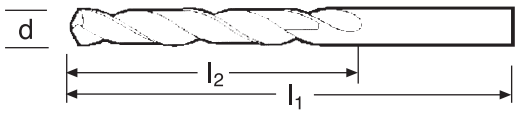
CUTTING TOOLS

STRAIGHT SHANK JOBBER DRILLS RIGHT HAND CUTTING

B.S. 328 DIN. 338 ISO. 235

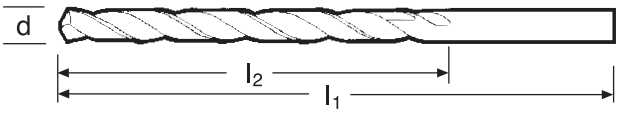
IMPA	ød Diameter mm	ød Diameter in	l_2 Flute Length mm	l_2 Flute Length in	l_1 Overall Length mm	l_1 Overall Length in	
630101	0.30		3	1/8	19	3/4	
		1/64					
630102	0.40		5	3/16	20	13/16	
630103	0.50		6	1/4	22	7/8	
630104	0.60		7	9/32	24	15/16	
630105	0.70		9	11/32	28	1 1/8	10
		1/32					
630106	0.80		10	13/32	30	1 3/16	
630107	0.90		11	7/16	32	1 1/4	
630108	1.00		12	15/32	34	1 5/16	
630109	1.10		14	9/16	36	1 7/16	
		3/64					
630110	1.20		16	5/8	38	1 1/2	10
630111	1.30						
630112	1.40		18	11/16	40	1 9/16	10
630113	1.50						
		1/16					
630114	1.60		20	25/32	43	1 11/16	10
630115	1.70						
630116	1.80		22	7/8	46	1 13/16	10
630117	1.90						
		5/64					
630118	2.00		24	15/16	49	1 15/16	10
630119	2.10						
630120	2.20		27	1 1/16	53	2 3/32	10
630121	2.30						
		3/32					
630122	2.40						
630123	2.50		30	1 3/16	57	2 1/4	10
630124	2.60						
630125	2.70						
		7/64	33	1 5/16	61	2 13/32	10
630126	2.80						
630127	2.90						
630128	3.00						
630129	3.10						
		1/8	36	1 7/16	65	2 9/16	10
630130	3.20						
630131	3.30						
630132	3.40						
630133	3.50						
		9/64	39	1 17/32	70	2 3/4	10
630134	3.60						
630135	3.70						
630136	3.80						
630137	3.90						
		5/32	43	1 11/16	75	2 15/16	10
630138	4.00						
630139	4.10						
630140	4.20						
630141	4.30						
		11/64	47	1 27/32	80	3 5/32	10
630142	4.40						
630143	4.50						
630144	4.60						
630145	4.70						
		3/16	52	2 1/16	86	3 3/8	10
630146	4.80						
630147	4.90						
630148	5.00						
630149	5.10						
		13/64					
630150	5.20						
630151	5.30						
630152	5.40						
630153	5.50						
		7/32	57	2 1/4	93	3 21/32	10
630154	5.60						
630155	5.70						
630156	5.80						
630157	5.90						
		15/64					
630158	6.00						
630159	6.10						
630160	6.20						
630161	6.30						
		1/4	63	2 1/2	101	3 31/32	10
630162	6.40						
630163	6.50						
630164	6.60						
630165	6.70						



IMPA	ød Diameter mm	ød Diameter in	l_2 Flute Length mm	l_2 Flute Length in	l_1 Overall Length mm	l_1 Overall Length in	
		17/64					
630166	6.80						
630167	6.90						
630168	7.00						
630169	7.10						
		9/32	69	2 23/32	109	4 9/32	10
630170	7.20						
630171	7.30						
630172	7.40						
630173	7.50						
		19/64					
630174	7.60						
630175	7.70						
630176	7.80						
630177	7.90						
		5/16	75	2 15/16	117	4 19/32	10
630178	8.00						
630179	8.10						
630180	8.20						
630181	8.30						
		21/64	75	2 15/16	117	4 19/32	10
630182	8.40						
630183	8.50						
630184	8.60		81	3 3/16	125	4 29/32	10
630185	8.70						
		11/32					
630186	8.80						
630187	8.90						
630188	9.00						
630189	9.10						
		23/64	81	3 3/16	125	4 29/32	5
630190	9.20						
630191	9.30						
630192	9.40						
630193	9.50						
		3/8					
630194	9.60						
630195	9.70						
630196	9.80						
630197	9.90						
		25/64	87	3 7/16	133	5 1/4	5
630198	10.00						
	10.10						
	10.20						
	10.30						
		13/32					
	10.40						
630199	10.50						
	10.60						
	10.70						
	27/64						
	10.75						
	10.80						
	10.90						
630201	11.00						
	11.10						
		7/16	94	3 11/16	142	5 19/32	5
	11.20						
	11.30						
	11.40						
630202	11.50						
		29/64					
	11.60						
	11.70						
	11.80						
	11.90						
		16/32					
630203	12.00						
	12.10						
	12.20						
	12.30						
		31/64	101	3 31/32	151	5 15/16	5
	12.40						
630204	12.50						
	12.60						
	12.70						
		1/2					
	12.80						
	12.90						
630205	13.00						

STRAIGHT SHANK LONG SERIES DRILLS

B.S. 328
DIN. 340
ISO. 494

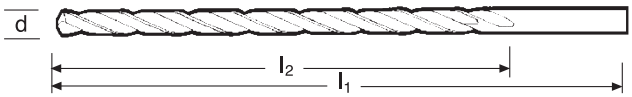


IMPA	ød Diameter		l2 Flute Length		l1 Overall Length		
	mm	in	mm	in	mm	in	
630401	1.0		33	1 1/4	56	2 1/4	
630402	1.5		45	1 3/4	70	2 3/4	
		1/16	56	1 3/4		2 3/4	
		5/64		1 3/4		2 3/4	
630403	2.0		56		85		10
		3/32		2 1/4		3 3/8	
630404	2.5		62		95		
	7/64		2 1/2		3 3/4		
	3.0	1/8					
	3.5	9/64					
		5/32					
	4.00		73	2 7/8	112	4 13/32	10
	4.10						
	4.20						
	4.30						
		1 1/64					
	4.40		82	3 7/32	126	4 31/32	10
	4.50						
	4.60						
	4.70						
		3/16					
	4.80						
	4.90						
	5.00						
	5.10		87	3 7/16	132	5 3/16	10
		13/64					
	5.20						
	5.30						
	5.40						
	5.50						
		7/32					
	5.60						
	5.70		91	3 19/32	139	5 15/32	10
	5.80						
	5.90						
		15/64					
	6.00						
	6.10						
	6.20						
	6.30						
		1/4	97	3 13/16	148	5 13/16	10
	6.40						
	6.50						
	6.60						
	6.70						
		17/64					
	6.80						
	6.90						
	7.00						
	7.10		102	4	156	6 1/8	5
		9/32					
	7.20						
	7.30						
	7.40						
	7.50						
		19/64					
	7.60						
	7.70						
	7.80						
	7.90		109	4 9/32	165	6 1/2	5
		5/16					
	8.00						

IMPA	ød Diameter		l2 Flute Length		l1 Overall Length		
	mm	in	mm	in	mm	in	
		21/64	109	4 9/32	165	6 1/2	5
	8.50						
		11/32					
	9.00		115	4 17/32	175	6 7/8	5
		23/64					
	9.50						
		3/8					
		26/64					
	10.00		121	4 3/4	184	7 1/4	1
		13/32					
	10.50						
	11.00						
		7/16					
			128	5 1/32	195	7 11/16	1
	11.50						
		15/32					
	12.00						
			134	5 9/32	205	8 1/16	1
	12.50						
		1/2					
	13.00		134	5 9/32	205	8 1/16	1
		17/32					
	13.50						
			140	5 1/2	214	8 7/16	1
	14.00						
		9/16					
	14.50						
			144	5 11/16	220	8 21/32	1
	15.00						
		19/32					
	15.50		149	5 7/8	227	8 15/16	1
		5/8					
	16.00						
	16.50						
		21/32	154	6 1/16	235	9 1/4	1
	17.00						
		11/16					
	17.50		158	6 7/32	241	9 1/2	1
	18.00						
		23/32					
	18.50						
			162	6 3/8	247	9 23/32	1
	19.00						
		3/4					
	19.50		166	6 17/32	254	10	1
		25/32					
	20.00						

CUTTING TOOLS

STRAIGHT SHANK EXTRA LENGTH DRILLS STANDARD FLUTE FORM - IMPERIAL



ød Diameter	l2 Flute Length		l1 Overall Length		
in	mm	in	mm	in	
1/16	78 102	3 4	127 152	5 6	1
5/64	76 102	3 4	127 152	5 6	1
3/32	76 102 152	3 4 6	127 152 203	5 6 8	1
7/64	76 102 152	3 4 6	127 152 203	5 6 8	1
1/8	102 152 203 254	4 6 8 10	152 203 254 305	6 8 10 12	1
9/64	102 152	4 6	152 203	6 8	1
5/32	102 152	4 6	152 203	6 8	1
11/64	102 152	4 6	152 203	6 8	1
3/16	102 152 203 254 305	4 6 8 10 12	152 203 254 305 381	6 8 10 12 15	1
13/64	102 152	4 6	152 203	6 8	1
7/32	102 152	4 6	152 203	6 8	1
15/64	102 152	4 6	152 203	6 8	1

ød Diameter	l2 Flute Length		l1 Overall Length		
in	mm	in	mm	in	
1/4	152 203 254 305	6 8 10 12	203 254 305 381	8 10 12 15	1
17/64	152	6	203	8	1
9/32	152	6	203	8	1
19/64	152	6	203	8	1
5/16	152 203 254 305	6 8 10 12	203 254 305 381	8 10 12 15	1
21/64	152	6	203	8	1
11/32	152	6	203	8	1
23/64	152	6	203	8	1
3/8	152 203 254 305	6 8 10 12	203 254 305 381	8 10 12 15	1
25/64	152	6	203	8	1
13/32	152	6	203	8	1
27/64	152	6	203	8	1
7/16	152 203 254 305	6 8 10 12	203 254 305 381	8 10 12 15	1
29/64	152	6	203	8	1
1/2	203 254 305	8 10 12	254 305 381	10 12 15	1

STRAIGHT SHANK EXTRA LENGTH DRILLS - STANDARD FLUTE FORM - METRIC

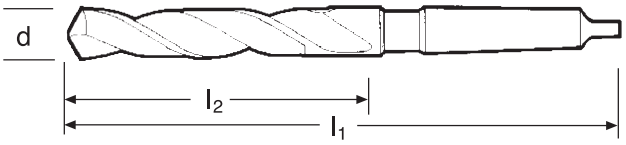
I.S.O. 3292 - 1975 (E)

IMPA	ød Diameter mm	l2 Flute Length mm	l1 Overall Length mm	
630405	3.0	100 125	160 200	1
630406	3.5	100 125	160 200	1
630407	4.0	100 125 160	160 200 250	1
630408	4.5	125 160 200	200 250 315	1
630409	5.0	125 160 200	200 250 315	1
630410	5.5	125 160 200	200 250 315	1
630411	6.0	125 160 200	200 250 315	1
630412	6.5	125 160 200	200 250 315	1
630413	7.0	160 200	250 315	1
630414	7.5	160 200	250 315	1

IMPA	ød Diameter mm	l2 Flute Length mm	l1 Overall Length mm	
630415	8.0	160 200 250	250 315 400	1
630416	8.5	160 200 250	250 315 400	1
630417	9.0	160 200 250	250 315 400	1
630418	9.5	160 200	250 315	1
630419	10.0	160 200 250	250 315 400	1
630420	10.5	160 200 250	250 315 400	1
630421	11.0	160 200 250	250 315 400	1
630424 **630425**	12.0	160 200 250	250 315 400	1
630429	13.0	200 250	315 400	1
	14.0	200 250	315 400	1

MORSE TAPER SHANK DRILLS

B.S. 328
DIN. 345
ISO. 235

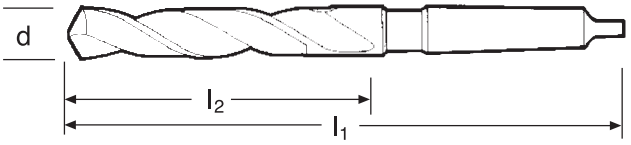


IMPA	ød Diameter		l2 Flute Length		l1 Overall Length		
	mm	in	mm	in	mm	in	
NO.1 MTS							
		1/16	20	25/32	101	3 31/32	1
	2.00	5/64	24	15/16	105	4 1/8	1
			27	1 1/16	108	4 1/4	1
	2.50	3/32	30	1 3/16	111	4 3/8	1
	3.00	7/64	33	1 5/16	114	4 1/2	1
		1/8	36	1 7/16	117	4 5/8	1
	3.50	9/64	39	1 17/32	120	4 3/4	1
	4.00	5/32	43	1 11/16	123	4 27/32	1
	4.50	11/64	47	1 27/32	128	5 1/32	1
	5.00	3/16 13/64	52	2 1/16	133	5 1/4	1
	5.50 6.00	7/32 15/64	57	2 1/4	138	5 7/16	1
	6.50	1/4	63	2 1/2	144	5 11/16	1
	7.00 7.50	17/64 9/32	69	2 23/32	150	5 29/32	1
	8.00 8.50	19/64 5/16 21/64	75	2 15/16	156	6 1/8	1
	9.00 9.50	11/32 23/64	81	3 3/16	162	6 3/8	1
630301 **630302**	10.00 10.50	3/8 25/64 13/32	87	3 7/16	168	6 5/8	1
630303 **630304**	11.00 11.50	27/64 7/16 29/64	94	3 11/16	175	6 7/8	1
630305 **630306** **630307**	12.00 12.50 13.00	15/32 31/64 1/2 33/64	101	3 31/32	182	7 5/32	1
630308 **630309**	13.50 14.00	17/32 35/64	108	4 1/4	189	7 7/16	1
NO.2 MTS							
630310 **630311**	14.50 15.00	9/16 37/64	114	4 1/2	212	8 3/8	1
630312 **630313**	15.50 16.00	19/32 39/64 5/8	120	4 3/4	218	8 5/8	1
630314 **630315**	16.50 17.00	41/64 21/32	125	4 7/8	223	8 3/4	1
630316 **630317**	17.50 18.00	43/64 11/16 45/64	130	5 1/8	228	9	1
630318 **630319**	18.50 19.00	23/32 47/64	135	5 1/4	233	9 1/8	1
630320 **630321**	19.50 20.00	3/4 49/64 25/32	140	5 1/2	238	9 3/8	1
630322 **630323**	20.50 21.00	51/64 13/16 53/64	145	5 3/4	243	9 5/8	1
630324 **630325**	21.50 22.00	27/32 55/64 7/8	150	5 7/8	248	9 3/4	1
630326 **630327**	22.50 23.00	57/64 29/32	155	6 1/8	253	10	1

CUTTING TOOLS

MORSE TAPER SHANK DRILLS

B.S. 328
DIN. 345
ISO. 235

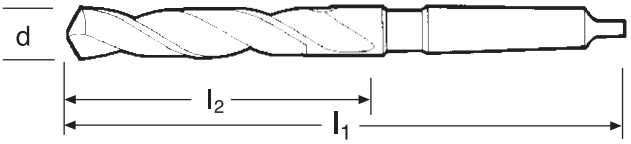


IMPA	ød Diameter mm	ød Diameter in	l2 Flute Length mm	l2 Flute Length in	l1 Overall Length mm	l1 Overall Length in	
NO.3 MTS							
630328	23.50	59/64	155	6 1/8	276	10 7/8	1
630329	24.00	15/16	160	6 1/4	281	11	1
630330	24.50	61/64					
630331	25.00	31/32					
630332	25.50	63/64	165	6 1/2	286	11 1/4	1
630333	26.00	1					
630334	26.50	1 1/64					
630335	27.00	1 1/32	170	6 5/8	291	11 3/8	1
630336	27.50	1 3/64					
630337	28.00	1 1/16					
630338	28.50	1 5/64	175	6 7/8	296	11 5/8	1
630339	29.00	1 3/32					
630340	29.50	1 7/64					
630341	30.00	1 1/8					
630342	30.50	1 9/64	180	7 1/8	301	11 7/8	1
630343	31.00	1 5/32					
630344	31.50	1 11/64					
		1 3/16	185	7 1/4	306	12	1
NO.4 MTS							
630345	32.00	1 13/64	185	7 1/4	334	13 1/8	1
	32.50	1 17/64					
630346	33.00	1 9/32					
	33.50	1 19/64					
630347	34.00	1 5/16	190	7 1/2	339	13 3/8	1
	34.50	1 21/64					
630348	35.00	1 11/32					
	35.50	1 23/64					
		1 3/8					
		1 25/64					

IMPA	ød Diameter mm	ød Diameter in	l2 Flute Length mm	l2 Flute Length in	l1 Overall Length mm	l1 Overall Length in	
630349	36.00	1 13/32	195	7 5/8	344	13 1/2	1
	36.50	1 27/64					
630350	37.00	1 7/16					
	37.50	1 29/64					
		1 15/32					
630351	38.00	1.31/64	200	7 7/8	349	13 3/4	1
	38.50	1.1/2					
630352	39.00	1 17/32					
	39.50	1 9/16					
630353	40.00						
630354	40.50	1 19/32	205	8 1/8	354	14	1
	41.00	1 5/8					
630355	41.50	1 21/32					
	42.00						
	42.50						
630356	43.00	1 11/16	210	8 1/4	359	14 1/8	1
	43.50	1 23/32					
630357	44.00	1 3/4					
	44.50						
630358	45.00						
630359	45.50	1 25/32	215	8 1/2	364	14 3/8	1
	46.00	1 13/64					
630360	46.50	1 27/32					
	47.00						
	47.50						
630361	48.00	1 7/8	220	8 5/8	369	14 1/2	1
	48.50	1 29/32					
630362	49.00	1 15/16					
	49.50						
630363	50.00						
		1 31/32	225	8 7/8	374	14 3/4	1
		2					

MORSE TAPER SHANK DRILLS

B.S. 328
DIN. 345
ISO. 235

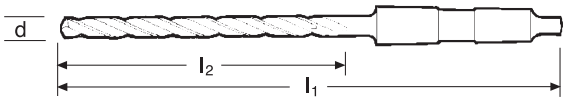


IMPA	ød Diameter mm	ød Diameter in	l2 Flute Length mm	l2 Flute Length in	l1 Overall Length mm	l1 Overall Length in	
NO.5 MTS							
630364	51.00						
		2 1/64					
		2 1/32	225	8 7/8	412	16 1/4	1
630365	52.00						
		2 1/16					
630366	53.00						
		2 3/32					
		2 1/8					
630367	54.00						
		2 5/32	230	9	417	16 3/8	1
630368	55.00						
		2 13/16					
630369	56.00						
		2 7/32					
630370	57.00						
		2.1/4					
		2 9/32					
630371	58.00		235	9 1/4	422	16 5/8	1
		2 5/16					
630372	59.00						
		2 11/32					
630373	60.00						
		2 3/8					
630374	61.00						
		2 13/32					
		2 7/16	240	9 1/2	427	16 7/8	1
630375	62.00						
		2 15/32					
630376	63.00						
		2 1/2					
630377	64.00						
		2 17/32					
630378	65.00						
		2 9/16	245	9 5/8	432	17	1
		2 19/32					
630379	66.00						
		2 5/8					
630380	67.00						
		2 21/32					
630381	68.00						
		2 11/16					
630382	69.00						
		2 23/32	250	9 7/8	437	17 1/4	1
		2 3/4					
630383	70.00						
		2 25/32					
630384	71.00						

IMPA	ød Diameter mm	ød Diameter in	l2 Flute Length mm	l2 Flute Length in	l1 Overall Length mm	l1 Overall Length in	
		2 13/16					
630385	72.00						
		2 27/32					
630386	73.00						
		2 7/8	255	10	442	17 3/8	1
		2 29/32					
630387	74.00						
		2 15/16					
630388	75.00						
		2 31/32					
630389	76.00		260	10.1/4	447	17 5/8	1
		3					
NO.6 MTS							
		3 1/16					
	78.00		260	10 1/4	514	20 1/4	1
		3 1/8					
	80.00						
		3 3/16					
	82.00						
		3 1/4	265	10 3/8	519	20 3/8	1
	84.00						
		3 5/16					
	85.00						
		3 3/8					
		3 7/16	270	10 5/8	524	20 5/8	1
		3.1/2					
	90.00						
		3 5/8	275	10 7/8	529	20 7/8	1
	95.00						
		3 3/4					
			280	11	534	21	1
		3 7/8					
	100.00						
		4	285	11 1/4	539	21 1/4	1

MORSE TAPER SHANK EXTRA LENGTH DRILLS STANDARD FLUTE FORM

Based on ISO 3291
(METRIC ONLY)

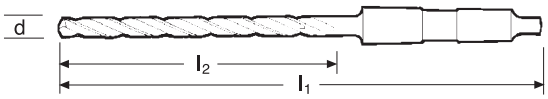


IMPA	ød Diameter mm	ød Diameter in	l2 Flute Length mm	l1 Overall Length mm	l1 Overall Length in	
NO.1 MTS						
			119	200	7 7/8	
			169	250	9 27/32	1
			234	315	12 13/32	
		5/16	114	203	8	
			165	254	10	
			215	305	12	1
			292	381	15	
			368	457	18	
	8.00		169	250	9 27/32	
			234	315	12 13/32	1
			319	400	15 3/4	
	8.50		169	250	9 27/32	
			234	315	12 13/32	1
			319	400	15 3/4	
		11/32	114	203	8	
			165	254	10	1
			215	305	12	
			292	381	15	
	9.00		169	250	9 27/32	
			234	315	12 13/32	
			319	400	15 3/4	1
			114	203	8	
			165	254	10	
	9.50		169	250	9 27/32	
			234	315	12 13/32	
		3/8	114	203	8	1
			165	254	10	
			215	305	12	
			292	381	15	
630451	10.00		169	250	9 27/32	
			234	315	12 13/32	
			319	400	15 3/4	
			419	500	19 11/16	1
		13/32	114	203	8	
			165	254	10	
			215	305	12	
630452	11.00		234	315	12 13/32	
			319	400	15 3/4	
			419	500	19 11/16	
		7/16	114	203	8	1
			165	254	10	
			215	305	12	
			292	381	15	
			368	457	18	

IMPA	ød Diameter mm	ød Diameter in	l2 Flute Length mm	l1 Overall Length mm	l1 Overall Length in	
		15/32	114	203	8	
			165	254	10	
			215	305	12	1
			292	381	15	
630453	12.00		234	315	12 13/32	
			319	400	15 3/4	
			419	500	19 11/16	
		1/2	114	203	8	1
			165	254	10	
			215	305	12	
			292	381	15	
			368	457	18	
630454	13.00		234	315	12 13/32	
			319	400	15 3/4	
			419	500	19 11/16	
			165	254	10	
			215	305	12	1
		17/32	165	254	10	
			215	305	12	
			292	381	15	
630455	14.00		234	315	12 13/32	
			319	400	15 3/4	1
NO.2 MTS						
		9/16	152	254	10	
			203	305	12	
			279	381	15	1
			356	457	18	
630456	15.00		302	400	15 3/4	
			402	500	19 11/16	
		19/32	152	254	10	
			203	305	12	1
		5/8	152	254	10	
			203	305	12	
			279	381	15	
			356	457	18	
630457	16.00		302	400	15 3/4	
			402	500	19 11/16	1
		21/32	152	254	10	
			203	305	12	
630458	17.00		302	400	15 3/4	1
			402	500	19 11/16	

MORSE TAPER SHANK EXTRA LENGTH DRILLS STANDARD FLUTE FORM

Based on ISO 3291
(METRIC ONLY)

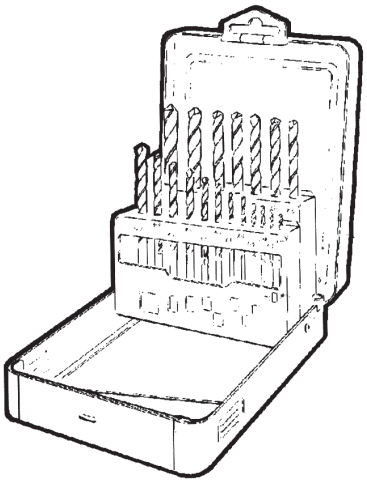


IMPA	ød Diameter		l2 Flute Length	l1 Overall Length		
	mm	in	mm	mm	in	
		11/16	152	254	10	1
			203	305	12	
			279	381	15	
			356	475	18	
630459	18.00		302	400	15 3/4	1
			402	500	19 11/16	
		23/32	152	254	10	
			203	305	12	
			279	381	15	
630460	19.00		302	400	15 3/4	1
			402	500	19 11/64	
		3/4	152	254	10	
			203	305	12	
			279	381	15	
			356	457	18	
		25/32	152	254	10	
			203	305	12	
630461	20.00		302	400	15 3/4	1
			402	500	19 11/16	
		13/16	152	254	10	
			203	305	12	
			279	381	15	
			356	457	18	
630462	21.00		302	400	15 3/4	1
			402	500	19 11/16	
		27/32	203	305	12	
630463	22.00		302	400	15 3/4	1
			402	500	19 11/16	
		7/8	279	381	15	
			356	457	18	
630464	23.00		379	500	19 11/16	
NO.3 MTS						
		15/16				
			254	381	15	1
			330	457	18	

IMPA	ød Diameter		l2 Flute Length	l1 Overall Length		
	mm	in	mm	mm	in	
630465	24.00		279	400	15 3/4	1
			379	500	19 11/16	
		31/32	254	381	15	
630466	25.00		279	400	15 3/4	1
			379	500	19 11/16	
		1	254	381	15	1
630467	26.00		330	457	18	
			379	500	19 11/16	
630468	27.00	1.1/16	254	381	15	1
			330	457	18	
630469	28.00		279	400	15 3/4	1
			379	500	19 11/16	
		1.1/8	254	381	15	
			330	457	18	
630472	30.00		279	400	15 3/4	1
			379	500	19 11/16	
		1.3/16	254	381	15	
			330	457	18	
		1.1/4	254	381	15	
			330	457	18	
630477	32.00		379	500	19 11/16	
NO.4 MTS						
		1.5/16	229	381	15	1
			305	457	18	
		1.3/8	229	381	15	1
			305	457	18	
		1.1/2	305	457	18	1
		1.5/8	305	457	18	1
		1.3/4	305	457	18	1
		1.7/8	305	457	18	1
		2	305	457	18	1

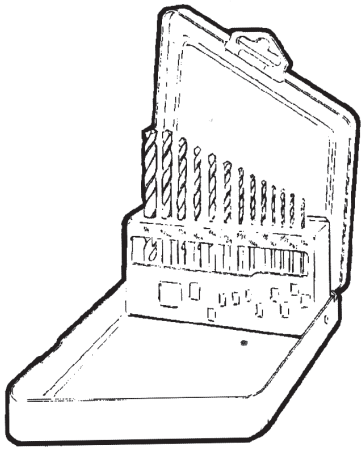
CUTTING TOOLS

DRILL SETS



METRIC DRILLS IN METAL CONTAINERS

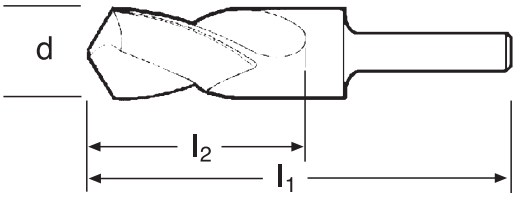
IMPA	Set No.	Contents	No. of Drills in each Set
630253	M1	1.5 to 6.5mm x 0.5mm plus 3.2mm 4.8mm	13
630254	M2	1.0 to 10.0mm x 0.5mm	19
630255	M3	1.0 to 13.0mm x 0.5mm	25
630256	M5	6.0 to 10.0mm x 0.1mm	41
630257	M4	1.0 to 5.9 mm x 0.1mm	50



IMPERIAL DRILLS IN METAL CONTAINERS

Set No.	Contents	No. of Drills in each Set
B13	1/16” to 1/4” x 1/64”	13
B15	1/16” to 1/2” x 1/32”	15
B21	1/16” to 3/8” x 1/64”	21
B29	1/16” to 1/2” x 1/64”	29
B60	No. 1 to No. 60 Drill Gauge	60
B26	Letter Sizes A to Z	26

BLACKSMITHS DRILLS



All Blacksmiths Drills have 1/2” diameter shanks

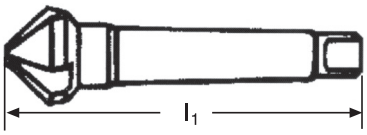
ød		l_2		l_1	
Diameter in	ø Metric	Flute in	Length mm	Overall in	Length mm
1/2	13.0				
17/32	13.5				
9/16	14.0				
19/32	14.5				
5/8	15.0				
21/32	15.5				
11/16	16.0				
23/32	16.5				
3/4	17.0	3	89	6	152
25/32	17.5				
13/16	18.0				
27/32	18.5				
7/8	19.0				
29/32	19.5				
15/16	20.0				
31/32	20.5				

ød		l_2		l_1	
Diameter In	ø Metric	Flute in	Length mm	Overall in	Length mm
1	21.0				
1 1/32	21.5				
1 1/16	22.0				
1 3/32	22.5				
1 1/8	23.0				
1 5/32	23.5				
1 3/16	24.0				
1 7/32	24.5	3	89	6	152
1 1/4	25.0				
1 5/16	25.5				
1 3/8	26.0				
1 7/16	27.0				
1 1/2	27.5				
1 5/8	28.0				
1 3/4	28.5				

Cat. No. E 7819

COUNTERSINKS 90°

HSS, from C, 3 flutes relief-ground, good centering and chip removal, cuts without vibration and scores.



DIN 335

For deburring, countersinking and chamfering of holes, e.g. for head screws and rivets, also suitable for cylindrical counterboring of screw holes and chamfering of tapping drill holes.

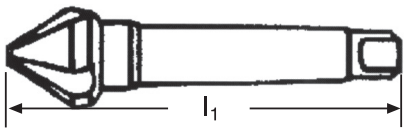
Large Diameter z 9	Smallest Diameter mm	l_1 mm	MT
15.0	3.2	85	1
16.5	3.2	85	1
19.0	3.5	100	2
20.5	3.5	100	2
23.0	3.8	106	2
25.0	3.8	106	2
26.0	3.8	106	2
28.0	4.0	112	2
30.0	4.2	112	2
31.0	4.2	112	2
34.0	4.5	118	2
37.0	4.8	118	2
40.0	10.0	140	3
50.0	14.0	150	3
63.0	16.0	180	4
80.0	22.0	190	4

1) For countersunk screws acc. to DIN 963, 964, 965, 966, 7513, 7516 also in set.

Cat. No. E 7818

COUNTERSINKS 60° WITH MORSE TAPER SHANK

HSS, from D, 3 flutes, relief-ground, good centering and chip removal, cuts without vibration and scores.



DIN 334

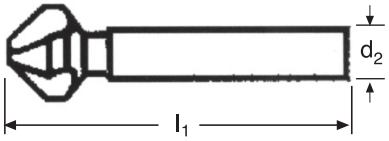
For deburring, countersinking and chamfering of holes, e.g. for head screws and rivets.

Large Diameter mm	Smallest Diameter mm	l_1 mm	Large Diameter mm
16.0	4.0	90	1.0
20.0	5.0	106	2.0
25.0	6.3	112	2.0
31.5	10.0	118	2.0
40.0	12.5	150	3.0
50.0	16.0	160	3.0
63.0	20.0	190	3.0
80.0	25.0	200	4.0

Cat. No. E 6819
Cat. No. E 6819 TiN

COUNTERSINKS 90°

HSS, from C, straight shank, 3 flutes also available with TiN coating, relief-ground, good centering and chip removal, cuts without vibration and scores.



DIN 335

For deburring, countersinking and chamfering of holes, e.g. for head screws and rivets, also suitable for cylindrical counterboring of screw holes and chamfering of tapping drill holes.

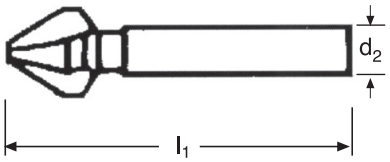
Large Diameter z 9	Smallest Diameter mm	l_1 mm	d_2 mm h 9
4.3	1.3	40	4
5.0	1.5	40	4
5.3	1.5	40	4
5.8	1.5	45	5
6.0	1.5	45	5
6.3	1.5	45	5
7.0	1.8	50	6
7.3	1.8	50	6
8.0	2.0	50	6
8.3	2.0	50	6
9.4	2.2	50	6
10.0	2.5	50	6
10.4	2.5	50	6
11.5	2.8	56	8
12.4	2.8	56	8
13.4	2.9	56	8
15.0	3.2	60	10
16.5	3.2	60	10
19.0	3.5	63	10
20.5	3.5	63	10
23.0	3.8	67	10
25.0	3.8	67	10
30.0	4.2	71	12

1) For countersunk screws acc. to DIN 963, 965, 964, 966, 7513, 7516 also available in set.

Cat. No. E 6818

COUNTERSINKS 60°

HSS, from C, straight shank, 3 flutes-ground, good centering and chip removal, cuts without vibration and scores.



DIN 334

For deburring, countersinking and chamfering of holes, e.g. for head screws and rivets.

Large Diameter mm	Smallest Diameter mm	l_1 mm	Large Diameter mm
6.3	1.6	45	5.0
8.0	2.0	50	6.0
12.5	3.2	56	8.0
16.0	4.0	63	10.0
20.0	5.0	67	10.0
25.0	6.3	71	10.0

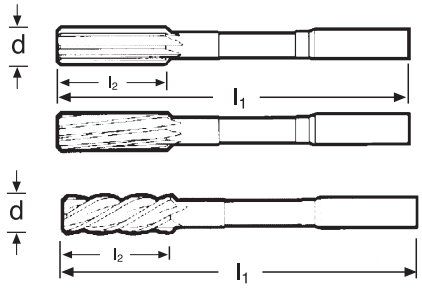
CUTTING TOOLS

CHUCKING REAMERS WITH STRAIGHT SHANK

Straight Flute

Helical Flute

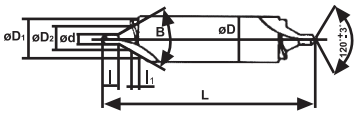
Quick Spiral



ød Diameter mm	l_2 Flute Length mm	l_1 Overall Length mm	
1.50	8	40	
1.60	9	43	
1.80	10	46	
2.00	11	49	
2.20	12	53	
2.00	14	57	
2.80	15	61	
3.00	15	61	
3.20	16	65	
3.50	18	70	
4.00	19	75	
4.50	21	80	
5.00	23	86	1
6.00	26	93	
7.00	31	109	
8.00	33	117	
9.00	36	125	
10.00	38	133	
11.00	41	142	
12.00	44	151	
13.00	44	151	
14.00	47	160	
15.00	50	162	
16.00	52	170	
17.00	54	175	
18.00	56	182	
19.00	58	189	
20.00	60	195	

CENTER DRILLS

B.S. 328-Part 2: 1950

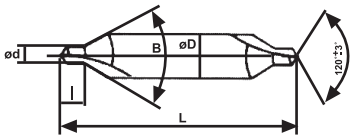


In

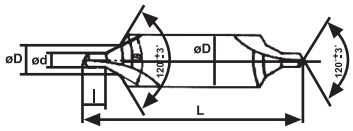
B.S. No.	$ød_2$ Pilot Dia. in	$ød_2$ Body Dia. in	Pilot Drill Max. in	l_1 Length Min. in	Overall Length in	
B.S.1	3/64	1/8	5/64	1/16	1 1/2	10
B.S.2	1/16	3/16	3/32	5/64	1 3/4	
B.S.3	3/32	1/4	5/32	1/8	2	
B.S.4	1/8	5/16	3/16	5/32	2 1/4	
B.S.5	3/16	7/16	9/32	1/4	2 1/2	5
B.S.6	1/4	5/8	3/8	5/16	3	
B.S.7	5/16	3/4	15/32	13/32	3 1/2	

High Speed Steel
Ref. JIS B 4304 Quality

A Type



B Type

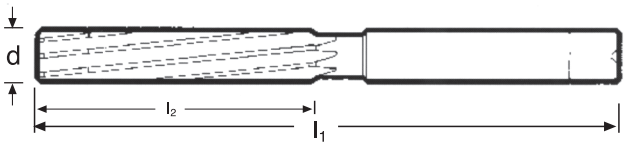


How to order:
63 -05 -01 Center drill A type, 1 x 60

A Type				B Type			
IMPA	Nominal Size Drill Diam. mm	θ	Body Diam mm	IMPA	Nominal Size Drill Diam. mm	θ	Body Diam mm
630501	1.0	60°	3.15	**630531**	1.0	60°	4.0
630502	1.6		4.0	**630532**	1.6		6.3
630503	2.0		5.0	**630533**	2.0		8.0
630504	2.5		6.3	**630534**	2.5		10.0
630505	3.15		8.0	**630535**	3.15		11.2
630506	4.0		10.0	**630536**	4.0		14.0
630507	6.3		16.0	**630537**	6.3		20.0
630508	10.0		25.0	**630538**	10.0		31.5
630511	1.0	75°	3.15	**630541**	1.0	75°	5.0
630512	1.6		5.0	**630542**	1.6		8.0
630513	2.0		6.3	**630543**	2.0		10.0
630514	2.5		8.0	**630544**	2.5		11.2
630515	3.15		10.0	**630545**	3.15		14.0
630516	4.0		12.5	**630546**	4.0		18.0
630517	6.3		18.0	**630547**	6.3		25.0
630518	10.0		28.0	**630548**	10.0		35.5
630519	12.5		35.5	**630549**	12.5		45.0
630521	1.0	90°	4.0	**630551**	1.0	90°	5.0
630522	2.0		8.0	**630552**	2.0		10.0
630523	2.5		10.0	**630553**	2.5		11.2
630524	3.15		11.2	**630554**	3.15		14.0
630525	4.0		12.5	**630555**	4.0		18.0
630526	6.3		20.0	**630556**	6.3		25.0
630527	10.0		31.5	**630557**	10.0		40.0
630528	12.5		35.5	**630558**	12.5		45.0

PARALLEL HAND REAMERS

B.S. 122
ISO. 236



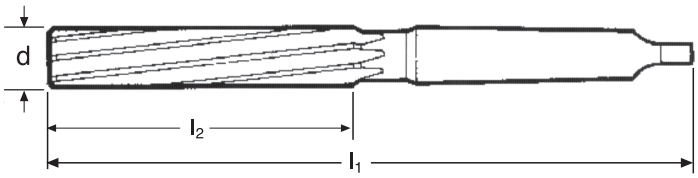
IMPA	ød Diameter mm	ød Diameter in	l 2 Flute Length mm	l 1 Overall Length mm	l 1 Overall Length in	
630605	1.50	20	41	1 5/8		5
	1.60	1/16	21	44	1 3/4	5
630606	1.80		23	47	1 7/8	5
630607	2.00	5/64	25	50	2	5
630608	2.20		27	54	2 1/8	5
630609	2.50	3/32	29	58	2 1/4	5
630610 630611	2.80 3.00	7/64	31	62	2 7/16	5
	3.20	1/8	33	66	2 5/8	5
630612	3.50	9/64	35	71	2 13/16	5
630613	4.00	5/32	38	76	3	5
		11/64	41	81	3 3/16	5
630614	4.50		41	81	3 3/16	1
		3/16	44	87	3 7/16	5
630615	5.00	13/64	44	87	3 7/16	1
630616	5.50	7/32 15/64	47	93	3 11/16	1
630617 630618	6.00 6.50	1/4	50	100	3 15/16	1
630619 630620	7.00 7.50	9/32	54	107	4 3/16	1
630621 630622	8.00 8.50	5/16	58	115	4 1/2	1
630623 630624	9.00 9.50	11/32	62	124	4 7/8	1
630625 630626	10.00 10.50	3/8 13/32	66	133	5 1/4	1
630627 630628	11.00 11.50	7/16	71	142	5 5/8	1
630629 630630 630631	12.00 12.50 13.00	15/32 1/2	76	152	6	1
630632 630633 630634 630635	13.50 14.00 14.50 15.00	9/16	81	163	6 7/16	1

IMPA	ød Diameter mm	ød Diameter in	l 2 Flute Length mm	l 1 Overall Length mm	l 1 Overall Length in	
630636 630637	15.50 16.00 16.50 17.00	5/8	87	175	6 7/8	1
630638 630639	11/16 17.50 18.00 18.50 19.00		93	188	7 7/16	1
630640 630641	19.50 20.00 21.00	3/4 13/16	100	201	7 15/16	1
630642 630643	22.00 23.00	7/8	107	215	8 1/2	1
630644 630645 630646	24.00 25.00 26.00	15/16 1	115	231	9 1/16	1
630647 630648	27.00 28.00 29.00 30.00	1 1/16 1 1/8	124	247	9 3/4	1
630649	31.00 32.00 33.00	1 3/16 1 1/4 1 5/16	133	265	10 7/16	1
630650	34.00 35.00	1 3/8	142	284	11 3/16	1
630651	36.00 37.00	1 17/16	142	284	11 3/16	1
630652 630653 630654	38.00 39.00 40.00 41.00 42.00	1 1/2 1 9/16 1 5/8	152	305	12	1
630655 630656	43.00 44.00 45.00 46.00 47.00	1 11/16 1 3/4 1 13/16	163	326	12 13/16	1
630657 630658	48.00 49.00 50.00	1 7/8 1 15/16 2	174	347	13 11/16	1

CUTTING TOOLS

PARALLEL MACHINE REAMERS WITH MORSE TAPER SHANK

B.S. 122
ISO. 236

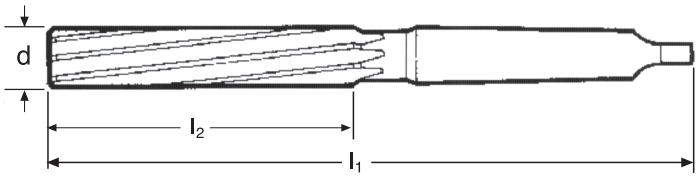


ød Diameter mm	ød Diameter in	l_2 Flute Length mm	l_2 Flute Length in	l_1 Overall Length mm	l_1 Overall Length in	
No. 1 MTS						
9.00	11/32 23/64	62	2.7/16	142	5 9/16	1
10.00 10.50	3/8 13/32	66	2.5/8	146	5 3/4	1
11.00 11.50	7/16	71	2.13/16	151	5 15/16	1
12.00	15/32	76	3	156	6 1/8	1
12.50 13.00	1/2	76	3	156	6 1/8	1
13.50 14.00	17/32	81	3.3/16	161	6 5/16	1
No. 2 MTS						
14.50 15.00	9/16	81	3.3/16	181	7 1/8	1
15.50 16.00 16.50 17.00	19/32 5/8 21/32	87	3.7/16	187	7 3/8	1
17.50 18.00 18.50 19.00	11/16 23/32 47/64	93	3 11/16	193	7 5/8	1

ød Diameter mm	ød Diameter in	l_2 Flute Length mm	l_2 Flute Length in	l_1 Overall Length mm	l_1 Overall Length in	
19.50 20.00 20.50 21.00	3/4 25/32 13/16	100	3 15/16	200	7 7/8	1
21.50 22.00 22.50 23.00	27/32 7/8 29/32	107	4 3/16	207	8 1/8	1
No. 3 MTS						
23.50 24.00 24.50 25.00	15/16 31/32	107	4 3/16	234	9 3/16	1
25.50 26.00 26.50	1 1 1/32	115	4 1/2	242	9 1/2	1
27.00 27.50 28.00 28.50 29.00 29.50 30.00	1 1/16 1 3/32 1 1/8 1 5/32	124	4 7/8	251	9 7/8	1

PARALLEL MACHINE REAMERS WITH MORSE TAPER SHANK

B.S. 122
ISO. 236



ød Diameter mm	ød Diameter in	l2 Flute Length mm	l2 Flute Length in	l1 Overall Length mm	l1 Overall Length in	
No. 3 MTS						
30.50	1 3/16	133	5 1/4	260	10 1/4	1
31.00	1 7/32					
31.50	1 1/4					
No. 4 MTS						
32.00		133	5 1/4	293	11 9/16	1
32.50	1 9/32					
33.00	1 5/16					
33.50						
34.00						
	1 11/32					
34.50	1 3/8					
35.00						
35.50						
	1 13/32	142	5 5/8	302	11 5/16	1
36.00						
36.50	1 7/16					
37.00	1 15/32					
37.50						
38.00		152	6	312	12 5/16	1
	1 1/2					
38.50						
39.00						
39.50						
	1 9/16					
40.00						
40.50						
41.00						
	1 5/8					
41.50						

ød Diameter mm	ød Diameter in	l2 Flute Length mm	l2 Flute Length in	l1 Overall Length mm	l1 Overall Length in	
42.00						
42.50						
	1 11/16	163	6 7/16	323	12 3/4	1
43.00						
43.50						
44.00						
	1 3/4					
44.50						
45.00						
45.50						
46.00						
	1 3/16					
46.50						
47.00						
47.50						
	1 7/8	174	6 7/8	334	13 3/16	1
48.00						
48.50						
49.00						
	1 15/16					
49.50						
50.00						
	2					
No. 5 MTS						
	2 1/8	184	7 1/4	381	15	1
	2 1/4					
	2 3/8	194	7 5/8	391	15 3/8	1
	2 1/2					
	2 5/8					
	2 3/4	203	8	400	15 3/4	1
	2 7/8					
	3	212	8 3/8	409	16 1/8	1

CUTTING TOOLS

HAND TAPER PIN REAMERS

B.S. 122 (Imperial)
DIN. 9 (Metric)

METRIC SIZES included taper 1 in 50 on diameter
FRACTIONAL SIZES included taper 1 in 48 on diameter

IMPA	Nom. Dia.	ød 3 Large Dia.	ød 2 Small Dia.	l2 Cutting Length	l1 Overall Length	
	in	in	in	in	in	
630861	1/16	0.064	0.0432	1	2	
	5/64	0.080	0.0592	1	2	
	3/32	0.095	0.0690	1 1/4	2 1/4	
	7/64	0.111	0.0798	1 1/2	2 1/2	
630862	1/8	0.127	0.0905	1 3/4	2 3/4	5
	9/64	0.143	0.1039	1 7/8	2 7/8	
630863	5/32	0.158	0.1163	2	3	
630864	11/64	0.174	0.1271	2 1/4	3 1/2	
630865	3/16	0.195	0.1377	2 3/4	4	
630866	7/32	0.220	0.1627	2 3/4	4	
630867	1/4	0.253	0.1827	3 3/8	4 5/8	
630868	9/32	0.292	0.2061	4 1/8	5 5/8	
630869	5/16	0.316	0.2301	4 1/8	5 5/8	
	11/32	0.347	0.2533	4 1/2	6	
630870	3/8	0.381	0.2768	5	6 1/2	
	13/32	0.412	0.2922	5 3/4	7 1/2	1
630871	7/16	0.443	0.3232	5 3/4	7 1/2	
630872	1/2	0.506	0.3706	6 1/2	8 1/4	
	9/16	0.571	0.4304	6 3/4	8 1/2	
630873	5/8	0.633	0.4768	7 1/2	9 1/4	
630874	3/4	0.760	0.5777	8 3/4	10 3/4	
630875	7/8	0.885	0.6871	9 1/2	12	
630876	1	1.0150	0.8070	10	13	

IMPA	Nom. Dia.	ød 3 Large Dia.	ød 2 Small Dia.	l2 Cutting Length	l1 Overall Length	
	mm	mm	mm	mm	mm	
630805	1.50	2.14	1.40	37	63	
630806	2.00	2.86	1.90	48	73	
630807	2.50	3.46	2.40	53	79	5
630808	3.00	4.16	2.90	63	88	
630809	4.00	5.40	3.90	75	100	
630810	5.00	6.64	4.90	87	115	
630811	6.00	8.28	5.90	119	150	
630812	8.00	10.72	7.90	141	177	
630813	10.00	13.16	9.90	163	205	1
630813A	12.00	15.74	11.86	194	240	
630814	13.00	16.74	12.86	194	240	
630814A	14.00	17.74	13.86	194	240	
630815	16.00	21.12	15.84	264	321	
630816	20.00	25.20	19.80	270	340	
630817	25.00	30.70	24.70	300	370	
630818	30.00	36.10	29.70	320	400	
630819	40.00	46.50	39.70	340	430	
630820	50.00	56.90	49.70	360	460	

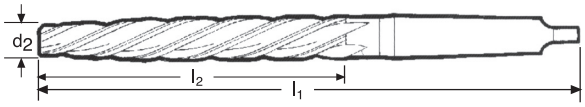
TAPER BRIDGE REAMERS WITH MORSE TAPER SHANK

Helical Flutes
Taper lead ≈ 1:10

METRIC — **DIN 311**

ød 1 Nominal Dia.	l2 Cutting Length	Length of Taper Lead	l1 Overall Length	
mm	mm	mm	mm	
NO.1 MTS				
6.40	75	30	151	
7.40	80	32	156	
8.40	85	34	161	
No. 2 MTS				
11.00	100	40	176	
13.00	105	42	199	
15.00	125	50	219	
No. 3 MTS				
17.00	135	54	251	
19.00	145	58	261	
21.00	155	62	271	
23.00	165	66	281	
25.00	180	72	296	
28.00	195	78	311	
31.00	210	84	326	
No. 4 MTS				
34.00	220	88	364	
37.00	230	88	364	
40.00	230	92	374	

Limits on Cutting Diameter
6.4mm to 8.4mm = $^{+.09}_{-0}$mm
11.0mm to 17.0mm = $^{+.11}_{-0}$mm
19.0mm to 28.8mm = $^{+.13}_{-0}$mm
31.0mm to 40.0mm = $^{+.16}_{-0}$mm

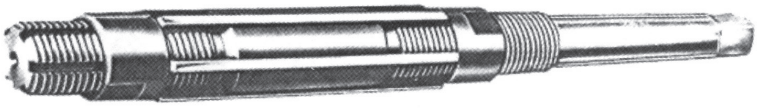


METRIC — **B.S 122**

ød1 Nominal Diameter	ød 2 Small End Diameter	l2 Cutting Length	Length of Taper Lead	l1 Overall Length	
in	in	in	in	in	
NO.1 MTS					
3/8	7/32	4	1 13/16	7	
No. 2 MTS					
7/16	1/4	4 3/8	2 1/8	8 1/8	
1/2	9/32	5 3/8	2 1/2	9 1/8	
9/16	5/16	5 3/8	2 1/2	9 1/8	
5/8	11/32	6 1/8	3 1/4	9 7/8	
11/16	3/8	6 1/8	3 1/4	9 7/8	
No. 3 MTS					
11/16	3/8	7 1/8	3 9/16	11 3/4	
3/4	7/16	7 3/8	3 9/16	12	
13/16	1/2	7 3/8	3 9/16	12	1
7/8	9/16	7 3/8	3 9/16	12	
15/16	5/8	7 3/8	3 9/16	12	
1	11/16	7 3/8	3 9/16	12	
1 1/16	3/4	7 3/8	3 9/16	12	
1 1/8	13/16	7 3/8	3 9/16	12	
1 3/16	7/8	7 3/8	3 9/16	12	
No. 4 MTS					
1 1/4	15/16	7 3/8	3 9/16	13	
1 5/16	1	7 3/8	3 9/16	13	
1 3/8	1 1/16	7 3/8	3 9/16	13	
1 7/16	1 1/8	7 3/8	3 9/16	13	
1 1/2	1 3/16	7 3/8	3 9/16	13	
1 9/16	1 1/4	8 3/8	3 9/16	14	

ADJUSTABLE HAND REAMER WITH HSS BLADES (B33)

Each Reamer Marked Metric and Fractional



IMPA	Symbols	Range		Effective Blade Lengths		Overall Length		Expansion
		in	mm	in	mm	in	mm	in
	4 Blades							
630919	HV	1/4 - 9/32	6.35 - 7.14	1 11/32	34.13	3 1/4	82.55	1/32
630920	HW	9/32 - 5/16	7.14 - 7.94	1 11/32	34.13	3 1/2	88.90	1/32
630921	HZ	5/16 - 11/32	7.94 - 8.73	1 1/2	38.10	4 1/8	104.78	1/32
630922	HY	11/32 - 3/8	8.73 - 9.52	1 1/2	38.10	4 3/8	111.12	1/32
	6 Blades							
630923	H1	3/8 - 13/32	9.52 - 10.31	1 1/2	38.10	4 3/4	120.65	1/32
630924	H2	13/32 - 7/16	10.31 - 11.11	1 1/2	38.10	5	127.00	1/32
630925	H3	7/16 - 15/32	11.11 - 11.90	1 5/8	41.28	5 1/4	133.35	1/32
630926	H4	15/32 - 17/32	11.90 - 13.49	1 5/8	41.28	5 1/2	139.70	1/16
630927	H5	17/32 - 19/32	13.49 - 15.08	1 13/16	46.04	5 3/4	146.05	1/16
630928	H6	19/32 - 21/32	15.08 - 16.66	2 1/16	52.39	6 1/2	165.10	1/16
630929	H7	21/32 - 23/32	16.66 - 18.25	2 3/16	55.56	6 3/4	171.45	1/16
630931	H8	23/32 - 25/32	18.25 - 19.84	2 1/2	63.50	7	177.80	1/16
630922	H9	25/32 - 27/32	19.84 - 21.43	2 5/8	66.68	7 3/8	187.32	1/16
630923	H10	27/32 - 15/16	21.43 - 23.81	3	76.20	8	203.20	3/32
630924	H11	15/16 - 1 1/16	23.81 - 26.98	3 1/4	82.55	9	228.60	1/8
630925	H12	1/16 - 1 3/16	26.98 - 30.16	3 3/8	85.72	10	254.00	1/8
630926	H13	1 3/16 - 1 11/32	30.16 - 34.13	3 7/8	98.42	11	279.40	5/32
630927	H14	1 11/32 - 1 1/2	34.13 - 38.10	4 1/4	107.95	12	304.80	5/32
630928	H15	1 1/2 - 1 13/16	38.10 - 46.03	4 7/16	112.71	14	355.60	5/16
630929	H16	1 13/16 - 2 7/32	46.03 - 56.35	5	123.83	16	406.40	13/32
630930	H17	2 7/32 - 2 3/4	56.35 - 69.85	4 7/8	127.00	18	457.20	17/32
	H18	2 3/4 - 3 11/32	69.85 - 84.93	5 1/4	133.35	20	508.00	19/32

ADJUSTABLE HAND REAMER - BOXED SETS

IMPA	Set No.	Range		Symbols	No. of Reamers
		in	mm		
630952	52	1/4 - 3/8	6.35 - 9.5	HV - HY	4
630953	53	3/8 - 15/32	9.5 - 12.0	H1 - H3	3
630954	54	15/32 - 1 1/16	12.0 - 27.0	H4 - H11	8
630955	55	15/32 - 1 1/2	12.0 - 38.0	H4 - H14	11
630956	56	19/32 - 1 1/16	15.0 - 27.0	H6 - H11	6
630957	57	19/32 - 1 1/2	15.0 - 38.0	H6 - H14	9
630958	58	3/8 - 2 7/32	9.5 - 56.0	H1 - H16	16

OPERATION

Adjustment is a simple operation carried out by the loosening of one nut while tightening the other, thus allowing the blades to progress along the taper bottomed slots resulting in an increase in the Reamer diameter according to the direction of adjustment.

ADJUSTABLE HAND REAMERS

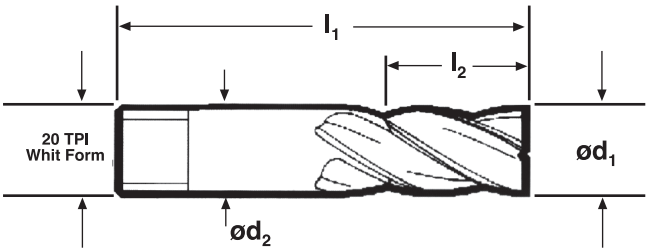
The Adjustable Hand Reamer is designed to fulfil the requirements of a section of the Engineering industry which has need of a versatile tool capable of reaming a small number of odd size holes.

The Reamer being simple in design and free from complications is easily adjusted to any diameter within the limits of the expansion range and by use of a set of Reamers holes of any size and tolerance from 1/4” or 6.35mm to 84.93mm can be obtained, or in the case of Taylor & Jones B47 patent blade type 3/8” to 3 11/32” or 9.52mm to 84.93mm.

CUTTING TOOLS

END MILLS - M2

Screwed Shank, Standard



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2	⌖
3/32‡	1/4	2	1/4	4
1/8‡	3/8	2 1/8	1/4	4
5/32‡	1/2	2 1/4	1/4	4
3/16‡	1/2	2 1/4	1/4	4
7/32‡	5/8	2 3/8	1/4	4
1/4‡	5/8	2 3/8	1/4	4
9/32	19/32	2 3/8	3/8	4
5/16	23/32	2 1/2	3/8	4
11/32	27/32	2 5/8	3/8	4
3/8	27/32	2 5/8	3/8	4
7/16	3/4	2 5/8	1/2	4
1/2	15/16	2 3/4	1/2	4
9/16	1 1/8	2 7/8	1/2	4
5/8	1 1/16	3 1/32	5/8	4
11/16	1 3/8	3 5/32	5/8	4

ød1	l2	l1	ød2	⌖
3/4	1 1/2	3 9/32	5/8	4
13/16	1 1/12	3 3/4	1	6
7/8	1 5/8	3 7/8	1	6
15/16	1 5/8	3 7/8	1	6
1	1 11/16	4	1	6
1 1/8	1 13/16	4 1/8	1	6
1 1/4	1 15/16	4 1/4	1	6
1 5/16	1 15/16	4 1/4	1	6
1 3/8	2 1/16	4 3/8	1	6
1 1/2	2 3/16	4 1/2	1	6
1 5/8	2 3/8	4 5/8	1	8
1 3/4	2 1/2	4 3/4	1	8
1 7/8	2 5/8	4 7/8	1	8
2	2 3/4	5	1	8
1 1/4	2	4 7/16	1 1/4	6
1 1/2	2 1/8	4 9/16	1 1/4	6
2	2 9/16	5	1 1/4	8

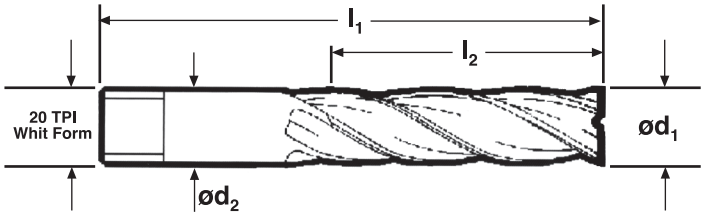
ød1	l2	l1	ød2	⌖
2.5‡	6.5	51.0	6.0	4
3.0‡	9.5	54.0	6.0	4
3.5‡	12.5	57.0	6.0	4
4.0‡	12.5	57.0	6.0	4
4.5‡	12.5	57.0	6.0	4
5.0‡	16.0	60.5	6.0	4
5.5‡	16.0	60.5	6.0	4
6.0‡	16.0	60.5	6.0	4
6.5	16.5	60.5	10.0	4
7.0	15.0	60.5	10.0	4
7.5	18.0	63.5	10.0	4
8.0	18.0	63.5	10.0	4
8.5	21.0	66.5	10.0	4
9.0	21.0	66.5	10.0	4
9.5	21.0	66.5	10.0	4
10.0	21.0	66.5	10.0	4
10.5	19.0	66.5	12.0	4
11.0	19.0	66.5	12.0	4
11.5	22.5	70.0	12.0	4
12.0	24.0	70.0	12.0	4
13.0	24.5	70.0	12.0	4
14.0	28.5	73.0	12.0	4
15.0	26.5	77.0	16.0	4
16.0	26.5	77.0	16.0	4
17.0	32.0	80.0	16.0	4
18.0	35.0	80.0	16.0	4
19.0	38.0	83.5	16.0	4
20.0	38.0	83.5	16.0	4
21.0	38.0	95.0	25.0	6
22.0	41.5	98.5	25.0	6

ød1	l2	l1	ød2	⌖
23.0	41.5	98.5	25.0	6
24.0	41.5	98.5	25.0	6
25.0	44.5	101.5	25.0	6
26.0	43.0	101.5	25.0	6
27.0	44.0	102.0	25.0	6
28.0	46.0	104.5	25.0	6
29.0	46.0	105.0	25.0	6
30.0	46.0	104.5	25.0	6
32.0	49.0	108.0	25.0	6
34.0	49.0	108.0	25.0	6
35.0	52.5	111.0	25.0	6
36.0	52.5	111.0	25.0	6
38.0	55.5	114.5	25.0	6
40.0	57.0	117.5	25.0	8
42.0	60.5	117.5	25.0	8
44.0	63.5	120.5	25.0	8
45.0	63.5	120.5	25.0	8
50.0	70.0	127.0	25.0	8
32.0	51.0	113.0	32.0	6
33.0	51.0	113.0	32.0	6
34.0	51.0	113.0	32.0	6
35.0	54.0	116.0	32.0	6
36.0	54.0	116.0	32.0	6
38.0	54.0	116.0	32.0	6
40.0	55.0	117.5	32.0	8
42.0	54.0	116.0	32.0	6
44.0	57.0	119.0	32.0	6
45.0	57.0	119.0	32.0	8
50.0	65.0	127.0	32.0	8

‡ These sizes are available in SVG only

LONG SERIES END MILLS - M2

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2	⊕
3/32‡	25/64	2 1/4	1/4	4
1/8‡	3/4	2 1/2	1/4	4
5/32‡	1	2 3/4	1/4	4
3/16‡	1	2 3/4	1/4	4
7/32‡	1 1/4	3	1/4	4
1/4‡	1 1/4	3	1/4	4
9/32	1 11/32	3 1/8	3/8	4
5/16	1 11/32	3 1/8	3/8	4
3/8	1 15/32	3 1/4	3/8	4
7/16	1 5/8	3 1/2	1/2	4
1/2	1 15/16	3 3/4	1/2	4
9/16	2 1/4	4	1/2	4
5/8	2 5/16	4 9/32	5/8	4
3/4	3	4 25/32	5/8	4

ød1	l2	l1	ød2	⊕
7/8	3 3/8	5 5/8	1	6
1	3 15/16	6 3/16	1	6
1 1/8	3 7/8	6 3/16	1	6
1 1/4	3 15/16	6 1/4	1	6
1 5/16	3 15/16	6 1/4	1	6
1 3/8	3 15/16	6 1/4	1	6
1 7/16	3 15/16	6 1/4	1	6
1 1/2	3 15/16	6 1/4	1	6
1 5/8	4	6 1/4	1	8
1 3/4	4	6 1/4	1	8
1 7/8	4	6 1/4	1	8
2	4	6 1/4	1	8
1 3/8	4	6 7/16	1.1/4	6
2	4	6 7/16	1.1/4	8

ød1	l2	l1	ød2	⊕
3.0‡	19.0	63.5	6.0	4
3.5‡	25.5	70.0	6.0	4
4.0‡	25.5	70.0	6.0	4
4.5‡	25.5	70.0	6.0	4
5.0‡	31.5	76.0	6.0	4
5.5‡	31.5	76.0	6.0	4
6.0‡	31.5	76.0	6.0	4
6.5	35.0	79.5	10.0	4
7.0	34.0	79.5	10.0	4
7.5	34.0	79.5	10.0	4
8.0	34.0	79.5	10.0	4
8.5	37.0	82.5	10.0	4
9.0	37.0	82.5	10.0	4
9.5	38.0	83.0	10.0	4
10.0	37.0	82.5	10.0	4
10.5	42.0	89.0	12.0	4
11.0	41.5	89.0	12.0	4
12.0	49.5	95.0	12.0	4
13.0	50.0	95.0	12.0	4
14.0	57.0	101.5	12.0	4
15.0	58.5	108.5	16.0	4
16.0	58.5	108.5	16.0	4
17.0	67.0	115.0	16.0	4
18.0	70.0	115.0	16.0	4
19.0	76.0	121.5	16.0	4
20.0	76.0	121.5	16.0	4

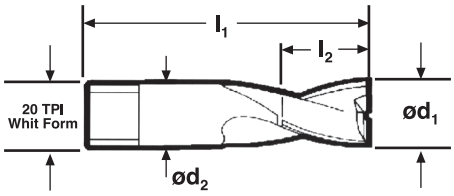
ød1	l2	l1	ød2	⊕
22.0	85.5	143.0	25.0	6
23.0	92.0	149.0	25.0	6
24.0	92.0	149.0	25.0	6
25.0	100.0	157.0	25.0	6
26.0	98.5	157.0	25.0	6
28.0	98.5	157.0	25.0	6
30.0	98.5	157.0	25.0	6
32.0	100.0	159.0	25.0	6
34.0	100.0	159.0	25.0	6
35.0	100.0	159.0	25.0	6
36.0	100.0	159.0	25.0	6
38.0	100.0	159.0	25.0	6
40.0	101.5	159.0	25.0	8
42.0	101.5	159.0	25.0	8
45.0	101.5	159.0	25.0	8
50.0	101.5	159.0	25.0	8
32.0	101.5	163.5	32.0	6
34.0	101.5	163.5	32.0	6
35.0	101.5	163.5	32.0	6
36.0	101.5	163.5	32.0	6
38.0	101.5	163.5	32.0	6
40.0	101.5	163.5	32.0	8
42.0	101.5	163.5	32.0	8
44.0	101.5	163.5	32.0	8
45.0	101.5	163.5	32.0	6
50.0	101.5	163.5	32.0	6

‡ These sizes are available in SVG only

CUTTING TOOLS

STANDARD SLOT DRILLS - M2

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2
1/16‡	3/32	1 29/32	1/4
5/64‡	3/32	1 15/16	1/4
3/32‡	3/16	2	1/4
1/8‡	9/32	2	1/4
5/32‡	3/8	2 1/16	1/4
3/16‡	3/8	2 1/16	1/4
7/32‡	7/16	2 3/16	1/4
1/4‡	7/16	2 7/32	1/4
9/32	7/16	2 5/16	3/8
5/16	1/2	2 11/32	3/8
11/32	9/16	2 3/8	3/8
3/8	9/16	2 3/8	3/8
7/16	11/16	2 9/16	1/2
1/2	3/4	2 5/8	1/2
9/16	27/32	2 23/32	1/2

ød1	l2	l1	ød2
5/8	7/8	2 27/32	5/8
11/16	15/16	2 29/32	5/8
3/4	1	3 1/32	5/8
13/16	1	3 7/8	1
7/8	1	3 15/16	1
15/16	1	4 1/16	1
1	1 1/16	3 3/4	1
1 1/16	1 1/8	3 11/16	1
1 1/8	1 3/16	3 3/4	1
1 1/4	1 1/2	4	1
1 5/16	1 1/2	4	1
1 3/8	1 9/16	4 1/16	1
1 7/16	1 9/16	4 1/16	1
1 1/2	1 11/16	4 3/16	1
1 5/8	1 7/8	4 7/16	1
1 3/4	2	4 9/16	1
1 7/8	2 1/8	4 11/16	1
2	2 1/4	4 13/16	1
1 1/4	1 3/8	4 5/8	1 1/4
1 1/2	1 11/16	4 1/2	1 1/4
1 9/16	1 13/16	4 5/8	1 1/4
1 5/8	1 7/8	4 5/8	1 1/4
1 3/4	1 7/8	4 11/16	1 1/4
1 7/8	2	4 11/16	1 1/4
2	2	4 5/8	1 1/4

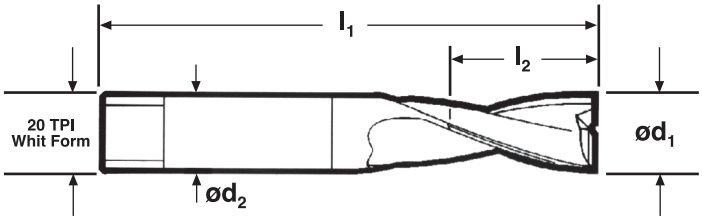
ød1	l2	l1	ød2
1.5‡	2.5	48.0	6.0
2.0‡	3.0	49.0	6.0
2.5‡	4.5	51.0	6.0
3.0‡	7.0	51.0	6.0
3.5‡	7.5	52.5	6.0
4.0‡	9.5	52.5	6.0
4.5‡	9.5	52.5	6.0
5.0‡	9.5	52.5	6.0
5.5‡	11.0	55.5	6.0
6.0‡	11.0	56.5	6.0
6.5	11.0	58.5	10.0
7.0	11.0	58.5	10.0
7.5	11.0	58.5	10.0
8.0	12.5	59.5	10.0
8.5	14.5	60.5	10.0
9.0	14.5	60.5	10.0
9.5	14.5	60.0	10.0
10.0	14.5	60.5	10.0
10.5	17.5	65.0	12.0
11.0	17.5	65.0	12.0
11.5	17.5	65.0	12.0
12.0	19.0	66.5	12.0
13.0	19.0	66.5	12.0
14.0	22.0	68.5	12.0
15.0	22.0	72.0	16.0
16.0	22,0	72.0	16.0
17.0	24.0	74.0	16.0
18.0	24.0	74.0	16.0
19.0	25.5	77.0	16.0
20.0	25.5	77.0	16.0

ød1	l2	l1	ød2
21.0	25.5	98.0	25.0
22.0	25.5	100.0	25.0
23.0	25.5	101.5	25.0
24.0	25.5	103.0	25.0
25.0	27.0	95.0	25.0
26.0	27.0	95.0	25.0
27.0	28.5	93.5	25.0
28.0	30.0	95.0	25.0
29.0	30.0	93.5	25.0
30.0	30.0	93.5	25.0
32.0	38.0	101.5	25.0
34.0	38.0	101.5	25.0
35.0	39.5	103.0	25.0
36.0	39.5	103.0	25.0
38.0	43.0	106.5	25.0
40.0	46.0	111.0	25.0
42.0	47.5	112.5	25.0
44.0	51.0	112.0	25.0
45.0	51.0	116.0	25.0
50.0	54.0	117.0	25.0
32.0	35.0	117.5	32.0
34.0	35.0	119.0	32.0
35.0	39.5	111.0	32.0
36.0	39.5	111.0	32.0
38.0	43.0	114.5	32.0
40.0	46.0	117.5	32.0
42.0	47.5	117.5	32.0
44.0	47.5	119.0	32.0
45.0	47.5	119.0	32.0
50.0	51.0	117.5	32.0

‡ These sizes are available in SVG only

LONG SERIES SLOT DRILLS - M2

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2
1/16‡	3/16	2	1/4
5/64‡	3/16	2	1/4
3/32‡	1/4	2 1/8	1/4
7/64‡	7/16	2 1/2	1/4
1/8‡	7/16	2 1/2	1/4
5/32‡	1/2	2 3/4	1/4
3/16‡	1/2	2 3/4	1/4
7/32‡	5/8	3	1/4
1/4	5/8	3	1/4
9/32	5/8	3	3/8
5/16	3/4	3 1/8	3/8
11/32	7/8	3 1/4	3/8
3/8	7/8	3 1/4	3/8
7/16	7/8	3 1/2	1/2
1/2	1	3 3/4	1/2

ød1	l2	l1	ød2
9/16	1 1/8	4	1/2
5/8	1 1/4	4 1/4	5/8
11/16	1 3/8	4 1/2	5/8
3/4	1 1/2	4 3/4	5/8
13/16	1 1/2	5 1/2	1
7/8	1 5/8	5 1/2	1
15/15	1 5/8	6	1
1	1 3/4	6 1/4	1
1 1/8	1 7/8	6 1/4	1
1 3/16*	2	6 1/4	1
1 1/4	2	6 1/4	1
1 5/16*	2	6 1/4	1
1 3/8	2 1/8	6 1/4	1
1 7/16*	2 1/8	6 1/4	1
1 1/2	2 1/4	6 1/4	1
1 5/8	2 1/2	6 1/4	1
1 3/4	2 1/2	6 1/4	1
1 7/8	2 1/2	6 1/4	1
2	2 1/2	6 1/4	1
1 1/4	2	6 1/4	1 1/4
1 1/2	1 11/16	4 1/2	1 1/4
1 3/4	2 1/2	6 1/4	1 1/4
1 7/8	2 1/2	6 1/4	1 1/4

ød1	l2	l1	ød2
2.0‡	4.0	51.0	6.0
2.5‡	6.5	54.0	6.0
3.0‡	11.0	60.5	6.0
3.5‡	12.5	66.5	6.0
4.0‡	12.5	66.5	6.0
4.5‡	12.5	66.5	6.0
5.0‡	12.5	70.0	6.0
5.5‡	16.0	76.0	6.0
6.0‡	16.0	76.0	6.0
6.5	16.0	76.0	10.0
7.0	16.0	76.0	10.0
7.5	16.0	76.0	10.0
8.0	19.0	79.5	10,0
8.5	22.0	82.5	10.0
9.0	22.0	82.5	10.0
10.0	22.0	82.5	10.0
10.5	22.0	89.0	12.0
11.0	22.0	89.0	12.0
12.0	25.5	95.5	12.0
13.0	25.5	95.5	12.0
14.0	28.5	101.5	12.0
15.0	31.5	108.0	16.0
16.0	31.5	108.0	16.0
17.0	35.0	114.5	16.0
18.0	35.0	114.5	16.0
19.0	38.0	120.5	16.0
20.0	38.0	120.5	16.0

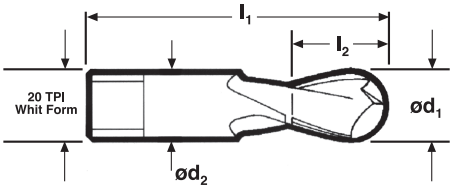
ød1	l2	l1	ød2
21.0	38.0	139.0	25.0
22.0	41.5	140.0	25.0
24.0	41.5	152.5	25.0
25.0	44.5	159.0	25.0
26.0	44.5	159.0	25.0
27.0	44.5	159.0	25.0
28.0	47.5	159.0	25.0
30.0	51.0	159.0	25.0
32.0	51.0	159.0	25.0
34.0	51.0	159.0	25.0
35.0	54.0	159.0	25.0
36.0	54.0	159.0	25.0
38.0	57.0	159.0	25.0
40.0	57.0	159.0	25.0
42.0	57.0	159.0	25.0
45.0	57.0	159.0	25.0
50.0	57.0	159.0	25.0
32.0	51.0	159.0	32.0
34.0	51.0	105.0	32.0
35.0	54.0	105.0	32.0
36.0	54.0	105.0	32.0
38.0	57.0	105.0	32.0
40.0	63.5	159.0	32.0
42.0	63.5	105.0	32.0
44.0	63.5	105.0	32.0
45.0	63.5	105.0	32.0
50.0	63.5	105.0	32.0

‡ These sizes are available in SVG only

CUTTING TOOLS

STANDARD BALL NOSED SLOT DRILLS - M2

Screwed Shank



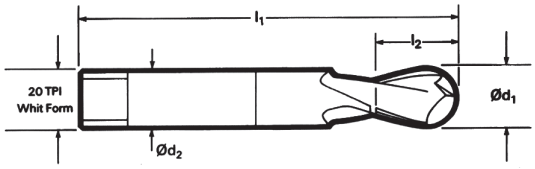
B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2
1/16‡	3/32	1 29/32	1/4
3/32‡	3/16	2	1/4
1/8‡	9/32	2	1/4
5/32‡	3/8	2 1/16	1/4
3/16‡	3/8	2 1/16	1/4
7/32‡	7/16	2 3/16	1/4
1/4	7/16	2 7/32	1/4
9/32	7/16	2 5/16	3/8
5/16	1/2	2 11/32	3/8
11/32	9/16	2 3/8	3/8
3/8	9/16	2 3/8	3/8
7/16	11/16	2 9/16	1/2
15/32	11/16	2 9/16	1/2

ød1	l2	l1	ød2
1/2	3/4	2 5/8	1/2
9/16	27/32	2 23/32	1/2
5/8	7/8	2 27/32	5/8
11/16	15/16	2 29/32	5/8
3/4	1	3 1/32	5/8
7/8	1	3 15/16	1
1	1 1/16	3 3/4	1
1 1/8	1 3/16	3 3/4	1
1 1/4	1 1/2	4	1
1 3/8	1 9/16	4 1/16	1
1 1/2	1 11/16	4 3/16	1
1 1/2	1 11/16	4 1/2	1 1/4

LONG SERIES BALL NOSED SLOT DRILLS - M2

Screwed Shank

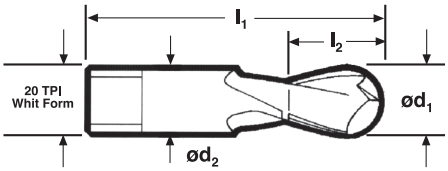


ød1	l2	l1	ød2
1/16	3/16	2	1/4
1/8	7/16	2 1/2	1/4
3/16	1/2	2 3/4	1/4
1/4	5/8	3	1/4
5/16	3/4	3 1/8	3/8
3/8	7/8	3 1/4	3/8
7/16	7/8	3 1/2	1/2
1/2	1	3 3/4	1/2
9/16	1 1/8	4	1/2

ød1	l2	l1	ød2
5/8	1 1/4	4 1/4	5/8
11/16	1 3/8	4 1/2	5/8
3/4	1 1/2	4 3/4	5/8
7/8	1 5/8	5 1/2	1
1	1 3/4	6 1/4	1
1 1/8	1 7/8	6 1/4	1
1 1/4	2	6 1/4	1
1 1/2	2 1/4	6 1/4	1 1/4

STANDARD BALL NOSED SLOT DRILLS - M2

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

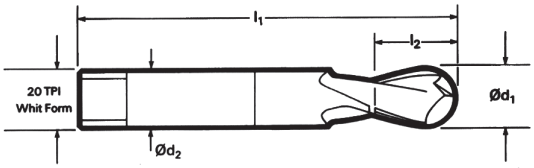
ød1	l2	l1	ød2
2.0‡	3.0	49.0	6.0
3.0‡	7.0	51.0	6.0
4.0‡	9.5	52.5	6.0
5.0‡	9.5	52.5	6.0
6.0‡	11.0	56.5	6.0
7.0	11.0	58.5	10.0
8.0	12.5	59.5	10.0
9.0	14.5	60.5	10.0
10.0	14.5	60.5	10.0
11.0	17.5	65.0	12.0
12.0	19.0	66.5	12.0
13.0	19.0	66.5	12.0
14.0	22.0	68.0	12.0

ød1	l2	l1	ød2
15.0	22.0	72.0	16.0
16.0	22.0	72.0	16.0
17.0	24.0	74.0	16.0
18.0	24.0	74.0	16.0
19,0	25.0	77.0	16.0
20.0	25.0	77.0	16.0
22.0	25.5	100.0	25.0
24.0	25,5	103.0	25.0
25.0	27.0	95.0	25.0
28.0	30.0	95.0	25.0
30.0	30.0	93.5	25.0
32.0	38.0	101.5	25.0

‡ These sizes are available in SVG only

LONG SERIES BALL NOSED SLOT DRILLS - M2

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

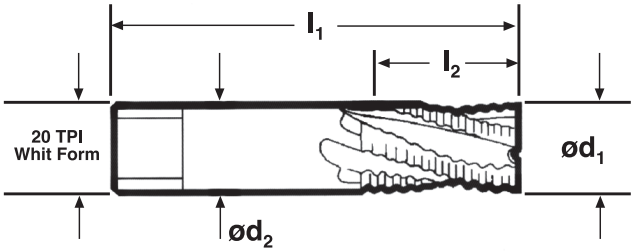
ød1	l2	l1	ød2
3.0‡	11.0	60.5	6.0
4.0‡	12.5	66.5	6.0
5.0‡	12.5	70.0	6.0
6.0‡	16.0	76.0	6.0
7.0	16.0	76.0	10.0
8.0	19.0	79.5	10.0
9.0	22.0	82.5	10.0
10.0	22.0	82.5	10.0
11.0	22.0	89.0	12.0

ød1	l2	l1	ød2
12.0	25.5	95.0	12.0
13.0	25.5	95.0	12.0
14.0	28.5	101.5	12.0
15.0	31.5	108.0	16.0
16.0	31.5	108.5	16.0
17.0	35.0	114.5	16.0
18.0	35.0	114.5	16.0
20.0	38.0	120.5	16.0

‡ These sizes are available in SVG only

STANDARD RIPPING CUTTERS, KNUCKLE FORM - SVG. CO.8

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2	⌖
1/4	5/8	2 3/8	1/4	3
5/16	23/32	2 1/2	3/8	3
3/8	27/32	2 5/8	3/8	4
7/16	3/4	2 5/8	1/2	4
1/2	15/16	2 3/4	1/2	4
9/16	1 1/8	2 7/8	1/2	4
5/8	1 1/16	3 1/32	5/8	4
11/16	1 3/8	3 5/32	5/8	4
3/4	1 1/2	3 9/32	5/8	4
7/8	1 5/8	3 7/8	1	5

ød1	l2	l1	ød2	⌖
1	1 11/16	4	1	5
1 1/16	1 11/16	4	1	5
1 1/8	1 13/16	4 1/8	1	5
1 1/4	1 15/16	4 1/4	1	5
1 3/8	2 1/16	4 3/8	1	6
1 1/2	2 3/16	4 1/2	1	6
1 1/4	2	4 7/16	1 1/4	5
1 1/2	2 1/8	4 9/16	1 1/4	6
1 3/4	2 1/4	4 11/16	1 1/4	6
2	2 9/16	5	1 1/4	6

LONG SERIES RIPPING CUTTERS, KNUCKLE FORM - SVG. CO.8

Screwed Shank

ød1	l2	l1	ød2	⌖
1/2	1 15/16	3 3/4	1/2	4
5/8	2 5/16	4 9/32	5/8	4
3/4	3	4 25/32	5/8	4
7/8	3 3/8	5 5/8	1	5
1	3 15/16	6 3/16	1	5
1 1/8	3 7/8	6 3/16	1	5

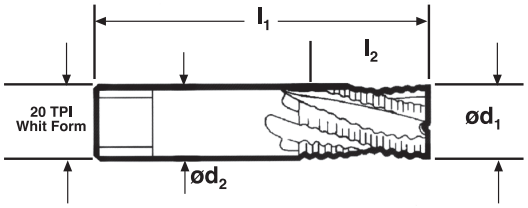
ød1	l2	l1	ød2	⌖
1 1/4	3 15/16	6 1/4	1	5
1 1/4	4	6 7/16	1 1/4	5
1 1/2	4	6 7/16	1 1/4	6
1 3/4	4	6 7/16	1 1/4	6
2	4	6 7/16	1 1/4	6

‡ These sizes are available in SVG only

CUTTING TOOLS

STANDARD RIPPING CUTTERS, KNUCKLE FORM - SVG. CO.8

Screwed Shank



B.S 122 Part 4 1980
Surface Finish
Osborn Bright

ød1	l2	l1	ød2	⌖
6.0	16.0	60.5	6.0	3
8.0	18.0	63.5	10.0	3
10.0	21.0	66.5	10.0	4
12.0	24.0	70.0	12.0	4
14.0	28.5	73.0	12.0	4
15.0	26.0	77.0	16.0	4
16.0	26.5	77.0	16.0	4
18.0	35.0	80.0	16.0	4
20.0	38.0	83.5	16.0	4
22.0	41.5	98.5	25.0	5
24.0	41.5	98.5	25.0	5
25.0	43.0	101.5	25.0	5
26.0	43.0	101.5	25.0	5

ød1	l2	l1	ød2	⌖
28.0	46.0	104.5	25.0	5
30.0	46.0	104.5	25.0	5
32.0	49.0	108.0	25.0	5
35.0	52.5	111.0	25.0	6
40.0	57.0	117.5	25.0	6
32.0	51.0	112.5	32.0	5
35.0	54.0	116.0	32.0	6
36.0	54.0	116.0	32.0	6
38.0	54.0	116.0	32.0	6
40.0	55.5	117.5	32.0	6
45.0	57.0	119.0	32.0	6
50.0	65.0	127.0	32.0	6

Available in TiN coated

LONG SERIES RIPPING CUTTERS, KNUCKLE FORM - SVG. CO.8

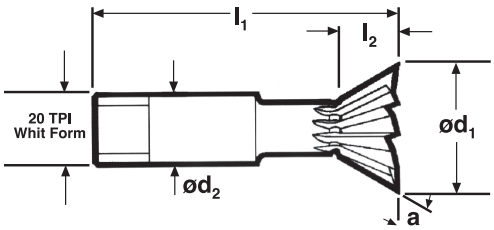
Screwed Shank

ød1	l2	l1	ød2	⌖
10.0	37.0	82.5	10.0	4
12.0	49.5	82.5	10.0	4
14.0	57.0	101.5	12.0	4
15.0	58.5	108.5	16.0	4
16.0	58.5	108.5	16.0	4
18.0	70.0	115.0	16.0	4
20.0	76.0	121.5	16.0	4
22.0	85.5	143.0	25.0	5
24.0	92.0	149.0	25.0	5
25.0	100.0	157.0	25.0	5

ød1	l2	l1	ød2	⌖
26.0	98.5	157.0	25.0	5
28.0	98.5	157.0	25.0	5
30.0	98.5	157.0	25.0	5
32.0	100.0	159.0	25.0	5
35.0	100.0	159.0	25.0	6
32.0	101.5	163.5	32.0	5
40.0	101.5	163.5	32.0	6
45.0	101.5	163.5	32.0	6
50.0	101.5	163.5	32.0	6

DOVETAIL CUTTERS - M2

Screwed Shank



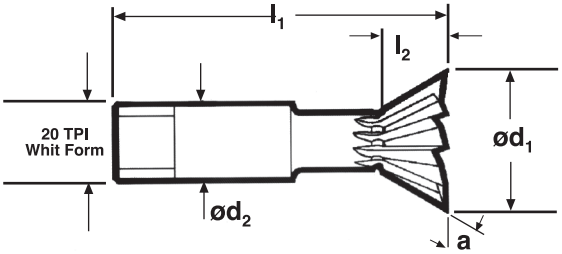
Surface Bright
Osborn Multi Finish

∠a° Angle	ød1	l2	l1	ød2	⌖
60°	1/2	5/32	2 33/64	1/2	6
60°	5/8	7/32	2 5/8	1/2	6
60°	3/4	9/32	2 11/16	1/2	6
60°	7/8	3/8	2 11/16	1/2	6
60°	1	15/32	2 3/4	1/2	6
60°	1 1/8	1/2	2 7/8	5/8	6
60°	1 1/4	17/32	2 61/64	5/8	8

∠a° Angle	ød1	l2	l1	ød2	⌖
55°	1	3/8	2 3/4	1/2	6
55°	1 1/2	19/32	3 5/16	1	8
45°	5/8	5/32	2 5/8	1/2	6
45°	3/4	7/32	2 11/16	1/2	6
45°	7/8	1/4	2 23/32	1/2	6
45°	1	5/16	2 3/4	1/2	6
45°	1 1/4	11/32	2 61/64	5/8	8
45°	1 3/8	3/8	3 1/16	1	8
45°	1 1/2	13/32	3 7/64	1	8

DOVETAIL CUTTERS - M2

Screwed Shank



I.S.O 3859
B.S 122 Part 3 1987
DIN 1833
Surface Finish
Osborn Multi Finish

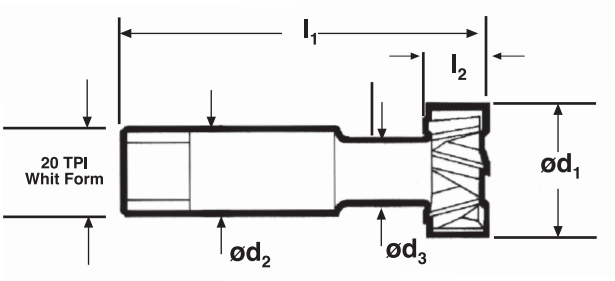
∠a° Angle	ød1	l2	l1	ød2	⌖
60°	16.0	6.3	60.0	12.0	6
60°	20.0	8.0	63.0	12.0	6
60°	25.0	10.0	67.0	16.0	6
60°	32.0	12.5	71.0	16.0	8

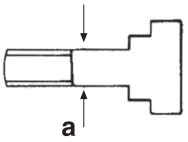
∠a° Angle	ød1	l2	l1	ød2	⌖
45°	16.0	4.0	60.0	12.0	6
45°	20.0	5.0	63.0	12.0	6
45°	25.0	6.3	67.0	12.0	6
45°	32.0	8.0	71.0	16.0	8

Note: a similar range of inverted dovetail cutters are available on short delivery

T SLOT CUTTERS, STAGGERED TOOTH - M2

Screw Shank





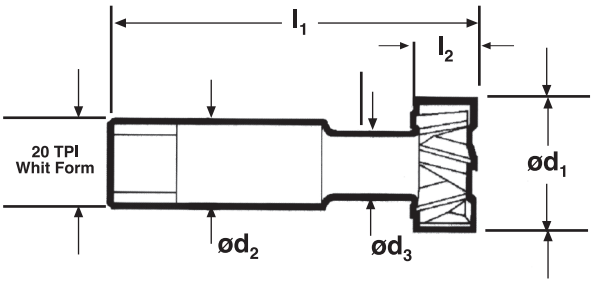
Surface Finish
Osborn Multi Finish

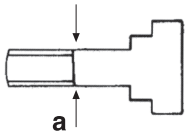
a Bolt Size	ød1	l2	ød3	l1	ød2	⌖
1/4	37/64	1/4	1/4	2 13/32	1/2	6
5/16	45/64	5/16	5/16	2 19/32	1/2	6
3/8	45/64	23/64	3/8	2 23/32	1/2	6
7/16	61/64	27/64	13/32	2 59/64	1/2	6
1/2	1 5/64	15/32	1/2	3 1/32	1/2	6

a Bolt Size	ød1	l2	ød3	l1	ød2	⌖
5/8	1 21/64	37/64	19/32	3 15/16	1	8
3/4	1 33/64	11/16	23/32	4 1/16	1	8
7/8	1 45/64	51/64	27/32	4 9/16	1	8
1	1 61/64	29/32	31/32	4 59/64	1	8

T SLOT CUTTERS, STAGGERED TOOTH - M2

Screw Shank





Based on DIN 851
Surface Finish
Osborn Multi Finish

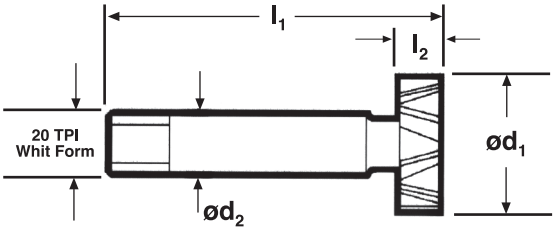
a Bolt Size	ød1	l2	ød3	l1	ød2	⌖
6.0	12.5	6.0	5.0	55.0	10.0	6
8.0	16.0	8.0	6.5	60.0	10.0	6
10.0	19.0	9.0	8.0	64.0	12.0	6
12.0	22.0	10.0	10.0	68.0	12.0	6
14.0	25.0	11.0	12.0	71.0	16.0	6

a Bolt Size	ød1	l2	ød3	l1	ød2	⌖
16.0	28.0	12.0	13.0	75.0	16	8
18.0	32.0	14.0	15.0	95.0	25	8
20.0	36.0	16.0	17.0	100.0	25	8
22.0	40.0	18.0	19.0	105.0	25	8

CUTTING TOOLS

WOODRUFF CUTTERS, STAGGERED TOOTH FORM - M2

Screwed Shank



Surface Finish
Osborn Multi Finish

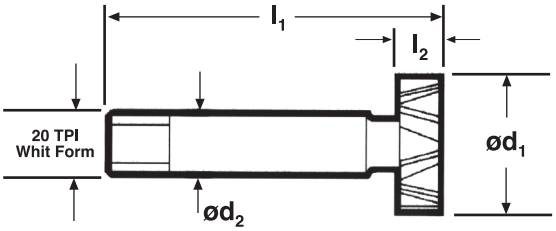
Number	ød1	l2	l1	ød2	⌖
204	1/2	1/16	56.5(59.0)	1/2	6
304	1/2	3/32	56.5(59.0)	1/2	6
404	1/2	1/8	57.0	1/2	6
405	5/8	1/8	57.0	1/2	6
505	5/8	5/32	57.0	1/2	6
406	3/4	1/8	57.0	1/2	6
506	3/4	5/32	57.0	1/2	8
606	3/4	3/16	57.0	1/2	6
507	7/8	5/32	64.0	1/2	8
607	7/8	3/16	64.0	1/2	8
707	7/8	7/32	64.0	1/2	8
807	7/8	1/4	64.0	1/2	8
608	1	3/16	70.0	1/2	8
708	1	7/32	70.0	1/2	8
808	1	1/4	70.0	1/2	8

Number	ød1	l2	l1	ød2	⌖
1008	1	5/16	70.0	1/2	8
609	1 1/8	3/16	70.0	1/2	8
809	1 1/8	1/4	70.0	1/2	8
1009	1 1/8	5/16	70.0	1/2	8
610	1 1/4	3/16	70.0	1/2	8
710	1 1/4	7/32	70.0	1/2	8
810	1 1/4	1/4	70.0	1/2	8
1010	1 1/4	5/16	70.0	1/2	8
1210	1 1/4	3/8	70.0	1/2	8
811	1 3/8	1/4	76.0	1/2	10
1011	1 3/8	5/16	76.0	1/2	10
1211	1 3/8	3/8	76.0	1/2	10
812	1 1/2	1/4	76.0	1/2	10
1012	1 1/2	5/16	76.0	1/2	10
1212	1 1/2	3/8	76.0	1/2	10

( ) including Pip

WOODRUFF CUTTERS, STAGGERED TOOTH - M2

Screw Shank



Based on
D.I.N 850 (Type B)
Surface Finish
Osborn Multi Finish

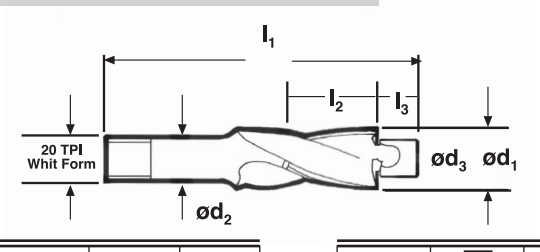
ød1	l2	l1	ød2	⌖
10.5	2.0	56.0(59.0)	12.0	6
10.5	2.5	56.0(59.0)	12.0	6
10.5	3.0	56.0(59.0)	12.0	6
13.5	2.0	56.0(59.0)	12.0	6
13.5	2.5	56.0(59.0)	12.0	6
13.5	3.0	56.0	12.0	6
13.5	4.0	56.0	12.0	6
16.5	2.5	56.0(59.0)	12.0	6
16.5	3.0	56.0	112.0	6
16.5	4.0	56.0	12.0	6
16.5	5.0	56.0	12.0	6
19.5	3.0	57.0	12.0	6
19.5	4.0	57.0	12.0	6
19.5	5.0	57.0	12.0	6
19.5	6.0	57.0	12.0	6
22.5	4.0	64.0	12.0	8
22.5	5.0	64.0	12.0	8
22.5	6.0	64.0	12.0	8

ød1	l2	l1	ød2	⌖
22.5	8.0	64.0	12.0	8
25.5	5.0	70.0	12.0	8
25.5	6.0	70.0	12.0	8
25.5	8.0	70.0	12.0	8
28.5	5.5	70.0	12.0	8
28.5	6.0	70.0	12.0	8
28.5	8.0	70.0	12.0	8
28.5	10.0	70.0	12.0	8
32.5	5.0	70.0	12.0	8
32.5	6.0	70.0	12.0	8
32.5	8.0	70.0	12.0	8
32.5	10.0	70.0	12.0	8
35.5	6.0	76.0	12.0	10
35.5	10.0	76.0	12.0	10
38.5	8.0	76.0	12.0	10
38.5	10.0	76.0	12.0	10
45.0	10.0	76.0	12.0	12

( ) including Pip

2 FLUTE COUNTERBORES - M2

Screwed Shank



Surface Finish
Osborn Multi Finish

ød1	T	l2	l1	l3	ød3	ød2
0.344	2BA	1/2	2 1/2	7/32	0.200	1/4
0.251	4BA	7/16	2 1/2	7/32	0.156	1/4
13/32	1/4	1/2	3	5/16	9/32	1/4
15/32	5/16	5/8	3 1/4	3/8	11/32	3/8
19/32	3/8	3/4	3 1/2	7/16	13/32	3/8
21/32	7/16	7/8	4	17/32	15/32	1/2

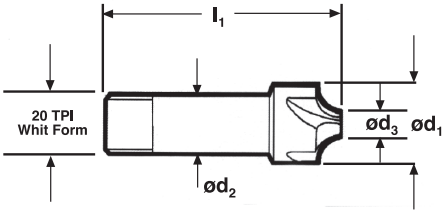
ød1	T	l2	l1	l3	ød3	ød2
25/32	1/2	1	4 1/4	17/32	17/32	1/2
27/32	9/16	1 1/8	4 17/32	19/32	19/32	5/8
29/32	5/8	1 1/4	4 25/32	21/32	21/32	5/8
1 1/32	3/4	1 1/2	5 7/16	25/32	25/32	1
1 5/32	7/8	1 3/4	5 15/16	29/32	29/32	1
1 11/32	1	2	6 7/16	1 1/32	1 1/32	1

ød1	T	l2	l1	l3	ød3	ød2
8.0	M4	12.5	65.0	5.5	4.3	6.0
10.0	M5	12.5	70.0	6.5	5.3	6.0
11.0	M6	12.5	76.0	8.0	6.4	6.0
15.0	M8	19.0	87.3	9.5	8.4	10.0
18.0	M10	19.0	89.0	11.0	10.5	10.0

ød1	T	l2	l1	l3	ød3	ød2
20.0	M12	25.5	108.0	13.5	13.0	12.0
24.0	M14	31.5	121.0	16.5	15.0	16.0
26.0	M16	38.0	124.0	19.0	17.0	16.0
30.0	M18	44.5	147.0	19.0	19.0	25.0
33.0	M20	44.5	149.0	21.5	21.0	25.0

CORNER ROUNDING CUTTERS - SVG. CO.8

Screw Shank



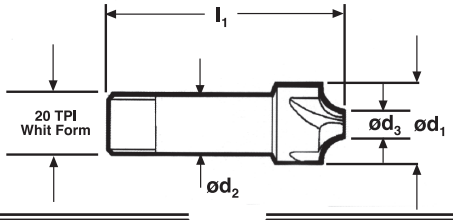
Surface Finish
Osborn Multi Finish

R	ød1	ød2	ød3	l1	⌖
1/8	1/2	1/2	1/4	2 3/8	4
3/16	5/8	5/8	1/4	2 3/8	4
1/4	7/8	5/8	3/8	2 1/2	4
5/16	1	1	3/8	2 7/8	4

R	ød1	ød2	ød3	l1	⌖
3/8	1 1/16	1	5/16	3	4
7/16	1 3/16	1	5/16	3 1/8	4
1/2	1 3/8	1	3/8	3 1/4	4

CORNER ROUNDING CUTTERS - SVG. CO.8

Screw Shank



Based on
DIN 850 (Type B)
Surface Finish
Osborn Multi Finish

R	ød1	ød2	ød3	l1	⌖
1.0	8.0	10.0	10.0	60	4
1.5	10.0	10.0	9.0	60	4
2.0	10.0	10.0	8.0	60	4
2.5	10.0	10.0	7.0	60	4
3.0	12.0	12.0	6.0	60	4
3.5	14.0	12.0	6.0	60	4
4.0	14.0	12.0	6.0	60	4
4.5	16.0	16.0	7.0	60	4
5.0	16.0	16.0	6.0	60	4
6.0	21.0	16.0	10.0	67	4
7.0	24.0	25.0	8.0	71	4

R	ød1	ød2	ød3	l1	⌖
8.0	24.0	25.0	9.0	71	4
9.0	28.0	25.0	8.0	85	4
11.0	35.0	25.0	13.0	90	4
12.0	35.0	25.0	11.0	90	4
13.0	42.0	25.0	16.0	100	4
14.0	42.0	25.0	14.0	100	4
15.0	48.0	25.0	15.0	100	4
16.0	48.0	25.0	16.0	100	4
18.0	54.0	32.0	12.5	112	4
20.0	58.0	32.0	13.0	112	4