

SPECIFICATIONS

Fluid Supply: 730 Series Servovalves are intended to operate with constant supply pressure.

Supply Pressure:

Minimum: 200 psi (14 bar)

Maximum Standard:

3500 psi (245 bar)

Maximum (special order):

5000 psi (350 bar)

Proof Pressure:

150% of supply pressure at P port

3000 psi 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 response characteristics are shown in Figures 1 and 2.

Step Response:

Typical transient responses are shown in Figure 3. The straight line portion of the response represents saturation flow from the pilot stage which will increase with higher supply pressures.

The 730 Series is a high performance, two-stage design that covers the range of rated flows from 1 to 15 gpm at 1000 psi valve drop. 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 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

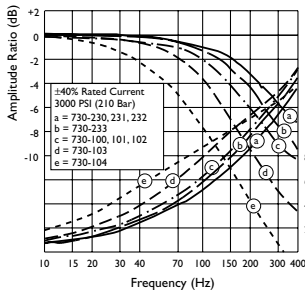


Figure 1 - Reduced Amplitude Frequency Response

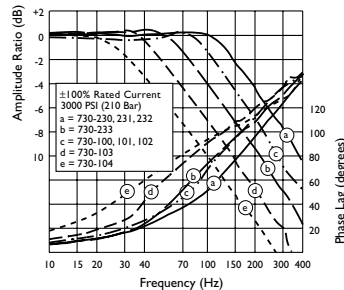


Figure 2 - Full Amplitude Frequency Response

STEP RESPONSE

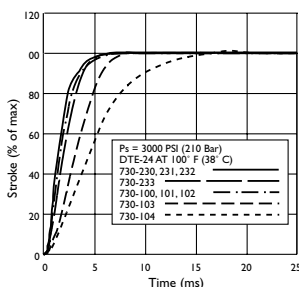


Figure 3 - Full Amplitude Step Response

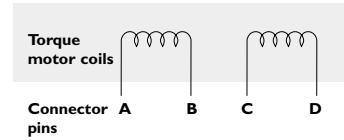
AVAILABLE FLOW AND SPOOL CONFIGURATIONS

Model	Response	Rated Flow (1000 psid)		Internal Leakage (1000 psi)		Rated Current (parallel coils)	Coil Nom. Resistance
		gpm	lpm	gpm	lpm		
730-100	Standard	1	3.8	<0.17	<0.66	15	200
730-230	High	1	3.8	<0.23	<0.92	40	80
730-101	Standard	2.5	9.5	<0.22	<0.83	15	200
730-231	High	2.5	9.5	<0.30	<1.15	40	80
730-102	Standard	5	19	<0.35	<1.32	15	200
730-232	High	5	19	<0.45	<1.78	40	80
730-103	Standard	10	38	<0.35	<1.32	15	200
730-233	High	10	38	<0.45	<1.78	40	80
730-104	Standard	15	57	<0.35	<1.32	40	80

Optional designs are available with intrinsically safe coils (FM approved), and/or special spool/bushing lap configuration. Available seal materials: VITON (standard), BUNA, or EPR.

730 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:
 For 3000 psi, 5000 psi, 4 port or 5 port
 PN 43586AM7

NOTES

Valve Weight: 2.5 lb (1.1 kg)

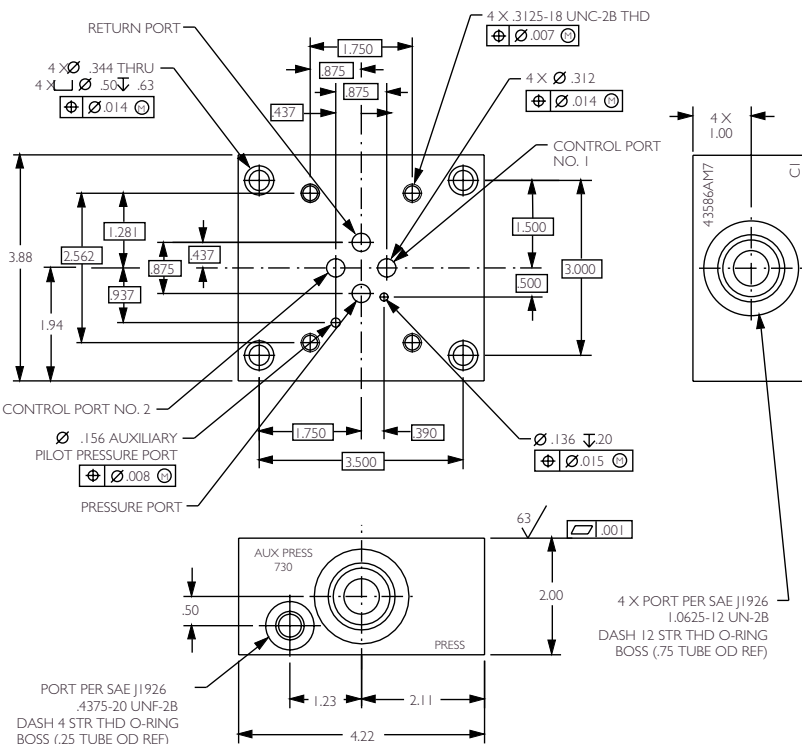
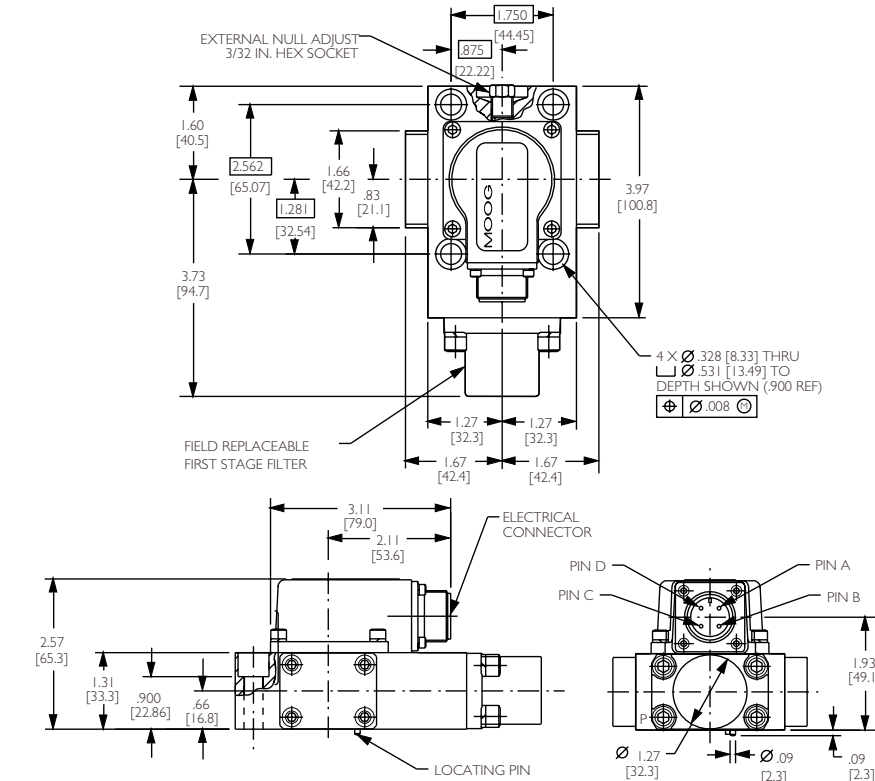
Subplate O-Ring Size:
 0.070 [1.78] sect. x 0.426 [10.82] I.D.
 (universal size -013)

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 $\sqrt{0.3}$ finish, flat within 0.001 [0.03] TIR.



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