

2.1.11 Boring 5 – CYCLE89



Programming

CYCLE89 (RTP, RFP, SDIS, DP, DPR, DTB)



Parameters

RTP	real	Retraction plane (absolute)
RFP	real	Reference plane (absolute)
SDIS	real	Safety clearance (enter without sign)
DP	real	Final drilling depth (absolute)
DPR	real	Final drilling depth relative to reference plane (enter without sign)
DTB	real	Dwell time at final drilling depth (chip breaking)



Function

The tool drills at the programmed spindle speed and feedrate to the programmed final drilling depth. Once the final drilling depth has been reached a dwell time can be programmed.



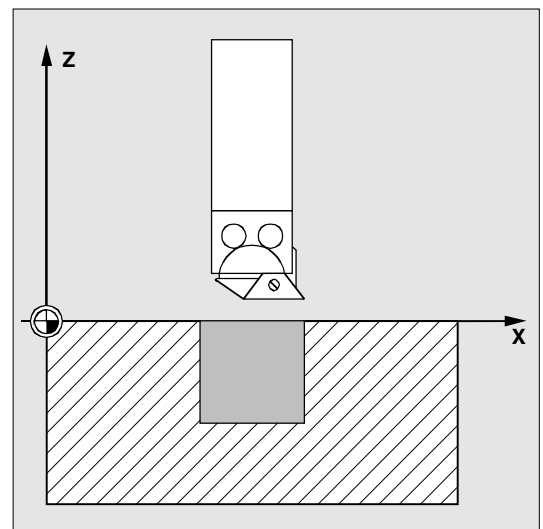
Sequence of operations

Position reached prior to cycle start:

The drilling position is the position in the two axes of the selected plane.

The cycle implements the following motion sequence:

- Approach of the reference plane brought forward by the safety clearance with G0
- Traverse to final drilling depth with G1 and the feedrate programmed before the program call
- Dwell time at final drilling depth
- Retraction to the reference plane brought forward by the safety clearance with G1 and the same feedrate value
- Retraction to retraction plane with G0





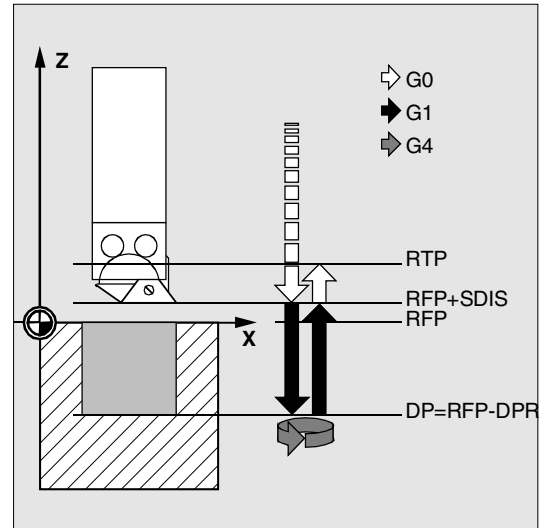
Description of parameters



See Section 2.1.2. (Drilling, Centering – CYCLE81) for a description of parameters RTP, RFP, SDIS, DP, DPR

DTB (dwell time)

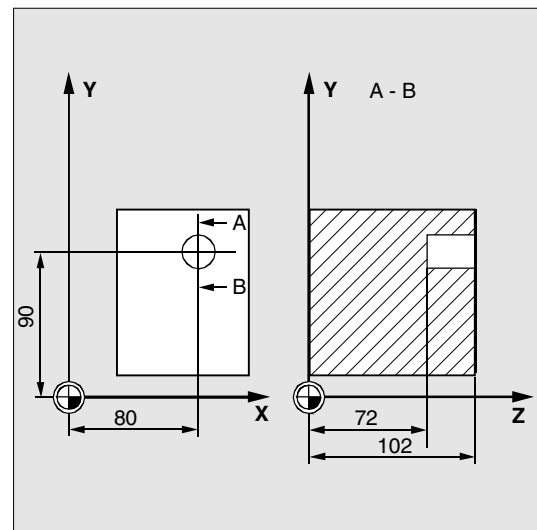
Parameter DTB is the dwell time at the final drilling depth (chip breaking) in seconds.



Programming example

Fifth boring pass

Boring cycle CYCLE89 is called at position X80 Y90 in the XY plane with a safety clearance of 5 mm and the final drilling depth specified as an absolute value. The boring axis is the Z axis.



DEF REAL RFP, RTP, DP, DTB	Definition of parameters
RFP=102 RTP=107 DP=72 DTB=3	Value assignments
N10 G90 G17 F100 S450 M4	Specification of technology values
N20 G0 X80 Y90 Z107	Traverse to drilling position
N30 CYCLE89 (RTP, RFP, 5, DP, , DTB)	Cycle call
N40 M30	End of program