



REAMING & COUNTERSINKING



Application recommendations for reamers

		Feed column no.						Feed f (mm/rev)
Code letter		E	F	G	H	I	J	
reamer-Ø mm	3.15	0.080	0.100	0.125	0.300	0.500	0.800	
	4.00	0.100	0.125	0.160	0.300	0.500	1.000	
	5.00	0.100	0.125	0.160	0.400	0.600	1.000	
	6.30	0.125	0.160	0.200	0.400	0.700	1.200	
	8.00	0.160	0.200	0.250	0.600	1.000	1.800	
	10.00	0.200	0.250	0.315	0.600	1.200	1.800	
	12.50	0.200	0.250	0.315	0.800	1.200	2.000	
	16.00	0.250	0.315	0.400	0.800	1.400	2.200	
	20.00	0.315	0.400	0.500	0.800	1.400	2.200	

Tools with feed column no. in bold are preferred choices for listed material group.

Diameter	Allowance of undersizes (recommended values)
< 6 mm	0.1 - 0.2 mm
< 10 mm	0.2 mm
< 16 mm	0.2 - 0.3 mm
< 25 mm	0.3 - 0.4 mm
> 25 mm	0.4 mm

- Lubricants:**
- cutting oil, highly activated, surface active lubricant with effective additives which chemically react and result in a special adhesive and abrasion reducing lubricant film.
 - soluble oil (emulsion)
 - without lubricant
 - air only

Material group	Materials examples, new designations (old designation in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm ²)	Hard- ness	Coolant
General purpose steels	1.0035 S185(St33), 1.0486 P275N(StE285), 1.0345 P235GH(H1), 1.0425 P265GH(H2)	≤500		<input checked="" type="checkbox"/>
	1.0050 E295 (St50-2), 1.0070 E360 (St70-2), 1.8937 P500NH (WStE500)	>500-850		<input checked="" type="checkbox"/>
Free-cutting steels	1.0718 11SMnPb30 (9SMnPb28), 1.0736 11SMn37 (9SMn36)	≤850		<input checked="" type="checkbox"/>
	1.0727 46S20 (45S20), 1.0728 (60S20), 1.0757 46SPb20 (45SPb20)	850-1000		<input checked="" type="checkbox"/>
Unalloyed tempering steels	1.0402 C22, 1.1178 C30E (Ck30)	≤ 700		<input checked="" type="checkbox"/>
	1.0503 C45, 1.1191 C45E (Ck45)	700-850		<input checked="" type="checkbox"/>
	1.0601 C60, 1.1221 C60E (Ck60)	850-1000		<input checked="" type="checkbox"/>
Alloyed tempering steels	1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4	850-≤1000		<input checked="" type="checkbox"/>
	1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4	1000-1200		<input checked="" type="checkbox"/>
Unalloyed case hardened steels	1.0301 (C10), 1.1121 C10E (Ck10)	≤750		<input checked="" type="checkbox"/>
Alloyed case hardened steels	1.7043 38Cr4	850-≤1000		<input checked="" type="checkbox"/>
	1.5752 15NiCr13 (15NiCr13), 1.7131 16MnCr5, 1.7264 20CrMo5	1000-1200		<input checked="" type="checkbox"/>
Nitriding steels	1.8504 34CrAl6	≥850-≤1000		<input checked="" type="checkbox"/>
	1.8519 31CrMoV9, 1.8550 34CrAlNi7	>1000-1200		<input checked="" type="checkbox"/>
Tool steels	1.1750 C75W, 1.2067 102Cr6, 1.2307 29CrMoV9	≤850		<input checked="" type="checkbox"/>
	1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2767 X45NiCrMo4	>850-1000		<input checked="" type="checkbox"/>
High speed steels	1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3	≥650-1000		<input checked="" type="checkbox"/>
Spring steels	1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4 (51CrV4)		≤330 HB	<input checked="" type="checkbox"/>
Stainless steels, sulphured	1.4005 X12CrS13, 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X8CrNiS18-9	≤850		<input checked="" type="checkbox"/>
austenitic	1.4301 X5CrNi18-10 (V2A), 1.4541 X6CrNiTi18-10, 1.4571 X6CrNiMoTi 17-12-2 (V4A)	≤850		<input checked="" type="checkbox"/>
martensitic	1.4057 X20CrNi 17.2 (X17CrNi16-2), 1.4122 X39CrMo17-1, 1.4521 X2CrMoTi18-2	≤850		<input checked="" type="checkbox"/>
Hardened steels	-		≤40-48 HRC >48-60 HRC	<input checked="" type="checkbox"/>
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤1200		<input checked="" type="checkbox"/>
Cast iron	0.6010 EN-GJL-100(GG10), 0.6020 EN-GJL-200(GG20)		≤240 HB	<input checked="" type="checkbox"/>
	0.6025 EN-GJL-250(GG25), 0.6035 EN-GJL-350(GG35)		<300 HB	<input checked="" type="checkbox"/>
Spheroidal graphite iron and maleable cast iron	0.7050 EN-GJS-500-7(GGG50), 0.8035 EN-GJMW-350-4(GTW35)		≤240 HB	<input checked="" type="checkbox"/>
Chilled cast iron	0.7070 EN-GJS-700-2(GGG70), 0.8170 EN-GJMB-700-2(GTS70)		<300 HB	<input checked="" type="checkbox"/>
Ti and Ti-alloys	-		≤350 HB	<input checked="" type="checkbox"/>
	3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2	≤850		<input checked="" type="checkbox"/>
	3.7154 TiAl6Zr5, 3.7165 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5, - TiAl8Mo1V1	>850-1200		<input checked="" type="checkbox"/>
Aluminium and Al-alloys	3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1	≤400		<input checked="" type="checkbox"/>
Al wrought alloys	3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	≤450		<input checked="" type="checkbox"/>
Al cast alloys ≤ 10 % Si	3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9	≤600		<input checked="" type="checkbox"/>
> 10 % Si	3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		<input checked="" type="checkbox"/>
Magnesium alloys	3.5200 MgMn2, 3.5812.05 G-MgAl8Zn1, 3.5612.05 G-MgAl6Zn1	≤450		<input checked="" type="checkbox"/>
Copper, low alloyed	2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb	≤400		<input checked="" type="checkbox"/>
Brass, short-chipping	2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2	≤600		<input checked="" type="checkbox"/>
long-chipping	2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5	≤600		<input checked="" type="checkbox"/>
Bronze, short-chipping	2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn	≤600		<input checked="" type="checkbox"/>
	2.0790 CuNi18Zn19Pb	>600-850		<input checked="" type="checkbox"/>
Bronze, long-chipping	2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	≤850		<input checked="" type="checkbox"/>
	2.0980 CuAl11Ni, 2.1247 CuBe2	>850-1000		<input checked="" type="checkbox"/>
Duroplastics	Epoxy resin, Resopal, Pertinax, Moltopren		-	<input type="checkbox"/>
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon		-	<input checked="" type="checkbox"/>
Kevlar	Kevlar		-	<input type="checkbox"/>
Glass/carbon-concentr. plastics	GFK/CFK		-	<input type="checkbox"/>

SuperR-HS Reamers

Catalog no.	72870	72871
Tool material	Carbide	
Surface finish	AlTiN nano	
DIN	Stock	Stock
Form		
Page	708	708

72872	72873
Carbide	
AlTiN nano	
Stock	Stock
710	710

NC Reamers

72920	72930
Carbide	
bright	bright
Stock	Stock
712	712

Machine Reamers

72868	72867	72860	72859	72880	72881
Carbide					
bright	bright	bright	bright	bright	bright
8050	8050	8051	8051	8093	8093
A	B	A	B	A	B
716	716	720	720	718	718



V _c m/min	Feed column no.		V _c m/min	Feed column no.		V _c m/min	Feed column no.		V _c m/min	Feed column no.						
185	I-J	I-J	185	I-J	I-J	18	F	F	18	F	F	F	F	F	F	F
185	I-J	I-J	185	I-J	I-J	16	F	F	16	F	F	F	F	F	F	F
185	I-J	I-J	185	I-J	I-J	18	F	F	18	F	F	F	F	F	F	F
185	I-J	I-J	185	I-J	I-J	16	F	F	16	F	F	F	F	F	F	F
185	I-J	I-J	185	I-J	I-J	18	E	E	18	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	16	F	F	16	F	F	F	F	F	F	F
185	I-J	I-J	185	I-J	I-J	14	E	E	14	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	14	E	E	14	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	12	E	E	12	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	18	E	E	18	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	14	E	E	14	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	12	E	E	12	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	14	E	E	14	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	12	E	E	12	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	10	E	E	10	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	10	E	E	10	E	E	E	E	E	E	E
90	I-J	I-J	90	I-J	I-J											
45	G-H	G-H	45	G-H	G-H											
90	H-I	H-I	90	H-I	H-I	8	E	E	8	E	E	E	E	E	E	E
60	H-I	H-I	60	H-I	H-I	6	E	E	6	E	E	E	E	E	E	E
90	H-I	H-I	90	H-I	H-I	6	E	E	6	E	E	E	E	E	E	E
50	G-H	G-H	50	G-H	G-H											
45	G-H	G-H	45	G-H	G-H											
100	I-J	I-J	100	I-J	I-J	20	E	E	20	E	E	E	E	E	E	E
100	I-J	I-J	100	I-J	I-J	18	E	E	18	E	E	E	E	E	E	E
185	I-J	I-J	185	I-J	I-J	20	E	E	20	E	E	E	E	E	E	E
90	I-J	I-J	90	I-J	I-J	18	E	E	18	E	E	E	E	E	E	E
40	H-I	H-I	40	H-I	H-I											
60	H-I	H-I	60	H-I	H-I	10	E	E	10	E	E	E	E	E	E	E
60	H-I	H-I	60	H-I	H-I	10	E	E	10	E	E	E	E	E	E	E
						30	G	G	30	G	G	G	G	G	G	G
						30	G	G	30	G	G	G	G	G	G	G
						40	F	F	40	F	F	F	F	F	F	F
						30	F	F	30	F	F	F	F	F	F	F
120	I-J	I-J	120	I-J	I-J	25	F	F	25	F	F	F	F	F	F	F
						25	F	F	25	F	F	F	F	F	F	F
175	I-J	I-J	175	I-J	I-J	35	F	F	35	F	F	F	F	F	F	F
						30	F	F	30	F	F	F	F	F	F	F
175	I-J	I-J	175	I-J	I-J	35	F	F	35	F	F	F	F	F	F	F
175	I-J	I-J	175	I-J	I-J	30	F	F	30	F	F	F	F	F	F	F
						30	F	F	30	F	F	F	F	F	F	F
						25	F	F	25	F	F	F	F	F	F	F
140	I-J	I-J	140	I-J	I-J	20	G	G	20	G	G	G	G	G	G	G
140	I-J	I-J	140	I-J	I-J	20	G	G	20	G	G	G	G	G	G	G

Application recommendations for reamers

		Feed column no.						
Code letter	E	F	G	H	I	J		
reamer-Ø mm	3.15	0.080	0.100	0.125	0.300	0.500	0.800	
	4.00	0.100	0.125	0.160	0.300	0.500	1.000	
	5.00	0.100	0.125	0.160	0.400	0.600	1.000	
	6.30	0.125	0.160	0.200	0.400	0.700	1.200	
	8.00	0.160	0.200	0.250	0.600	1.000	1.800	
	10.00	0.200	0.250	0.315	0.600	1.200	1.800	
	12.50	0.200	0.250	0.315	0.800	1.200	2.000	
	16.00	0.250	0.315	0.400	0.800	1.400	2.200	
	20.00	0.315	0.400	0.500	0.800	1.400	2.200	
								f (mm/rev)

Tools with feed column no. in bold are preferred choices for listed material group.

Diameter	Allowance of undersizes (recommended values)
< 6 mm	0.1 - 0.2 mm
< 10 mm	0.2 mm
< 16 mm	0.2 - 0.3 mm
< 25 mm	0.3 - 0.4 mm
> 25 mm	0.4 mm

- Lubricants:**
- cutting oil, highly activated, surface active lubricant with effective additives which chemically react and result in a special adhesive and abrasion reducing lubricant film.
 - soluble oil (emulsion)
 - without lubricant
 - air only

Material group	Materials examples, new designations (old designation in brackets) Figures in bold = material no. to DIN EN	Tensile strength MPa (N/mm ²)	Hardness	Coolant
General purpose steels	1.0035 S185(St33), 1.0486 P275N(StE285), 1.0345 P235GH(H1), 1.0425 P265GH(H2)	≤500		<input checked="" type="checkbox"/>
	1.0050 E295 (St50-2), 1.0070 E360 (St70-2), 1.8937 P500NH (WStE500)	>500-850		<input checked="" type="checkbox"/>
Free-cutting steels	1.0718 11SMnPb30 (9SMnPb28), 1.0736 11SMn37 (9SMn36)	≤850		<input checked="" type="checkbox"/>
	1.0727 46S20 (45S20), 1.0728 (60S20), 1.0757 46SPb20 (45SPb20)	850-1000		<input checked="" type="checkbox"/>
Unalloyed tempering steels	1.0402 C22, 1.1178 C30E (Ck30)	≤ 700		<input checked="" type="checkbox"/>
	1.0503 C45, 1.1191 C45E (Ck45)	700-850		<input checked="" type="checkbox"/>
	1.0601 C60, 1.1221 C60E (Ck60)	850-1000		<input checked="" type="checkbox"/>
Alloyed tempering steels	1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4	850-≤1000		<input checked="" type="checkbox"/>
	1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4	1000-1200		<input checked="" type="checkbox"/>
Unalloyed case hardened steels	1.0301 (C10), 1.1121 C10E (Ck10)	≤750		<input checked="" type="checkbox"/>
Alloyed case hardened steels	1.7043 38Cr4	850-≤1000		<input checked="" type="checkbox"/>
	1.5752 15NiCr13 (15NiCr13), 1.7131 16MnCr5, 1.7264 20CrMo5	1000-1200		<input checked="" type="checkbox"/>
Nitriding steels	1.8504 34CrAl6	≥850-≤1000		<input checked="" type="checkbox"/>
	1.8519 31CrMoV9, 1.8550 34CrAlNi7	>1000-1200		<input checked="" type="checkbox"/>
Tool steels	1.1750 C75W, 1.2067 102Cr6, 1.2307 29CrMoV9	≤850		<input checked="" type="checkbox"/>
	1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2767 X45NiCrMo4	>850-1000		<input checked="" type="checkbox"/>
High speed steels	1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3	≥650-1000		<input checked="" type="checkbox"/>
Spring steels	1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4 (51CrV4)		≤330 HB	<input checked="" type="checkbox"/>
Stainless steels, sulphured	1.4005 X12CrS13, 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X8CrNiS18-9	≤850		<input checked="" type="checkbox"/>
austenitic	1.4301 X5CrNi18-10 (V2A), 1.4541 X6CrNiTi18-10, 1.4571 X6CrNiMoTi 17-12-2 (V4A)	≤850		<input checked="" type="checkbox"/>
martensitic	1.4057 X20CrNi 17.2 (X17CrNi16-2), 1.4122 X39CrMo17-1, 1.4521 X2CrMoTi18-2	≤850		<input checked="" type="checkbox"/>
Hardened steels	-		≤40-48 HRC >48-60 HRC	<input checked="" type="checkbox"/>
Special alloys	Nimonic, Inconel, Monel, Hastelloy	≤1200		<input checked="" type="checkbox"/>
Cast iron	0.6010 EN-GJL-100(GG10), 0.6020 EN-GJL-200(GG20)		≤240 HB	<input checked="" type="checkbox"/>
	0.6025 EN-GJL-250(GG25), 0.6035 EN-GJL-350(GG35)		<300 HB	<input checked="" type="checkbox"/>
Spheroidal graphite iron and maleable cast iron	0.7050 EN-GJS-500-7(GGG50), 0.8035 EN-GJMW-350-4(GTW35)		≤240 HB	<input checked="" type="checkbox"/>
Chilled cast iron	0.7070 EN-GJS-700-2(GGG70), 0.8170 EN-GJMB-700-2(GTS70)		<300 HB	<input checked="" type="checkbox"/>
Ti and Ti-alloys	-		≤350 HB	<input checked="" type="checkbox"/>
	3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2	≤850		<input checked="" type="checkbox"/>
	3.7154 TiAl6Zr5, 3.7165 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5, - TiAl8Mo1V1	>850-1200		<input checked="" type="checkbox"/>
Aluminium and Al-alloys	3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1	≤400		<input checked="" type="checkbox"/>
Al wrought alloys	3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	≤450		<input checked="" type="checkbox"/>
Al cast alloys ≤ 10 % Si	3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9	≤600		<input checked="" type="checkbox"/>
> 10 % Si	3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		<input checked="" type="checkbox"/>
Magnesium alloys	3.5200 MgMn2, 3.5812.05 G-MgAl8Zn1, 3.5612.05 G-MgAl6Zn1	≤450		<input checked="" type="checkbox"/>
Copper, low alloyed	2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb	≤400		<input checked="" type="checkbox"/>
Brass, short-chipping	2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2	≤600		<input checked="" type="checkbox"/>
long-chipping	2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5	≤600		<input checked="" type="checkbox"/>
Bronze, short-chipping	2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn	≤600		<input checked="" type="checkbox"/>
	2.0790 CuNi18Zn19Pb	>600-850		<input checked="" type="checkbox"/>
Bronze, long-chipping	2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10	≤850		<input checked="" type="checkbox"/>
	2.0980 CuAl11Ni, 2.1247 CuBe2	>850-1000		<input checked="" type="checkbox"/>
Duroplastics	Epoxy resin, Resopal, Pertinax, Moltopren		-	<input type="checkbox"/>
Thermoplastics	Plexiglass, Hostalen, Novodur, Makralon		-	<input checked="" type="checkbox"/>
Kevlar	Kevlar		-	<input type="checkbox"/>
Glass/carbon-concentr. plastics	GFK/CFK		-	<input type="checkbox"/>

Machine bridge ream. Reamers

NC Machine Reamers

Taper pin Reamers

Machine Reamers

Quick spiral Reamers

Catalog no.	72680
Tool material	HSS
Surface finish	nitrided
DIN	311
Form	
Page	736

72900	72910
HSS-E	
bright	bright
Stock std.	Stock std.
A	A
722	722

72741	72742
HSS-E	
bright	bright
Stock std.	Stock std.
A	A
737	738

72640	72654	72650	72660	72670
HSS-E				
bright	bright	bright	bright	bright
212	212	212	208	208
C	B/D	D	A	B
729	726	731	733	733

72690
HSS-E
bright
212
E
735



V _c m/min	Feed col. no.	V _c m/min	Feed column no.		V _c m/min	Feed column no.		V _c m/min	Feed column no.					V _c m/min	Feed col. no.
14	F	16	F	F	8	F	F	16	F	F	F	F	F	16	G
12	F	12	F	F	8	F	F	12	F	F	F	F	F	12	G
10	F	10	E	E	8	F	F	10	E	E	E	E	E	12	G
10	E	14	F	F	8	E	E	14	F	F	F	F	F	14	G
8	E	12	E	E	8	E	E	12	E	E	E	E	E	12	G
6	E	10	E	E	8	E	E	10	E	E	E	E	E		
12	F	8	E	E	8	E	E	8	E	E	E	E	E	16	G
6	E	16	F	F	8	E	E	16	F	F	F	F	F		
8	E	10	E	E	6	E	E	10	E	E	E	E	E		
12	E	8	E	E	6	E	E	8	E	E	E	E	E		
8	E	10	E	E	6	E	E	10	E	E	E	E	E	10	G
		8	E	E				8	E	E	E	E	E		
		14	F	F	6	E	E	14	F	F	F	F	F		
		10	E	E	6	E	E	10	E	E	E	E	E		
		10	E	E				10	E	E	E	E	E		
5	E	6	F	F	6	E	E	6	F	F	F	F	F		
4	E	6	F	F	6	E	E	6	F	F	F	F	F		
		4	F	F	6	E	E	4	F	F	F	F	F		
12	E	14	E	E	6	E	E	14	E	E	E	E	E		
12	E	12	E	E	6	E	E	12	E	E	E	E	E		
10	E	12	E	E	6	E	E	10	E	E	E	E	E		
		10	E	E	6	E	E								
4	E	6	E	E	6	E	E	6	E	E	E	E	E	5	E
3	E	4	E	E	6	E	E	4	E	E	E	E	E		
		18	G	G				18	G	G	G	G	G	22	G
18	G	18	G	G	8	G	G	18	G	G	G	G	G	22	G
18	G	20	F	F	8	G	G	20	F	F	F	F	F	20	G
		18	F	F				18	F	F	F	F	F		
18	G	20	F	F	8	G	G	20	F	F	F	F	F	16	G
16	F	18	F	F	8	F	F	18	F	F	F	F	F		
		18	F	F				18	F	F	F	F	F		
16	F	16	F	F	8	F	F	16	F	F	F	F	F	18	G
20	E	20	F	F	8	F	F	20	F	F	F	F	F		
		18	F	F				18	F	F	F	F	F		
16	F	18	F	F	8	F	F	18	F	F	F	F	F		
14	F	14	F	F	8	F	F	14	F	F	F	F	F		
		12	G	G				12	G	G	G	G	G	12	G
10	F	14	G	G	8	F	F	14	G	G	G	G	G	14	G

Carbide reamers

NC machine chucking reamers

Catalog no. 72920



For all ferrous and non-ferrous materials, as well as for hard and soft plastics. For mass production on automatic lathes. Straight shank for use in hydraulic chucks or shrinking systems.

Stock std.

Tool material	Solid Carbide
Surface	bright
Type	
Form	
Cutting direction	right-hand
Tolerance on Ø	
Flutes	8° LH spiral

Tolerance d2: h6
 Tolerance d1:
 from Ø 1,00 - 5,03 mm 0,000/+0,004
 from Ø 5,97 - 12,00 mm 0,000/+0,005

NC machine chucking reamers

Catalog no. 72930



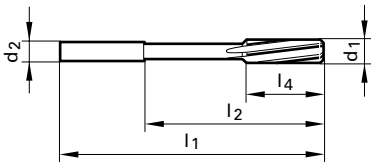
For all ferrous and non-ferrous materials, as well as for hard and soft plastics. For mass production on automatic lathes. Straight shank for use in hydraulic chucks or shrinking systems.

Stock std.

Tool material	Solid Carbide
Surface	bright
Type	
Form	
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	8° LH spiral

Tolerance d2: h6

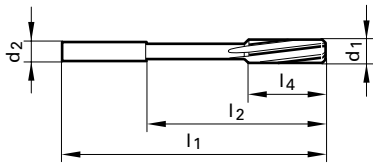
NC machine chucking reamers



Catalog no.	72920	72930
Tool material	Solid Carbide	
Discount group	120	120
Surface	bright	bright
Form		

d1	d2	l1	l2	l4	Z	price per piece
mm	mm	mm	mm	mm		
0.980	4.000	50.00	22.00	6.00	3	●
0.990	4.000	50.00	22.00	6.00	3	●
1.000	4.000	50.00	22.00	6.00	3	●
1.010	4.000	50.00	22.00	6.00	3	●
1.020	4.000	50.00	22.00	6.00	3	●
1.030	4.000	50.00	22.00	9.00	3	●
1.480	4.000	50.00	22.00	9.00	3	●
1.490	4.000	50.00	22.00	9.00	3	●
1.500	4.000	50.00	22.00	9.00	3	●
1.510	4.000	50.00	22.00	9.00	3	●
1.520	4.000	50.00	22.00	9.00	3	●
1.530	4.000	50.00	22.00	9.00	3	●
1.980	4.000	50.00	22.00	12.00	4	●
1.990	4.000	50.00	22.00	12.00	4	●
2.000	4.000	50.00	22.00	12.00	4	●
2.010	4.000	50.00	22.00	12.00	4	●
2.020	4.000	50.00	22.00	12.00	4	●
2.030	4.000	50.00	22.00	12.00	4	●
2.480	4.000	60.00	32.00	16.00	4	●
2.490	4.000	60.00	32.00	16.00	4	●
2.500	4.000	60.00	32.00	16.00	4	●
2.510	4.000	60.00	32.00	16.00	4	●
2.520	4.000	60.00	32.00	16.00	4	●
2.530	4.000	60.00	32.00	16.00	4	●
2.970	4.000	64.00	36.00	17.00	6	●
2.980	4.000	64.00	36.00	17.00	6	●
2.990	4.000	64.00	36.00	17.00	6	●
3.000	4.000	64.00	36.00	17.00	6	●
3.010	4.000	64.00	36.00	17.00	6	●
3.020	4.000	64.00	36.00	17.00	6	●
3.030	4.000	64.00	36.00	17.00	6	●
3.100	4.000	68.00	40.00	18.00	6	●
3.200	4.000	68.00	40.00	18.00	6	●
3.300	4.000	68.00	40.00	18.00	6	●
3.400	4.000	74.00	46.00	20.00	6	●
3.500	4.000	74.00	46.00	20.00	6	●
3.600	4.000	74.00	46.00	20.00	6	●
3.700	4.000	74.00	46.00	20.00	6	●
3.800	4.000	77.00	45.00	21.00	6	●
3.900	4.000	77.00	45.00	21.00	6	●
3.970	4.000	77.00	45.00	21.00	6	●
3.980	4.000	77.00	45.00	21.00	6	●
3.990	4.000	77.00	45.00	21.00	6	●
4.000	4.000	77.00	45.00	21.00	6	●
4.010	4.000	77.00	45.00	21.00	6	●
4.020	4.000	77.00	45.00	21.00	6	●
4.030	4.000	77.00	45.00	21.00	6	●
4.100	6.000	82.00	50.00	23.00	6	●
4.200	6.000	82.00	50.00	23.00	6	●
4.300	6.000	82.00	50.00	23.00	6	●
4.400	6.000	82.00	50.00	23.00	6	●
4.500	6.000	82.00	50.00	23.00	6	●
4.600	6.000	82.00	50.00	23.00	6	●
4.700	6.000	82.00	50.00	23.00	6	●
4.800	6.000	93.00	59.00	26.00	6	●
4.900	6.000	93.00	59.00	26.00	6	●
4.970	6.000	93.00	59.00	26.00	6	●
4.980	6.000	93.00	59.00	26.00	6	●
4.990	6.000	93.00	59.00	26.00	6	●
5.000	6.000	93.00	59.00	26.00	6	●

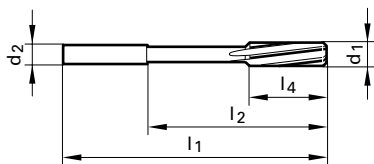
NC machine chucking reamers



Catalog no.	72920	72930
Tool material	Solid Carbide	
Discount group	120	120
Surface	bright	bright
Form		

d1	d2	l1	l2	l4	Z	price per piece
mm	mm	mm	mm	mm		
5.010	6.000	93.00	59.00	26.00	6	●
5.020	6.000	93.00	59.00	26.00	6	●
5.030	6.000	93.00	59.00	26.00	6	●
5.100	6.000	93.00	59.00	26.00	6	●
5.200	6.000	93.00	59.00	26.00	6	●
5.300	6.000	93.00	59.00	26.00	6	●
5.400	6.000	93.00	57.00	26.00	6	●
5.500	6.000	93.00	57.00	26.00	6	●
5.600	6.000	93.00	57.00	26.00	6	●
5.700	6.000	93.00	57.00	26.00	6	●
5.800	6.000	93.00	57.00	26.00	6	●
5.900	6.000	93.00	57.00	26.00	6	●
5.970	6.000	93.00	57.00	26.00	6	●
5.980	6.000	93.00	57.00	26.00	6	●
5.990	6.000	93.00	57.00	26.00	6	●
6.000	6.000	93.00	57.00	26.00	6	●
6.010	6.000	93.00	57.00	26.00	6	●
6.020	6.000	93.00	57.00	26.00	6	●
6.030	6.000	93.00	57.00	26.00	6	●
6.100	8.000	101.00	63.00	28.00	6	●
6.200	8.000	101.00	63.00	28.00	6	●
6.300	8.000	101.00	63.00	28.00	6	●
6.400	8.000	101.00	63.00	28.00	6	●
6.500	8.000	101.00	63.00	28.00	6	●
6.600	8.000	101.00	63.00	28.00	6	●
6.700	8.000	101.00	63.00	28.00	6	●
6.800	8.000	109.00	69.00	31.00	6	●
6.900	8.000	109.00	69.00	31.00	6	●
7.000	8.000	109.00	69.00	31.00	6	●
7.100	8.000	109.00	69.00	31.00	6	●
7.200	8.000	109.00	69.00	31.00	6	●
7.300	8.000	109.00	69.00	31.00	6	●
7.400	8.000	109.00	69.00	31.00	6	●
7.500	8.000	109.00	69.00	31.00	6	●
7.600	8.000	109.00	69.00	31.00	6	●
7.700	8.000	117.00	75.00	33.00	6	●
7.800	8.000	117.00	75.00	33.00	6	●
7.900	8.000	117.00	75.00	33.00	6	●
7.970	8.000	117.00	75.00	33.00	6	●
7.980	8.000	117.00	75.00	33.00	6	●
7.990	8.000	117.00	75.00	33.00	6	●
8.000	8.000	117.00	75.00	33.00	6	●
8.010	8.000	117.00	75.00	33.00	6	●
8.020	8.000	117.00	75.00	33.00	6	●
8.030	8.000	117.00	75.00	33.00	6	●
8.040	8.000	117.00	75.00	33.00	6	●
8.100	10.000	117.00	75.00	33.00	6	●
8.200	10.000	117.00	75.00	33.00	6	●
8.300	10.000	117.00	75.00	33.00	6	●
8.400	10.000	117.00	75.00	33.00	6	●
8.500	10.000	117.00	75.00	33.00	6	●
8.600	10.000	117.00	75.00	33.00	6	●
8.700	10.000	125.00	81.00	36.00	6	●
8.800	10.000	125.00	81.00	36.00	6	●
8.900	10.000	125.00	81.00	36.00	6	●
9.000	10.000	125.00	81.00	36.00	6	●
9.100	10.000	125.00	81.00	36.00	6	●
9.200	10.000	125.00	81.00	36.00	6	●
9.300	10.000	125.00	81.00	36.00	6	●
9.400	10.000	125.00	81.00	36.00	6	●

NC machine chucking reamers



Catalog no.	72920	72930
Tool material	Solid Carbide	
Discount group	120	120
Surface	bright	bright
Form		

d1	d2	l1	l2	l4	Z	price per piece
mm	mm	mm	mm	mm		
9.500	10.000	125.00	81.00	36.00	6	●
9.600	10.000	125.00	81.00	36.00	6	●
9.700	10.000	133.00	87.00	38.00	6	●
9.800	10.000	133.00	87.00	38.00	6	●
9.900	10.000	133.00	87.00	38.00	6	●
9.970	10.000	133.00	87.00	38.00	6	●
9.980	10.000	133.00	87.00	38.00	6	●
9.990	10.000	133.00	87.00	38.00	6	●
10.000	10.000	133.00	87.00	38.00	6	●
10.010	10.000	133.00	87.00	38.00	6	●
10.020	10.000	133.00	87.00	38.00	6	●
10.030	10.000	133.00	87.00	38.00	6	●
10.040	10.000	133.00	87.00	38.00	6	●
10.050	10.000	133.00	87.00	38.00	6	●
10.100	10.000	133.00	87.00	38.00	6	●
10.200	10.000	133.00	87.00	38.00	6	●
10.300	10.000	133.00	87.00	38.00	6	●
10.400	10.000	133.00	87.00	38.00	6	●
10.500	10.000	133.00	87.00	38.00	6	●
10.600	10.000	133.00	87.00	38.00	6	●
10.700	10.000	142.00	96.00	41.00	6	●
10.800	10.000	142.00	96.00	41.00	6	●
10.900	10.000	142.00	96.00	41.00	6	●
11.000	10.000	142.00	96.00	41.00	6	●
11.100	10.000	142.00	96.00	41.00	6	●
11.200	10.000	142.00	96.00	41.00	6	●
11.300	10.000	142.00	96.00	41.00	6	●
11.400	10.000	142.00	96.00	41.00	6	●
11.500	10.000	142.00	96.00	41.00	6	●
11.600	10.000	142.00	96.00	41.00	6	●
11.700	10.000	142.00	96.00	41.00	6	●
11.800	10.000	142.00	96.00	41.00	6	●
11.900	12.000	151.00	105.00	44.00	6	●
11.970	12.000	151.00	105.00	44.00	6	●
11.980	12.000	151.00	105.00	44.00	6	●
11.990	12.000	151.00	105.00	44.00	6	●
12.000	12.000	151.00	105.00	44.00	6	●
12.010	12.000	151.00	105.00	44.00	6	●
12.020	12.000	151.00	105.00	44.00	6	●
12.030	12.000	151.00	105.00	44.00	6	●
12.040	12.000	151.00	105.00	44.00	6	●
12.050	12.000	151.00	105.00	44.00	6	●

Carbide reamers

Carbide brazed machine reamers

~ DIN 8050

Catalog no. 72868



For steels with tensile strengths of up to 1000 N/mm², grey cast iron of more than approx. 240 Brinell, manganese steels, AISi-alloys as well as hard and abrasive plastics. For mass production. not suitable for interrupted holes, e.g. with key ways, intersecting holes and similar.

Tool material	Carbide
Surface	bright
Type	
Form	A
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	straight

Carbide brazed machine reamers

~ DIN 8050

Catalog no. 72867

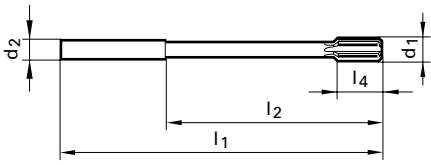


Short bevel lead, 45°.

For steels with tensile strengths of up to 1000 N/mm², grey cast iron of more than approx. 240 brinell, manganese steels, AISi-alloys as well as hard and abrasive plastics. For mass production.

Tool material	Carbide
Surface	bright
Type	
Form	B
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	7° LH spiral

Carbide brazed machine reamers



Catalog no.	72868	72867
Tool material	Carbide	
Discount group	120	120
Surface	bright	bright
Form	A	B

d1	d2	l1	l2	l4	Z	price per piece	
mm	mm	mm	mm	mm			
5.000	5.000	86.00	52.00	12.00	6	●	●
6.000	5.600	93.00	57.00	12.00	6	●	●
7.000	7.100	109.00	69.00	16.00	6	●	●
8.000	8.000	117.00	75.00	16.00	6	●	●
9.000	9.000	125.00	81.00	19.00	6	●	●
10.000	10.000	133.00	87.00	12.00	6	●	●
11.000	10.000	142.00	96.00	12.00	6		●
12.000	10.000	151.00	105.00	12.00	6	●	●
13.000	10.000	151.00	105.00	12.00	6		●
14.000	12.000	160.00	110.00	16.00	6	●	●
15.000	12.000	162.00	112.00	16.00	6	●	●
16.000	12.000	170.00	120.00	19.00	6	●	●
18.000	14.000	182.00	130.00	19.00	6		●
20.000	16.000	195.00	137.00	19.00	6	●	●

Carbide reamers

Carbide brazed machine reamers

~ DIN 8093

Catalog no. 72880



Short bevel lead, 45°.

For steels with tensile strengths of up to 1400 N/mm², grey cast iron of more than approx. 240 Brinell, manganese steels, AISi-alloys as well as hard and abrasive plastics, i.e. in materials and under machining conditions for which the tool life of HSS-E reamers is not economical. For mass production.

Not suitable for interrupted holes, e.g. with key ways, intersecting holes and similar.

Note: Reamers with highly unequal flute spacing greatly improve circular precision and surface finish quality.

Tool material	Carbide
Surface	bright
Type	
Form	A
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	straight

extreme unequal pitch

Carbide brazed machine reamers

~ DIN 8093

Catalog no. 72881



Short bevel lead, 45°.

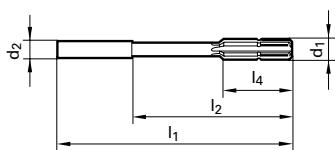
For steels with a tensile strength of up to 1400 N/mm², grey cast iron of more than approx. 240 Brinell, manganese steels, AISi-alloys as well as hard and abrasive plastics, i.e. in materials and under machining conditions for which the tool life of HSS-E reamers is not economical. For mass production.

Note: Reamers with highly unequal flute spacing greatly improve circular precision and surface finish quality.

Tool material	Carbide
Surface	bright
Type	
Form	B
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	7° LH spiral

extreme unequal pitch

Carbide brazed machine reamers



Catalog no.	72880	72881
Tool material	Carbide	
Discount group	120	120
Surface	bright	bright
Form	A	B

d1	d2	l1	l2	l4	Z	price per piece	
mm	mm	mm	mm	mm			
1.000	1.000	34.00	15.00	5.50	3		●
1.200	1.200	38.00	16.50	7.50	3	●	●
1.500	1.500	40.00	18.00	8.00	3	●	●
1.600	1.600	43.00	20.00	9.00	3	●	
2.000	2.000	49.00	24.00	11.00	4	●	●
2.500	2.500	57.00	29.00	14.00	4	●	●
3.000	3.000	61.00	33.00	15.00	6	●	●
3.500	3.500	70.00	36.00	18.00	6	●	●
4.000	4.000	75.00	43.00	19.00	6	●	●
4.500	4.500	80.00	47.00	21.00	6	●	●
5.000	5.000	86.00	52.00	23.00	6	●	●
6.000	5.600	93.00	57.00	26.00	6	●	●
7.000	7.100	109.00	69.00	31.00	6	●	●
8.000	8.000	117.00	75.00	33.00	6	●	●
9.000	9.000	125.00	81.00	36.00	6	●	●
10.000	10.000	133.00	87.00	38.00	6	●	●
11.000	10.000	142.00	96.00	41.00	6	●	●
12.000	10.000	151.00	105.00	44.00	6	●	●
13.000	10.000	151.00	105.00	44.00	6	●	●
14.000	12.000	160.00	110.00	47.00	6	●	●
16.000	12.000	170.00	120.00	52.00	6	●	●

Carbide reamers

Carbide brazed machine reamers

~ DIN 8051

Catalog no. 72860



For steels with tensile strengths of up to 1000 N/mm², grey cast iron of more than approx. 240 Brinell, manganese steels, AISi-alloys as well as hard and abrasive plastics. For mass production. not suitable for interrupted holes, e.g. with key ways, intersecting holes and similar.

Tool material	Carbide
Surface	bright
Type	
Form	A
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	straight

Carbide brazed machine reamers

~ DIN 8051

Catalog no. 72859

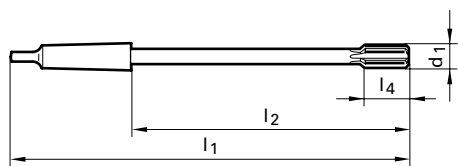


Short bevel lead, 45°.

For steels with tensile strengths of up to 1000 N/mm², grey cast iron of more than approx. 240 brinell, manganese steels, AISi-alloys as well as hard and abrasive plastics. For mass production.

Tool material	Carbide
Surface	bright
Type	
Form	B
Cutting direction	right-hand
Tolerance on Ø	H7
Flutes	7° LH spiral

Carbide brazed machine reamers



Catalog no.	72860	72859
Tool material	Carbide	
Discount group	120	120
Surface	bright	bright
Form	A	B

d1	MT	l1	l2	l4	Z	price per piece	
mm		mm	mm	mm			
6.000	1	138.00	72.50	12.00	6		●
8.000	1	156.00	90.50	16.00	6		●
10.000	1	168.00	102.50	12.00	6	○	●
11.000	1	175.00	109.50	12.00	6		●
12.000	1	182.00	116.50	12.00	6	○	●
13.000	1	182.00	116.50	12.00	6		●
14.000	1	189.00	123.50	16.00	6	○	●
15.000	2	204.00	124.00	16.00	6	○	●
16.000	2	210.00	130.00	19.00	6	○	●
17.000	2	214.00	134.00	19.00	6		●
18.000	2	219.00	139.00	19.00	6	○	●
20.000	2	228.00	148.00	19.00	6	○	●
21.000	2	232.00	152.00	22.00	6		●
22.000	2	237.00	157.00	22.00	6	○	●
23.000	2	241.00	161.00	22.00	6		●
24.000	3	268.00	169.00	22.00	8	○	●
25.000	3	268.00	169.00	22.00	8	○	●
26.000	3	273.00	174.00	22.00	8	○	●
27.000	3	277.00	178.00	25.00	8		●
28.000	3	277.00	178.00	25.00	8	○	●
30.000	3	281.00	182.00	25.00	8	○	●
32.000	4	317.00	193.00	25.00	8		●