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COMPANY

metallo**duro**
hardmetal



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Sinter Sud

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Index | Indice | Inhaltverzeichnis | Sommaire

page | description

- 6** **Solid rods** - Length 320/330mm | **Cilindri** - Lunghezze 320/330mm | **VHM-Rundstäbe** - Länge 320/330mm | **Barreaux ronds** - Longueur 320/330mm
-
- 8** **Solid rods** - Length 330mm | **Cilindri** - Lunghezze 330mm | **VHM-Rundstäbe** - Länge 330mm | **Barreaux ronds** - Longueur 330mm
-
- 10** **Solid rods** - DIN Length | **Cilindri** - Lunghezze DIN | **VHM-Rundstäbe** - Länge DIN | **Barreaux ronds** - Longueur DIN
-
- 14** **Solid rods** - With chamfer | **Cilindri** - Con smusso | **VHM-Rundstäbe** - Mit Fase | **Barreaux ronds** - Avec chamfrein
-
- 15** **Milling cutter blanks** | **Cilindri Semi-lavorati** | **Fräser-Rohlinge** | **Semi-finis**
Helical cutting - Edge blanks | **Cilindri** - Per punte Elicoidali | **Reibahlen-Rohlinge** | **Barreaux** - Pour forêts hélicoïdaux
-
- 16** **Solid rods** - Reamer blanks DIN 332/A | **Cilindri** - Per alesatori DIN 332/A | **Reibahl-Rohlinge** - DIN 332/A | **Barreaux** - Pour alesoirs DIN 332/A
-
- 17** **Coolant rods** - Central coolant hole | **Cilindri** - Con foro centrale | **Rundstäbe** - Mit einem zentral liegendem Kühlkanal | **Barreaux** - Ronds a 1 trou droit
-
- 18** **Coolant rods** - with 2 parallel coolant holes | **Cilindri** - Con due fori paralleli | **Rundstäbe** - Mit 2 parallelen Kühlkanälen | **Barreaux ronds** - 2 trous droits
-
- 20** **Coolant rods** - With 2 holes and 30° helix/ 330 mm | **Cilindri** - Con due fori elicoidali 30°/ 330 mm | **Rundstäbe** - Mit 2 verdrehten Kühlkanälen 30°/ 330 mm | **Barreaux ronds** - Avec 2 trous hélicoïdaux 30°/ 330 mm
-
- 21** **Coolant rods** - With 2 holes and 40° helix/ 330 mm | **Cilindri** - Con due fori elicoidali 40°/ 330 mm | **Rundstäbe** - Mit 2 verdrehten Kühlkanälen 40°/ 330 mm | **Barreaux ronds** - Avec 2 trous hélicoïdaux 40°/ 330 mm
Coolant rods - With 3 holes and 30° helix/ 330 mm | **Cilindri** - Con tre fori elicoidali 30°/ 330 mm | **Rundstäbe** - Mit 3 verdrehten Kühlkanälen 30°/ 330 mm | **Barreaux ronds** - Avec trois trous hélicoïdaux 30°/ 330 mm
-
- 22** **Unground square and rectangular bars** Length 335 mm | **Barre grezze a sezione quadra e rettangolare** Lunghezze 335 mm | **Sinterrohe Quadrat- und Rechteckstäbe** Länge 335 mm | **Barreaux brut carré et rectangulaires** Longueur 335 mm
-
- 24** **Burr blanks** | **Testine per lime rotative** | **Frässtift-Rohlinge** | **Fraises rotatives** |
-
- 26** **Tungsten carbide grades** - Specifications | **Gradi metallo duro** - Composizione | **Hartmetall Sorten** - Zusammensetzung | **Carbure Nuances** - Spécifications
-
- 27** **Technical data:** Tolerances | **Dati Tecnici:** Tolleranze | **Technische daten:** Toleranzen | **Données techniques:** Tolérances





Since 1974, SINTER SUD has been manufacturing premium quality tungsten carbide items using modern technologies and innovative production processes.

Forty years of continuous R&D allow SINTER SUD to produce a wide range of excellent tungsten carbide products (especially rods, square and rectangular bars and burr blanks), both standard and customized to meet our customers' needs. Product quality and process efficiency are always checked in accordance with the strictest international standards: SINTER SUD has received ISO 9001:2008 and ISO 14001:2004 certifications.

In 2003, the company moved to a new modern plant located in Sant'Agata De Goti (BN). This plant includes industry leading technology and efficiency while minimizing environmental impact. Equipment includes DORST presses and ALD and PVA Sinter-HIP furnaces.

In the period 2017-2019 Sinter Sud has realized important investment for the purchasing of new implants, machineries and advanced Software in accordance to the standards of the "INDUSTRY 4.0"

Our large manufacturing capability and wide range of in-stock items allow SINTER SUD to quickly satisfy even the most diverse customer needs.

At SINTER SUD, everyone is aware of the importance of customer satisfaction, as it is the true wealth of the company. Technology, quality, professionalism and reliability are the fundamental elements in our relationships with our customers.

SINTER SUD is now one of the world's leaders in hard metal products. Since its origins, the passion for our work builds the will to work and grow with our customers and drives us to face new hard metal technological challenges.

Azienda

Dal 1974 SINTER SUD realizza prodotti in metallo duro di elevata qualità mediante tecnologie moderne e processi di produzione innovativi.

Quarant'anni di continue ricerche permettono all'azienda di produrre un'ampia gamma di prodotti in metallo duro (specialmente cilindri, barrette e testine per lime rotative), standard, ovvero personalizzati in base alle specifiche richieste dei clienti. La qualità dei prodotti e l'efficienza dei processi produttivi sono controllate secondo i più severi standard internazionali. Non a caso la SINTER SUD ha conseguito le certificazioni ISO 9001 – 2015, ISO 14001 – 2015 e la Certificazione del sistema di gestione ambientale EMAS

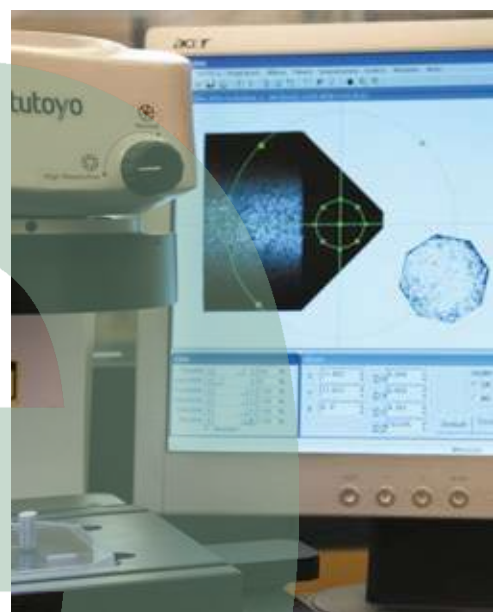
Dal 2003 tutte le attività produttive si svolgono nel moderno impianto di Sant'Agata Dè Goti (BN): è dotato, infatti, di macchinari all'avanguardia per tecnologia, efficienza ed impatto ambientale; tra questi, i forni di sinterizzazione HIP della PVA ed ALD, o le presse automatizzate della Dorst.

Negli anni 2017-2019 sono stati realizzati investimenti per la realizzazione della "Fabbrica intelligente" con l'acquisizione di Impianti, Macchinari, Attrezzature e Software tecnologicamente innovativi secondo gli standard "Industria 4.0". La notevole capacità produttiva e l'ampia disponibilità di prodotti a stock consentono alla Sinter Sud di soddisfare in tempi brevi le più diverse esigenze dei clienti. L'azienda è da sempre impegnata in attività di R&S in nanotecnologie per il miglioramento delle performance dei propri prodotti nonché l'applicazione di nuove tecnologie per il re-manufacturing in ottica di economia circolare.

In SINTER SUD ognuno è consapevole dell'importanza della soddisfazione del cliente, unico vero patrimonio dell'azienda. Tecnologia, qualità, professionalità ed affidabilità sono gli elementi fondamentali del nostro rapporto con i clienti.

SINTER SUD è oggi una tra le aziende leader nel settore del metallo duro nel mondo. Così come in passato, la passione per il nostro lavoro anima la volontà di progredire insieme ai nostri clienti e ci spinge ad accettare sempre nuove sfide tecnologiche nel campo del metallo duro.

Grinding Department



Raw Material Department





Seit 1974 fertigt SINTER SUD Hartmetallprodukte in Premiumqualität unter Einsatz modernster Technologien und innovativer Produktionsverfahren.

Vierzig Jahre kontinuierliche Forschung und Entwicklung ermöglichen SINTER SUD die Herstellung einer breiten Palette von exzellenten Hartmetallprodukten (insbesondere Stäbe, Vierkant- und Rechteckstangen und Gratrohlinge) zu produzieren, sowohl standardmäßig als auch nach Kundenzeichnung, um die Bedürfnisse unserer Kunden zu erfüllen. Produktqualität und Prozesseffizienz werden stets nach den strengsten internationalen Normen geprüft: SINTER SUD ist nach ISO 9001 - 2008 und ISO 14001 - 2004 zertifiziert.

Im Jahr 2003 zog das Unternehmen in ein neues, modernes Werk in Sant'Agata De Goti (BN) um. Diese Anlage umfasst branchenführende Technologien und Effizienz bei gleichzeitiger Minimierung der Umweltbelastung. Zur Ausstattung gehören DORST-Pressen sowie ALD- und PVA-Sinter-HIP-Öfen.

In den Jahren 2017-2019 wurden Investitionen für die Schaffung der „Smart Factory“ realisiert, besonders mit dem Erwerb von technologisch innovativen Anlagen, Maschinen, Geräten und Softwares nach dem Standard „Industrie 4.0“.

Unsere große Fertigungskapazität und die breite Palette an Lagerartikeln ermöglichen es SINTER SUD, auch die unterschiedlichsten Kundenwünsche schnell zu erfüllen.

Bei SINTER SUD ist sich jeder der Bedeutung der Kundenzufriedenheit bewusst, denn sie ist der wahre Reichtum des Unternehmens. Technologie, Qualität, Professionalität und Zuverlässigkeit sind die grundlegenden Elemente in unseren Beziehungen zu unseren Kunden.

SINTER SUD ist heute einer der weltweit führenden Hersteller von Hartmetallprodukten. Seit den Anfängen bildet die Leidenschaft für unsere Arbeit das Fundament, mit unseren Kunden zu arbeiten und zu wachsen, und treibt uns an, uns neuen hartmetalltechnischen Herausforderungen zu stellen.

Entreprise

Depuis 1974, la société SINTER SUD produit des composants en métal dur de haute qualité avec des technologies modernes et innovantes.

Quarante ans de recherches et d'évolutions techniques ont permis de produire une large gamme d'articles en métal dur (spécialement barreaux, barreaux carré ou rectangulaires et fraises rotatives), standards et personnalisés selon demandes des clients. Le contrôle de qualité des nos produits et l'efficacité des nos processus répondent aux plus sévères normes internationales : SINTER SUD est certifié ISO 9001:2015, ISO 14001:2015 et EMAS.

A partir de 2003 toutes les activités de production sont concentrés sur le nouveau site de production de Sant'Agata De Goti (BN): qui est équipé de machines technologiquement avancées, efficaces et respectueuses de l'environnement, comme des fours Sinter – HIP ALD et PVA, et les presses DORST.

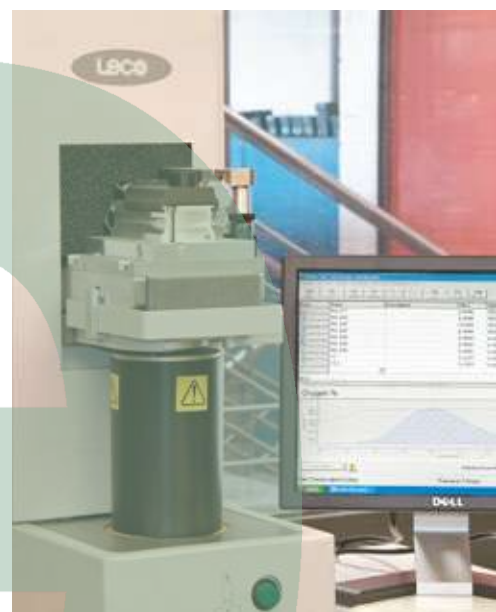
Pendant les années 2017-2019 ont été réalisés des investissements avec l'achat d'équipements, machines et des logiciels innovatifs du point de vue technologique selon les standards « Industrie 4.0 »

L'importante capacité de production et un grand nombre d'articles déjà disponibles en stock, permettent de satisfaire les différentes demandes des clients rapidement.

Chaque employé à SINTER SUD est conscient que la satisfaction du client représente le patrimoine de l'entreprise. Technologie, qualité, professionnalisme et fiabilité sont les éléments fondamentaux de notre partenariat avec les clients.

SINTER SUD est aujourd'hui leader mondial dans le secteur du métal dur. La passion de notre métier alimente tous les jours la volonté d'accompagner nos clients et nous encourage à relever les défis technologiques dans le domaine du carbure.

Press Department



Extrusion Department

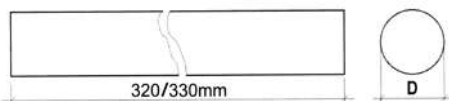


Solid rods - Length 320/330mm

Cilindri - Lunghezze 320/330mm

VHM-Rundstäbe - Länge 320/330mm

Barreaux ronds - Longueur 320/330mm



GRADO GRADE SORTE NUANCE	K10F L330mm		K06F L320mm		K12F L330mm	
D mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
1,00	GSK10FCG0100330	RSK10FCR0100330				
1,50	GSK10FCG0150330	RSK10FCR0150330				
2,00	GSK10FCG0200330	RSK10FCR0200330				
2,50	GSK10FCG0250330	RSK10FCR0250330				
3,00	GSK10FCG0300330	RSK10FCR0300330	GSK06FCG0300320	RSK06FCR0300320	NSK12FCG0300330	NSK12FCR0300330
3,17	GSK10FCG0317330	RSK10FCR0317330				
3,50	GSK10FCG0350330	RSK10FCR0350330				
4,00	GSK10FCG0400330	RSK10FCR0400330	GSK06FCG0400320	RSK06FCR0400320	NSK12FCG0400330	NSK12FCR0400330
4,50	GSK10FCG0450330	RSK10FCR0450330				
4,76	GSK10FCG0476330	RSK10FCR0476330				
5,00	GSK10FCG0500330	RSK10FCR0500330				
5,50	GSK10FCG0550330	RSK10FCR0550330				
6,00	GSK10FCG0600330	RSK10FCR0600330	GSK06FCG0600320	RSK06FCR0600320	NSK12FCG0600330	NSK12FCR0600330
6,35	GSK10FCG0635330	RSK10FCR0635330				
7,00	GSK10FCG0700330	RSK10FCR0700330				
7,50	GSK10FCG0750330	RSK10FCR0750330				
8,00	GSK10FCG0800330	RSK10FCR0800330	GSK06FCG0800320	RSK06FCR0800320	NSK12FCG0800330	NSK12FCR0800330
8,50	GSK10FCG0850330	RSK10FCR0850330				
9,00	GSK10FCG0900330	RSK10FCR0900330				
9,50	GSK10FCG0950330	RSK10FCR0950330				
9,52	GSK10FCG0952330	RSK10FCR0952330				
10,00	GSK10FCG1000330	RSK10FCR1000330	GSK06FCG1000320	RSK06FCR1000320	NSK12FCG1000330	NSK12FCR1000330
10,50	GSK10FCG1050330	RSK10FCR1050330				
11,00	GSK10FCG1100330	RSK10FCR1100330				
11,50	GSK10FCG1150330	RSK10FCR1150330				
12,00	GSK10FCG1200330	RSK10FCR1200330	GSK06FCG1200320	RSK06FCR1200320	NSK12FCG1200330	NSK12FCR1200330
12,50	GSK10FCG1250330	RSK10FCR1250330				
12,70	GSK10FCG1270330	RSK10FCR1270330				
13,00	GSK10FCG1300330	RSK10FCR1300330				
13,50	GSK10FCG1350330	RSK10FCR1350330				
14,00	GSK10FCG1400330	RSK10FCR1400330	GSK06FCG1400320	RSK06FCR1400320	NSK12FCG1400330	NSK12FCR1400330
14,50	GSK10FCG1450330	RSK10FCR1450330				
15,00	GSK10FCG1500330	RSK10FCR1500330				



GRADO GRADE SORTE NUANCE	K10F L330mm		K06F L320mm		K12F L330mm	
D mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
15,50	GSK10FCG1550330	RSK10FCR1550330				
15,87	GSK10FCG1587330	RSK10FCR1587330				
16,00	GSK10FCG1600330	RSK10FCR1600330	GSK06FCG1600320	RSK06FCR1600320	NSK12FCG1600330	NSK12FCR1600330
16,50	GSK10FCG1650330	RSK10FCR1650330				
17,00	GSK10FCG1700330	RSK10FCR1700330				
17,50	GSK10FCG1750330	RSK10FCR1750330				
18,00	GSK10FCG1800330	RSK10FCR1800330	GSK06FCG1800320	RSK06FCR1800320	NSK12FCG1800330	NSK12FCR1800330
18,50	GSK10FCG1850330	RSK10FCR1850330				
19,00	GSK10FCG1900330	RSK10FCR1900330				
19,05	GSK10FCG1905330	RSK10FCR1905330				
19,50	GSK10FCG1950330	RSK10FCR1950330				
20,00	GSK10FCG2000330	RSK10FCR2000330	GSK06FCG2000320	RSK06FCR2000320	NSK12FCG2000330	NSK12FCR2000330
20,50	GSK10FCG2050330	RSK10FCR2050330				
21,00	GSK10FCG2100330	RSK10FCR2100330				
21,50	GSK10FCG2150330	RSK10FCR2150330				
22,00	GSK10FCG2200330	RSK10FCR2200330	GSK06FCG2200320	RSK06FCR2200320	NSK12FCG2200330	NSK12FCR2200330
22,50	GSK10FCG2250330	RSK10FCR2250330				
23,00	GSK10FCG2300330	RSK10FCR2300330				
23,50	GSK10FCG2350330	RSK10FCR2350330				
24,00	GSK10FCG2400330	RSK10FCR2400330	GSK06FCG2400320	RSK06FCR2400320	NSK12FCG2400330	NSK12FCR2400330
24,50	GSK10FCG2450330	RSK10FCR2450330				
25,00	GSK10FCG2500330	RSK10FCR2500330				
25,40	GSK10FCG2540330	RSK10FCR2540330				
26,00	GSK10FCG2600330	RSK10FCR2600330	GSK06FCG2600320	RSK06FCR2600320	NSK12FCG2600330	NSK12FCR2600330
27,00	GSK10FCG2700330	RSK10FCR2700330				
28,00	GSK10FCG2800330	RSK10FCR2800330	GSK06FCG2800320	RSK06FCR2800320	NSK12FCG2800330	NSK12FCR2800330
29,00	GSK10FCG2900330	RSK10FCR2900330				
30,00	GSK10FCG3000330	RSK10FCR3000330	GSK06FCG3000320	RSK06FCR3000320	NSK12FCG3000330	NSK12FCR3000330
31,00	GSK10FCG3100330	RSK10FCR3100330				
32,00	GSK10FCG3200330	RSK10FCR3200330	GSK06FCG3200320	RSK06FCR3200320	NSK12FCG3200330	NSK12FCR3200330
33,00	GSK10FCG3300330	RSK10FCR3300330				
34,00	GSK10FCG3400330	RSK10FCR3400330				
35,00	GSK10FCG3500330	RSK10FCR3500330				
36,00	GSK10FCG3600330	RSK10FCR3600330				
37,00	GSK10FCG3700330	RSK10FCR3700330				
38,00	GSK10FCG3800330	RSK10FCR3800330				
39,00	GSK10FCG3900330	RSK10FCR3900330				
40,00	GSK10FCG4000330	RSK10FCR4000330				
41,00	GSK10FCG4100330	RSK10FCR4100330				
42,00	GSK10FCG4200330	RSK10FCR4200330				
43,00	GSK10FCG4300330	RSK10FCR4300330				
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45,00	GSK10FCG4500330	RSK10FCR4500330				

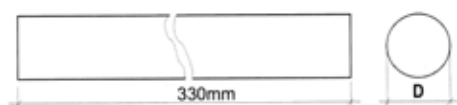


Solid rods - Length 330mm

Cilindri - Lunghezza 330mm

VHM-Rundstäbe - Länge 330mm

Barreaux ronds - Longueur 330mm



GRADO GRADE SORTE NUANCE	MK12 L330mm		GF70 L330mm	
D mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
1,00				
1,50				
2,00				
2,50				
3,00	GSMK12CG0300330	RSMK12CR0300330	GSGF70CG0300330	RS GF70CR0300330
3,17	GSMK12CG0317330	RSMK12CR0317330		
3,50	GSMK12CG0350330	RSMK12CR0350330		
4,00	GSMK12CG0400330	RSMK12CR0400330	GSGF70CG0400330	RS GF70CR0400330
4,50	GSMK12CG0450330	RSMK12CR0450330		
4,76	GSMK12CG0476330	RSMK12CR0476330		
5,00	GSMK12CG0500330	RSMK12CR0500330	GSGF70CG0500330	RS GF70CR0500330
5,50	GSMK12CG0550330	RSMK12CR0550330		
6,00	GSMK12CG0600330	RSMK12CR0600330	GSGF70CG0600330	RS GF70CR0600330
6,35	GSMK12CG0635330	RSMK12CR0635330		
7,00	GSMK12CG0700330	RSMK12CR0700330	GSGF70CG0700330	RS GF70CR0700330
7,50	GSMK12CG0750330	RSMK12CR0750330		
8,00	GSMK12CG0800330	RSMK12CR0800330	GSGF70CG0800330	RS GF70CR0800330
8,50	GSMK12CG0850330	RSMK12CR0850330		
9,00	GSMK12CG0900330	RSMK12CR0900330	GSGF70CG0900330	RS GF70CR0900330
9,50	GSMK12CG0950330	RSMK12CR0950330		
9,52	GSMK12CG0952330	RSMK12CR0952330		
10,00	GSMK12CG1000330	RSMK12CR1000330	GSGF70CG1000330	RS GF70CR1000330
10,50	GSMK12CG1050330	RSMK12CR1050330		
11,00	GSMK12CG1100330	RSMK12CR1100330		
11,50	GSMK12CG1150330	RSMK12CR1150330		
12,00	GSMK12CG1200330	RSMK12CR1200330	GSGF70CG1200330	RS GF70CR1200330
12,50	GSMK12CG1250330	RSMK12CR1250330		
12,70	GSMK12CG1270330	RSMK12CR1270330		
13,00	GSMK12CG1300330	RSMK12CR1300330		
13,50	GSMK12CG1350330	RSMK12CR1350330		
14,00	GSMK12CG1400330	RSMK12CR1400330	GSGF70CG1400330	RS GF70CG1400330
14,50	GSMK12CG1450330	RSMK12CR1450330		
15,00	GSMK12CG1500330	RSMK12CR1500330		



GRADO GRADE SORTE NUANCE	MK12 L330mm		GF70 L330mm	
D mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
15,50	GSMK12CG1550330	RSMK12CR1550330		
15,87	GSMK12CG1587330	RSMK12CR1587330		
16,00	GSMK12CG1600330	RSMK12CR1600330	GSGF70CG1600330	RSGF70CR1600330
16,50	GSMK12CG1650330	RSMK12CR1650330		
17,00	GSMK12CG1700330	RSMK12CR1700330		
17,50	GSMK12CG1750330	RSMK12CR1750330		
18,00	GSMK12CG1800330	RSMK12CR1800330	GSGF70CG1800330	RSGF70CR1800330
18,50	GSMK12CG1850330	RSMK12CR1850330		
19,00	GSMK12CG1900330	RSMK12CR1900330		
19,05	GSMK12CG1905330	RSMK12CR1905330		
19,50	GSMK12CG1950330	RSMK12CR1950330		
20,00	GSMK12CG2000330	RSMK12CR2000330	GSGF70CG2000330	RSGF70CR2000330
20,50	GSMK12CG2050330	RSMK12CR2050330		
21,00	GSMK12CG2100330	RSMK12CR2100330		
21,50	GSMK12CG2150330	RSMK12CR2150330		
22,00	GSMK12CG2200330	RSMK12CR2200330	GSGF70CG2200330	RSGF70CR2200330
22,50	GSMK12CG2250330	RSMK12CR2250330		
23,00	GSMK12CG2300330	RSMK12CR2300330		
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24,50	GSMK12CG2450330	RSMK12CR2450330		
25,00	GSMK12CG2500330	RSMK12CR2500330		
25,40	GSMK12CG2540330	RSMK12CR2540330		
26,00	GSMK12CG2600330	RSMK12CR2600330	GSGF70CG2600330	RSGF70CR2600330
27,00	GSMK12CG2700330	RSMK12CR2700330		
28,00	GSMK12CG2800330	RSMK12CR2800330	GSGF70CG2800330	RSGF70CR2800330
29,00	GSMK12CG2900330	RSMK12CR2900330		
30,00	GSMK12CG3000330	RSMK12CR3000330	GSGF70CG3000330	RSGF70CR3000330
31,00	GSMK12CG3100330	RSMK12CR3100330		
32,00	GSMK12CG3200330	RSMK12CR3200330	GSGF70CG3200330	RSGF70CR3200330
33,00	GSMK12CG3300330	RSMK12CR3300330		
34,00	GSMK12CG3400330	RSMK12CR3400330		
35,00	GSMK12CG3500330	RSMK12CR3500330		
36,00	GSMK12CG3600330	RSMK12CR3600330		
37,00	GSMK12CG3700330	RSMK12CR3700330		
38,00	GSMK12CG3800330	RSMK12CR3800330		
39,00	GSMK12CG3900330	RSMK12CR3900330		
40,00	GSMK12CG4000330	RSMK12CR4000330		
41,00				
42,00				
43,00				
44,00				
45,00	GSMK12CG4500330	RSMK12CR4500330		

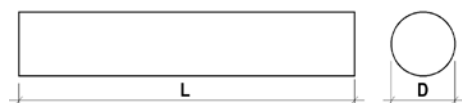


Solid rods - DIN Length

Cilindri - Lunghezze DIN

VHM-Rundstäbe - Länge DIN

Barreaux ronds - Longueur DIN



GRADO GRADE SORTE NUANCE		K10F	
D mm	L mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
2,00	80	GDK10FCG0200080	RDk10FCR0200080
2,00	100	GDK10FCG0200100	RDk10FCR0200100
2,50	100	GDK10FCG0250100	RDk10FCR0250100
3,00	38	GDK10FCG0300038	RDk10FCR0300038
3,00	40	GDK10FCG0300040	RDk10FCR0300040
3,00	50	GDK10FCG0300050	RDk10FCR0300050
3,00	61	GDK10FCG0300061	RDk10FCR0300061
3,00	70	GDK10FCG0300070	RDk10FCR0300070
3,00	75	GDK10FCG0300075	RDk10FCR0300075
3,00	100	GDK10FCG0300100	RDk10FCR0300100
3,50	70	GDK10FCG0350070	RDk10FCR0350070
3,50	75	GDK10FCG0350075	RDk10FCR0350075
3,50	100	GDK10FCG0350100	RDk10FCR0350100
4,00	40	GDK10FCG0400040	RDk10FCR0400040
4,00	50	GDK10FCG0400050	RDk10FCR0400050
4,00	55	GDK10FCG0400055	RDk10FCR0400055
4,00	60	GDK10FCG0400060	RDk10FCR0400060
4,00	75	GDK10FCG0400075	RDk10FCR0400075
4,00	80	GDK10FCG0400080	RDk10FCR0400080
4,00	92	GDK10FCG0400092	RDk10FCR0400092
4,00	100	GDK10FCG0400100	RDk10FCR0400100
4,50	58	GDK10FCG0450058	RDk10FCR0450058
4,50	80	GDK10FCG0450080	RDk10FCR0450080
4,50	86	GDK10FCG0450086	RDk10FCR0450086
4,50	100	GDK10FCG0450100	RDk10FCR0450100
5,00	50	GDK10FCG0500050	RDk10FCR0500050
5,00	62	GDK10FCG0500062	RDk10FCR0500062
5,00	66	GDK10FCG0500066	RDk10FCR0500066
5,00	75	GDK10FCG0500075	RDk10FCR0500075
5,00	86	GDK10FCG0500086	RDk10FCR0500086
5,00	93	GDK10FCG0500093	RDk10FCR0500093
5,00	100	GDK10FCG0500100	RDk10FCR0500100
5,50	93	GDK10FCG0550093	RDk10FCR0550093
5,50	100	GDK10FCG0550100	RDk10FCR0550100

K10F - In stock

K12F/MK12/GF70/K06F - On demand

K10F - Pronto magazzino

K12F/MK12/GF70/K06F - Su richiesta

K10F - Auf Lager

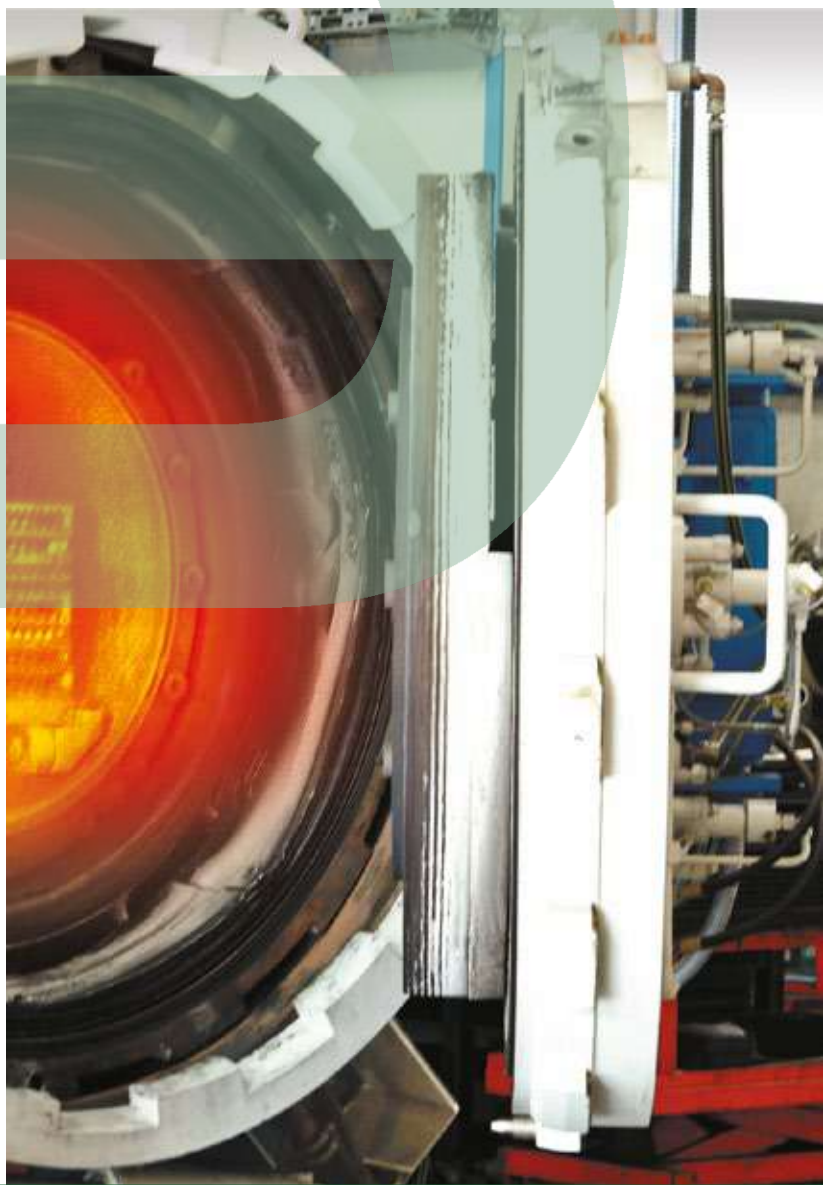
K12F/MK12/GF70/K06F - Auf Anfrage

K10F - En stock

K12F/MK12/GF70/K06F - Sur demande



GRADO GRADE SORTE NUANCE		K10F	
D mm	L mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
6,00	50	GDK10FCG0600050	RDK10FCR0600050
6,00	54	GDK10FCG0600054	RDK10FCR0600054
6,00	57	GDK10FCG0600057	RDK10FCR0600057
6,00	60	GDK10FCG0600060	RDK10FCR0600060
6,00	66	GDK10FCG0600066	RDK10FCR0600066
6,00	70	GDK10FCG0600070	RDK10FCR0600070
6,00	75	GDK10FCG0600075	RDK10FCR0600075
6,00	80	GDK10FCG0600080	RDK10FCR0600080
6,00	93	GDK10FCG0600093	RDK10FCR0600093
6,00	100	GDK10FCG0600100	RDK10FCR0600100
6,00	150	GDK10FCG0600150	RDK10FCR0600150
6,50	70	GDK10FCG0650070	RDK10FCR0650070
6,50	100	GDK10FCG0650100	RDK10FCR0650100
6,50	109	GDK10FCG0650109	RDK10FCR0650109
7,00	60	GDK10FCG0700060	RDK10FCR0700060
7,00	80	GDK10FCG0700080	RDK10FCR0700080
7,00	100	GDK10FCG0700100	RDK10FCR0700100
7,50	100	GDK10FCG0750100	RDK10FCR0750100
7,50	109	GDK10FCG0750109	RDK10FCR0750109
7,50	117	GDK10FCG0750117	RDK10FCR0750117
8,00	60	GDK10FCG0800060	RDK10FCR0800060
8,00	63	GDK10FCG0800063	RDK10FCR0800063
8,00	75	GDK10FCG0800075	RDK10FCR0800075
8,00	80	GDK10FCG0800080	RDK10FCR0800080
8,00	100	GDK10FCG0800100	RDK10FCR0800100
8,00	117	GDK10FCG0800117	RDK10FCR0800117
8,00	150	GDK10FCG0800150	RDK10FCR0800150
8,50	79	GDK10FCG0850079	RDK10FCR0850079
8,50	100	GDK10FCG0850100	RDK10FCR0850100
8,50	125	GDK10FCG0850125	RDK10FCR0850125
9,00	66	GDK10FCG0900066	RDK10FCR0900066
9,00	84	GDK10FCG0900084	RDK10FCR0900084
9,00	100	GDK10FCG0900100	RDK10FCR0900100
9,00	125	GDK10FCG0900125	RDK10FCR0900125
9,50	100	GDK10FCG0950100	RDK10FCR0950100
9,50	125	GDK10FCG0950125	RDK10FCR0950125
9,50	133	GDK10FCG0950133	RDK10FCR0950133
10,00	66	GDK10FCG1000066	RDK10FCR1000066
10,00	70	GDK10FCG1000070	RDK10FCR1000070
10,00	72	GDK10FCG1000072	RDK10FCR1000072
10,00	75	GDK10FCG1000075	RDK10FCR1000075
10,00	80	GDK10FCG1000080	RDK10FCR1000080
10,00	90	GDK10FCG1000090	RDK10FCR1000090



Solid rods - DIN Length

Cilindri - Lunghezza DIN

VHM-Rundstäbe - Länge DIN

Barreaux ronds - Longueur DIN



K10F - In stock
K12F/MK12/GF70/K06F - On demand

K10F - Pronto magazzino
K12F/MK12/GF70/K06F - Su richiesta

K10F - Auf Lager
K12F/MK12/GF70/K06F - Auf Anfrage

K10F - En stock
K12F/MK12/GF70/K06F - Sur demande

GRADO GRADE SORTE NUANCE		K10F	
D mm	L mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
10,00	100	GDK10FCG1000100	RDk10FCR1000100
10,00	110	GDK10FCG1000110	RDk10FCR1000110
10,00	133	GDK10FCG1000133	RDk10FCR1000133
10,00	150	GDK10FCG1000150	RDk10FCR1000150
10,50	90	GDK10FCG1050090	RDk10FCR1050090
10,50	100	GDK10FCG1050100	RDk10FCR1050100
10,50	133	GDK10FCG1050133	RDk10FCR1050133
10,50	142	GDK10FCG1050142	RDk10FCR1050142
11,00	100	GDK10FCG1100100	RDk10FCR1100100
11,00	142	GDK10FCG1100142	RDk10FCR1100142
11,50	100	GDK10FCG1150100	RDk10FCR1150100
12,00	73	GDK10FCG1200073	RDk10FCR1200073
12,00	75	GDK10FCG1200075	RDk10FCR1200075
12,00	83	GDK10FCG1200083	RDk10FCR1200083
12,00	100	GDK10FCG1200100	RDk10FCR1200100
12,00	102	GDK10FCG1200102	RDk10FCR1200102
12,00	110	GDK10FCG1200110	RDk10FCR1200110
12,00	150	GDK10FCG1200150	RDk10FCR1200150
12,50	100	GDK10FCG1250100	RDk10FCR1250100
12,50	151	GDK10FCG1250151	RDk10FCR1250151
13,00	100	GDK10FCG1300100	RDk10FCR1300100
13,00	151	GDK10FCG1300151	RDk10FCR1300151
13,50	100	GDK10FCG1350100	RDk10FCR1350100
14,00	75	GDK10FCG1400075	RDk10FCR1400075
14,00	82	GDK10FCG1400082	RDk10FCR1400082
14,00	85	GDK10FCG1400085	RDk10FCR1400085
14,00	92	GDK10FCG1400092	RDk10FCR1400092
14,00	100	GDK10FCG1400100	RDk10FCR1400100
14,00	110	GDK10FCG1400110	RDk10FCR1400110
14,00	120	GDK10FCG1400120	RDk10FCR1400120
14,00	150	GDK10FCG1400150	RDk10FCR1400150
14,50	100	GDK10FCG1450100	RDk10FCR1450100
15,00	92	GDK10FCG1500092	RDk10FCR1500092
15,00	100	GDK10FCG1500100	RDk10FCR1500100





GRADO GRADE SORTE NUANCE		K10F		GRADO GRADE SORTE NUANCE		K10F	
D mm	L mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	D mm	L mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
15,00	130	GDK10FCG1500130	RDk10FCR1500130	20,00	110	GDK10FCG2000110	RDk10FCR2000110
15,50	100	GDK10FCG1550100	RDk10FCR1550100	20,00	120	GDK10FCG2000120	RDk10FCR2000120
16,00	82	GDK10FCG1600082	RDk10FCR1600082	20,00	130	GDK10FCG2000130	RDk10FCR2000130
16,00	92	GDK10FCG1600092	RDk10FCR1600092	20,00	150	GDK10FCG2000150	RDk10FCR2000150
16,00	100	GDK10FCG1600100	RDk10FCR1600100	20,00	165	GDK10FCG2000165	RDk10FCR2000165
16,00	110	GDK10FCG1600110	RDk10FCR1600110	21,00	100	GDK10FCG2100100	RDk10FCR2100100
16,00	120	GDK10FCG1600120	RDk10FCR1600120	22,00	100	GDK10FCG2200100	RDk10FCR2200100
16,00	130	GDK10FCG1600130	RDk10FCR1600130	22,00	110	GDK10FCG2200110	RDk10FCR2200110
16,00	140	GDK10FCG1600140	RDk10FCR1600140	22,00	130	GDK10FCG2200130	RDk10FCR2200130
16,00	150	GDK10FCG1600150	RDk10FCR1600150	22,00	150	GDK10FCG2200150	RDk10FCR2200150
16,50	100	GDK10FCG1650100	RDk10FCR1650100	23,00	100	GDK10FCG2300100	RDk10FCR2300100
17,00	92	GDK10FCG1700092	RDk10FCR1700092	24,00	100	GDK10FCG2400100	RDk10FCR2400100
17,00	100	GDK10FCG1700100	RDk10FCR1700100	24,00	110	GDK10FCG2400110	RDk10FCR2400110
17,50	100	GDK10FCG1750100	RDk10FCR1750100	24,00	130	GDK10FCG2400130	RDk10FCR2400130
18,00	84	GDK10FCG1800084	RDk10FCR1800084	25,00	100	GDK10FCG2500100	RDk10FCR2500100
18,00	92	GDK10FCG1800092	RDk10FCR1800092	25,00	110	GDK10FCG2500110	RDk10FCR2500110
18,00	100	GDK10FCG1800100	RDk10FCR1800100	25,00	130	GDK10FCG2500130	RDk10FCR2500130
18,00	110	GDK10FCG1800110	RDk10FCR1800110	25,00	150	GDK10FCG2500150	RDk10FCR2500150
18,00	130	GDK10FCG1800130	RDk10FCR1800130	26,00	100	GDK10FCG2600100	RDk10FCR2600100
18,00	150	GDK10FCG1800150	RDk10FCR1800150	26,00	110	GDK10FCG2600110	RDk10FCR2600110
18,50	100	GDK10FCG1850100	RDk10FCR1850100	26,00	130	GDK10FCG2600130	RDk10FCR2600130
19,00	100	GDK10FCG1900100	RDk10FCR1900100	26,00	150	GDK10FCG2600150	RDk10FCR2600150
19,00	160	GDK10FCG1900160	RDk10FCR1900160	28,00	130	GDK10FCG2800130	RDk10FCR2800130
19,50	100	GDK10FCG1950100	RDk10FCR1950100	30,00	130	GDK10FCG3000130	RDk10FCR3000130
20,00	92	GDK10FCG2000092	RDk10FCR2000092	30,00	150	GDK10FCG3000150	RDk10FCR3000150
20,00	100	GDK10FCG2000100	RDk10FCR2000100	32,00	130	GDK10FCG3200130	RDk10FCR3200130
20,00	104	GDK10FCG2000104	RDk10FCR2000104	32,00	150	GDK10FCG3200150	RDk10FCR3200150

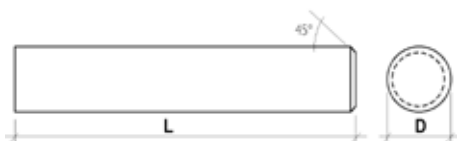


Solid rods - With chamfer

Cilindri - Con smusso

VHM-Rundstäbe - Mit Fäse

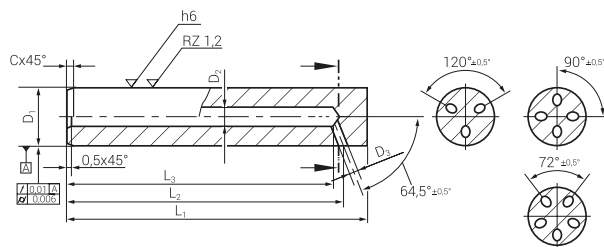
Barreaux ronds - Avec chamfrein



GRADO GRADE SORTE NUANCE		K10F	
D mm	L mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
3,00	38	K10FCG0300038SM	K10FCR0300038SM
4,00	40	K10FCG0400040SM	K10FCR0400040SM
4,00	50	K10FCG0400050SM	K10FCR0400050SM
5,00	50	K10FCG0500050SM	K10FCR0500050SM
6,00	50	K10FCG0600050SM	K10FCR0600050SM
6,00	57	K10FCG0600057SM	K10FCR0600057SM
6,00	60	K10FCG0600060SM	K10FCR0600060SM
6,00	70	K10FCG0600070SM	K10FCR0600070SM
6,00	75	K10FCG0600075SM	K10FCR0600075SM
8,00	60	K10FCG0800060SM	K10FCR0800060SM
8,00	63	K10FCG0800063SM	K10FCR0800063SM
8,00	80	K10FCG0800080SM	K10FCR0800080SM
8,00	100	K10FCG0800100SM	K10FCR0800100SM
10,00	72	K10FCG1000072SM	K10FCR1000072SM
10,00	75	K10FCG1000075SM	K10FCR1000075SM
10,00	80	K10FCG1000080SM	K10FCR1000080SM
10,00	90	K10FCG1000090SM	K10FCR1000090SM
10,00	100	K10FCG1000100SM	K10FCR1000100SM
12,00	73	K10FCG1200073SM	K10FCR1200073SM
12,00	75	K10FCG1200075SM	K10FCR1200075SM
12,00	83	K10FCG1200083SM	K10FCR1200083SM
12,00	150	K10FCG1200150SM	K10FCR1200150SM
14,00	82	K10FCG1400082SM	K10FCR1400082SM
14,00	85	K10FCG1400085SM	K10FCR1400085SM
14,00	100	K10FCG1400100SM	K10FCR1400100SM
14,00	110	K10FCG1400110SM	K10FCR1400110SM
16,00	82	K10FCG1600082SM	K10FCR1600082SM
16,00	92	K10FCG1600092SM	K10FCR1600092SM
16,00	110	K10FCG1600110SM	K10FCR1600110SM
16,00	130	K10FCG1600130SM	K10FCR1600130SM
16,00	150	K10FCG1600150SM	K10FCR1600150SM
18,00	92	K10FCG1800092SM	K10FCR1800092SM
18,00	110	K10FCG1800110SM	K10FCR1800110SM
20,00	104	K10FCG2000104SM	K10FCR2000104SM
20,00	110	K10FCG2000110SM	K10FCR2000110SM
20,00	150	K10FCG2000150SM	K10FCR2000150SM

GRADO GRADE SORTE NUANCE				K10F	
D		L			Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
Inch	mm	Inch	mm		
1/8	3,175	1 1/2	38,1	NSK10FCR03170038SM	
1/8	3,175	2	50,8	NSK10FCR031700508SM	
3/16	4,762	2	50,8	NSK10FCR0476050.8SM	
3/16	4,762	3	76,2	NSK10FCR04760762SM	
1/4	6,35	2	50,8	NSK10FCR06350508SM	
1/4	6,35	2 1/2	63,5	NSK10FCR06350635SM	
1/4	6,35	3	76,2	NSK10FCR06350762SM	
1/4	6,35	4	101,6	NSK10FCR06351016SM	
5/16	7,938	2	50,8	NSK10FCR0793508SM	
5/16	7,938	2 1/2	63,5	NSK10FCR0793635SM	
3/8	9,525	3	76,2	NSK10FCR09520762SM	
3/8	9,525	4	101,6	NSK10FCR09521016SM	
1/2	12,70	3	76,2	NSK10FCR12700762SM	
1/2	12,70	3 1/2	88,9	NSK10FCR12700889SM	
1/2	12,70	4	101,6	NSK10FCR127001016SM	
3/4	19,05	4	101,6	NSK10FCR19051016SM	



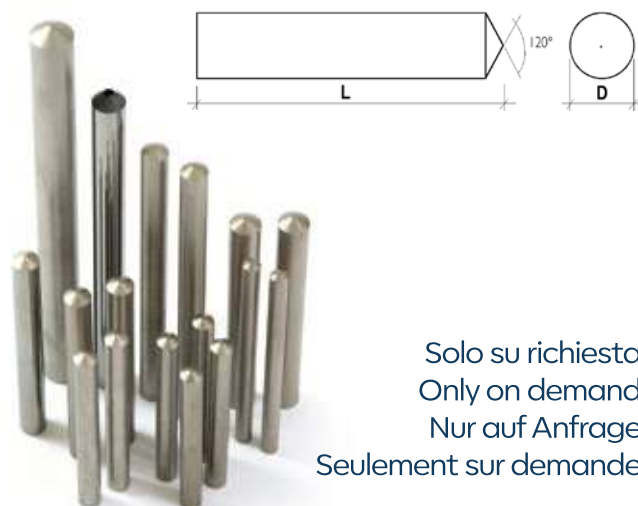


Milling cutter blanks Cilindri Semi-lavorati Fräser-Rohlinge Semi-finis

Dh6 mm	L ₁ mm	D ₂ +0.30 mm	L ₂ ±0.3 mm	D ₃ +0.25 mm	C mm	L ₃ mm	K10F 3 Exits	K10F 4 Exits	K10F 5 Exits
6,00	58,0 /+0,80	1,75	55,0	1,0	0,5	54,6	✓	✓	✓
6,00	76,5 /+0,90	1,75	73,0	1,0	0,5	72,6	✓	✓	✓
8,00	64,2 /+0,80	1,75	60,0	1,2	1,0	59,1	✓	✓	
8,00	101,2 /+1,00	1,75	97,0	1,2	1,0	96,1	✓	✓	✓
10,00	67,2 /+0,80	2,00	62,0	1,2	1,0	60,6		✓	
10,00	73,2 /+0,90	2,00	68,0	1,2	1,0	66,6	✓	✓	✓
10,00	101,2 /+1,00	2,00	96,0	1,2	1,0	94,6	✓	✓	✓
12,00	74,2 /+0,90	2,00	68,0	1,5	1,0	66,1	✓	✓	
12,00	84,2 /+0,90	2,00	78,0	1,5	1,0	76,1	✓	✓	✓
12,00	101,1 /+1,00	2,00	95,0	1,5	1,0	93,1	✓	✓	✓
14,00	84,2 /+0,90	2,00	77,0	1,5	1,0	74,7	✓	✓	
14,00	101,2 /+1,00	2,00	94,0	1,5	1,0	91,7	✓	✓	
16,00	83,2 /+0,90	4,00	75,0	1,5	1,5	72,2			✓
16,00	93,2 /+1,00	4,00	85,0	1,5	1,5	82,2	✓	✓	✓
16,00	101,2 /+1,00	4,00	93,0	1,5	1,5	90,2	✓	✓	✓
18,00	93,0 /+1,00	4,00	84,0	2,0	1,5	80,7	✓	✓	
18,00	102,0 /+1,00	4,00	93,0	2,0	1,5	89,7	✓	✓	
18,00	151,3 /+1,60	4,00	142,0	2,0	1,5	138,7	✓	✓	
20,00	93,2 /+1,00	4,00	83,0	2,0	1,5	79,2	✓	✓	
20,00	105,0 /+1,10	4,00	95,0	2,0	1,5	91,2	✓	✓	✓
20,00	151,2 /+1,60	4,00	141,0	2,0	1,5	137,2	✓	✓	✓
25,00	122,0 /+1,20	4,00	109,5	2,0	1,5	104,5	✓	✓	✓
25,00	152,0 /+1,60	4,00	139,5	2,0	1,5	134,5	✓	✓	✓

GRADO GRADE SORTE NUANCE		K10F	GRADO GRADE SORTE NUANCE		K10F
D mm	L mm	Unground - Grezzo Sinterroh - Brut	D mm	L mm	Unground - Grezzo Sinterroh - Brut
4,0	55	K10FCPE040055	9,0	125	K10FCPE090125
4,0	75	K10FCPE040075	10,0	89	K10FCPE100089
5,0	62	K10FCPE050062	10,0	103	K10FCPE100103
5,0	86	K10FCPE050086	10,0	133	K10FCPE100133
6,0	66	K10FCPE060066	12,0	102	K10FCPE120102
6,0	82	K10FCPE060082	12,0	118	K10FCPE120118
6,0	93	K10FCPE060093	12,0	151	K10FCPE120151
7,0	74	K10FCPE070074	14,0	107	K10FCPE140107
7,0	109	K10FCPE070109	14,0	124	K10FCPE140124
8,0	79	K10FCPE080079	14,0	160	K10FCPE140160
8,0	91	K10FCPE080091	16,0	115	K10FCPE160115
8,0	117	K10FCPE080117	16,0	133	K10FCPE160133
9,0	84	K10FCPE090084			

Helical cutting - Edge blanks Cilindri - Per punte Elicoidali Reibahlen-Rohlinge Barreaux - Pour forêts hélicoïdaux



Solo su richiesta
Only on demand
Nur auf Anfrage
Seulement sur demande



Solid rods - Reamer blanks DIN 332/A

Cilindri - Per alesatori DIN 332/A

Reibahl-Rohlinge - DIN 332/A

Barreaux - Pour alesoirs DIN 332/A



Altri gradi su richiesta

Other grades on request

Andere Sorten auf Anfrage

Autres nuances sur demande



GRADO GRADE SORTE NUANCE		K10F
D mm	L mm	Grezzo Unground Sinterroh Brut
4,00	75	K10FCA040075
4,50	80	K10FCA045080
5,00	86	K10FCA050086
5,50	93	K10FCA055093
6,00	93	K10FCA060093
6,50	101	K10FCA065101
7,00	109	K10FCA070109
7,50	109	K10FCA075109
8,00	117	K10FCA080117
8,50	117	K10FCA085117
9,00	125	K10FCA090125
9,50	125	K10FCA095125
10,00	133	K10FCA100133
10,50	133	K10FCA105133
11,00	142	K10FCA110142
11,50	142	K10FCA115142
12,00	151	K10FCA120151
12,50	151	K10FCA125151
13,00	151	K10FCA130151
13,50	160	K10FCA135160
14,00	160	K10FCA140160
14,50	169	K10FCA145169
15,00	169	K10FCA150169
15,50	178	K10FCA155178
16,00	178	K10FCA160178
22,00	105	K10FCA220105



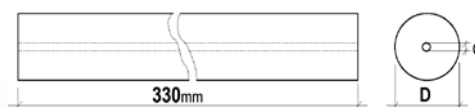


Coolant rods - central coolant hole

Cilindri - Con foro centrale

Rundstäbe - Mit einem zentral liegendem Kühlkanal

Barreaux - Ronds a 1 trou droit



Altri gradi su richiesta
Other grades on request
Andere Sorten auf Anfrage
Autres nuances sur demande

GRADO GRADE SORTE NUANCE		K10F L330mm		MK12 L330mm	
D mm	d mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
4,0	0,6	GCK10FCG040320F06	RCK10FCR040320F06	GCMK12CG040320F06	RCMK12CR040320F06
6,0	1,0	GCK10FCG060320F10	RCK10FCR060320F10	GCMK12CG060320F10	RCMK12CR060320F10
8,0	1,3	GCK10FCG080320F13	RCK10FCR080320F13	GCMK12CG080320F13	RCMK12CR080320F13
10,0	2,0	GCK10FCG100320F20	RCK10FCR100320F20	GCMK12CG100320F20	RCMK12CR100320F20
12,0	2,0	GCK10FCG120320F20	RCK10FCR120320F20	GCMK12CG120320F20	RCMK12CR120320F20
14,0	2,0	GCK10FCG140320F20	RCK10FCR140320F20	GCMK12CG140320F20	RCMK12CR140320F20
16,0	3,0	GCK10FCG160320F30	RCK10FCR160320F30	GCMK12CG160320F30	RCMK12CR160320F30
18,0	3,0	GCK10FCG180320F30	RCK10FCR180320F30	GCMK12CG180320F30	RCMK12CR180320F30
20,0	3,0	GCK10FCG200320F30	RCK10FCR200320F30	GCMK12CG200320F30	RCMK12CR200320F30
22,0	3,0	GCK10FCG220320F30	RCK10FCR220320F30	GCMK12CG220320F30	RCMK12CR220320F30
24,0	4,0	GCK10FCG240320F40	RCK10FCR240320F40	GCMK12CG240320F40	RCMK12CR240320F40
25,0	4,0	GCK10FCG250320F40	RCK10FCR250320F40	GCMK12CG250320F40	RCMK12CR250320F40
26,0	4,0	GCK10FCG260320F40	RCK10FCR260320F40	GCMK12CG260320F40	RCMK12CR260320F40
28,0	4,0	GCK10FCG280320F40	RCK10FCR280320F40	GCMK12CG280320F40	RCMK12CR280320F40
30,0	5,0	GCK10FCG300320F50	RCK10FCR300320F50	GCMK12CG300320F50	RCMK12CR300320F50
32,0	5,0	GCK10FCG320320F50	RCK10FCR320320F50	GCMK12CG320320F50	RCMK12CR320320F50
34,0	5,0	GCK10FCG340320F50	RCK10FCR340320F50	GCMK12CG340320F50	RCMK12CR340320F50
35,0	6,0	GCK10FCG350320F60	RCK10FCR350320F60	GCMK12CG350320F60	RCMK12CR350320F60
36,0	6,0	GCK10FCG360320F60	RCK10FCR360320F60	GCMK12CG360320F60	RCMK12CR360320F60

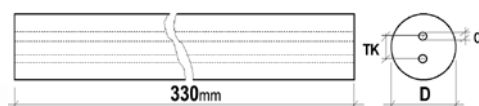


Coolant rods - with 2 parallel coolant holes

Cilindri - Con due fori paralleli

Rundstäbe - Mit 2 parallelen Kühlkanälen

Barreaux ronds - 2 trous droits



Altri gradi su richiesta

Other grades on request

Andere Sorten auf Anfrage

Autres nuances sur demande



GRADO GRADE SORTE NUANCE			K10F L330mm		MK12 L330mm	
D mm	d mm	TK mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
6,0	0,8	2,0	GPk10FCG060320FS	RPk10FCR060320FS	GPMK12CG060320FS	RPMK12CR060320FS
6,0	1,0	3,0	GPk10FCG060320FL	RPk10FCR060320FL	GPMK12CG060320FL	RPMK12CR060320FL
8,0	1,0	2,6	GPk10FCG080320FS	RPk10FCR080320FS	GPMK12CG080320FS	RPMK12CR080320FS
8,0	1,0	4,0	GPk10FCG080320FL	RPk10FCR080320FL	GPMK12CG080320FL	RPMK12CR080320FL
9,0	1,0	2,6	GPk10FCG090320FS	RPk10FCR090320FS	GPMK12CG090320FS	RPMK12CR090320FS
9,0	1,4	4,0	GPk10FCG090320FL	RPk10FCR090320FL	GPMK12CG090320FL	RPMK12CR090320FL
10,0	1,0	2,6	GPk10FCG100320FS	RPk10FCR100320FS	GPMK12CG100320FS	RPMK12CR100320FS
10,0	1,4	5,0	GPk10FCG100320FL	RPk10FCR100320FL	GPMK12CG100320FL	RPMK12CR100320FL
11,0	1,2	3,5	GPk10FCG110320FS	RPk10FCR110320FS	GPMK12CG110320FS	RPMK12CR110320FS
11,0	1,4	5,0	GPk10FCG110320FL	RPk10FCR110320FL	GPMK12CG110320FL	RPMK12CR110320FL
12,0	1,2	3,5	GPk10FCG120320FS	RPk10FCR120320FS	GPMK12CG120320FS	RPMK12CR120320FS
12,0	1,75	6,0	GPk10FCG120320FL	RPk10FCR120320FL	GPMK12CG120320FL	RPMK12CR120320FL
13,0	1,2	3,5	GPk10FCG130320FS	RPk10FCR130320FS	GPMK12CG130320FS	RPMK12CR130320FS
13,0	1,75	6,0	GPk10FCG130320FL	RPk10FCR130320FL	GPMK12CG130320FL	RPMK12CR130320FL
14,0	1,5	5,0	GPk10FCG140320FS	RPk10FCR140320FS	GPMK12CG140320FS	RPMK12CR140320FS
14,0	1,75	7,0	GPk10FCG140320FL	RPk10FCR140320FL	GPMK12CG140320FL	RPMK12CR140320FL
15,0	1,5	5,0	GPk10FCG150320FS	RPk10FCR150320FS	GPMK12CG150320FS	RPMK12CR150320FS
15,0	2,0	7,0	GPk10FCG150320FL	RPk10FCR150320FL	GPMK12CG150320FL	RPMK12CR150320FL
16,0	1,5	5,0	GPk10FCG160320FS	RPk10FCR160320FS	GPMK12CG160320FS	RPMK12CR160320FS
16,0	2,0	8,0	GPk10FCG160320FL	RPk10FCR160320FL	GPMK12CG160320FL	RPMK12CR160320FL
17,0	2,0	8,0	GPk10FCG170320FL	RPk10FCR170320FL	GPMK12CG170320FL	RPMK12CR170320FL
18,0	2,0	6,2	GPk10FCG180320FS	RPk10FCR180320FS	GPMK12CG180320FS	RPMK12CR180320FS
18,0	2,0	9,0	GPk10FCG180320FL	RPk10FCR180320FL	GPMK12CG180320FL	RPMK12CR180320FL
20,0	2,0	6,2	GPk10FCG200320FS	RPk10FCR200320FS	GPMK12CG200320FS	RPMK12CR200320FS
20,0	2,6	10,0	GPk10FCG200320FL	RPk10FCR200320FL	GPMK12CG200320FL	RPMK12CR200320FL
22,0	2,0	6,2	GPk10FCG220320FS	RPk10FCR220320FS	GPMK12CG220320FS	RPMK12CR220320FS





Coolant rods - with 2 parallel coolant holes

Cilindri - Con due fori paralleli

Rundstäbe - Mit 2 parallelen Kühlkanälen

Barreaux ronds - 2 trous droits



Altri gradi su richiesta
Other grades on request
Andere Sorten auf Anfrage
Autres nuances sur demande

GRADO GRADE SORTE NUANCE			K10F L330mm		MK12 L330mm	
D mm	d mm	TK mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
22,0	2,6	11,0	GPK10FCG220320FL	RPK10FCR220320FL	GPMK12CG220320FL	RPMK12CR220320FL
24,0	2,0	7,5	GPK10FCG240320FS	RPK10FCR240320FS	GPMK12CG240320FS	RPMK12CR240320FS
24,0	3,0	12,0	GPK10FCG240320FL	RPK10FCR240320FL	GPMK12CG240320FL	RPMK12CR240320FL
25,0	2,0	7,5	GPK10FCG250320FS	RPK10FCR250320FS	GPMK12CG250320FS	RPMK12CR250320FS
25,0	3,0	12,0	GPK10FCG250320FL	RPK10FCR250320FL	GPMK12CG250320FL	RPMK12CR250320FL
26,0	2,0	8,5	GPK10FCG260320FS	RPK10FCR260320FS	GPMK12CG260320FS	RPMK12CR260320FS
26,0	3,0	13,0	GPK10FCG260320FL	RPK10FCR260320FL	GPMK12CG260320FL	RPMK12CR260320FL
28,0	2,0	8,5	GPK10FCG280320FS	RPK10FCR280320FS	GPMK12CG280320FS	RPMK12CR280320FS
28,0	3,0	14,0	GPK10FCG280320FL	RPK10FCR280320FL	GPMK12CG280320FL	RPMK12CR280320FL
30,0	3,0	8,5	GPK10FCG300320FS	RPK10FCR300320FS	GPMK12CG300320FS	RPMK12CR300320FS
30,0	3,0	14,0	GPK10FCG300320FL	RPK10FCR300320FL	GPMK12CG300320FL	RPMK12CR300320FL
32,0	3,0	8,5	GPK10FCG320320FS	RPK10FCR320320FS	GPMK12CG320320FS	RPMK12CR320320FS
32,0	3,0	14,0	GPK10FCG320320FL	RPK10FCR320320FL	GPMK12CG320320FL	RPMK12CR320320FL
34,0	3,0	8,5	GPK10FCG340320FS	RPK10FCR340320FS	GPMK12CG340320FS	RPMK12CR340320FS
34,0	3,0	14,0	GPK10FCG340320FL	RPK10FCR340320FL	GPMK12CG340320FL	RPMK12CR340320FL
35,0	3,0	8,5	GPK10FCG350320FS	RPK10FCR350320FS	GPMK12CG350320FS	RPMK12CR350320FS
35,0	3,0	14,0	GPK10FCG350320FL	RPK10FCR350320FL	GPMK12CG350320FL	RPMK12CR350320FL
36,0	3,0	8,5	GPK10FCG360320FS	RPK10FCR360320FS	GPMK12CG360320FS	RPMK12CR360320FS
36,0	3,0	14,0	GPK10FCG360320FL	RPK10FCR360320FL	GPMK12CG360320FL	RPMK12CR360320FL

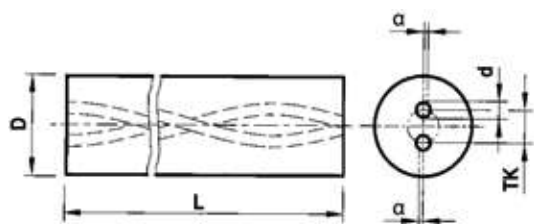


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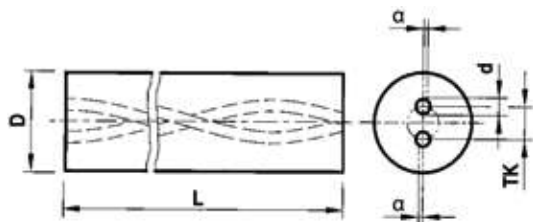


Coolant rods - With 2 holes and 30° helix/ 330 mm
Cilindri - Con due fori elicoidali 30°/ 330 mm
Rundstäbe - Mit 2 verdrehten Kühlkanälen 30°/ 330 mm
Barreaux ronds - Avec 2 trous hélécoidaux 30°/ 330 mm



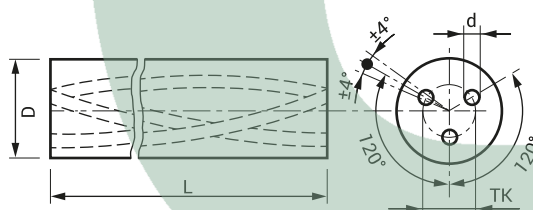
GRADO - GRADE SORTE - NUANCE									K10F L330mm	
D mm	Toll. mm	TK mm	Toll. mm	d mm	Toll. mm	Pitch mm	Toll. mm	a mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
6,00	+0,30 / +0,60	2,40	± 0.20	0,70	± 0.10	32,70	+0,67 / -0,60	0,15	K10FCG0603302FLE30	K10FCR0603302FLE30
7,00	+0,30 / +0,60	3,30	± 0.20	1,00	± 0.15	38,09	+0,78 / -0,76	0,15	NSK10FCG0703302FLE30	NSK10FCR0703302FLE30
8,00	+0,30 / +0,60	3,40	± 0.20	1,00	± 0.15	43,50	+0,89 / -0,86	0,15	K10FCG0803302FLE30	K10FCR0803302FLE30
9,00	+0,30 / +0,70	4,50	± 0.30	1,40	± 0.15	48,97	+1,00 / -0,97	0,20	NSK10FCG0903302FLE30	NSK10FCR0903302FLE30
10,00	+0,30 / +0,60	4,50	± 0.30	1,40	± 0.15	54,40	+1,11 / -1,08	0,20	K10FCG1003302FLE30	K10FCR1003302FLE30
11,00	+0,30 / +0,70	4,90	± 0.40	1,40	± 0.15	59,86	+1,22 / -1,19	0,28	NSK10FCG1103302FLE30	NSK10FCR1103302FLE30
12,00	+0,30 / +0,70	5,85	± 0.40	1,40	± 0.20	65,30	+1,34 / -1,30	0,30	K10FCG1203302FLE30	K10FCR1203302FLE30
13,00	+0,30 / +0,70	6,10	± 0.40	1,75	± 0.20	70,74	+1,45 / -1,40	0,34	NSK10FCG1303302FLE30	NSK10FCR1303302FLE30
14,00	+0,30 / +0,70	6,70	± 0.40	1,90	± 0.20	76,20	+1,56 / -1,51	0,37	K10FCG1403302FLE30	K10FCR1403302FLE30
15,00	+0,30 / +0,70	7,00	± 0.40	1,90	± 0.20	81,62	+1,67 / -1,62	0,40	NSK10FCG1503302FLE30	NSK10FCR1503302FLE30
16,00	+0,30 / +0,70	8,00	± 0.40	1,90	± 0.25	87,10	+1,78 / -1,73	0,40	K10FCG1603302FLE30	K10FCR1603302FLE30
17,00	+0,30 / +0,70	7,60	± 0.40	2,10	± 0.20	92,50	+1,89 / -1,84	0,47	NSK10FCG1703302FLE30	NSK10FCR1703302FLE30
18,00	+0,30 / +0,70	9,00	± 0.50	2,30	± 0.25	98,00	+2,00 / -1,94	0,50	K10FCG1803302FLE30	K10FCR1803302FLE30
20,00	+0,30 / +0,70	9,90	± 0.50	2,30	± 0.25	109,00	+2,23 / -2,16	0,50	K10FCG2003302FLE30	K10FCR2003302FLE30
22,00	+0,30 / +0,70	10,00	± 0.50	2,30	± 0.25	120,00	+2,45 / -2,38	0,50	K10FCG2203302FLE30	K10FCR2203302FLE30
24,00	+0,30 / +0,70	12,00	± 0.50	2,30	± 0.25	120,00	+2,67 / -2,59	0,50	K10FCG2403302FLE30	K10FCR2403302FLE30
25,00	+0,30 / +0,70	11,50	± 0.50	2,30	± 0.25	135,40	+2,78 / -2,70	0,50	NSK10FCG2503302FLE30	NSK10FCR2503302FLE30
26,00	+0,30 / +0,70	12,00	± 0.50	2,30	± 0.25	141,00	+2,90 / -2,81	0,50	K10FCG2603302FLE30	K10FCR2603302FLE30





Coolant rods - With 2 holes and 40° helix/ 330 mm
Cilindri - Con due fori elicoidali 40°/ 330 mm
Rundstäbe - Mit 2 verdrahten Kühlkanälen 40°/ 330 mm
Barreaux ronds - Avec 2 trous hélécoidaux 40°/ 330 mm

GRADO - GRADE SORTE - NUANCE									K10F L330mm	
D mm	Toll. mm	TK mm	Toll. mm	d mm	Toll. mm	Pitch mm	Toll. mm	α mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
6,00	+0,30 /+0,60	2,00	± 0.20	0,50	± 0.10	22,50	+0,40/-0,39	0,15	K10FCG0603302FLE40	K10FCR0603302FLE40
8,00	+0,30 /+0,60	2,40	± 0.30	0,65	± 0.15	30,00	+0,54 /-0,53	0,15	K10FCG0803302FLE40	K10FCR0803302FLE40
10,00	+0,30 /+0,60	3,20	± 0.30	0,80	± 0.15	37,40	+0,67 /-0,66	0,20	K10FCG1003302FLE40	K10FCR1003302FLE40
12,00	+0,30 /+0,70	3,80	± 0.40	0,90	± 0.20	44,90	+0,80 /-0,79	0,30	K10FCG1203302FLE40	K10FCR1203302FLE40
13,00	+0,30 /+0,70	4,00	± 0.40	0,90	± 0.20	48,67	+0,87 /-0,85	0,34	NSK10FCG1303302FLE40	NSK10FCR1303302FLE40
14,00	+0,30 /+0,70	4,30	± 0.40	1,00	± 0.20	52,40	+0,94 /-0,92	0,37	K10FCG1403302FLE40	K10FCR1403302FLE40
16,00	+0,30 /+0,70	5,10	± 0.40	1,20	± 0.20	59,90	+1,07 /-1,05	0,40	K10FCG1603302FLE40	K10FCR1603302FLE40
18,00	+0,30 /+0,70	5,90	± 0.40	1,40	± 0.20	67,39	+1,21 /-1,18	0,50	K10FCG1803302FLE40	K10FCR1803302FLE40
20,00	+0,30 /+0,70	6,60	± 0.50	1,50	± 0.25	74,90	+1,34 /-1,31	0,50	K10FCG2003302FLE40	K10FCR2003302FLE40
22,00	+0,30 /+0,70	7,20	± 0.50	1,70	± 0.25	82,40	+1,48 /-1,44	0,50	K10FCG2203302FLE40	K10FCR2203302FLE40
24,00	+0,30 /+0,70	7,50	± 0.50	1,75	± 0.25	89,90	+1,61 /-1,58	0,50	K10FCG2403302FLE40	K10FCR2403302FLE40
25,00	+0,30 /+0,70	7,60	± 0.50	1,75	± 0.25	94,04	+1,68 /-1,64	0,50	NSK10FCG2503302FLE40	NSK10FCR2503302FLE40
26,00	+0,30 /+0,70	7,70	± 0.50	1,75	± 0.25	97,30	+1,74 /-1,71	0,50	K10FCG2603302FLE40	K10FCR2603302FLE40



Coolant rods - With 3 holes and 30° helix/ 330 mm
Cilindri - Con tre fori elicoidali 30°/ 330 mm
Rundstäbe - Mit 3 verdrahten Kühlkanälen 30°/ 330 mm
Barreaux ronds - Avec trois trous hélécoidaux 30°/ 330 mm

GRADO - GRADE SORTE - NUANCE									K10F L330mm	
D mm	Toll. mm	TK mm	Toll. mm	d mm	Toll. mm	Pitch mm	Toll. mm	α mm	Grezzo Unground Sinterroh Brut	Rettificato h6 Ground h6 Geschliffen h6 Rectifié h6
6,00	+0,30 /+0,60	2,75	± 0.15	0,50	± 0.10	32,65	+0,67/-0,65	± 4°	NSK10FCG0603303FLE30	NSK10FCR0603303FLE30
8,00	+0,30 /+0,60	3,85	± 0.15	0,70	± 0.10	43,53	+0,89 /-0,86	± 4°	NSK10FCG0803303FLE30	NSK10FCR0803303FLE30
10,00	+0,30 /+0,70	4,95	± 0.15	0,85	± 0.15	54,41	+1,11 /-1,08	± 4°	NSK10FCG1003303FLE30	NSK10FCR1003303FLE30
12,00	+0,30 /+0,70	6,05	± 0.25	1,10	± 0.15	65,30	+1,34 /-1,30	± 4°	NSK10FCG1203303FLE30	NSK10FCR1203303FLE30
14,00	+0,30 /+0,70	7,05	± 0.25	1,40	± 0.15	76,18	+1,56 /-1,51	± 4°	NSK10FCG1403303FLE30	NSK10FCR1403303FLE30
16,00	+0,30 /+0,70	8,05	± 0.25	1,60	± 0.15	87,06	+1,78 /-1,73	± 4°	NSK10FCG1603303FLE30	NSK10FCR1603303FLE30
18,00	+0,30 /+0,70	9,25	± 0.25	1,70	± 0.20	97,95	+2,00 /-1,94	± 4°	NSK10FCG1803303FLE30	NSK10FCR1803303FLE30
20,00	+0,30 /+0,70	9,85	± 0.35	1,90	± 0.25	108,83	+2,23 /-2,16	± 4°	NSK10FCG2003303FLE30	NSK10FCR2003303FLE30



Unground square and rectangular bars

Length 335 mm

Barre grezze a sezione quadra e rettangolare

Lunghezze 335 mm

Sinterrohe Quadrat - und Rechteckstäbe

Länge 335 mm

Barreaux brut carré et rectangulaires

Longueur 335 mm



GRADO GRADE SORTE NUANCE		K10F L335mm	K30 L335mm
a mm	b mm	Codice Articolo Item Code Artikel-Code Code Article	Codice Articolo Item Code Artikel-Code Code Article
1,5	3	K10FB01.503335	K30B01.503335
1,5	4	K10FB01.504335	K30B01.504335
1,5	6	K10FB01.506335	K30B01.506335
1,5	8	K10FB01.508335	K30B01.508335
2,0	2	K10FB02.002335	K30B02.002335
2,0	4	K10FB02.004335	K30B02.004335
2,0	5	K10FB02.005335	K30B02.005335
2,0	6	K10FB02.006335	K30B02.006335
2,0	7	K10FB02.007335	K30B02.007335
2,0	8	K10FB02.008335	K30B02.008335
2,0	9	K10FB02.009335	K30B02.009335
2,0	10	K10FB02.010335	K30B02.010335
2,0	12	K10FB02.012335	K30B02.012335
2,0	14	K10FB02.014335	K30B02.014335
2,0	16	K10FB02.016335	K30B02.016335
2,0	18	K10FB02.018335	K30B02.018335
2,0	20	K10FB02.020335	K30B02.020335
2,5	6	K10FB02.506335	K30B02.506335
2,5	8	K10FB02.508335	K30B02.508335
2,5	10	K10FB02.510335	K30B02.510335
2,5	12	K10FB02.512335	K30B02.512335
2,5	14	K10FB02.514335	K30B02.514335
2,5	16	K10FB02.516335	K30B02.516335
2,5	18	K10FB02.518335	K30B02.518335
2,5	20	K10FB02.520335	K30B02.520335
3,0	3	K10FB03.003335	K30B03.003335
3,0	5	K10FB03.005335	K30B03.005335
3,0	6	K10FB03.006335	K30B03.006335
3,0	7	K10FB03.007335	K30B03.007335
3,0	8	K10FB03.008335	K30B03.008335
3,0	10	K10FB03.010335	K30B03.010335
3,0	12	K10FB03.012335	K30B03.012335
3,0	13	K10FB03.013335	K30B03.013335
3,0	14	K10FB03.014335	K30B03.014335





GRADO GRADE SORTE NUANCE		K10F L335mm	K30 L335mm	GRADO GRADE SORTE NUANCE		K10F L335mm	K30 L335mm
a mm	b mm	Codice Articolo Item Code Artikel-Code Code Article	Codice Articolo Item Code Artikel-Code Code Article	a mm	b mm	Codice Articolo Item Code Artikel-Code Code Article	Codice Articolo Item Code Artikel-Code Code Article
3,0	15	K10FB03.015335	K30B03.015335	6,0	8	K10FB06.008335	K30B06.008335
3,0	16	K10FB03.016335	K30B03.016335	6,0	10	K10FB06.010335	K30B06.010335
3,0	18	K10FB03.018335	K30B03.018335	6,0	12	K10FB06.012335	K30B06.012335
3,0	20	K10FB03.020335	K30B03.020335	6,0	14	K10FB06.014335	K30B06.014335
3,0	22	K10FB03.022335	K30B03.022335	6,0	16	K10FB06.016335	K30B06.016335
3,0	25	K10FB03.025335	K30B03.025335	6,0	18	K10FB06.018335	K30B06.018335
3,0	30	K10FB03.030335	K30B03.030335	6,0	20	K10FB06.020335	K30B06.020335
4,0	4	K10FB04.004335	K30B04.004335	6,0	25	K10FB06.025335	K30B06.025335
4,0	5	K10FB04.005335	K30B04.005335	6,0	30	K10FB06.030335	K30B06.030335
4,0	6	K10FB04.006335	K30B04.006335	8,0	8	K10FB08.008335	K30B08.008335
4,0	8	K10FB04.008335	K30B04.008335	10,0	10	K10FB10.010335	K30B10.010335
4,0	10	K10FB04.010335	K30B04.010335	12,0	12	K10FB12.012335	K30B12.012335
4,0	12	K10FB04.012335	K30B04.012335	14,0	14	K10FB14.014335	K30B14.014335
4,0	13	K10FB04.013335	K30B04.013335	16,0	16	K10FB16.016335	K30B16.016335
4,0	14	K10FB04.014335	K30B04.014335	18,0	18	K10FB18.018335	K30B18.018335
4,0	16	K10FB04.016335	K30B04.016335	20,0	20	K10FB20.020335	K30B20.020335
4,0	18	K10FB04.018335	K30B04.018335				
4,0	20	K10FB04.020335	K30B04.020335				
4,0	22	K10FB04.022335	K30B04.022335				
4,0	25	K10FB04.025335	K30B04.025335				
4,0	30	K10FB04.030335	K30B04.030335				
5,0	5	K10FB05.005335	K30B05.005335				
5,0	7	K10FB05.007335	K30B05.007335				
5,0	8	K10FB05.008335	K30B05.008335				
5,0	10	K10FB05.010335	K30B05.010335				
5,0	12	K10FB05.012335	K30B05.012335				
5,0	14	K10FB05.014335	K30B05.014335				
5,0	16	K10FB05.016335	K30B05.016335				
5,0	18	K10FB05.018335	K30B05.018335				
5,0	20	K10FB05.020335	K30B05.020335				
5,0	25	K10FB05.025335	K30B05.025335				
5,0	30	K10FB05.030335	K30B05.030335				
5,0	32	K10FB05.032335	K30B05.032335				
6,0	6	K10FB06.006335	K30B06.006335				

Other sizes available on demand.
A richiesta disponibili anche altre misure.
Weitere Größen auf Anfrage.
Autres dimensions disponible sur demande.

K10F - In stock
K06F/K30 - On demand

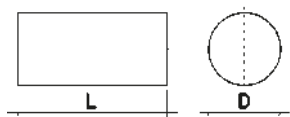
K10F - Pronto magazzino
K06F/K30 - Su richiesta

K10F - Auf Lager
K06F/K30 - Auf Anfrage

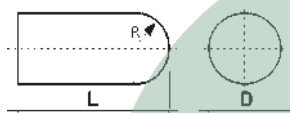
K10F - En stock
K06F/K30 - Sur demande



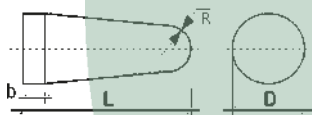
Burr blanks
Testine per lime rotative
Frässtift-Rohlinge
Fraises rotatives



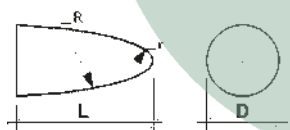
GRADO - GRADE SORTE - NUANCE	K10F
Din 8033	Codice Articolo Item Code Artikel-Code Code Article
TLA / ZYA 0410	K10FTLA0410
TLA / ZYA 0512	K10FTLA0512
TLA / ZYA 0613	K10FTLA0613
TLA / ZYA 0820	K10FTLA0820
TLA / ZYA 1020	K10FTLA1020
TLA / ZYA 1225	K10FTLA1225
TLA / ZYA 1625	K10FTLA1625
TLA / ZYA 2025	K10FTLA2025



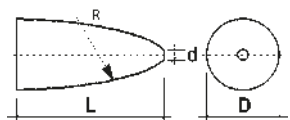
TLB / WRC 0512	K10FTLB0512
TLB / WRC 0613	K10FTLB0613
TLB / WRC 0820	K10FTLB0820
TLB / WRC 1020	K10FTLB1020
TLB / WRC 1225	K10FTLB1225
TLB / WRC 1625	K10FTLB1625
TLB / WRC 2025	K10FTLB2025



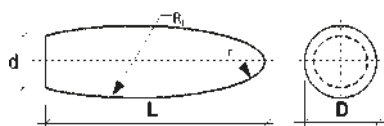
TLC / KEL 0820	K10FTLC0820
TLC / KEL 0824	K10FTLC0824
TLC / KEL 1020	K10FTLC1020
TLC / KEL 1028	K10FTLC1028
TLC / KEL 1225	K10FTLC1225
TLC / KEL 1230	K10FTLC1230
TLC / KEL 1630	K10FTLC1630
TLC / KEL 1638	K10FTLC1638
TLC / KEL 2032	K10FTLC2032



TLD / RBF 0613	K10FTLD0613
TLD / RBF 0818	K10FTLD0818
TLD / RBF 1020	K10FTLD1020
TLD / RBF 1225	K10FTLD1225
TLD / RBF 1630	K10FTLD1630
TLD / RBF 2030	K10FTLD2030



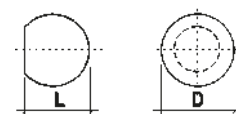
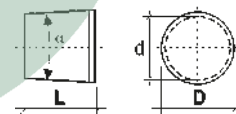
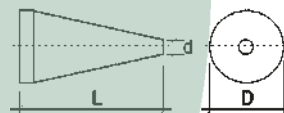
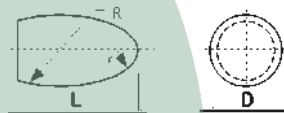
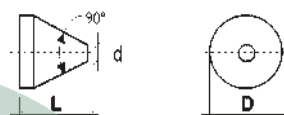
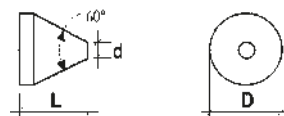
TLE / SPG 0613	K10FTLE0613
TLE / SPG 0818	K10FTLE0818
TLE / SPG 1020	K10FTLE1020
TLE / SPG 1225	K10FTLE1225
TLE / SPG 1630	K10FTLE1630



NO DIN STANDARD						Codice Articolo Item Code Artikel-Code Code Article
	D	L	R	r	d	
TLS 08	8	20	26	1,3	6,0	K10FTLS0820
TLS 10	10	25	33	1,5	6,0	K10FTLS1025
TLS 12	12	30	40	2,0	8,0	K10FTLS1230
TLS 16	16	35	47	4,0	12,5	K10FTLS1635



GRADO - GRADE SORTE - NUANCE	K10F
Din 8033	Codice Articolo Item Code Artikel-Code Code Article
TLF / KSJ 60° 0606	K10FTLF0606
TLF / KSJ 60° 0808	K10FTLF0808
TLF / KSJ 60° 1010	K10FTLF1010
TLF / KSJ 60° 1212	K10FTLF1212
TLF / KSJ 60° 1616	K10FTLF1616
TLF / KSJ 60° 2020	K10FTLF2020
TLG / KSK 90° 0605	K10FTLG0605
TLG / KSK 90° 0808	K10FTLG0808
TLG / KSK 90° 1010	K10FTLG1010
TLG / KSK 90° 1212	K10FTLG1212
TLG / KSK 90° 1613	K10FTLG1613
TLG / KSK 90° 2020	K10FTLG2020
TLH / TRE 0610	K10FTLH0610
TLH / TRE 0813	K10FTLH0813
TLH / TRE 1016	K10FTLH1016
TLH / TRE 1220	K10FTLH1220
TLH / TRE 1625	K10FTLH1625
TLH / TRE 2025	K10FTLH2025
TLI / SKM 0613	K10FTLI0613
TLI / SKM 0818	K10FTLI0818
TLI / SKM 1020	K10FTLI1020
TLI / SKM 1225	K10FTLI1225
TLI / SKM 1625	K10FTLI1625
TLI / SKM 2025	K10FTLI2025
TLL / WKN 0606	K10FTLL0606
TLL / WKN 0808	K10FTLL0808
TLL / WKN 1010	K10FTLL1010
TLL / WKN 1212	K10FTLL1212
TLL / WKN 1616	K10FTLL1616
TLL / WKN 2020	K10FTLL2020
TLM / KUD 0403,5	K10FTLM0403,5
TLM / KUD 0504	K10FTLM0504
TLM / KUD 0605	K10FTLM0605
TLM / KUD 0807	K10FTLM0807
TLM / KUD 1009	K10FTLM1009
TLM / KUD 1210,5	K10FTLM1210,5
TLM / KUD 1614	K10FTLM1614
TLM / KUD 2018	K10FTLM2018



Tungsten carbide grades - Specifications

Gradi metallo duro - Composizione

Hartmetall Sorten - Zusammensetzung

Carbure Nuances - Spécifications

Grade / Grado HM - Sorte / Nuance	WC Incl. Doping %	Co %	Grain size / Grana Korngröße Grosueur de grain micron	Density / Densità Dichte / Densité g/cm³	Hardness / Durezza Härte / Dureté HRA	Hardness / Durezza Härte / Dureté HV30	Transverse rupture strength Resistenza alla flessione Biegefestigkeit Resistance a la flexion N/mm²
MK12	88	12	Ultrafine	14,20	92,5	1730	4600

Suitable for finishing, processing and roughing of steels with hardnesses between 40 and 55 HRC, steels for surface treatments, nickel and nickel alloys. Suitable for finishing by micro milling.

Adatto alla lavorazione, sia in sgrossatura che in finitura, di acciai con durezza compresa tra i 40 ed i 55 HRC, acciai per trattamenti superficiali, nichel e leghe di nichel. Adatto alla lavorazione di finitura con microfrese su acciai.

Recommandé pour la réalisation des ébauches mais aussi des finitions pour les aciers de dureté comprise entre 40 et 55 HRC, aciers pour traitements de surface, nickel, alliages de nickel. Recommandé aussi pour la finitions pour des aciers Micro.

Geeignet für die Bearbeitung von Stählen mit Härte zwischen 40 und 55 HRC, Nickel und Nickellegierungen; Geeignet für die Bearbeitung von Stählen durch Mikrofräser.

GF70	91,5	8,5	Ultrafine	14,50	93,8	1950	4400
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Suitable for finishing high speed steels with hardnesses between 55 and 65 HRC and tempered steels. Suitable for high speed milling and drilling of cast iron, non-ferrous metals, light alloys, composites, and laminates of paper, plastic and graphite.

Adatto alle lavorazioni di finitura ad alta velocità per acciai di durezza compresa tra i 55 ed i 65 HRC tra cui acciaio rapido e acciaio temperato. Lavorazioni di fresatura e foratura ad alta velocità di ghisa, non ferrosi, leghe leggere, compositi, laminati di carta, plastica, grafite.

Recommandé pour la finition des aciers rapides de la dureté comprise entre 55 et 65 HRC (acier trempé, acier rapide). D'usinage et de fraisage à haute vitesse de perçage de la fonte, les métaux non ferreux, alliage légers, composites, produits laminés de papier et de plastique, graphite.

Geeignet für die Hochgeschwindigkeitsbearbeitung von Stählen der Härte zwischen 55 und 65 HRC (legierte und hochlegierte Werkzeugstähle). Geeignet für Hochgeschwindigkeitsfräsen und -bohren von Gusseisen, NE-Metalle, Leichtmetalle, Verbundstoffe aus Papier, Holz und Plastik

K10F	90	10,0	Sub-Micron	14,42	92,1	1620	3700
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Suitable for steel manufacturing including non-tempered steels with hardnesses up to 40 HRC. Suitable for aluminium alloys, aluminium magnesium, cast iron and non-ferrous material.

Grado adatto alla lavorazione di acciai anche non temprati, specie quando la durezza è minore di 40 HRC. Idoneo alla lavorazione di leghe di alluminio, alluminio magnesio, ghisa, materiali non ferrosi.

Recommandé pour l'usinage des aciers, incluant les aciers les non trempés, en particulier lorsque la dureté est inférieure à 40 HRC. Recommandé pour l'aluminium, aluminium magnésium, fonte, métaux non ferreux.

Geeignet für die Bearbeitung von Stählen der Härte bis 40 HRC. Geeignet für die Bearbeitung von Aluminium-Legierungen, Aluminium, Magnesium, Gusseisen und NE-Metalle.

K12F	88	12	Sub-Micron	14,22	91,1	1480	3740
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Suitable for stainless steel manufacturing, Nickel alloys, Titanium, Titanium alloys, special alloys (Nimonic, Inconel, Monel, Hastelloy), Brass and Bronze. Suitable also for roughing and drilling tender steels with irregular surfaces.

Adatto alla lavorazione di acciai inossidabili, leghe a base Nichel, Titanio, leghe di Titanio, leghe speciali (Nimonic, Inconel, Monel, Hastelloy), Ottone, Bronzo. Adatto alla foratura e sgrossatura di superfici irregolari o ondulate di acciai teneri o tenaci. Non indicato nella lavorazione di acciai induriti.

Recommandé pour l'usinage de l'acier inoxydable, des alliages à base de Nickel, Titanium, alliages de Titanium, alliages spéciaux (Nimonic, Inconel, Monel, Hastelloy), Laiton, Bronze. Convient aussi pour le perçage et l'ébauche des aciers légers avec des surfaces irrégulières.

Geeignet für die Bearbeitung von Edelstählen, Nickelbasislegierungen, Titan, Titanlegierungen, Sonderlegierungen (Nimonic, Inconel, Monel, Hastelloy), Messing und Bronze. Geeignet zum Bohren von Edelstählen mit unregelmäßigen Oberflächen

K30	91	9,0	Medium	14,63	91,0	1520	2900
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Suitable for applications where moderate wear resistance and high toughness are required. Suitable also for woodworking and interrupted cuts.

Adatto ad applicazioni ove è richiesta una modesta resistenza all'usura, ma molta tenacità. Ideale, quindi, per la lavorazione del legno e per lavorazioni con taglio interrotto.

Recommandé pour des applications demandant une faible résistance à l'usure, mais avec haute ténacité. Idéal donc pour le travail du bois et coupe interrompue.

Geeignet für Anwendungen, bei denen moderate Verschleißfestigkeit und gleichzeitig hohe Zähigkeit erforderlich sind. Ideal für Holzbearbeitungen und Bearbeitungen mit unterbrochenem Schnitt.

K06F	94	6,0	Sub-Micron	14,80	93,4	1890	2600
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Suitable for drilling and milling of plastic composites, PCB, ceramics and woods (in particular hard woods and medium density fiberboard (MDF)). Suitable also for drilling steels.

Idoneo alla foratura e fresatura di compositi plastici, PCB, ceramiche, legni in particolare legni duri e truciolati (MDF). Adatto anche a foratura su acciai.

Recommandé pour la perçage et la fraisage de matériaux composites, de plastique, PCB, céramiques, bois en particulier bois durs et bois composites (MDF). Recommandé aussi pour le perçage des aciers.

Geeignet für Anwendungen, bei denen eine beständige Basisqualität benötigt wird. Ideal für Holzbearbeitung und für Bearbeitungen mit unterbrochenem Schnitt.



Tungsten carbide grain size classification Classificazione della grana del metallo duro Hartmetallkorngröße Klassifizierung Classification de grosueur de grain	Grain size Dimensione della grana Korngröße Grosueur de grain	Classification Classificazione Klassifizierung Classification
	> 0,2	nano
	> 0,2 - 0,5	ultrafine
	> 0,5 - 0,8	sub-micron
	> 0,8 - 1,3	fine
	> 1,3 - 2,5	medium
	> 2,5 - 6,0	coarse
	> 6,0	extra-coarse



Solid rods as sintered Cilindri grezzi VHM- Rundstäbe roh Barreaux ronds brut	
Diameter Diametro Durchmesser Diametre mm	Tolerances Tolleranze Toleranzen Tolerances mm
0,5 - 3,5	+0,25 / +0,35
4,0 - 6,0	+0,25 / +0,40
6,5 - 12,0	+0,30 / +0,45
12,5 - 16,0	+0,35 / +0,50
16,5 - 22,0	+0,40 / +0,55
22,5 - 45,0	+0,45 / +0,60

Length Lunghezza Länge Longueur mm	Tolerances Tolleranze Toleranzen Tolerances mm
fino a 100,0	+0,50 / +1,00
100,0 - 165,0	+1,00 / +2,50
165,0 - 335,0	+1,00 / +6,00

Straightness Rettilinearità Geradeheit Rectitude Ø mm	Tolerances Tolleranze Toleranzen Tolerances mm
0,6 - 4	0,10
4,5 - 8	0,12
8,5 - 12,0	0,15
12,5 - 20	0,20
≥20,5	0,24

Solid rods ground to h6 Cilindri Rettificati h6 VHM- Rundstäbe geschliffen h6 Barreaux ronds rectifiés h6	
Diameter Diametro Durchmesser Diametre mm	Tolerances Tolleranze Toleranzen Tolerances mm

All diameters Tutti i diametri Alle Durchmesser Toutes les diamètres	h6
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Length Lunghezza Länge Longueur mm	Tolerances Tolleranze Toleranzen Tolerances mm
fino a 100,0	+0,50 / +1,00
100,0 - 165,0	+1,00 / +2,50
165,0 - 335,0	+1,00 / +6,00

Straightness Rettilinearità Geradheit Rectitude Ø mm	Tolerances Tolleranze Toleranzen Tolerances mm
<4,0	0,07
4,5 - 5	0,06
5,5 - 12	0,05
>12,50	0,04

Roundness Rotondità Rundheit Circularité Ø mm	Tolerances Tolleranze Toleranzen Tolerances mm
< 3,0	2,0 micron
3,0 - 6,0	2,5 micron
6,1 - 10,0	3,0 micron
10,1 - 18,0	3,5 micron
18,1 - 30,0	4,0 micron
30,1 - 50,0	5,0 micron

Central coolant duct Tolleranza decentramento foro dei cilindri con 1 foro centrale Mit 1 zentralen Kühlkanal 1 trou droit	
Diameter Diametro Durchmesser Diametre mm	Off-center Max decentramento Max Bohrung Abstand von der Mitte Distance maximale du centre du trou mm
4,0 - 8,0	0,15
9,0 - 12,0	0,20
13,0 - 16,0	0,30
17,0 - 18,0	0,40
> 20,0	0,50

2 holes axial approx. Tolleranza interasse foro dei cilindri con due fori paralleli ad interasse minore Zwei parallele Kühlkanäle mit eingengtem Teilkreis Entraxe réduit				
Diameter Diametro Durchmesser Diametre mm	Bolt circle Interasse fori Teilkreis Distance entre 2 trous mm	ID Diametro foro IK Dimensions de trou mm	a	
6,0	2,00	-0,20/0	0,80	± 0,10
7,0	2,00	-0,20/0	0,80	± 0,10
8,0	2,60	-0,30/0	1,00	± 0,10
9,0	2,60	-0,30/0	1,00	± 0,10
10,0	2,60	-0,30/0	1,00	± 0,10
11,0	3,50	-0,30/0	1,20	± 0,15
12,0	3,50	-0,30/0	1,20	± 0,15
13,0	3,50	-0,30/0	1,20	± 0,15
14,0	5,00	-0,30/0	1,50	± 0,15
15,0	5,00	-0,30/0	1,50	± 0,15
16,0	5,00	-0,30/0	1,50	± 0,15
18,0	6,20	-0,30/0	2,00	± 0,20
20,0	6,20	-0,40/0	2,00	± 0,20
22,0	6,20	-0,40/0	2,00	± 0,20
24,0	7,50	-0,40/0	2,00	± 0,20
25,0	7,50	-0,40/0	2,00	± 0,20
26,0	8,50	-0,50/0	2,00	± 0,20
28,0	8,50	-0,50/0	2,00	± 0,20
≥30,0	8,50	-0,50/0	3,00	± 0,25

2 holes axial approx. Tolleranza interasse cilindri con due fori paralleli ad interasse maggiore Zwei parallele Kühlkanäle mit Standardteilkreis Entraxe standard				
Diameter Diametro Durchmesser Diametre mm	Bolt circle Interasse fori Teilkreis Distance entre 2 trous mm	ID Diametro foro IK Dimensions de trou mm	a	
6,0	3,00	-0,20	1,00	± 0,10
7,0	3,50	-0,20	1,00	± 0,10
8,0	4,00	-0,30	1,00	± 0,10
9,0	4,00	-0,30	1,40	± 0,15
10,0	5,00	-0,30	1,40	± 0,15
11,0	5,00	-0,30	1,40	± 0,15
12,0	6,00	-0,30	1,75	± 0,15
13,0	6,00	-0,30	1,75	± 0,15
14,0	7,00	-0,30	1,75	± 0,15
15,0	7,00	-0,30	2,00	± 0,20
16,0	8,00	-0,30	2,00	± 0,20
17,0	8,00	-0,30	2,00	± 0,20
18,0	9,00	-0,30	2,00	± 0,20
20,0	10,00	-0,40	2,60	± 0,25
22,0	11,00	-0,40	2,60	± 0,25
24,0	12,00	-0,50	3,00	± 0,25
25,0	12,00	-0,50	3,00	± 0,25
26,0	13,00	-0,50	3,00	± 0,25
≥28,0	14,00	-0,50	3,00	± 0,25

Technical data: Tolerances
Dati Tecnici: Tolleranze
Technische daten: Toleranzen
Données techniques: Tolérances



Square and rectangular bars Barre quadre e rettangolari Quadrat- und Rechteckstäbe Carrés et rectangulaires	
Length Lunghezza Länge Longueur mm	Tolerances Tolleranze Toleranzen Tolerances mm

fino a 100,0	+0,50 / +1,50
100,0 - 165,0	+1,00 / +2,50
165,0 - 335,0	+1,00 / +6,00

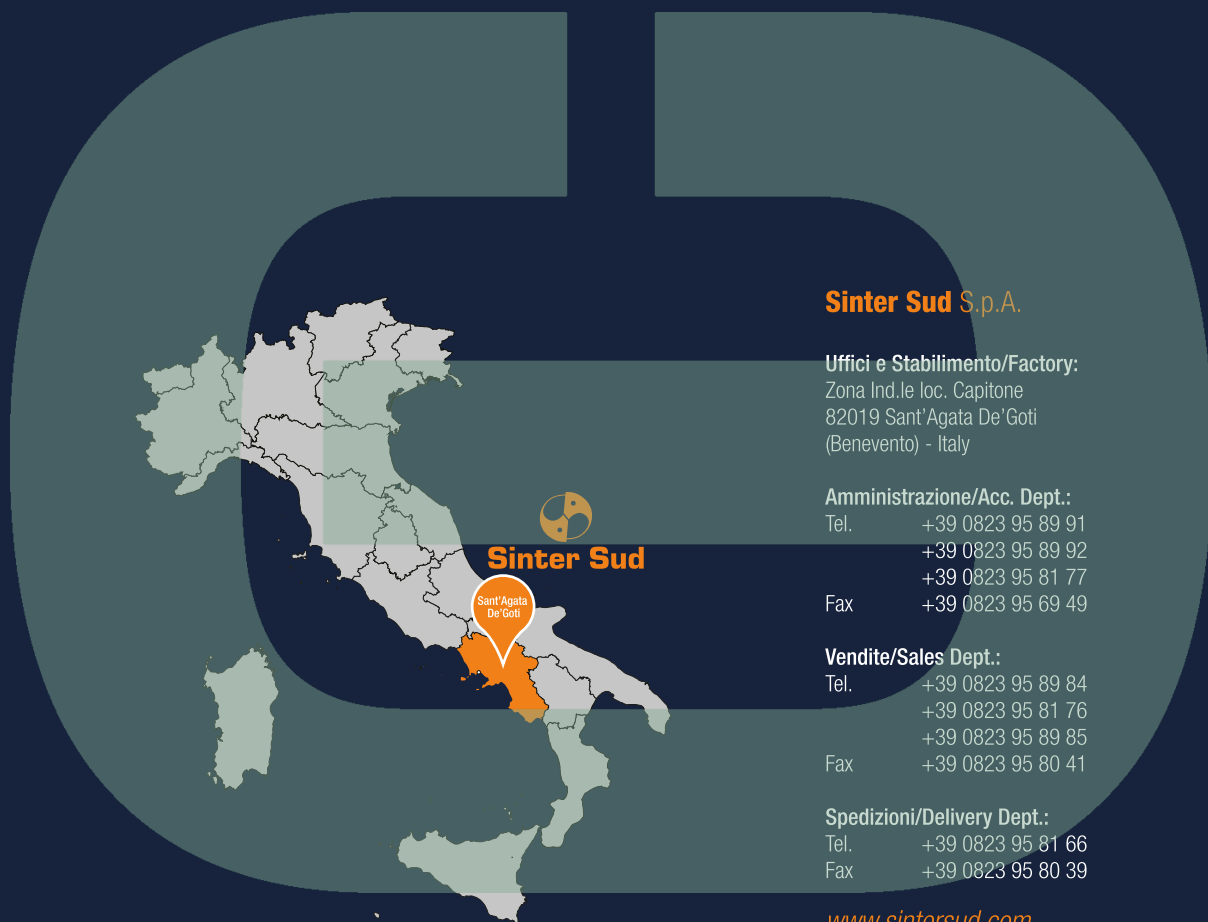
Thickness/Height Spessore/Altezza Stärke/Höhe Epaisseur/Hauteur mm	Tolerances Tolleranze Toleranzen Tolerances mm
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1,5	+0,25 / +0,50
2,0	+0,25 / +0,50
2,5	+0,25 / +0,52
3,0	+0,25 / +0,55
4,0	+0,25 / +0,55
5,0	+0,25 / +0,60
6,0	+0,25 / +0,60
7,0	+0,25 / +0,60
8,0	+0,25 / +0,60
9,0	+0,25 / +0,60
10,0	+0,25 / +0,60
12,0	+0,25 / +0,60
14,0	+0,25 / +0,60
16,0	+0,25 / +0,60
18,0	+0,25 / +0,60
20,0	+0,30 / +0,65
22,0	+0,30 / +0,65
24,0	+0,30 / +0,65
25,0	+0,30 / +0,80
26,0	+0,30 / +0,80
28,0	+0,30 / +0,80
30,0	+0,30 / +0,80
32,0	+0,30 / +0,80
35,0	+0,30 / +0,80
> 35,0	+0,35 / +0,80





A
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