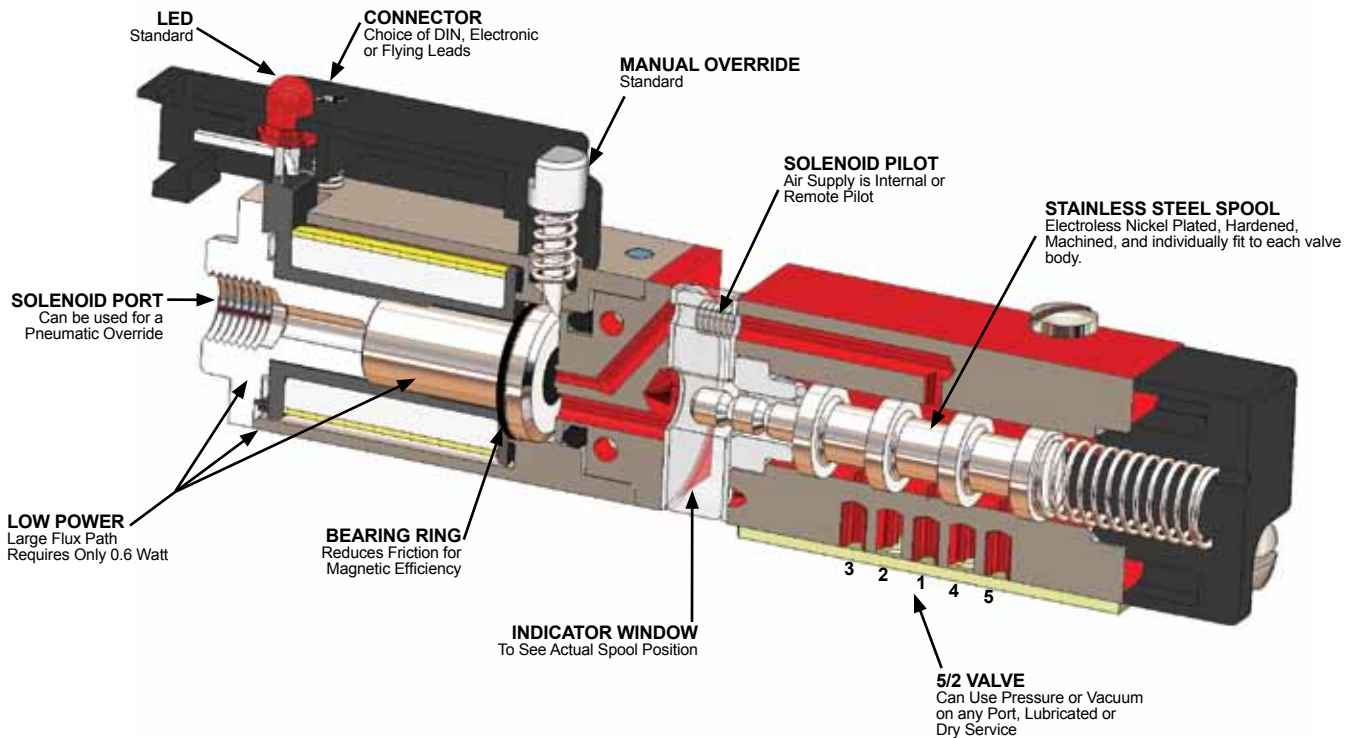


DASH 2 OPERATED SOLENOID VALVE QUALITY DESIGN FEATURES



DASH 1 SOLENOID OPERATOR

Solenoid Life 100,000,000 Cycles

HIGH FLOW $C_v = .12$

7 SCFM (200 LPM) .100 Inch (2.5 mm) Dia.
(See Flow Curves Page 26)

MANIFOLDS

For Mounting and Connecting Multiple Valves

MINATURE SIZE

.625 in. (16 mm) Wide

BASEPLATES

Choice of Side and Bottom Ports

FAST RESPONSE

.004 - .007 Sec. to Shift

Dash 2 Valves



D2532KLO DASH 2 Single POS Solenoid Electronic
2593-0 1/8 NPT Side Ported Base
2458-0 Removable Electronic Connector



D2533KLO DASH 2 SINGLE POS SOLENOID DIN
2430-0 10-32 [M5] Bottom Ported Base
2270-0 Removable DIN Connector



VALVE BODY AND SPOOL DESIGN

There are no moving seals in the DASH 2 valve! The DASH 2 is a metal to metal lapped spool valve. Traditional metal to metal valves can be unforgiving and require extremely fine filtration. Dynamco's design of using dissimilar metals of different hardnesses eliminates the need. DYNAMCO controls the clearances between the body and spool by individually match fitting each spool and body to achieve a proper floating air bearing. The clearance has a narrow range that every valve must achieve. The thermal expansion coefficients of the body and spool are the same so the clearance stays the same over a wide range of temperatures.

MINIATURE SIZE AND HIGH FLOW

DASH 2 valves are .625 inches (16mm) wide and yet have a C_v of .12 that will flow over 7 SCFM (200 Liters/Min). See Flow Curves on page 25.

SPEED

DASH 2 valves are extremely fast. The pilot operated solenoid DASH 2 can shift in 4 to 7 milliseconds. The higher the pressure the faster the shift time.

REPEATABILITY

In DYNAMCO's DASH 2 valves virtually all friction has been eliminated. The only force on the spool is the spring and the air pressure from the solenoid pilot. Valves with moving seals not only endure friction, but friction changes with lubrication, moisture, temperature, etc. DYNAMCO valves respond the same regardless of ambient conditions.

LOW ELECTRICAL POWER REQUIREMENTS

The very low 0.6 watt power consumption of the pilot operated solenoid allows DASH 2 valves to be controlled by almost any electronic control.

LIFE

The design life of DYNAMCO's DASH 2 valves is well in excess of 100 million cycles. This performance has been thoroughly proven in laboratory tests and field performance.

LED INDICATOR

DASH 2 valves have a red LED as a standard feature. **Note:** Take care to connect the positive wire (red) to the #1 (positive) terminal and the negative wire (black) to the #2 (negative) terminal when attaching the signal wires to the connector. If the polarity is reversed, the valve will work, but the LED will not illuminate. If the LED appears dim, check the voltage level supplied to the solenoid. It is probably below the minimum rated level.

SPOOL INDICATOR WINDOW

The spool indicator window shows the physical position of the spool, and is a great benefit when setting up and troubleshooting machines.

SOLENOID PILOT AIR

The DASH 2 valve can be ordered with a main supply connection or a remote pilot connection, and configuration can be switched in the field without any additional parts.

PNEUMATIC OVERRIDE

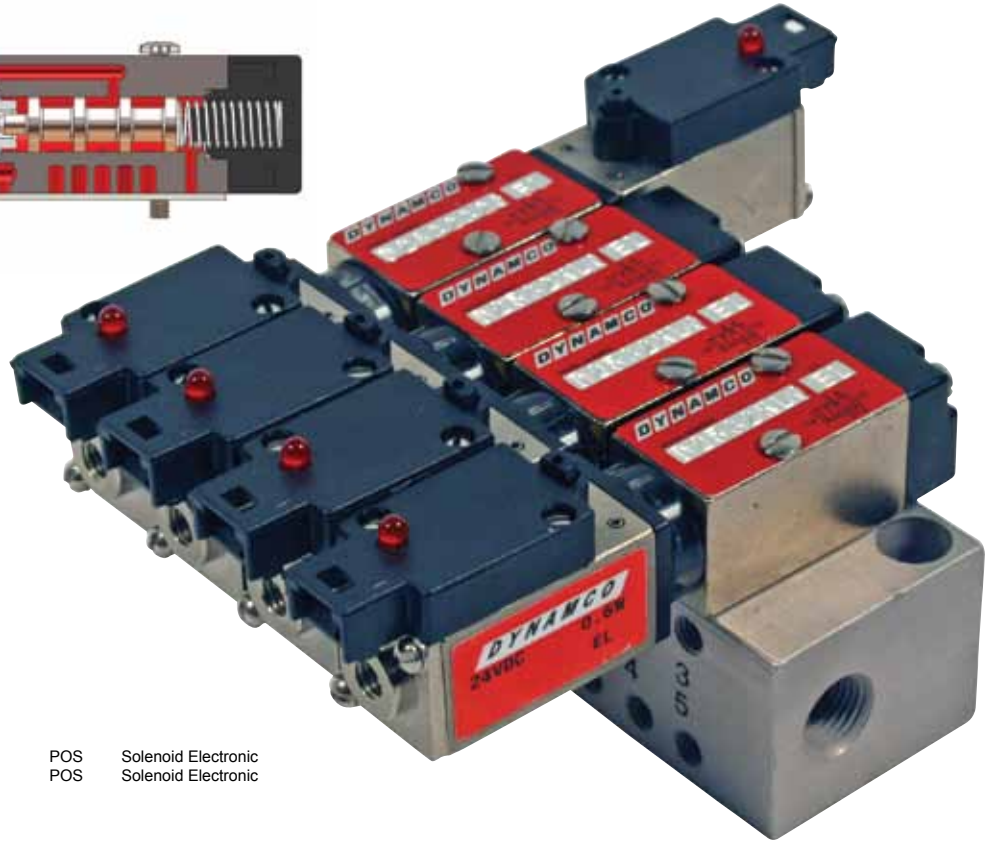
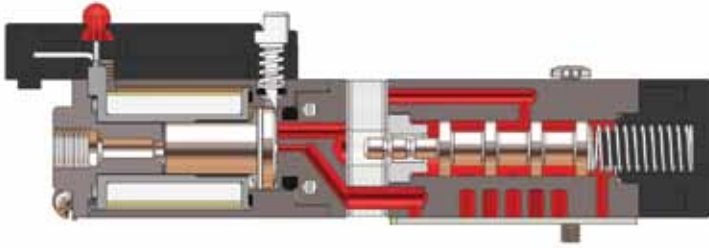
The solenoid operator port can be used for a pneumatic override. A 3 way (3/2) signal will shift the valve spool against the return spring (or detent in a double solenoid).

QUALITY

Quality must be present in both design and manufacturing. Our strict standards ensure the DASH 2 valve is the highest quality design available. **We are an ISO 9001:2008 certified company.**

DYNAMCO manufactures practically all components for DASH 2 in its own manufacturing facility. Every DASH 2 is given a complete battery of tests at various stages of manufacture. DYNAMCO's care and attention to detail mean you receive a thoroughly proven product when it is finally given the DYNAMCO name and packed for shipment.

DASH 2 PILOT OPERATED SOLENOID REMOTE SUPPLY



1466-4 MANIFOLD 4 STATION 10-32 [M5] PORTS

3 Valves	D2532KL0	Dash 2	Single	POS	Solenoid Electronic
1 Valve	D2632320	Dash 2	Double	POS	Solenoid Electronic

ELECTRICAL SPECIFICATIONS			
Voltage (Volts)	Power (Watts)	Resistance (OHMS)	Current (Amps)
5*	0.6	45	.111
12*	0.6	260	.050
24*	0.6	1100	.027
115*	2.5	5500	.021

*The voltage can be AC (50/60 Hz) or DC. For AC operation use AC lead wires (described on page 6) and the proper voltage DC DASH 2 valve. Voltage tolerance is +15% -10% of rated. Solenoids are rated for continuous duty.

TEMPERATURE RANGE

For DASH 2 Models below 1 watt:
0° to 150°F (-18° to 65°C)

For DASH 2 Models above 1 watt
0° to 122°F (-18° to 50°C)

MOUNTING

Generally, DASH 2 POS valves may be mounted in any orientation. DYNAMCO recommends mounting DASH 2 valve spools horizontally if vibration is present.

MATERIALS

Valve Body	Electroless Nickel Plated S.S.
Valve Spool	Hardened Stainless Steel
Springs	Stainless Steel
Seals	Buna N and Polyurethane
Indicator Window	Acrylic
Spring Housing.....	Delrin
Solenoid Adapter Plate	Anodized Aluminum
Solenoid Housing/Pole Piece	Plated S.S.
Armature	Proprietary
Coil Form.....	Ryton™ R4

PRESSURE RANGE

Spool Valve vacuum to 100 psi (6.9 Bar)
Min. Std. Solenoid Pilot Press20 psi (1.4 Bar)
For lower pilot pressure models, please contact DYNAMCO.

SERVICE, FILTRATION AND LUBRICATION

DASH 2 valves are designed for service on air and inert gasses. DYNAMCO recommends 5 micron filtration. Lubrication is not required.

Dash 2 Valves



DASH 2 POS MODEL NUMBERING SYSTEM

EXAMPLE: **D2 5 33 KL 0**

VALVE SERIES

VALVE TYPE

- Single POS - Connected to Main Supply 5
- Double POS - Connected to Main Supply 6
- Single POS - Connected to Pilot Supply 7
- Double POS - Connected to Pilot Supply 8

BASE PLATE OPTION

- Without Base Plate 0
- Bottom Ported 10-32 (M5) 2430-0 A
- Side Ported 10-32 (M5) 2592-0 B
- Side Ported 1/8 NPT 2593-0 D
- Side Ported 1/8 BSPP (G1/8) 2801-0 F

ACTUATOR "14" END

- 5 VDC 0.6 Watt Electronic 12
- 5 VDC 0.6 Watt DIN 13
- 12 VDC 0.6 Watt Electronic 22
- 12 VDC 0.6 Watt DIN 23
- 24 VDC 0.6 Watt Electronic 32
- 24 VDC 0.6 Watt DIN 33
- 115 VDC 2.5 Watt Electronic 52
- 115 VDC 2.5 Watt DIN 53
- 5 VDC 0.6 Watt Elec Conn w/Diode A2
- 5 VDC 0.6 Watt DIN Conn w/Diode A3
- 12 VDC 0.6 Watt Elec Conn w/Diode B2
- 12 VDC 0.6 Watt DIN Conn w/Diode B3
- 24 VDC 0.6 Watt Elec Conn w/Diode C2
- 24 VDC 0.6 Watt DIN Conn w/Diode C3
- No Solenoid - Adapter Plate Only XX

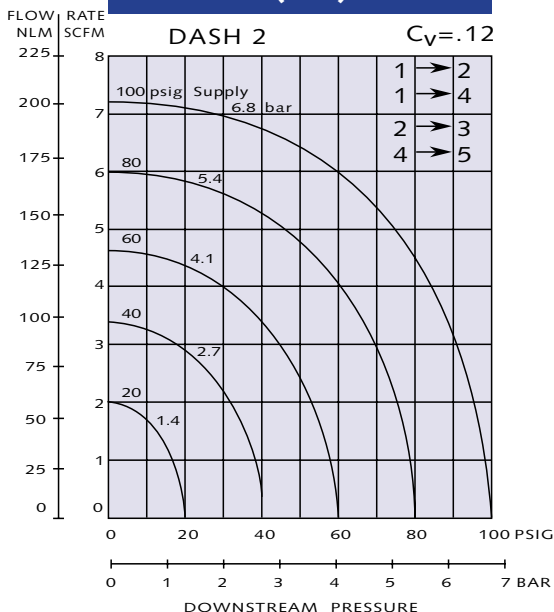
ACTUATOR "12" END

- 5 VDC 0.6 Watt Electronic 12
- 5 VDC 0.6 Watt DIN 13
- 12 VDC 0.6 Watt Electronic 22
- 12 VDC 0.6 Watt DIN 23
- 24 VDC 0.6 Watt Electronic 32
- 24 VDC 0.6 Watt DIN 33
- 115 VDC 2.5 Watt Electronic 52
- 115 VDC 2.5 Watt DIN 53
- 5 VDC 0.6 Watt Elec Conn w/Diode A2
- 5 VDC 0.6 Watt DIN Conn w/Diode A3
- 12 VDC 0.6 Watt Elec Conn w/Diode B2
- 12 VDC 0.6 Watt DIN Conn w/Diode B3
- 24 VDC 0.6 Watt Elec Conn w/Diode C2
- 24 VDC 0.6 Watt DIN Conn w/Diode C3
- Spring Return - Standard 20 psi* KL
- No Solenoid - Adapter Plate Only XX

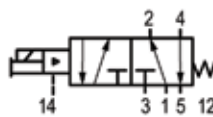
*lower pressure models may be available. Please consult DYNAMCO for more information.

- NOTES:**
1. Removable connectors and lead wires must be ordered separately. See page 6.
 2. All voltages can be used on either AC or DC electrical service by ordering the proper AC or DC lead wires. See page 6.

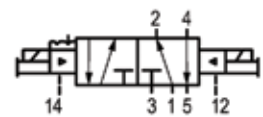
0.100 in (2.5) Orifice



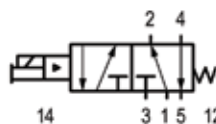
DASH 2 POS VALVE SYMBOLS



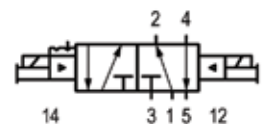
SINGLE SOLENOID
Remote Pilot Supply



DOUBLE SOLENOID
Remote Pilot Supply

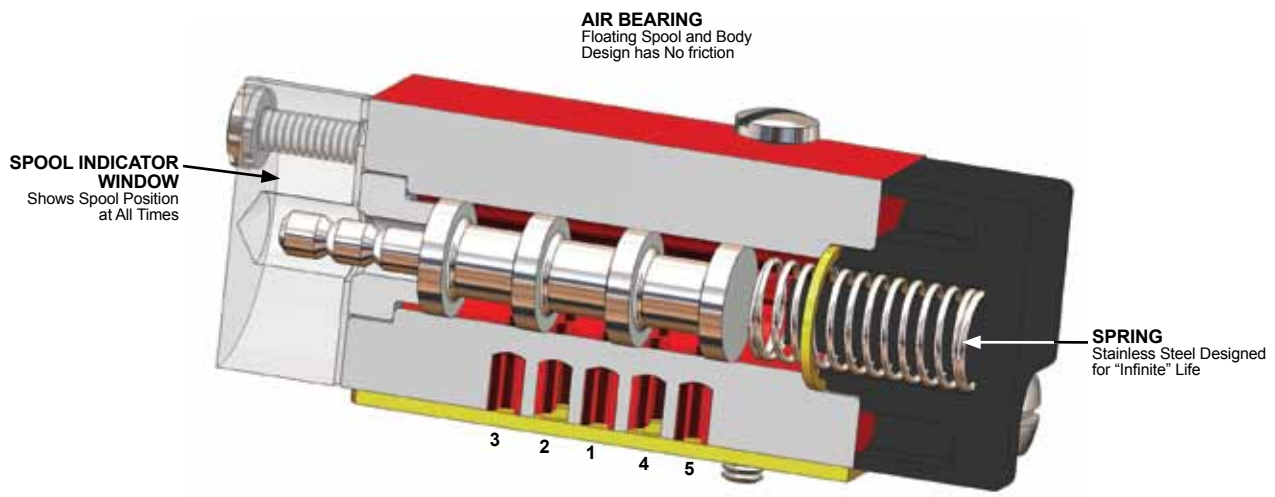


SINGLE SOLENOID
Main Supply

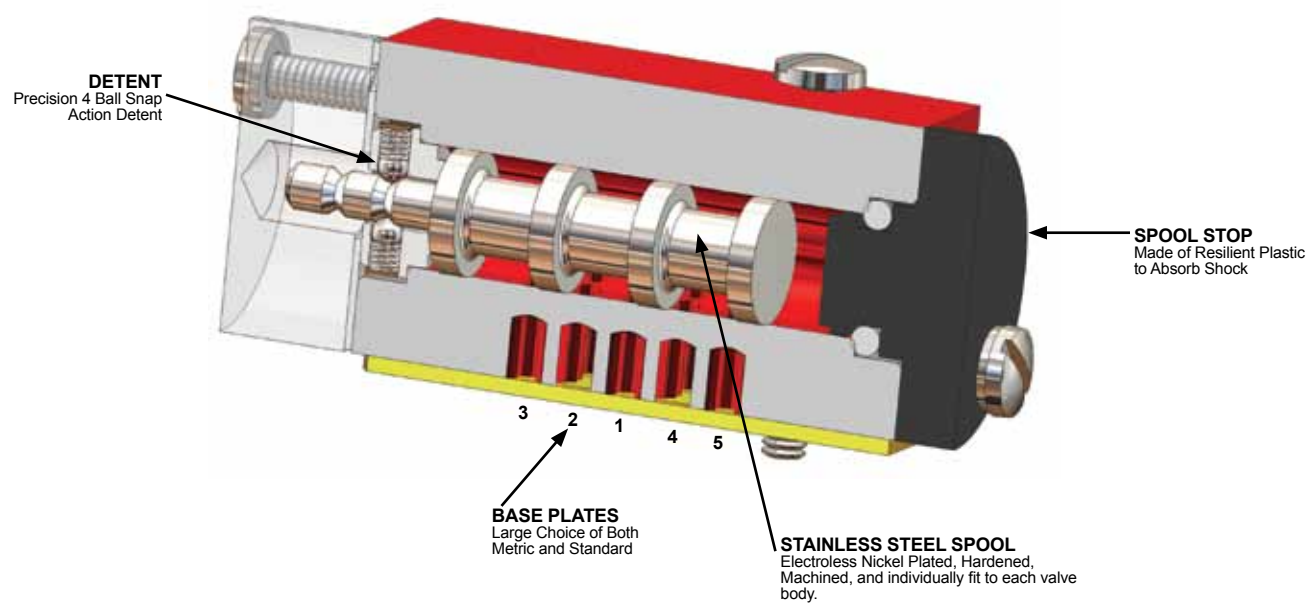


DOUBLE SOLENOID
Main Supply

DASH 2 AIR PILOT OPERATED VALVES QUALITY DESIGN FEATURES



AIR PILOT OPERATED - SPRING RETURN



DOUBLE AIR PILOT - DETENTED

LIFE
100,000,000 Cycles

HIGH FLOW Cv=.12
7 SCFM (200 LPM) .100 Inch (2.5 mm) Dia.
(See Flow Curves Page 25)

MANIFOLD MOUNTING
For Mounting and Connecting
Multiple Valves

LUBRICATION
Not Required But May Be Used

REPEATABILITY
Excellent Because the Valves Have
No Friction and the Parts are
Thermally Matched

FAST RESPONSE
.003 - .005 Sec. to Shift

Dash 2 Valves



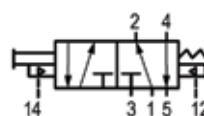
D20S0K00 DASH 2 Double Air Piloted
2593-0 1/8 NPT Side Ported Base



D20S0K00 DASH 2 AIR PILOTED SPRING RETURN
2430-0 10-32 [M5] Bottom Ported Base



**DOUBLE AIR PILOT
DETENTED**



**AIR PILOT
SPRING RETURN**

DASH 2 AIR PILOT MODEL NUMBERING SYSTEM

EXAMPLE: D20SMK0 0

VALVE SERIES

Dash 2 Air Pilot Operated Spring Return.....	D20S0K0
Dash 2 Air Pilot Operated Spring Return with Manual Override	D20SMK0
Dash 2 Double Air Pilot Detented	D20D0A0
Dash 2 Double Air Pilot Detented with Manual Overrides.....	D20DMAM

BASE PLATE OPTION

Without Base Plate	0
Bottom Ported 10-32 (M5) 2430-0.....	A
Side Ported 10-32 (M5) 2592-0.....	B
Side Ported 1/8 NPT 2593-0.....	D
Side Ported 1/8 BSPP (G1/8) 2801-0.....	F

MATERIALS

Valve Body	Electroless Nickel Plated S.S.
Valve Spool	Hardened Stainless Steel
Springs	Stainless Steel
Seals	Buna N and Polyurethane
Indicator Window	Acrylic
Spring Housing.....	Delrin

PRESSURE RANGE

Spool Valvevacuum to 100 psi (6.9 Bar)
 Minimum Standard Pilot Press20 psi (1.4 Bar)
 For lower pilot pressure models, please contact
 DYNAMCO.

SERVICE, FILTRATION AND LUBRICATION

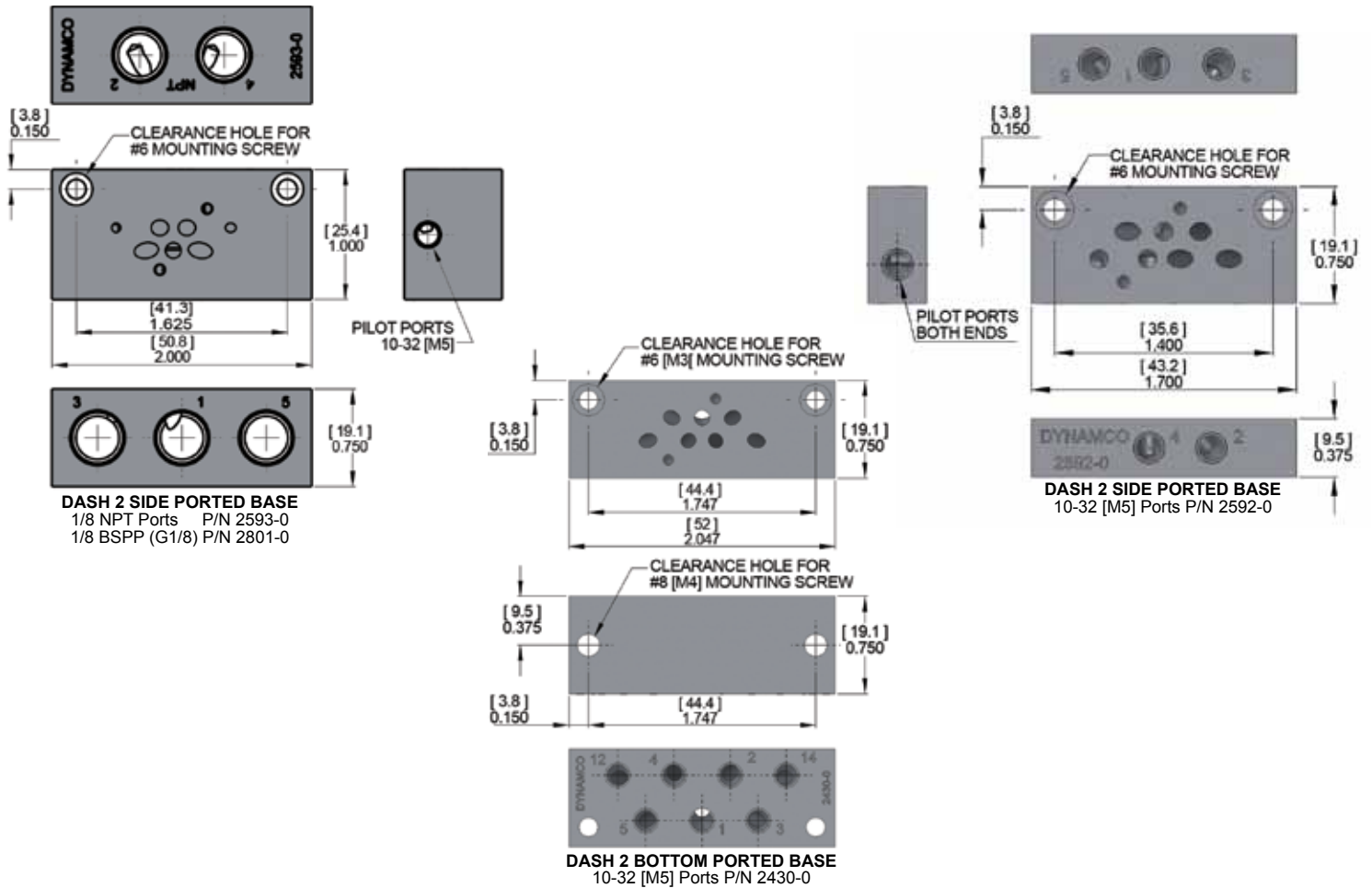
DASH 2 valves are designed for service on air and inert gasses. DYNAMCO recommends 5 micron filtration. Lubrication is not required.

TEMPERATURE RANGE

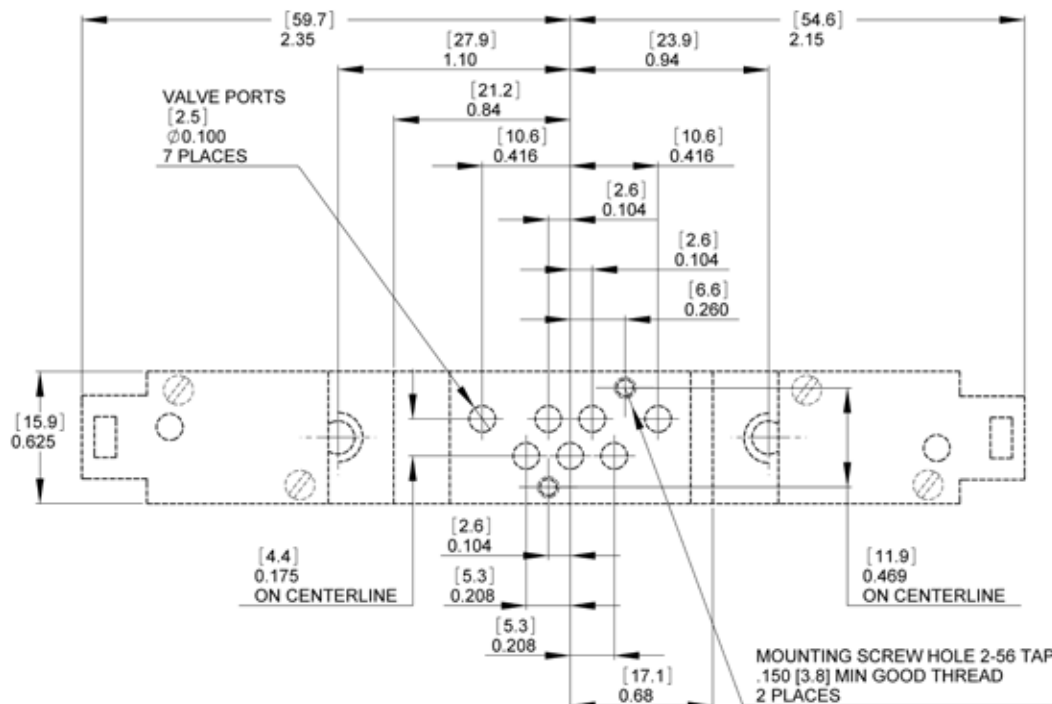
0° to 200°F (-18° to 93°C)

MOUNTING

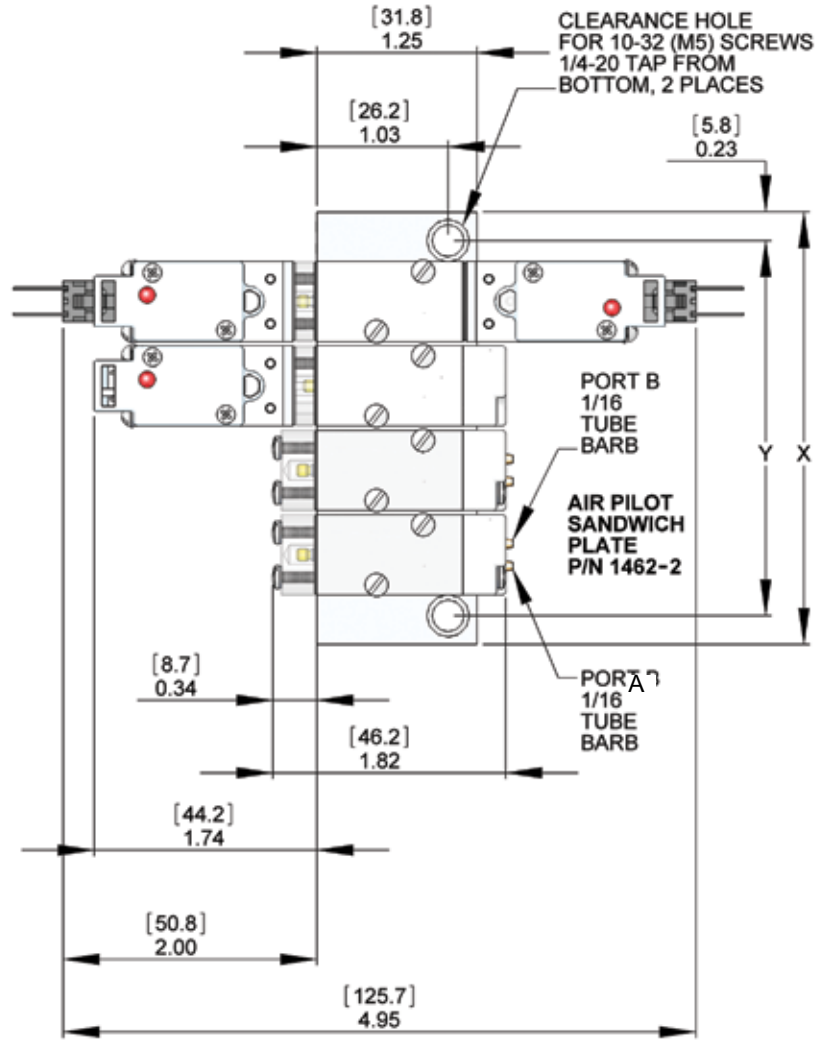
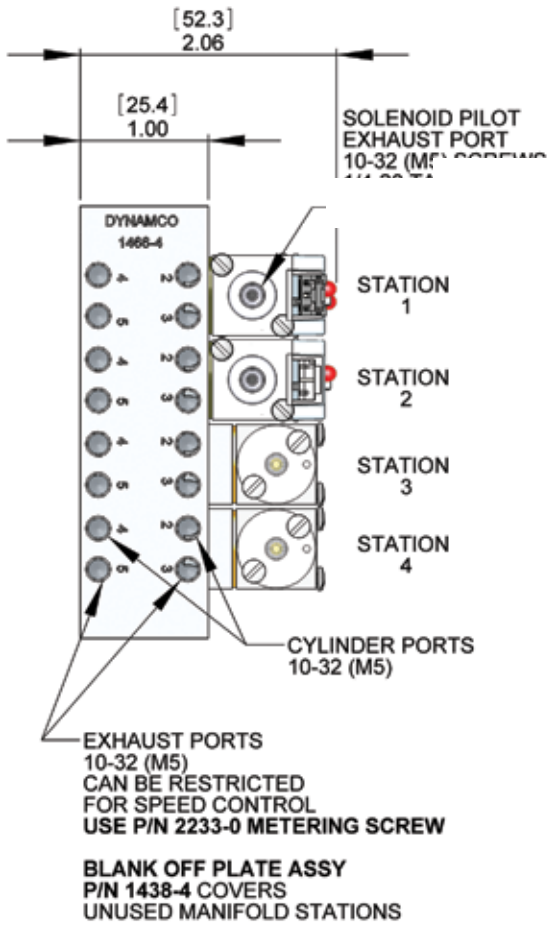
Generally DASH 2 air piloted valves may be mounted in any orientation. DYNAMCO recommends mounting valve spools horizontally if vibration is present.



DASH2 FOOTPRINT



Dash 2 Manifolds



DASH 2 MANIFOLD 1/8 NPT SUPPLY			
P/N	Number of Stations	"X"	"Y"
1466-2	2	2.06 (52.3)	1.61 (40.9)
1466-4	4	3.38 (85.9)	2.93 (74.4)
1466-6	6	4.70 (119.4)	4.25 (108.0)
1466-8	8	6.02 (152.9)	5.57 (141.5)
1466-0	10	7.34 (186.4)	6.89 (175.0)

