

## Press Controls and Setup (PCS) *Updated for 2018!*

- Understanding Logic Cartridge Valves – basic operation and control cover options
- Review directional control Logic Valves *Rexroth Volume 4 Text*
- Review directional control (BR) *data sheet RE/RA 21010*
- Pressure Control Logic Cartridge Valves *Rexroth Volume 4 Text (BR) data sheet RE/RA 21050* – simple stamping press example
- Review prefill valve and circuit operation (*UIH text excerpt*)
- Pump systems for hydraulic powered presses
  - Open pump loop pumps and controls
  - Typical pressure type pump controls
  - Typical displacement type pump controls
  - Electro-hydraulic proportional valves for tonnage, directional control & pump control
  - Pump control labs and demonstrations
- Press ram speed control
- Press ram return cylinders' (kickers) circuits
- Counterbalance
- Decompression control
- Regen circuits
- Press circuit schematic reading/interpretation – actual press circuits