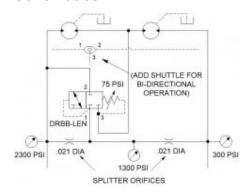


Motors in Series with Leakage Compensation

Machine: | Actuator: Motor | Function: Speed, Torque

Prepared for : Prepared by :

Schematics

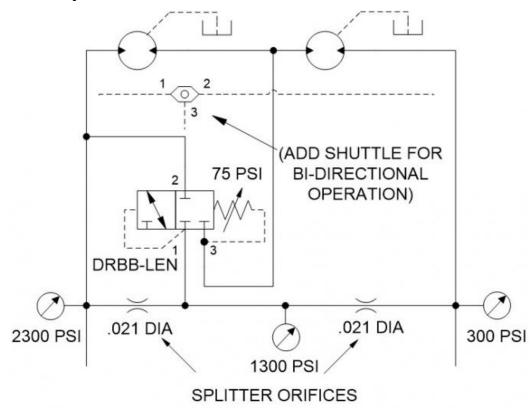


Related Products

Cartridges

DRBB - 2-way, direct-acting, directional valve with internal drain to port 3 - normally closed CSAA - Single ball shuttle valve with signal external

Summary



Two motors in series are mechanically connected (not shown). Since motors have leakage, the motor downstream would tend to rotate slower and will be driven by the external mechanical force. As a result, there is a severe loss in efficiency as the first motor exerts a higher torque than the second motor.

• Direct-acting 2-way directional valve: DRBB
• Shuttle valve: CSA*

Benefits of this circuit arrangement:

- The circuit compensates for the leakage in the upstream motor, allowing both motors to deliver the same torque.
- Splitter orifices are used to generate a pressure that is halfway between the inlet and outlet pressures of the
 motors. This pressure is the setting for a DRBB valve that works as a pressure-reducing valve. It keeps the
 pressure between the motors at such a level that they both motors see the same pressure differential within
 75 nsi
- Note: If the motors are driven in both directions, a shuttle valve can be added to generate the supply to the DRBB as shown in the circuit.

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