

Visual Index - Reamers

Feed Rate Chart - Reamers

Alpha Code	Reamers - Feed in Inches per Revolution												Ø Diameter	
	1/16	5/64	1/8	3/16	5/16	25/64	1/2	5/8	25/32	1"	1-13/16	1-1/2	2"	
A	0.002	0.002	0.003	0.004	0.006	0.007	0.007	0.009	0.010	0.011	0.013	0.015	0.017	
B	0.002	0.003	0.004	0.006	0.007	0.008	0.009	0.011	0.012	0.014	0.016	0.020	0.022	
C	0.003	0.003	0.005	0.007	0.009	0.010	0.011	0.013	0.015	0.017	0.019	0.024	0.027	
D	0.031	0.004	0.006	0.008	0.011	0.013	0.014	0.016	0.019	0.021	0.024	0.029	0.033	
E	0.004	0.006	0.007	0.010	0.014	0.015	0.017	0.020	0.021	0.025	0.030	0.036	0.043	
F	0.006	0.007	0.010	0.014	0.017	0.020	0.022	0.025	0.028	0.031	0.037	0.047	0.059	

Application Material Groups (AMG)		Hardness HRC	ISO
1. Steel	1.1 Magnetic soft steel	12L14, 12L15	<120 HB P 1
	1.2 Structural Steel/ case carburising steel	1005-1025, 1214, 1215, A36	<200 HB P 1
	1.3 Plain Carbon steel	1030-1060, 1050-1060, 1144-1146	<24 P 2
	1.4 Alloy steel	4140,4340,52100,8620 H11-H41,A2,D2,01,P20,420	<24 P 3
	1.5 Alloy steel/ Hardened and tempered steel	4140,4340,52100,8620 H11-H41,A2,D2,01,P20,420	>24<38 P 4
	1.6 Alloy steel/ Hardened and tempered steel	4140,4340,52100,8620 H11-H41,A2,D2,01,P20,420	>38 H 1
	1.7 Alloy steel Hardened	A2-D2, H10-H41, L1-L6, M1-M42, T1	49-55 H 3
	1.8 Alloy steel Hardened	A2-D2, H10-H41, L1-L6, M1-M42, T1	55-63 H 4
2. Stainless Steel	2.1 Free machining Stainless Steel	200, 303, 416, 420F, 430F, 440	<24 M 1
	2.2 Austenitic	301, 302, 304, 316, 321, 330, CUSTOM 455, AM-350	<24 M 3
	2.3 Ferritic + Austenitic, Martensitic	318-329, 400-446, DUPLEX	<32 M 2
	2.4 Precipitation Hardened	15-5PH, Custom 450 17-4PH	<32 S 2
3. Cast Iron	3.1 Lamellar graphite	Grey, G10, Gg40, J431C, A48 CLASS 20	<150 HB K 1
	3.2 Lamellar graphite	Grey, GG25-Gg40, J158, A48 CLASS 40-60	>150 HB<32 K 2
	3.3 Nodular graphite/ Malleable Cast Iron	A220, A436, A439, A602, Black, GGG40-GGG70	<200 HB K 3
	3.4 Nodular graphite/ Malleable Cast Iron	Black Gts/Gtw, J434C	>200 HB<32 K 4
4. Titanium	4.1 Titanium, unalloyed	Commercially Pure	<200 HB S 1
	4.2 Titanium, alloyed	6Al4V, 6Al4V-2Sn, Monel, Monel K	<28 S 2
	4.3 Titanium, alloyed	6Al4V-4Mo, 7A14V-4Mo, 4911-4967	>28<38 S 3
5. Nickel	5.1 Nickel, unalloyed	Commercially Pure, 17644, 200, 5553	<150 HB S 1
	5.2 Nickel, alloyed	Monel 400, Hastelloy C, Inconel 625, Waspaloy	<28 S 2
	5.3 Nickel, alloyed	Inconel 718, Nimonic 75-95, Rene 41, Inconel 825, A286	>28<38 S 3
6. Copper	6.1 Copper	Commercially Pure	<100 HB N 3
	6.2 β-Brass, Bronze	314-340, 350-370	<200 HB N 4
	6.3 α-Brass	Alloyed Cu + Al + Fe, Long Chipping	<200 HB N 3
	6.4 High Strength Bronze	Ampco 18-25	<49 N 4
7. Aluminium Magnesium	7.1 Al, Mg, unalloyed	Commercially Pure	<100 HB N 1
	7.2 Al alloyed, Si<0.5%	6061 T6, 7075, 314-340	<150 HB N 1
	7.3 Al alloyed, Si>0.5%<10%	6061 T6, 380-390	<120 HB N 1
	7.4 Al alloyed, Si>10% Mg alloys	Magnesium Whisker Reinforced	<120 HB N 2
8. Synthetic Materials	8.1 Thermoplastics	Ultramid, Polystrol	---
	8.2 Thermosetting plastics	Bakelit, Pertinax	---
	8.3 Reinforced plastic materials	CFK, GFKAFK	---
9. Hard Mat.	9.1 Cermet (Metal-ceramics)	Ferrotic	<54 H
10. Graphite	10.1 Standard graphite	---	O

Visual Index - Reamers

Tool Material:	HM	HM	HM	HM	HM	HSS-E	HSS	HSS	HSS-E	HSS-E	HSS	HSS
Finish/Coating:												
Standard:	DIN 8050	DIN 8093	DIN 8051	DIN 8094	DIN 8093	DIN 212	ANSI	ANSI	BS 328	DIN 212	ANSI	ANSI
Direction of Cut:												
Shank:												
Tolerance:	H7	H7	H7	H7	Ø .95 - 5.6 0, +0.004 Ø 5.51 - 12 0, +0.005	Ø .95 - 5.6 0, +0.004 Ø 5.51 - 12 0, +0.005	USCTI	USCTI	H7	H7		USCTI
Tolerance:												
Countersink Angle:												
Taper Gradient:												1:48
Style:	B441	B400	B442	B411	B481	B170	4533	4535	B901	B157	B122	4588
Range:	10.00 - 20.00	1.00 - 20.00	10.00 - 20.00	5.00 - 30.00	0.98 - 12.05	0.98 - 12.00	N60 - 1.1/2	1/16 - 1"	1.50 - 1/2	2.00 - 20.00	3/8 - 1.1/16	7/0 - 10
Page #	457	458	459	460	461	463	466	470	471	472	473	474
1.1	59B	59B	59B	59B	59B	82C	82C	82C	59C	82C	59C	59C
1.2	59B	59B	59B	59B	59B	66C	66C	66C	46C	66C	46C	46C
1.3	46B	46B	46B	46B	46B	52C	52C	52C	36C	52C	36C	36C
1.4	46B	46B	46B	46B	46B	49B	49B	49B	33B	49B	33B	33B
1.5	33C	33C	33C	33C	33C	30B	30B	30B	16B	30B	16B	16B
1.6	33C	33C	33C	33C	33C	16A	16A	16A	13A	16A	13A	13A
1.7												
1.8												
2.1						36C	36C	36C	26C	36C	26C	26C
2.2						20B	20B	20B		20B	16B	16B
2.3						26B	26B	26B		26B	20B	20B
2.4							20B	20B				
3.1	56D	56D	56D	56D	56D	52E	52E	52E	46E		46E	46E
3.2	56D	56D	56D	56D	56D	49D	49D	49D	36D		36D	36D
3.3	56D	56D	56D	56D	56D	43C	43C	43C	33C		33C	33C
3.4	46D	46D	46D	46D	46D	36C	36C	36C	30C		30C	30C
4.1	46C	46C	46C	46C	46C	49C	49C	49C	36C	49C	36C	36C
4.2	46C	46C	46C	46C	46C	30B	30B	30B	16B	30B	16B	16B
4.3	33B	33B	33B	33B	33B	16B	16B	16B	13B	16B	13B	13B
5.1	33C	33C	33C	33C	33C	26D	26D	26D	16D	26D	16D	16D
5.2	33B	33B	33B	33B	33B	16C	16C	16C	10C	16C		
5.3	33B	33B	33B	33B	33B	10C	10C	10C	7C	10C		
6.1	125E	125E	125E	125E	125E	82D	82D	82D	59D	82D	59D	59D
6.2	125E	125E	125E	125E	125E	92E	92E	92E	66E	92E	66E	66E
6.3	125E	125E	125E	125E	125E	82D	82D	82D	59D		59D	59D
6.4	125D	125D	125D	125D	125D	46D	46D	46D	36D		36D	36D
7.1	197D	197D	197D	197D	197D				75F	92F	75F	75F
7.2	197D	197D	197D	197D	197D				59F	82F	59F	59F
7.3	82D	82D	82D	82D	82D					66E	49E	49E
7.4	82D	82D	82D	82D	82D					52D	46D	46D
8.1	82C	82C	82C	82C	82C					98B		
8.2	43C	43C	43C	43C	43C				69B		69B	69B
8.3												
9.1										10A		
10.1												

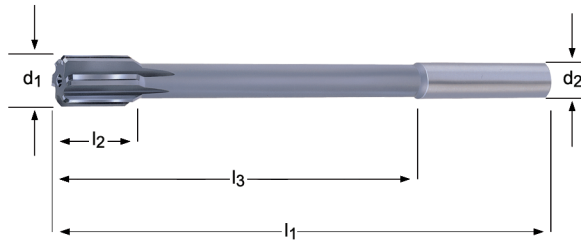
Visual Index - Reamers

	HSS-E	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	
	ST	ST	ST						ST	ST		
	BS 328	DIN 311	ANSI	ANSI	DORMER	ANSI	ANSI	ANSI	DIN 206	BS 328	ANSI	
	H7	k11	USCTI	USCTI					H7		USCTI	
											60°	
											↓	
											100°	
						1:48	1:48			1:48		
	B101	B121	4579	4500	B334	B335	4587	4591	4600	B100	B301	4608
	3.00 - 2"	10.00 - 30.00	7/16 - 1.1/16	1/8 - 1"	N000 N16	Blades Nuts	N0 - N10	N0 - N10	1/8 - 1"	1.50 - 50.00	1/16 - 1/2	1/4 - 1"
	475	477	478	479	480	481	482	483	484	485	487	488
1.1	59C	59C	59C	82C	59C		59C	59C	59C	59C	59C	98F
1.2	46C	46C	46C	66C	46C		46C	46C	46C	46C	46C	82E
1.3	36C	36C	36C	52C	36C		36C	36C	36C	36C	36C	66D
1.4	33B	33B	33B	49B	33B		33B	33B	33B	33B	33B	49D
1.5	16B	16B	16B	30B	16B		16B	16B	16B	16B	16B	33B
1.6	13A	13A	13A	16A	13A		13A	13A	13A	13A	13A	20A
1.7												
1.8												
2.1	26C		26C	36C	26F		26C	26C	26C	26F	26C	26C
2.2			16B	20B			16B	16B	16B		16B	20B
2.3			20B	26B			20B	20B	20B		20B	13A
2.4				20B					20B			
3.1	46E	46E	46E	52E	46E		46E	46E	46E	46E	46E	82F
3.2	36D	36D	36D	49D	36D		36D	36D	36D	36D	36D	49D
3.3	33C	33C	33C	43C	33C		33C	33C	33C	33C	33C	39C
3.4	30C	30C	30C	36C	30C		30C	30C	30C	30C	30C	26C
4.1	36C	36C	36C	49C	36C		36C	36C	36C	36C	36C	39C
4.2	16B		16B	30B	16B		16B	16B	16B	16B	16B	33A
4.3	13B		13B	16B	13B		13B	13B	13B	13B	13B	26A
5.1	16D		16D	26D	16D		16D	16D	16D	16D	16D	39C
5.2	10C			16C	10C					10C		20B
5.3	7C			10C	7C					7C		13A
6.1	59D		59D	82D	59D		59D	59D	59D	59D	59D	82D
6.2	66E		66E	92E	66E		66E	66E	66E	66E	66E	66F
6.3	59D		59D	82D	59D		59D	59D	59D	59D	59D	82F
6.4	36D		36D	46D	36D		36D	36D	36D	36D	36D	33D
7.1	75F		75F		75F		75F	75F	75F	75F	75F	98G
7.2	59F		59F		59F		59F	59F	59F	59F	59F	82F
7.3			49E				49E	49E	49E	49E	49E	66F
7.4			46D				46D	46D	46D		46D	33F
8.1												98G
8.2	69B	69B	69B		69B		69B	69B	69B	69B	69B	66G
8.3												
9.1												
10.1												

Machine Reamer, Straight Shank, Brazed Carbide Tipped

B441 Extremely unequal flute spacing. Straight flute. For machine reaming of abrasive, hard ferrous, and non-ferrous materials.

1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2
5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2



B441

HM



DIN
8050



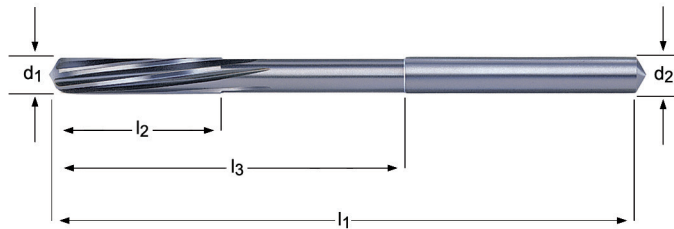
10.00 - 20.00

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	# of Flutes	d_2 Ø h_9 mm	Pack Qty	B441
10.0	133	19	87	6	10	1	0421086
11.0	142	19	96	6	10	1	0421093
12.0	151	19	105	6	10	1	0421109
13.0	151	19	105	6	10	1	0426302
14.0	160	19	110	6	12.5	1	0421116
15.0	162	19	112	6	12.5	1	0421123
16.0	170	22	120	6	12.5	1	0421130
17.0	175	22	123	6	14	1	0421147
18.0	182	22	130	6	14	1	0421154
19.0	189	22	131	6	16	1	0421161
20.0	195	22	137	6	16	1	0421178

Machine Reamer, Straight Shank

B400 Extremely unequal flute spacing with left hand slow spiral, right hand cut. For machine reaming of abrasive, hard ferrous, and non-ferrous materials.

1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2
5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2



B400

HM



DIN
8093



1.00 - 20.00

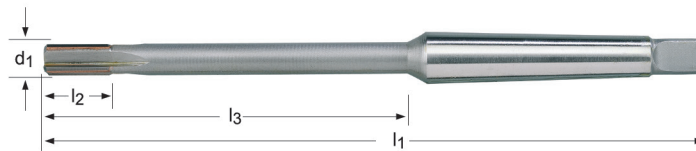
d ₁ Ø mm	l ₁ mm	l ₂ mm	l ₃ mm	# of Flutes	d ₂ Øh ₆ mm	Pack Qty	B400
1.0	34	5.5	15	3	1.0	1	0052983
1.2	38	7.5	16.5	3	1.2	1	0052990
1.4	40	8	18	3	1.5	1	0053003
1.5	40	8	18	3	1.5	1	0053010
1.6	43	9	20	3	1.6	1	0053027
1.8	46	10	22	4	1.8	1	0053034
2.0	49	11	24	4	2.0	1	0053041
2.2	53	12	25	4	2.2	1	0053058
2.5	57	14	29	4	2.5	1	0053065
2.8	61	15	33	6	3.0	1	0053072
3.0	61	15	33	6	3.0	1	0144152
3.2	65	16	37	6	3.2	1	0144169
3.5	70	18	42	6	3.5	1	0144176
4.0	75	19	47	6	4.0	1	0144183
4.5	80	21	52	6	4.5	1	0144190
5.0	86	23	58	6	5.0	1	0144206
5.5	93	26	57	6	5.6	1	0144213
6.0	93	26	57	6	5.6	1	0144220
6.5	101	28	65	6	6.3	1	0144237
7.0	109	31	73	6	7.1	1	0144244
8.0	117	33	81	6	8.0	1	0144251
9.0	125	36	85	6	9.0	1	0144268
10.0	133	38	93	6	10.0	1	0144275
12.0	151	44	111	6	10.0	1	0144282
14.0	160	47	115	6	12.5	1	0144299 ¹⁾
16.0	170	52	125	6	12.5	1	0144305 ¹⁾
18.0	182	56	137	6	14.0	1	0144312 ¹⁾
20.0	195	60	147	6	16.0	1	0144329 ¹⁾

¹⁾ Brazed Carbide Tipped

Machine Reamer, Taper Shank, Brazed Carbide Tipped

B442 Extremely unequal flute spacing with straight flute. For machine reaming of abrasive, hard ferrous, and non-ferrous materials.

- 1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2
5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2



B442

HM



DIN
8051



10.00 - 20.00

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	# of Flutes	MTS	Pack Qty	B442
10.0	168	19	102.5	6	1	1	0421185
12.0	182	19	116.5	6	1	1	0421192
14.0	189	19	123.5	6	1	1	0421208
15.0	204	19	124	6	2	1	0421215
16.0	210	22	130	6	2	1	0421222
17.0	214	22	134	6	2	1	0421239
18.0	219	22	139	6	2	1	0421246
19.0	223	22	143	6	2	1	0426319
20.0	228	22	148	6	2	1	0421253

Machine Reamer, Taper Shank

B411 Extremely unequal spacing with left hand spiral, and right hand cut. For machine reaming of abrasive, hard ferrous, and non-ferrous materials.

1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2
5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2



B411

HM



DIN
8094



5.00 - 30.00

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	# of Flutes	MTS	Pack Qty	B411
5.0	133	23	67.5	6	1	1	0053195 ¹⁾
6.0	138	26	72.5	6	1	1	0053201 ¹⁾
7.0	150	31	84.5	6	1	1	0053218 ¹⁾
8.0	156	33	90.5	6	1	1	0053225 ¹⁾
9.0	162	36	96.5	6	1	1	0053232 ¹⁾
10.0	168	38	102.5	6	1	1	0053126 ¹⁾
12.0	182	44	116.5	6	1	1	0053140 ¹⁾
14.0	189	47	123.5	8	1	1	0053164 ¹⁾
15.0	204	50	124	8	2	1	0053171 ¹⁾
16.0	210	52	130	8	2	1	0053188 ¹⁾
17.0	214	54	134	6	2	1	0144336 ²⁾
18.0	219	56	139	6	2	1	0144343 ²⁾
19.0	223	58	143	6	2	1	0144350 ²⁾
20.0	228	60	148	6	2	1	0144367 ²⁾
22.0	237	64	157	6	2	1	0144374 ²⁾
24.0	268	68	169	8	3	1	0144381 ²⁾
25.0	268	68	169	8	3	1	0144398 ²⁾
26.0	273	70	174	8	3	1	0144404 ²⁾
30.0	281	73	182	8	3	1	0144411 ²⁾

¹⁾ Carbide Head
²⁾ Carbide Tipped

High Precision, Straight Shank

B481 High Precision NC Centesimal Reamers are offered in 0.01mm increments. Extremely unequal flute spacing with left hand slow spiral, right hand cut. For machining reaming of abrasive, hard ferrous, and non-ferrous materials. Ideal for hydraulic and heat shrink tool holding systems.

1.1 1.2 1.3 1.4 1.5 1.6 3.1 3.2 3.3 3.4 4.1 4.2 4.3 5.1 5.2
5.3 6.1 6.2 6.3 6.4 7.1 7.2 7.3 7.4 8.1 8.2



B481

HM



DIN
8093



0.98 - 12.05

d ₁ Ø mm	l ₁ mm	l ₂ mm	l ₃ mm	# of Flutes	d ₂ Øh ₆ mm	Pack Qty	B481
0.98	49.5	6	21.5	3	4	1	0421567
0.99	49.5	6	21.5	3	4	1	0421574
1.00	49.5	6	21.5	3	4	1	0421581
1.01	49.5	6	21.5	3	4	1	0421598
1.02	49.5	6	21.5	3	4	1	0421604
1.03	49.5	9	21.5	3	4	1	0421611
1.48	49	9	21	3	4	1	0421628
1.49	49	9	21	3	4	1	0421635
1.50	49	9	21	3	4	1	0421642
1.51	49	9	21	3	4	1	0421659
1.52	49	9	21	3	4	1	0421666
1.53	49	9	21	3	4	1	0421673
1.98	49	12	21	4	4	1	0421680
1.99	49	12	21	4	4	1	0421697
2.00	49	12	21	4	4	1	0421857
2.01	49	12	21	4	4	1	0421864
2.02	49	12	21	4	4	1	0421871
2.03	49	12	21	4	4	1	0421888
2.48	59	16	31	4	4	1	0421895
2.49	59	16	31	4	4	1	0421901
2.50	59	16	31	4	4	1	0421918
2.51	59	16	31	4	4	1	0421925
2.52	59	16	31	4	4	1	0421932
2.53	59	16	31	4	4	1	0421949
2.97	62.5	17	35	6	4	1	0421956
2.98	62.5	17	35	6	4	1	0421963
2.99	62.5	17	35	6	4	1	0421970
3.00	62.5	17	35	6	4	1	0421987
3.01	62.5	17	35	6	4	1	0421994
3.02	62.5	17	35	6	4	1	0422007
3.03	62.5	17	35	6	4	1	0422014
3.97	75	19	47	6	4	1	0422021
3.98	75	19	47	6	4	1	0422038

APPLICATION CARBIDE REAMER

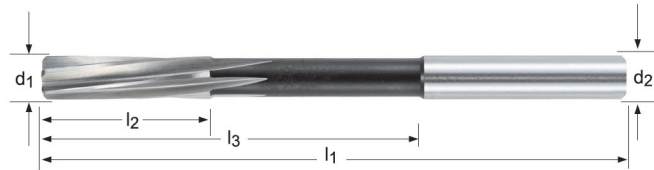


d_1 Ø	l_1	l_2	l_3	# of Flutes	d_2 Øh ₆ mm	Pack Qty	B481
mm	mm	mm	mm		mm		
3.99	75	19	47	6	4	1	0422045
4.00	75	19	47	6	4	1	0422052
4.01	75	19	47	6	4	1	0422069
4.02	75	19	47	6	4	1	0422076
4.03	75	19	47	6	4	1	0422083
4.97	86	23	50	6	6	1	0422090
4.98	86	23	50	6	6	1	0422106
4.99	86	23	50	6	6	1	0422113
5.00	86	23	50	6	6	1	0422120
5.01	86	23	50	6	6	1	0422137
5.02	86	23	50	6	6	1	0422144
5.03	86	23	50	6	6	1	0422151
5.97	93	26	57	6	6	1	0422168
5.98	93	26	57	6	6	1	0422175
5.99	93	26	57	6	6	1	0422182
6.00	93	26	57	6	6	1	0422199
6.01	93	26	57	6	6	1	0422205
6.02	93	26	57	6	6	1	0422212
6.03	93	26	57	6	6	1	0422229
7.97	117	33	81	6	8	1	0422236
7.98	117	33	81	6	8	1	0422243
7.99	117	33	81	6	8	1	0422250
8.00	117	33	81	6	8	1	0422267
8.01	117	33	81	6	8	1	0422274
8.02	117	33	81	6	8	1	0422281
8.03	117	33	81	6	8	1	0422298
8.04	117	33	81	6	8	1	0422304
9.97	133	38	93	6	10	1	0422311
9.98	133	38	93	6	10	1	0422328
9.99	133	38	93	6	10	1	0422335
10.00	133	38	93	6	10	1	0421703
10.01	133	38	93	6	10	1	0421710
10.02	133	38	93	6	10	1	0421727
10.03	133	38	93	6	10	1	0421734
10.04	133	38	93	6	10	1	0421741
10.05	133	38	93	6	10	1	0421758
11.97	151	44	106	6	12	1	0421765
11.98	151	44	106	6	12	1	0421772
11.99	151	44	106	6	12	1	0421789
12.00	151	44	106	6	12	1	0421796
12.01	151	44	106	6	12	1	0421802
12.02	151	44	106	6	12	1	0421819
12.03	151	44	106	6	12	1	0421826
12.04	151	44	106	6	12	1	0421833
12.05	151	44	106	6	12	1	0421840

High Precision, Straight Shank

B170 Centesimal Reamer by 0.01mm increments.
 Left hand slow spiral, right hand cut. For machine reaming of abrasive, hard ferrous, and non-ferrous materials.

- 1.1 1.2 1.3 1.4 1.5 1.6 2.1 2.2 2.3 3.1 3.2 3.3 3.4 4.1 4.2
4.3 5.1 5.2 5.3 6.1 6.2 6.3 6.4



B170

HSS-E



DIN
212



0.98 - 12.00

d ₁ Ø mm	l ₁ mm	l ₂ mm	l ₃ mm	# of Flutes	d ₂ Øh ₉ mm	Pack Qty	B170
0.98	34	5.5	15	3	1.0	1	0127957
0.99	34	5.5	15	3	1.0	1	0127964
1.00	34	5.5	15	3	1.0	1	0127971
1.01	34	5.5	15	3	1.0	1	0127988
1.02	34	5.5	15	3	1.0	1	0127995
1.03	34	5.5	15	3	1.0	1	0128008
1.04	34	5.5	15	3	1.0	1	0128015
1.05	34	5.5	15	3	1.0	1	0128022
1.49	40	8.0	18	3	1.5	1	0128459
1.50	40	8.0	18	3	1.5	1	0128466
1.51	43	9.0	20	3	1.6	1	0050392
1.52	43	9.0	20	3	1.6	1	0128473
1.98	49	11.0	24	4	2.0	1	0128916
1.99	49	11.0	24	4	2.0	1	0128923
2.00	49	11.0	24	4	2.0	1	0130896
2.01	49	11.0	24	4	2.0	1	0130902
2.02	49	11.0	24	4	2.0	1	0130919
2.03	49	11.0	24	4	2.0	1	0130926
2.04	49	11.0	24	4	2.0	1	0130933
2.05	49	11.0	24	4	2.0	1	0130940
2.49	57	14.0	28	4	2.5	1	0131367
2.50	57	14.0	28	4	2.5	1	0131374
2.51	57	14.0	28	4	2.5	1	0131381
2.52	57	14.0	28	4	2.5	1	0131398
2.98	61	15.0	32	6	3.0	1	0131848
2.99	61	15.0	32	6	3.0	1	0131855
3.00	61	15.0	32	6	3.0	1	0131862
3.01	65	16.0	35	6	3.2	1	0050491
3.02	65	16.0	35	6	3.2	1	0131879
3.03	65	16.0	35	6	3.2	1	0131886
3.04	65	16.0	35	6	3.2	1	0131893
3.05	65	16.0	35	6	3.2	1	0131909
3.49	70	18.0	40	6	3.5	1	0132302

APPLICATION COBALT REAMER



d ₁ Ø	l ₁	l ₂	l ₃	# of Flutes	d ₂ Øh ₃ mm	Pack Qty	B170
mm	mm	mm	mm		mm		
3.50	70	18.0	40	6	3.5	1	0132319
3.51	70	18.0	40	6	3.5	1	0132326
3.52	70	18.0	40	6	3.5	1	0132333
3.98	75	19.0	43	6	4.0	1	0132784
3.99	75	19.0	43	6	4.0	1	0132791
4.00	75	19.0	43	6	4.0	1	0132807
4.01	75	19.0	43	6	4.0	1	0132814
4.02	75	19.0	43	6	4.0	1	0132821
4.03	75	19.0	43	6	4.0	1	0132838
4.04	75	19.0	43	6	4.0	1	0132845
4.05	75	19.0	43	6	4.0	1	0132852
4.49	80	21.0	47	6	4.5	1	0133286
4.50	80	21.0	47	6	4.5	1	0133293
4.51	80	21.0	47	6	4.5	1	0133309
4.52	80	21.0	47	6	4.5	1	0133316
4.98	86	23.0	52	6	5.0	1	0133767
4.99	86	23.0	52	6	5.0	1	0133774
5.00	86	23.0	52	6	5.0	1	0133781
5.01	86	23.0	52	6	5.0	1	0133798
5.02	86	23.0	52	6	5.0	1	0133804
5.03	86	23.0	52	6	5.0	1	0133811
5.04	86	23.0	52	6	5.0	1	0133828
5.05	86	23.0	52	6	5.0	1	0133835
5.49	93	26.0	57	6	5.6	1	0134269
5.50	93	26.0	57	6	5.6	1	0134276
5.51	93	26.0	57	6	5.6	1	0134283
5.52	93	26.0	57	6	5.6	1	0134290
5.98	93	26.0	57	6	5.6	1	0134757
5.99	93	26.0	57	6	5.6	1	0134764
6.00	93	26.0	57	6	5.6	1	0134771
6.01	101	28.0	63	6	6.3	1	0134788
6.02	101	28.0	63	6	6.3	1	0134795
6.03	101	28.0	63	6	6.3	1	0134801
6.04	101	28.0	63	6	6.3	1	0134818
6.05	101	28.0	63	6	6.3	1	0134825
6.49	101	28.0	63	6	6.3	1	0135242
6.50	101	28.0	63	6	6.3	1	0135259
6.51	101	28.0	63	6	6.3	1	0135303
6.52	101	28.0	63	6	6.3	1	0135310
6.98	109	31.0	69	6	7.1	1	0135761
6.99	109	31.0	69	6	7.1	1	0135778
7.00	109	31.0	69	6	7.1	1	0135785
7.01	109	31.0	69	6	7.1	1	0135792
7.02	109	31.0	69	6	7.1	1	0135808
7.03	109	31.0	69	6	7.1	1	0135815
7.04	109	31.0	69	6	7.1	1	0135822
7.05	109	31.0	69	6	7.1	1	0135839
7.49	109	31.0	69	6	7.1	1	0136270
7.50	109	31.0	69	6	7.1	1	0136287
7.51	117	33.0	75	6	8.0	1	0136294
7.52	117	33.0	75	6	8.0	1	0136300
7.98	117	33.0	75	6	8.0	1	0136751
7.99	117	33.0	75	6	8.0	1	0136768
8.00	117	33.0	75	6	8.0	1	0136959
8.01	117	33.0	75	6	8.0	1	0136775
8.02	117	33.0	75	6	8.0	1	0136782
8.03	117	33.0	75	6	8.0	1	0136799
8.04	117	33.0	75	6	8.0	1	0136805
8.05	117	33.0	75	6	8.0	1	0136812
8.49	117	33.0	75	6	8.0	1	0137260
8.50	117	33.0	75	6	8.0	1	0137277
8.51	125	36.0	81	6	9.0	1	0050590
8.52	125	36.0	81	6	9.0	1	0137284
8.98	125	36.0	81	6	9.0	1	0137734
8.99	125	36.0	81	6	9.0	1	0137741
9.00	125	36.0	81	6	9.0	1	0137758

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	# of Flutes	d_2 Ø h_3 mm	Pack Qty	B170
9.01	125	36.0	81	6	9.0	1	0137765
9.02	125	36.0	81	6	9.0	1	0137772
9.03	125	36.0	81	6	9.0	1	0137789
9.04	125	36.0	81	6	9.0	1	0137796
9.05	125	36.0	81	6	9.0	1	0137802
9.49	125	36.0	81	6	9.0	1	0138236
9.50	125	36.0	81	6	9.0	1	0138243
9.51	133	38.0	87	6	10.0	1	0138250
9.52	133	38.0	87	6	10.0	1	0138267
9.98	133	38.0	87	6	10.0	1	0138717
9.99	133	38.0	87	6	10.0	1	0138724
10.00	133	38.0	87	6	10.0	1	0128930
10.01	133	38.0	87	6	10.0	1	0128947
10.02	133	38.0	87	6	10.0	1	0128954
10.03	133	38.0	87	6	10.0	1	0128961
10.04	133	38.0	87	6	10.0	1	0128978
10.05	133	38.0	87	6	10.0	1	0128985
10.49	133	38.0	87	6	10.0	1	0129463
10.51	133	38.0	87	6	10.0	1	0129470
10.52	133	38.0	87	6	10.0	1	0129487
10.98	142	41.0	96	6	10.0	1	0129883
10.99	142	41.0	96	6	10.0	1	0129890
11.00	142	41.0	96	6	10.0	1	0129906
11.01	142	41.0	96	6	10.0	1	0129913
11.02	142	41.0	96	6	10.0	1	0129920
11.03	142	41.0	96	6	10.0	1	0129937
11.04	142	41.0	96	6	10.0	1	0129944
11.05	142	41.0	96	6	10.0	1	0129951
11.49	142	41.0	96	6	10.0	1	0130384
11.50	142	41.0	96	6	10.0	1	0130391
11.51	142	41.0	96	6	10.0	1	0130407
11.52	142	41.0	96	6	10.0	1	0130414
11.98	151	44.0	105	6	10.0	1	0130865
11.99	151	44.0	105	6	10.0	1	0130872
12.00	151	44.0	105	6	10.0	1	0130889

HSS REAMER

Chucking Reamer, Straight Shank

4533 Straight Flute, Right Hand Cut. Chucking reamers have shorter and deeper flutes than hand reamers and are specifically designed for accurate machine reaming in most materials and equipment including screw machines, turret lathes, drill presses, and machining centers. Recommended for most general purpose reaming.

Produced per ASME B94.2-1995 Standards.



4533

HSS



ANSI



N60 - 1.1/2

d_1 Ø "/Nr./letter	d_1 decimal Inch	d_2 decimal Inch	l_2 Inch	l_1 Inch	# of Flutes	Pack Qty	4533
N60	0.0400	0.0390	1/2	2.1/2	4	1	5010173
N59	0.0410	0.0390	1/2	2.1/2	4	1	5010175
N58	0.0420	0.0390	1/2	2.1/2	4	1	5010177
N57	0.0430	0.0390	1/2	2.1/2	4	1	5010179
N56	0.0465	0.0455	1/2	2.1/2	4	1	5010186
3/64	0.0469	0.0455	1/2	2.1/2	4	1	5010187
N55	0.0520	0.0510	1/2	2.1/2	4	1	5010198
N54	0.0550	0.0510	1/2	2.1/2	4	1	5010204
N53	0.0595	0.0585	1/2	2.1/2	4	1	5010213
1/16	0.0625	0.0585	1/2	2.1/2	4	1	5010219
N52	0.0635	0.0585	1/2	2.1/2	4	1	5010221
N51	0.0670	0.0660	3/4	3"	4	1	5010228
N50	0.0700	0.0660	3/4	3"	4	1	5010234
N49	0.0730	0.0660	3/4	3"	4	1	5010240
N48	0.0760	0.0720	3/4	3"	4	1	5010246
5/64	0.0781	0.0720	3/4	3"	4	1	5010251
N47	0.0785	0.0720	3/4	3"	4	1	5010252
N46	0.0810	0.0771	3/4	3"	4	1	5010257
N45	0.0820	0.0771	3/4	3"	4	1	5010259
N44	0.0860	0.0810	3/4	3"	4	1	5010267
N43	0.0890	0.0810	3/4	3"	4	1	5010273
N42	0.0935	0.0880	3/4	3"	4	1	5010282
3/32	0.0938	0.0880	3/4	3"	4	1	5010283
N41	0.0960	0.0928	7/8	3.1/2	4	1	5010288
N40	0.0980	0.0928	7/8	3.1/2	4	1	5010292
N39	0.0995	0.0928	7/8	3.1/2	4	1	5010295
N38	0.1015	0.0950	7/8	3.1/2	4	1	5010299
N37	0.1040	0.0950	7/8	3.1/2	4	1	5010304
N36	0.1065	0.1030	7/8	3.1/2	4	1	5010309
7/64	0.1094	0.1030	7/8	3.1/2	4	1	5010316
N35	0.1100	0.1030	7/8	3.1/2	4	1	5010318
N34	0.1110	0.1055	7/8	3.1/2	4	1	5010320
N33	0.1130	0.1055	7/8	3.1/2	4	1	5010324

HSS REAMER

d ₁ Ø "Nr./letter	d ₁ decimal Inch	d ₂ decimal Inch	l ₂ Inch	l ₁ Inch	# of Flutes	Pack Qty	4533
N32	0.1160	0.1120	7/8	3.1/2	4	1	5010330
N31	0.1200	0.1120	7/8	3.1/2	4	1	5010338
	0.1230	0.1120	7/8	3.1/2	4	1	5010344
	0.1240	0.1190	7/8	3.1/2	4	1	5010346
	0.1247	0.1190	7/8	3.1/2	4	1	5010349
1/8	0.1250	0.1190	7/8	3.1/2	4	1	5010350
	0.1260	0.1190	7/8	3.1/2	4	1	5010354
N30	0.1285	0.1190	7/8	3.1/2	4	1	5010359
N29	0.1360	0.1275	1"	4"	4	1	5010374
N28	0.1405	0.1350	1"	4"	4	1	5010383
9/64	0.1410	0.1350	1"	4"	4	1	5010384
N27	0.1440	0.1350	1"	4"	4	1	5010391
N26	0.1470	0.1430	1"	4"	4	1	5010397
N25	0.1495	0.1430	1"	4"	4	1	5010402
N24	0.1520	0.1460	1"	4"	4	1	5010407
N23	0.1540	0.1460	1"	4"	4	1	5010411
5/32	0.1562	0.1510	1"	4"	6	1	5010416
N22	0.1570	0.1510	1"	4"	6	1	5010418
N21	0.1590	0.1530	1.1/8	4.1/2	6	1	5010422
N20	0.1610	0.1530	1.1/8	4.1/2	6	1	5010426
N19	0.1660	0.1595	1.1/8	4.1/2	6	1	5010436
N18	0.1695	0.1595	1.1/8	4.1/2	6	1	5010443
11/64	0.1719	0.1645	1.1/8	4.1/2	6	1	5010448
N17	0.1730	0.1645	1.1/8	4.1/2	6	1	5010451
N16	0.1770	0.1700	1.1/8	4.1/2	6	1	5010459
N15	0.1800	0.1755	1.1/8	4.1/2	6	1	5010465
N14	0.1820	0.1755	1.1/8	4.1/2	6	1	5010469
N13	0.1850	0.1800	1.1/8	4.1/2	6	1	5010475
	0.1855	0.1800	1.1/8	4.1/2	6	1	5010476
	0.1865	0.1800	1.1/8	4.1/2	6	1	5010478
	0.1870	0.1800	1.1/8	4.1/2	6	1	5010479
3/16	0.1875	0.1800	1.1/8	4.1/2	6	1	5010480
	0.1885	0.1800	1.1/8	4.1/2	6	1	5010482
N12	0.1890	0.1800	1.1/8	4.1/2	6	1	5010483
N11	0.1910	0.1860	1.1/4	5"	6	1	5010487
N10	0.1935	0.1860	1.1/4	5"	6	1	5010492
N9	0.1960	0.1895	1.1/4	5"	6	1	5010498
N8	0.1990	0.1895	1.1/4	5"	6	1	5010504
N7	0.2010	0.1945	1.1/4	5"	6	1	5010508
13/64	0.2031	0.1945	1.1/4	5"	6	1	5010513
N6	0.2040	0.1945	1.1/4	5"	6	1	5010515
N5	0.2055	0.2016	1.1/4	5"	6	1	5010518
N4	0.2090	0.2016	1.1/4	5"	6	1	5010525
N3	0.2130	0.2075	1.1/4	5"	6	1	5010533
7/32	0.2188	0.2075	1.1/4	5"	6	1	5010545
N2	0.2210	0.2173	1.1/2	6"	6	1	5010550
N1	0.2280	0.2173	1.1/2	6"	6	1	5010564
A	0.2340	0.2265	1.1/2	6"	6	1	5010576
15/64	0.2344	0.2265	1.1/2	6"	6	1	5010577
B	0.2380	0.2329	1.1/2	6"	6	1	5010585
C	0.2420	0.2329	1.1/2	6"	6	1	5010593
D	0.2460	0.2329	1.1/2	6"	6	1	5010602
	0.2480	0.2329	1.1/2	6"	6	1	5010606
	0.2490	0.2400	1.1/2	6"	6	1	5010608
	0.2495	0.2400	1.1/2	6"	6	1	5010609
1/4	0.2500	0.2400	1.1/2	6"	6	1	5010610
	0.2510	0.2400	1.1/2	6"	6	1	5010612
F	0.2570	0.2485	1.1/2	6"	6	1	5010619
G	0.2610	0.2485	1.1/2	6"	6	1	5010622
17/64	0.2656	0.2485	1.1/2	6"	6	1	5010623
H	0.2660	0.2485	1.1/2	6"	6	1	5010624
I	0.2720	0.2485	1.1/2	6"	6	1	5010626
J	0.2770	0.2485	1.1/2	6"	6	1	5010627
K	0.2810	0.2485	1.1/2	6"	6	1	5010628
9/32	0.2812	0.2485	1.1/2	6"	6	1	5010629
L	0.2900	0.2792	1.1/2	6"	6	1	5010630

HSS REAMER



d ₁ Ø "/Nr./letter	d ₁ decimal Inch	d ₂ decimal Inch	l ₂ Inch	l ₁ Inch	# of Flutes	Pack Qty	4533
M	0.2950	0.2792	1.1/2	6"	6	1	5010631
19/64	0.2969	0.2792	1.1/2	6"	6	1	5010632
N	0.3020	0.2792	1.1/2	6"	6	1	5010633
	0.3105	0.2792	1.1/2	6"	6	1	5010636
	0.3115	0.2792	1.1/2	6"	6	1	5010638
	0.3120	0.2792	1.1/2	6"	6	1	5010639
5/16	0.3125	0.2792	1.1/2	6"	6	1	5010640
	0.3135	0.2792	1.1/2	6"	6	1	5010642
	0.3160	0.2792	1.1/2	6"	6	1	5010645
O	0.3230	0.2792	1.1/2	6"	6	1	5010647
P	0.3281	0.2792	1.1/2	6"	6	1	5010648
21/64	0.3281	0.2792	1.1/2	6"	6	1	5010648
Q	0.3320	0.2792	1.1/2	6"	6	1	5010649
R	0.3390	0.2792	1.1/2	6"	6	1	5010650
11/32	0.3438	0.2792	1.1/2	6"	6	1	5010651
S	0.3480	0.3100	1.3/4	7"	6	1	5010652
T	0.3580	0.3100	1.3/4	7"	6	1	5010653
23/64	0.3594	0.3100	1.3/4	7"	6	1	5010654
U	0.3680	0.3100	1.3/4	7"	6	1	5010655
	0.3730	0.3100	1.3/4	7"	6	1	5010658
	0.3740	0.3100	1.3/4	7"	6	1	5010659
	0.3745	0.3100	1.3/4	7"	6	1	5010660
3/8	0.3750	0.3100	1.3/4	7"	6	1	5010661
	0.3760	0.3100	1.3/4	7"	6	1	5010662
V	0.3770	0.3100	1.3/4	7"	6	1	5010663
W	0.3860	0.3100	1.3/4	7"	6	1	5010665
25/64	0.3906	0.3100	1.3/4	7"	6	1	5010666
X	0.3970	0.3100	1.3/4	7"	6	1	5010667
Y	0.4040	0.3100	1.3/4	7"	6	1	5010668
13/32	0.4062	0.3100	1.3/4	7"	6	1	5010670
Z	0.4130	0.3730	1.3/4	7"	6	1	5010671
27/64	0.4219	0.3730	1.3/4	7"	6	1	5010672
	0.4355	0.3730	1.3/4	7"	6	1	5010673
	0.4365	0.3730	1.3/4	7"	6	1	5010674
	0.4370	0.3730	1.3/4	7"	6	1	5010675
7/16	0.4375	0.3730	1.3/4	7"	6	1	5010676
	0.4385	0.3730	1.3/4	7"	6	1	5010677
29/64	0.4531	0.3730	1.3/4	7"	6	1	5010678
15/32	0.4688	0.3730	1.3/4	7"	6	1	5010679
31/64	0.4844	0.4355	2"	8"	6	1	5010680
	0.4980	0.4355	2"	8"	6	1	5010681
	0.4990	0.4355	2"	8"	6	1	5010682
	0.4995	0.4355	2"	8"	6	1	5010683
1/2	0.5000	0.4355	2"	8"	6	1	5010684
	0.5010	0.4355	2"	8"	6	1	5010685
33/64	0.5156	0.4355	2"	8"	6	1	5010690
17/32	0.5312	0.4355	2"	8"	6	1	5010691
35/64	0.5469	0.4355	2"	8"	8	1	5010692
9/16	0.5625	0.4355	2"	8"	8	1	5010693
37/64	0.5781	0.4355	2"	8"	8	1	5010694
19/32	0.5938	0.4355	2"	8"	8	1	5010695
39/64	0.6094	0.5620	2.1/4	9"	8	1	5010696
5/8	0.6250	0.5620	2.1/4	9"	8	1	5010698
41/64	0.6406	0.5620	2.1/4	9"	8	1	5010700
21/32	0.6562	0.5620	2.1/4	9"	8	1	5010701
43/64	0.6719	0.5620	2.1/4	9"	8	1	5010702
11/16	0.6875	0.5620	2.1/4	9"	8	1	5010703
45/64	0.7031	0.5620	2.1/4	9"	8	1	5010704
23/32	0.7188	0.5620	2.1/4	9"	8	1	5010705
47/64	0.7344	0.6245	2.1/2	9.1/2	8	1	5010706
3/4	0.7500	0.6245	2.1/2	9.1/2	8	1	5010708
49/64	0.7656	0.6245	2.1/2	9.1/2	8	1	5010710
25/32	0.7812	0.6245	2.1/2	9.1/2	8	1	5010711
51/64	0.7969	0.6245	2.1/2	9.1/2	8	1	5010712
13/16	0.8125	0.6245	2.1/2	9.1/2	8	1	5010713
53/64	0.8281	0.6245	2.1/2	9.1/2	8	1	5010714
27/32	0.8438	0.6245	2.1/2	9.1/2	8	1	5010715

HSS REAMER

d_1 Ø "Nr./letter	d_1 decimal Inch	d_2 decimal Inch	l_2 Inch	l_1 Inch	# of Flutes	Pack Qty	4533
55/64	0.8594	0.7495	2.5/8	10"	8	1	5010716
7/8	0.8750	0.7495	2.5/8	10"	8	1	5010717
57/64	0.8906	0.7495	2.5/8	10"	8	1	5010718
29/32	0.9062	0.7495	2.5/8	10"	8	1	5010719
59/64	0.9219	0.7495	2.5/8	10"	8	1	5010720
15/16	0.9375	0.7495	2.5/8	10"	8	1	5010721
61/64	0.9531	0.7495	2.5/8	10"	8	1	5010722
31/32	0.9688	0.7495	2.5/8	10"	8	1	5010723
63/64	0.9844	0.8745	2.3/4	10.1/2	8	1	5010724
1"	1.0000	0.8745	2.3/4	10.1/2	8	1	5010725
1.1/16	1.0625	0.8745	2.3/4	10.1/2	8	1	5010726
1.1/8	1.1250	0.8745	2.7/8	11"	8	1	5010727
1.3/16	1.1875	0.9995	2.7/8	11"	8	1	5010728
1.1/4	1.2500	0.9995	3"	11.1/2	8	1	5010729
1.3/8	1.3750	0.9995	3.1/4	12"	8	1	5010731
1.1/2	1.5000	1.2495	3.1/2	12.1/2	8	1	5010733

HSS REAMER

Chucking Reamer, Straight Shank

4535

Slow Right Hand Spiral Flute, Right Hand Cut. Cuts with a smoother, chatter free action than straight flute reamers. Recommended for more difficult to ream materials, better surface finish requirements, applications with an interruption, and to aid in chip evacuation in blind holes.

Designed for accurate machine reaming using all types of equipment and incorporating all other design features of the straight flute style.

Produced per ASME B94.2-1995 standards.



4535

HSS



ANSI



1/16 - 1"

d_1 Ø Inch	d_1 decimal Inch	d_2 Ø Inch	l_2 Inch	l_1 Inch	# of Flutes	Pack Qty	4535
1/16	0.0625	0.0585	1/2	2.1/2	4	1	5010054
5/64	0.0781	0.0720	3/4	3"	4	1	5010055
3/32	0.0938	0.0880	3/4	3"	4	1	5010056
7/64	0.1094	0.1030	7/8	3.1/2	4	1	5010057
1/8	0.1250	0.1190	7/8	3.1/2	4	1	5010058
5/32	0.1562	0.1510	1"	4"	6	1	5010060
11/64	0.1719	0.1645	1.1/8	4.1/2	6	1	5010061
3/16	0.1875	0.1800	1.1/8	4.1/2	6	1	5010062
13/64	0.2031	0.1945	1.1/4	5"	6	1	5010063
7/32	0.2188	0.2075	1.1/4	5"	6	1	5010064
1/4	0.2500	0.2400	1.1/2	6"	6	1	5010066
17/64	0.2656	0.2485	1.1/2	6"	6	1	5010067
9/32	0.2812	0.2485	1.1/2	6"	6	1	5010068
5/16	0.3125	0.2792	1.1/2	6"	6	1	5010070
11/32	0.3438	0.2792	1.1/2	6"	6	1	5010072
3/8	0.3750	0.3100	1.3/4	7"	6	1	5010074
25/64	0.3906	0.3100	1.3/4	7"	6	1	5010075
13/32	0.4062	0.3100	1.3/4	7"	6	1	5010076
7/16	0.4375	0.3730	1.3/4	7"	6	1	5010078
31/64	0.4844	0.4355	2"	8"	6	1	5010081
1/2	0.5000	0.4355	2"	8"	6	1	5010082
17/32	0.5312	0.4355	2"	8"	6	1	5010083
9/16	0.5625	0.4355	2"	8"	8	1	5010084
5/8	0.6250	0.5620	2.1/4	9"	8	1	5010086
11/16	0.6875	0.5620	2.1/4	9"	8	1	5010088
3/4	0.7500	0.6245	2.1/2	9.1/2	8	1	5010090
7/8	0.8750	0.7495	2.5/8	10"	8	1	5010094
1"	1.0000	0.8745	2.3/4	10.1/2	8	1	5010098

Machine Reamer, Straight Shank

B901 Left Hand Slow Spiral, Right Hand Cut. Steam Oxide in flutes reduces wear and chip welding in soft ferrous materials.



B901

HSS-E



**BS
328**



1.50mm - 1/2

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	# of Flutes	Pack Qty	B901
	1.50	44	21	4	1	0180808
1/16	1.59	44	21	4	1	0180815
	2.00	50	25	4	1	0180822
3/32	2.38	58	29	4	1	0180839
	2.50	58	29	4	1	0180846
	3.00	62	31	4	1	0180853
1/8	3.18	66	33	4	1	0180860
	3.50	71	35	4	1	0180877
5/32	3.97	76	38	6	1	0180891
	4.00	76	38	6	1	0180907
	4.50	81	41	6	1	0180921
3/16	4.76	87	44	6	1	0180938
	5.00	87	44	6	1	0180945
13/64	5.16	87	44	6	1	0180952
	5.50	93	47	6	1	0180969
7/32	5.56	93	47	6	1	0180976
15/64	5.95	93	47	6	1	0180983
	6.00	93	47	6	1	0180990
1/4	6.35	100	50	6	1	0181003
	7.00	107	54	6	1	0181010
9/32	7.14	107	54	6	1	0181027
5/16	7.94	115	58	6	1	0181034
	8.00	115	58	6	1	0181041
	9.00	124	62	6	1	0181065
3/8	9.52	133	66	6	1	0181072
	10.00	133	66	6	1	0181089
	11.00	142	71	6	1	0181102
7/16	11.11	142	71	6	1	0181119
	12.00	152	76	6	1	0181126
1/2	12.70	152	76	6	1	0181133

COBALT REAMER



Machine Reamer, Straight Shank

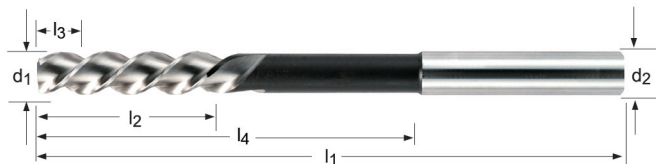
B157 Left Hand Fast Sprial, Right Hand Cut.
Designed for Stainless Steel, Titanium, and
Nickel Alloy applications.

B157

HSS-E



DIN
212

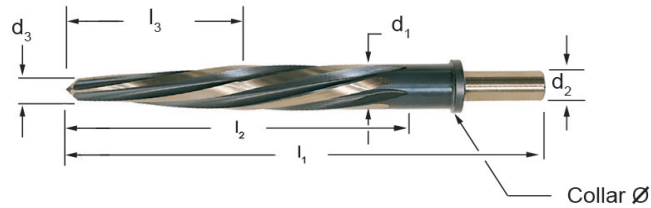


2.00 - 20.00

d_1 Ø mm	l_1 mm	l_2 mm	l_3 mm	l_4 mm	# of Flutes	d_2 Ø h_9 mm	Pack Qty	B157
2.0	49	11	3.5	24	3	2.0	1	0049648
3.0	61	15	4.0	32	3	3.0	1	0122198
4.0	75	19	4.0	43	3	4.0	1	0049679
5.0	86	23	4.5	52	3	5.0	1	0049693
6.0	93	26	6.0	57	3	5.6	1	0049716
7.0	109	31	7.0	69	3	7.1	1	0049730
8.0	117	33	9.0	75	3	8.0	1	0049747
9.0	125	36	9.5	81	3	9.0	1	0049754
10.0	133	38	10.0	87	3	10.0	1	0049617
11.0	142	41	10.5	96	3	10.0	1	0049624
12.0	151	44	11.0	105	3	10.0	1	0049631
13.0	151	44	11.5	105	3	10.0	1	0140352
14.0	160	47	12.0	110	3	12.5	1	0140369
15.0	162	50	12.5	112	3	12.5	1	0140376
16.0	170	52	13.0	120	3	12.5	1	0140383
17.0	175	54	13.5	123	3	14.0	1	0140390
18.0	182	56	14.0	130	3	14.0	1	0140406
19.0	189	58	14.5	131	3	16.0	1	0140413
20.0	195	60	15.0	137	3	16.0	1	0140420

Car Reamer (Alignment Reamer), Reduced Shank

B122 Left Hand Helical Flute, Right Hand Cut. 1/2" Reduced Shank with Tri-Flats. Combination Bronze and Steam Oxide in flutes reduces wear and chip welding in harder ferrous materials. Used to align or enlarge holes.



Note: Collar diameter = $d_1 + 1/8"$
 Collar thickness = $3/16"$
 Shank Length = $1.1/2"$

B122

HSS



ANSI



3/8 - 1.1/16

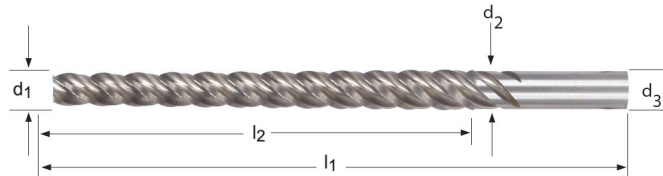
d_1 Ø Inch	d_1 decimal Inch	l_1 Inch	l_2 Inch	l_3 Inch	# of Flutes	d_2 Ø Inch	d_3 Ø Inch	Pack Qty	B122
3/8	0.3750	5.1/4	3.1/16	2	5	3/8	7/32	1	0426296
1/2	0.5000	5.5/16	3.3/4	2.5/8	5	1/2	1/4	1	0252376
9/16	0.5625	6.9/16	4.5/16	3.3/16	5	1/2	5/16	1	0252437
5/8	0.6250	6.9/16	4.5/16	3.3/16	5	1/2	3/8	1	0252413
11/16	0.6875	7	4.13/16	3.9/16	5	1/2	7/16	1	0252369
3/4	0.7500	7	4.13/16	3.9/16	5	1/2	1/2	1	0252406
13/16	0.8125	7.1/4	5.1/8	3.7/8	5	1/2	9/16	1	0252383
7/8	0.8750	7.1/4	5.1/8	3.7/8	5	1/2	5/8	1	0252420
15/16	0.9375	7.1/4	5.1/8	3.7/8	5	1/2	11/16	1	0252390
1"	1.0000	7.1/4	5.1/8	3.7/8	5	1/2	3/4	1	0252345
1.1/16	1.0625	7.1/4	5.1/4	3.7/8	5	1/2	13/16	1	0252352

HSS REAMER

Machine Reamer, Taper Pin Type, Straight Shank

4588

Left hand high spiral. Right hand cut taper pin (1/4" per foot). Designed to convert a straight hole into a tapered hole into which standard taper pins (ASA B5.20-1958) will fit. Ideal geometry for the machine reaming of pin holes on a production basis. Helical construction prevents chips from packing in flutes and reduces breakage.



4588

HSS



ANSI



1:48



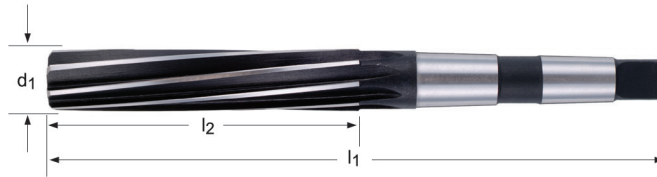
7/0 - 10

nom Ø	d ₁ Ø Inch	d ₂ Ø Inch	d ₃ Ø Inch	l ₂ Inch	l ₁ Inch	# of Flutes	Pack Qty	4588
7/0	0.0497	0.0666	5/64	13/16	1.13/16	2	1	5011157
6/0	0.0611	0.0810	3/32	15/16	1.15/16	2	1	5011158
5/0	0.0719	0.0966	7/64	1.3/16	2.3/16	2	1	5011159
4/0	0.0869	0.1142	1/8	1.5/16	2.5/16	2	1	5011160
3/0	0.1029	0.1300	9/64	1.5/16	2.5/16	2	1	5011161
2/0	0.1137	0.1462	5/32	1.9/16	2.9/16	3	1	5011162
1	0.1447	0.1798	3/16	1.11/16	2.15/16	3	1	5011164
2	0.1600	0.2010	13/64	1.15/16	3.3/16	3	1	5011165
3	0.1813	0.2294	15/64	2.5/16	3.11/16	3	1	5011166
4	0.2071	0.2600	17/64	2.9/16	4.1/16	3	1	5011167
5	0.2410	0.2994	5/16	2.13/16	4.5/16	3	1	5011168
6	0.2773	0.3540	23/64	3.11/16	5.7/16	3	1	5011169
7	0.3297	0.4220	13/32	4.7/16	6.5/16	3	1	5011170
8	0.3971	0.5050	7/16	5.3/16	7.3/16	3	1	5011171
9	0.4800	0.6066	9/16	6.1/16	8.5/16	4	1	5011172
10	0.5799	0.7216	5/8	6.13/16	9.5/16	4	1	5011173

Note: Nom Ø is the Taper Pin number
Per American Standard Taper Pin Specification (ASA B5.20-1958)

Machine Reamer, Taper Shank

B101 Left hand slow spiral, right hand. Steam oxide in flutes reduces wear chip welding harder ferrous materials.



B101

HSS-E



BS
328



3.00mm - 2"

Note: All sizes have 1mm x 45 chamfer (lead).
Cutting diameters are produced to H7 tolerance

d_1 Ø Inch	d_1 Ø mm	l_1 mm	l_2 mm	# of Flutes	MTS	Pack Qty	B101
	3.00	112	33	4	1	1	0181560
1/8	3.18	112	33	4	1	1	0181140
	3.50	115	35	6	1	1	0181577
	4.00	117	38	6	1	1	0181584
	4.50	120	41	6	1	1	0181591
3/16	4.76	124	44	6	1	1	0181164
	5.00	124	44	6	1	1	0181607
	5.50	127	47	6	1	1	0181614
	6.00	127	47	6	1	1	0181621
1/4	6.35	130	50	6	1	1	0181188
	6.50	130	50	6	1	1	0181638
	7.00	134	54	6	1	1	0181645
5/16	7.94	138	58	6	1	1	0181201
	8.00	138	58	6	1	1	0181669
	8.50	138	58	6	1	1	0181676
	9.00	142	62	6	1	1	0181683
	9.50	142	62	6	1	1	0181690
3/8	9.52	146	66	6	1	1	0181225
	10.00	146	66	6	1	1	0181706
	10.50	146	66	6	1	1	0181713
	11.00	151	71	6	1	1	0181720
7/16	11.11	151	71	6	1	1	0181249
	12.00	156	76	6	1	1	0181744
	12.50	156	76	6	1	1	0181751
1/2	12.70	156	76	6	1	1	0181263
	13.00	156	76	6	1	1	0181768
	13.50	161	81	6	1	1	0181775
	14.00	161	81	8	1	1	0181782
9/16	14.29	181	81	8	2	1	0181287
	14.50	181	81	8	2	1	0181799
	15.00	181	81	8	2	1	0181805
	15.50	187	87	8	2	1	0181812
5/8	15.88	187	87	8	2	1	0181300

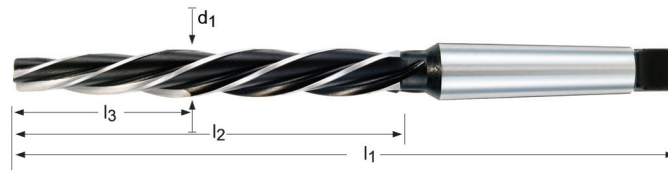
COBALT REAMER



d ₁ Ø Inch	d ₁ Ø mm	l ₁ mm	l ₂ mm	# of Flutes	MTS	Pack Qty	B101
	16.00	187	87	8	2	1	0181829
	16.50	187	87	8	2	1	0181836
	17.00	187	87	8	2	1	0181843
	18.00	193	93	8	2	1	0181850
	19.00	193	93	8	2	1	0181867
3/4	19.05	200	100	8	2	1	0181348
	20.00	200	100	8	2	1	0181874
13/16	20.64	200	100	8	2	1	0181362
	21.00	200	100	8	2	1	0181881
	22.00	207	107	8	2	1	0181898
7/8	22.22	207	107	8	2	1	0181386
	23.00	207	107	8	2	1	0181904
	24.00	242	115	8	3	1	0181911
	25.00	242	115	10	3	1	0181928
1"	25.40	242	115	10	3	1	0181423
	26.00	242	115	10	3	1	0181935
	27.00	251	124	10	3	1	0181942
	28.00	251	124	10	3	1	0181959
1.1/8	28.58	251	124	10	3	1	0181447
	29.00	251	124	10	3	1	0181966
	30.00	251	124	10	3	1	0181973
	31.00	260	133	10	3	1	0181980
1.1/4	31.75	260	133	10	3	1	0181461
	32.00	293	133	10	4	1	0181997
	34.00	302	142	10	4	1	0182017
1.3/8	34.93	302	142	10	4	1	0181485
	35.00	302	142	10	4	1	0182024
	36.00	302	142	10	4	1	0182031
	37.00	302	142	10	4	1	0182048
	38.00	312	152	10	4	1	0182055
1.1/2	38.10	312	152	10	4	1	0181508
	39.00	312	152	10	4	1	0182062
	40.00	312	152	10	4	1	0182079
	41.00	312	152	10	4	1	0182086
	42.00	312	152	10	4	1	0182093
	43.00	323	163	10	4	1	0182109
	44.00	323	163	10	4	1	0182116
1.3/4	44.45	323	163	10	4	1	0181522
	45.00	323	163	12	4	1	0182123
	46.00	323	163	12	4	1	0182130
	47.00	323	163	12	4	1	0182147
	48.00	334	174	12	4	1	0182154
	50.00	334	174	12	4	1	0182178
2"	50.80	334	174	12	4	1	0181546

Bridge Reamer, Taper Shank

B121 Left hand fast spiral, right hand cut tapered bridge reamer. Used in structural iron and steel applications for badly misaligned holes. The l_3 length has a 1:10 starting taper.



B121

HSS



DIN 311



10.00 - 30.00

d_1 Ø	l_1	l_2	l_3	# of Flutes	MTS	Pack Qty	B121
10.0	171	95	30	4	1	1	0049020
11.0	176	100	33	4	1	1	0049037
12.0	199	105	39	4	2	1	0049044
13.0	199	105	39	4	2	1	0049051
14.0	209	115	42	4	2	1	0049068
15.0	219	125	45	4	2	1	0049075
16.0	229	135	48	4	2	1	0049082
17.0	251	135	51	4	3	1	0049099
18.0	261	145	58	4	3	1	0049105
19.0	261	145	58	4	3	1	0049112
20.0	271	155	62	4	3	1	0049129
21.0	271	155	62	4	3	1	0049136
22.0	281	165	66	4	3	1	0049143
23.0	281	165	66	4	3	1	0049150
24.0	296	180	72	4	3	1	0049167
25.0	296	180	72	4	3	1	0049174
26.0	296	180	72	4	3	1	0049181
30.0	311	195	78	5	3	1	0049211

HSS REAMER

Bridge Reamer, Taper Shank

4579 Left hand slow spiral, right hand cut tapered bridge reamer. Used in structural iron and steel applications for badly misaligned holes.

Produced per ASME B94.2-1995 standards.



4579

HSS



ANSI

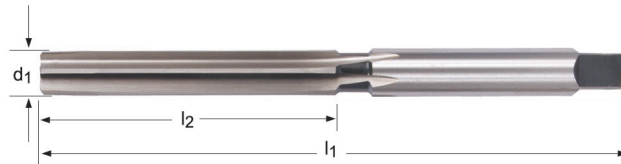


7/16 - 1.1/16

nom Ø	d_1 Ø (min)	d_2 Ø (max)	MTS	l_2 Inch	l_1 Inch	# of Flutes	Pack Qty	4579
7/16	1/4	7/16	2	4.3/8	8.1/4	4	1	5011055
1/2	9/32	1/2	2	5.1/8	9"	4	1	5011056
9/16	11/32	9/16	2	5.1/8	9"	4	1	5011057
5/8	3/8	5/8	2	6.1/8	10"	4	1	5011058
11/16	25/64	11/16	3	7.1/8	11.3/4	4	1	5011059
3/4	7/16	3/4	3	7.3/8	12"	4	1	5011060
13/16	1/2	13/16	3	7.3/8	12"	4	1	5011061
7/8	9/16	7/8	3	7.3/8	12"	4	1	5011062
15/16	5/8	15/16	3	7.3/8	12"	4	1	5011063
1"	11/16	1"	3	7.3/8	12"	4	1	5011064
1.1/16	3/4	1.1/16	3	7.3/8	12"	4	1	5011065

Hand Reamer, Square Drive

4500 Straight flute hand reamer with square drive, right hand cut. Widely used by hand for the final sizing of drilled holes. The square on the shank allows it to be held in either a tap wrench or a vise depending on whether it is the reamer or the part that is rotating. A long starting taper allows for ease of entry and accurate alignment. The straight flute style is recommended for most general purpose hand reaming applications.



4500

HSS

ANSI

1/8 - 1"

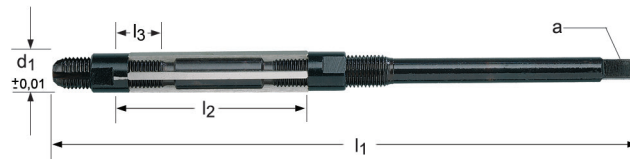
d_1 Ø Inch	d_1 decimal Inch	l_2 Inch	l_1 Inch	# of Flutes	Pack Qty	4500
1/8	0.1250	1.1/2	3"	4	1	5010928
3/16	0.1875	1.3/4	3.1/2	6	1	5010930
1/4	0.2500	2"	4"	6	1	5010932
5/16	0.3125	2.1/4	4.1/2	6	1	5010934
3/8	0.3750	2.1/2	5"	6	1	5010936
7/16	0.4375	2.3/4	5.1/2	6	1	5010938
1/2	0.5000	3"	6"	6	1	5010940
9/16	0.5625	3.1/4	6.1/2	8	1	5010942
5/8	0.6250	3.1/2	7"	8	1	5010944
3/4	0.7500	4.3/16	8.3/8	8	1	5010948
7/8	0.8750	4.7/8	9.3/4	8	1	5010950
1"	1.0000	5.7/16	10.7/8	8	1	5010952

HSS REAMER



Adjustable Hand Reamer, Replaceable Blade Type

B334 For light duty sizing of uninterrupted holes.



B334

HSS

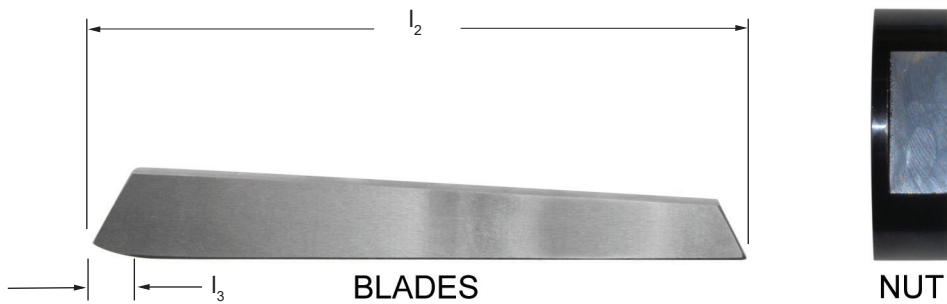


N000 - N16

Nr.	d min-max mm	l ₁ mm	l ₂ mm	l ₃ mm	# of Flutes	□ a mm	Pack Qty	B334
000	6.4 - 7.2	110	32	7	4	3.0	1	0052174
00	7.2 - 8.0	110	32	7	4	3.4	1	0052167
0	8.0 - 9.0	115	34	9	5	3.8	1	0052150
1	9.0 - 10.0	115	34	9	5	4.3	1	0052181
2	10.0 - 11.0	115	34	9	5	4.9	1	0052228
3	11.0 - 12.0	125	35	9	5	4.9	1	0052235
4	12.0 - 13.5	135	41	9	5	6.2	1	0052242
5	13.5 - 15.5	146	50	12	5	7.0	1	0052259
6	15.5 - 18.0	166	60	12	5	8.0	1	0052266
7	18.0 - 21.0	178	65	15	5	9.0	1	0052273
8	21.0 - 24.0	195	76	15	5	11.0	1	0052280
9	24.0 - 27.5	218	82	18	5	12.0	1	0052297
10	27.5 - 31.5	245	86	18	5	14.5	1	0052198
11	31.5 - 37.0	280	98	18	6	18.0	1	0052204
12	37.0 - 45.0	325	108	20	6	20.0	1	0052211
13	45.0 - 55.0	370	118	20	6	26.0	1	0140819
14	55.0 - 67.0	400	125	20	6	32.0	1	0140826
15	67.0 - 80.0	435	140	23	8	39.0	1	0140833
16	80.0 - 95.0	475	155	23	8	49.0	1	0140840

Adjustable Hand Reamer, Replaceable Blade Type

B335 Replace blades & nuts for use with B334



B335

HSS

DORMER

N000 BLADES - N16 NUTS

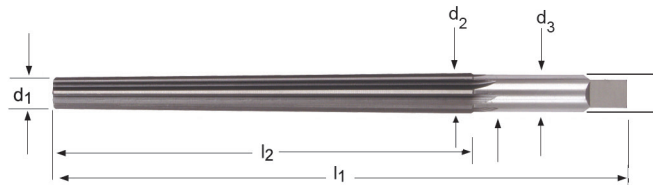
Nr.	l_2 mm	l_3 mm	Nuts Pack Qty	B335 Nuts	Blades Pack Qty	B335 Blades
000	32	7	1	0144640	4	0052327
00	32	7	1	0144633	4	0052310
0	34	9	1	0144626	5	0052303
1	34	9	1	0144657	5	0052334
2	34	9	1	0144664	5	0052372
3	35	9	1	0144671	5	0052389
4	41	9	1	0144688	5	0052396
5	50	12	1	0144695	5	0052402
6	60	12	1	0144701	5	0052419
7	65	15	1	0144718	5	0052426
8	76	15	1	0144725	5	0052433
9	82	18	1	0144732	5	0052440
10	86	18	1	0144749	5	0052341
11	98	18	1	0144756	6	0052358
12	108	20	1	0144763	6	0052365
13	118	20	1	0144770	6	0144589
14	125	20	1	0144787	6	0144596
15	140	23	1	0144794	8	0144602
16	155	23	1	0144800	8	0144619

HSS REAMER

Hand Reamer, Taper Pin Type, Square Drive

4587 Straight flute taper pin (1/4" per foot), right hand cut. Designed to convert a straight hole into a tapered hole into which standard taper pins (ASA B5.20-1958) will fit. The square on the shank is suitable for holding a tap wrench or vise, depending on whether the reamer or part is rotating, making them ideal for hand use. Recommended for most materials.

Produced per ASME B94.2-1995 standards.



4587

HSS



ANSI



1:48



N0 - N10

nom Ø	d_1 Ø Inch	d_2 Ø Inch	d_3 Ø Inch	l_2 Inch	l_1 Inch	# of Flutes	Pack Qty	4587
0	0.1287	0.1638	11/64	1.11/16	2.15/16	6	1	5011129
1	0.1447	0.1798	3/16	1.11/16	2.15/16	6	1	5011130
2	0.1600	0.2010	13/64	1.15/16	3.3/16	6	1	5011131
3	0.1813	0.2294	15/64	2.5/16	3.11/16	6	1	5011132
4	0.2071	0.2600	17/64	2.9/16	4.1/16	6	1	5011133
5	0.2410	0.2994	5/16	2.13/16	4.5/16	6	1	5011134
6	0.2773	0.3540	23/64	3.11/16	5.7/16	6	1	5011135
7	0.3297	0.4220	13/32	4.7/16	6.5/16	6	1	5011136
8	0.3971	0.5050	7/16	5.3/16	7.3/16	6	1	5011137
9	0.4800	0.6066	9/16	6.1/16	8.5/16	8	1	5011138
10	0.5799	0.7216	5/8	6.13/16	9.5/16	8	1	5011139

Note: Nom Ø is the Taper Pin number
Per American Standard Taper Pin Specification (ASA B5.20-1958)

Hand Reamer, Taper Pin, Square Drive

4591 Left hand slow spiral flute, right hand cut taper pin (1/4" per foot) hand reamer with square drive.
 Designed to convert a straight hole into a tapered hole into which standard taper pins (ASA B5.20-1958) will fit. The square on the shank is suitable for holding a tap wrench or vise, depending on whether the reamer or part is rotating, making them ideal for hand use.
 Recommended for most materials.

Produced per ASME B94.2-1995 standards.



4591

HSS

ANSI

1:48

N0 - N10

nom Ø	d ₁ Ø Inch	d ₂ Ø Inch	d ₃ Ø Inch	l ₂ Inch	l ₁ Inch	# of Flutes	Pack Qty	4591
0	0.1287	0.1638	11/64	1.11/16	2.15/16	6	1	5011146
1	0.1447	0.1798	3/16	1.11/16	2.15/16	6	1	5011147
2	0.1600	0.2010	13/64	1.15/16	3.3/16	6	1	5011148
3	0.1813	0.2294	15/64	2.5/16	3.11/16	6	1	5011149
4	0.2071	0.2600	17/64	2.9/16	4.1/16	6	1	5011150
5	0.2410	0.2994	5/16	2.13/16	4.5/16	6	1	5011151
6	0.2773	0.3540	23/64	3.11/16	5.7/16	6	1	5011152
7	0.3297	0.4220	13/32	4.7/16	6.5/16	6	1	5011153
8	0.3971	0.5050	7/16	5.3/16	7.3/16	6	1	5011154
9	0.4800	0.6066	9/16	6.1/16	8.5/16	8	1	5011155
10	0.5799	0.7216	5/8	6.13/16	9.5/16	8	1	5011156

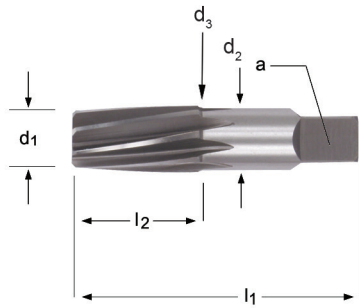
Note: Nom Ø is the Taper Pin number
 Per American Standard Taper Pin Specification (ASA B5.20-1958)

HSS REAMER

Hand Reamer, Taper Pipe Type, Square Drive

4600 Left hand spiral flute, right hand cut taper (3/4" per foot) taper pipe reamer. Intended for reaming holes to be tapped with American Standard taper pipe taps. Generally used by hand with a tap wrench.

Produced per ASME B94.2-1995 standards.



4600

HSS



ANSI



1/8 - 1"

nom Ø	d ₁ Ø Inch	d ₂ Ø Inch	d ₃ Ø Inch	l ₂ Inch	l ₁ Inch	□ a mm	# of Flutes	Pack Qty	4600
1/8	0.3160	0.3620	0.4375	3/4	2.1/8	0.3280	6	1	1810007
1/4	0.4060	0.4720	0.5625	1.1/16	2.7/16	0.4210	6	1	1810008
3/8	0.5400	0.6060	0.7000	1.1/16	2.9/16	0.5310	8	1	1810009
1/2	0.6650	0.7510	0.6875	1.3/8	3.1/8	0.5150	8	1	1810010
3/4	0.8760	0.9620	0.9063	1.3/8	3.1/4	0.6790	10	1	1810011
1"	1.1030	1.2120	1.1250	1.3/4	3.3/4	0.8430	10	1	1810012

Note: Nom Ø (column 1) is the NPT pipe thread size. This is not the tool diameter.

Hand Reamer, Square Drive

B100

Left hand spiral flute, right hand cut.

Widely used by hand for the final sizing of drilled holes. The square on the shank allows it to be held in either a tap wrench or a vise depending on whether it is the reamer or the part that is rotating. A long starting taper allows for ease of entry and accurate alignment.



Produced per DIN206 Form B.

Cutting diameters are produced to H7 tolerance.

Shank diameters (same as cutting diameters) but produced to e9 tolerance.

B100

HSS



DIN
206



1.50 - 50.00

d ₁ Ø Inch	d ₁ Ø mm	l ₁ mm	l ₂ mm	l ₃ mm	# of Flutes	□ a mm	Pack Qty	B100
	1.50	41	20	5	3	1.12	1	0179987
1/16	1.59	41	20	5	3	1.12	1	0179598
	1.60	44	21	5	3	1.25	1	0179994
5/64	1.98	47	23	6	4	1.40	1	0179604
	2.00	50	25	6	4	1.60	1	0048610
3/32	2.38	54	27	7	4	1.80	1	0179611
	2.50	58	29	7	4	2.10	1	0048634
7/64	2.78	62	31	8	6	2.10	1	0179628
	3.00	62	31	8	6	2.40	1	0048719
1/8	3.18	66	33	8	6	2.40	1	0179635
	3.20	66	33	8	6	2.40	1	0048726
	3.50	71	35	9	6	2.70	1	0048733
9/64	3.57	71	35	9	6	2.70	1	0179642
5/32	3.97	76	38	10	6	3.00	1	0179659
	4.00	76	38	10	6	3.00	1	0048801
11/64	4.37	81	41	10	6	3.40	1	0179666
	4.50	81	41	10	6	3.40	1	0048818
3/16	4.76	87	44	11	6	3.80	1	0179673
	5.00	87	44	11	6	3.80	1	0048887
13/64	5.16	87	44	11	6	3.80	1	0179680
	5.50	93	47	12	6	4.30	1	0048894
7/32	5.56	93	47	12	6	4.30	1	0179697
15/64	5.95	93	47	12	6	4.90	1	0179703
	6.00	93	47	12	6	4.90	1	0048917
1/4	6.35	100	50	13	6	4.90	1	0179710
	6.50	100	50	13	6	4.90	1	0140314
17/64	6.75	107	54	14	6	5.50	1	0179727
	7.00	107	54	14	6	5.50	1	0048924
9/32	7.14	107	54	14	6	6.20	1	0179734
	7.50	107	54	14	6	6.20	1	0140321
19/64	7.54	115	58	15	6	6.20	1	0179741
5/16	7.94	115	58	15	6	6.20	1	0179758
	8.00	115	58	15	6	6.20	1	0048931

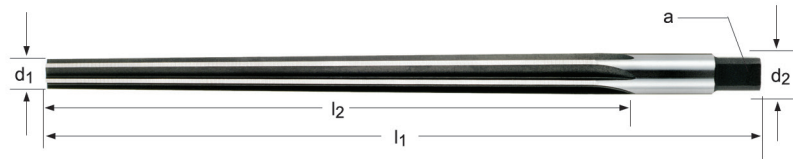
HSS REAMER



d ₁ Ø Inch	d ₁ Ø mm	l ₁ mm	l ₂ mm	l ₃ mm	# of Flutes	□ a mm	Pack Qty	B100
21/64	8.33	115	58	15	6	7.00	1	0179765
	8.50	115	58	15	6	7.00	1	0140338
11/32	8.73	124	62	16	6	7.00	1	0179772
	9.00	124	62	16	6	7.00	1	0048948
23/64	9.13	124	62	16	6	8.00	1	0179789
	9.50	124	62	16	6	8.00	1	0140345
3/8	9.52	124	62	17	6	8.00	1	0179796
25/64	9.92	133	66	17	6	8.00	1	0179802
	10.00	133	66	17	6	8.00	1	0048511
13/32	10.32	133	66	17	6	8.00	1	0179819
	10.50	133	66	17	6	8.00	1	0180006
7/16	11.00	142	71	18	6	9.00	1	0048528
	11.11	142	71	18	6	9.00	1	0179826
	11.50	142	71	18	6	9.00	1	0180013
	12.00	152	76	19	6	9.00	1	0048535
1/2	12.50	152	76	19	6	10.00	1	0180020
	12.70	152	76	19	6	10.00	1	0179840
	13.00	152	76	19	6	10.00	1	0048542
17/32	13.49	163	81	20	8	11.00	1	0179857
	13.50	163	81	20	8	11.00	1	0180037
	14.00	163	81	20	8	11.00	1	0048559
9/16	14.29	163	81	20	8	11.00	1	0179864
	14.50	163	81	20	8	11.00	1	0180044
	15.00	163	81	20	8	12.00	1	0048566
19/32	15.08	163	81	22	8	12.00	1	0179871
5/8	15.88	175	87	22	8	12.00	1	0179888
	16.00	175	87	22	8	12.00	1	0048573
	17.00	175	87	22	8	13.00	1	0048580
11/16	17.46	188	93	23	8	14.50	1	0179895
	18.00	188	93	23	8	14.50	1	0048597
	19.00	188	93	23	8	14.50	1	0048603
3/4	19.05	188	93	25	8	14.50	1	0179901
	20.00	201	100	25	8	16.00	1	0048658
13/16	20.64	201	100	25	8	16.00	1	0179925
	21.00	201	100	25	8	16.00	1	0180051
	22.00	215	107	27	8	18.00	1	0048665
7/8	22.22	215	107	27	8	18.00	1	0179949
	23.00	215	107	27	8	18.00	1	0180068
	24.00	231	115	29	8	18.00	1	0048672
	25.00	231	115	29	8	20.00	1	0048689
1"	25.40	231	115	29	8	20.00	1	0179970
	26.00	231	115	29	8	20.00	1	0048696
	27.00	247	124	31	10	22.00	1	0180075
	28.00	247	124	31	10	22.00	1	0048702
	29.00	247	124	31	10	22.00	1	0180082
	30.00	247	124	31	10	24.00	1	0048740
	31.00	265	133	33	10	24.00	1	0180099
	32.00	265	133	33	10	24.00	1	0048757
	33.00	265	133	33	10	26.00	1	0180105
	34.00	284	142	36	10	26.00	1	0048764
	35.00	284	142	36	10	29.00	1	0048771
	36.00	284	142	36	10	29.00	1	0048788
	37.00	284	142	36	10	29.00	1	0180112
	38.00	305	152	38	10	29.00	1	0048795
	39.00	305	152	38	10	32.00	1	0180129
40.00	305	152	38	10	32.00	1	0048825	
45.00	326	163	41	12	35.00	1	0048856	
50.00	347	174	44	12	39.00	1	0048900	

Hand Reamer, Taper Pin Type, Square Drive

B301 Straight flute taper pin (1/4" per foot), straight shank reamer. Designed to convert a straight hole into a tapered hole into which standard taper pins will fit. The square on the shank is suitable for holding a tap wrench or vise, depending on whether the reamer or part is rotating, making them ideal for hand use. Recommended for most materials.



B301

HSS



BS
328



1:48



1/16 - 1/2

nom Ø	d ₁ Ø mm	l ₁ mm	l ₂ mm	# of Flutes	□ a mm	d ₂ Ø mm	Pack Qty	B301
1/16	1.10	51	25	4	1.2	1.63	1	0182277 ¹⁾
5/64	1.50	51	25	4	1.6	2.03	1	0182284 ¹⁾
3/32	1.75	57	32	4	2.0	2.41	1	0182291 ¹⁾
7/64	2.03	64	38	4	2.2	2.82	1	0182307 ¹⁾
1/8	2.30	70	44	4	2.5	3.23	1	0182314 ¹⁾
9/64	2.64	73	48	4	2.8	3.63	1	0182321 ¹⁾
5/32	2.95	76	51	4	3.1	4.01	1	0182338 ¹⁾
11/64	3.23	89	57	4	3.6	4.42	1	0182345 ¹⁾
3/16	3.50	102	70	4	4.0	4.95	1	0182352 ¹⁾
7/32	4.13	102	70	6	4.5	5.59	1	0182369 ¹⁾
1/4	4.64	117	86	6	5.0	6.43	1	0182376 ²⁾
9/32	5.23	143	105	6	5.6	7.42	1	0182383 ²⁾
5/16	5.84	143	105	6	6.3	8.03	1	0182390 ²⁾
11/32	6.43	152	114	6	7.1	8.81	1	0182406 ²⁾
3/8	7.03	165	127	6	8.0	9.68	1	0182413 ²⁾
13/32	7.42	191	146	6	8.0	10.46	1	0182420 ²⁾
7/16	8.21	191	146	6	9.0	11.25	1	0182437 ²⁾
1/2	9.41	210	165	6	10.0	12.85	1	0182444 ²⁾

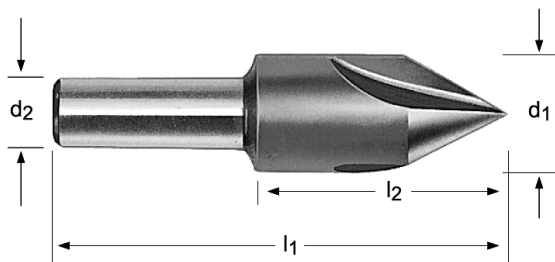
¹⁾ Limit of tolerance +0.0030

²⁾ Limit of tolerance +0.0050

HSS REAMER

Straight Shank, 3-Flute

4608 Center Reamer, Available in 60°, 82°, 90°, or 100° angles. Widely used to finish ream lathe centers in shafts, and countersink angles for screw heads and rivets. The odd number of flutes promotes smooth reamed finishes while eliminating chatter and providing better accuracy in most applications.



4608

HSS



ANSI



1/4 - 1"

d ₁ Ø Inch	Angle	d ₂ Ø Inch	l ₂ Inch	l ₁ Inch	# of Flutes	Pack Qty	4608
1/4	60°	3/16	3/4	1.1/2	3	1	5011093
1/4	82°	3/16	3/4	1.1/2	3	1	5011098
1/4	90°	3/16	3/4	1.1/2	3	1	5011103
1/4	100°	3/16	3/4	1.1/2	3	1	5011108
3/8	60°	1/4	7/8	1.3/4	3	1	5011094
3/8	82°	1/4	7/8	1.3/4	3	1	5011099
3/8	90°	1/4	7/8	1.3/4	3	1	5011104
3/8	100°	1/4	7/8	1.3/4	3	1	5011109
1/2	60°	3/8	1"	2"	3	1	5011095
1/2	82°	3/8	1"	2"	3	1	5011100
1/2	90°	3/8	1"	2"	3	1	5011105
1/2	100°	3/8	1"	2"	3	1	5011110
5/8	60°	3/8	1"	2.1/4	3	1	5011096
5/8	82°	3/8	1"	2.1/4	3	1	5011101
5/8	90°	3/8	1"	2.1/4	3	1	5011106
5/8	100°	3/8	1"	2.1/4	3	1	5011111
3/4	60°	1/2	1.1/4	2.5/8	3	1	5011097
3/4	82°	1/2	1.1/4	2.5/8	3	1	5011102
3/4	90°	1/2	1.1/4	2.5/8	3	1	5011107
3/4	100°	1/2	1.1/4	2.5/8	3	1	5011112
1"	60°	1/2	1"	3"	3	1	46262132
1"	82°	1/2	1"	3"	3	1	46262133
1"	90°	1/2	1"	3"	3	1	46262134
1"	100°	1/2	1"	3"	3	1	46262135