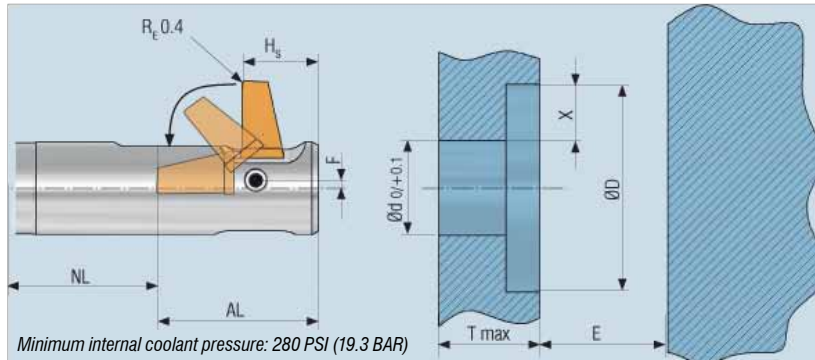


Programming Example

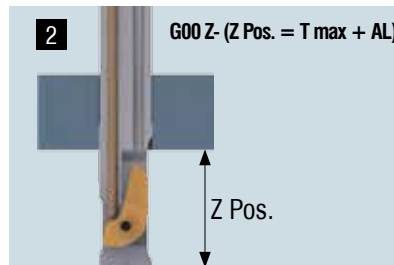


Legend

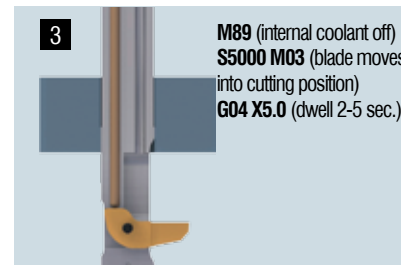
Ød	Bore diameter (tol. 0/+0.1)
ØD	Counterbore diameter
X	Cutting edge width
E	Distance interfering edge
NL	Working length
AL	Swing length
H _s	Cutting position
R _E	Edge radius standard 0.4 mm
T max	Maximum material thickness



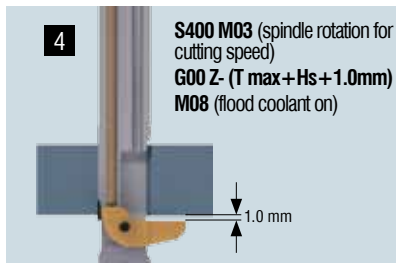
1
M05 (spindle stop)
M88 (internal coolant on)
G04 X2.0 (dwell 2 seconds)
 Position tool above part, spindle off, internal coolant on, dwell 2- 5 seconds (dwell time depends on pump), blade retracts.



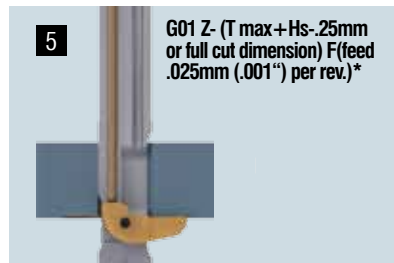
2
G00 Z- (Z Pos. = T max + AL)
 Position tool through the hole (Z Pos. = T max + AL).



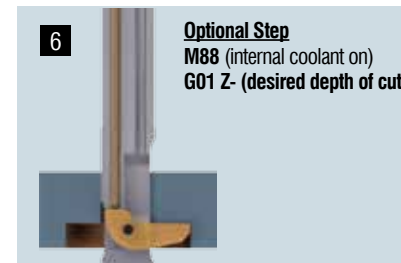
3
M89 (internal coolant off)
S5000 M03 (blade moves into cutting position)
G04 X5.0 (dwell 2-5 sec.)
 Internal coolant off and start spindle 2000-5000 RPM, dwell 2-5 seconds (dwell depends on time it takes to purge the internal coolant), blade moves into cutting position.



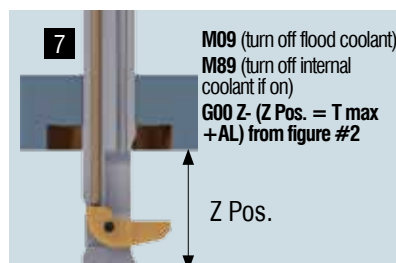
4
S400 M03 (spindle rotation for cutting speed)
G00 Z- (T max + Hs + 1.0mm)
M08 (flood coolant on)
 Turn on spindle at cutting speed. Position cutting blade 1 mm below T max (note tolerance and burr size), turn on flood coolant.



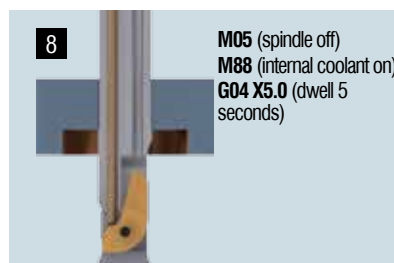
5
G01 Z- (T max + Hs - 25mm or full cut dimension) F (feed .025mm (.001") per rev.)*
 Move Z axis for cutting (approximately .25 mm deep or until full cut) with cutting feed rate.
 *continue to desired depth of cut unless optional next step is required



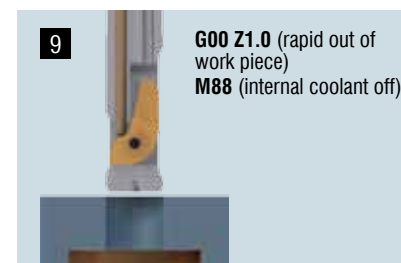
6
Optional Step
M88 (internal coolant on)
G01 Z- (desired depth of cut)
 Optional: For deep bores, turn internal coolant on and feed to desired depth. Insert must be in full cut.



7
M09 (turn off flood coolant)
M89 (turn off internal coolant if on)
G00 Z- (Z Pos. = T max + AL) from figure #2
 If the counterbore depth is reached, switch off internal coolant and external coolant, and rapid back to Z position (Z Pos. = T max + AL).



8
M05 (spindle off)
M88 (internal coolant on)
G04 X5.0 (dwell 5 seconds)
 Spindle stop, internal coolant on, dwell 2-5 seconds, blade retracts.



9
G00 Z1.0 (rapid out of work piece)
M88 (internal coolant off)
 Position tool out of work piece. Internal coolant off or move to next hole location.

*Programming codes vary per machine make and model

1 - Check swing length 2 - Check activation speed on pg 193 3 - Reference cutting data on pg 193