



Diameter	Structural Steel <500 Mpa Based on mm/R Feed of 0.10	Structural Steel <1000 Mpa Based on mm/R Feed of 0.10	Stainless Steel INOX Based on mm/R Feed of 0.13	Aluminium	Cast Iron (Grey)	Fibreglass	Composite	Plastics	Wood
	RPM Range								
9/16" - 11/16"	1350-850	840-585	500-360	2210-1575	900-625	780-705	1350-850	900-640	1495-1010
3/4" - 1"	850-625	580-420	350-250	1575-1125	600-455	700-520	850-625	620-450	990-895
1 1/16" - 1 3/16"	620-500	415-325	240-195	1080-885	435-345	500-405	620-500	440-345	895-850
1 1/4" - 1 9/16"	480-410	320-275	195-160	875-740	330-285	400-330	480-410	345-280	850-740
1 5/8" - 1 13/16"	390-340	270-220	160-145	730-620	285-240	315-275	390-340	175-235	740-610
1 7/8" - 2 1/16"	335-300	220-180	140-120	615-545	235-215	275-245	335-300	235-215	600-505
2 5/32" - 2 3/8"	295-260	180-165	115-100	525-485	210-180	240-215	295-260	210-185	500-460
2 9/16" - 2 3/4"	260-225	165-155	100-90	475-415	180-160	205-185	260-225	180-160	455-400
3 5/32"	220-195	155-140	90-75	410-365	155-140	180-160	220-195	155-140	395-360

Diameter	Structural Steel <500 Mpa (S275, S355) Based on mm/R Feed of 0.10	Structural Steel <1000 Mpa Based on mm/R Feed of 0.10	Stainless Steel INOX Based on mm/R Feed of 0.13	Cast Iron-Grey	Aluminium
	RPM Range				
7/16" - 3/4"	1265-850	850-580	530-350	925-615	2200-1560
49/64" - 1"	840-650	550-410	345-255	610-440	1480-1140
1 1/16" - 1 1/4"	545-460	410-315	250-200	430-335	1125-890
1 5/16" - 1 9/16"	460-395	315-265	195-170	330-280	885-730
1 5/8" - 1 13/16"	405-340	265-250	165-140	280-235	720-620
1 7/8" - 2 1/16"	335-300	250-195	135-120	235-205	615-545
2 1/8" - 2 3/8"	295-265	195-180	120-105	200-180	540-475
2 7/16" - 2 3/4"	260-230	180-140	105-90	180-160	475-415
2 13/16" - 3 3/16"	230-200	140-130	90-70	160-145	410-365
3 1/4" - 3 3/4"	195-180	130-115	70-65	140-125	350-325
3 13/16" - 3 15/16"	180-160	115-100	60-55	125-110	320-280
4" - 4 3/8"	160-140	100-90	55-50	110-100	280-250
4 1/2" - 4 7/8"	140-120	90-85	50-48	100-90	250-235
5" - 5 3/8"	120-110	85-75	48-45	90-80	230-205
5 13/16" - 6"	110-100	70-65	45-40	80-75	205-190
6-1/16" - 6-27/32"	70 - 80	50 - 60	45 - 40	55 - 65	145 - 155
6-57/64" - 7-7/8"	60 - 70	40 - 50	25 - 30	45 - 55	120 - 140

BEST PRACTICE ADVICE

GUIDELINE PARAMETERS ONLY - Actual parameters may vary depending on operating conditions

1. Centre punch or pilot drill the surface for accurate hole start
2. Follow guidelines to set correct RPM speed. Incorrect RPM can lead to poor life or tool breakage
3. Apply firm, steady feed pressure throughout the cut, applying the feed very slowly and cautiously during the first 1mm of cut
4. Avoid lateral movement or tilting which can cause damage to the tool
5. Ensure regular application of quality cooling lubricant, especially when drilling thick or hardened materials
6. Hardened or heat-affected materials may require higher torque, reduced RPM and feed rates and extra coolant
7. When using a Magnet Drill regularly check that slides, handles, arbors and movable parts have not vibrated loose over time
8. Ensure a debris free surface of sufficient steel thickness for strong magnet hold when Magnet Drilling
9. For drilling holes in steel thicker than 25mm it is recommended to ventilate the hole frequently to clear the swarf
10. For thicker materials, predrill 6.35mm pilot hole first and use then sprung pilot drill or pilot pin as a guide

QUICK GUIDE

- Optimum life & performance when used with Rotary Pistol Drills
- Good results from SDS Drills when used in Rotary-Only mode
- For best results pre-drill the pilot hole
- Use appropriate lubrication and correct RPM to achieve long tool life

MORE INFO



BEST PRACTICE ADVICE

GUIDELINE PARAMETERS ONLY - Actual parameters may vary depending on operating conditions

1. Centre punch or pilot drill the surface for accurate hole start
2. Follow guidelines to set correct RPM speed. Incorrect RPM can lead to poor life or tool breakage
3. Apply firm, steady feed pressure throughout the cut, applying the feed very slowly and cautiously during the first 1mm of cut
4. Avoid lateral movement or tilting which can cause damage to the cutter
5. Ensure regular application of quality cooling lubricant, especially when drilling thick or hardened materials
6. Hardened or heat-affected materials may require higher torque, reduced RPM and feed rates and extra coolant
7. Regularly check that Magnet Drill slides, handles, arbors and movable parts have not vibrated loose over time
8. Ensure a debris free surface of sufficient steel thickness for strong magnet hold when Magnet Drilling
9. For drilling holes in steel thicker than 25mm it is recommended to ventilate the hole frequently to clear the swarf
10. Selecting the correct machine will often result in better life from the consumables and a quicker completion of the task

QUICK GUIDE

- Adjust RPM to match the material
- Slowly and cautiously begin cutting before increasing pressure
- For best results & swarf clearance always select a cutter longer than the material thickness
- For hard materials & wear plates like Hardox use Ultra coated cutters. See page 68-73

MORE INFO

