200 °C / Compressive strenght at 200 °C	**Mpa**	**350**
Resistenza alla flessione (10 mm) a 23 °C / Bending strength (10 mm) at 23 °C	**Mpa**	**380**

Tolleranza / Tolerance - 0,4 mm **Parallelismo / Parallelism +/- 0,05 mm**

Piastre isolanti N52 / N53 (bianche)

Insulating plates N52 / N53 (white)

Materiale composto da resine di fibre di vetro; spessori 3 - 30 mm
Compound material made of resinated glass fibres and filling material; thickness 3 - 30 mm

Caratteristiche Characteristics	Unità Unit	Valore Value
Caratteristiche fisiche / Physical characteristics		
Densità / Density	**g/cm³**	**1,8**
Caratteristiche termiche / Thermal characteristics		
Temperatura d'utilizzo, permanente / Working temperature, permanent	**°C**	**200**
Temperatura d'utilizzo, temporanea / Application temperature, temporary	**°C**	**210**
Conduttività termica / Thermal conductivity	**W/mK**	**0,18**
Coefficiente d'espansione lineare / Coefficient of linear expansion	**10^{-6} x K^{-1}**	**18**
Caratteristiche meccaniche / Mechanical characteristics		
Resistenza alla compressione a 23 °C / Compressive strength at 23 °C	**Mpa**	**330**
Resistenza alla compressione a 200 °C / Compressive strenght at 200 °C	**Mpa**	**120**
Resistenza alla flessione (10 mm) a 23 °C / Bending strength (10 mm) at 23 °C	**Mpa**	**140**

Tolleranza / Tolerance - 0,4 mm **Parallelismo / Parallelism +/- 0,05 mm**

Acciaio non da lega 1.1191 (C45E)
Non-alloy heat treatment steel 1.1191 (C45E)

Composizione chimica
Chemical composition

C	Si	Mn	S	Other
0,45	0,25	0,65	<0,030	(Pb)

Caratteristiche
Characteristics

Componenti con piccole sezioni trasversali di trattamento termico e bassa forza.

Components with small heat treatment cross section and low strength.

Uso
Use

Acciaio non da leghe per la costruzione di particolari per motori e veicoli in generale.

Non-alloy construction steel for parts in engine and vehicle construction (general).

Trattamento termico
Hot forming and heat treatment

Forgiatura e laminazione / *Forging or rolling*	1100 – 850 °C
Distensione / *Normalising*	840 – 880 °C/air
Bassa ricottura / *Soft annealing*	680 – 710 °C/furnace
Tempra / *Hardening*	820 – 860 °C/water/oil
Rinvenimento / *Tempering*	550 – 660 °C

Acciaio 1.2826 (60MnSiCr4)
Cold work steel 1.2826 (60MnSiCr4)

Composizione chimica
Chemical composition

C	Si	Mn	Cr
0,16	1	1,1	0,3

Caratteristiche
Characteristics

Acciaio per lavorazioni a freddo, alta resistenza al trattamento termico e all'usura.

Cold work steel with very good spring property, high robustness in heat-treated state, and high wear resistance.

Uso
Use

Pinze, lame da taglio singole e matrici, espulsori, inserti per stampi plastica ad alto rischio rotture a causa di forze trasversali.

Tongs and bridges, single shear blades and die plates, ejectors and inserts in plastic moulds that are in high risk of fracture due to their cross sections.

Trattamento termico
Hot forming and heat treatment

Bassa ricottura / *Soft annealing*	700 – 740 °C/furnace
Allevio dello stress / *Stress relieving*	600 – 650 °C/furnace
Tempra / *Hardening*	820 – 850 °C/oil
Rinvenimento / *Tempering*	160 – 500 °C

ALternative di questo tipo di materiale
Alternatives to this type of steel

1.1183, 1.1241, 1.1545, 1.0503, 1.0570, St37, 1.2842

Acciaio 1.7139 (16MnCrS5)
Tool steel 1.7139 (16MnCrS5)

Composizione chimica
Chemical composition

C	Si	Mn	Cr	S	Other
0,16	0,25	1,15	0,95	0,02 0,035	(Pb)

Caratteristiche
Characteristics

Acciaio da cementazione per la costruzione di particolari ad alto rendimento, molto resistente all'usura. Spicca per la sua buona lavorabilità.

Case hardening steel for construction of highly stressed and wear resistant parts of all kinds. It stands out due to its very good workability. It features form stability as well as high impact strength, and is hardenable (case hardening/nitriding).

Uso
Use

Acciaio da cementazione per particolari che devono avere una durezza interna di circa 800-1.100 N/mm² particolarmente sotto pressione causa usura.

MnCr-alloyed case hardening steel for parts that should have a core strength of 800 – 1100 N/mm² and are mainly stressed by wear, like slides, cogwheels, con-rods, slide rails, base plates, bolts, pints, spindles etc.

Trattamento termico
Hot forming and heat treatment

Forgiatura e laminazione / *Forging and rolling*	1100 – 850 °C
Distensione / *Normalising*	840 – 870 °C/air
Bassa ricottura / *Soft annealing*	650 – 700 °C/furnace
Cementazione / *Carburising*	880 – 980 °C
Tempra a cuore / *Core hardening*	860 – 900 °C/oil
Rinvenimento intermedio / *Intermediate annealing*	650 – 700 °C
Tempra superficiale / *Case hardening*	780 – 820 °C/oil
Rinvenimento / *Tempering*	150 – 200 °C

ALternative di questo tipo di materiale
Alternatives to this type of steel

1.1183, 1.1241, 1.1545, 1.0503, 1.0570, St37, 1.2842

Bronzo 2.1090 (CuSn7Zn4Pb7-C)
Bronze 2.1090 (CuSn7Zn4Pb7-C)

Composizione chimica
Chemical composition

Cu	Ni	P	Pb	Sn	Zn
>81	<2	<0,1	>5	>6	>2
<85			<8	<8	<5

Caratteristiche
Characteristics

CuSn7Zn4Pb7-C è usato specialmente come materiale di scorrimento. Con una forza media ha buone caratteristiche di utilizzo ache a secco senza lubrificazione. Oltre ad una buona lavorabilità questo materiale offre una buona resistenza alla corrosione anche con acqua di mare.

Temperatura massima di utilizzo = 200°C

CuSn7Zn4Pb7-C is especially used as slide material. With medium strength, it possesses good characteristics in dry-running operations. When produced with centrifugal or continuous casting it features sufficient resistance to wear. Besides good machinability this material has good corrosion resistance, also in sea water, and is regarded as an all-purpose slide bearing material.

t max = 200°C

Uso
Use

Le principali aree di utilizzo sono i cuscinetti a scorrimento e le boccole dei cuscinetti per la costruzione generale di macchine.

Major areas of use are slide bearings and bearing bushes for general machine construction.

Rivestimento DLC
DLC Coating

Procedura
Procedure

Nel caso del DLC (Diamant Like Carbon) il trattamento viene applicato al materiale tramite processo di PVD/PACVD. Questo è possibile con diversi materiali.

In the case of the DLC coating (Diamant Like Carbon), a diamond-like carbon is applied to the material to be processed by the PVD/PACVD process. This is possible with different materials.

Vantaggi
The advantages

Riduzione del consumo di energia grazie al ridotto valore di attrito
Reduction of energy consumption due to reduced friction values

Alta reistenza alle corrosioni di acidi e sali
High corrosion resistance to alkalis, acids and salts

Alta reistenza alle temperature fino a 350 °C
High temperature resistance, depending on the base material up to 350°C

Alto valore di durezza
High degree of hardness

Grazie alla biocompatibilità è possibile l'uso nell'industria alimentare e farmaceutica
Due to the biocompability, the use in the food industry and in the medical field is possible

Uso
Use

Vari tipi di metallo, ceramiche, utensili da taglio e alcuni tipi di plastiche.

Varoius metals, ceramics, cutting tools and some types of plastics.

Caratteristiche
Characteristics

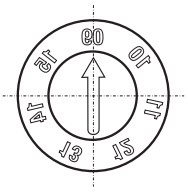
Temperatura di deposizione / *Deposition temperature (°C)*	<180
Microdurezza (HV 0,05) / *Microhardness (HV 0,05)*	>3000
Spessore (µm) / *Thickness (µm)*	<3
Coefficiente d'attrito (-) / *Friction coefficient* (-)*	0,05…0,015
Massima temperatura d'utilizzo (°C) / *Max. operating temperature (°C)*	350
Materiale di rivestimento / *Coating material*	a-C/a-C:H
Resistenza all'abrasione / *Abrasive wear resistance*	+++
Resistenza alla corrosione / *Corrosion resistance*	+++
Colore del rivestimento / *Coating color*	black gray / nero grigio

Suggerimenti
Hints

Coefficiente d'attrito con acciaio (100Cr6) misurato con scorrimento sfera/tribometro a disco non lubrificato
Coefficient of friction against steel (100Cr6), measured in the sliding wear test ball/disc-tribometer, unlubricated

Il colore può essere più chiaro con spessori più fini
The color can shimmer in the light, by ist small thickness also from green to red

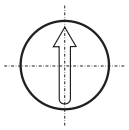
Datari per plastica e pressofusione annuali e mensili annuali con inserti filettati smontabili anteriormente tipo KR
Daters for plastic and pressure die casting type KR
Dateurs pour plastique et injection de metal type KR
Datum-Stempel für Kunststoff und Metal Spritzwerkzeuge type KR



DAF-T



DMAF-T

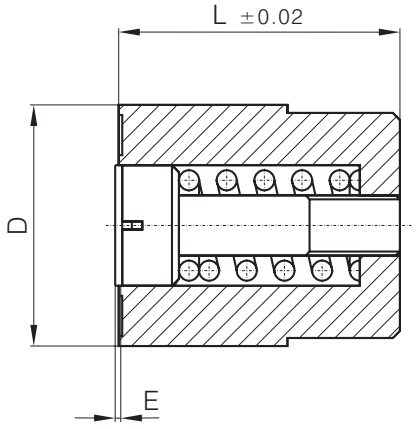


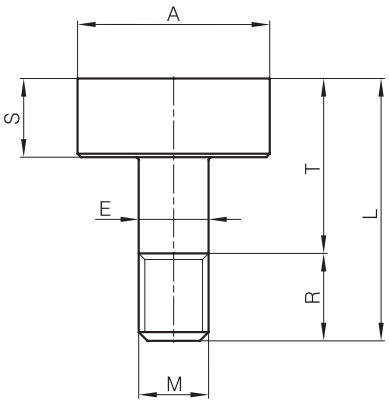
IF-T



IFA-T

DIMENSIONE DATARIO					DIMENSIONI INSERTO DATARIO						
D	L	E	M	F	A	L	R	T	E	S	M
6	8	0,20	1,6 x 0,2	3,10	3,10	7,50	2,50	3,30	1,6	2	1,6
8	10	0,25	2,3 x 0,25	4,40	4,40	9,50	4	3,80	2,30	2,50	2,3
10	12	0,35	2,5 x 0,35	5,20	5,20	11,50	4,50	4,30	2,50	3	2,5
12	14	0,35	3 x 0,35	6,20	6,20	13,50	5	5,80	3	3	3
16	14	0,35	4 x 0,35	8,20	8,20	13,50	5	5,80	4	3,50	4
20	16	0,35	4 x 0,35	11	11	15	5	6,30	4	4,50	4

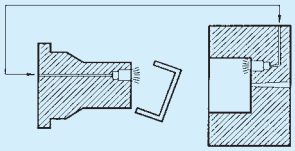




Acciaio
Steel
Acier
Werkstoff

Acciaio inox
Stainless steel
Acier Inoxydable
Rostbeständiger Stahl



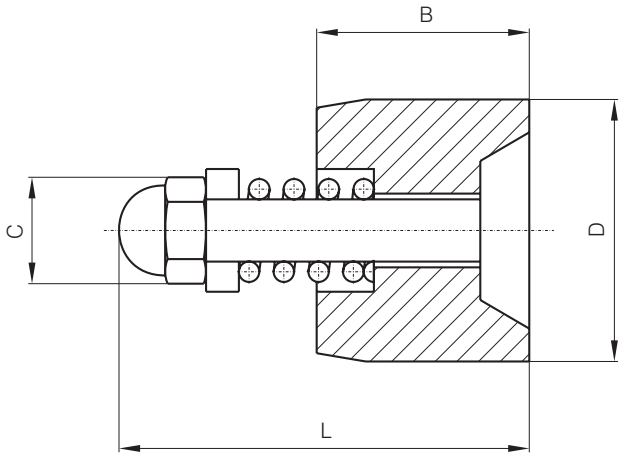


Vengono impiegate per compensare il vuoto durante la fase di estrazione in cavità profonde o per immettere aria. Costruite interamente in acciaio inox, temperate e rettificate, con dado autobloccante.

The valves are used to compensate the vacuum during extraction from deep cavities or to let air in. They are made entirely in stainless steel, hardened and ground, with selflocking nut.

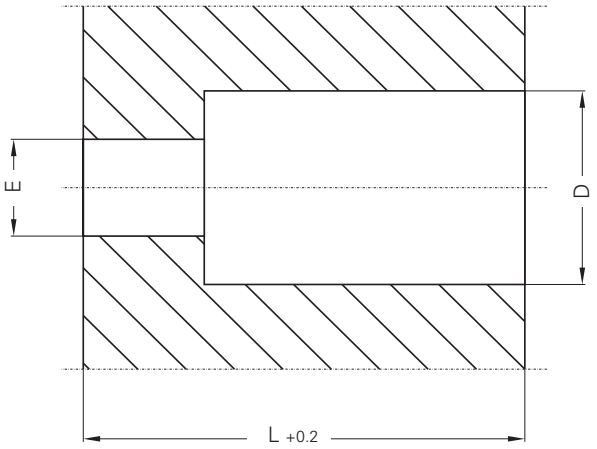
Valvole compensazione
Air Valve
Soupape de compensation
Luftventile

Cod VKT



Cod.	D	B	C	L
VKT08	8	11	7	28
VKT10	10	11	7	31
VKT12	12	18	9	31
VKT16	16	20	10	43
VKT18	18	22	12	43
VKT20	20	20	12	43
VKT25	25	20	12	63

SEDE INSTALLAZIONE



Cod.	D	L	E
VKT08	8	11	7
VKT10	10	11	8
VKT12	12	18	10
VKT16	16	20	12
VKT18	18	22	14
VKT20	20	20	14
VKT25	25	20	14

Acciaio
Steel
Acier
Werkstoff

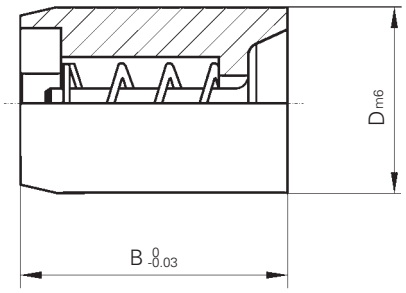
Acciaio inox
Stainless steel
Acier Inoxydable
Rostbeständiger Stahl

Vengono impiegate per compensare il vuoto durante la fase di estrazione in cavità profonde o per immettere aria. Costruite interamente in acciaio inox, temperate e rettificate, con dado autobloccante.

The valves are used to compensate the vacuum during extraction from deep cavities or to let air in. They are made entirely in stainless steel, hardened and ground, with selflocking nut.

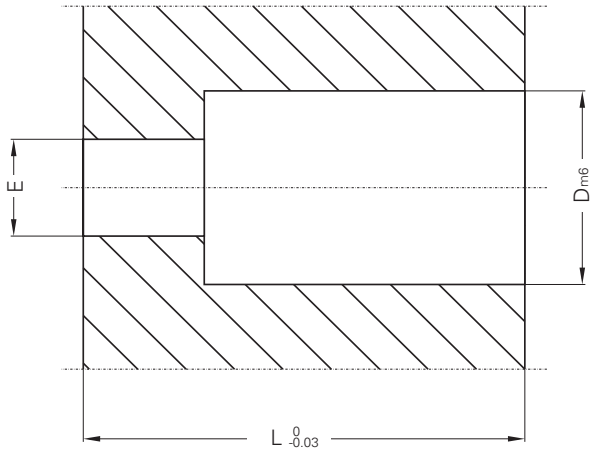
Valvole compensazione
Air Valve
Soupape de compensation
Luftventile

Cod VKTB



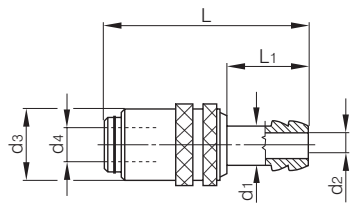
Cod.	D	B
VKTB 08	8	14
VKTB 10	10	14
VKTB 12	12	18
VKTB 16	16	20
VKTB 18	18	22
VKTB 20	20	20
VKTB 26	26	20

SEDE INSTALLAZIONE

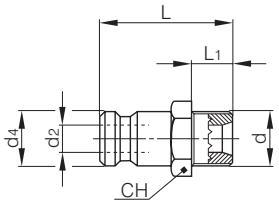


Cod.	D	L	E
VKTB 08	8	14	5
VKTB 10	10	14	8
VKTB 12	12	18	8
VKTB 16	16	20	8
VKTB 18	18	22	8
VKTB 20	20	20	16
VKTB 26	26	20	18

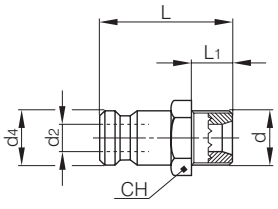
Valvole e raccordi-rapidi
Water connectors
Coupler rapide
Schnellkupplung



ATTACCO RAPIDO	d4	d2	d1	d3	L	L1
VALVOLA R R 6	10	6	10	18	49	18
VALVOLA R R 9	14	9	14	24	61	25

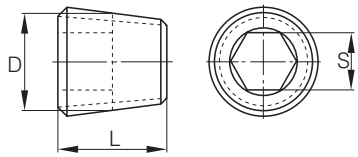


RACCORDI	d	d2	d4	L1	L	CH
INNESTO I R 6	1/8" GAS	6	9	8	28	13
INNESTO I R 6	1/4" GAS	6	9	8	28	13
INNESTO I R 6	M 10	6	9	8	28	13
INNESTO I R 9	1/4" GAS	9	13,5	10,5	28	14



Tipo EUROPEO	d	d2	d4	L1	L	CH
ER	1/4" GAS	6	9,5	9	24	14
ER	1/8" GAS	6	9,5	9	24	14
ER	1/4" GAS	9	13,5	12,5	34	14
ER	1/8" GAS	9	13,5	12,5	34	14

Tappi conici con esagono incassato
Taper threaded plugs
Bouchons filetés coniques
Könische Verschluss-Schrauben



DGas	L	S
1/8" GAS	9,78	3/16"
1/4" GAS	12,9	1/4"
3/8" GAS	14,5	5/16"
1/2" GAS	17,7	3/8"

Acciaio
Steel
Acier
Werkstoff

CF 53 - W. Nr. 1.1213

Durezza
Hardness
Dureté
Härte

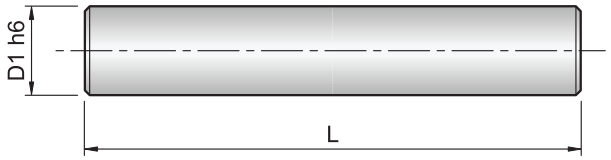
Gambo:	62/64	HRC
Cuore:	40/42	HRC
Shaft:	62/64	HRC
Heart:	40/42	HRC
Corp:	62/64	HRC
Cœur:	40/42	HRC
Schaft:	62/64	HRC
Herz:	40/42	HRC

Esecuzione
Finish
Exécution
Ausführung

Hardened for induction

Barre per scorrimento lineare
Shaft for linear motion
Arbre pour mouvement linéaire
Induktionsgehärtete welle

Tipo BARRAT

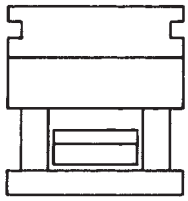


D1	L
6	
8	
10	
12	
14	
16	
18	
20	1.000
25	
30	
32	
40	
50	
60	

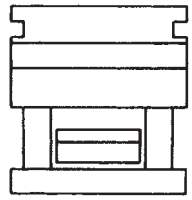
A richiesta altre lunghezze
On request different length
Nous produisons des pieces hors standard
Andere Längen auf Anfrage

Blocchi portastampi per materie plastiche
Standard mould bases
Carcasses pour moules
Standardformen

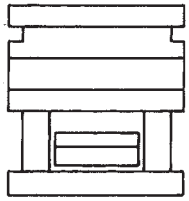
Serie XE



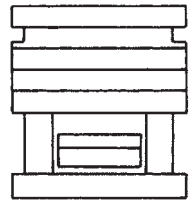
Serie XE + M

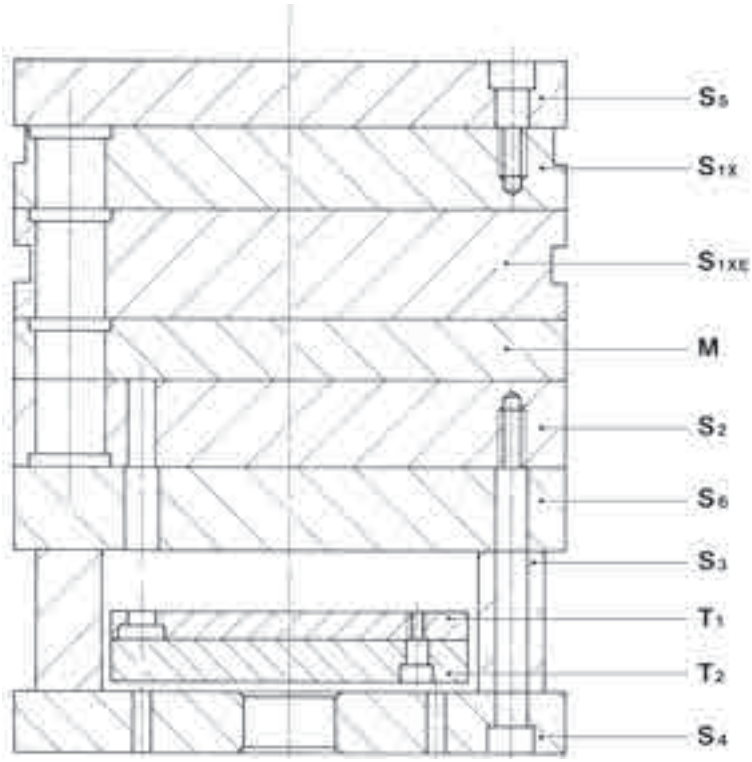


Serie X



Serie X + M





S_{1XE}	Piastra portaforma superiore per tipo XE Clamp plate for type XE	S_5	Piastra di fissaggio superiore Clamp plate
S_{1X}	Piastra portaforma superiore per tipo X Clamp plate for type X	S_6	Piastra intermedia per tipo x Backing plate
S_2	Piastra portaforma inferiore Cavity plate	M	Piastra portaforma mobile Cavity plate
S_3	Distanziali Distance - Bushes	T_1	Piastra tavolino estrazione superiore Ejector plate
S_4	Piastra di fissaggio inferiore Clamp plate	T_2	Piastra tavolino estrazione inferiore Ejector plate base

Piastre rettificate in acciaio indeformabile
Ground plates
Plaques rectifiées
Platten Geschliffen

Acciaio
Steel
Acier
Werkstoff

UNI 95MNVCR 5 KU
DIN 1.2510 K460

Esecuzione
Finish
Exécution
Ausführung

Rettificato
Ground
Rectifiées
Geschliffen

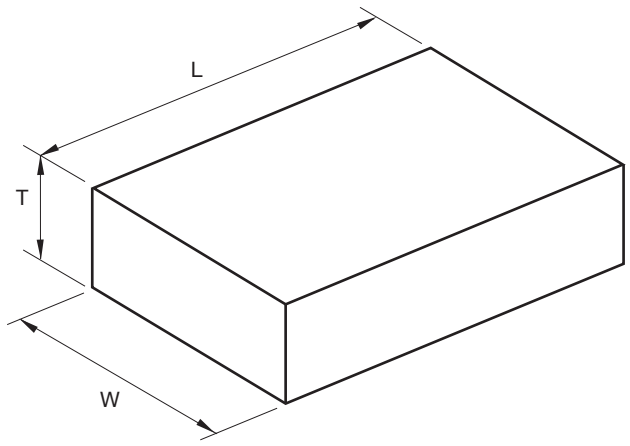
Tolleranza

T = SPESSORE -0/+0,05
W = LARGHEZZA -0/+0,02

Trattamento da eseguire

Tempra:
790÷820°C spegnimento in olio a bagno di sale a 200÷250°C (fino allo spessore massimo di 20 mm): Tempo di permanenza a temperatura: minimo 10 min. Per pezzi con spessore superiore a 20 mm è necessario 1-2 min per ogni mm di spessore. Durezza ottenibile: 63-65 HRC.

Rinvenimento:
Deve essere effettuato immediatamente dopo la tempra. I valori di durezza ottenibili dopo il rinvenimento si rilevano dalla corrispondente curva di rinvenimento. Tempo di permanenza a temperatura: minimo 1 ora. Per pezzi con spessore superiore a 20 mm è necessaria 1 ora per ogni 20 mm di spessore. In casi particolari può essere appropriato il trattamento ad una temperatura di rinvenimento lievemente inferiore con un tempo di permanenza lievemente superiore.



L	W larghezza	T = spessore													
		1	1,5	2	3	4	5	6	8	10	12	15	20	25	30
500	4					●									
	5						●								
	6							●							
	8								●						
	10	●	●	●	●	●	●	●	●	●					
	12	●	●	●	●	●	●	●	●	●	●				
	15	●	●	●	●	●	●	●	●	●	●				
	20	●	●	●	●	●	●	●	●	●	●	●			
	25	●	●	●	●	●	●	●	●	●	●	●	●		
	30	●	●	●	●	●	●	●	●	●	●	●	●	●	
	35	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	60	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	70	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	80	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	125	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	150	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	200	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	250		●	●	●	●	●	●	●	●	●	●	●	●	●
	300	●	●	●	●	●		●	●	●	●	●	●	●	●

Piastre rettificate in acciaio indeformabile
Ground plates
Plaques rectifiées
Platten Geschliffen

Acciaio
Steel
Acier
Werkstoff

UNI X 15CRLM0121
DIN 1.2379-K110

Esecuzione
Finish
Exécution
Ausführung

Rettificato
Ground
Rectifiées
Geschliffen

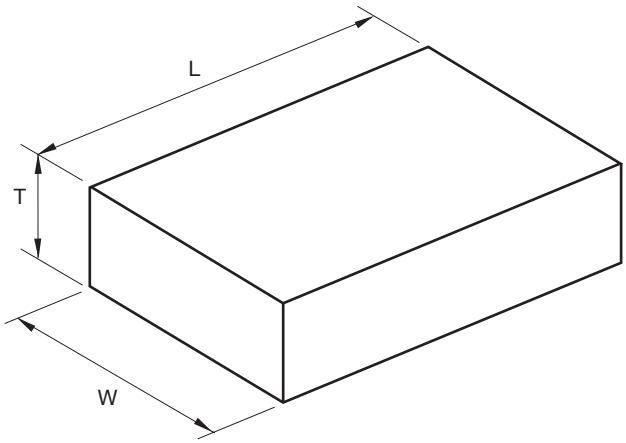
Tolleranza

T = SPESSORE -0/+0,05
W = LARGHEZZA -0/+0,02

Trattamento da eseguire

Tempra:
790÷820°C spegnimento in olio a bagno di sale a 200÷250°C (fino allo spessore massimo di 20 mm): Tempo di permanenza a temperatura: minimo 10 min. Per pezzi con spessore superiore a 20 mm è necessario 1-2 min per ogni mm di spessore. Durezza ottenibile: 63-65 HRC.

Rinvenimento:
Deve essere effettuato immediatamente dopo la tempra. I valori di durezza ottenibili dopo il rinvenimento si rilevano dalla corrispondente curva di rinvenimento. Tempo di permanenza a temperatura: minimo 1 ora. Per pezzi con spessore superiore a 20 mm è necessaria 1 ora per ogni 20 mm di spessore. In casi particolari può essere appropriato il trattamento ad una temperatura di rinvenimento lievemente inferiore con un tempo di permanenza lievemente superiore.



L	W larghezza	T = spessore														
		1	1,5	2,3	3,3	4,3	5,3	6,3	7,3	8,3	9,3	10,3	12,3	15,3	20,3	25,3
500	5,3						●									
	6,3							●								
	7,3								●							
	8,3									●						
	9,3										●					
	10,3											●				
	12,3												●			
	15,3				●	●	●	●	●	●				●		
	20,3				●	●	●	●	●	●	●	●	●		●	
	25,3			●	●	●	●	●	●	●	●	●	●	●		●
	30,3			●	●	●	●	●	●	●	●	●	●	●	●	
	40,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	50,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	60,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	70,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	80,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	100,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	125,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	150,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	200,3			●	●	●	●	●	●	●	●	●	●	●	●	●
	250,3				●	●	●	●	●	●	●	●	●	●	●	●

Golfari girevoli
Rotating eyebolts



Specifiche tecniche
Technical specifications

Orientabile sotto carico

Disponibile su richiesta con filettatura UNC

Disponibile su richiesta con lunghezza gambo fuori standard

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360° con anello ribaltabile a 180° autoallineante

Assemblato con sfere per facilitare l'orientamento del carico

Can be oriented during loading

Available on demand with UNC threading

Available on demand with not standard stem length

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

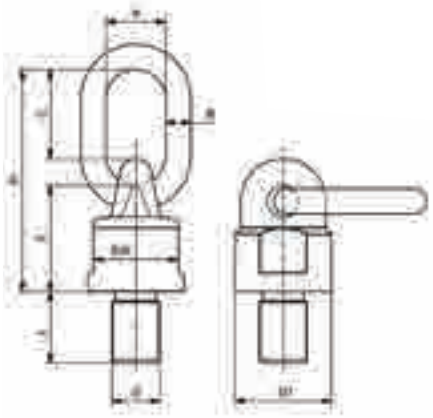
Can be oriented at 360° with self aligning tilting ring at 180°

Assembled with spheres to make load orientation easier

Golfare girevole con anello GR. 80
GR. 80 Rotating eyebolts with ring

800





Misura Size	W.L.L.	A	B	C	E	H	SW	D1	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	Ø mm	Kg
M8x16	0,3	30	13	46	50	105	30	38	0,48
M8x18	0,3	30	13	46	50	105	30	38	0,48
M10x18	0,3	30	13	46	50	105	30	38	0,48
M12x18	0,5	30	13	46	50	105	30	38	0,5
M12x25	0,5	30	13	46	50	105	30	38	0,5
M16x20	1,12	30	13	46	50	105	30	38	0,53
M16x30	1,12	30	13	46	50	105	30	38	0,53
M20x30	1,12	30	13	46	50	105	30	38	0,53
M20x30	2	34	16	57	61	131	40	50	1,05
M24x30	3,15	40	18	70	68	153	48	58	1,63
M30x35	5,3	45	22	65	80	165	65	75	2,23
M30x45	5,3	45	22	65	80	165	65	75	2,23
M30x35	8	50	23	95	95	205	75	85	5,3
M30x45	8	50	23	95	95	205	75	85	5,3
M36x54	8	50	23	95	95	205	75	85	5,5
M42x63	10	50	23	95	95	205	75	85	10
M48x60	15	70	32	120	130	280	95	120	10
M56x78	15	70	32	120	130	280	95	120	10
M64x96	15	70	32	120	130	280	95	120	10
M72x108	25	90	45	130	165	338	140	170	29
M80x120	30	90	45	130	165	338	140	170	29
M90x135	35	90	45	130	165	338	140	170	29

Specifiche tecniche
Technical specifications

Orientabile sotto carico

Disponibile su richiesta con filettatura UNC

Disponibile su richiesta con lunghezza gambo fuori standard

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360° con anello ribaltabile a 180° autoallineante

Assemblato con sfere per facilitare l'orientamento del carico

Can be oriented during loading

Available on demand with UNC threading

Available on demand with not standard stem length

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

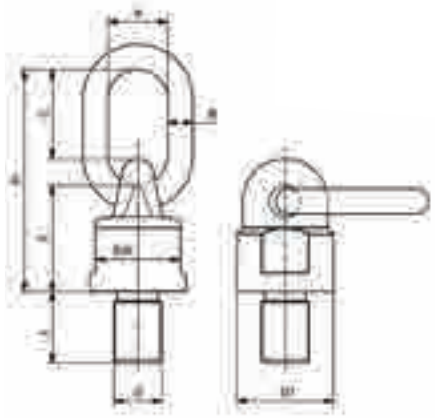
Can be oriented at 360° with self aligning tilting ring at 180°

Assembled with spheres to make load orientation easier

Golfare girevole con anello GR. 100
GR. 100 Rotating eyebolts with ring

800X





Misura Size	W.L.L.	A	B	C	E	H	SW	D1	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	Ø mm	Kg
M8x16	0,3	30	13	46	50	105	30	38	0,48
M8x18	0,3	30	13	46	50	105	30	38	0,48
M10x18	0,5	30	13	46	50	105	30	38	0,48
M12x18	0,7	30	13	46	50	105	30	38	0,5
M14x20	1	30	13	46	50	105	30	38	0,53
M16x20	1,4	30	13	46	50	105	30	38	0,53
M20x30	1,7	30	13	46	50	105	30	38	0,53
M24x30	1,7	30	13	46	50	105	30	38	0,53
M20x30	2,5	34	16	57	61	131	40	50	1,05
M24x30	4	40	18	70	68	153	48	58	1,63
M30x35	4	40	18	70	68	153	48	58	1,63
M30x35	6,7	45	22	65	71	156	70	80	2,85
M30x45	8	50	23	91	86	200	80	90	4,4
M36x54	10	50	23	91	86	200	80	90	4,62
M42x63	12,5	50	23	91	86	200	80	90	5,2
M45x60	12,5	50	23	91	86	200	80	90	5,2
M48x72	12,5	50	23	91	86	200	80	90	5,2
M45x60	16	70	32	120	112	262	100	120	10,9
M48x60	17	70	32	120	112	262	100	120	10,9
M56x78	18	70	32	120	112	262	100	120	10,9
M64x96	20 (25)	70	32	120	112	262	100	120	10,9
M64x96	28	90	45	124	165	333	140	170	29
M72x108	31,5	90	45	124	165	333	140	170	29
M80x120	35	90	45	124	165	333	140	170	29
M90x135	40	90	45	124	165	333	140	170	29

Specifiche tecniche
Technical specifications

Tiro a 90° con minimo ingombro

Disponibile su richiesta con filettatura UNC

Disponibile su richiesta con lunghezza gambo fuori standard

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360°

La vite viene protetta con il sistema GEOMET che garantisce una protezione durevole nel tempo

Pull at 90° with minimum overall dimensions

Available on demand with UNC threading

Available on demand with not standard stem length

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

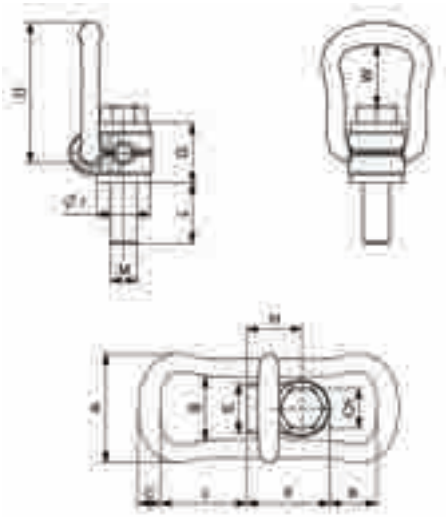
Can be oriented at 360°

The screw is protected with the GEOMET system which guarantees lasting protection in time

Golfare girevole con staffa GR. 100
GR. 100 Rotating eyebolts with clamp

806X





Misura Size	W.L.L.	A	B	C	D	E	F	G	H	I	L	W	J	K	Ch	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg
M8	0,3	57	34	10	78	24	41	30	26,5	25	15	43	51	35	13	0,27
M10	0,63	57	34	10	78	24	41	30	26,5	25	15	42	51	35	17	0,29
M12	1	66	38	13,5	85	30	50	36	33	32	23	40	52	28	19	0,5
M16	1,5	66	38	13,5	85	30	50	36	33	32	24	38	52	28	24	0,51
M20	2,5	87	55	16	111	48	68	44	42,5	45	31	54	71	36	30	1,25
M24	4	87	55	16	111	48	68	44	42,5	45	37	51	71	36	36	1,3
M27	4	109	66	22,5	145	54	91	63	58,5	60	37	64	86	47	41	3,1
M30	5	109	66	22,5	145	54	91	65	58,5	60	45	62	86	47	46	3,2
M36	7	109	66	22,5	145	54	91	55	58,5	60	50	60	86	43	55	3,3
M36	8	136	78	28	190	62	108	81	72,5	70	59	88	115	74	55	5,9
M42	10	136	78	28	190	62	108	75	72,5	70	75	86	115	70	65	6,5
M42	15	169	97	36	242	68	131	89	87,5	85	63	121	151	97	65	11,2
M48	20	169	97	36	242	68	131	89	87,5	95	71	117	151	93	75	11,6

Specifiche tecniche
Technical specifications

Tiro assiale con minimo ingombro

Disponibile su richiesta con lunghezza gambo fuori standard

Coefficiente di sicurezza 5 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360°

Vite imperdibile

La vite viene protetta con il sistema GEOMET che garantisce una protezione durevole nel tempo

Le viti dei golfari sono state realizzate per poter essere serrate anche con chiavi esagonali universali

In axis pull with minimum overall dimensions

Available on demand with not standard stem length

Coefficient 5 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

Can be oriented at 360°

Captive screws

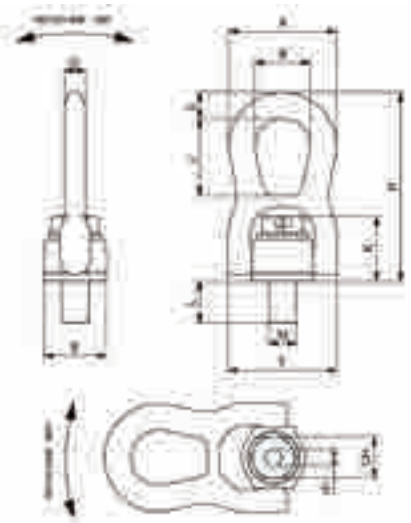
The screw is protected with the GEOMET system which guarantees lasting protection in time

The screws are manufactured to allow use with universal hexagonal keys

Golfare girevole con snodo GR. 100
GR. 100 Heavy lift swivel hoist ringp

811X





Misura Size	W.L.L.	A	B	C	E	F	G	H	J	K	L	CH	Ch	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg
M8	0,3	56	28	14	30	55	11	99	40	33,5	12	13	5	0,37
M10	0,6	56	28	14	30	55	11	99	40	34,5	15	17	6	0,37
M12	1	56	28	14	30	55	11	99	40	35,5	18	19	7	0,37
M14	1,3	74,5	38	18	47	78	17	135,5	55	46	21	22	7	1,3
M16	1,6	74,5	38	18	47	78	17	135,5	55	46,5	25	24	10	1,3
M18	2	74,5	38	18	47	78	17	135,5	55	47	27	27	10	1,3
M20	2,5	74,5	38	18	47	78	17	135,5	55	48	30	30	12	1,3
M22	3	106	56	25	62	114,5	22	198,5	84	63,5	33	32	12	4
M24	4	106	56	25	62	114,5	22	198,5	84	64,5	36	36	14	4
M27	5	106	56	25	62	114,5	22	198,5	84	66,5	40	41	14	4
M30	6,3	106	56	25	62	114,5	22	198,5	84	68	45	46	17	4

Specifiche tecniche
Technical specifications

Ideale per ancoraggi a 90°

Disponibile su richiesta con lunghezza gambo fuori standard

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360°

Le viti dei golfari sono state realizzate per poter essere serrate anche con chiavi esagonali universali

Ideal for fastening at 90°

Available on demand with not standard stem length

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

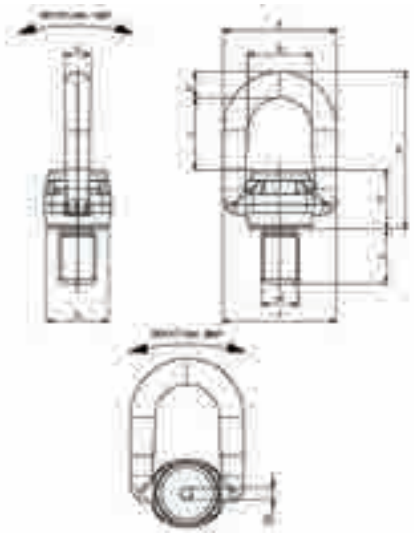
Can be oriented at 360°

The screws are manufactured to allow use with universal hexagonal keys

Golfare girevole con snodo GR. 100
GR. 100 Heavy lift swivel hoist ring

812X





Misura Size	W.L.L.	A	B	C	E	F	G	H	J	K	L	Ch	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg
M33	8	150	85	32	76,5	150	32	220	108	80	50	17	6
M36	10	150	85	32	76,5	150	32	220	108	80	54	17	6
M39	10	150	85	32	76,5	150	32	220	108	80	58	17	6
M42	12,5	150	85	32	76,5	150	32	220	108	80	63	17	6
M45	15	176	100	39	95	176	39	257	128	90	63	17	10,5
M48	20	176	100	39	95	176	39	257	128	90	68	17	10,5
M52	20	176	100	39	95	176	39	257	128	90	68	17	10,5
M56	25	200	113	46	110	200	46	277	126	105	78	19	16,3
M64	35	200	113	46	110	200	46	277	126	105	90	19	16,3
M72	25	200	113	46	110	200	46	277	126	105	90	19	16,3
M80	35	200	113	46	110	200	46	277	126	105	90	19	16,3
M90	35	200	113	46	110	200	46	277	126	105	90	19	16,3
M100	35	200	113	46	110	200	46	277	126	105	90	19	16,3

Specifiche tecniche
Technical specifications

Ideale per ancoraggi a 90°

Disponibile su richiesta con filettatura UNC

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360°

Vite imperdibile

Le viti dei golfari sono state realizzate per poter essere serrate anche con chiavi esagonali universali

Ideal for fastening at 90°

Available on demand with UNC threading

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

Can be oriented at 360°

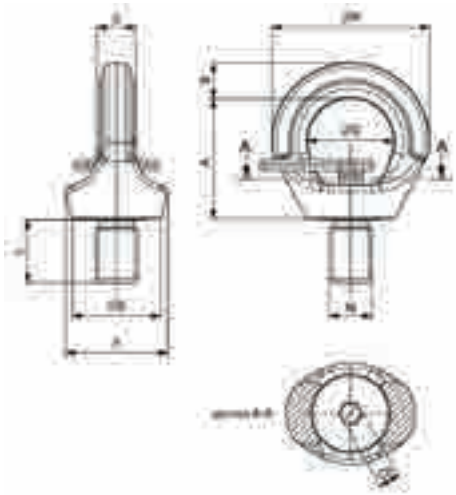
Captive screws

The screws are manufactured to allow use with universal hexagonal keys

Golfare girevole H.T. GR. 100
GR. 100 Rotating eyebolt H.T.

807X H.T.





Misura Size	W.L.L.	A	B	C	D	E	F	K	L	CH	Peso Weight
mm	t	mm	mm	mm	Ø mm	Ø mm	mm	Ø mm	mm	mm	Kg
M08	0,3	35	11	9	25	25,5	30	46	12	6	0,12
M10	0,4	33,7	10	9,8	25	25,5	30	46	15	6	0,12
M12	0,75	41,5	12,5	11,5	30	30,6	36,5	55,5	18	8	0,2
M14	0,75	41,5	12,5	11,5	30	30,6	36,5	55,5	18	8	0,2
M16	1,5	49,5	14,5	15,7	35	36,5	42	64,5	24	10	0,35
M18	1,5	49,5	14,5	15,7	35	36,5	42	64,5	24	10	0,35
M20	2,3	58	16	18	40	42	52,5	74,5	30	12	0,6
M22	2,3	58	16	18	40	42	52,5	74,5	30	12	0,6
M24	3,2	69	20,5	22	49	50	61	90	36	12	1
M27	3,2	69	20,5	22	49	50	61	90	36	12	1
M30	4,5	86	25,5	28	60	66	75	111	45	17	2
M33	4,5	86	25,5	28	60	66	75	111	45	17	2
M36	7	105	32	30	74	77	96,5	135	55	22	3,4
M42	9	118	38	37	82	87	110	158	65	24	5,7
M48	12	137	43	38	95	102	124,5	180	72	27	8,5

Specifiche tecniche
Technical specifications

Vite a lunghezza variabile

Chiave imperdibile da ordinare separatamente

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360°

Vite a testa cilindrica con cava esagonale cl. 10.9 con lunghezza variabile secondo norma UNI 5931-DIN912

Variable screw length

Spanner kit to be ordered separately

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

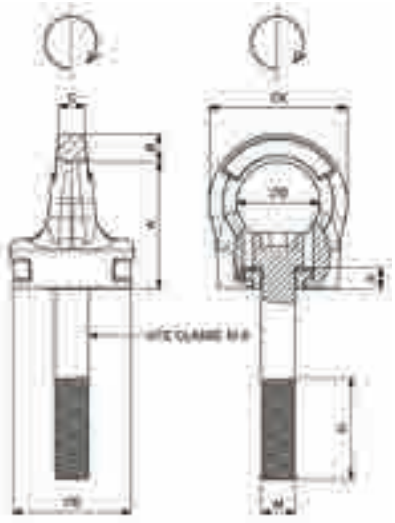
Can be oriented at 360°

Cylinder head screw with hexagonal slot cl. 10.9 with variable length in compliance with directive UNI 5931-DIN912

Golfare girevole H.Q.E. GR. 100
GR. 100 Rotating eyebolt H.Q.E.

810X





Misura Size	W.L.L.	A	B	C	D	E	K	F
mm	t	mm	mm	mm	Ø mm	Ø mm	Ø mm	Ø mm
M8	0,3	44,5	8	10	29	32	45	10,5
M10	0,4	44,5	8	10	29	32	45	6,5
M12	0,75	53,5	11	11	34	44	56	8
M16	1,5	59,5	13	14,5	39	56	65	8,5
M20	2,3	67	14	17	42	58	70	10,5
M24	3,2	80	18	19	52	73	88	13,5
M30	4,5	101	22	27	62	80	106	17

Specifiche tecniche
Technical specifications

Sistema autobloccante integrato

Coefficiente di sicurezza 4 in tutte le direzioni di carico

Idoneo al sollevamento in sicurezza secondo direttiva macchine 2006/42/EC

Orientabile a 360°

Dado imperdibile

Il perno filettato deve essere sempre avvitato completamente almeno per tutta l'altezza del dado

Fitted with integrated self locking system

Coefficient 4 in all loading directions

Suitable for safe lifting in compliance with the machinery directive 2006/42/EC

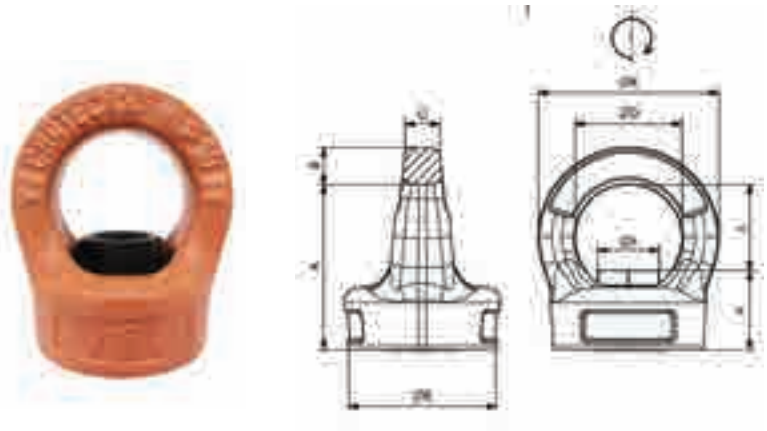
Can be oriented at 360°

Worm nut

The threaded pivot must always be screwed on completely along the length of the nut

Golfare girevole femmina H.Q.E. GR. 100
GR. 100 Rotating eyenut H.Q.E.

810FX



Misura Size	W.L.L.	A	B	C	D	E	K	F	L	Ch	Peso Weight
mm	t	mm	mm	mm	Ø mm	Ø mm	Ø mm	mm	mm	mm	Kg
M8	0,3	44,5	8	10	29	32	45	21,5	23	13	0,17
M10	0,4	44,5	8	10	29	32	45	21,5	23	14	0,2
M12	0,75	53,5	11	11	34	44	56	26,5	27	16	0,39
M16	1,5	59,5	13	14,5	39	56	65	30,5	29	21	0,69
M20	2,3	67	14	17	42	58	70	33	34	26	0,71
M24	3,2	80	18	19	52	73	88	40	40	30	1,7
M30	4,5	101	22	27	62	80	106	51	50	36	2,44

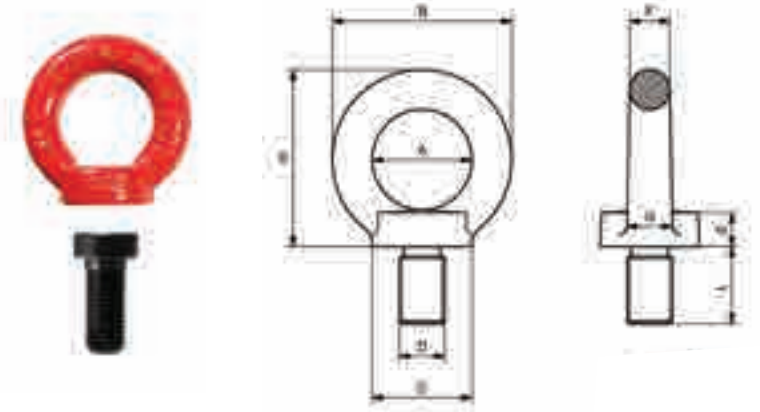
Specifiche tecniche
Technical specifications

Orientabile
Coefficiente di sicurezza 4
Avvitare con chiave

Can be oriented
Safety ratio 4
To be screwed with appropiate spanner

Golfare orientabile con vite 8.8 GR. 80
GR. 80 Oriented eyebolt with screw 8.8

801



Misura Size	A	B	C	F	H	Peso Weight
D x L (mm)	mm	mm	mm	mm	mm	Kg
M6x15	25	45	25	10	45	0,090
M8x15	25	45	25	10	45	0,113
M10x16	25	45	25	10	45	0,135
M12x22	35	63	35	14	62	0,270
M14x20	35	63	35	14	62	0,290
M16x29	35	63	35	14	62	0,310
M20x32	50	90	50	20	90	0,860
M24x40	50	90	50	20	90	0,900
M30x45	60	108	65	24	109	1.700

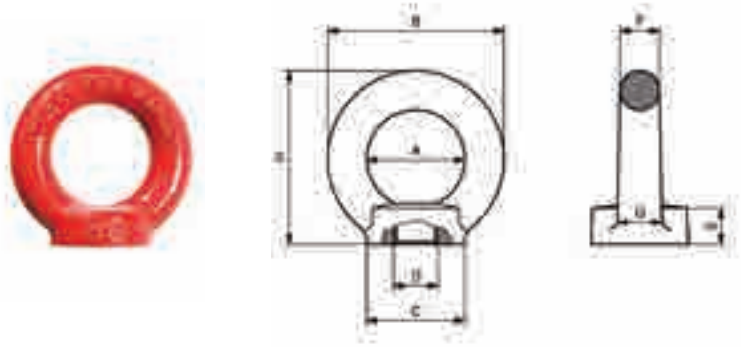
Specifiche tecniche
Technical specifications

Orientabile
Coefficiente di sicurezza 4
Avvitare a mano

Can be oriented
Safety ratio 4
To be screwed by hand

Golfare femmina 8.8 GR. 80
GR. 80 Eyenut 8.8

802



Misura Size	A	B	C	E	F	H	Peso Weight
D x L (mm)	mm	mm	mm	mm	mm	mm	Kg
M6	25	45	25	10	10	45	0,1
M8	25	45	25	10	10	45	0,1
M10	25	45	25	10	10	45	0,1
M12	35	63	35	14	14	62	0,26
M14	35	63	35	14	14	62	0,26
M16	35	63	35	14	14	62	0,26
M18	50	90	50	20	20	90	0,75
M20	50	90	50	20	20	90	0,75
M24	50	90	50	20	20	90	0,75
M27	60	108	65	24	24	109	1,4
M30	60	108	65	24	24	109	1,4

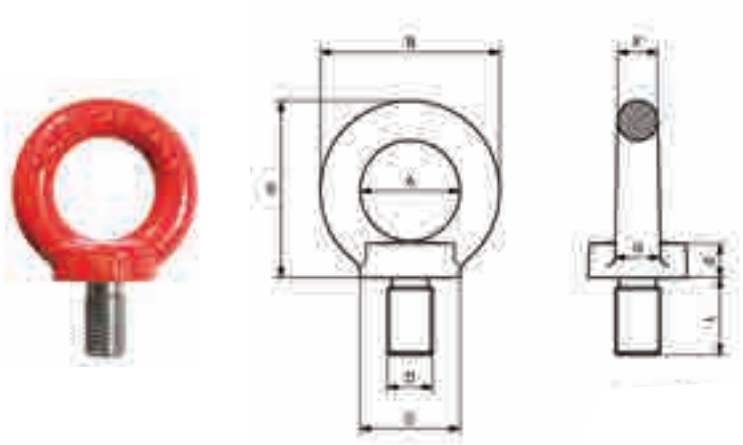
Specifiche tecniche
Technical specifications

Orientabile
Coefficiente di sicurezza 4
Avvitare a mano

Can be oriented
Safety ratio 4
To be screwed by hand

Golfare maschio 8.8 GR. 80
GR. 80 Eyebolt 8.8

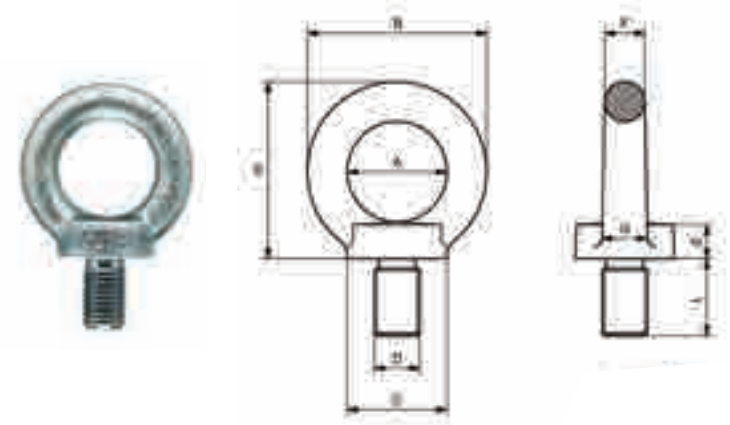
803



Misura Size	A	B	C	E	F	H	Peso Weight
D x L (mm)	mm	mm	mm	mm	mm	mm	Kg
M6x13	25	45	25	10	10	45	0,09
M8x13	25	45	25	10	10	45	0,09
M10x17	25	45	25	10	10	45	0,11
M12x21	35	63	35	14	14	62	0,27
M14x21	35	63	35	14	14	62	0,29
M16x27	35	63	35	14	14	62	0,31
M18x27	50	90	50	20	20	90	0,84
M20x30	50	90	50	20	20	90	0,86
M22x36	50	90	50	20	20	90	0,9
M24x36	50	90	50	20	20	90	0,9
M27x45	60	108	65	24	24	109	1,66
M30x45	60	108	65	24	24	109	1,7
M33x54	70	126	75	26	28	128	2
M36x54	70	126	75	26	28	128	2,15
M42x63	80	144	85	30	32	147	4,15
M48x68	90	166	100	35	38	168	6,2
M56x78	100	184	110	38	42	187	8,8
M64x90	110	206	120	42	48	208	12,4

Golfare maschio DIN 580
Liting eyebolt DIN 580

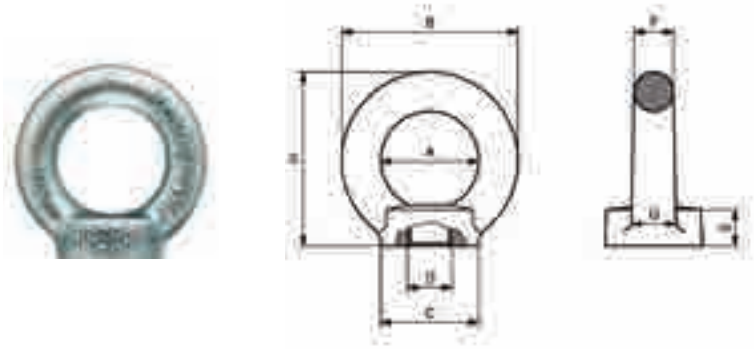
55



Misura Size	W.L.L.	A	B	C	E	F	G	H	L	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	mm	mm	Kg
SIMILAR TO DIN M6	90	20	36	20	6	8	10	36	13	0,060
M6	75	20	36	20	6	8	10	36	13	0,060
M 8	140	20	36	20	6	8	10	36	13	0,060
M 10	230	25	45	25	8	10	12	45	17	0,110
M 12	340	30	54	30	8	12	14	53	20,5	0,180
SIMILAR TO DIN M 14	500	30	54	30	10	12	14	53	20,5	0,190
M 14	490	35	63	35	12	14	16	62	27	0,270
M 16	700	35	63	35	12	14	16	62	27	0,280
SIMILAR TO DIN M 18	930	35	63	35	12	14	16	62	27	0,330
M 18	850	40	72	40	14	16	19	71	30	0,440
M 20	1200	40	72	40	14	16	19	71	30	0,450
SIMILAR TO DIN M 22	1500	40	72	40	14	16	19	71	30	0,500
M 22	1400	50	90	50	18	20	24	90	36	0,720
M 24	1800	50	90	50	18	20	24	90	36	0,740
SIMILAR TO DIN M 27	2500	54	98	62	20	22	26	99	40	1.250
M 27	2100	60	108	65	22	24	28	109	45	1.620
M 30	3200	60	108	65	22	24	28	109	45	1.660
SIMILAR TO DIN M 33	4200	60	108	65	22	24	28	109	45	1.900
M 33	3200	70	126	75	26	28	32	128	54	2.600
M 36	4600	70	126	75	26	28	32	128	54	2.650
SIMILAR TO DIN M 39	6000	80	144	85	30	32	38	147	63	3.780
M 39	4600	80	144	85	30	32	38	147	63	3.780
M 42	6300	80	144	85	30	32	38	147	63	4.030
SIMILAR TO DIN M 45	7800	90	166	100	35	38	46	168	68	6.240
M 45	6300	90	166	100	35	38	46	168	68	6.240
M 48	8600	90	166	100	35	38	46	168	68	6.380
SIMILAR TO DIN M 52	9900	100	184	110	38	42	50	187	78	8.570
M 52	8600	100	184	110	38	42	50	187	78	8.570
M 56	11500	100	184	110	38	42	50	187	78	8.800
M 60	11500	110	206	120	42	48	58	208	90	12.130
M 64	16000	110	206	120	42	48	58	208	90	12.400
M 72	20000	140	260	150	50	60	72	260	100	23.300
M 80	28000	160	296	170	55	68	80	298	112	34.200
M 100	40000	180	330	190	60	75	88	330	130	49.100

Golfare femmina DIN 582
Lifting eyenut DIN 582

56



Misura Size	W.L.L.	A	B	C	E	F	G	H	Peso Weight
mm	t	mm	mm	mm	mm	mm	mm	mm	Kg
SIMILAR TO DIN M 6	90	20	36	20	8,5	8	10	36	0,050
M 6	75	20	36	20	8,5	8	10	36	0,050
M 8	140	20	36	20	8,5	8	10	36	0,050
M 10	230	25	45	25	10	10	12	45	0,090
M 12	340	30	54	30	11	12	14	53	0,160
SIMILAR TO DIN M 14	500	30	54	30	11	12	14	53	0,150
M 14	490	35	63	35	13	14	16	62	0,240
M 16	700	35	63	35	13	14	16	62	0,240
SIMILAR TO DIN M 18	930	35	63	35	13	14	16	62	0,230
M 18	850	40	72	40	16	16	19	71	0,370
M 20	1200	40	72	40	16	16	19	71	0,360
SIMILAR TO DIN M 22	1500	40	72	40	16	16	19	71	0,350
M 22	1400	50	90	50	20	20	24	90	0,730
M 24	1800	50	90	50	20	20	24	90	0,720
SIMILAR TO DIN M 27	2500	54	98	62	22	22	26	99	0,800
M 27	2100	60	108	65	25	24	28	109	1.340
M 30	3200	60	108	65	25	24	28	109	1.320
SIMILAR TO DIN M 33	4200	60	108	65	25	24	28	109	1.270
M 33	3200	70	126	75	30	28	32	128	2.110
M 36	4600	70	126	75	30	28	32	128	2.080
SIMILAR TO DIN M 39	6000	80	144	85	35	32	38	147	3.150
M 39	4600	80	144	85	35	32	38	147	3.150
M 42	6300	80	144	85	35	32	38	147	3.110
SIMILAR TO DIN M 45	7800	90	166	100	40	38	46	168	5.080
M 45	6300	90	166	100	40	38	46	168	5.080
M 48	8600	90	166	100	40	38	46	168	5.020
SIMILAR TO DIN M 52	9900	100	184	110	45	42	50	187	6.790
M 52	8600	100	184	110	45	42	50	187	6.790
M 56	11500	100	184	110	45	42	50	187	6.690
M 60	11500	110	206	120	50	48	58	208	9.430
M 64	16000	110	206	120	50	48	58	208	9.300
M 72	20000	140	260	150	60	60	72	260	18.500
M 80	28000	160	296	170	70	68	80	298	27.300
M 100	40000	180	330	190	80	75	88	330	36.400

Troncatrice
Cut-off machine
Tronçonneuse
Trennmaschine









Serie DIAMANTE ABZ

Particolarmente adatta per tagliare spine, punzoni, colonne e boccole guida, barrette in acciaio al cobalto, profilati speciali in acciaio inox, alluminio, ottone, rame, nylon, ecc…
Non lascia bave e non altera il trattamento di tempra, motore 1HP/0.75kW, alimentazione trifase 380V, a richiesta anche alimentazione monofase 220V per hobbisti.
Disco abrasivo per alte velocità Ø 150 x 1-1,5 mm, velocità di rotazione 6.000 giri circa morsa girevole graduata per tagli fino a 45°. Comando di avviamento nell'impugnatura mediante microinterruttore a bassa tensione, carter avvolgente per protezione totale disco abrasivo.

DIAMANTE ABZ range

It is ideal for cutting pins, punches, pilot pins and guide bushings, cobalt steel bars, special stainless steel, aluminium, brass, copper, and nylon etc sections.
It does not leave burr nor alter quench hardening treatment, 1HP/0.75kW motor, three-phase power supply, single 220V power unit available on request for home users.
Abrasive disk Ø 150 x 1-1,5 mm, for high speeds, rotation speed approx. 6.000 rpm, rotating graduated chuck for cuts of up to 45°. Starts using low voltage micro-switch on handle, wrap-around safety guard totally shields abrasive disk.

Série DIAMANTE ABZ

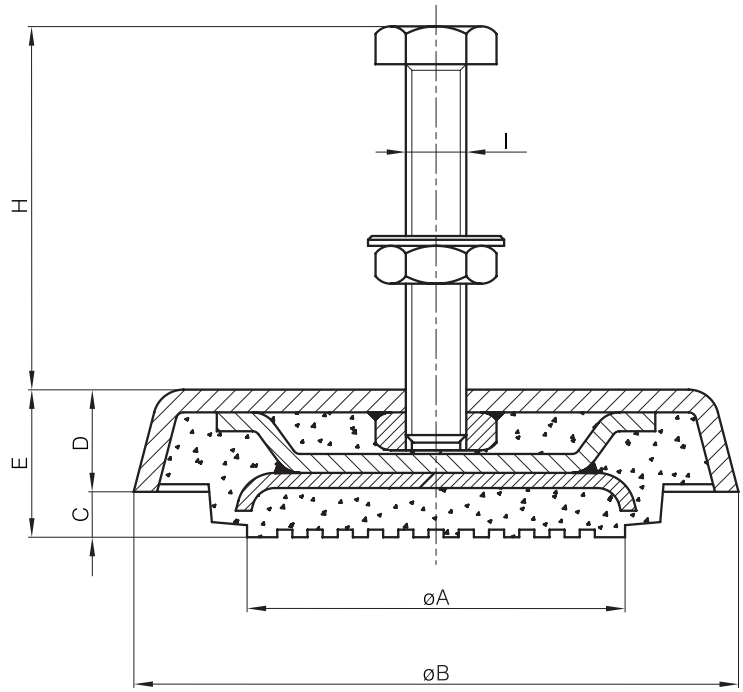
Machine particulièrement indiquée pour découper les chevilles poinçons, colonnes et bagues de guidage, barrettes en acier au cobalt, profilés spéciaux en acier inox, aluminium, laiton, cuivre, nylon etc.
Ne laisse aucune trace de bavure et n'altère pas le traitement de tempre. Moteur 1 ch./0.75 kW, alimentation triphasée 380 V (sur demande, alimentation monophasée 220 V pour travaux de bricolage).
Disque abrasif pour grandes vitesses Ø 150 x 1-1,5 mm, vitesse de rotation 6.000 tours environ, étau rotatif gradué pour coupes jusqu'à 45°.
Commande de démarrage sur la poignée par micro-interrupteur basse tension, carter enveloppant pour protection totale du disque abrasif.

Caratteristiche generali
General features

Il supporto antivibrante VIBROLEVEL è stato appositamente studiato per risolvere ogni problema di installazione rapida o di spostamenti di un parco macchine per esigenze di produzione o di spazio, offrendo i seguenti vantaggi:
- Semplice posa in opera della macchina in bolla
- Livellamento preciso, avvitando il tirante il supporto si ingrossa
- Ammortizzamento di vibrazioni e urti su gomma antiolio
- Possibilità di un rapido spostamento della macchina senza bisogno di fondazioni.

The antivibrations mountings VIBROLEVEL have been studied to solve all problems of a fast displacement for the needs of production and space;
These supports offer the following advantages:
- Exact levelling
- Endurance against vibrations and knocks
- Possibility of a fast displacement of the engine without foundings.

Supporti antivibranti Vibrolevel
Antivibrations Vibrolevel



Tipo	A	B	C	D	E	H	I	Carico Max
OG-120	75	120	12	24	36	75	M-12	1000 Kg.
OG-140	110	140	14	28	42	100	M-14	2000 Kg.
OG-180	120	180	16	33	49	100	M-16	3000 Kg.
OG-230	160	230	19	38	57	135	M-18	4000 Kg.

Caratteristiche generali
General features

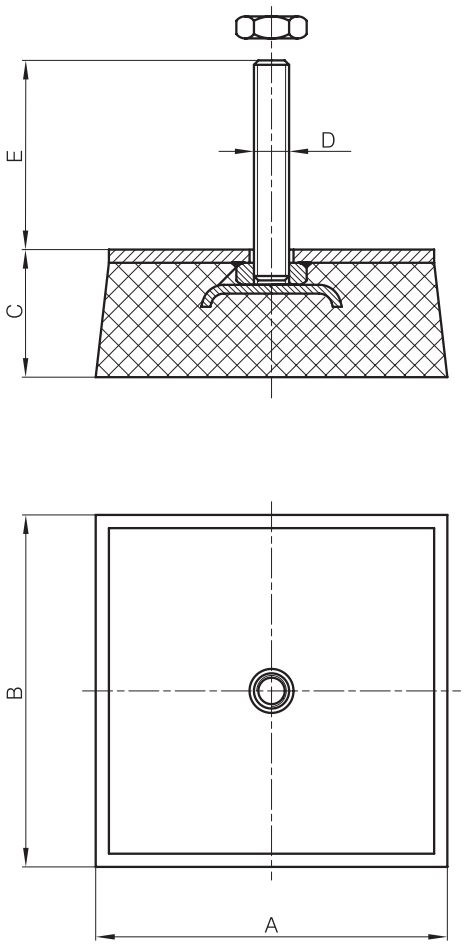
Il supporto antivibrante VIBROTAP è stato studiato per risolvere i problemi di quelle installazioni nelle quali non sia necessario il livellamento (esempio A), o nel caso di livellamenti in cui non sia indispensabile la rigidità della macchina (esempio B).

La sua forma e struttura garantisce i seguenti vantaggi:
- Perfetta aderenza al pavimento e sicuro ancoraggio della macchina
- Isolamento alle vibrazioni assorbendo gli urti ed eliminando i rumori di funzionamento.
- Durata illimitata della gomma essendo in neoprene antiolio
- Semplice posa in opera della macchina in bolla (es. B)
- Possibilità di un rapido spostamento della macchina senza bisogno di fondazioni.

The antivibrations mountings VIBROTAP have been studied to solve the problems for the engine where the levelling is not necessary (A), or for the levelling where the rigidity of the engine is not important (B).

The shape of this support guarantees the following advantages:
- Perfect adherence to the floor
- Isolation against vibrations and elimination of working rumor
- Unlimited rubber resistance
- Possibility of a fast displacement of the engine without foundings.

Supporti antivibranti Vibrotap
Antivibrations Vibrotap



Tipo	A	B	C	D	E	Carico Max
OM 80	80	50	20	M 8	50	356 Kg.
OM 110	110	70	22	M 12	60	700 Kg.
OM 150	150	100	25	M 16	70	1800 Kg.
OM 200	200	120	30	M 18	80	3000 Kg.

Tabella Tolleranze
Tolerances
Tolerances
Abmaße

Ø EST - Ø EXT - AUßENMAßE - in m = 0,001mm

mm		f6	f7	g6	h3	h4	h5	h6	h8	h9	j6	js6	js9	js14	js15	k6	m5	m6	n6
DA	1	-6	-6	-2	0	0	0	0	0	0	+4	+3	+12,5	+125	+200	+6	+6	+8	+10
A	3	-12	-16	-8	-2	-3	-4	-6	-14	-25	-2	-3	-12,5	-125	-200	0	+2	+2	+4
Oltre	3	-10	-10	-4	0	0	0	0	0	0	+6	+4	+15	+150	+240	+9	+9	+12	+16
A	6	-18	-22	-12	-2,5	-4	-5	-8	-18	-30	-2	-4	-15	-150	-240	+1	+4	+4	+8
Oltre	6	-13	-13	-5	0	0	0	0	0	0	+7	+4,5	+18	+180	+290	+10	+12	+15	+19
A	10	-22	-28	-14	-2,5	-4	-6	-9	-22	-36	-2	-4,5	-18	-180	-290	+1	+6	+6	+10
Oltre	10	-16	-16	-6	0	0	0	0	0	0	-8	+5,5	+21,5	+215	+350	+12	+15	+18	+23
A	18	-27	-34	-17	-3	-5	-8	-11	-27	-43	-3	-5,5	-21,5	-215	-350	+1	+7	+7	+12
Oltre	18	-20	-20	-7	0	0	0	0	0	0	+9	+6,5	+26	+260	+420	+12	+17	+21	+28
A	30	-33	-41	-20	-4	-6	-9	-13	-33	-52	-4	-6,5	-26	-260	-420	+2	+8	+8	+15
Oltre	30	-25	-25	-9	0	0	0	0	0	0	+11	+8	+31	+310	+500	+18	+20	+25	+33
A	50	-41	-50	-25	-4	-7	-11	-16	-39	-62	-5	-8	-31	-310	-500	+2	+9	+9	+17
Oltre	50	-30	-30	-10	0	0	0	0	0	0	+12	+9,5	+37	+370	+600	+21	+24	+30	+39
A	80	-49	-60	-29	-5	-8	-13	-19	-46	-74	-7	-9,5	-37	-370	-600	+2	+11	+11	+20
Oltre	80	-36	-36	-12	0	0	0	0	0	0	+13	+11	+43,5	+435	+700	+25	+28	+35	+45
A	120	-58	-71	-34	-6	-10	-15	-22	-54	-87	-9	-11	-43,5	-435	-700	+3	+13	+13	+23

Ø INT - Ø INT - INNENMAßE - in m = 0,001mm

mm		E8	F7	G7	H5	H6	H7	H8	H9	H10	H11	J7	JS5	K6	K7	M6	M7	P6	P7
DA	1	+28	+16	+12	+4	+6	+10	+14	+25	+40	+60	+4	+2	0	0	-2	-2	-6	-6
A	3	+14	+6	+2	0	0	0	0	0	0	0	-6	-2	-6	-10	-8	-12	-12	-16
Oltre	3	+38	+22	+16	+5	+8	+12	+18	+30	+48	+75	+6	+2,5	+2	+3	-1	0	-9	-8
A	6	+20	+10	+4	0	0	0	0	0	0	0	-6	-2,5	-6	-9	-9	-12	-17	-20
Oltre	6	+47	+28	+20	+6	+9	+15	+22	+36	+58	+90	+8	+3	+2	+5	-3	0	-12	-9
A	10	+25	+13	+5	0	0	0	0	0	0	0	-7	-3	-7	-10	-12	-15	-21	-24
Oltre	10	+59	+34	+24	+8	+11	+18	+27	+43	+70	+110	+10	+4	+2	+6	-4	0	-18	-14
A	18	+32	+16	+6	0	0	0	0	0	0	0	-8	-4	-9	-12	-15	-18	-26	-29
Oltre	18	+73	+41	+28	+9	+13	+21	+33	+52	+84	+130	+12	+4,5	+2	+6	-4	0	-18	-14
A	30	+40	+20	+7	0	0	0	0	0	0	0	-9	-4,5	-11	-15	-17	-21	-31	-35
Oltre	30	+89	+50	+34	+11	+16	+25	+39	+62	+100	+160	+14	+5,5	+3	+7	-4	0	-21	-17
A	50	+50	+25	+9	0	0	0	0	0	0	0	-11	-5,5	-13	-18	-20	-25	-37	-42
Oltre	50	+106	+60	+40	+13	+19	+30	+46	+74	+120	+190	+18	+6,5	+4	+9	-5	0	-26	-21
A	80	+60	+30	+10	0	0	0	0	0	0	0	-12	-6,5	-15	-21	-24	-30	-45	-51
Oltre	80	+126	+71	+47	+15	+22	+35	+54	+87	+140	+220	+22	+7,5	+4	+10	-6	0	-30	-24
A	120	+72	+36	+12	0	0	0	0	0	0	0	-13	-7,5	-18	-25	-28	-35	-52	-59

Tabella di conversione per durezza Vickers e Rockwell
Conversion table for Vickers and Rockwell hardness

Valori approssimativi
Approximate values

HV	HRC DIN
574	53,8
584	54,3
592	54,8
602	55,3
612	55,8
620	56,3
630	56,6
636	57,1
642	57,6
656	58,1
666	58,6
673	59,1
687	59,6
698	60
708	60,5
720	61
732	61,5

HV	HRC DIN
742	61,9
758	62,4
770	62,9
783	63,4
797	63,9
810	64,3
823	64,6
840	65,3
856	65,6
872	66,2
892	66,7
908	67,2
924	67,6
946	68,1
978	68,6
1004	69

ø of test pieces	Load
> 3,2 ... 6	HV 10
> 1,0 ... 3,2	HV 5
> 0,5 ... 1	HV 1

Regola di base per la selezione del carico per il test di Vickers

Le due diagonali dell'impressione di Vickers non devono partono di oltre il 5% l'uno dall'altro, altrimenti la soglia di carico deve essere modificata.

Basic rule for selection of load for Vickers test

The two diagonals of the Vickers impression must not depart by more than 5% from each other, otherwise the load threshold must be changed.

Condizioni generali di vendita
Selling terms

Condizioni generali di vendita

- Per tutti gli ordini e la produzione di parti speciali, Nuova Ret si riserva il diritto di:
  - fornire una quantità che sia compresa in un range tra +/-10 % rispetto alla quantità ordinata.
- Tutti i prezzi non inclusi nei vari listini possono essere richiesti dal cliente tramite richiesta d'offerta.

- Non si accettano reclami trascorsi 8 giorni dal ricevimento di quanto fornito.
- La merce viaggia a rischio e pericolo del cliente, anche se convenuta a franco destino.
- Salvo patto espresso, tutti i prezzi si intendono franco sede della ditta fornitrice.
- Non si accettano pagamenti parziali senza nessuna autorizzazione concordata in fase d'ordine.
- In caso di ritardo nel pagamento, decorreranno gli interessi commerciali nella misura del tasso ufficiale di sconto aumentato di 3 punti percentuali.
- Per qualsiasi controversia è competente l'autorità giudiziaria del Foro di Milano.
- Accettando questo documento si accettano tutte le condizioni soprastanti.

General selling terms

- For all the orders and the production of special components, Nuova Ret reserves the right of:
  - supply a quantity in a range between +/- 10 % of the ordered quantity.
- All the prices not included in the price list may be asked form the customers through an official inquiry.

- Nuova Ret does not accept claims after 8 days from the receiving of the goods.
- The risk of the goods transportation in on customer's charge.
- All the transportation's costs must be considered ex-works.
- We do not accept discounted or partial payments without authorization.
- In case of delay in payment we will apply an interest rate equal to the official market interest rate increased by 3 percentage points.
- Legal arguments will be discussed under the Milan legal authority.
- By accepting this document, you accept all the above-mentioned conditions.

Note

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Note

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