



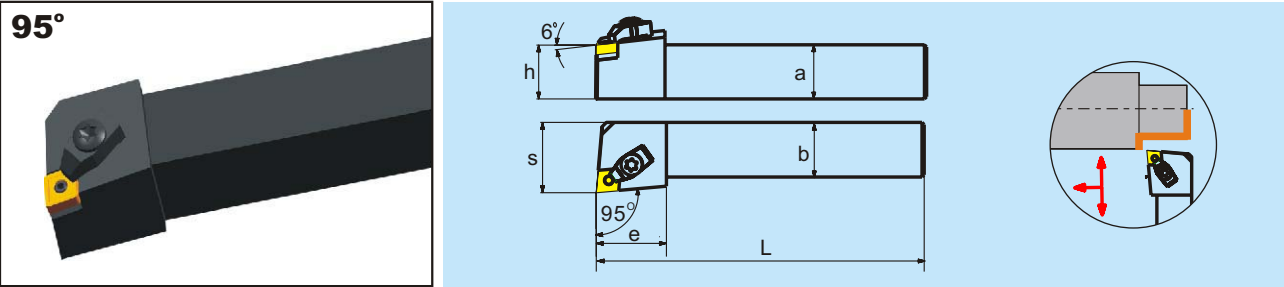
Turning tools

Ferramentas para torneamento

Herramientas para torneado

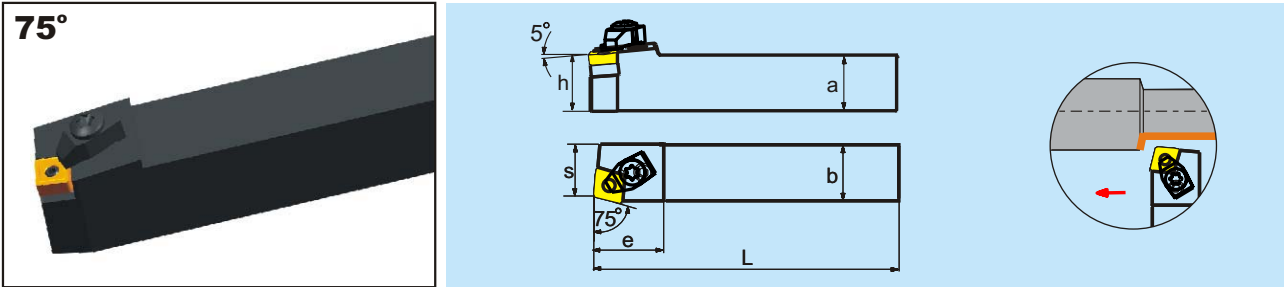
- Suportes para torneamento externo
- Portaplaquitas para torneado externo
- External, end turning toolholders

MCLNR/L



Código Codigo Type	Dimensão (mm) Dimensión (mm) Dimension (mm)								Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
	Stock		a	b	L	h	s	e	 B8-B11						
	R	L													
MCLNR/L	2020K12	●	●	20	20	125	20	25	32	CN__ 1204__	Dm6x25	C12BM	WH25L WH30L	C1RD	Tm6x19
	2525M12	●	●	25	25	150	25	32	32		Dm6x30				
	3225P12	●	●	32	25	170	32	32	32	CN__ 1606__	Dm6x30	C16BM	WH30L	C2RD	Tm8x21
	2525M16			25	25	150	25	32	38						
	3232P16	●	●	32	32	170	32	40	38		CN__ 1906__				
	3232P19			32	32	170	32	40	45						
	4040S19			40	40	250	40	50	45						

MCBNR/L



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos	Parafuso	Calço	Chave	Alavanca	Rebite	
									Plaquetas Aplicables	Tornillo	Asiento	Clave	Palanca	Remache	
		Applicable Inserts	Screw	Shim	Wrench	Lever	Shim pin								
		Stock							 B8-B11						
R	L	a	b	L	h	s	e								
MCBNR/L	2020 K12			20	20	125	20	17	32	CN__ 1204__	Dm6x25	C12BM	WH25L WH30L	C1RD	Tm6x19
	2525M12			25	25	150	25	22	32		Dm6x30				
	3225P12			32	25	170	32	22	32						
	2525M16	●	●	25	25	150	25	22	40	CN__ 1606__	Dm6x30	C16BM	WH30L	C2RD	Tm8x21
	3232P16	●	●	32	32	170	32	27	40						
	3232P19			32	32	170	32	27	45	CN__ 1906__	Dm8x35	C19BM	WH40L	C3RD	Tm10x21
	4040S19			40	40	250	40	35	45						

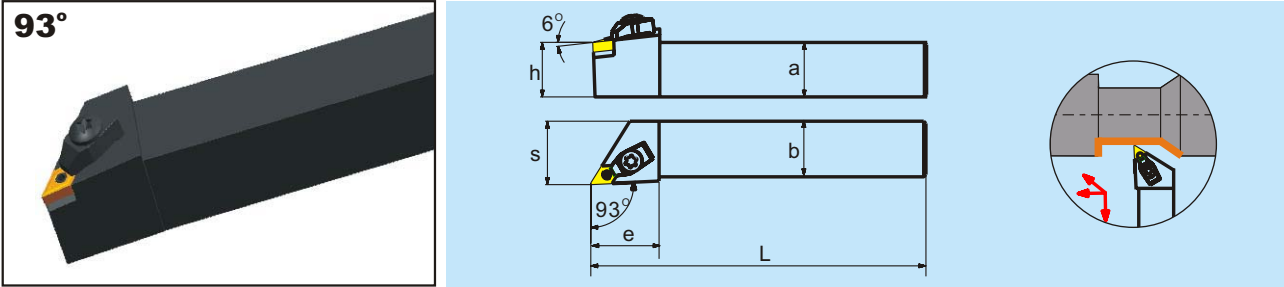
Turning tools

Ferramentas para torneamento

Herramientas para torneado

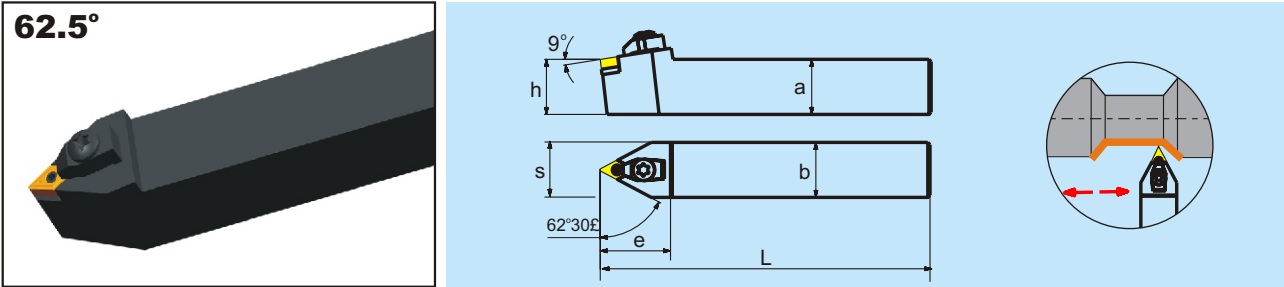
- Suportes para torneamento externo
- Portaplaquitas para torneado externo
- External, end turning toolholders

MDJNR/L



Código Codigo Type			Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
										Stock		a	b	L	h	s
			R	L												
MDJNR/L	2020 K11			20	20	125	20	25	32	DN__ 1104__	Dm6x25	D11BM	WH20L WH30L	C1RD	Tm5x13	
	2525M11			25	25	150	25	32	32		Dm6x30					
	3225P11			32	25	170	32	32	32							
	2020K15			20	20	125	20	25	38	DN__ 1506__	Dm6x25	D15BM	WH30L	C2RD	Tm6x19	
	2525M15			25	25	150	25	32	38		Dm6x30					
	3225P15			32	25	170	32	32	38							

MDPNN



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
		Stock		a	b	L	h	s	e						
		R	L												
MDPNN	2020 K11			20	20	125	20	10	35	DN__ 1104__	Dm6x25	D11BM	WH20L WH30L	C1RD	Tm5x13
	2525M11			25	25	150	25	12.5	35		Dm6x30				
	3225P11			32	25	170	32	12.5	35						
	2020 K15			20	20	125	20	10	35	DN__ 1506__	Dm6x30	D15BM	WH30L	C2RD	Tm6x19
	2525M15			25	25	150	25	12.5	38						
	3225P15			32	25	170	32	12.5	38						



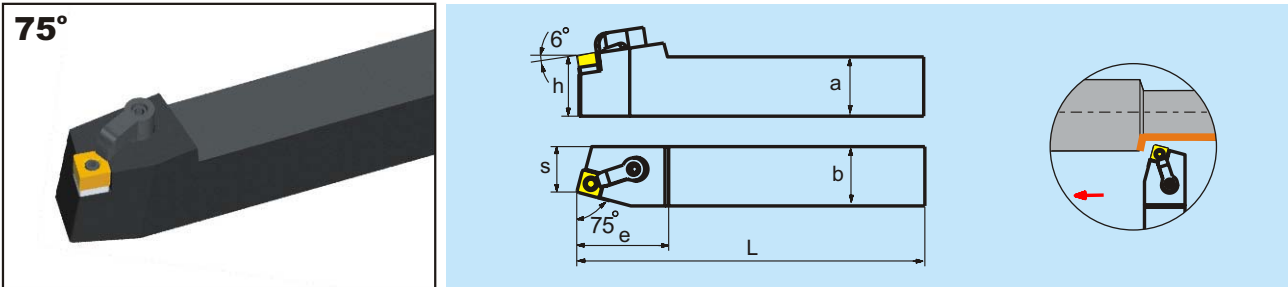
Turning tools

Ferramentas para torneamento

Herramientas para torneado

- Suportes para torneamento externo
- Portaplaquitas para torneado externo
- External, end turning toolholders

MSBNR/L



Código Codigo Type	Dimensão (mm) Dimensión (mm) Dimension (mm)								Insertos Plaquitas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin
	Stock		a	b	L	h	s	e						
	R	L												
MSBNR/L 2020 K12			20	20	125	20	17	32	SN__ 1204__	Dm6x25	S12BM	WH20L WH30L	C1RD	Tm6x19
2525M12	●	●	25	25	150	25	22	32						
3225P12	●	●	32	25	170	32	22	32						
2525M15	●	●	25	25	150	25	22	38	SN__ 1506__	Dm6x30	S15BM	WH30L	C2RD	Tm8x21
3232P15	●	●	32	32	170	32	29	38						
4032S15			40	32	250	40	29	38						
3232P19			32	32	170	32	27	45	SN__ 1906__	Dm8x35	S19BM	WH40L	C3RD	Tm10x21
4040S19			40	40	250	40	35	45						
4040S25			40	40	250	40	33	50						
			40	40	250	40	33	50	SN__ 2509__	Dm8x35	S25BM	WH40L	C3RD	Tm12x29

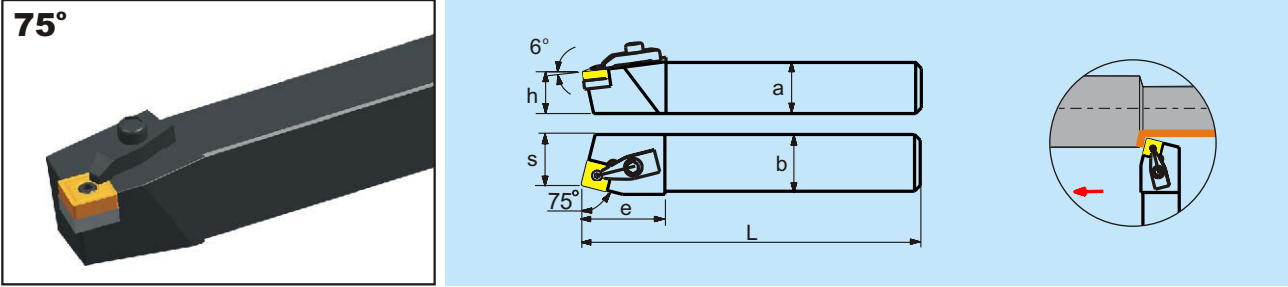
Turning tools

Ferramentas para torneamento

Herramientas para torneado

- Suportes para torneamento externo
- Portaplaquitas para torneado externo
- External, end turning toolholders

MSRNR/L



Código Codigo Type	Dimensão (mm) Dimensión (mm) Dimension (mm)								Insertos Plaquitas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin
	Stock		a	b	L	h	s	e						
	R	L												
MSRNR/L 2020 K12			20	20	125	20	22	36	SN__ 1204__	Dm6x25	S12BM	WH20L WH30L	C1RD	Tm6x19
2525M12	●	●	25	25	150	25	27	36						
3225P12	●	●	32	25	170	32	27	36						
2525M15			25	25	150	25	27	40	SN__ 1506__	Dm6x30	S15BM	WH30L	C2RD	Tm8x21
3232P15	●	●	32	32	170	32	35	40						
4032R15			40	32	200	40	35	40						
3232P19			32	32	170	32	35	45	SN__ 1906__	Dm8x35	S19BM	WH40L	C3RD	Tm10x21
4040S19			40	40	250	40	43	45						
4040S25			40	40	250	40	43	50						
			40	40	250	40	43	50	SN__ 2509__	Dm8x35	S25BM	WH40L	C3RD	Tm12x29



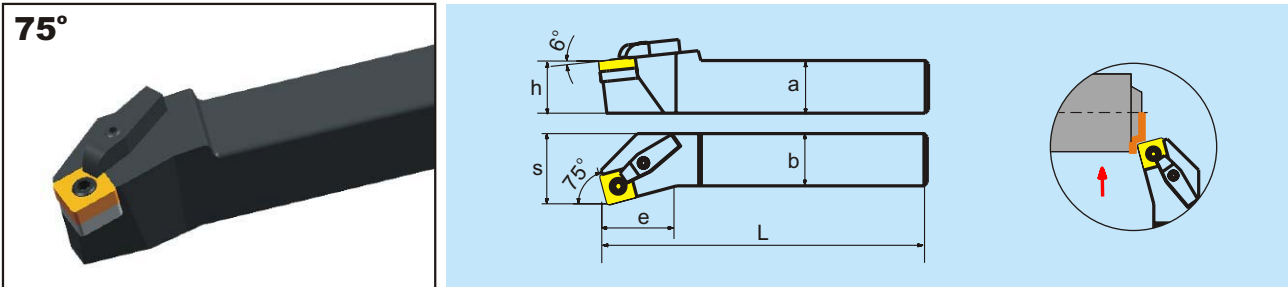
Turning tools

Ferramentas para torneamento

Herramientas para torneado

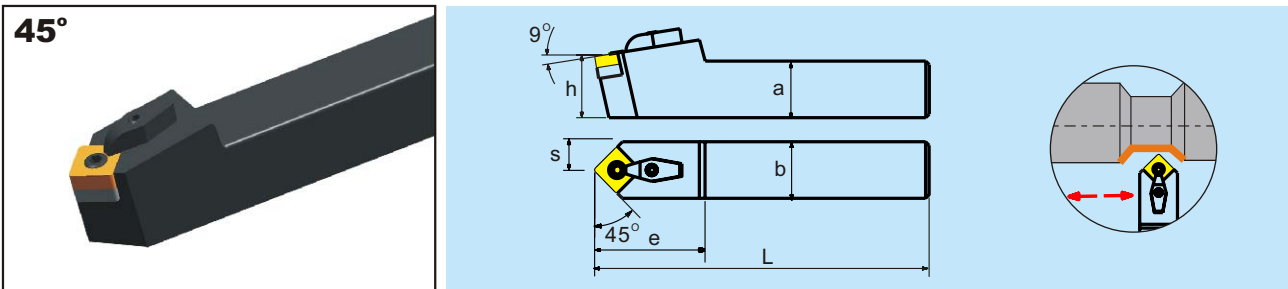
- Suportes para torneamento externo
- Portaplaquetas para torneado externo
- External, end turning toolholders

MSKNR/L



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos	Parafuso	Calço	Chave	Alavanca	Rebite		
									Plaquetas Aplicables	Tornillo	Asiento	Clave	Palanca	Remache		
		Applicable Inserts	Screw	Shim	Wrench	Lever	Shim pin									
		Stock		a	b	L	h	s	e	 B14-B20						
R	L															
MSKNR/L	2020 K12			20	20	125	20	25	32	SN__ 1204__	Dm6x25	S12BM	WH20L WH30L	C1RD	Tm6x19	
	2525M12	●	●	25	25	150	25	32	32		Dm6x30					
	3225P12	●	●	32	25	170	32	32	32							
	2525M15			25	25	150	25	32	38	SN__ 1506__	Dm6x30	S15BM	WH30L	C2RD	Tm8x21	
	3232P15	●	●	32	32	170	32	40	38							
	4032S15			40	32	250	40	40	38							
	3232P19	●	●	32	32	170	32	40	45	SN__ 1906__	Dm8x35	S19BM	WH40L	C3RD	Tm10x21	
	4040S19			40	40	250	40	50	45							
	4040S25			40	40	250	40	50	50							SN__ 2509__

MSDNN



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos	Parafuso	Calço	Chave	Alavanca	Rebite		
									Plaquetas Aplicables	Tornillo	Asiento	Clave	Palanca	Remache		
		Applicable Inserts	Screw	Shim	Wrench	Lever	Shim pin									
		Stock														
		R	L	a	b	L	h	s	e							
									B 14-B 19							
MSDNN	2020 K12			20	20	125	20	10	35	SN__ 1204__	Dm6x25	S12BM	WH20L WH30L	C1RD	Tm6x19	
	2525M12	●		25	25	150	25	12.5	35		Dm6x30					
	3225P12	●		32	25	170	32	12.5	35							
	2525M15			25	25	150	25	12.5	42	SN__ 1506__	Dm6x30	S15BM	WH30L	C2RD	Tm8x21	
	3232P15	●		32	32	170	32	16	42							
	4032S15			40	32	250	40	16	42							



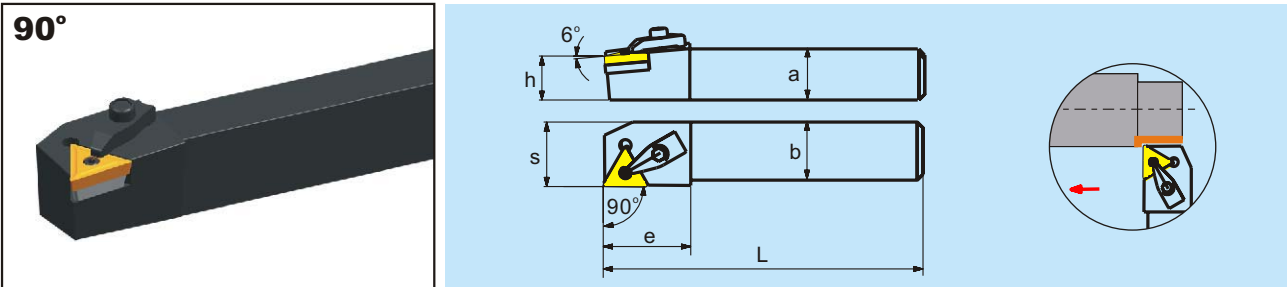
Turning tools

Ferramentas para torneamento

Herramientas para torneado

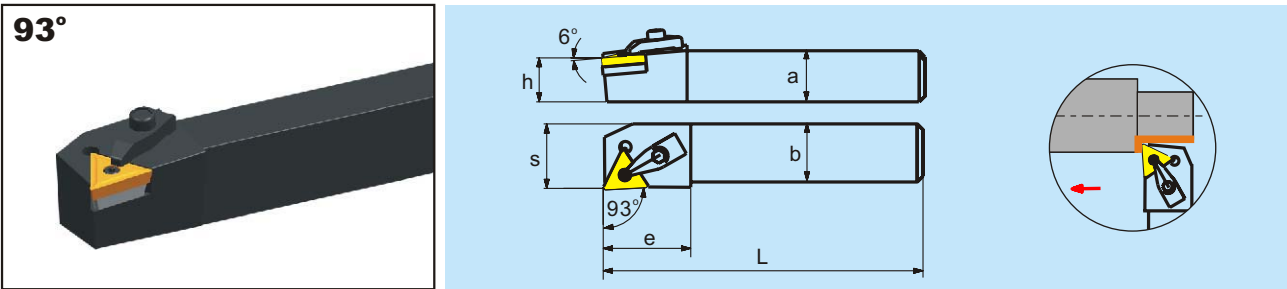
- Suportes para torneamento externo
- Portaplaquetas para torneado externo
- External, end turning toolholders

MTGNR/L



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
		Stock		a	b	L	h	s	e						
		R	L												
MTGNR/L	2020-K16	●	●	20	20	125	20	25	33	TN__ 1604__	Dm6x25	T16BM	WH25L	C1RD	Tm5x13
	2525-M16	●	●	25	25	150	25	32	33						
	3225-P16			32	25	170	32	32	33						
	2525-M22			25	25	150	25	32	35	TN__ 2204__	Dm6x30	T22BM	WH30L	C2RD	Tm6x17
	3225-P22			32	25	170	32	32	35						

MTJNR/L



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
		Stock		a	b	L	h	s	e						
		R	L												
MTJNR/L	2020-K16	●	●	20	20	125	20	25	32	TN__ 1604__	Dm6x25	T16BM	WH25L	C1RD	Tm5x13
	2525-M16	●	●	25	25	150	25	32	32						
	3225-P16	●	●	32	25	170	32	32	32						
	2525-M22	●	●	25	25	150	25	32	36	TN__ 2204__	Dm6x30	T22BM	WH30L	C2RD	Tm6x17
	3225-P22	●	●	25	32	170	32	32	36						



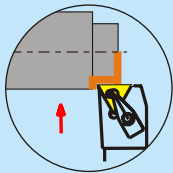
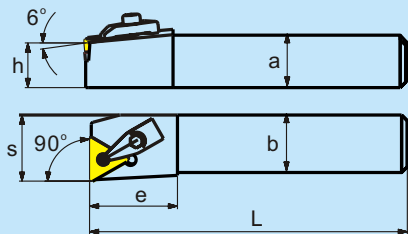
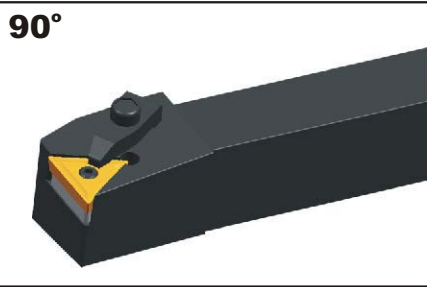
Turning tools

Ferramentas para torneamento

Herramientas para torneado

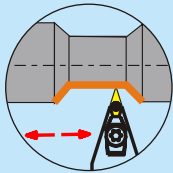
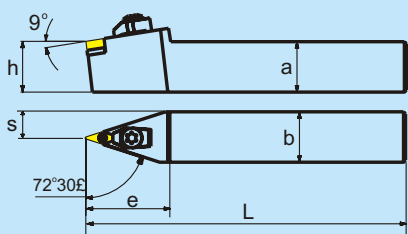
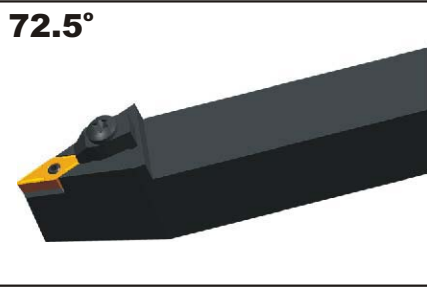
- Suportes para torneamento externo
- Portaplaquetas para torneado externo
- External, end turning toolholders

MTFNR/L



Código Codigo Type	Dimensão (mm) Dimensión (mm) Dimension (mm)								Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
	Stock			a	b	L	h	s	e						
	R	L													
MTFNR/L 2020-K16	●	●		20	20	125	20	25	32	TN__ 1604__	Dm6x25	T16BM	WH25L	C1RD	Tm5x13
2525-M16	●	●		25	25	150	25	32	32						
3225-P16				32	25	170	32	32	32						
2525-M22				25	25	150	25	32	36	TN__ 2204__	Dm6x30	T22BM	WH30L	C2RD	Tm6x17
3225-P22				32	25	170	32	32	36						

MVVNN



Código Codigo Type	Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin
	Stock	a	b	L	h	s	e						
								B24-B26					
MVVNN 2020 K16		20	20	125	20	10	45	VN__ 1604__	Dm6x25	V16BM	WH20L WH30L	C3RD	Tm5x13
2525M16	●	25	25	150	25	12.5	45		Dm6x30				
3225P16		32	25	170	32	12.5	45						
3232P16		32	32	170	32	16	45						



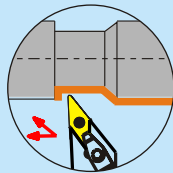
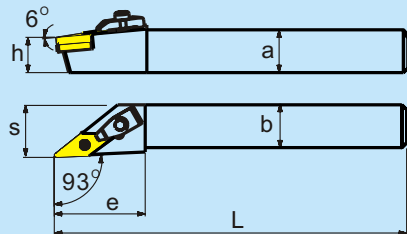
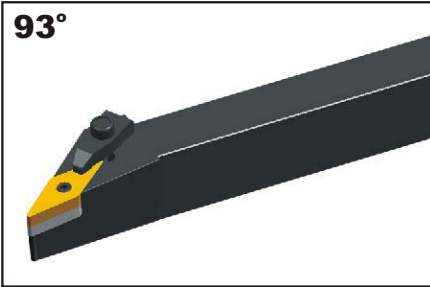
Turning tools

Ferramentas para torneamento

Herramientas para torneado

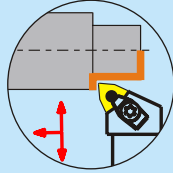
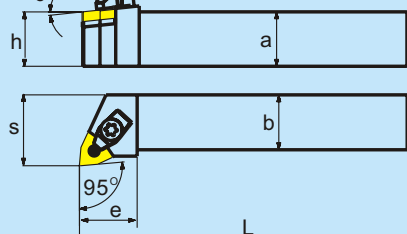
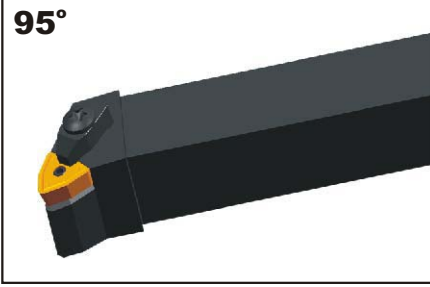
- Suportes para torneamento externo
- Portaplaquetas para torneado externo
- External, end turning toolholders

MVJNR/L



Código Código Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin	
		Stock		a	b	L	h	s	e	 B24-B26					
		R	L												
MVJNR/L	2020 K16	●	●	20	20	125	20	25	45	VN__ 1604__	Dm6x25	V16BM	WH25L WH30L	C3RD	Tm5x13
	2525M16	●	●	25	25	150	25	32	45		Dm6x30				
	3225P16			32	25	170	32	32	45						
	3232P16			32	32	170	32	40	45						

MWLNR/L



Código Codigo Type			Dimensão (mm) Dimensión (mm) Dimension (mm) <th> Insertos Plaquetas Aplicables Applicable Inserts </th> <th> Parafuso Tornillo Screw </th> <th> Calço Asiento Shim </th> <th> Chave Clave Wrench </th> <th> Alavanca Palanca Lever </th> <th> Rebite Remache Shim pin </th>							Insertos Plaquetas Aplicables Applicable Inserts	Parafuso Tornillo Screw	Calço Asiento Shim	Chave Clave Wrench	Alavanca Palanca Lever	Rebite Remache Shim pin
										Stock					
			R	L	a	b	L	h	s	e					
MWLNR/L	2020 K06	●	●	20	20	125	20	25	30	WN__0604__	Dm6x25	W06BM	WH20L WH30L	C1RD	Tm5x13
	2525M06	●	●	25	25	150	25	32	30		Dm6x30				
	2020 K08	●	●	20	20	125	20	25	30	WN__0804__	Dm6x25		WH25L WH30L		
	2525M08	●	●	25	25	150	25	32	35		Dm6x30				
	3225P08	●	●	32	25	170	32	32	35	W08BM		C1RD	Tm6x17		
	3232P08			32	32	170	32	40	35						



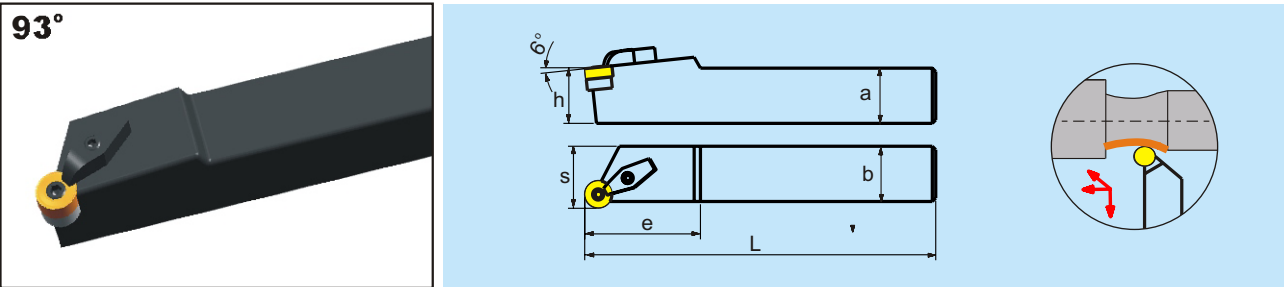
Turning tools

Ferramentas para torneamento

Herramientas para torneado

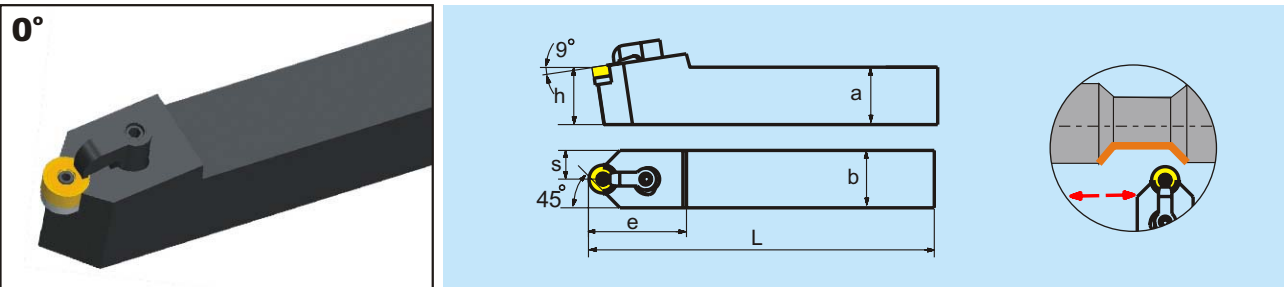
- Suportes para torneamento externo
- Portaplaquetas para torneado externo
- External, end turning toolholders

MRGNR/L



■ Código ■ Codigo ■ Type		■ Dimensão (mm) ■ Dimensión (mm) ■ Dimension (mm)							■ Insertos	■ Parafuso	■ Calço	■ Chave	■ Alavanca	■ Rebite	
									■ Plaquetas Aplicables	■ Tornillo	■ Asiento	■ Clave	■ Palanca	■ Remache	
		■ Applicable Inserts	■ Screw	■ Shim	■ Wrench	■ Lever	■ Shim pin								
		Stock		a	b	L	h	s	e	 B28-B29					
R	L														
MRGNR/L	2020 K12			20	20	125	20	25	32	RN__ 1204__	Dm6x25	R12BM	WH25L WH30L	C1RD	Tm6x17
	2525M12	●		25	25	150	25	32	32		Dm6x30				
	3225P12			32	25	170	32	32	32						
	3232P12			32	32	170	32	40	32						

MRDNN



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos	Parafuso	Calço	Chave	Alavanca	Rebite
									Plaquetas Aplicables	Tornillo	Asiento	Clave	Palanca	Remache
		Applicable Inserts	Screw	Shim	Wrench	Lever	Shim pin							
		Stock	a	b	L	h	s	 B28-B29						
MRDNN	2020 M12	●	20	20	150	20	10	RN__ 1204__	Dm6x25	R12BM	WH25L WH30L	C1RD	Tm6x17	
	2525M12	●	25	25	150	25	12.5							
	3225P12	●	32	25	150	32	12.5							
	3232P12		32	32	170	32	16							



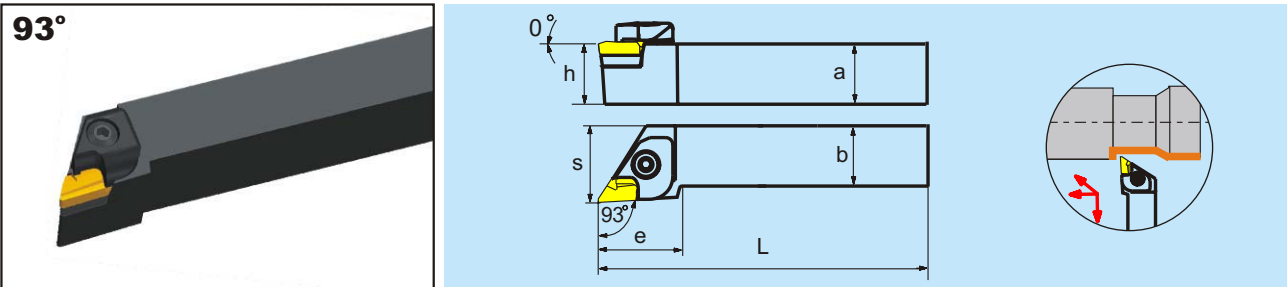
Turning tools

Ferramentas para torneamento

Herramientas para torneado

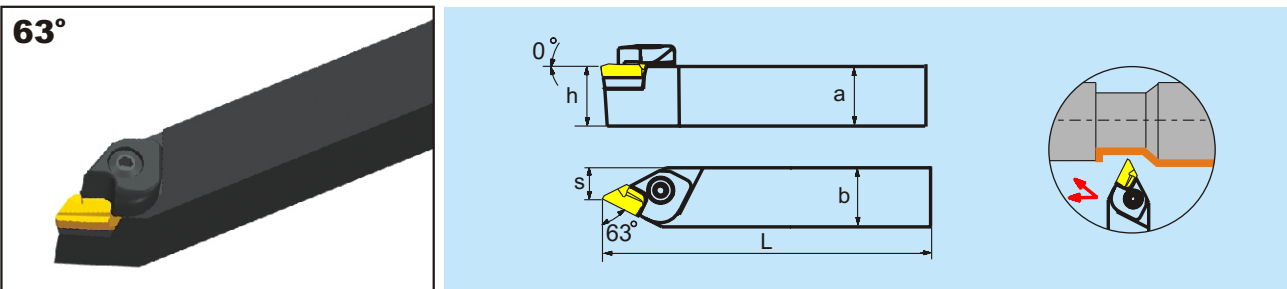
- Suportes para torneamento externo
- Portaplaquetas para torneado externo
- External, end turning toolholders

CKJNR/L



■ Código ■ Codigo ■ Type		■ Dimensão (mm) ■ Dimensión (mm) ■ Dimension (mm)							■ Insertos ■ Plaquetas Aplicables ■ Applicable Inserts	■ Grampo ■ Grampo ■ Clamp	■ Clamp ■ Screw ■ Parafuso	■ Mola ■ Resorte ■ Spring	■ Pino ■ Pivote ■ Pin	■ Calço ■ Asiento ■ Shim	■ Parafuso ■ Shim ■ Screw	■ Chave ■ Clave ■ Wrench
		Stock	a	b	L	h	s	e								
									B52							
CKJNR	2525-M16	●	25	25	150	25	32	32	KN_ 1604_R	C6R1T	CM6x25A	SPR1, SPR2	P0515	K16CC	SM3x10B	WH20L, WH40L
	3232-P16		32	32	170	32	40	32								
	4040-R16		40	40	200	40	50	32								
CKJNL	2525-M16	●	25	25	150	25	32	32	KN_ 1604_L	C6L1T			K16 CCL			
	3232-P16		32	32	170	32	40	32								
	4040-R16		40	40	200	40	50	32								

CKNNR/L



Código Codigo Type		Dimensão (mm) Dimensión (mm) Dimension (mm)							Insertos Plaquetas Aplicables Applicable Inserts	Grampo Grampo Clamp	Clamp Screw Parafuso	Mola Resorte Spring	Pino Pivote Pin	Calço Asiento Shim	Parafuso Tornillo Screw	Chave Clave Wrench	
		Stock		a	b	L	h	s	e	 B52							
		R	L														
		CKNNR	2525-M16			25	25	150	25	14.4	37	KN__ 1604__R	C6R1T	CM6x25A	SPR1, SPR2	P0515	K16CC
	3232-P16			32	32	170	32	16.8	37								
CKNNL	2525-M16			25	25	150	25	14.4	37	KN__ 1604__L	C6L1T	CM6x25A	SPR1, SPR2	P0515	K16CCL	SM3x10B	
	3232-P16			32	32	170	32	16.8	37								



Turning tools
Ferramentas para Torneamento

ISO-Chave de Códigos para Ferramentas de Torneamento Interno
ISO-Indexable insert internal turning toolholders code key

Exemplel

S16R-SDUCR07

μ₃ĐÊ Type of bars

μ₃Ö¼ Shank diameter

μ₃³ Tool length

Ñ½·Ê Clamping system

μÆĐ× Insert shape

ÖÖÊÑ Manufacturer's option

ÇİÊ³ Cutting edge length

Çİİ Hand of tools

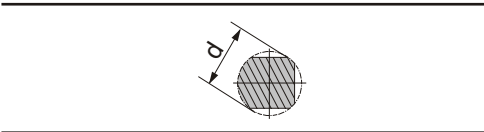
μÆ°½ Insert clearance angle

μİĐ× Bar style

μ₃ĐÊ Type of bars

1/4° Symbol	A	E	C	S	X
μ ₃ ΔĐ Type of shank	„+ÖÄÊŁ Steel Shank+ Oil Hole	ÖÖ°½, +ÖÄÊŁ Carbide Shank +Oil Hole	ÖÖ°½, Carbide Shank	„ Steel Shank	ÊÖİÊμÆ Special Insert Application

μ₃Ö¼ Shank diameter



μ₃³ Tool length

H	K	M	N	Q	R	S	T	U	V
100	125	150	160	180	200	250	300	350	400

Ñ½·Ê Clamping system

Ñ·Ñ½Ê Top clamping	„Ñ½Ê Hole clamping	ÄÑ½Ê Screw on
C	P	S

μÆĐ× Insert shape

μİĐ× Bar style

K	F	U	L	P

μÆ°½ Insert clearance angle

B	C	P	N

Çİİ Hand of tools

R	L

ÇİÊ³ Cutting edge length

--	--	--	--	--

ÖÖÊÑ Manufacturer's option

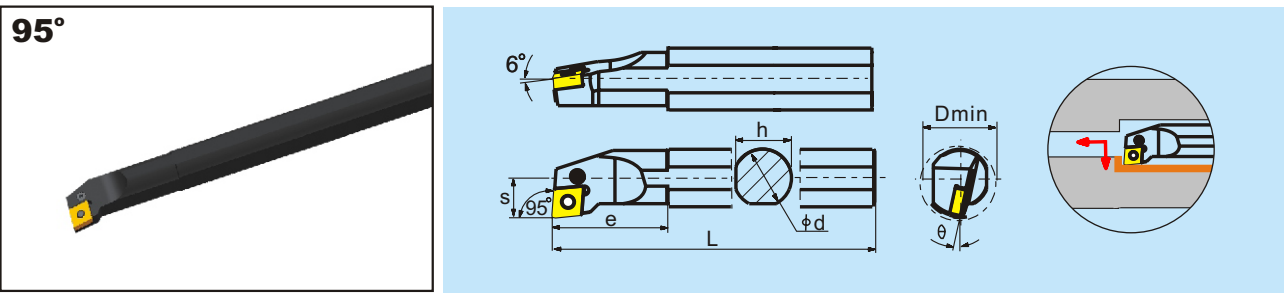
D=¼·ÆÖÄf, 3°+1,0mm	E=¼·ÆÖÄf, 3°+2,0mm	R=Öμ±	W=ĐŁ¼½	X=±İ
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Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders



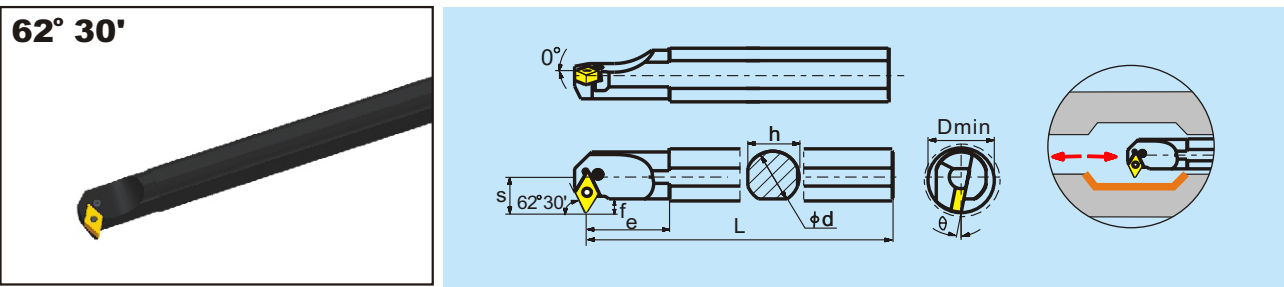
PCLNR/L



Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Lever Alavanca	Shim Calço	Shim pin Rebite	
	Stock		Dmin	φd	h	L	s	θ°	e	 B8-B11					
	R	L													
S16R-PCLNR/L09	●	●	20	16	15	200	11	-12°	28	CN__ 0903__	LEM5x9B	WH20L	L3C		
S20S-PCLNR/L09	●	●	25	20	18	250	13	-11°	31						
S25T-PCLNR/L09	●	●	32	25	23	300	17	-10°	35						
S25T-PCLNR/L12	●	●	32	25	23	300	17	-12°	40	CN__ 1204__	LEM6x13.4A	WH25L	L4A	C12APB	SP4
S32U-PCLNR/L12	●	●	44	32	30	350	22	-10°	50		LEM8x21	WH30L	L4		
S40V-PCLNR/L12	●	●	54	40	37	400	27	-10°	55						
S50W-PCLNR/L12	●	●	63	50	47	450	35	-10°	56	CN__ 1906__	LEM10x27	WH40L	L6	C19AP	SP6
S50W-PCLNR/L19	●	●	63	50	47	450	35	-10°	63						
*A25R-PCLNR/L12			32	25	24	200	17	-12°	40						
*A32S-PCLNR/L12			44	32	31	250	22	-10°	50						

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

PDSNR/L



Type Tipo	Dimension(mm) Dimensão (mm)										Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Lever Alavanca	Shim Calço	Shim pin Rebite
	Stock		Dmin	φd	h	L	s	θ°	e	f	 B11-B14					
	R	L														
S32U-PDSNR/L15	●	●	40	32	30	350	22	-11°	45	8.5	DN__ 1506__	LEM8x21	WH30L	L4B	D15AP	SP4
S40V-PDSNR/L15	●		50	40	37	400	27	-11°	43	9.4						
S32V-PDSNR/L15-3	●		40	32	32	350	22	-11°	45	8.5	DN__ 1504__	LEM8x21	WH30L	L4	D15AP	SP4
S40V-PDSNR/L15-3			50	40	37	400	27	-11°	43	9.4						
*A32S-PDSNR/L15			40	32	31	250	22	-11°	45	8.5	DN__ 1506__	LEM8x21	WH30L	L4B	D15AP	SP4
*A32S-PDSNR/L15-3			40	32	31	250	22	-11°	45	8.5	DN__ 1504__	LEM8x21	WH30L	L4	D15AP	SP4

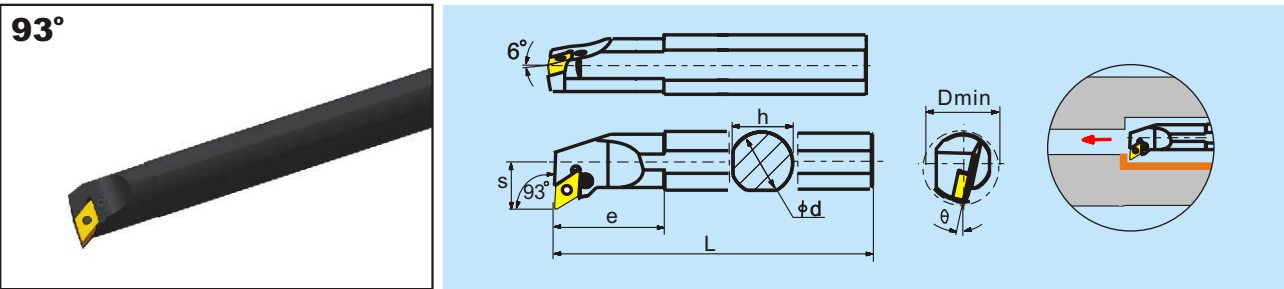
* Barra de aço com refrigeração interna / Coolant Hold Boring Bar



Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

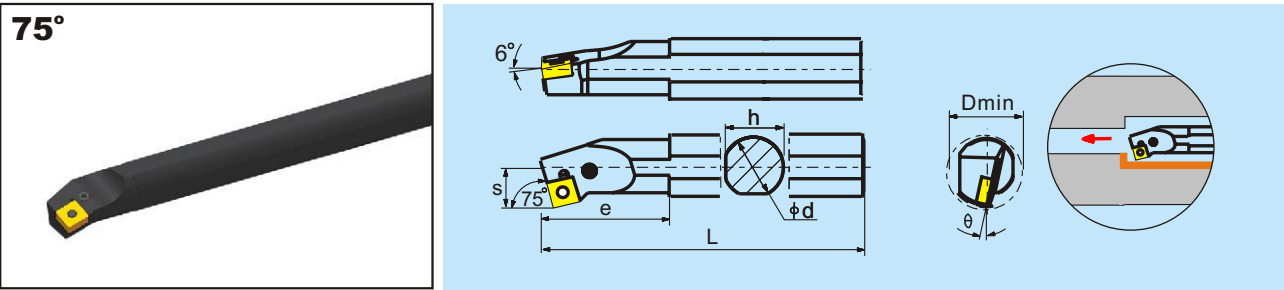
PDUNR/L



Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Lever Alavanca	Shim Calço	Shim pin Rebite	
	Stock		Dmin	φd	h	L	s	θ°							e
	R	L													
															
									B11-B14						
S20S-PDUNR/L 11			25	20	18	250	13	-16°	30	DN__ 1104__	LEM5x12B	WH20L	L3D		
S25T-PDUNR/L 11			32	25	23	300	17	-13°	35				L3		
S32U-PDUNR/L 11			40	32	30	350	22	-16°	40					D11AP	SP3
S32U-PDUNR/L 15			40	32	30	350	22	-16°	50	DN__ 1506__	LEM8x21	WH30L	L4B	D15AP	SP4
S40V-PDUNR/L 15			50	40	37	400	27	-11°	50						
S32U-PDUNR/L 15-3			40	32	30	350	22	-16°	50						
S40V-PDUNR/L 15-3			50	40	37	400	27	-11°	50	DN__ 1504__	LEM8x21	WH30L	L4	D15AP	SP4
*A32S-PDUNR/L 15			40	32	31	250	22	-16°	50	DN__ 1506__	LEM8x21	WH30L	L4B	D15AP	SP4
*A32S-PDUNR/L 15-3			40	32	31	250	22	-16°	50	DN__ 1504__	LEM8x21	WH30L	L4	D15AP	SP4

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

PSKNR/L



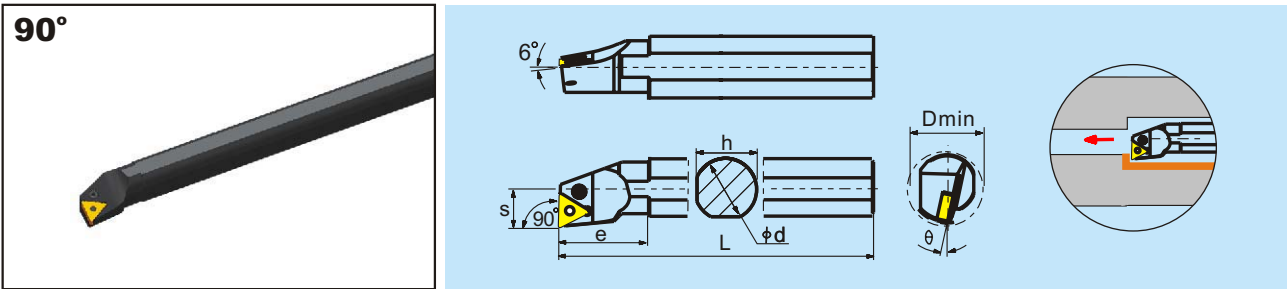
Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Lever Alavanca	Shim Calço	Shim pin Rebite	
	Stock		Dmin	φd	h	L	s	θ°							e
	R	L													
									 B14-B19						
S25T-PSKNR/L 12			32	25	23	300	17	-12°	42	SN__ 1204 __	LEM6x13.4A	WH25L	L4A		
S32U-PSKNR/L 12			44	32	30	350	22	-10°	50		LEM8x21	WH30L	L4	S12APB	SP4
S40V-PSKNR/L 12			54	40	37	400	27	-10°	55						
A25R-PSKNR/L 12			32	25	24	200	17	-12°	42		LEM6x13.4A	WH25L	L4A		
A32S-PSKNR/L 12			44	32	31	250	22	-10°	50		LEM8x21	WH30L	L4	S12APB	SP4

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

PTFNR/L



Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Lever Alavanca	Shim Calço	Shim pin Rebite							
	Stock $\varnothing$		Dmin	ϕd	h	L	s	θ°							e						
	R	L																			
S16R-PTFNR/L 11			20	16	15	200	11	-14°	28	 B20-B24											
S20S-PTFNR/L 11			25	20	18	250	13	-12°	31							TN__ 1103__	LEM5x9B	WH20L	L2		
S25T-PTFNR/L 11			32	25	23	300	17	-10°	35												
S25T-PTFNR/L 16	●		32	25	23	300	17	-12°	40	LEM6x17	WH25L	L3	T16APB	SP3							
	●		44	32	30	350	22	-10°	50												
S40V-PTFNR/L 16	●		54	40	37	400	27	-10°	55												
*A25R-PTFNR/L 16			32	25	24	200	17	-12°	40						LEM5x12B	WH20L	L3B				
*A32S-PTFNR/L 16			44	32	31	250	22	-10°	50	LEM6x17	WH25L	L3	T16APB	SP3							

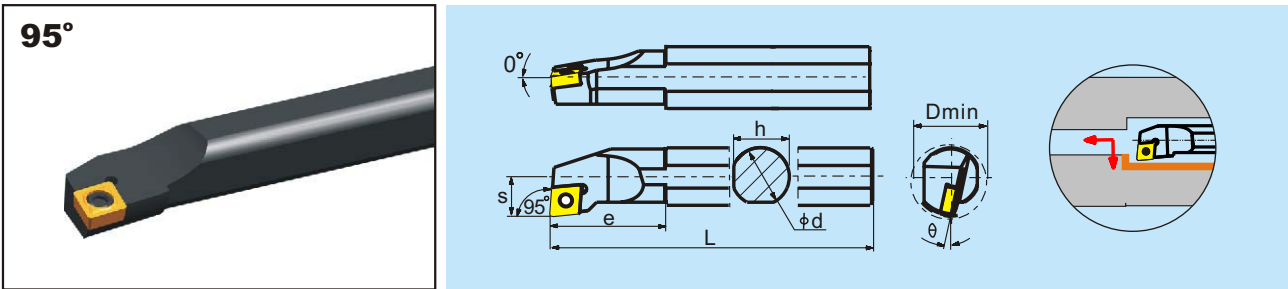
* Barra de aço com refrigeração interna / Coolant Hold Boring Bar



Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

SCLCR/L



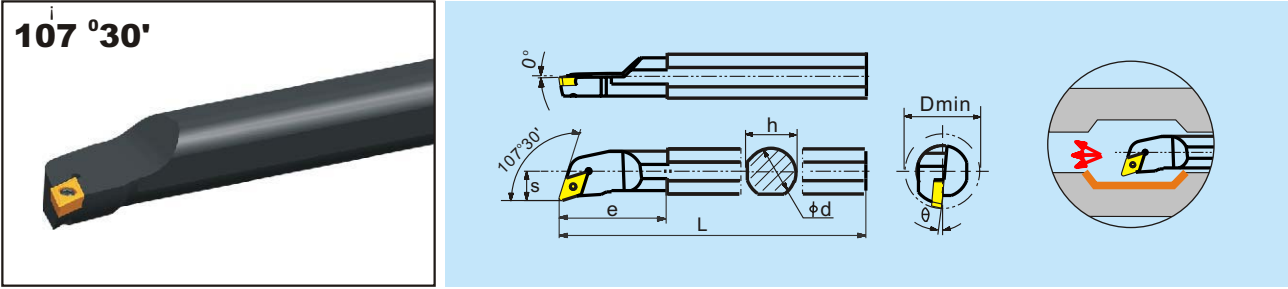
Type Tipo	Dimension(mm) Dimensão (mm)									Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Shim Calço	Shim Screw Parafuso Calço
	Stock		Dmin	φd	h	L	s	θ°	e					
	R	L												
S08K-SCLCR/L 06	●	●	10	8	7	125	5	-15°	14	CC_T 0602__	I60M2.5x6.5	WT07P		
S10M-SCLCR/L 06	●	●	12	10	9	150	6	-13°	14					
S12M-SCLCR/L 06	●	●	16	12	11	150	9	-10°	25					
S12M-SCLCR/L 09	●	●	16	12	11	150	9	-10°	25					
S16R-SCLCR/L 09	●	●	20	16	15	200	11	-12°	32.5	CC_T 09T3__	I60M3.5x8	WT15P		
S20S-SCLCR/L 09	●	●	25	20	18	250	13	-8°	38					
S25T-SCLCR/L 09	●	●	32	25	23	300	17	-6°	45					
S25T-SCLCR/L 12	●	●	32	25	23	300	17	-6°	45	CC_T 1204__	I60M3.5x10	WT15P	C12BS	SM6x10XA
S32U-SCLCR/L 12	●	●	40	32	30	350	22	-10°	50					
S40V-SCLCR/L 12	●	●	50	40	37	400	27	-8°	60					
*A08F-SCLCR/L 06	●	●	10	8	7.5	80	5	-5°	14	CC_T 0602__	I60M2.5x6.5	WT07P		
*A10H-SCLCR/L 06	●	●	12	10	9.5	100	6	-13°	14					
*A12K-SCLCR/L 06	●	●	16	12	11	125	9	-10°	25					
*A12K-SCLCR/L 09	●	●	16	12	11	125	9	-10°	25					
*A16M-SCLCR/L 09	●	●	20	16	15	150	11	-12°	32.5	CC_T 09T3__	I60M3.5x8	WT15P		
*A20Q-SCLCR/L 09	●	●	25	20	19	180	12	-8°	38					
*A25R-SCLCR/L 09	●	●	32	25	24	200	17	-6°	45					
*A25R-SCLCR/L 12	●	●	32	25	24	200	17	-6°	45					
*A32S-SCLCR/L 12	●	●	40	32	31	250	32	-10°	50	CC_T 1204__	I60M4x11X	WT15P WH40L,WT15P	C12BS	SM6x10XA

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

SDQCR/L



Type Tipo	Dimension(mm) Dimensão (mm)									Applicable Inserts Insertos	Screw Parafuso	Wrench Chave
	Stock		Dmin	φd	h	L	s	θ°	e			
	R	L										
S10M-SDQCR/L 07			13	10	9	150	7	-8°	20	DC_T 0702__	I60M2.5x6.5	WT07P
S12M-SDQCR/L 07			16	12	11	150	9	-8°	22			
S16R-SDQCR/L 07			20	16	15	200	11	-6°	27			
S20S-SDQCR/L 11			25	20	18	250	13	-6°	32			
S25T-SDQCR/L 11			32	25	23	300	17	-6°	32	DC_T 11T3__	I60M3.5x8	WT15P
*A10H-SDQCR/L 07			13	10	9.5	100	7	-8°	20		I60M3.5x10	
*A12K-SDQCR/L 07			16	12	11	125	9	-8°	20	DC_T 0702__	I60M2.5x6.5	WT07P
*A16M-SDQCR/L 11			20	16	15	150	11	-6°	27			
*A20Q-SDQCR/L 11			25	20	19	180	13	-6°	32			
*A25R-SDQCR/L 11			32	25	24	200	17	-6°	32			

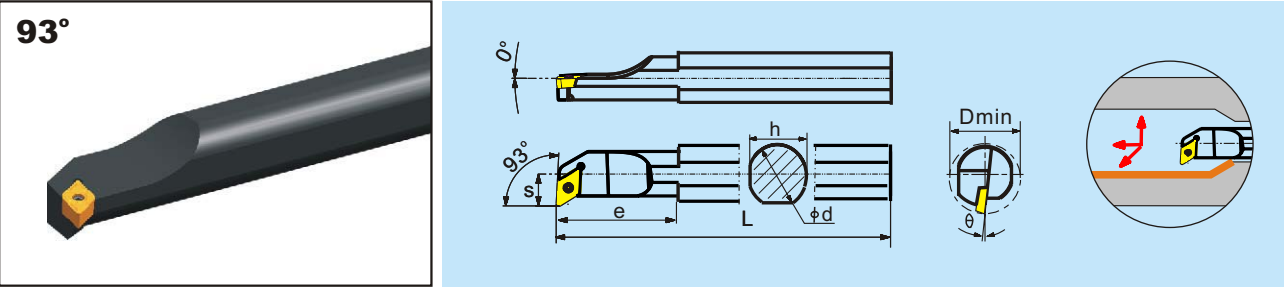
* Barra de aço com refrigeração interna / Coolant Hold Boring Bar



Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

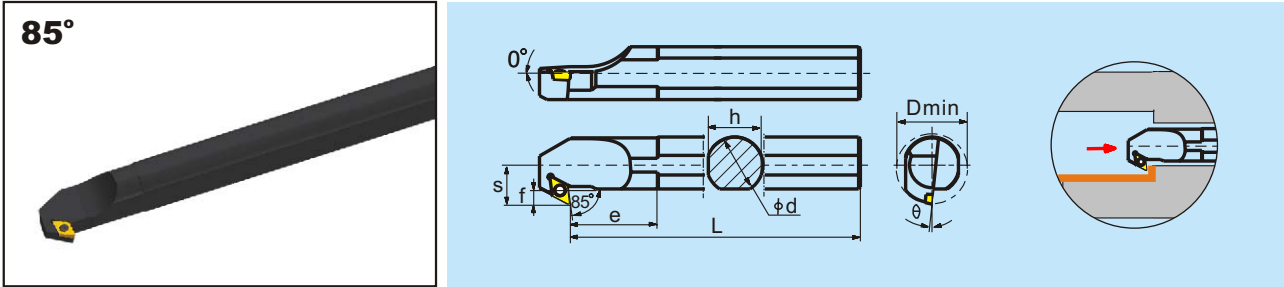
SDUCR/L



Type Tipo	Dimension(mm) Dimensão (mm)										Applicable Inserts Insertos	Screw Parafuso	Wrench Chave		
	Stock		Dmin	φd	h	L	s	θ°	e						
	R	L													
											 B32-B33				
S10M-SDUCR/L 07	●	●	13	10	9	150	7	-8°	0		DC_ 0702__	I60M2.5x6.5	WT07P		
S12M-SDUCR/L 07	●	●	16	12	11	150	9	-8°	22						
S16R-SDUCR/L 07	●	●	20	16	15	200	11	-6°	27						
S20S-SDUCR/L 11	●	●	25	20	18	250	13	-6°	40		DC_ 11T3__	I60M3.5x8	WT15P		
S25T-SDUCR/L 11	●	●	32	25	23	300	17	-6°	46						
*A10H-SDUCR/L 07			13	10	9.5	150	7	-8°	0						
*A12K-SDUCR/L 07			16	12	11	125	9	-8°	22		DC_ 0702__	I60M2.5x6.5	WT07P		
*A16M-SDUCR/L 07			20	16	15	150	11	-6°	27						
*A20Q-SDUCR/L 11			25	20	19	180	13	-6°	40						
*A25R-SDUCR/L 11			32	25	24	200	17	-6°	46		DC_ 11T3__	I60M3.5x8	WT15P		

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

SDZCR/L



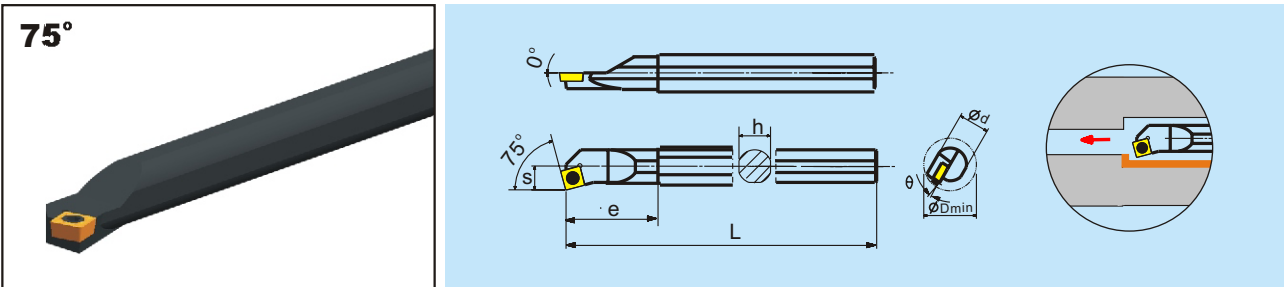
Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Shim Calço	Shim Screw Parafuso Calço	
	Stock		Dmin	φd	h	L	s	θ°	e	 B32-B33				
	R	L												
S25T-SDZCR/L 11	●		32	25	23	300	17	-6°	30	DC_ 11T3__	I60M3.5x10	WT15P		
S32U-SDZCR/L 11	●		40	32	30	350	22	-6°	39		I60M3.5x12	WT15P WH35L	D11BS	SM5x8.65XA
S40V-SDZCR/L 11			50	40	37	400	27	-4°	47		I60M3.5x10	WT15P		
*A25R-SDZCR/L 11			32	25	24	200	17	-6°	30		I60M3.5x12	WT15P, WH35L	D11BS	SM5x8.65XA
*A32S-SDZCR/L 11			40	32	31	250	22	-6°	39					

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

SSKCR/L



Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Shim Calço	Shim Screw Parafuso Calço	
	Stock		Dmin	φd	h	L	s	θ°	e	 B34-B36				
	R	L												
S12M-SSKCR 09			16	20	11	150	9	-10°	26	SC_ T 09T3__	I60M3.5x8	WT15P		
S16R-SSKCR 09			20	16	15	200	11	-11°	32.5					
S20S-SSKCR 09	●		25	20	18	250	13	-8°	34.5					
S25T-SSKCR 12	●	●	32	25	23	300	17	-8°	36.3	SC_ T 1204__	I60M4x11X	WT15P WT40L	S12BS	SM6x11XA
S32U-SSKCR 12	●		40	32	30	350	22	-10°	43.5					
*A12K-SSKCR 09			16	12	11	125	9	-10°	26					
*A16M-SSKCR 09			20	16	15	150	11	-11°	32.5	SC_ T 09T3__	I60M3.5x8	WT15P		
*A20Q-SSKCR 09			25	20	19	180	12	-8°	34.5					
*A25R-SSKCR 12			32	25	24	200	17	-8°	36.3	SC_ T 1204__	I60M4x11X	WT15P WT40L	S12BS	SM6x11XA
*A32S-SSKCR 12			40	32	31	250	22	-10°	43.5					

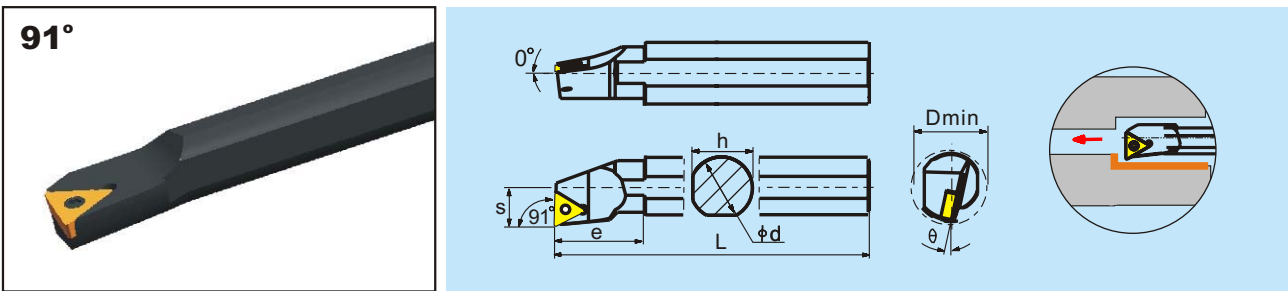
* Barra de aço com refrigeração interna / Coolant Hold Boring Bar



Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

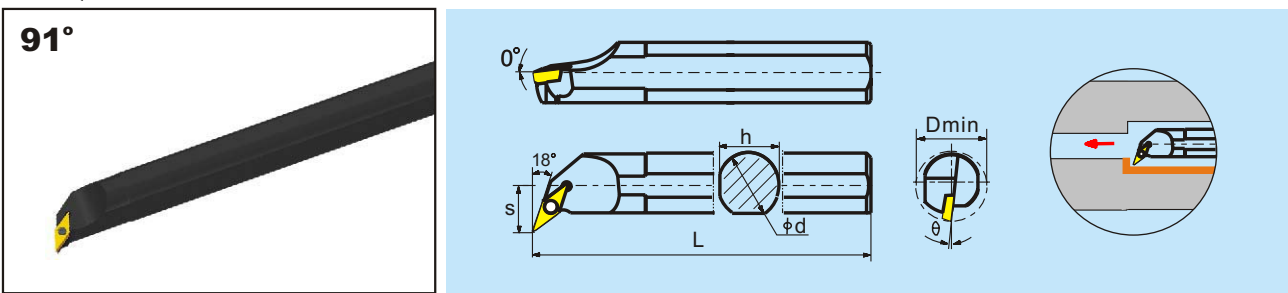
STFCR/L



Type Tipo	Dimension(mm) Dimensão (mm)								Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Shim Calço	Shim Screw Parafuso Calço			
	Stock		Dmin	φd	h	L	s	θ°	e	 B40-B41						
	R	L														
S12M-STFCR/L 11	●	●	16	12	11	150	9	-10°	30	TC_ T 1102__	I60M2.5x6.5	WT07P				
S16R-STFCR/L 11	●	●	20	16	15	200	11	-6°	35							
S20S-STFCR/L 11	●		25	20	18	250	13	-3°	36							
S25T-STFCR/L 16	●	●	32	25	23	300	17	-6°	49	TC_ T 16T3__	I60M3.5x10	WT15P				
S32U-STFCR/L 16	●		40	32	30	350	22	-10°	50		I60M3.5x12	WT15 WH35L			T16BS	SM5x8.65XA
S40V-STFCR/R 16	●		50	40	37	400	27	-8°	60							
*A12K-STFCR/L 11			16	12	11	125	9	-10	30	TC_ T 1102__	I60M2.5x6.5	WT07P				
*A16M-STFCR/L 11			20	16	15	150	11	-6°	35							
*A20Q-STFCR/L 11			25	20	19	180	13	-3°	36							
*A25R-STFCR/L 16			32	25	24	200	17	-6°	49	TC_ T 16T3__	I60M3.5x10	WT15P				
*A32S-STFCR/L 16			40	32	31	250	22	-10°	50		I60M3.5x12	WT15 WH35L			T16BS	SM5x8.65XA

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

SVQBR/L



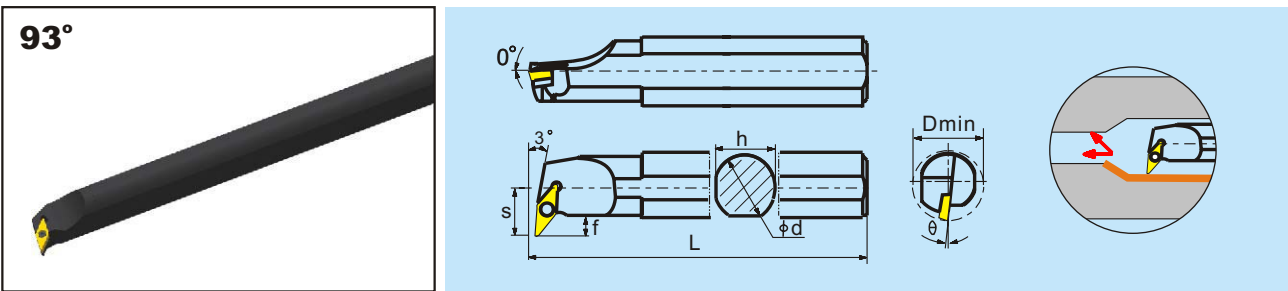
Type Tipo	Dimension(mm) Dimensão (mm)										Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Shim Calço	Shim Screw Parafuso Calço
	Stock		Dmin	φd	h	L	s	θ°	e	f	 B46-B47				
	R	L													
S32U-SVQBR/L 16	●	●	40	32	30	350	22	-8°	56	8.4	VB_ T 1604__	I60M3.5x12	WT15P WH35L	V16BS	SM5x8.65XA
S40V-SVQBR/L 16			50	40	37	400	27	-8°	64	9.4					
*A32S-SVQBR/L 16			40	32	31	250	22	-8°	56	8.4					

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

Turning tools
Ferramentas para Torneamento

Ferramentas para Torneamento Interno
Internal turning toolholders

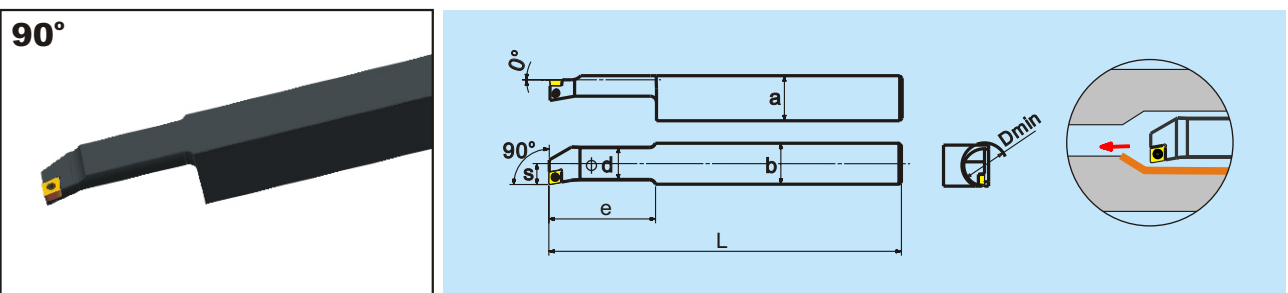
SVUBR/L



Type Tipo	Dimension(mm) Dimensão (mm)										Applicable Inserts Insertos	Screw Parafuso	Wrench Chave	Shim Calço	Shim Screw Parafuso Calço
	Stock		Dmin	φd	h	L	s	θ°	e	f					
	R	L													
S32U-SVUBR/L 16	●	●	40	32	30	350	22	-8°	49	8.4	 B46-B47				
S40V-SVUBR/L 16			50	40	37	400	27	-8°	56.5	9.4					
*A32S-SVUBR/L 16			40	32	37	250	22	-8°	49	8.4					

* Barra de aço com refrigeração interna / Coolant Hold Boring Bar

SCFCR



Type Tipo	Dimension(mm) Dimensão (mm)									Applicable Inserts Insertos	Screw Parafuso	Wrench Chave			
	Stock		Dmin	φd	L	s	a	b	e						
	R	L													
															
S10M-SCFCR 06S25			13	10	150	7	27	25	30	B29-B30					
S12P-SCFCR 06S25			16	12	170	9	27	25	35	CC__0602__	I60 M2.5x5.2	WT8P			
S16Q-SCFCR 09S25			20	16	180	11	27	25	40	CC__09T3__	I60 M4x8.4	WT15P			
S20R-SCFCR 09S25			25	20	200	13	27	25	45						
S25R-SCFCR 12S25			32	25	200	17	27	25	50						