

General Description

Series D8P directional control valves are 5-chamber, pilot operated valves. They are available in 2 or 3-position styles. These valves are manifold or sub-plate mounted, and conform to NFPA's D08, CETOP 8 mounting pattern.

Features

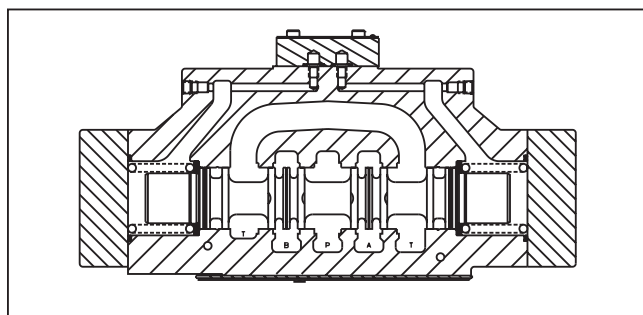
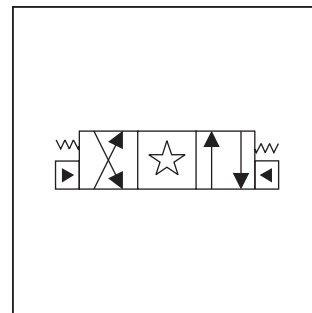
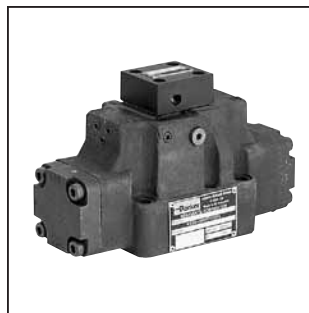
- Low pressure drop design.
- Hardened spools provide long life.

Specifications

Mounting Pattern	NFPA D08, CETOP 8, NG25
Max. Operating Pressure	345 Bar (5000 PSI)
Max. Tank Line Pressure	345 Bar (5000 PSI)
Max. Drain Pressure	345 Bar (5000 PSI)
Min. Pilot Pressure	5.1 Bar* (75 PSI)
Max. Pilot Pressure	345 Bar (5000 PSI)
Nominal Flow	302 LPM (80 GPM)
Max. Flow	See Reference Data Chart

* 6.9 Bar (100 PSI) for 2, 8, 9 & 12 spools

For flow path, pilot drain and pilot pressure details, see Installation Information.



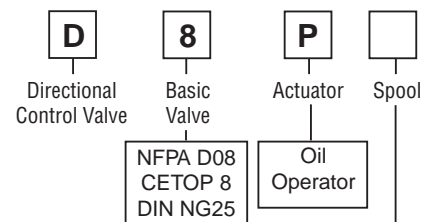
Response Time

Response time will vary with pilot line size, pilot line length, pilot pressure shift time and flow capacity of the control valve.

Shift Volume

The pilot chamber requires a volume of 1.35 in³ (22.1 cc) for center to end.

Ordering Information

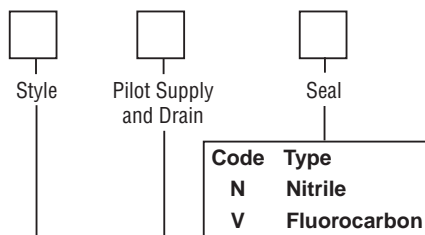


Code	Symbol	Code	Symbol
1		11	
2		12	
4		20*	
7		30**	
9**			

* 20 spool has closed crossover.

** 9 & 30 spools have open crossover.

Valve schematic symbols are per NFPA/ANSI standards, providing flow P to A when energizing operator X. Note operators reverse sides for #9 spool. See installation information for details.



Code	Description
2	Ext. Pilot / Ext. Drain
5#	Ext. Pilot / Int. Drain

Available in "B" and "H" style only.

Code	Description
7	Pilot Choke – Meter Out
8	Stroke Adj. 'B' End
9	Stroke Adj. 'A' End
60	Pilot Choke – Meter In
89	Stroke Adj. 'A' & 'B' Ends

Code	Description	Symbol
B†	Sgl. operator, 2 position, spring offset. P to A and B to T in offset position.	
C	Dbl. operator, 3 position, spring centered.	
H†	Sgl. operator, 2 position, spring offset. P to B and A to T in offset position.	

† Available with 20 & 30 spools only.

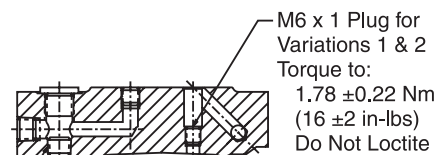
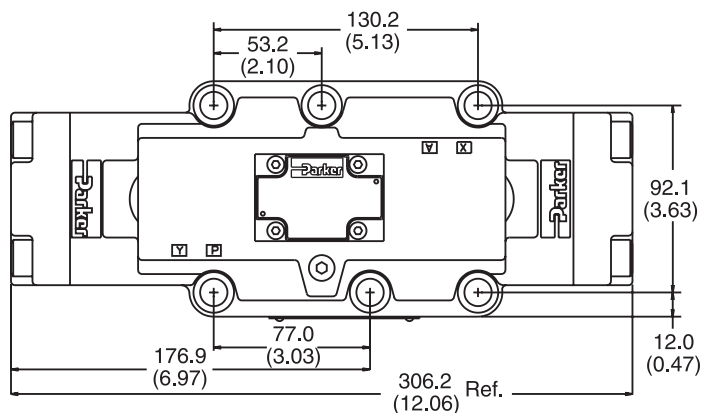
Valve Weight: 18.9 kg (41.7 lbs.) **Standard Bolt Kit:** BK228 **Metric Bolt Kit:** BKM228

Bold: Designates Tier I products and options.

Non-Bold: Designates Tier II products and options. These products will have longer lead times.

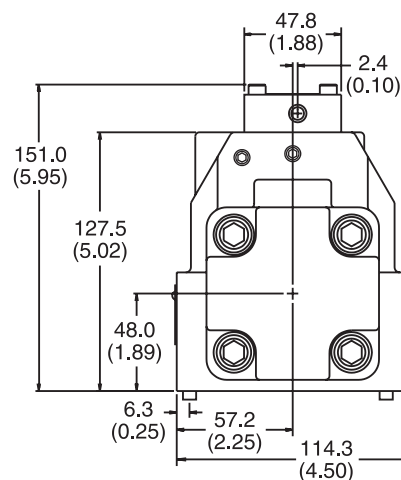
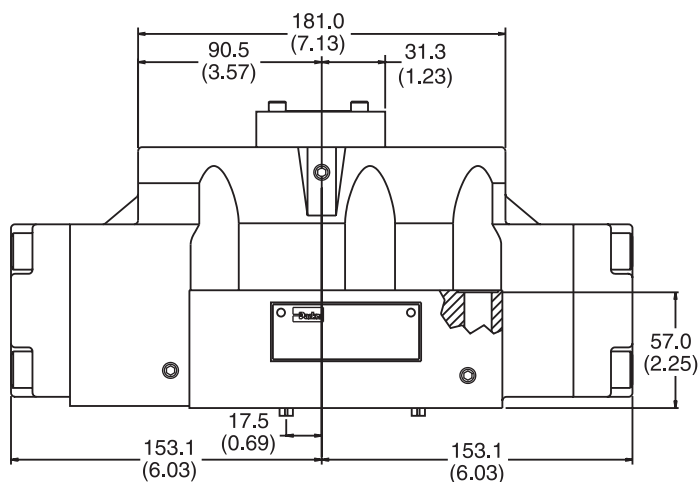
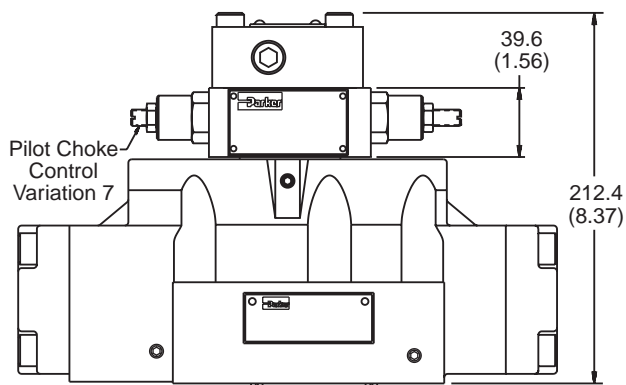
D81.indd, dd

Inch equivalents for millimeter dimensions are shown in (**)

A**Standard Pilot Operated**

1/16 Plug for Variations 2 & 5

Torque to:
 11.67 ± 1.67 Nm
(105 \pm 15 in-lbs)
Do Not Loctite

**Pilot Operated with Pilot Choke Control****Note:** 57mm (2.24") from bottom of bolt hole counterbore to bottom of valve.

Installation Information

FOR MAXIMUM VALVE RELIABILITY, ADHERE TO THE FOLLOWING INSTALLATION INFORMATION.

The following is important installation information which applies to all directional control valves described in this catalog.

Mounting Position

Detent – Horizontal
Spring Offset – Unrestricted
Spring Centered – Unrestricted

Fluid Recommendations

Premium quality hydraulic oil with a viscosity range between 32-54 cSt. (150-250 SSU) At 38°C (100°F) is recommended. The absolute operating viscosity range is from 16-220 cSt. (80-1000 SSU). Oil should have maximum anti-wear properties and rust and oxidation treatment.

Fluids and Seals

Valves using synthetic, fire-resistant fluids require special seals. When phosphate esters or its blends are used, FLUOROCARBON seals are required. Water-glycol, water-in-oil emulsions and petroleum oil may be used with STANDARD seals.

Filtration

For maximum valve and system component life, the system should be protected from contamination at a level not to exceed 125 particles greater than 10 microns per milliliter of fluid (SAE class 4/ISO 16/13).

Silting

Silting can cause any sliding spool valve to stick and not spring return if held under pressure for long periods of time. The valve should be cycled periodically to prevent sticking.

Special Installations

Consult your Parker representative for any application requiring the following:

- Pressure above rating.
- Fluid other than those specified.
- Oil temperature above 71.1°C (160°F).
- Flow path other than normal.

Mounting Patterns

Series	NFPA	CETOP
D81V*, D8P	D08	3/4"

Torque Specifications

The recommended torque values for the bolts which mount the valve to the manifold or subplate are as follows: 135.6 Nm (100 ft-lbs).

