G32 Cycle
Paralle Threading
For ISO Program on Mazak Machine

1st
- G0
- X8.0
- Z-5.0
- 5.0 = 1st pass Diameter
- Start point

- G0
- X5.0
- Z10.0
- 10.0 = Thread length

- G32
- X5.0
- F0.8
- 0.8 = 1 thread lead

- G0
- X8.0
- Z-4.942

2nd
- G0
- X8.0
- Z-4.942

- G0
- X4.8
- Z10
- 4.8 = 2nd pass Diameter
- 4.8 = 2nd flank infeed angle 30Deg

- G32
- X4.8
- F0.8
- -5 + 0.1*TAN30 = - 4.942

- G0
- X8.0
- Z-

3rd
- G0
- X8.0
- Z10
- Z10
- F0.8
- 4.8 = 2nd pass Diameter
- \( -5 + 0.1 \times \tan(30) = -4.942 \)
- \( \text{... = 3rd pass Diameter and so on} \)
G32 Cycle
Conical Threading
For ISO Program on Mazak Machine

1st Threading cycle

Start point

Retract point

2nd

-4.942 = 2nd pass start flank infeed angle 30Deg
-5 + 0.1*TAN30 = -4.942

3rd

... = 3rd pass Diameter and so on
G76 Canned Cycle
Parallel Threading Constant Volume
For ISO Program on Mazak Machine

- $0 = m$ repeat times of final finishing
- $20 = r$ run out length
  $= 20/10 \times \text{lead} = 1.6$
- $60 = a$ Tip angle – thread for Flank infeed
- $0.0 = d$ finishing allowance
- $R0.0$
- $5.0 = \text{Minor Diameter}$
- $10.0 = \text{Thread length}$
- $R0.0$
- $0.0 = i$ Radial difference on length
- $0.5 = k$ Thread height in radius value
- $0.11 = \Delta d$ first cutting depth in radius value
- $0.8 = l$ thread lead
G76 Canned Cycle
Conical Threading Constant Volume
For ISO Program on Mazak Machine

0=m repeat times of final finishing

20=r run out length
=20/10*lead = 4.418

60=a Tip angle – thread for Flank infeed

0.0 =d finishing allowance

R0.0

29.06 = Minor Diameter

Z17.34 = Thread length

0.5399 = i Radial difference on length

P1.644 = k Thread height in radius value

Q0.456 = Δd first cutting depth in radius value

F2.209 =l thread lead