

2.1.7 Boring 1 – CYCLE85



Programming

CYCLE85 (RTP, RFP, SDIS, DP, DPR, DTB, FFR, RFF)



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)
FFR	real	Feedrate
RFF	real	Retraction feedrate



Function

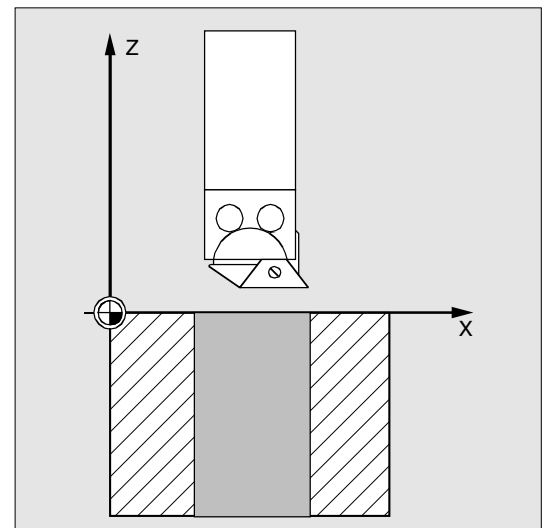
The tool drills at the programmed spindle speed and feedrate to the programmed final drilling depth. The inward and outward movement is performed at the feedrate that is assigned to FFR and RFF respectively.



Sequence of operations

Position reached prior to cycle start:

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



2.1 Drilling cycles

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 at the feedrate programmed under parameter FFR
- Dwell time at final drilling depth
- Retraction to the reference plane brought forward by the safety clearance with G1 and the retraction feedrate defined under parameter RFF
- 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)

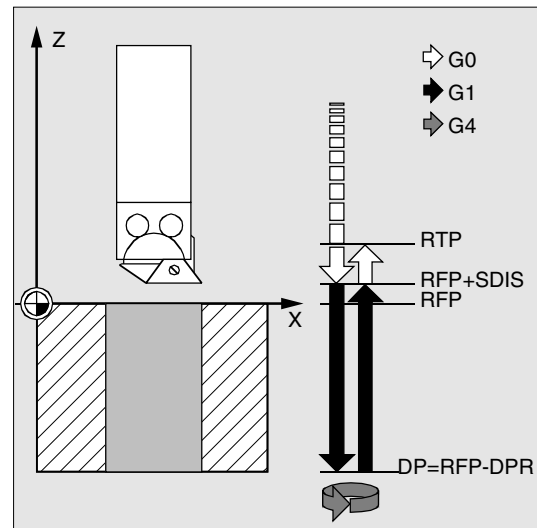
Parameter DTB is the dwell time at the final drilling depth (chip breaking) in seconds.

FFR (feedrate)

The feedrate value assigned to FFR is active for boring.

RFF (retraction feedrate)

The feedrate value assigned to RFF is active for retraction from the plane.

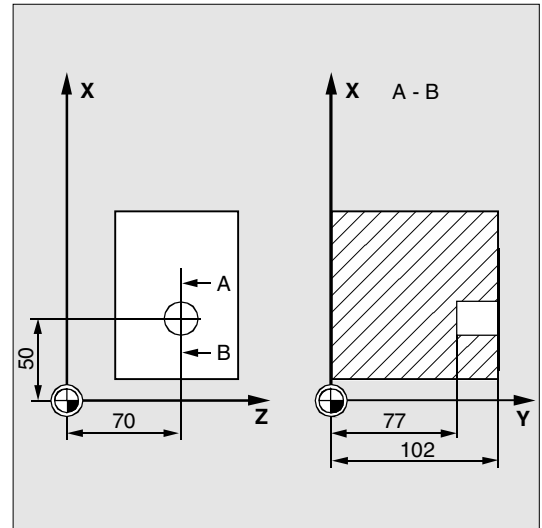




Programming example

First boring pass

Cycle CYCLE85 is called at position Z70 X50 in the ZX plane. The boring axis is the Y axis. The value for the final drilling depth in the cycle call is programmed as a relative value, no dwell time is programmed. The top edge of the workpiece is positioned at Y102.



```
DEF REAL FFR, RFF, RFP=102, DPR=25,
SDIS=2
```

Definition of parameters with value assignments

```
N10 FFR=300 RFF=1.5*FFR S500 M4
```

Specification of technology values

```
N20 G18 Z70 X50 Y105
```

Traverse to drilling position

```
N30 CYCLE85 (RFP+3, RFP, SDIS, , DPR, , ->
-> FFR, RFF)
```

Cycle call, no dwell time programmed

```
N40 M30
```

End of program

-> Must be programmed in a single block