MOOG

730-HP8 Series
Servovalves

SPECIFICATIONS

Fluid Supply: 730-HP8 Series Servovalves are intended to operate with constant supply pressure.
Supply Pressure:
Minimum: 5000 psi (345 bar)
(consult factory for lower pressures)
Maximum: 8000 psi (550 bar)
Rated Fatigue Pressure:
≥ 8000 psi per NFPA T2.6.1-1974 (R1982)
Proof Pressure:
150% of supply pressure at P port
3000 psi max. 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:
Minimum: -40°F (-40°C)
(maximum fluid viscosity: 6000 SUS)
Maximum: +275°F (+135°C)
Rated Flow Tolerance: ±10%
Symmetry: < 10%
Hysteresis: < 3%
Threshold: < 1/2%
Null Shift: with temperature, 100°F variation: < 2%
with acceleration to 10g: < 2%
with supply pressure 1000 psi change: < 2%
with back pressure 0 to 500 psi: < 2%
Frequency Response: Typical estimated response characteristics for 730-HP8 Series Servovalves are shown in Figures 1 and 2.
Step Response: Typical estimated transient responses of 730-HP8 Series Servovalves are shown in Figure 3.

The 730-HP8 Series servovalve is specifically designed for operation with supply pressures between 5000 and 8000 psi. Rated flows from 1 to 10 gpm at 1000 psi valve drop are available. These valves have a large field replaceable filter for first stage flow that insures long, trouble-free operation.

The output stage is a closed center, four way sliding spool. The pilot stage is a symmetrical double-nozzle and flapper, driven by a double air gap, dry torque motor. Mechanical feedback of spool position is provided by a cantilever spring. The valve design is simple and rugged for dependable, long life operation.

FREQUENCY RESPONSE

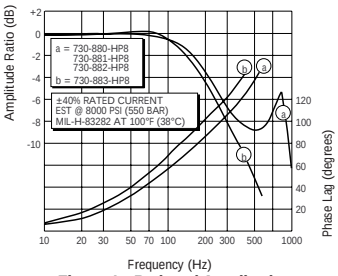


Figure 1 - Reduced Amplitude Frequency Response

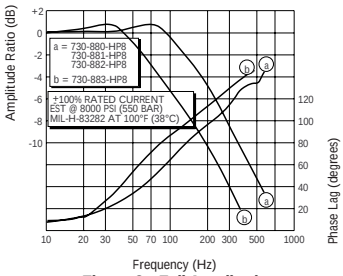


Figure 2 - Full Amplitude Frequency Response

STEP RESPONSE

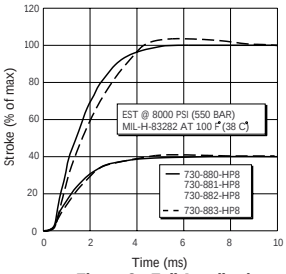


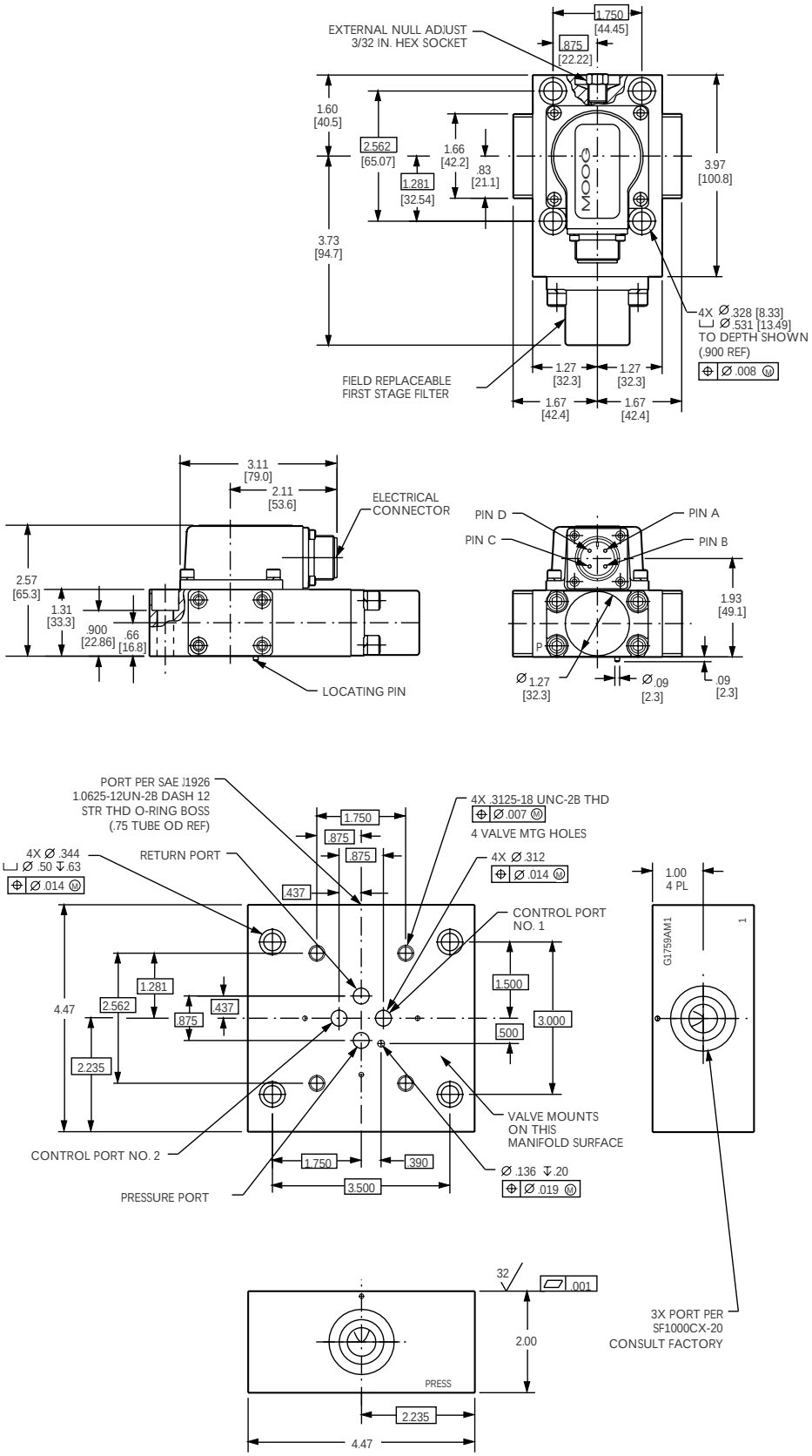
Figure 3 - Full Amplitude Step Response

AVAILABLE FLOW AND SPOOL CONFIGURATIONS

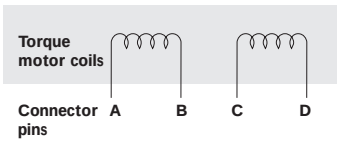
Model	Response	Rated Flow (1000 psid)		Internal Leakage (1000 psi)		Rated Current (parallel coils)	Coil Nom. Resistance
		gpm	lpm	gpm	lpm	mA	ohms
730-880-HP8	Standard	1	3.8	<0.17	<0.66	40	80
730-881-HP8	Standard	2.5	9.5	<0.22	<0.83	40	80
730-882-HP8	Standard	5	19	<0.35	<1.33	40	80
730-883-HP8	Standard	10	38	<0.35	<1.33	40	80

Optional designs are available with special flow null cuts.
Available seal materials: BUNA, VITON (Standard) or EPR.

730-HP8 SERIES INSTALLATION AND MANIFOLD



STANDARD ELECTRICAL CONFIGURATION



External connections and electrical polarity for flow out control port No. 2 are:

single coil: A+, B-; or C+, D-
series coils: tie B to C; A+, D-
parallel coils: tie A to C and B to D; A & C+, B & D-

ACCESSORIES

Flushing Block: PN 23718-1K1

Mating Electrical Connector:
PN 49054F14S2S (MS3106F14S-2S)

Suggested Mounting Bolts:
PN A31324-224B 5/16 - 18NC x 1-1/2 long socket head cap screw

Replacement Filter Cartridge:
PN 22050K1

Subplate:
4 port PN G1759AM1

NOTES

Valve Weight: 4.3 lb (2.0 kg)

Subplate O-Ring Size:
0.070 [1.78] sect. x 0.426 [10.82] I.D. (universal size -013)

Aux. Pilot Pressure Port O-Ring Size:
0.070 [1.78] sect. x 0.364 [9.25] I.D. (universal size -012)

Aux. Pilot Pressure Port:
Furnished with standard valves.

Null Adjust: Flow out of control port No. 2 will increase with clockwise rotation of the null adjust screw (3/32 hex key).

Surface Finish: Surface to which valve is mounted requires 32 finish, flat within 0.001 [0.03] TIR.

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