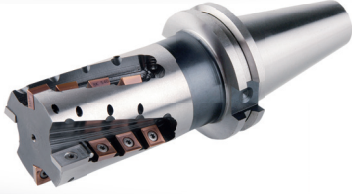




**TAKİMSAŞ®**

since 1987



**İSTANBUL**

**Ürün Kataloğu**

Product Catalogue

Produktkatalog

## BİZLER KİMİZ?

Makine, otomotiv, inşaat, havacılık, savunma vb. sektörlerde ileri teknoloji içeren tezgâhların kullanımı hızla artmaktadır. Kullanılan kesici ve takım tutucularının sayısı da her geçen gün artmaktadır. Bu ihtiyacının karşılanmasından yola çıkan TAKIMSAŞ, standart ve özel takım üretimine 1987 yılı sonlarında ülkemizde bir marka olarak başlamıştır.

Ülkemiz sanayisi büyüyerek gelişmektedir. Tüm sanayici ve çalışanlarımızın katkılarıyla, ülkemiz ihracat ve ekonomik verilerinin son zamanlarda artması, bizlere de bu başarıda onurlu bir geçmişe sahip olmanın mutluluğunu yaşıyor...

Firmamızın, ileri teknoloji içeren tezgâhlar kullanması ve her geçen gün sayılarının artması, kapasitemizi, kalitemizi geliştirirken, topluma olan sosyal sorumluluğumuzu arttıran saygının bir göstergesi olarak algılanması, bizlere güç vermektedir.

Rekabette vazgeçilmez unsur kabul edilen HIZ ve KALİTE, talaşlı imalat operasyonlarında daha hassas, standartlara uygun, verimli, ekonomik ve daha üretken imalat yapılabilmesi bakımından çok büyük öneme sahiptir. İşleme zamanlarını kısaltan, üretkenliği ve verimliliği arttıran özel takımların geliştirilmesinin de hızlı üretim teknolojisinde ayrı bir yeri bulunmaktadır.

Firmamız, gerek müşteri ve bayi beklentilerinin ve gerekse talaşlı imalattaki teknik problemlerin çözümünde büyük öneme sahip olan, standart tutucu ve kesici takımların üretiminin yanında ÖZEL TUTUCU ve TAKIMLARIN da geliştirilmesi, yüksek hız nedeniyle hassaslaştırılması gerektiğinin, yaşadığı yıllara dayalı tecrübelerle bilincine varmıştır.

TAKIMSAŞ, büyük oranda DIN standartlarına uygun olarak hazırlanan takım, tutucu ve kesicilerini üreterek ya da ithal ederek müşterilerinin kullanımına sunmakta, problemlerine çözüm ortağı olmaktadır. Bununla beraber, sektörde liderliğini koruyabilmek için ISO 9001 Kalite Yönetim Sistemi, ISO 14001 Çevre Yönetim Sistemi, TS 18001 İş Sağlığı ve Güvenliği Sistem belgelerini almış ve gerekli olanlarını almak için çalışmalarını sürdürmektedir.

Ülkemiz ekonomisine ve talaşlı üretime yıllarca katkıda bulunmanın gönül huzurunu, sevincini ve gururunu sizlerin destekleri ve sayesinde yaşamaktayız; bunu sizlerle paylaşmaktan da onur duymaktayız.

Bizler kim miyiz; TAKIMSAŞ bayi, müşteri ve çalışanlarıyız...

## WHO ARE WE?

In the industry of machinery, automotive, construction, aerospace, defense etc., the use of machining mills equipped high technology has been increasing exponentially. The quantity of toolholders and cutters used in industry is also increasing more and more. Supplying these needs of the industry has become the elementary concept of Takimsas Kesici Takim Makine Sanayi ve Ticaret A.S. and been established in 1987 to manufacture modern and customized tools as a national brand name in this field of business.

Turkish industry is expanding and growing. By regarding recent increases in exports and economic values of our country, we are experiencing the pleasure and proud of having honorable background in this success with the contributions of all our industrialists and employees.

Related to our manufacturing process with high tech machinery and increasing quantity of our products in the market, our capacity and quality is being upgraded with each passing day. We are being motivated and encouraged with our contribution to several industries with our products.

In the competitive market of machining process, the speed and the quality as the accepted indispensable primary matters have great importance in terms of manufacturing features like being more efficient, productive, economical, accurate and up to standard. Developing special tools which increase efficiency, productivity and decrease operation period has also special contribution in serial manufacture.

We can meet the expectations of our dealers and customers because our company gets great advantage of developing and manufacturing customized (special) holders and tools besides of standard holder and cutting tools. These special tools and holders enable to solve some technical problems in the production line. In addition to our technical abilities, our background and experience of several years bring determining the important concepts in production as accuracy of the products.

Takimsas produces or imports tools, holders, cutters and tips most of which complies with ISO standards and offers them to the service of its customers and becomes solution partner.

In order to maintain its leadership in company activities, we have taken some of the standard certificates such as ISO 9001 Quality Management System, ISO 14001 Environment Management System, ISO 18001 Health and Safety System. These certificates will be updated each period and some new certificates will be added.

We feel confidence, happiness and pride of us to the economy of our country and taking place in machining production by virtue of you. The most enjoyable and honorable stage of our business is sharing the results with you.

Who We Are; We are TAKIMSAS employees and customers...

## WER SIND WIR?

In der Branche der Maschinen hat Automobil-, Bau-, Luftfahrt-, Verteidigungs usw., die Verwendung der Bearbeitung Mühlen ausgestattet hohen Technologie exponentiell. Die Menge dieser Werkzeughalter und Fräser in der Industrie verwendet wird, auch immer mehr zu. Versorgung dieser Bedürfnisse der Industrie hat sich die elementare Konzept der Takimsas Kesici Takim Makine Sanayi ve Ticaret AS und im Jahr 1987 eingerichtet worden, um moderne und maßgeschneiderte Werkzeuge als nationale Marke in diesem Geschäftsfeld zu fertigen.

Türkischen Industrie wächst und wächst. Mit Bezug auf den jüngsten Anstieg der Exporte und wirtschaftliche Werte unseres Landes, erleben wir die Freude und stolz darauf, ehrenvolle Hintergrund in diesem Erfolg mit den Beiträgen aller unserer Industriellen und Mitarbeiter.

Bezug zu unseren Herstellungsprozess mit High-Tech Maschinen und zunehmende Menge unserer Produkte auf dem Markt, ist unsere Kapazität und Qualität mit jedem Tag aktualisiert. Wir werden motiviert und ermutigt, unseren Beitrag für verschiedene Branchen mit unseren Produkten.

Im umkämpften Markt der Bearbeitung, der Geschwindigkeit und der Qualität der akzeptierten unverzichtbare primären Dinge haben eine große Bedeutung in Bezug auf die Herstellung von Features wie ist effizienter, produktiver, wirtschaftlicher, genauer und aktueller Standard. Entwicklung spezieller Werkzeuge, die effizienz zu erhöhen, hat die Produktivität und die Abnahme Betriebsdauer auch besonderen Beitrag in Serienfertigung.

Takimsas produziert oder importiert Werkzeuge, Halter, Messer und Tipps von denen die meisten mit ISO-Standards entspricht und bietet sie in den Dienst seiner Kunden und wird Lösungspartner.

Um seine führende Position im Unternehmen Tätigkeiten erhalten, haben wir einige der Standard-Zertifikate wie ISO 9001 Qualitätsmanagement, ISO 14001 Umwelt-Management-System, ISO 18001 Arbeitsgesundheit und Sicherheitsmanagement übernommen. Diese Zertifikate werden in jeder Periode aktualisiert und einige neue certificates hinzugefügt werden.

Wir fühlen uns Vertrauen, Freude und Stolz, einen Beitrag für die Wirtschaft unseres Landes und findet in der spannenden Fertigung durch Sie. Die schönste und ehrenhafte Teil unseres Geschäfts ist, die Ergebnisse mit Ihnen.

Wer wir sind, Wir sind TAKIMSAS Mitarbeiter und Kunden...



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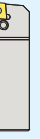
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Dış Torna Katerleri / Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung




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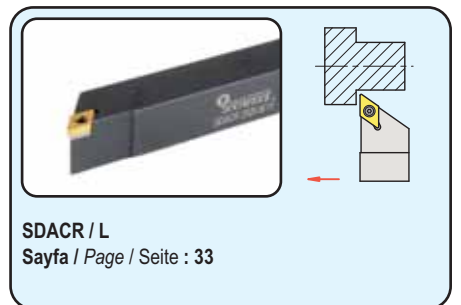
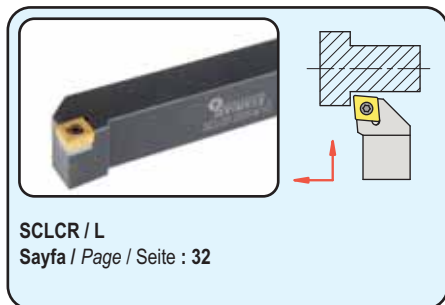
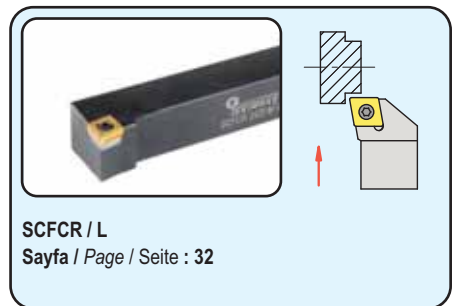
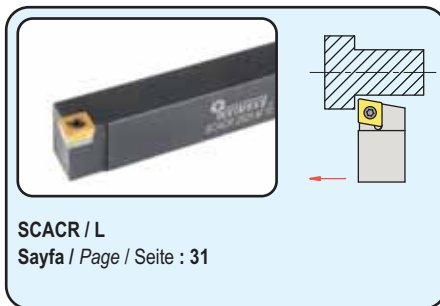
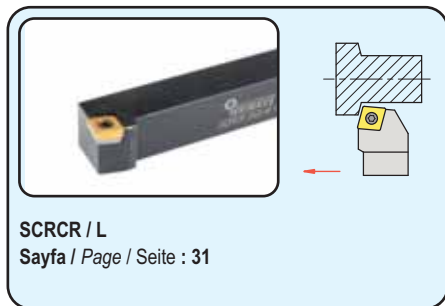
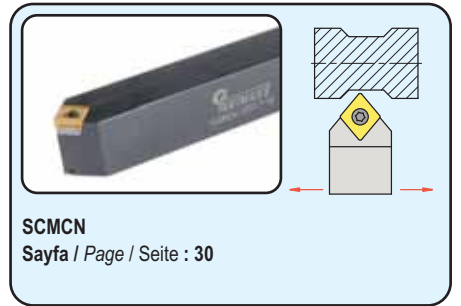
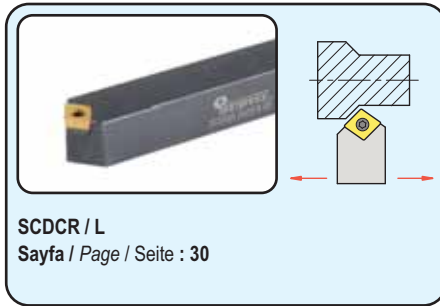
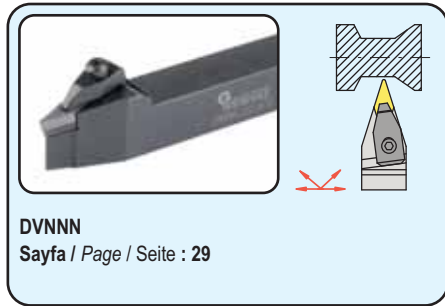
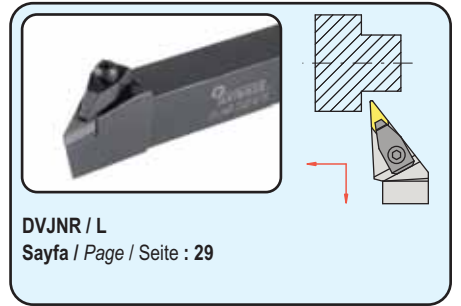
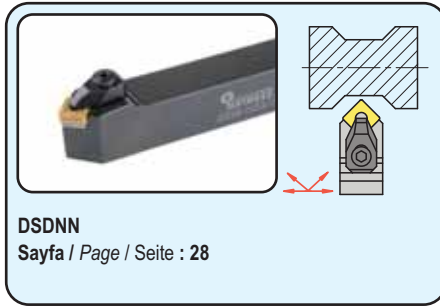
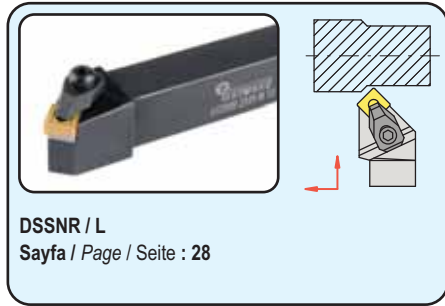
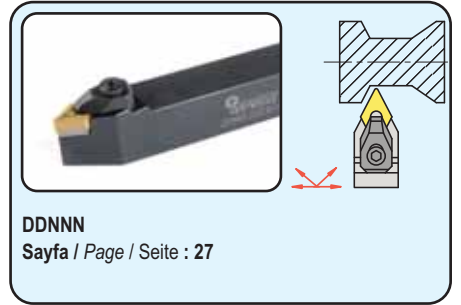
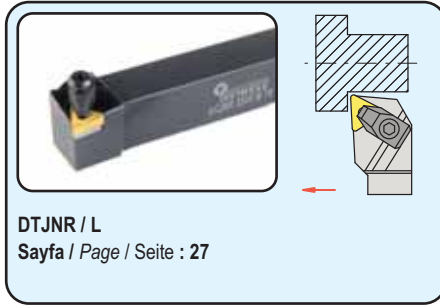
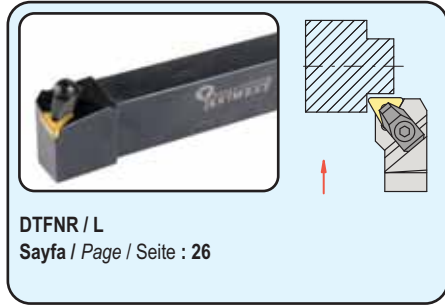


**Dış Torna Katerleri / Turning - Toolholder, External**  
 Drehen - Klemmhalter, Außenbearbeitung

 <p><b>PWLNR / L</b>                  Sayfa / Page / Seite : 19</p>	 <p><b>PRGNR / L</b>                  Sayfa / Page / Seite : 19</p>	 <p><b>PRGCR / L</b>                  Sayfa / Page / Seite : 20</p>
 <p><b>PRDCN</b>                  Sayfa / Page / Seite : 20</p>	 <p><b>MTJNR / L</b>                  Sayfa / Page / Seite : 21</p>	 <p><b>MTGNR / L</b>                  Sayfa / Page / Seite : 21</p>
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Dış Torna Katerleri / Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung

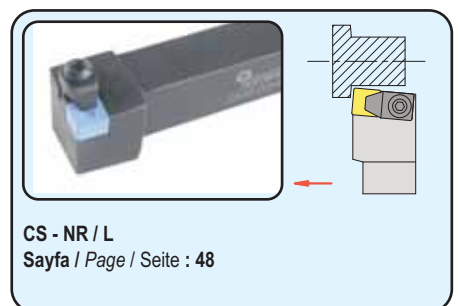
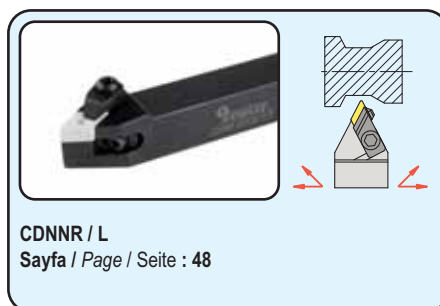
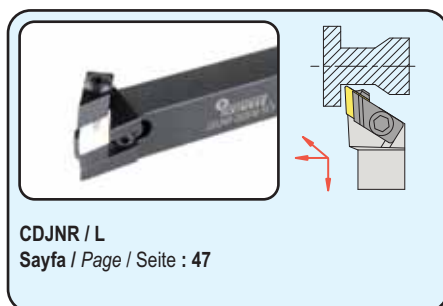
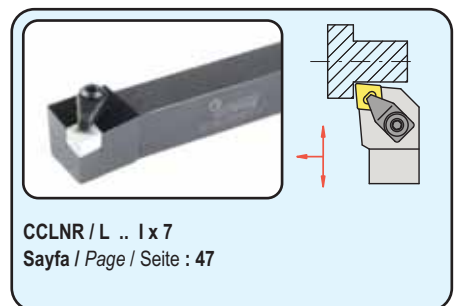
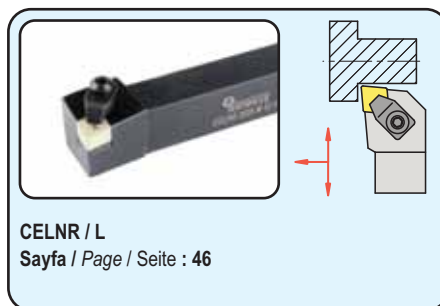
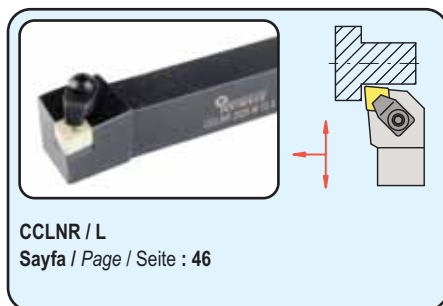
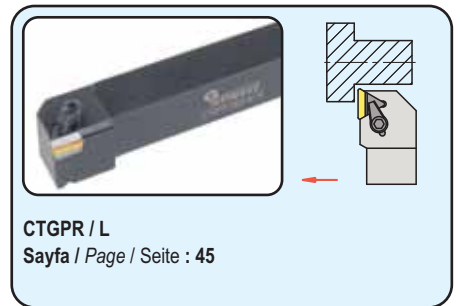
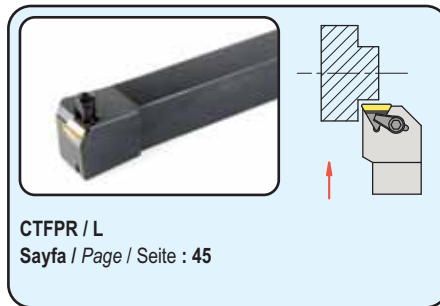
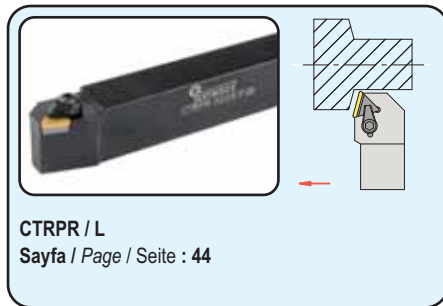
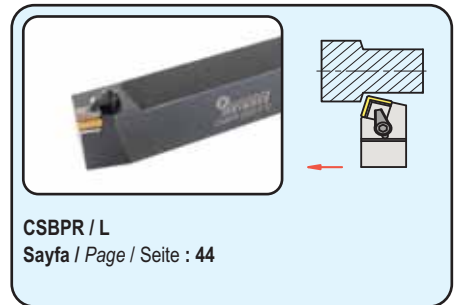
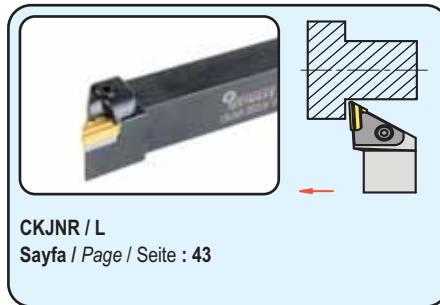
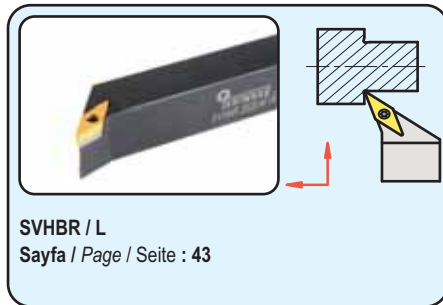
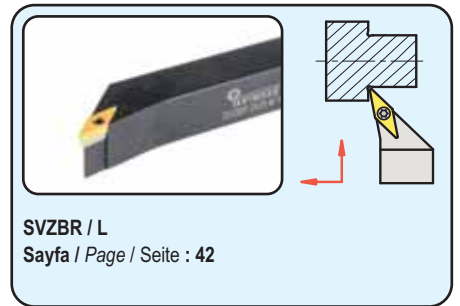
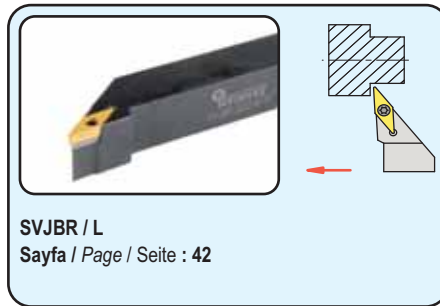
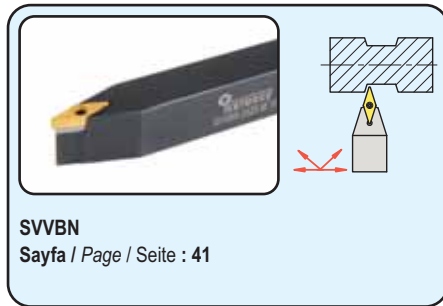




**Dış Torna Katerleri / Turning - Toolholder, External**  
*Drehen - Klemmhalter, Außenbearbeitung*


 <p><b>SDJCR / L</b>  <i>Sayfa / Page / Seite : 34</i></p>	 <p><b>SDHCR / L</b>  <i>Sayfa / Page / Seite : 34</i></p>	 <p><b>SRDCN</b>  <i>Sayfa / Page / Seite : 35</i></p>
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 <p><b>SSBCR / L</b>  <i>Sayfa / Page / Seite : 37</i></p>	 <p><b>SSKCR / L</b>  <i>Sayfa / Page / Seite : 37</i></p>	 <p><b>STGCR / L</b>  <i>Sayfa / Page / Seite : 38</i></p>
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Dış Torna Katerleri / Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung







**Dış Torna Katerleri / Turning - Toolholder, External**  
Drehen - Klemmhalter, Außenbearbeitung




**CSYNR / L**  
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**CSRNR / L**  
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**CSKNR / L**  
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**CSSNR / L**  
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**CTUNR / L**  
Sayfa / Page / Seite : 52



**CRSNR / L**  
Sayfa / Page / Seite : 52


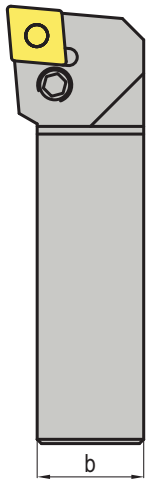
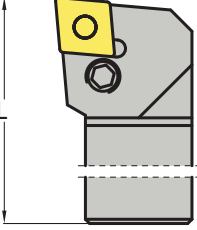


















**CRDNN**  
Sayfa / Page / Seite : 53



**CRDCN**  
Sayfa / Page / Seite : 53

<b>P</b> 1	<b>S</b> 2		<b>S</b> 3				<b>N</b> 4		<b>R</b> 5
Sıkma Tipi / Clamping Style Befestigungsart	Uç Tipi / Insert Type Wendeplattenform		Yanaşma Açısı / Approach Angle Klemmhalterform				Uç Serbest Açısı / Insert Clearance Angle Wendeplattenfreiwinkel		Kesme Yönü / Cutting Direction Schneidrichtung
<b>C</b> Baskılı Sistem / Top Clamping von oben geklemmt	<b>A</b> 85°	<b>M</b> 84°	<b>A</b> 90°	<b>B</b> 75°	<b>C</b> 90°	<b>D</b> 45°	<b>A</b> 3°	<b>B</b> 5°	<b>L</b>
<b>D</b> Baskılı Sistem / Top Clamping von oben geklemmt	<b>B</b> 82°	<b>O</b> 135°	<b>A</b> 60°	<b>B</b> 90°	<b>C</b> 90°	<b>D</b> 90°	<b>C</b> 7°	<b>D</b> 15°	<b>N</b>
<b>M</b> Baskılı ve Pimli Sistem Top and Hole Clamping Von oben und über Bohrung geklemmt	<b>C</b> 80°	<b>P</b> 108°	<b>E</b> 75°	<b>F</b> 85°	<b>G</b> 50°	<b>H</b> 65°	<b>E</b> 20°	<b>F</b> 25°	<b>R</b>
<b>P</b> Levyeli Sistem / Lever System Über Bohrung geklemmt	<b>D</b> 55°	<b>R</b> 90°	<b>K</b> 75°	<b>L</b> 45°	<b>M</b> 80°	<b>N</b> 85°	<b>G</b> 30°	<b>N</b> 0°	
<b>S</b> Vida ile Delikten Sıkma Centre Screw Locking Durch Bohrung geschraubt	<b>E</b> 75°	<b>S</b> 90°	<b>R</b> 72.5°	<b>S</b> 60°	<b>T</b> 80°	<b>U</b> 85°	<b>P</b> 11°	<b>O</b> 8°	
	<b>H</b> 120°	<b>T</b> 60°							
	<b>K</b> 55°	<b>V</b> 35°							
	<b>L</b> 90°	<b>W</b> 80°							

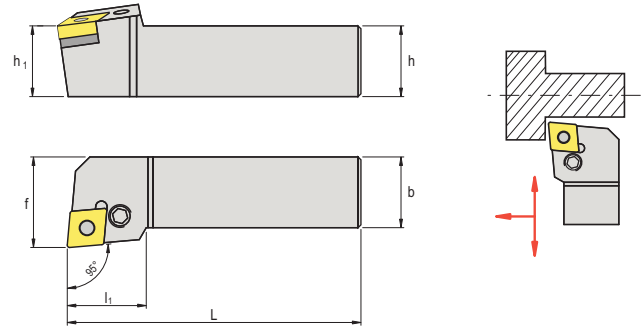
<b>25</b> 6	<b>25</b> 7	<b>M</b> 8	<b>12</b> 9	
Kesme Kenar Yüksekliği / Cutting Edge Height Schneidenhöhe	Şaft Genişliği / Shank width Schaftbreite	Şaft Boyu / Shank length Werkzeuglänge	Kesici Kenar Uzunluğu / Cutting edge length Schneidkantenlänge	
			<b>A</b> 	<b>C</b> 
			<b>B</b> 	<b>E</b> 
			<b>D</b> 	<b>H</b> 
		<b>Takım Boyu / Tool Length</b> Kennbuchstaben für die Längen $l_1$	<b>K</b> 	<b>L</b> 
		<b>L</b> <b>L mm</b>	<b>M</b> 	<b>O</b> 
		A      32	<b>P</b> 	<b>R</b> 
		B      40	<b>S</b> 	<b>T</b> 
		C      50	<b>V</b> 	<b>W</b> 
		D      60		
		E      70		
		F      80		
		G      90		
		H      100		
		J      110		
		K      125		
		L      140		
		<b>M</b> <b>150</b>		
		N      160		
		P      170		
		Q      180		
		R      200		
		S      250		
		T      300		
		U      350		
		V      400		
		W      450		
		X      ÖZEL		
		Y      500		

Genel olarak dış torna katerinde  $h_1$  ile  $h$  eşittir.

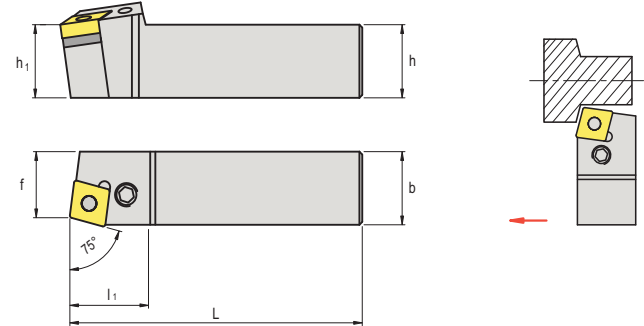
Ingeneral,  $h_1$  is equal to  $h$  for external tool holders

Bei Klemmwerkzeugen entspricht die Schneidhöhe  $h_1$  im allgemeinen der Schafthöhe  $h_2$  Ausgenommen sind Kurzklemmhalter und Klemmwerkzeuge zum Innendrehen.

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



		Stok Stock Lager		Ölçüler Dimensions Abmessungen									
Kod Code Bezeichnung	16 16 H12T 20 20 K12T 25 25 M12T 32 25 P12T 32 32 P12T 25 25 M16T 32 25 P16T 32 32 P16T 32 25 P19T 32 32 P19T 40 40 R19T 40 40 R25T 50 50 S25T	● ● ● ○ ○ ● ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	16 16 H12T	●	○	16	16	100	26	20	CN.....1204	U 112150	H 023441	S 023421	R 023461
	20 20 K12T	●	○	20	20	125	30	25					
	25 25 M12T	●	○	25	25	150	30	32					
	32 25 P12T	○	○	32	25	170	30	32					
	32 32 P12T	○	○	32	32	170	30	40					
	25 25 M16T	●	○	25	25	150	33	32	CN.....1606	U 000152	H 000840	S 028430	R 025464
	32 25 P16T	○	○	32	25	170	33	32					
	32 32 P16T	○	○	32	32	170	33	40					
	32 25 P19T	○	○	32	25	170	38	32	CN.....1906	U 123151	H 033442	S033422	R 033462
	32 32 P19T	○	○	32	32	170	38	40					
	40 40 R19T	○	○	40	40	200	38	50	CN.....2509	U 002540	H 038444	S 038427	R 038465
	40 40 R25T	○	○	40	40	200	47	50					
	50 50 S25T	○	○	50	50	250	47	60					



		Stok Stock Lager		Ölçüler Dimensions Abmessungen									
Kod Code Bezeichnung	25 25 M12T 32 25 P12T 25 25 M16T 32 25 P16T 32 32 P16T 32 32 P19T 40 40 R19T 40 40 R25T 50 50 S25T	● ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	25 25 M12T	●	○	25	25	150	30	22	CN.....1204	U 112150	H 023441	S 023421	R 023461
	32 25 P12T	○	○	32	25	170	30	22					
	25 25 M16T	○	○	25	25	150	33	22	CN.....1606	U 000152	H 000840	S 028430	R 025464
	32 25 P16T	○	○	32	25	170	33	22					
	32 32 P16T	○	○	32	32	170	33	27					
	32 32 P19T	○	○	32	32	170	38	27	CN.....1906	U 123151	H 033442	S033422	R 033462
	40 40 R19T	○	○	40	40	200	38	35					
	40 40 R25T	○	○	40	40	200	47	35	CN.....2509	U 002540	H 038444	S 038427	R 038465
	50 50 S25T	○	○	50	50	250	47	45					

R : Sağ / Right / Rechte L : Sol / Left / Linke

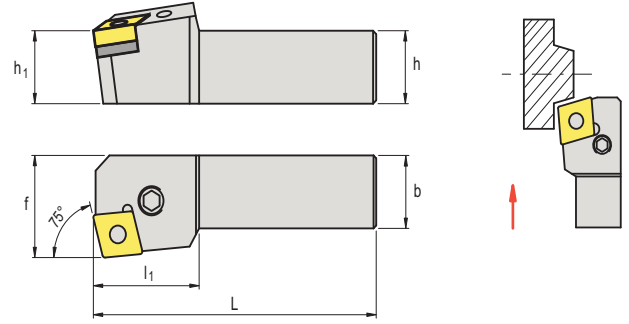
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : PCLNR 25 25 M12






● Stoktan / Stock / Verfügbar ab Lager

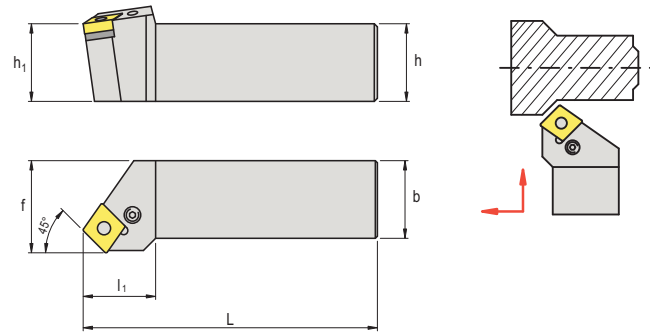
● 2 Hafta / in two weeks / in zwei Wochen






○ Stokta yok / Non stock item / Nicht auf Lager

İsteğe bağlı olarak pabuç takiyesi ilave edilmektedir. / Clamp will be supplied according to customer need.

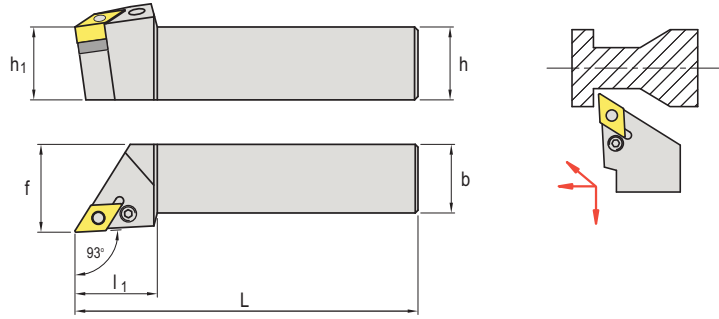
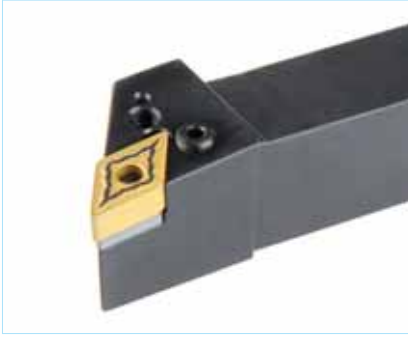


Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen									
	R	L	h h1	b	L	l1	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
PCKNR/L 25 25 M12T	●	●	25	25	150	30	32	CN.....1204	U 112150	H 023441	S 023421	R 023461
32 25 P12T	○	○	32	25	170	30	32					
25 25 M16T	○	○	25	25	150	33	32	CN.....1606	U 000152	H 000840	S 028430	R 025464
32 25 P16T	○	○	32	25	170	33	32					
32 32 P16T	○	○	32	32	170	33	40	CN.....1906	U 123151	H 033442	S 033422	R 033462
32 25 P16T	○	○	32	25	170	38	32					
32 32 P19T	○	○	32	32	170	38	40	CN.....2509	U 002540	H 038444	S 038427	R 038465
40 40 R19T	○	○	40	40	200	38	50					
40 40 R25T	○	○	40	40	200	47	50					

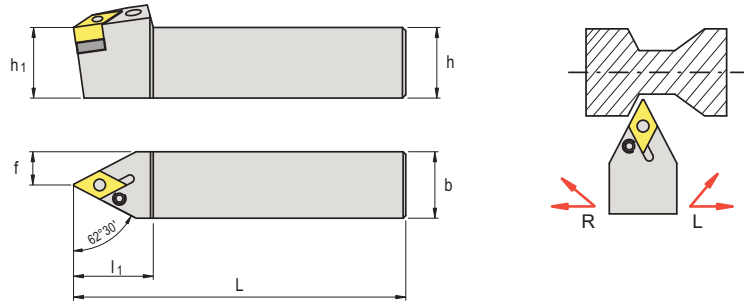


Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen									
	R	L	h h1	b	L	l1	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
PCSNR/L 20 20 K12T	●	●	20	20	125	30	25	CN.....1204	U 112150	H 023441	S 023421	R 023461
25 25 M12T	●	●	25	25	150	30	32					
32 25 P12T	○	○	32	25	170	30	32	CN.....1606	U 000152	H 000840	S 028430	R 025464
25 25 M16T	○	○	25	25	150	33	32					
32 25 P16T	○	○	32	25	170	33	32	CN.....1906	U 123151	H 033442	S 033422	R 033462
32 32 P16T	○	○	32	32	170	33	40					
32 25 P19T	○	○	32	25	170	38	32	CN.....2509	U 002540	H 038444	S 038427	R 038465
32 32 P19T	○	○	32	32	170	38	40					
40 40 R19T	○	○	40	40	200	38	50					

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altık Pimi Anvil Pin Rohrstift
	R	L	h h1	b	L	l1	f					
PDJNR/L 20 20 K11T	○	○	20	20	125	30	25	DN.....1104	DN 11 ALT	H 019445	S 018420	R 018463
25 25 M11T	○	○	25	25	150	30	32					
20 20 K15T	●	●	20	20	125	30	25	DN.....1506	U 153150	H 024447	S 028430	R 023461
25 25 M15T	●	●	25	25	150	30	32					
32 25 P15T	○	○	32	25	170	33	32					
32 32 P15T	○	○	32	32	170	33	40					
40 25 R15T	○	○	40	25	200	38	32					
40 32 R15T	○	○	40	32	200	38	40					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altık Pimi Anvil Pin Rohrstift
	R	L	h h1	b	L	l1	f					
PDNNR/L 25 25 M15T	●	●	25	25	150	25	12.5	DN.....1506	U 153150	H 024447	S 028430	R 023461
32 25 P15T	○	○	32	25	170	25	12.5					
32 32 P15T	○	○	32	32	170	32	16					
40 25 R15T	○	○	40	25	200	25	12.5					
40 32 R15T	○	○	40	32	200	32	16					

R : Sağ / Right / Rechte L : Sol / Left / Linke

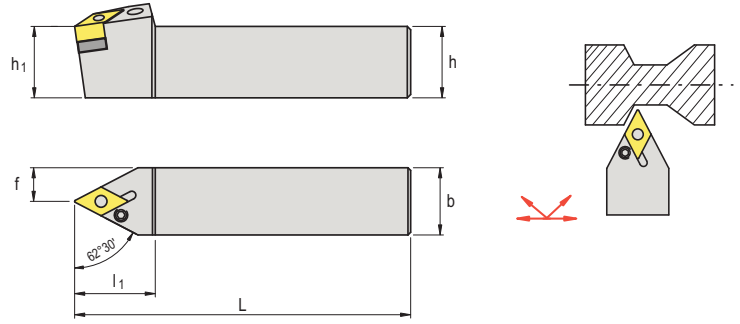
● Stoktan / Stock / Verfügbar ab Lager






● 2 Hafta / in two weeks / in zwei Wochen

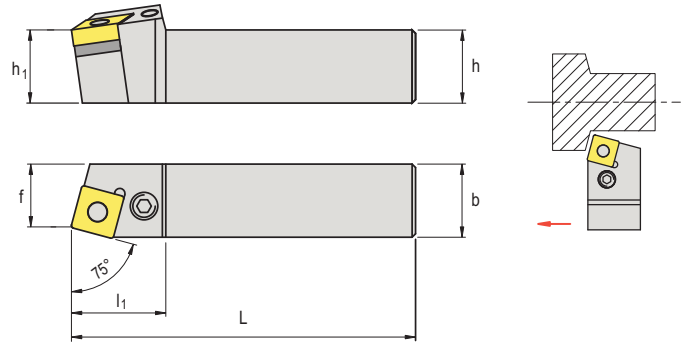
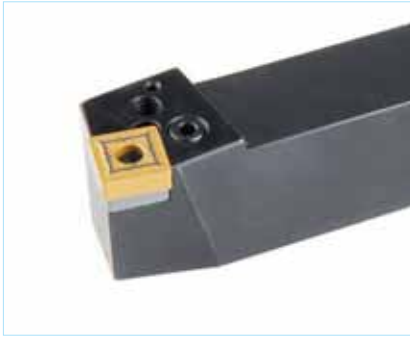
○ Stokta yok / Non stock item / Nicht auf Lager






İsteğe bağlı olarak pabuç takiyesi ilave edilmektedir. / Clamp will be supplied according to customer need.



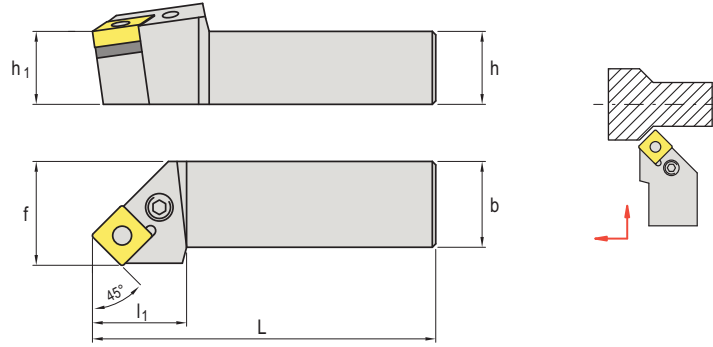


Kod Code Bezeichnung		Stok Stock Lager		Ölçüler Dimensions Abmessungen									
				h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
PDNNN	25 25 M15T	●		25	25	150	25	12.5	DN.....1506	U 153150	H 024447	S 028430	R 023461
	32 25 P15T	○		32	25	170	25	12.5					
	32 32 P15T	○		32	32	170	32	16					
	40 25 R15T	○		40	25	200	25	12.5					
	40 32 R15T	○		40	32	200	32	16					

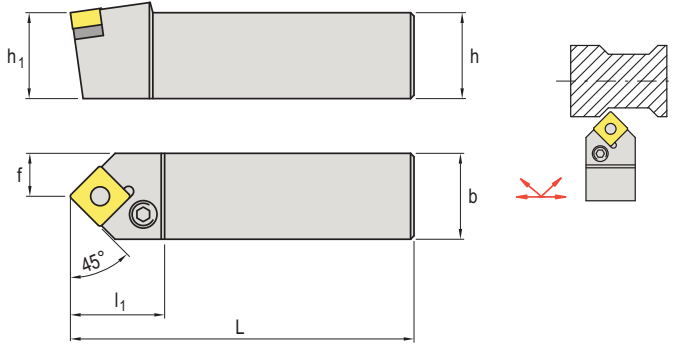
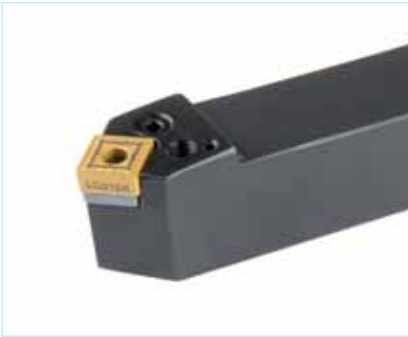


Kod Code Bezeichnung		Stok Stock Lager		Ölçüler Dimensions Abmessungen									
				R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel
PSBNR/L	16 16 H09T	○	○	16	16	100	23	13	SN.....0903	U 053450	H 018440	S 011429	R 018463
	20 20 K12T	○	○	20	20	125	28	17	SN.....1204	U 063451	H 023441	S 023421	R 023461
	25 25 M12T	○	○	25	25	150	28	22					
	32 25 P12T	○	○	32	25	170	28	22	SN.....1506	U 000457	H 000840	S 028430	R 025464
	25 25 M15T	○	○	25	25	150	32	22					
	32 25 P15T	○	○	32	25	170	32	22					
	32 32 P15T	○	○	32	32	170	32	27					
	32 32 P19T	○	○	32	32	170	39	27					
	40 40 R19T	○	○	40	40	200	41	35	SN.....1906	U 083452	H 033442	S 033422	R 033462
	40 40 R25T	○	○	40	40	200	47	35	SN.....2507	U 092453	H 038444	S 038427	R 038465
	50 50 S25T	○	○	50	50	250	47	45					

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager		h					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levye Lever Hebel	Levye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f					
PSSNR/L 16 16 H09T	○	○	16	16	100	22	20	SNM...0903	U 053450	H 018440	S 011429	R 018463
20 20 K12T	●	○	20	20	125	29	25	SNM...1204	U 063451	H 023441	S 023421	R 023461
25 25 M12T	●	○	25	25	150	29	32					
32 25 P12T	○	○	32	25	170	29	32					
25 25 M15T	○	○	25	25	150	34	32	SNM...1506	U 000457	H 000840	S 028430	R 025464
32 25 P15T	○	○	32	25	170	34	32	SNM...1906	U 083452	H 033442	S 033422	R 033462
32 32 P15T	○	○	32	32	170	34	40					
40 40 R19T	○	○	40	40	200	41	50	SNM...2507	U 092453	H 038444	S 038427	R 038465
40 40 R25T	○	○	40	40	200	48	50					



		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager		h					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levye Lever Hebel	Levye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f					
PSDNN 16 16 H09T	○	○	16	16	100	20	8	SNM...0903	U 053450	H 018440	S 011429	R 018463
20 20 K12T	●	○	20	20	125	28	10	SNM...1204	U 063451	H 023441	S 023421	R 023461
25 25 M12T	●	○	25	25	150	28	12.5					
32 25 P12T	○	○	32	25	170	28	12.5					
25 25 M15T	○	○	25	25	150	32	12.5	SNM...1506	U 000457	H 000840	S 028430	R 025464
32 25 P15T	○	○	32	25	170	32	12.5	SNM...1906	U 083452	H 033442	S 033422	R 033462
32 32 P15T	○	○	32	32	170	32	16					
40 40 R19T	○	○	40	40	200	41	20	SNM...2507	U 092453	H 038444	S 038427	R 038465
40 40 R25T	○	○	40	40	200	48	20					

R : Sağ / Right / Rechte L : Sol / Left / Linke

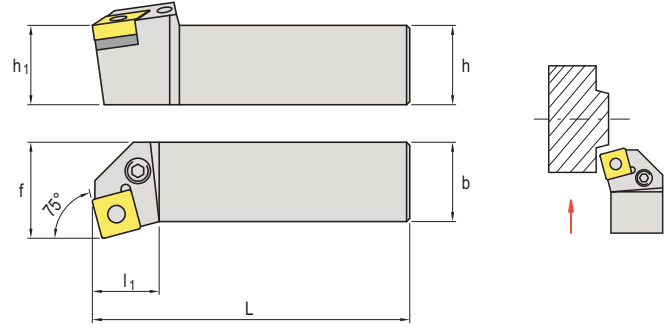
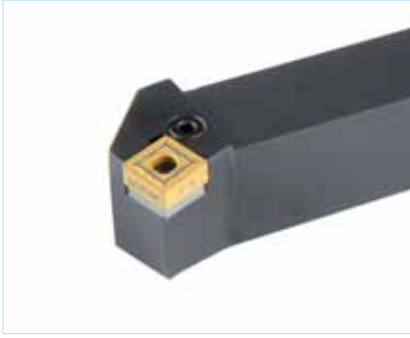
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : PSSNR 25 25 M12






● Stoktan / Stock / Verfügbar ab Lager

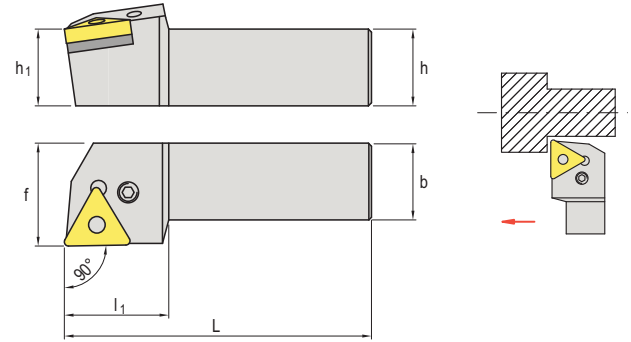
● 2 Hafta / in two weeks / in zwei Wochen






○ Stokta yok / Non stock item / Nicht auf Lager

İsteğe bağlı olarak pabuç takviyesi ilave edilmektedir. / Clamp will be supplied according to customer need.

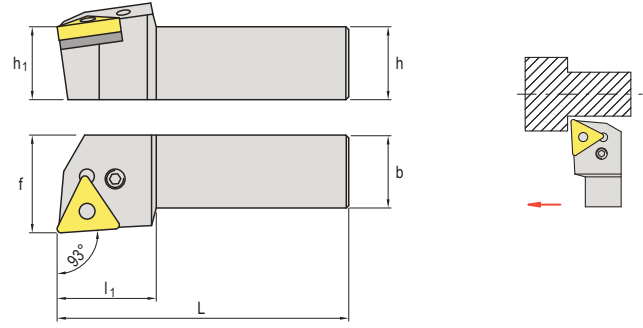







			Ölçüler Dimensions Abmessungen									
Kod Code Bezeichnung	Stok Stock Lager		h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	h <sub>1</sub>									
PSKNR/L 16 16 H09T	○	○	16	16	100	16	20	SN.....0903	U 053450	H 018440	S 011429	R 018463
20 20 K12T	○	○	20	20	125	23	25	SN.....1204	U 063451	H 023441	S 023421	R 023461
25 25 M12T	●	○	25	25	150	23	32					
32 25 P12T	●	○	32	25	170	23	32	SN.....1506	U 000457	H 000840	S 028430	R 025464
25 25 M15T	○	○	25	25	150	28	32					
32 25 P15T	○	○	32	25	170	28	32	SN.....1906	U 083452	H 033442	S 033422	R 033462
32 32 P15T	○	○	32	32	170	28	40					
32 32 P19T	○	○	32	32	170	33	40	SN.....2507	U 092453	H 038444	S 038427	R 038465
40 40 R19T	○	○	40	40	200	33	50					
40 40 R25T	○	○	40	40	200	38	50					
50 50 S25T	○	○	50	50	250	38	60					

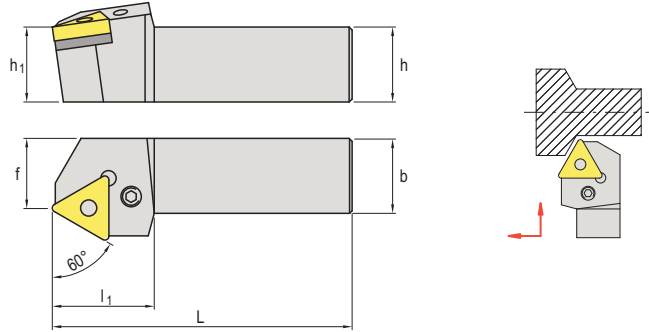
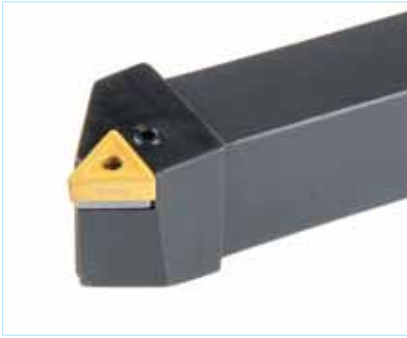







			Ölçüler Dimensions Abmessungen									
Kod Code Bezeichnung	Stok Stock Lager		h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	h <sub>1</sub>									
PTGNR/L 16 16 H11T	○	○	16	16	100	18	20	TN.....1103		H 011446	S 011429	
16 16 H16T	○	○	16	16	100	20	20	TN.....1604	U 013950	H 018440	S 018420	R 018463
20 20 K16T	●	○	20	20	125	20	25					
25 25 M16T	●	○	25	25	150	22	32	TN.....2204	U 023952	H 023441	S 023421	R 023461
32 25 P16T	○	○	32	25	170	22	32					
25 25 M22T	○	○	25	25	150	28	32	TN.....2706	U 013954	H 028443	S 000831	R 025464
32 25 P22T	○	○	32	25	170	28	32					
32 32 P22T	○	○	32	32	170	28	40					
32 32 P27T	○	○	32	32	170	35	40					
40 40 R27T	○	○	40	40	200	41	50					

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	h <sub>1</sub>	b	L	l <sub>1</sub>	f							
PTJNR/L 16 16 H16T	○	○	16	16	100	20	20	TN.....1604	U 013950	H 018440	S 018420	R 018463
20 20 K16T	○	○	20	20	125	20	25					
25 25 M16T	○	○	25	25	150	22	32					
32 25 P16T	○	○	32	25	170	22	32					
25 25 M22T	○	○	25	25	150	28	32	TN.....2204	U 023952	H 023441	S 023421	R 023461
32 25 P22T	○	○	32	25	170	28	32					
32 25 P22T	○	○	32	25	170	28	32					
32 32 P22T	○	○	32	32	170	28	40					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	h <sub>1</sub>	b	L	l <sub>1</sub>	f							
PTTNR/L 20 20 K16T	○	○	20	20	125	26	17	TN.....1604	U 013950	H 018440	S 018420	R 018463
25 25 M16T	○	○	25	25	150	26	22					
32 25 P16T	○	○	32	25	170	26	22					
25 25 M22T	○	○	25	25	150	32	22	TN.....2204	U 023952	H 023441	S 023421	R 023461
32 25 P22T	○	○	32	25	170	32	22					
32 25 P22T	○	○	32	25	170	32	22					
32 32 P22T	○	○	32	32	170	32	29					

R : Sağ / Right / Rechte L : Sol / Left / Linke

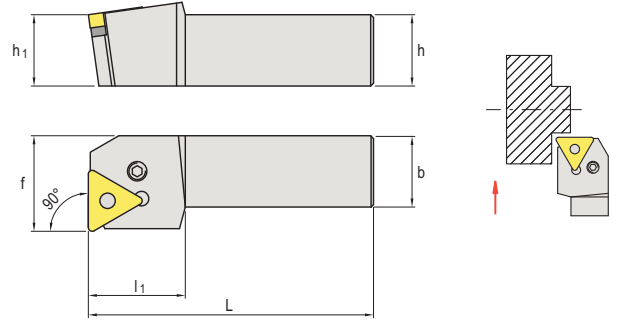
● Stoktan / Stock / Verfügbar ab Lager






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

İsteğe bağlı olarak pabuç takiyesi ilave edilmektedir. / Clamp will be supplied according to customer need.

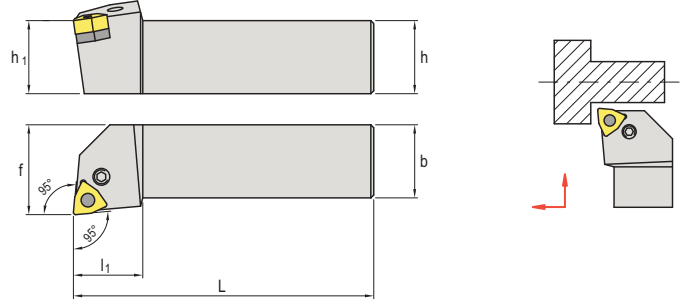
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : PTJNR 25 25 M16








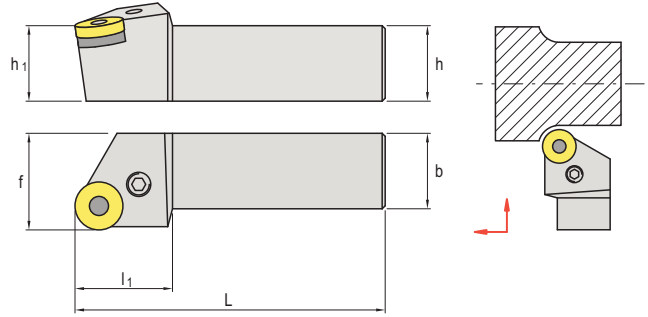
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levy Lever Hebel	Levy Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
PTFNR/L 16 16 H11T	○	○	16	16	100	18	20	TN.....1103	—	H 011446	S 011429	—
	○	○	16	16	100	20	20					
20 20 K16T	○	○	20	20	125	20	25	TN.....1604	U 013950	H 018440	S 018420	R 018463
25 25 M16T	○	○	25	25	150	22	32					
32 25 P16T	○	○	32	25	170	22	32					
25 25 M22T	○	○	25	25	150	28	32					
32 25 P22T	○	○	32	25	170	28	32	TN.....2204	U 023952	H 023441	S 023421	R 023461
32 32 P22T	○	○	32	32	170	28	40					








**Dış Torna Katerleri**  
Turning - Toolholder , External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
			h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
			h <sub>1</sub>									
PWLNRL/ 16 16 H06T	○	○	16	16	100	20	20	WNM...0604	WNMG 0604 ALT	H 018440	S 018421	R 018463
20 20 K06T	○	○	20	20	125	25	25					
25 25 M06T	○	○	25	25	150	25	32					
20 20 M08T	●	○	20	20	125	25	25	WNM...0804	7853519	H 023441	S 023421	R 023461
25 25 M08T	●	●	25	25	150	25	32					
32 25 P08T	○	○	32	25	170	25	32					
32 32 P08T	○	○	32	32	170	25	40					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
			h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
			h <sub>1</sub>									
PRGNRL/ 20 20 K09T	○	○	20	20	125	21	25	RNM...0903	U 000650	H 018440	S 018420	R 018463
25 25 M12T	○	○	25	25	150	27	32	RNM...1204	U 000651	H 023441	S 023421	R 023461
32 25 P12T	○	○	32	25	170	27	32					
32 32 P12T	○	○	32	32	170	27	40					

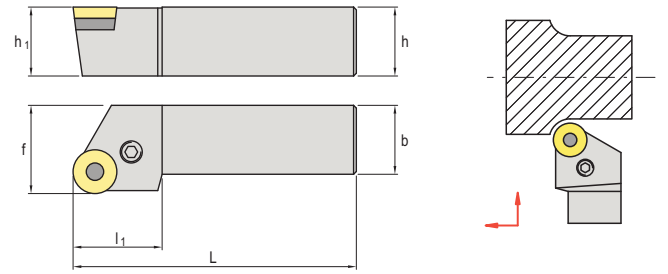
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

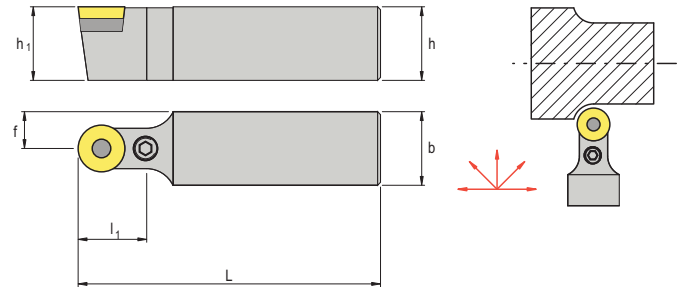
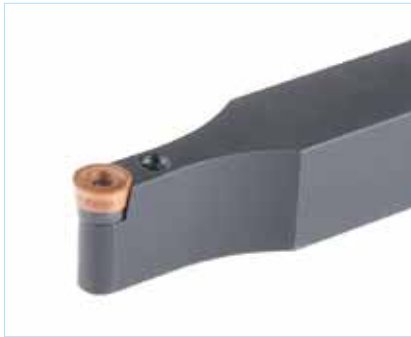
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

İsteğe bağlı olarak pabuç takiyesi ilave edilmektedir. / Clamp will be supplied according to customer need.

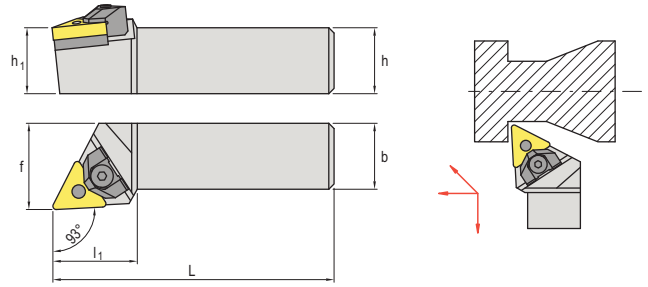


Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f					
PRGCR/L 20 20 K12T	○	○	20	20	125	21	25	RCM...1204	U 000351	H 000341	S 018420	R 018463
25 25 M12T	○	○	25	25	150	27	32					
32 25 P12T	○	○	32	25	170	27	32					
25 25 M16T	○	○	25	25	150	28	32	RCM...1606	U 000352	H 000342	S 000433	R 000467
32 25 P16T	○	○	32	25	170	28	32					
32 32 P20T	○	○	32	32	170	32	40	RCM...2006	U 000353	H 000343	S 000425	R 025464
40 40 R25T	○	○	40	40	200	40	50	RCM...2507	U 000354	H 000344	S 000432	R 033462
50 50 S32T	○	○	50	50	250	50	60	RCM...3209	U 000355	H 000345	S 038427	R 038465

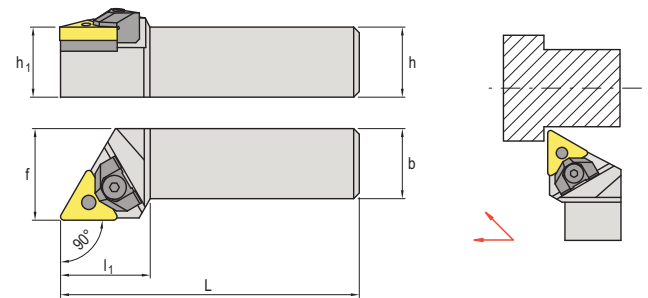


Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f					
PRDCN 20 20 K12T	○	○	20	20	125	21	10	RCM...1204	U 000351	H 000341	S 018420	R 018463
25 25 M12T	●	○	25	25	150	27	12.5					
32 25 P12T	○	○	32	25	170	27	12.5					
25 25 M16T	○	○	25	25	150	28	12.5	RCM...1606	U 000352	H 000342	S 000433	R 000467
32 25 P16T	○	○	32	25	170	28	12.5					
32 32 P20T	○	○	32	32	170	32	16	RCM...2006	U 000353	H 000343	S 000425	R 025464
40 40 R25T	○	○	40	40	200	40	20	RCM...2507	U 000354	H 000344	S 000432	R 033462
50 50 S32T	○	○	50	50	250	50	25	RCM...3209	U 000355	H 000345	S 038427	R 038465

**Dış Torna Katerleri**  
Turning - Toolholder , External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MTJNR/L 20 20 K16T	●	●	20	20	125	31	25	TNM...1604	170.3.852	170.3.820	MTJN 16 M5 BV	170.3.847
25 25 M16T	●	●	25	25	150	31	32					
32 25 P16T	○	○	32	25	170	31	32					
25 25 M22T	●	●	25	25	150	35	32	TNM...2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
32 25 P22T	○	○	32	25	170	35	32					
32 32 P22T	○	○	32	32	170	35	40					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MTGNR/L 20 20 K16T	●	●	20	20	125	31	25	TNM...1604	170.3.852	170.3.820	MTJN 16 M5 BV	170.3.847
25 25 M16T	●	●	25	25	150	31	32					
32 25 P16T	○	○	32	25	170	31	32					
25 25 M22T	○	○	25	25	150	35	32	TNM...2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
32 25 P22T	○	○	32	25	170	35	32					
32 32 P22T	○	○	32	32	170	35	40					

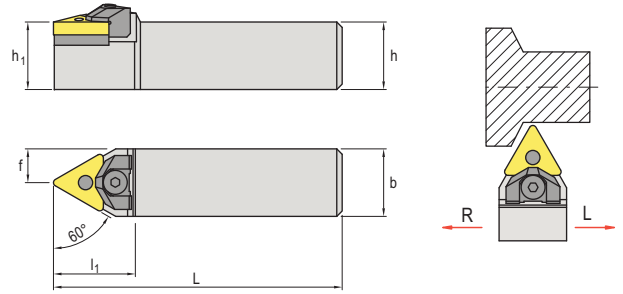
R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager






Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : MTJNR 25 25 M16

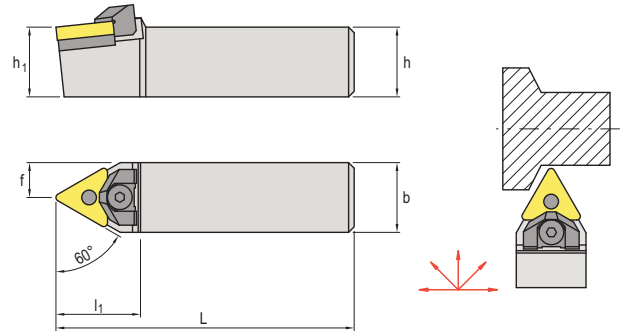
● 2 Hafta / in two weeks / in zwei Wochen






○ Stokta yok / Non stock item / Nicht auf Lager



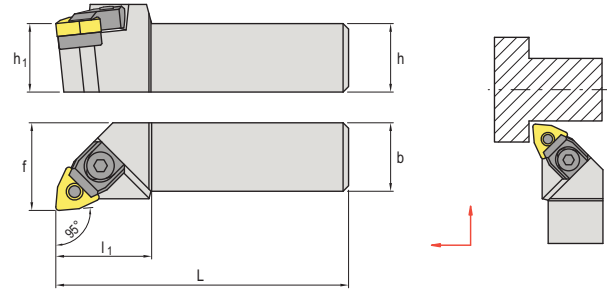






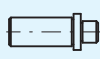
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MTNR/L	○	○	20	20	125	31	10	TNM...1604	170.3.852	170.3.820	MTJN 16 M5 BV	170.3.847
20 20 K16T	○	○	20	20	125	31	10					
25 25 M16T	○	○	25	25	150	31	12.5					
32 25 P16T	○	○	32	25	170	31	12.5	TNM...2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
25 25 M22T	○	○	25	25	150	31	12.5					
32 25 P22T	○	○	32	25	170	35	12.5					
32 32 P22T	○	○	32	32	170	35	16					

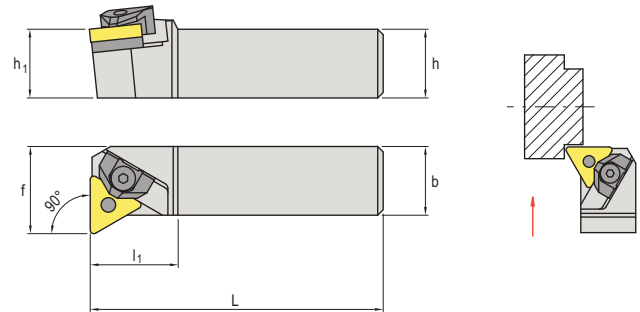






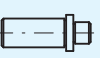
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MTENN	●	○	25	25	150	31	12.5	TNM...1604	170.3.852	170.3.820	MTJN 16 M5 BV	170.3.847
25 25 M16T	○	○	25	25	150	31	12.5					
32 25 P16T	○	○	32	25	170	35	12.5	TNM...2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
25 25 M22T	●	○	25	25	150	31	12.5					
32 25 P22T	○	○	32	25	170	35	12.5					

**Dış Torna Katerleri**  
Turning - Toolholder , External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MWLNR/L 20 20 K08T	●	●	20	20	125	35	25	WNM...0804	WN 08 ALT	WN 08 BP	MTJN 22 M6 BV	170.3.836
25 25 M08T	●	●	25	25	150	35	32					
32 25 P08T	○	○	32	25	170	35	32					
32 32 P08T	○	○	32	32	170	35	40					



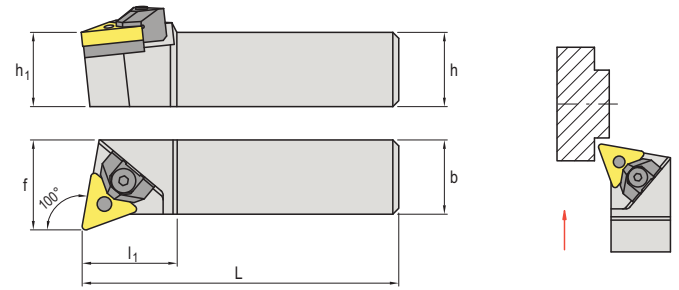
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MTFNR/L 20 20 K16T	●	●	20	20	125	31	25	TNM...1604	170.3.852	170.3.820	MTJN 16 M5 BV	170.3.847
25 25 M16T	●	●	25	25	150	31	32					
32 25 P16T	○	○	32	25	170	31	32					
25 25 M22T	○	○	25	25	150	35	32	TNM...2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
32 25 P22T	○	○	32	25	170	35	32					
32 32 P22T	○	○	32	32	170	35	40					






R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

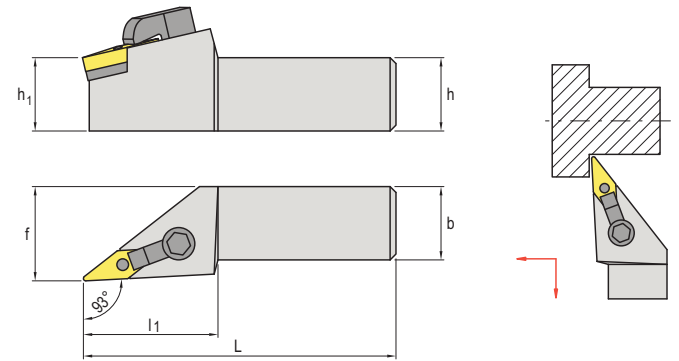
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : MWLNR 25 25 M08






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

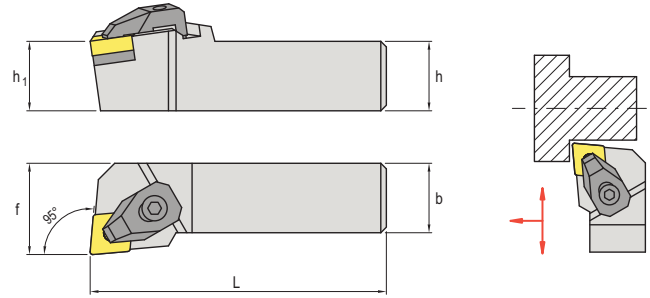







Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Pim Pin Stift
MTXNR/L	20	20	20	20	125	31	25	TNM...1604	170.3.852	170.3.820	MTJN 16 M5 BV	170.3.847
25 25 K16T	●	●	25	25	150	31	32					
32 25 M16T	○	○	32	25	170	31	32					
20 20 K22T	○	○	20	20	125	35	25	TNM...2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
25 25 M22T	○	○	25	25	150	35	32					
32 25 P22T	○	○	32	25	170	35	32					

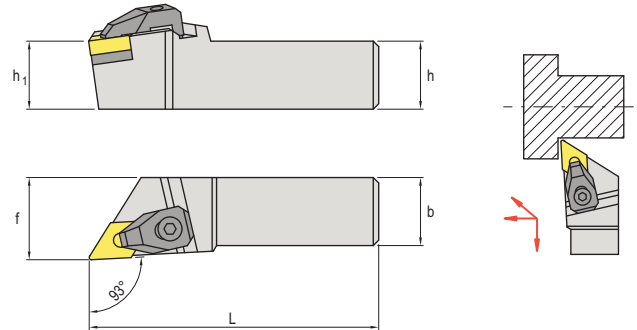







Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Uç Vidası Insert Screw Plattenschraube	Baskı Vidası Clamp Screw Klemmschraube
MVJNR/L	20	20	20	20	125	40	25	VNM...1604	VN 16 ALT	TBP 12	M4 NL	70.91.11.BV
25 25 K16	●	●	25	25	150	40	32					
32 25 M16	○	○	32	25	170	40	32					
32 25 P16	○	○	32	25	170	40	32					

**Dış Torna Katerleri**  
Turning - Toolholder , External  
Drehen - Klemmhalter, Außenbearbeitung



		Ölçüler Dimensions Abmessungen								
Kod Code Bezeichnung	Stok Stock Lager		h			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
	R	L	h <sub>1</sub>	b	L					
DCLNR/L 20 20 K12	●	●	20	20	125	CNM...1204	U 112150	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
25 25 M12	●	●	25	25	150					
32 25 P12	○	○	32	25	170					
32 32 P12	○	○	32	32	170					



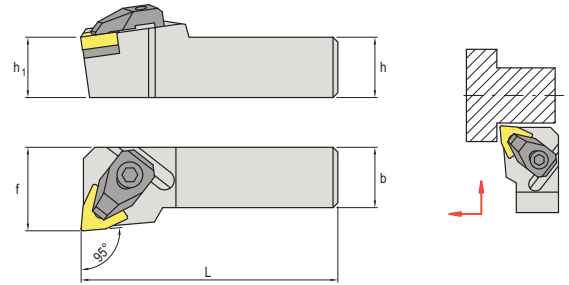
		Ölçüler Dimensions Abmessungen								
Kod Code Bezeichnung	Stok Stock Lager		h			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
	R	L	h <sub>1</sub>	b	L					
DDJNR/L 20 20 K15	●	●	20	20	125	DNM...1506	U 153150	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
25 25 M15	●	●	25	25	150					
32 25 P15	○	○	32	25	170					
32 32 P15	○	○	32	32	170					






R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

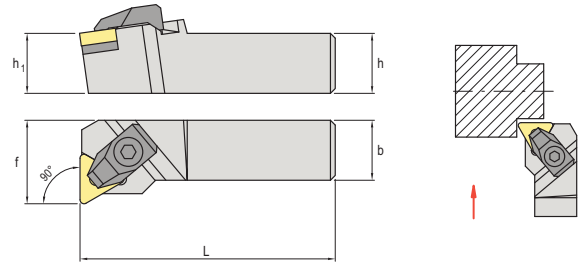
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : DCLNR 25 25 M12






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

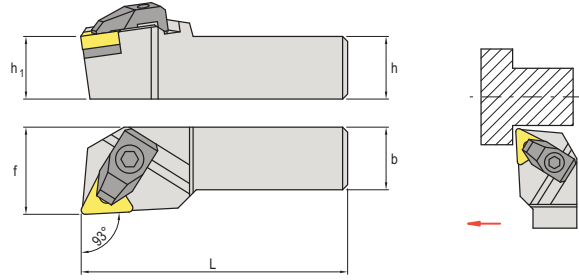







Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
DWLNR/L 20 20 K06	○	○	20	20	125	25	WNM...0604	WN 06 ALT	TK DBP	MTJN 22 M6 BV	M3 AV
25 25 M06	○	○	25	25	150	32					
25 25 M08	●	●	25	25	150	32	WNM...0804	7853519	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
32 25 P08	○	○	32	25	170	32					

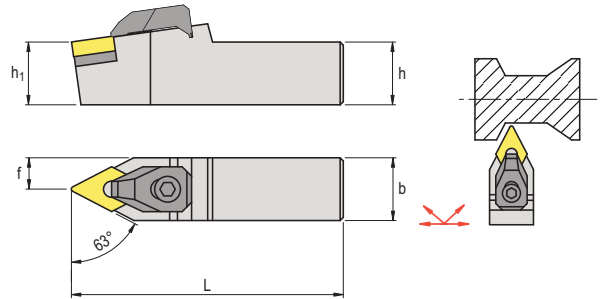
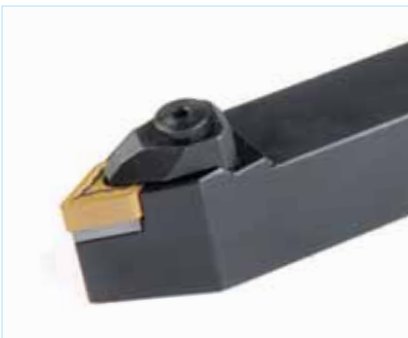







Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
DTFNR/L 20 20 K16	○	○	20	20	125	25	TNM...1604	U 013950	TK DBP K	MTJN 22 M6 BV	M4 x 12 AV
25 25 M16	○	○	25	25	150	32					
32 25 P16	○	○	32	25	170	32					

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
DTJNR/L 20 20 K16	○	○	20	20	125	25	TNM...1604	U 013950	TK DBP K	MTJN 22 M6 BV	M4 x 12 AV
25 25 M16	○	○	25	25	150	32					
32 25 P16	○	○	32	25	170	32					



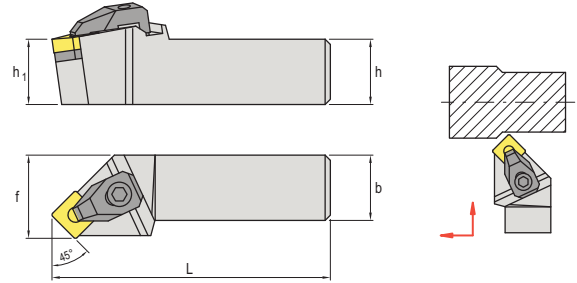
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
DDNNN 20 20 K15	○	○	20	20	125	10	DNM...1506	U 153150	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
25 25 M15	○	○	25	25	150	12.5					
32 25 P15	○	○	32	25	170	12.5					






R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

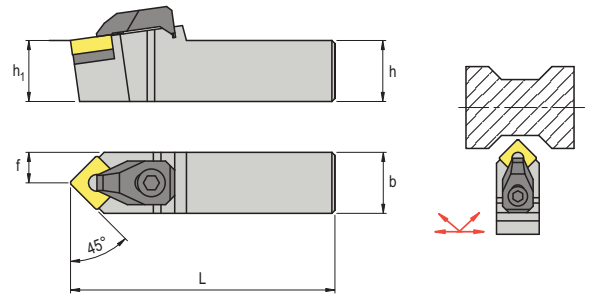
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : DTJNR 25 25 M16






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
DSSNR/L 20 20 K12	○	○	20	20	125	25	SN.....1204	U 063451	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
25 25 M12	○	○	25	25	150	32					
32 25 P12	○	○	32	25	170	32					

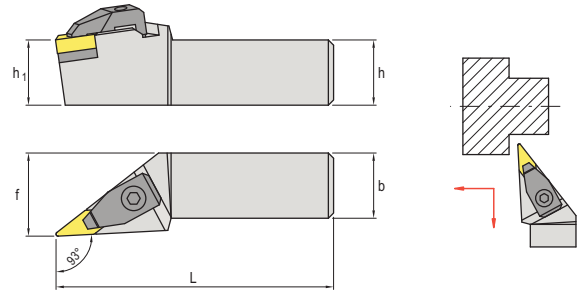


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
DSDNN 20 20 K12	○	○	20	20	125	10	SN.....1204	U 063451	TK DBP	MTJN 22 M6 BV	M4 AV
25 25 M12	○	○	25	25	150	12.5					

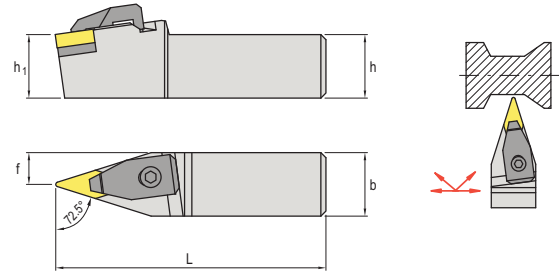
# Dış Torna Katerleri

Turning - Toolholder, External

Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altılık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altılık Vidası Anvil Screw Gewindehülse
	R	L	h h <sub>1</sub>	b	L	f					
DVJNR/L 20 20 K16	○	○	20	20	125	25	VN.....1604	VN 16 ALT	TK DBP 16	MTJN 22 M6 BV	M4 x 12 AV
25 25 M16	○	○	25	25	150	32					
32 25 P16	○	○	32	25	170	32					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altılık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altılık Vidası Anvil Screw Gewindehülse
	R	L	h h <sub>1</sub>	b	L	f					
DVVNN 20 20 K16	○	○	20	20	125	10	VN.....1604	VN 16 ALT	TK DBP 16	MTJN 22 M6 BV	M4 x 12 AV
25 25 M16	○	○	25	25	150	12.5					
32 25 P16	○	○	32	25	170	12.5					

R : Sağ / Right / Rechte L : Sol / Left / Linke

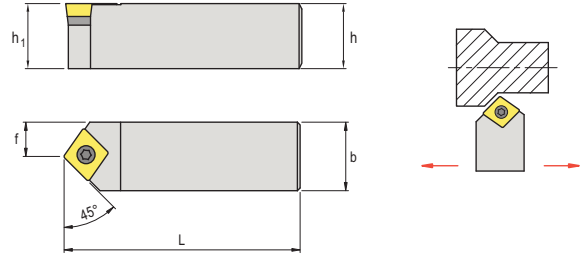
● Stoktan / Stock / Verfügbar ab Lager






Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager: DVJNR 25 25 M16

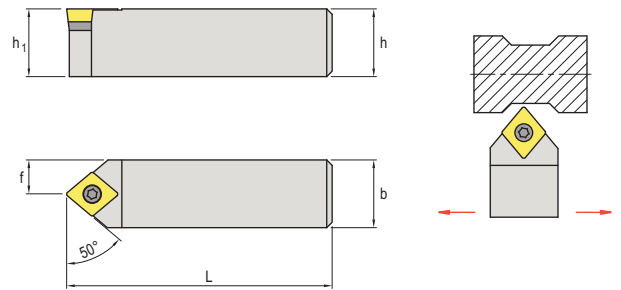
● 2 Hafta / in two weeks / in zwei Wochen






○ Stokta yok / Non stock item / Nicht auf Lager



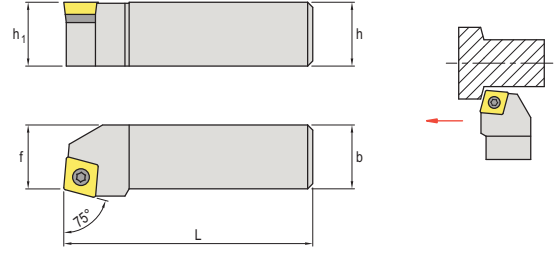
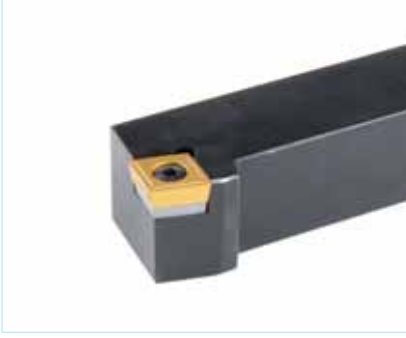







		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager		h			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel		
	R	L	h <sub>1</sub>	b	L						f	
SCDCR/L	08 08 H06	○	○	8	8	100	4	CC.....0602	—	—	7815101	T08 IP
	10 10 H06	○	○	10	10	100	5	—	—	7815102	T15 IP	
	12 12 H09	○	○	12	12	100	6	CC.....09T3	—	—	7815102	T15 IP
	14 14 H09	○	○	14	14	100	7	—	—	7815102	T15 IP	

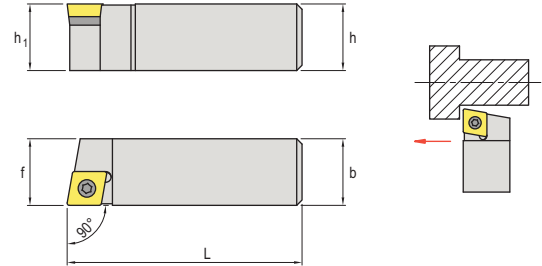
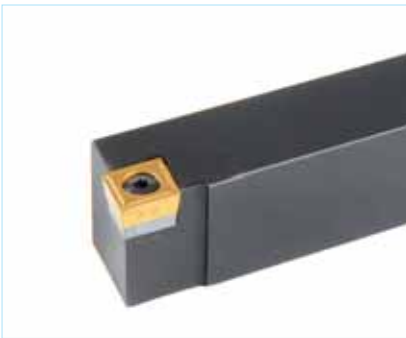







		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager		h			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel		
	R	L	h <sub>1</sub>	b	L						f	
SCMCN	16 16 H09	○	○	16	16	100	8	CC.....09T3	—	—	7815102	T15 IP
	20 20 K09	○	○	20	20	125	10	—	7883001	7883102		
	25 25 M12	●	○	25	25	150	12.5	CC.....1204	7883002	7883101		
	32 25 P12	○	○	32	25	170	12.5	—	7883002	7883101		

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SCRCR/L 08 08 D06	○	○	8	8	60	9	CC.....0602	—	—	7815101	T08 IP
10 10 E06	○	○	10	10	70	11					
12 12 F09	○	○	12	12	80	13					
16 16 H09	○	○	16	16	100	17	CC.....09T3	7883001	7883102	7815102	T15 IP
20 20 K09	○	○	20	20	125	22					
16 16 H12	○	○	16	16	100	17	CC.....1204	7883002	7883101	7883202	T15 IP
20 20 K12	○	○	20	20	125	22					
25 25 M12	○	○	25	25	150	27					



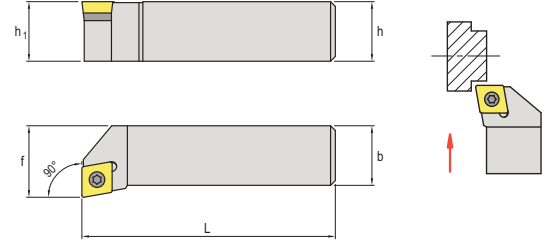
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SCACR/L 08 08 D06	○	○	8	8	60	8	CC.....0602	—	—	7815101	T08 IP
10 10 E06	○	○	10	10	70	10					
12 12 F09	○	○	12	12	80	12					
16 16 H09	○	○	16	16	100	16	CC.....09T3	7883001	7883102	7815102	T15 IP
20 20 K09	○	○	20	20	125	20					
16 16 H12	○	○	16	16	100	16	CC.....1204	7883002	7883101	7883202	T15 IP
20 20 K12	●	●	20	20	125	20					
25 25 M12	●	●	25	25	150	25					






R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

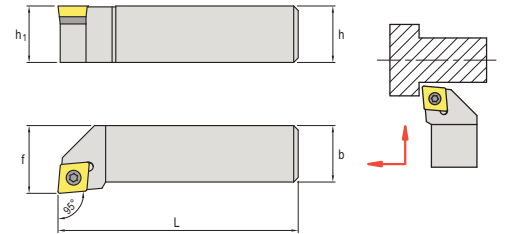
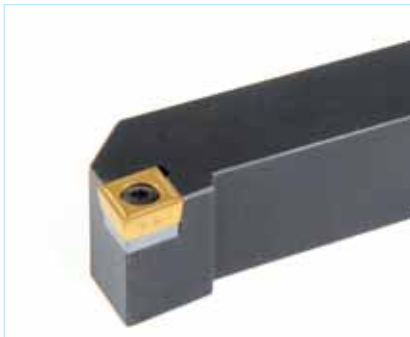
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager: SCRCR 25 25 M12






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

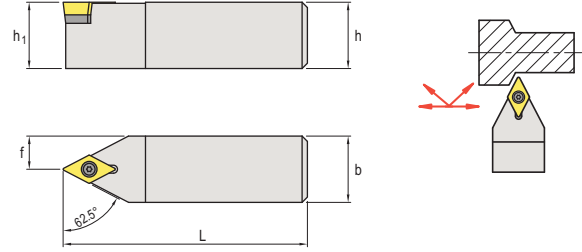







Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SCFCR/L 08 08 D06	○	○	8	8	60	10	CC.....0602	—	—	7815101	T08 IP
	○	○	10	10	70	12					
12 12 F09	○	○	12	12	80	16	CC.....09T3	7883001	7883102	7815102	T15 IP
16 16 H09	○	○	16	16	100	20					
20 20 K09	○	○	20	20	125	25	CC.....1204	7883002	7883101	7883202	
16 16 H12	○	○	16	16	100	20					
20 20 K12	○	○	20	20	125	25					
25 25 M12	○	○	25	25	150	32					

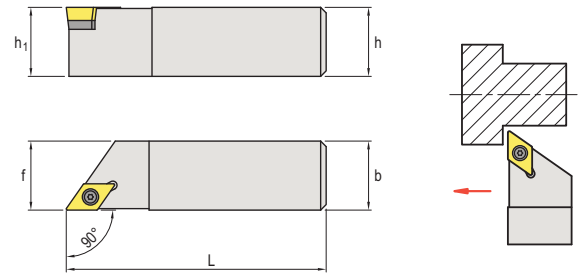
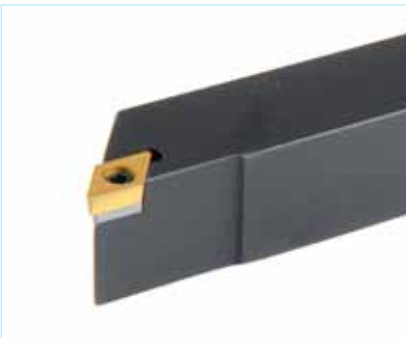







Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SCLCR/L 08 08 D06	○	○	8	8	60	10	CC.....0602	—	—	7815101	T08 IP
	○	○	10	10	70	12					
12 12 F09	○	○	12	12	80	16	CC.....09T3	7883001	7883102	7815102	T15 IP
16 16 H09	○	○	16	16	100	20					
20 20 K09	○	○	20	20	125	25	CC.....1204	7883002	7883101	7883202	
16 16 H12	○	○	16	16	100	20					
20 20 K12	○	○	20	20	125	25					
25 25 M12	○	○	25	25	150	32					

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



		Ölçüler Dimensions Abmessungen								
Kod Code Bezeichnung	Stok Stock Lager	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SDNCN 08 08 D07	○	8	8	60	4	DC.....0702	—	—	7815101	T08 IP
10 10 E07	○	10	10	70	5					
12 12 F07	○	12	12	80	6					
16 16 H11	○	16	16	100	8	DC.....11T3	7815000	7883102	7815102	T15 IP
20 20 K11	●	20	20	125	10					
25 25 M11	●	25	25	150	12.5					
32 25 P11	○	32	25	170	12.5					



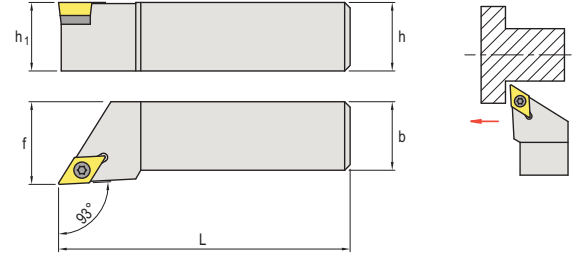
		Ölçüler Dimensions Abmessungen									
Kod Code Bezeichnung	Stok Stock Lager		h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L									
SDACR/L 08 08 D07	○	○	8	8	60	8	DC.....0702	—	—	7815101	T08 IP
10 10 E07	○	○	10	10	70	10					
12 12 F07	○	○	12	12	80	12					
16 16 H11	○	○	16	16	100	16	DC.....11T3	7815000	7883102	7815102	T15 IP
20 20 K11	○	○	20	20	125	20					
25 25 M11	○	○	25	25	150	25					
32 25 P11	○	○	32	25	170	25					

R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

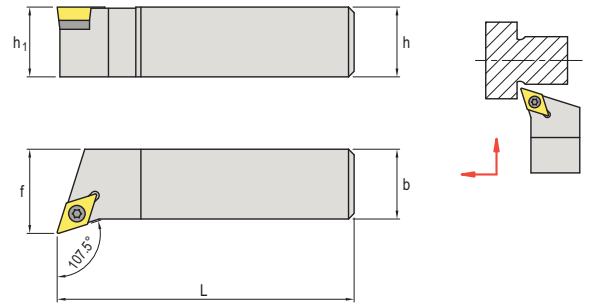
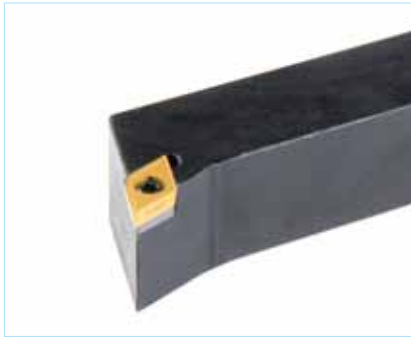
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : SDNCN 25 25 M11

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SDJCR/L 08 08 D07	○	○	8	8	60	8	DC...0702	—	—	7815101	T08 IP
10 10 E07	○	○	10	10	70	10					
12 12 F07	○	○	12	12	80	12					
16 16 H11	○	○	16	16	100	16	DC...11T3	7815000	7883102	7815102	T15 IP
20 20 K11	○	○	20	20	125	20					
25 25 M11	○	○	25	25	150	25					
32 25 P11	○	○	32	25	170	25					

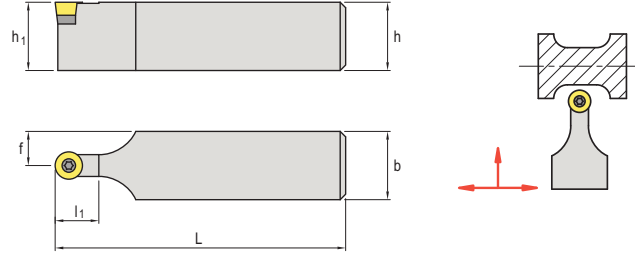
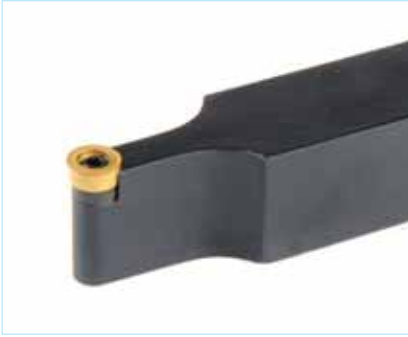


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SDHCR/L 08 08 D07	○	○	8	8	60	8	DC...0702	—	—	7815101	T08 IP
10 10 E07	○	○	10	10	70	10					
12 12 F07	○	○	12	12	80	12					
16 16 H11	○	○	16	16	100	16	DC...11T3	7815000	7883102	7815102	T15 IP
20 20 K11	○	○	20	20	125	20					
25 25 M11	○	○	25	25	150	25					
32 25 P11	○	○	32	25	170	25					

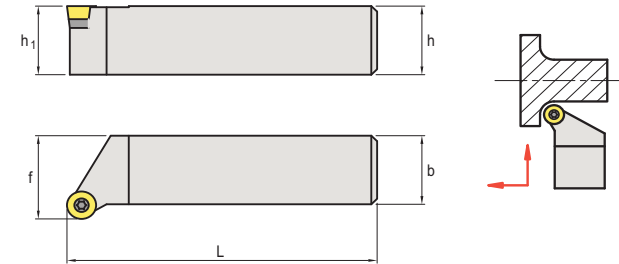
# Dış Torna Katerleri

Turning - Toolholder, External

Drehen - Klemmhalter, Außenbearbeitung



		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
SRDCN 12 12 F06	○	12	12	80	13	6	RC.....0602	—	—	7815101	T08 IP	
16 16 H06	○	16	16	100	17	8						
20 20 K06	○	20	20	125	21	10						
25 25 M06	●	25	25	150	21	12.5						
16 16 H08	○	16	16	100	17	8	RC.....0803	—	—	7883203	T15 IP	
20 20 K08	●	20	20	125	21	10						
25 25 M08	●	25	25	150	21	12.5						
16 16 H10	○	16	16	100	17	8	RC.....1003	7817002	7883102	7815102	T15 IP	
20 20 K10	○	20	20	125	21	10						
25 25 M10	●	25	25	150	21	12.5	RC.....1204	7817003	7883101	7883202	T15 IP	
20 20 K12	○	20	20	125	21	10						
25 25 M12	●	25	25	150	21	12.5						
32 25 P12	○	32	25	170	25	12.5						



		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager		h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
	R	L										
SRGCR/L 12 12 F06	○	○	12	12	80	16	RC.....0602	—	—	7815101	T08 IP	
16 16 H06	○	○	16	16	100	20						
20 20 K06	○	○	20	20	125	25						
25 25 M06	○	○	25	25	150	32						
16 16 H08	○	○	16	16	100	20	RC.....0803	—	—	7883203	T15 IP	
20 20 K08	○	○	20	20	125	25						
25 25 M08	○	○	25	25	150	32						
16 16 H10	○	○	16	16	100	20	RC.....1003	7817002	7883102	7815102	T15 IP	
20 20 K10	○	○	20	20	125	25						
25 25 M10	○	○	25	25	150	32	RC.....1204	7817003	7883101	7883202	T15 IP	
20 20 K12	○	○	20	20	125	25						
25 25 M12	○	○	25	25	150	32						
32 25 P12	○	○	32	25	170	32						

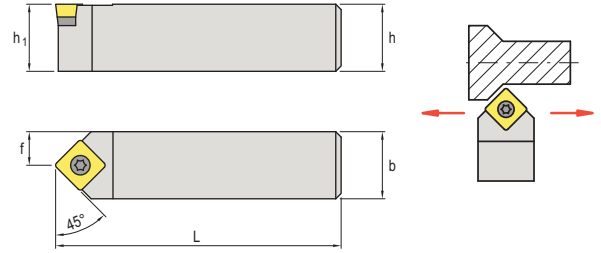
R : Sağ / Right / Rechte L : Sol / Left / Linke






Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : SRDCN 25 25 M12

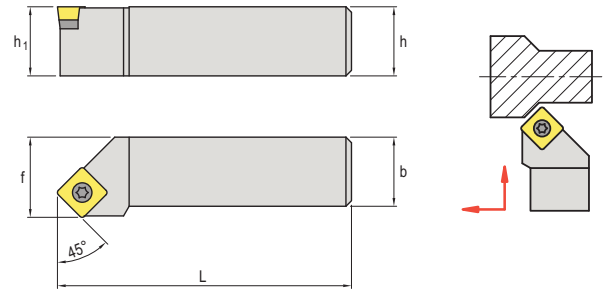
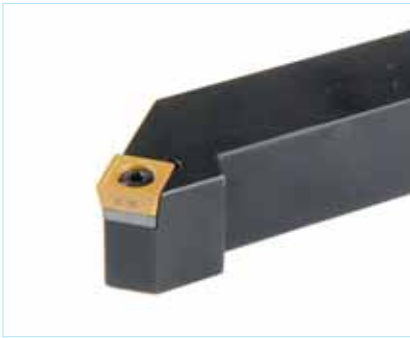
● Stoktan / Stock / Verfügbar ab Lager






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

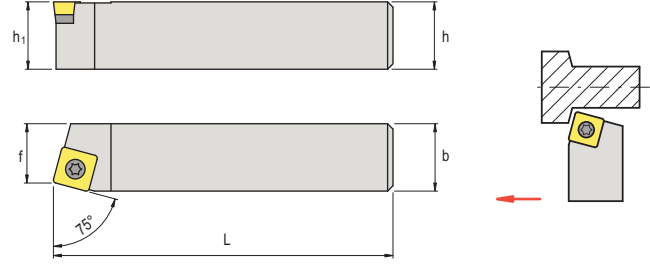
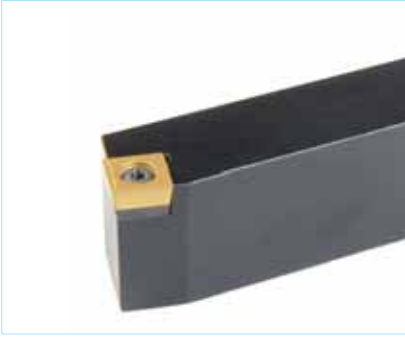







		Ölçüler Dimensions Abmessungen									
Kod Code Bezeichnung	Stok Stock Lager	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
SSDCN	12 12 F09	○	12	12	80	6	SC.....09T3..	—	—	7815102	T15 IP
	16 16 H09	○	16	16	100	8		7883003	7883102		
	20 20 K09	○	20	20	125	10		—	—		
SSDCN	16 16 H12	○	16	16	100	8	SC.....1204..	—	—	7883202	
	20 20 K12	◐	20	20	125	10		7883004	7883101		
	25 25 M12	●	25	25	150	12.5		—	—		
	32 25 P12	○	32	25	170	12.5		—	—		

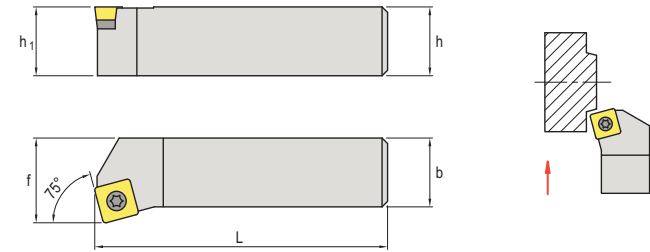
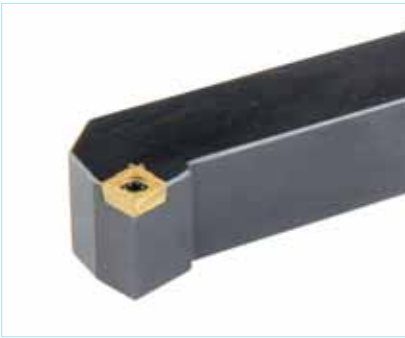







		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager		h	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
	R	L	h <sub>1</sub>									
SSSCR/L	12 12 F09	○	○	12	12	80	16	SC.....09T3..	—	—	7815102	T15 IP
	16 16 H09	○	○	16	16	100	20		7883003	7883102		
	20 20 K09	○	○	20	20	125	25		—	—		
SSSCR/L	16 16 H12	○	○	16	16	100	20	SC.....1204..	—	—	7883202	
	20 20 K12	◐	◐	20	20	125	25		7883004	7883101		
	25 25 M12	●	●	25	25	150	32		—	—		
	32 25 P12	○	○	32	25	170	32		—	—		

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SSBCR/L	12 12 F09	○ ○	12	12	80	16	SC.....09T3..	—	—	7815102	T15 IP
	16 16 H09	○ ○	16	16	100	20		7883003	7883102		
	20 20 K09	○ ○	20	20	125	25		—	—		
	16 16 H12	○ ○	16	16	100	20	SC.....1204..	—	—	7883202	
	20 20 K12	● ●	20	20	125	25		7883004	7883101		
	25 25 M12	● ●	25	25	150	32		—	—		
32 25 P12	○ ○	32	25	170	32	—	—	—	—		



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SSKCR/L	12 12 F09	○ ○	12	12	80	16	SC.....09T3..	—	—	7815102	T15 IP
	16 16 H09	○ ○	16	16	100	20		7883003	7883102		
	20 20 K09	○ ○	20	20	125	25		—	—		
	16 16 H12	○ ○	16	16	100	20	SC.....1204..	—	—	7883202	
	20 20 K12	● ●	20	20	125	25		7883004	7883101		
	25 25 M12	● ●	25	25	150	32		—	—		
32 25 P12	○ ○	32	25	170	32	—	—	—	—		

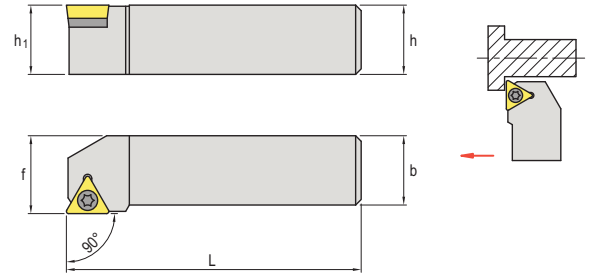
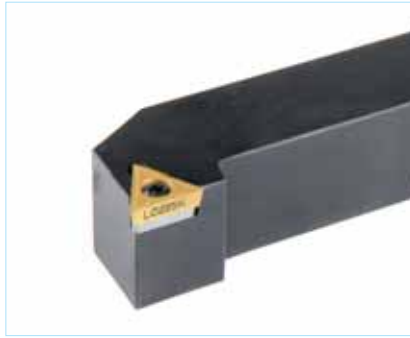
R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : SSBKR 25 25 M12

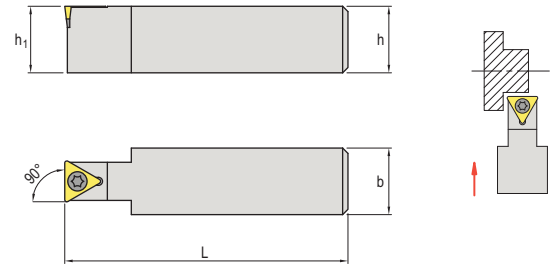
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager





Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
STGCR/L	10 10 E09	○ ○	10	10	70	12	TC.....0902..	—	—	7722113	T07
	12 12 F11	○ ○	12	12	80	14	TC.....1102..	—	—	7815101	T08 IP
	16 16 H11	○ ○	16	16	100	20	TC.....16T3..	7883005	7883102	7815102	T15 IP
	16 16 H16	○ ○	16	16	100	20					
	20 20 K16	● ●	20	20	125	25					
	25 25 M16	● ●	25	25	150	32					
	32 25 P16	○ ○	32	25	170	32					

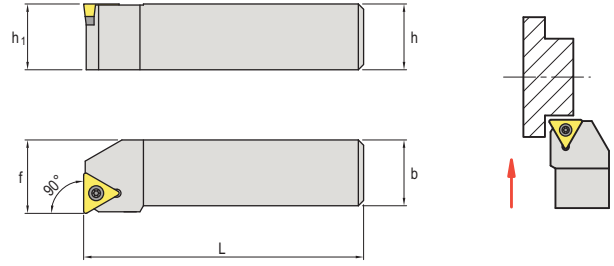


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L					
STCCN	10 10 E09	○ ○	10	10	70	TC.....0902..	—	—	7722113	T07
	12 12 F11	○ ○	12	12	80	TC.....1102..	—	—	7815101	T08 IP
	16 16 H11	○ ○	16	16	100	TC.....16T3..	7883005	7883102	7815102	T15 IP
	16 16 H16	○ ○	16	16	100					
	20 20 K16	○ ○	20	20	125					
	25 25 M16	○ ○	25	25	150					
	32 25 P16	○ ○	32	25	170					

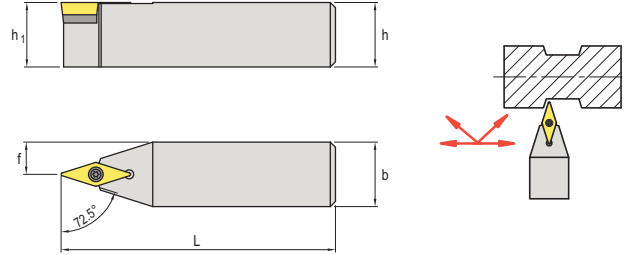
# Dış Torna Katerleri

Turning - Toolholder, External

Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung		Stok Stock Lager		Ölçüler Dimensions Abmessungen			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		R	L	h h <sub>1</sub>	b	L						f
STFCR/L	10 10 E09	○	○	10	10	70	12	TC.....0902..	—	—	7722113	T07
	12 12 F11	○	○	12	12	80	14	TC.....1102..	—	—	7815101	T08 IP
	16 16 H11	○	○	16	16	100	20	TC.....16T3..	7883005	7883102	7815102	T15 IP
	16 16 H16	○	○	16	16	100	20					
	20 20 K16	●	●	20	20	125	25					
	25 25 M16	●	●	25	25	150	32					
32 25 P16	○	○	32	25	170	32						



Kod Code Bezeichnung		Stok Stock Lager		Ölçüler Dimensions Abmessungen			Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		R	L	h h <sub>1</sub>	b	L						f
SVVCN	12 12 F11	○	○	12	12	80	6	VC.....1103..	—	—	7815101	T08 IP
	16 16 H11	○	○	16	16	100	8					
	20 20 K11	○	○	20	20	125	10					
	25 25 M11	○	○	25	25	150	12.5					
	20 20 K16	●	●	20	20	125	10	VC.....1604..	7815002	7883102	7815102	T15 IP
	25 25 M16	●	●	25	25	150	12.5					
	32 25 P16	○	○	32	25	170	12.5					
	25 25 M22	○	○	25	25	150	12.5					
32 25 P22	○	○	32	25	170	12.5	VC.....2205..	7815004	7883101	7883202		

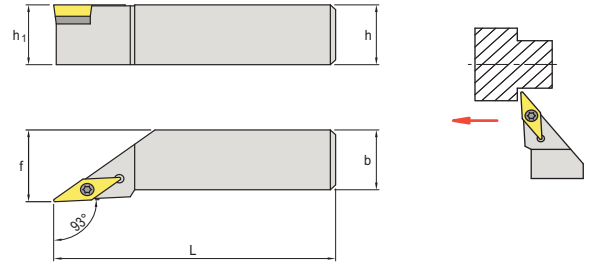
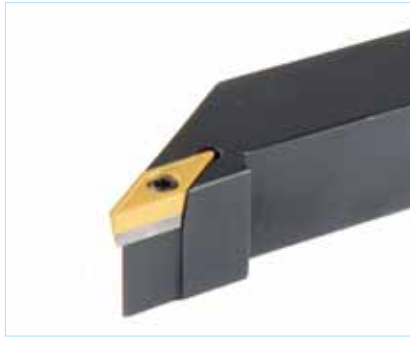
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

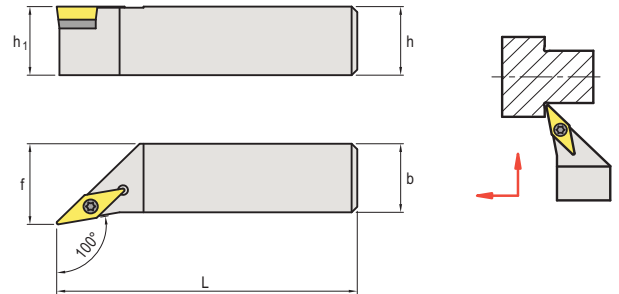
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : STFCR 25 25 M16

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

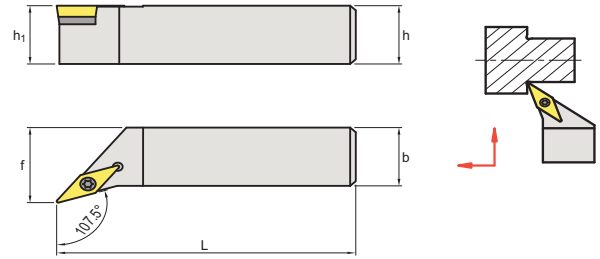
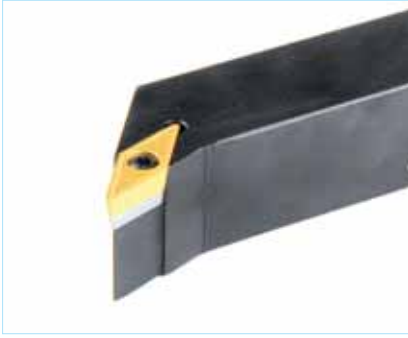


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SVJCR/L 12 12 F11	○	○	12	12	80	16	VC.....1103..	—	—	7815101	T08 IP
16 16 H11	○	○	16	16	100	20					
20 20 K11	○	○	20	20	125	25					
25 25 M11	○	○	25	25	150	32					
20 20 K16	●	●	20	20	125	25	VC.....1604..	7815002	7883102	7815102	T15 IP
25 25 M16	●	●	25	25	150	32					
32 25 P16	○	○	32	25	170	32					
25 25 M22	○	○	25	25	150	32	VC.....2205..	7815004	7883101	7883202	
32 25 P22	○	○	32	25	170	32					

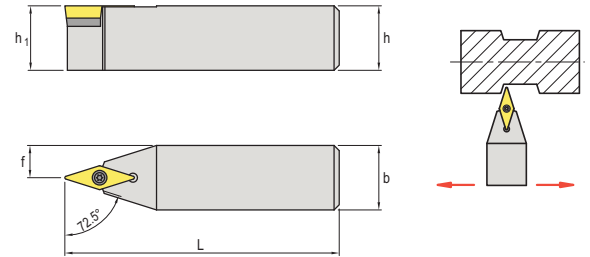


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SVZCR/L 12 12 F11	○	○	12	12	80	16	VC.....1103..	—	—	7815101	T08 IP
16 16 H11	○	○	16	16	100	20					
20 20 K11	○	○	20	20	125	25					
25 25 M11	○	○	25	25	150	32					
20 20 K16	●	●	20	20	125	25	VC.....1604..	7815002	7883102	7815102	T15 IP
25 25 M16	●	●	25	25	150	32					
32 25 P16	○	○	32	25	170	32					
25 25 M22	○	○	25	25	150	32	VC.....2205..	7815004	7883101	7883202	
32 25 P22	○	○	32	25	170	32					

**Dış Torna Katerleri**  
Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SVHCR/L 12 12 F11	○	○	12	12	80	16	VC.....1103..	—	—	7815101	T08 IP
16 16 H11	○	○	16	16	100	20					
20 20 K11	○	○	20	20	125	25					
25 25 M11	○	○	25	25	150	32					
20 20 K16	○	○	20	20	125	25	VC.....1604..	7815002	7883102	7815102	T15 IP
25 25 M16	○	○	25	25	150	32					
32 25 P16	○	○	32	25	170	32					
25 25 M22	○	○	25	25	150	32	VC.....2205..	7815004	7883101	7883202	
32 25 P22	○	○	32	25	170	32					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SVVBN 12 12 F11	○	○	12	12	80	6	VB.....1103..	—	—	7815101	T08 IP
16 16 H11	○	○	16	16	100	8					
20 20 K11	○	○	20	20	125	10					
25 25 M11	○	○	25	25	150	12.5					
20 20 K16	●	○	20	20	125	10	VB.....1604..	7815002	7883102	7815102	T15 IP
25 25 M16	●	○	25	25	150	12.5					
32 25 P16	○	○	32	25	170	12.5					
25 25 M22	○	○	25	25	150	12.5	VB.....2205..	7815004	7883101	7883202	
32 25 P22	○	○	32	25	170	12.5					

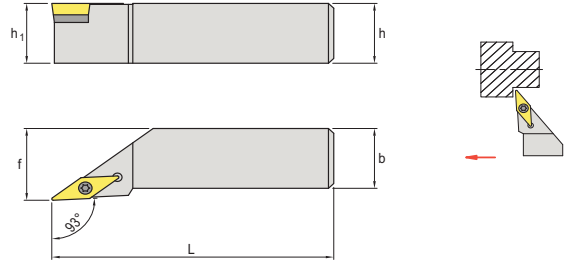
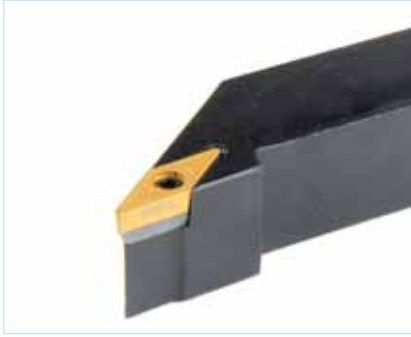
R : Sağ / Right / Rechte L : Sol / Left / Linke






● Stoktan / Stock / Verfügbar ab Lager

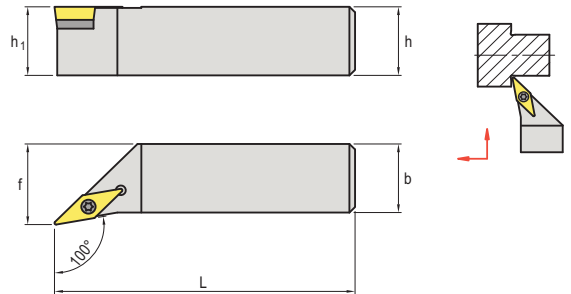
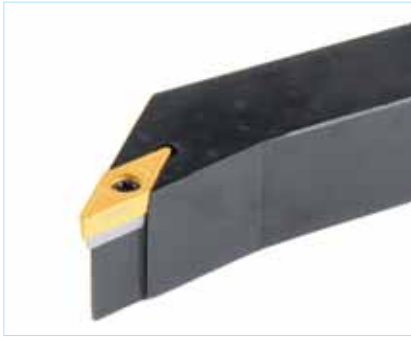
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : SVHCR 25 25 M16






● 2 Hafta / in two weeks / in zwei Wochen

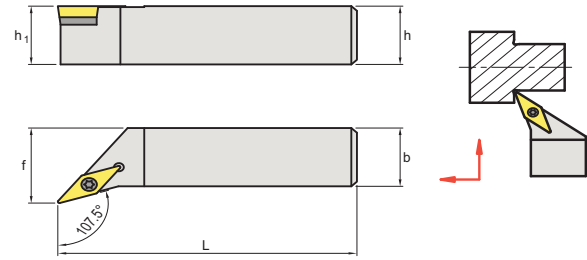
○ Stokta yok / Non stock item / Nicht auf Lager



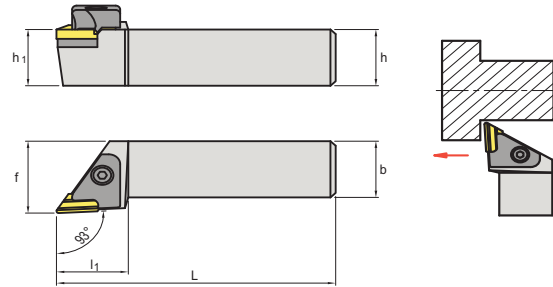
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SVJBR/L 12 12 F11 16 16 H11 20 20 K11 25 25 M11	○	○	12	12	80	16	VB.....1103..	—	—	7815101	T08 IP
	○	○	16	16	100	20					
	○	○	20	20	125	25					
	○	○	25	25	150	32					
20 20 K16 25 25 M16 32 25 P16	○	○	20	20	125	25	VB.....1604..	7815002	7883102	7815102	T15 IP
	○	○	25	25	150	32					
	○	○	32	25	170	32					
25 25 M22 32 25 P22	○	○	25	25	150	32	VB.....2205..	7815004	7883101	7883202	
	○	○	32	25	170	32					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								
	R	L	h h <sub>1</sub>	b	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
SVZBR/L 12 12 F11 16 16 H11 20 20 K11 25 25 M11	○	○	12	12	80	16	VB.....1103..	—	—	7815101	T08 IP
	○	○	16	16	100	20					
	○	○	20	20	125	25					
	○	○	25	25	150	32					
20 20 K16 25 25 M16 32 25 P16	○	○	20	20	125	25	VB.....1604..	7815002	7883102	7815102	T15 IP
	○	○	25	25	150	32					
	○	○	32	25	170	32					
25 25 M22 32 25 P22	○	○	25	25	150	32	VB.....2205..	7815004	7883101	7883202	
	○	○	32	25	170	32					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	h h <sub>1</sub>	b	L	f					
SVHBR/L 12 12 F11	○	○	12	12	80	16	VB.....1103..	—	—	7815101	T08 IP
16 16 H11	○	○	16	16	100	20					
20 20 K11	○	○	20	20	125	25					
25 25 M11	○	○	25	25	150	32					
20 20 K16	○	○	20	20	125	25	VB.....1604..	7815002	7883102	7815102	T15 IP
25 25 M16	○	○	25	25	150	32					
32 25 P16	○	○	32	25	170	32	VB.....2205..	7815004	7883101	7883202	
25 25 M22	○	○	25	25	150	32					
32 25 P22	○	○	32	25	170	32					



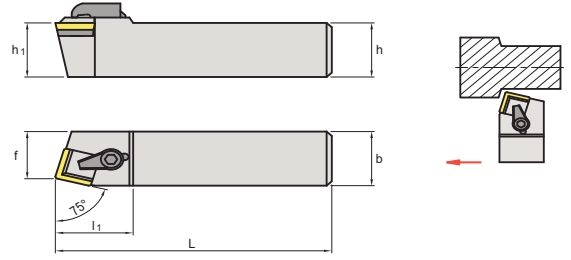
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Sağ Baskı Pabucu Clamp Right Rechte Klemmung	Sol Baskı Pabucu Clamp Left Linke Klemmung	Baskı Vidası Screw Schraube	Sağ Altlık Anvil Right Re. Unterlage	Sol Altlık Anvil Left Li. Unterlage	Altlık Pimi Anvil Pin Rohrstift
	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f							
CKJNR/L 20 20 K16	○	○	20	20	125	35	25	KNUX 16...	70.5.824	70.5.825	70.5.865	U 00051R	U 00051L	7480901
25 25 M16	●	●	25	25	150	35	32							
32 25 P16	○	○	32	25	170	35	32							
32 32 P16	○	○	32	32	170	35	40							







R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

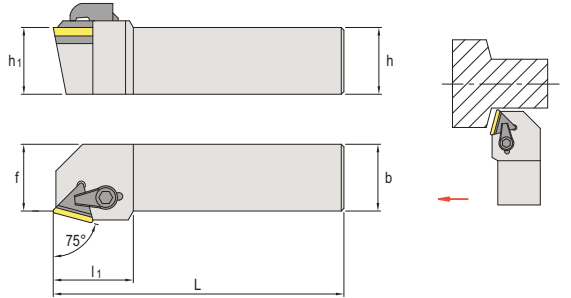
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CKJNR 25 25 M16







● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

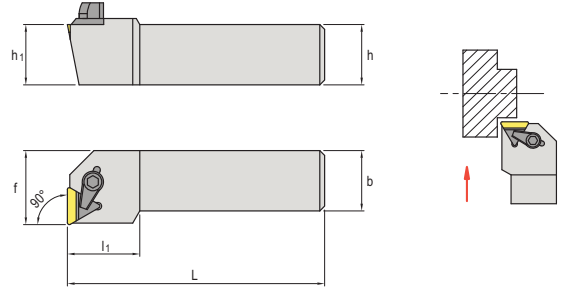


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert T-type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Klemmschraube	Altlık Pimi Anvil Pin Rohrstift	Talaş Kırıcı Chip Breaker Spanformille
CSBPR/L 20 20 K12	○	○	20	20	125	36	17	SP...1203..	7480315	TBP 16	TBP 16 BV	7480901	SP 12 TK
25 25 M12	○	○	25	25	150	36	22						
32 25 P12	○	○	32	25	170	36	22						

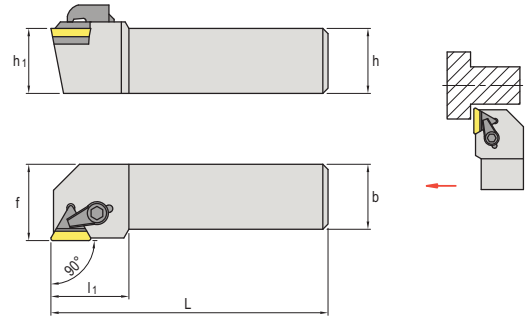


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Klemmschraube	Altlık Pimi Anvil Pin Rohrstift	Talaş Kırıcı Chip Breaker Spanformille
CTRPR/L 12 12 F11	○	○	12	12	80	15	12	TP...1103..	—	7830001	7830002	—	—
16 16 H11	○	○	16	16	100	16	16						
20 20 K16	○	○	20	20	125	26	20	TP...1603..	7480316	TBP 16	TBP 16 BV	7480901	TP 16 TK
25 25 M16	○	○	25	25	150	26	25						
32 25 P16	○	○	32	25	170	32	25						
25 25 M22	○	○	25	25	150	26	25	TP...2204..	175.11.624	TBP 12	70.91.11.BV	M4 x 12AV	TP 22 TK
32 32 P22	○	○	32	32	170	32	32						

**Dış Torna Katerleri**  
Turning - Toolholder , External  
Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Klemmschraube	Altlık Pimi Anvil Pin Rohrstift	Talaş Kırıcı Chip Breaker Spanformille
	R	L	h	b	L	l <sub>1</sub>	f						
CTFPR/L	12 12 F11	○ ○	12	12	80	15	16	TP...1103..	—	7830001	7830002	—	—
	16 16 H11	○ ○	16	16	100	16	20						
	20 20 K16	○ ○	20	20	125	26	25	TP...1603..	7480316	TBP 16	TBP 16 BV	7480901	TP 16 TK
	25 25 M16	○ ○	25	25	150	26	32						
	32 25 P16	○ ○	32	25	170	32	32	TP...2204..	175.11.624	TBP 12	70.91.11.BV	M4 x 12 AV	TP 22 TK
	32 32 P16	○ ○	32	32	170	32	40						
	25 25 M22	○ ○	25	25	150	26	32						
	32 32 P22	○ ○	32	32	170	32	40						



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Klemmschraube	Altlık Pimi Anvil Pin4 Rohrstift	Talaş Kırıcı Chip Breaker Spanformille
	R	L	h	b	L	l <sub>1</sub>	f						
CTGPR/L	12 12 F11	○ ○	12	12	80	15	16	TP...1103..	—	7830001	7830002	—	—
	16 16 H11	○ ○	16	16	100	16	20						
	20 20 K16	○ ○	20	20	125	26	25	TP...1603..	7480316	TBP 16	TBP 16 BV	7480901	TP 16 TK
	25 25 M16	○ ○	25	25	150	26	32						
	32 25 P16	○ ○	32	25	170	32	32	TP...2204..	175.11.624	TBP 12	70.91.11.BV	M4 x 12 AV	TP 22 TK
	32 32 P16	○ ○	32	32	170	32	40						
	25 25 M22	○ ○	25	25	150	26	32						
	32 32 P22	○ ○	32	32	170	32	40						

R : Sağ / Right / Rechte L : Sol / Left / Linke

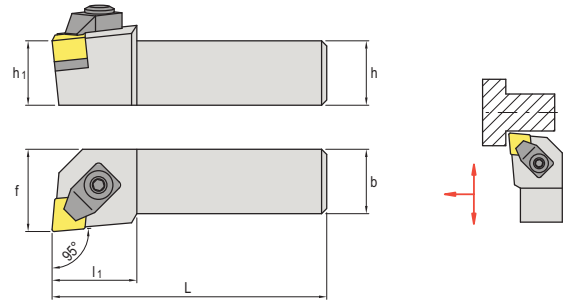
● Stoktan / Stock / Verfügbar ab Lager








Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CTFPR 25 25 M16

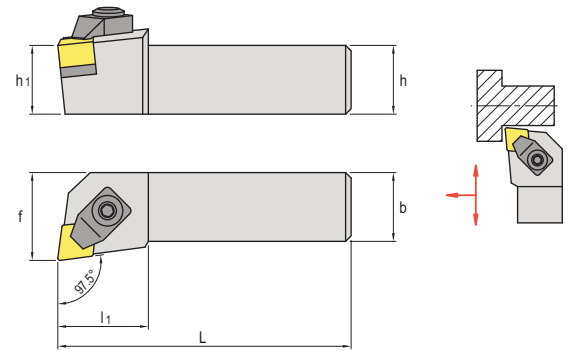
● 2 Hafta / in two weeks / in zwei Wochen








○ Stokta yok / Non stock item / Nicht auf Lager





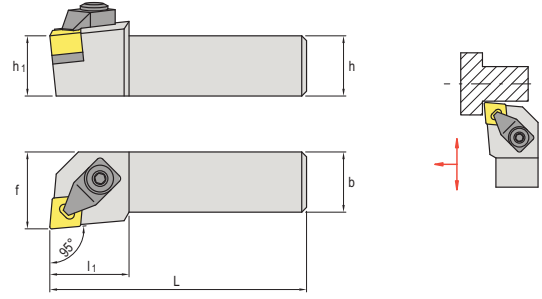
		Stok Stock Lager		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung		R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CCLNR/L	20 20 K12S	○	○	20	20	125	30	25	CNG...1208...	SRD 12 ALT	CNG...1204...	SRD 12 AL2	M4 x 12 AV	70.91.11.134.0	70.91.11.BV
	25 25 M12S	●	○	25	25	150	30	32							
	32 25 P12S	○	○	32	25	170	30	32							










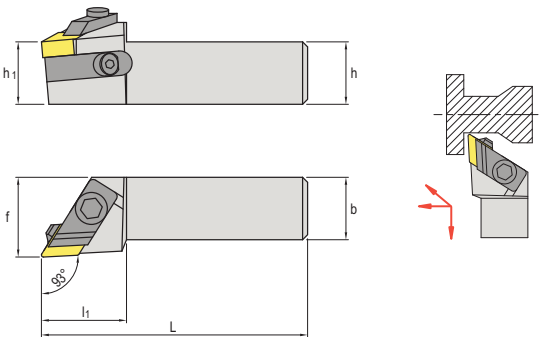
		Stok Stock Lager		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung		R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CELNR/L	20 20 K13S	○	○	20	20	125	32	25	ENG...1308...	SE 12 ALT	ENG...1308..	SE 12 AL2	M4 x 12 AV	70.91.11.134.0	70.91.11.BV
	25 25 M13S	○	○	25	25	150	32	32							
	32 25 P13S	○	○	32	25	170	32	32							








# Dış Torna Katerleri

Turning - Toolholder, External  
Drehen - Klemmhalter, Außenbearbeitung



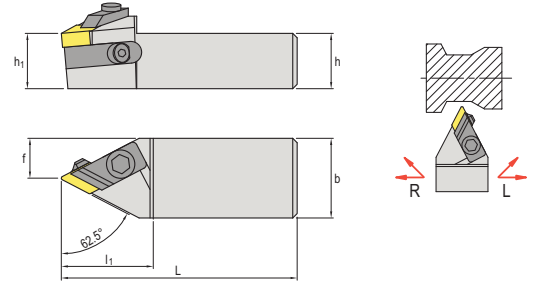
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage Dünne	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CCLNR/L 20 20 K12 lx7	○	○	20	20	125	30	25	CNGX .1208...	SRD 12 ALT	CNGX.1204..	SRD 12 AL2	M4 x 12 AV	70.91.11.316.0	MTJN22 M6BV
25 25 M12 lx7	○	○	25	25	150	33	32							
32 25 P12 lx7	○	○	32	25	170	33	32							


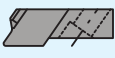
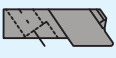






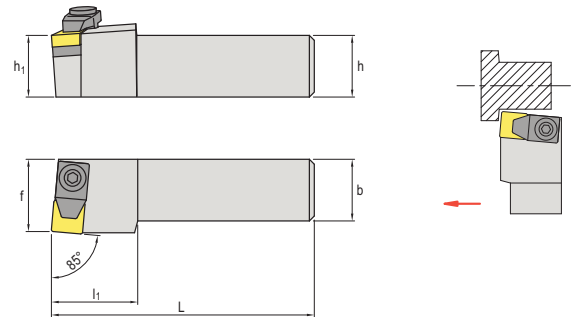
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Sağ Altlık Anvil Right Rechte Unterlage	Sol Altlık Anvil Left Linke Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Sağ Baskı Papucu Clamp Right Rechte Klemme	Sol Baskı Pabucu Clamp Left Linke Klemme	Baskı Vidası Screw Schraube
CDJNR/L 20 20 K15S	○	○	20	20	125	32	25	DNG....1506...	70.91.53.681 OR	70.91.53.681 OL	M5	03 BP YTKR	03 BP YTKL	7480210
25 25 M15S	●	○	25	25	150	32	32							
32 25 P15S	○	○	32	25	170	32	32							








R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CDJNR 25 25 M15  
● 2 Hafta / in two weeks / in zwei Wochen ○ Stokta yok / Non stock item / Nicht auf Lager



		Stok Stock Lager		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung	25 25 M15S 32 25 P15S 40 25 P15S	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Sağ Altılık Anvil Right Rechte Unterlage	Sol Altılık Anvil Left Linke Unterlage	Altılık Vidası Anvil Screw Gewindehülse	Sağ Baskı Papucu Rechte Klemmung	Sol Baskı Papucu Linke Klemmung	Baskı Vidası Schraube
CDNNR/L	25 25 M15S	○	○	25	25	150	32	12.5							
	32 25 P15S	○	○	32	25	170	32	12.5	DNG...1506...	70.91.53.681 OR	70.91.53.681 OL	M5	03 BP YTKR	03 BP YTKL	7480210
	40 25 P15S	○	○	40	25	170	32	12.5							

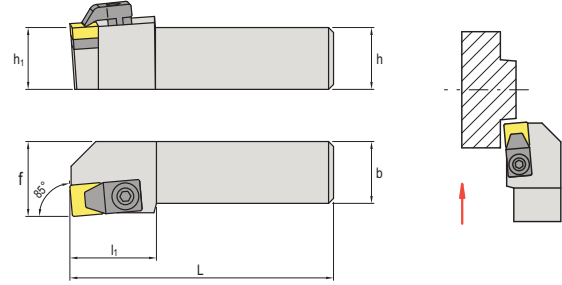


		Stok Stock Lager		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung	20 20 K12S 25 25 M12S 32 25 P12S	R	L	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altılık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altılık Anvil Thick Unterlage Dicke	Altılık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CS - NR/L	20 20 K12S	○	○	20	20	125	30	25							
	25 25 M12S	○	○	25	25	150	33	32	SNG...1208...	SR 12 ALT	SNG...1204..	SR 12 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
	32 25 P12S	○	○	32	25	170	33	32							

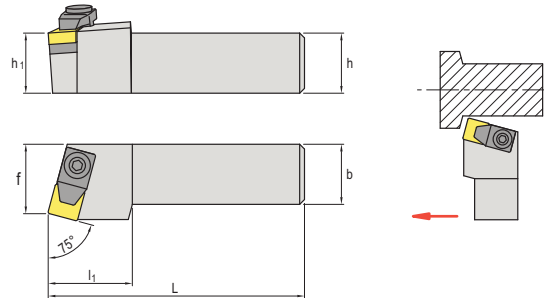
# Dış Torna Katerleri

Turning - Toolholder, External

Drehen - Klemmhalter, Außenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	h	b	L	l1	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CSYNR/L 20 20 K12S	○	○	20	20	125	30	25	SNG...1208...	SR 12 ALT	SNG...1204..	SR 12 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
25 25 M12S	○	○	25	25	150	33	32							
32 25 P12S	○	○	32	25	170	33	32							



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	h	b	L	l1	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CSNR/L 20 20 K12S	○	○	20	20	125	30	25	SNG...1208...	SR 12 ALT	SNG...1204..	SR 12 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
25 25 M12S	○	○	25	25	150	33	32							
32 25 P12S	○	○	32	25	170	33	32							

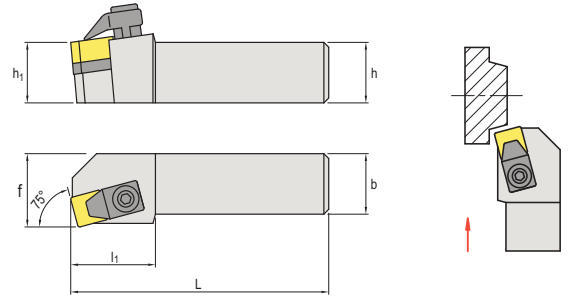
R : Sağ / Right / Rechte L : Sol / Left / Linke








● Stoktan / Stock / Verfügbar ab Lager

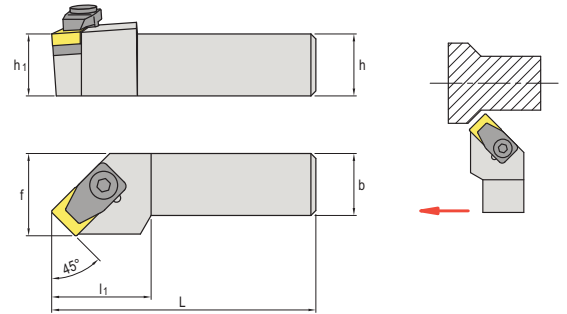
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CSYNR 25 25 M12








● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CSKNR/L 20 20 K12S	○	○	20	20	125	30	25	SNG...1208...	SR 12 ALT	SNG...1204..	SR 12 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
25 25 M12S	○	○	25	25	150	33	32							
32 25 P12S	○	○	32	25	170	33	32							

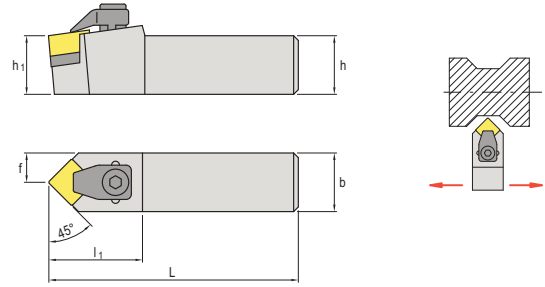


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
CSSNR/L 20 20 K12S	○	○	20	20	125	30	25	SNG...1208...	SR 12 ALT	SNG...1204..	SR 12 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
25 25 M12S	●	○	25	25	150	33	32							
32 25 P12S	○	○	32	25	170	33	32							

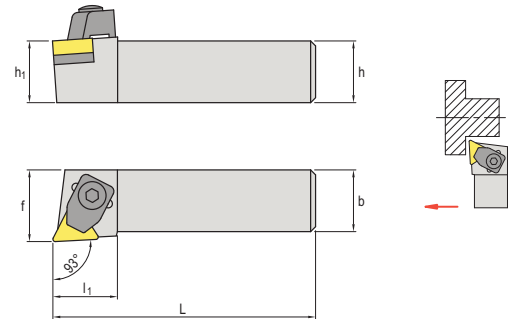
# Dış Torna Katerleri

Turning - Toolholder , External

Drehen - Klemmhalter, Außenbearbeitung



		Ölçüler Dimensions Abmessungen												
Kod Code Bezeichnung	Stok Stock Lager	h h <sub>1</sub>	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube	
CSDNN	20 20 K12S	○	20	20	125	30	10	SNG...1208...	SR 12 ALT	SNG...1204..	SR 12 AL2	M4 x 12 AV	70.91.11.134.0	70.91.11 BV
	25 25 M12S	○	25	25	150	33	12.5							
	32 25 P12S	○	32	25	170	33	12.5							



		Ölçüler Dimensions Abmessungen												
Kod Code Bezeichnung	Stok Stock Lager		h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
	R	L												
CTJNR/L	20 20 K16S	○ ○	20	20	125	30	25	TNG...1608...	SR 16 ALT	TNG...1604..	SR 16 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
	25 25 M16S	○ ○	25	25	150	33	32							
	32 25 P16S	○ ○	32	25	170	33	32							

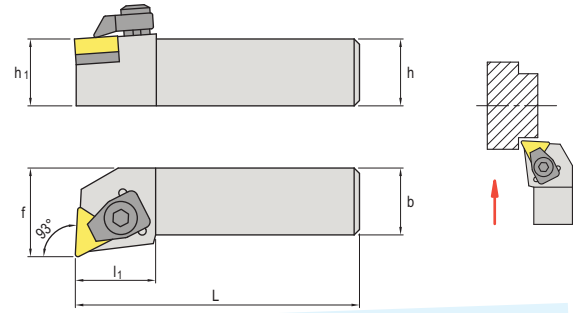
R : Sağ / Right / Rechte L : Sol / Left / Linke








● Stoktan / Stock / Verfügbar ab Lager

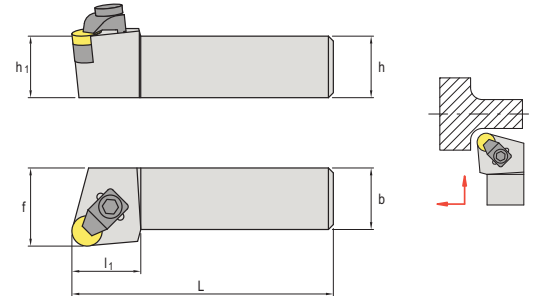
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CTJNR 25 25 M16








● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

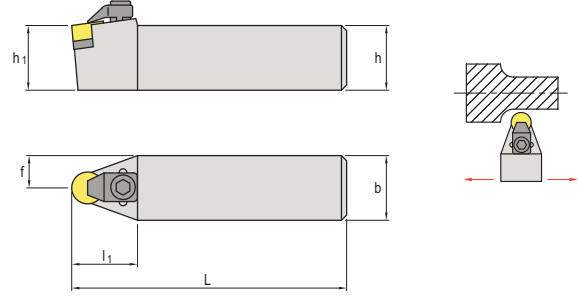









		Ölçüler Dimensions Abmessungen													
Kod Code Bezeichnung	Stok Stock Lager	h							Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
		R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f							
CTUNR/L	20 20 K16S	○	○	20	20	125	30	25	TNG...1608...	SR 16 ALT	TNG...1604..	SR 16 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
	25 25 M16S	○	○	25	25	150	33	32							
	32 25 P16S	○	○	32	25	170	33	32							

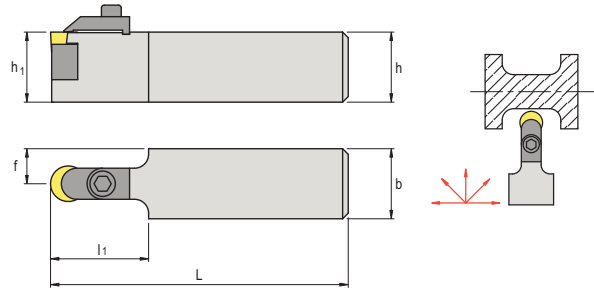








		Ölçüler Dimensions Abmessungen													
Kod Code Bezeichnung	Stok Stock Lager	h							Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube
		R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f							
CRSNR/L	20 20 K12S	○	○	20	20	125	30	25	RNG...1208...	SRN 12 ALT	RNG...1204..	SRN 12 AL2	M4 x 12 AV	70.91.11.094.0	70.91.11 BV
	25 25 M12S	○	○	25	25	150	33	32							
	32 25 P12S	○	○	32	25	170	33	32							

**Dış Torna Katerleri**  
Turning - Toolholder , External  
Drehen - Klemmhalter, Außenbearbeitung



		Ölçüler Dimensions Abmessungen												
Kod Code Bezeichnung	Stok Stock Lager	h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Unterlage (Dü)	Uç Tipi Insert Type Plattentype	Kalın Altlık Anvil Thick Unterlage Dicke	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube	
CRDNN	20 20 K12S	○	20	20	125	30	10							
	25 25 M12S	○	25	25	150	33	12.5	RNG...1208...	SRN 12 ALT	RNG...1204..	SRN 12 AL2	M4 x 12 AV	70.91.11.094.0	70.91.11 BV
	32 25 P12S	○	32	25	170	33	12.5							



		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung	Stok Stock Lager		h	b	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	İnce Altlık Anvil Thin Dünn Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Baskı Pabucu Clamp Klemme	Baskı Vidası Screw Schraube	
	R	L	h <sub>1</sub>	b	L	l <sub>1</sub>	f						
CRDCN	20 20 K12S	○ ○	20	20	125	30	10						
	25 25 M12S	○ ○	25	25	150	33	12.5	RCG...1208...	414007	M5	308136	M6 x 20	
	32 25 P12S	○ ○	32	25	170	33	12.5						

R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügher ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CRDNN 25 25 M12

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager





# İç Tornalama Takımları için ISO Kodlama Sistemi

## ISO Designation System for Tool Holders, Internal Turning

### ISO Bezeichnungssystem für Klemmhalter, Innenbearbeitung



S			32	U	P																																																
Takım tipi / Type of Boring Bar / Werkstoff des Körpers			Şaft Çapı / Shank Diameter / Schaftdurchmesser	Şaft Boyu / Length of Shank / Werkzeuglänge	Sıkma Tipi / Clamping Style / Befestigungsart																																																
Gösterim harfi Identification letter Kennbuchstabe	Takım malzemesi Material used for main body Werkstoff des Körpers	Konstrüksiyon özellikleri Features of design Konstruktionsmerkmale	<p>D</p> <p>08 10 12 16 20 25 <b>32</b> 40 50</p>	<p>L</p> <table border="1"> <thead> <tr> <th>L</th> <th>L mm</th> </tr> </thead> <tbody> <tr><td>A</td><td>32</td></tr> <tr><td>B</td><td>40</td></tr> <tr><td>C</td><td>50</td></tr> <tr><td>D</td><td>60</td></tr> <tr><td>E</td><td>70</td></tr> <tr><td>F</td><td>80</td></tr> <tr><td>G</td><td>90</td></tr> <tr><td>H</td><td>100</td></tr> <tr><td>J</td><td>110</td></tr> <tr><td>K</td><td>125</td></tr> <tr><td>L</td><td>140</td></tr> <tr><td>M</td><td>150</td></tr> <tr><td>N</td><td>160</td></tr> <tr><td>P</td><td>170</td></tr> <tr><td>Q</td><td>180</td></tr> <tr><td>R</td><td>200</td></tr> <tr><td>S</td><td>250</td></tr> <tr><td>T</td><td>300</td></tr> <tr><td>U</td><td>350</td></tr> <tr><td>V</td><td>400</td></tr> <tr><td>W</td><td>450</td></tr> <tr><td>X</td><td>Özel / Special / Sonder</td></tr> <tr><td>Y</td><td>500</td></tr> </tbody> </table>	L	L mm	A	32	B	40	C	50	D	60	E	70	F	80	G	90	H	100	J	110	K	125	L	140	M	150	N	160	P	170	Q	180	R	200	S	250	T	300	U	350	V	400	W	450	X	Özel / Special / Sonder	Y	500	<p>C</p> <p>Baskılı Sistem / Top Clamping / von oben geklemmt</p> <p>D</p> <p>Baskılı Sistem / Top Clamping / Von oben geklemmt</p> <p>M</p> <p>Baskılı ve Pimli Sistem / Top and Hole Clamping / Von oben und über Bohrung geklemmt</p> <p>P</p> <p>Levyeli Sistem / Lever System / Über Bohrung geklemmt</p> <p>S</p> <p>Vida ile Delikten Sıkma / Centre Screw Locking / Durch Bohrung geschraubt</p>
L	L mm																																																				
A	32																																																				
B	40																																																				
C	50																																																				
D	60																																																				
E	70																																																				
F	80																																																				
G	90																																																				
H	100																																																				
J	110																																																				
K	125																																																				
L	140																																																				
M	150																																																				
N	160																																																				
P	170																																																				
Q	180																																																				
R	200																																																				
S	250																																																				
T	300																																																				
U	350																																																				
V	400																																																				
W	450																																																				
X	Özel / Special / Sonder																																																				
Y	500																																																				
S	Yekpare Çelik Gövde Solid steel Stahlschaft	Standart / none / keine																																																			
A		Soğutma kanallı with internal coolant supply mit innerer Kühlmittelzuführung																																																			
B		Vibrasyon gidericili with vibration damping mit Vibrationsdämpfung																																																			
D		Soğutma kanallı ve vibrasyon giderici with vibration damping and coolant supply mit Vibrationsdämpfung und innerer Kühlmittelzuführung																																																			
C	Çelik başlık ve sert metal gövde Hard metal with steel head Hartmetallschaft mit Stahlkopf	Standart / none / keine																																																			
E		Soğutma kanallı with coolant supply mit vibrationsdämpfung																																																			
F		Vibrasyon gidericili with vibration damping mit vibrationsdämpfung																																																			
G		Soğutma kanallı ve vibrasyon giderici with vibration damping and coolant supply mit Vibrationsdämpfung und innerer Kühlmittelzuführung																																																			
H	Ağır metal *) Heavy metal *) Schwermetall *)	Standart / none / keine																																																			
J		Soğutma kanallı with internal coolant supply mit innerer Kühlmittelzuführung																																																			

\*) Sinterlenmiş alaşımlar, vibrasyon giderilmesinde yükseltici etki yaparlar, Örneğin : wolfram - bakır gibi.

\*) Sintered alloys with increased damping effect, e.g. tungsten copper.

\*) Sinterlegierungen mit erhöhter Dämpfung, z.B. Wolfram-Kupfer.

C	L	N	R	12
Uç Tipi / Insert Type / Wendeplattenform	Yanaşma Açısı / Approach Angle / Klemmhalterform	Uç Serbest Açısı / Insert Clearance angle / Wendeplattenfreiwinkel	Kesme Yönü / Cutting Direction / Schnitttrichtung	Kesici Kenar Uzunluğu / Cutting Edge Length / Schneidkantenlänge
C  80°	F  90°	B  5°	L Sol yönlü kesme Boring bar suitable for operation to the left only Halter kann nur links-schneidend verwendet werden	C  E 
D  55°	K  75°	C  7°		D  K 
K  55°	L  95°	N  0°	R Sağ yönlü kesme Boring bar suitable for operation to the right only Halter kann nur rechts-schneidend verwendet werden	R  S 
R  90°	S  45°	P  11°		T  W 
T  60°	U  93°	O  a°		V 
V  35°	Q  107.5°	Özel olarak verilecek serbest açısı Clearance angle requiring special indications Freiwinkel, bei denen besondere Angaben erforderlich sind.		
W  80°				



**Delik Torna katerleri / Turning - Toolholder , Internal**  
 Drehen - Klemmhalter, Innenbearbeitung

**S.... PCLNR / L**  
 Sayfa / Page / Seite : 60

**S.... PSKNR / L**  
 Sayfa / Page / Seite : 60

**S.... PDUNR / L**  
 Sayfa / Page / Seite : 61

**S.... PDQNR / L**  
 Sayfa / Page / Seite : 61

**S.... PDXNR / L**  
 Sayfa / Page / Seite : 62

**S.... PTFNR / L**  
 Sayfa / Page / Seite : 62

**S.... PWLNR/L**  
 Sayfa / Page / Seite : 63

**S.... MTUNR / L**  
 Sayfa / Page / Seite : 64

**S.... MTQNR / L**  
 Sayfa / Page / Seite : 64

**S.... MWLNR/L**  
 Sayfa / Page / Seite : 65

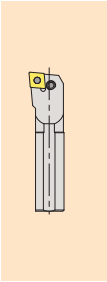
**S.... SCFCR/L**  
 Sayfa / Page / Seite : 66

**S.... SCLCR / L**  
 Sayfa / Page / Seite : 66

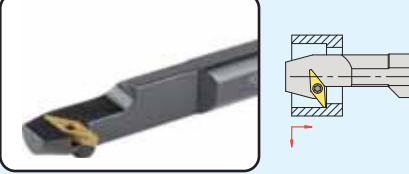
**S.... SDUCR / L**  
 Sayfa / Page / Seite : 67

**S.... SDQCR / L**  
 Sayfa / Page / Seite : 67


**S.... SDXCR / L**  
 Sayfa / Page / Seite : 68



Delik Torna katerleri / Turning - Toolholder , Internal  
Drehen - Klemmhalter, Innenbearbeitung




**S.... SVXCR / L**  
Sayfa / Page / Seite : 68



**S.... SVUCR / L**  
Sayfa / Page / Seite : 69




**S.... SVQCR / L**  
Sayfa / Page / Seite : 69



**S.... SVUBR/L**  
Sayfa / Page / Seite : 70



**S.... SVQBR / L**  
Sayfa / Page / Seite : 70



**S.... SVXBR / L**  
Sayfa / Page / Seite : 71




**S.... SSKCR / L**  
Sayfa / Page / Seite : 72



**S.... SSSCR/L**  
Sayfa / Page / Seite : 72




**S.... STFCR / L**  
Sayfa / Page / Seite : 73



**S.... CKUNR / L**  
Sayfa / Page / Seite : 73



**S.... CSKPR / L**  
Sayfa / Page / Seite : 74




**S.... CTFPR / L**  
Sayfa / Page / Seite : 74



**S.... CSYNR / L**  
Sayfa / Page / Seite : 75

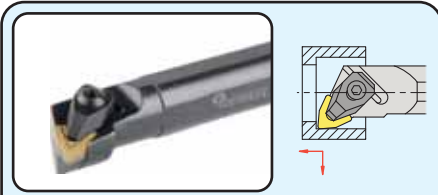


**S.... CCLNR / L**  
Sayfa / Page / Seite : 75

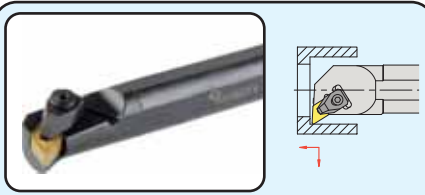


**S.... DCLNR / L**  
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**Delik Torna katerleri / Turning - Toolholder , Internal**  
Drehen - Klemmhalter, Innenbearbeitung



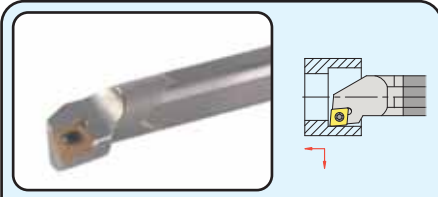
**S.... DWLNR / L**  
Sayfa / Page / Seite : 76



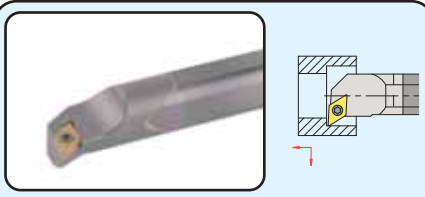
**S.... DDUNR / L**  
Sayfa / Page / Seite : 77



**S.... DTUNR / L**  
Sayfa / Page / Seite : 77



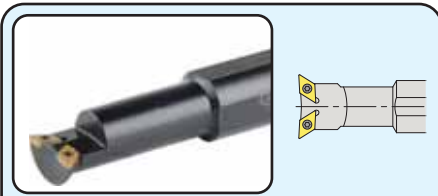
**E.... SCLCR/L**  
Sayfa / Page / Seite : 78



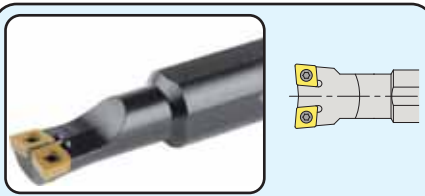
**E.... SDUCR / L**  
Sayfa / Page / Seite : 78



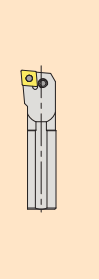
**S.... SCR - SD L**  
**S.... SDR - SCL**  
Sayfa / Page / Seite : 79

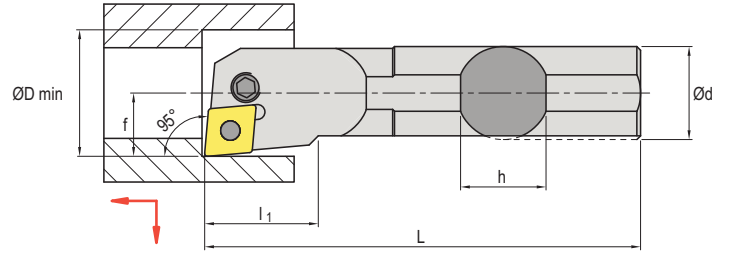







**S.... SDR - SDL**  
Sayfa / Page / Seite : 80

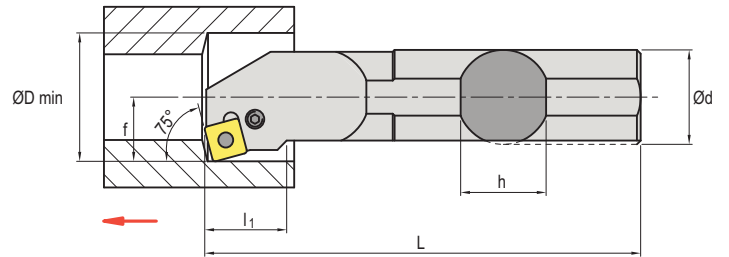







**S.... SCR - SCL**  
Sayfa / Page / Seite : 81





Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Levye Lever Hebel	Levye Vidası Lever Screw Hebel Schraube	Altık Pimi Anvil Pin Rohrstift	
S 16 R PCLNR/L 09T	○	○	21	16	15	200	20	11	CN.....0903	—	H 013445	S 011429	—	
S 20 S PCLNR/L 09T	○	○	25	20	18	250	20	13		—	438.3.841	438.3.832	—	
S 25 T PCLNR/L 12T	●	●	32	25	23	300	23	17	CN.....1204	—	U 112150	H 023441	S 023421	R 023461
S 32 U PCLNR/L 12T	●	●	40	32	30	350	26	22		U 112150	H 023441	S 023421	R 023461	
S 40 V PCLNR/L 12T	○	○	50	40	37	400	26	27	CN.....1606	U 000152	H 000840	S 028430	R 025464	
S 40 V PCLNR/L 16T	○	○	50	40	37	400	32	27		U 000152	H 000840	S 028430	R 025464	
S 50 W PCLNR/L 16T	○	○	63	50	47	450	32	35		U 000152	H 000840	S 028430	R 025464	

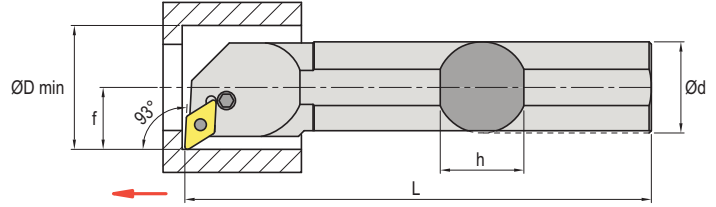


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Levye Lever Hebel	Levye Vidası Lever Screw Hebel Schraube	Altık Pimi Anvil Pin Rohrstift
S 25 T PSKNR/L 12T	○	○	32	25	23	300	23	17	SN.....1204	—	438.3.841	438.3.832	—
S 32 U PSKNR/L 12T	○	○	40	32	30	350	26	22		U 063451	H 023441	S 023421	R 023461
S 40 V PSKNR/L 12T	○	○	50	40	37	400	26	27	SN.....1506	U 000457	H 000840	S 028430	R 025464
S 40 V PSKNR/L 15T	○	○	50	40	37	400	32	27		U 000457	H 000840	S 028430	R 025464
S 50 W PSKNR/L 15T	○	○	63	50	47	450	32	35		U 000457	H 000840	S 028430	R 025464

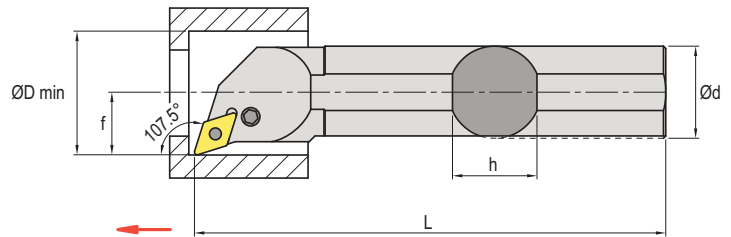
# Delik Torna Katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
S 16 R PDUNR/L 11	○	○	21	16	15	200	11	DN.....1104	—	5432.015.011	438.3.830	—
S 20 S PDUNR/L 11	○	○	25	20	18	250	13					
S 25 T PDUNR/L 11	○	○	32	25	23	300	17					
S 32 U PDUNR/L 15	●	○	40	32	30	350	22	DN.....1506	U 153150	H 024447	S 028430	R 023461
S 40 V PDUNR/L 15	○	○	50	40	37	400	27					
S 50 W PDUNR/L 15	○	○	63	50	47	450	35					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
S 25 T PDQNR/L 15	●	○	32	25	23	300	17	DN.....1506	U 153150	H 024447	S 028430	R 023461
S 32 U PDQNR/L 15	●	○	40	32	30	350	22					
S 40 V PDQNR/L 15	○	○	50	40	37	400	27					
S 50 W PDQNR/L 15	○	○	63	50	47	450	35					

R : Sağ / Right / Rechte L : Sol / Left / Linke

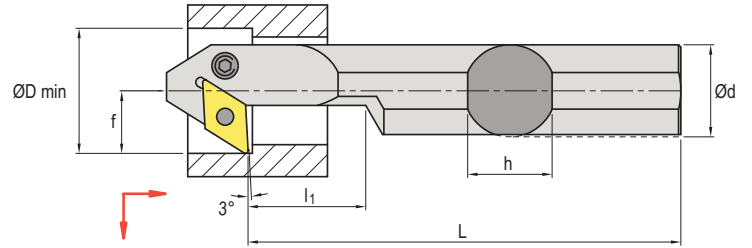
● Stoktan / Stock / Verfügbar ab Lager






● 2 Hafta / in two weeks / in zwei

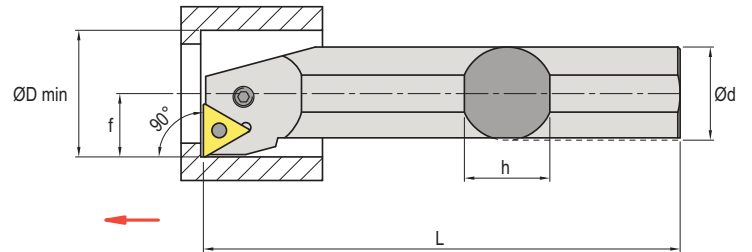
○ Stokta yok / Non stock item / Nicht auf Lager






İsteğe bağlı olarak pabuç takviyesi ilave edilmektedir. / Clamp will be supplied according to customer need.





Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altılık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altılık Pimi Anvil Pin Rohrstift
S 32 U PDXNR/L 15	○	○	40	32	30	350	63	22	DN.....1506	U 153150	H 024447	S 028430	R 023461
S 40 V PDXNR/L 15	○	○	50	40	37	400	70	27					
S 50 W PDXNR/L 15	○	○	63	50	47	450	75	35					

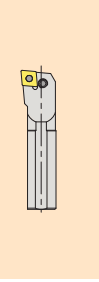
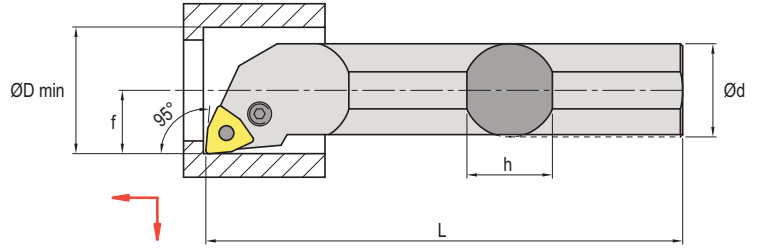


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altılık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altılık Pimi Anvil Pin Rohrstift
S 16 R PTFNR/L 11	○	○	21	16	15	200	11	TN.....1103	—	H 011446	S 011429	—
S 20 S PTFNR/L 11	○	○	25	20	18	250	13	TN.....1103	—	5432.015.011	438.3.830	—
S 25 T PTFNR/L 16	○	○	32	25	23	300	17	TN.....1604	U 013950	H 018440	S 018420	R 018463
S 32 U PTFNR/L 16	○	○	40	32	30	350	22	TN.....1604	U 013950	H 018440	S 018420	R 018463
S 40 V PTFNR/L 16	○	○	50	40	37	400	27	TN.....1604	U 013950	H 018440	S 018420	R 018463
S 40 V PTFNR/L 22	○	○	50	40	37	400	27	TN.....2204	U 023952	H 023441	S 023421	R 023461
S 50 W PTFNR/L 22	○	○	63	50	47	450	35	TN.....2204	U 023952	H 023441	S 023421	R 023461

# Delik Torna katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyeye Lever Hebel	Levyeye Vidası Lever Screw Hebel Schraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	ØDmin	Ød	h	L	f					
S 16 R PWLNR/L 06	○	○	21	16	15	200	11	WN.....0604	—	5432.015.011	438.3.832M	—
S 20 S PWLNR/L 06	○	○	25	20	18	250	13					
S 25 T PWLNR/L 06	○	○	32	25	23	300	17					
S 25 T PWLNR/L 08	●	○	32	25	23	300	17	WN.....0804	7853519	H 023441	438.3.832M	—
S 32 U PWLNR/L 08	○	○	40	32	30	350	22					
S 40 V PWLNR/L 08	○	○	50	40	37	400	27					



R : Sağ / Right / Rechte L : Sol / Left / Linke

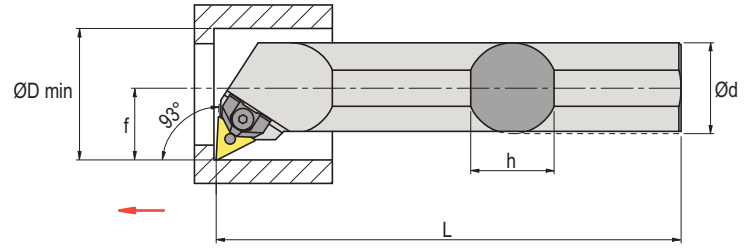
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U PWLNR 08

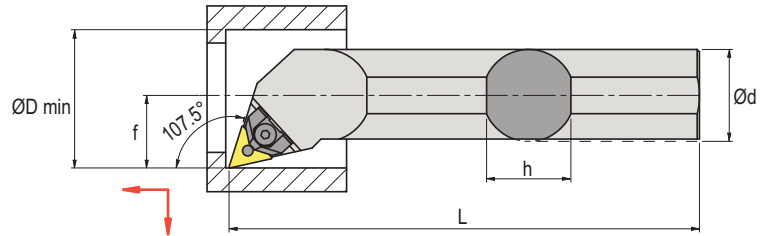
● 2 Hafta / in two weeks / in zwei

○ Stokta yok / Non stock item / Nicht auf Lager

İsteğe bağlı olarak pabuç takiyesi ilave edilmektedir. / Clamp will be supplied according to customer need.



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	ØDmin	Ød	h	L	f					
S 20 S MTUNR/L 16	○	○	25	20	19	200	13	TN.....1604	—	TMB 16	MTJN 16 M5 BV X	170.3.847 X
S 25 S MTUNR/L 16	●	○	32	25	23	250	17					
S 32 T MTUNR/L 16	●	○	40	32	30	300	22					
S 40 U MTUNR/L 16	○	○	50	40	37	350	27					
S 32 T MTUNR/L 22	○	○	40	32	30	300	22	TN.....2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
S 40 U MTUNR/L 22	○	○	50	40	37	350	27					
S 50 W MTUNR/L 22	○	○	63	50	47	450	35					

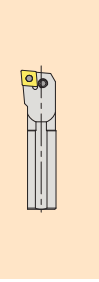
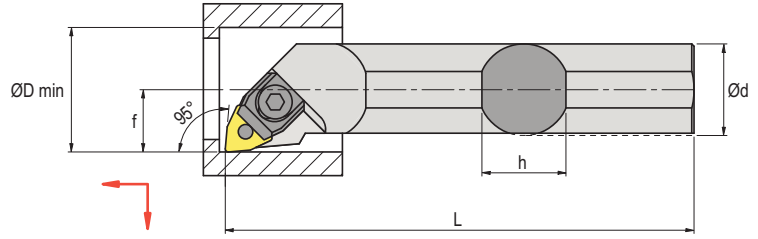


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Pimi Anvil Pin Rohrstift
	R	L	ØDmin	Ød	h	L	f					
S 25 T MTQNR/L 16	○	○	32	25	23	300	17	TN.....1604	—	170.3.820	MTJN 16 M5 BV X	170.3.847 X
S 32 U MTQNR/L 16	○	○	40	32	30	350	22					
S 40 V MTQNR/L 16	○	○	50	40	37	400	27					
S 32 U MTQNR/L 22	○	○	40	32	30	350	22	TN.....2204	170.3.856	170.3.821	MTJN 22 M6 BV	170.3.836
S 40 V MTQNR/L 22	○	○	50	40	37	400	27					
S 50 W MTQNR/L 22	○	○	63	50	47	450	35					

# Delik Torna Katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Pimi Anvil Pin Rohrstift
S 25 T MWLNR/L 08	●	○	32	25	23	300	17	WN.....0804	WN 08 ALT	WN 08 BP	MTJN 22 M6 BV	170.3.836
S 32 U MWLNR/L 08	●	○	40	32	30	350	22					
S 40 V MWLNR/L 08	○	○	50	40	37	400	27					
S 50 W MWLNR/L 08	○	○	63	50	47	450	35					

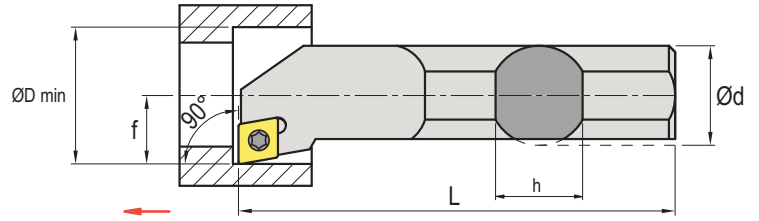







R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

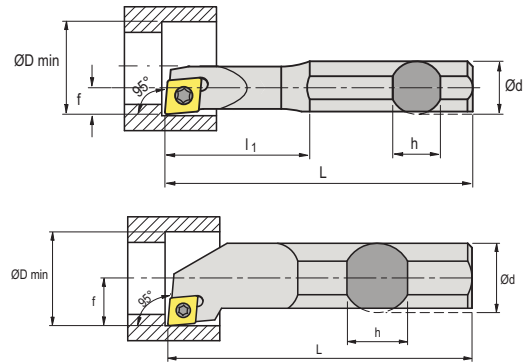
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U MWLNR 08






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 08 H SCFCR/L 06	○	○	11	8	7	100	5	CC..0602	—	—	7815101	T08 IP
S 10 K SCFCR/L 06	○	○	13.6	10	9	125	7					
S 12 Q SCFCR/L 06	○	○	17	12	11	180	9					
S 16 R SCFCR/L 09	○	○	21	16	15	200	11	CC..09T3	—	—	7883209	T15 IP
S 20 S SCFCR/L 09	○	○	25	20	18	250	13		7883001	7883102	7815102	
S 25 T SCFCR/L 09	○	○	32	25	23	300	17		7883002	7883101	7883202	
S 32 U SCFCR/L 12	○	○	40	32	30	350	22	CC..1204	7883002	7883101	7883202	T15 IP
S 40 V SCFCR/L 12	○	○	50	40	37	400	27					

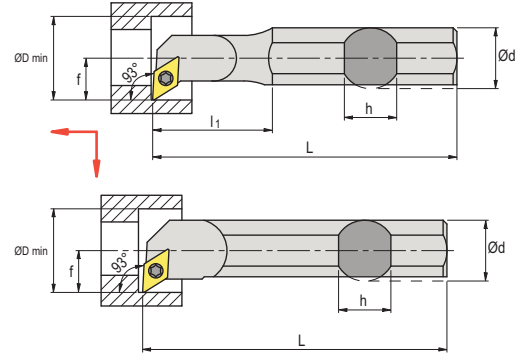


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
S 06 08 H SCLCR/L 06	●	●	9.3	8	7	100	25	4	CC..0602	—	—	7815101	T08 IP	
S 08 10 H SCLCR/L 06	●	●	12	10	9	100	30	6						
S 10 12 K SCLCR/L 06	●	●	13.6	12	11	125	35	7						
S 12 16 M SCLCR/L 06	●	●	17.2	16	15	150	40	9						
S 16 R SCLCR/L 09	●	●	21	16	15	200	—	11	CC..09T3	—	—	7883209	T15 IP	
S 20 S SCLCR/L 09	●	●	25	20	18	250	—	13		7883001	7883102	7815102		
S 25 T SCLCR/L 09	○	○	32	25	23	300	—	17		7883002	7883101	7883202		
S 32 U SCLCR/L 12	○	○	40	32	30	350	—	22	CC..1204	7883002	7883101	7883202	T15 IP	
S 40 V SCLCR/L 12	○	○	50	40	37	400	—	27						

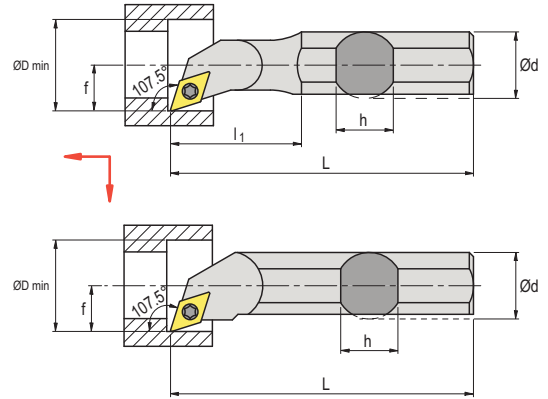
# Delik Torna Katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen						Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f						
S 08 10 H SDUCR/L 07	●	●	12	10	9	100	30	7	DC..0702	—	—	7815101	T08 IP	
S 10 12 K SDUCR/L 07	●	●	13.6	12	11	125	35	9						
S 12 16 M SDUCR/L 07	●	●	17	16	15	150	40	11						
S 16 R SDUCR/L 07	○	○	21	16	15	200		11						
S 20 S SDUCR/L 07	○	○	25	20	18	250		13						
S 16 R SDUCR/L 11	●	○	21	16	15	200		11	DC..11T3	7815000	7883102	7883209	7815102	T15 IP
S 20 S SDUCR/L 11	●	●	25	20	18	250		13						
S 25 T SDUCR/L 11	●	●	32	25	23	300		17						
S 32 U SDUCR/L 11	○	○	40	32	30	350		22						
S 40 V SDUCR/L 11	○	○	50	40	37	400		27						



Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen						Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f						
S 08 10 H SDQCR/L 07	●	●	12	10	9	100	30	7	DC..0702	—	—	7815101	T08 IP	
S 10 12 K SDQCR/L 07	●	●	13.6	12	11	125	35	9						
S 12 16 M SDQCR/L 07	●	●	17	16	15	150	40	11						
S 16 R SDQCR/L 07	○	○	21	16	15	200		11						
S 20 S SDQCR/L 07	○	○	25	20	18	200		13						
S 16 R SDQCR/L 11	●	○	21	16	15	200		11	DC..11T3	7815000	7883102	7883209	7815102	T15 IP
S 20 S SDQCR/L 11	●	●	25	20	18	200		13						
S 25 T SDQCR/L 11	●	●	32	25	23	250		17						
S 32 U SDQCR/L 11	○	○	40	32	30	300		22						
S 40 V SDQCR/L 11	○	○	50	40	37	350		27						

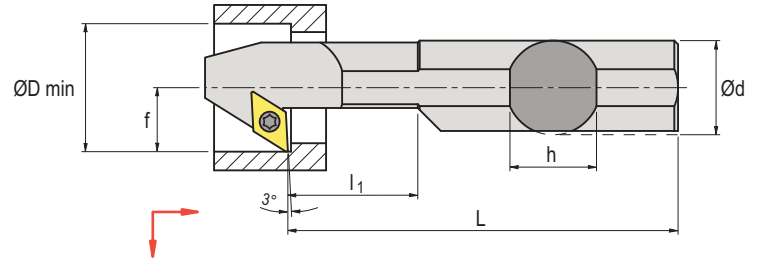
R : Sağ / Right / Rechte L : Sol / Left / Linke






● Stoktan / Stock / Verfügbar ab Lager

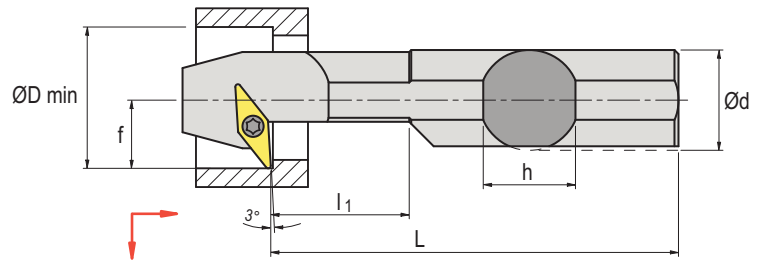
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U SDUCR 11






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 12 Q SDXCR/L 07	○	○	17	12	11	180	30	9	DC..0702	—	—	7815101	T08 IP
S 16 R SDXCR/L 07	○	○	21	16	15	200	35	11		—	—	7815101	
S 20 S SDXCR/L 07	○	○	25	20	18	250	40	13		—	—	7815101	
S 20 S SDXCR/L 11	○	○	25	20	18	250	40	13	DC..11T3	—	—	7883209	T15 IP
S 25 T SDXCR/L 11	○	○	32	25	23	300	55	17		7815000	7883102	7815102	
S 32 U SDXCR/L 11	○	○	40	32	30	350	63	22		—	—	7815102	
S 40 V SDXCR/L 11	○	○	50	40	37	400	70	27		—	—	7815102	

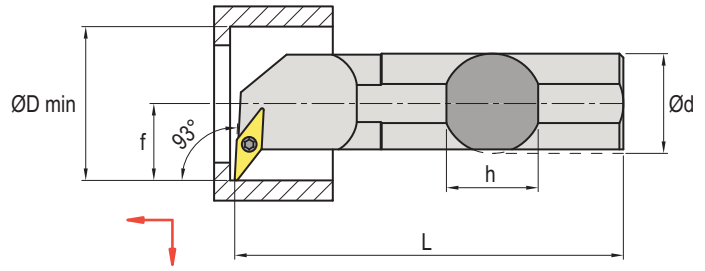


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SVXCR/L 11	○	○	22	16	15	200	35	13	VC..1103	—	—	7815101	T08 IP
S 20 R SVXCR/L 11	○	○	25	20	18	200	40	16		—	—	7815101	
S 25 T SVXCR/L 11	○	○	32	25	23	300	45	18		—	—	7815101	
S 25 T SVXCR/L 16	○	○	32	25	23	300	55	18	VC..1604	—	—	7815102	T15 IP
S 32 U SVXCR/L 16	○	○	40	32	30	350	63	22		7815002	7883102	7815102	
S 40 U SVXCR/L 16	○	○	50	40	37	400	70	27		—	—	7815102	

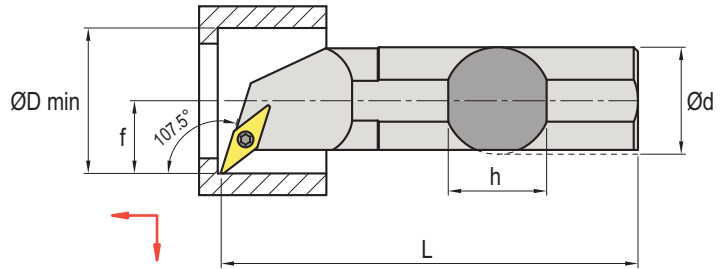
# Delik Torna Katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SVUCR/L 11	○	○	21	16	15	200	11	VC..1103	—	—	7815101	T08 IP
S 20 S SVUCR/L 11	○	○	25	20	18	250	13	VC..1103	—	—	7815101	T08 IP
S 25 T SVUCR/L 16	●	○	32	25	23	300	17	VC..1604	—	—	7815102	T15 IP
S 32 U SVUCR/L 16	●	○	40	32	30	350	22	VC..1604	7815002	7883102	7815102	T15 IP
S 40 V SVUCR/L 16	○	○	50	40	37	400	27	VC..1604	7815002	7883102	7815102	T15 IP



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SVQCR/L 11	○	○	21	16	15	200	11	VC..1103	—	—	7815101	T08 IP
S 20 R SVQCR/L 11	○	○	25	20	18	200	13	VC..1103	—	—	7815101	T08 IP
S 25 S SVQCR/L 16	●	○	32	25	23	250	17	VC..1604	—	—	7815102	T15 IP
S 32 T SVQCR/L 16	●	○	40	32	30	300	22	VC..1604	7815002	7883102	7815102	T15 IP
S 40 U SVQCR/L 16	○	○	50	40	37	350	27	VC..1604	7815002	7883102	7815102	T15 IP

R : Sağ / Right / Rechte L : Sol / Left / Linke

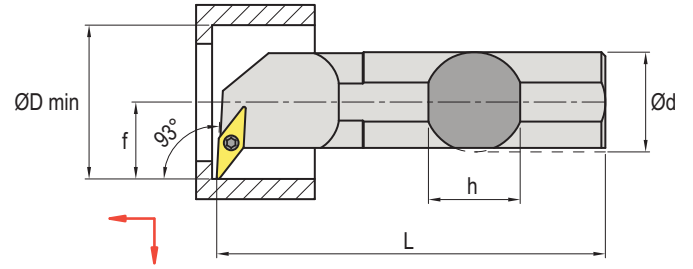
● Stoktan / Stock / Verfügbar ab Lager






Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U SVUCR 16

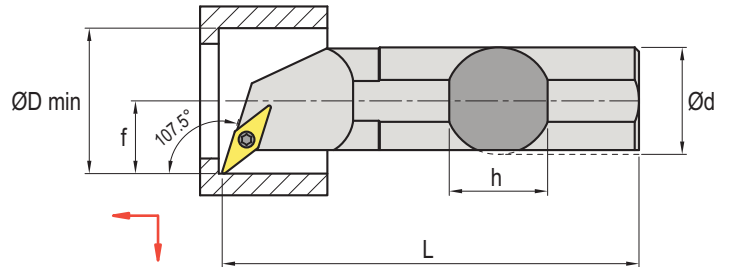
● 2 Hafta / in two weeks / in zwei Wochen






○ Stokta yok / Non stock item / Nicht auf Lager





Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Altık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SVUBR/L 11	○	○	21	16	15	200	11	VB..1103	—	—	7815101	T08 IP
S 20 S SVUBR/L 11	○	○	25	20	18	250	13	VB..1103	—	—	7815101	T08 IP
S 25 T SVUBR/L 16	●	○	32	25	23	300	17	VB..1604	—	—	7815102	T15 IP
S 32 U SVUBR/L 16	●	○	40	32	30	350	22		7815002	7883102		
S 40 V SVUBR/L 16	○	○	50	40	37	400	27		7815002	7883102		

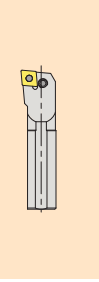
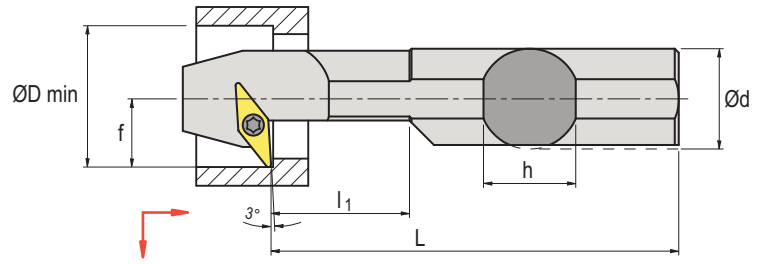


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Altık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SVQBR/L 11	○	○	21	16	15	200	11	VB..1103	—	—	7815101	T08 IP
S 20 S SVQBR/L 11	○	○	25	20	18	250	13	VB..1103	—	—	7815101	T08 IP
S 25 T SVQBR/L 16	●	○	32	25	23	300	17	VB..1604	—	—	7815102	T15 IP
S 32 U SVQBR/L 16	●	○	40	32	30	350	22		7815002	7883102		
S 40 V SVQBR/L 16	○	○	50	40	37	400	27		7815002	7883102		

# Delik Torna Kateri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
S 16 R SVXBR/L 11	○	○	22	16	15	200	35	13	VB..1103	—	—	7815101	T08 IP	
S 20 R SVXBR/L 11	○	○	25	20	18	200	40	16						
S 25 T SVXBR/L 11	○	○	32	25	23	300	45	18						
S 25 T SVXBR/L 16	○	○	32	25	23	300	55	18	VB..1604	—	—	7815102	T15 IP	
S 32 U SVXBR/L 16	○	○	40	32	30	350	63	22		7815002	7883102			
S 40 U SVXBR/L 16	○	○	50	40	37	400	70	27						



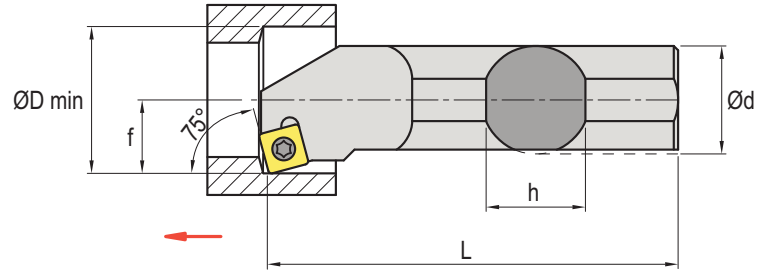
R : Sağ / Right / Rechte L : Sol / Left / Linke






● Stoktan / Stock / Verfügbar ab Lager

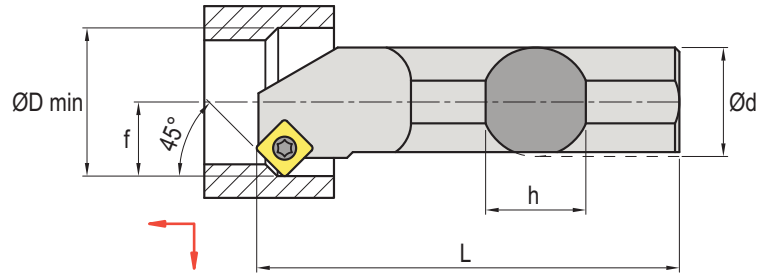
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U SVXBR 16






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SSKCR/L 09	●	○	21	16	15	200	11	SC..09T3	—	—	7815102	T15 IP
S 20 R SSKCR/L 09	●	○	25	20	18	200	13		7883003	7883102		
S 25 S SSKCR/L 09	○	○	32	25	23	250	17		—	—		
S 25 S SSKCR/L 12	○	○	32	25	23	250	17	SC..1204	—	—	7883202	T15 IP
S 32 T SSKCR/L 12	○	○	40	32	30	300	22		7883004	7883101		
S 40 U SSKCR/L 12	○	○	50	40	37	350	27		—	—		

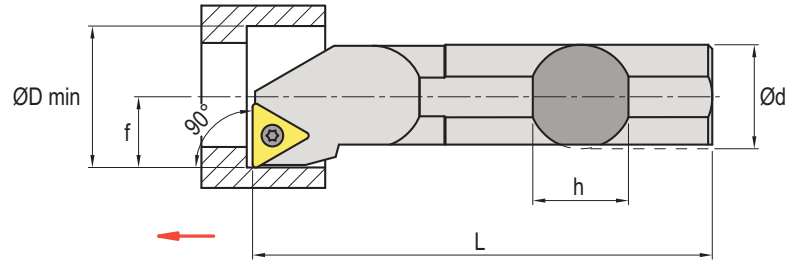


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 16 R SSSCR/L 09	●	○	21	16	15	200	11	SC..09T3	—	—	7815102	T15 IP
S 20 S SSSCR/L 09	●	○	25	20	18	250	13		7883003	7883102		
S 25 T SSSCR/L 09	○	○	32	25	23	300	17		—	—		
S 25 T SSSCR/L 12	○	○	32	25	23	300	17	SC..1204	—	—	7883202	T15 IP
S 32 U SSSCR/L 12	○	○	40	32	30	350	22		7883004	7883101		
S 40 V SSSCR/L 12	○	○	50	40	37	400	27		—	—		

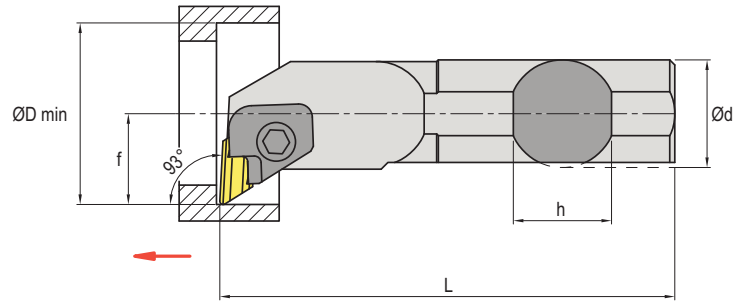
# Delik Torna Kateri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 10 K STFCR/L 09	○	○	13.6	10	9	125	7	TC..0902	—	—	7722113	T07 IP
S 10 K STFCR/L 11	○	○	13.6	10	9	125	7	TC..1102	—	—	7815101	T08 IP
S 12 Q STFCR/L 11	●	○	17	12	11	180	9					
S 16 R STFCR/L 11	○	○	21	16	15	200	11					
S 20 S STFCR/L 11	○	○	25	20	18	200	13	TC..16T3	—	—	7815102	T15 IP
S 16 R STFCR/L 16	○	○	21	16	15	200	11					
S 20 S STFCR/L 16	●	○	25	20	18	200	13					
S 25 T STFCR/L 16	●	○	32	25	23	250	17					
S 32 U STFCR/L 16	○	○	40	32	30	300	22					
S 40 V STFCR/L 16	○	○	50	40	37	350	27		7883005	7883102		



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen											
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Sağ Baskı Pabucu Clamp Right Rechte Klemme	Sol Baskı Pabucu Clamp Left Linke Klemme	Baskı Vidası Screw Schraube	Sağ Altlık Anvil Right Rechte Unterlage	Sol Altlık Anvil Left Linke Unterlage	Altlık Pimi Anvil Pin Rohrstift
S 25 T CKUNR/L 16	●	○	32	25	23	300	17	KNUX 16...	70.5.824	70.5.825	70.5.865	—	—	—
S 32 U CKUNR/L 16	●	○	40	32	30	350	22							
S 40 V CKUNR/L 16	○	○	50	40	37	400	27							
S 50 W CKUNR/L 16	○	○	63	50	47	450	35							

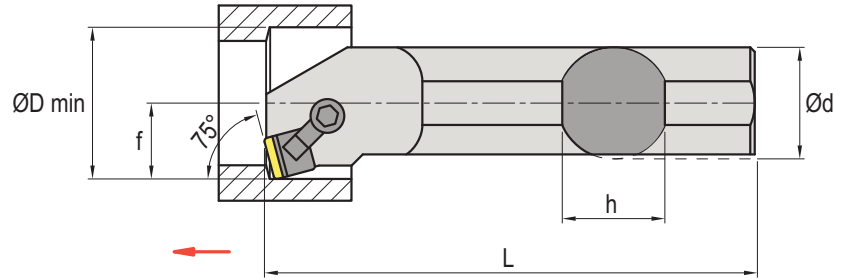
R : Sağ / Right / Rechte L : Sol / Left / Linke







● Stoktan / Stock / Verfügbar ab Lager

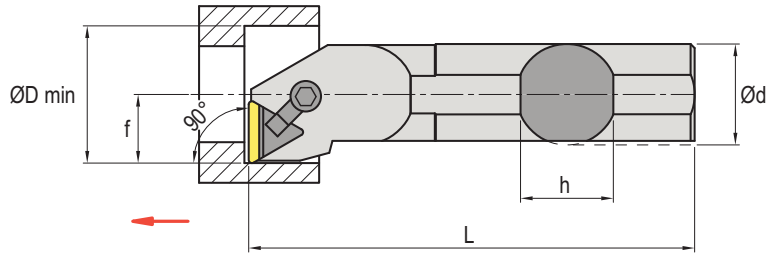
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U STFCR 16







● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Schraube	Altlık Pimi Anvil Pin Rohrstift	Talaş Kırıcı Chip Breaker Spanformille
S 12 Q CSKPR/L 09	○	○	17	12	11	180	9	SP...0903..	—	7830001	7830002	—	—
S 16 R CSKPR/L 09	○	○	21	16	15	200	11						
S 20 S CSKPR/L 09	○	○	25	20	18	200	13						
S 25 T CSKPR/L 12	○	○	32	25	23	250	17	SP...1203..	7480315	TBP 16	TBP 16 BV	7480901	SP 12 TK
S 32 U CSKPR/L 12	○	○	40	32	30	300	22						
S 40 V CSKPR/L 12	○	○	50	40	37	350	27						

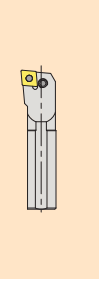
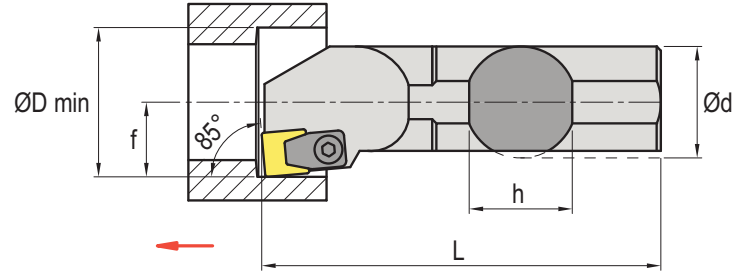


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Schraube	Altlık Pimi Anvil Pin Rohrstift	Talaş Kırıcı Chip Breaker Spanformille
S 12 Q CTFPR/L 11	●	○	17	12	11	180	9	TP...1103..	—	7830001	7830002	—	—
S 16 R CTFPR/L 11	●	○	21	16	15	200	11						
S 20 S CTFPR/L 11	●	○	25	20	18	250	13						
S 20 S CTFPR/L 16	●	○	25	20	18	250	13	TP...1603..	7480316	TBP 16	TBP 16 BV	7480901	TP 16 TK
S 25 T CTFPR/L 16	○	○	32	25	23	300	17						
S 32 U CTFPR/L 16	○	○	40	32	30	350	22						
S 40 V CTFPR/L 16	○	○	50	40	37	400	27						
S 40 V CTFPR/L 22	○	○	50	40	37	400	27	TP...2204..	175.11.624	TBP 12	70.91.11 BV	M4 x12 AV	TP 22 TK
S 50 W CTFPR/L 22	○	○	63	50	47	450	35						

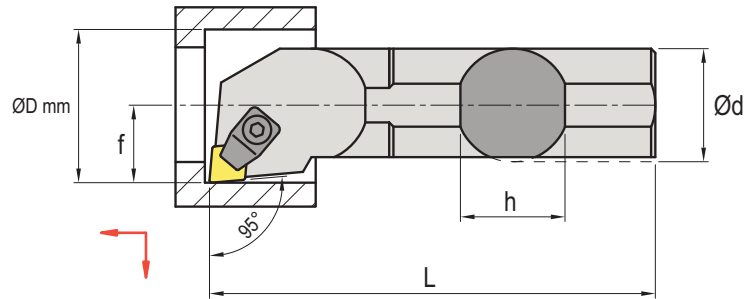
# Delik Torna Katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



		Ölçüler Dimensions Abmessungen												
Kod Code Bezeichnung	Stok Stock Lager		ØDmin	Ød	h	L	f	Uç Tipi	İnce Altlık	Uç Tipi	Kalın Altlık	Altlık Vidası	Baskı Pabucu	Baskı Vidası
	R	L						Insert Type Plattentype	Anvil Thin Unterlage (Dü)	Insert Type Plattentype	Anvil Thick Unterlage Dicke	Anvil Screw Gewindehülse	Clamp Klemme	Screw Schraube
CSYNR/L 0040 T12S	○	○	55	40	37	300	27							
CSYNR/L 0050 U12S	○	○	65	50	47	350	35	SNG...1208...	SR 12 ALT	SNG...1204...	SR 12 AL2	M4 x 12 AV	70.91.11.194.0	70.91.11 BV
CSYNR/L 0063 V12S	○	○	75	63	60	400	43							



		Ölçüler Dimensions Abmessungen												
Kod Code Bezeichnung	Stok Stock Lager		ØDmin	Ød	h	L	f	Uç Tipi	İnce Altlık	Uç Tipi	Kalın Altlık	Altlık Vidası	Baskı Pabucu	Baskı Vidası
	R	L						Insert Type Plattentype	Anvil Thin Unterlage (Dü)	Insert Type Plattentype	Anvil Thick Unterlage Dicke	Anvil Screw Gewindehülse	Clamp Klemme	Screw Klemmschraube
CCLNR/L 0040 T12S	○	○	55	40	37	300	27							
CCLNR/L 0050 U12S	○	○	65	50	47	350	35	CNG....1208...	SRD 12 ALT	CNG....1204...	SRD 12 AL2	M4 x 12 AV	70.91.11.134.0	70.91.11.BV
CCLNR/L 0063 V12S	○	○	75	63	60	400	43							

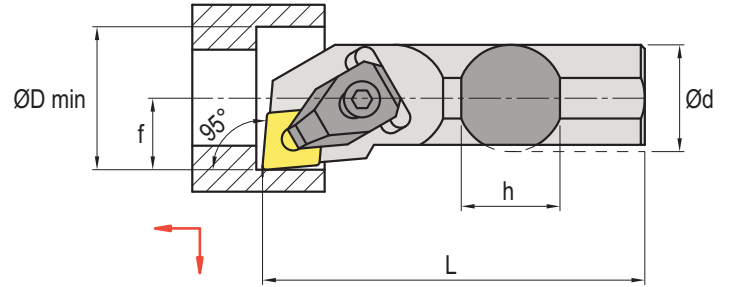
R : Sağ / Right / Rechte L : Sol / Left / Linke






● Stoktan / Stock / Verfügler ab Lager

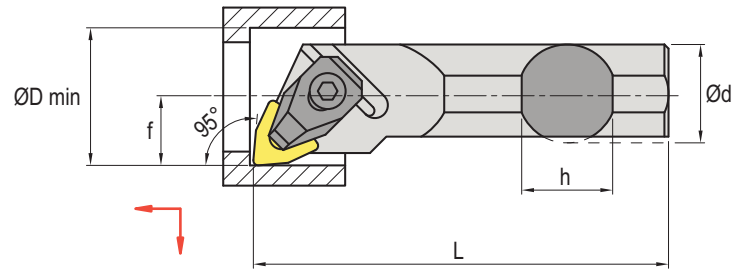
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CSYNR 0040 T12S






● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altık Vidası Anvil Screw Gewindehülse
S 25 T DCLNR/L 12T	○	○	32	25	23	300	17	CN.....1204	U 112150	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
S 32 U DCLNR/L 12T	○	○	40	32	30	350	22					
S 40 V DCLNR/L 12T	○	○	50	40	37	400	27					

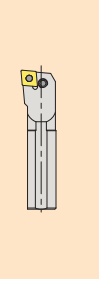
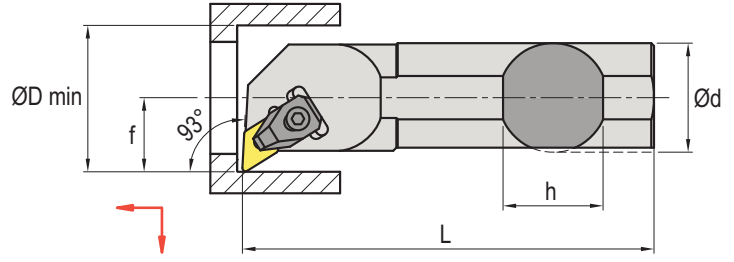


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altık Vidası Anvil Screw Gewindehülse
S 25 S DWLNR/L 08T	○	○	32	25	23	250	17	WN.....0804	7853519	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
S 32 T DWLNR/L 08T	○	○	40	32	30	300	22					
S 40 U DWLNR/L 08T	○	○	50	40	37	350	27					

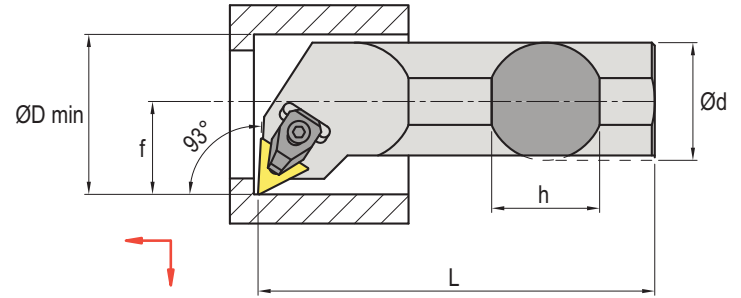
# Delik Torna Katerleri

Turning - Toolholder, Internal

Drehen - Klemmhalter, Innenbearbeitung



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
S 25 S DDUNR/L 15T	●	○	32	25	23	250	17	DN.....1506	U 153150	TK DBP	MTJN 22 M6 BV	M4 x 12 AV
S 32 T DDUNR/L 15T	●	○	40	32	30	300	22					
S 40 U DDUNR/L 15T	○	○	50	40	37	350	27					



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									
	R	L	ØDmin	Ød	h	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube	Altlık Vidası Anvil Screw Gewindehülse
S 25 S DTUNR/L 16T	○	○	32	25	23	250	17	TN.....1604	U 013950	TK DBP K	MTJN 22 M6 BV	M4 x 12 AV
S 32 T DTUNR/L 16T	○	○	40	32	30	300	22					
S 40 U DTUNR/L 16T	○	○	50	40	37	350	27					

R : Sağ / Right / Rechte L : Sol / Left / Linke

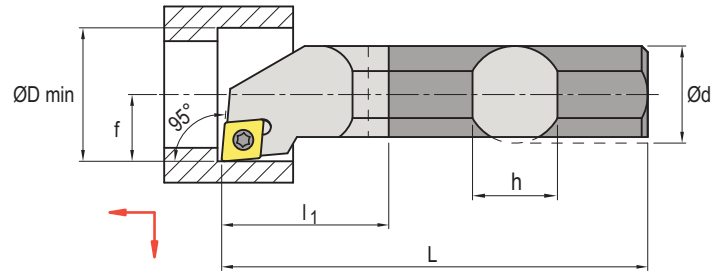
● Stoktan / Stock / Verfügbar ab Lager






Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 U DDUNR 15

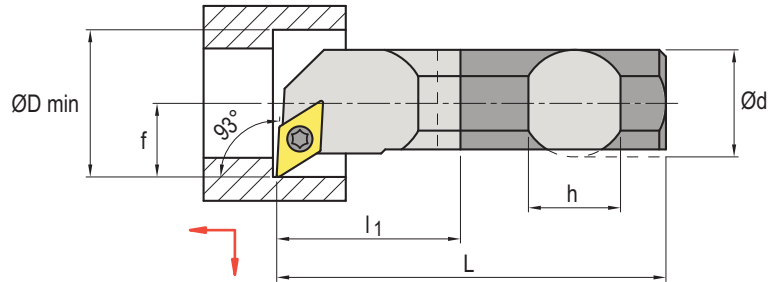
● 2 Hafta / in two weeks / in zwei Wochen






○ Stokta yok / Non stock item / Nicht auf Lager





		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung	Stok Stock Lager		ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Altık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L											
C 08 K SCLCR/L 06	●	●	11	8	7	125	20	5	CC..0602	—	—	7815101	T08 IP
C 10 K SCLCR/L 06	●	●	13.6	10	9	125	20	7					
C 12 Q SCLCR/L 06	●	●	17	12	11	180	20	9					
C 16 R SCLCR/L 06	●	●	21	16	15	200	25	11					
C 16 R SCLCR/L 09	●	●	21	16	15	200	30	11	CC..09T3	—	—	7883209	T15 IP
C 20 S SCLCR/L 09	●	●	25	20	18	250	40	13					
C 25 T SCLCR/L 09	●	●	32	25	23	300	40	17					

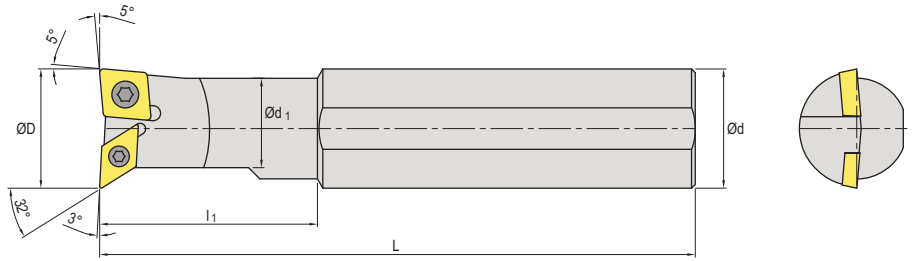


		Ölçüler Dimensions Abmessungen											
Kod Code Bezeichnung	Stok Stock Lager		ØDmin	Ød	h	L	l <sub>1</sub>	f	Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Altık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L											
C 08 K SDUCR/L 07	●	●	12	8	7	125	20	7	DC..0702	—	—	7815101	T08 IP
C 10 K SDUCR/L 07	●	●	13.6	10	9	125	20	9					
C 12 Q SDUCR/L 07	●	●	17	12	11	180	20	11					
C 16 R SDUCR/L 07	●	●	21	16	15	200	25	11					
C 20 S SDUCR/L 07	●	●	25	20	18	250	30	13	DC..11T3	—	—	7883209	T15 IP
C 20 S SDUCR/L 11	●	●	25	20	18	250	40	13					
C 25 T SDUCR/L 11	●	●	32	25	23	300	40	17					

## Çift Yönlü Torna Kateri

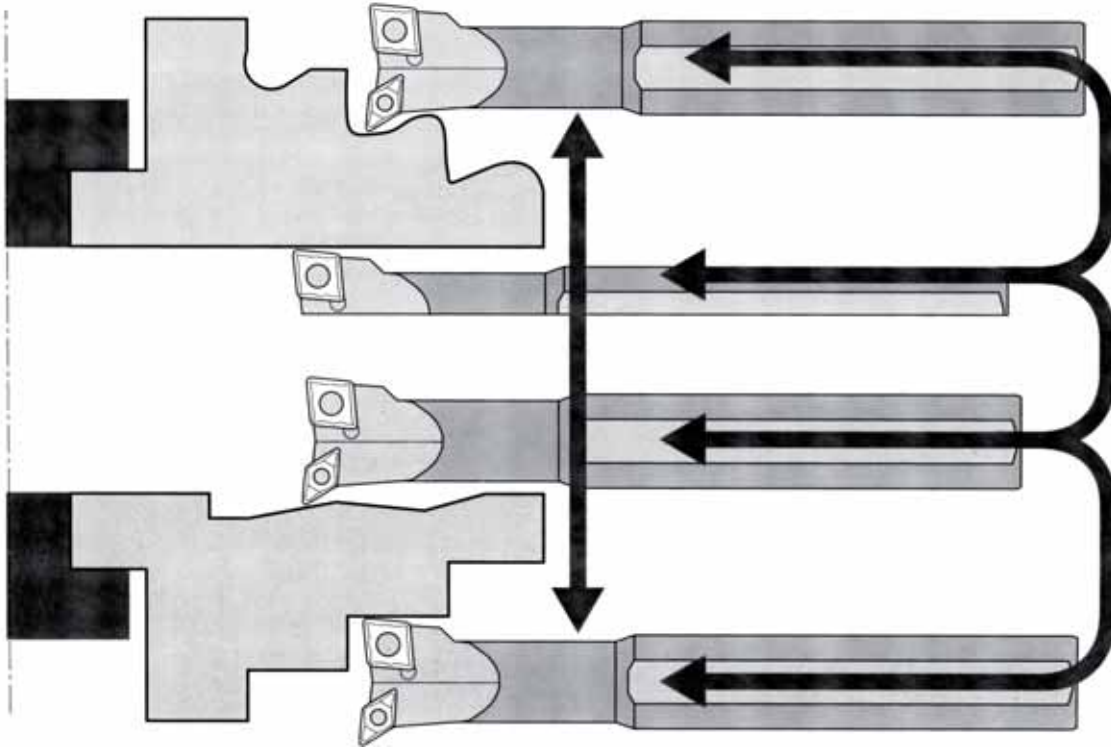
Turning - Toolholder, Both Sided

Drehen - Klemmhalter, Beide Seitenbearbeitet



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen										
		ØD	Ød <sub>1</sub>	Ød	l <sub>1</sub>	L	ØDmax	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 20 Q SCR - SDL 06 - 07	○	20	16	20	45	180	24	CC..0602	7815101	DC..0702	7815101	T08 IP
S 20 Q SDR - SCL 07 - 06	○	20	16	20	45	180	24	CC..0602	7815101	DC..0702	7815101	T08 IP
S 22 R SCR - SDL 09 - 07	○	22	18	25	50	200	28	CC..09T3	7883209	DC..0702	7815101	T15 IP - T08 IP
S 22 R SDR - SCL 07 - 09	○	22	18	25	50	200	28	CC..09T3	7883209	DC..0702	7815101	T15 IP - T08 IP
S 29 S SCR - SDL 09 - 11	○	29	22	32	70	250	32	CC..09T3	7883209	DC..11T3	7883209	T15 IP
S 29 S SDR - SCL 11 - 09	○	29	22	32	70	250	32	CC..09T3	7883209	DC..11T3	7883209	T15 IP
S 32 T SCR - SDL 12 - 11	○	32	27	32	85	300	37	CC..1204	7883202	DC..11T3	7883209	T15 IP
S 32 T SDR - SCL 11 - 12	○	32	27	32	85	300	37	CC..1204	7883202	DC..11T3	7883209	T15 IP

### İşleme Şekli / Process Type



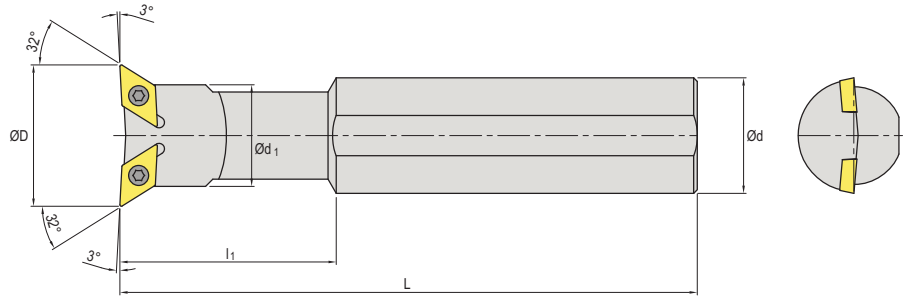
R : Sağ / Right / Rechte L : Sol / Left / Linke






● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 32 T SCR - SDL 12 - 11

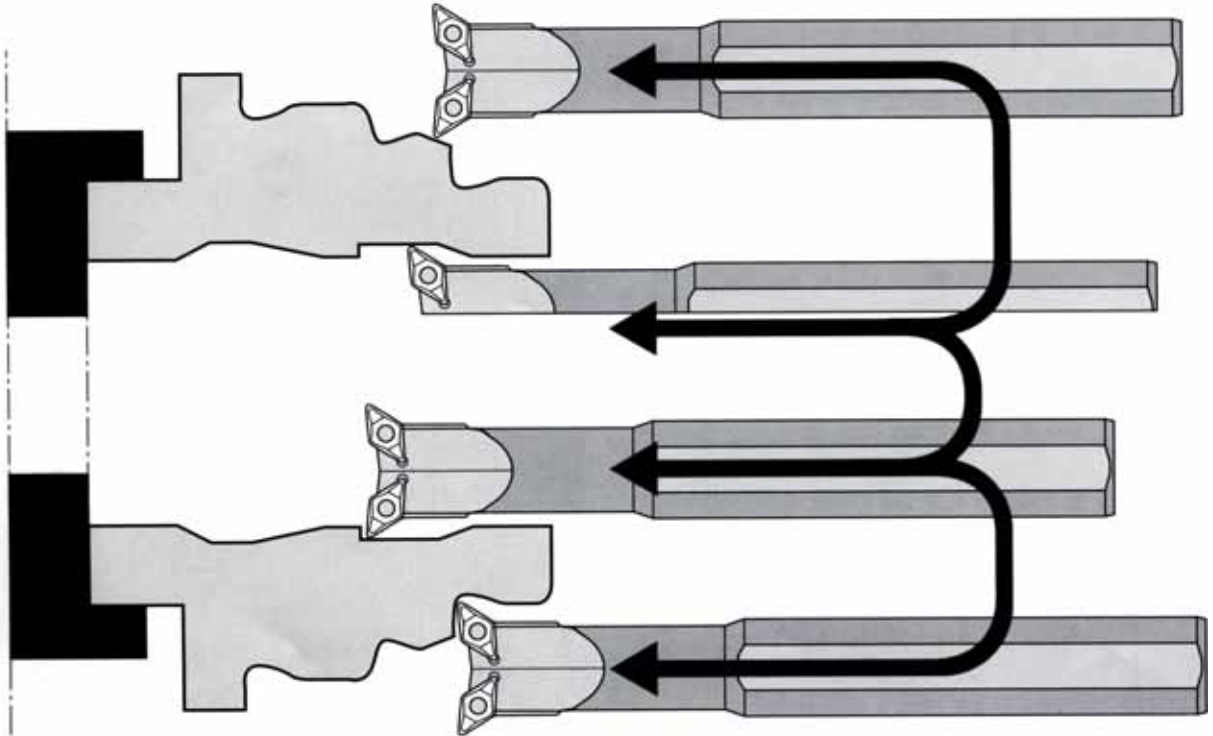
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions Abmessungen										
		ØD	Ød <sub>1</sub>	Ød	l <sub>1</sub>	L	ØDmax	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
S 18 Q SDR - SDL 07 - 07	○	18	13	20	45	180	24					
S 22 R SDR - SDL 07 - 07	○	22	15.5	20	50	200	26	DC..0702	7815101	DC..0702	7815101	T08 IP
S 25 S SDR - SDL 07 - 07	○	25	19	25	60	250	30					
S 28 S SDR - SDL 11 - 11	○	28	23	32	70	250	34	DC..11T3	7883209	DC..11T3	7883209	T15 IP
S 34 T SDR - SDL 11 - 11	○	34	27	32	85	300	38					

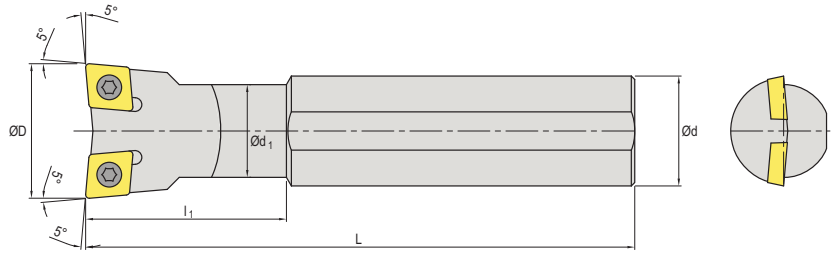
### İşleme Şekli / Process Type



## Çift Yönlü Torna Kateri

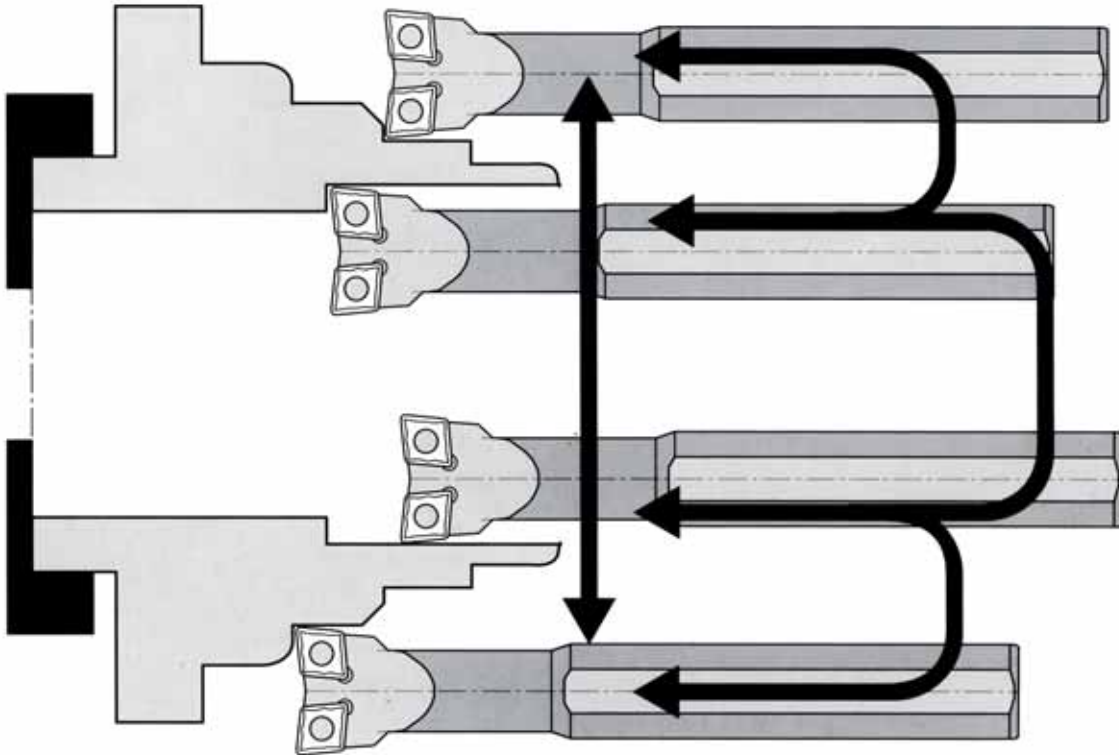
Turning - Toolholder, Both Sided

Drehen - Klemmhalter, Beide Seitenbearbeitet



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød <sub>1</sub>	Ød	I <sub>1</sub>	L	ØDmax					
S 16 Q SCR - SCL 06 - 06	○	16	13	20	40	180	24	CC..0602	7815101	CC..0602	7815101	T08
S 22 R SCR - SCL 09 - 09	○	22	17.5	25	50	200	29	CC..09T3	7883209	CC..09T3	7883209	T15 IP
S 25 S SCR - SCL 09 - 09	○	25	20.5	32	70	250	36	CC..09T3	7883209	CC..1204	7883202	T15 IP
S 28 S SCR - SCL 09 - 12	○	28	23.5	32	70	250	36	CC..09T3	7883209	CC..1204	7883202	T15 IP
S 36 T SCR - SCL 12 - 12	○	36	29.5	32	85	300	37	CC..1204	7883202	CC..1204	7883202	T15 IP

### İşleme Şekli / Process Type



R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S 36 T SCR - SCL 12 - 12

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

## Birimler

Gösterim	Tanımlama	Birim
$D_m$	İşleme Çapı	mm
$V_c$	Kesme hızı	m / dak
$n$	Devir Sayısı	dev / dak
$T_c$	İşleme zamanı	dak
$Q$	Kaldırılan talaşın hacmi	cm <sup>3</sup> / dak
$l_m$	İşleme uzunluğu	mm
$P_c$	Net güç gereksinimi	kW
$k_c$	Özgül kesme kuvveti	N / mm <sup>2</sup>
$f_n$	İlerleme miktarı	mm / dev
$\mathcal{N}$	Yanaşma ( giriş ) açısı	Derece
$R_a$	Yüzey pürüzlülüğü	$\mu\text{m}$
$R_e$	Köşe radyüsü	mm
$a_p$	Kesme derinliği	mm

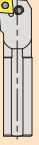
## Formüller

Kesme hızı ( mm / dak )	$V_c = \frac{D_m \cdot \pi \cdot n}{1000}$
Devir sayısı ( dev / dak )	$n = \frac{V_c \cdot 1000}{D_m \cdot \pi}$
Talaş hacmi ( cm <sup>3</sup> / dak )	$Q = V_c \cdot a_p \cdot f_n$
Güç gereksinimi ( kW )	$P_c = \frac{Q \cdot k_c}{D_m \cdot \pi} \left[ \frac{0,4}{f_n \sin \mathcal{N}} \right]^{0.29}$
İşleme zamanı ( dak )	$T_c = \frac{l_m}{f_n \cdot n}$
Profil derinliği ( $\mu\text{m}$ )	$R_a = \frac{f_n^2}{r_e} \cdot 125$

# Tornalama Problemleri ve Çözümleri

Problems in Turning and Solutions

Maßnahmen bei Drehproblemen



Problem / Çözüm	Serbest yüzey aşınması	Krater aşınması	Talaş birikmesi	Kesme kenarında talaş birikmesi	Kesme kenarında çentiklenme	Sert metal uç kırılması	Termal çatlaklar	Plastik deformasyon	Darbeli işlem	İş parçası yüzey hassasiyetinin bozulması	Uzun ve dolanan talaş (başlangıçta değil)	Çok dar talaş oluşumu
Sert metal aşınma dayanımı	↑↑				↑↑			↑↑				
Sert Metal sünekliği				↑↑		↑↑	↑↑		↑↑			
Kesme hızı	↓↓	↓↓	↑↑		↓↓			↓↓	↑↑	↑↑		
İlerleme	↔	↓↓	↓↓					↓↓	↓↓	↓↓	↑↑	↓↓
Kesme derinliği					↔				↓↓		↔	↔
Talaş açısı		↑↑	↑↑	↓↓		↓↓			↔			
Talaş kırıcı geometrisi				↔		↔					↔	↔
Kesme kenar durumu				↔					↔			
Köşe radyusu						↑↑			↑↑	↑↑		
Yanaşma açısı				↓↓								
Stabilite				↑↑								
Soğutma		↑↑	↑↑				↑↑	↑↑		↑↑		

↑↑ : Yükseltin

↓↓ : Azaltın

↔ : Optimize edin

## Units / Berechnungseinheiten

Code / Kurzbezeichnung	Description / Bezeichnung	Unit / Einheiten
$D_m$	Machining Diameter / Bearbeitungsdurchmesser	mm
$V_c$	Cutting speed / Schnittgeschwindigkeit	m / min
n	Revolution per minute (RPM) / Anzahl Spindelumdrehungen	Rev / min
$T_c$	Cutting time / Eingriffszeit	min
Q	Metal removal volume / Zerspanungsvolumen	cm <sup>3</sup> / min
$l_m$	Working Length / Bearbeitungslänge	mm
$P_c$	Net power consumption / Netto-Antriebsleistung	kW
$k_c$	Specific cutting force / Spezifische Schnittkraft	N / mm <sup>2</sup>
$f_n$	Feed per revolution / Vorschub pro Umdrehung	mm / rev
$\varphi$	Approach angle / Anstellwinkel	Degrees
$R_a$	Profile depth / Profiltiefe	$\mu$ m
$R_e$	Tip radius / Schneidplattenradius	mm
$a_p$	Cutting depth / Schnitttiefe	mm

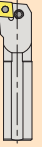
## Formulas

Cutting speed (m / min) Schnittgeschwindigkeit (m / min)	$V_c = \frac{D_m \cdot \pi \cdot n}{1000}$
Revolution per minute (Rev / min) Anzahl Spindelumdrehungen	$n = \frac{V_c \cdot 1000}{D_m \cdot \pi}$
Metal removal volumes (cm <sup>3</sup> / min) Zerspanungsvolumen (cm <sup>3</sup> /min)	$Q = V_c \cdot a_p \cdot f_n$
Power consumption (kW) Antriebsleistung (kW)	$P_c = \frac{Q \cdot k_c}{D_m \cdot \pi} \left[ \frac{0,4}{f_n \sin \varphi} \right]^{0.29}$
Cutting time (min) Eingriffszeit (min)	$T_c = \frac{l_m}{f_n \cdot n}$
Profile depth ( $\mu$ m ) Profiltiefe ( $\mu$ m )	$R_a = \frac{f_n^2}{r_e} \cdot 125$

# Tornalama Problemleri ve Çözümleri

Problems in Turning and Solutions

Maßnahmen bei Drehproblemen



<b>Problem Problem</b>	<b>Option Abhilfe</b>	<i>Clearance face wear</i> Extremer Freiflächen- verschleiß	<i>Extreme crater wear</i> Extremer Kolkverschleiß	<i>Formation of built-up edge</i> Aufbauschneidenbildung	<i>Chip in cutting edge</i> Schneidkantenausbrüche	<i>Notching</i> Kerbverschleiß	<i>Insert breakage</i> Plattenbruch	<i>Thermal cracking</i> Wärmerisse	<i>Plastic deformation</i> Plastische Verformung	<i>Interrupted cut</i> Unterbrochener Schnitt	<i>Poor finish surface</i> Schlechte Werkstückoberfläche	<i>Band / snarl chips (not started up)</i> Band-/Wirrspan (nicht angelaufen)	<i>Chip shape too narrow (blueing)</i> Zu enge Spanform (blau angelaufen)
<i>T/C wear resistance</i> T/C Verschleißfestigkeit		↑↑				↑↑			↑↑				
<i>T/C toughness</i> T/C Zähigkeit					↑↑		↑↑	↑↑		↑↑			
<i>Cutting speed</i> Schnittgeschwindigkeit		↓↓	↓↓	↑↑		↓↓			↓↓	↑↑	↑↑		
<i>Feed</i> Vorschub		↔	↓↓	↓↓					↓↓	↓↓	↓↓	↑↑	↓↓
<i>Depth of cut</i> Schnitttiefe						↔				↓↓		↔	↔
<i>Rake angle</i> Spanwinkel			↑↑	↑↑	↓↓		↓↓			↔			
<i>Chip breaker geometry</i> Spanformgeometrie					↔		↔					↔	↔
<i>Condition of cutting edge</i> Zustand der Schneidkante					↔					↔			
<i>Corner radius</i> Platten-Eckenradius							↑↑			↑↑	↑↑		
<i>Approach angle</i> Anstellwinkel					↓↓								
<i>Stability</i> Stabilität					↑↑								
<i>Cooling</i> Kühlung			↑↑	↑↑				↑↑	↑↑		↑↑		

↑↑ : Increase  
Erhöhen, vergrößern

↓↓ : Reduce  
Vermindern, verkleinern

↔ : Optimize  
Optimieren, kontrollieren



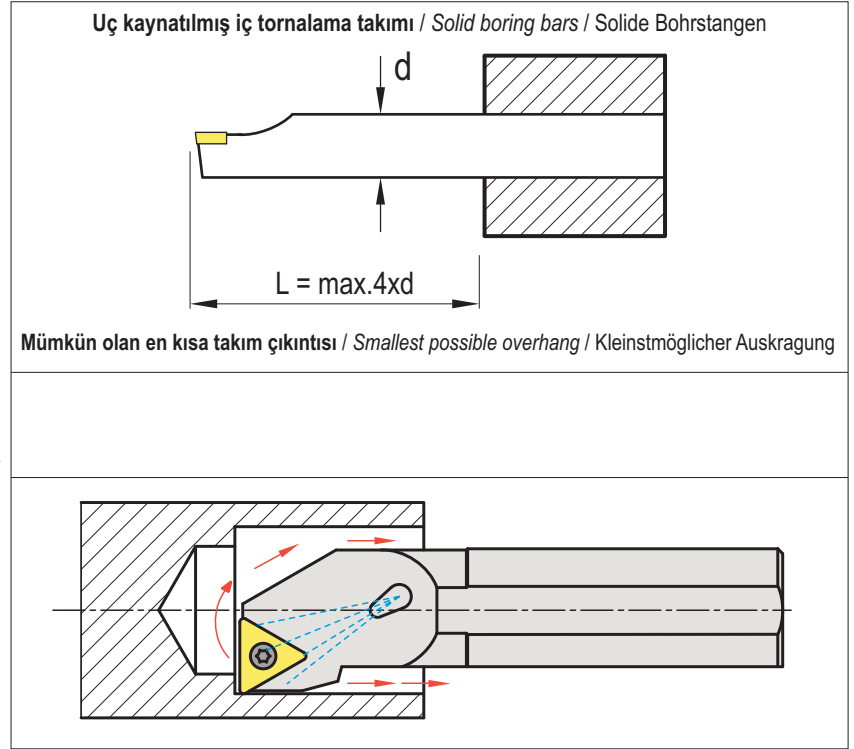
## İç tornalama işlemlerinde takım seçerken aşağıdaki noktalara dikkat edilmelidir.

The below points should be taken account while choosing tools for internal turning.

Beachten Sie unterstehende Funkte während der Wahl von Klemmhalter für Innenbearbeitung

### Genel tavsiyeler / General Recommendations / Allgemeine Empfehlungen

- Mümkün olan en büyük şaft çapı seçilmelidir.  
Use largest possible shank diameter.  
Den größtmöglichen Überhang Wählen
- Takım mümkün olan en kısa şekilde bağlanmalıdır.  
Apply the shortest possible overhang.  
Kleinstmöglichen Überhang wählen
- Doğru ve kuvvetli bağlama sistemiz kullanılmalıdır.  
Use the correct and stable clamping system.  
Korrekte und stabile Einspannung für die Bohrstange wählen
- Kesme sıvısı veya basınçlı hava kullanılması; özellikle derin delik ve kör deliklerin tornalanmasında talaşın dışarıya atılmasında ve yüzey kalitesinde olumlu etkiler sağlar.  
Use of coolant/lubricant or compressed air can improve chips removal and surface quality particularly in deep-hole boring and blind hole boring.  
Verwendung von Kühlmittel / Schmiermittel oder Druckluft Chips verbessern Entfernung und Oberflächengüte insbesondere im Tieflochbohren und Sackloch langweilig.



## Vibrasyon oluşabilecek işler için, takımların seçiminde göz önünde bulundurulması gereken faktörler :

Factors to be considered when selecting the tools for workpiece subjects to vibration :

Die zu berücksichtigenden Faktoren bei der Auswahl der Werkzeuge für sein Werkstück Themen zu Vibrationen :

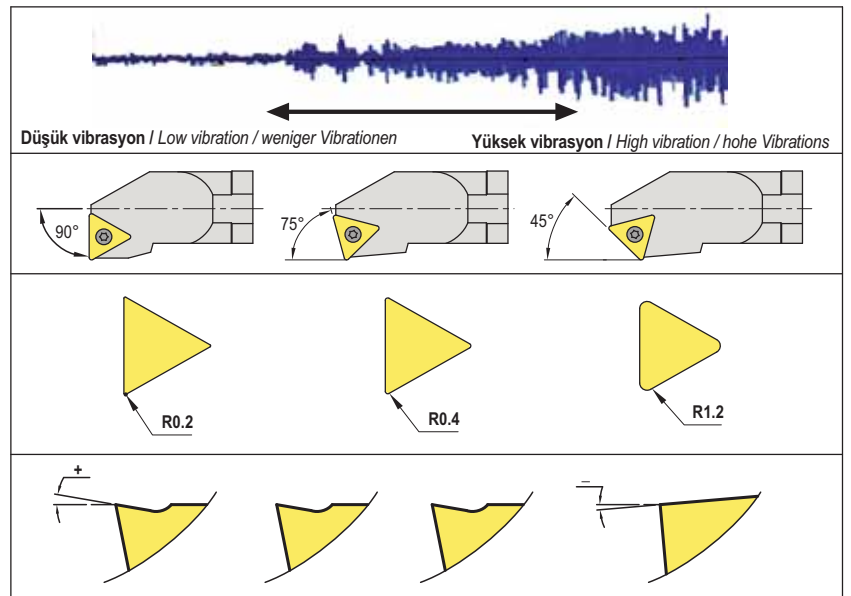
- Yanaşma açısı mümkün olduğunca 90 dereceye yakın olmalı ve 75 dereceden az olmamalıdır.

The setting angle should be as close as possible to 90 degrees and not less than 75 degrees.

Der Einstellwinkel sollte so nahe wie möglich an 90° nicht unter 75° liegen

- Küçük köşe radyusu seçilmelidir.  
Select smaller insert-tip radius.  
Kleinen Eckenradius wählen.

- Pozitif takım ve uçlar kullanılmalıdır.  
Use positive holders and inserts.  
Positive Halter und Wendschneidplatten wählen.



# Mekanik Sıkmalı Uç Şeklinin Seçilmesi

Selecting Indexable Insert Shape

Wahl der Wendepplattenform



## Mekanik Sıkmalı Uç Şekli / Indexable Insert Shape / Wendeschneidplatte Form

- Yandaki şemada yuvarlak şekilden, 35 derece uç açılılara kadar kullanımı en yaygın olan uçlar gösterilmiştir.

The figure at the right shows the most common insert shapes from round tips to 35 degrees.

Die Abbildung zeigt die gebräuchlichsten ISO-Plattenformen von der runden bis hin zur 35° Wendeschneidplatte.

- Şemada okun gösterdiği gibi kesici kenar dayanımı ( S ), geniş açılı uçlara doğru artar; bununla beraber zor ve dar noktalara ulaşılabilirlik ( Z ), dar açılı uçlara doğru artar.

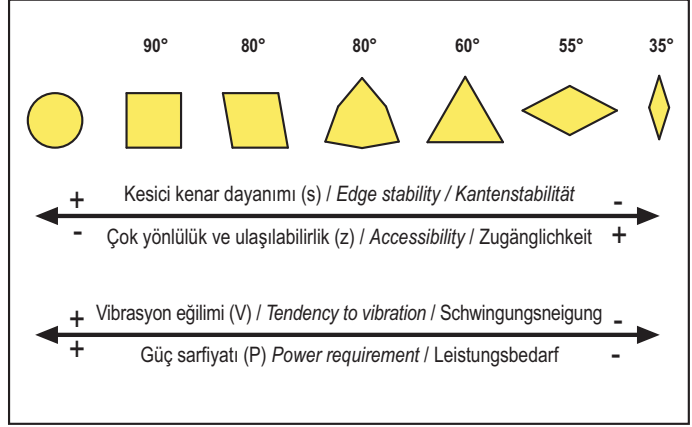
As it's seen on the figure, the stability of cutting edge (s) increases toward the wide angle tips, although the accession to the hard and narrow points gets difficult toward acute angle tips.

Die Pfeilskala zeigt, dass die Schneidkantenstabilität (S) mit größer werdendem Eckenwinkel zunimmt. Je kleiner der Eckenwinkel, umso besser ist die Zugänglichkeit. (Z)

- Vibrasyon eğilimi ( V ) uç açısı büyüdükçe artmaktadır. Uç açısı küçüldükçe güç ( P ) gereksinimi azalmaktadır.

The tendency to vibration ( V ) increases as the tip angle increases whereas the power required ( P ) decreases as the tip angle decreases.

Die Pfeilskala zeigt, dass die Vibrationsneigung (V) links ansteigt, während Leistungsbedarf (P) recht niedriger ist.



## Köşe Radyusu ve İlerleme / Tip Radius and Feed / Eckenradius und Vorschub

Mekanik sıkmalı uçta köşe radyusu, işleme esnasında önemli bir faktördür. Örneğin :

The tip radius of an insert is a key factor that results in :

Der Eckenradius der Wendeschneidplatte ist ein Schlüsselfaktor in Bezug auf.

- Kaba tornalama sırasında dayanım, Stability during rough turning, Stabilität beim Schruppen.

- Finiş operasyonlarında yüzey kalitesi, Surface quality during finish turning, Oberflächengüte beim Schlichten

### Uç radyusuna göre max. ilerleme değerleri

Maximum feed rate for some tip radius

Maximaler Vorschub für einige Spitzenradius

Köşe radyusu ( r ) mm Corner Radius ( r ) mm	0.4	0.8	1.2	1.6	2.4
Tavsiye edilen max. ilerleme değeri ( f <sub>n</sub> ) mm / dev. Recommended max. feed rate ( f <sub>n</sub> ) mm / dev.	0.25-0.35	0.4-0.7	0.5-1.0	0.7-1.3	1.0-1.8
Empfohlene max. füttern Rate ( f <sub>n</sub> ) mm / dev.					

## Kaba Tornalama / Rough Turning / Schruppdrehen

- Kesme kenarı dayanımı yüksek olmalıdır. Bu yüzden mümkün olan en büyük uç radyusu seçilmelidir.

Use the largest possible tip radius to ensure the greatest degree of stability for the cutting edge.

Größtmöglichen Eckenradius wahlen, um eine möglichst stabile Schneidkante zu gewährleisten.

- Uç radyusunun büyük seçilmesi, daha yüksek ilerleme değerlerine olanak tanır.

Larger tip radius ensures greater feed rate.

Ein großer Eckenradius erlaubt größere Vorschübe.

- Eğer vibrasyon riski varsa uç radyusu küçük alınmalıdır.

Prefer smaller tip radius if there is risk of vibration.

Bei Vibrationsgefahr kleineren Eckenradius wahlen.

Kaba tornalamada kullanılan uç radyusları genellikle 1,2 ve 1,6 mm'dir.

The tip radius frequently used for rough turning are 1,2 and 1,6 mm.

Die bei der Schruppbearbeitung am häufigsten verwendeten Radien betragen 1,2-1,6 mm.

Bu tabloda tavsiye edilen max. ilerleme değerleri, uç radyusunun 2/3' üne göre hazırlanmıştır.

The maximum feeding rates recommended reflect two thirds (2/3) of the tip radius.

Die maximalen Preise Fütterung empfohlen spiegeln zwei Drittel (2/3) des Spitzenradius.

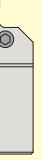
### Aşağıdaki durumlarda daha yüksek ilerleme değerleri uygulanabilir.

Greater feed rates are possible in following cases.

Höhere Vorschübe sind in folgenden Fällen möglich.

- En az 60 derece uç açısına ve iyi bir kesme dayanımına sahip uçların kullanılması halinde, When the insert having 60 degrees of tip angle and stable cutting edge is used, Wendeschneidplatten mit stabiler Schneidkante und Spitzwinkel von min. 60°
- Tek taraflı talaş kırıcılı uçların kullanılması durumunda, When the insert having single side chip breaker is used, Wenn der Einsatz mit einseitig Spanbrecher verwendet wird,
- 90 dereceden daha küçük yanaşma açısının kullanıldığı durumlarda, When the insert having setting angle less than 90 degrees is used, Wenn der Einsatz mit Anstellwinkel kleiner als 90 Grad verwendet wird,
- Normal kesme hızlarında rahat talaş kaldırılabilen malzemelerin işlenmesinde, Working with the materials that can be machined easily at normal cutting speeds, Die Arbeit mit den Materialien, die leicht an bearbeitet werden kann normalen Schnittgeschwindigkeiten,

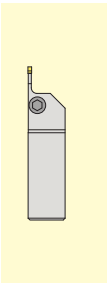







**Kanal ve Kesme Katerleri / Turning - Grooving and Parting-off**  
 Klemmhalter, Abstecken und Einstechen


 <p><b>XLCFN .... TB</b>                  Sayfa / Page / Seite : 94</p>	 <p><b>SBN</b>                  Sayfa / Page / Seite : 94</p>	 <p><b>XLCFR/L .... LTH</b>                  Sayfa / Page / Seite : 95</p>
 <p><b>XLCFN .... KL</b>                  Sayfa / Page / Seite : 95</p>	 <p><b>XLCFN .... N151</b>                  Sayfa / Page / Seite : 96</p>	 <p><b>XLCFR .... TB</b>                  Sayfa / Page / Seite : 96</p>
 <p><b>R/LF 151 22 ....</b>                  Sayfa / Page / Seite : 97</p>	 <p><b>R/LF 151 23 ....</b>                  Sayfa / Page / Seite : 97</p>	 <p><b>CGFCR / L .... E..</b>                  Sayfa / Page / Seite : 98</p>
 <p><b>CGFCR / L .... F6</b>                  Sayfa / Page / Seite : 98</p>	 <p><b>CGFCR / L .... F..</b>                  Sayfa / Page / Seite : 99</p>	 <p><b>S... CGACR / L</b>                  Sayfa / Page / Seite : 99</p>
 <p><b>MGEHR / L</b>                  Sayfa / Page / Seite : 100</p>	 <p><b>MGIVR / L</b>                  Sayfa / Page / Seite : 100</p>	 <p><b>R / L 154 91 ....</b>                  Sayfa / Page / Seite : 101</p>



**Kanal ve Kesme Takımları / Turning - Grooving and Parting-off**  
Klemmhalter, Abstechen und Einstechen




**R / L 154 91 ....**  
Sayfa / Page / Seite : 101




**R / L 154 93 ....**  
Sayfa / Page / Seite : 102



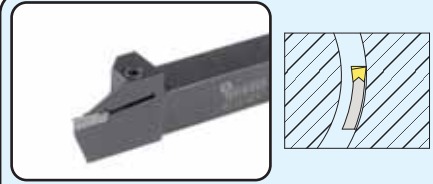
**R / L 154 93 ....**  
Sayfa / Page / Seite : 102



**TDKR / L**  
Sayfa / Page / Seite : 104



**TDKR / L**  
Sayfa / Page / Seite : 104



**AKR / L**  
Sayfa / Page / Seite : 106 - 107

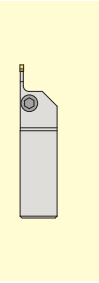
**Diş Açma Katerleri / Toolholder - Threading**  
Klemmhalter, Gewindedrehen



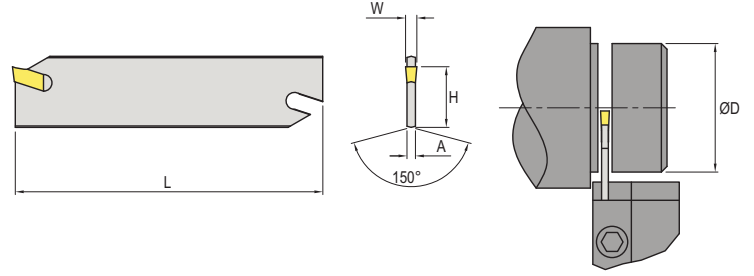
**NL / AL**  
Sayfa / Page / Seite : 108



**NVR / LCH - AVR / LCH**  
Sayfa / Page / : 109

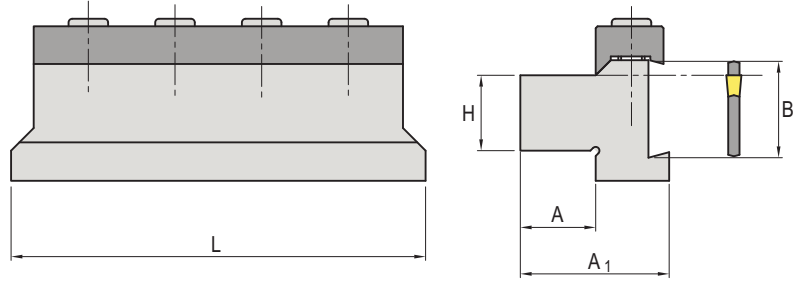






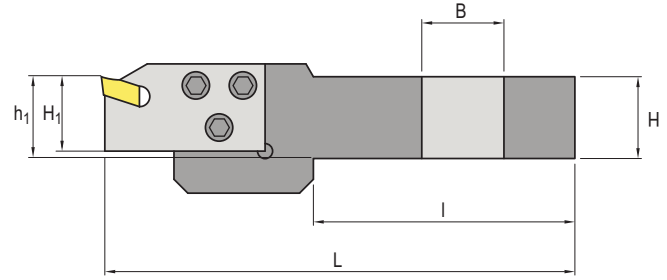
Kod Code Bezeichnung	Stok Stock Lager	Çap Diameter ØD	Genişlik Width \ Breite W	H	L	A	Anahtar Wrench Torx Schlüssel	Uç Tipi Insert Type Plattentype
XLCFN	26 J21 TB	○	2.2	21.4	110	1.8	TCA 5	STE(N) 2.0
	26 J31 TB	●	3.1	21.4	110	2.5		STE(N) 3.0
	26 J41 TB	●	4.1	21.4	110	3.4		STE(N) 4.0
	26 J51 TB	●	5.1	21.4	110	4.2		STE(N) 5.0
	32 J21 TB	○	2.2	25	120	1.8		STE(N) 2.0
	32 J31 TB	●	3.1	25	120	2.5		STE(N) 3.0
	32 J41 TB	●	4.1	25	120	3.4		STE(N) 4.0
	32 J51 TB	●	5.1	25	120	4.2		STE(N) 5.0

**Kesme Laması Tutucusu**  
Turning - Toolholder For Blade  
Drehen - Spannblock für Klingen



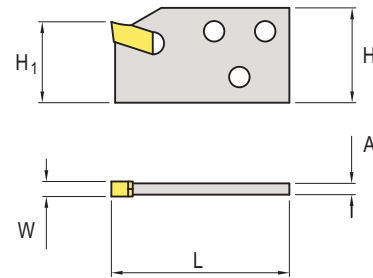
Kod Code Bezeichnung	Stok Stock Lager	H	B	A	A <sub>1</sub>	L	Sıkma Vidası Clamping Screw Klemmschraube	
SBN	20 20 26K	●	20	26	20	33	109	M6 x 30
	25 20 26K	●	25	26	20	33	109	
	25 25 26K	●	25	26	25	38	109	
	32 25 26K	○	32	26	25	38	109	
	20 20 32K	●	20	32	20	33	120	
	25 20 32K	●	25	32	20	33	120	
	25 25 32K	●	25	32	25	38	120	
	32 25 32K	○	32	32	25	38	120	

**Kısa Kesme Laması Tutucusu**  
Turning - Toolholder For Short Blade  
Drehen - Spannblock für kurze Klingen



Kod Code Bezeichnung	Stok Stock Lager		h <sub>1</sub> H	H <sub>1</sub>	B	I	L	Sıkma Vidası Clamping Screw Klemmschraube	Anahtar Wrench Torx Schlüssel
	R	L							
XLCFR/L 20 20 26 LTH	●	○	20	21.5	20	105	160	M5 x 15 BV	Ta3
25 25 26 LTH	●	○	25		25	110	170		
32 25 26 LTH	○	○	32		25	130	190		

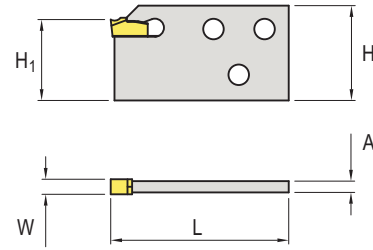
**Kısa Kesme Laması**  
Turning - Short Blade, Parting  
Drehen - kurze Klingen



Kod Code Bezeichnung	Stok Stock Lager	H	A	L	H <sub>1</sub>	W	Uç Tipi Insert Type Plattentype
XLCFN 26X 2KL	○	25.2	2.0	50	21.5	2.2	STE(N) 2.0
26X 3KL	●		2.5			3.1	STE(N) 3.0
26X 4KL	●		3.4			4.1	STE(N) 4.0
26X 5KL	●		4.2			5.1	STE(N) 5.0

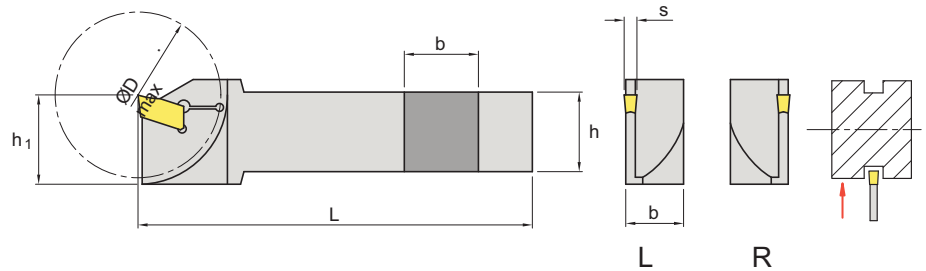
R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : XLCFR 20 20 26 LTH  
● 2 Hafta / in two weeks / in zwei Wochen ○ Stokta yok / Non stock item / Nicht auf Lager

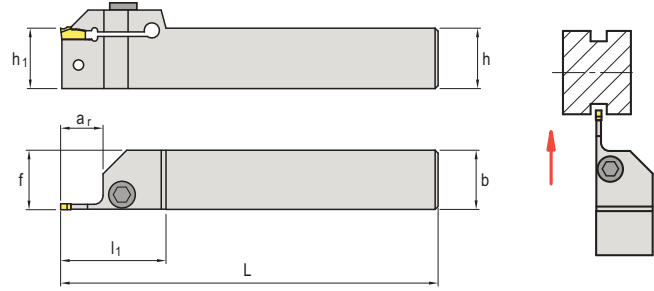


Kod Code Bezeichnung	Stok Stock Lager	H	A	L	H <sub>1</sub>	W	Uç Tipi Insert Type Plattentype
XLCFN 26X 3N 151	○	25.2	2.0	50	21.5	2.1	N151 2 300
	○		2.5			3.1	N151 2 400
	○		3.4			4.1	N151 2 500

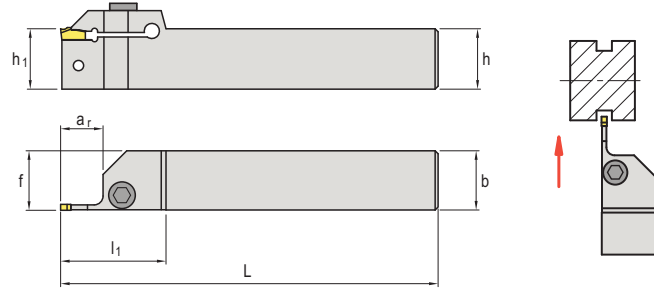
**Kesme Kateri**  
Turning - Parting and Grooving  
Drehen - Klemmhalter, Abstechen und Einstechen



Kod Code Bezeichnung	Stok Stock Lager		ØD max	S	h h <sub>1</sub>	b	L	Sıkma Vidası Clamping Screw Klemmschraube	Anahtar Wrench, Torx Schlüssel
	R	L							
XLCFR/L	●	○	35	3.1	20	20	125	TCA5	STE(N) 3.0
	○	○	35	4.1	20	20	125		STE(N) 4.0
	○	○	40	3.1	25	20	150		STE(N) 3.0
	●	○	40	3.1	25	25	150		STE(N) 3.0
	○	○	40	4.1	25	20	150		STE(N) 4.0
	○	○	40	4.1	25	25	150		STE(N) 4.0
	○	○	40	5.1	25	25	150		STE(N) 5.0
	○	○	50	3.1	32	25	170		STE(N) 3.0
	○	○	60	4.1	32	25	170		STE(N) 4.0
	○	○	60	5.1	32	25	170		STE(N) 5.0



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	ar	b	f	h	h1	l1	L				
R/LF 151	22 20 20 2Q	●	●	8	20	21	20	20	23	125	Ta4	M5 x 15	N 151 22 200
	22 25 25 2Q	●	●	8	25	26	25	25	23	150			N 151 22 250
	22 20 20 2.5Q	○	○	10	20	25	20	20	27	125			N 151 22 300
	22 25 25 2.5Q	○	○	10	25	32	25	25	27	150			N 151 22 400
	22 20 20 3Q	●	●	10	20	25	20	20	27	125			N 151 22 500
	22 25 25 3Q	●	●	10	25	32	25	25	27	150			N 151 22 600
	22 20 20 4Q	●	●	13	20	25	20	20	31	125		M5 x 20	N 151 22 500
	22 25 25 4Q	●	●	13	25	32	25	25	31	150			
	22 32 25 4Q	○	○	13	25	32	32	32	31	170			
	22 25 25 5Q	●	●	13	25	32	25	25	31	150			
22 32 25 5Q	○	○	13	25	32	32	32	31	170	M6 x 20	N 151 22 600		
22 25 25 6Q	●	●	16	25	32	25	25	37	150				
22 32 25 6Q	○	○	16	25	32	32	32	37	170				



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen								Anahtar Wrench Schlüssel	Uç Vidası Insert Screw Plattenschraube	Uç Tipi Insert Type Plattentype	
	R	L	ar	b	f	h	h1	l1	L					
R/LF 151	23 20 20 2Q	●	●	15	20	21	20	20	39	125	Ta4	M5 x 15	N 151 22 200	
	23 25 25 2Q	●	●	15	25	26	25	25	39	150			N 151 22 250	
	23 20 20 2.5Q	○	○	20	20	21	20	20	40	125			N 151 22 300	
	23 25 25 2.5Q	○	○	20	25	26	25	25	40	150			N 151 22 400	
	23 16 16 3Q	●	●	20	16	17	16	16	41	100			M5 x 20	N 151 22 500
	23 20 20 3Q	●	●	20	20	21	20	20	41	125				
	23 25 25 3Q	●	●	20	25	26	25	25	41	150				
	23 32 25 3Q	●	●	20	25	26	32	32	37	170				
	23 20 20 4Q	●	○	25	20	21	20	20	47	125				
	23 25 25 4Q	●	●	25	25	26	25	25	47	150				
	23 32 25 4Q	●	●	25	25	26	32	32	47	170			M6 x 20	N 151 22 600
	23 25 25 5Q	●	●	32	25	26	25	25	31	150				
	23 32 25 5Q	●	●	32	25	26	32	32	31	170				
	23 25 25 6Q	●	●	32	25	26	25	25	37	150				
	23 32 25 6Q	●	●	32	25	26	32	32	37	170				

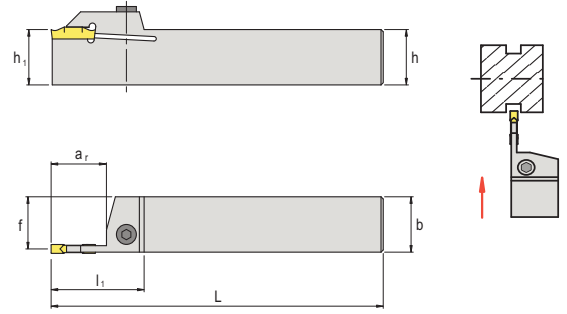
R : Sağ / Right / Rechte L : Sol / Left / Linke

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :RF 151 22 25 25 3Q

● Stokta / Stock / Verfügbar ab Lager

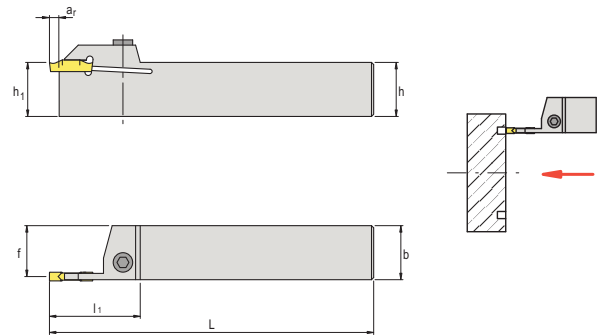
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



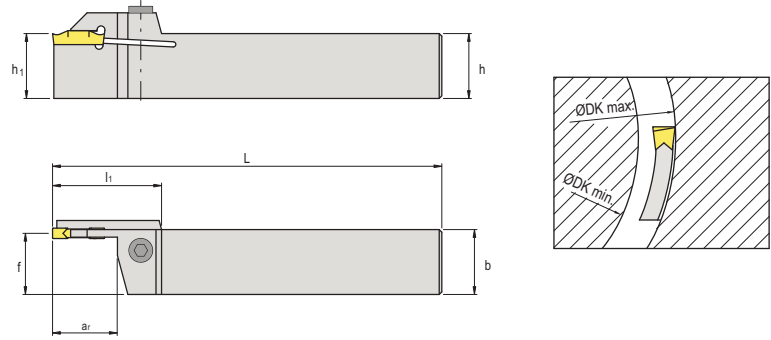
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	a <sub>r</sub>	b	f	h	h <sub>1</sub>	l <sub>1</sub>	L			
CGFCR/L 16 16 J2 E12	○	○	12	16	14.95	16	16	32	110	Ta4	M5 x 16	ED LCMR 2.00.....
16 16 J3 E12	○	○	12	16	14.95	16	16	32	110			ED LCMR 3.00.....
16 16 J4 E15	○	○	15	16	14.55	16	16	32	110			ED LCMR 4.00.....
20 20 K2 E12	○	○	12	20	18.95	20	20	32	125			ED LCMR 2.00.....
20 20 K3 E12	○	○	12	20	18.95	20	20	32	125			ED LCMR 3.00.....
20 20 K4 E15	○	○	15	20	18.55	20	20	32	125			ED LCMR 4.00.....
20 20 K5 E20	○	○	20	20	18.05	20	20	37	125	Ta5	M6 x 25	ED LCMR 5.00.....
20 20 K6 E20	○	○	20	20	17.55	20	20	37	125			ED LCMR 6.00.....
25 25 M2 E12	○	○	12	25	23.95	25	25	32	150	Ta4	M5 x 16	ED LCMR 2.00.....
25 25 M3 E12	○	○	12	25	23.95	25	25	32	150			ED LCMR 3.00.....
25 25 M4 E15	○	○	15	25	23.55	25	25	32	150			ED LCMR 4.00.....
25 25 M5 E20	○	○	20	25	23.05	25	25	37	150	Ta5	M6 x 25	ED LCMR 5.00.....
25 25 M6 E20	○	○	20	25	22.55	25	25	37	150			ED LCMR 6.00.....
25 25 M8 E25	○	○	25	25	22.05	25	25	42	150			ED LCMR 8.00.....
32 32 P8 E25	○	○	25	32	29.05	32	32	42	170			ED LCMR 8.00.....

**Alın Kanal Kateri**  
Turning - Face Grooving  
Drehen - Axial Einstechen



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	a <sub>r</sub>	b	f	h	h <sub>1</sub>	l <sub>1</sub>	L			
CGFCR/L 16 16 J4 F6	○	○	6	16	14.55	16	16	32	110	Ta4	M5 x 16	ED LCMR 4.00.....
20 20 K4 F6	○	○	6	20	18.55	20	20	32	125			
25 25 M4 F6	○	○	6	25	23.55	25	25	32	150			
20 20 K6 F6	○	○	6	20	17.55	20	20	37	125	Ta4	M5 x 25	ED LCMR 6.00.....
25 25 M6 F6	○	○	6	25	22.55	25	25	37	150			

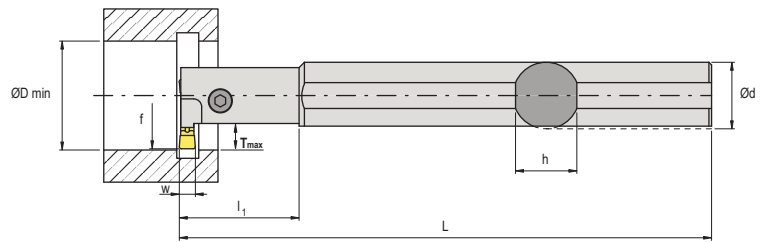
**Alın Kanal Kateri**  
Turning - Face Grooving  
Drehen - Axial Einstechen



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							ØDK min.	ØDK max.	Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	a <sub>r</sub>	b	f	h	h <sub>1</sub>	l <sub>1</sub>	L					
CGFCR/L 25 25 M3 F10 D30N	○	○	10	25	23.95	25	25	38	150	24	35	Ta5	M6 x 25	ED LCMR 3.00.
25 25 M3 F10 D35N	○	○	10	25	23.95	25	25	38	150	29	42			
25 25 M3 F10 D42	○	○	10	25	23.95	25	25	38	150	36	50			
25 25 M3 F15 D50N	○	○	15	25	23.95	25	25	38	150	44	70			
25 25 M3 F15 D70	○	○	15	25	23.95	25	25	38	150	64	100			
25 25 M4 F10 D30	○	○	10	25	23.55	25	25	39	150	22	36			
25 25 M4 F20 D36	○	○	20	25	23.55	25	25	39	150	28	42			ED LCMR 4.00..
25 25 M4 F20 D42	○	○	20	25	23.55	25	25	39	150	34	50			
25 25 M4 F20 D50	○	○	20	25	23.55	25	25	39	150	42	70			
25 25 M4 F20 D70	○	○	20	25	23.55	25	25	39	150	62	120			
25 25 M4 F20 D120	○	○	20	25	23.55	25	25	39	150	112	200			ED LCMR 5.00..
25 25 M5 F25 D60	○	○	25	25	23.05	25	25	49	150	50	80			
25 25 M5 F25 D80	○	○	25	25	23.05	25	25	49	150	70	110			
25 25 M5 F25 D110	○	○	25	25	23.05	25	25	49	150	100	150			
25 25 M5 F25 D150	○	○	25	25	23.05	25	25	49	150	140	200			ED LCMR 6.00..
25 25 M6 F25 D60			25	25	22.55	25	25	49	150	48	70			
25 25 M6 F25 D70			25	25	22.55	25	25	49	150	58	100			
25 25 M6 F25 D100			25	25	22.55	25	25	49	150	88	180			
25 25 M6 F25 D180			25	25	22.55	25	25	49	150	168	400			



**Delik Kanal Kateri**  
Turning - Internal Grooving / Drehen - Innen Einstechen



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	Ød	L	l <sub>1</sub>	f	h <sub>1</sub>	W	T <sub>max</sub>			
S 20S CGACR/L 3	○	○	20	250	40	15.8	9	3	6.5	Ta4	M5 x 16	ED LCMR 3.00.....
CGACR/L 4	○	○	20	250	40	15.8	9	4	6.5			ED LCMR 4.00.....
S 25T CGACR/L 3	○	○	25	300	40	17.5	11.5	3	6.5	Ta5	M6 x 25	ED LCMR 3.00.....
CGACR/L 4	○	○	25	300	40	17.5	11.5	4	6.5			ED LCMR 4.00.....
CGACR/L 5	○	○	25	300	40	17.5	11.5	5	6.5	Ta4	M5 x 16	ED LCMR 5.00.....
S 32U CGACR/L 4	○	○	32	350	60	20.8	14	4	6.5			ED LCMR 4.00.....
CGACR/L 5	○	○	32	350	60	20.8	14	5	6.5	Ta5	M6 x 25	ED LCMR 5.00.....
CGACR/L 6	○	○	32	350	60	20.8	14	6	6.5			ED LCMR 6.00.....
CGACR/L 8	○	○	32	350	60	21.3	14.5	8	6.5	Ta5	M6 x 25	ED LCMR 8.00.....
S 40 U CGACR/L 8	○	○	40	400	65	28.8	19	8	6.5			

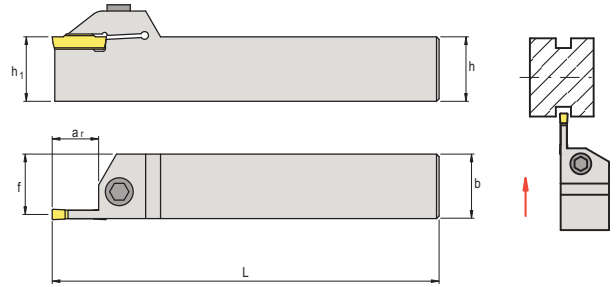
R : Sağ / Right / Rechte L : Sol / Left / Linke

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CGFCR 25 25 M3 F15 D70

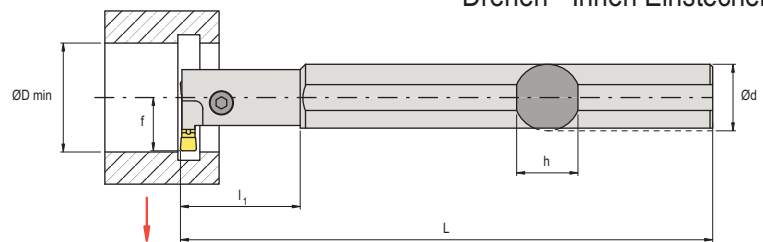
● Stoktan / Stock / Verfügher ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



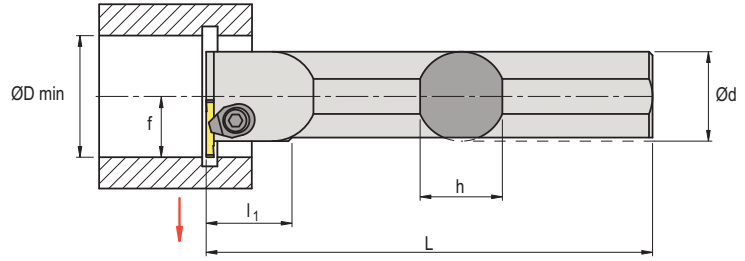
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen						Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	a <sub>r</sub>	b	f	h	h <sub>1</sub>	L			
MGEHR/L 16 16 2	○	○	14.5	16	16.25	16	16	100	Ta5	M6 x 15	MGMN 200 M
16 16 3	○	○	18.5	16	16.35	16	16	100			MGMN 300 M
20 20 2	○	○	14.5	20	20.25	20	20	125			MGMN 200 M
20 20 3	○	○	18	20	20.4	20	20	125			MGMN 300 M
20 20 4	○	○	18	20	20.4	20	20	125			MGMN 400 M
20 20 5	○	○	23	20	20.5	20	20	125			MGMN 500 M
20 20 6	○	○	23	20	20.6	20	20	125		MGMN 600 M	
25 25 3	○	○	18	25	25.4	25	25	150		MGMN 300 M	
25 25 4	○	○	18	25	25.4	25	25	150		MGMN 400 M	
25 25 5	○	○	23	25	25.5	25	25	150		MGMN 500 M	
25 25 6	○	○	23	25	25.6	25	25	150		MGMN 600 M	
25 25 8	○	○	28	25	26.1	25	25	150		MGMN 800 M	
32 32 3	○	○	18	32	32.4	32	32	170		MGMN 300 M	
32 32 4	○	○	18	32	32.4	32	32	170		MGMN 400 M	
32 32 5	○	○	23	32	32.5	32	32	170		MGMN 500 M	
32 32 6	○	○	23	32	32.6	32	32	170		MGMN 600 M	
32 32 8	○	○	28	32	33.1	32	32	170	MGMN 800 M		



**Delik Kanal Kateri**  
Turning - Internal Grooving  
Drehen - Innen Einstechen

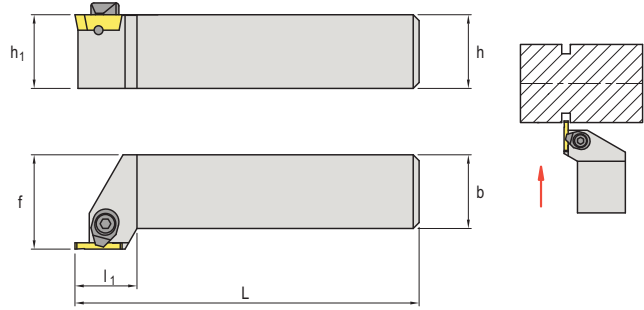
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen						Anahtar Wrench Schlüssel	Sıkma Vidası Screw Schraube	Uç Tipi Insert Type Plattentype
	R	L	ØDmin	Ød	h	f	l <sub>1</sub>	L			
MGIVR/L 20 16 2	○	○	20	16	15	12.4	35	125	Ta5	M5 x 15	MGMN 200 M
25 20 2	○	○	25	20	18	14	45	150			MGMN 300 M
25 20 3	○	○	25	20	18	15.6	45	150			MGMN 400 M
25 20 4	○	○	25	20	18	15.6	45	150			MGMN 300 M
31 25 3	○	○	31	25	23	18.9	45	200			MGMN 400 M
31 25 4	○	○	31	25	23	18.9	45	200			MGMN 500 M
31 25 5	○	○	31	25	23	18.9	45	200		MGMN 600 M	
31 25 6	○	○	31	25	23	18.9	45	200		MGMN 300 M	
37 32 3	○	○	37	32	30	21.5	65	250		MGMN 400 M	
37 32 4	○	○	37	32	30	21.5	65	250		MGMN 500 M	
37 32 5	○	○	37	32	30	21.5	65	250		MGMN 600 M	
37 32 6	○	○	37	32	30	21.5	65	250		MGMN 300 M	

**Delik Kanal Kateri**  
Turning - Internal Grooving  
Drehen - Innen Einstechen



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen						Baskı Pabucu Clamp Klemme	Pim Pin Stift	Baskı Vidası Clamp Screw Klemmschraube	Uç Tipi Insert Type Plattentype
	R	L	Ød	h	l <sub>1</sub>	L	f	ØD min				
R/L 154	91 16 3Q	● ○	16	15	20	150	11	21	7830001	CKP 3x8	7830002	BKU 1603.....R/L
	91 20 3Q	● ○	20	18	22	200	13	26				
	91 25 3Q	○ ○	25	23	24	250	17	31				
	91 32 3Q	○ ○	32	30	26	300	21	40				
	91 25 5Q	○ ○	25	23	28	250	17	31	7485865	CKP 3x10	7485860	BKU 2204.....R/L
	91 32 5Q	○ ○	32	30	30	300	21	40				
	91 40 5Q	○ ○	40	38	35	350	27	50				

**Kanal Kateri**  
Turning - Grooving  
Drehen - Stechen



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen						Baskı Pabucu Clamp Klemme	Pim Pin Stift	Baskı Vidası Clamp Screw Klemmschraube	Uç Tipi Insert Type Plattentype
	R	L	h	h <sub>1</sub>	b	l <sub>1</sub>	L	f				
R/L 154	91 16 16 3Q	○ ○	16	16	16	21	100	20	7830001	CKP 3x8	7830002	BKU 1603.....R/L
	91 20 20 3Q	● ○	20	20	20	21	125	25				
	91 25 25 3Q	● ○	25	25	25	21	150	32				
	91 32 25 3Q	○ ○	32	32	25	21	170	32				
	91 16 16 5Q	○ ○	16	16	16	26	100	20	7485865	CKP 3x10	7485860	BKU 2204.....R/L
	91 20 20 5Q	○ ○	20	20	20	26	125	25				
	91 25 25 5Q	○ ○	25	25	25	26	150	32				
	91 32 25 5Q	○ ○	32	32	25	26	170	32				

R : Sağ / Right / Rechte L : Sol / Left / Linke

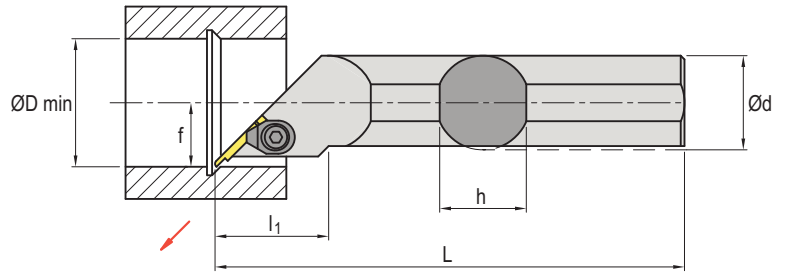
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : R 154 91 16 3Q

● 2 Hafta / in two weeks / in zwei Wochen

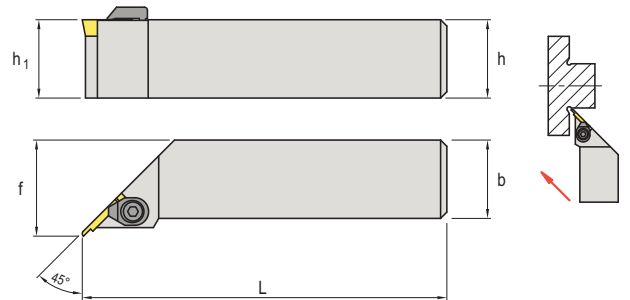
○ Stokta yok / Non stock item / Nicht auf Lager



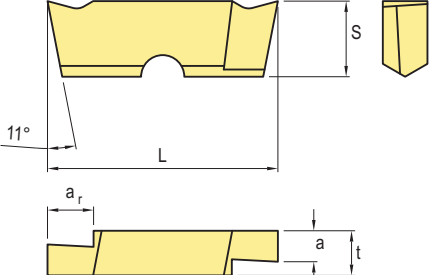


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen							Baskı Pabucu Clamp Klemme	Pim Pin Stift	Baskı Vidası Clamp Screw Klemmschraube	Uç Tipi Insert Type Plattentype	
		R	L	Ød	h	l <sub>1</sub>	L	f					ØD min
R/L 154	93 16 3Q	○	○	16	15	20	150	11	21	7830001	CKP 3x8	7830002	BKU 1603.....R/L
	93 20 3Q	○	○	20	18	22	200	13	26				
	93 25 3Q	○	○	25	23	24	250	17	31				
	93 32 3Q	○	○	32	30	26	300	21	40				
	93 25 5Q	○	○	25	23	28	250	17	31	7485865	CKP 3x10	7485860	BKU 2204.....R/L
	93 32 5Q	○	○	32	30	30	300	21	40				
	93 40 5Q	○	○	40	38	35	350	27	50				

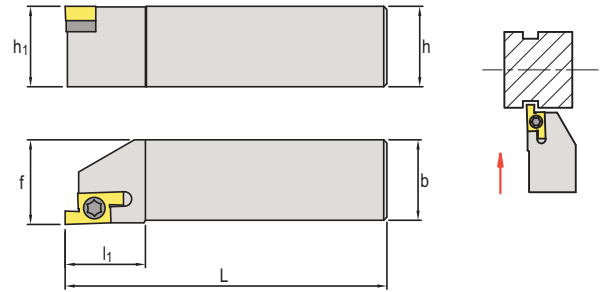
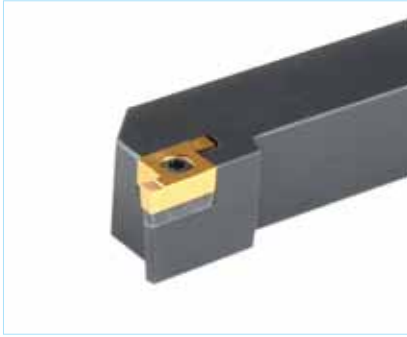
**Kanal Kateri**  
Turning - External Grooving  
Drehen - Stechen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Baskı Pabucu Clamp Klemme	Pim Pin Stift	Baskı Vidası Clamp Screw Klemmschraube	Uç Tipi Insert Type Plattentype	
		R	L	h	h <sub>1</sub>	b	L					f
R/L 154	93 16 16 3Q	○	○	16	16	16	100	20	7830001	CKP 3x8	7830002	BKU 1603.....R/L
	93 20 20 3Q	○	○	20	20	20	125	25				
	93 25 25 3Q	○	○	25	25	25	150	32				
	93 32 25 3Q	○	○	32	32	25	170	32				
	93 16 16 5Q	○	○	16	16	16	100	20	7485865	CKP 3x10	7485860	BKU 2204.....R/L
	93 20 20 5Q	○	○	20	20	20	125	25				
	93 25 25 5Q	○	○	25	25	25	150	32				
	93 32 25 5Q	○	○	32	32	25	170	32				

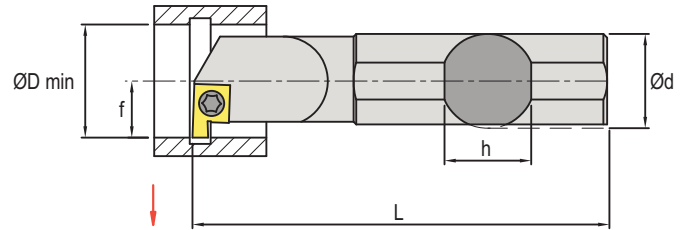
Uç Vidası Insert Screw Plattenschraube	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					
		R	L	a	t	S	&	L	a <sub>r</sub>
	BKU 1603	110 R/L	○ ○	1.10	3.1	5.25	11°	16	2.1
		130 R/L	○ ○	1.30					2.3
		160 R/L	○ ○	1.60					2.6
		185 R/L	○ ○	1.85					2.9
		215 R/L	○ ○	2.15					3.2
		265 R/L	○ ○	2.65					3.7
		300 R/L	○ ○	3.00					4.0
	BKU 2204	315 R/L	○ ○	3.15	5.1	6.25	11°	22	4.2
		415 R/L	○ ○	4.15					5.2
		500 R/L	○ ○	5.00					6.2



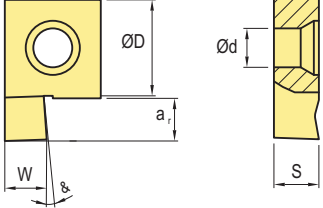


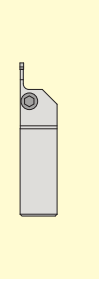
		Stok Stock Lager		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung		R	L	h <sub>1</sub>	b	l <sub>1</sub>	L	f	Sağ Altılık Anvil Right Rechte Unterlage	Sol Altılık Anvil Left Linke Unterlage	Altılık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	Uç Tipi Insert Type Plattentype
		TDKR/L	12 12 H06	○	○	12	12	18	100	16				
	16 16 H06	○	○	16	16	18	100	20						
	20 20 K06	○	○	20	20	18	125	25	—	—	—	7815101	T08 IP	BTKU 0602
	25 25 M06	○	○	25	25	18	150	32						
	32 25 P06	○	○	32	25	18	170	32						
	12 12 H09	○	○	12	12	22	100	16	—	—	—			
	16 16 H09	○	○	16	16	22	100	20						
	20 20 K09	○	○	20	20	22	125	25				7815102	T15 IP	BTKU 0904
	25 25 M09	○	○	25	25	22	150	32	KA 09 R	KA 09 L	7883102			
	32 25 P09	○	○	32	25	22	170	32						

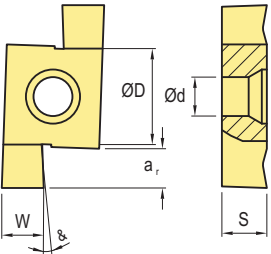
**Delik Kanal Kateri**  
Turning - Internal Grooving  
Drehen - Innen Einstechen



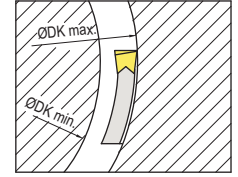
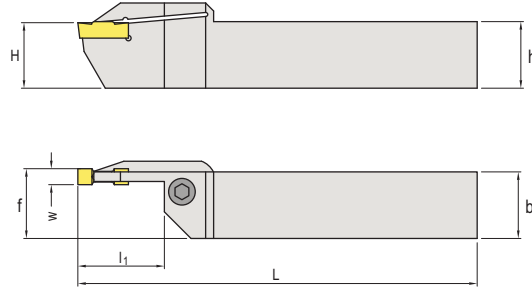
		Stok Stock Lager		Ölçüler Dimensions Abmessungen										
Kod Code Bezeichnung		R	L	ØD min.	Ød	h	L	f	Sağ Altılık Anvil Right Rechte Unterlage	Sol Altılık Anvil Left Linke Unterlage	Altılık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	Uç Tipi Insert Type Plattentype
		TDKR/L	0010 H06	○	○	14	10	9	100	7.5				
	0012 K06	○	○	17	12	11	125	8.5						
	0016 Q06	○	○	20	16	15	180	9.5	—	—	—	7815101	T08 IP	BTKU 0602
	0020 R06	○	○	26	20	19	200	13						
	0025 S06	○	○	31	25	24	250	16						
	0032 T06	○	○	38	32	30	300	20						
	0016 Q09	○	○	20	16	15	180	9.5	—	—	—			
	0020 R09	●	○	26	20	19	200	13						
	0025 S09	○	○	31	25	24	250	16				7815102	T15 IP	BTKU 0904
	0032 T09	○	○	38	32	30	300	20						
	0040 U09	○	○	48	40	37	350	24	KA 09 R	KA 09 L	7883102			
	0050 V09	○	○	65	50	47	400	29						

Uç Tipi Insert Type Plattentype	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					
		R	L	ØD (lc)	S	W	&	Ød	a <sub>r</sub>
	BTKU 06 02 215 R/L	●	●	6.35	2.6	2.15	2°	2.8	2.65
	06 02 265 R/L	●	●			2.65			

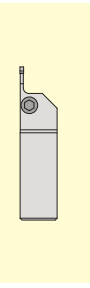
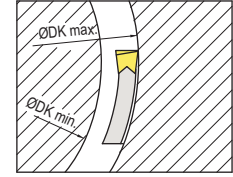
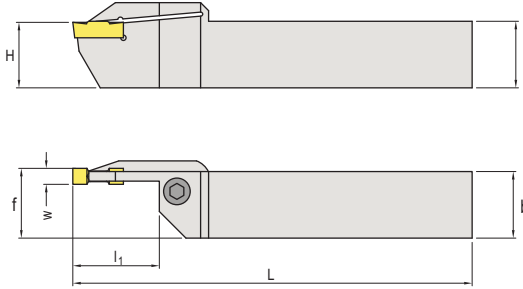


Uç Tipi Insert Type Plattentype	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					
		R	L	ØD (lc)	S	W	&	Ød	a <sub>r</sub>
	BTKU 09 04 315 R/L	●	●	9.52	4.76	3.15	2°	4.4	4.5
	09 04 415 R/L	●	●			4.15			

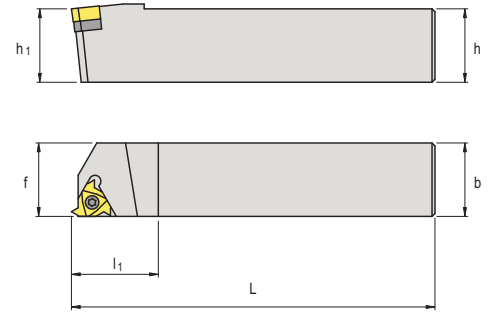









Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen										Uç Tipi Insert Type Plattentype
	R	L	H	h	b	l <sub>1</sub>	L	f	W	ØDK min	ØDK max		
AKR/L 20 25 3T [ 25 - 30 ]	●	●	20	20	20	25	140	20.5	3	25	30	HFPR 3003 / HFPR 3015	
20 30 3T [ 30 - 38 ]	●	●	20	20	20	25	140	20.5	3	30	38		
20 38 3T [ 38 - 48 ]	●	●	20	20	20	25	140	20.5	3	38	48		
20 48 3T [ 48 - 60 ]	●	●	20	20	20	25	140	20.5	3	48	60		
20 60 3T [ 60 - 75 ]	●	●	20	20	20	25	140	20.5	3	60	75		
20 75 3T [ 75 - 100 ]	●	●	20	20	20	25	140	20.5	3	75	100		
25 25 3T [ 25 - 30 ]	●	●	25	25	25	25	150	25.5	3	25	30		
25 30 3T [ 30 - 38 ]	●	●	25	25	25	25	150	25.5	3	30	38		
25 38 3T [ 38 - 48 ]	●	●	25	25	25	25	150	25.5	3	38	48		
25 48 3T [ 48 - 60 ]	●	●	25	25	25	25	150	25.5	3	48	60		
25 60 3T [ 60 - 75 ]	●	●	25	25	25	25	150	25.5	3	60	75		
25 75 3T [ 75 - 100 ]	●	●	25	25	25	25	150	25.5	3	75	100		
20 25 4T [ 25 - 29 ]	●	●	20	20	20	30	140	20.6	4	25	29	HFPR 4004 / HFPR 4020	
20 29 4T [ 29 - 34 ]	●	●	20	20	20	30	140	20.6	4	29	34		
20 34 4T [ 34 - 40 ]	●	●	20	20	20	30	140	20.6	4	34	40		
20 40 4T [ 40 - 48 ]	●	●	20	20	20	30	140	20.6	4	40	48		
20 48 4T [ 48 - 60 ]	●	●	20	20	20	30	140	20.6	4	48	60		
20 60 4T [ 60 - 75 ]	●	●	20	20	20	30	140	20.6	4	60	75		
20 75 4T [ 75 - 100 ]	●	●	20	20	20	30	140	20.6	4	75	100		
25 25 4T [ 25 - 29 ]	●	●	25	25	25	30	150	25.6	4	25	29		
25 29 4T [ 29 - 34 ]	●	●	25	25	25	30	150	25.6	4	29	34		
25 34 4T [ 34 - 40 ]	●	●	25	25	25	30	150	25.6	4	34	40		
25 40 4T [ 40 - 48 ]	●	●	25	25	25	30	150	25.6	4	40	48		
25 48 4T [ 48 - 60 ]	●	●	25	25	25	30	150	25.6	4	48	60		
25 60 4T [ 60 - 75 ]	●	●	25	25	25	30	150	25.6	4	60	75		
25 75 4T [ 75 - 100 ]	●	●	25	25	25	30	150	25.6	4	75	100		
25 100 4T [ 100 - 140 ]	●	●	25	25	25	30	150	25.6	4	100	140		
25 140 4T [ 140 - 240 ]	●	●	25	25	25	30	150	25.6	4	140	240		
25 240 4T [ 240 - 800 ]	●	●	25	25	25	30	150	25.6	4	240	800		



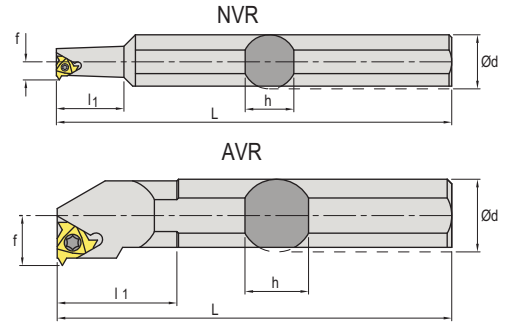
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen									Uç Tipi Insert Type Plattentype
	R	L	H	h	b	l <sub>1</sub>	L	f	W	ØDK min	ØDK max	
AKR/L 20 25 5T [ 25 - 30 ]	●	●	20	20	20	32.5	140	21	5	25	30	HFPR 5004 / HFPR 5025
20 28 3T [ 28 - 31 ]	●	●	20	20	20	32.5	140	21	5	28	31	
20 31 5T [ 31 - 35 ]	●	●	20	20	20	32.5	140	21	5	31	35	
20 35 5T [ 35 - 40 ]	●	●	20	20	20	32.5	140	21	5	35	40	
20 40 5T [ 40 - 45 ]	●	●	20	20	20	32.5	140	21	5	40	45	
20 45 5T [ 45 - 55 ]	●	●	20	20	20	32.5	140	21	5	45	55	
20 55 5T [ 55 - 70 ]	●	●	20	20	20	32.5	140	21	5	55	70	
20 70 5T [ 70 - 95 ]	●	●	20	20	20	32.5	140	21	5	70	95	
25 25 5T [ 25 - 30 ]	●	●	25	25	25	32.5	150	26	5	25	30	
25 28 3T [ 28 - 31 ]	●	●	25	25	25	32.5	150	26	5	28	31	
25 31 5T [ 31 - 35 ]	●	●	25	25	25	32.5	150	26	5	31	35	
25 35 5T [ 35 - 40 ]	●	●	25	25	25	32.5	150	26	5	35	40	
25 40 5T [ 40 - 45 ]	●	●	25	25	25	32.5	150	26	5	40	45	
25 45 5T [ 45 - 55 ]	●	●	25	25	25	32.5	150	26	5	45	55	
25 55 5T [ 55 - 70 ]	●	●	25	25	25	32.5	150	26	5	55	70	
25 70 5T [ 70 - 95 ]	●	●	25	25	25	32.5	150	26	5	70	95	
25 95 5T [ 95 - 130 ]	●	●	25	25	25	32.5	150	26	5	95	130	
25 130 5T [ 130 - 180 ]	●	●	25	25	25	32.5	150	26	5	130	180	
25 180 5T [ 180 - 800 ]	●	●	25	25	25	32.5	150	26	5	180	800	
20 26 6T [ 26 - 30 ]	●	●	20	20	20	30	140	21.4	6	26	30	HFPR 6004 / HFPR 6030
20 30 6T [ 30 - 38 ]	●	●	20	20	20	30	140	21.4	6	30	38	
20 38 6T [ 38 - 50 ]	●	●	20	20	20	30	140	21.4	6	38	50	
20 50 6T [ 50 - 70 ]	●	●	20	20	20	30	140	21.4	6	50	70	
25 30 6T [ 30 - 38 ]	●	●	25	25	25	30	150	26.4	6	30	38	
25 38 6T [ 38 - 50 ]	●	●	25	25	25	30	150	26.4	6	38	50	
25 50 6T [ 50 - 70 ]	●	●	25	25	25	30	150	26.4	6	50	70	
25 70 6T [ 70 - 100 ]	●	●	25	25	25	30	150	26.4	6	70	100	
25 100 6T [ 100 - 180 ]	●	●	25	25	25	30	150	26.4	6	100	180	
25 180 6T [ 180 - 400 ]	●	●	25	25	25	30	150	26.4	6	180	400	
25 400 6T [ 400 - ∞ ]	●	●	25	25	25	30	150	26.4	6	400	∞	



		Öçüler Dimensions Abmessungen										
Kod Code Bezeichnung	Stok Stock Lager	h h <sub>1</sub>	b	l <sub>1</sub>	L	f	Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
NL	08 - 2	○	8	8	13	80	11 ER.....ISO	—	—	7815101	T08 IP	
	08 - 2 LH	○	8	8	13	80	11 EL.....ISO	—	—	7815101	T08 IP	
	12 - 3	○	12	12	15	100	16 ER.....ISO	—	—	7815102	T15 IP	
	12 - 3 LH	○	12	12	15	100	16 EL.....ISO	—	—	7815102	T15 IP	
AL	16 3C	○	16	16	16	125	16 ER.....ISO	—	—	7815102	T15 IP	
	16 3C LH	○	16	16	16	125	16 EL.....ISO	—	—	7815102	T15 IP	
	20 3C	●	20	20	21	125	16 ER.....ISO	—	—	7815102	T15 IP	
	20 3C LH	○	20	20	21	125	16 EL.....ISO	—	—	7815102	T15 IP	
	25 3C	●	25	25	21	150	16 ER.....ISO	—	—	7815102	T15 IP	
	25 3C LH	○	25	25	21	150	16 EL.....ISO	VIDA 16 ALT R/L	7883102	7815102	T15 IP	
	32 3C	○	32	32	21	170	16 ER.....ISO	—	—	7815102	T15 IP	
	32 3C LH	○	32	32	21	170	16 EL.....ISO	—	—	7815102	T15 IP	
	25 4C	●	25	25	28	150	22 ER.....ISO	—	—	7815102	T15 IP	
	25 4C LH	○	25	25	28	150	22 EL.....ISO	—	—	7815102	T15 IP	
	32 4C	○	32	32	28	170	22 ER.....ISO	—	—	7815102	T15 IP	
	32 4C LH	○	32	32	28	170	22 EL.....ISO	VIDA 22 ALT R/L	7883101	7883202	T15 IP	
	40 4C	○	40	40	28	180	22 ER.....ISO	—	—	7883101	T15 IP	
	40 4C LH	○	40	40	28	180	22 EL.....ISO	—	—	7883101	T15 IP	
	25 5C	●	25	25	28	150	27 ER.....ISO	—	—	7883101	T15 IP	
	25 5C LH	○	25	25	28	150	27 EL.....ISO	—	—	7883101	T15 IP	
	32 5C	●	32	32	28	170	27 ER.....ISO	—	—	7883101	T15 IP	
	32 5C LH	○	32	32	28	170	27 EL.....ISO	VIDA 27 ALT R/L	7883101	7883202	T15 IP	
	40 5C	●	40	40	28	180	27 ER.....ISO	—	—	7883101	T15 IP	
	40 5C LH	○	40	40	28	180	27 EL.....ISO	—	—	7883101	T15 IP	



**Diş Açma Kateri**  
Turning - External, Threading  
Drehen - Ausen gewindedrehen



Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Altık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel			
		Ød	h	L	l <sub>1</sub>	f								
NVR	10 - 2 C	●	20	18	180	25	7.3	11 IR.....ISO	—	—	7815101	T 08 IP		
	10 - 2 C LH	○	20	18	180	25	7.3	11 IL.....ISO						
	10 - 2 C - 10	○	10	9	150	25	7.3	11 IR.....ISO						
	10 - 2 C 10 LH	○	10	9	150	25	7.3	11 IL.....ISO						
	13 - 2 C	●	20	18	180	32	8.7	11 IR.....ISO						
	13 - 2 C LH	○	20	18	180	32	8.7	11 IL.....ISO						
	16 - 3C	●	20	18	180	40	11.77	16 IR.....ISO						
	16 - 3 C LH	○	20	18	180	40	11.77	16 IL.....ISO						
	16 - 3 C 16	○	16	15	180	40	11.77	16 IR.....ISO						
	16 - 3 C 16 LH	○	16	15	180	40	11.77	16 IL.....ISO						
AVR	20 - 3 C	●	20	18	180	50	13.4	16 IR.....ISO	—	—	7815102	T 15 IP		
	20 - 3 C LH	○	20	18	180	50	13.4	16 IL.....ISO						
	25 - 3 C	●	32	30	250	60	16	16 IR.....ISO						
	25 - 3 C LH	○	32	30	250	60	16	16 IL.....ISO						
	25 - 3 C 25	○	25	23	250	60	16	16 IR.....ISO						
	25 - 3 C 25 LH	○	25	23	250	60	16	16 IL.....ISO						
	32 - 3 C	○	32	30	250	60	19.6	16 IR.....ISO						
	32 - 3 C LH	○	32	30	250	60	19.6	16 IL.....ISO						
	40 - 3 C	○	40	37	300	60	23.8	16 IR.....ISO						
	40 - 3 C LH	○	40	37	300	60	23.8	16 IL.....ISO						
	50 - 3 C	○	50	46	400	60	30.3	16 IR.....ISO	VIDA 16 ALT R/L	7883102	T 15 IP			
	50 - 3 C LH	○	50	46	400	60	30.3	16 IL.....ISO						
	25 - 4 C	●	32	30	250	60	18.3	22 IR.....ISO						
	25 - 4 C LH	○	32	30	250	60	18.3	22 IL.....ISO						
	25 - 4 C 25	○	25	23	250	60	18.3	22 IR.....ISO						
	25 - 4 C 25 LH	○	25	23	250	60	18.3	22 IL.....ISO						
	32 - 4 C	○	32	30	250	60	21.5	22 IR.....ISO						
	32 - 4 C LH	○	32	30	250	60	21.5	22 IL.....ISO						
	40 - 4 C	○	40	37	300	60	25.8	22 IR.....ISO						
	40 - 4 C LH	○	40	37	300	60	25.8	22 IL.....ISO						
	50 - 4 C	○	50	46	400	60	30.3	22 IR.....ISO	VIDA 22 ALT R/L	7883202	T 15 IP			
	50 - 4 C LH	○	50	46	400	60	30.3	22 IL.....ISO						
	32 - 5 C	●	32	30	250	60	21.5	27 IR.....ISO						
	32 - 5 C LH	○	32	30	250	60	21.5	27 IL.....ISO						
	40 - 5 C	●	40	37	300	60	25.8	27 IR.....ISO						
	40 - 5 C LH	○	40	37	300	60	25.8	27 IL.....ISO						
	50 - 5 C	●	50	46	400	60	30.3	27 IR.....ISO						
	50 - 5 C LH	○	50	46	400	60	30.3	27 IL.....ISO						
	32 - 5 C	●	32	30	250	60	21.5	27 IR.....ISO				VIDA 27 ALT R/L	7883101	T 15 IP
	32 - 5 C LH	○	32	30	250	60	21.5	27 IL.....ISO						
	40 - 5 C	●	40	37	300	60	25.8	27 IR.....ISO						
	40 - 5 C LH	○	40	37	300	60	25.8	27 IL.....ISO						

R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : AVR 25 3C

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



## Diş açma metodları

### Threading methods / Gewindedrehen Methoden

#### Üretim Metodunun Seçilmesi

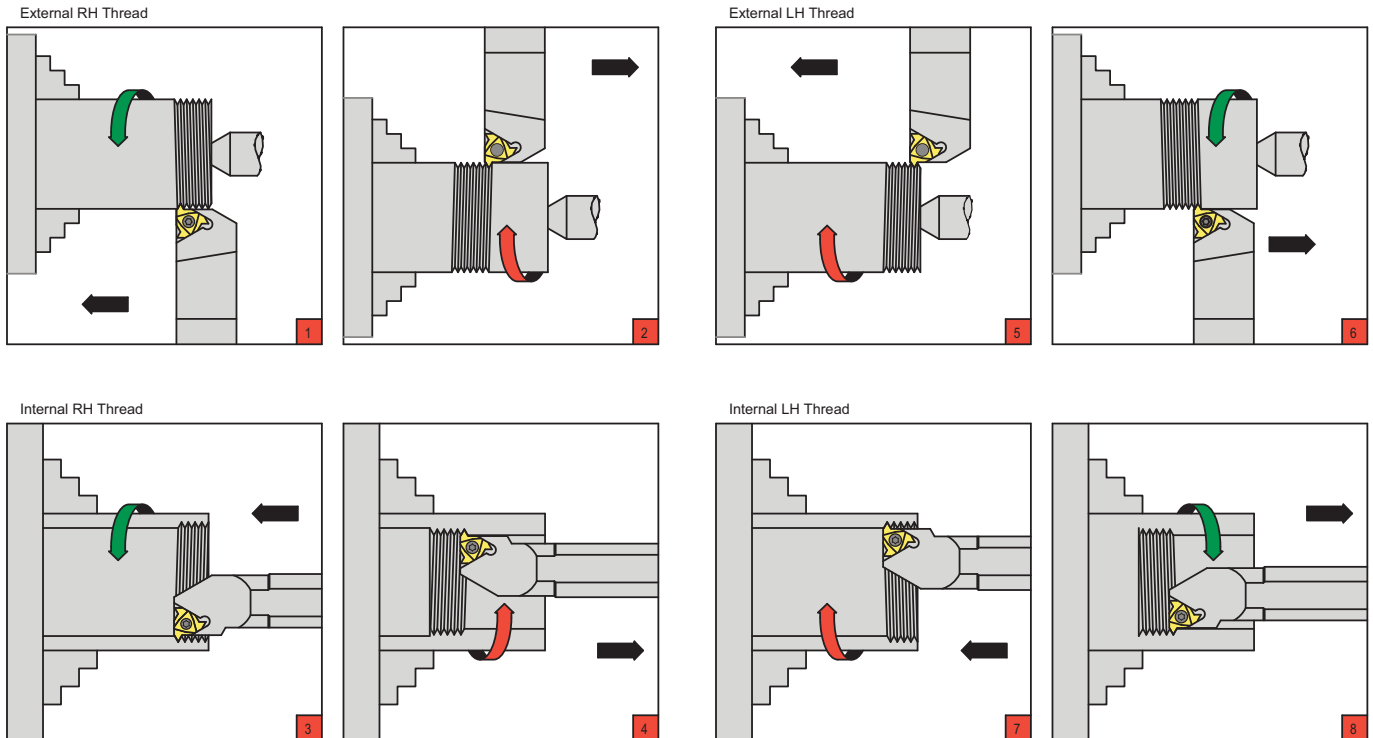
İş parçasının şekline ve takıma uygun olarak, vida açmak için hangi metodun daha uygun olduğuna karar verilir. Genellikle işleme yönü olarak ayna yönüne doğru vida çekme uygulanır. Ayna yönüne ters diş çekmek de mümkün olmakla beraber, ayna yönüne doğru vida çekmek tercih edilir. Kesici takım, çekilecek olan vidanın dönüş yönüne göre sağ ve sol olarak seçilmeli ve kullanılmalıdır. Bu durumda sağ vida için sol takım ve sol vida için ise sağ takım kullanılır. Böylece kesici uç ve takım maksimum desteği sağlar. Normal kesme şartlarının yanında tersi de uygulanabilir. Tüm bunlarla birlikte, kater ve kesici uç birbiriyle uyumlu seçilmelidir.

#### Choosing Threading Method

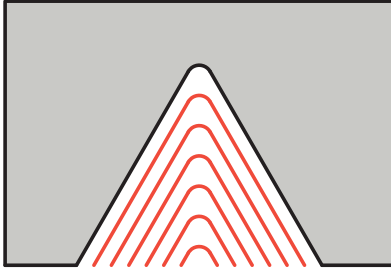
For the threading operation well adapted to process material's form and tool, the most appropriate method is decided. Mostly the selected for threading direction is toward the turning chuck, that is applied. Although threading is possible by diverging from the chuck, threading toward the chuck is preferred. Threading direction is chosen depending on the screwing direction. In this occasion, left tool is used for right screw and right tool is used for left screw. As a result, insert and tool provides maximum support. Besides, for normal cutting conditions, the reverse can be valid too. For all, the toolholder and the insert must be chosen accordingly.

#### Die Wahl Gewindedrehen Methode

Für das gewindedrehen -Betrieb gut geeignet, um Material der Form und Werkzeugverarbeiten, wird die am besten geeignete Methode entschieden. Meistens sind die zum Einfädeln Richtung ausgewählt ist in Richtung der Dreh-Futter, das angewendet wird. Although Gewindedrehen ist durch divergierende aus dem Futter possible, Einfädeln auf das Futter preferred. Gewindedrehen direction gewählt wird in Abhängigkeit von der Einschraubrichtung. Bei dieser Gelegenheit wird links tool für rechte Schraube eingesetzt und richtige Werkzeug ist für die linke Schraube eingesetzt. Als Ergebnis bietet Wendepatte und maximal zu unterstützen. Außerdem ist für normalen Schneidencontitions, der umgekehrte gültigen too. For alles sein, muss der Halter und der Einsatzentsprechend ausgewählt werden.



## Vida açma operasyonlarında radyal (dik) paso verme çeşitleri



Vida açma operasyonlarında dört farklı radyal paso verme yöntemi vardır:

Dış çaptan merkeze doğru doğrusal ilerlemeli,

Radyal paso verme işlemine, dış çaptan merkeze doğru düzenli artarak, takıma, iş parçasına ve diş adımına bağlı olarak karar verilir. Konvansiyonel tezgahlarda en çok uygulanan vida açma şeklidir. Talaş formu yumuşaktır ve aynı zamanda kesici uçta aşınma meydana gelir. Normal vida açmak için tercih edilir. Büyük hatveli dişlerde talaş kontrolü kötüdür ve yüzeyde vibrasyon oluşur. Sert malzemeler için uygundur, örneğin austenitik paslanmaz çelik gibi. Radyal paso verme işleminde, vida profilinin her iki yanına da aynı anda yük geldiği için, ucun profili oluşturduğu kısımda, aşırı zorlanma ve aşınma meydana gelir. Aynı zamanda, çıkan talaşın atılması da kolay olmaz ve bu durum kesici ucun kendisine de zarar verir.

## The variations of radial pass in threading

There are three kinds of radial pass in threading:

Radial pass towards the center with regular feed

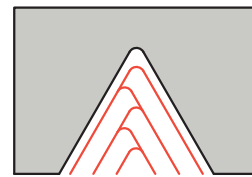
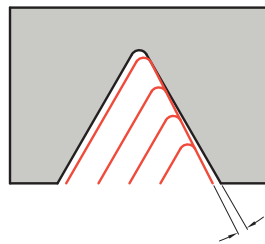
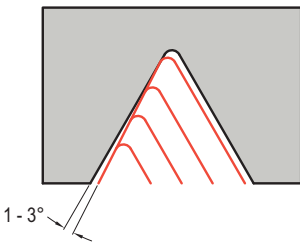
Radial pass from external diameter to the center by regular feed is chosen depending upon the tool, process and pitch. It is the most applied threading method in conventional machines being controlled mechanically. Soft chips form and excess wear on the insert tip are observed together. It is preferred in standard threading methods. Threadings having bigger pitch result in troubles in chip control and vibration occurs, but may practical for hard materials such as austenitic stainless steel. While threading with this method, because of that the both sides of tooth profile loaded at the same time, on the tip section of the insert forming profile, the probability of extra wear and compulsion occurs. Throwing away the chips while threading is not easy and it causes insert being damaged by itself.

## Die Schwankungen der Radial-Pass in Gewindedrehen

Es gibt drei Arten von Radial-Pass in Gewindedrehen

Radial-Pass zur Mitte hin mit regelmäßigen Feed

Radial Pass von Außendurchmesser zur Mitte durch regelmäßiges Feedback wird abhängig von der Werkzeug-, Prozess- und Pitch. Es ist die am meisten angewendete Verfahren Gewinde in herkömmlichen Maschinenmechanisch gesteuert. Soft-Chips Form und übermäßigen Verschleiß an dem EinsatzSpitze zusammen beobachtet. Es wird in standart Threading Methoden bevorzugt. Gewinde mit größerer Steigung result in Schwierigkeiten im Chip-Steuerung und Vibrationen auftreten, sondern kann praktisch für harte Materialien wie austenitische Edelstahl. Während treten bei diesem Verfahren, da der, dass die beiden Seiten des Zahnprofils gleichzeitig geladen werden, auf dem Spitzenabschnitt des Einsatzes bildet Profil, tritt die Wahrscheinlichkeit der zusätzliche Verschleiß und Zwang. Wegwerfen des Chips während Einfädeln ist nicht einfach und es verursacht durch Einsatz selbst beschädigt.



Dış çaptan merkeze doğru sağa veya sola ilerlemeli,

Vida açma operasyonlarında, vidanın profilinin kenarından merkeze doğru ilerlerken, sağa ve sola hareketle çalışma mükemmel talaş kontrolü sağlar. Büyük hatveli dişlerde, delik içine vida açma işleminde talaşın dışarıya daha kolay çıkmasına ve vibrasyondan dolayı yüzey bozulmalarına neden olmaması açısından uygun bir vida açma metodudur. Bu yöntemde, yüzey problemlerine dikkat edilmelidir. Giriş açısı 3° - 5° arasında olmalıdır. Bu methodun ancak CNC kontrollü tezgahlarda uygulanabilme imkanı vardır.

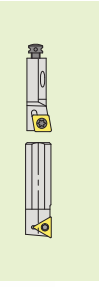
Radial pass towards the center with irregular feed

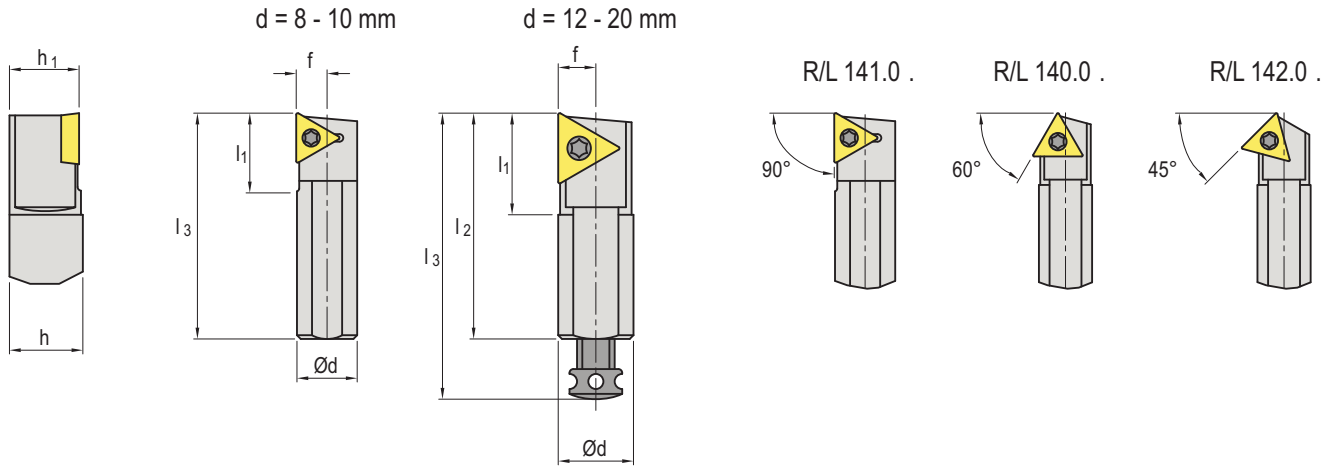
During threading, feeding towards the center provides perfect chip control by right and left stroke. It is convenient for threading having bigger pitch, because it doesn't cause any surface corruption as a result of vibration and it provides perfect chips removal especially for internal threading. Troubles on the surface quality should be avoided. Setting angle must be between 3° and 5°. However this method can be used only in the machines having CNC control.

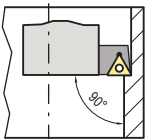
Radial-Pass zur Mitte hin mit unregelmäßigen feed

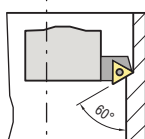
Beim Gewindedrehen, Fütterung zur Mitte hin sorgt für perfekte Spankontrolle durch rechte und linke Schlaganfall. Es ist bequem für das Einfädeln mit größeren Abstand, weil sie nicht dazu führen, jede Oberfläche Korruption als Folge der Vibrationen und bietet perfekte Entfernung Chips speziell für Innengewinde. Troubles auf die Oberflächenqualität sollte vermieden werden. Einstellen muss zwischen 3° und 5° liegen. Allerdings kann diese Methode nur in den Maschinen mit CNC-Steuerung verwendet werden.

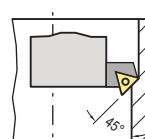


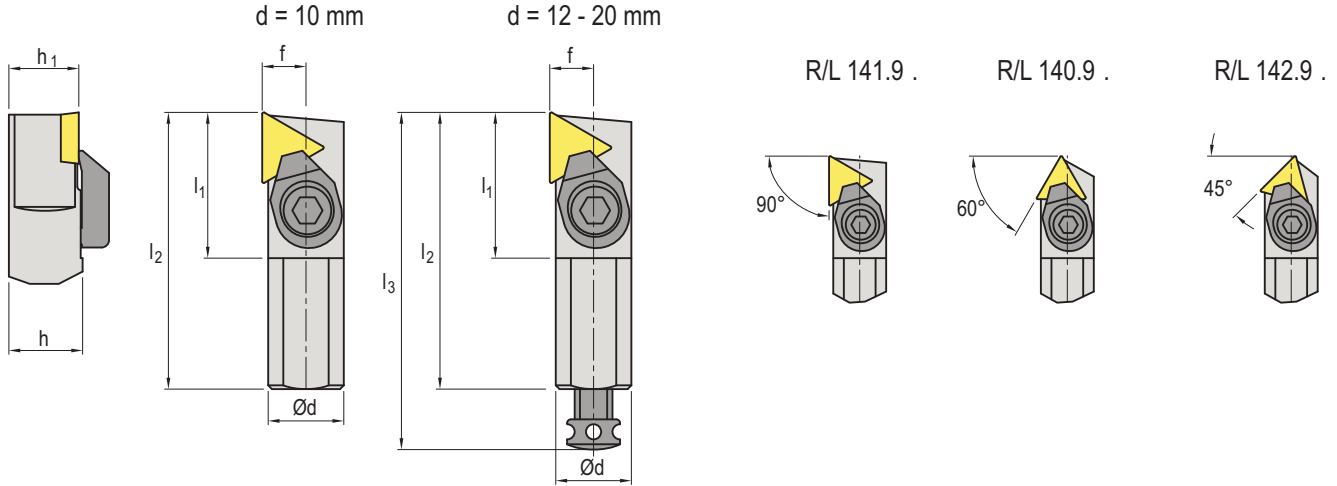


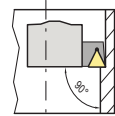


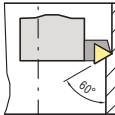
Uygulama Application Anwendung	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		R	L	h	h <sub>1</sub>	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	f			
	R/L 141 0	8 06	○ ○	7	7	8	30	10.5	—	4.0	TC...0602..	7722113	T07
		10 09	○ ○	8.5	8.5	10	50	14.0	—	5.1	TC...0902..	7815101	T08 IP
		12 11	○ ○	10.5	10.5	12	68	15.3	60	6.0	TC...1103..		
		16 11	○ ○	14.0	14.0	16	98	15.3	90	7.5			
		20 16	○ ○	17.0	17.0	20	128	19.0	120	10.7	TC...16T3..	7815102	T15 IP


Uygulama Application Anwendung	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		R	L	h	h <sub>1</sub>	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	f			
	R/L 140 0	8 06	○ ○	7	7	8	30	10.5	—	1.47	TC...0602..	7722113	T07
		10 09	○ ○	8.5	8.5	10	50	14.0	—	1.7	TC...0902..	7815101	T08 IP
		12 11	○ ○	10.5	10.5	12	68	15.3	60	2.2	TC...1103..		
		16 11	○ ○	14.0	14.0	16	98	15.3	90	2.2			
		20 16	○ ○	17.0	17.0	20	128	19.0	120	2.3	TC...16T3..	7815102	T15 IP

Uygulama Application Anwendung	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		R	L	h	h <sub>1</sub>	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	f			
	R/L 142 0	8 06	○ ○	7	7	8	30	10.5	—	0.39	TC...0602..	7722113	T07
		10 09	○ ○	8.5	8.5	10	50	14.0	—	0.23	TC...0902..	7815101	T08 IP
		12 11	○ ○	10.5	10.5	12	68	15.3	60	0.5	TC...1103..		
		16 11	○ ○	14.0	14.0	16	98	15.3	90	0.5			
		20 16	○ ○	17.0	17.0	20	128	19.0	120	-0.7	TC...16T3..	7815102	T15 IP



Uygulama Application Anwendung	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
		R	L	h	h <sub>1</sub>	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	f				
	R/L 141 9	10 09	○ ○	8.5	8.5	10	50	14.0	—	5.1	TP...0903..	7830001	7830002	Ta3
		12 11	○ ○	10.5	10.5	12	68	15.3	60	6.0	TP...1103..			
		16 11	○ ○	14.0	14.0	16	98	15.3	90	7.5	TP...16T3..	7485865	7485860	Ta4
		20 16	○ ○	17.0	17.0	20	128	19.0	120	10.7	TP...16T3..	7485865	7485860	Ta4

Uygulama Application Anwendung	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
		R	L	h	h <sub>1</sub>	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	f				
	R/L 140 9	10 09	○ ○	8.5	8.5	10	50	14	—	1.7	TP...0903..	7830001	7830002	Ta3
		12 11	○ ○	10.5	10.5	12	68	15.3	60	2.2	TP...1103..			
		16 11	○ ○	14	14	16	98	15.3	90	2.2	TP...16T3..	7485865	7485860	Ta4
		20 16	○ ○	17	17	20	128	19	120	2.4	TP...16T3..	7485865	7485860	Ta4

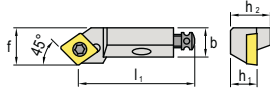
Uygulama Application Anwendung	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
		R	L	h	h <sub>1</sub>	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	f				
	R/L 142 9	10 09	○ ○	8.5	8.5	10	50	14	—	0.23	TP...0903..	7830001	7830002	Ta3
		12 11	○ ○	10.5	10.5	12	68	15.3	60	0.5	TP...1103..			
		16 11	○ ○	14	14	16	98	15.3	90	0.5	TP...16T3..	7485865	7485860	Ta4
		20 16	○ ○	17	17	20	128	19	120	0.7	TP...16T3..	7485865	7485860	Ta4

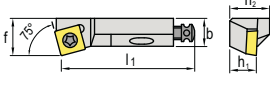
R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

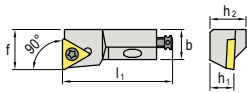
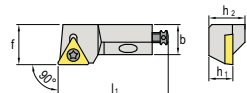
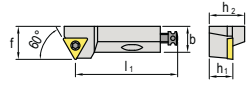
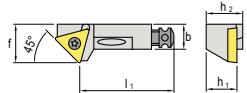
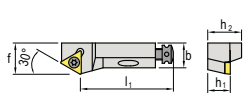
● 2 Hafta / in two weeks / in zwei Wochen

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : R 140 9 10 09

○ Stokta yok / Non stock item / Nicht auf Lager

	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		R	L	$h_1$	$h_2$	b	$l_1$	f						
														
SCSCR/L	06 CA 06	○	○	6	8	6	21	8	CC... 0602..	—	—	7815101	T08 IP	
	10 CA 09	○	○	10	15	11	44	14	CC... 09T3..			7815102	T15 IP	
	12 CA 12	○	○	12	18	15	47	20	CC... 1204..			7883202	T15 IP	
SCFCR/L	06 CA 06	●	○	6	8.5	6	25	8	CC... 0602..	—	—	7815101	T08 IP	
	08 CA 06	○	○	8	11	8	32	10	CC... 1204..			7815102	T15 IP	
	10 CA 09	●	○	10	15	11	50	14				7883002		7883101
	12 CA 12	●	○	12	18	15	55	20				7883202		7883101
	16 CA 12	○	○	16	21	20	63	25						
SCGCR/L	06 CA 06	○	○	6	8.5	6	25	8		CC... 0602..	—	—		7815101
	08 CA 06	○	○	8	11	8	32	10	CC... 09T3..	7815102			T15 IP	
	10 CA 09	○	○	10	15	11	50	14	CC... 09T3..	7815102			T15 IP	

	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel		
		R	L	$h_1$	$h_2$	b	$l_1$	f							
															
SSKCR/L	10 CA 09	●	○	10	15	10.5	50	14	SC... 09T3..	—	—	7815102	T15 IP		
	12 CA 12	○	○	12	20	15	55	20	SC... 1204..			7883004		7883101	7883202
	16 CA 12	○	○	16	21	20	63	25							7883202
SSSCR/L	10 CA 09	○	○	10	15	10.5	44	14	SC... 09T3..	—	—	7815102	T15 IP		
	12 CA 12	○	○	12	20	15	47	20	SC... 1204..			7883004		7883101	7883202
	16 CA 12	○	○	16	21	20	53	25							7883202

	Kod Code Bezeichnung	Ölçüler Dimensions Abmessungen							Uç Tipi Insert Type Plattentype	Altık Anvil Unterlage	Altık Vidası Anvil Screw Gewindehülse	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		Stok Stock Lager		h <sub>1</sub>	h <sub>2</sub>	b	l <sub>1</sub>	f					
		R	L										
	STFCR/L 10 CA 11	●	○	10	15	11	50	14	TC... 1102..	—	—	7815101	T08 IP
	12 CA 16	●	○	12	20	15	55	20	TC... 16T3..	—	—	7815102	T15 IP
	16 CA 16	○	○	16	21	20	63	25	TC... 16T3..	7883005	7883102	7815102	T15 IP
	STGCR/L 10 CA 11	○	○	10	15	10.5	50	14	TC... 1102..	—	—	7815102	T15 IP
	12 CA 16	○	○	12	20	15	55	20	TC... 16T3..	—	—	7815102	T15 IP
	16 CA 16	○	○	16	21	20	63	25	TC... 16T3..	7883005	7883102	7815102	T15 IP
	STWCR/L 08 CA 09	○	○	8	11	8	28	10	TC... 0902..	—	—	7722113	T07
	10 CA 11	○	○	10	15	11	44	14	TC... 1102..	—	—	7815101	T08 IP
	STSCR/L 08 CA 09	○	○	8	9.5	6.5	25.7	10	TC... 0902..	—	—	7722113	T07
	10 CA 11	○	○	10	15	11	44	14	TC... 1102..	—	—	7815101	T08 IP
	STTCR/L 08 CA 09	○	○	8	9.5	6.5	24	5.7	TC... 0902..	—	—	7722113	T07
	10 CA 11	○	○	10	15	11	41.3	13.9	TC... 1102..	—	—	7815101	T08 IP

R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

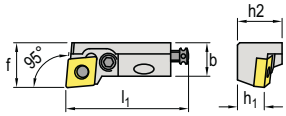
● 2 Hafta / in two weeks / in zwei Wochen

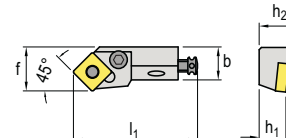
○ Stokta yok / Non stock item / Nicht auf Lager

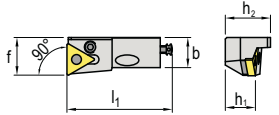
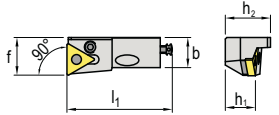
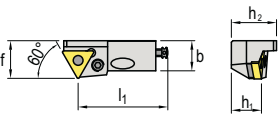
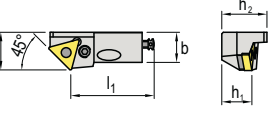
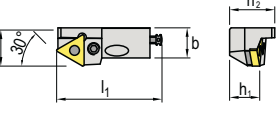
İsteğe bağlı olarak pabuç takviyesi ilave edilmektedir. / Clamp will be supplied according to customer need.

Sipariş Örneği / Ordering Example { Bestellbeispiel ab Lager : STFCR 12 CA 16



	Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyne Vidası Lever Screw Hebel Schraube	Levyne Lever Hebel	Altlık Pimi Anvil Pin Rohrstift
		R	L	h <sub>1</sub>	h <sub>2</sub>	b	l <sub>1</sub>	f					
													
PCLNR/L	12 CA 12	○	○	12	20	15	55	20	CN... 1204..	—	438.3.832	438.3.841	—
	16 CA 12	○	○	16	25	20	63	25		U 112150	S 023441	H 023441	R 023461
	20 CA 16	○	○	20	30	20	70	25	CN... 1606..	U 000152	S 000831	H 000840	R 025464
	25 CA 19	○	○	25	38	25	100	32	CN... 1906..	U 123151	S 033422	H 033442	R 033462
PCFNR/L	12 CA 12	○	○	12	20	15	55	20	CN... 1204..	—	438.3.832	438.3.841	—
	16 CA 12	○	○	16	25	20	63	25		U 112150	S 023441	H 023441	R 023461
	20 CA 16	○	○	20	30	20	70	25	CN... 1606..	U 000152	S 000831	H 000840	R 025464
	25 CA 19	○	○	25	38	25	100	32	CN... 1906..	U 123151	S 033422	H 033442	R 033462
PCGNR/L	12 CA 12	○	○	12	20	15	55	20	CN... 1204..	—	438.3.832	438.3.841	—
	16 CA 12	○	○	16	25	20	63	25		U 112150	S 023441	H 023441	R 023461
	20 CA 16	○	○	20	30	20	70	25	CN... 1606..	U 000152	S 000831	H 000840	R 025464
	25 CA 19	○	○	25	38	25	100	32	CN... 1906..	U 123151	S 033422	H 033442	R 033462

	Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyne Vidası Lever Screw Hebel Schraube	Levyne Lever Hebel	Altlık Pimi Anvil Pin Rohrstift
		R	L	h <sub>1</sub>	h <sub>2</sub>	b	l <sub>1</sub>	f					
													
PSSNR/L	12 CA 12	○	○	12	20	15	55	20	SN... 1204..	—	438.3.832	438.3.841	—
	16 CA 12	○	○	16	25	20	63	25		U 063451	S 023441	H 023441	R 023461
	20 CA 15	○	○	20	30	20	70	25	SN... 1506..	U 000457	S 000831	H 000840	R 025464
	25 CA 19	○	○	25	38	25	100	32	SN... 1906..	U 083452	S 033422	H 033442	R 033462
PSKNR/L	12 CA 12	●	○	12	20	15	55	20	SN... 1204..	—	438.3.832	438.3.841	—
	16 CA 12	○	○	16	25	20	63	25		U 063451	S 023441	H 023441	R 023461
	20 CA 15	○	○	20	30	20	70	25	SN... 1506..	U 000457	S 000831	H 000840	R 025464
	25 CA 19	○	○	25	38	25	100	32	SN... 1906..	U 083452	S 033422	H 033442	R 033462

	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Levyne Vidası Lever Screw Hebel Schraube	Levyne Lever Hebel	Altlık Pimi Anvil Pin Rohrstift
		R	L	h <sub>1</sub>	h <sub>2</sub>	b	l <sub>1</sub>	f					
													
	PTFNR/L 12 CA 16	●	○	12	20	15	55	20	TN... 1604..	—	438.3.830	5432 015 011	—
	16 CA 16	○	○	16	25	20	63	25	TN... 1604..	U 013950	S 018421	H 018440	R 018663
	20 CA 22	○	○	20	30	20	70	25	TN... 2204..	U 023952	S 023421	H 023441	R 023461
	25 CA 22	○	○	25	38	25	100	32	TN... 2204..	U 023952	S 023421	H 023441	R 023461
	PTWNR/L 12 CA 16	○	○	12	20	15	47	20	TN... 1604..	—	438.3.830	5432 015 011	—
	16 CA 16	○	○	16	25	20	53	25	TN... 1604..	U 013950	S 018421	H 018440	R 018663
	20 CA 22	○	○	20	30	20	60	25	TN... 2204..	U 023952	S 023421	H 023441	R 023461
	PTSNR/L 12 CA 16	○	○	12	20	15	47	20	TN... 1604..	—	438.3.830	5432 015 011	—
	16 CA 16	○	○	16	25	20	53	25	TN... 1604..	U 013950	S 018421	H 018440	R 018663
	20 CA 22	○	○	20	30	20	60	25	TN... 2204..	U 023952	S 023421	H 023441	R 023461
	PTTNR/L 12 CA 16	○	○	12	20	15	55	20	TN... 1604..	—	438.3.830	5432 015 011	—
	16 CA 16	○	○	16	25	20	63	25	TN... 1604..	U 013950	S 018421	H 018440	R 018663
	20 CA 22	○	○	20	30	20	70	25	TN... 2204..	U 023952	S 023421	H 023441	R 023461

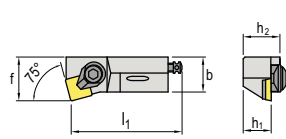
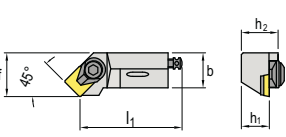


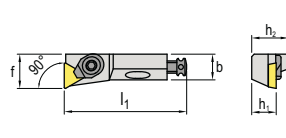
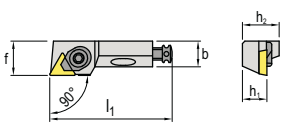
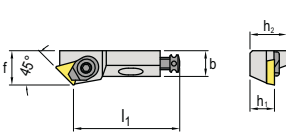
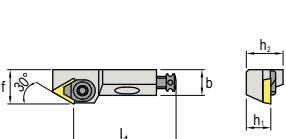
R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : PTFNR 12 CA 16

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Pimi Anvil Pin Rohrstift	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube
		R	L	$h_1$	$h_2$	b	$l_1$	f					
	CSKPR/L 10 CA 09	○	○	10	15	10.5	50	14	SP... 0903rr	—	—	7830001	
	12 CA 12	○	○	12	20	15	55	20	SP... 1203rr			7485865	7485860
	16 CA 12	○	○	16	21	20	63	25	SP... 1203rr	7480315	7480901	7485869	7480210
	CSSPR/L 10 CA 09	○	○	10	15	10.5	50	14	SP... 0903rr	—	—	7830001	
	12 CA 12	○	○	12	20	15	55	20	SP... 1203rr			7485865	7485860

	Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Uç Tipi Insert Type Plattentype	Altlık Anvil Unterlage	Altlık Pimi Anvil Pin Rohrstift	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemmschraube
		R	L	$h_1$	$h_2$	b	$l_1$	f					
	CTFPR/L 10 CA 11	○	○	10	15	10.5	50	14	TP... 1103rr	—	—	7830001	7485860
	12 CA 16	○	○	12	20	15	55	20	TP... 1603rr			7485865	
	16 CA 16	○	○	16	21	20	63	25	TP... 1603rr	7480316	7480901	7485869	7480210
	CTGPR/L 10 CA 11	○	○	10	15	10.5	50	14	TP... 1103rr	—	—	7830001	7485860
	12 CA 16	○	○	12	20	15	55	20	TP... 1603rr			7485865	
	CTSPR/L 10 CA 11	○	○	10	15	10.5	50	14	TP... 1103rr	—	—	7830001	7485860
	12 CA 16	○	○	12	20	15	55	20	TP... 1603rr			7485865	
	CTTPR/L 10 CA 11	○	○	10	15	10.5	50	14	TP... 1103rr	—	—	7830001	7485860
	12 CA 16	○	○	12	20	15	55	20	TP... 1603rr			7485865	





## Freze Kafaları / Milling - Side and Face Mills Fräsen - Scheiben- und Planfräsen



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**AFR / L 75 .... 15**  
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**AFR / L 75 .... 12 AL**  
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**NFR / L 75 .... 12**  
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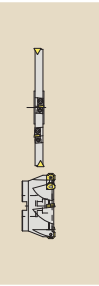
**A 270**  
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**A 290**  
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**T 90 A / T 90 AS**  
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**Freze Kafaları / Milling - Side and Face Mills**  
Fräsen - Scheiben- und Planfräsen



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**A 250**  
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**TSRF**  
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**Kanal Frezeler / Milling - Disc Mills**  
Fräsen - Schafffräser



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**TKF .... 11**  
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**TKFR / L**  
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**S 2**  
Sayfa / Page / Seite : 137



**TDK**  
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**TSK**  
Sayfa / Page / Seite : 138



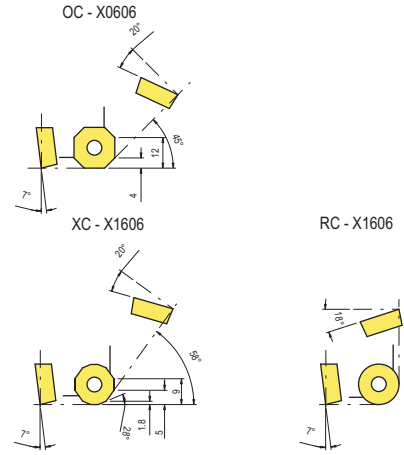
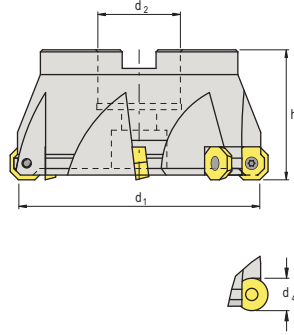
**330 20 ....**  
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**TK 125 ....SLN .... N / R**  
Sayfa / Page / Seite : 139



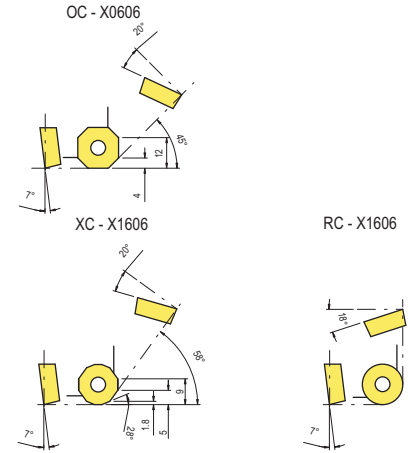
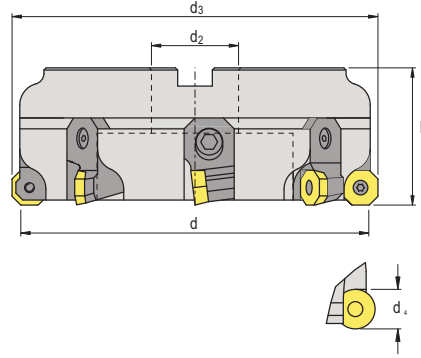
**TK 125 .... SCN**  
Sayfa / Page / Seite : 140



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen				Z	Ölçüler Dimensions Abmessungen			Uç Vidası Insert Screw Plattenshraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		d <sub>1</sub>	d <sub>4</sub>	h	d <sub>2</sub>							
FCT 45	52 R04 16	●	52	16	40	22	4	OCKX 0606 AD - TR	XCKX 1606 AD - TR	RCKX 1606 MO - TR	7883202	T 15
	66 R05 16	●	66	16	50	27	5					
	80 R06 16	●	80	16	50	27	6					
	100 R07 16	○	100	16	50	32	7					
	125 R08 16	○	125	16	63	40	8					







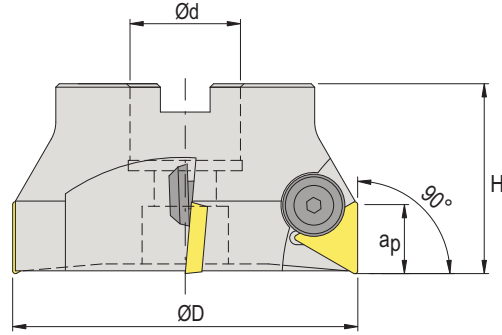
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					Z	Uç Tipi Insert Type Plattentype			Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		d	d <sub>3</sub>	h	d <sub>2</sub>	Z							
MCT 45	160 R10 16	○	160	168	63	40	8	OCKX 0606 AD - TR	XCKX 1606 AD - TR	RCKX 1606 MO - TR	MCT 45 ALT	7883202	T15 IP
	200 R10 16	○	200	208	63	60	10						
	250 R12 16	○	250	258	63	60	12						
	315 R16 16	○	315	323	80	60	16						
	400 R18 16	○	400	408	80	60	18						
	500 R22 16	○	500	508	80	60	22						

Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					Z	Uç Tipi Insert Type Plattentype			Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		d	d <sub>3</sub>	h	d <sub>2</sub>	Z							
MCT 45 S	125 R08 16		125	133	63	40	8	OCKX 0606 AD - TR	XCKX 1606 AD - TR	RCKX 1606 MO - TR	MCT 45 ALT	7883202	T15 IP
	160 R12 16		160	168	63	40	12						
	200 R14 16		200	208	63	60	14						
	250 R18 16		250	258	63	60	18						
	315 R22 16		315	323	80	60	22						
	400 R26 16		400	408	80	60	26						
	500 R32 16		500	508	80	60	32						

## Yüzey Freze Kafası

Milling - Face Mill

Fräsen - Planfräsen

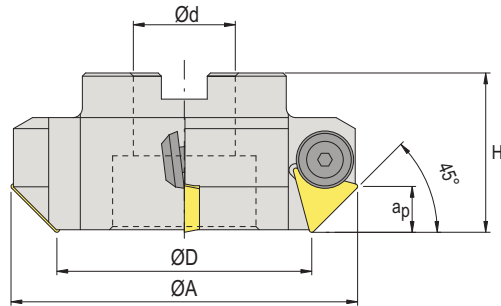


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Vidası Clamp Screw Klemme schraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	ØD	Ød	H	ap				
FKR/L 20 17 0040	●	○	40	16	43	14.5	3	TPK.. 1603..	C16 644	Ta3
20 17 0050	●	○	50	22	51	14.5	3			
20 17 0063	●	○	63	22	51	22	3	TPK.. 2204..	C16 648	Ta4
20 17 0080	●	○	80	32	55	22	4			
20 17 0100	○	○	100	40	55	22	5			

## Yüzey Freze Kafası

Yüzey Milling - Face Mill

Fräsen - Planfräsen



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Vidası Clamp Screw Klemme schraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	ØA	H				
PFR/L 20 47 0040	○	○	40	16	65	43	9	3	C16 644	Ta3
20 47 0050	○	○	50	22	75	50	9	3		
20 47 0063	○	○	63	22	88	50	13	3	C16 648	Ta4
20 47 0080	○	○	80	32	95	50	13	4		
20 47 0100	○	○	100	40	115	50	13	5		

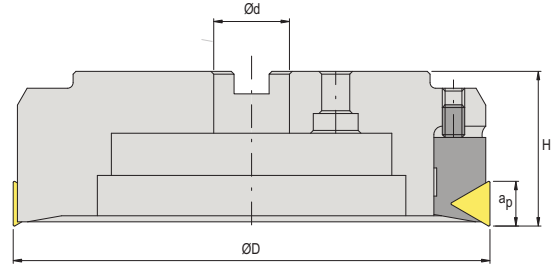
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :FKR 20 17 0100

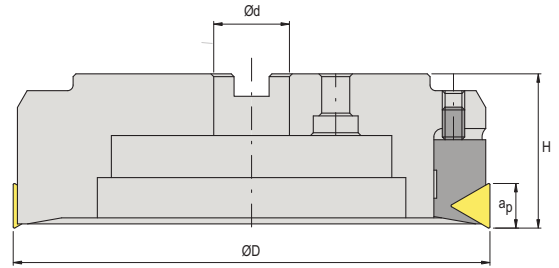
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
FKR/L 90	0080 16	○ ○	80	27	55	13	6	TPKN 1603..	FB 12	FR 650	FK16R/L	M8 x 10	Ta4
	0100 16	○ ○	100	32	57	13	8						
	0125 16	○ ○	125	40	57	13	8						
	0160 16	○ ○	160	40	57	13	12						
	0200 16	○ ○	200	60	60	13	15						
	0250 16	○ ○	250	60	60	13	18						
	0315 16	○ ○	315	70	60	13	24						
	0400 16	○ ○	400	75	60	13	32						

**Kasetli Freze Kafası**  
Milling - Face Mill, Casette  
Fräsen - Planfräsen, Kassetten

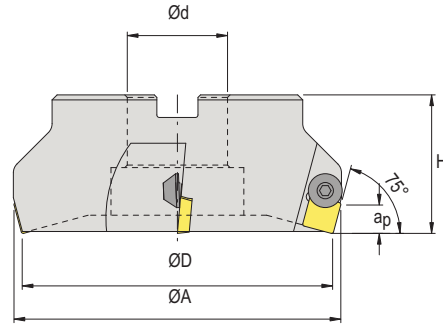


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
FKR/L 90	0100 22	○ ○	100	32	62	18	5	TPKN 2204..	FB 12	FR 650	FK22R/L	M8 x 10	Ta4
	0125 22	○ ○	125	40	62	18	6						
	0160 22	○ ○	160	40	62	18	10						
	0200 22	○ ○	200	60	62	18	12						
	0250 22	○ ○	250	60	62	18	15						
	0315 22	○ ○	315	60	72	18	18						
	0400 22	○ ○	400	60	74	18	24						
	0500 22	○ ○	500	60	80	18	30						

## Yüzey Freze Kafası

Milling - Face Mill

Fräsen - Planfräsen

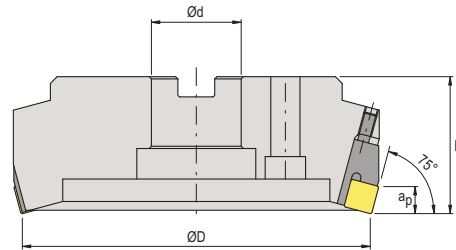


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Baskı Vidası Clamp Screw Klemme schraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	ØA	H	ap				
AFR/L 20 27 0050	●	○	50	22	56	50	8	3	SPK.. 1203..	C16 644	Ta3
20 27 0063	●	○	63	22	69	50	8	4			
20 27 0080	○	○	80	32	86	50	8	5			
20 27 0100	○	○	100	32	106	50	8	6			

## Kasetli Freze Kafası

Milling - Face Mill, Casette

Fräsen - Planfräsen, Kassetten



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
AFR/L 75 0080 12	○	○	80	27	55	6	6	SPK.. 1203..	FB 12	FR 650	FA12PR/L	M8 x 10	Ta4
0100 12	○	○	100	32	57	6	8						
0125 12	○	○	125	40	57	6	8						
0160 12	○	○	160	40	57	6	12						
0200 12	○	○	200	60	60	6	15						
0250 12	○	○	250	60	60	6	18						
0315 12	○	○	315	60	70	6	24						
0400 12	○	○	400	60	75	6	32						
0500 12	○	○	500	60	75	6	40						

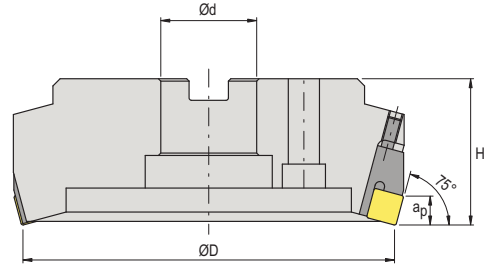
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :AFR 20 27 0100

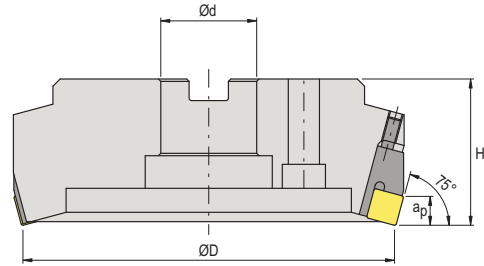
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



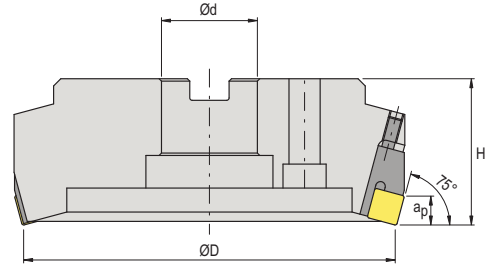
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
AFR/L 75	0125 12 S	○ ○	125	40	57	6	10	SPK.. 1203..	FBO 12	FR 650	FAO12PR/L	M8 x 10	Ta4
	0160 12 S	○ ○	160	40	57	6	18						
	0200 12 S	○ ○	200	60	60	6	20						
	0250 12 S	○ ○	250	60	60	6	24						
	0315 12 S	○ ○	315	60	70	6	32						
	0400 12 S	○ ○	400	60	75	6	40						
	0500 12 S	○ ○	500	60	75	6	48						

**Kasetli Freze Kafası**  
Milling - Face Mill, Casette  
Fräsen - Planfräsen, Kassetten



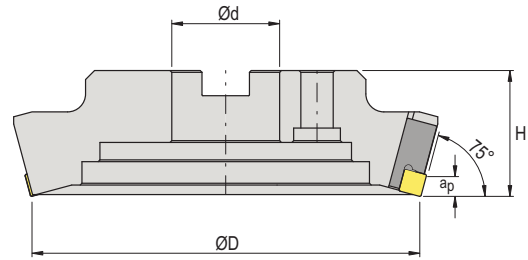
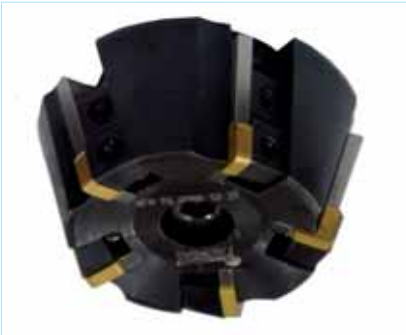
Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altlık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
AFR/L 75	0100 15	○ ○	100	32	62	8	6	SPK.. 1504..	FB 12	FR 650	FA15PR/L	M8 x 10	Ta4
	0125 15	○ ○	125	40	62	8	8						
	0160 15	○ ○	160	40	62	8	12						
	0200 15	○ ○	200	60	62	8	15						
	0250 15	○ ○	250	60	62	8	18						
	0315 15	○ ○	315	60	70	8	24						
	0400 15	○ ○	400	60	75	8	32						
	0500 15	○ ○	500	60	75	8	40						

**Kasetli Freze Kafası**  
Milling - Face Mill, Casette  
Fräsen - Planfräsen, Kassetten



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altılık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
AFR/L 75 0080 12 AL	○	○	80	27	58	6	5	SFAN 1203EF	FB 12	FR 650	FA12ALR/L	M8 x 10	Ta4
0100 12 AL	○	○	100	32	58	6	6						
0125 12 AL	○	○	125	40	61	6	6						
0160 12 AL	○	○	160	40	61	6	10						
0200 12 AL	○	○	200	60	62	6	12						
0250 12 AL	○	○	250	60	62	6	15						
0315 12 AL	○	○	315	60	68	6	20						
0400 12 AL	○	○	400	60	74	6	24						
0500 12 AL	○	○	500	60	74	6	32						

**Kasetli Freze Kafası**  
Milling - Face Mill, Casette  
Fräsen - Planfräsen, Kassetten



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Altılık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
	R	L	ØD	Ød	H	ap							
NFR/L 75 0080 12	○	○	80	27	56	6	5	SNG.. 1204EN	FB 12 N	FR 650	NFA 12	M8 x 10	Ta4
0100 12	○	○	100	32	56	6	6						
0125 12	○	○	125	40	56	6	8						
0160 12	○	○	160	40	60	6	12						
0200 12	○	○	200	60	60	6	15						
0250 12	○	○	250	60	60	6	18						
0315 12	○	○	315	60	62	6	24						
0400 12	○	○	400	60	70	6	32						
0500 12	○	○	500	60	74	6	40						

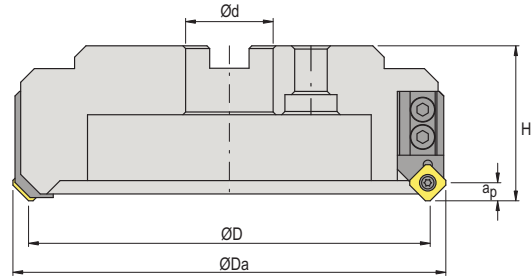
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :AFR 75 0100 12 AL

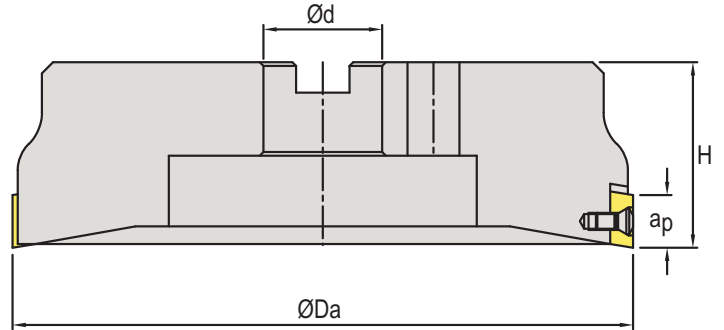
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Altılık Anvil Unterlage	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	ØD	Ød	ØDa	H	ap					
A 270	40 R03 12	● ○	40	16	54	40	6	3	SDH.. 1204AE	—	7883202	T15 IP
	50 R03 12	● ○	50	22	64	40	6	3				
	63 R04 12	● ○	63	22	77	40	6	4				
	80 R05 12	○ ○	80	27	94	50	6	5				
	100 R06 12	○ ○	100	32	114	50	6	6				
	125 R06 12	○ ○	125	40	139	63	6	6				
	160 R08 12	○ ○	160	40	174	68	6	8				
	200 R10 12	○ ○	200	60	214	68	6	10				
	250 R12 12	○ ○	250	60	264	70	6	12				
	315 R16 12	○ ○	315	60	329	70	6	16				
									A 270 ALT			

**Yüzey Freze Kafası**  
Milling - Face Mill  
Fräsen - Planfräsen

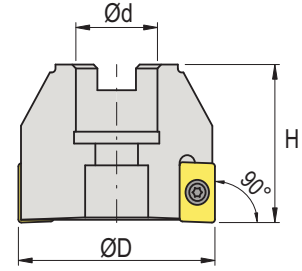


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	H	ap					
A 290	63 R05 12	○	63	22	40	8	5	CNHW 1205	7815102	T15 IP
	80 R08 12	○	80	27	50	8	8			
	100 R10 12	○	100	32	50	8	10			
	125 R12 12	○	125	40	56	8	12			
	160 R16 12	○	160	40	62	8	16			

## Yüzey Freze Kafası

Milling - Face Mill

Fräsen - Planfräsen

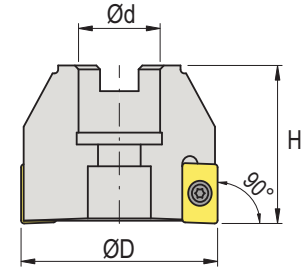


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen			Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	H				
T90A	50 R04 22	●	50	22	40	APKT 1604..	7815102	T15 IP
	63 R05 22	●	63	22	40			
	80 R06 27	○	80	27	50			
	100 R07 32	○	100	32	50			
T90AS	63 R06 22	○	63	22	40			
	80 R08 27	○	80	27	50			
	100 R10 32	○	100	32	50			

## Yüzey Freze Kafası

Milling - Face Mill

Fräsen - Planfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen			Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	H				
A 240	40 R04	○	40	16	40	LDHT / LDHW 15T308	7883209	T15 IP
	50 R05	○	50	22	40			
	63 R06	○	63	22	40			
	80 R06	○	80	27	50			
	100 R08	○	100	32	50			
	125 R09	○	125	40	63			
	160 R12	○	160	40	63			
	200 R16	○	200	63	63			
	250 R18	○	250	63	63			

R : Sağ / Right / Rechte L : Sol / Left / Linke

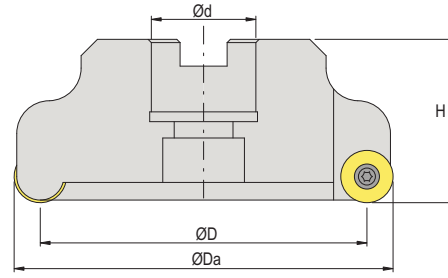
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : T 90A 100 R07 32

● 2 Hafta / in two weeks / in zwei Wochen

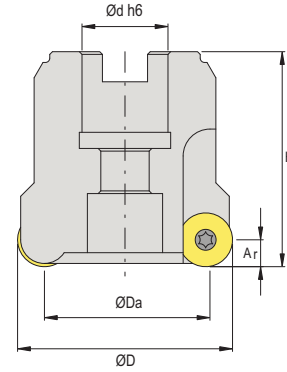
○ Stokta yok / Non stock item / Nicht auf Lager





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	ØDa	H	L				
A 250	40 R04 12	○	40	16	52	40	19	RP... 1204	7883202	T15 IP
	50 R04 12	○	50	22	62	40	20			
	63 R05 12	○	63	22	75	40	20			
	80 R06 12	○	80	27	92	50	22			
	100 R06 12	○	100	32	112	50	26			
	125 R07 12	○	125	40	137	63	30			

**Yüzey Freze Kafası**  
Milling - Face Mill  
Fräsen - Planfräsen

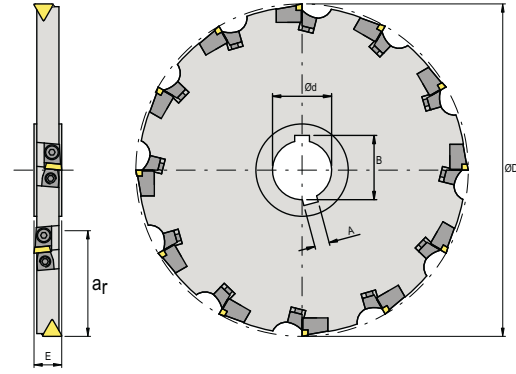


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød H6	ØDa	H	Ar				
TSRFA	40 R04 10	○	40	16	30	40	5	RDHX 1003 MOT	7883209	T15
	50 R05 10	○	50	22	40	40	5			
	63 R06 10	○	63	22	53	40	5			
	80 R05 12	○	80	27	68	50	6			
	100 R06 12	○	100	32	88	50	6			

# Çapraz Açılı Kanal Freze

Milling - Disc Mill

Fräsen - Scheibenfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Sağ Altlık Anvil Right Re. Unterlage	Sol Altlık Anvil Left Li. Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel	
		ØD	Ød	E	A	ar	B									
TKF	125 18 16	○	125	40	18	10	30	43.8	8	TP... 1603PPN	FB 12	FR 650	FK 16 P-R	FK 16 P-L	M4 x 15	Ta4
	125 20 16	○	125	40	20	10	30	43.8	8							
	160 18 16	○	160	40	18	10	45	43.8	10							
	160 20 16	○	160	40	20	10	45	43.8	10							
	200 20 16	○	200	50	20	12	60	53.6	12							
	200 24 16	○	200	50	24	12	60	53.6	12							
	250 20 16	○	250	50	20	12	60	53.6	16							
	250 24 16	○	250	50	24	12	60	53.6	16							
	315 24 16	○	315	60	24	14	70	64	20							
	400 24 16	○	400	60	24	14	80	64	24							



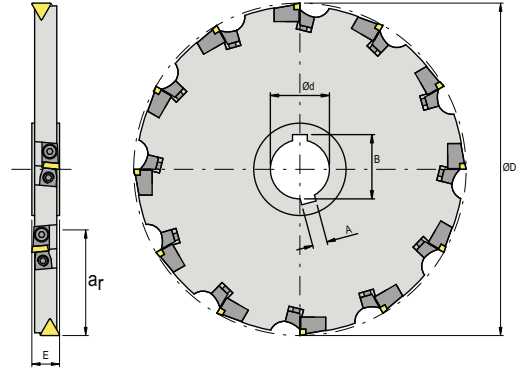
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :TKF 125 20 1

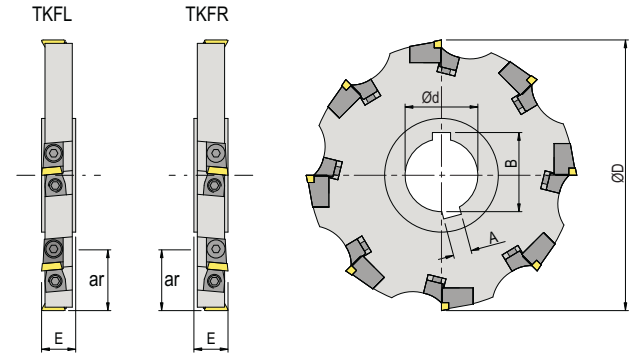
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Sağ Altlık Anvil Right Re. Unterlage	Sol Altlık Anvil Left Li. Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel
		ØD	Ød	E	A	ar	B									
TKF	80 10 11	○	80	27	10	7	15	29.8	6	TP... 1103PPN	331.2.851	FR 649	R331 2 832	L331 2 833	M3 x 12	Ta3
	80 12 11	○	80	27	12	7	15	29.8	6							
	100 10 11	○	100	32	10	8	24	34.8	8							
	100 12 11	○	100	32	12	8	24	34.8	8							
	125 10 11	○	125	40	10	10	30	43.8	10							
	125 12 11	○	125	40	12	10	30	43.8	10							
	160 10 11	○	160	40	10	10	45	43.8	12							
	160 12 11	○	160	40	12	10	45	43.8	12							
	160 14 11	○	160	40	14	10	45	43.8	12							
	200 10 11	○	200	50	10	12	60	53.6	16							
	200 12 11	○	200	50	12	12	60	53.6	16							
	200 14 11	○	200	50	14	12	60	53.6	16							

**Kanal Freze**  
Milling - Disc Mill  
Fräsen - Scheibenfräsen

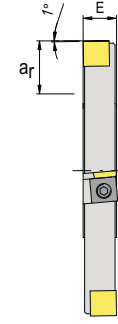
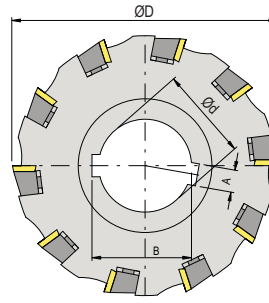


Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Sağ Altlık Anvil Right Re. Unterlage	Sol Altlık Anvil Left Li. Unterlage	Uç Vidası Insert Screw Plattenschraube	Anahtar Wrench Schlüssel		
	R	L	ØD	Ød	E	A	ar	B											
TKFR/L	125	18	16	○	○	125	40	18	10	30	43.8	8	TP... 1603PPN	FB 12	FR 650	FK 16 P-R	FK 16 P-L	M4 x 15	Ta4
	125	20	16	○	○	125	40	20	10	30	43.8	8							
	160	18	16	○	○	160	40	18	10	45	43.8	10							
	160	20	16	○	○	160	40	20	10	45	43.8	10							
	200	20	16	○	○	200	50	20	12	60	53.6	12							
	200	24	16	○	○	200	50	24	12	60	53.6	12							
	250	20	16	○	○	250	50	20	12	60	53.6	16							
	250	24	16	○	○	250	50	24	12	60	53.6	16							
	315	24	16	○	○	315	60	24	14	70	64	20							
	400	24	16	○	○	400	60	24	14	80	64	24							

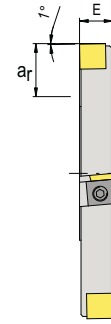
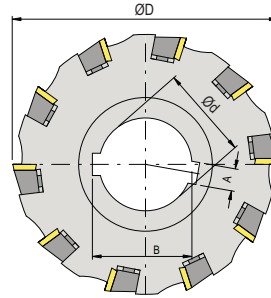
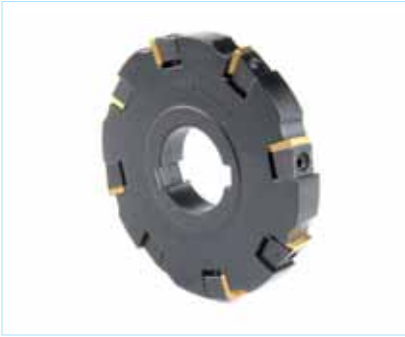
# Çapraz Açılı Kanal Freze

Milling - Disc Mill

Fräsen - Scheibenfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Anahtar Wrench Schlüssel	
		ØD	Ød	E	A	ar	B						
S2	100 14 12	○	100	32	14	8	24	34.8	10	SPUN 1203..	S2 12 R/L	FR 650	Ta4
	100 16 12	○	100	32	16	8	24	34.8	10				
	125 14 12	○	125	40	14	10	30	43.8	12				
	125 16 12	○	125	40	16	10	30	43.8	12				
	160 14 12	○	160	40	14	10	45	43.8	16				
	160 16 12	○	160	40	16	10	45	43.8	16				
	200 14 12	○	200	50	14	12	60	53.6	18				
	200 16 12	○	200	50	16	12	60	53.6	18				
	250 14 12	○	250	50	14	12	60	53.6	24				
	250 16 12	○	250	50	16	12	60	53.6	24				



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Anahtar Wrench Schlüssel	
		ØD	Ød	E	A	ar	B						
TDK	80 10 09	○	80	27	10	7	18	29.8	6	SPUN 0903..	TDB 09 R/L	FR 648	Ta3
	100 10 09	○	100	32	10	8	24	34.8	10				
	100 12 09	○	100	32	12	8	24	34.8	10				
	125 10 09	○	125	40	10	10	30	43.8	12				
	125 12 09	○	125	40	12	10	30	43.8	12				
	160 10 09	○	160	40	10	10	45	43.8	18				
	160 12 09	○	160	40	12	10	45	43.8	18				
	200 10 09	○	200	50	10	12	60	53.6	22				
	200 12 09	○	200	50	12	12	60	53.6	22				

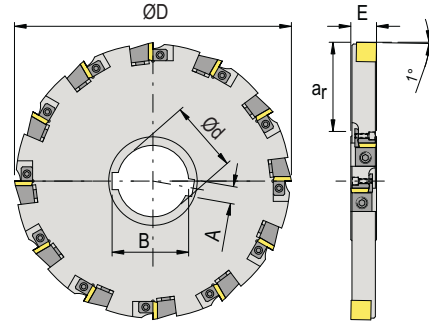
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : S2 100 14 12

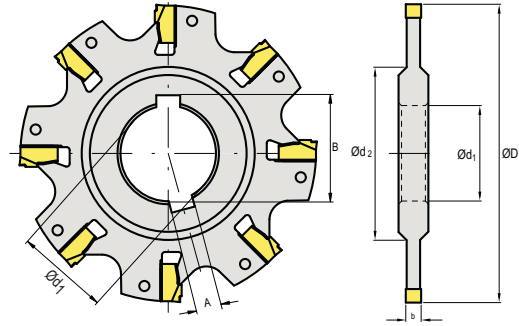
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

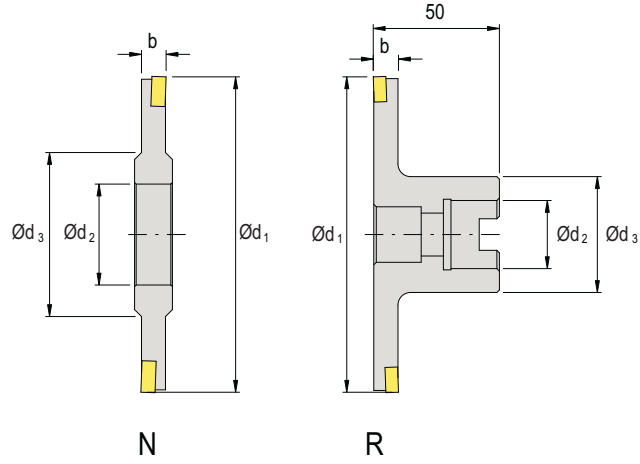


Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype	Baskı Pabucu Clamp Klemme	Baskı Vidası Clamp Screw Klemme schraube	Anahtar Wrench Schlüssel
		ØD	Ød	E	A	ar	B						
TSK	100 16 12	○	100	32	16	8	24	34.8	8	SPUN 1203..	S2 12 R/L	FR 650	Ta4
	100 18 12	○	100	32	18	8	24	34.8	8				
	125 16 12	○	125	40	16	10	30	43.8	10				
	125 18 12	○	125	40	18	10	30	43.8	10				
	160 16 12	○	160	40	16	10	45	43.8	12				
	160 18 12	○	160	40	18	10	45	43.8	12				
	200 16 12	○	200	50	16	12	60	53.6	18				
	200 18 12	○	200	50	18	12	60	53.6	18				
	250 16 12	○	250	50	16	12	60	53.6	20				
	250 18 12	○	250	50	18	12	60	53.6	20				

**Dar Kanal Freze**  
Milling - Disc Mill  
Fräsen - Scheibenfräsen



Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype
		ØD	Ød <sub>1</sub>	b	Ød <sub>2</sub>	A	B			
330 20	080 030 230	○	80	27	3	45	7	29.8	7	N 151 2 300
	100 030 230	○	100	32	3	58	8	34.8	8	
	125 030 230	○	125	40	3	62	10	43.8	11	
	160 030 230	○	160	40	3	62	10	43.8	14	
	080 040 240	○	80	27	4	45	7	29.8	6	N 151 2 400
	100 040 240	○	100	32	4	58	8	34.8	8	
	125 040 240	○	125	40	4	62	10	43.8	10	
	160 040 240	○	160	40	4	62	10	43.8	13	
	080 050 250	○	80	27	5	45	7	29.8	6	N 151 2 500
	100 050 250	○	100	32	5	58	8	34.8	8	
	125 050 250	○	125	40	5	62	10	43.8	10	
	160 050 250	○	160	40	5	62	10	43.8	13	
	080 060 260	○	80	27	6	45	7	29.8	6	N 151 2 600
	100 060 260	○	100	32	6	58	8	34.8	8	
	125 060 260	○	125	40	6	62	10	43.8	10	
	160 060 260	○	160	40	6	62	10	43.8	13	



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		$\text{Ød}_1$	$\text{Ød}_2$	b	$\text{Ød}_3$				
TK 80 93 SLN12 N06	○	80	27	6-7	44	8	LNEW 1235 / LNEW 1240	M3.5 x 5	T15 IP
80 93 SLN12 N08	○	80	27	8-9	44	8	LNEW 1240 / LNEW 1245	M3.5 x 6	
100 93 SLN12 N06	○	100	32	6-7	52	10	LNEW 1235 / LNEW 1240	M3.5 x 5	
100 93 SLN12 N08	○	100	32	8-9	52	10	LNEW 1240 / LNEW 1245	M3.5 x 6	
125 93 SLN12 N06	○	125	40	6-7	63	12	LNEW 1235 / LNEW 1240	M3.5 x 5	
125 93 SLN12 N08	○	125	40	8-9	63	12	LNEW 1240 / LNEW 1245	M3.5 x 6	
125 93 SLN12 N10	○	125	40	10-11	63	12	LNEW 1245 / LNEW 1250	M3.5 x 7	
160 93 SLN12 N06	○	160	40	6-7	63	16	LNEW 1235 / LNEW 1240	M3.5 x 5	
160 93 SLN12 N08	○	160	40	8-9	63	16	LNEW 1240 / LNEW 1245	M3.5 x 6	
160 93 SLN12 N10	○	160	40	10-11	63	16	LNEW 1245 / LNEW 1250	M3.5 x 8	
160 93 SLN12 N12	○	160	40	12-13	63	16	LNEW 1245 / LNEW 1250	M3.5 x 9	
200 93 SLN12 N06	○	200	50	6-7	75	18	LNEW 1235 / LNEW 1240	M3.5 x 5	
200 93 SLN12 N08	○	200	50	8-9	75	18	LNEW 1240 / LNEW 1245	M3.5 x 6	
200 93 SLN12 N10	○	200	50	10-11	75	18	LNEW 1245 / LNEW 1250	M3.5 x 8	
200 93 SLN12 N12	○	200	50	12-13	75	18	LNEW 1245 / LNEW 1250	M3.5 x 9	
80 93 SLN12 R06	○	80	22	6-7	42	8	LNEW 1235 / LNEW 1240	M3.5 x 5	
80 93 SLN12 R08	○	80	22	8-9	42	8	LNEW 1240 / LNEW 1245	M3.5 x 6	
100 93 SLN12 R06	○	100	27	6-7	50	10	LNEW 1235 / LNEW 1240	M3.5 x 5	
100 93 SLN12 R08	○	100	27	8-9	50	10	LNEW 1240 / LNEW 1245	M3.5 x 6	
125 93 SLN12 R06	○	125	40	6-7	70	12	LNEW 1235 / LNEW 1240	M3.5 x 5	
125 93 SLN12 R08	○	125	40	8-9	70	12	LNEW 1240 / LNEW 1245	M3.5 x 6	
125 93 SLN12 R10	○	125	40	10-11	70	12	LNEW 1245 / LNEW 1250	M3.5 x 7	
160 93 SLN12 R06	○	160	40	6-7	70	16	LNEW 1235 / LNEW 1240	M3.5 x 5	
160 93 SLN12 R08	○	160	40	8-9	70	16	LNEW 1240 / LNEW 1245	M3.5 x 6	
160 93 SLN12 R10	○	160	40	10-11	70	16	LNEW 1245 / LNEW 1250	M3.5 x 8	

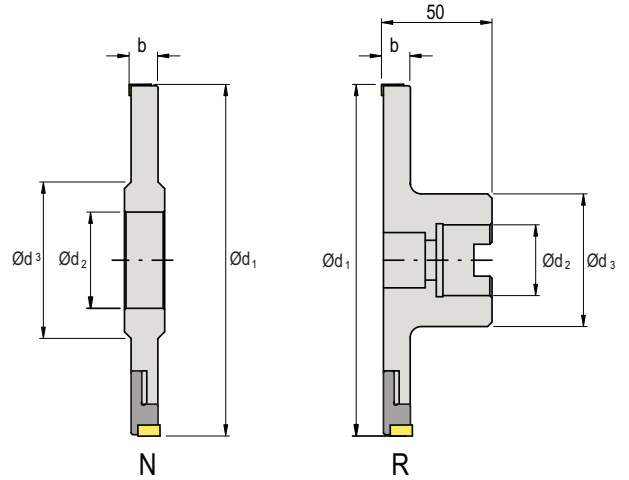
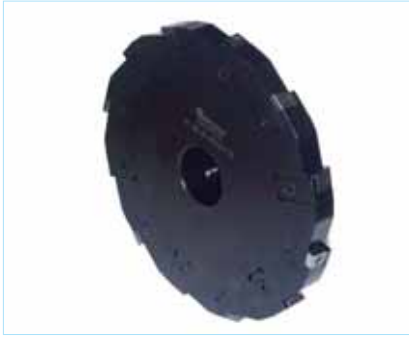
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : TK 160 93 SLN12 N08

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Sağ Kartuş Cartridge Right Re. Kurzklammhalten	Sol Kartuş Cartridge Left Li. Kurzklammhalten	Dayama Parçası Limit Piece	Torx Anahtar Torx Wrench Torx Schlüssel
		Ød <sub>1</sub>	Ød <sub>2</sub>	b	Ød <sub>3</sub>							
TK	○	125	40	14-18	60	8	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
125 93 SCN12 N18	○	125	40	18-22	60	8	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
160 93 SCN10 N14	○	160	40	14-18	63	10	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
160 93 SCN12 N18	○	160	40	18-22	70	10	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
200 93 SCN10 N14	○	200	50	14-18	75	12	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
200 93 SCN12 N18	○	200	50	18-22	75	12	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
250 93 SCN10 N14	○	250	50	14-18	75	16	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
250 93 SCN12 N18	○	250	50	18-22	75	16	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
125 93 SCN10 R14	○	125	40	14-18	60	8	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
125 93 SCN12 R18	○	125	40	18-22	60	8	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
160 93 SCN10 R14	○	160	40	14-18	63	10	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
160 93 SCN12 R18	○	160	40	18-22	70	10	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
200 93 SCN10 R14	○	200	50	14-18	75	12	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
200 93 SCN12 R18	○	200	50	18-22	75	12	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP
250 93 SCN10 R14	○	250	50	14-18	75	16	CNHW(T) 1005	7883203	93 SCN10 KFA R	93 SCN10 KFA L	93 SCN10 AP	T08 IP
250 93 SCN12 R18	○	250	50	18-22	75	16	CNHW(T) 1205	7883209	93 SCN12 KFA R	93 SCN12 KFA L	93 SCN12 AP	T15 IP

#### UYGULAMA TAVSİYELERİ

93 SCN DISC MILL Tipinde dar kanal frezeler, özel kartuş konstrüksiyonları ile 4 mm'ye kadar ayar imkanına olanak sağlar.

- 1- Standart formunda, montajlı kartuşlar ve ara parçalar ile birlikte kanal genişliği (b)14 mm'dir.
- 2- Eğer bir taraftaki kartuşun altındaki ayar parçası kaldırılırsa genişlik (b)16 mm'ye arttırılır.
- 3- Maksimum kanal genişliğini elde etmek için freze, ayar ara parçaları olmadan monte edilmelidir. Bu konumda kanal genişliği (b)18 mm'dir.

#### APPLICATION

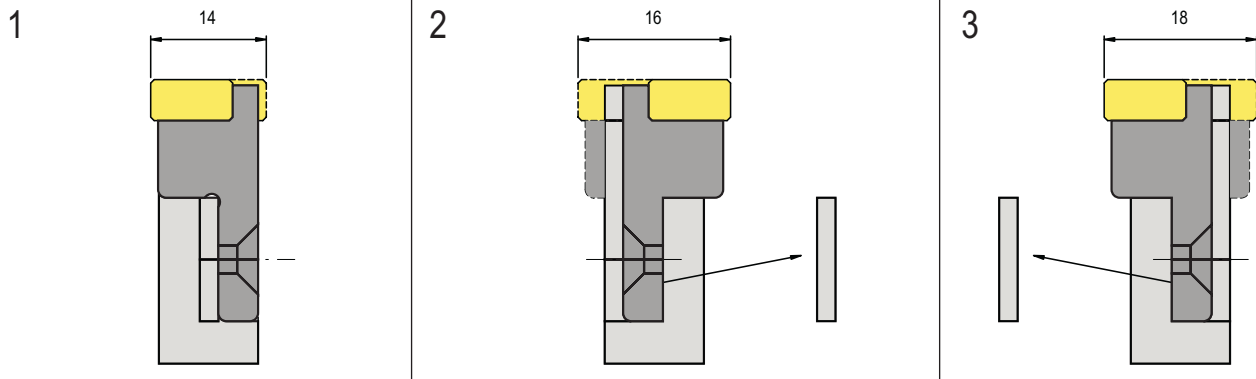
Disc mill type 93 SCN, provides the possibility of adjusting up to 4 mm by special cartridge.

- 1- In standard form, cartridge and fastening parts provides width of (b) 14 mm.
- 2- If the adjustment of cartridge in one side are cancelled, width is enlarged to (b) 16 mm.
- 3- Maximum width can be achieved without adjustment parts. In that way the width becomes (b) 18 mm.

#### ANWENDUNGSEMPFEHLUNGEN

Disc-Mühle Typ 93 SCN, bietet die Möglichkeit der Anpassung bis zu 4 mm durch spezielle Patrone.

- 1- In der Standardausführung bietet der Breite der Kurzklammhalten und Befestigungstechnik (b) 147 mm.7
- 2- Wenn die Einstellung der Kurzklammhalten in einer Seite abgebrochen werden, wird die Breite (b) 16 mm vergrößert.
- 3-Maximale Breite Einstellung ohne Teile erreicht werden kann. Auf diese Weise wird die Breite (b) 18 mm.



## Parmak Frezeler / Milling - End Mills Fräsen - Schafffräser



**FKR / L 15 17 ...**  
Sayfa / Page / Seite : 144



**PFR / L 15 17 ...**  
Sayfa / Page / Seite : 144



**A 246**  
Sayfa / Page / Seite : 145



**A 150 .... CW**  
Sayfa / Page / Seite : 145



**A 150 .... MK**  
Sayfa / Page / Seite : 146



**C 130**  
Sayfa / Page / Seite : 147



**C 140**  
Sayfa / Page / Seite : 147



**T 90**  
Sayfa / Page / Seite : 148



**C 135**  
Sayfa / Page / Seite : 148



**CNF**  
Sayfa / Page / Seite : 149



**CZF .... CW**  
Sayfa / Page / Seite : 149



**CZF .... SK**  
Sayfa / Page / Seite : 150



**TCKF**  
Sayfa / Page / Seite : 150



**TKUF**  
Sayfa / Page / Seite : 151



**TSRF**  
Sayfa / Page / Seite : 151







**T 90 .... MD..**  
Sayfa / Page / Seite : 152



**TSRF .... MD..**  
Sayfa / Page / Seite : 152



**TKUF .... MD..**  
Sayfa / Page / Seite : 153



**CW...MDS...**  
Sayfa / Page / Seite : 154



**BT...MDS...**  
Sayfa / Page / Seite : 154



**CAT...MDS...**  
Sayfa / Page / Seite : 155



**IT...MDS...**  
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**C 144**  
Sayfa / Page / Seite : 157



**C 149 .... DIN 69871**  
Sayfa / Page / Seite : 157



**C 149 .... (A.N.S.I) CAT**  
Sayfa / Page / Seite : 158



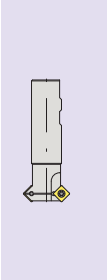
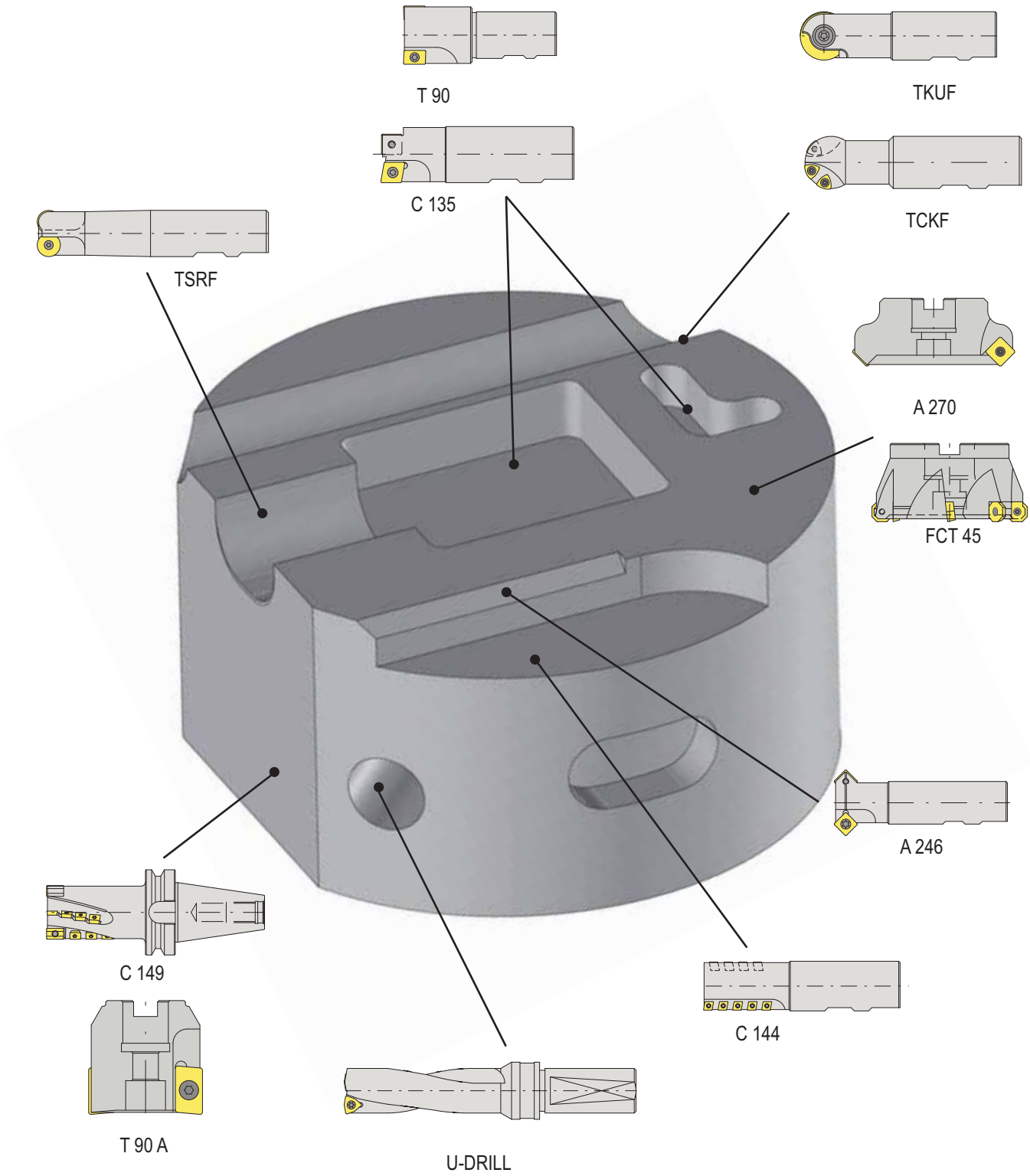
**C 149 .... BT MAS**  
Sayfa / Page / Seite : 158

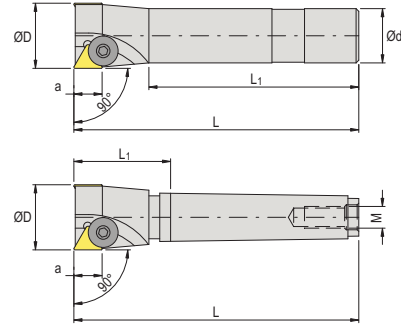


**C 149 .... M**  
Sayfa / Page / Seite : 159



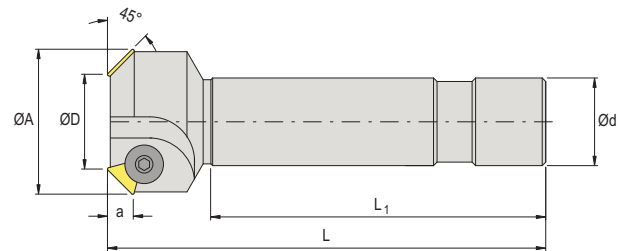
**C 149 .... DIN 2080**  
Sayfa / Page / Seite : 159





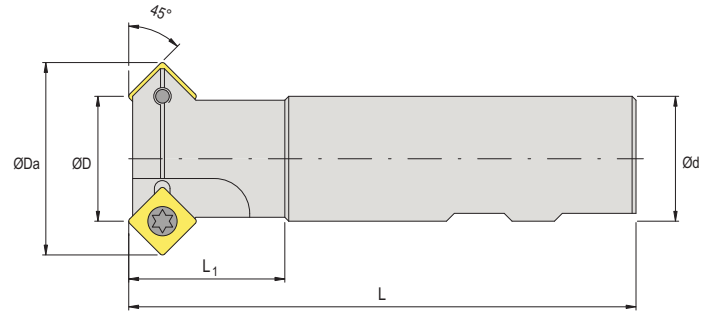
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype	Baskı Vidası Clamp Screw Klemme schraube	Anahtar Wrench Schlüssel
		ØD	Ød	L	L <sub>1</sub>	M	a					
FK 15 17	20 20 11	●	20	20	105	75		9	2	TP... 1103...	C16 636	Ta3
	20 22 11	●	22	20	105	75		9	2			
	25 25 11	●	25	25	105	75		9	2			
	25 28 11	●	28	25	105	85		9	2			
	32 32 16	○	32	32	125	90		14.5	2	TP... 1603...	C16 644	Ta4
	32 36 16	○	36	32	125	90		14.5	2			
	32 40 16	○	40	32	125	90		14.5	3			
	30 22.2	○	22	MK3	115	35	M12	9	2	TP... 1103...	C16 636	Ta3
	30 25.2	○	25	MK3	115	35	M12	9	2			
	30 28.2	○	28	MK3	115	35	M12	9	2			
30 32.2	○	32	MK3	120	35	M12	14.5	2				
30 36.2	○	36	MK3	120	35	M12	14.5	2	TP... 1603...	C16 644	Ta4	
30 40.2	○	40	MK4	120	40	M16	14.5	3				

**Parmak Freze**  
Milling - Chamfer Mill  
Fräsen - Fasenfräsen



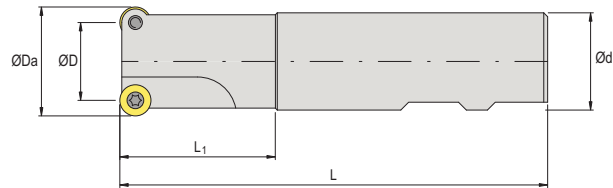
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		ØD	Ød	ØA	L	L <sub>1</sub>	a					
PF 15 17	25 20	○	20	25	34.4	100	70	6	2	TP... 1103...	C16 636	Ta3
	25 25	○	25	25	38.4	125	95	9	2			
	25 28	○	28	25	41.4	125	95	9	2			
	32 32	○	32	32	52.3	125	95	9	2	TP... 1603...	C16 644	Ta3
	32 36	○	36	32	56.3	125	95	9	2			
	32 40	○	40	32	60.3	125	95	9	3			

**Parmak Freze**  
Milling - Chamfer Mill  
Fräsen - Fasenfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	ØDa	Ød	L	L <sub>1</sub>				
A 246	12 R01 09	●	12	24.8	16	100	29	SCMT 09T308	7883209	T15 IP
	16 R02 09	●	16	28.8	20	105	32			
	20 R02 09	●	20	32.8	25	110	35			
	22 R02 09	●	22	34.8	25	115	35			
	25 R02 12	○	25	42.3	32	120	38	SPMT 120408	7883202	
	28 R02 12	○	28	45.3	32	125	40			
	32 R03 12	○	32	49.3	32	130	40			

**Parmak Freze**  
Milling - Slot Mill  
Fräsen - Kopiertfräsen



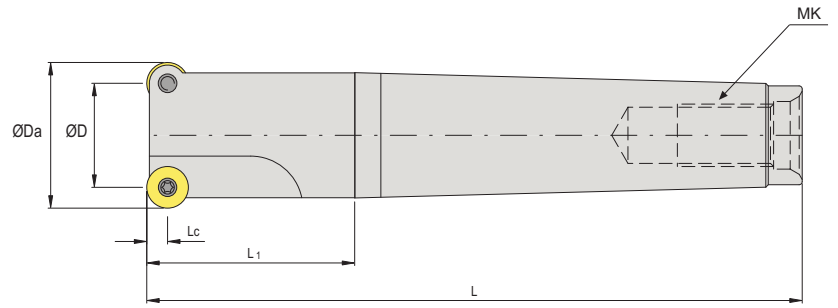
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		ØD	ØDa	Ød	L	L <sub>1</sub>				
A 150	12 R01 08 CW	○	12	20	16	100	50	RCM...0803..	7883203	T08 IP
	16 R01 08 CW	○	16	24	20	110	65			
	20 R02 08 CW	○	20	28	25	110	40			
	20 R02 08 CWU	○	20	28	25	140	65			
	25 R02 10 CW	○	25	35	32	110	50	RCM...1003..	7883209	T15 IP
	25 R02 10 CWU	○	25	35	32	140	75			
	32 R02 10 CW	○	32	42	32	140	75			
	32 R02 10 CWU	○	32	42	32	170	110			
	40 R02 10 CW	○	40	50	32	150	90			

R : Sağ / Right / Rechte L : Sol / Left / Linke  
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : A 246 20 R02 09

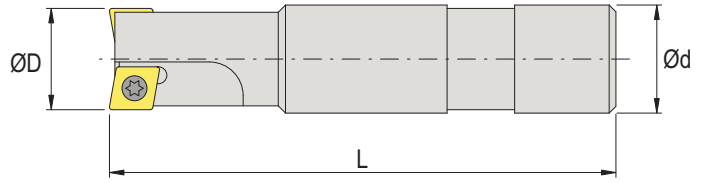
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



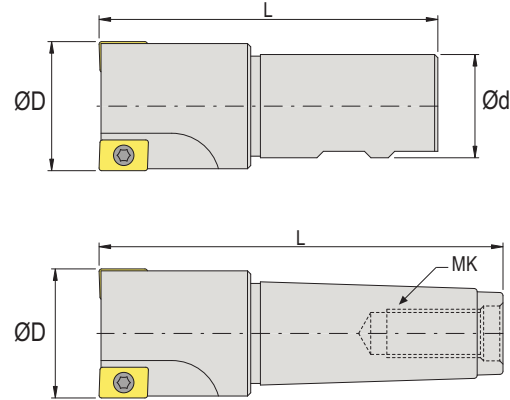
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	MK	ØDa	L	L <sub>1</sub>	Lc					
A 150	25 R02 08 MK	○	25	3	33	135	55	4	2	RCM...0803..	7883203	T08 IP
	32 R02 10 MK	○	32	3	42	135	55	5	2	RCM...1003..	7883209	T15 IP
	36 R02 12 MK	○	36	4	46	157	60	6	2	RCM...1204..	7883202	
	40 R02 12 MK	○	40	4	52	167	65	6	3			
	50 R02 12 MK	○	50	4	62	167	65	6	4			





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen			Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	L					
C 130	10 R01 CW	●	10	12	80	1	CPMT 060304	7815101	T08 IP
	12 R01 CW	●	12	12	80	1			
	14 R02 CW	●	14	16	80	2			
	16 R02 CW	●	16	16	90	2			
	18 R02 CW	●	18	20	100	2			
	20 R02 CW	○	20	20	105	2			
	22 R02 CW	○	22	25	110	2	CPMT 09T308	7883209	T15 IP
	25 R02 CW	○	25	25	115	2			
	28 R02 CW	○	28	25	115	2			
	32 R02 CW	○	32	25	120	3			

**Parmak Freze**  
Milling - Slot Mill  
Fräsen - Bohrnutenfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	L	MK				
C 140	22 R02 CW	○	22	20	90	---	LD.. 15T308	7883209	T15 IP
	25 R02 CW	●	25	25	120	---			
	25 R02 MK	○	25	---	135	3			
	28 R02 CW	○	28	25	120	---			
	28 R02 MK	○	28	---	135	3			
	32 R03 CW	○	32	32	120	---			
	32 R03 MK	○	32	---	140	3			
	36 R03 CW	○	36	32	120	---			
	36 R03 MK	○	36	---	140	3			
	40 R04 CW	○	40	32	125	---			
	40 R04 MK	○	40	---	156	4			

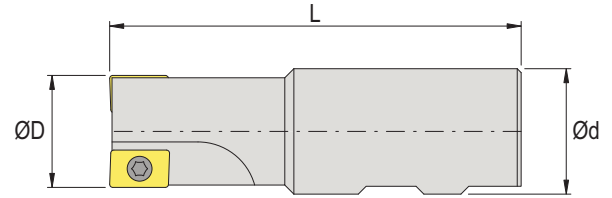
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : C 130 20 R02 CW

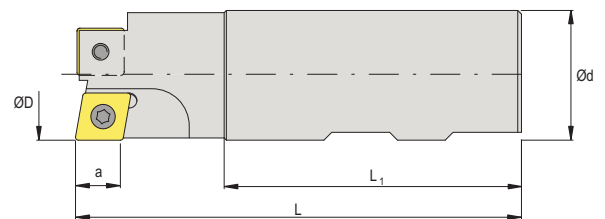
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



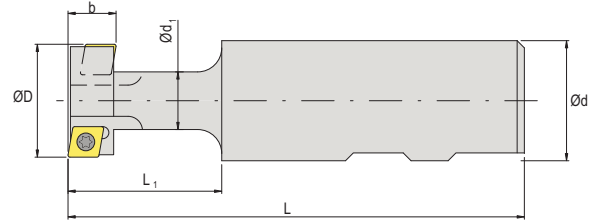
Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions Abmessungen			Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	L					
T90	16 R02 CW	●	16	16	90	2	APKT 1003...PD-R	7815101	T08 IP
	20 R02 CW	●	20	20	105	2			
	22 R02 CW	●	22	20	105	2			
	25 R02 CW	●	25	25	105	2	APKT 1604...PD-R	7815102	T15 IP
	28 R02 CW	●	28	25	105	2			
	32 R03 CW	○	32	32	120	3			
	40 R04 CW	○	40	32	120	4			

**Parmak Freze**  
Milling - Slot Mill  
Fräsen - Bohrnutenfräsen



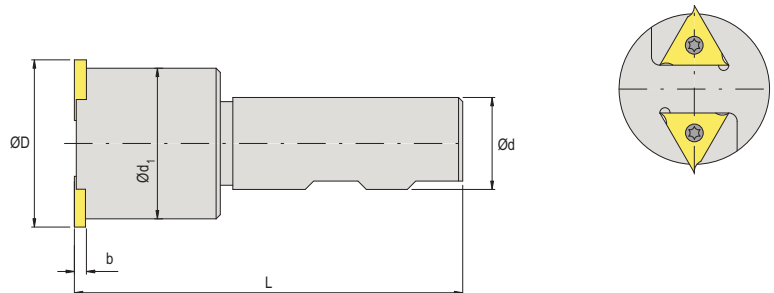
Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	L	L <sub>1</sub>	a					
C135	20 18 4 06T	○	18	20	105	75	4	2	CPMT 060304	7815101	T08 IP
	20 20 4 06T	○	20	20	105	75	4	2			
	25 25 4 09T	○	25	25	115	80	6	2	CPMT 09T308 / SPMT 09T308	7815102	T15 IP
	32 32 4 12T	○	32	32	120	80	8	2			
	32 36 4 12T	○	36	32	120	80	8	2	CPMT 120408 / SPMT 120408	7883202	
	32 40 4 12T	○	40	32	120	80	8	2			

**“T”Kanal Freze**  
Milling - “T” Slot Mill  
Fräsen - “T” Nutenfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen							Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	Ød <sub>1</sub>	L	L <sub>1</sub>	b					
CNF	17 R01 CW	○	17.5	16	10	80	25	8.5	2	CPMT 060304	7815101	T08 IP
	20 R01 CW	○	20.5	16	11	85	30	9	2			
	23 R01 CW	○	23.5	20	12	95	32	10	2			
	30 R02 CW	○	30.5	25	16	100	40	12	2			
	32 R02 CW	○	32.5	32	16	105	40	12	2			
	37 R02 CW	○	37.5	32	17	115	50	16	2	CPMT 09T304	7883209	T15 IP
	42 R02 CW	○	42.5	32	19	120	50	17	4			
	47 R02 CW	○	47	32	25	125	60	20	4	CPMT 120408	7883202	
	52 R02 CW	○	52	32	25	125	60	21	4			
	55 R02 CW	○	55	32	25	125	60	22	4			

**Kanal Açma Frezesi**  
Milling - Disc Mill for Grooving  
Fräsen - Scheibenmühle zum Einstechen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	Ød <sub>1</sub>	L	b					
CZF	20 R01 CW	○	20	20	15	100	1.1/2.65/4.15	1	R 154.3.16.....	7883209	T15 IP
	25 R01 CW	○	25	20	19	100	1.1/2.65/4.15	1			
	32 R02 CW	○	32	25	26	115	1.1/2.65/4.15	2			
	36 R03 CW	○	36	32	30	120	1.1/2.65/4.15	3			
	40 R03 CW	○	40	32	34	125	1.1/2.65/4.15	3			
	50 R04 CW	○	50	32	42	130	1.1/2.65/4.15	4			
	63 R05 CW	○	63	40	55	135	1.1/2.65/4.15	5			
	80 R06 CW	○	80	40	72	140	1.1/2.65/4.15	6			

R : Sağ / Right / Rechte L : Sol / Left / Linke

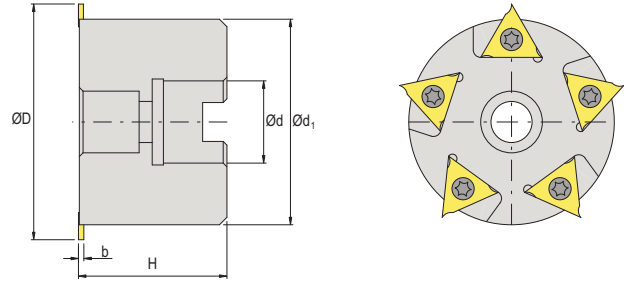
● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CNF 42 R02 CW

● 2 Hafta / in two weeks / in zwei Wochen

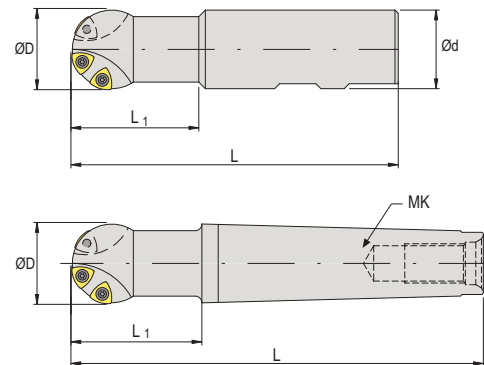
○ Stokta yok / Non stock item / Nicht auf Lager





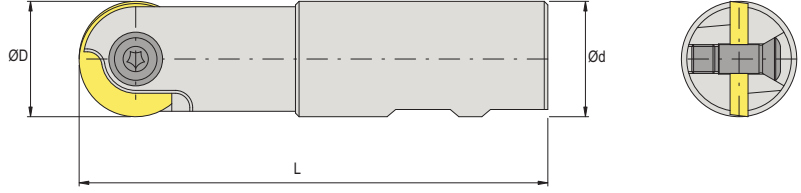
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	Ød <sub>1</sub>	H	b					
CZF	40 R03 SK 16	○	40	16	33	40	1.1/2.65/4.15	3	R 154.3.16.....	7883209	T15
	50 R04 SK 16	○	50	22	42	45	1.1/2.65/4.15	4			
	63 R05 SK 16	○	63	22	55	45	1.1/2.65/4.15	5			
	80 R06 SK 16	○	80	27	72	45	1.1/2.65/4.15	6			

**Küresel Freze**  
Milling - Form Mill  
Fräsen - Kugelfräsen



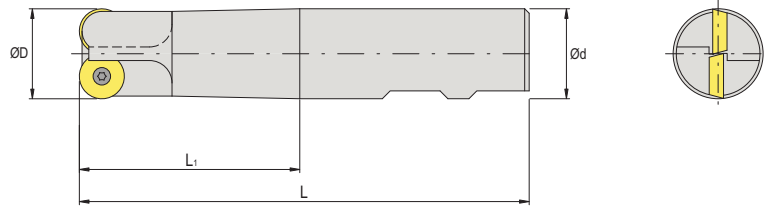
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	L	L <sub>1</sub>	MK					
TCKF	2016 OCR	○	16	20	130	50	—	2	RT 19 080T	7815101	T08 IP
	2520 OCR	○	20	25	140	60	—	2	RT 19 100T		
	3225 OCR	○	25	32	162	82	—	2	RT 19 125T		
	3232 OCR	○	32	32	168	88	—	2	RT 19 160T	7883209	T15 IP
	2016 3 17M	○	16	---	109	40	2	2	RT 19 080T	7815101	T08 IP
	2020 3 22M	○	20	---	111	42	2	2	RT 19 100T	7883209	T15 IP
	3032 3 30M	○	32	---	141	55	3	2	RT 19 160T		

**Küresel Freze**  
Milling - Form Mill  
Fräsen - Kugelfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen			Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød	L			
TKUF 10 R01 CW12	○	10	12	115	WPR 10 N	GWS 10	T15 IP
12 R01 CW16	○	12	16	115	WPR 12 N	GWS 12	T20
16 R01 CW20	○	16	20	115	WPR 16 N	GWS 16	
20 R01 CW25	○	20	25	130	WPR 20 N	GWS 20	
25 R01 CW25	○	25	25	140	WPR 25 N	GWS 25	
32 R01 CW32	○	32	32	160	WPR 32 N	GWS 32	
10 130 R01 CW12	○	10	12	130	WPR 10 N	GWS 10	
12 130 R01 CW16	○	12	16	130	WPR 12 N	GWS 12	T20
16 140 R01 CW20	○	16	20	140	WPR 16 N	GWS 16	
20 180 R01 CW25	○	20	25	180	WPR 20 N	GWS 20	
25 190 R01 CW25	○	25	25	190	WPR 25 N	GWS 25	
32 200 R01 CW32	○	32	32	200	WPR 32 N	GWS 32	

**Parmak Freze**  
Milling - Slot Mill  
Fräsen - Koptierfräsen



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen				Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel			
		ØD	Ød	L	L <sub>1</sub>							
TSRF 20 R02 CW20 - 10	●	20	20	100	49	2	RDHX 1003 MOT	7883209	T15 IP			
25 R02 CW25 - 10	○	25	25	120	60	2						
25 R03 CW25 - 10	○	25	25	120	60	3						
25 R03 CW32 - U10	○	25	32	180	100	2						
32 R03 CW32 - 10	○	32	32	125	55	3						
32 R03 CW40 - U10	○	32	40	200	100	3						
40 R04 CW40 - 10	○	40	40	150	70	4						
25 R02 CW25 - 12	●	25	25	120	60	2				RDHX 12T3 MOT	7883202	T15 IP
32 R03 CW32 - 12	●	32	32	125	55	3						
32 R03 CW32 - U12	○	32	32	200	120	3						
32 R02 CW32 - 16	○	32	32	200	120	2	RDHX 1604 MOT	7883202	T15 IP			
32 R02 CW32 - U16	○	32	32	250	170	2						
40 R03 CW40 - 16	○	40	40	200	120	3						
40 R03 CW40 - U16	○	40	40	250	170	3						

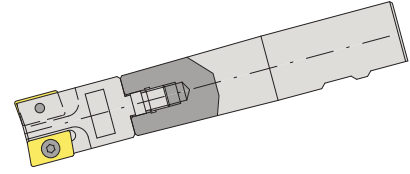
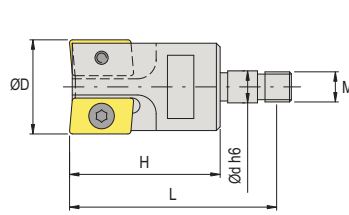
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : TKUF 25 R01 CW25

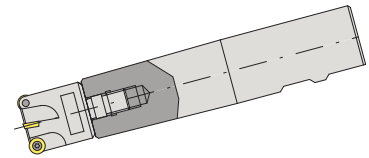
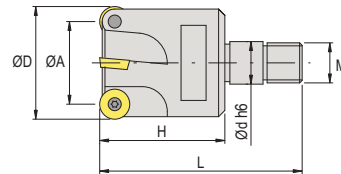
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

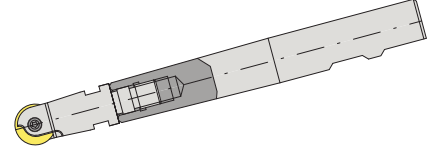
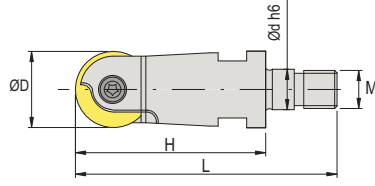


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød h6	M	H	L					
T 90	16 R02 MD8	○	16	8.5	M8	24	38	2	APKT 1003	7815101	T08
	20 R03 MD10	○	20	10.5	M10	26	45	3			
	25 R04 MD12	○	25	12.5	M12	33	55	4			
	25 R02 MD12	○	25	12.5	M12	33	55	2	APKT 1604	7883209	T15
	32 R03 MD16	○	32	17	M16	43	66	3			
	32 R03 MD16	○	32	17	M16	43	66	3			
	40 R04 MD16	○	40	17	M16	43	66	4			

**Parmak Freze**  
Milling - End Mill  
Fräsen - Schafffräsen

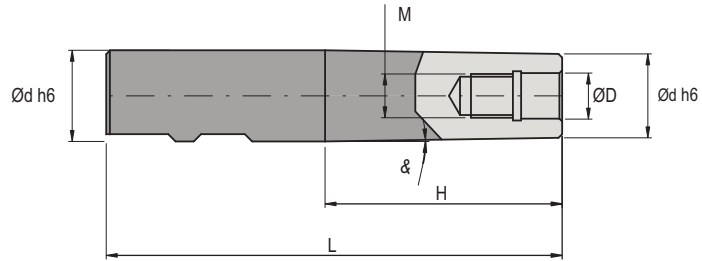


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød h6	ØA	M	H	L					
TSRF	16 R02 07 MD8	○	16	8.5	8	M8	24	38	2	RDHX 0702 MOT	7815101	T08 IP
	20 R03 10 MD10	○	20	10.5	10	M10	26	45	3			
	25 R03 10 MD12	○	25	12.5	15	M12	33	55	3			
	25 R02 12 MD12	○	25	12.5	13	M12	33	55	2	RDHX 12T3 MOT	7883209	T15 IP
	32 R03 10 MD16	○	32	17	22	M16	43	66	3			
	32 R03 12 MD16	○	32	17	20	M16	43	66	3			
	40 R04 12 MD16	○	40	17	28	M16	43	66	4			



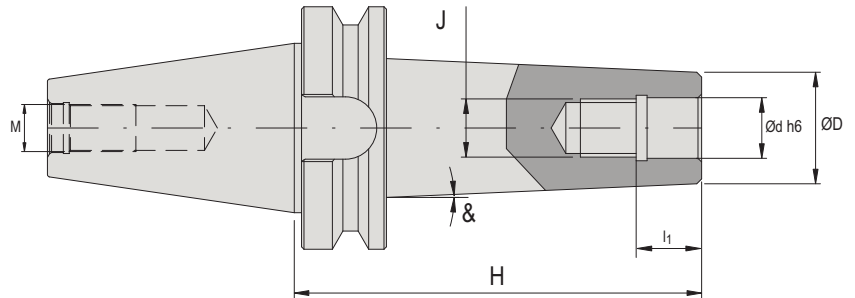
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	Ød h6	M	H	L				
TKUF 16 R01 MD8	○	16	8.5	M8	40	54	1	WPR 16 N	GWS 16	T20
20 R01 MD10	○	20	10.5	M10	40	59	1	WPR 20 N	GWS 20	
25 R01 MD12	○	25	12.5	M12	45	67	1	WPR 25 N	GWS 25	





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						
		ØD	ØA	Ød H6	H	L	M	&
CW20 MDS8 40	●	14	8.5	20	40	90	M8	3°
CW20 MDS8 80	●	14	8.5	20	80	130	M8	1°
CW25 MDS8 40	○	14	8.5	25	40	96	M8	3°
CW25 MDS8 80	●	14	8.5	25	80	136	M8	1°
CW20 MDS10 40	○	18	10.5	20	40	90	M10	3°
CW20 MDS10 80	●	18	10.5	20	80	130	M10	1°
CW25 MDS10 40	●	18	10.5	25	40	96	M10	3°
CW25 MDS10 100	●	18	10.5	25	100	156	M10	1°
CW25 MDS12 50	○	22	12.5	25	50	106	M12	3°
CW25 MDS12 100	●	22	12.5	25	100	156	M12	1°
CW32 MDS12 50	○	22	12.5	32	50	110	M12	3°
CW32 MDS12 100	○	22	12.5	32	100	165	M12	1°
CW32 MDS16 50	○	28	17	32	50	110	M16	3°
CW32 MDS16 100	○	28	17	32	100	160	M16	1°
CW32 MDS16 150	○	28	17	32	150	210	M16	1°

**Modüler Sistem Freze Tutucuları BT MAS - Form A**  
Milling - Toolholder , Arbor BT MAS - Form A  
Fräsen - Werkzeughalter, BT MAS - Form A

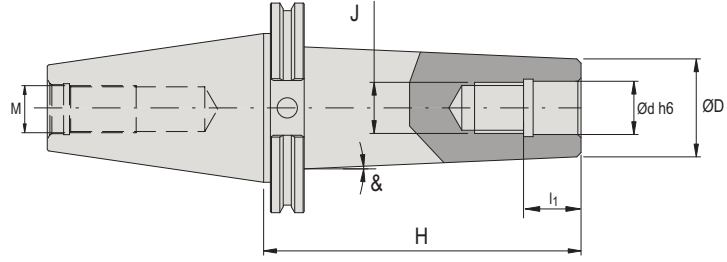


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						
		ØD	Ød H6	H	l1	J	M	&
BT40	MDS8 80	○	14	8.5	80	6.5	M8	1°
	MDS10 100	○	18	10.5	100	6.5	M10	
	MDS12 105	○	22	12.5	105	7	M12	
	MDS16 150	○	28	17	150	8	M16	
BT50	MDS8 80	○	14	8.5	80	6.5	M8	
	MDS10 100	○	18	10.5	100	6.5	M10	
	MDS12 105	○	22	12.5	105	7	M12	
	MDS16 150	○	28	17	150	8	M16	

## Modüler Sistem Freze Tutucuları (A.N.S.I) CAT - Form A

Milling - Toolholder , Arbor (A.N.S.I) CAT - Form A

Fräsen - Werkzeughalter, (A.N.S.I) CAT - Form A

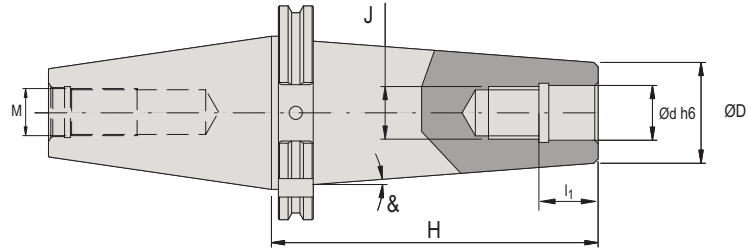


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen								
		ØD	Ød H6	H	l1	J	M	&		
CAT40	MDS8 80	○	14	8.5	80	6.5	M8	M16	1°	
	MDS10 100	○	18	10.5	100	6.5	M10			
	MDS12 105	○	22	12.5	105	7	M12			
	MDS16 150	○	28	17	150	8	M16			
CAT50	MDS8 80	○	14	8.5	80	6.5	M8			M24
	MDS10 100	○	18	10.5	100	6.5	M10			
	MDS12 105	○	22	12.5	105	7	M12			
	MDS16 150	○	28	17	150	8	M16			

## Modüler Sistem Freze Tutucuları DIN 69871 - Form A

Milling - Toolholder , Arbor DIN 69871 - Form A

Fräsen - Werkzeughalter, DIN 69871 - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen								
		ØD	Ød H6	H	l1	J	M	&		
IT40	MDS8 80	○	14	8.5	80	6.5	M8	M16	1°	
	MDS10 100	○	18	10.5	100	6.5	M10			
	MDS12 105	○	22	12.5	105	7	M12			
	MDS16 150	○	28	17	150	8	M16			
IT50	MDS8 80	○	14	8.5	80	6.5	M8			M24
	MDS10 100	○	18	10.5	100	6.5	M10			
	MDS12 105	○	22	12.5	105	7	M12			
	MDS16 150	○	28	17	150	8	M16			

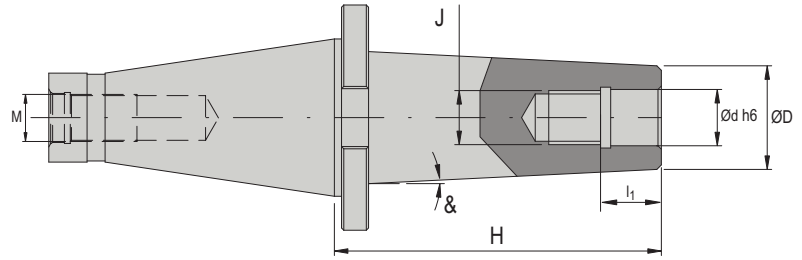
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :IT40 MDS8 80

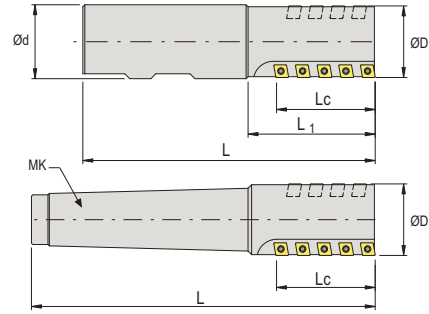
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



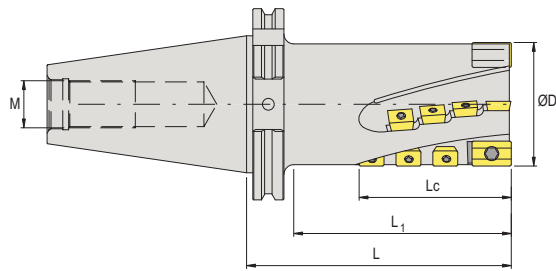
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						
		ØD	Ød H6	H	l <sub>1</sub>	J	M	&
ISO40	MDS8 80	○	14	8.5	80	6.5	M8	1°
	MDS10 100	○	18	10.5	100	6.5	M10	
	MDS12 105	○	22	12.5	105	7	M12	
	MDS16 150	○	28	17	150	8	M16	
ISO50	MDS8 80	○	14	8.5	80	6.5	M8	
	MDS10 100	○	18	10.5	100	6.5	M10	
	MDS12 105	○	22	12.5	105	7	M12	
	MDS16 150	○	28	17	150	8	M16	





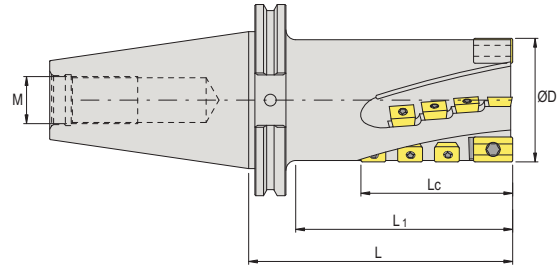
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Sayısı Insert Number Plattenzahl	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	L	L <sub>1</sub>	MK	Lc						
C144	20 R01 CW	○	20	20	90	45	---	25	2	5	CPMT 060304	7815101	T08 IP
	20 R01 MK	○	20	---	90	45	2	25	2	5			
	25 R02 CW	○	25	25	100	55	---	30	4	12			
	25 R02 MK	○	25	---	100	55	3	30	4	12			
	32 R02 CW	○	32	32	115	60	---	38	4	16			
	32 R02 MK	○	32	---	115	60	4	38	4	16			
	36 R02 CW	○	36	32	125	70	---	48	4	16			
	36 R02 MK	○	36	---	125	70	4	48	4	16			
	40 R02 CW	○	40	32	125	70	---	48	4	14	CPMT 09T304	7883209	T15 IP
	40 R02 MK	○	40	---	125	70	4	48	4	14			

**Helis Freze - DIN 69871 - Form A**  
Milling - Helical Mill-DIN 69871 - Form A  
Fräsen - Helikalen Fräsen DIN 69871 - Form A



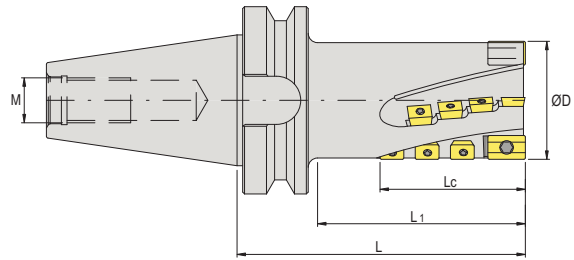
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen						Z	Uç Sayısı Insert Number Plattenzahl	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD	M	L	L <sub>1</sub>	Lc						
C149	50 R02 IT40	○	50	M16	120	95	65	4	12	LPHT 200408 / SPMT 120408	7883202	T15 IP
	50 R02 IT50	○	50	M24	120	95	65	4	12			
	63 R02 IT40	○	63	M16	135	110	80	4	14			
	63 R02 IT50	○	63	M24	135	110	80	4	14			
	80 R03 IT50	○	80	M24	150	125	95	6	30			
	100 R04 IT50	○	100	M24	175	150	120	8	44			



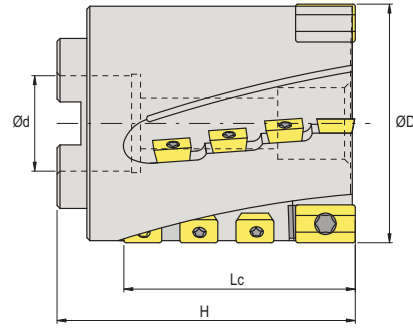


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Sayısı Insert Number Plattenzahl	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	M	L	L <sub>1</sub>	Lc						
C149	50 R02 C40	○	50	M16	120	95	65	4	12	LPHT 200408 / SPMT 120408	7883202	T15 IP
	50 R02 C50	○	50	M24	120	95	65	4	12			
	63 R02 C40	○	63	M16	135	110	80	4	14			
	63 R02 C50	○	63	M24	135	110	80	4	14			
	80 R03 C50	○	80	M24	150	125	95	6	30			
	100 R04 C50	○	100	M24	175	150	120	8	44			

**Helis Freze - BT MAS - Form A**  
Milling - Helical Mill - BT MAS - Form A  
Fräsen - Helikalen Fräsen - BT MAS - Form A

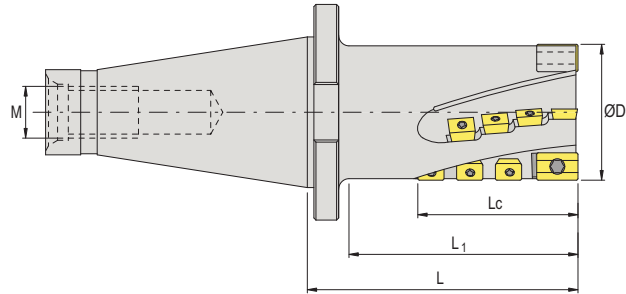


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Sayısı Insert Number Plattenzahl	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	M	L	L <sub>1</sub>	Lc						
C149	50 R02 B40	○	50	M16	120	95	65	4	12	LPHT 200408 / SPMT 120408	7883202	T15 IP
	50 R02 B50	○	50	M24	130	95	65	4	12			
	63 R02 B40	○	63	M16	140	110	80	4	14			
	63 R02 B50	○	63	M24	145	110	80	4	14			
	80 R03 B50	○	80	M24	160	125	95	6	30			
	100 R04 B50	○	100	M24	180	150	120	8	44			



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen				Z	Uç Sayısı Insert Number Plattenzahl	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	Ød	H	Lc						
C149	63 R02 M54	○	63	27	74	54	4	2/10	LPHT 200408/SPMT 120408	7883202	T15 IP
	80 R03 M80	○	80	32	100	80	6	3/21			
	100 R04 M90	○	100	40	110	90	8	4/48			
	125 R05 M100	○	125	50	120	100	10	5/58			

**Helis Freze - DIN 2080 - Form A**  
Milling - Helical Mill - DIN 2080 - Form A  
Fräsen - Helikalen Fräsen - DIN 2080 - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Z	Uç Sayısı Insert Number Plattenzahl	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel	
		ØD	M	L	L <sub>1</sub>	Lc						
C149	50 R02 D40	○	50	M16	115	95	65	4	12	LPHT 200408 / SPMT 120408	7883202	T15 IP
	50 R02 D50	○	50	M24	115	95	65	4	12			
	63 R02 D40	○	63	M16	130	110	80	4	14			
	63 R02 D50	○	63	M24	130	110	80	4	14			
	80 R03 D50	○	80	M24	145	125	95	6	30			
	100 R04 D50	○	100	M24	170	150	120	8	44			
	125 R05 D50	○	125	M24	180	160	130	10	54			

R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : C 149 80 R03 M80

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Problem \ Çözüm	Aşırı serbest yüzey aşınması	Aşırı krater aşınması	Talaş birikmesi (kaynaması)	Kesme kenarının ufak parçalar halinde kopması	Plastik deformasyon	Termal çatlaklar (kırıklar)	Kesme kenarının çentiklenmesi	Kötü iş parçası yüzeyi	İş parçasının küçük parçalar halinde kopması
Uç kalitesinin aşınma dayanımı	↑↑	↑↑			↑↑			↑↑	
Uç kalitesinin sünekliği				↑↑		↑↑			
Kesme hızı	↓↓	↓↓	↑↑	↑↑	↓↓			↑↑	
Diş başına ilerleme	↑↑	↓↓	↑↑	↓↓	↓↓				↓↓
Kesme derinliği			↓↓	↔				↔	↓↓
Yanaşma açısı			↔						↓↓
Kesme kenar pahu	↑↑				↑↑			↓↓	↓↓
Stabilite					↑↑			↑↑	
Soğutma		↑↑	↑↑					↔	

↑↑ : Yükseltin

↓↓ : Azaltın

↔ : Uygun hale getirin

Kesme hızı (m/dak)	$V_c = \frac{D_m \cdot \pi \cdot n}{1000}$
Tabla ilerleme hızı (mm/dak)	$V_f = f_z \cdot z \cdot n$
Ortalama talaş kalınlığı (mm)	$h_m = f_z \cdot \sqrt{\frac{a_e}{d_1}}$
Talaş hacmi (cm <sup>3</sup> /dak)	$v = \frac{a_p \cdot a_e \cdot V_f}{1000}$

ap... Kesme derinliği (mm)  
ae... Frezeleme genişliği (mm)  
fz ... Uç (insert) başına ilerleme (mm/uç)  
d1... Freze kafa çapı (mm)  
n ... Devir sayısı ( dev/dak)



Problem / Option	Extreme flank wear Extremer Freiflächensverschleiß	Extreme crater wear Extremer Kolkverschleiß	Edge build up Aufbauschneidenbildung	Chipping of cutting edge Schneidkantenausbrüche	Plastic deformation Plastische Verformung	Thermal crack Warmerisse	Notch wear Kerbverschleiß	Poor workpiece surface Schlechte Werkstückoberfläche	Chipping of workpiece Chippen von Werkstück
Carbide wear resistance Verschleißfestigkeit	↑↑	↑↑			↑↑			↑↑	
Carbide toughness Zahigkeit				↑↑		↑↑			
Cutting speed Schnittgeschwindigkeit	↓↓	↓↓	↑↑	↑↑	↓↓			↑↑	
Feed per tooth Vorschub pro Zahn	↑↑	↓↓	↑↑	↓↓	↓↓				↓↓
Cutting depth Schnitttiefe			↓↓	↔				↔	↓↓
Lead angle Anstellwinkel			↔						↓↓
Cutting edge chamfer Platten-Eckenradius	↑↑				↑↑			↓↓	↓↓
Stability Stabilität					↑↑			↑↑	
Cooling Kühlung		↑↑	↑↑					↔	

↑↑ : Increase  
: Erhöhen

↓↓ : Reduce  
: Verkleinern

↔ : Optimize  
: Optimieren

Cutting speed (m/min) Schnittgeschwindigkeit (m/min)	$V_c = \frac{D_m \cdot \pi \cdot n}{1000}$
Feed speed (mm/min) Vorschubgeschwindigkeit (mm/min)	$V_f = f_z \cdot z \cdot n$
Average chip thickness (mm) Mittlere Spandicke (mm)	$h_m = f_z \cdot \sqrt{\frac{a_e}{d_1}}$
Metal removal rate (cm <sup>3</sup> /min) Zerspanungsvolumen (cm <sup>3</sup> /min)	$v = \frac{a_p \cdot a_e \cdot V_f}{1000}$

$a_p$ ... Cutting depth (mm)  
Schnitttiefe (mm)

$a_e$ ... Depth of cut (mm)  
Frasenbreite (mm)

$f_z$ ... Feed per tooth (mm)  
Vorschub pro Zahn (mm)

$d_1$ ... Cutter diameter (mm)  
Schnittdurchschnitt (mm)

$n$  ... Revolution per minute ( Rev/min)  
Drehzahl pro minute ( Rev/min)

### Değiştirilebilir Uçlu Matkaplar (U - delme) / Indexable Insert Drills (U - Drill) Wendepaltenbohrer (U - Bohrer)



**1.5 DHB**  
Sayfa / Page / Seite : 164



**3 DHB**  
Sayfa / Page / Seite : 165



**TKM ....**  
Sayfa / Page / Seite : 167

### Ayarlı Delik İşleme Kafası ve Tutucuları / Rough Boring heads and Holder Einstellbaren Klemmhalter Für Ausdrehköpfe



**ADIK ....**  
Sayfa / Page / Seite : 178



**SCGCL / SCBCL**  
Sayfa / Page / Seite : 179



**ADM TUTUCU .... BT MAS - Form A**  
Sayfa / Page / Seite : 180



**ADM TUTUCU .... (A.N.S.I) CAT - Form A**  
Sayfa / Page / Seite : 180

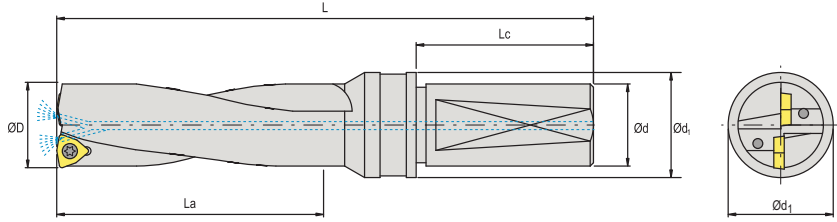


**ADM TUTUCU .... DIN 69871 - Form A**  
Sayfa / Page / Seite : 181



**ADM TUTUCU .... DIN 2080 - Form A**  
Sayfa / Page / Seite : 181



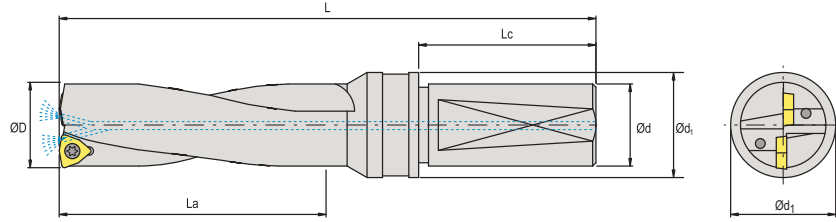


Kod Code Bezeichnung	Stok Stock Lager		Öçüler Dimensions Abmessungen						Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	ØD	Ød	Ød <sub>1</sub>	La	Lc	L			
1.5 DHB											
200 25 R/L 10	○	○	20	25	32	34	54	115	WCMX 040204	7815101	T08 IP
210 25 R/L 10	○	○	21	25	32	36	54	115			
220 25 R/L 10	○	○	22	25	32	37	54	115			
230 25 R/L 10	○	○	23	25	32	38	54	115			
240 25 R/L 10	○	○	24	25	32	41	54	125	WCMX 050308	7883203	
250 25 R/L 10	○	○	25	25	32	43	54	125			
260 25 R/L 10	○	○	26	25	32	45	54	125			
270 25 R/L 10	○	○	27	25	32	46	54	130			
280 25 R/L 10	○	○	28	25	32	47	54	130			
290 25 R/L 10	○	○	29	25	32	49	54	130			
300 32 R/L 10	○	○	30	32	49	49	58	140	WCMX 06T308	7883209	T15 IP
310 32 R/L 10	○	○	31	32	49	50	58	140			
320 32 R/L 10	○	○	32	32	49	55	58	145			
330 32 R/L 10	○	○	33	32	49	56	58	145			
340 32 R/L 10	○	○	34	32	49	58	58	145			
350 32 R/L 10	○	○	35	32	49	59	58	145			
360 32 R/L 10	○	○	36	32	49	59	58	150			
370 32 R/L 10	○	○	37	32	49	61	58	150			
380 32 R/L 10	○	○	38	32	49	62	58	150			
390 32 R/L 10	○	○	39	32	49	63	58	150			
400 32 R/L 10	○	○	40	32	49	65	58	150			
410 32 R/L 10	○	○	41	32	49	66	58	155			
420 32 R/L 10	○	○	42	32	49	68	58	155			
430 32 R/L 10	○	○	43	32	49	68	58	155			
440 32 R/L 10	○	○	44	32	49	72	58	155			
450 40 R/L 10	○	○	45	40	59	73	68	170	WCMX 080412	7815102	
460 40 R/L 10	○	○	46	40	59	74	68	170			
470 40 R/L 10	○	○	47	40	59	75	68	170			
480 40 R/L 10	○	○	48	40	59	78	68	180			
490 40 R/L 10	○	○	49	40	59	80	68	180			
500 40 R/L 10	○	○	50	40	59	82	68	180			
510 40 R/L 10	○	○	51	40	59	84	68	180			
520 40 R/L 10	○	○	52	40	59	86	68	180			
530 40 R/L 10	○	○	53	40	59	88	68	182			
540 40 R/L 10	○	○	54	40	59	89	68	182			
550 40 R/L 10	○	○	55	40	59	90	68	185			
560 40 R/L 10	○	○	56	40	59	91	68	185			

# Değiştirilebilir Uçlu Matkaplar - 3 D

Indexable Insert Drill - 3 D

Wendepplattenbohrer - 3 D



Kod Code Bezeichnung	Stok Stock Lager		Ölçüler Dimensions Abmessungen						Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
	R	L	ØD	Ød	Ød1	La	Lc	L			
3 DHB	○	○	20	25	32	63	54	138	WCMX 040204	7815101	T08 IP
200 25 R/L 10	○	○	21	25	32	64	54	138			
210 25 R/L 10	○	○	22	25	32	69	54	138			
220 25 R/L 10	○	○	23	25	32	70	54	138			
230 25 R/L 10	○	○	24	25	32	75	54	150			
240 25 R/L 10	○	○	25	25	32	77	54	150			
250 25 R/L 10	○	○	26	25	32	82	54	150			
260 25 R/L 10	○	○	27	25	32	85	54	150			
270 25 R/L 10	○	○	28	25	32	88	54	160			
280 25 R/L 10	○	○	29	25	32	91	54	160	WCMX 050308	7883203	
290 25 R/L 10	○	○	30	32	49	92	58	160			
300 32 R/L 10	○	○	31	32	49	94	58	175			
310 32 R/L 10	○	○	32	32	49	103	58	175			
320 32 R/L 10	○	○	33	32	49	104	58	190			
330 32 R/L 10	○	○	34	32	49	105	58	190			
340 32 R/L 10	○	○	35	32	49	107	58	190			
350 32 R/L 10	○	○	36	32	49	115	58	190			
360 32 R/L 10	○	○	37	32	49	117	58	205			WCMX 06T308
370 32 R/L 10	○	○	38	32	49	119	58	205			
380 32 R/L 10	○	○	39	32	49	121	58	205			
390 32 R/L 10	○	○	40	32	49	123	58	205			
400 32 R/L 10	○	○	41	32	49	129	58	205			
410 32 R/L 10	○	○	42	32	49	131	58	205			
420 32 R/L 10	○	○	43	32	49	132	58	205			
430 32 R/L 10	○	○	44	32	49	133	58	205			
440 32 R/L 10	○	○	45	40	59	142	68	205	WCMX 080412	7815102	
450 40 R/L 10	○	○	46	40	59	143	68	225			
460 40 R/L 10	○	○	47	40	59	144	68	225			
470 40 R/L 10	○	○	48	40	59	151	68	225			
480 40 R/L 10	○	○	49	40	59	153	68	240			
490 40 R/L 10	○	○	50	40	59	155	68	240			
500 40 R/L 10	○	○	51	40	59	157	68	240			
510 40 R/L 10	○	○	52	40	59	159	68	240			
520 40 R/L 10	○	○	53	40	59	161	68	240			
530 40 R/L 10	○	○	54	40	59	162	68	240			
540 40 R/L 10	○	○	55	40	59	163	68	242			
550 40 R/L 10	○	○	56	40	59	163	68	242			

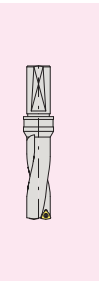
R : Sağ / Right / Rechte L : Sol / Left / Linke

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : 3 DHB 250 25 R10

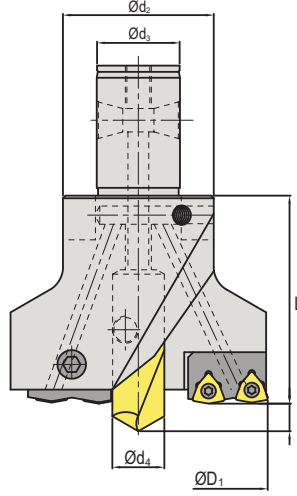
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



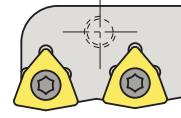






**İç Kartuş**  
Interior Cartridges  
Kurzklemmhalters Innere

for 2 inserts  
für 2 kurzklemmhalters

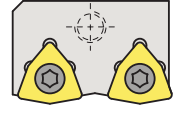


for 3 inserts  
für 3 kurzklemmhalters



**Dış Kartuş**  
Exterior Cartridges  
Kurzklemmhalters Außere

for 2 inserts  
für 2 kurzklemmhalters



for 3 inserts  
für 3 kurzklemmhalters



ØD <sub>1</sub>	2 to 4 x ØD <sub>1</sub>	4 to 6 x ØD <sub>1</sub>	> 6 x ØD <sub>1</sub>
	l <sub>1</sub>	l <sub>1</sub>	l <sub>1</sub>
45 - 58	3.0	3.4	3.8
58 - 73	4.0	4.3	4.6
73 - 96	6.2	6.5	6.8
96 - 122	8.1	8.4	8.7
122 - 150	10.5	10.9	11.3

Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					Kartuş / Cartridges Kurzklemmhalter		Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel
		ØD <sub>1</sub>	Ød <sub>2</sub>	Ød <sub>3</sub>	Ød <sub>4</sub>	L	İç Innere	Dış Äußere			
TKM 45 AK 04	○	45	28	13	8	50	DIK 45 L	DIK 45 R	WCMX 040204	7815101	T 08 IP
50 AK 04	○	50	28	13	8	50	DIK 50 L	DIK 50 R			
55 AK 05	○	55	32	16	8	60	DIK 55 L	DIK 55 R	WCMX 050308	7883203	
58 AK 05	○	58	32	16	10	60	DIK 58 L	DIK 58 R			
63 AK 05	○	63	32	16	10	60	DIK 63 L	DIK 63 R			
68 AK 05	○	68	40	22	10	70	DIK 68 L	DIK 68 R			
73 AK 05	○	73	40	22	15	70	DIK 73 L	DIK 73 R			
78 AK 05	○	78	40	22	15	70	DIK 78 L	DIK 78 R			
84 AK 06	○	84	48	27	15	70	DIK 84 L	DIK 84 R	WCMX 06T308	7883209	T 15 IP
90 AK 06	○	90	48	27	15	70	DIK 90 L	DIK 90 R			
96 AK 06	○	96	58	32	20	80	DIK 96 L	DIK 96 R			
102 AK 06	○	102	58	32	20	80	DIK 102 L	DIK 102 R			
108 AK 06	○	108	58	32	20	80	DIK 108 L	DIK 108 R			
115 AK 06	○	115	70	40	20	90	DIK 115 L	DIK 115 R			
122 AK 06	○	122	70	40	25	90	DIK 122 L	DIK 122 R			
130 AK 06	○	130	70	40	25	90	DIK 130 L	DIK 130 R			
140 AK 06	○	140	80	50	25	100	DIK 140 L	DIK 140 R			
150 AK 06	○	150	80	50	25	100	DIK 150 L	DIK 150 R			





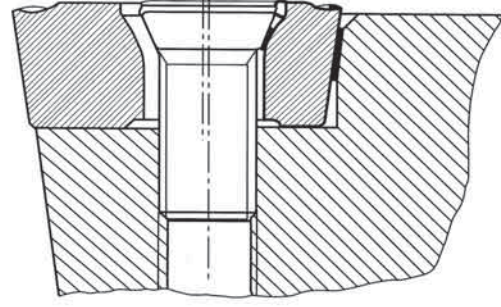
## Değiştirilebilir uçlu matkaplar için teknik bilgiler

Technical information about indexable insert drills  
Technische Hinweise für Wendeplattebohrer



### Emniyet Bilgileri

- Kesici takımın sabit tutulup işleme parçasının döndürüldüğü hallerde kesim sonunda keskin ve ince bir disk oluşabilecektir. Bir koruyucu MUHAFAZA tavsiye edilir.
- Eğer matkap dönüyor ve soğutma RİNGİ kullanılıyorsa soğutma RİNGİ'nin dönmesi önemlidir.
- Saçılan talaşlardan korunmak için koruyucu MUHAFAZA kullanılması önerilir.

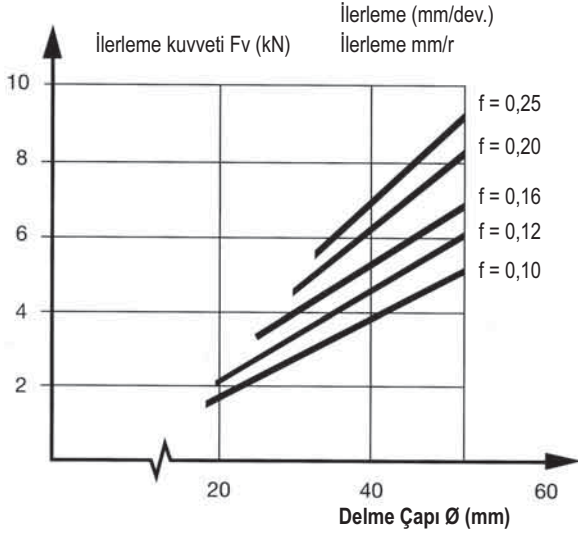


### İlerleme Kuvveti

İlerleme kuvvetleri kesme hızları için belirlenmiştir.

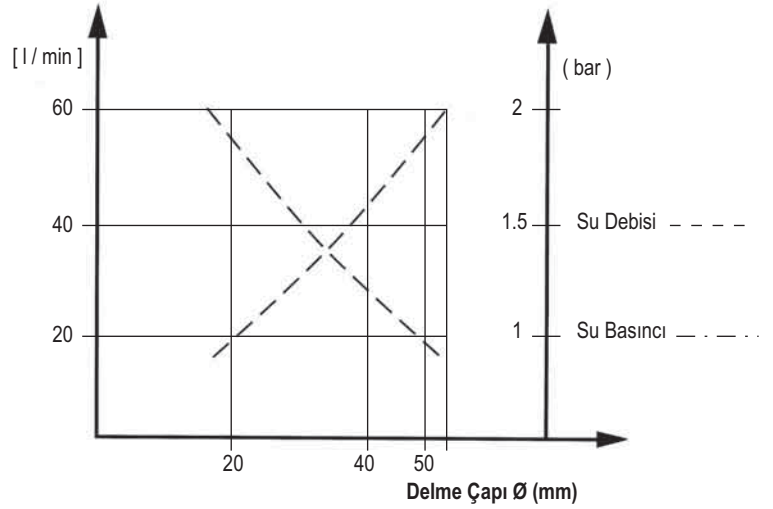
$v_c=120$  m/dak.

Malzeme 900 N/mm<sup>2</sup>

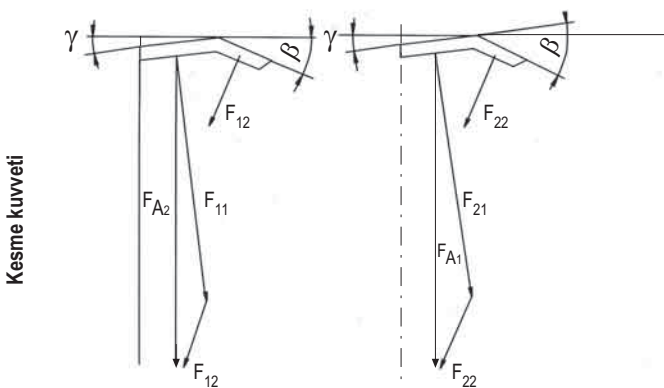


### Su Besleme

Takım dönerken su basıncı normalin üzerinde olduğu zaman talaş takım üzerinden daha iyi akar.

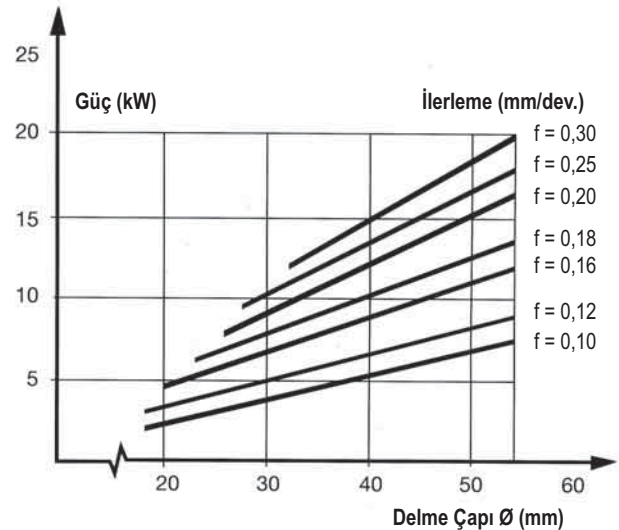


### Kesme Kuvvetlerinin Dengelenmesi



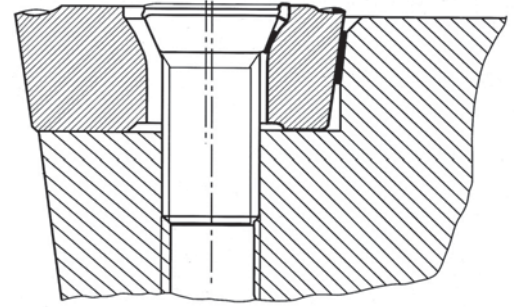
### Bağlama sistemi

Takım üzerine Uçlar Takımsaş maxilock-S sistem vida ile basit ve iyi bir şekilde bağlanır.



**Security Information / Sicherheitshinweise:**

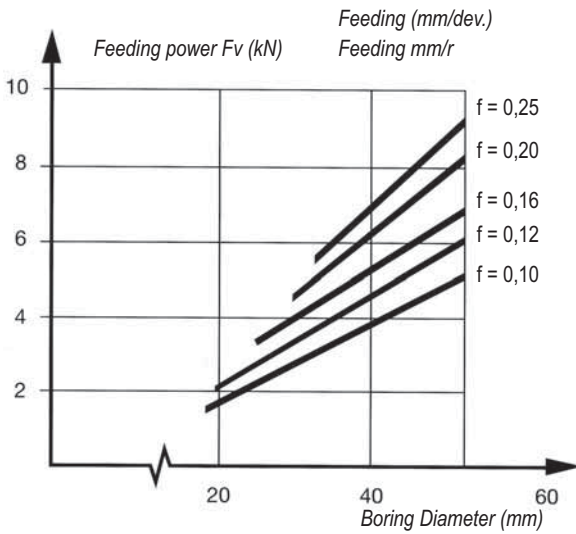
- At the end of cutting process and in the case of cutting tool being stabilized, process material being rotated, a sharp and thin disc occurs. A protective cover is recommended.
- If the drill rotates by using cooler RING, rotation of RING is important.
- Using protective cover is recommended to prevent any damage of scattered stones.
- Am Ende der Schneidvorgang tritt eine scharfe und dünne Scheibe auf, indem Schneidwerkzeug stabilisiert wird, wobei das Material gedreht wird. Eine Schutzabdeckung wird empfohlen.
- Wenn der Bohrer durch Kühler Ring dreht, ist die Drehung des RING wichtig.
- Die Schutzabdeckung wird empfohlen, um Schaden vom verstreuten Span zu verhindern.



**Feeding Power / Vorschubkraft:**

Feeding Power has been determined for cutting speed  
 Vorschubkräfte wurden für die Schnittgeschwindigkeiten ermittelt.

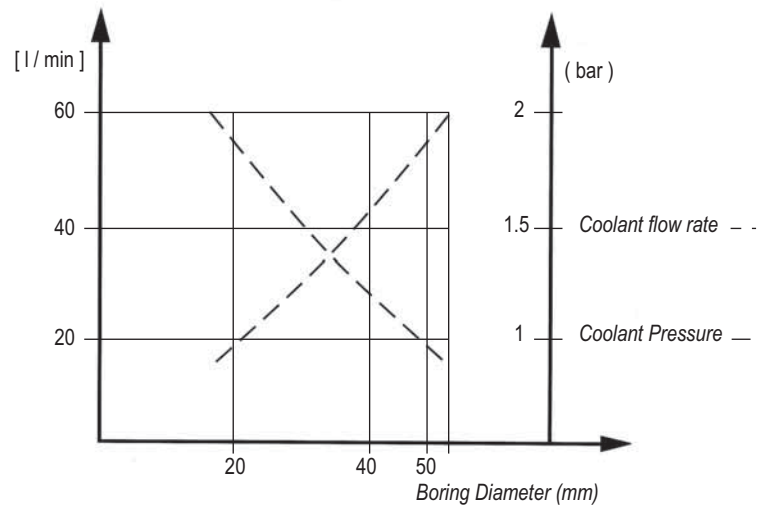
$v_c = 120 \text{ m/min}$     Material  $900 \text{ N/mm}^2$



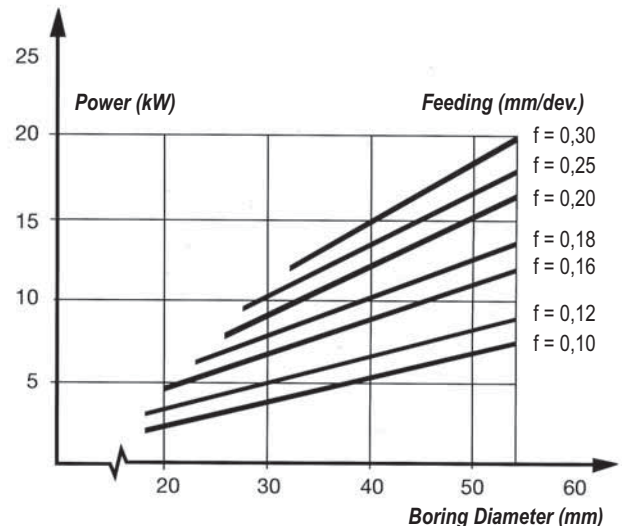
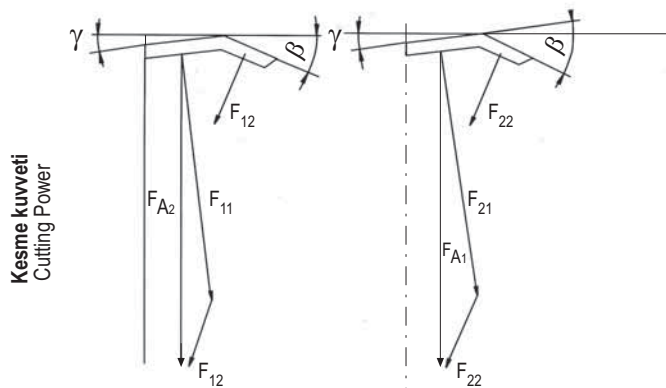
**Water Supply / Wasserleitung:**

Chips can flow over rotating tool easily if water pressure is more than standard. Mostly, Water pressure from water supply to tool is adequate.

Der Span kann über den drehenden Werkzeug einfacher fließen, wenn der Wasserdruck höher als dem Standard-Druck.



**Balance of Cutting Powers / Die Balance der Vorschubkräfte:**



**Clamping System / Klemmsystem:**

Inserts can be connected to the tools perfectly by simply Takimsaş maxilock-Ssystem screw.

Die Platten können an Werkzeugen durch Takimsaş maxilock-S Schraubensystem perfekt verbunden werden.

### Mekanik Şartlar;

Değiştirilebilir uçlu matkapların, amaca uygun kullanıldıkları zaman, oldukça avantajlı ve etkili takımlar olduklarını görebiliriz. Kullanım esnasında mekanik şartların var olması ve hatta tam olarak uygun olması gerekmektedir.

- Kesme hızları kullanılan ucun kalitesi için uygun olmalıdır.
- Fener milinin, ucun gerektirdiği şartlar için yeterli olması gereklidir ( $1000\text{N/mm}^2$  den daha yukarı mukavemetteki çelikler için). Fener milinin delinecek delik çapı için, yeterli motor gücüne sahip olması gereklidir.
- Delinecek iş parçası tezgah tablasına rijit olarak bağlanmalıdır.  
Tezgah ve bağlanan iş parçasında, vibrasyon olmamalıdır.
- Takımın ilerlemesi uygun seçilmelidir.
- Soğutma sıvısı ve yağ, yeterli basınç ve debiye sahip olmalıdır.
- Delme esnasında emniyet tedbirlerinin tam olarak alınması gereklidir.

### İşlenecek parça malzemesi

Kesme işlemi sırasında, talaş formu açısından, kısa talaş açığa çıkaran malzemeler ile uzun talaş açığa çıkaran malzemeler arasında gözle görülür farklılıklar vardır. Talaşın uygun bir şekilde atılmasında; kısa talaş açığa çıkaran malzemelerin, uzun talaş açığa çıkaran malzemelere göre daha az problemlili oldukları görülür. Bütün çelik çeşitleri ve demir içermeyen (non-ferrous) malzemeler işleme anında uzun talaş açığa çıkarırlar.

Delinecek malzemeler için kullanılacak ucun, talaş kırıcı formunun ideal bir şekilde seçilmiş olması ve buna göre kesme şartlarının uygulanmış olması durumunda, tüm çelik çeşitleri ve demir içermeyen (non-ferrous) malzemelerde başarılı sonuç alınabilir. Değiştirilebilir uç olarak WCMK-WCMT ve benzeri uçlarla iyi sonuç alınabilir.

Genel olarak, kesme kenarları ekstra yuvarlatılmış olan uçlar tercih edilmelidir (ISO'ya göre S tipi). Bununla beraber, bütün çelik ve döküm çeşitlerinde; MOLIBDEN TZM, hafif metaller ve demir içermeyen (non-ferrous) metallerde kullanılan uçlar ise ( ISO'ya göre F tipi ) keskin kenarlı olanlardır ve uygulamada daha iyi sonuç verirler.

Kesmede ideal olan kısa talaşı elde etmek, malzemenin cinsine, ucun kalitesine ve kesme şartlarına bağlıdır.

### Uç seçimi

İdeal şartlarda kesmeyi sağlamak için, işlenecek parça ile seçilen uç arasında iyi bir eşleşme olmalıdır; bunun için WXXM-WCMT ve benzeri uçlar uygundur. Yüksek kesme hızları için çok katlı kaplama yapılmış uçlar tavsiye edilir ( örnek : TiC, Ti(c,n), TiN-P35 ve Al<sub>2</sub>O<sub>3</sub> P15/K15). Düşük kesme hızları için kaplamasız uçlar (P25, P35, K15) tavsiye edilir. Kaplamalı ve kaplamasız kalitelere (P25-P35) kesme kenarları yuvarlatılmış veya negatif pah olabilir. Kısa talaş açığa çıkaran malzemelerde (döküm) kullanılan K20 ve K30 tipi uçların kesme kenarları ise keskindir (F). Delme esnasındaki kesme hızı, kesici uç yarıçapına uygun olursa (dış çapa), merkezde kesme yapan ucun o çaptaki kesme hızı ( $V_c = 0$ ) sıfır olur. Merkezdeki kesme hızının düşük olması ( $V_c$ ), merkezdeki ucun dışarıdaki uca göre daha fazla yüke maruz kalmasına sebep olur. Darbeli kesmelerde talaş merkezdeki ucun üzerine yapışır ve ucun üzerine gelen basıncın artmasına neden olur. Bu yüzden, merkezdeki ucu aşınmaya karşı değil, kırılmaya karşı daha dayanıklı seçmemiz gerekir, örneğin P30-P40 gibi.



### **Mechanical Conditions**

When the drills having indexable insert are used on exactly relevant process, we can get all advantages and efficiency of modern technology. During process, mechanical conditions must be convenient.

- Cutting speeds must be compatible with the insert quality
- Tool spindle must be adequate for cutting conditions ( for the steels having resistance higher than  $1000\text{N/mm}^2$  ). Tool spindle must have adequate engine power.
- The work piece to be drilled must be fixed to the workbench tightly to prevent vibration.
- Feeding must be chosen appropriately.
- Cooling water and lubricant must have adequate pressure and flow rate during process.
- During process all safety precautions must be applied exactly.

### **The Work Piece Material**

During process, we can observe reasonable differences between the chips arising from materials in terms of chip form. For easy chip removing, the materials having short shaped chips have less problems than the materials having long shaped chips. All steel qualities and nonferrous materials form long chips.

When the chip breaker is chosen properly for the material and cutting condition the application is perfect and successful for especially steel and nonferrous materials. The most suitable insert type is WCMX-WCMT or similars.

In general we prefer inserts having rounded cutting edges (type S according to ISO). However the best results for steels, cast iron, MOLIBDEN TZM, light and nonferrous metals can be achieved using inserts having sharp cutting edge, type F in ISO.

To achive short chips that is preferable depends to the material, insert quality and cutting conditions.

### **Choosing Insert**

There should be a good corrolation between the insert and material to be machined for ideal cutting; for this, WXXM-WCMT and similar type of inserts are suitable. The inserts having multiple layer coating are recommended for higher level cutting speeds (e.g. TiC, Ti(cn), TiN-P35 and AlO3P15/K15). The inserts without coating are recommended for low level cutting speeds (e.g. P25, P35 and K15). Both inserts coated or un-coated (P25-P35) may have cutting edges rounded or chamfered negatively. The inserts used for some casted materials producing short chips like K20 and K30 have sharp cutting edges (F). While drilling, if the cutting speed is properly chosen for the insert radius (external diameter), the cutting speed of the insert on the center is  $V_c = 0$  according to the diameter. Lower cutting speed of the central insert results in higher pressure and load on the outer insert. Especially while intermittent cutting, chips stack on central insert and causes excess pressure on the insert. So, inserts on the center must be chosen as resistant to breaking not resistant to wear.

### **Mechanische Bedingen:**

Wenn Wendeplattenbohrer werden auf genau entsprechendes Prozess verwendet, kann man alle Vorteile und Leistungsfähigkeit bekommen. Während des Prozess müssen die mechanischen Bedingungen zweckmäßig sein.

- Die Schnittgeschwindigkeit muss vereinbar mit der Qualität sein.
- Die Werkzeugspindel muss angemessen für die Schnittbedingungen sein. (für Stahl mit Widerstand höher als  $1000\text{ N/mm}^2$ ) Die Spindel muss einen angemessenen Motorkraft haben.
- Das Werkstück, das gebohrt wird, muss ganz fest an der Bohrentisch befestigt werden, um die Vibration zu verhindern.
- Der Vorschub muss angemessen gewählt werden.
- Das Kühlwasser und Schmiermittel müssen ausreichenden Druck und Durchfluss haben.
- Während des Prozess müssen alle Sicherheitsvorkehrungen genau angewendet werden.

### **Das Werkstückmaterial**

Während des Vorgans können wir vernünftige Unterschiede zwischen den Span aus Werkstoffe in Bezug auf die Spanform beobachten. Werkstoffe, die kurze Spanform haben, wenige Probleme als Werkstoffe mit der langen Spanform bei der Entfernung vom Span. Alle Stahlarten und Nichteisenmetalle haben lange Spanform.

Wenn die Spanformrille wird korrekt für das Material und die Schneidbedingungen gewählt, ist die Anwendung perfekt und erfolgreich besonders für Stahl und Nichteisenmetalle. Die am besten geeignete Art der Wendeplatte ist WCMX-WCMT oder die ähnlichen.

Im Allgemeinen bevorzugen wir die Platten mit der abgerundeten Schnittkanten. (Typ S nach ISO-Standard). Allerdings erreicht man das beste Ergebnis für den Stahl, Gusseisen, Molybdan TZM und Leichtmetall, indem die Platten mit der scharfen Schnittkanten benutzt werden.

### **Wendeplatte wahlen:**

Für den optimalen Schnitt soll es eine gute Zusammenhang zwischen der Platte und dem Material, die bearbeitet werden. Dafür passt das Plattentyp WXXM-WCMT oder die ähnlichen. Die mehrfach beschichtete Platten werden für die hohe Schnittgeschwindigkeiten empfohlen. ( z.B TiC, Ti(cn), TiN-P35 und AlO3P15/K15). Die nicht geschichtete Platten ist geeignet für die niedrige Schnittgeschwindigkeiten . (z.B. P25, P35 und K15). Die beide Platten , beschichtet oder nicht beschichtet haben runden und negativ Geschwindigkeit der Platte in der Mitte  $VC=0$  je nach dem Durchmesser. Die niedrige abgeschragten Schnittkanten . Die Platten (K20- K30), die für kurz Spanform produzierte Materialien geeignet wird, haben scharfen Schnittkanten. Wenn die Schnittgeschwindigkeit ist korrekt für den Plattendurchmesser beim Bohren gewählt wird, ist die Geschwindigkeit der zentralen Platte führt zu einem höheren Druck an der äußeren Platte. Besonders stapelt der Span auf die zentrale Platte und das verursacht einen Überdruck auf der Platte. Also die zentralen Platten sollen je nach dem Gegenstand gegen Bruch gewählt werden; nicht gegen Verschleiß.

### Kesme değerleri

#### Kesme değerlerinin optimizasyonu

Genel olarak, ilerleme arttırıldığı zaman kısa talaş elde edilir. Diğer taraftan ilerleme sabit tutulup kesme hızı arttırıldığı zaman daha uzun talaş elde edilir ki, bu da tavsiye edilmez. Daima kısa talaş açığa çıkaracak kesme şartları oluşturulmalıdır.

#### Soğutma Sıvısı

Talaşın dışarıya kolay atılabilmesi için kesme sıvısı ve yağ veya basınçlı hava kullanılır. Özellikle derin deliklerde (>1x nominal çap) veya matkabın dik olarak kullanılması durumunda talaş kanallarının tıkanmasına meydan vermemek için, çıkan talaşın kısa ve küçük, kesme sıvısının basınç ve debisinin yeterli olmasına dikkat etmeliyiz. Soğutma sıvısı ve yağ veya basınçlı hava, kesme esnasında delik içerisinde oluşan ısıyı önler, bu da kesici ucun ömrünü arttırır, talaşın uygun şekilde kırılmasına ve gerekli ölçünün daha düzgün elde edilmesine yardımcı olur.

#### Takım ömrünü etkileyen faktörler

Kesme kenarının aşınması takım ömrü için önemli göstergedir. Müsaade edilen oran kesici ucun kalınlığının 1/10'udur. İdeal kesme şartlarında, delinecek parçanın malzemesine bağlı olarak, kesme kenarı başına ortalama 8000 mm'lik delme uzunluğu sağlanabilir (Yaklaşık 1000 N/mm<sup>2</sup>).

Kesme kuvvetleri, kesici ucun kesme kenarının aşınmasıyla artar ve bu yüzden takım veya makinaya ekstra yükler biner. Eğer kesme kuvvetini otomatik olarak denetleyen bir sistem yok ise, kesme kenarının aşınmasını mutlaka düzenli olarak kontrol etmeliyiz. Aşırı aşınma sonucu kesici ucun üzerine ağır yükler geliyor ise, kesici uç kırılır ve takım büyük zararlar görebilir; hatta kullanamaz hale gelebilir.

Kesici uç değiştirirken, uç yuvasının temiz olmasına ve kesici uç kenarında yapışmış talaş ve herhangi bir kırık olmadığına dikkat etmeliyiz, aksi takdirde elde edilecek delik çapı nominal delik çapından daha küçük olur.

#### Delik delme

Değiştirilebilir uçlu matkap döndürülerek, işlenecek parça sabitken yatay veya dikey delme işlemi yapılabilir. İşlenecek parça dönerken ve takım sabitken delme ekseninin sapma ihtimali vardır, bu durumda nominal çapa göre eksen düzeltilerek uygun delik elde edilir. Aksi takdirde delik küçük veya büyük çıkacağı gibi, takım da zarar görebilir.

Değiştirilebilir uçlu matkap ile delme yapılırken delinecek malzemenin yüzeyi düzgün değilse, ilerleme hızı ona göre hesaplanmalıdır. Kavisli (iç bükey / dış bükey) yüzeyler delinirken ilk temasta dıştaki veya merkezdeki uçlardan sadece bir tanesi kesme yapar. Bu durumda radyal kuvvetler dengelenemez. İç bükey ve dış bükey yüzeylerde delme işlemi yaparken tam temas (her iki uçtan) sağlanıncaya kadar ilerleme yarıya düşürülür ve tam temas (her iki uç) sağlanınca ilerleme tam olarak uygulanır.





### Cutting Values

Generally, increasing feeding results in short chips. On the other side, if you keep feeding speed constant while cutting speed is increasing, you get long chips that is not recommended. Always it should be provided cutting condition as to produce short chips.

### Coolant

In several cases, a convenient mixture of water and oil emission or air pressure are used to flow chips out easily. It should be taken care of that the chips arised is short and the pressure/flow rate of the coolant is convenient to prevent blockage along chip channels while especially deep drilling (>1 x nominal diameter) or vertical drilling. Water/oil mixture or air pressure for cooling prevent chips accumulation in drilling hole and keeps the heat stable during cutting process, whereupon it increases the life time of the insert, enables correct dimensioning and broken chips conveniently.

### Factors Effecting Tool Life

Wear on cutting edges is an impotant indicator for tool life. Permitted ratio for wear indication is 1/10 of the insert thickness. Under the ideal cutting conditions, it can be drilled 8000 mm of length in average depending upon the material specifications (approximately 1000 N/mm<sup>2</sup>).

Cutting forces increase as the wear on cutting edges increase, this causes extra loads on the machine and the tools. If there is not any system to control cutting forces, wear on cutting edges must be checked regularly. If over load occurs on the insert as a result of wearing, the insert will be possibly broken and the tool also will be damaged.

As an addition, while changing the insert, the insert seat must be clean and there must not be any chip stacked on the insert edge and must not be any broken part. Otherwise, the drilled diameter can be smaller than the nominal hole diameter.

### Drilling

Drilling can be done vertically and horizontally while the part is stabilized and the drill hold fixed on the toolholder is rotating. When there is probability of deviation, in this condition, according to the nominal diameter, a convenient running can be got by correcting the position of axis. Otherwise decisive hole diameter can be smaller or larger than the needed one and tool can be damaged.

During drilling the feeding speed must be chosen according to the surface quality.

While drilling thru concave or convex surfaces, in the first contact, only one insert touches the surface, outer or inner. In this situation, radial forces can not be balanced. When drilling thru concave or convex surfaces, feeding speed should be chosen as half of that should be up to full contact then adjusted to normal level.

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### Schnittwerte

In der Regel ergibt die Erhöhung des Vorschubs kurze Spanform. Wenn man andererseits die Vorschubgeschwindigkeit konstant haltet , bekommt man lange Spanform , wahrend die Schnittgeschwindigkeit erhöht wird. Man soll immer die Schnittbedingungen so feststellen , dass kurze Spanform hergestellt wird.

praktische Mischung von Wasser und Öl oder Druckluft verwendet, damit der Span leicht entfernt wird. Man soll darauf achten , dass die Spanform kurz entstanden wird und dass Druck/Fluss Rate der Kühlmittel zweckmäßig

### Kühlmittel

In mehreren Fallen wird eine ist , um die Verstopfung zu verhindern, besonders wahrend des Tieflochbohrens und vertikalen Bohren. Wasser / Öl Mischung oder die Druckluft für die Abkühlung verhindert die Ansammlung des Spans im Bohrloch und haltet die Hitze stabil beim Bohren.

### Faktoren für Werkzeugstandzeit

Der Verschleiß an der Schneidkanten ist eine wichtige Angabe für die Standzeit. Das zullasige Verhältnis vom Verschleiß ist 10 % von der Plattendicke . Unter idealen Schnittbedingungen kann man durchschnittdie die Lange von 8000 mm je nach Werkstoff-Spezifikationen bohren. (ca. 1000 N/mm<sup>2</sup>)

Die Schnittkrafte wird vergrößert , da der Verschleiß an der Schnittkanten vergrößert wird und es verursacht zusatzliche Belastungen auf de Maschine und dem Werkzeug. Wenn es kein Kontrollsystem für die Schnittkrafte gibt , muss der Verschleiß an der Schnittkanten regelmäßig überprüft werden. Wenn die Platte als Folge von dem Verschleiß überlastet, wird sie möglicherweise gebrochen und so wird auch das Werkzeug beschädigt.

Beim Wechsel der Platte muss der Plattensitz gereinigt sein und kein Span oder gebrochene Teile müssen sich an der Spankante befinden. Sonst kann der gebohrte Durchmesser kleiner als den nominalen Durchmesser.

### Bohren

Man kann das Material vertikal und horizontal bohren wahrend der Werkstoff stabil ist und der am Halter festge Bohrer gedreht wird. Wenn es eine Möglichkeit der Abweichung vom nominalen Durchmesser gibt, muss man die Position der Achse korrigieren. Sonst kann der unterschiedene Bohrungsdurchmesser kleiner oder größer als die benötigte sein. So kann das Werkzeug beschädigt werden.

Beim Bohren soll die Vorschubgeschwindigkeit nach der Qualität der Oberfläche gewahlt werden. Wahrend des Bohrens der konkaven oder konvexen Oberfläche berührt nur eine Platte auf die Oberfläche-die Innere oder Äußere. In diesem Fall können die radialen Krafte nicht ausgeglichen werden. So soll man die Vorschubgeschwindigkeit um die Halfte reduzieren, bis der vollständige Kontakt entstanden wird. Dann kann man die vole Vorschubgeschwindigkeit verwenden.

## Delinecek yüzey örnekleri

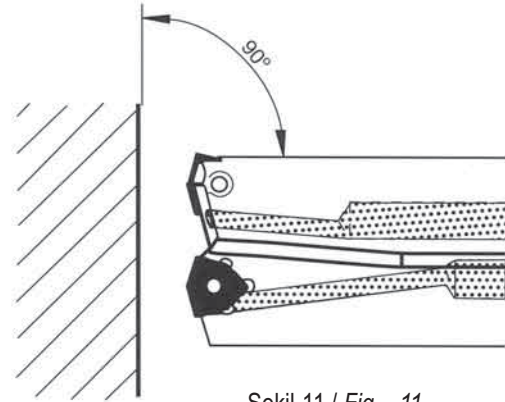
Drilling processes for different surfaces

Bohrer fahren für verschieden Oberflächen

Şekil 11'deki gibi takımın düz bir yüzeye girişi en ideal olanıdır.

*As in figure 11, the ideal entering position to drill is thru flat surface.*

Wie in der Abbildung 11 zu sehen, wird das ideale Bohren auf der ebenen Oberfläche verwendet.

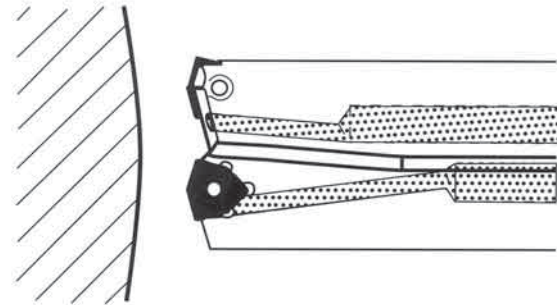


Şekil-11 / Fig. - 11

Şekil 12'deki gibi dış bükey yüzeye delme yapılırken, önce merkezdeki uç malzemeye temas eder. Tam temas sağlanıncaya kadar ilerleme hızı olması gereken değerin yarısı alınmalıdır.

*As in figure 12, while drilling thru convex surface the insert at the center touches first. The feeding speed should be kept half of that should be up to full contact.*

Wie in der Abbildung 12 zu sehen, berührt erst die mittlere Wendepalte die Oberfläche beim konvexen Bohren. Die Vorschubgeschwindigkeit soll um die Hälfte bis zum vollständigen Kontakt reduziert werden.

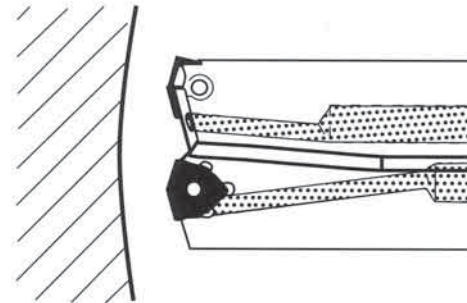


Şekil-12 / Fig. - 12

Şekil 13'deki gibi iç bükey yüzeye delme yapılırken, önce dıştaki uç malzemeye temas eder. Tam temas sağlanıncaya kadar ilerleme hızı olması gereken değerin yarısı alınmalıdır. Aksi takdirde, uca gelen yükün artmasından dolayı uç ve uç yuvası zarar görebilir.

*As in figure 13, while drilling thru concave surface the outer insert touches first. The feeding speed should be half of that should be up to full contact. Otherwise the insert and the seat may be damaged by overload on the insert.*

Wie in der Abbildung 13 zu sehen, berührt erst die äußere Wendepalte die Oberfläche beim konkaven Bohren. Die Vorschubgeschwindigkeit soll um die Hälfte bis zum vollständigen Kontakt reduziert werden. Sonst kann die Wendepalte wegen der Überlastung beschädigt werden.

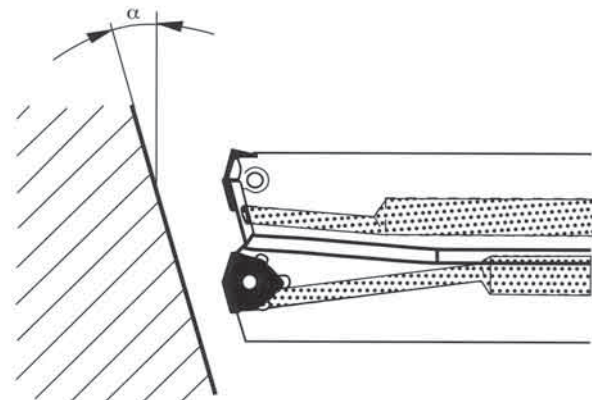


Şekil-13 / Fig. - 13

Şekil 14'deki gibi eğimli yüzeye delme yapılırken, önce dıştaki uç malzemeye temas eder. Tam temas sağlanıncaya kadar ilerleme hızı olması gereken değerin yarısı alınmalıdır.

*As in figure 14, while drilling thru inclined surface the outer insert touches first. The feeding speed should be half of that should be up to full contact.*

Wie in der Abbildung 14 zu sehen, erst die äußere Wendepalte die Oberfläche beim geneigte Bohren. Die Vorschubgeschwindigkeit soll um die Hälfte bis zum vollständigen Kontakt reduziert werden.

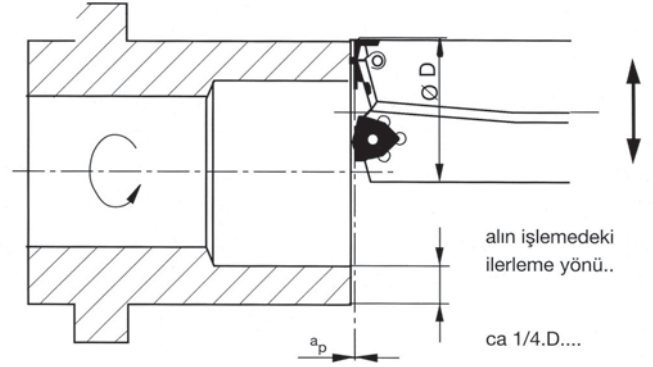


Şekil-14 / Fig. - 14



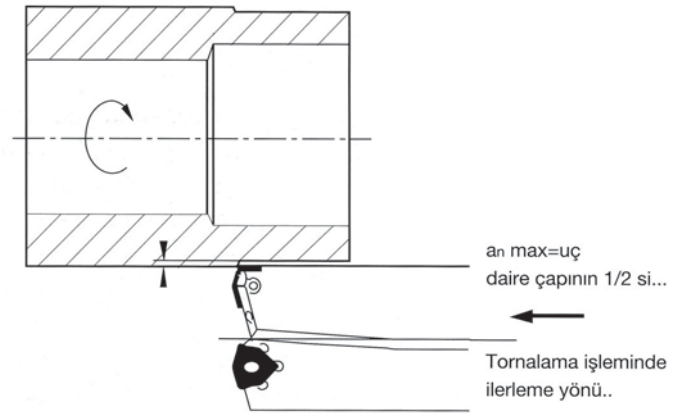
## Alın yüzey işleme

Değiştirilebilir uçlu matkaplar belirli limitler dahilinde yüzey işleme işlemleri için de kullanılabilirler. Yüzey işleme işlemi yalnızca bir taraftaki uçla kısıtlı olarak yapılabilir. Kesme derinlikleri ucun ölçüsü ve matkabın yapısına bağlıdır. İşlenebilecek yüzey çapı, takımın nominal çapına bağlıdır.



## Tornalama

Değiştirilebilir uçlu matkaplar ile yapılabilecek tornalama işlemleri de matkabın çapı ve kesici ucun ölçüsü ile sınırlıdır. Olabilecek kesme derinliği, takımın çapına bağlıdır. Şekil 16'da verilmiş örnekteki gibi.

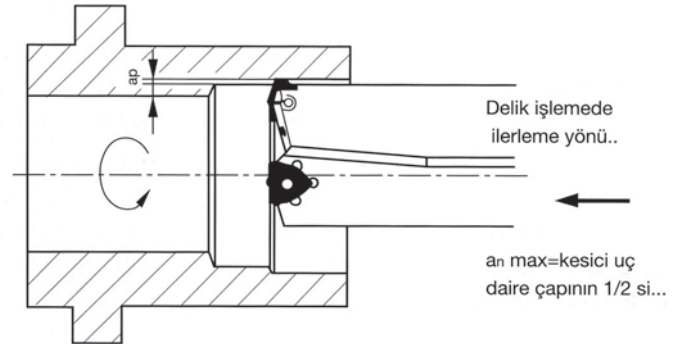


## Delik delme

Delme esnasında, tornalama işleminde verilen sınırlamaların hepsi geçerlidir. Matkap öncelikle delme takımıdır. Ve sadece, bazı özel durumlarda asıl fonksiyonu dışında kullanılabilir.

## Dönerek / durarak çalışan takımlar

Değiştirilebilir uçlu matkaplar, delik delme işlemi için en ekonomik ve avantajlı takımlardır. Delinecek malzeme ve delme takımının rijit bağlanmış olması ve yeterli soğutma önemlidir. Takımın veya delinen malzemenin dönmesi ile birlikte takımın dikey veya yatay kullanılması önemli değildir. Takımın sabit parçanın dönmesi durumunda, iş parçasının bağlandığı ayna veya pens kafasının, delme işlemi yapacak olan takım ile aynı eksende olması gerekir. Eksen ayarı iyi yapılmadığı takdirde nominal delme çapında sapma olur ve delme işlemi sırasında takım hasar görebilir.



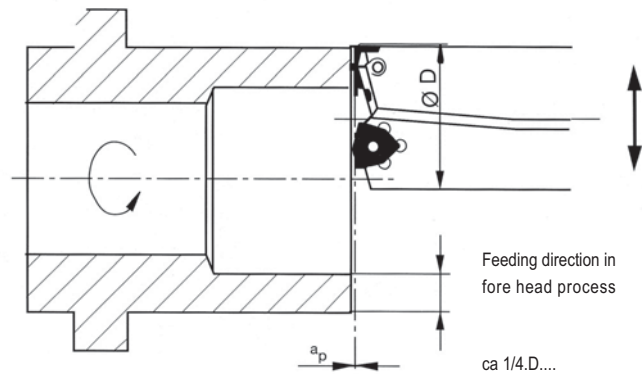
## Merkezden kaçık delme işlemi

Değiştirilebilir uçlu matkaplar, iş parçasıyla aynı merkezli olmayacak şekilde ayarlanmış ise buna merkezden kaçık delme işlemi denir. Bu durumda delik, nominal delme çapından büyük veya küçük olacaktır. Eğer kasıtlı olarak merkezden kaçık işlem yaptırıyorsak bu işlem sadece dış çaptaki ucun kesme kenarına paralel yapılmalıdır ve bu delinecek çapı belirleyecektir. Eğer merkezden uzakta pozisyonlama yapılıyorsa ve çap ölçüsünü küçültüyorsa, matkap gövde çapının delinen deliğin çeperine sürtünme olasılığı artar ve de bu takımın gövde yüzeylerinin kullanılamaz duruma gelmesi ile birçok problemi yaşamamıza ve hatta takımın devre dışı kalmasına neden olur. Ayrıca işlenecek delik zarar görebilir ve hatta iş bozuk olabilir. Müsaade edilebilir ayar limitleri, takımın nominal çapına bağlıdır.

## Face Turning / Plandrehen

The drills having interchangeable insert can be used also for face turning in certain limits. Face turning can be done only with one of the insert. Cutting depth is limited by the form of the insert and mechanical structure of the drill. On the other side, diameter of cut depends on the tool's nominal diameter.

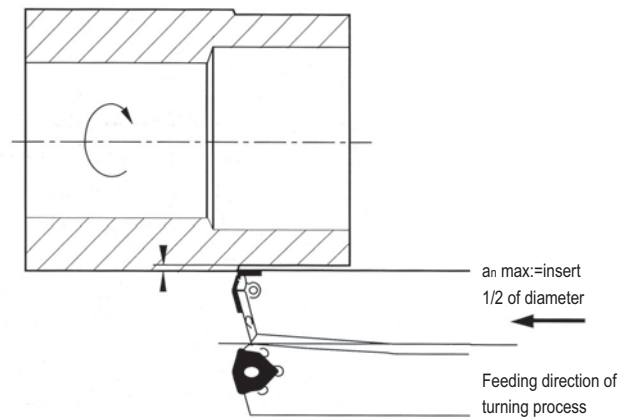
Der Bohrer mit der Wendeplatte kann auch zum Plandrehen in bestimmten Grenzwerten benutzt werden. Das Plandrehen kann aber nur mit einer von der Wendeplatten durchgeführt werden. Die Schneidtiefe wird durch die Plattenform und die mechanische Aufbau des Bohrers begrenzt. Der Schnittdurchmesser ist abhängig vom nominalen Durchmesser des Werkzeugs.



## Turning / Drehen

Turning with the drills having interchangeable insert is limited with the diameter of the drill and form of the insert. Possible cutting depth depends on the diameter of tool as in the example of figure 16.

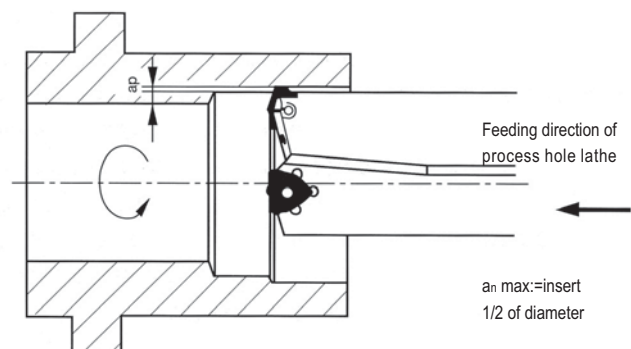
Das Drehen mit der Wendeplatte wird durch den Bohrdurchmesser und die Plattenform begrenzt. Die mögliche Schneidtiefe ist abhängig vom Durchmesser des Werkzeugs wie in der Abbildung 16 zu sehen ist.



## Drilling / Bohren

While drilling, all the constraints given for the turning are valid. First, the drill should be categorized as boring tools and it shouldn't be used for turning except some special conditions.

Beim Bohren sind alle Beschränkungen gültig, die man beim Drehen hat. Zunächst ist der Bohrer ein Bohrwerkzeug und soll nicht beim Drehen außer manchen besonderen Bedingungen verwendet werden.



## Drills working by turning or stationary position

The drills having interchangeable inserts are the most economical drilling tools and carries advantages when they are adjusted for full bore. It should be taken account that the workpiece and the tool must be clamped tight ; and to supply coolant as well . It is not important whether the workpiece or the tool turns, or whether tool is positioned as vertically or horizontally.

If the tool is stationary and workpiece turning, the axis of the chuck or collet should be same with the axis of the tool. If it is not, it should be adjusted; otherwise, there will be a deviation on the nominal diameter and the tool possibly will get some damages during drilling.

## Bohrer drehen oder Werkstoff drehen:

Der Wendeplattenbohrer sind wirtschaftlichste und günstige Bohrwerkzeuge. Man soll beachten, dass das Werkzeug und der Werkstoff festgeklemmt werden. Dabei soll man es gut abkühlen. Es ist nicht wichtig, ob das Werkzeug oder der Werkstoff gedreht wird; oder ob das Werkzeug vertikal oder horizontal angeordnet wird.

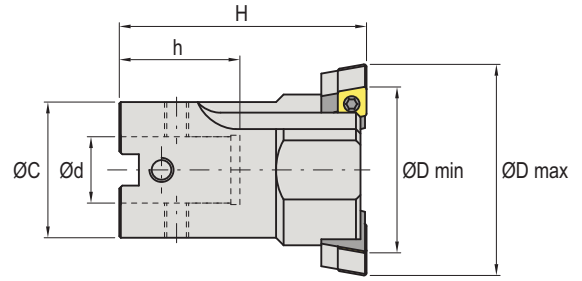
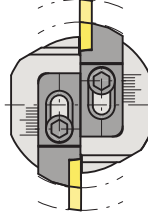
Wenn der Werkstoff gedreht wird, sollen Achsen des Spannfutters und der Spannzange gleich zur Achse des Werkzeugs sein. Sonst soll man es verbessern. Wenn man das nicht tut, gibt es eine Abweichung im nominalen Durchmesser und das Werkzeug kann beim Bohren beschädigt werden.

## Drilling out of center / Bohren außerhalb der Mitte:

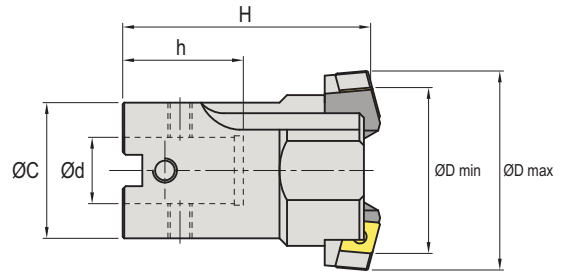
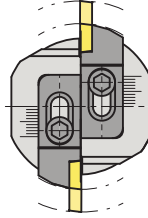
If the drills having interchangeable insert are adjusted to be in different centers, it is called drilling out of center. In this situation, the hole diameter can be smaller or greater than nominal drilling diameter. If the tool is adjusted as to be out of center willingly, the cutting must be applied only in a parallel position to the cutting edge of external insert. This positioning decreases hole diameter, then the probability of friction between drill's body and hole wall increases, whereupon it causes damages on tool's body and tool may become out of order. Permissible adjusting limits depends on nominal tool diameter.

Wenn die Wendeplattenbohrer in verschiedenen Zentren eingestellt werden, nennt man es, "Bohren außerhalb der mitte." In diesem Fall kann der Lochdurchmesser kleiner oder größer als den nominalen Bohrungsdurchmesser sein. Wenn man das Werkzeug absichtlich außerhalb der Mitte einstellt, soll das Bohren nur parallel zur Schneidkante der äußeren Platte angewandt werden. So wenn der Lochdurchmesser bei dieser Art des Bohrens verkleinert wird, dann ist eine Reibung zwischen Bohrer und Lochwand möglich und darauf verursacht es Schaden am Werkzeug. Zulässige Grenzwerte der Einstellung sind abhängig vom nominalen Werkzeugdurchmesser.

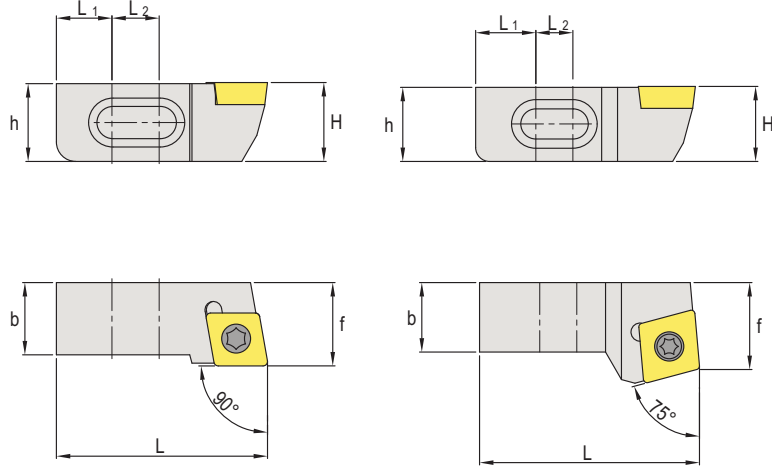




Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						Kod Code Bezeichnung	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Wrench Schlüssel	Ayar Vidası Set Screw Schraube	Kartuş Bağ. Vidası Screw Schraube	Montaj Vidası Screw Schraube	
		ØD min	ØD max	Ød	ØC	H	h								
ADIK 35 45-1	○	35	45	16	34,5	65	25	SCGCL 15x15 CC09	CCMT 09T308	7815102	T15 IP	M4	KBV 5	MV 4	
45 55-1	○	45	55	16	36	65	25	13 AD 09-1				FR648		MV 5	
55 70-1	○	55	70	22	47	80	40	15 AD 09-1							
70 90-1	○	70	90	27	56	85	41	19 AD 12-1	CCMT 120408	7883202	T15 IP	FR650	KBV 6	MV 6	
90 110-1	○	90	110	40	75	85	45	20 AD 12-1					KBV 8	MV 8	
100 130-1	○	100	130	40	75	90	45	21 AD 12-1							
130 150-1	○	130	150	40	75	90	45	25 AD 12-1							
144 174-1	○	144	174	40	75	95	45	30 AD 12-1					FR651	KBV 10	MV 10
174 220-1	○	174	220	40	75	100	45	35 AD 12-1							MV 12






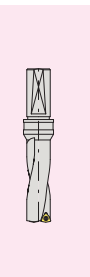
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		ØD min	ØD max	Ød	ØC	H	h								
ADIK 45 55-2	○	45	55	16	36	65	25	SCGCL 13 AD 09-1	CCMT 09T308	7815102	T15 IP	M4	KBV 5	MV 4	
55 70-2	○	55	70	22	47	80	40	15 AD 09-1				FR648		MV 5	
70 90-2	○	70	90	27	56	85	41	19 AD 12-1							
90 110-2	○	90	110	40	75	85	45	20 AD 12-1	CCMT 120408	7883202	T15 IP	FR650	KBV 6	MV 6	
100 130-2	○	100	130	40	75	90	45	21 AD 12-1					KBV 8	MV 8	
130 150-2	○	130	150	40	75	90	45	25 AD 12-1							
144 174-2	○	144	174	40	75	95	45	30 AD 12-1					FR651	KBV 10	MV 10
174 220-2	○	174	220	40	75	100	45	35 AD 12-1							MV 12

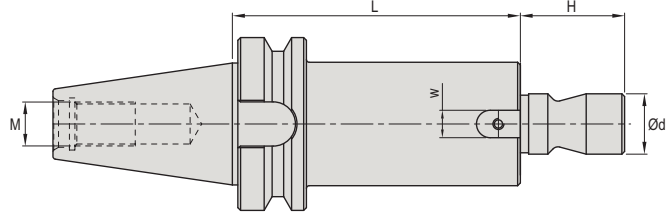


**SCGCL...Serisi**  
Serial SCGCL.....

**SCBCL...Serisi**  
Serial SCBCL.....

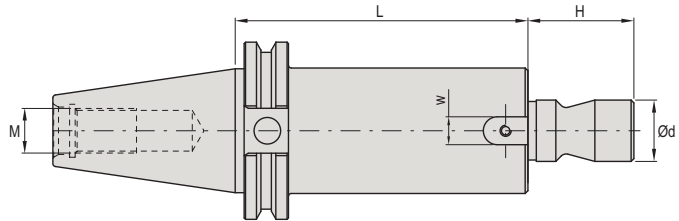
		Öçüler Dimensions Abmessungen											
Kod Code Bezeichnung	Stok Stock Lager	H	h	b	L <sub>1</sub>	L <sub>2</sub>	L	f	Uç Tipi Insert Type Plattentype	Uç Vidası Insert Screw Plattenschraube	Torx Anahtar Torx Wrench Torx Schlüssel		
SCGCL	13 AD 09 - 1	○	13.2	13	11	10	6	33	CC.. 09T3..	7815102	T15 IP		
	14 AD 09 - 1	○	14.2	14	12	11	6.5	34.5					
	15 AD 09 - 1	○	14.2	14	13	10.2	8.5	38					
	15 AD 09 - 1	○	14.2	14	13	10.2	8.5	38					
	18 AD 12 - 1	○	16.2	16	15	13	8	47.5				CC.. 1204..	7883202
	19 AD 12 - 1	○	18.2	18	16	13	11	50					
	20 AD 12 - 1	○	20.2	20	17	14	13	67					
	21 AD 12 - 1	○	20.2	20	18	15	15.5	69					
	25 AD 12 - 1	○	25.2	25	22	18	32	70					
	30 AD 12 - 1	○	30.2	30	25	20	43	94					
35 AD 12 - 1	○	32.2	32	30	26	60	115						
SCBCL	13 AD 09 - 2	○	13.2	13	11	10	6	33	CC.. 09T3..	7815102			
	14 AD 09 - 2	○	14.2	14	12	11	6.5	34.5					
	15 AD 09 - 2	○	14.2	14	13	10.2	8.5	38					
	15 AD 09 - 2	○	14.2	14	13	10.2	8.5	38					
	18 AD 12 - 2	○	16.2	16	15	13	8	47.5			CC.. 1204..	7883202	
	19 AD 12 - 2	○	18.2	18	16	13	11	50					
	20 AD 12 - 2	○	20.2	20	17	14	13	67					
	21 AD 12 - 2	○	20.2	20	18	15	15.5	69					
	25 AD 12 - 2	○	25.2	25	22	18	32	70					
	30 AD 12 - 2	○	30.2	30	25	20	43	94					
35 AD 12 - 2	○	32.2	32	30	26	60	115						





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Ød	H	L	W	M	
BT40	ADM 16 75	○	16	24	75	10	M16
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	
BT50	ADM 16 75	○	16	24	75	10	M24
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	

**Ayarlı Delik İşleme Kafası Tutucuları - (A.N.S.I) CAT - Form A**  
 Toolholder for Boring Bars - (A.N.S.I) CAT - Form A  
 Werkzeughalter für Bohrstangen - (A.N.S.I) CAT - Form A

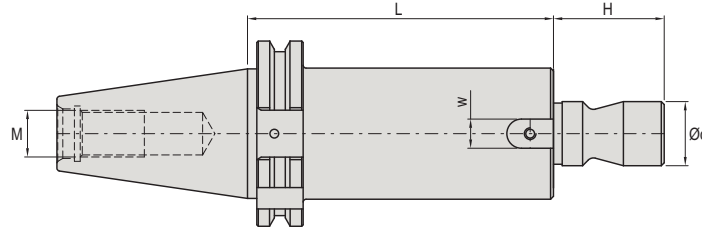


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Ød	H	L	W	M	
CAT40	ADM 16 75	○	16	24	75	10	M16
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	
CAT50	ADM 16 75	○	16	24	75	10	M24
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	

## Ayarlı Delik İşleme Kafası Tutucuları - DIN 69871 - Form A

Toolholder for Boring Bars - DIN 69871 A - Form A

Werkzeughalter für Bohrstangen - DIN 69871 A - Form A

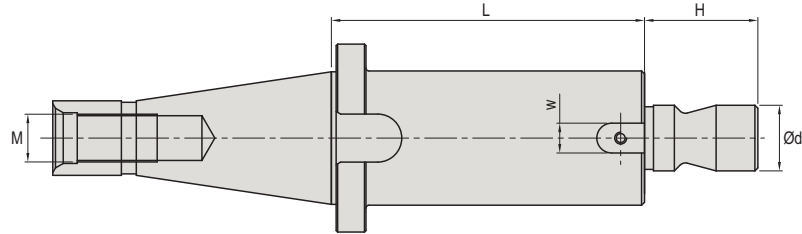


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Ød	H	L	W	M	
IT40	ADM 16 75	○	16	24	75	10	M16
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	
IT50	ADM 16 75	○	16	24	75	10	M24
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	

## Ayarlı Delik İşleme Kafası Tutucuları - DIN 2080 - Form A

Toolholder for Boring Bars - DIN 2080 - Form A

Werkzeughalter für Bohrstangen - DIN 2080 - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Ød	H	L	W	M	
ISO40	ADM 16 75	○	16	24	75	10	M16
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	
ISO50	ADM 16 75	○	16	24	75	10	M24
	ADM 22 75	○	22	38	75	10	
	ADM 27 90	○	27	39	90	12	
	ADM 32 90	○	32	39	90	14	
	ADM 40 105	○	40	39	105	16	
	ADM 60 120	○	60	54	120	25	

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : IT40 ADM16 75

● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager





## Tutucular / Toolholders

## Werkzeughalter



**Freze Tutucu - DIN 2087 / 6362 - Form A**  
Shell Mill Holder - DIN 2087 / 6362 - Form A  
Aufsteckfräsenhalter - DIN 2087 / 6362 - Form A  
Sayfa / Page / Seite : 186



**Freze Tutucu - DIN 2087 / 6362 - Form A**  
Shell Mill Holder - DIN 2087 / 6362 - Form A  
Aufsteckfräsenhalter - DIN 2087 / 6362 - Form A  
Sayfa / Page / Seite : 186



**Kılavuz Tutucu - Form A**  
Tapping Chuck Holder - Form A  
Gewindeschneidhalter - Form A  
Sayfa / Page / Seite : 187



**Pens Tutucu DIN 6499 / DIN 2080 - Form AD**  
Toolholder - Collet Chuck DIN 6499 / DIN 2080 - Form AD  
Spannzanghalter DIN 6499 / DIN 2080 - Form AD  
Sayfa / Page / Seite : 188



**Pens Tutucu DIN 6499 / BT MAS - Form AD**  
Toolholder - Collet Chuck DIN 6499 / BT MAS - Form AD  
Spannzanghalter DIN 6499 / BT MAS - Form AD  
Sayfa / Page / Seite : 188



**Pens Tutucu DIN 6499 / (A.N.S.I) CAT - Form AD**  
Toolholder - Collet Chuck DIN 6499 / (A.N.S.I) CAT - Form AD  
Spannzanghalter DIN 6499 / (A.N.S.I) CAT - Form AD  
Sayfa / Page / Seite : 189



**Pens Tutucu DIN 6499 / DIN 69871 - Form AD**  
Toolholder - Collet Chuck DIN 6499 / DIN 69871 - Form AD  
Spannzanghalter DIN 6499 / DIN 69871 - Form AD  
Sayfa / Page / Seite : 189



**Pens Tutucu DIN 6388 / BT MAS - Form AD**  
Toolholder - Collet Chuck DIN 6388 / BT MAS - Form AD  
Spannzanghalter DIN 6388 / BT MAS - Form AD  
Sayfa / Page / Seite : 190



**Pens Tutucu DIN 6388 / DIN 69871 - Form AD**  
Toolholder - Collet Chuck DIN 6388 / DIN 69871 - Form AD  
Spannzanghalter DIN 6388 / DIN 69871 - Form AD  
Sayfa / Page / Seite : 190



**Pens Tutucu DIN 6388 / (A.N.S.I) CAT - Form AD**  
Toolholder - Collet Chuck DIN 6388 / (A.N.S.I) CAT - Form AD  
Spannzanghalter DIN 6388 / (A.N.S.I) CAT - Form AD  
Sayfa / Page / Seite : 191



**Silindirik Şaftlı Pens Tutucu DIN 6499 - Form A**  
Toolholder-Collet Chuck With Cylindrical Shunk DIN 6499 - Form A  
Spannzanghalter mit der zylindrischen Schaft DIN 6499 - Form A  
Sayfa / Page / Seite : 191



**Silindirik Şaftlı Pens Tutucu DIN 6499 - Form A**  
Toolholder-Collet Chuck With Cylindrical Shunk DIN 6499 - Form A  
Spannzanghalter mit der zylindrischen Schaft DIN 6499 - Form A  
Sayfa / Page / Seite : 192



**Silindirik Şaftlı Pens Tutucu DIN 6499 - Form A**  
Toolholder-Collet Chuck With Cylindrical Shunk DIN 6499 - Form A  
Spannzanghalter mit der zylindrischen Schaft DIN 6499 - Form A  
Sayfa / Page / Seite : 192



**Freze Tutucu - DIN 2080 - Form A**  
Toolholder - Shell Mill Holder - DIN 2080 - Form A  
Aufsteckfräsenhalter - DIN 2080 - Form A  
Sayfa / Page / Seite : 194



**Freze Tutucu - BT MAS - Form A**  
Toolholder - Shell Mill Holder - BT MAS - Form A  
Aufsteckfräsenhalter - BT MAS - Form A  
Sayfa / Page / Seite : 194





**Freze Tutucu - DIN 69871 - Form A**  
Toolholder - Shell Mill Holder - DIN 69871  
Aufsteckfräsenhalter - DIN 69871  
Sayfa / Page / Seite : 195



**Freze Tutucu - (A.N.S.I) CAT - Form A**  
Toolholder - Shell Mill Holder - (A.N.S.I) CAT - Form A  
Aufsteckfräsenhalter - (A.N.S.I) CAT - Form A  
Sayfa / Page / Seite : 195



**Freze Merkezleme Tutucusu - DIN 2080 - Form A**  
Toolholder - Arbor For Centering - DIN 2080 - Form A  
Fräsendorne für Zentrierung - DIN 2080 - Form A  
Sayfa / Page / Seite : 196



**Freze Tutucu - DIN 2080 - Form A**  
Toolholder - Shell Mill Holder - DIN 2080 - Form A  
Aufsteckfräsenhalter - DIN 2080 - Form A  
Sayfa / Page / Seite : 197



**Freze Tutucu - BT MAS - Form A**  
Toolholder - Shell Mill Holder - BT MAS - Form A  
Aufsteckfräsenhalter - BT MAS - Form A  
Sayfa / Page / Seite : 198



**Freze Tutucu - (A.N.S.I) CAT - Form A**  
Toolholder - Shell Mill Holder - (A.N.S.I) CAT - Form A  
Aufsteckfräsenhalter - (A.N.S.I) CAT - Form A  
Sayfa / Page / Seite : 199



**Freze Tutucu - DIN 69871 - Form A**  
Toolholder - Shell Mill Holder - DIN 69871 - Form A  
Aufsteckfräsenhalter - DIN 69871 - Form A  
Sayfa / Page / Seite : 200



**Weldon Tutucu - DIN 2080 - Form AD**  
Toolholder - Type Weldon - DIN 2080 - Form AD  
Werkzeughalter - Type Weldon - DIN 2080 - Form AD  
Sayfa / Page / Seite : 201



**Weldon Tutucu - BT MAS - Form AD**  
Toolholder - Type Weldon - BT MAS - Form AD  
Werkzeughalter - Type Weldon - BT MAS - Form AD  
Sayfa / Page / Seite : 202



**Weldon Tutucu - DIN 69871 - Form AD**  
Toolholder - Type Weldon - DIN 69871 - Form AD  
Werkzeughalter - Type Weldon - DIN 69871 - Form AD  
Sayfa / Page / Seite : 203



**Weldon Tutucu - DIN 69871 - Form AD-B**  
Toolholder - Type Weldon - DIN 69871 - Form AD-B  
Werkzeughalter - Type Weldon - DIN 69871 - Form AD-B  
Sayfa / Page / Seite : 204



**Weldon Tutucu - (A.N.S.I) CAT - Form AD**  
Toolholder - Type Weldon - (A.N.S.I) CAT - Form AD  
Toolholder - Type Weldon - (A.N.S.I) CAT - Form AD  
Sayfa / Page / Seite : 205



**Weldon Tutucu - (A.N.S.I) CAT - Form AD-B**  
Toolholder - Type Weldon - (A.N.S.I) CAT - Form AD-B  
Werkzeughalter - Type Weldon - (A.N.S.I) CAT - Form AD-B  
Sayfa / Page / Seite : 206



**Mors Konikli Freze Tutucusu DIN 228 - 2 Form C - Form A**  
Toolholder - Morse Taper DIN 228 - 2 Form C - Form A  
Werkzeughalter - Morsekegel DIN 228 - 2 Form C - Form A  
Sayfa / Page / Seite : 207



**Mors Konikli Freze Tutucusu DIN 228 - 2 Form D - BT MAS - Form A**  
Toolholder - Morse Taper DIN 228 - 2 Form D - BT MAS - Form A  
Werkzeughalter - Morsekegel DIN 228 - 2 Form D - BT MAS - Form A  
Sayfa / Page / Seite : 208

Tutucular / Toolholders

Werkzeughalter



**Mors Konikli Freze Tutucusu DIN 228 - 2 Form D - (A.N.S.I) CAT - Form A**  
Toolholder - Morse Taper DIN 228 - 2 Form D - (A.N.S.I) CAT - Form A  
Werkzeughalter - Morsekegel DIN 228 - 2 Form D - (A.N.S.I) CAT - Form A  
**Sayfa / Page / Seite : 209**



**Mors Konikli Freze Tutucusu DIN 228 - 2 Form D - DIN 69871 - Form A**  
Toolholder - Morse Taper DIN 228 - 2 Form D - DIN 69871 - Form A  
Werkzeughalter - Morsekegel DIN 228 - 2 Form D - DIN 69871 - Form A  
**Sayfa / Page / Seite : 210**



**Mandren Tutucular - DIN 238 - Form A**  
Drill Chuck - DIN 238 - Form A  
Bohrenwerkzeughalter - DIN 238 - Form A  
**Sayfa / Page / Seite : 211**



**Kanal Freze Tutucuları / BT MAS - Form A**  
Disc Mill Holders - BT MAS - Form A  
Werkzeughalter für Scheibenfräsen - BT MAS - Form A  
**Sayfa / Page / Seite : 212**



**Kanal Freze Tutucuları / (A.N.S.I) CAT - Form A**  
Disc Mill Holders (A.N.S.I) CAT - Form A  
Werkzeughalter für Scheibenfräsen (A.N.S.I) CAT - Form A  
**Sayfa / Page / Seite : 213**



**Kanal Freze Tutucuları / DIN 69871 - Form A**  
Disc Mill Holders - DIN 69871 - Form A  
Werkzeughalter für Scheibenfräsen - DIN 69871 - Form A  
**Sayfa / Page / Seite : 214**



**Isıtmalı Tutucular / DIN 69871 - Form AD-B**  
Shirring Chuck Holders - DIN 69871 - Form AD-B  
Schrumpfspannfutter - DIN 69871 - Form AD-B  
**Sayfa / Page / Seite : 215 - 216**



**Isıtmalı Tutucular / BT MAS - Form AD-B**  
Shirring Chuck Holders / BT MAS - Form AD-B  
Schrumpfspannfutter / BT MAS - Form AD-B  
**Sayfa / Page / Seite : 217**



**Isıtmalı Tutucular / (A.N.S.I) CAT - Form AD-B**  
Shirring Chuck Holders (A.N.S.I) CAT - Form AD-B  
Schrumpfspannfutter (A.N.S.I) CAT - Form AD-B  
**Sayfa / Page / Seite : 218**



**Çektirme Vidası**  
Pull Stud  
Anzugsbolzen  
**Sayfa / Page / Seite : 220 - 221**



**VDI Takım Tutucu / DIN 69880**  
VDI Holder / DIN 69880  
VDI Werkzeughalter / DIN 69880  
**Sayfa / Page / Seite : 223 - 228**



**Adaptör**  
Adaptor  
Adapter  
**Sayfa / Page / Seite : 229**



**Yeni!**

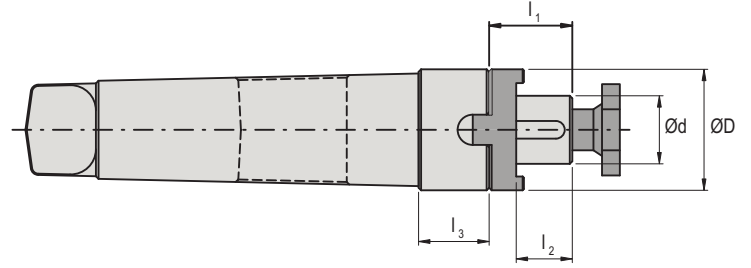
**Weldon Tutucu / DIN 69893 (HSK)**  
Toolholder - Type Weldon / DIN 69893 (HSK)  
Werkzeughalter - Type Weldon / DIN 69893 (HSK)  
**Sayfa / Page / Seite : 231**



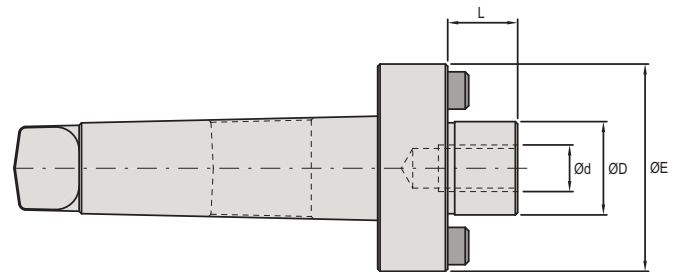
**Yeni!**

**Pens Tutucu / ER Tip / DIN 6499 / DIN 69893 (HSK)**  
Toolholder - Collet Chuck / Type ER / DIN 6499 / DIN 69893 (HSK)  
Spannzanghalter / Type ER / DIN 6499 / DIN 69893 (HSK)  
**Sayfa / Page / Seite : 232**





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		ØD	Ød	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	MK
X 06	K - 01	○	32	16	27	17	4
	K - 02	○	40	22	31	19	
	K - 03	○	48	27	33	21	
	K - 04	○	58	32	38	24	
	K - 05	○	70	40	41	27	
	K - 06	○	40	22	31	19	
K - 07	○	48	27	33	21		
K - 08	○	58	32	38	24		
K - 09	○	70	40	41	27		
K - 10	○	90	50	46	30	24	6
K - 11	○	48	27	33	21	28	
K - 12	○	58	32	38	24	26	
K - 13	○	70	40	41	27	26	
K - 14	○	90	50	46	30	24	metr.80
K - 15	○	110	60	66	50	24	
K - 16	○	48	27	33	21	28	
K - 17	○	58	32	38	24	26	
K - 18	○	70	40	41	27	26	
K - 19	○	90	50	46	30	24	
K - 20	○	110	60	66	50	24	

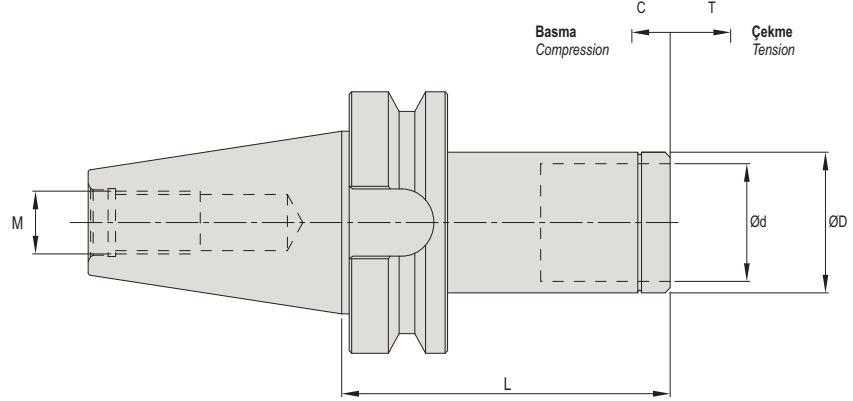


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen				MK
		ØE	ØD (h6)	Ød	L	
X 08	- 01	○	69.832	32	M16	5
	- 02	○	88.832	40	M20	
	- 03	○	128.57	60	M30	
	- 04	○	88.832	40	M20	6
	- 05	○	128.57	60	M30	
	- 06	○	88.832	40	M20	metr.80
	- 07	○	128.57	60	M30	

## Hızlı Değişirmeli; Kompanzasyonlu Kılavuz Tutucu - Form A

Quick - Change Tap Holder; Length Compensation - Form A

Schnellwechsel - Gewindeschneidhalter mit Langenausgleich - Form A

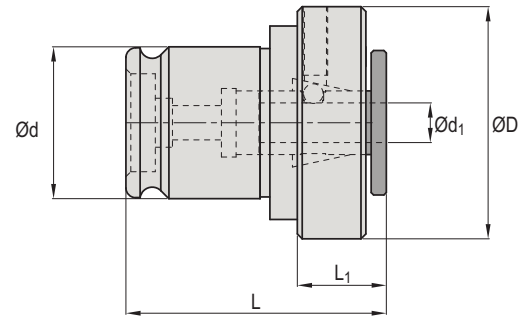


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions Abmessungen					
		Ød	ØD	L	G	C	T
BT40 TKÇB 31 95 (M4.5 - M20)	○				M16		
BT50 TKÇB 31 95 (M4.5 - M20)	○				M24		
CAT40 TKÇB 31 95 (M4.5 - M20)	○				M16		
CAT50 TKÇB 31 95 (M4.5 - M20)	○				M24		
IT40 TKÇB 31 95 (M4.5 - M20)	○	31	53.8	95	M16	8.5	15
IT50 TKÇB 31 95 (M4.5 - M20)	○				M24		
D40 TKÇB 31 95 (M4.5 - M20)	○				M16		
D50 TKÇB 31 95 (M4.5 - M20)	○				M24		
VDI40 TKÇB 31 95 (M4.5 - M20)	○				---		

## Hızlı Değişirmeli Kılavuz Adaptörü

Quick - Change Tap Adaptor

Schnellwechsel - Gewindeschneidadapter



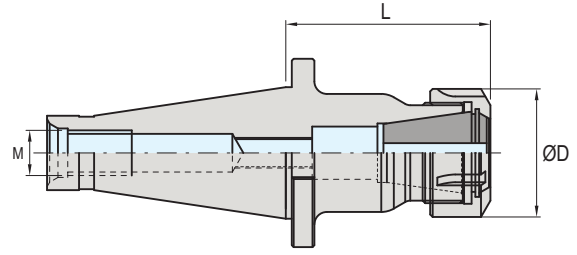
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen				
		Ød <sub>1</sub>	Ød	ØD	L	L <sub>1</sub>
TKÇB A 6	○	6				
7	○	7				
8	○	8				
9	○	9				
10	○	10				
11	○	11				
12	○	12				
14	○	14				
16	○	16				
18	○	18				
			31	47.4	54.8	19.8

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : BT40 TKCB31 95

● Stoktan / Stock / Verfügbar ab Lager

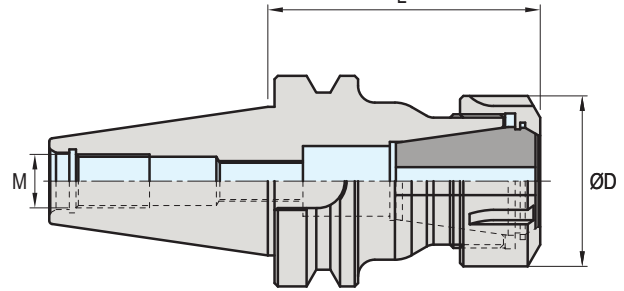
● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



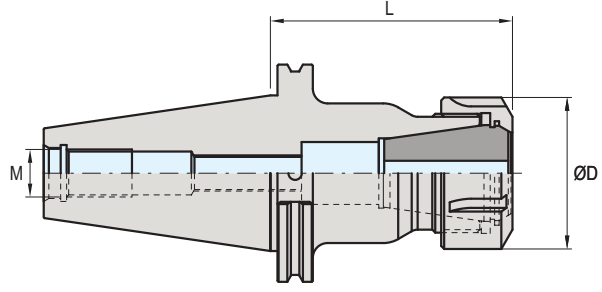
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
ISO30	ER16 75	○	ER16	TM 16 FM	1.0 - 10.0	75	28	M12
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
ISO40	ER16 75	○	ER16	TM 16 FM	1.0 - 10.0	75	28	M16
	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
	ER32 75	○	ER32	TM 32 FM	3.0 - 20.0	75	50	
ISO50	ER20 105	○	ER20	TM 20 FM	1.0 - 13.0	105	34	M24
	ER20 125	○	ER20	TM 20 FM	1.0 - 13.0	125	34	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
	ER32 105	○	ER32	TM 32 FM	3.0 - 20.0	105	50	

**Pens Tutucu / ER Tip / DIN 6499 / BT MAS - Form AD**  
 Toolholder - Collet Chuck / Type ER / DIN 6499 / BT MAS - Form AD  
 Spannzanghalter / Type ER / DIN 6499 / BT MAS - Form AD



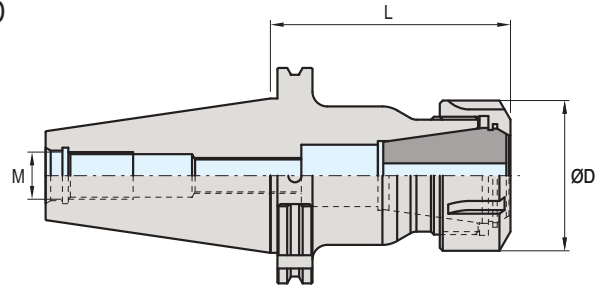
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
BT40	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28	M16
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34	
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
BT50	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28	M24
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34	
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
	ER25 150	○	ER25	TM 25 FM	2.0 - 16.0	150	42	
	ER32 105	○	ER32	TM 32 FM	3.0 - 20.0	105	50	

**Pens Tutucu / ER Tip / DIN 6499 / (A.N.S.I) CAT - Form AD**  
 Toolholder - Collet Chuck / Type ER / DIN 6499 / (A.N.S.I) CAT - Form AD  
 Spannzanghalter / Type ER / DIN 6499 / (A.N.S.I) CAT - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
CAT40	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28	M16
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34	
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
CAT50	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28	M24
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34	
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
	ER25 150	○	ER25	TM 25 FM	2.0 - 16.0	150	42	
	ER32 105	○	ER32	TM 32 FM	3.0 - 20.0	105	50	

**Pens Tutucu / ER Tip / DIN 6499 / DIN 69871- Form AD**  
 Toolholder - Collet Chuck / Type ER / DIN 6499 / DIN 69871 - Form AD  
 Spannzanghalter / Type ER / DIN 6499 / DIN 69871 - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
IT40	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28	M16
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34	
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
IT50	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	34	M24
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28	
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	28	
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34	
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42	
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42	
	ER25 150	○	ER25	TM 25 FM	2.0 - 16.0	150	42	
	ER32 105	○	ER32	TM 32 FM	3.0 - 20.0	105	50	

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CAT40 ER16 105

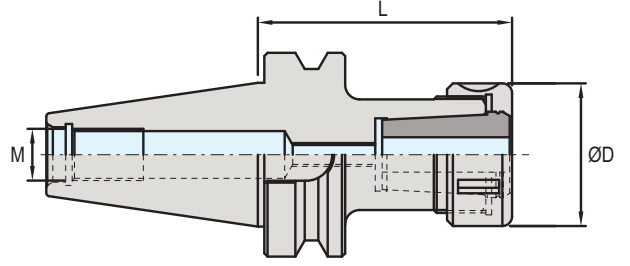
● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

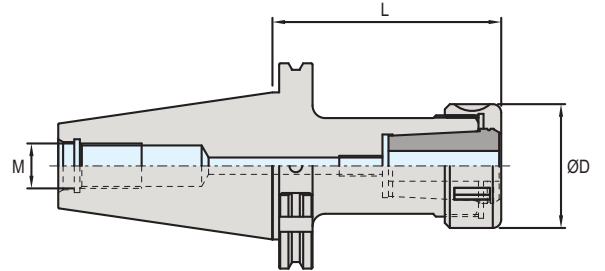
○ Stokta yok / Non stock item / Nicht auf Lager





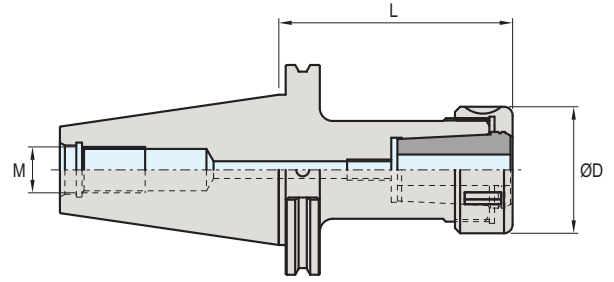


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
BT40	PK25 75	○	PK25	TM 225 FM	4.0 - 25.0	75	60	M16
	PK25 105	○	PK25	TM 225 FM	4.0 - 25.0	105	60	
BT50	PK25 75	○	PK25	TM 225 FM	4.0 - 25.0	75	60	M24
	PK25 105	○	PK25	TM 225 FM	4.0 - 25.0	105	60	
	PK32 105	○	PK32	TM 432 FM	4.0 - 32.0	105	74	



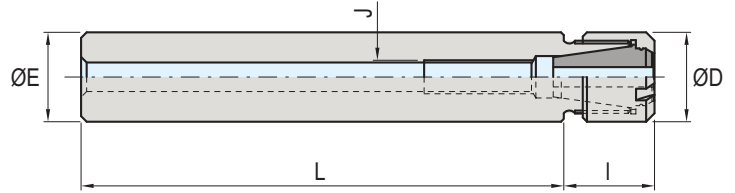
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
IT40	PK25 75	○	PK25	TM 225 FM	4.0 - 25.0	75	60	M16
	PK25 105	○	PK25	TM 225 FM	4.0 - 25.0	105	60	M16
IT50	PK25 75	○	PK25	TM 225 FM	4.0 - 25.0	75	60	M24
	PK25 105	○	PK25	TM 225 FM	4.0 - 25.0	105	60	M24
	PK32 105	○	PK32	TM 432 FM	4.0 - 32.0	105	74	M24

**Pens Tutucu / N Tip / DIN 6388 / (A.N.S.I.) CAT - Form AD**  
 Toolholder - Collet Chuck / Type N / DIN 6388 / (A.N.S.I.) CAT - Form AD  
 Spannzanghalter / Type N / DIN 6388 / (A.N.S.I.) CAT - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	M	
CAT40	PK25 75	○	PK25	TM 225 FM	4.0 - 25.0	75	60	M16
	PK25 105	○	PK25	TM 225 FM	4.0 - 25.0	105	60	
CAT50	PK25 75	○	PK25	TM 225 FM	4.0 - 25.0	75	60	M24
	PK25 105	○	PK25	TM 225 FM	4.0 - 25.0	105	60	
	PK32 105	○	PK32	TM 432 FM	4.0 - 32.0	105	74	

**ER Tip Silindirik Şaftlı Pens Tutucular - DIN 6499 - Form A**  
 Toolholder - Collet Chuck With Cylindrical Shank , Type ER - DIN 6499 - Form A  
 Spannzanghalter mit der zylindrischen Schaft, Type ER - DIN 6499 - Form A



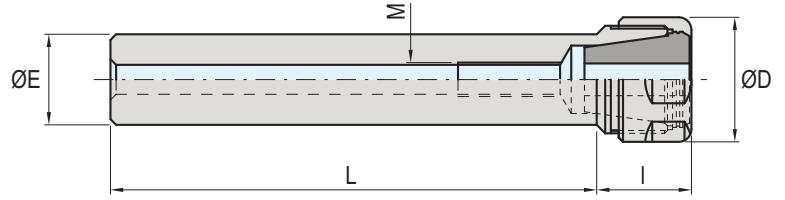
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		ØE	Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	I	ØD	J
VS16	ER11 105 S	○	ER11	TM 11 FM S	1.0 - 6.0	105	25	16	M8
VS20	ER11 150 S	○	ER11	TM 11 FM S	1.0 - 6.0	150	25	16	M8
VS16	ER16 105 S	○	ER16	TM 16 FM S	1.0 - 10.0	105	32	22	M10
VS20	ER16 150 S	○	ER16	TM 16 FM S	1.0 - 10.0	150	32	22	M10
	ER20 105 S	○	ER20	TM 20 FM S	1.0 - 13.0	105	38	28	M12
	ER20 150 S	○	ER20	TM 20 FM S	1.0 - 13.0	150	38	28	M12

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager :CAT40 PK25 75

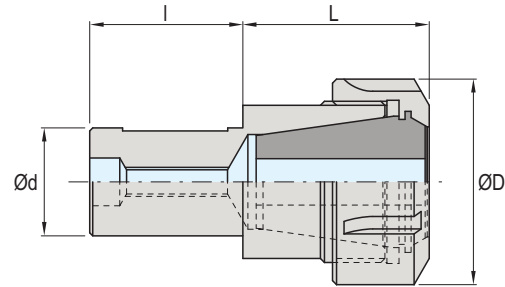
● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		ØE	Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	I	ØD	M	
VS16	ER11 105	○	16	ER11	TM 11 FM	1.0 - 6.0	105	22	20	M8
	ER11 150	○	16	ER11	TM 11 FM	1.0 - 6.0	150	22	20	M8
	ER16 105	○	16	ER16	TM 16 FM	1.0 - 10.0	105	28	28	M10
VS20	ER11 105	○	20	ER11	TM 11 FM	1.0 - 6.0	105	22	20	M8
	ER11 150	○	20	ER11	TM 11 FM	1.0 - 6.0	150	22	20	M8
	ER16 105	○	20	ER16	TM 16 FM	1.0 - 10.0	105	28	28	M10
VS25	ER16 150	○	25	ER16	TM 16 FM	1.0 - 10.0	150	28	28	M10
	ER20 105	○	25	ER20	TM 20 FM	1.0 - 13.0	105	40	34	M12
	ER20 150	○	25	ER20	TM 20 FM	1.0 - 13.0	150	40	34	M12



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	I	ØD	J	
CNC32	ER25 50	○	32	ER25	TM 25 FM	2.0 - 16.0	50	80	42	M12
CNC40	ER25 50	○	40	ER25	TM 25 FM	2.0 - 16.0	50	100	42	
CNC32	ER32 50	○	32	ER32	TM 32 FM	3.0 - 20.0	50	80	50	M16
CNC40	ER32 50	○	40	ER32	TM 32 FM	3.0 - 20.0	50	100	50	

**BT MAS**  
**Kılavuz Tutucular**  
*Tapping Holders*  
Gewindeschneidhalter

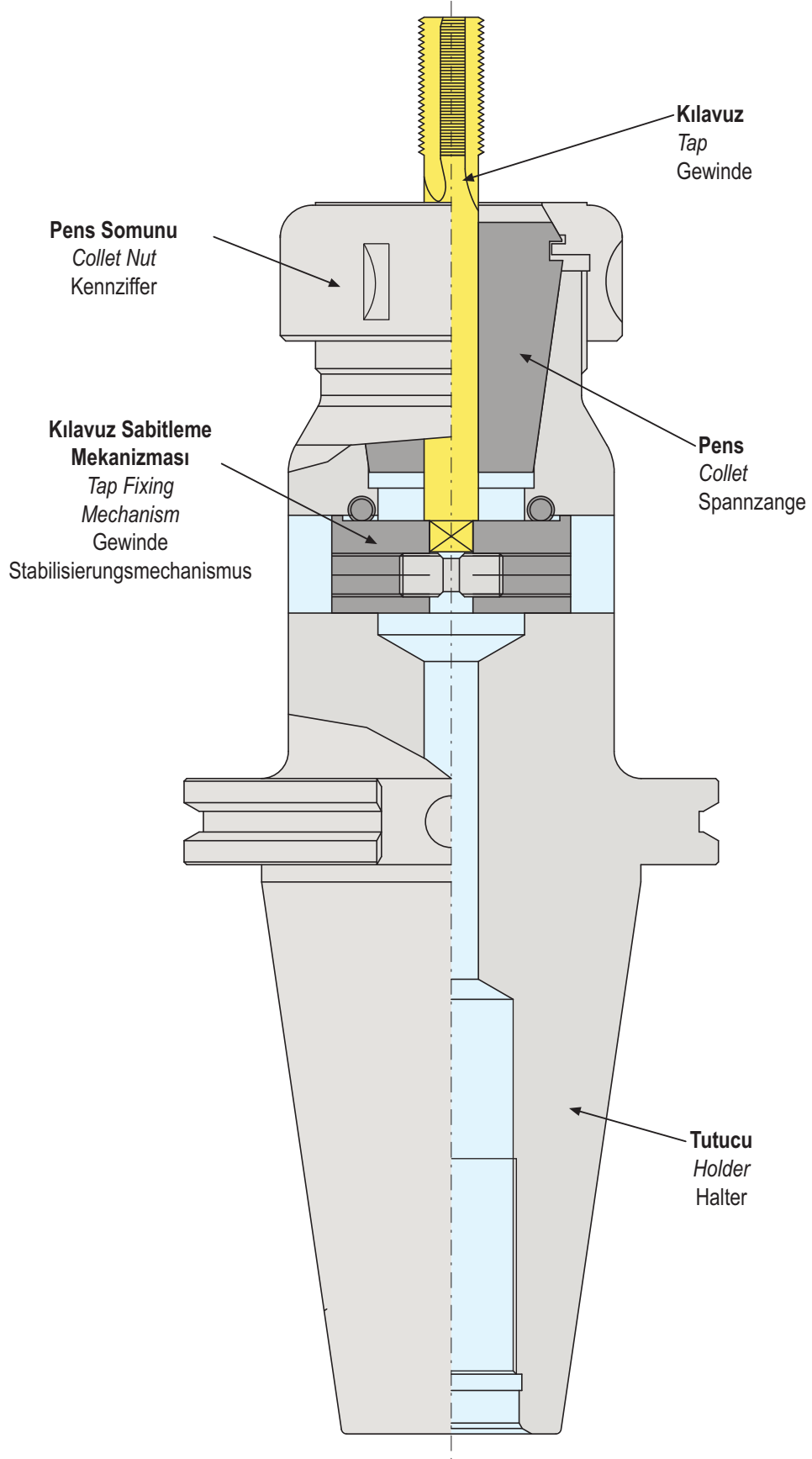
BT40 ER25 105 KT  
BT40 ER32 105 KT  
BT50 ER25 105 KT  
BT50 ER32 105 KT  
BT50 ER40 120 KT

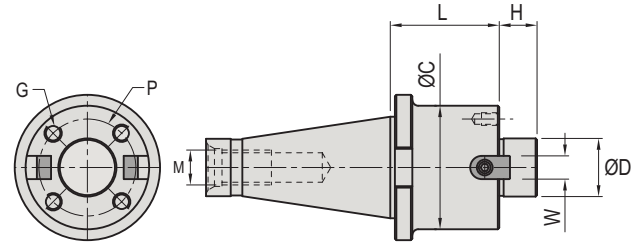
**DIN 69871**  
**Kılavuz Tutucular**  
*Tapping Holders*  
Gewindeschneidhalter

IT40 ER25 105 KT  
IT40 ER32 105 KT  
IT50 ER25 105 KT  
IT50 ER32 105 KT  
IT50 ER40 120 KT

**(A.N.S.I) CAT**  
**Kılavuz Tutucular**  
*Tapping Holders*  
Gewindeschneidhalter

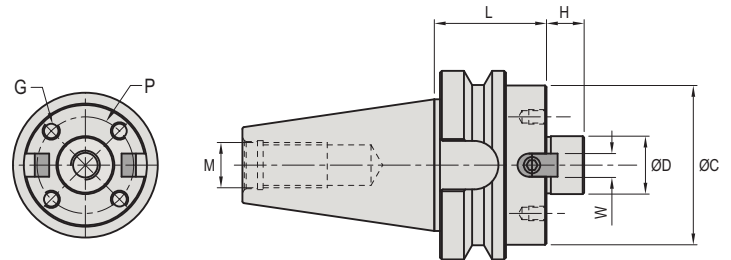
CAT40 ER25 105 KT  
CAT40 ER32 105 KT  
CAT50 ER25 105 KT  
CAT50 ER32 105 KT  
CAT50 ER40 120 KT





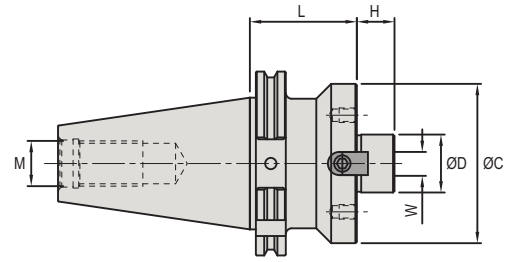
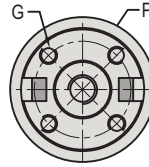
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		ØD	ØC	H	L	W	P	G	M	
ISO40	FMB40 45	○	40	85	30	45	16	66.7	—	M16
	FMB60 45	○	60	140	40	45	25.4	101.6	M12	
ISO50	FMB40 45	○	40	85	30	45	16	66.7	—	M24
	FMB60 45	○	60	140	40	45	25.4	101.6	M16	

**Freze Tutucu - BT MAS - Form A**  
 Toolholder - Shell Mill Holder , BT MAS - Form A  
 Aufsteckfräsenhalter BT MAS - Form A



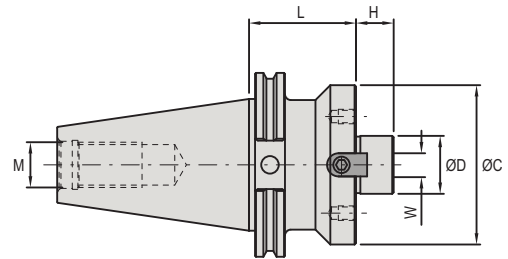
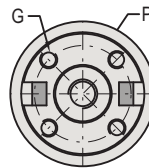
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		ØD	ØC	H	L	W	P	G	M	
BT40	FMB40 45	○	40	85	30	45	16	66.7	—	M16
	FMB60 45	○	60	140	40	45	25.4	101.6	M12	
BT50	FMB40 45	○	40	85	30	45	16	66.7	—	M24
	FMB60 45	○	60	140	40	45	25.4	101.6	M16	

**Freze Tutucu - DIN 69871 - Form A**  
 Toolholder - Shell Mill Holder, DIN 69871 - Form A  
 Aufsteckfräsenhalter, DIN 69871 - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		ØD	ØC	H	L	W	P	G	M	
IT40	FMB40 45	○	40	85	30	45	16	66.7	—	M16
	FMB60 45	○	60	140	40	45	25.4	101.6	M12	
IT50	FMB40 45	○	40	85	30	45	16	66.7	—	M24
	FMB60 45	○	60	140	40	45	25.4	101.6	M16	

**Freze Tutucu - (A.N.S.I) CAT - Form A**  
 Toolholder - Shell Mill Holder, (A.N.S.I) CAT - Form A  
 Aufsteckfräsenhalter, (A.N.S.I) CAT - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		ØD	ØC	H	L	W	P	G	M	
CAT40	FMB40 45	○	40	85	30	45	16	66.7	—	M16
	FMB60 45	○	60	140	40	45	25.4	101.6	M12	
CAT50	FMB40 45	○	40	85	30	45	16	66.7	—	M24
	FMB60 45	○	60	140	40	45	25.4	101.6	M16	

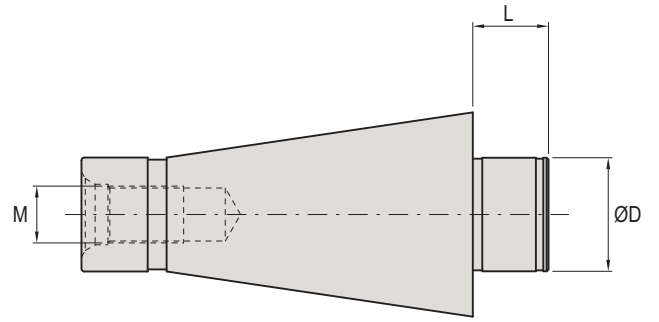


● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

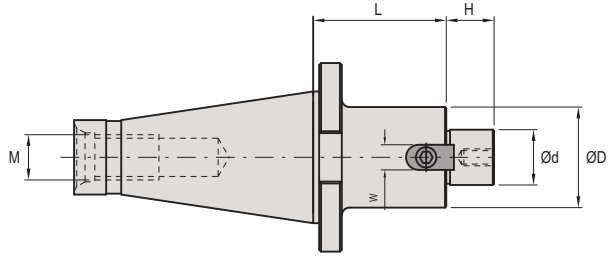
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : IT40 FMB40 45



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen			
		ØD	L	Tanımlama	H
ISO40 MR40 32	○	40	32	MERKEZLEME TUTUCUSU	M16
ISO50 MR60 40	○	50	40	MERKEZLEME TUTUCUSU	M24



**Freze Tutucu - DIN 2080 - Form A**  
 Toolholder - Shell Mill Holder, DIN 2080 - Form A  
 Aufsteckfräsenhalter, DIN 2080 - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Ød	ØD	H	L	W	M	
ISO40	SMS16 60	○	16	32	14	60	8	M16
	SMS16 120	○	16	32	14	120	8	
	SMS22 60	○	22	42	16	60	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
ISO50	SMS16 60	○	16	32	14	60	8	M24
	SMS16 120	○	16	32	14	120	8	
	SMS22 75	○	22	42	16	75	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS27 105	○	27	50	18	105	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
	SMS40 45	○	40	70	23	45	16	
	SMS40 75	○	40	70	23	75	16	



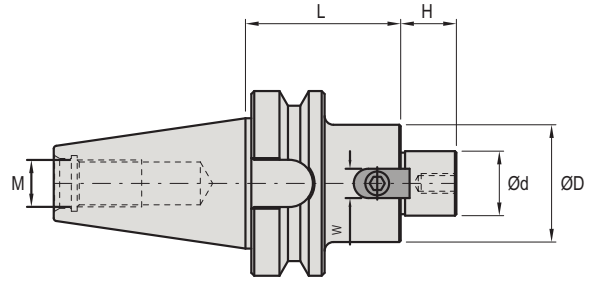
● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : ISO40 SMS22 60

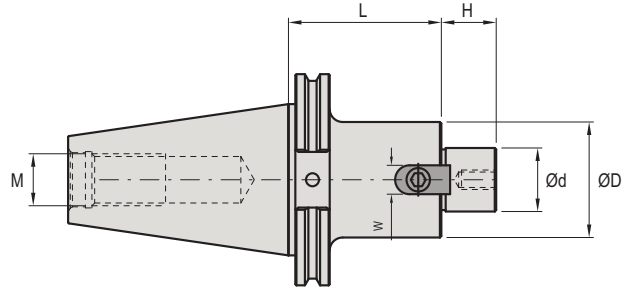




Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Ød	ØD	H	L	W	M	
BT40	SMS16 60	○	16	32	14	60	8	M16
	SMS16 120	○	16	32	14	120	8	
	SMS22 60	○	22	42	16	60	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
BT50	SMS16 60	○	16	32	14	60	8	M24
	SMS16 120	○	16	32	14	120	8	
	SMS22 75	○	22	42	16	75	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS27 105	○	27	50	18	105	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
	SMS40 45	○	40	70	23	45	16	
	SMS40 75	○	40	70	23	75	16	



**Freze Tutucu - (A.N.S.I) CAT - Form A**  
 Toolholder - Shell Mill Holder, (A.N.S.I) CAT - Form A  
 Aufsteckfräsenhalter, (A.N.S.I) CAT - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Ød	ØD	H	L	W	M	
CAT40	SMS16 60	○	16	32	14	60	8	M16
	SMS16 120	○	16	32	14	120	8	
	SMS22 60	○	22	42	16	60	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
CAT50	SMS16 60	○	16	32	14	60	8	M24
	SMS16 120	○	16	32	14	120	8	
	SMS22 75	○	22	42	16	75	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS27 105	○	27	50	18	105	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
	SMS40 45	○	40	70	23	45	16	
	SMS40 75	○	40	70	23	75	16	

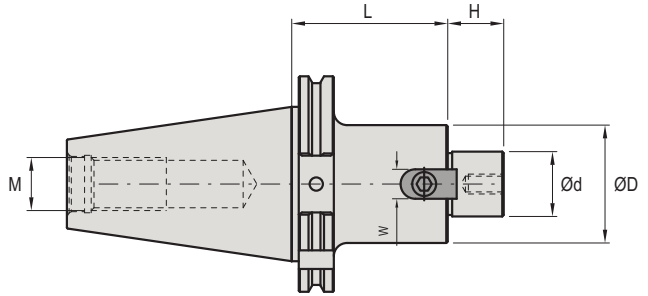


● Stoktan / Stock / Verfügher ab Lager

⦿ 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

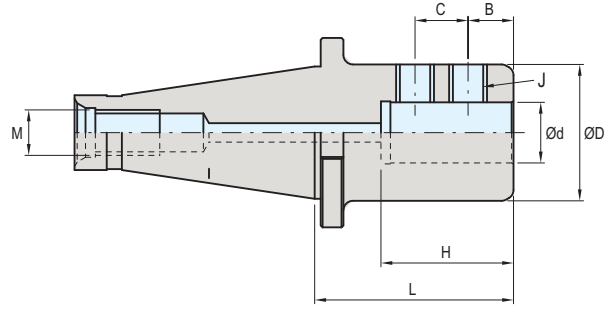
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CAT40 SMS22 60



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Ød	ØD	H	L	W	M	
IT40	SMS16 60	○	16	32	14	60	8	M16
	SMS16 120	○	16	32	14	120	8	
	SMS22 60	○	22	42	16	60	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
	SMS32 75	○	32	60	20	75	14	
IT50	SMS16 60	○	16	32	14	60	8	M24
	SMS16 120	○	16	32	14	120	8	
	SMS22 75	○	22	42	16	75	10	
	SMS22 120	○	22	42	16	120	10	
	SMS27 60	○	27	50	18	60	12	
	SMS27 105	○	27	50	18	105	12	
	SMS32 45	○	32	60	20	45	14	
	SMS32 75	○	32	60	20	75	14	
	SMS40 45	○	40	70	23	45	16	
	SMS40 75	○	40	70	23	75	16	



**Weldon Tutucu DIN 2080 - Form AD**  
 Toolholder - Type Weldon, DIN 2080 - Form AD  
 Werkzeughalter - Type Weldon, DIN 2080 - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	ØD	J	H	L	B	C	M	
ISO40	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M16
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24	28	
ISO50	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M24
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24	28	
	SLN40 120	○	40	90	M20 x 2	68 - 73	120	30	32	

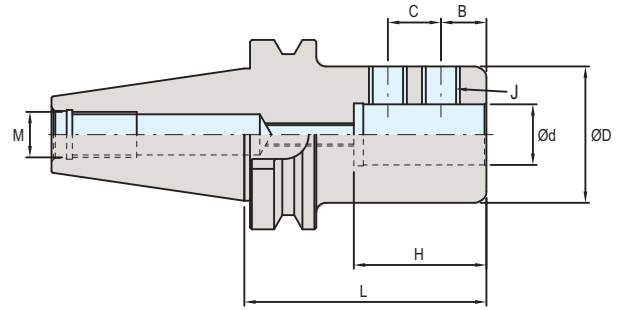


● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

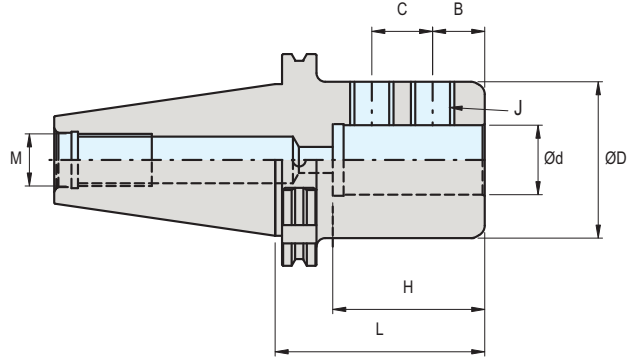
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : ISO40 SLN20 90



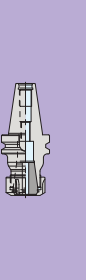
Kod Code Bezeichnung	Stok Stock Lager	Öçüler Dimensions / Abmessungen									
		Ød	ØD	J	H	L	B	C	M		
BT40	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M16	
	SLN8 90	○	8	28	M8	35 - 40	90	18			
	SLN10 90	○	10	35	M10	39 - 44	90	20			
	SLN12 90	○	12	42	M12	44 - 49	90	22.5			
	SLN16 90	○	16	48	M14	47 - 52	90	24			
	SLN20 90	○	20	52	M16	49 - 54	90	25			
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24			25
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24			28
BT50	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M24	
	SLN8 90	○	8	28	M8	35 - 40	90	18			
	SLN10 90	○	10	35	M10	39 - 44	90	20			
	SLN12 90	○	12	42	M12	44 - 49	90	22.5			
	SLN16 90	○	16	48	M14	47 - 52	90	24			
	SLN20 90	○	20	52	M16	49 - 54	90	25			
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24			25
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24			28
	SLN40 120	○	40	90	M20 x 2	68 - 73	120	30			32



**Weldon Tutucu DIN 69871 - Form AD**  
 Toolholder - Type Weldon, DIN 69871 - Form AD  
 Werkzeughalter - Type Weldon, DIN 69871 - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	ØD	J	H	L	B	C	M	
IT40	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M16
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24	28	
IT50	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M24
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24	28	
	SLN40 120	○	40	90	M20 x 2	68 - 73	120	30	32	

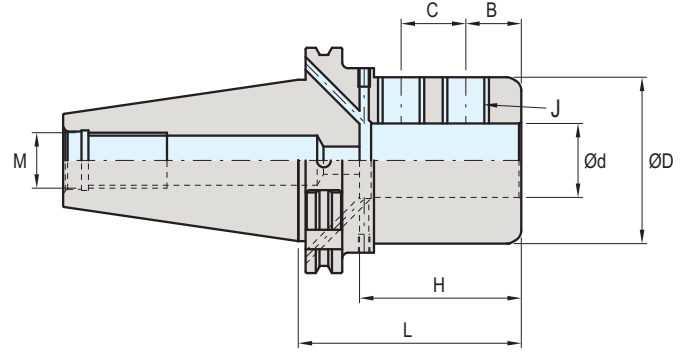


● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

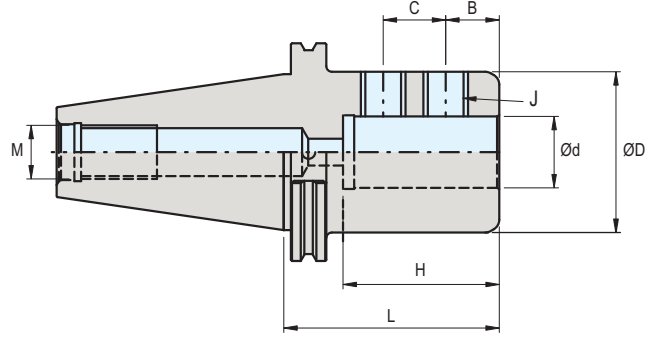
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : IT40 SLN20 90



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen									
		Ød	ØD	J	H	L	B	C	M		
IT40	SLN6 90 B	○	6	25	M6	35 - 40	90	18	—	M16	
	SLN8 90 B	○	8	28	M8	35 - 40	90	18			
	SLN10 90 B	○	10	35	M10	39 - 44	90	20			
	SLN12 90 B	○	12	42	M12	44 - 49	90	22.5			
	SLN16 90 B	○	16	48	M14	47 - 52	90	24			
	SLN20 90 B	○	20	52	M16	49 - 54	90	25			
	SLN25 105 B	○	25	65	M18 x 2	54 - 59	105	24			25
	SLN32 105 B	○	32	72	M20 x 2	58 - 63	105	24			28
IT50	SLN6 90 B	○	6	25	M6	35 - 40	90	18	—	M24	
	SLN8 90 B	○	8	28	M8	35 - 40	90	18			
	SLN10 90 B	○	10	35	M10	39 - 44	90	20			
	SLN12 90 B	○	12	42	M12	44 - 49	90	22.5			
	SLN16 90 B	○	16	48	M14	47 - 52	90	24			
	SLN20 90 B	○	20	52	M16	49 - 54	90	25			
	SLN25 105 B	○	25	65	M18 x 2	54 - 59	105	24			25
	SLN32 105 B	○	32	72	M20 x 2	58 - 63	105	24			28
	SLN40 120 B	○	40	90	M20 x 2	68 - 73	120	30			32



**Weldon Tutucu (A.N.S.I) CAT - Form AD**  
 Toolholder - Type Weldon, (A.N.S.I) CAT - Form AD  
 Werkzeughalter - Type Weldon, (A.N.S.I) CAT - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	ØD	J	H	L	B	C	M	
CAT40	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M16
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24	28	
CAT50	SLN6 90	○	6	25	M6	35 - 40	90	18	—	M24
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24	28	
	SLN40 120	○	40	90	M20 x 2	68 - 73	120	30	32	

● Stoktan / Stock / Verfügbar ab Lager

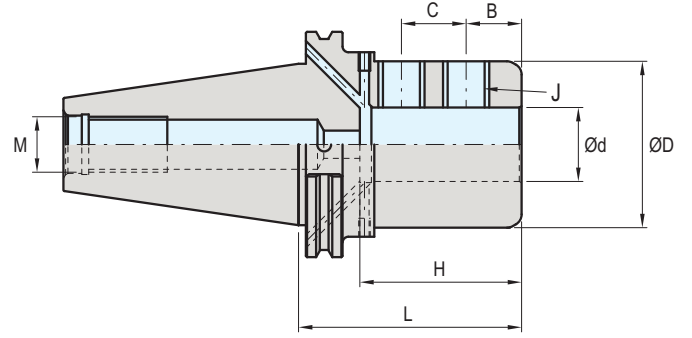
⌚ 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CAT40 SLN20 90







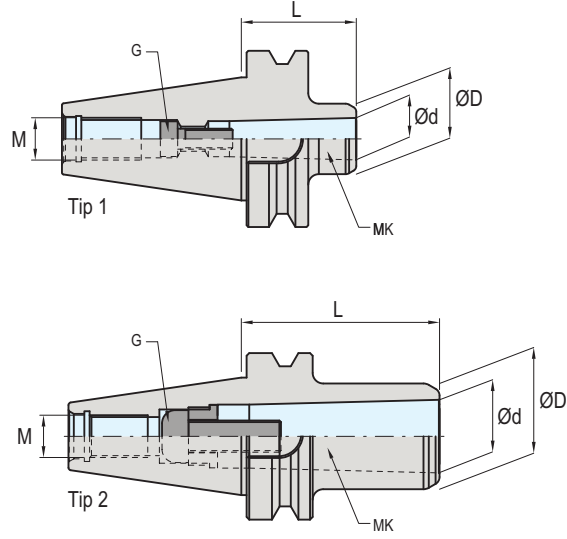
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	ØD	J	H	L	B	C	M	
CAT40	SLN6 90 B	○	6	25	M6	35 - 40	90	18	—	M16
	SLN8 90 B	○	8	28	M8	35 - 40	90	18		
	SLN10 90 B	○	10	35	M10	39 - 44	90	20		
	SLN12 90 B	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90 B	○	16	48	M14	47 - 52	90	24		
	SLN20 90 B	○	20	52	M16	49 - 54	90	25		
	SLN25 105 B	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105 B	○	32	72	M20 x 2	58 - 63	105	24	28	
CAT50	SLN6 90 B	○	6	25	M6	35 - 40	90	18	—	M24
	SLN8 90 B	○	8	28	M8	35 - 40	90	18		
	SLN10 90 B	○	10	35	M10	39 - 44	90	20		
	SLN12 90 B	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90 B	○	16	48	M14	47 - 52	90	24		
	SLN20 90 B	○	20	52	M16	49 - 54	90	25		
	SLN25 105 B	○	25	65	M18 x 2	54 - 59	105	24		
	SLN32 105 B	○	32	72	M20 x 2	58 - 63	105	24	28	
	SLN40 120 B	○	40	90	M20 x 2	68 - 73	120	30	32	



# Mors Konikli Freze Tutucusu DIN 228 - 2 Form C - Form A

Toolholder - Morse Taper - DIN 228 - 2 Form C - Form A

Werkzeughalter - Morsekegel - DIN 228 - 2 Form C - Form A



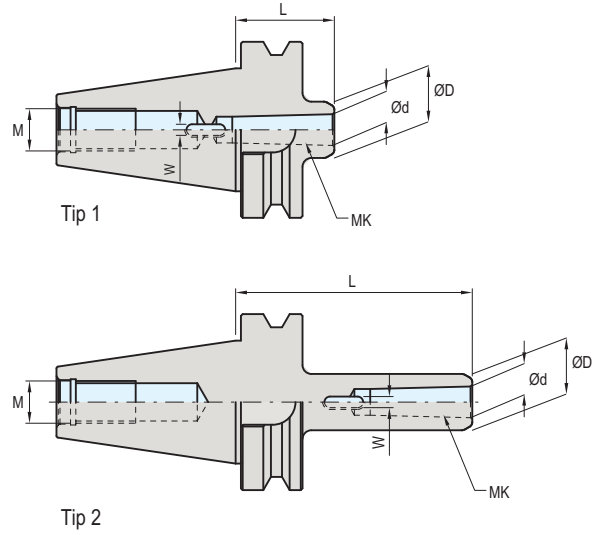
Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		MK	Ød	ØD	L	Tip	G	M	
BT40	MTB1 45	○	1	12.065	25	45	1	M6x1	M16
	MTB2 60	○	2	17.780	32	60	1	M10x1.5	
	MTB3 45	○	3	23.825	40	45	2	M12x1.75	
	MTB4 85	○	4	31.267	50	85	2	M16x2	
CAT40	MTB1 45	○	1	12.065	25	45	1	M6x1	
	MTB2 60	○	2	17.780	32	60	1	M10x1.5	
	MTB3 45	○	3	23.825	40	45	2	M12x1.75	
	MTB4 85	○	4	31.267	50	85	2	M16x2	
IT40	MTB1 45	○	1	12.065	25	45	1	M6x1	
	MTB2 60	○	2	17.780	32	60	1	M10x1.5	
	MTB3 45	○	3	23.825	40	45	2	M12x1.75	
	MTB4 85	○	4	31.267	50	85	2	M16x2	
BT50	MTB1 45	○	1	12.065	25	45	1	M6x1	M24
	MTB2 45	○	2	17.780	32	45	1	M10x1.5	
	MTB3 60	○	3	23.825	40	60	1	M12x1.75	
	MTB4 75	○	4	31.267	50	75	1	M16x2	
	MTB5 105	○	5	44.399	70	105	2	M20x2.5	
CAT50	MTB1 45	○	1	12.065	25	45	1	M6x1	
	MTB2 45	○	2	17.780	32	45	1	M10x1.5	
	MTB3 60	○	3	23.825	40	60	1	M12x1.75	
	MTB4 75	○	4	31.267	50	75	1	M16x2	
	MTB5 105	○	5	44.399	70	105	2	M20x2.5	
IT50	MTB1 45	○	1	12.065	25	45	1	M6x1	
	MTB2 45	○	2	17.780	32	45	1	M10x1.5	
	MTB3 60	○	3	23.825	40	60	1	M12x1.75	
	MTB4 75	○	4	31.267	50	75	1	M16x2	
	MTB5 105	○	5	44.399	70	105	2	M20x2.5	

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : BT40 MTB1 45

● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

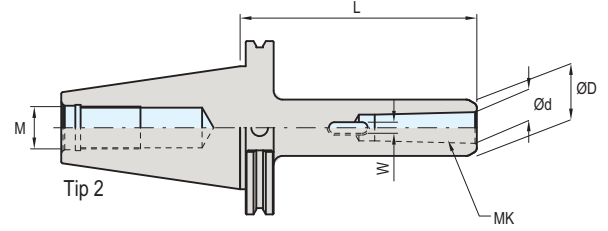
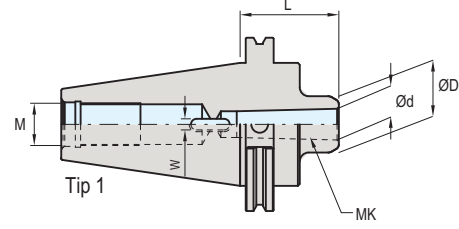


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		MK	Ød	ØD	L	Tip	W	M	
BT40	MTA1 45	○	1	12.065	25	45	1	5.6	M16
	MTA1 120	○	1	12.065	25	120	2	5.6	
	MTA2 45	○	2	17.780	32	45	1	6.6	
	MTA2 135	○	2	17.780	32	135	2	6.6	
	MTA3 75	○	3	23.825	40	75	1	8.4	
	MTA3 150	○	3	23.825	40	150	2	8.4	
	MTA4 90	○	4	31.267	50	90	1	12.4	
	MTA4 180	○	4	31.267	50	180	2	12.4	
BT50	MTA1 45	○	1	12.065	25	45	1	5.6	M24
	MTA1 120	○	1	12.065	25	120	2	5.6	
	MTA1 180	○	1	12.065	25	180	2	5.6	
	MTA2 45	○	2	17.780	32	45	1	6.6	
	MTA2 135	○	2	17.780	32	135	2	6.6	
	MTA2 180	○	2	17.780	32	180	2	6.6	
	MTA3 45	○	3	23.825	40	45	1	8.4	
	MTA3 150	○	3	23.825	40	150	2	8.4	
	MTA3 180	○	3	23.825	40	180	2	8.4	
	MTA4 75	○	4	31.267	50	75	1	12.4	
	MTA4 180	○	4	31.267	50	180	2	12.4	
	MTA5 105	○	5	44.399	65	105	1	16.5	

# Mors Konikli Freze Tutucusu DIN 228-2 Form D - (A.N.S.I) CAT - Form A

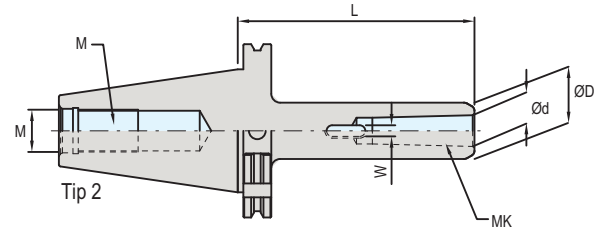
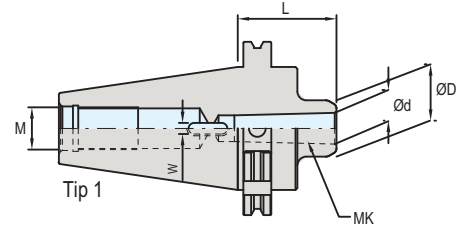
Toolholder - Morse Taper - DIN 228-2 Form D - (A.N.S.I) CAT - Form A

Werkzeughalter - Morsekegel - DIN 228-2 Form D - (A.N.S.I) CAT - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		MK	Ød	ØD	L	Tip	W	M	
CAT40	MTA1 45	○	1	12.065	25	45	1	5.6	M16
	MTA1 120	○	1	12.065	25	120	2	5.6	
	MTA2 45	○	2	17.780	32	45	1	6.6	
	MTA2 135	○	2	17.780	32	135	2	6.6	
	MTA3 75	○	3	23.825	40	75	1	8.4	
	MTA3 150	○	3	23.825	40	150	2	8.4	
	MTA4 90	○	4	31.267	50	90	1	12.4	
	MTA4 180	○	4	31.267	50	180	2	12.4	
CAT50	MTA1 45	○	1	12.065	25	45	1	5.6	M24
	MTA1 120	○	1	12.065	25	120	2	5.6	
	MTA1 180	○	1	12.065	25	180	2	5.6	
	MTA2 45	○	2	17.780	32	45	1	6.6	
	MTA2 135	○	2	17.780	32	135	2	6.6	
	MTA2 180	○	2	17.780	32	180	2	6.6	
	MTA3 45	○	3	23.825	40	45	1	8.4	
	MTA3 150	○	3	23.825	40	150	2	8.4	
	MTA3 180	○	3	23.825	40	180	2	8.4	
	MTA4 75	○	4	31.267	50	75	1	12.4	
	MTA4 180	○	4	31.267	50	180	2	12.4	
	MTA5 105	○	5	44.399	65	105	1	16.5	



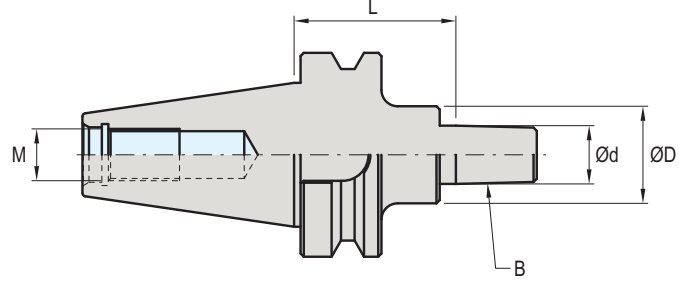


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		MK	Ød	ØD	L	Tip	W	M	
IT40	MTA1 45	○	1	12.065	25	45	1	5.6	M16
	MTA1 120	○	1	12.065	25	120	2	5.6	
	MTA2 45	○	2	17.780	32	45	1	6.6	
	MTA2 135	○	2	17.780	32	135	2	6.6	
	MTA3 75	○	3	23.825	40	75	1	8.4	
	MTA3 150	○	3	23.825	40	150	2	8.4	
	MTA4 90	○	4	31.267	50	90	1	12.4	
	MTA4 180	○	4	31.267	50	180	2	12.4	
IT50	MTA1 45	○	1	12.065	25	45	1	5.6	M24
	MTA1 120	○	1	12.065	25	120	2	5.6	
	MTA1 180	○	1	12.065	25	180	2	5.6	
	MTA2 45	○	2	17.780	32	45	1	6.6	
	MTA2 135	○	2	17.780	32	135	2	6.6	
	MTA2 180	○	2	17.780	32	180	2	6.6	
	MTA3 45	○	3	23.825	40	45	1	8.4	
	MTA3 150	○	3	23.825	40	150	2	8.4	
	MTA3 180	○	3	23.825	40	180	2	8.4	
	MTA4 75	○	4	31.267	50	75	1	12.4	
	MTA4 180	○	4	31.267	50	180	2	12.4	
	MTA5 105	○	5	44.399	65	105	1	16.5	

# Mandren Tutucular - Form A

Toolholder - Drill Chuck Holder - DIN 238 - Form A

Bohrenwerkzeughalter - DIN 238 - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Ød	B	ØD	L	M	
BT40	B12 45	○	12.065	B12	18.5	45	M16
	B16 45	○	15.733	B16	24	45	
	B18 45	○	17.431	B18	24	45	
CAT40	B12 45	○	12.065	B12	18.5	45	
	B16 45	○	15.733	B16	24	45	
	B18 45	○	17.431	B18	24	45	
IT40	B12 45	○	12.065	B12	18.5	45	
	B16 45	○	15.733	B16	24	45	
	B18 45	○	17.431	B18	24	45	
BT50	B12 45	○	12.065	B12	18.5	45	M24
	B16 45	○	15.733	B16	24	45	
	B18 45	○	17.431	B18	24	45	
CAT50	B12 45	○	12.065	B12	18.5	45	
	B16 45	○	15.733	B16	24	45	
	B18 45	○	17.431	B18	24	45	
IT50	B12 45	○	12.065	B12	18.5	45	
	B16 45	○	15.733	B16	24	45	
	B18 45	○	17.431	B18	24	45	

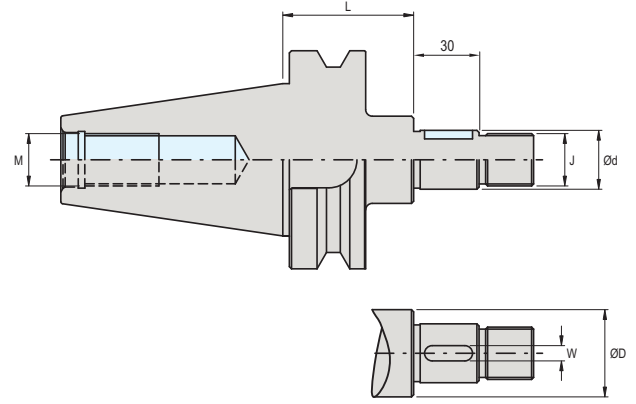
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : BT40 B12 45

● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

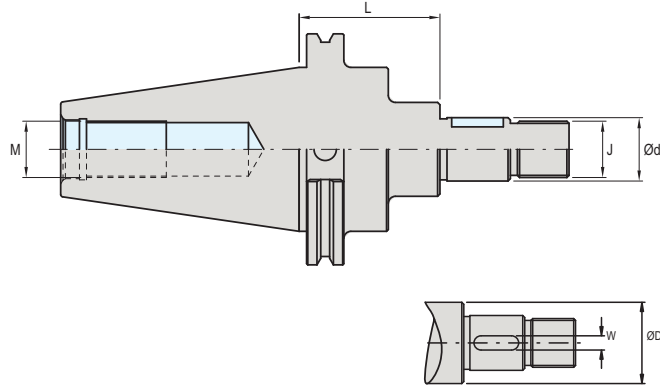




Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Ød	ØD	L	J	W	M	
BT40	SCA16 75	○	16	26	75	M14x1.5	4	M16
	SCA16 105	○	16	26	105	M14x1.5	4	
	SCA22 75	○	22	34	75	M20x1.5	6	
	SCA22 120	○	22	34	120	M20x1.5	6	
	SCA27 75	○	27	40	75	M24x2	7	
	SCA27 135	○	27	40	135	M24x2	7	
BT50	SCA32 90	○	32	46	90	M30x2	8	M24
	SCA16 75	○	16	26	75	M14x1.5	4	
	SCA16 120	○	16	26	120	M14x1.5	4	
	SCA22 75	○	22	34	75	M20x1.5	6	
	SCA22 135	○	22	34	135	M20x1.5	6	
	SCA27 75	○	27	40	75	M24x2	7	
	SCA27 135	○	27	40	135	M24x2	7	
	SCA32 90	○	32	46	90	M30x2	8	
	SCA32 135	○	32	46	135	M30x2	8	
	SCA40 90	○	40	55	90	M36x2	10	
SCA40 135	○	40	55	135	M36x2	10		



**Kanal Freze Tutucuları / (A.N.S.I) CAT - Form A**  
 Toolholder - Disc Mill Holders / (A.N.S.I) CAT - Form A  
 Werkzeughalter für Scheibenfräsen / (A.N.S.I) CAT - Form A



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		Ød	ØD	L	J	W	M	
CAT40	SCA16 75	○	16	26	75	M14x1.5	4	M16
	SCA16 105	○	16	26	105	M14x1.5	4	
	SCA22 75	○	22	34	75	M20x1.5	6	
	SCA22 120	○	22	34	120	M20x1.5	6	
	SCA27 75	○	27	40	75	M24x2	7	
	SCA27 135	○	27	40	135	M24x2	7	
	SCA32 90	○	32	46	90	M30x2	8	
CAT50	SCA16 75	○	16	26	75	M14x1.5	4	M24
	SCA16 120	○	16	26	120	M14x1.5	4	
	SCA22 75	○	22	34	75	M20x1.5	6	
	SCA22 135	○	22	34	135	M20x1.5	6	
	SCA27 75	○	27	40	75	M24x2	7	
	SCA27 135	○	27	40	135	M24x2	7	
	SCA32 90	○	32	46	90	M30x2	8	
	SCA32 135	○	32	46	135	M30x2	8	
	SCA40 90	○	40	55	90	M36x2	10	
	SCA40 135	○	40	55	135	M36x2	10	



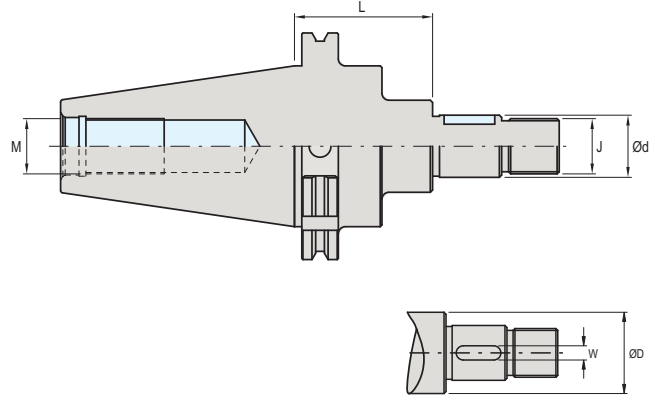
● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : CAT40 SCA27 75



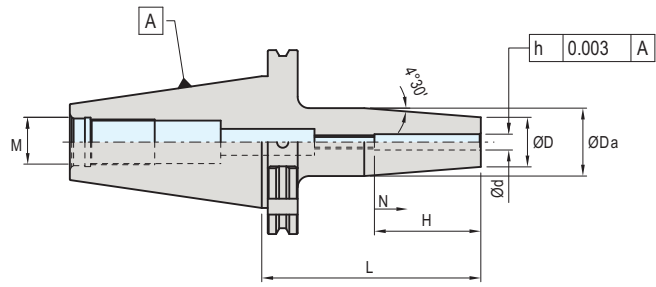


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen						
		ød	ØD	L	J	W	M	
IT40	SCA16 75	○	16	26	75	M14x1.5	4	M16
	SCA16 105	○	16	26	105	M14x1.5	4	
	SCA22 75	○	22	34	75	M20x1.5	6	
	SCA22 120	○	22	34	120	M20x1.5	6	
	SCA27 75	○	27	40	75	M24x2	7	
	SCA27 135	○	27	40	135	M24x2	7	
	SCA32 90	○	32	46	90	M30x2	8	
	IT50	SCA16 75	○	16	26	75	M14x1.5	
SCA16 120		○	16	26	120	M14x1.5	4	
SCA22 75		○	22	34	75	M20x1.5	6	
SCA22 135		○	22	34	135	M20x1.5	6	
SCA27 75		○	27	40	75	M24x2	7	
SCA27 135		○	27	40	135	M24x2	7	
SCA32 90		○	32	46	90	M30x2	8	
SCA32 135		○	32	46	135	M30x2	8	
SCA40 90		○	40	55	90	M36x2	10	
SCA40 135		○	40	55	135	M36x2	10	

## Isıtmalı Tutucu - DIN 69871 - Form AD

Shrink Chuck Holder - DIN 69871 - Form AD

Schrumpfspannfutter - DIN 69871 - Form AD

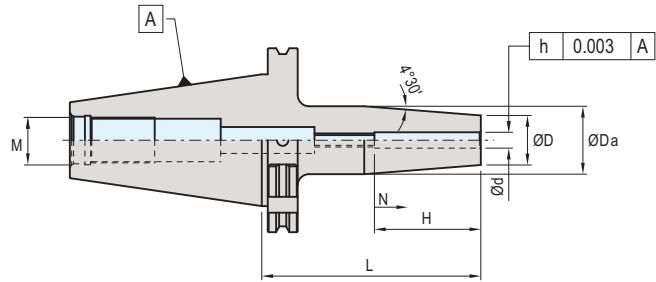


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
IT40	SGT06 80	○	6	21	27	36	80	10	M16
	SGT08 80	○	8	21	27	36			
	SGT10 80	○	10	24	32	42			
	SGT12 80	○	12	24	32	47			
	SGT14 80	○	14	27	34	47			
	SGT16 80	○	16	27	34	50			
	SGT18 80	○	18	33	42	50			
	SGT20 80	○	20	33	42	52			
	SGT25 80	○	25	44	53	58			

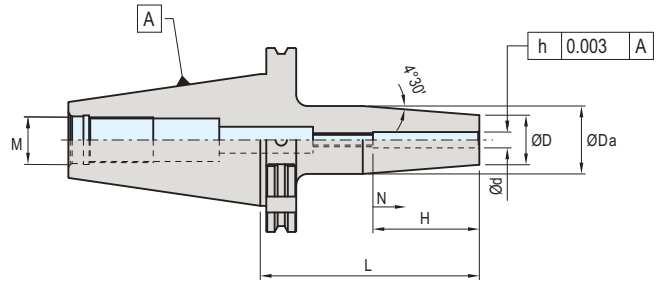
## Isıtmalı Tutucu - DIN 69871 - Form AD-B

Shrink Chuck Holder- DIN 69871 - Form AD-B

Schrumpfspannfutter- DIN 69871 - Form AD-B

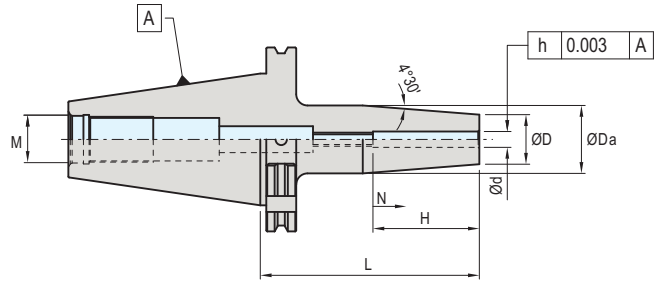


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
IT40	SGT06 80 B	○	6	21	27	36	80	10	M16
	SGT08 80 B	○	8	21	27	36			
	SGT10 80 B	○	10	24	32	42			
	SGT12 80 B	○	12	24	32	47			
	SGT14 80 B	○	14	27	34	47			
	SGT16 80 B	○	16	27	34	50			
	SGT18 80 B	○	18	33	42	50			
	SGT20 80 B	○	20	33	42	52			
	SGT25 80 B	○	25	44	53	58			



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
IT50	SGT06 80	○	6	21	27	36	80	10	M24
	SGT08 80	○	8	21	27	36			
	SGT10 80	○	10	24	32	42			
	SGT12 80	○	12	24	32	47			
	SGT14 80	○	14	27	34	47			
	SGT16 80	○	16	27	34	50			
	SGT18 80	○	18	33	42	50			
	SGT20 80	○	20	33	42	52			
	SGT25 80	○	25	44	53	58			

**Isıtmalı Tutucu - DIN 69871 - Form AD-B**  
 Shrink Chuck Holder - DIN 69871 - Form AD-B  
 Schrumpfspannfutter - DIN 69871 - Form AD-B

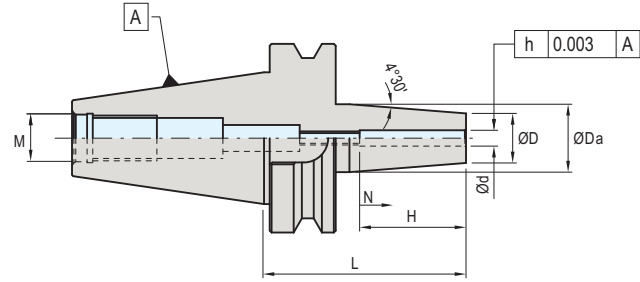


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
IT50	SGT06 80 B	○	6	21	27	36	80	10	M24
	SGT08 80 B	○	8	21	27	36			
	SGT10 80 B	○	10	24	32	42			
	SGT12 80 B	○	12	24	32	47			
	SGT14 80 B	○	14	27	34	47			
	SGT16 80 B	○	16	27	34	50			
	SGT18 80 B	○	18	33	42	50			
	SGT20 80 B	○	20	33	42	52			
	SGT25 80 B	○	25	44	53	58			

## İstmalı Tutucu- BT MAS - Form AD

Shrink Chuck Holder - BT MAS - Form AD

Schrumpfspannfutter - BT MAS - Form AD

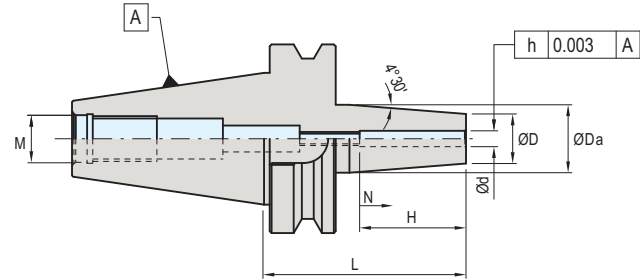


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
BT40	SGT06 80	○	6	21	27	36	80	10	M16
	SGT08 80	○	8	21	27	36			
	SGT10 80	○	10	24	32	42			
	SGT12 80	○	12	24	32	47			
	SGT14 80	○	14	27	34	47			
	SGT16 80	○	16	27	34	50			
	SGT18 80	○	18	33	42	50			
	SGT20 80	○	20	33	42	52			
	SGT25 80	○	25	44	53	58			

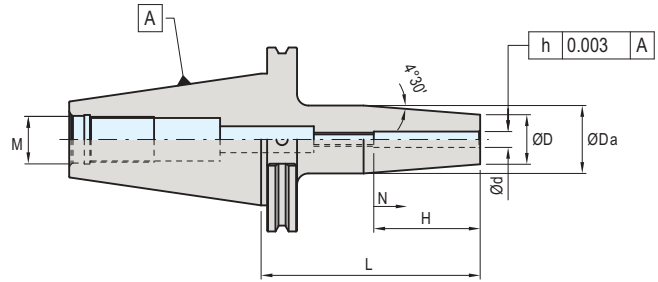
## İstmalı Tutucu - BT MAS - Form AD

Shrink Chuck Holder - BT MAS - Form AD

Schrumpfspannfutter - BT MAS - Form AD

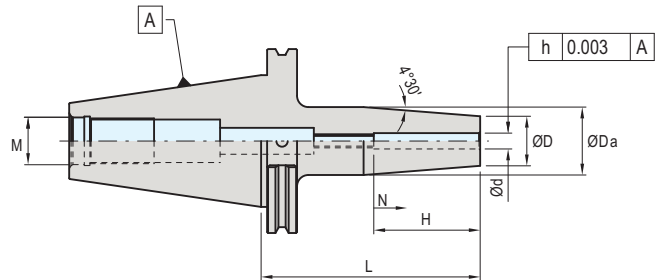


Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
BT50	SGT06 80 B	○	6	21	27	36	80	10	M24
	SGT08 80 B	○	8	21	27	36			
	SGT10 80 B	○	10	24	32	42			
	SGT12 80 B	○	12	24	32	47			
	SGT14 80 B	○	14	27	34	47			
	SGT16 80 B	○	16	27	34	50			
	SGT18 80 B	○	18	33	42	50			
	SGT20 80 B	○	20	33	42	52			
	SGT25 80 B	○	25	44	53	58			



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
CAT40	SGT06 80	○	6	21	27	36	80	10	M16
	SGT08 80	○	8	21	27	36			
	SGT10 80	○	10	24	32	42			
	SGT12 80	○	12	24	32	47			
	SGT14 80	○	14	27	34	47			
	SGT16 80	○	16	27	34	50			
	SGT18 80	○	18	33	42	50			
	SGT20 80	○	20	33	42	52			
	SGT25 80	○	25	44	53	58			

**Isıtmalı Tutucu - (A.N.S.I) CAT - Form AD**  
 Shrink Chuck Holder - (A.N.S.I) CAT - Form AD  
 Schrumpfspannfutter - (A.N.S.I) CAT - Form AD



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		Ød	ØD	ØDa	H	L	N	M	
CAT50	SGT06 80 B	○	6	21	27	36	80	10	M24
	SGT08 80 B	○	8	21	27	36			
	SGT10 80 B	○	10	24	32	42			
	SGT12 80 B	○	12	24	32	47			
	SGT14 80 B	○	14	27	34	47			
	SGT16 80 B	○	16	27	34	50			
	SGT18 80 B	○	18	33	42	50			
	SGT20 80 B	○	20	33	42	52			
	SGT25 80 B	○	25	44	53	58			

## Takım bağlama ve sökme fikstürü (Aparat)

Toolholder Tightening Fixture

Werkzeughalter Spannvorrichtung



### ÖZELLİĞİ

1. Kesici takımların ve çektirme vidalarının kolayca sökülüp takılabilmesine olanak verir.
2. Takım sökme ve takma fikstürünü 5 değişik pozisyonda ayarlayıp kullanabilirsiniz.
3. Maximum kullanım kolaylığına olanak verecek şekilde dizayn edilmiştir.
4. İş masasına veya herhangi bir takım masasına kolayca monte edilebilecek şekilde dizayn edilmiştir.
5. Takım tutucu kısmı sertleştirilmiş ve hassas işlenmiştir.

### FUNCTIONS

1. It provides the possibility of easily mounting and dismounting of cutting tools.
2. You can use tool dismounting and mounting fixture by adjusting 5 different position.
3. It has been designed to get maximum usage friendly.
4. It has been designed to be assembled on any tool table or worktable.
5. The side of toolholder has been hardened and processed delicately.

### FUNKTIONEN

1. Es bietet die Möglichkeit, sehr einfach Montage und Demontage der Schneidwerkzeuge
2. Sie können mit Werkzeug Demontage und Montage Befestigung durch Verstellen 5 verschiedene Position.
3. Es wurde entwickelt, um maximale Nutzung freundlich.
4. Es wurde entwickelt, um auf jedem Werkzeug-Tabelle oder Arbeitstisch montiert werden.
5. Die Seite der Werkzeughalter wurde gehärtet und fein verarbeitet.

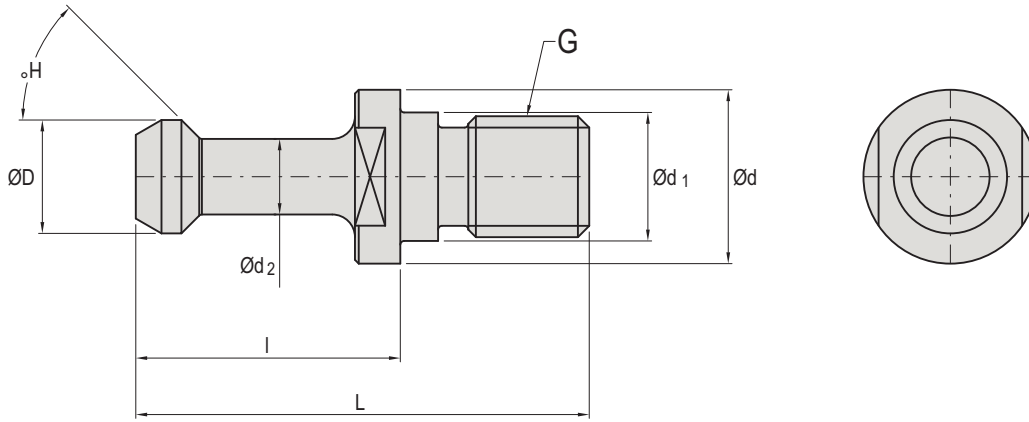


Sipariş Örneği / Ordering Example / Bestellbeispiel :

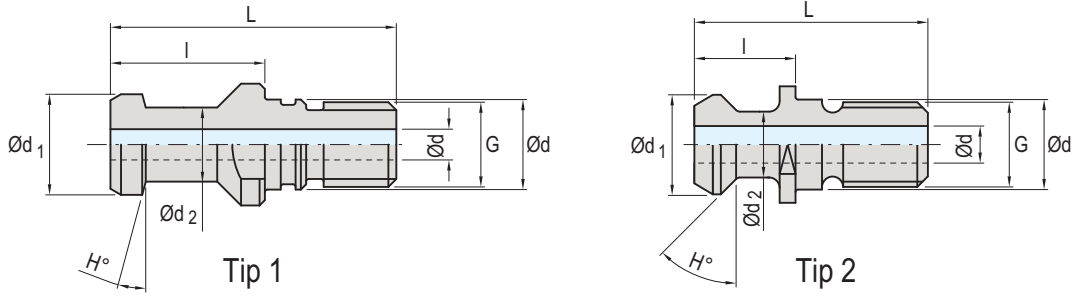
ISO40 TTF 180

ISO50 TTF 180





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen							
		ØD	Ød	Ød <sub>1</sub>	Ød <sub>2</sub>	L	I	G	H°
PS 1T	○	15	23	17	10	60	35	M16	45°
PS 2T	○	15	23	17	10	60	35	M16	60°
PS 3T	○	19	31	21	14	70	40	M20	45°
PS 4T	○	19	31	21	14	70	40	M20	60°
PS 5T	○	23	38	25	17	85	45	M24	45°
PS 6T	○	23	38	25	17	85	45	M24	60°
PS 8T	○	15	23	17	10	108	35	M16	45°
PS 10T	○	15	23	17	10	108	35	M16	60°
PS 15T	○	23	38	25	17	157	45	M24	45°
PS 61T	○	23	38	25	17	157	45	M24	60°
PS 0T	○	23	38	25	17	85	45	M24	90°
PS 02T	○	19	31	21	14	70	40	M20	90°
PS 05T	○	19	31	21	14	125	40	M20	90°
PS 08T	○	15	23	17	10	60	35	M16	90°
PS PT	○	24	36	25	18	71	31	M24	90°
PS P5T	○	15	23	17	10	50	25	M16	90°
PS G4T	○	29	37	25	21	65.2	25.2	M24	45°
PS G5T	○	18.8	22	17	12.4	44.1	19.1	M16	45°
PS S2T	○	25	39	25	18	95	55	M24	60°
PS B1T	○	22	38	25	16	112	72	M24	60°
PS H1T	○	22	38	25	17	111	73	M24	45°
PS 80T 50	○	28	38	25	21	74	34	M24	75°
PS 80T 40	○	19	23	17	14	54	29	M16	75°
PS CT	○	21	39	25	15	105.1	63.1	M24	45°
PS 30T	○	15	23	17	11	60	35	M16	60°
PS 302T	○	19	23	17	14	54	26	M16	75°
PS Q4T	○	15	23	17	10	62.85	37.85	M16	45°
PS Q5T	○	15	23	17	10	60.3	35.3	M16	45°
PS Q6T	○	15	23	17	10	52.5	27.5	M16	45°
PS 309T	○	19	23	17	14	54	26	M16	75°
PS 512T	○	28	36	25	21	74	34	M24	75°
PS A1T	○	19	23	17	14	54	26	M16	75°
PS A3T	○	28	36	25	21	74	34	M24	75°
PS A4T	○	18.95	22.5	17	12.95	44.5	16.4	M16	45°
PS A6T	○	29.1	37	25	19.6	65.5	25.55	M24	45°



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen									Tutucu Tipi Holder Type
		Ød <sub>1</sub>	Ød <sub>2</sub>	Ød <sub>3</sub>	L	l	G	Ød	H°	Fig	
PS 212 CAT	○	18.95	17	12.9	38	16.2	M16	7	15°	2	(A.N.S.I) CAT
PS 312 CAT	○	24.05	21	16.2	48	20.8	M20	9.5	15°	2	
PS 412 CAT	○	29.10	25	19.05	59	25.4	M24	11.5	15°	2	

Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen									Tutucu Tipi Holder Type
		Ød <sub>1</sub>	Ød <sub>2</sub>	Ød <sub>3</sub>	L	l	G	Ød	H°	Fig	
PS 213 IT	○	19	17		54	26	M16	7	15°	1	DIN 69871
PS 313 IT	○	23	21		65	30	M20	9.5	15°	1	
PS 413 IT	○	28	25		74	34	M24	11.5	15°	1	

Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen									Tutucu Tipi Holder Type
		Ød <sub>1</sub>	Ød <sub>2</sub>	Ød <sub>3</sub>	L	l	G	Ød	H°	Fig	
PS 214 IT	○	19	17		54	26	M16	7	45°	2	DIN 69871 AD-B
PS 314 IT	○	23	21		65	30	M20	9.5	45°	2	
PS 414 IT	○	28	25		74	34	M24	11.5	45°	2	



Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : PS 213 IT

● Stoktan / Stock / Verfügbar ab Lager

⌚ 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager





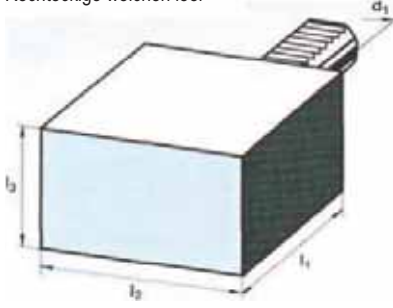
# VDI Takım Tutucu DIN 69880

VDI Holder DIN 69880

VDI Werkzeughalter DIN 69880

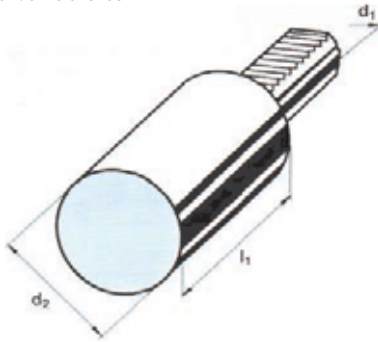


**Kater tutucu özel takım yapma amaçlı**  
Rectangular soft blank  
Rechteckige weichen leer



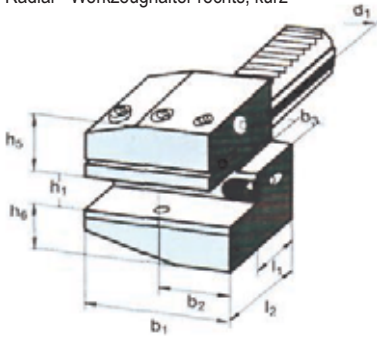
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d1	d2	d3	h1	h5	h6	l1	l2	l3
VDI 39 70 004	A1 - 30 x 85	○	30	-	-	-	-	-	85	130	76
70 006	A1 - 40 x 100	○	40	-	-	-	-	-	100	151	96
70 008	A1 - 50 x 125	○	50	-	-	-	-	-	125	160	120
70 010	A1 - 60 x 140	○	60	-	-	-	-	-	140	170	135

**Kater tutucu özel takım yapma amaçlı**  
Round soft blank  
Runde weiche leer



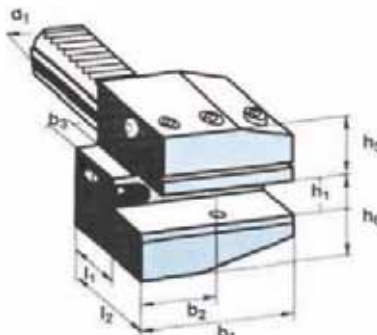
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d1	d2						l1		
VDI 39 70 104	A2 - 30 x 100	○	30	68	-	-	-	-	-	100	-	-
70 106	A2 - 30 x 240	○	30	68	-	-	-	-	-	240	-	-
70 108	A2 - 40 x 120	○	40	83	-	-	-	-	-	120	-	-
70 110	A2 - 40 x 320	○	40	83	-	-	-	-	-	320	-	-
70 112	A2 - 50 x 135	○	50	98	-	-	-	-	-	135	-	-
70 114	A2 - 50 x 400	○	50	98	-	-	-	-	-	400	-	-
70 116	A2 - 60 x 140	○	60	125	-	-	-	-	-	140	-	-
70 118	A2 - 60 x 425	○	60	125	-	-	-	-	-	425	-	-

**Radyal kater tutucu sağ tip , kısa**  
Radial - Toolholder right, short  
Radial - Werkzeughalter rechts, kurz



Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d1	b1	b2	b3	h1	h5	h6	l1	l2	l3
VDI 39 72 006	B1 - 30 x 20 x 40	●	30	70	35	10	20	28	38	22	40	-
72 008	B1 - 30 x 20 x 60	●	30	70	35	10	20	28	38	42	60	-
72 010	B1 - 40 x 25 x 44	●	40	85	42.5	12.5	25	32.5	48	22	44	-
72 012	B1 - 50 x 32 x 55	●	50	100	50	16	32	35	60	30	55	-
72 014	B1 - 60 x 40 x 60	○	60	125	62.5	16	32	35	62.5	30	60	-

**Radyal kater tutucu sol tip, kısa**  
Radial - Toolholder left, short  
Radial - Werkzeughalter links, kurz



Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d1	b1	b2	b3	h1	h5	h6	l1	l2	l3
VDI 39 72 056	B2 - 30 x 20 x 40	●	30	70	35	10	20	28	38	22	40	-
72 058	B2 - 30 x 20 x 60	●	30	70	35	10	20	28	38	42	60	-
72 060	B2 - 40 x 25 x 44	●	40	85	42.5	12.5	25	32.5	48	22	44	-
72 062	B2 - 50 x 32 x 55	●	50	100	50	16	32	35	60	30	55	-
72 064	B2 - 60 x 40 x 60	○	60	125	62.5	16	32	35	62.5	30	60	-

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : VDI 39 70 004 ( A1 - 30 x 85 )

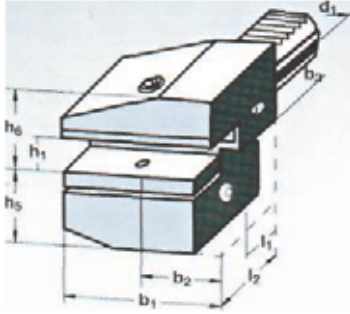
● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager

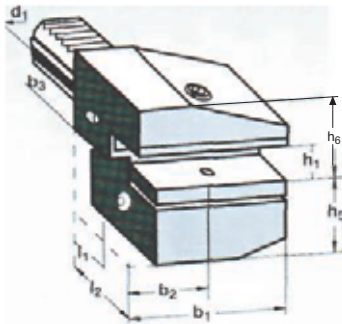


**Radyal kater tutucu ters sağ tip, kısa**  
*Radial - Toolholder inverted right, short*  
*Radial - Werkzeughalter invertiert rechts, kurz*



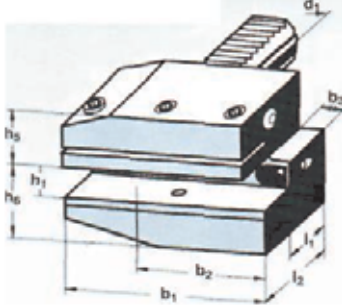
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 72 106	B3 - 30 x 20 x 40	●	30	70	35	10	20	28	38	22	40	-
72 108	B3 - 30 x 20 x 60	●	30	70	35	10	20	28	38	42	60	-
72 110	B3 - 40 x 25 x 44	●	40	85	42.5	12.5	25	32.5	48	22	44	-
72 112	B3 - 50 x 32 x 55	●	50	100	50	16	32	35	60	30	55	-
72 114	B3 - 60 x 40 x 60	○	60	125	62.5	16	32	35	62.5	30	60	-

**Radyal kater tutucu ters sol tip , kısa**  
*Radial - Toolholder inverted left, short*  
*Radial - Werkzeughalter invertiert links, kurz*



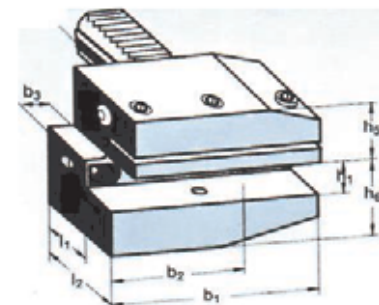
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 72 156	B4 - 30 x 20 x 40	○	30	70	35	10	20	28	38	22	40	-
72 158	B4 - 30 x 20 x 60	○	30	70	35	10	20	28	38	42	60	-
72 160	B4 - 40 x 25 x 44	○	40	85	42.5	12.5	25	32.5	48	22	44	-
72 162	B4 - 50 x 32 x 55	○	50	100	50	16	32	35	60	30	55	-
72 164	B4 - 60 x 40 x 60	○	60	125	62.5	16	32	35	62.5	30	60	-

**Radyal kater tutucu sağ tip, uzun**  
*Radial - Toolholder right, long*  
*Radial - Werkzeughalter rechts, lang*



Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 72 206	B5 - 30 x 20 x 40	○	30	100	65	10	20	28	38	22	40	-
72 208	B5 - 30 x 20 x 60	○	30	100	65	10	20	28	38	42	60	-
72 210	B5 - 40 x 25 x 44	○	40	118	75.5	12.5	25	32.5	48	22	44	-
72 212	B5 - 50 x 32 x 55	○	50	130	80	16	32	35	60	30	55	-
72 214	B5 - 60 x 40 x 60	○	60	145	82.5	16	32	35	62.5	30	60	-

**Radyal kater tutucu sol tip , uzun**  
*Radial - Toolholder left, long*  
*Radial - Werkzeughalter links, lang*



Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 72 256	B6 - 30 x 20 x 40	○	30	100	65	10	20	28	38	22	40	-
72 258	B6 - 30 x 20 x 60	○	30	100	65	10	20	28	38	42	60	-
72 260	B6 - 40 x 25 x 44	○	40	118	75.5	12.5	25	32.5	48	22	44	-
72 262	B6 - 50 x 32 x 55	○	50	130	80	16	32	35	60	30	55	-
72 264	B6 - 60 x 40 x 60	○	60	145	82.5	16	32	35	62.5	30	60	-

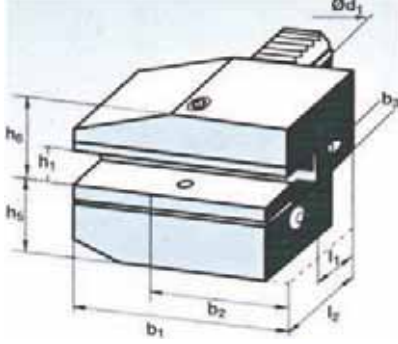
# VDI Takım Tutucu DIN 69880

VDI Holder DIN 69880

VDI Werkzeughalter DIN 69880

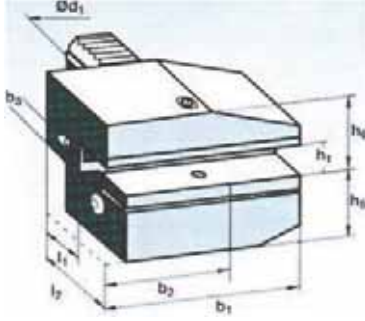


**Radyal kater tutucu ters sağ tip, uzun**  
 Radial - Toolholder inverted right, long  
 Radial - Werkzeughalter invertiert rechts, lang



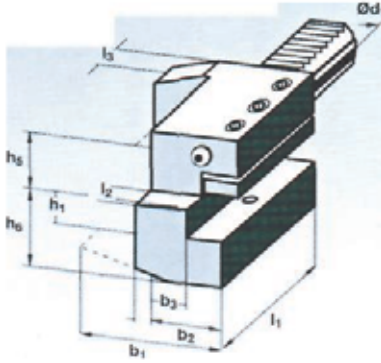
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>
VDI 39 72 306	B7 - 30 x 20 x 40	○	30	100	65	10	20	28	38	22	40
72 308	B7 - 30 x 20 x 60	○	30	100	65	10	20	28	38	42	60
72 310	B7 - 40 x 25 x 44	○	40	118	75.5	12.5	25	32.5	48	22	44
72 312	B7 - 50 x 32 x 55	○	50	130	80	16	32	35	60	30	55
72 314	B7 - 60 x 40 x 60	○	60	145	82.5	16	32	35	62.5	30	60

**Radyal kater tutucu ters sol tip, uzun**  
 Radial - Toolholder inverted left, long  
 Radial - Werkzeughalter invertiert linke, lange



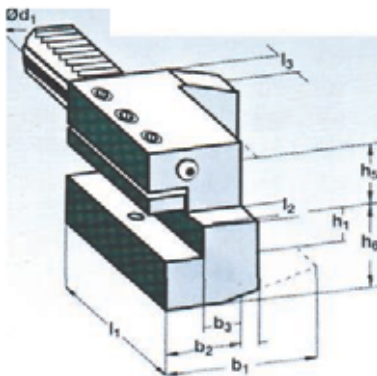
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>
VDI 39 72 356	B8 - 30 x 20 x 40	○	30	100	65	10	20	28	38	22	40
72 358	B8 - 30 x 20 x 60	○	30	100	65	10	20	28	38	42	60
72 360	B8 - 40 x 25 x 44	○	40	118	75.5	12.5	25	32.5	48	22	44
72 362	B8 - 50 x 32 x 55	○	50	130	80	16	32	35	60	30	55
72 364	B8 - 60 x 40 x 60	○	60	145	82.5	16	32	35	62.5	30	60

**Aksiyal kater tutucu ters sağ tip**  
 Axial - Toolholder inverted right  
 Axial - Werkzeughalter invertiert rechts



Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 74 006	C1 - 30 x 20 x 70	○	30	70	35	17	20	28	38	70	10	30
74 008	C1 - 40 x 25 x 85	○	40	85	42.5	20.5	25	32.5	48	85	12.5	30
74 010	C1 - 50 x 32 x 100	○	50	100	50	25.5	32	35	60	100	16	40
74 012	C1 - 60 x 40 x 125	○	60	125	62.5	32.5	32	42.5	62.5	125	16	40

**Aksiyal kater tutucu ters sol tip**  
 Axial - Toolholder inverted left  
 Axial - Werkzeughalter links invertiert



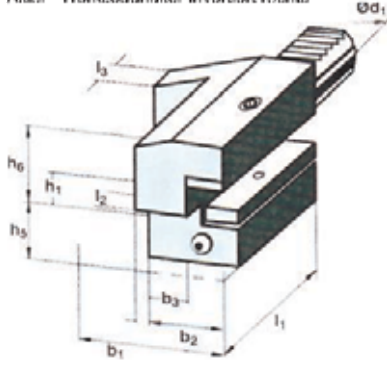
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 74 054	C2 - 30 x 20 x 70	○	30	70	35	17	20	28	38	70	10	30
74 056	C2 - 40 x 25 x 85	○	40	85	42.5	20.5	25	32.5	48	85	12.5	30
74 058	C2 - 50 x 32 x 100	○	50	100	50	25.5	32	35	60	100	16	40
74 060	C2 - 60 x 40 x 125	○	60	125	62.5	32.5	32	42.5	62.5	125	16	40

● Stoktan / Stock / Verfügbar ab Lager

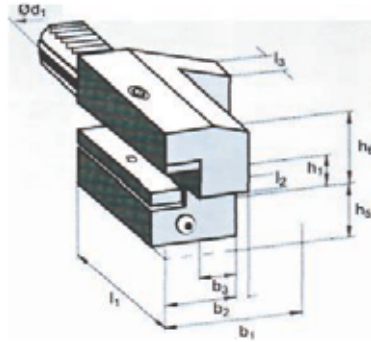
○ 2 Hafta / in two weeks / in zwei Wochen

○ Stokta yok / Non stock item / Nicht auf Lager 225

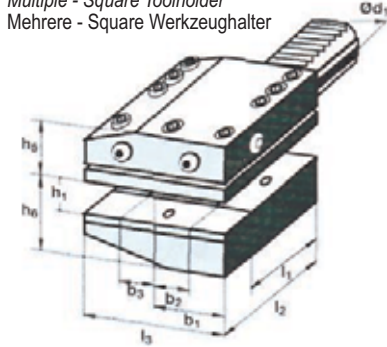


**Aksiyal kater tutucu ters sağ tip**
*Axial - Toolholder inverted right*
*Axial - Werkzeughalter invertiert rechts*


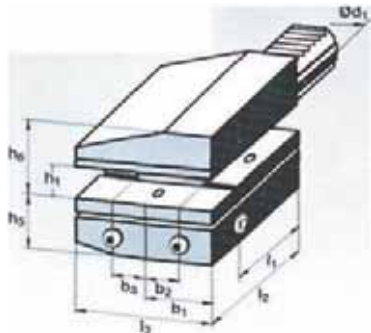
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 74 106	C3 - 30 x 20 x 70	○	30	70	35	17	20	28	38	70	10	30
74 108	C3 - 40 x 25 x 85	○	40	85	42.5	20.5	25	32.5	48	85	12.5	30
74 110	C3 - 50 x 32 x 100	○	50	100	50	25.5	32	35	60	100	16	40
74 112	C3 - 60 x 40 x 125	○	60	125	62.5	32.5	32	42.5	62.5	125	16	40

**Aksiyal kater tutucu ters sol tip**
*Axial - Toolholder inverted left*
*Axial - Werkzeughalter links invertiert*


Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 74 156	C4 - 30 x 20 x 70	○	30	70	35	17	20	28	38	70	10	30
74 158	C4 - 40 x 25 x 85	○	40	85	42.5	20.5	25	32.5	48	85	12.5	30
74 160	C4 - 50 x 32 x 100	○	50	100	50	25.5	32	35	60	100	16	40
74 162	C4 - 60 x 40 x 125	○	60	125	62.5	32.5	32	42.5	62.5	125	16	40

**Çok yönlü kater tutucu**
*Multiple - Square Toolholder*
*Mehrere - Square Werkzeughalter*


Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 75 002	D1 - 30 x 20	○	30	35	17	23	20	28	38	42	60	76
75 004	D1 - 40 x 25	○	40	42.5	20.5	25.5	25	32.5	48	50	72	90
75 006	D1 - 50 x 32	○	50	50	25.5	30.5	32	35	60	60	85	105
75 008	D1 - 60 x 40	○	60	57.5	32.5	32.5	32	42.5	62.5	85	110	125

**Çok yönlü kater tutucu ters**
*Multiple - Square Toolholder, inverted*
*Mehrere - Square Werkzeughalter, invertiert*


Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	h <sub>1</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
VDI 39 75 102	D2 - 30 x 20	○	30	35	17	23	20	28	38	42	60	76
75 104	D2 - 40 x 25	○	40	42.5	20.5	25.5	25	32.5	48	50	72	90
75 106	D2 - 50 x 32	○	50	50	25.5	30.5	32	35	60	60	85	105
75 108	D2 - 60 x 40	○	60	57.5	32.5	32.5	32	42.5	62.5	85	110	125

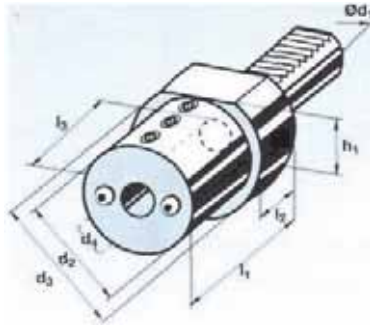
# VDI Takım Tutucu DIN 69880

VDI Holder DIN 69880

VDI Werkzeughalter DIN 69880

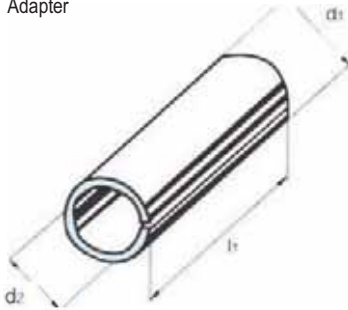


Delik kater tutucusu  
Boring bar holder  
Bohrstangenhalter



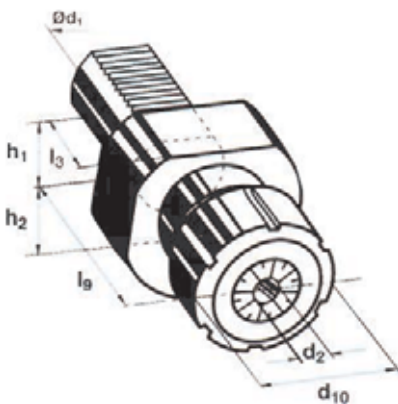
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4h7</sub>	h <sub>1</sub>	l <sub>1</sub>	h <sub>2</sub>	l <sub>3</sub>
VDI 39 76 114	E2 - 30 x 8	●	30	42	68	8	28	60	22	51
76 116	E2 - 30 x 10	●	30	45	68	10	28	60	22	51
76 118	E2 - 30 x 12	●	30	48	68	12	28	60	22	51
76 120	E2 - 30 x 16	●	30	50	68	16	28	60	22	51
76 122	E2 - 30 x 20	●	30	55	68	20	28	60	22	51
76 124	E2 - 30 x 25	●	30	60	68	25	28	60	22	51
76 126	E2 - 30 x 32	●	30	68	68	32	28	60	22	51
76 127	E2 - 40 x 10	●	40	68	68	10	32.5	75	22	61
76 128	E2 - 40 x 12	●	40	45	68	12	32.5	75	22	61
76 130	E2 - 40 x 16	●	40	50	83	16	32.5	75	22	61
76 132	E2 - 40 x 20	●	40	55	83	20	32.5	75	22	61
76 134	E2 - 40 x 25	●	40	60	83	25	32.5	75	22	61
76 136	E2 - 40 x 32	●	40	68	83	32	32.5	75	22	61
76 138	E2 - 40 x 40	●	40	83	83	40	32.5	75	22	61
76 140	E2 - 50 x 16	●	50	50	83	16	35	90	30	76
76 142	E2 - 50 x 20	●	50	55	98	20	35	90	30	76
76 144	E2 - 50 x 25	●	50	60	98	25	35	90	30	76
76 146	E2 - 50 x 32	●	50	68	98	32	35	90	30	76
76 148	E2 - 50 x 40	●	50	83	98	40	35	90	30	76
76 150	E2 - 50 x 50	●	50	90	98	50	35	100	30	86
76 152	E2 - 60 x 16	○	60	50	98	16	42.5	90	30	76
76 154	E2 - 60 x 20	○	60	55	123	20	42.5	90	30	76
76 156	E2 - 60 x 25	○	60	60	123	25	42.5	90	30	76
76 158	E2 - 60 x 32	○	60	68	123	32	42.5	90	30	76
76 160	E2 - 60 x 40	○	60	83	123	40	42.5	90	30	76
76 162	E2 - 60 x 50	○	60	90	123	50	42.5	100	30	86
76 164	E2 - 60 x 63	○	60	105	123	63	42.5	120	30	100

Adaptör  
Adaptor  
Adapter



Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>				
VDI 39 76 352	E2 - 2 x 25	○	25	16	-	60				
76 354	E2 - 2 x 32	○	32	25	-	70				
76 356	E2 - 2 x 40	○	40	32	-	80				
76 358	E2 - 2 x 50	○	50	40	-	90				

Pens başlığı  
Collet chuck holder  
Spannzangenhalter



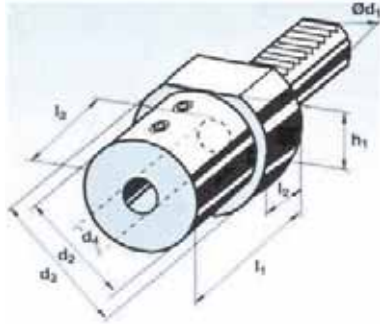
Tutucu Kod No: Code No: Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>6</sub>	d <sub>10</sub> max.	h <sub>1</sub>	h <sub>2</sub>	l <sub>3</sub>	l <sub>9</sub> max.
VDI 20 ER16 CNC	E3 - 20 x 1 - 13	○	20	1 - 13	50	28	23	23	18	57
VDI 20 ER25 CNC	E3 - 20 x 2 - 16	○	20	2 - 16	50	42	23	23	18	62
VDI 30 ER16 CNC	E3 - 30 x 1 - 13	●	30	1 - 13	68	28	28	30	22	57
VDI 30 ER25 CNC	E3 - 30 x 2 - 16	●	30	2 - 16	68	42	28	30	22	62
VDI 40 ER16 CNC	E3 - 40 x 1 - 13	●	40	1 - 13	83	28	32.5	-	22	75
VDI 40 ER25 CNC	E3 - 40 x 2 - 16	●	40	2 - 16	83	42	32.5	-	22	75
VDI 50 ER16 CNC	E3 - 50 x 1 - 13	●	50	1 - 13	98	28	35	-	25	80
VDI 50 ER25 CNC	E3 - 50 x 2 - 16	●	50	2 - 16	98	42	35	-	25	80
VDI 60 ER16 CNC	E3 - 60 x 1 - 13	○	60	1 - 13	123	28	42.5	-	25	90
VDI 60 ER25 CNC	E3 - 60 x 2 - 16	○	60	2 - 16	123	42	42.5	-	25	90

● Stoktan / Stock / Verfügbar ab Lager

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : VDI 39 76 114 ( E2 - 30 x 12 )  
● 2 Hafta / in two weeks / in zwei Wochen ○ Stokta yok / Non stock item / Nicht auf Lager

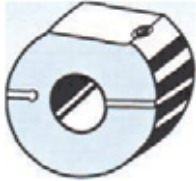


**Matkap tutucu**  
Drill holder  
Bohrerhalter



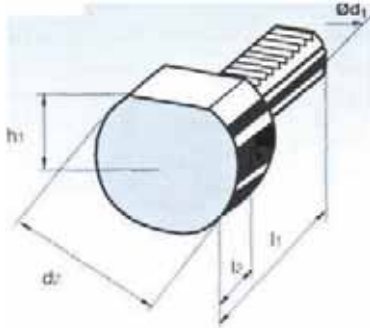
Tutucu Kod No: Code No Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4h7</sub>	h <sub>1</sub>	l <sub>1</sub>	h <sub>2</sub>	l <sub>3</sub>
VDI 39 76 006	E1 - 30 x 20	●	30	40	68	20	28	67	22	54
76 008	E1 - 30 x 25	●	30	45	68	25	28	71	22	59
76 010	E1 - 30 x 32	●	30	52	68	32	28	75	22	63
76 012	E1 - 40 x 20	●	40	40	83	20	32.5	67	22	54
76 014	E1 - 40 x 25	●	40	45	83	25	32.5	75	22	59
76 016	E1 - 40 x 32	●	40	52	83	32	32.5	75	22	63
76 018	E1 - 40 x 40	●	40	60	83	40	32.5	90	22	73
76 020	E1 - 50 x 20	●	50	40	98	20	35	67	30	54
76 022	E1 - 50 x 25	●	50	45	98	25	35	80	30	59
76 024	E1 - 50 x 32	●	50	52	98	32	35	80	30	63
76 026	E1 - 50 x 40	●	50	60	98	40	35	100	30	73
76 028	E1 - 50 x 50	●	50	70	98	50	35	100	30	83

**Bağlama ringi**  
Ring holder type  
Ringhalter Typ



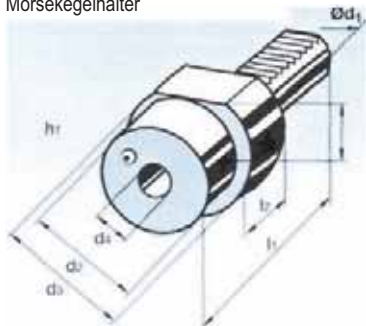
Tutucu Kod No: Code No Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4h7</sub>	h <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
RING 39 78 104	Z1 - 30	○	30	68			28	22		
78 106	Z1 - 40	○	40	83			32.5	22		
78 108	Z1 - 50	○	50	98			35	30		

**Metal kör tapa**  
Protective plug  
Schutzstopfen

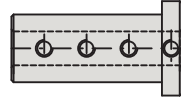
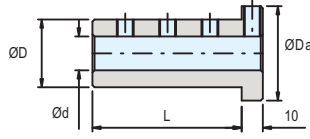


Tutucu Kod No: Code No Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4h7</sub>	h <sub>1</sub>	l <sub>1</sub>	h <sub>2</sub>	l <sub>3</sub>
TAPA 39 78 202	Z2 - 20	○	20	50			23	56	16	
78 204	Z2 - 30	○	30	68			28	71	16	
78 206	Z2 - 40	○	40	83			32.5	83	20	
78 208	Z2 - 50	○	50	98			35	98	20	
78 210	Z2 - 60	○	60	123			42.5	114	20	
78 212	Z2 - 80	○	80	158			55	144	20	

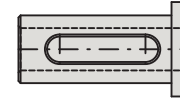
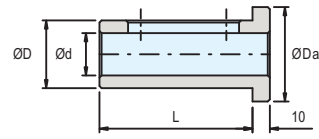
**Mors Konik Tutucu**  
Holder for mors taper shank  
Morsekegelhalter



Tutucu Kod No: Code No Bezeichnung No:	DIN 69880	Stok Stock Lager	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	MK	d <sub>4</sub>	h <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>
VDI 39 78 004	F - 30 - MK - D1	○	30	-	68	1	12.065	28	27	-
78 006	F - 30 - MK - D2	○	30	-	68	2	17.780	28	27	-
78 008	F - 40 - MK - D2	○	40	55	83	2	17.780	32.5	36	22
78 010	F - 40 - MK - D3	○	40	58	83	3	23.825	32.5	36	22
78 012	F - 40 - MK - D4	○	40	68	83	4	31.267	32.5	80	22
78 014	F - 50 - MK - D2	○	50	55	98	2	17.780	35	36	30
78 016	F - 50 - MK - D3	○	50	58	98	3	23.825	35	36	30
78 018	F - 50 - MK - D4	○	50	68	98	4	31.267	35	50	30



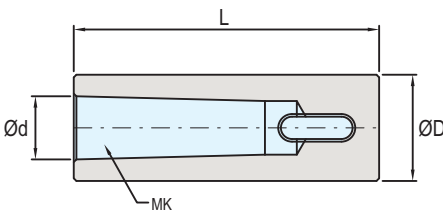
Tip 1



Tip 2

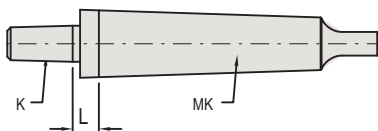
Kod Code Bezeichnung	DIN 69980	Stok Stock Lager	Ölçüler Dimensions / Abmessungen				
			ØD	Ød	ØDa	L	Tip
ADPT 39 76 202	E2 - 1 - 25 x 8	○	25	8	30	60	1
39 76 204	E2 - 1 - 25 x 10	○	25	10	30	60	1
39 76 206	E2 - 1 - 25 x 12	○	25	12	30	60	1
39 76 208	E2 - 1 - 32 x 8	●	32	8	40	70	1
39 76 210	E2 - 1 - 32 x 10	●	32	10	40	70	1
39 76 212	E2 - 1 - 32 x 12	●	32	12	40	70	1
39 76 214	E2 - 1 - 32 x 16	●	32	16	40	70	1
39 76 216	E2 - 1 - 32 x 20	●	32	20	40	70	2
39 76 218	E2 - 1 - 40 x 8	●	40	8	45	80	1
39 76 220	E2 - 1 - 40 x 10	●	40	10	45	80	1
39 76 222	E2 - 1 - 40 x 12	●	40	12	45	80	1
39 76 224	E2 - 1 - 40 x 16	●	40	16	45	80	1
39 76 226	E2 - 1 - 40 x 20	●	40	20	45	80	2
39 76 228	E2 - 1 - 40 x 25	●	40	25	45	80	2
39 76 230	E2 - 1 - 50 x 16	○	50	16	55	90	1
39 76 232	E2 - 1 - 50 x 20	○	50	20	55	90	2
39 76 234	E2 - 1 - 50 x 25	○	50	25	55	90	2
39 76 236	E2 - 1 - 50 x 32	○	50	32	55	90	2

**Mors Konik Adaptör**  
Adaptor Morse Taper  
Adapter Morsekegel



Kod Code Bezeichnung	DIN 69980	Stok Stock Lager	Ölçüler Dimensions / Abmessungen			
			ØDa	MK	Ød	L
ADPT 39 76 302	E2 - 3 - 32 x 2	○	32	2	17.780	90
39 76 304	E2 - 3 - 32 x 3	○	32	3	23.825	110
39 76 306	E2 - 3 - 40 x 2	○	40	2	17.780	90
39 76 308	E2 - 3 - 40 x 3	○	40	3	23.825	110
39 76 310	E2 - 3 - 50 x 2	○	50	2	17.780	90
39 76 312	E2 - 3 - 50 x 3	○	50	3	23.825	110
39 76 316	E2 - 3 - 50 x 4	○	50	4	31.267	135

**Mandren Tutucu**  
Drill Chuck Holder  
Bohrerwerkzeughalter



Kod Code Bezeichnung	DIN 69980	Stok Stock Lager	Ölçüler Dimensions / Abmessungen		
			MK	K	L
ADPT 51 40 254	MK1 x B10	○	1	B10	11.5
51 40 255	MK2 x B10	○	2	B10	13
51 40 258	MK1 x B12	○	1	B12	10.5
51 40 259	MK2 x B12	○	2	B12	12.5
51 40 262	MK1 x B16	○	1	B16	14
51 40 263	MK2 x B16	○	2	B16	15
51 40 264	MK3 x B16	○	3	B16	16
51 40 267	MK1 x B18	○	1	B18	12.5
51 40 268	MK2 x B18	○	2	B18	13
51 40 269	MK3 x B18	○	3	B18	15.5
51 40 270	MK4 x B18	○	4	B18	18.5

Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : ADPT 39 76 210 ( E12 - 1 - 32 x 10 )

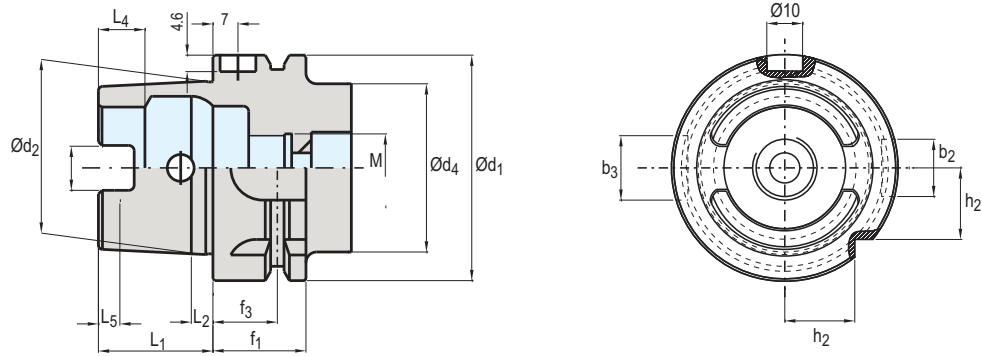
● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

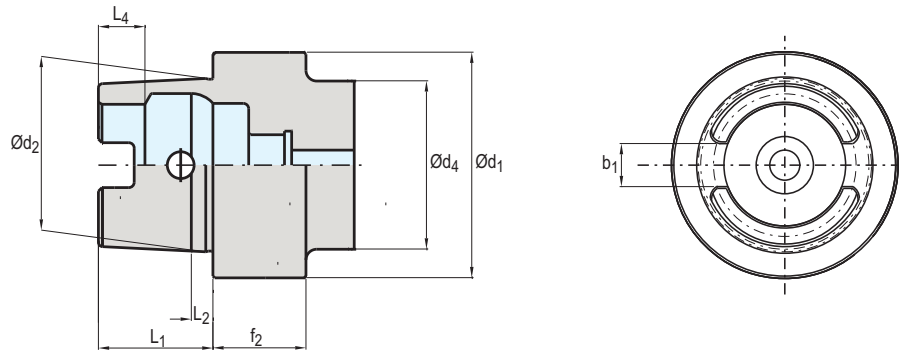
○ Stokta yok / Non stock item / Nicht auf Lager



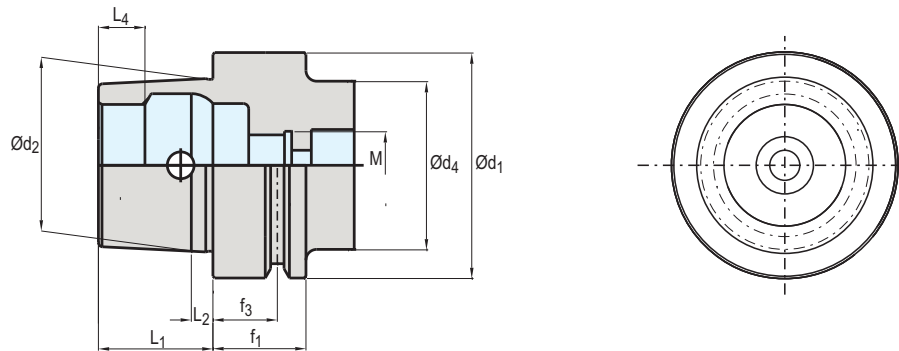




**DIN 69893 HSK Form-A**



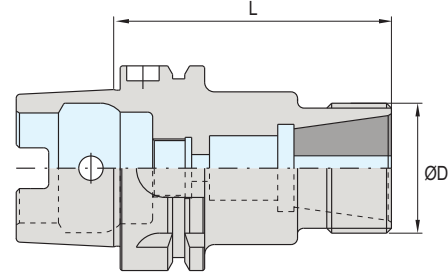
**DIN 69893 HSK Form-C**



**DIN 69893 HSK Form-E**

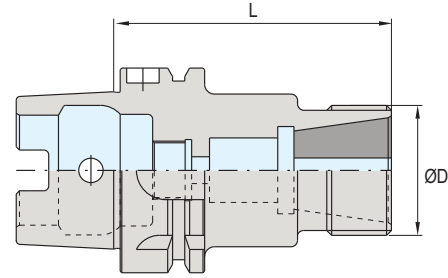
$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_4$	$L_1$	$L_2$	$L_4$	$L_5$	M	$f_1$	$f_2$	$f_3$	$b_1$	$b_2$	$b_3$	$h_2$
32	24	26	16	3.2	5.0	3.0	M10x1	20	19	16	7.05	7	9	9.5
40	30	34	20	4.0	6.0	3.5	M12x1	20	23	16	8.05	9	11	12
50	38	42	25	5.0	7.5	4.5	M16x1	26	29	18	10.54	12	14	15.5
63	48	53	32	6.3	10.0	6.0	M18x1	26	37	18	12.54	16	18	20
80	60	67	40	8.0	12.0	8.0	M20x1.5	26	46	18	16.04	18	20	25
100	75	85	50	10.0	15.0	10.0	M24x1.5	29	58	20	20.02	20	22	31.5

**Pens Tutucu / ER Tip / DIN 6499 / DIN 69893 (HSK)**  
 Toolholder - Collet Chuck / Type ER / DIN 6499 / DIN 69893 (HSK)  
 Spannzanghalter / Type ER / DIN 6499 / DIN 69893 (HSK)



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	
HSK 50	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42
HSK 63	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42
	ER25 150	○	ER25	TM 25 FM	2.0 - 16.0	150	42
ER32 105	○	ER32	TM 32 FM	3.0 - 20.0	105	50	

**Pens Tutucu / ER Tip / DIN 6499 / DIN 69893 (HSK)**  
 Toolholder - Collet Chuck / Type ER / DIN 6499 / DIN 69893 (HSK)  
 Spannzanghalter / Type ER / DIN 6499 / DIN 69893 (HSK)



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen					
		Tip Type Type	Somun Collet Nut Spannmutter	Sıkma Aralığı Clamping Range Spannbereich	L	ØD	
HSK 80	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42
HSK 100	ER16 105	○	ER16	TM 16 FM	1.0 - 10.0	105	28
	ER16 150	○	ER16	TM 16 FM	1.0 - 10.0	150	28
	ER20 75	○	ER20	TM 20 FM	1.0 - 13.0	75	34
	ER20 150	○	ER20	TM 20 FM	1.0 - 13.0	150	34
	ER25 75	○	ER25	TM 25 FM	2.0 - 16.0	75	42
	ER25 105	○	ER25	TM 25 FM	2.0 - 16.0	105	42
	ER25 150	○	ER25	TM 25 FM	2.0 - 16.0	150	42
ER32 105	○	ER32	TM 32 FM	3.0 - 20.0	105	50	

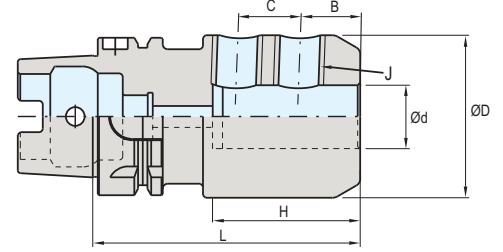
Sipariş Örneği / Ordering Example / Bestellbeispiel ab Lager : HSK 50 ER16 105

● Stoktan / Stock / Verfügbar ab Lager

● 2 Hafta / in two weeks / in zwei Wochen

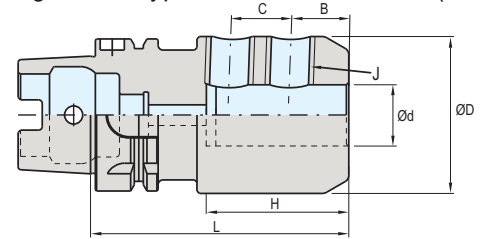
○ Stokta yok / Non stock item / Nicht auf Lager





Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	ØD	J	H	L	B	C		
HSK 50	SLN6 90	○	6	25	M6	35 - 40	90	18	—	
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		25
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24		28
HSK 63	SLN6 90	○	6	25	M6	35 - 40	90	18	—	
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		25
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24		28
	SLN40 120	○	40	90	M20 x 2	68 - 73	120	30		32

**Weldon Tutucu DIN 69893 (HSK)**  
 Toolholder - Type Weldon, DIN 69893 (HSK)  
 Werkzeughalter - Type Weldon, DIN 69893 (HSK)



Kod Code Bezeichnung	Stok Stock Lager	Ölçüler Dimensions / Abmessungen								
		Ød	ØD	J	H	L	B	C		
HSK 80	SLN6 90	○	6	25	M6	35 - 40	90	18	—	
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		25
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24		28
HSK 100	SLN6 90	○	6	25	M6	35 - 40	90	18	—	
	SLN8 90	○	8	28	M8	35 - 40	90	18		
	SLN10 90	○	10	35	M10	39 - 44	90	20		
	SLN12 90	○	12	42	M12	44 - 49	90	22.5		
	SLN16 90	○	16	48	M14	47 - 52	90	24		
	SLN20 90	○	20	52	M16	49 - 54	90	25		
	SLN25 105	○	25	65	M18 x 2	54 - 59	105	24		25
	SLN32 105	○	32	72	M20 x 2	58 - 63	105	24		28
	SLN40 120	○	40	90	M20 x 2	68 - 73	120	30		32























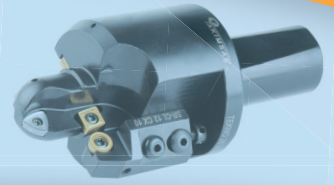
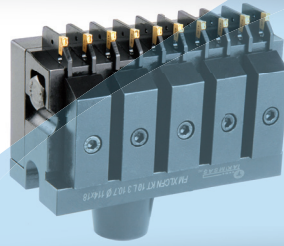
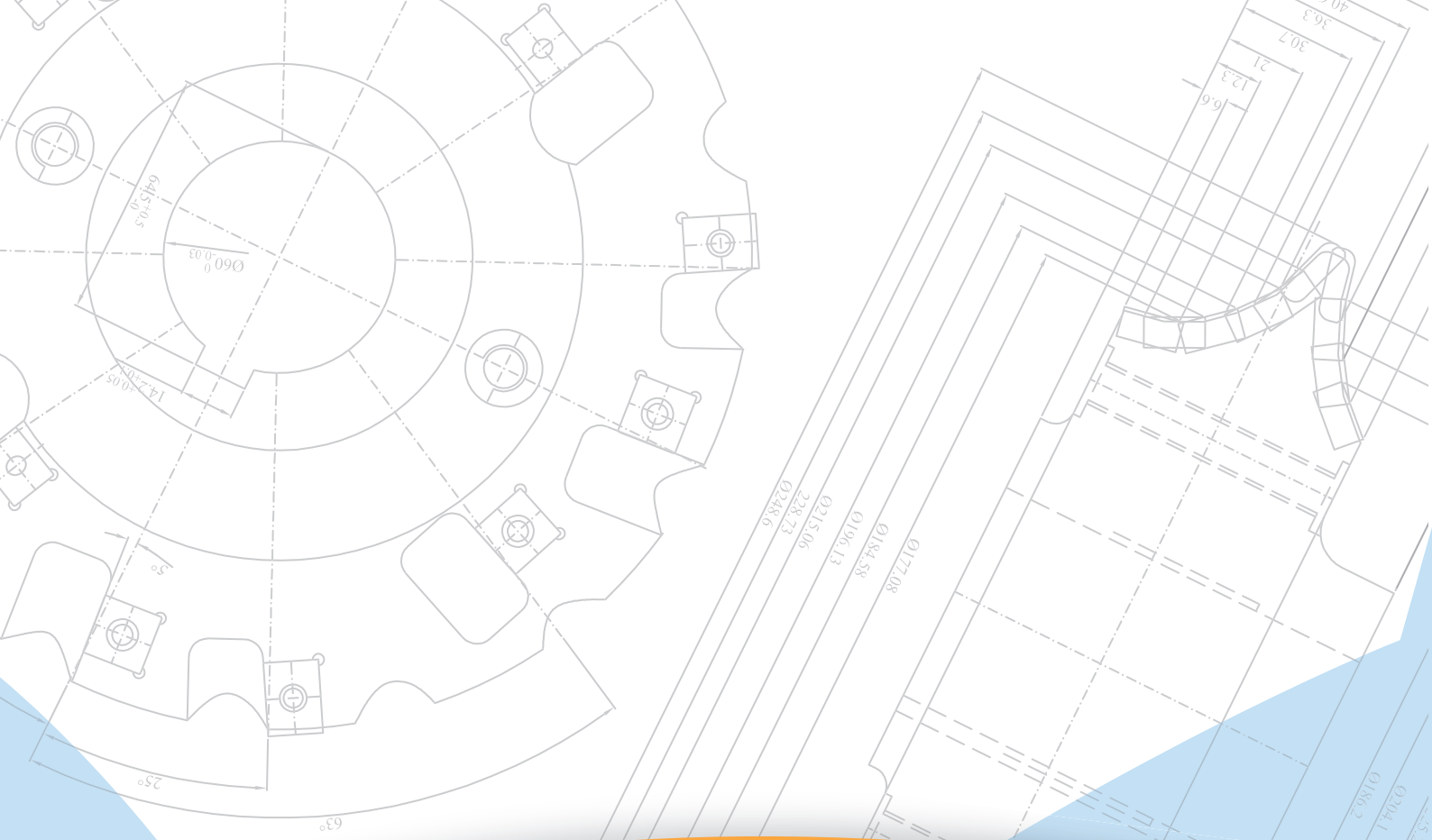












## TAKIMSAS KESİCİ TAKIM MAKİNE SAN. ve TİC. A.Ş.

Merkez Mah. Çınar Cad. Kavak Sok. No : 26/3 34197 Yenibosna - Bahçelievler - İstanbul

Tel : +90 0212 639 15 00 +90 0212 639 15 14 Fax : +90 0212 639 19 29  
+90 0212 639 39 24 +90 0212 639 39 25 GSM : +90 0533 524 83 14

takimsas@takimsas.com.tr • www.takimsas.com.tr

