

# Reamers



- Hand Reamers
- Machine Reamers with taper shank, straight shank
- Shell Reamers
- Arbors
- Bridge Reamers
- Taper Pin Reamers
- Taper Pin Reamers, quick spiral style
- Machine Reamers Solid Carbide, Carbide Tipped



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## Reamers HSS/HSS-E/Solid Carbide/Carbide Tipped

Standard		Image		Type	Form	Material	Dia. (mm)	Dia. (ins)	Surface	List-No.	Page
Hand Reamers	DIN 206			Straight Spiral	A B	HSS	1,5 - 40,0	1/16 - 1	P0	73050 73060	193
Hand Reamers adjustable	DIN 859			Straight Spiral	A B	HSS	4,0 - 40,0		P0	75060 75070	194
	Factory Standard			Reamers		Special Steel	8,0 - 65,0		P0	75090	194
				Set of Blades		Special Steel	8,0 - 65,0		P0	75290	194
Machine Reamers with straight shank	DIN 212			Straight Spiral	A,C B,D	HSS-E	1,4 - 20,0		P0/PS	75201 75211/75215	195
				Quick Spiral	E	HSS-E	2,0 - 20,0		P0	75221	195
	BS 328			Spiral	B	HSS	1,5 - 16,0	1/16 - 1/2	P0	73000	196
Machine Reamers with taper shank	DIN 208			Straight Spiral	A B	HSS-E	3,0 - 50,0		P0/PS	75101 75111/75115	197-198
				Quick Spiral	C	HSS-E	5,0 - 32,0		P0	75121	197-198
	BS 328			Spiral	B	HSS	3,0 - 40,0	1/8 - 1 1/2	P0	72000	199-200
Shell Reamers	DIN 219			Straight Spiral	A B	HSS	20,0 - 100,0		P0	76010 76020	201-202
				Quick Spiral	C	HSS	20,0 - 100,0		P0	76030	201-202
Arbors	DIN 217			Shell Taper 1:30					P0	76040	203
Bridge Reamers	DIN 311					HSS	6,4 - 40,0		P0	72050	211
Taper Pin Reamers with straight shank	DIN 9			Finishing, Taper 1:50	A B	HSS	1,5 - 50,0		P0	75040 75050	206
	BS 328			Finishing, Taper 1:48	A	HSS		1/16 - 1	P0	75020	208
Socket Reamers	DIN 204			Finishing	C	HSS	MT1 - MT6		P0	73080	204
	DIN 1895			Finishing	E	HSS	MT1 - MT6		P0	72080	205
Taper Pin Reamers	DIN 2179			Quick Spiral Style, Taper 1:50		HSS	2,0 - 20,0		P0	75030	209
	DIN 2180			Quick Spiral Style, Taper 1:50		HSS	4,0 - 50,0		P0	75080	210
Pipe Reamers	Factory Standard			Finishing, Taper 1:16	A	HSS		1/8 - 2	P0	73200	207
Solid Carbide Machine Reamers	DIN 8093			Straight Spiral	A B	K10	4,0 - 20,0		P0	77000 77010	212
Carbide Tipped Machine Reamers	DIN 8094			Straight Spiral	A B	K10	5,0 - 40,0		P0	77020 77030	213
Carbide Tipped Shell Reamers	DIN 8054			Straight	A	K10	30,0 - 75,0		P0	77040	214

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

# Application Recommendations for Hand Reamers

( ) acceptable  
 Spray tool with cutting oil before use!  
 Please refer to reaming allowances page 484.

Material Group	Material examples (DIN EN ISO)	Material examples (British Standard)	Tensile strength N/mm <sup>2</sup>	Hardness HB [HRC]	Coolant	Material	
						Surface finish	Form
Hand Reamers	DIN 206						Helix angle
	DIN 859					adjustable	
Taper Reamers	Factory Standard					adjustable	
	DIN 9					taper pin 1: 50	
	DIN 204					socket reamers	
	BS 328					taper pin 1: 48	
	Factory Standard					pipe reamers	
Material Group	Material examples (DIN EN ISO)	Material examples (British Standard)	Tensile strength N/mm <sup>2</sup>	Hardness HB [HRC]	Coolant		
Structural steels	S185; S235JRH; S275JR; (St 33 - St 44)	BS 4360- 40 B; 43 B; (En 1)	< 550	< 180	Oil		
	E295; E335; E360; (St 50 - St 70)	BS 4360- 50 C; 55 C; (En 2)	500 - 850	150 - 250	Oil		
Free cutting steels	10 S 20; 11 SMnPb 30; 11 SMn 37	210 M 15, leaded	< 800	< 240	Oil		
	46 S 20; 60 S 20; 46 SPb 20	216 M 36, leaded	800 - 1.000	240 - 300	Oil		
Case-hardening steels	C 10; C 15; C 10 E; C 15 E	080 A 15; 040 A 10 (En 2 A); 045 M 10 (En 32 A)	< 750	< 220	Oil		
	15 CrNi 6; 38 Cr 4		750 - 950	220 - 280	Oil		
	16 MnCr 5; 20 MnCr 5; 25 MoCr 4	527 M 17; 590 M 17	950 - 1.200	280 - 350	Oil		
Heat treatable steels	C 22; C 35; C 22 E; C 30 E	070 M 20 (En 3); 080 M 30 (En 5)	< 700	< 200	Oil		
	C 45; C 45 E; C 60; 50 MnSi 4	080 M 46 (En 8); 080 M 50 (En 43 A)	700 - 850	200 - 250	Oil		
	41 Cr 4; 37 MnSi 4; 42 CrMo 4	640 A 35 (En 111 A)	850 - 1.200	250 - 350	Oil		
Tool steels, cold working	102 Cr 6; 55 NiCrMoV 6	D2, D4, O1 (silver steel), P20	700 - 850	200 - 250	Oil		
	X 91 CrMoV 18; X 100 CrMoV 5-1		850 - 1.000	250 - 300	Oil		
Tool steels, hot working	29 CrMoV 9; X 21 Cr 13	H10; H13; annealed HSS (M2, M3, M35, M42)	700 - 850	200 - 250	Oil		
	X 45 NiCrMo 4; 28 NiMo 17	H10; H13 quenched and tempered	850 - 1.000	250 - 300	Oil		
Nitrided steels	34 CrAl 6	897 M 39	600 - 800	180 - 240	Oil		
	31 CrMoV 9; 31 CrMo 12	722 M 24	800 - 1.200	240 - 350	Oil		
Spring steels	38 Si 6; 51 MnV 7; 67 SiCr 5	251 A 58 (En 45 A), 735 A 51 (En 47)	700 - 1.100	200 - 320	Oil		
High alloyed special steels	Hardox 400; XAR 400	Hardox 400; XAR 400	< 1.250	< 370	Oil		
	Hardox 500; XAR 500; Weldox 1100	Hardox 500; XAR 500; Weldox 1100	< 1.550	< 450	Oil		
Stainless steels, austenitic	X 20 Cr 13; X 5 CrNi 18-10;	304 S 31; 304 S 15 (En 58 E)	500 - 800	150 - 240	Oil		
	X 6 CrNiMoTi 17-12-2	320 S 33; 316 S 11			Oil		
Heat-resisting steels	X 10 CrSi 6; X 10 CrAl 7	303 S 31	450 - 700	130 - 200	Oil		
	X 10 CrAl 18; X 15 CrNiSi 20-12	309 S 24	500 - 800	150 - 240	Oil		
Hardened steels				<[55]	Oil		
Special alloys	Nimonic; Inconel; Monel; Hastelloy		< 1.200	< 350	Oil		
Cast iron, spheroidal-graphite and malleable cast iron	GG10 - 25; GGG35 - 50; GTW35; GTS55	BS 1452 grade 350; 400; W35-04; pearlitic		< 240	Oil		
	GG30 - 45; GGG60 - 70; GTW65; GTS70	BS 2789 grade 600/3; 700/2		< 300	Oil		
Titanium and Titanium alloys	Ti99,5; TiAl5Sn2,5; TiCu2		< 800	< 240	Oil		
	TiAl6Zr5; TiAl6V4; TiAl4Mo4Sn2,5		800 - 1.200	240 - 350	Oil		
Aluminium and Aluminium alloys	Al99,5; AlMgSi1; AlMg1	1050A; 6082; LM0; LM1B	< 400	< 120	Oil		
Al - cast alloys ≤10% Si	G-AlSi5; G-AlSi6Cu4	LM2; LM4; LM5; LM10; LM16; LM21; LM22	< 600	< 180	Oil		
Al - cast alloys >10% Si	G-AlSi12; G-AlSi12Cu	LM6; LM12; LM13; LM20; LM28; LM30	< 600	< 180	Oil		
Al - wrought alloys	AlMgSiPb; AlCuSiMg; AlCuMgPb; AlMg7	6012; 2030	< 450	< 130	Oil		
Copper	E-Cu; F-Cu; D-Cu; SE-Cu; SF-Cu; SD-Cu	BS 2874: C101; C103; C106	< 400	< 120	Oil		
Brass, long chipping	CuZn33; CuZn36Pb3 (Ms65 - Ms90)	BS 2874: CZ107; CZ102	< 600	< 180	Oil		
Brass, short chipping	CuZn39Pb2 (Ms58 - Ms63)	BS 2874: CZ122; CZ128	< 600	< 180	Oil		
Bronze, short chipping	CuSn7ZnPb; CuPb5Sn5		< 600	< 180	Oil		
	CuNi18Zn19Pb	BS2874: NS113	600 - 850	180 - 250	Oil		
Bronze, long chipping	CuAl5; CuAl9Mn	CA101	< 800	< 240	Oil		
	CuAl11Ni	Ampco 18 - 26	800 - 1.200	240 - 300	Oil		
Thermoplastics	PVC; Polyamid; Plexiglas; Novadur				Oil		
Duroplastics	Bakelit; Pertinax; Resopal				Oil		

**P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB**



# Application Recommendations for Machine Reamers

Vc = average cutting speed (m/min)  
 f-Letter = feed column  
 n = speed (r.p.m.)  
 E = emulsion  
 A = air  
 Oil = cutting oil  
 () = acceptable  
 Please refer to reaming allowances page 484.  
 $n = Vc * 1.000 / \pi / d$  speed series: page 466

## Feed column (mm/rev)

Nominal diameter (mm)	2,50	4,00	6,30	10,0	16,0	25,0	40,0	63,0
Letter								
A	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125
B	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200
C	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250
D	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400
E	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500
F	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800
G	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000
H	0,315	0,400	0,500	0,630	0,800	1,000	1,250	1,600

Material Group	Material examples (DIN EN ISO)	Material examples (British Standard)	Tensile strength N/mm <sup>2</sup>	Hardness HB [HRC]	Coolant
Structural steels	S185; S235JRH; S275JR; (St 33 - St 44)	BS 4360- 40 B; 43 B; (En 1)	< 550	< 180	E
	E295; E335; E360; (St 50 - St 70)	BS 4360- 50 C; 55 C; (En 2)	500 - 850	150 - 250	E
Free cutting steels	10 S 20; 11 SMnPb 30; 11 SMn 37	210 M 15, leaded	< 800	< 240	E
	46 S 20; 60 S 20; 46 SPb 20	216 M 36, leaded	800 - 1.000	240 - 300	E
Case-hardening steels	C 10; C 15; C 10 E; C 15 E	080 A 15; 040 A 10 (En 2 A); 045 M 10 (En 32 A)	< 750	< 220	E
	15 CrNi 6; 38 Cr 4		750 - 950	220 - 280	E
	16 MnCr 5; 20 MnCr 5; 25 MoCr 4	527 M 17; 590 M 17	950 - 1.200	280 - 350	E
Heat treatable steels	C 22; C 35; C 22 E; C 30 E	070 M 20 (En 3); 080 M 30 (En 5)	< 700	< 200	E
	C 45; C 45 E; C 60; 50 MnSi 4	080 M 46 (En 8); 080 M 50 (En 43 A)	700 - 850	200 - 250	E
	41 Cr 4; 37 MnSi 4; 42 CrMo 4	640 A 35 (En 111 A)	850 - 1.200	250 - 350	E
Tool steels, cold working	102 Cr 6; 55 NiCrMoV 6	D2, D4, O1 (silver steel), P20	700 - 850	200 - 250	E
	X 91 CrMoV 18; X 100 CrMoV 5-1		850 - 1.000	250 - 300	E
Tool steels, hot working	29 CrMoV 9; X 21 Cr 13	H10; H13; annealed HSS (M2, M3, M35, M42)	700 - 850	200 - 250	E
	X 45 NiCrMo 4; 28 NiMo 17	H10; H13 quenched and tempered	850 - 1.000	250 - 300	E
Nitrided steels	34 CrAl 6	897 M 39	600 - 800	180 - 240	E
	31 CrMoV 9; 31 CrMo 12	722 M 24	800 - 1.200	240 - 350	E
Spring steels	38 Si 6; 51 MnV 7; 67 SiCr 5	251 A 58 (En 45 A); 735 A 51 (En 47)	700 - 1.100	200 - 320	E
High alloyed special steels	Hardox 400; XAR 400	Hardox 400; XAR 400	< 1.250	< 370	E
	Hardox 500; XAR 500; Weldox 1100	Hardox 500; XAR 500; Weldox 1100	< 1.550	< 450	E
Stainless steels, austenitic	X 20 Cr 13; X 5 CrNi 18-10	304 S 31; 304 S 15 (En 58 E)	500 - 800	150 - 240	E
	X 6 CrNiMoTi 17-12-2	320 S 33; 316 S 11			E
Heat-resisting steels	X 10 CrSi 6; X 10 CrAl 7	303 S 31	450 - 700	130 - 200	E
	X 10 CrAl 18; X 15 CrNiSi 20-12	309 S 24	500 - 800	150 - 240	E
Hardened steels				<[55]	E
Special alloys	Nimonic; Inconel; Monel; Hastelloy		< 1.200	< 350	E
Cast iron, spheroidal-graphite and malleable cast iron	GG10 - 25; GGG35 - 50; GTW35; GTS55	BS 1452 grade 350; 400; W35-04; pearlitic		< 240	E
	GG30 - 45; GGG60 - 70; GTW65; GTS70	BS 2789 grade 600/3; 700/2		< 300	E
Titanium and Titanium alloys	Ti99,5; TiAl5Sn2,5; TiCu2		< 800	< 240	Oil
	TiAl6Zr5; TiAl6V4; TiAl4Mo4Sn2,5		800 - 1.200	240 - 350	Oil
Aluminium and Aluminium alloys	Al99,5; AlMgSi1; AlMg1	1050A; 6082; LM0; LM1B	< 400	< 120	Oil
	Al - cast alloys ≤10% Si	G-AlSi5; G-AlSi6Cu4	LM2; LM4; LM5; LM10; LM16; LM21; LM22	< 600	< 180
Al - cast alloys >10% Si	G-AlSi12; G-AlSi12Cu	LM6; LM12; LM13; LM20; LM28; LM30	< 600	< 180	Oil
Al - wrought alloys	AlMgSiPb; AlCuSiMg; AlCuMgPb; AlMg7	6012; 2030	< 450	< 130	Oil
Copper	E-Cu; F-Cu; D-Cu; SE-Cu; SF-Cu; SD-Cu	BS 2874: C101; C103; C106	< 400	< 120	Oil
Brass, long chipping	CuZn33; CuZn36Pb3 (Ms65 - Ms90)	BS 2874: CZ107; CZ102	< 600	< 180	Oil
Brass, short chipping	CuZn39Pb2 (Ms58 - Ms63)	BS 2874: CZ122; CZ128	< 600	< 180	Oil
Bronze, short chipping	CuSn7ZnPb; CuPb5Sn5		< 600	< 180	Oil
	CuNi18Zn19Pb	BS2874: NS113	600 - 850	180 - 250	Oil
Bronze, long chipping	CuAl5; CuAl9Mn	CA101	< 800	< 240	Oil
	CuAl11Ni	Ampco 18 - 26	800 - 1.200	240 - 300	Oil
Thermoplastics	PVC; Polyamid; Plexiglas; Novadur				Oil
Duroplastics	Bakelit; Pertinax; Resopal				Oil

Material	Surface finish	Form	Helix angle
Machine Reamers	DIN 212 / 8093	straight shank	
	BS 328		
	DIN 208 / 8094	taper shank	
Taper Reamers	BS 328		
	DIN 219 / 8054	shell reamers	
	DIN 2179 / 2180	taper pin reamers	
	DIN 1895	socket reamers	
	DIN 311	bridge reamers	

Tensile strength N/mm <sup>2</sup>	Hardness HB [HRC]	Coolant
< 550	< 180	E
500 - 850	150 - 250	E
< 800	< 240	E
800 - 1.000	240 - 300	E
< 750	< 220	E
750 - 950	220 - 280	E
950 - 1.200	280 - 350	E
< 700	< 200	E
700 - 850	200 - 250	E
850 - 1.200	250 - 350	E
700 - 850	200 - 250	E
850 - 1.000	250 - 300	E
700 - 850	200 - 250	E
850 - 1.000	250 - 300	E
600 - 800	180 - 240	E
800 - 1.200	240 - 350	E
700 - 1.100	200 - 320	E
< 1.250	< 370	E
< 1.550	< 450	E
500 - 800	150 - 240	E
		E
450 - 700	130 - 200	E
500 - 800	150 - 240	E
< 1.200	< 350	E
	< 240	E
< 800	< 240	Oil
800 - 1.200	240 - 350	Oil
< 400	< 120	Oil
< 600	< 180	Oil
< 600	< 180	Oil
< 450	< 130	Oil
< 400	< 120	Oil
< 600	< 180	Oil
< 600	< 180	Oil
< 600	< 180	Oil
600 - 850	180 - 250	Oil
< 800	< 240	Oil
800 - 1.200	240 - 300	Oil

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

### Machine Reamers

HSS			HSS-E				K10/K20	
P0	P0	P0	P0	P0	P0	P5	P0	P0
straight	spiral	quick spiral	straight	spiral	quick spiral	spiral	straight	spiral
0°	7°	45°	0°	7°	45°	7°	0°	7°
			75201	75211	75221	75215	77000	77010
	73000							
			75101	75111	75121	75115	77020	77030
	72000							
			76010	76020	76030		77040	
		75030/75080						
	72080							
	72050							
Vc / f-Letter	Vc / f-Letter	Vc / f-Letter	Vc / f-Letter	Vc / f-Letter	Vc / f-Letter	Vc / f-Letter	Vc / f-Letter	Vc / f-Letter
10 / F	10 / F	12 / G	10 / F	10 / F	12 / G	14 / F	(16 / G)	(16 / G)
8 / F	8 / F	10 / G	8 / F	8 / F	10 / G	12 / F	(14 / G)	(14 / G)
10 / F	10 / F	12 / G	10 / F	10 / F	12 / G	14 / F	(16 / G)	(16 / G)
8 / F	8 / F	10 / G	8 / F	8 / F	10 / G	12 / F	(14 / G)	(14 / G)
10 / E	10 / E		10 / E	10 / E		14 / E	(14 / F)	(14 / F)
8 / E	8 / E		8 / E	8 / E		12 / E	(12 / F)	(12 / F)
6 / E	6 / E		6 / E	6 / E		10 / E	(10 / F)	(10 / F)
10 / E	10 / E		10 / E	10 / E		14 / E	(14 / F)	(14 / F)
8 / E	8 / E		8 / E	8 / E		12 / E	(12 / F)	(12 / F)
6 / E	6 / E		6 / E	6 / E		10 / E	(10 / F)	(10 / F)
(6 / D)	(6 / D)		(6 / D)	(6 / D)		(8 / D)	(10 / E)	(10 / E)
(4 / C)	(4 / C)		(4 / C)	(4 / C)		(6 / C)	(8 / F)	(8 / F)
(8 / D)	(8 / D)		(8 / D)	(8 / D)		(10 / D)	(10 / E)	(10 / E)
(6 / C)	(6 / C)		(6 / C)	(6 / C)		(8 / C)	(8 / F)	(8 / F)
8 / D	8 / D		8 / D	8 / D		(10 / D)	(12 / E)	(12 / E)
6 / D	6 / D		6 / D	6 / D		(8 / D)	(10 / E)	(10 / E)
							10 / D	10 / D
(6 / C)	(6 / C)		(6 / C)	(6 / C)		(8 / D)	8 / D	8 / D
(5 / C)	(5 / C)		(5 / C)	(5 / C)		(6 / D)	10 / D	10 / D
(4 / C)	(4 / C)		(4 / C)	(4 / C)		(6 / D)	8 / D	8 / D
(4 / C)	(4 / C)	(4 / D)	(6 / C)	(4 / C)	(4 / C)	(4 / D)	(6 / F)	(6 / F)
(10 / F)	(10 / F)	(10 / G)	(10 / F)	(10 / F)	(10 / G)	(12 / F)	20 / H	20 / H
(8 / E)	(8 / E)	(8 / F)	(8 / E)	(8 / E)	(8 / F)	(10 / E)	16 / G	16 / G
(5 / D)	(5 / D)		(5 / D)	(5 / D)		(7 / D)	12 / H	12 / H
(4 / D)	(4 / D)		(4 / D)	(4 / D)		(5 / D)	10 / H	10 / H
(22 / F)	(22 / F)	22 / G	(22 / F)	(22 / F)	22 / G	30 / F	(30 / H)	(30 / H)
(18 / E)	(18 / E)	18 / F	(18 / E)	(18 / E)	18 / F	20 / E	(20 / H)	(20 / H)
							15 / H	15 / H
(20 / F)	(20 / F)	20 / G	(20 / F)	(20 / F)	20 / G	26 / F	(25 / H)	(25 / H)
(16 / F)	(16 / F)	(18 / G)	(16 / F)	(16 / F)	(18 / G)	(20 / F)	(25 / G)	(25 / G)
(18 / F)	(18 / F)	(18 / G)	(18 / F)	(18 / F)	(18 / G)	(25 / F)	30 / H	30 / H
(22 / F)	(22 / F)		(22 / F)	(22 / F)		(30 / F)	35 / H	35 / H
(18 / F)	(18 / F)		(18 / F)	(18 / F)		(25 / F)	30 / H	30 / H
(16 / F)	(16 / F)		(16 / F)	(16 / F)		(20 / F)	25 / H	25 / H
(18 / F)	(18 / F)		(18 / F)	(18 / F)		(25 / F)	30 / H	30 / H
(18 / F)	(18 / F)		(18 / F)	(18 / F)		(20 / F)	25 / H	25 / H
(10 / G)	(10 / G)	12 / G	(10 / G)	(10 / G)	(12 / G)	(12 / G)	15 / H	15 / H
(6 / G)	(6 / G)	10 / G	(6 / G)	(6 / G)	(10 / G)	(10 / G)	20 / H	20 / H

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## Reamers

### Hand Reamers, DIN 206

Catalogue: page 193

Type	Material	List-No.	Surface
Form A	HSS	73050	P0
Form B		73060	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

General-purpose reamer to be used on all ferrous and non-ferrous materials as well as soft and hard plastics. Due to the long taper lead not suitable for blind holes.

#### Design characteristics

Taper lead: Long, tapered  
Flute form: Form A — straight fluted  
Form B — spiral fluted acc. DIN 10  
Square:

### Adjustable Hand Reamers, DIN 859

Catalogue: page 194

Type	Material	List-No.	Surface
Form A	HSS	75060	P0
Form B		75070	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

Special Reamer for machining through holes in all ferrous and non-ferrous materials. The adjustment enables the correct fit of the hole and compensates wear of the reamer. The adjustment range is within the elastic limit of hardened steel and should not cross the following upper limits.

#### Design characteristics

d 6-10 mm approx. 0,10mm adjustment  
d 11-15 mm approx. 0,15mm adjustment  
d 16-22 mm approx. 0,20mm adjustment  
d 23-30 mm approx. 0,30mm adjustment  
d 31-45 mm approx. 0,40mm adjustment  
d 46-60 mm approx. 0,60mm adjustment

Taper lead: approx. 1/6 of cutting length tapered

Flute form: Form A — straight fluted

Form B — spiral fluted

Square: acc. DIN 10

### Adjustable Hand Reamers, factory standard

Catalogue: page 194

Type	Material	List-No.	Surface
Reamers	Special Steel	75090	P0
Set of Blades	Special Steel	75290	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

Right hand cutting reamer with unequal pitched, adjustable cutting blades and straight shank with square. The blades are made of special steel. Cutting edges are eccentric domed relief-grounded. A nut with scale will ensure adjustability. Particularly to be used for repairing jobs.

#### Design characteristics

Taper lead: long  
Flute form: straight fluted  
Square: acc. DIN 10

### Machine Chucking Reamers with straight shank, DIN 212

Catalogue: page 195

Type	Material	List-No.	Surface
Form A, C	HSS-E	75201	P0
Form B, D		75211	P0
Form D		75215	P5



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

General-purpose reamers designed for machining steels with tensile strength up to 700 N/mm<sup>2</sup>, long-chipping aluminium, copper and soft plastics. Form A, B with straight shank up to diameter 2,7 mm, form C, D with reinforced straight shank from diameter 2,8 mm up. When reaming blind holes, use the straight fluted style; for interrupted holes, it is recommended to use the spiral-fluted style. TiN coating provides longer tool life and improved surface quality.

#### Design characteristics

Bevel lead: short, 45°  
Flute form: Form A, C — straight fluted  
Form B, D — spiral fluted

### Machine Chucking Reamers with straight shank, DIN 212

Catalogue: page 195

Type	Material	List-No.	Surface
Form E	HSS-E	75221	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

Left -hand quick spiral reamers designed for machining through holes in steels with tensile strength up to 700 N/mm<sup>2</sup>, ductile stainless steel, long-chipping aluminium, copper and soft plastics. Due to the long taper lead, they are not suitable for blind holes. The Reamers have reduced number of flutes. When operated at the same cutting conditions in comparison with conventionally used, multiple fluted reaming tools, and used with up to 100% higher reaming allowance they produce a clean, chatter-free surface quality, an excellent concentricity on the bore and also gain a substantially longer tool life.

#### Design characteristics

Taper lead: approx. 1/6 of cutting length tapered  
Flute form: 45° L.H. helix

### Machine Reamers with straight shank, BS 328

Catalogue: page 196

Type	Material	List-No.	Surface
Form B	HSS	73000	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

General-purpose reamers with long flutes designed for machining steels with tensile strength up to 700 N/mm<sup>2</sup>, long-chipping aluminium, copper and soft plastics.

#### Design characteristics

Bevel lead: short, 45°  
Flute form: Form B — spiral fluted

## Reamers

### Machine Chucking Reamers with taper shank, DIN 208 Catalogue: page 197 - 198

Type	Material	List-No.	Surface
Form A	HSS-E	75101	P0
Form B		75111	P0
Form B		75115	P5



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

General-purpose reamers designed for machining steels with tensile strength up to 700 N/mm<sup>2</sup>, long-chipping aluminium, copper and soft plastics. When reaming blind holes use the straight fluted style, for interrupted holes it is recommended to use the spiral-fluted style. TiN coating provides longer tool life and improved surface quality.

#### Design characteristics

Bevel lead: short, 45°  
Flute form: Form A — straight fluted  
Form B — spiral fluted

### Machine Chucking Reamers with taper shank, DIN 208 Catalogue: page 197 - 198

Type	Material	List-No.	Surface
Form C	HSS-E	75121	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Left hand quick spiral reamers designed for machining through holes in steels with tensile strength up to 700 N/mm<sup>2</sup>, long-chipping aluminium, copper and soft plastics. Due to the long taper lead they are not suitable for blind holes. The reamers have reduced number of flutes. When operated at the same cutting conditions in comparison with conventionally used, multiple fluted reaming tools, and used with up to 100% higher reaming allowance they produce a clean, chatter-free surface quality, an excellent concentricity on the bore and also gain a substantially longer tool life.

#### Design characteristics

Taper lead: approx. 1/6 of cutting length tapered  
Flute form: 45° L.H. helix

### Machine Reamers with taper shank, BS 328 Catalogue: page 199 - 200

Type	Material	List-No.	Surface
Form B	HSS	72000	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

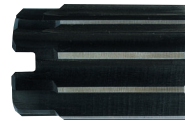
General-purpose reamers with long flutes designed for machining steels with tensile strength up to 700 N/mm<sup>2</sup>, long-chipping aluminium, copper and soft plastics.

#### Design characteristics

Bevel lead: short, 45°  
Flute form: Form B — spiral fluted

### Shell Reamers, DIN 219 Catalogue: page 201 - 202

Type	Material	List-No.	Surface
Form A	HSS-E	76010	P0
Form B		76020	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Robust reamers designed for machining all ferrous and non-ferrous metals. When reaming blind holes use the straight fluted style; for interrupted holes, it is recommended to use the spiral-fluted style. To be used in combination with arbors acc. to DIN 217 (List-No. 76040).

#### Design characteristics

Bevel lead: short, 45°  
Flute form: Form A — straight fluted  
Form B — spiral fluted  
Socket: taper 1:30  
Cross slot: acc. DIN 138

### Shell Reamers, DIN 219 Catalogue: page 201 - 202

Type	Material	List-No.	Surface
Form C	HSS-E	76030	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Left hand quick spiral reamers designed for machining through holes in steels with tensile strength up to 700 N/mm<sup>2</sup>, ductile stainless steel, long-chipping aluminium, copper and soft plastics. Due to the long taper lead, they are not suitable for blind holes. The reamers have reduced number of flutes. When operated at the same cutting conditions in comparison with conventionally used, multiple fluted reaming tools, and used with up to 100% higher reaming allowance they produce a clean, chatter-free surface quality, an excellent concentricity on the bore and also gain a substantially longer tool life. To be used in combination with arbors acc. DIN 217 (List-No. 76040).

#### Design characteristics

Taper lead: approx. 1/6 of cutting length tapered  
Flute form: 45° L.H. helix  
Socket: taper 1:30  
Cross slot: acc. DIN 138

### Arbors, DIN 217 Catalogue: page 203

Type	Material	List-No.	Surface
		76040	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Arbors with short mounting taper 1:30 for shell reamers.

#### Design characteristics

P0-Bright • P1-Steamed tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

## Reamers

### Bridge Reamers with taper shank, DIN 311 Catalogue: page 211

Type	Material	List-No.	Surface
	HSS	72050	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Reamers with high metal removal rate for machining all ferrous and non-ferrous metals as well as for hard and soft plastics, mainly used in the steel construction, boiler, vessel and shipbuilding industries. Special design provides correction of misalignment of sheet metal stacked parts to the required hole diameter (e. g. for riveting or bolting).

#### Design characteristics

Taper lead: long, approx. 1/3 of cutting length tapered spiral fluted, 25° L.H. helix  
Flute form:

### Taper Pin Reamers 1:50 with straight shank, DIN 9 Catalogue: page 206

Type	Material	List-No.	Surface
Form A	HSS	75040	P0
Form B		75050	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Reamers designed for machining all ferrous and non-ferrous metals as well as for hard and soft plastics. Used for reaming of taper bores to suit taper pins (acc. DIN 1, DIN 258, DIN 7977, DIN 7978).

#### Design characteristics

Flute form: Form A — straight fluted  
Form B — spiral fluted acc. DIN 10  
Square:

### Hand Taper Pin Reamers 1:48 with straight shank, BS 328 Catalogue: page 208

Type	Material	List-No.	Surface
Form A	HSS	75020	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Reamers designed for machining all ferrous and non-ferrous metals as well as for hard and soft plastics. Used for reaming of taper bores to suit taper pins.

#### Design characteristics

Flute form: Form A — straight fluted

### Morse Socket Reamers with straight shank, DIN 204 Catalogue: page 209

Type	Material	List-No.	Surface
Form C	HSS	73080	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

These tools are designed for finishing Morse taper bores in all ferrous and non-ferrous metals as well as soft and hard plastics.

#### Design characteristics

Flute form: Form C — straight fluted acc. DIN 10  
Square:

### Morse Socket Reamers with taper shank, DIN 1895 Catalogue: page 205

Type	Material	List-No.	Surface
Form E	HSS	72080	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

These tools are designed for finishing Morse taper bores in all ferrous and non-ferrous metals as well as soft and hard plastics.

#### Design characteristics

Flute form: Form E — straight fluted

### Taper Pin Reamers 1:50 with straight shank, quick spiral, DIN 2179 Catalogue: page 209

Type	Material	List-No.	Surface
	HSS	75030	P0



**d • Packing unit**  
mm • pcs.  
All diam. • l

#### Applications

Reamers designed for machining all ferrous and non-ferrous metals as well as for hard and soft plastics. Used for reaming of taper bores to suit taper pins (acc. DIN 1, DIN 258, DIN 7977, DIN 7978).

#### Design characteristics

Flute form: 45° L.H. helix acc. DIN 1809  
Tang:

## Reamers

### Taper Pin Reamers 1:50 with taper shank, quick spiral, DIN 2180

Catalogue: page 210

Type	Material	List-No.	Surface
	HSS	75080	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

Reamers designed for machining all ferrous and non-ferrous metals as well as for hard and soft plastics. For reaming of taper bores to suit taper pins.

#### Design characteristics

Flute form: 45° L.H. helix

### Pipe Reamers 1:16 with straight shank, factory standard

Catalogue: page 207

Type	Material	List-No.	Surface
Form A	HSS	73200	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

Reamers designed for machining all ferrous and non-ferrous metals as well as for hard and soft plastics. For pipe threads, NPT, NPTF, API, BSPT.

#### Design characteristics

Flute form: straight fluted

### Machine Reamers with straight shank, similar to DIN 8093

Catalogue: page 212

Type	Material	List-No.	Surface
Form A	Solid Carbide	77000	P0
Form B		77010	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

To be used on steels with tensile strength of more than 1.000 N/mm<sup>2</sup>, grey cast iron with hardness of more than 240 HB, manganese steels, silicon-content aluminium alloys as well as hard and abrasive plastics. Also used on all materials and under cutting conditions where using of HSS-E reamers is impossible. When reaming blind holes use the straight fluted style, for interrupted holes, it is recommended to use the spiral-fluted style.

#### Design characteristics

Bevel lead: short, 45°  
 Flute form: Form A — straight fluted  
 Form B — spiral fluted  
 Cutting part: long  
 Up to dia. 8,0 mm completely made of solid carbide, from dia. 8,5 mm up with carbide head and steel-shank.

### Machine Reamers with taper shank, DIN 8094

Catalogue: page 213

Type	Material	List-No.	Surface
Form A	Carbide Tipped	77020	P0
Form B		77030	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

To be used on steels with tensile strength of more than 1.000 N/mm<sup>2</sup>, grey cast iron with hardness of more than 240 HB, manganese steels, silicon-content aluminium alloys, as well as hard and abrasive plastics. When reaming blind holes, use the straight fluted style; for interrupted holes it is recommended to use the spiral-fluted style.

#### Design characteristics

Bevel lead: short, 45°  
 Flute form: Form A — straight fluted  
 Form B — spiral fluted  
 Cutting part: long

### Shell Reamers, 8054

Catalogue: page 214

Type	Material	List-No.	Surface
Form A	HSS-E	77040	P0



#### d • Packing unit

mm	•	pcs.
All diam.	•	l

#### Applications

Robust reamers designed for machining steels with tensile strength of more than 1.000 N/mm<sup>2</sup>, grey cast iron with hardness of more than 240 HB, manganese steels, silicon-content aluminium alloys as well as hard and abrasive plastics. To be used in combination with arbors acc. DIN 217 (List-No. 76040).

#### Design characteristics

Bevel lead: short, 45°  
 Flute form: straight fluted  
 Socket: taper 1:30  
 Cross slot: acc. DIN 138



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12

### Adjustable Hand Reamers with straight shank HSS, DIN 859

Product Group	08	08		
	straight	spiral		
List-No.	75060	75070		
Material	HSS	HSS		
Surface	P0	P0		
<p> <math>\varnothing</math> 6-10 mm 0,10 mm adjustable  <math>\varnothing</math> 11-15 mm 0,15 mm adjustable  <math>\varnothing</math> 16-22 mm 0,20 mm adjustable  <math>\varnothing</math> 23-30 mm 0,30 mm adjustable  <math>\varnothing</math> 31-45 mm 0,40 mm adjustable         </p>				
d	l1	l2	Availability	Availability
mm	mm	mm		
4,00	76	38	•	
5,00	87	44	•	
6,00	93	47	•	•
7,00	107	54	•	•
8,00	115	58	•	•
9,00	124	62	•	•
10,00	133	66	•	•
11,00	142	71	•	•
12,00	152	76	•	•
13,00	152	76	•	•
14,00	163	81	•	•
15,00	163	81	•	•
16,00	175	87	•	•
17,00	175	87	•	•
18,00	188	93	•	•
19,00	188	93	•	•
20,00	201	100	•	•
21,00	201	100	•	•
22,00	201	107	•	•
23,00	201	107	•	•
24,00	231	115	•	•
25,00	231	115	•	•
26,00	231	125	•	•
27,00	247	124	•	•
28,00	247	124	•	•
29,00	247	124	•	•
30,00	247	124	•	•
31,00	265	133	•	•
32,00	265	133	•	•
33,00	265	133	•	•
34,00	284	142	•	•
35,00	284	142	•	•
36,00	284	142	•	•
37,00	284	142	•	•
38,00	305	152	•	•
39,00	305	152	•	•
40,00	305	152	•	•

### Hand Reamers with straight shank, Special Steel and Set of Blades, Factory Standard

Product Group	08	08		
	Reamer	Set of Blades		
List-No.	75090	75290		
Material	Special Steel	Special Steel		
Surface	P0	P0		
Range	l1	l2	Availability	Availability
	mm	mm		
8,0 - 9,0	111	32	•	•
9,0 - 10,0	115	32	•	•
10,0 - 11,0	120	35	•	•
11,0 - 12,0	125	35	•	•
12,0 - 13,5	130	42	•	•
13,5 - 15,5	145	50	•	•
15,5 - 18,0	165	60	•	•
18,0 - 21,0	180	65	•	•
21,0 - 24,0	190	70	•	•
24,0 - 27,5	205	75	•	•
27,5 - 31,5	225	80	•	•
31,5 - 37,0	240	90	•	•
37,0 - 45,0	285	100	•	•
45,0 - 55,0	320	109	•	•
55,0 - 65,0	350	120	•	•

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

## Machine Reamers with straight shank, HSS-E, DIN 212

Product Group				07	07	07	07
List-No.				straight 75201	spiral 75211	spiral 75215	quick spiral 75221
Material				HSS-E	HSS-E	HSS-E	HSS-E
Surface				P0	P0	P5	P0
d1 mm	l1 mm	l2 mm	d2 mm	Availability	Availability	Availability	Availability
1,40	40	8	1,4	•	•		
1,50	40	8	1,5	•	•		
1,60	43	9	1,6	•	•		
1,80	46	10	1,8	•	•		
2,00	49	11	2,0	•	•		•
2,20	53	12	2,2	•	•		
2,50	57	14	2,5	•	•		•
2,80	61	15	2,8	•	•		
3,00	61	15	3,0	•	•		•
3,20	65	16	3,2	•	•		•
3,50	70	18	3,5	•	•		•
4,00	75	19	4,0	•	•	•	•
4,50	80	21	4,5	•	•	•	•
5,00	86	23	5,0	•	•	•	•
5,50	93	26	5,6	•	•	•	
6,00	93	26	5,6	•	•	•	•
6,50	101	28	6,3	•	•	•	
7,00	109	31	7,1	•	•	•	•
8,00	117	33	8,0	•	•	•	•
9,00	125	36	9,0	•	•	•	•
10,00	133	38	10,0	•	•	•	•
11,00	142	41	10,0	•	•	•	•
12,00	151	44	10,0	•	•	•	•
13,00	151	44	10,0	•	•	•	•
14,00	160	47	12,5	•	•	•	•
15,00	162	50	12,5	•	•	•	•
16,00	170	52	12,5	•	•	•	•
17,00	175	54	14,0	•	•	•	•
18,00	182	56	14,0	•	•	•	•
19,00	189	58	16,0	•	•	•	•
20,00	195	60	16,0	•	•	•	•

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB



# Machine Reamers with straight shank, HSS, BS 328

Product Group		06			
List-No.		spiral 73000			
Material		HSS			
Surface		P0			
d1 mm	d1 ins	l1 mm	l2 mm	Availability	
1,50		44	21	•	
1,588	1/16	44	21	•	
2,00		50	25	•	
2,381	3/32	58	29	•	
2,50		58	29	•	
3,00		62	31	•	
3,175	1/8	66	33	•	
3,50		71	35	•	
3,572	9/64	71	35	•	
3,969	5/32	76	38	•	
4,00		76	38	•	
4,366	11/64	81	41	•	
4,50		81	41	•	
4,763	3/16	87	44	•	
5,00		87	44	•	
5,159	13/64	87	44	•	
5,50		93	47	•	
5,556	7/32	93	47	•	
6,00		93	47	•	
6,350	1/4	100	50	•	
7,00		107	54	•	
7,938	5/16	115	58	•	
8,00		115	58	•	
9,00		124	62	•	
9,525	3/8	133	66	•	
10,00		133	66	•	
11,00		142	71	•	
11,113	7/16	142	71	•	
12,00		152	76	•	
12,700	1/2	152	76	•	
13,00		152	76	•	
14,00		163	81	•	
16,00		175	87	•	

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

## Machine Reamers with taper shank, HSS-E, DIN 208

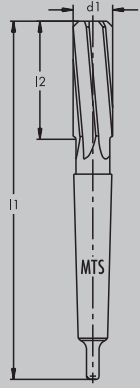
Product Group				07	07	07	07
				straight	spiral	spiral	quick spiral
List-No.				75101	75111	75115	75121
Material				HSS-E	HSS-E	HSS-E	HSS-E
Surface				P0	P0	P5	P0
d1 mm	l1 mm	l2 mm	MTS	Availability	Availability	Availability	Availability
3,00	112	15	1	•	•		
4,00	125	19	1	•	•		
5,00	133	23	1	•	•		•
6,00	138	26	1	•	•		•
7,00	150	31	1	•	•		•
8,00	156	33	1	•	•		•
9,00	162	36	1	•	•		•
10,00	168	38	1	•	•	•	•
11,00	175	41	1	•	•	•	•
12,00	182	44	1	•	•	•	•
13,00	182	44	1	•	•	•	•
14,00	189	47	1	•	•	•	•
15,00	204	50	2	•	•	•	•
16,00	210	52	2	•	•	•	•
17,00	214	54	2	•	•	•	•
18,00	219	56	2	•	•	•	•
19,00	223	58	2	•	•	•	•
20,00	228	60	2	•	•	•	•
21,00	232	62	2	•	•	•	•
22,00	237	64	2	•	•	•	•
23,00	241	66	2	•	•	•	•
24,00	268	68	3	•	•	•	•
25,00	268	68	3	•	•	•	•
26,00	273	70	3	•	•	•	•
27,00	277	71	3	•	•	•	•
28,00	277	71	3	•	•	•	•
29,00	281	73	3	•	•	•	•
30,00	281	73	3	•	•	•	•
31,00	285	75	3	•	•	•	•
32,00	317	77	4	•	•	•	•
33,00	317	77	4	•	•	•	•
34,00	321	78	4	•	•	•	•
35,00	321	78	4	•	•	•	•
36,00	325	79	4	•	•	•	•
37,00	325	79	4	•	•	•	•
38,00	329	81	4	•	•	•	•
39,00	329	81	4	•	•	•	•
40,00	329	81	4	•	•	•	•
41,00	333	82	4	•	•	•	•
42,00	333	82	4	•	•	•	•

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB



## Machine Reamers with taper shank, HSS, BS 328

Product Group	06					06
List-No.	spiral					spiral
Material	72000					72000
Surface	HSS					HSS
	P0					P0
	d1	d1	I1	I2	MTS	Availability
	mm	ins	mm	mm		
	12,00		156	76	1	•
	12,303	31/64	156	76	1	•
	12,50		156	76	1	•
	12,700	1/2	156	76	1	•
	13,00		156	76	1	•
	13,097	33/64	156	76	1	•
	13,494	17/32	161	81	1	•
	13,50		161	81	1	•
	13,891	35/64	161	81	1	•
	14,00		161	81	1	•
	14,288	9/16	181	81	2	•
	14,50		181	81	2	•
	14,684	37/64	181	81	2	•
	15,00		181	81	2	•
	15,081	19/32	187	87	2	•
	15,478	39/64	187	87	2	•
	15,50		187	87	2	•
	15,875	5/8	187	87	2	•
	16,00		187	87	2	•
	16,272	41/64	187	87	2	•
	16,50		187	87	2	•
	16,669	21/32	187	87	2	•
	17,00		187	87	2	•
	17,066	43/64	193	93	2	•
	17,463	11/16	193	93	2	•
	17,50		193	93	2	•
	17,859	45/64	193	93	2	•
	18,00		193	93	2	•
	18,256	23/32	193	93	2	•
	18,50		193	93	2	•
	18,653	47/64	193	93	2	•
	19,00		193	93	2	•
	19,050	3/4	200	100	2	•
	19,447	49/64	200	100	2	•
	19,50		200	100	2	•
	19,844	25/32	200	100	2	•
	20,00		200	100	2	•
	20,241	51/64	200	100	2	•
	20,50		200	100	2	•
	20,638	13/16	200	100	2	•
	21,00		200	100	2	•
	21,034	53/64	200	100	2	•
	21,431	27/32	207	107	2	•
	21,828	55/64	207	107	2	•
	22,00		207	107	2	•
	22,225	7/8	207	107	2	•
	22,622	57/64	207	107	2	•
	23,00		207	107	2	•
	23,019	29/32	207	107	2	•
	23,416	59/64	242	115	3	•
	23,50		242	115	3	•
	23,813	15/16	242	115	3	•
	24,00		242	115	3	•
	24,209	61/64	242	115	3	•



P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB



## Shell Reamers HSS-E, DIN 219

Product Group				07	07	07
List-No.				straight 76010	spiral 76020	quick spiral 76030
Material				HSS-E	HSS-E	HSS-E
Surface				P0	P0	P0
d1 mm	l1 mm	l2 mm	d2 mm	Availability	Availability	Availability
20,00	50	40	10,0	•	•	•
21,00	50	40	10,0	•	•	•
22,00	50	40	10,0	•	•	•
23,00	50	40	10,0	•	•	•
24,00	50	40	10,0	•	•	•
25,00	45	32	13,0	•	•	•
26,00	45	32	13,0	•	•	•
27,00	45	32	13,0	•	•	•
28,00	45	32	13,0	•	•	•
29,00	45	32	13,0	•	•	•
30,00	45	32	13,0	•	•	•
31,00	50	36	16,0	•	•	•
32,00	50	36	16,0	•	•	•
33,00	50	36	16,0	•	•	•
34,00	50	36	16,0	•	•	•
35,00	50	36	16,0	•	•	•
36,00	56	40	19,0	•	•	•
37,00	56	40	19,0	•	•	•
38,00	56	40	19,0	•	•	•
39,00	56	40	19,0	•	•	•
40,00	56	40	19,0	•	•	•
41,00	56	40	19,0	•	•	•
42,00	56	40	19,0	•	•	•
43,00	63	45	22,0	•	•	•
44,00	63	45	22,0	•	•	•
45,00	63	45	22,0	•	•	•
46,00	63	45	22,0	•	•	•
47,00	63	45	22,0	•	•	•
48,00	63	45	22,0	•	•	•
49,00	63	45	22,0	•	•	•
50,00	63	45	22,0	•	•	•
52,00	71	50	27,0	•	•	•
55,00	71	50	27,0	•	•	•
56,00	71	50	27,0	•	•	•
58,00	71	50	27,0	•	•	•
60,00	71	50	27,0	•	•	•
62,00	80	56	32,0	•	•	•
65,00	80	56	32,0	•	•	•
68,00	80	56	32,0	•	•	•
70,00	80	56	32,0	•	•	•

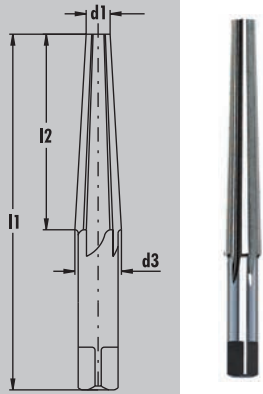
P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB







# Socket Reamers with straight shank, HSS, DIN 204

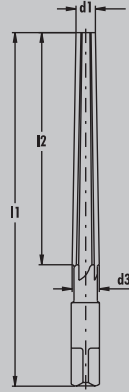
<b>Product Group</b>		06						
		finishing						
<b>List-No.</b>		73080						
<b>Material</b>		HSS						
<b>Surface</b>		P0						
								
<b>for MT-No.</b>	<b>d1 mm</b>	<b>d2 mm</b>	<b>l1 mm</b>	<b>l2 mm</b>	<b>Availability</b>			
1	9,571	12,863	102	66	•			
2	14,733	18,679	121	79	•			
3	20,010	24,829	146	96	•			
4	26,229	32,410	179	119	•			
5	37,873	45,767	222	150	•			
6	54,172	65,016	300	208	•			

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided lands • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB



# Taper Pin Reamers 1:50 with straight shank and square, HSS, DIN 9

<b>Product Group</b>	<b>06</b>	<b>06</b>	
	<b>straight</b>	<b>spiral</b>	
<b>List-No.</b>	<b>75040</b>	<b>75050</b>	
<b>Material</b>	<b>HSS</b>	<b>HSS</b>	
<b>Surface</b>	<b>P0</b>	<b>P0</b>	

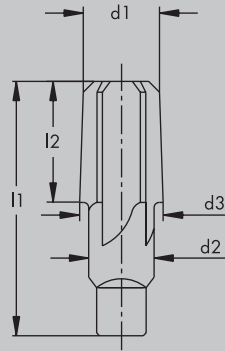


Size mm	d1 mm	d3 mm	l1 mm	l2 mm	Availability	Availability
1,50	1,40	2,14	57	37	•	•
2,00	1,90	2,86	68	48	•	•
2,50	2,40	3,36	68	48	•	•
3,00	2,90	4,06	80	58	•	•
4,00	3,90	5,26	93	68	•	•
5,00	4,90	6,36	100	73	•	•
6,00	5,90	8,00	135	105	•	•
7,00	6,90	9,72	177	141	•	•
8,00	7,90	10,80	180	145	•	•
9,00	8,90	12,16	205	163	•	•
10,00	9,90	13,40	215	175	•	•
12,00	11,80	16,00	255	210	•	•
13,00	12,86	16,74	240	194	•	•
14,00	13,86	17,74	240	194	•	•
16,00	15,80	20,40	280	230	•	•
20,00	19,80	24,80	310	250	•	•
25,00	24,70	30,70	370	300	•	•
30,00	29,70	36,10	400	320	•	•
40,00	39,70	46,50	430	340	•	•
50,00	49,70	56,90	460	360	•	•

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

## Pipe Reamers 1:16 with straight shank and square, HSS, Factory Standard

<b>Product Group</b>	06
	finishing
<b>List-No.</b>	73200
<b>Material</b>	HSS
<b>Surface</b>	P0



Size ins	d1 mm	d3 mm	l1 mm	l2 mm	d2 mm	Availability
1/16	6,000	7,062	70	17	6,0	•
1/8	8,300	9,362	70	17	8,0	•
1/4	10,800	12,487	80	27	10,0	•
3/8	14,200	15,887	85	27	12,0	•
1/2	17,500	19,687	95	35	16,0	•
3/4	22,800	24,987	105	35	20,0	•
1	28,650	31,337	130	43	25,0	•
1 1/4	37,400	40,150	140	44	32,0	•
1 1/2	43,450	46,362	150	45	36,0	•
2	55,500	58,375	160	46	48,0	•

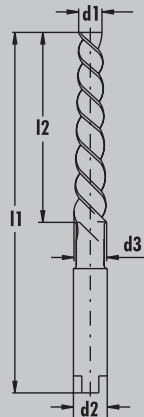
P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB





**Taper Pin Reamers 1:50 with straight shank, HSS, DIN 2179**

<b>Product Group</b>	06
	quick spiral
<b>List-No.</b>	75030
<b>Material</b>	HSS
<b>Surface</b>	P0



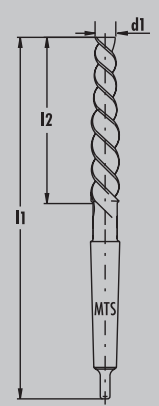

Size mm	d1 mm	d3 mm	l1 mm	l2 mm	d2 mm	Availability
2,00	1,90	2,86	86	48	3,15	•
2,50	2,40	3,36	86	48	3,15	•
3,00	2,90	4,06	100	58	4,00	•
4,00	3,90	5,26	112	68	5,00	•
5,00	4,90	6,36	122	73	6,30	•
6,00	5,90	8,00	160	105	8,00	•
6,50	6,40	8,78	187	119	8,50	•
8,00	7,90	10,80	207	145	10,00	•
10,00	9,90	13,40	245	175	12,50	•
12,00	11,80	16,00	290	210	16,00	•
13,00	12,86	16,74	275	194	16,00	•
14,00	13,86	17,74	275	194	17,00	•
16,00	15,84	21,12	355	264	20,00	•
20,00	19,80	25,20	370	270	24,00	•

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB





**Bridge Reamers, HSS, DIN 311**

<b>Product Group</b>					<b>06</b>		
<b>List-No.</b>					<b>72050</b>		
<b>Material</b>					<b>HSS</b>		
<b>Surface</b>					<b>P0</b>		
							
Size mm	d1 mm	l1 mm	l2 mm	MTS	Availability		
6,40	4,50	151	75	1	.		
7,40	5,20	156	80	1	.		
8,00	5,50	161	85	1	.		
8,40	5,90	161	85	1	.		
9,00	6,30	166	90	1	.		
9,50	6,60	166	90	1	.		
10,00	7,00	171	95	1	.		
11,00	7,70	176	100	1	.		
12,00	8,40	199	105	2	.		
13,00	9,10	199	105	2	.		
14,00	9,80	209	115	2	.		
15,00	10,50	219	125	2	.		
16,00	11,20	229	135	2	.		
17,00	11,90	251	135	3	.		
18,00	12,60	261	145	3	.		
19,00	13,30	261	145	3	.		
20,00	14,00	271	155	3	.		
21,00	14,70	271	155	3	.		
22,00	15,40	281	165	3	.		
23,00	16,40	281	165	3	.		
24,00	16,80	296	180	3	.		
25,00	17,50	296	180	3	.		
26,00	18,20	296	180	3	.		
27,00	18,90	311	195	3	.		
28,00	19,60	311	195	3	.		
29,00	20,30	311	195	3	.		
30,00	21,00	311	195	3	.		
31,00	21,70	326	210	3	.		
32,00	22,40	354	210	4	.		
33,00	23,10	354	210	4	.		
34,00	23,80	364	220	4	.		
35,00	24,50	364	220	4	.		
36,00	25,20	364	220	4	.		
37,00	25,90	364	220	4	.		
38,00	26,60	374	230	4	.		
39,00	27,30	374	230	4	.		
40,00	28,00	374	230	4	.		

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB

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## Machine Reamers with taper shank, Carbide Tipped, DIN 8094

Product Group				07	07	
List-No.				straight 77020	spiral 77030	
Material				K10	K10	
Surface				P0	P0	
d1 mm	l1 mm	l2 mm	MTS	Availability	Availability	
5,00	150	30	1	•	•	
6,00	150	30	1	•	•	
7,00	150	30	1	•	•	
8,00	156	33	1	•	•	
9,00	162	36	1	•	•	
10,00	168	38	1	•	•	
11,00	175	41	1	•	•	
12,00	182	44	1	•	•	
13,00	182	44	1	•	•	
14,00	189	47	1	•	•	
15,00	204	50	2	•	•	
16,00	210	52	2	•	•	
17,00	214	54	2	•	•	
18,00	219	56	2	•	•	
19,00	223	58	2	•	•	
20,00	228	60	2	•	•	
21,00	232	62	2	•	•	
22,00	237	64	2	•	•	
23,00	241	66	2	•	•	
24,00	268	68	3	•	•	
25,00	268	68	3	•	•	
26,00	273	70	3	•	•	
27,00	277	71	3	•	•	
28,00	277	71	3	•	•	
29,00	281	73	3	•	•	
30,00	281	73	3	•	•	
31,00	285	75	3	•	•	
32,00	317	77	4	•	•	
34,00	321	78	4	•	•	
35,00	321	78	4	•	•	
36,00	325	79	4	•	•	
38,00	329	81	4	•	•	
40,00	329	81	4	•	•	

P0-Bright • P1-Steam tempered • P2-Bronze • P3-Moc • P4-Nitrided • P5-TiN • P6-TiCN • P7-HY • P8-TiAlN • P9-TiB



