

Bradrad® precision tools drill and deburr from 1/4" to 4", or 5.5 to 100mm diameter, in material thicknesses up to 10mm.

Designed for industrial applications, each step produces accurate, parallel holes with a small clearance on the nominal diameter. It positively deburrs the entry side as the hole is drilled, and if the work can be reversed, both sides.

One 'S' Type Bradrad® can drill eleven different diameters, while the 'A' Type can drill nine.

The Bradrad® can be adapted for use on CNC machines.

BRADRAD®

HIGH SPEED STEEL STEP DRILLS FOR MACHINE SHOP APPLICATIONS

Industrial Application Examples:

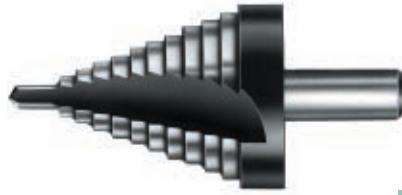
- **Steel fabricators and engineers**
- to replace punches and dies, and milling and trepanning on short-run or prototype work, particularly where material is over 1/16" thick
- **Jig and tool makers**
- **Aircraft manufacturers**
- **Car body repairs**
- **Electricians**
- **Plumbers and gas fitters**



HIGH SPEED STEEL STEP DRILLS FOR MACHINE SHOP APPLICATIONS

S TYPE

'S' Type Bradrad® drills are used to machine a wide variety of materials and for many different applications. No pilot hole is required, and good quality deburred holes are produced with minimum of fuss using a bench drill or light pedestal drilling machine.



TOOL NO	DRILL SIZES IN mm FOR MATERIAL UP TO 3mm (1/8") THICK											SHANK AVAILABILITY				DRILLING SPEEDS RPM	
												MORSE TAPER		ROUND SHANK		FERROUS	NON FERROUS
BS M1	5.5	8.5	11.5	14.5	17.5	20.5	23.5	26.5	29.5	32.5	35.5	•	•	•	•	80-250	250-700
BS M2	6	9	12	15	18	21	24	27	30	33	36	•	•	•	•	80-250	250-700
BS M3	6.5	9.5	12.5	15.5	18.5	21.5	24.5	27.5	30.5	33.5	36.5	•	•	•	•	80-250	250-700
BS M4	7	10	13	16	19	22	25	28	31	34	37	•	•	•	•	80-250	250-700
BS M5	7.5	10.5	13.5	16.5	19.5	22.5	25.5	28.5	31.5	34.5	37.5	•	•	•	•	75-220	220-650
BS M6	8	11	14	17	20	23	26	29	32	35	38	•	•	•	•	75-220	220-650
DRILL SIZES IN INCHES FOR MATERIAL UP TO 1/8" (3mm) THICK																	
BS E1	1/4	3/8	1/2	5/8	3/4	7/8	1	1.1/8	1.1/4	1.3/8	1.1/2	•	•	•	•	75-220	220-650
BS E2	9/32	13/32	17/32	21/32	25/32	29/32	1.1/32	1.5/32	1.9/32	1.13/32	1.17/32	•	•	•	•	75-220	220-650
BS E3	5/16	7/16	9/16	11/16	13/16	15/16	1.1/16	1.3/16	1.5/16	1.7/16	1.9/16	•	•	•	•	75-220	220-650
BS E4	7/32	11/32	15/32	19/32	23/32	27/32	31/32	1.3/32	1.7/32	1.11/32	1.15/32	•	•	•	•	75-220	220-650

A TYPE (HSS Cobalt)

'A' Type Bradrad® drills incorporate a detachable centre drill and the first diameter is produced by a smooth trepanning action. Thereafter, the 'A' Type drills from step to step until the required diameter is achieved. The initial trepanning action produces a disc which must be removed before commencing the next hole.



TOOL NO	DRILL SIZES IN mm FOR MATERIAL UP TO 5mm (3/16") THICK											SHANK AVAILABILITY			DRILLING SPEEDS RPM	
												MORSE TAPER		13mm (1/2")	FERROUS	NON FERROUS
BA M2	36	39	42	45	48	51	54	57	60	-	-	•	•	•	50-150	150-375
BA M4	37	40	43	46	49	52	55	58	61	-	-	•	•	•	50-150	150-375
BA M6	38	41	44	47	50	53	56	59	62	-	-	•	•	•	50-150	150-375
DRILL SIZES IN INCHES FOR MATERIAL UP TO 3/16" (5mm) THICK																
BA E1	1.1/2	1.5/8	1.3/4	1.7/8	2	2.1/8	2.1/4	2.3/8	2.1/2	-	-	•	•	•	50-150	150-375

B TYPE (HSS Cobalt)

'B' Type Bradrad® drills incorporate a detachable centre drill, and the first diameter is produced by an 'end milling' action which ensures the rapid penetration of steel plate or structural steel supports.



TOOL NO	DRILL SIZES IN mm FOR MATERIAL UP TO 10mm (3/8") THICK											SHANK AVAILABILITY		DRILLING SPEEDS RPM	
												MORSE TAPER		FERROUS	NON FERROUS
BB M2	36	39	42	45	48	51	54	57	60	-	-	No 3 MTS		50-150	150-375
BB M4	37	40	43	46	49	52	55	58	61	-	-			50-150	150-375
BB M6	38	41	44	47	50	53	56	59	62	-	-			50-150	150-375
DRILL SIZES IN INCHES FOR MATERIAL UP TO 3/8" (10mm) THICK															
BB E1	1.1/2	1.5/8	1.3/4	1.7/8	2	2.1/8	2.1/4	2.3/8	2.1/2	-	-			50-150	150-375

F TYPE (HSS Cobalt)

'F' Type Bradrad® drills require a pilot hole which can be produced by an 'A' or 'B' Type Bradrad®, some other drilling method or even by flame cutting.



TOOL NO	PILOT Ø	DRILL SIZES IN mm								SHANK		DRILLING SPEEDS RPM		
										No 4 MTS	MATERIAL THICKNESS	FERROUS	NON FERROUS	
BFA M	60mm	65	70	75	80	85	90	95	100	-	•	5mm (3/16")	30-90	90-225
BFB M	80mm	-	-	-	-	85	90	95	100	-	•	10mm (3/8")	30-90	90-225

HIGH SPEED STEEL STEP DRILLS FOR MACHINE SHOP APPLICATIONS

SPECIAL APPLICATION | PG TYPE

PG Bradrad® drills are made from high speed steel for use in pedestal drills or industrial hand drills. Each hole is automatically deburred by the cutting edge of the next step. Detachable centre drill for easy regrind.

PG 21 & PG 29 for drilling the clearance holes for PG fittings in material up to 3mm thick.

PGT for drilling core holes for PG threads in material up to 5mm thick.



FOR PG NUMBER		PG 7	PG 9	PG 11	PG 13.5	PG 16	PG 21					PG 29			SHANK			DRILLING SPEEDS RPM	
TOOL NO	PILOT MM	DRILL SIZES IN MM											10MM	13MM	INTEGRAL 13MM	MAX MATERIAL THICKNESS	FERROUS	NON FERROUS	
PG 21	8	12.5	15.2	18.6	20.4	22.5	25.8	28.3	30.5	-	-	-	-	-	•	3mm	100-300	300-750	
PG 29	8	12.5	15.2	18.6	20.4	22.5	25.8	28.3	30.5	33.6	37	•	•	•	3mm	75-220	220-550		
PG T*	8.8	11.4	14	17.25	19	21.25	24.5	26.75	-	-	-	-	-	•	5mm	110-310	310-800		

SPECIAL APPLICATION | PIPE TOOLS

BP1 - for drilling the clearance holes for BSP fittings in material up to 5mm thick.

BP2 - for drilling the core holes for BSP threads in material up to 5mm thick.



BSP SIZES		1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	SHANK					DRILLING SPEEDS RPM		
TOOL NO	PILOT MM	DRILL SIZES IN MM						INTEGRAL 13MM					MAX MATERIAL THICKNESS	FERROUS	NON FERROUS
BP 1	8.8	11.2	14.5	18.2	22.3	24.3	27.9	-	-	-	-	•	5mm	100-310	310-800
BP 2	8.8	8.8	11.8	15.3	19.0	21.0	24.5	-	-	-	-	•	5mm	120-360	360-900

SPECIAL APPLICATION | ELECTRICAL

A range of sizes specially designed for work with conduits.



TOOL NO	PILOT MM	APPLICATION IN MM					SHANK		DRILLING SPEEDS RPM	
							TO FIT CHUCK	MAX MATERIAL THICKNESS	FERROUS	NON FERROUS
BC 1232	8	12, 16, 20, 25 & 32mm Holes for Conduit Entry					10mm	3.5mm	90-300	300-750
BC 1240	8	12, 16, 20, 25, 32 & 40mm Holes for Conduit Entry					13mm	3.5mm	70-220	220-550
BCT 1240	10.5	Drills core holes for ISO Conduit Threads M12, M16, M20, M25, M32 & M40 (1.5mm)					13mm	3.5mm	70-220	220-550

SPECIAL APPLICATION | SAWBORER (HSS Cobalt)

Sawborer Bradrad® drills have been developed for opening out bores of tungsten carbide tipped circular saw blades with a hardness up to 42Rc.

The tool itself is made from cobalt steel and hardened to ensure maximum life between grinds.



TOOL NO	PILOT MM	BORE SIZE IN MM										SHANK		DRILLING SPEEDS RPM	
												No3 MORSE TAPER SHANK	MAX MATERIAL THICKNESS	FERROUS	NON FERROUS
BSB 2	16	20	25	30	35	40	45	50	55	60	-	•	5mm	50-150	150-375
BSB 4	16	20	22	25	30	32	35	40	-	-	-	•	5mm	75-220	220-650

TOOL NO	PILOT INCHES	BORE SIZE IN INCHES										SHANK		DRILLING SPEEDS RPM	
												No3 MORSE TAPER SHANK	MAX MATERIAL THICKNESS	FERROUS	NON FERROUS
BSB 3	5/8	3/4	7/8	1	1.1/8	1.1/4	1.3/8	1.1/2	-	-	-	•	5mm	75-220	220-650