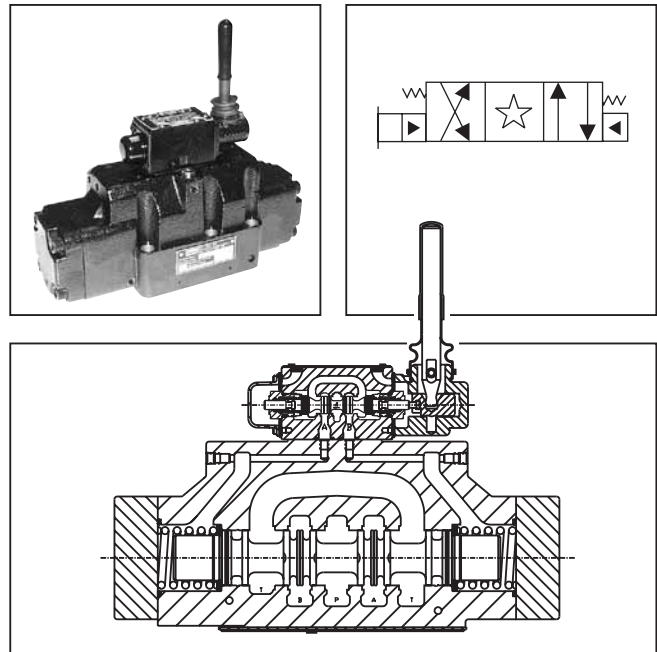


**General Description**

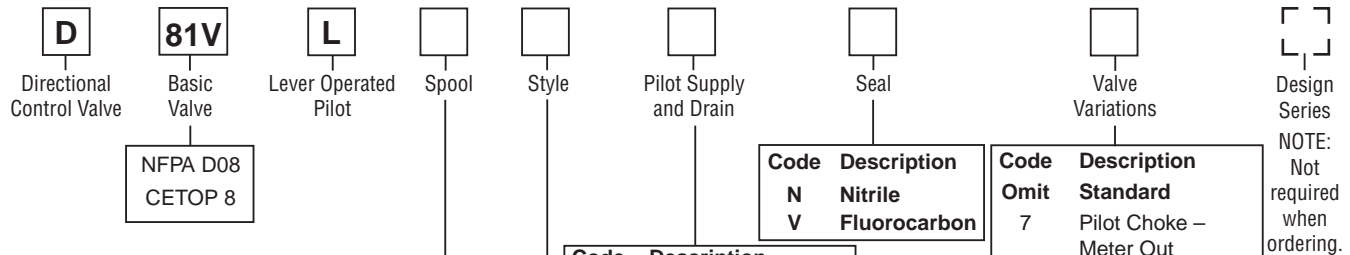
Series D81VL directional control valves are 5-chamber, lever operated valves. They are available in 2 or 3-position styles. These valves are manifold or subplate mounted, and conform to NFPA's D08, CETOP 8 mounting pattern.

**Specifications**

<b>Mounting Pattern</b>	NFPA D08, CETOP 8, NG25
<b>Max. Operating Pressure</b>	350 Bar (5000 PSI)
<b>Max. Tank Line Pressure</b>	Internal Drain Model 34 Bar (500 PSI) External Drain Model 350 Bar (5000 PSI)
<b>Maximum Drain Pressure</b>	34 Bar (500 PSI)
<b>Maximum Flow</b>	See Reference Data Charts
<b>Pilot Pressure</b>	Oil Min 6.9 Bar (100 PSI) Oil Max 350 Bar (5000 PSI)
<b>Response Time</b>	Varies with pilot line size and length, pilot pressure, pilot valve shift time & flow capacity (GPM)



**Ordering Information**



Code	Symbol	Code	Symbol
001		011	
002		012	
004		020*	
008*		030**	
009**			

\* 008 & 020 spools have closed crossover.  
 \*\* 009 & 030 spools have open crossover.

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

**Valve Weight:** 19.6 kg (43.2 lbs.)  
**Standard Bolt Kit:** BK228  
**Metric Bolt Kit:** BKM228

Code	Description
1	Int. pilot/Ext. drain
2	Ext. pilot/Ext. drain
4#	Int. pilot/Int. drain
5	Ext. pilot/Int. drain

# Not available with 002, 008, 009 & 030 spools.

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

Code	Description	Symbol
<b>B†</b>	<b>Sgl. operator, 2 position, spring offset. P to A and B to T in offset position.</b>	
<b>C</b>	<b>Dbl. operator, 3 position, spring centered.</b>	
<b>D†</b>	<b>Dbl. operator, 2 position, detent.</b>	
<b>E</b>	Sgl. operator, 2 position, spring centered. P to B and A to T in shifted position.	
<b>H†</b>	<b>Sgl. operator, 2 position, spring offset. P to B and A to T in offset position.</b>	
<b>K</b>	Sgl. operator, 2 position. Spring centered. P to A and B to T in shifted position.	

This condition varies with spool code.

† Available with 020 & 030 spools only.

**Bold: Designates Tier I products and options.**

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

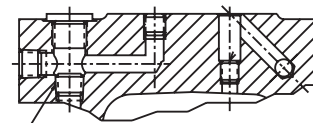
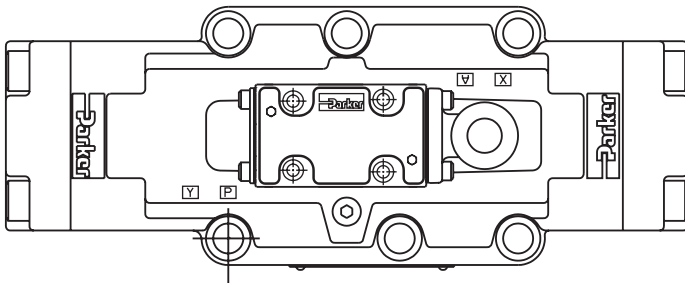
D81.indd, dd



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

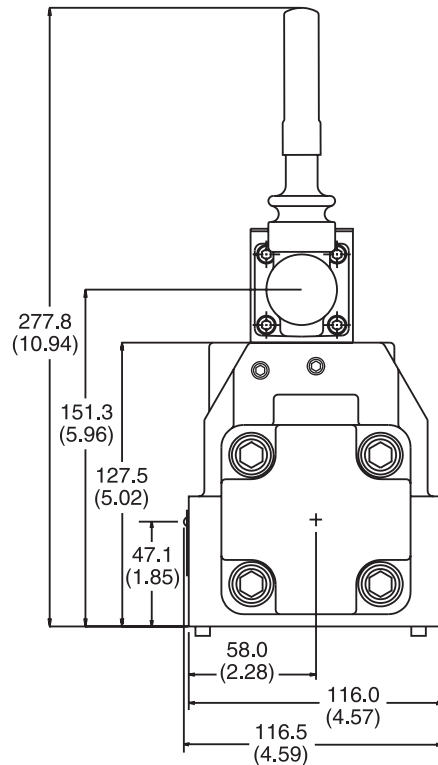
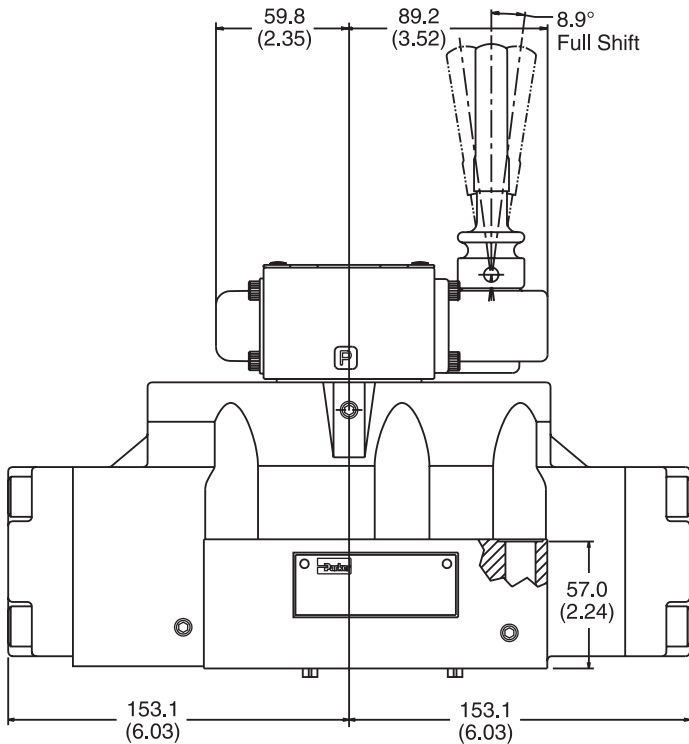
**A**

**Lever Operated**



M6 x 1 Plug for Variations 1 & 2  
Torque to:  
1.78 ± 0.22 Nm  
(16 ± 2 in-lbs)  
Do Not Loctite

1/16 Plug for Variations 2 & 5  
Torque to:  
11.67 ± 1.67 Nm  
(105 ± 15 in-lbs)  
Do Not Loctite



**Note:** 57mm (2.24") from bottom of bolt hole counterbore to bottom of valve.