

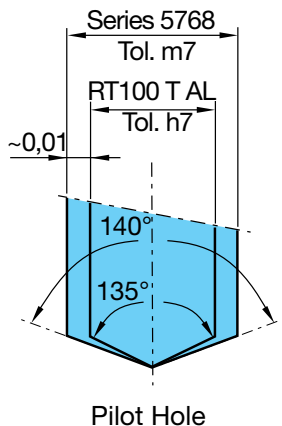


6515, 6516, 6517 (RT 100 T AL) Operating Parameters

Material group	Hardness		SFM	Feed Rate - IPR					
	HRc	Bhn		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
Aluminium and Al-alloys	-	≤ 120	395	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Al wrought alloys	-	≤ 200	395	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Al cast alloys ≤ 10 % Si	-	≤ 180	460	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
> 10 % Si	-	≤ 180	395	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
Magnesium alloys	-	≤ 120	510	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
Copper, low-alloyed	-	≤ 150	395	0.0025	0.0040	0.0065	0.0065	0.0080	0.0100
Brass, short-chipping	-	≤ 180	460	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
long-chipping	-	≤ 180	460	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Bronze, short-chipping	-	≤ 180	395	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
	≤ 25	≤ 255	395	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
Bronze, long-chipping	≤ 25	≤ 255							
	≤ 32	≤ 301							
Duroplastics			330	0.0020	0.0030	0.0050	0.0050	0.0065	0.0080
Thermoplastics			330	0.0020	0.0030	0.0050	0.0050	0.0065	0.0080
Reinforced plastics - Kevlar									
Reinforced plastics - GFK / CFK									

5768 (Recommended pilot drill) Operating Parameters

Material group	Hardness		SFM	Feed Rate - IPR					
	HRc	Bhn		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
Aluminium and Al-alloys	-	≤ 120	1150	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
Al wrought alloys	-	≤ 200	1150	0.0065	0.0125	0.0155	0.0195	0.0250	0.0250
Al cast alloys ≤ 10 % Si	-	≤ 180	1050	0.0065	0.0100	0.0155	0.0155	0.0195	0.0250
> 10 % Si	-	≤ 180	920	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Magnesium alloys	-	≤ 120	1050	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Copper, low-alloyed	-	≤ 150	625	0.0050	0.0080	0.0125	0.0125	0.0155	0.0195
Brass, short-chipping	-	≤ 180	525	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
long-chipping	-	≤ 180	525	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
Bronze, short-chipping	-	≤ 180	525	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
	≤ 25	≤ 255	525	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
Bronze, long-chipping	≤ 25	≤ 255	490	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
	≤ 32	≤ 301	490	0.0040	0.0065	0.0100	0.0100	0.0125	0.0155
Duroplastics			330	0.0020	0.0030	0.0050	0.0050	0.0065	0.0080
Thermoplastics			330	0.0020	0.0030	0.0050	0.0050	0.0065	0.0080
Reinforced plastics - Kevlar									
Reinforced plastics - GFK / CFK			330	0.0015	0.0025	0.0040	0.0040	0.0050	0.0065



Recommended drilling procedure for RT100 T AL drills:

- Machine a pilot hole with an m7 toleranced Guhring series 5768 drill to a pilot depth of 2xD to 3xD.
- Enter the pilot hole at a speed of approx. 300 RPM, and with a feed rate of approx. 20 IPM stopping just shy of the bottom of the hole.
- Start high coolant pressure and increase RPM to recommended value.
- Feed drill at recommended feed rate to final hole depth. No peck cycle required.
- For through holes with oblique exit, reduce the feed rate to 40% approx. 1 mm prior to break-through.
- After reaching hole depth, turn off coolant, reduce machine spindle speed to 300RPM and withdraw the drill at a maximum feed rate of 200IPM.