GRESEN®

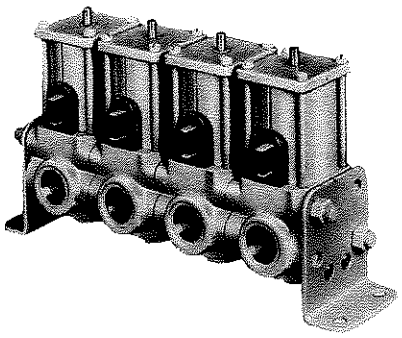
DANA

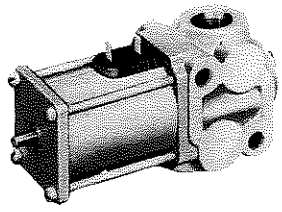
Engineering Data

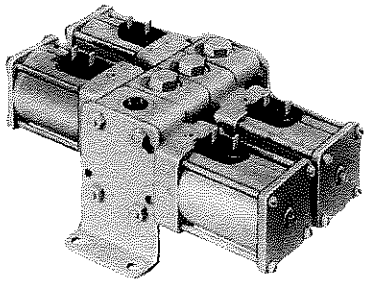
DIRECTIONAL CONTROLS
TWO-WAY VALVE

3/8" — **3000 PSI**
8 GPM

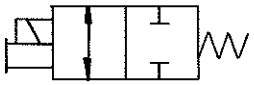
SOLENOID OPERATED
STACKABLE
INLINE MOUNTED



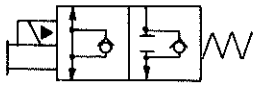




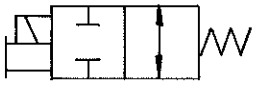
SYMBOLS



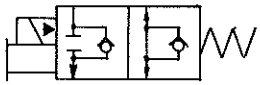
SPOOL TYPE
NORMALLY CLOSED



POPPET TYPE
NORMALLY CLOSED



SPOOL TYPE
NORMALLY OPEN



POPPET TYPE
NORMALLY OPEN

SPECIFICATIONS

PRESSURE RATING--3000 psi (207 bar; 20,700 kPa)

FLOW RATING -- Spool Type . . . . . 8 gpm (30 L/min) Nominal
Poppet Type . . . . . 15 gpm (57 L/min) Nominal

SOLENOIDS -- DC solenoids are available with 6v, 12v, or 24v ratings. AC solenoids are available with 115v ratings. Extended manual push pins are standard and optional palm buttons are available. Consult factory for other voltage ratings.

FLUID RECOMMENDATIONS -- Premium grade hydraulic fluid with 60 SUS (10cSt) to 1000 SUS (216cSt) viscosity at operating temperature.

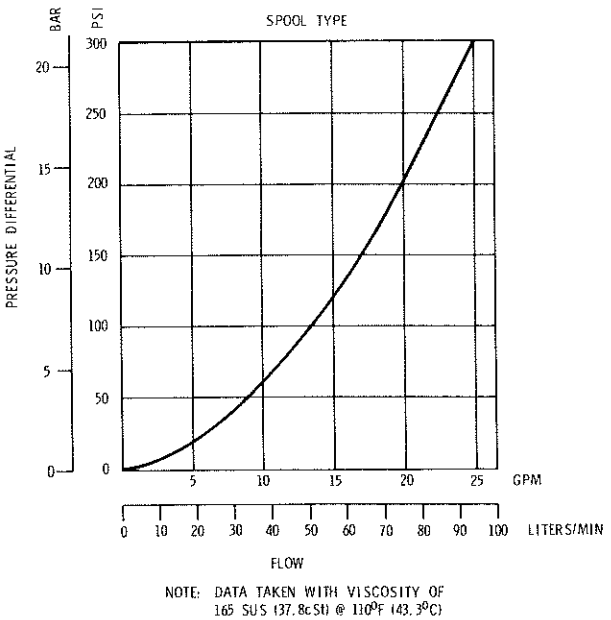
TEMPERATURE -- Under normal conditions of continuous operation, fluid temperature should not exceed 180°F (82°C). In no instance, should the temperature exceed 200°F (93°C).

MOUNTING -- Not restricted.

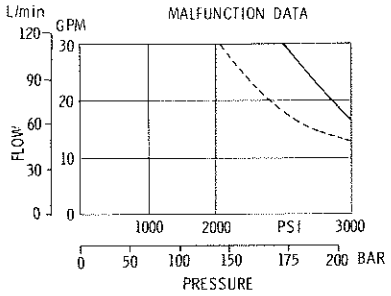
WEIGHT (Approx.) -- Spool Type . . . . . 5 lbs. (2.3 kg)
Poppet Type . . . . . 4.5 lbs. (2.1 kg)

PERFORMANCE CHARACTERISTICS

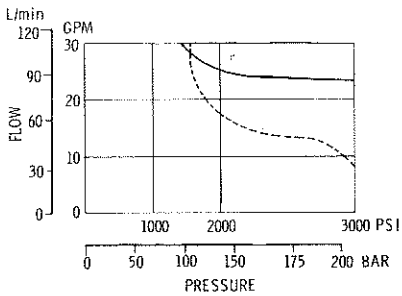
SPOOL TYPE



NOTE: DATA TAKEN WITH VISCOSITY OF 165 SUS (37.8cSt) @ 110°F (43.3°C)



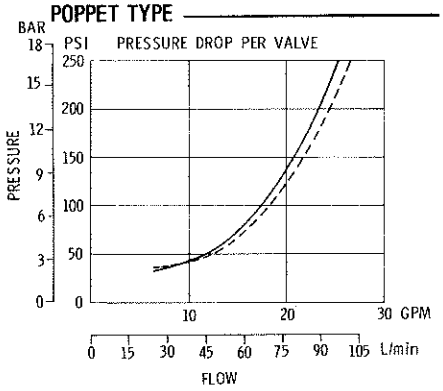
FLOW IN PORT A, OUT PORT B
FLOW IN PORT B, OUT PORT A
NORMALLY CLOSED



FLOW IN PORT A, OUT PORT B
FLOW IN PORT B, OUT PORT A
NORMALLY OPEN

TYPICAL LEAKAGE (SPOOL TYPE)		MAXIMUM LEAKAGE (POPPET TYPE) 5 DROPS/MINUTE
PRESSURE psi (bar)	LEAKAGE in^3/min (milliliters/min)	
1000 (69)	5 (82)	
2000 (138)	10 (164)	
3000 (207)	15 (246)	

POPPET TYPE



NORMALLY CLOSED
NORMALLY OPEN

NOTE: Data taken with viscosity of 230 SUS (50cSt) @ 100°F (38°C)

SOLENOID DATA

	Series 6 Encapsulated DC Solenoid	Series 9 Encapsulated AC Rect. Solenoid
Duty	See Note	Continuous*
Wattage @ 70°F	44	35
Wattage After 10 Min. Continuous Duty	27	21

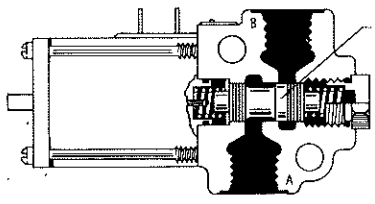
NOTE: Specify Series 9, 30 Watt Solenoid For Continuous Duty.

* High Temperature May Cause Rectifier Failure. Hot Fluid, High Ambient Temperature And/Or Extended Use May Combine To Cause Overheating.

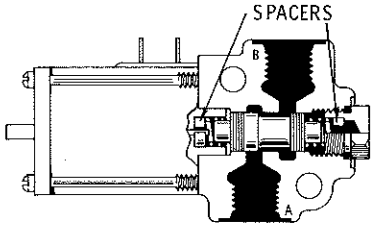
PICTORIALS

SPOOL TYPE

This valve is designed with a reversible spool for ease of field conversion from normally open to normally closed or normally closed to normally open by just reversing the spool. The addition of two spacers (0.19 (4.8) I.D. x 0.44 (11.1) O.D. x 0.180 (4.6) thick) is also required when converting normally closed valve to normally open valve, Part Number 355461.



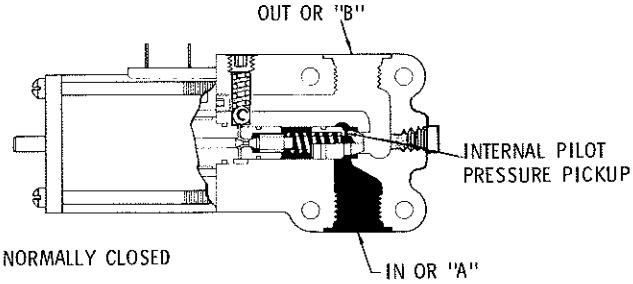
NORMALLY CLOSED



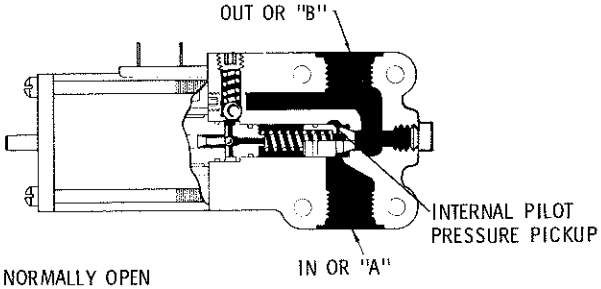
NORMALLY OPEN

POPPET TYPE

The valve is designed for fast response, low pressure drop, and can be used anywhere a low leakage 2-way valve is required. It gives the same circuit action as a check valve in that it free flows when flow is reversed. The valve is stackable or can be mounted individually.



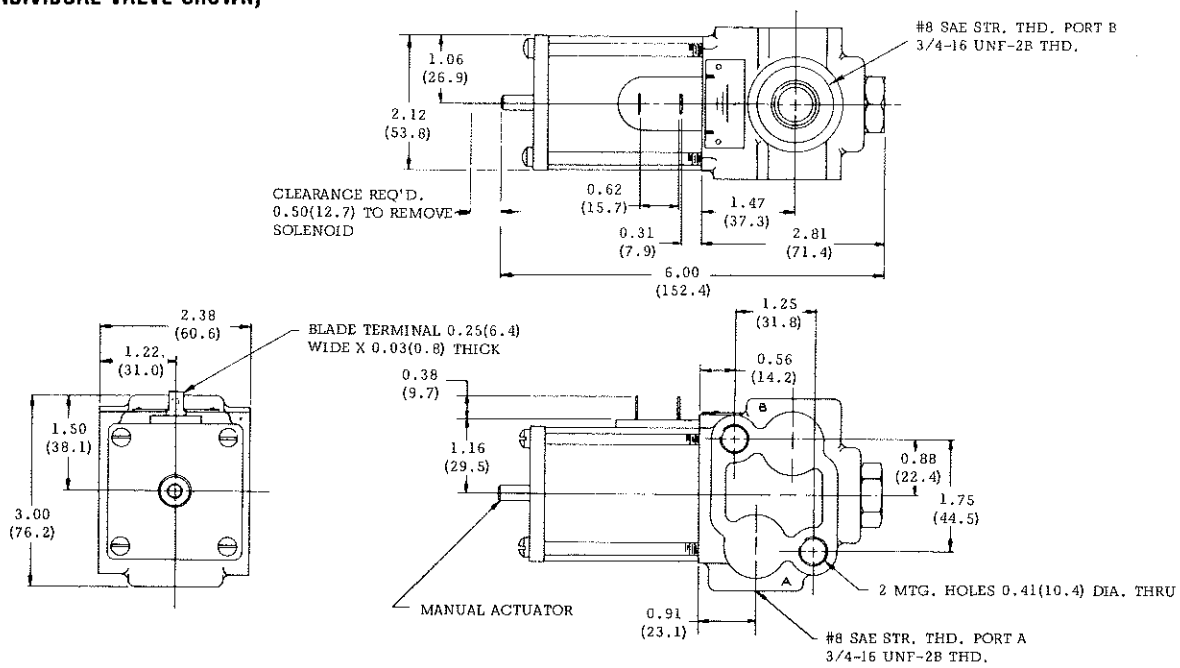
NORMALLY CLOSED



NORMALLY OPEN

DIMENSIONAL DATA — SPOOL TYPE

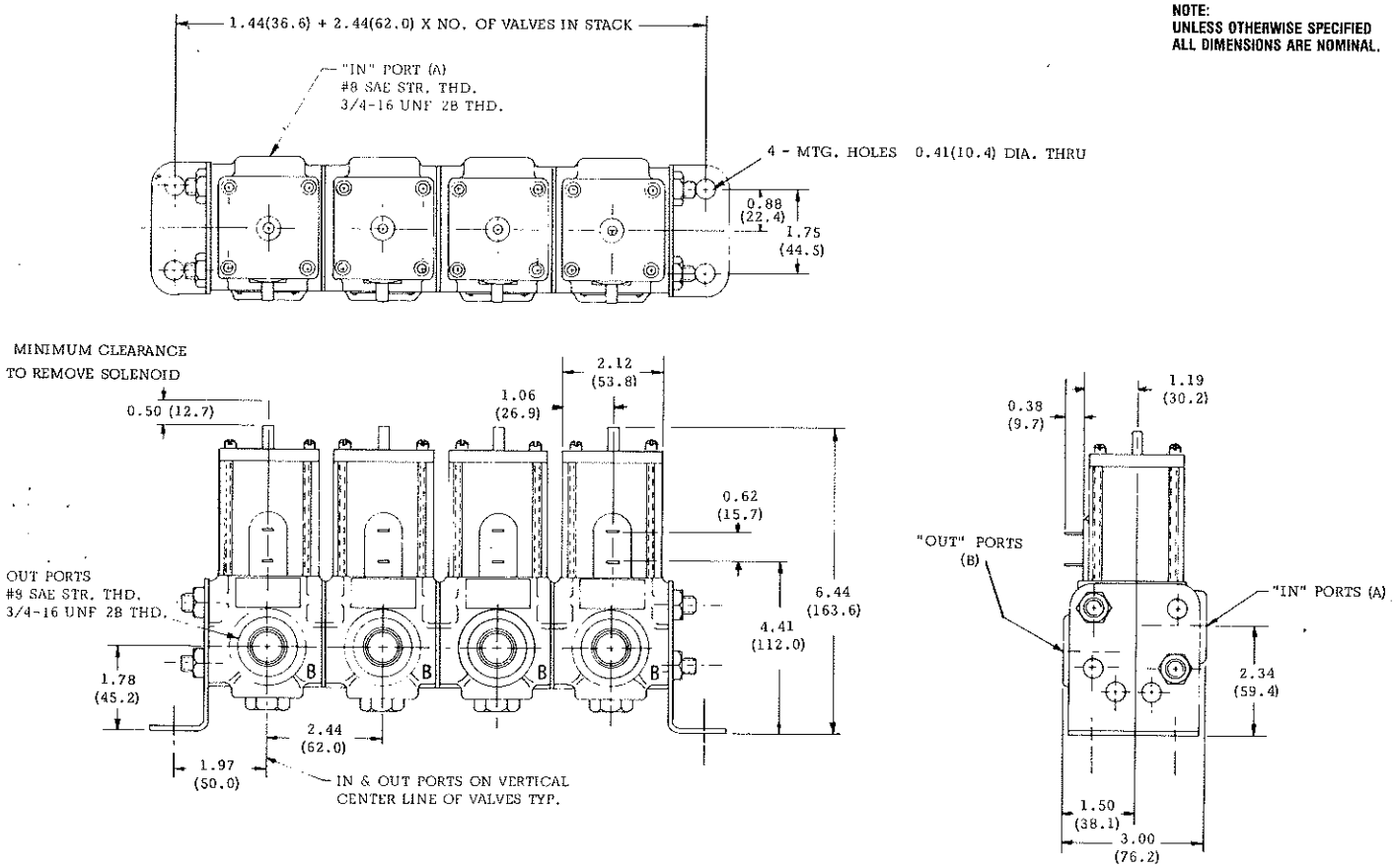
DC SOLENOID — (INDIVIDUAL VALVE SHOWN)



TYPICAL STACK — (STD. D.C. SOLENOIDS)

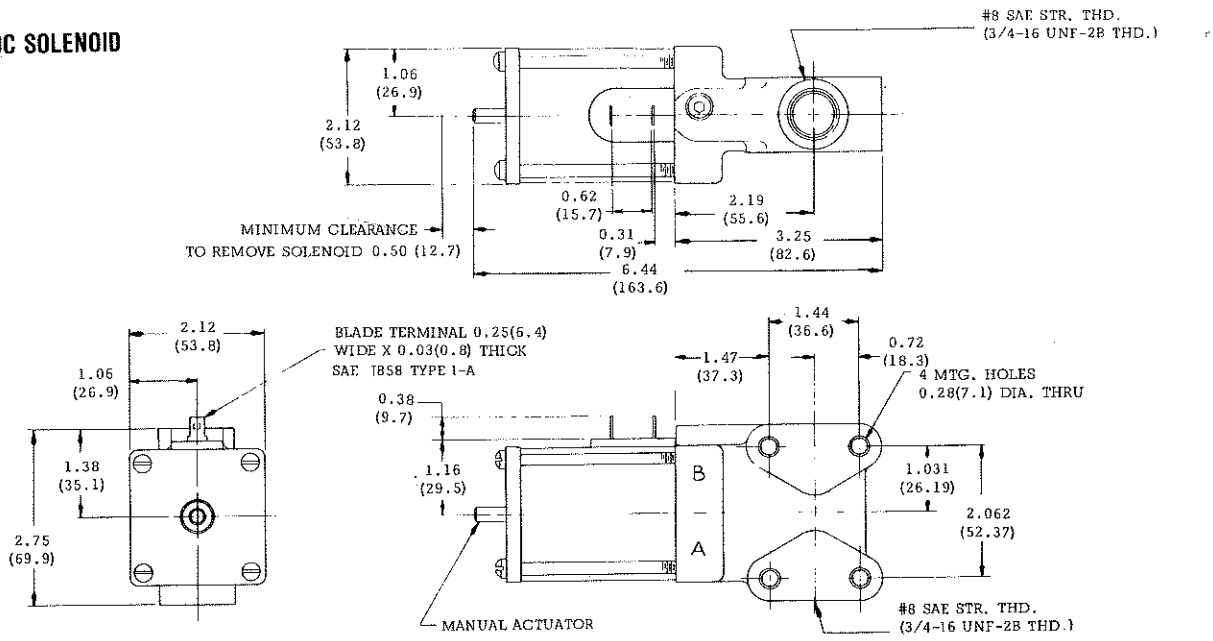
INCHES (MILLIMETRES)

NOTE:
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.

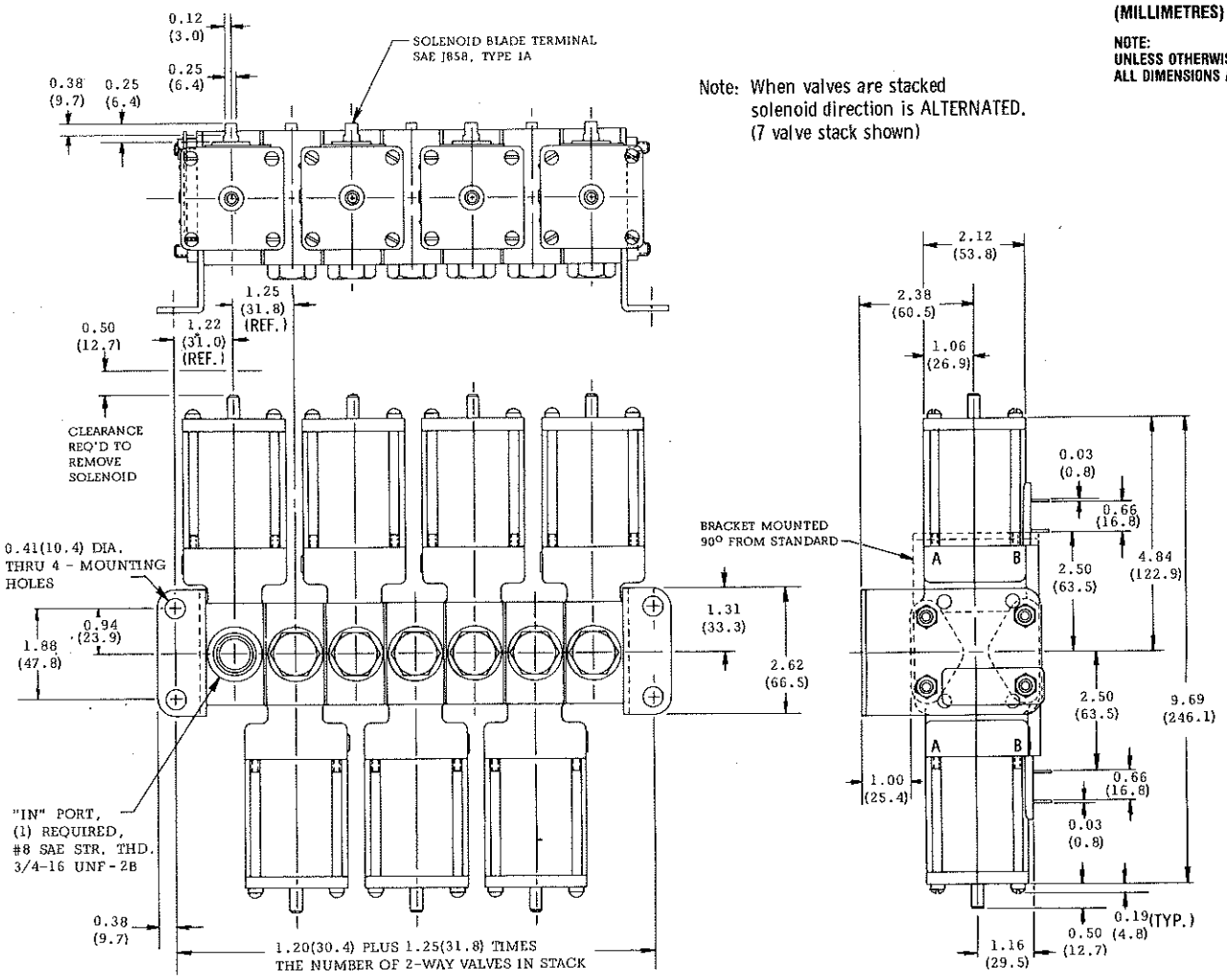


DIMENSIONAL DATA — POPPET TYPE

DC SOLENOID



TYPICAL STACK



INCHES
(MILLIMETRES)

NOTE:
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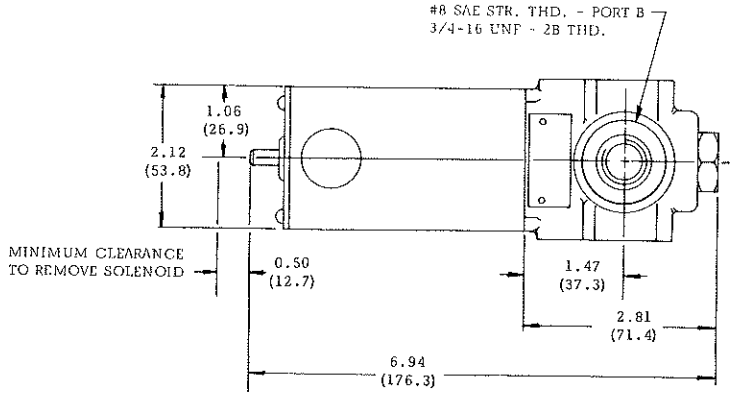
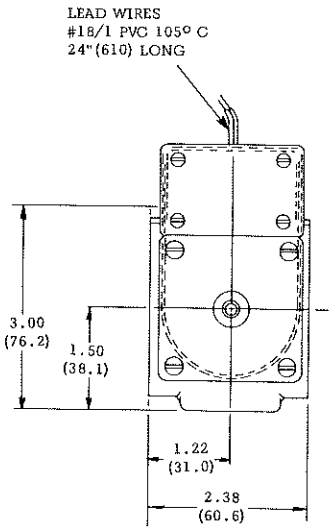
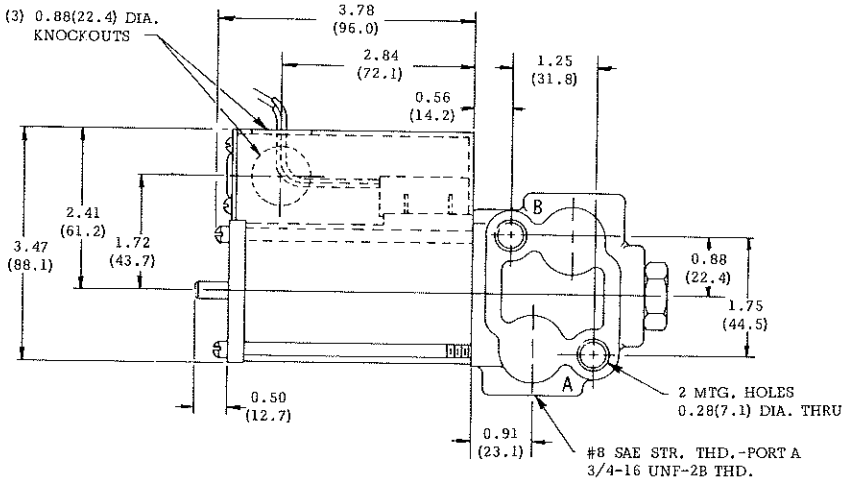
ALL DIMENSIONS ARE NOMINAL.

SPOOL TYPE VALVE



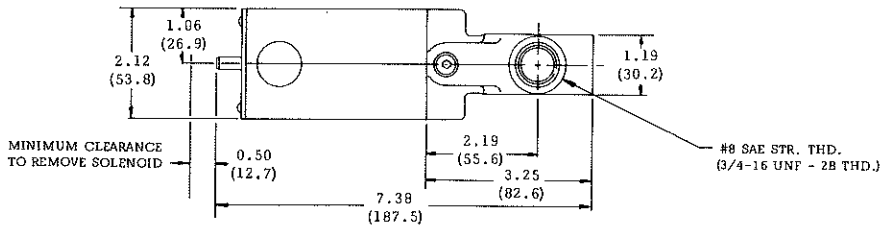


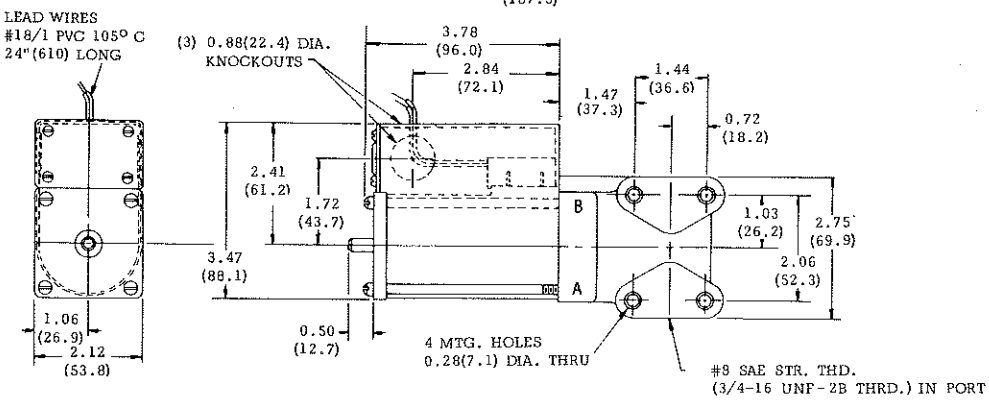


INCHES
(MILLIMETRES)

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE NOMINAL.

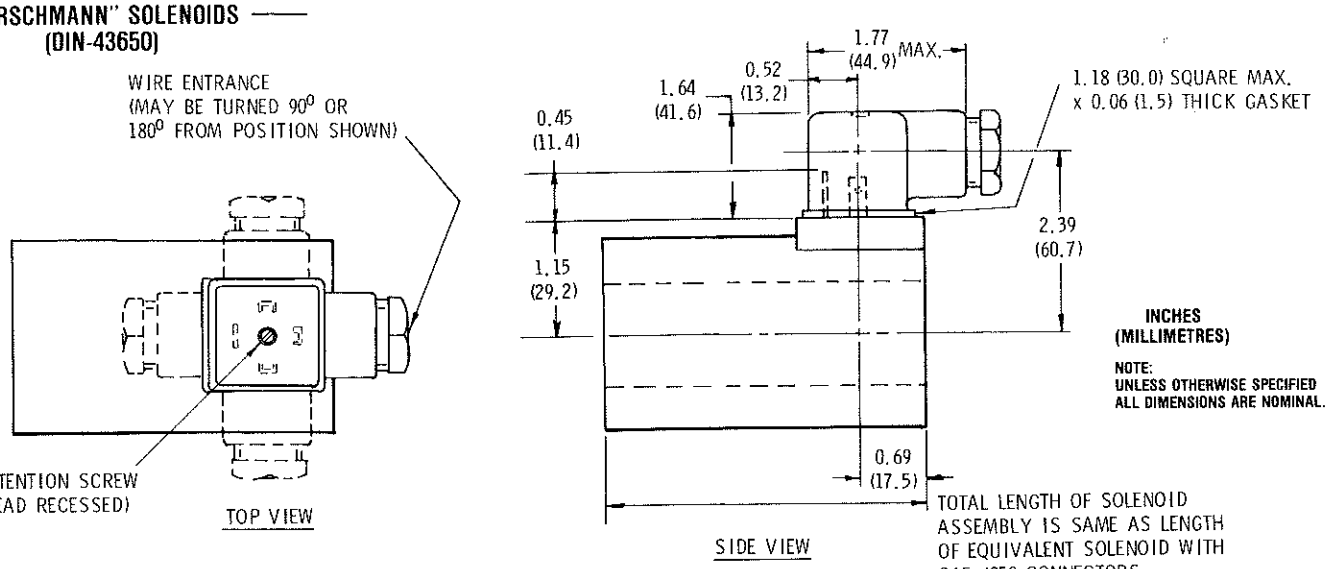
POPPET TYPE VALVE





OPTIONS

"HIRSCHMANN" SOLENOIDS (DIN-43650)



INCHES
(MILLIMETRES)

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE NOMINAL.

HIRSCHMANN SOLENOID (DIN-43650)--This solenoid utilizes a bipolar connector. This electrical connector enables quick disconnecting of the solenoid from the electrical power source without disturbing the wiring.

"Hirschmann" Solenoid (DIN-43650) Encapsulated DC Coil With DIN-43650 Electric Connector. Use With Mating Female Plug 951923 As Shown For Single Solenoid. Use 951924 For Double Solenoid Valve.

HOW TO ORDER

SPOOL TYPE VALVES

MA06-ADNC-*

A--IN-LINE

B--STACKABLE
UPSTREAM

C--STACKABLE
MID-STACK
(NO EXTERNAL A PORT)

D--STACKABLE
DOWNSTREAM
(NO EXTERNAL A PORT)

K--NON-STANDARD

C--NORMALLY CLOSED

D--NORMALLY OPEN

6 VDC

12 VDC

24 VDC

115 VOLT RECTIFIED
AC TYPE SOLENOID.

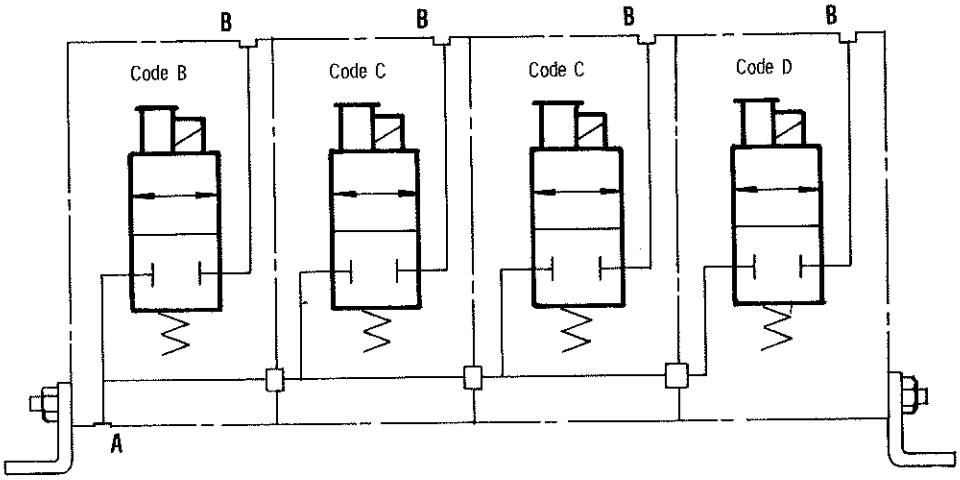
EXTENDED MANUAL PUSH PINS
W/PALM BUTTON.

***EXPLOSION PROOF SOLENOIDS
(12, 24 & 100 VDC)
SPECIFY 5/8" OR 3/4" CONTROL
CABLE SLEEVE

HIRSCHMANN SOLENOIDS

*ALWAYS SPECIFY SOLENOID DATA.

3/8" TWO WAY VALVES



TYPICAL STACK, SPOOL TYPE VALVES

HOW TO ORDER

MA06-EUNC-*

E--IN-LINE

F--STACKABLE UPSTREAM

G--STACKABLE MID-STACK (NO EXTERNAL A PORT)

H--STACKABLE DOWNSTREAM (NO EXTERNAL A PORT)

K--NON-STANDARD

C--NORMALLY CLOSED

O--NORMALLY OPEN

6 VDC

12 VDC

24 VDC

115 VOLT RECTIFIED AC TYPE SOLENOID.

EXTENDED MANUAL PUSH PINS W/PALM BUTTON.

***EXPLOSION PROOF SOLENOIDS (12, 24 & 100 VDC) SPECIFY 5/8" or 3/4" CONTROL CABLE SLEEVE

HIRSCHMANN SOLENOIDS

*ALWAYS SPEICFY SOLENOID DATA.

***EXPLOSION PROOF SOLENOIDS DESIGNED TO MEET SPECIFICATIONS OF U. S. BUREAU OF MINES SCHEDULE 2G ARE AVAILABLE FOR THESE VALVES. THESE SOLENOIDS ARE SUITABLE FOR USE ON PERMISSIBLE EQUIPMENT IN GASSY MINES OR TUNNELS. MESA CERTIFICATION NUMBER X/P -2226. FOR DIMENSIONS OF SOLENOIDS SEE BULLETIN ED 2.51

STACKING KITS

Includes Mounting Feet, Tie Bolts And All External & Internal Plugs As Necessary.

SPECIFY NUMBER OF VALVES IN STACK.

GRESEN®

DANA

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