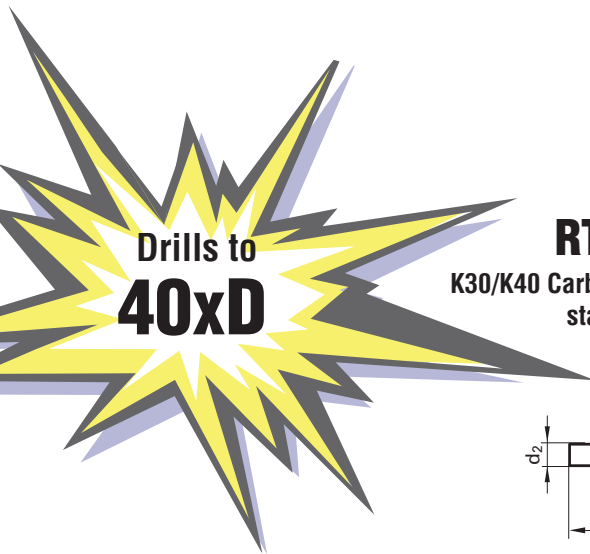


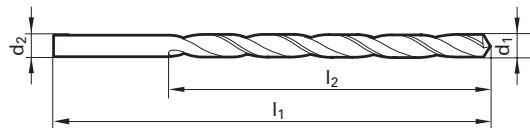
NEW!








Series 6514

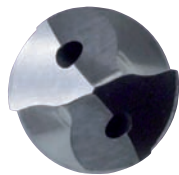
RT 100 T Deep Hole Drill

K30/K40 Carbide, RT 100 T high penetration, 40xD, 135° point, standard straight shank, TiAlN tip, RH cut



Application Materials:

-  General Steels
-  Universal Steels
-  Stainless Steels
-  Cast Iron
-  Ti & Ni Alloys



- Unique double margin design
- Maximized coolant duct profile
- Specialized flute form
- High polished flute
- TiAlN coated tip
- 135° point angle

Series 6514 40 x D

d1 dec. in.	d1 fract.	d1 mm	d2 mm	l1 mm	l2 mm
0.1181		3.000	6.00	170.00	130.00
0.1250	1/8	3.170	6.00	193.00	153.00
0.1378		3.500	6.00	193.00	153.00
0.1563	5/32	3.970	6.00	216.00	176.00
0.1575		4.000	6.00	216.00	176.00
0.1772		4.500	6.00	238.00	198.00
0.1874	3/16	4.760	6.00	258.00	218.00
0.1969		5.000	6.00	258.00	218.00
0.2165		5.500	6.00	280.00	240.00
0.2189	7/32	5.560	6.00	300.00	260.00
0.2362		6.000	6.00	300.00	260.00
0.2500	1/4	6.350	8.00	322.00	282.00
0.2559		6.500	8.00	322.00	282.00
0.2756		7.000	8.00	342.00	302.00
0.2811	9/32	7.140	8.00	363.00	323.00
0.2953		7.500	8.00	363.00	323.00
0.3150		8.000	8.00	383.00	343.00

RT 100 T Deep Hole Drilling Solutions



RT 100 T Deep Hole Drill - Procedures and Cutting Parameters

- Minimum of 250 PSI coolant pressure recommended -

Procedure:

- Machine a pilot hole with an m7 toleranced series 5514 RT 100 drill to a minimum pilot depth of 1 to 1.5 x D.
- Enter the pilot hole at a speed of approx. 300 RPM, and with a feed rate of approx. 19 - 20 IPM
- Start high coolant pressure and increase RPM.
- Continuous drilling to complete hole depth without peck cycle.
- For through holes with oblique exit, reduce the feed rate v_f to 40% approx. 1 mm prior to break-through.
- After reaching hole depth reduce machine spindle RPM and withdraw.

$$IPM = IPR \times RPM$$


$$RPM = \frac{SFM}{DIAM. \text{ in.}} \times 3.82$$

$$\frac{HOLE \text{ DEPTH in.}}{IPM} \times 60 = \text{Cut Time (seconds)}$$

$$mm = \text{in.} \times 25.40$$

$$m/min. = SFM \div 3.28 \quad \text{Bar} = \text{PSI} \div 14.50$$

$$mm/rev. = IPR \div 25.40 \quad \text{Liter} = \text{Gal.} \div 3.79$$

 All deep hole drills must utilize a pilot hole.
Deep hole drills must never operate at full speed without support in the pilot hole.

Material group	Hardness	SFM	Feed Rate - IPR														
			1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 24.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm					
Common structural steels	≤100 Bhn >100-260 Bhn	265 265		0.006	0.010	0.016	0.016	0.016	0.020								
Free-cutting steels	≤24 Rc >24-30 Rc	265 265		0.006	0.010	0.016	0.016	0.016	0.020								
Unalloyed heat-treatable steels	≤16 Rc 16-24 Rc 24-30 Rc	265 265 265		0.006	0.010	0.016	0.016	0.016	0.020								
Alloyed heat-treatable steels	24-30 Rc >30-38 Rc	330 265		0.005	0.008	0.012	0.012	0.012	0.016								
Unalloyed case hardened steels	≤230 Bhn																
Alloyed case hardened steels	24-30 Rc >30-38 Rc																
Nitriding steels	≥24-30 Rc >30-38 Rc																
Tool steels	≤24 Rc >24-30 Rc	230 200		0.005	0.008	0.012	0.012	0.012	0.016								
High speed steels	≥14-30 Rc																
Spring steels	≤330 Bhn																
Stainless steels, sulphured austenitic martensitic	≤24 Rc ≤24 Rc ≤24 Rc	230		0.004	0.006	0.010	0.010	0.010	0.012								
Hardened steels	≤40-48 Rc >48-60 Rc																
Special alloys	≤38 Rc	115		0.002	0.004	0.006	0.007	0.007	0.007								
Cast iron	≤240 Bhn <300 Bhn	330 265		0.004	0.006	0.010	0.010	0.010	0.012								
Spheroidal graphite iron and malleable cast iron	≤240 Bhn <300 Bhn	295 265		0.005	0.008	0.012	0.012	0.012	0.016								
Chilled cast iron	≤350 Bhn																
Ti and Ti-alloys	≤24 Rc >24-38 Rc	130		0.002	0.004	0.006	0.007	0.007	0.007								
Aluminium and Al-alloys	≤120 Bhn	250		0.003	0.005	0.008	0.010	0.010	0.010								
Al wrought alloys	≤150 Bhn																
Al cast alloys ≤ 10 % Si > 10 % Si	≤200 Bhn ≤200 Bhn	250		0.003	0.005	0.008	0.010	0.010	0.010								
Magnesium alloys	≤150 Bhn																
Copper, low-alloyed	≤120 Bhn																
Brass, short-chipping long-chipping	≤200 Bhn ≤200 Bhn																
Bronze, short-chipping	≤200 Bhn																
Bronze, long-chipping	>200-260 Bhn ≤24 Rc >24-30 Rc																
Duroplastics	-																
Thermoplastics	-																
Reinforced plastics - Kevlar	-																
Reinforced plastics - GFK / CFK	-																

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