



# CANNED / FIXED CYCLES

Chapter 25



# Review

- Interpolation
  - *Linear G01*
  - *Circular G02/3*
- Feed rates are required – F word
- Can involve one, two, or more axis
- Circular interpolation must include a plane identifier
  - *G17 = XY (IJ), G18 = XZ (IK), G19 = YZ (JK)*
- ALL ARE MODAL

# Canned / Fixed Cycles

- Canned cycles are intended to be a cycle that is easily selected / repeated / combined with other cycles to cut down on program time
- They can be cycles that are used for drilling, milling, pocketing, boring
- They can also be combined to do two or more operations
  - *i.e. set up a drilling and tapping cycle*
  - *Have it repeated over a pattern cycle*

# Important Notes

- Many manufacturers have their own set of cycles
- While some are similar they may vary by machine
  - *They may have different commands per block*
- The way the machine sets up the cycles may vary
  - *Bottom corner or top*
- Some commands are modal and will not be canceled until told
  - *EG. Drilling cycles will stay until canceled*
  - *Patterns will only last for the single line*

# Drilling Cycles

- G81 – Drilling cycle
- G82 – Spot drilling cycle
- G83 – Deep hole drilling cycle – Standard
  - *Commonly called peck*
- G73 – Deep hole drilling cycle – High speed
  - *Commonly called high speed peck*
- G84 – Tapping cycle – Right hand thread
- G74 – tapping cycle – Reverse hand thread
- G85 thru 89 and G76– Boring and reaming cycles

# Cycles

- Ensure you know what cycles you are applying
- If you are applying a boring / drilling cycle remember they are modal
- If you are using a canned cycle to pattern remember that it is not modal
- If you can try and pattern as many holes as you can without changing cycles
  
- Ensure that you cancel any cycles by using G80 before moving on to the next operation

# Homework

- Complete homework assignment in lab on FlashCut computers.
- Turn in today

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