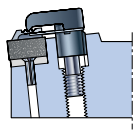


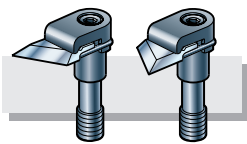
CSXN R/L (C)
—
Recommendations
Empfehlungen
Rekommendationer
Page: Seite: Sida:
B12-B14, B20

Ceramics – Keramik – Keramik

85°

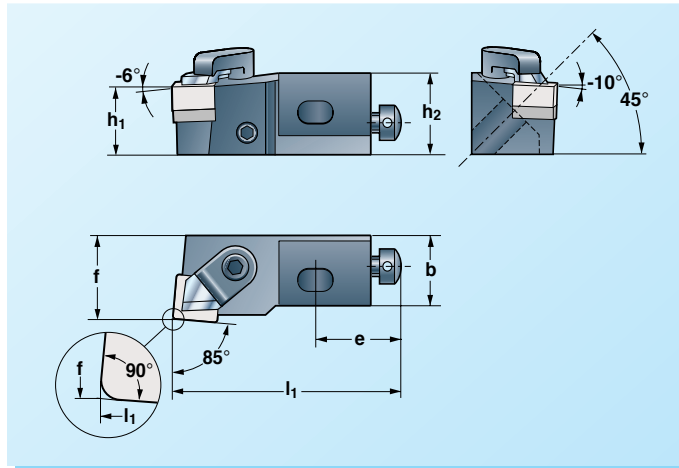


C



(C)

Chip breaker – Spanbrecher
Spånbrötare



The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

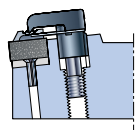
B

	h_1	h_2	b	l_1	e	f											Page: Seite: Sida: B190-B193	
CSXN R/L 16CA-12C	16	25	20	63	25	25	— ¹⁾ (U414ST) ²⁾	— RS 308	CS836RC-1 ³⁾	CS836LC-1 ³⁾	NY4	AX612	RA512	NY2.5	MO830	NY5	1207 ¹⁾ (1204 . . .) ²⁾	
CSXN R/L 20CA-12C	20	25	20	70	30	25	U414ST ¹⁾ (U414SK) ²⁾	RS 308										

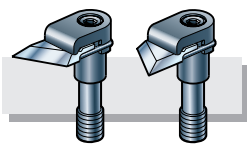
CSRN R/L (C)
—
Recommendations
Empfehlungen
Rekommendationer
Page: Seite: Sida:
B12-B14, B20

Ceramics – Keramik – Keramik

75°

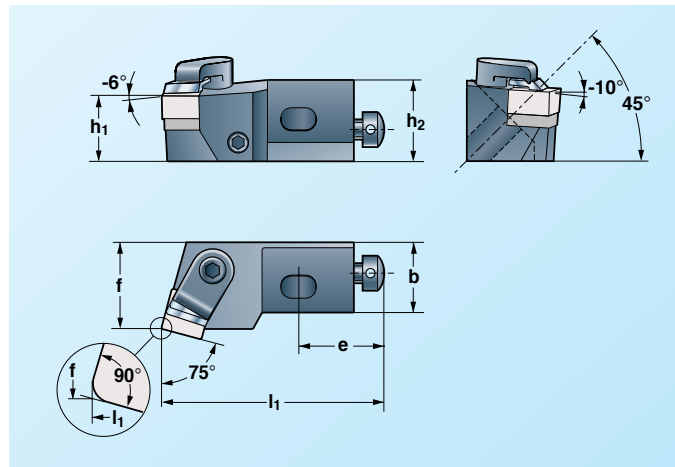


C



(C)

Chip breaker – Spanbrecher
Spånbrötare



The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

	h_1	h_2	b	l_1	e	f											Page: Seite: Sida: B190-B193	
CSRN R/L 16CA-12C	16	25	20	63	25	25	— ¹⁾ (U414ST) ²⁾	— RS 308	CS822RC-1 ³⁾	CS822LC-1 ³⁾	NY4	AX612	RA512	NY2.5	MO830	NY5	1207 ¹⁾ (1204 . . .) ²⁾	
CSRN R/L 20CA-12C	20	25	20	70	30	25	U414ST ¹⁾ (U414SK) ²⁾	RS 308										

¹⁾ Standard delivery for inserts with 7.94 mm thickness.
²⁾ Separate delivery for inserts with 4.76 mm thickness.

¹⁾ Standardlieferung für Schneiden mit 7,94 mm Dicke.
²⁾ Lieferung auf besondere Bestellung für Schneiden mit 4,76 mm Dicke.

¹⁾ Standardleverans för skär med 7,94 mm tjocklek.
²⁾ Separat leverans för skär med 4,76 mm tjocklek.

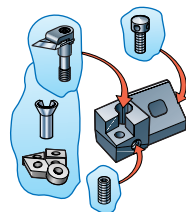


Chip breaker, see page:
Spanbrecher, siehe Seite:
Spånbrötare, se sid:

B159

Ordering example:
Bestellbeispiel:
Beställningsexempel:

CSRN 16CA-12C



Spare parts shown in the coloured columns are supplied assembled in each tool.

Die in den farbigen Spalten aufgeführten Ersatzteile sind in den Werkzeugen montiert.

Reservdelar i de färgade kolumnerna ingår monterade i varje verktyg.

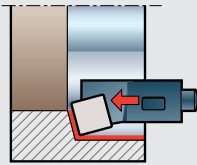
CSKN R/L (C)

Ceramics – Keramik – Keramik

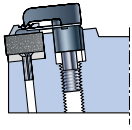
Recommendations
Empfehlungen
Rekommendationer

Page: Seite: Sida:

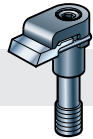
B12-B14, B20



75°

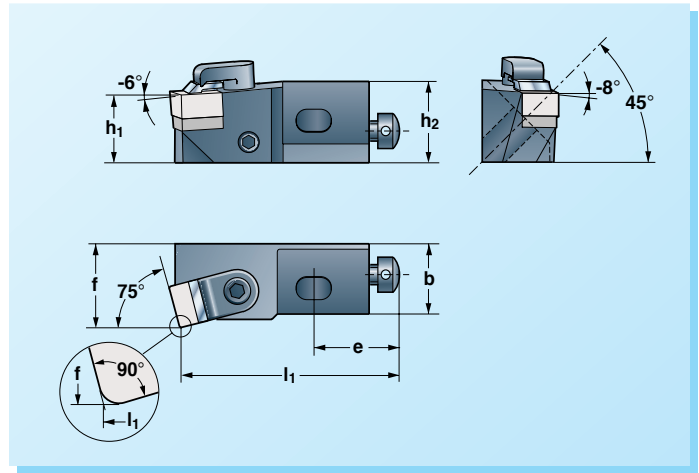


C



(C)

Chip breaker – Spanbrecher
Spånbrytare



The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

B

	h_1	h_2	b	l_1	e	f									Page: Seite: Sida: SNGN		
CSKN R/L 16CA-12C	16	25	20	63	25	25	⁻¹⁾ (U414ST) ²⁾	–	RS 308	CS 822C-1	NY4	AX612	RA512	NY2.5	MO830	NY5	1207 ¹⁾ (1204 . . .) ²⁾
CSKN R/L 20CA-12C	20	25	20	70	30	25	⁻¹⁾ (U414ST) ¹⁾ (U414SK) ²⁾	–	RS 308	CS 822C-1	NY4	AX612	RA512	NY2.5	MO830	NY5	1207 ¹⁾ (1204 . . .) ²⁾

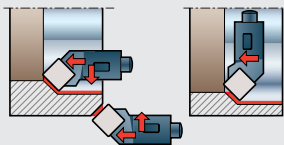
CSSN R/L (C)

Ceramics – Keramik – Keramik

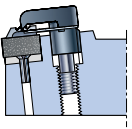
Recommendations
Empfehlungen
Rekommendationer

Page: Seite: Sida:

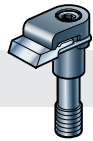
B12-B14, B20



45°

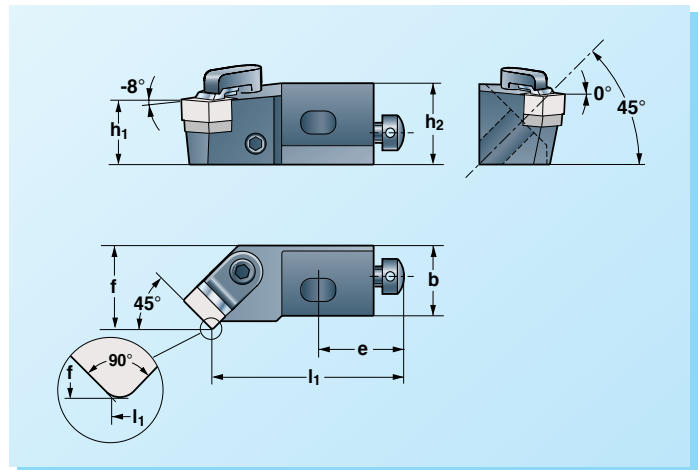


C



(C)

Chip breaker – Spanbrecher
Spånbrytare



The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

	h_1	h_2	b	l_1	e	f									Page: Seite: Sida: SNGN		
CSSN R/L 16CA-12C	16	25	20	53	25	25	⁻¹⁾ (U414ST) ²⁾	–	RS 308	CS 822C-1	NY4	AX612	RA512	NY2.5	MO830	NY5	1207 (1204 . . .)
CSSN R/L 20CA-12C	20	25	20	60	30	25	⁻¹⁾ (U414ST) ¹⁾ (U414SK) ²⁾	–	RS 308	CS 822C-1	NY4	AX612	RA512	NY2.5	MO830	NY5	1207 (1204 . . .)

¹⁾ Standard delivery for inserts with 7.94 mm thickness.
²⁾ Separate delivery for inserts with 4.76 mm thickness.

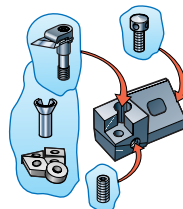
¹⁾ Standardlieferung für Schneiden mit 7,94 mm Dicke.
²⁾ Lieferung auf besondere Bestellung für Schneiden mit 4,76 mm Dicke.

¹⁾ Standardleverans för skär med 7,94 mm tjocklek.
²⁾ Separat leverans för skär med 4,76 mm tjocklek.



Chip breaker, see page:
Spanbrecher, siehe Seite:
Spånbrytare, se sid:

B159



Spare parts shown in the coloured columns are supplied assembled in each tool.

Die in den farbigen Spalten aufgeführten Ersatzteile sind in den Werkzeugen montiert.

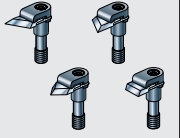
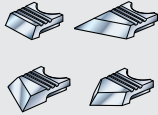
Reservdelar i de färgade kolumnerna ingår monterade i varje verktyg.

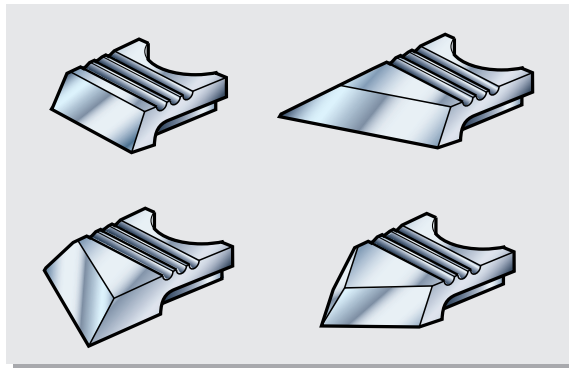
Ordering example:

Bestellbeispiel: **CSSR 16CA-12C**

Beställningsexempel:

Chip breakers for cartridges with ceramic inserts
Spanbrecher für Kurzklemmhalter mit Keramikschniden
Spånbrytare för inbyggnadshållare med keramiska skär

	
CS 822 C-1	SB 82
CS 822 RC-1	SB 82 R
CS 822 LC-1	SB 82 L
CS 823 C-1	SB 83 C
CS 836 RC-1	SB 86 R
CS 836 LC-1	SB 86 L



Ordering example:

Bestellbeispiel: **SB 82R**

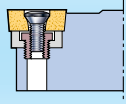
Beställningsexempel:

Cartridges, see page:

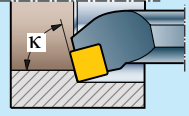
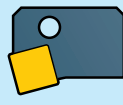

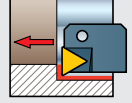
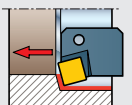
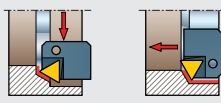
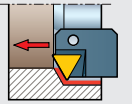
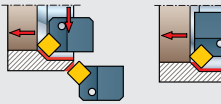
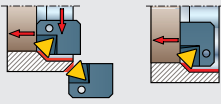
Kurzklemmhalter, siehe Seite:
 Inbyggnadshållare, se sid:

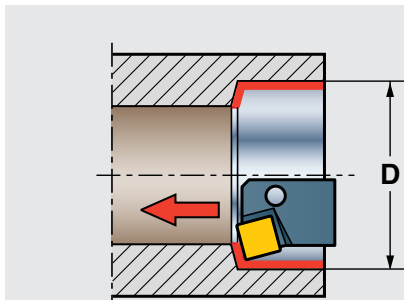
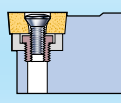
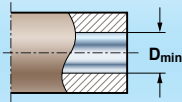
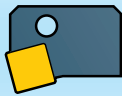
B153-B158

B

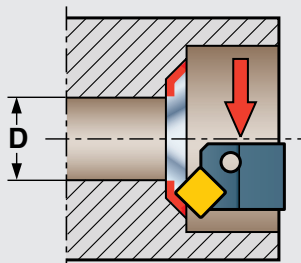


B

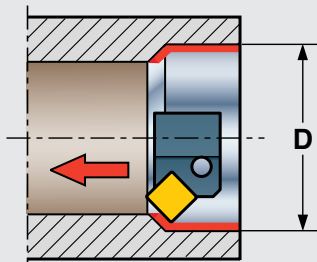
					Page Seite Sida
		10	12,5		
	90°	STFCR/L	11	16	B162
	75°	SSKCR/L	09	12	B162
	60°	STTCR/L	11	16	B163
	60°	STWCR/L	11	16	B163
	45°	SSSCR/L	09	12	B164
	45°	STSCR/L	11	16	B164



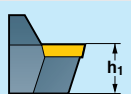
Radial adjustment Radiale Verstellbarkeit Radiell ställbarhet	2 mm	1 mm
Size Grösse Storlek	10 CM	13 CM
Type Typ Typ	SSKC SSSC STFC STSC STTC STWC	SSKC SSSC STFC STSC STTC STWC
D-min	32	45



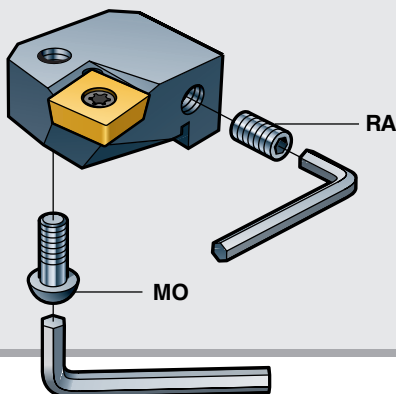
Size Grösse Storlek	10 CM	13 CM
Type Typ Typ	SSSC STSC STTC	SSSC STSC STTC
D-min	55	75



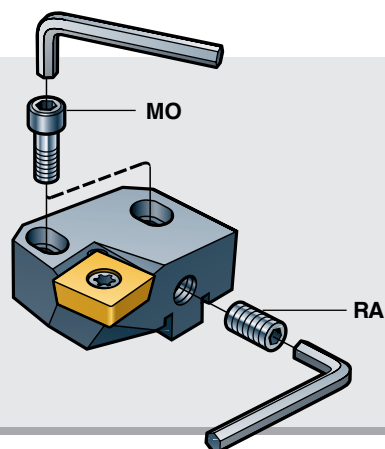
Size Grösse Storlek	10 CM	13 CM
Type Typ Typ	SSSC STSC STTC	SSSC STSC STTC
D-min	40	50



10 CM



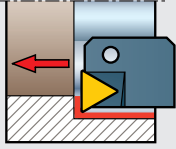
13 CM



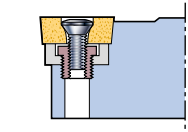
STFC R/L

Recommendations
Empfehlungen
Rekommendationer

Page: Seite: Sida:
B12-B14, B18



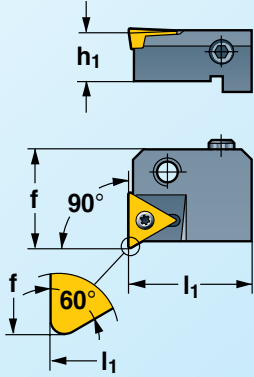
90°



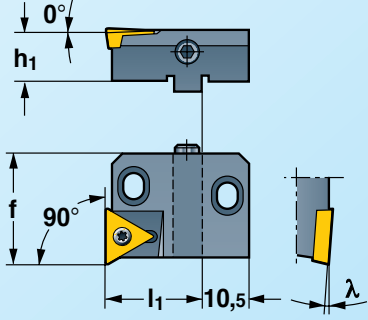
S






The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

Size 10 CM
Grösse 10 CM
Storlek 10 CM



Size 13 CM
Grösse 13 CM
Storlek 13 CM

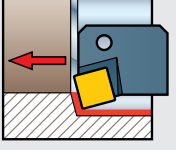


	h_1	l_1	f	λ		 torx					TCMW* TCMT TCGT	Page: Seite: Sida: B179-B184
STFCR/L 10CMX11	10	21,5	18	-4°	FTX072507	NY7X	RA508	NY2.5	MO510	NY3	1102 ..	
STFCR/L 13CMX16	12,5	21	26	-4°	FTX153510	NY15X	RA508	NY2.5	MO516	NY3	16T3 ..	

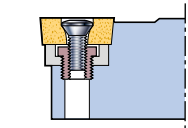
SSKC R/L

Recommendations
Empfehlungen
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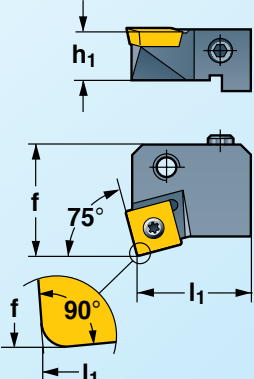
75°



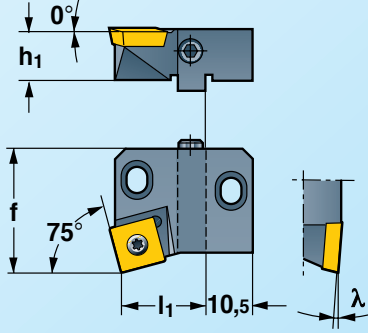
S







The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

Size 10 CM
Grösse 10 CM
Storlek 10 CM



Size 13 CM
Grösse 13 CM
Storlek 13 CM



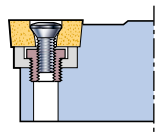
	h_1	l_1	f	λ		 torx					SCMW* SCMT SCGT	Page: Seite: Sida: B179-B184
SSKCR/L 10CMX09T	10	21,5	18	-4°	FTX153510	NY15X	RA508	NY2.5	MO510	NY3	09T3 ..	
SSKCR/L 13CMX12	12,5	18	26	-4°	FTX154512	NY15X	RA508	NY2.5	MO516	NY3	1204 ..	

STTC R/L

Recommendations
Empfehlungen
Rekommendationer

Page: Seite: Sida:
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60°



S

The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

Size 10 CM
Grösse 10 CM
Storlek 10 CM

Size 13 CM
Grösse 13 CM
Storlek 13 CM

B

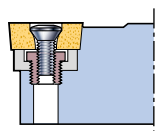
 	h ₁	l ₁	f	λ	 FTX072507 FTX153510	 torx NY7X NY15X	 RA508 RA508	 NY2.5 NY2.5	 MO510 MO516	 NY3 NY3	TCMW*	TCMT	TCGT	Page: Seite: Sida: B179-B184
STTCR/L 10CMX11	10	23	13,5	-4°	FTX072507	NY7X	RA508	NY2.5	MO510	NY3	1102 ..			
STTCR/L 13CMX16	12,5	21,5	18,8	-4°	FTX153510	NY15X	RA508	NY2.5	MO516	NY3	16T3 ..			

STWC R/L

Recommendations
Empfehlungen
Rekommendationer

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60°



S

The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

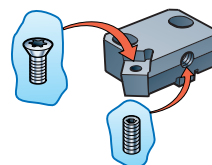
Size 10 CM
Grösse 10 CM
Storlek 10 CM

Size 13 CM
Grösse 13 CM
Storlek 13 CM

 	h ₁	l ₁	f	λ	 FTX072507 FTX153510	 torx NY7X NY15X	 RA508 RA508	 NY2.5 NY2.5	 MO510 MO516	 NY3 NY3	TCMW*	TCMT	TCGT	Page: Seite: Sida: B179-B184
STWCR/L 10CMX11	10	20	18	-4°	FTX072507	NY7X	RA508	NY2.5	MO510	NY3	1102 ..			
STWCR/L 13CMX16	12,5	17	26	-4°	FTX153510	NY15X	RA508	NY2.5	MO516	NY3	16T3 ..			

* Selection of cutting geometry page:
Wahl der Schneidgeometrie, Seite: **B27-B39**
Val av skärgeometri, sid:

Ordering example:
Bestellbeispiel: **STWCR 10CMX11**
Beställningsexempel:



Spare parts shown in the coloured columns are supplied assembled in each tool.

Die in den farbigen Spalten aufgeführten Ersatzteile sind in den Werkzeugen montiert.

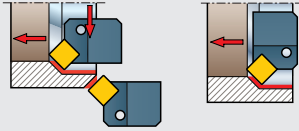
Reservdelar i de färgade kolumnerna ingår monterade i varje verktyg.

SSSC R/L

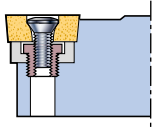
Recommendations
Empfehlungen
Rekommendationer

Page: Seite: Sida:

B12-B14, B18



45°

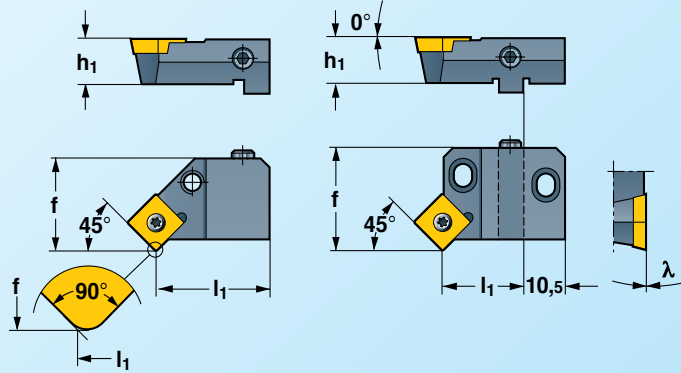


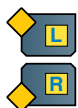










S

The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

Size 10 CM
Grösse 10 CM
Storlek 10 CM

Size 13 CM
Grösse 13 CM
Storlek 13 CM



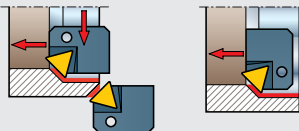
	h ₁	l ₁	f	λ		 torx					SCMW*	TCMT	TCGT	Page:	
											 			Seite:	
SSSCR/L 10CMX09T	10	22,5	18	0°	FTX153510	NY15X	RA508	NY2.5	MO510	NY3	09T3 . .			B179-B184	Sida:
SSSCR/L 13CMX12	12,5	20	26	0°	FTX154512	NY15X	RA508	NY2.5	MO516	NY3	1204 . .				

STSC R/L

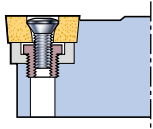
Recommendations
Empfehlungen
Rekommendationer

Page: Seite: Sida:

B12-B14, B18



45°

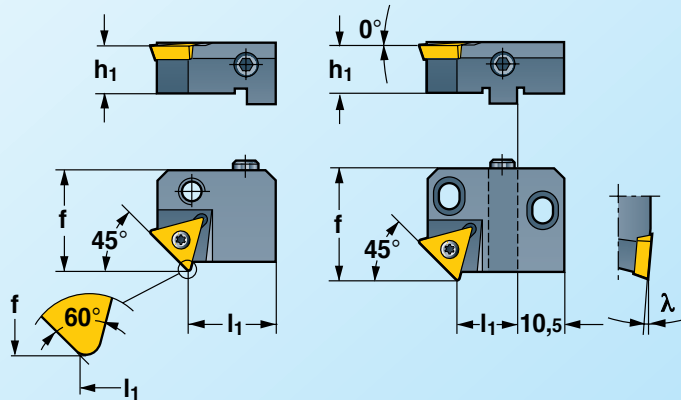













S



The drawing shows right-hand version. Left-hand version reversed.
Die Zeichnung zeigt Rechtsausführung. Linksausführung umgekehrt.
Ritningen visar högerutförande. Vänsterutförande spegelvänt.

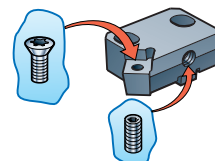
Size 10 CM
Grösse 10 CM
Storlek 10 CM

Size 13 CM
Grösse 13 CM
Storlek 13 CM



	h ₁	l ₁	f	λ		 torx					TCMW*	TCMT	TCGT	Page:	
											 			Seite:	
STSCR/L 10CMX11	10	17,5	18	-4°	FTX072507	NY7X	RA508	NY2.5	MO510	NY3	1102 . .			B179-B184	Sida:
STSCR/L 13CMX16	12,5	11	26	-4°	FTX153510	NY15X	RA508	NY2.5	MO516	NY3	16T3 . .				

*  Selection of cutting geometry page:
Wahl der Schneidgeometrie, Seite: **B27-B39**
 Val av skärgeometri, sid:



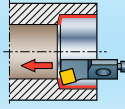
Spare parts shown in the coloured columns are supplied assembled in each tool.

Die in den farbigen Spalten aufgeführten Ersatzteile sind in den Werkzeugen montiert.

Reservdelar i de färgade kolumnerna ingår monterade i varje verktyg.

Ordering example:
Bestellbeispiel: **SSSCR 13CMX12**
Beställningsexempel:

ISO



Clamping system Spannsystem Spännsystem	Shape of insert Schneidform Skärform	Approach angle and type Einstellwinkel und Typ Ställvinkel och typ	Relief angle of insert Freiwinkel der Schneide Skärets släppningsvinkel	Performance Ausführung Utförande	Cutting edge height Schneidkantehöje Skäreghöjd	Type of tool Werkzeugtyp Verktvgstyp	Dimensional standard Abmessungsstandard Dimensionsstandard	Length of tool Werkzeuglänge Verktvglängd	Length of cutting edge Schneidkantenlänge Skärkantlängd	Additional code Zusatzkode Tilläggskod
---	--	--	---	--	---	--	--	---	---	--

S T F C R 16 C A - 16 ..

C
Clamp
Spannhaken
Spännhake

M
Locking pin/hole and clamp
Spannstift/
Loch und
Spannhaken

P
Pinne/hål och
Spännhake

P
Locking pin/hole
Spannstift/
Loch

S
Pinne/hål
Schraube/
Loch

S
Screw/hole
Schraube/
Loch

S
Skruv/hål

H
O
P
R
S
T
C
D
E
M
V
W
L
A
B
K

F
G
J
K
L
R
S
T
U

A
B
C
D
E
F
G
N
P
W
X
Y

R
R
L
L

16
 $\frac{h_1}{10}$
 $\frac{h_1}{12}$
 $\frac{h_1}{16}$
 $\frac{h_1}{20}$
 $\frac{h_1}{25}$

C
C = cartridge
C = Kurzklemmhalter
C = inbyggnadshållare

A
A = ISO 5611

-
16

H
O
P
R
S
T
C,D,E
M,V
W
L
A,B,K

Supplementary key examples:
M = MIRCONA standard tool holder apart from ISO
Tool holders for ceramic inserts; C = Chip breaker P = Thrust plate
Q, F, B = qualified holder

Beispiel Zusatzkode:
M = MIRCONA Standardhalter über ISO hinaus
Klemmhalter für keramische Wendeschneidplatten; C = Spänbrecher P = Druckplatte
Q, F, B = Präzisionshalter

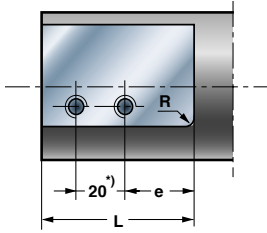
Exempel på tilläggskod:
M = MIRCONA standardhållare utöver ISO
Verktvgshållare för keramiska skär; C = Spänbrytare P = Tryckplatta
Q, F, B = precisionshållare

h ₁	L ₁ Approach angle Einstellwinkel Ställvinkel	
	F, G, J, K, L, R, T, U, Y	W, S
6	25	21
8	32	28
10	50	44
12	55	47
16	63	53
20	70	60
25	100	87

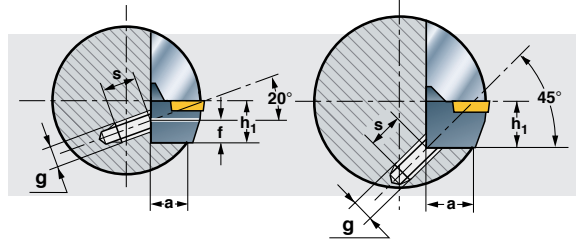
B



Mounting measurements to ISO Einbauabmessungen nach ISO Inbyggnadsmått enligt ISO



*) For size 25
*) Für Grösse 25
*) För storlek 25

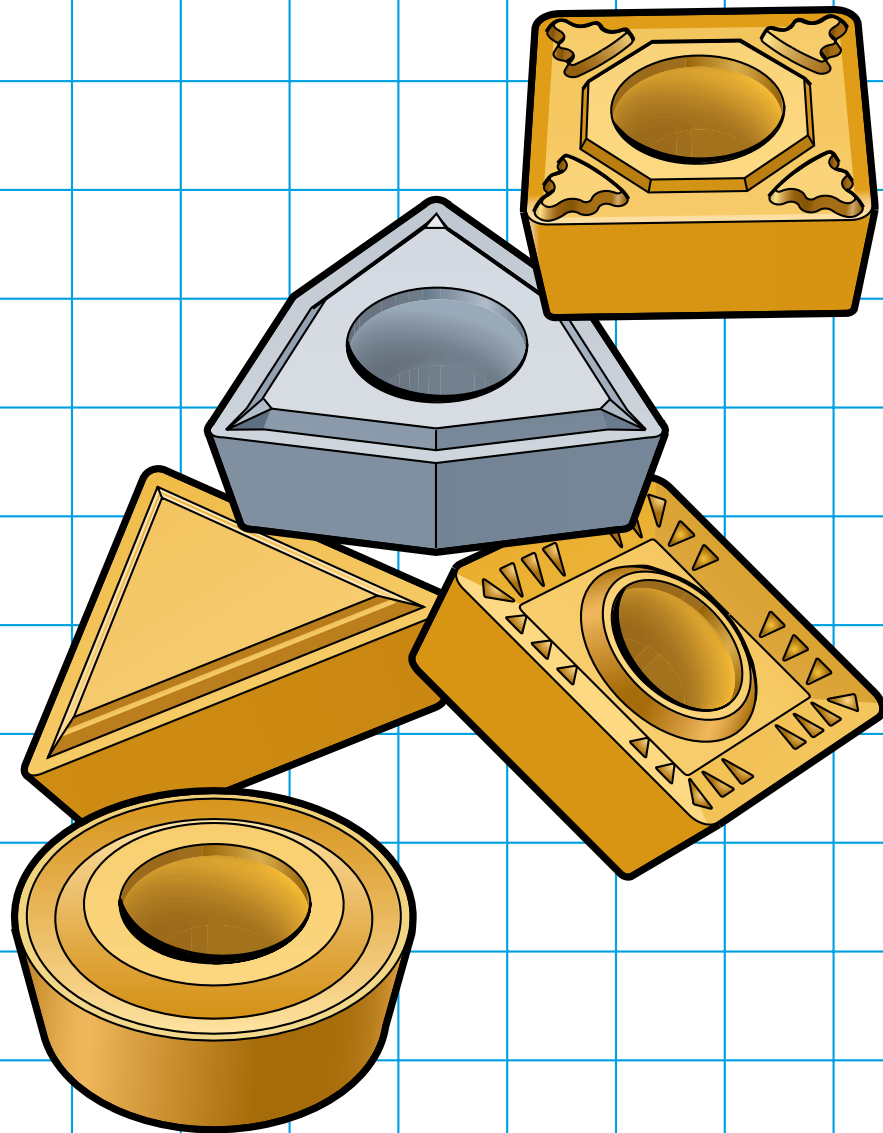


For size 06–12
Für Grösse 06–12
För storlek 06–12

For size 16–25
Für Grösse 16–25
För storlek 16–25

Size Grösse Storlek	h_1	L	a	f	e	g	S min	R max
06	6	23	5	3,5	12	M3,5	10	1,5
08	8	30	6	4,5	17	M4	10	2,5
10	10	48	9	5	20	M6	13	4
12	12	53	13	6	20	M6	13	5
16	16	60	17	–	25	M8	16	6
20	20	67	17	–	30	M8	16	6
25	25	96	22	–	30	2xM10	19	8


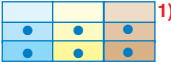

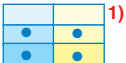



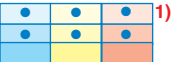

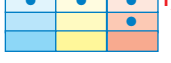
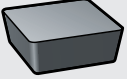

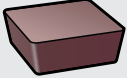
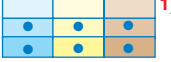
B



MIRCONA carbide grades for turning
MIRCONA Hartmetallsorten zum Drehen
MIRCONA hårdmetallsorter för svarvning



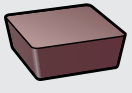

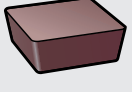

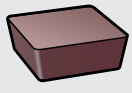

MIRCONA . . coated carbide grades
. . beschichtete Hartmetallsorten
. . belagda hårdmetallsorter

Grade Sorte Sort	Type of coating Beschichtungstyp Typ av beläggning	ISO	Application Gebrauch Tillämpning	Recommendations Empfehlungen Rekommendationer
ALC 135 	CVD TiN/TiCN/ Al ₂ O ₃ /TiN +	P35-P40 M30 S30 (P35/M30/ S30)		<ul style="list-style-type: none"> Tough grade especially for medium roughing/roughing in stainless steel/heat-resistant alloys. Zähe Sorte speziell für mittleres Schruppen/Schruppen in rostbeständigen Stähle/warmfeste Legierungen. Seg sort speciellt för medelgrov/grov bearbetning i rostfritt stål/varmhållfasta legeringar.
ALC 145 		P30-P35 M25-M35 (P30/M30)		<ul style="list-style-type: none"> Medium hard grade for steel/cast steel, malleable/nodular long-chipping iron. Mittlereharte Sorte für Stahl/Stahlguss, Temperguss/langspannenden Kugelgraphitguss. Medelhård sort för stål/gjutstål, aducergods/långspånande nodulärt gjutjärn.
ALC 245 		P20-P30 (P25)		<ul style="list-style-type: none"> Allround grade for most turning operations in all types of steel. Universalsorte für meisten Drehoperationen in alle Arten von Stahl. Allroundsort för de flesta typer av svarvoperationer i alla typer av stål.
ALC 345 		P15-P20 M20 K20 (P15/M20/ K20)		<ul style="list-style-type: none"> Medium roughing to finishing grade for all types of steel and cast iron. Cobalt enriched substrate with repeated surplus layer coating. Sorte für mittleres Schruppen bis zum Schlichten in alle Arten von Stahl und Guss. Kobolt angereichertes Substrat mit wiederholter überschüssigen Lagenbeschichtungen. Sort för medelgrov till finbearbetning i alla typer av stål och gjutjärn. Koboltberikat substrat med upprepade multiskiktbeläggning.
ALC 400 		P10 M10 K10-K15 (P10/M10/ K10)		<ul style="list-style-type: none"> Finishing grade. High speeds/low feeds in steel/cast steel, malleable/nodular iron. Fine surface finish. Schlichtsorte. Hohe geschwindigkeiten/niedrige Vorschübe in Stahl/Stahlguss, Temperguss/Kugelgraphitguss. Hervorragende Oberflächegüte. Finbearbetningsort. Höga hastigheter/låga matningar i stål/gjutstål, aducergods/nodulärt gjutjärn. Fin yta.
ALC 410 	CVD TiN/TiCN/ Al ₂ O ₃	K10-K15 (K15)		<ul style="list-style-type: none"> Allround grade for all types of cast iron. Especially adapted multi-layer coating with extreme wear resistance. Universalsorte für alle Arten von Guss. Speziell angepasste Mehrfach-beschichtung mit extremen Verschleisswiderstand. Allroundsort för alla typer av gjutjärn. Speciellt anpassad flerskiktbeläggning med extrem slitstyrka.
TNP 140 	PVD TiAlN	P30-P40 M15-M25 S25 (P40/M25/ S25)		<ul style="list-style-type: none"> Grade intended for unfavourable conditions in all types of stainless steel and difficult to machine materials like heat-resistant alloys. Sorte geeignet für ungünstige Verhältnisse in alle Arten von rostbeständige Stähle und schwer zu bearbeitende Materialien wie warmfeste Ti/Co-Legierungen. Sort avsedd för ofördelaktiga förhållanden i alla typer av rostfria stål och svårbearbetade material som varmhållfasta Ni/Co-legeringar.

1) Page: **B185**
Seite:
Sida:

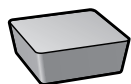
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Schnittdaten, Seite:
Skärdata, sida:



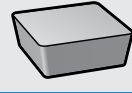


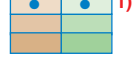
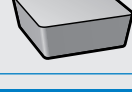


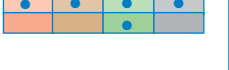


Grade Sorte Sort	Type of coating Beschichtungstyp Typ av beläggning	ISO	Application Gebrauch Tillämpning	Recommendations Empfehlungen Rekommendationer
TNP 220 	PVD TiAlN	P10-P20 M15-M20 S15 (P20/M20/ S15)		<ul style="list-style-type: none"> Allround grade for all types of stainless steel and difficult to machine materials like heat-resistant Ti/Co-alloys. Universalsorte für alle Arten von rostbeständige Stähle und schwer zu bearbeitende Materialien wie warmfeste Ti/Co-Legierungen. Allroundsort för alla typer av rostfria stål och svårbearbetade material som varmhållfasta Ni/Co-legeringar.
TNP 315 		M10-M20 (M15)		<ul style="list-style-type: none"> Grade for especially finishing/medium roughing in stainless steel. Sorte speziell für Schlichten/mittleres Schruppen in rostbeständigen Stähle. Sort speciellt för fin/medelgrov bearbetning i rostfritt stål.
TNP 400 		N15-N25 (N25)		<ul style="list-style-type: none"> Medium roughing in wearing aluminum alloys and composite materials. Mittleres Schruppen in verschleissende Al-legierungen und Kompositmaterialien. Medelgrov bearbetning i slitande aluminiumlegeringar och kompositmaterial.

CVD = Chemical Vapour Deposition

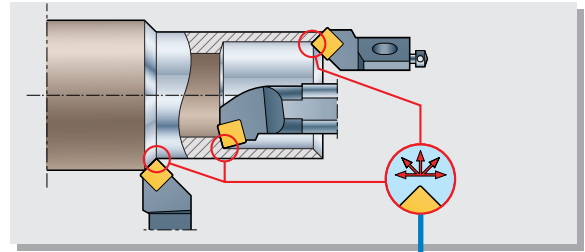
PVD = Physical Vapour Deposition



MIRCONA . . uncoated carbide grades . . unbeschichtete Hartmetallsorten . . obelagda hårdmetallsorter

Grade Sorte Sort	ISO	Application Gebrauch Tillämpning	Recommendations Empfehlungen Rekommendationer
S6 	P40		<ul style="list-style-type: none"> Tough grade. Unfavourable conditions, low speeds/high feeds, intermittent cutting in all types of steel/cast steel. Zähe Sorte. Unvorteilhafte Bearbeitungsverhältnisse, niedrige Geschwindigkeiten/hohe Vorschübe, unterbrochene Schnitte für alle Typen von Stahl/Stahlguss. Seg sort. Ofördelaktiga förhållanden, låga hastigheter/höga matningar, intermittent bearbetning i alla typer av stål/gjutstål.
FG 10 	S15 N10		<ul style="list-style-type: none"> Hard grade for finishing to roughing in non-ferrous metals/heat-resistant alloys. Harte Sorte für Schlichten bis zum Schruppen in NE-Metallen/Warmfeste Legierungen. Hård sort för fin- till medelgrov bearbetning av icke-järnmetaller/varmhållfasta legeringar.
FG 15 	N15		<ul style="list-style-type: none"> Finishing to medium roughing in non-ferrous metals. Mittlereharte Sorte für Schlichten bis zum mittleres Schruppen in NE-Metallen. Medelhård sort för fin till medelgrov bearbetning av icke-järnmetaller.
FG 25 	K20 S20 N25 H15		<ul style="list-style-type: none"> Tough/hard micro-grain grade for non-ferrous metals/heat-resistant alloys Zähe/harte Feinkornsorte für NE-Metalle/warmfeste Legierungen. Seg/hård finkorning sort för icke-järnmetaller/varmhållfasta legeringar.
CER510 	P10 M10		<ul style="list-style-type: none"> Finishing grade. Favourable conditions, high speeds/low feeds, extremely fine surface finish in all types of steel. Schlichtsorte. Vorteilhafte Verhältnisse, hohe geschwindigkeiten, niedrige Vorschübe, hervorragende Oberflächengüte für alle typen von Stahl. Finbearbetningssort. Fördelaktiga förhållanden, höga hastigheter/låga matningar, extremt fin yta i alla typer av stål.

Selection of MIRCONA insert grade: Wahl der MIRCONA Schneidsorte: Val av MIRCONA skärsort:



First choice
= Erste Wahl
Första val

Grade	Material	Coating	Notes
ALC 135 (P35/M30/S30)	Steel/Cast Steel	Uncoated	Especially for medium roughing/roughing in stainless steel/heat-resistant alloys.
ALC 145 (P30/M30)	Steel/Cast Steel	Uncoated	Medium roughing/roughing for all types of steel/cast steel.
ALC 245 (P25)	Steel/Cast Steel	Uncoated	Allround grade for all types of steel/cast steel. Balanced hardness toughness.
ALC 345 (P15/M20/K20)	Steel/Cast Steel	Uncoated	Finishing/high speeds.
ALC 400 (P10/M10/K10)	Steel/Cast Steel	Uncoated	Finishing/very high speeds/low feeds, fine surface finish.
TNP 140 (P40/M25/S25)	Stainless Steel	Uncoated	Allround grades for all types of stainless steels.
TNP 220 (P20/M20/S15)	Stainless Steel	Uncoated	Allroundsorter för alla typer av rostfria stål.
CER 510 (P10/M10)	Cermet	Uncoated	Cermet, extreme finishing, very high cutting speeds/low feeds.
S6 (P40)	Stainless Steel	Uncoated	Unfavourable conditions, intermittent cutting, low speeds/high feeds.
CEW 075 (P05/K05)	Soft Steels	Uncoated	Soft steels, carbon steels, alloyed steels.
CEB 225 (P05/K05/S10/H05)	Carbon Steels	Uncoated	Carbon steels, alloyed steels, heat-resistant steels.
CEB 250 (P10/K10/S10/H10)	Carbon Steels	Uncoated	Kolstål, legerat stål, varmhållfasta stål.
FG 10 (N10/S15)	Non-ferrous metals	Uncoated	Allround grade/AL-alloys.
FG 15 (N15)	Non-ferrous metals	Uncoated	Universalsorte/AL-Leg.
FG 25* (K20/S20/N25/H15)	Non-ferrous metals	Uncoated	Allround grade.
TNP 400 (N25)	Non-ferrous metals	Uncoated	Wearing (Al-Si) AL-alloys.

Legend:

- Uncoated grades / Unbeschichtete Sorten / Obelagda sorter
- Uncoated micro-grain carbide grades / Unbeschichtete Feinkornsorter / Obelagda finkorniga sorter
- Coated grades / Beschichtete Sorten / Belagda sorter
 - CVD TiN/TiCN/Al₂O₃/TiN+
 - CVD TiN/TiCN/Al₂O₃
 - PVD TiAlN
- Ceramic grades / Keramiksorтер / Keramiska sorter
 - Al₂O₃
 - Al₂O₃ + TiC
 - Si₃N₄
 - Si₃N₄ + TiN

CVD = Chemical Vapour Deposition
PVD = Physical Vapour Deposition

- All types of short-chipping cast iron.
- Alle Arten von kurzspanende Gußeisen.
- Alla typer av kortspånande gjutjärn.

ALC 345
(P15/M20/K20)

- Medium roughing, unfavourable conditions at moderate speeds.
- Mittleres Schruppen, ungünstige Verhältnisse bei mässigen Geschwindigkeiten.
- Medelgrov bearbetning, ofördelaktiga förhållanden vid moderata skärhastigheter.

ALC 410
(K15)

- Allround grade for all types of cast iron. Balanced hardness/toughness.
- Universalsorte für alle Arten von Guss. Ausgewogene Härte/Zähigkeit.
- Allroundsort för alla typer av gjutjärn. Balanserad hårdhet/segghet.

ALC 400
(P10/M10/K10)

- Finishing/high speeds/low feeds, fine surface finish.
- Schlichten/hohe Geschwindigkeiten/niedrige Vorschübe, hervorragende Oberflächengüte.
- Finbearbetning/höga hastigheter/låga matningar, fin yta.

FG 25*
(K20/S20/N25/H15)

- Allround grade for all types of cast iron.
- Universalsorte für alle Arten von Guss.
- Allroundsort för alla typer av gjutjärn.

CEW 075
(P05/K05)

- Grey/nodular/malleable cast iron. Cutting fluid; No
- Grau/Temper/Kugelgraphitguss. Schneidflüssigkeit; Nein
- Grått/nodulärt/aducer gjutjärn. Skärvätska; Nej

CEB 225
(P05/K05/S10/H05)

- Grey/nodular/malleable cast iron. CES 025 for unfavourable conditions. Cutting fluid; If desired.
- Grauguss/Kugelgraphit/Temperguss. CES 025 für ungünstige Bearbeitungsverhältnisse. Schneidflüssigkeit; Wenn Sie wünschen.
- Grått/nodulärt/aducer gjutjärn. CES 025 för ofördelaktiga förhållanden Skärvätska; Om så önskas.

CEB 250
(P10/K10/S10/H10)

CES 050
(K05/S10/H10)

CES 025
(K10/S15/H15)

CES 060
(K10/S15/H15)

- Hard materials: hardened steel and cast iron.
- Harte Materialien: gehärtete Stahl und Guss.
- Hårda material: härdade stål och gjutjärn.

FG 25*
(K20/S20/N25/H15)

- Allround grade.
- Universalsorte.
- Allroundsort.

CES 050
(K05/S10/H10)

CES 025
(K10/S15/H15)

CES 060
(K10/S15/H15)

CEB 225
(P05/K05/S10/H05)

CEB 250
(P10/K10/S10/H10)

- Hardened steel, chilled cast iron HRC > 45. Cutting fluid: If desired.
- Gehärtete Stahl, Kokillhartguss HRC >45. Schneidflüssigkeit; Wenn Sie wünschen.
- Härdat stål, kokillhärdat gjutjärn HRC >45. Skärvätska; Om så önskas.

- High alloy aust/duplex stainless steels.
- Hochlegierte aust/duplexe rostfreie Stähle.
- Höglegerade aust/duplexa rostfria stål.

ALC 135
(P35/M30/S30)

- Especially stainless steel.
- Speziell rostfreie Stahl.
- Speziell rostfritt stål.

TNP 140
(P40/M25/S25)

TNP 220
(P20/M20/S15)

TNP 315
(M15)

ALC 145
(P30/M30)

ALC 345
(P15/M20/K20)

ALC 400
(P10/M10/K10)

CER 510
(P10/M10)

- Extreme wear resistance/toughness.
- Ausgesprochener Verschleißwiderstand/Zähigkeit.
- Extrem slitstyrka/segghet.
- Extreme wear resistance
- Ausgesprochener Verschleißwiderstand.
- Extrem slitstyrka.

- Heat resistant Ni-, Co-, Fe- and Ti-alloys
- Warmfeste Ni-, Co-, Fe- und Ti-Legierungen.
- Varmhållfasta Ni-, Co-, Fe- och Ti-legeringar

TNP 140
(P40/M25/S25)

TNP 220
(P20/M20/S15)

ALC 135
(P35/M30/S30)

FG 10
(N10/S15)

FG 25*
(K20/S20/N25/H15)

CES 050
(K05/S10/H10)

CES 025
(K10/S15/H15)

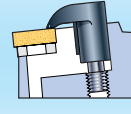
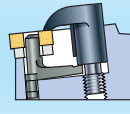
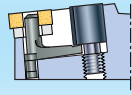
CES 060
(K10/S15/H15)

CEB 225
(P05/K05/S10/H05)


CEB 250
(P10/K10/S10/H10)

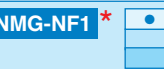
- Extreme wear resistance/toughness.
- Ausgesprochener Verschleißwiderstand/Zähigkeit.
- Extrem slitstyrka/segghet.
- Ni-alloys. Cutting fluid; If desired.
- Ni-Legierungen. Schneidflüssigkeit; Wenn Sie wollen.
- Ni-legeringar. Skärvätska; Om så önskas.








B


TNMG-NF1* 	ALC 400 P10/M10/K10	ALC 410 K15	ALC 345 P15/M20/K20	ALC 245 P25	ALC 145 P30/M30
TNMG 16 04 04-NF1 TNMG 16 04 08-NF1	■		■	■	■
TNMG 22 04 04-NF1 TNMG 22 04 08-NF1			○	○	

WNMG-NF1* 	ALC 400 P10/M10/K10	ALC 410 K15	ALC 345 P15/M20/K20	ALC 245 P25	ALC 145 P30/M30
WNMG 06 04 04-NF1 WNMG 06 04 08-NF1 WNMG 06 04 12-NF1	○		■	○	■
WNMG 08 04 04-NF1 WNMG 08 04 08-NF1 WNMG 08 04 12-NF1	○		○	■	○

SNMG-NF1* 	ALC 400 P10/M10/K10	ALC 410 K15	ALC 345 P15/M20/K20	ALC 245 P25	ALC 145 P30/M30
SNMG 12 04 04-NF1 SNMG 12 04 08-NF1 SNMG 12 04 12-NF1			○	○	■

DNMG-NF1* 	ALC 400 P10/M10/K10	ALC 410 K15	ALC 345 P15/M20/K20	ALC 245 P25	ALC 145 P30/M30
DNMG 11 04 04-NF1 DNMG 11 04 08-NF1	□		■	□	○
DNMG 15 04 04-NF1 DNMG 15 04 08-NF1	□	□	■	■	
DNMG 15 06 04-NF1 DNMG 15 06 08-NF1 DNMG 15 06 12-NF1	□		■	■	○

CNMG-NF1* 	ALC 400 P10/M10/K10	ALC 410 K15	ALC 345 P15/M20/K20	ALC 245 P25	ALC 145 P30/M30
CNMG 12 04 04-NF1 CNMG 12 04 08-NF1 CNMG 12 04 12-NF1	■		■	■	○

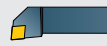
VNMG-NF1* 	ALC 400 P10/M10/K10	ALC 410 K15	ALC 345 P15/M20/K20	ALC 245 P25	ALC 145 P30/M30
VNMG 16 04 04-NF1 VNMG 16 04 08-NF1	○		○	□	○

● Coated grades ● Beschichtete Sorten ● Belagda sorter.




CVD = Chemical Vapour Deposition
PVD = Physical Vapour Deposition


Ordering example:
Bestellbeispiel: **TNMG 220404-NF1 ALC 245**
Beställningsexempel:



Page: **B44-B62**
Seite: **B44-B62**
Sida:



Page: **B130-B137**
Seite: **B130-B137**
Sida:



Page: **B102-B106**
Seite: **B102-B106**
Sida:

- Stocked - Ab Lager - Lagerfört
- Limited stocked - Begrenzt ab Lager - Begränsat lagerfört
- Offered on request - Auf Anfrage angeboten - Offereras på begäran

*  Selection of cutting geometry, page: **B27-B38**
Wahl der Schneidengeometrie, Seite: **B27-B38**
Val av skärgeometri, sida:

Selection of carbide grade, page: **B168-B171**
Wahl der Hartmetallsorte, Seite: **B168-B171**
Val av hårdmetallsort, sida:

Cutting data, page: **B196-B205**
Schnittdaten, Seite: **B196-B205**
Skärdata, sida: