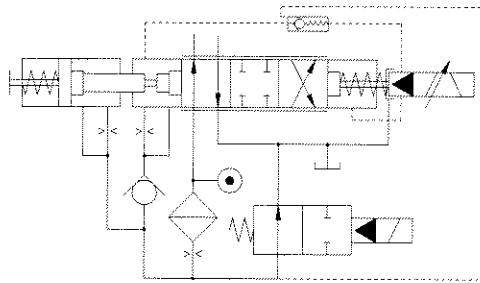


The **728 Series Abort Valves** are high performance, two-stage servovalves intended for use in motion simulation applications requiring high flow. The maximum rated flow for a symmetric configuration is 130 gpm at 1000 psi drop. These valves are typically custom configured for specific application requirements.

The design features of these valves include factory set flow stops, long life hardened CRES spool and sleeves, "simulator" null cuts to minimize pressure changes through zero flow, factory set flow change limits during abort and customer adjustable "abort" flow settings. Optional configurations include asymmetric second stages, units without abort feature and second stage spool position feedback or monitoring using a LVDT or DCDT for custom applications.

728 Series
SERVOVALVES

Hydraulic Schematic



Frequency Response

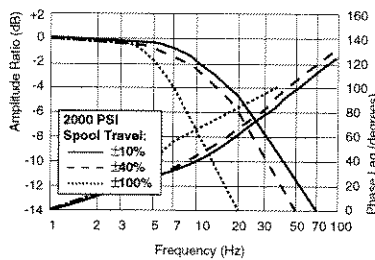


Figure 1 - Frequency Response

Abort Response

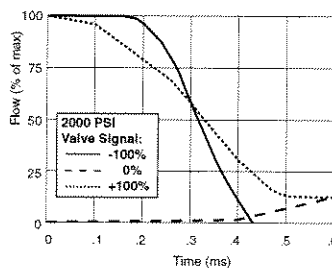


Figure 3 - Flow Response

Step Response

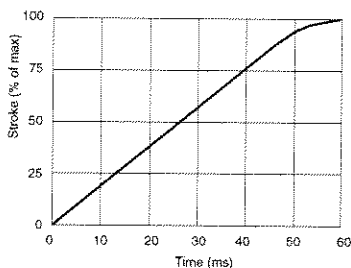


Figure 2 - Step Response

Abort Response

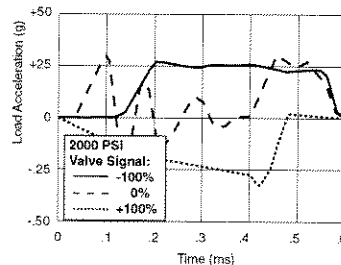


Figure 4 - Acceleration Response

† parameters measured on a 4.0 inch bore, 3.0 inch hydrostatic cylinder with 6200 lb vertical load.

Specifications:

Fluid Supply: 728 Series Abort Valves are intended to operate with constant supply pressure.

Supply Pressure:
3000 psi (210 bar) max.
1000 psi (70 bar) min. (200 psi (15 bar) without abort option)

Return Pressure:
30 psi (2.1 bar) max. recommended

Proof Pressure:
150% of supply pressure at P port
100% of supply pressure at R port

Fluid:
Compatible with common hydraulic fluids
Recommended viscosity range:
60-450 SUS @ 100°F
(10-97 cSt @ 38°C)

Cleanliness Level:
ISO DIS 4406 code 16/13 max.
14/11 recommended

Operating Temperature:
0°F to 180°F (-20°C to 80°C)

Rated Flow Tolerance: ±10%

Hysteresis: < 3.0%

Threshold: < 0.30%

Null Shift:* with temperature, 100°F variation: < 1.5%

Null Leakage:* < 2.5 gpm (9.5 lpm)

Frequency Response:* See figure 1

Step Response:* See figure 2

Abort Response Flow:* See figure 3†

Abort Response Acceleration:* See figure 4†

Smoothness:* < 0.06 g†

Stability:* < 0.03 g†

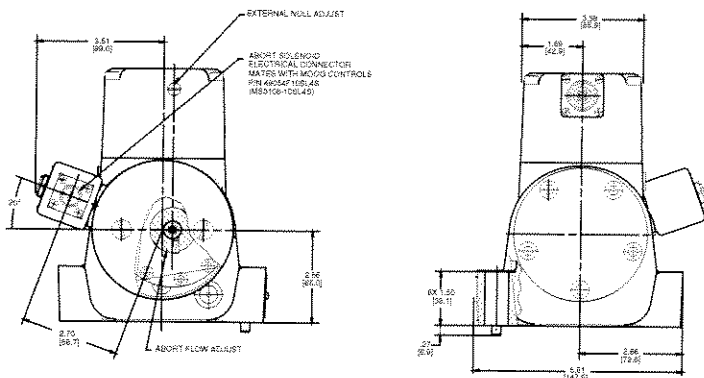
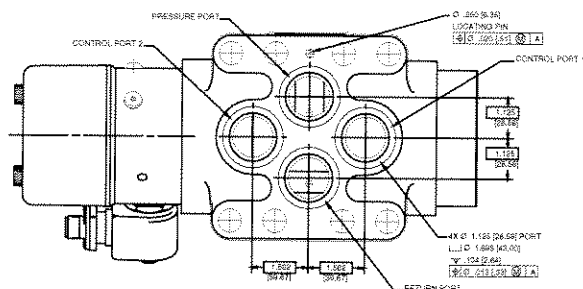
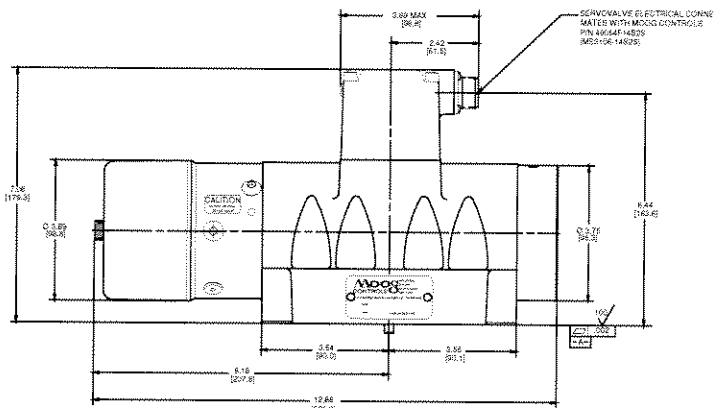
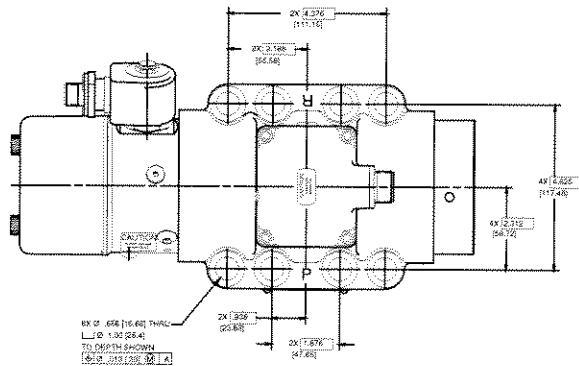
*at 2000 psi (140 bar) supply pressure

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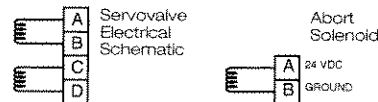
Moog Inc., East Aurora, NY 14052-0018
Telephone: 716/655-3000 Fax: 716/655-1803
Toll Free: 1-800-272-MOOG

728 Series

SERVOVALVES



Standard Electrical Configuration



Servo Valve Polarity: External connections for flow out control port No. 2 are:
 Single coil: A+ B- or D+ C-
 Series coils: tie C to D, A+ B-
 Parallel coils: tie A to D and B to C; A& D+, B& C-

Abort Solenoid Polarity: Valve aborts with flow out control port No. 2 with loss of signal. Coil rated at 12 watts continuous duty operation.

Accessories:

Flushing Block: PN 43949

Mating Electrical Connectors:

Valve: PN 49054F14S2S
 (MS3106F14S-2S)

Solenoid: PN 49054F10SL4S
 (MS3106F10SL4S)

Suggested Mounting Bolts:

.625-11 UNC x 2.50 long (8)
 Torque to 480-540 in-lb.

Subplate: PN 43948-1

4 ports (SAE 1 7/8 - 12 UN straight)
 Thread ports for 1 1/2 dia. tube

Notes:

Valve Weight: 45 lb (20.4 kg)

Base O-Ring Size: (Viton 90 durometer) (4 req'd) PN 42082-264 (univ. -221)

Null Adjust: Flow out of control port No. 2 will increase with clockwise rotation.

Abort Adjust: Flow out of control port No. 2 will decrease with clockwise rotation. Adjustable range from zero to rated flow. (Preset)

Surface Finish: Surface to which valve is mounted requires $\sqrt{32}$ finish, flat within 0.004 [0.10] TIR.

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