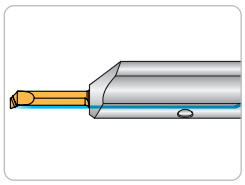
KONRAD
TOOLS

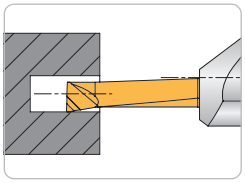
MCS -
Mini cutting system

MINI INATERNAL MACHINING

MINI CUTTING SYSTEM (MCS)

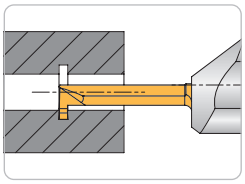


MCS HOLDER



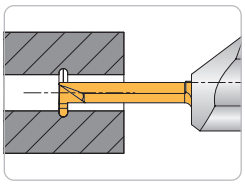
TURNING

D_{min}= 0,7 - 10,2 mm



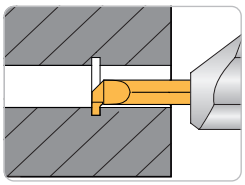
GROOVING

D_{min}= 2,5 - 7,9 mm



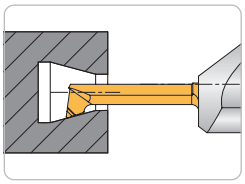
RADIUS GROOVING

D_{min}= 3,9 - 8,2 mm



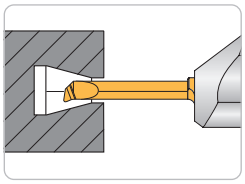
CIR-CLIP DIN 471/472

D_{min}= 4,1 - 10,4 mm



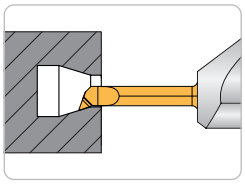
COPYING

D_{min}= 0,7 - 10,2 mm



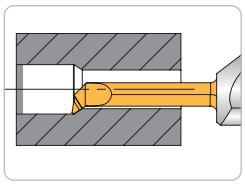
COPYING – RE-INFORCED EXECUTION

D_{min}= 1,5 - 10,8 mm



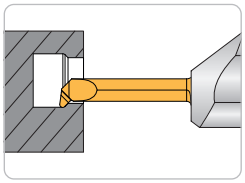
COPYING 20°

D_{min}= 6,0 mm



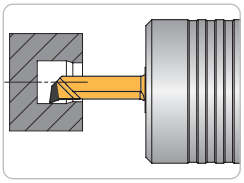
COPYING 32°

D_{min}= 2,9 - 8,0 mm



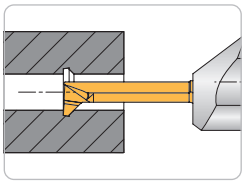
COPYING 45°

D_{min}= 1,6 - 8,9 mm



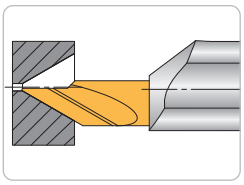
COPY TURNING – CBN BRAZED

D_{min}= 3,0 - 6,0 mm

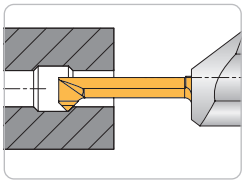


PRE-GROOVING AND CHAMFERING

D_{min}= 1,5 - 10,8 mm

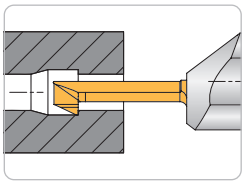


CENTRE CHAMFERING 45°/60°



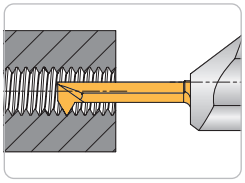
CHAMFERING 45°

D_{min}= 2,5 - 5,9 mm



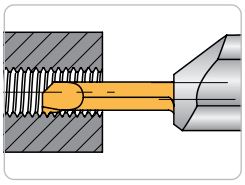
BACK TURNING

D_{min}= 3,9 - 5,9 mm



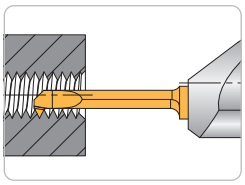
THREADING 60°
– METRIC PARTIAL PROFILE

D_{min}= 2,3 - 6,0 mm



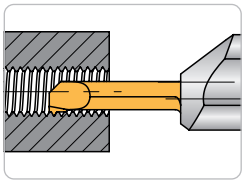
THREADING 60°
– METRIC FULL PROFILE

D_{min}= 3,7 - 6,0 mm



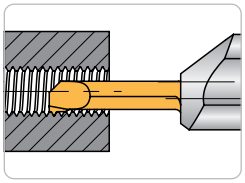
WHITWORTH THREAD 55°
– PARTIAL PROFILE

D_{min}= 3,3 - 6,0 mm



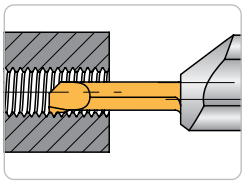
WHITWORTH PIPE THREAD 55° DIN ISO 228 – FULL PROFILE

D_{min}= 4,0 - 11,0 mm



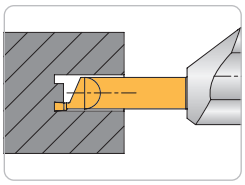
WHITWORTH PIPE THREAD 55° BSW
– FULL PROFILE

D_{min}= 3,4 - 6,5 mm



TRAPEZOIDAL 30° DIN ISO 103
– PARTIAL PROFILE

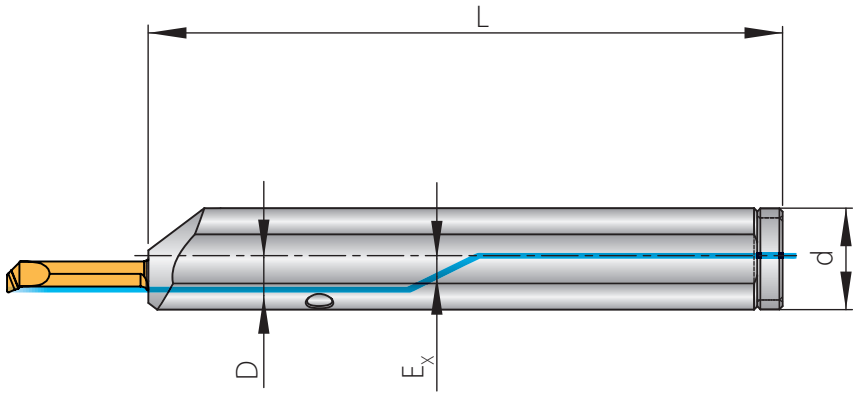
D_{min}= 6,5 - 8,0 mm



AXIAL GROOVING

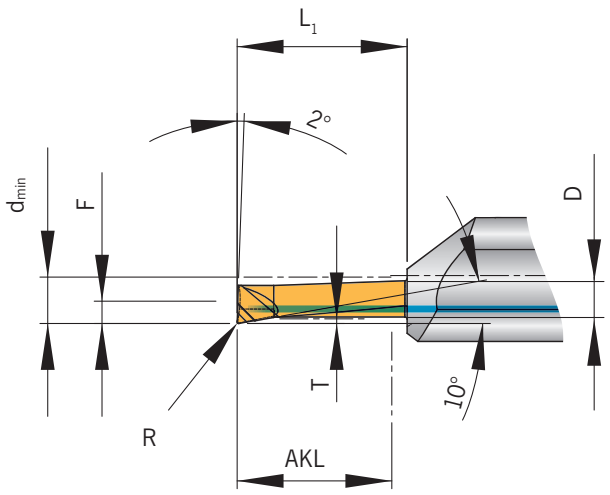
D_{min}= 5,0 - 9,0 mm

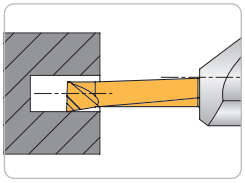
MCS holder



DESIGNATION	D	d	L	E_x	INSERT
HMCSL/R 1204	4	12	100	2,35	MCS...40L/R
HMCSL/R 1206	6	12	100	2,35	MCS...60L/R
HMCSL/R 1606	6	16	120	2,8	MCS...60L/R
HMCSL/R 1608	8	16	120	2,8	MCS...80L/R
HMCSR 2010	10	20	120	2,8	MCS...100L/R

MCS - Turning



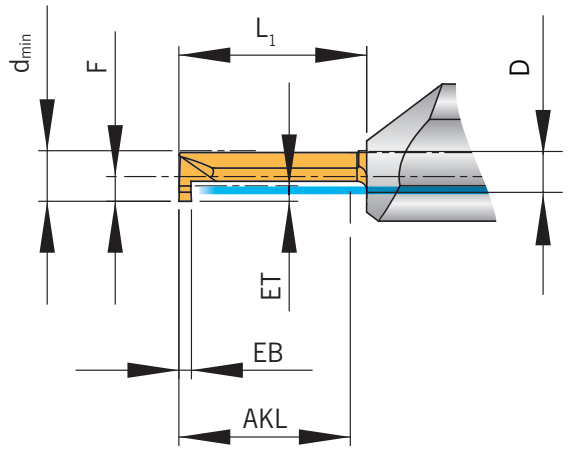


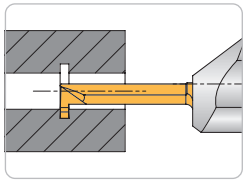
MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	Vc (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-T-07005005-020.40R	0,7	2	0,05	0,05	0,3	4	4		HMCS...04	●	
MCS-T-20015002-060.40R	2	6	0,15	0,02	0,9	8	4			●	
MCS-T-20015002-100.40R	2	10	0,15	0,02	0,9	12	4			●	
MCS-T-220401-060.40R	2,2	6	0,4	0,1	1,05	8	4			●	
MCS-T-250401-100.40R	2,5	10	0,4	0,1	1,15	12	4			●	
MCS-T-250401-150.40R	2,5	15	0,4	0,1	1,15	17	4			●	
MCS-T-250401-200.40R	2,5	20	0,4	0,1	1,15	22	4			●	
MCS-T-300401-100.40R	3	10	0,4	0,1	1,4	12	4			●	
MCS-T-300401-150.40R	3	15	0,4	0,1	1,4	17	4			●	
MCS-T-300401-200.40R	3	20	0,4	0,1	1,4	22	4			●	
MCS-T-300402-100.40R	3	10	0,4	0,2	1,4	12	4			●	
MCS-T-300402-150.40R	3	15	0,4	0,2	1,4	17	4			●	
MCS-T-300402-200.40R	3	20	0,4	0,2	1,4	22	4			●	
MCS-T-390602-100.40R	3,9	10	0,6	0,2	1,9	12	4			●	
MCS-T-390602-150.40L/R	3,9	15	0,6	0,2	1,9	17	4			●	
MCS-T-390602-200.40L/R	3,9	20	0,6	0,2	1,9	22	4			●	
MCS-T-40015005-250.40L/R	4	25	0,15	0,05	1,9	27	4			●	
MCS-T-400301-250.40R	4	25	0,3	0,1	1,9	27	4			●	
MCS-T-590801-150.60R	5,9	15	0,8	0,1	2,9	17	6		HMCS...06	●	
MCS-T-590802-100.60R	5,9	10	0,8	0,2	2,9	12	6			●	
MCS-T-590802-200.60L/R	5,9	20	0,8	0,2	2,9	22	6			●	
MCS-T-590802-300.60L/R	5,9	30	0,8	0,2	2,9	32	6			●	
MCS-T-590804-200.60R	5,9	20	0,8	0,4	2,9	22	6			●	
MCS-T-6005015-420.60R	6	42	0,5	0,15	2,9	44	6			●	
MCS-T-791002-100.80R	7,9	10	1	0,2	3,9	12	8		HMCS...08	●	
MCS-T-791002-250.80L/R	7,9	25	1	0,2	3,9	27	8			●	
MCS-T-820402-300.80R	8,2	30	0,4	0,2	3,9	32	8			●	
MCS-T-1021002-200.100R	10,2	20	1	0,2	4,9	22	10		HMCS...10	●	
MCS-T-1021002-300.100R	10,2	30	1	0,2	4,9	32	10			●	

ORDER EXAMPLE: MCS-T-300402-200.40R A32-BZ2 - 2x

MCS - Grooving

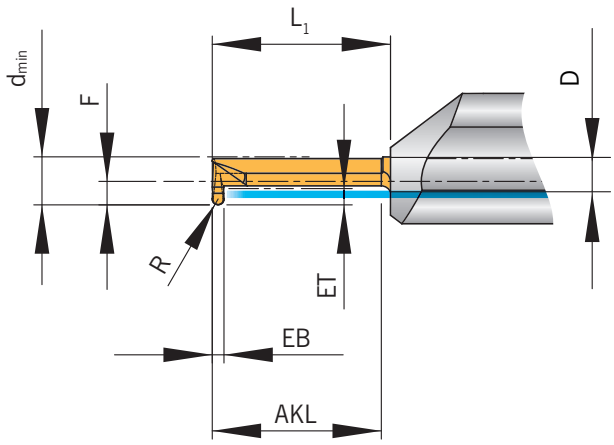


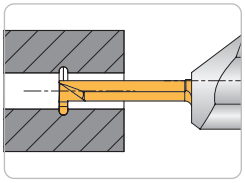


MACHINING MATERIAL				
	STEEL	P	●	
	STAINLESS STEEL	M	●	
	CAST IRON	K	●	
	NON-FERROUS METAL	N	●	
	EXOTIC ALLOY	S	●	
	HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	EB	ET	F	L_1	D	-	Vc (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-G-S-25080600-100.40R	2,5	10	0,8	0,6	1,15	12	4		HMCS...04	●	
MCS-G-S-25080600-150.40R	2,5	15	0,8	0,6	1,15	17	4			●	
MCS-G-S-25080600-200.40R	2,5	20	0,8	0,6	1,15	22	4			●	
MCS-G-S-30080600-100.40R	3	10	0,8	0,6	1,4	12	4			●	
MCS-G-S-30080600-150.40R	3	15	0,8	0,6	1,4	17	4			●	
MCS-G-S-30080600-200.40R	3	20	0,8	0,6	1,4	22	4			●	
MCS-G-S-39100800-100.40R	3,9	10	1	0,8	1,9	12	4			●	
MCS-G-S-39100800-150.40L/R	3,9	15	1	0,8	1,9	17	4			●	
MCS-G-S-39100800-200.40R	3,9	20	1	0,8	1,9	22	4			●	
MCS-G-S-59101800-200.60L/R	5,9	20	1	1,8	2,9	22	6		HMCS...06	●	
MCS-G-S-59151800-100.60R	5,9	10	1,5	1,8	2,9	12	6			●	
MCS-G-59151800-200.60L/R	5,9	20	1,5	1,8	2,9	22	6			●	
MCS-G-S-59151800-300.60R	5,9	30	1,5	1,8	2,9	32	6			●	
MCS-G-S-69202500-150.80L/R	6,9	15	2	2,5	3,9	17	8		HMCS...08	●	
MCS-G-S-79182500-100.80R	7,9	10	1,8	2,5	3,9	12	8			●	
MCS-G-S-79182500-250.80R	7,9	25	1,8	2,5	3,9	27	8			●	

MCS - Radius grooving

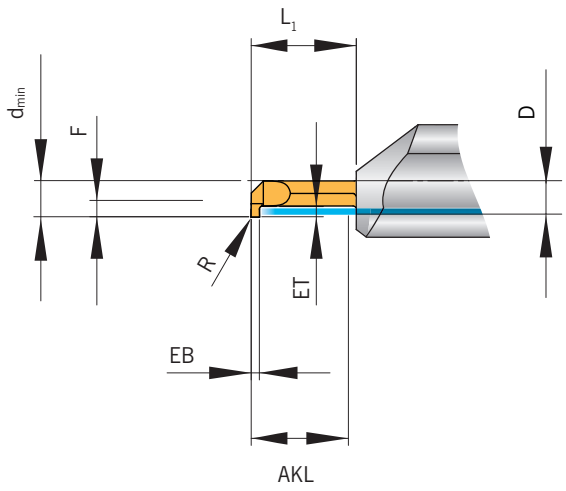


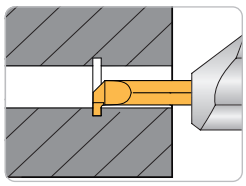


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	EB	ET	R	F	L_1	D	VC (M/MIN) CUTTING SPEED → GRADE → SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	PAGE 24 CBN1
MCS-G-S-39100805-100.40R	3,9	10	1	0,8	0,5	1,9	12	4	HMCS...04	●	
MCS-G-S-39100805-150.40L/R	3,9	15	1	0,8	0,5	1,9	17	4		●	
MCS-G-S-39100805-200.40R	3,9	20	1	0,8	0,5	1,9	22	4		●	
MCS-G-S-59151875-100.60R	5,9	10	1,5	1,8	0,75	2,9	12	6	HMCS...06	●	
MCS-G-S-59151875-200.60R	5,9	20	1,5	1,8	0,75	2,9	22	6		●	
MCS-G-S-59151875-300.60R	5,9	30	1,5	1,8	0,75	2,9	32	6		●	
MCS-G-S-82202010-200.80R	8,2	20	2	2	1	3,9	22	8	HMCS...08	●	

MCS - Cir-clip grooving DIN 471/472



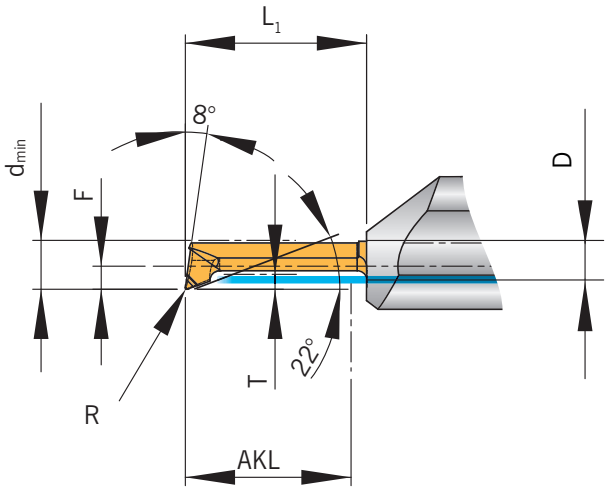


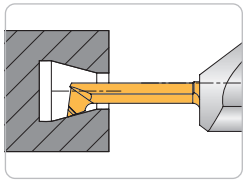
MACHINING MATERIAL				
	STEEL	P	●	
	STAINLESS STEEL	M	●	
	CAST IRON	K	●	
	NON-FERROUS METAL	N	●	
	EXOTIC ALLOY	S	●	
	HARDENED STEEL	H		●

									Vc (M/MIN) CUTTING SPEED →	PAGE 24	
DESIGNATION	d_{min}	AKL	EB	ET	R	F	L_1	D	GRADE → SUITABLE HOLDER ↓	A32-BZ2	CBN1
MCS-GS-41099110-150.40R	4,1	15	0,99	1,1	0,05	1,9	17	4		●	
MCS-GS-41119110-150.40R	4,1	15	1,19	1,1	0,05	1,9	17	4		●	
MCS-GS-41139110-150.40R	4,1	15	1,39	1,1	0,05	1,9	17	4	HMCS...04	●	
MCS-GS-41169110-150.40R	4,1	15	1,69	1,1	0,05	1,9	17	4		●	
MCS-GS-61099150-150.60R	6,1	15	0,99	1,5	0,05	2,9	17	6		●	
MCS-GS-61119150-150.60R	6,1	15	1,19	1,5	0,05	2,9	17	6		●	
MCS-GS-61139150-150.60R	6,1	15	1,39	1,5	0,05	2,9	17	6	HMCS...06	●	
MCS-GS-61169150-150.60R	6,1	15	1,69	1,5	0,05	2,9	17	6		●	
MCS-GS-61194150-150.60R	6,1	15	1,94	1,5	0,05	2,9	17	6		●	
MCS-GS-84119200-200.80R	8,4	20	1,19	2	0,05	3,9	22	8		●	
MCS-GS-84139200-200.80R	8,4	20	1,39	2	0,05	3,9	22	8		●	
MCS-GS-84169250-200.80R	8,4	20	1,69	2,5	0,05	3,9	22	8		●	
MCS-GS-84194250-200.80R	8,4	20	1,94	2,5	0,05	3,9	22	8	HMCS...08	●	
MCS-GS-84224300-200.80R	8,4	20	2,24	3	0,05	3,9	22	8		●	
MCS-GS-84274350-200.80R	8,4	20	2,74	3,5	0,05	3,9	22	8		●	
MCS-GS-84328350-200.80R	8,4	20	3,28	3,5	0,05	3,9	22	8		●	
MCS-GS-104139350-250.100R	10,4	25	1,39	3,5	0,05	4,9	27	10		●	
MCS-GS-104169350-250.100R	10,4	25	1,69	3,5	0,05	4,9	27	10		●	
MCS-GS-104194350-250.100R	10,4	25	1,94	3,5	0,05	4,9	27	10		●	
MCS-GS-104224350-250.100R	10,4	25	2,24	3,5	0,05	4,9	27	10	HMCS...10	●	
MCS-GS-104274350-250.100R	10,4	25	2,74	3,5	0,05	4,9	27	10		●	
MCS-GS-104328350-250.100R	10,4	25	3,28	3,5	0,05	4,9	27	10		●	

ORDER EXAMPLE: MCS-T-300402-200.40R A32-BZ2 - 2x

MCS - Copying



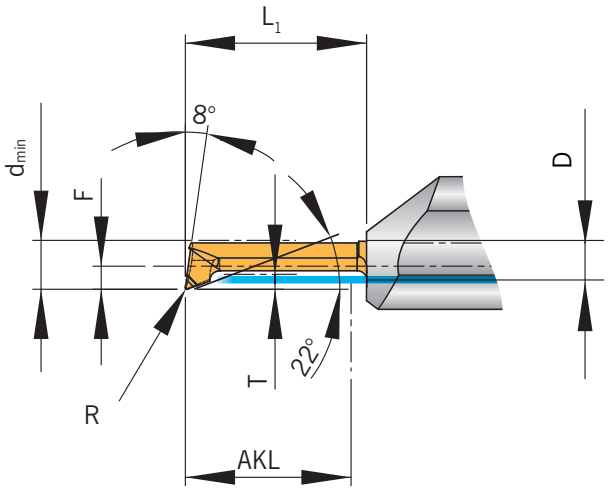


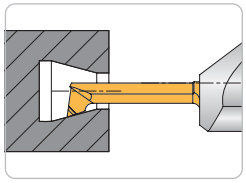
MACHINING MATERIAL				
	STEEL	P	●	
	STAINLESS STEEL	M	●	
	CAST IRON	K	●	
	NON-FERROUS METAL	N	●	
	EXOTIC ALLOY	S	●	
	HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	Vc (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-C-1501501-060.40R	1,5	6	0,15	0,1	1,3	7	4		HMCS...04	●	
MCS-C-1501005-110.40R	1,5	11	0,1	0,05	1,3	12	4			●	
MCS-C-2003005-060.40R	2	6	0,3	0,05	0,9	7	4			●	
MCS-C-2003005-100.40R	2	10	0,3	0,05	0,9	11	4			●	
MCS-C-20015005-100.40L/R	2	10	0,15	0,05	0,9	11	4			●	
MCS-C-2001005-150.40R	2	15	0,15	0,05	0,9	17	4			●	
MCS-C-220201-150.40R	2,2	15	0,2	0,1	0,95	16	4			●	
MCS-C-250401-100.40R	2,5	10	0,4	0,1	1,15	12	4			●	
MCS-C-250401-150.40R	2,5	15	0,4	0,1	1,15	17	4			●	
MCS-C-250401-200.40R	2,5	20	0,4	0,1	1,15	22	4			●	
MCS-C-300401-100.40R	3	10	0,4	0,1	1,4	12	4			●	
MCS-C-300401-150.40R	3	15	0,4	0,1	1,4	17	4			●	
MCS-C-300401-200.40L/R	3	20	0,4	0,1	1,4	22	4			●	
MCS-C-390802-100.40R	3,9	10	0,8	0,2	1,9	12	4			●	
MCS-C-390802-150.40L/R	3,9	15	0,8	0,2	1,9	17	4			●	
MCS-C-390802-200.40L/R	3,9	20	0,8	0,2	1,9	22	4			●	
MCS-C-391304-200.40R	3,9	20	1,3	0,4	1,9	22	4			●	
MCS-C-400604-120.40R	4	12	0,6	0,4	1,9	14	4			●	
MCS-C-400604-150.40R	4	15	0,6	0,4	1,9	17	4			●	
MCS-C-400602-200.40R	4	20	0,6	0,2	1,9	22	4			●	
MCS-C-400301-300.40R	4	30	0,3	0,1	1,5	32	4			●	
MCS-C-2001005-150.40R	2	15	0,1	0,05	0,9	17	4			●	
MCS-C-400301-300.40R	4	30	0,3	0,1	1,5	32	4			●	
MCS-C-500502-100.60L/R	5	10	0,5	0,2	2,3	12	6		HMCS...06	●	
MCS-C-500502-150.60L/R	5	15	0,5	1,2	2,3	17	6			●	
MCS-C-500502-200.60R	5	20	0,5	0,2	2,3	22	6			●	
MCS-C-500502-250.60L/R	5	25	0,5	0,2	2,3	26	6			●	
MCS-C-500502-300.60R	5	30	0,5	0,2	2,3	31	6			●	
MCS-C-591802-100.60R	5,9	10	1,8	0,2	2,9	12	6			●	

ORDER EXAMPLE: MCS-T-300402-200.40R A32-BZ2 - 2x

MCS - Copying



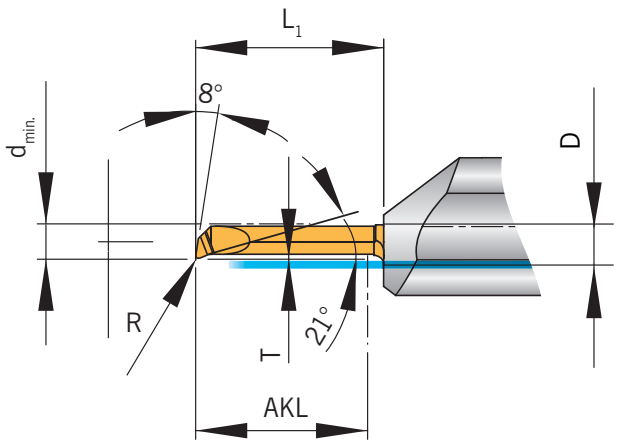


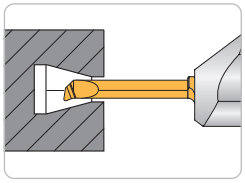
MACHINING MATERIAL				
	STEEL	P	●	
	STAINLESS STEEL	M	●	
	CAST IRON	K	●	
	NON-FERROUS METAL	N	●	
	EXOTIC ALLOY	S	●	
	HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	Vc (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-C-591802-200.60L/R	5,9	20	1,8	0,2	2,9	22	6		HMCS...06	●	
MCS-C-591802-300.60L/R	5,9	30	1,8	0,2	2,9	32	6			●	
MCS-C-590502-350.60R	5,9	35	0,5	0,2	2,9	37	6			●	
MCS-C-590502-400.60R	5,9	40	0,5	0,2	2,9	42	6			●	
MCS-C-590502-500.60R	5,9	50	0,5	0,2	2,9	52	6			●	
MCS-C-6005015-420.60R	6	42	0,5	0,15	2,3	44	6			●	
MCS-C-500502-150.60L/R	5	15	0,5	0,2	2,3	17	6			●	
MCS-C-680502-200.80L	6,8	20	0,5	0,2	3,9	22	8		HMCS...08	●	
MCS-C-6805005-250.80R	6,8	25	0,5	0,05	3,9	27	8			●	
MCS-C-680502-250.80L/R	6,8	25	0,5	0,2	3,9	27	8			●	
MCS-C-720502-450.80R	7,2	45	0,5	0,2	3,45	47	8			●	
MCS-C-791002-200.80R	7,9	20	1	0,2	3,9	22	8			●	
MCS-C-791002-300.80R	7,9	30	1	0,2	3,9	32	8			●	
MCS-C-791002-400.80R	7,9	40	1	0,2	3,9	42	8			●	
MCS-C-800502-500.80R	8	50	0,5	0,2	3,9	52	8			●	
MCS-C-893902-200.80R	8,9	20	3,9	0,2	3,9	22	8			●	
MCS-C-893902-300.80R	8,9	30	3,9	0,2	3,9	32	8			●	
MCS-C-6805005-250.80R	6,8	25	0,5	0,05	3,9	27	8			●	
MCS-C-680502-200.80L	6,8	20	0,5	0,2	3,9	22	8			●	
MCS-C-680502-250.80L/R	6,8	25	0,5	0,2	3,9	27	8			●	
MCS-C-791002-200.80R	7,9	20	1	0,2	3,9	22	8			●	
MCS-C-791002-300.80R	7,9	30	1	0,2	3,9	32	8			●	
MCS-C-791002-400.80R	7,9	40	1	0,2	3,9	42	8			●	
MCS-C-1084902-250.100R	10,8	25	4,9	0,2	4,9	27	10		HMCS...10	●	
MCS-C-1084902-350.100R	10,8	35	4,9	0,2	4,9	37	10			●	

ORDER EXAMPLE: MCS-T-300402-200.40R A32-BZ2 - 2x

MCS - Copying (reinforced version)

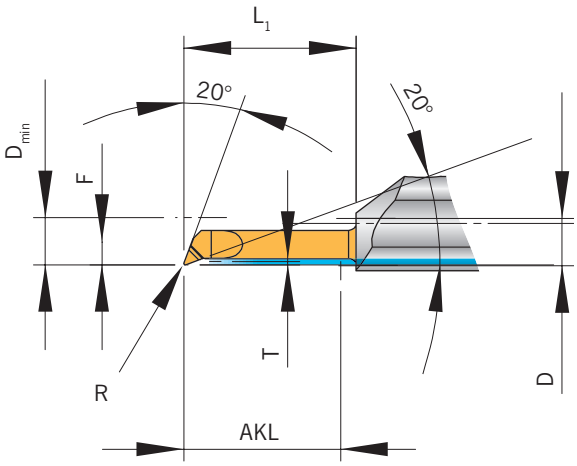


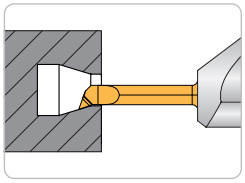


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	VC (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-C-300202-100.40L/R	3	10	0,2	0,2	1,3	12	4		HMCS...04	●	
MCS-C-300202-150.40R	3	15	0,2	0,2	1,3	17	4			●	
MCS-C-3202015-100.40R	3,2	10	0,2	0,15	1,45	12	4			●	
MCS-C-400301-250.40R	4	25	0,3	0,1	1,5	27	4			●	
MCS-C-400302-100.40L/R	4	10	0,3	0,2	1,9	12	4			●	

MCS - Copying 20/20°

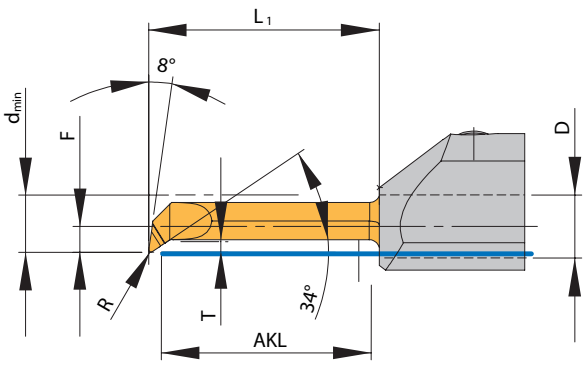


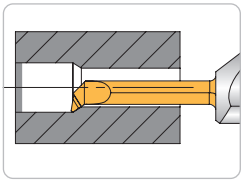


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	VC (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-C20-5005015-200.60L/R	6	20	0,5	0,2	2,9	22	6		HMCS...06	●	

MCS - Copying 32°

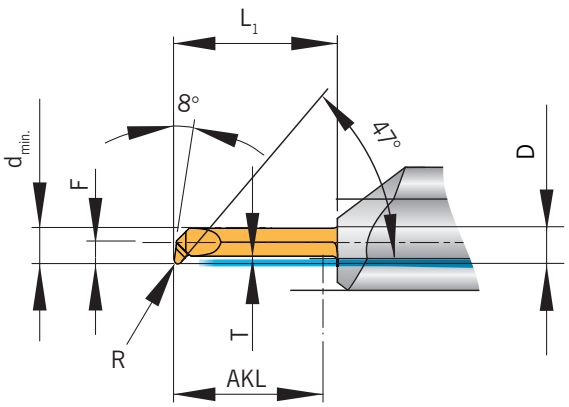


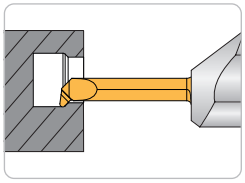


MACHINING MATERIAL				
STEEL	P	●		
STAINLESS STEEL	M	●		
CAST IRON	K	●		
NON-FERROUS METAL	N	●		
EXOTIC ALLOY	S	●		
HARDENED STEEL	H		●	

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	Vc (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-C32-290701-100.40R	2,9	10	0,7	0,1	1,9	12	4			●	
MCS-C32-290701-200.40R	2,9	20	0,7	0,1	1,9	22	4			●	
MCS-C32-390801-100.40R	3,9	10	0,8	0,1	1,9	12	4		HMCS...04	●	
MCS-C32-390801-160.40R	3,9	16	0,8	0,1	1,9	18	4			●	
MCS-C32-390801-200.40R	3,9	20	0,8	0,1	1,9	22	4			●	
MCS-C32-501002-150.60R	5	15	1	0,2	2,45	17	6			●	
MCS-C32-501002-200.60R	5	15	1	0,2	2,45	22	6		HMCS...06	●	
MCS-C32-501002-300.60R	5	30	1	0,2	2,45	32	6			●	
MCS-C32-792002-250.80R	7,9	25	2	0,2	3,9	27	8			●	
MCS-C32-792002-300.80R	7,9	30	2	0,2	3,9	32	8			●	
MCS-C32-792002-400.80R	7,9	40	2	0,2	3,9	42	8		HMCS...08	●	
MCS-C32-792002-500.80R	7,9	50	2	0,2	3,9	52	8			●	
MCS-C32-802502-200.80R	8	20	2,5	0,2	3,9	22	8			●	

MCS - Copying 45°

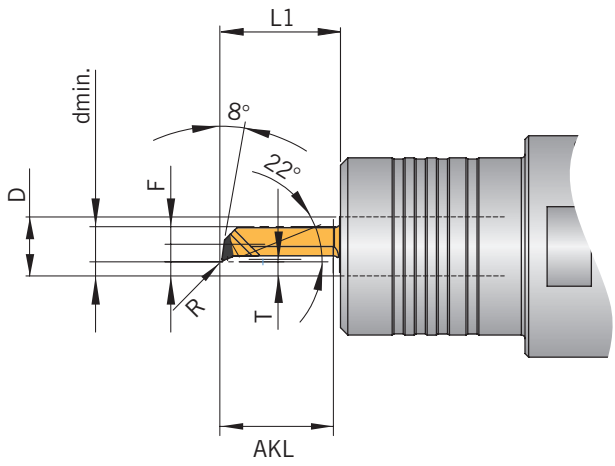


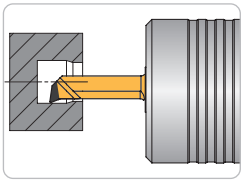


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	Vc (m/min) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-C45-16015005-070.40L/R	1,6	7	0,15	0,05	0,9	9	4		HMCS...04	●	
MCS-C45-3906015-200.40R	3,9	20	0,6	0,15	1,9	22	4			●	
MCS-C45-391304-200.40R	3,9	20	1,3	0,4	1,9	22	4			●	
MCS-C45-400604-120.40R	4	12	0,6	0,4	1,9	14	4			●	
MCS-C45-400604-150.40R	4	15	0,6	0,4	1,9	17	4			●	
MCS-C45-4008015-200.40R	4	20	0,8	0,15	1,9	22	4			●	
MCS-C45-5010015-250.60R	5	25	1	0,15	2,45	27	6		HMCS...06	●	
MCS-C45-5918015-150.60L/R	5,9	15	1,8	0,15	2,9	17	6			●	
MCS-C45-5918015-300.60R	5,9	30	1,8	0,15	2,9	32	6			●	
MCS-C45-692902-100.60R	6,9	10	2,9	0,2	2,9	12	6			●	
MCS-C45-692902-150.60L/R	6,9	15	2,9	0,2	2,9	17	6			●	
MCS-C45-692902-200.60R	6,9	20	2,9	0,2	2,9	22	6			●	
MCS-C45-692902-300.60R	6,9	30	2,9	0,2	2,9	32	6			●	
MCS-C45-893902-150.80R	8,9	15	3,9	0,2	3,9	17	8		HMCS...08	●	
MCS-C45-893902-200.80R	8,9	20	3,9	0,2	3,9	22	8			●	
MCS-C45-893902-300.80R	8,9	30	3,9	0,2	3,9	32	8			●	

MCS - Copying CBN

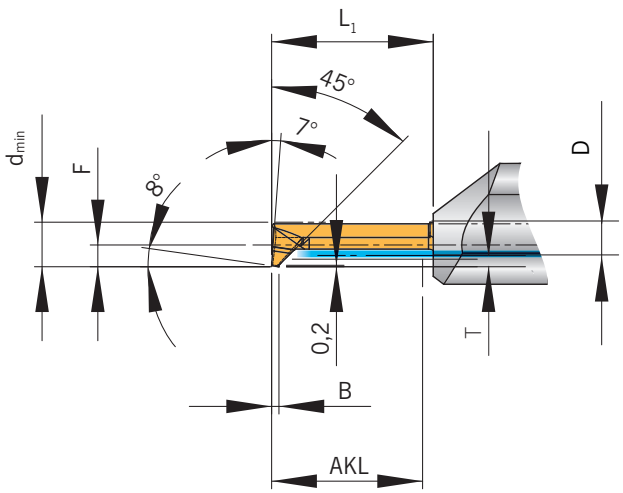


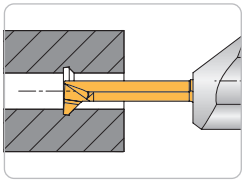


MACHINING MATERIAL				
	STEEL	P	●	
	STAINLESS STEEL	M	●	
	CAST IRON	K	●	
	NON-FERROUS METAL	N	●	
	EXOTIC ALLOY	S	●	
	HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	R	F	L_1	D	-	VC (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	PAGE 24 CBN1
MCS-C-300201-100.60R	3	10	0,2	0,1	1,5	12	6		HMCS...06		●
MCS-C-400302-130.60R	4	13	0,3	0,2	2	15	6				●
MCS-C-500402-150.60R	5	15	0,4	0,2	2,5	17	6				●
MCS-C-600402-180.60R	6	18	0,4	0,2	3	20	6				●

MCS - Pre-grooving and chamfering

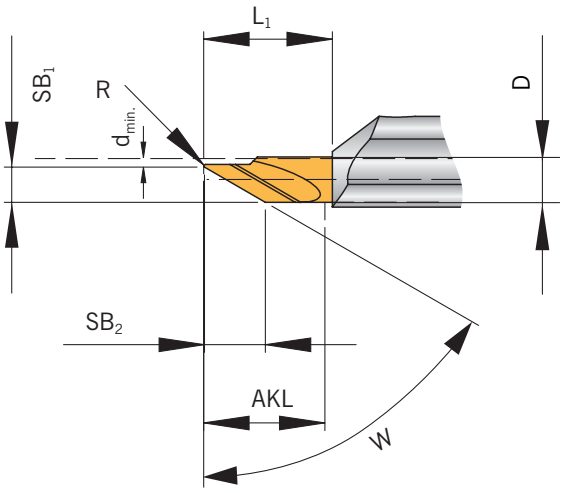


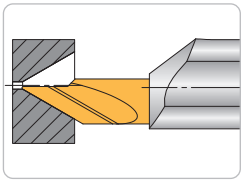


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	T	B	F	L_1	D	-	Vc (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-CH-50100800-200.60R	5	20	0,8	1	2,4	22	6		HMCS...06	●	
MCS-CH-59100800-200.60R	5,9	20	0,8	1	2,9	22	6			●	

MCS - Centre chamfering 45° / 60°

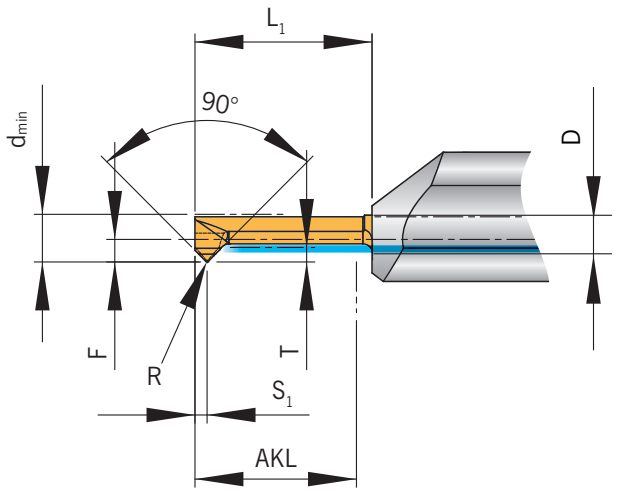


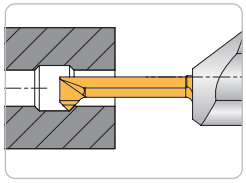


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	SB_1	SB_2	W	AKL	R	L_1	D	Vc (M/MIN) CUTTING SPEED →	PAGE 24	
									GRADE → SUITABLE HOLDER ↓	A32-BZ2	CBN1
MCS-CH45-104502-150.60L/R	1	4,5	4,5	45°	15	0,2	17	6	HMCS...06	●	
MCS-CH60-108002-150.60L/R	1	4,5	7,9	60°	15	0,2	17	6		●	

MCS - Chamfering 45°

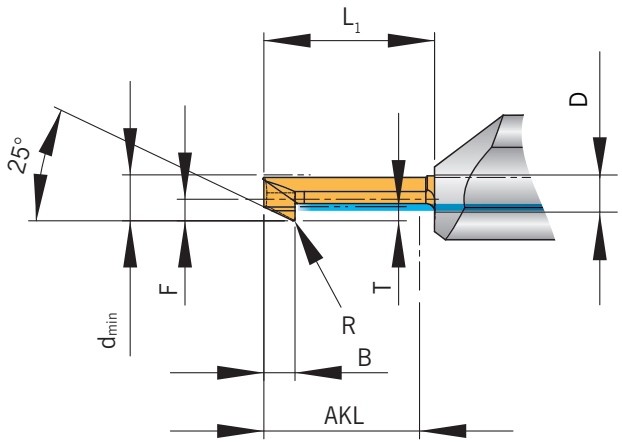


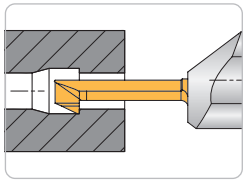


MACHINING MATERIAL				
STEEL	P	●		
STAINLESS STEEL	M	●		
CAST IRON	K	●		
NON-FERROUS METAL	N	●		
EXOTIC ALLOY	S	●		
HARDENED STEEL	H		●	

DESIGNATION	d_{min}	AKL	T	S_1	R	F	L_1	D	Vc (M/MIN) CUTTING SPEED →	PAGE 24	
									GRADE → SUITABLE HOLDER ↓	A32-BZ2	CBN1
MCS-CH1-250401-150.40R	2,5	15	0,4	1	0,1	1,15	17	4		●	
MCS-CH1-300401-150.40R	3	15	0,4	1	0,1	1,4	17	4	HMCS...04	●	
MCS-CH1-390802-150.40R	3,9	15	0,8	1,2	0,2	1,9	17	4		●	
MCS-CH1-591802-200.60R	5,9	20	1,8	2	0,2	2,9	22	6	HMCS...06	●	

MCS - Back turning

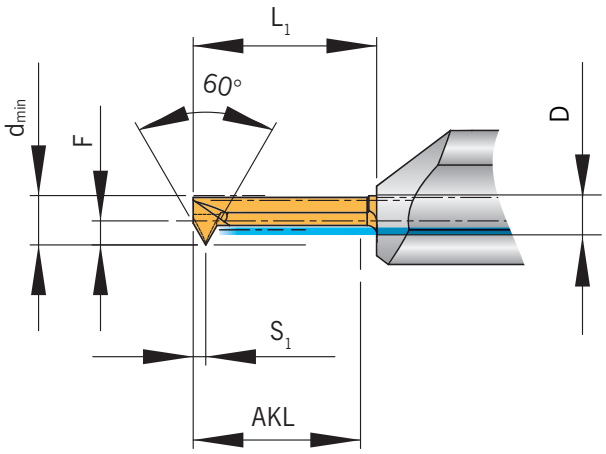


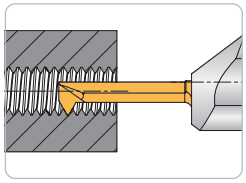


MACHINING MATERIAL				
STEEL	P	●		
STAINLESS STEEL	M	●		
CAST IRON	K	●		
NON-FERROUS METAL	N	●		
EXOTIC ALLOY	S	●		
HARDENED STEEL	H		●	

DESIGNATION	d_{min}	AKL	T	B	R	F	L_1	D	Vc (M/MIN) CUTTING SPEED →	PAGE 24	
									GRADE → SUITABLE HOLDER ↓	A32-BZ2	CBN1
MCS-BT-39401002-150.40R	3,9	15	1	4	0,2	1,9	17	4	HMCS...04	●	
MCS-BT-59402002-200.60R	5,9	20	2	4	0,2	2,9	22	6	HMCS...06	●	

MCS - Threading 60° - metric partial profile

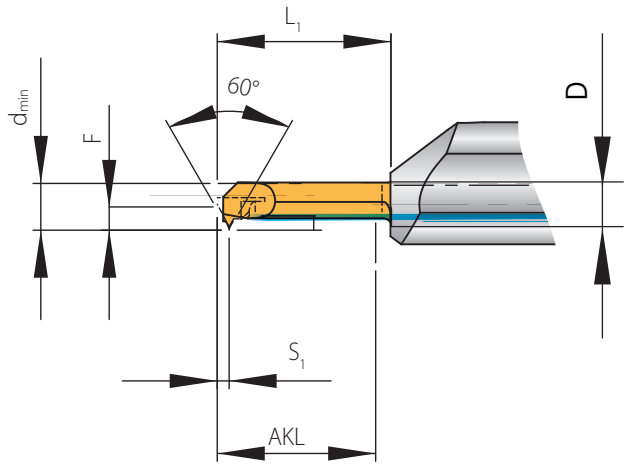


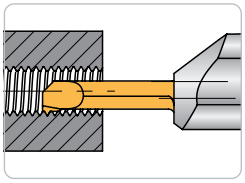


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	Thread	P - pitch	S_1	F	L_1	D	VC (M/MIN) CUTTING SPEED →	PAGE 24	
									GRADE → SUITABLE HOLDER ↓	A32-BZ2	CBN1
MCS-TP-MF020050-050.40R	2,3	5	>M2,5	0,2 - 0,5	0,45	1,1	6,5	4		●	
MCS-TP-MF050070-150.40R	3	15	M4	0,5 - 0,7	0,7	1,4	17	4	HMCS...04	●	
MCS-TP-MF050100-150.40R	4	15	M5	0,5 - 1,0	0,7	1,9	17	4		●	
MCS-TP-MF050150-200.60R	6	20	M8	0,5 - 1,5	0,8	2,9	22	6	HMCS...06	●	

MCS - Threading 60° - metric full profile

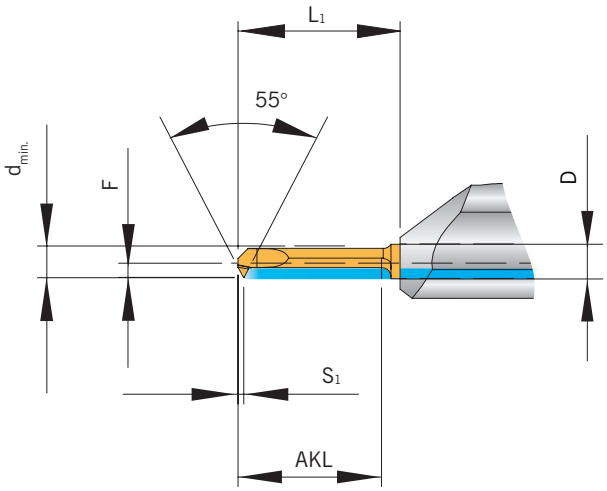


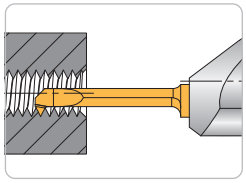


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	Thread	P - pitch	S_1	F	L_1	D	VC (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	PAGE 24 CBN1
MCS-TF-MF025-150.40R	3,7	16	M4,5	0,25	0,4	1,9	18	4	HMCS...04	●	
MCS-TF-MF035-150.40R	3,7	16	M4,5	0,35	0,4	1,9	18	4		●	
MCS-TF-MF050-150.40R	4	15	MF	0,5	0,4	1,9	17	4		●	
MCS-TF-MF060-150.40R	4	15	MF	0,6	0,4	1,9	17	4		●	
MCS-TF-MF070-150.40R	4,1	15	MF	0,7	0,5	1,9	17	4		●	
MCS-TF-MF075-150.40R	4,2	15	MF	0,75	0,5	1,9	17	4		●	
MCS-TF-M100-150.40R	5	15	M6	1	0,7	1,9	17	4	HMCS...06	●	
MCS-TF-M100-200.60R	4,8	20	M6	1	0,7	2,9	22	6		●	
MCS-TF-MF025-150.60R	5,1	16	M4	0,25	0,4	2,5	18	6		●	
MCS-TF-MF080-150.60R	5,3	16	M6	0,8	0,5	2,6	18	6		●	
MCS-TF-MF050-150.60R	5,4	15	MF	0,5	0,4	2,5	17	6		●	
MCS-TF-MF075-150.60R	5,6	15	MF	0,75	0,5	2,6	17	6		●	
MCS-TF-M100-150.60R	5,7	15	M10	1	0,7	2,6	17	6		●	
MCS-TF-M125-200.60R	6	20	M8	1,25	0,8	2,9	22	6		●	
MCS-TF-M150-200.60R	6	20	M12	1,5	1	2,9	22	6		●	

MCS - Whitworth thread 55° – partial profile

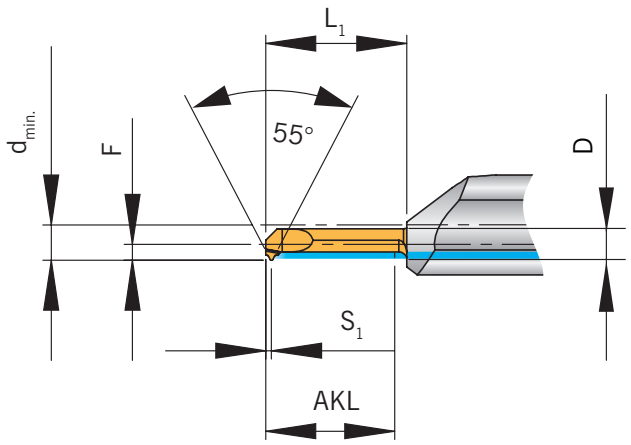


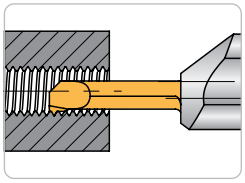


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	Thread	P - pitch	S_1	F	L_1	D	Vc (m/min) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-TP-WF33025100-150.40R	3,3	15	WF	0,25 - 1,0	0,6	1,5	17	4	HMCS...04	●	
MCS-TP-WF43025100-150.40R	4,3	15	WF	0,25 - 1,0	0,6	1,9	17	4		●	
MCS-TP-WF60050150-150.60R	6	15	WF	0,5 - 1,5	0,8	2,9	17	6	HMCS...06	●	

MCS - Whitworth pipe thread 55° - DIN ISO 228 – full profil

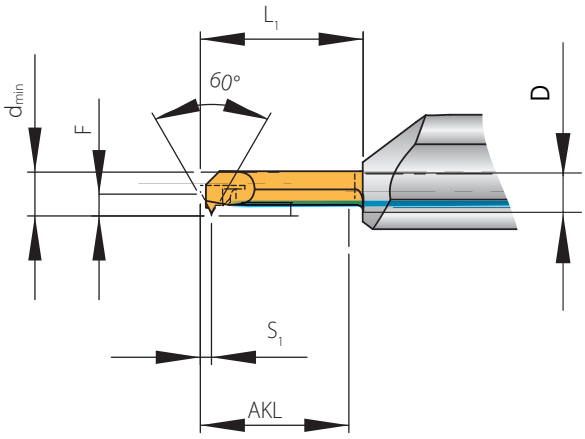


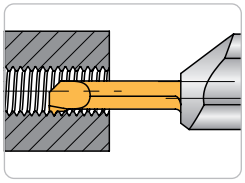


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	Thread	P - pitch (TPI)	S_1	F	L_1	D	Vc (m/min) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-TF-W228/20-150.40R	4	15	W228	1,27 (20)	0,7	1,9	17	4	HMCS...04	●	
MCS-TF-W228/19-150.60R	11	15	1/4“-19 BSP	1,33 (19)	0,95	2,9	17	6	HMCS...06	●	

MCS - Whitworth pipe thread 55° BSW – full profil

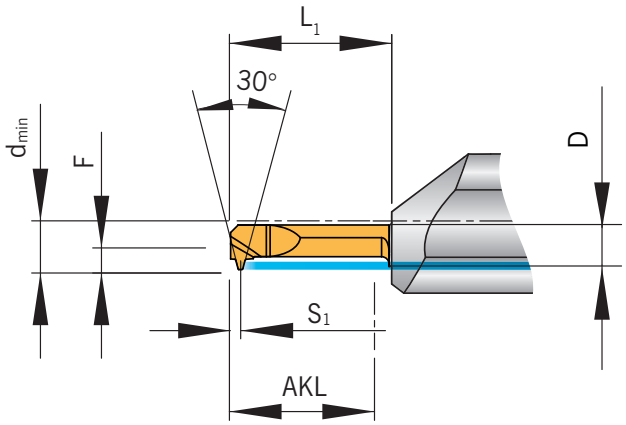


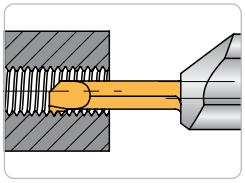


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

									VC (M/MIN) CUTTING SPEED →	PAGE 24	
DESIGNATION	d_{min}	AKL	Thread	TPI	S_1	F	L_1	D	GRADE → SUITABLE HOLDER ↓	A32-BZ2	CBN1
MCS-TF-BSW24-150.40R	3,4	15	3/16“-24BSW	24	0,75	1,3	17	4	HMCS...04	●	
MCS-TF-BSW24-150.60R	3,4	15	3/16“-24BSW	24	0,75	0,3	17	6	HMCS...06	●	
MCS-TF-BSW28-150.60R	4,4	15	7/32“-28BSW	28	0,65	1,2	17	6		●	
MCS-TF-BSW22-150.60R	6,5	15	5/16“-22BSW	22	0,9	2,9	17	6		●	

MCS - Trapezoidal 30° DIN ISO 103 – partial profile

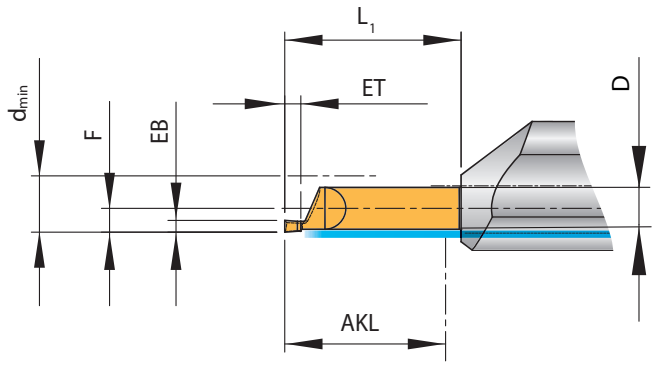


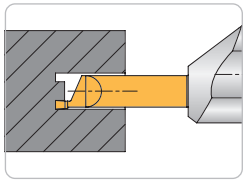


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

DESIGNATION	d_{min}	AKL	Thread	P - pitch	S_1	F	L_1	D	Vc (m/min) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-TP-TR103/1.5R-200.60R	6,5	20	TR 8x1.5	1,5	0,85	2,9	22	6	HMCS...06	●	
MCS-TP-TR103/2.0R-200.60R	7	20	TR 9x2.0	2	1,3	2,9	22	6		●	
MCS-TP-TR103/2.0R-200.80R	7	20	TR 9x2.0	2	1,3	2,6	22	8	HMCS...08	●	
MCS-TP-TR103/3.0R-200.80R	8	20	TR 11x3.0	3	1,4	3,6	22	8		●	

MCS - Axial grooving



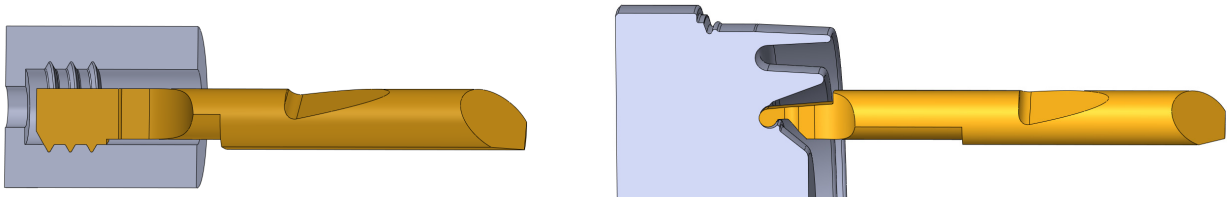


MACHINING MATERIAL				
STEEL	P	●	
STAINLESS STEEL	M	●	
CAST IRON	K	●	
NON-FERROUS METAL	N	●	
EXOTIC ALLOY	S	●	
HARDENED STEEL	H		●

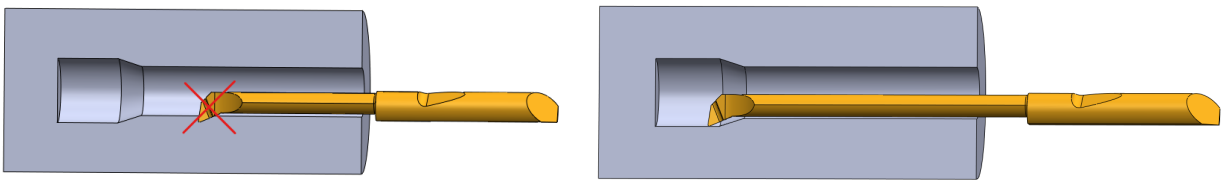
DESIGNATION	d_{min}	AKL	EB	ET	R	F	L_1	D	VC (M/MIN) CUTTING SPEED → / GRADE → / SUITABLE HOLDER ↓	PAGE 24 A32-BZ2	CBN1
MCS-A-50071100-075.40R	5	7,5	0,7	1,1	0	1,9	9,7	4		●	
MCS-A-5007711005-075.40R	5	7,5	0,77	1,1	0,05	1,9	9,7	4		●	
MCS-A-50081200-075.40R	5	7,5	0,8	1,2	0	1,9	9,7	4		●	
MCS-A-50091300-075.40R	5	7,5	0,9	1,3	0	1,9	9,7	4		●	
MCS-A-50101500-075.40R	5	7,5	1	1,5	0	1,9	10	4	HMCS...04	●	
MCS-A-501015005-075.40R	5	7,5	1	1,5	0,05	1,9	10	4		●	
MCS-A-50121500-075.40R	5	7,5	1,2	1,5	0	1,9	10	4		●	
MCS-A-50121500-150.40R	5	15	1,2	1,5	0	1,9	17	4		●	
MCS-A-502050005-100.40L/R	5	10	2	5	0,05	1,9	12	4		●	
MCS-A-600971500-100.60R	6	10	0,97	1,5	0	2,4	12	6		●	
MCS-A-60121500-100.60R	6	10	1,2	1,5	0	2,4	12	6		●	
MCS-A-60121500-180.60R	6	18	1,2	1,5	0	2,4	20	6	HMCS...06	●	
MCS-A-70152000-100.60R	7	10	1,5	2	0	2,9	12	6		●	
MCS-A-70152000-200.60R	7	20	1,5	2	0	2,9	22	6		●	
MCS-A-801530015-100.80R	8	10	1,5	3	0,15	2	12	8		●	
MCS-A-90152000-100.80R	9	10	1,5	2	0	3,8	12	8	HMCS...08	●	
MCS-A-90152000-250.80R	9	25	1,5	2	0	3,8	27	8		●	

MCS - custom design tool

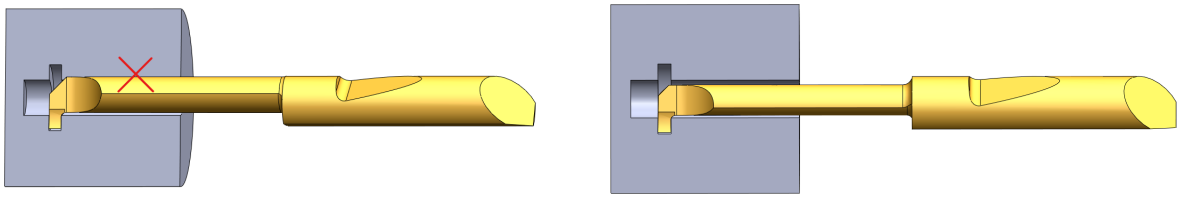
DO YOU NEED SPECIFIC SHAPE OF YOUR TOOL?



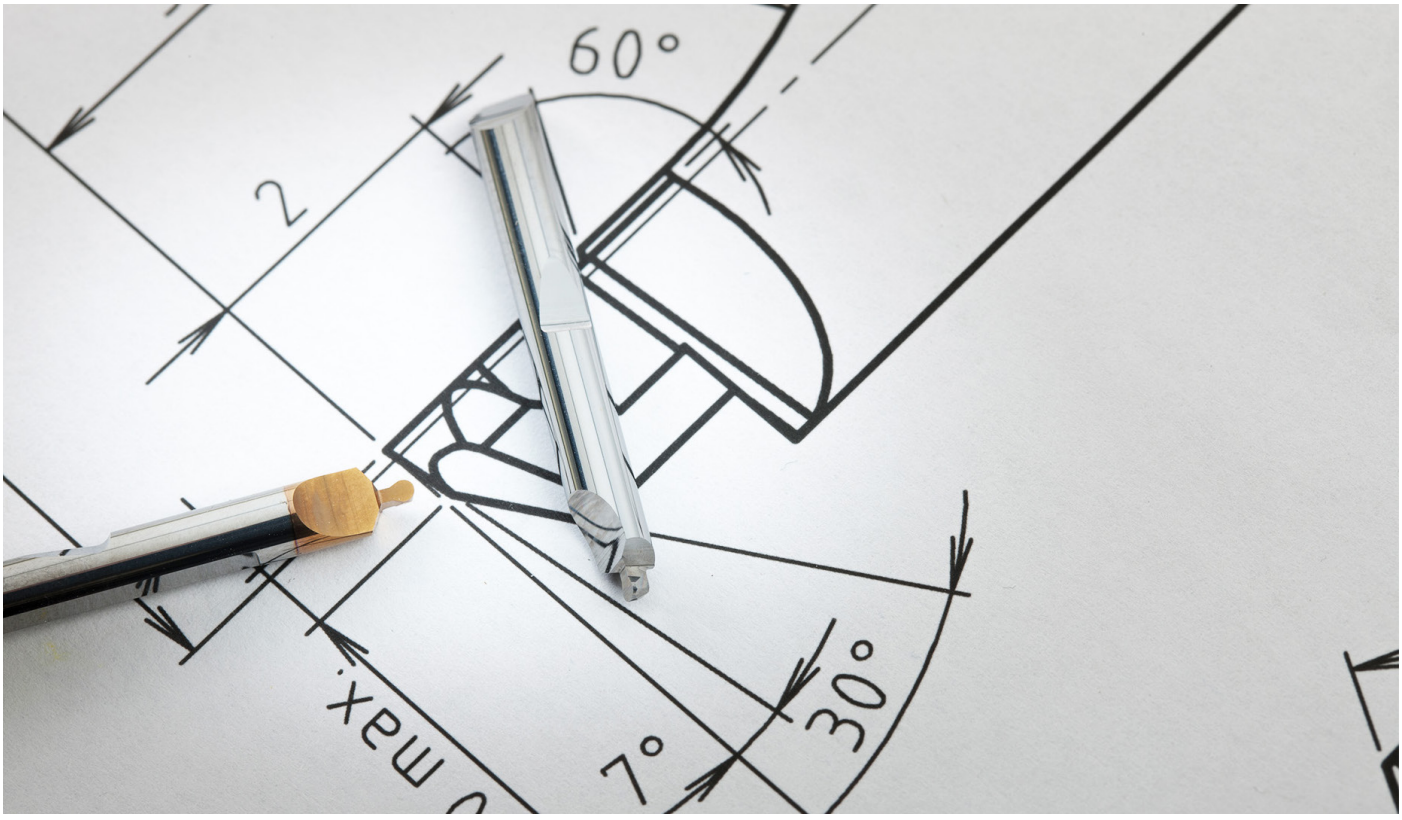
DO YOU NEED LONGER VERSION OF STANDARD TOOL?



DO YOU NEED TOOL FOR MACHINING SMALLER HOLE DIAMETER?



NO PROBLEM FOR US. WE ARE PREPARED FOR YOUR REQUEST.



CUTTING DATA

Material group	Structure of the material groups		Brinell hardness HB	Tensile strength Rm (N/mm²)	Chipping group	Cutting speed Vc (m/min) A32-BZ2	Cutting speed Vc (m/min) CBN
P	Unalloyed steel	C ≤ 0.25 % - annealed	125	428	P1	20 - 180	
		C = 0.25 % - 0.55 % - annealed	190	639	P2	20 - 180	
		C = 0.25 % - 0.55 % - hardened and tempered	210	708	P3	20 - 180	
		C ≤ 0.55 % - annealed	190	639	P4	20 - 180	
		C ≤ 0.55 % - hardened and tempered	300	1013	P5	20 - 180	
		Machinig steel (short-clipping) - annealed	220	745	P6	20 - 180	
	Low alloyed steel	annealed	175	591	P7	15 - 160	
		hardened and tempered	300	1013	P8	15 - 160	
		hardened and tempered	380	1282	P9	15 - 160	
		hardened and tempered	430	1477	P10	15 - 160	
	High alloyed steel and high alloyed tool steel	annealed	200	675	P11	20 - 120	
		hardened	300	1013	P12	20 - 120	
		hardened	400	1361	P13	20 - 120	
	Stainless steel	ferretic / martensitic - annealed	200	675	P14	20 - 90	
		martensitic, hardened and tempered	330	1114	P15	20 - 180	
M	Stainless steel	austenitic, chilled	200	675	M1	20 - 90	
		austenitic, precipitation-hardened (PH)	300	1013	M2	15 - 80	
		austenitic-ferritic, Duplex	230	778	M3	10 - 60	
K	Malleable cast iron	ferritic	200	675	K1	20 - 120	
		pearlitic	260	867	K2	20 - 120	
	Cast iron	low tensile strength	180	602	K3	20 - 140	
		high tensile strength / austenitic	245	825	K4	20 - 140	
	Cast iron with nodular graphite	ferritic	155	518	K5	20 - 130	
		pearlitic	265	885	K6	20 - 130	
	GGV (CGI)		200	675	K7	20 - 120	
N	Aluminium alloys long chipping	not heat treatable	30	-	N1	20 - 500	
		heat treatable, heat treated	100	343	N2	20 - 500	
	Casted aluminium alloys	≤ 12 % Si, not heat treatable	75	260	N3	20 - 500	
		≤ 12 % Si, heat treatable, heat treated	90	314	N4	20 - 500	
		> 12 % Si, not heat treatable	130	447	N5	20 - 500	
	Magnesium alloys	> 12 % Si, not heat treatable	70	250	N6	-	
	Copper and copper alloys (Brass / Bronze)	Unalloyed, elektrolyte copper	100	343	N7	20 - 600	
		Brass, Bronze	90	314	N8	20 - 600	
		Cu-alloys, short-chipping	110	382	N9	20 - 600	
			300	1013	N10	-	
	Non-ferrous materials	Lead alloys (without abrasive filling material)	-	-	N11	-	
		Duroplastic (without abrasive filling material)	-	-	N12	-	
		Plastic glas fibre reinforced GFRP	-	-	N13	-	
		Plastic carbon fibre reinforced CFRP	-	-	N14	-	
		Plastic aramid fibre reinforced AFRP	-	-	N15	-	
		Graphite (tech.)	80 Shore	-	N16	-	
S	High temperature resistant alloys	Fe-based - annealed	200	675	S1	15 - 75	
		Fe-based - heat treated	280	943	S2	15 - 75	
		Ni- or Co-alloyed - annealed	250	839	S3	15 - 40	
		Ni- or Co-alloyed - heat treated	350	1177	S4	15 - 40	
		Ni- or Co-alloyed - casting	320	1076	S5	15 - 40	
	Titanium alloys	Pure titan	200	675	S6	-	
		α- and β-alloys, heat treated	375	1262	S7	-	
		β-alloys	410	1396	S8	-	
	Wolfram alloys		300	1013	S9	-	
	Molybdän alloys		300	1013	S10	-	
H	Hardened steel	hardened	50 HRC	-	H1	-	60 - 150
		hardened	55 HRC	-	H2	-	60 - 150
		hardened	60 HRC	-	H3	-	60 - 150
	Hardened cast iron	hardened	55 HRC	-	H4	-	60 - 150