



ZERON 100 OUTLINE MACHINING GUIDELINES

OPERATION	CUTTING SPEED (m/min)	FEED RATE	DEPTH OF CUT (mm)	TOOL DETAILS	COOLANT/ LUBRICANT	COMMENTS
TURNING (ROUGH)	30 - 65	0.35 - 0.6 mm/rev	3 - 5	CARBIDE GRADE ISO P45 SANDVIK GC4235 PR GEOMETRY	FLOOD	SANDVIK CT 525 MAY ALSO BE USED ON BRIGHT BAR OR FINISHING : PR OR QM GEOMETRY
TURNING (FINISH)	85 - 90	0.2 - 0.4 mm/rev	0.5	CARBIDE GRADE ISO P45 P25 SANDVIK GC4235 OR CT 525 PR OR QM GEOMETRY	FLOOD	SANDVIK CT 525 MAY ALSO BE USED ON BRIGHT BAR OR FINISHING : PR OR QM GEOMETRY
MILLING (ROUGH)	16 - 50	0.2 - 0.4 mm per tooth	6	ISO GRADE P45 SANDVIK GC4235 OR 4040 245 45° APPROACH	ROCOL RTD METAL WORKING COMPOUND/LIQUID	SANDVIK T-MAX 45° CUTTERS HAVE GIVEN SUPERIOR TOOL LIFE AND PERFORMANCE
FACE MILLING MILLING (FINISH)	70	MIN 0.15 mm per tooth	0.25	ISO GRADE P45 SANDVIK GC 235 OR 4040	ROCOL RTD METAL WORKING COMPOUND/LIQUID	SANDVIK MODUMILLS 45° AND 75° MAY BE USED
H.S.S. DRILLING	5 - 9	APPROX 2/3 OF RATE USED FOR STANDARD AUSTENITIC S.S	-	H.S. STEEL POINT ANGLE 118° CHISEL ANGLE 120°	ROCOL RTD METAL WORKING COMPOUND/LIQUID	SANDVIK U DRILLS HAVE PROVEN VERY SUCCESSFUL
SECO DRILLING	60 - 100	0.03 - 0.12 mm/rev	-	-	-	-
TAPPING (SMALL SIZES)	-	-	-	H.S. STEEL STRAIGHT FLUTE HAND TAPS	-	-
TAPPING (LARGE SIZES)	-	-	-	-	ROCOL RTD METAL WORKING COMPOUND/LIQUID	MOST SUCCESSFUL BUT EXPENSIVE ARE "INNESPAN" MACHINE TAPS (TYPICALLY 32 RPM FOR 2" TAP). LESS PREFERRED BUT CHEAPER CHOICE: STANDARD SPIRAL FLUTE TAPS.

NOTE (1) The above machining details are guidelines based on RA Materials' experience and are intended only as a starting point. The precise details for any particular application will depend upon other factors such as component geometry and machine tool capacity and rigidity.

NOTE (2) Where tight tolerances are required on the final product, RA Materials would recommend two passes as minimum, ie rough machine to approx. 2mm envelope on final size, stabilise for at least 12 hours at room temperature and then final machine to size.