

MOOG

A085 Series Servoactuators

SPECIFICATIONS

Operating Pressure:
Standard: 500 to 3000 psi *
Optional (special order): 4000 psi

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: -20°F (-28°C)
(maximum fluid viscosity 6000 SUS)
Maximum: +200°F (+93°C)

Seals:
Fluorocarbon O-Rings
with anti-extrusion device

External Leakage:
Rod Seals: slight rod wetting

Radial Load:
Maximum: 50 lbs.

Transducer Null Adjustment:
± 0.25 inch

Orientation: Any

Cycle Life:
> 10⁷ cycles between seal changes

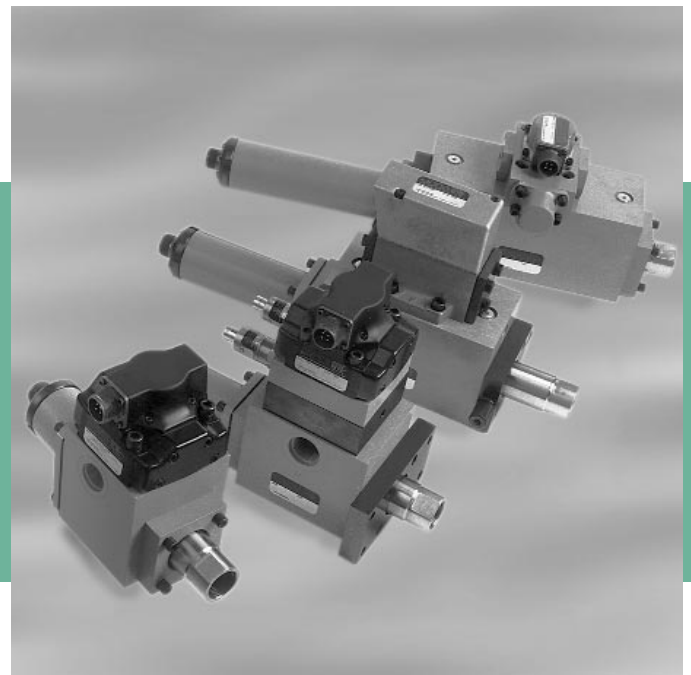
Exterior Materials:

- Aluminum Alloy (chromic acid anodized)
- Alloy Steel (zinc or chrome plated; black oxide treated)
- Stainless Steel

The Moog A085 Series Servoactuators combine high performance cylinders, linear feedback devices and servovalves in one assembly. These servoactuators have been specifically developed to offer the advantages of custom engineered units designed for industrial applications without the costs or delays that can accompany a custom designed unit.

The choice of servovalves, feedback transducers, working areas and strokes available will accommodate most control requirements. Maximum compatibility with other Moog components such as electronics and special function manifolds.

The benefits of the A085 Series include totally assembled and self contained units that are 100% tested before shipment. Minimized plumbing and fixturing as well as case drain for zero rod leakage.



STANDARD OPTIONS

Piston Areas: 1.1 in², 3.4 in², 6.8 in²

Strokes: 1 in, 2 in, 4 in, 6 in

Servovalve Selection: 62 Series,
760 Series

Selection of Cylinder Mounting:
Base Mount, Front or Rear Flange
Mount, Front or Rear Trunnion Mount

**Optional Crossports Relief
Valves (CRV)**

**Optional Cylinder Bypass Orifice
(AMO)**

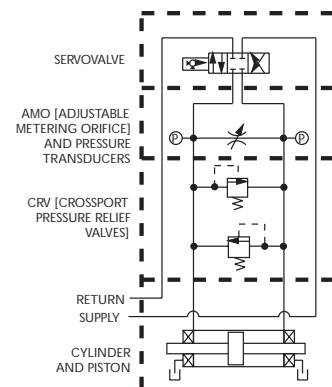
Optional Pressure Transducers

Optional Filter for supply fluid

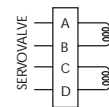
**Wide Range of Flow Capacity
and Dynamic Response
Selection**

**Selection of LVDT or DCDT for
position feedback**

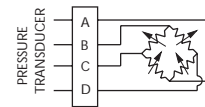
TYPICAL HYDRAULIC CIRCUIT



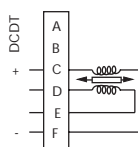
ELECTRICAL SCHEMATIC



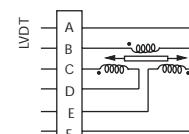
POLARITY:
Parallel coils: A & C (+),
B & D (-) actuator extends
Series coils: B & C interconnected,
A (+), D (-) actuator extends



POLARITY:
Input: A (+), B (-)
Output: C positive with respect
to D with pressure applied



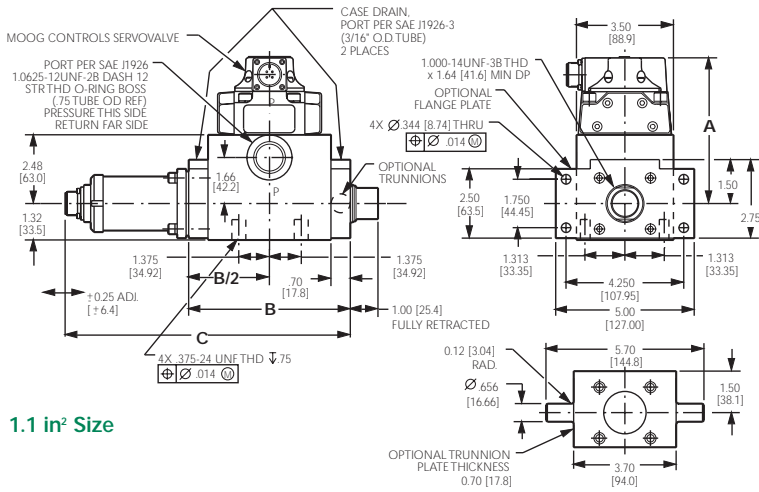
PHASING:
Input: C (+), F (-)
Output: with actuator
extended E is positive
with respect to D



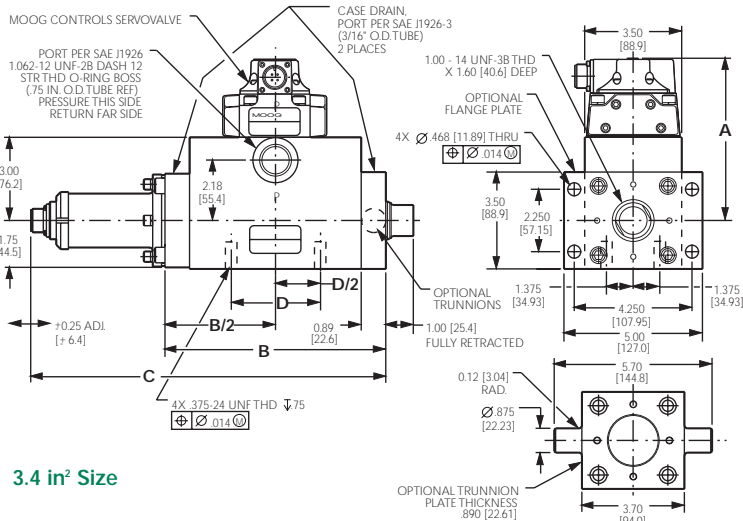
PHASING:
Input: A & B
Output: interconnect D & E;
with actuator extended,
B & C common, A & F are in phase

* Input polarity must be observed

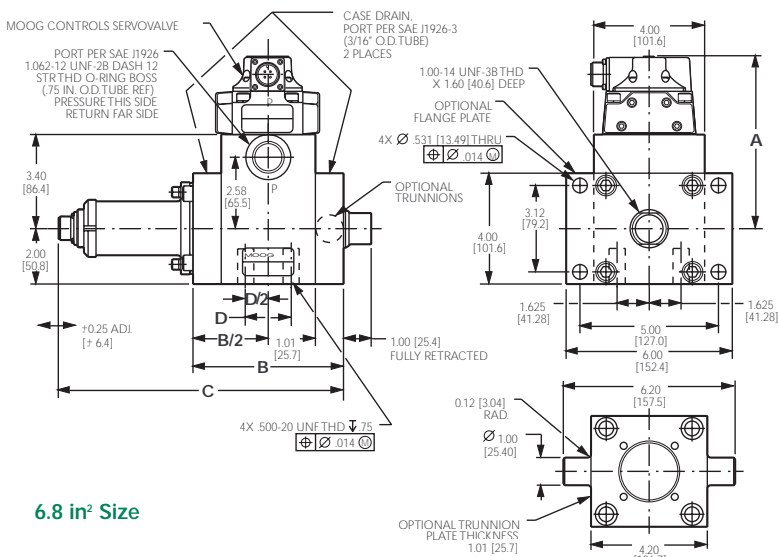
A085 SERIES INSTALLATIONS AND MANIFOLDS



1.1 in² Size



3.4 in² Size



6.8 in² Size

ACCESSORIES

Rod End Adapter:

P/N A31558
converts rod end to female 1/2-20 UNF-3 x 1.00 DP thd; adapter adds 0.50 inch to rod end length

Servo Valve Mating Electrical Connector:

P/N 49054F14S2S
(MS3106F14S-2S)

Position Transducer Mating Electrical Connector:

P/N 49054F14S6S
(MS3106F14S-6S)

Pressure Transducer Mating Electrical Connector:

P/N 49532-18
(MS3116E8-4S)

1.1 in² Size

Actuator plus 760 Servo Valve	A	Piston Stroke	B	C
Servo Valve only	5.48 [139.2]	1.00 [25.4]	4.84 [122.9]	9.17 [232.9]
Servo Valve plus Relief Valves (CRV)	6.73 [170.9]	2.00 [50.8]	5.84 [148.3]	11.17 [283.7]
Servo Valve plus Metering Orifice (AMO)	6.46 [164.1]	4.00 [101.6]	7.84 [199.1]	15.17 [385.3]
Servo Valve plus Relief Valves (CRV) & Metering Orifice (AMO)	7.71 [195.8]	6.00 [152.4]	9.84 [249.9]	19.17 [486.9]

3.4 in² Size

Actuator plus 760 Servo Valve	A	Piston Stroke	B	C	D
Servo Valve only	6.00 [152.4]	1.00 [25.4]	4.98 [126.5]	9.31 [236.5]	1.00 [25.4]
Servo Valve plus Relief Valves (CRV)	7.25 [184.2]	2.00 [50.8]	5.98 [151.9]	11.31 [287.3]	1.50 [38.1]
Servo Valve plus Metering Orifice (AMO)	6.98 [177.3]	4.00 [101.6]	7.98 [202.7]	15.31 [388.9]	3.00 [76.2]
Servo Valve plus Relief Valves (CRV) & Metering Orifice (AMO)	8.23 [209.0]	6.00 [152.4]	9.98 [253.5]	19.31 [490.5]	5.00 [127.0]

6.8 in² Size

Actuator plus 760 Servo Valve	A	Piston Stroke	B	C	D
Servo Valve only	6.40 [162.5]	1.00 [25.4]	5.43 [137.9]	8.88 [225.6]	None
Servo Valve plus Relief Valves (CRV)	7.65 [194.3]	2.00 [50.8]	6.43 [163.3]	10.88 [276.4]	1.38 [35.1]
Servo Valve plus Metering Orifice (AMO)	7.38 [187.4]	4.00 [101.6]	8.43 [214.1]	14.88 [377.9]	3.00 [76.2]
Servo Valve plus Relief Valves (CRV) & Metering Orifice (AMO)	8.63 [219.2]	6.00 [152.4]	10.43 [264.9]	18.88 [479.6]	5.00 [127.0]

MOOG

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