

# Parker D1VC, D1VD, D1VG Series Cam Operated Directional Control Valve Service Manual

A

## General Description

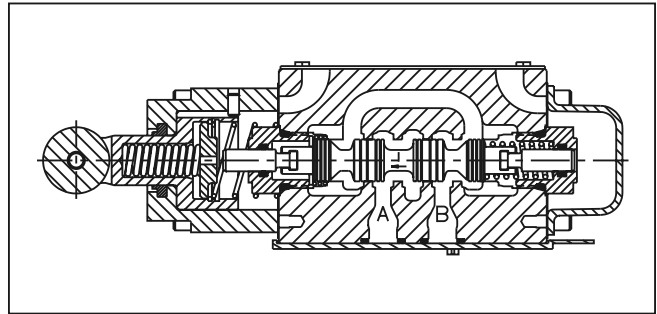
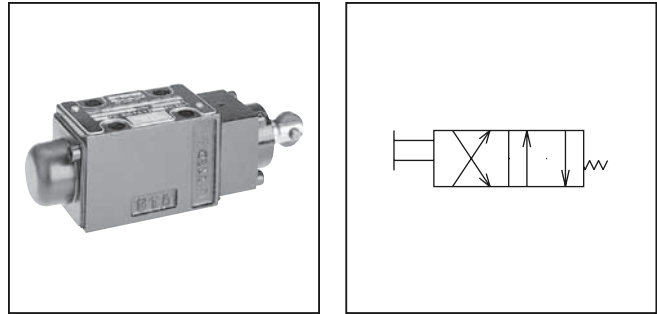
Series D1VC, D1VD and D1VG directional control valves are high performance, 4-chamber, direct operated, cam controlled, 4-way valves. They are available in 2-position and conform to NFPA's D03, CETOP 3 mounting patterns.

## Features

- Choice of 2 cam roller positions (D1VC and D1VD)
- Two styles available (D1VC and D1VG)
- Short stroke option

## Specifications

<b>Mounting Pattern</b>	NFPA D03, CETOP 3, NG 6
<b>Maximum Pressure</b>	Operating: 345 Bar (5000 PSI) Tank Line: 34 Bar (500 PSI)
<b>Nominal Flow</b>	32 LPM (8.5 GPM)
<b>Maximum Flow</b>	See Reference Data
<b>Force Required to Shift</b>	D1VC, D1VD: 107 N (24 lbs.) D1VG: 36 N (8 lbs.)
<b>Maximum Cam Angle</b>	30°



## Ordering Information

<div style="border: 1px solid black; padding: 2px; width: 30px; margin: 0 auto;">D</div> <p style="text-align: center; font-size: 0.8em;">Directional Control Valve</p>	<div style="border: 1px solid black; padding: 2px; width: 30px; margin: 0 auto;">1V</div> <p style="text-align: center; font-size: 0.8em;">Basic Valve</p> <div style="border: 1px solid black; padding: 2px; margin-top: 10px; width: 80px; margin: 0 auto;"> <p style="font-size: 0.7em; margin: 0;">NFPA D03 CETOP 3</p> </div>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p style="text-align: center; font-size: 0.8em;">Actuator</p>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p style="text-align: center; font-size: 0.8em;">Spool</p>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p style="text-align: center; font-size: 0.8em;">Style</p>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p style="text-align: center; font-size: 0.8em;">Seal</p>	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto;"></div> <p style="text-align: center; font-size: 0.8em;">Variations</p>	<div style="border: 1px dashed black; width: 30px; height: 30px; margin: 0 auto;"></div> <p style="text-align: center; font-size: 0.8em;">Design Series</p> <p style="font-size: 0.7em; margin-top: 5px;">NOTE: Not required when ordering.</p>																																													
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>Cam (90° to mounting surface)</td> </tr> <tr> <td>D</td> <td>Cam parallel to mounting surface</td> </tr> <tr> <td>G</td> <td>Cam Lever</td> </tr> </tbody> </table>		Code	Description	C	Cam (90° to mounting surface)	D	Cam parallel to mounting surface	G	Cam Lever	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Symbol</th> </tr> </thead> <tbody> <tr> <td>001</td> <td></td> </tr> <tr> <td>002</td> <td></td> </tr> <tr> <td>004</td> <td></td> </tr> <tr> <td>008*</td> <td></td> </tr> <tr> <td>009†</td> <td></td> </tr> <tr> <td>081</td> <td></td> </tr> <tr> <td>082</td> <td></td> </tr> </tbody> </table> <p style="font-size: 0.8em; margin-top: 5px;">* 008 spool has closed crossover. † 009 spool has open crossover.</p>	Code	Symbol	001		002		004		008*		009†		081		082		<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>Nitrile</td> </tr> <tr> <td>V</td> <td>Fluorocarbon</td> </tr> </tbody> </table>	Code	Description	N	Nitrile	V	Fluorocarbon	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Description</th> </tr> </thead> <tbody> <tr> <td>Omit</td> <td>Standard</td> </tr> <tr> <td>P05</td> <td>Short Stroke</td> </tr> <tr> <td>P10*</td> <td>Monitor Switch</td> </tr> </tbody> </table> <p style="font-size: 0.8em; margin-top: 5px;">* Not CE or CSA approved.</p>	Code	Description	Omit	Standard	P05	Short Stroke	P10*	Monitor Switch	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code</th> <th style="text-align: left;">Description</th> <th style="text-align: left;">Symbol</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>Two position, spring offset operator at "A" port end.</td> <td></td> </tr> <tr> <td>H</td> <td>Two position, spring offset operator at "B" port end.</td> <td></td> </tr> </tbody> </table> <p style="font-size: 0.8em; margin-top: 5px;">Valve schematic symbols are per NFPA/ANSI standards, providing flow P to A when energized. Note flow paths reverse sides for #008 and #009 spools.</p>	Code	Description	Symbol	B	Two position, spring offset operator at "A" port end.		H	Two position, spring offset operator at "B" port end.	
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**Bold: Designates Tier I products and options.**

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

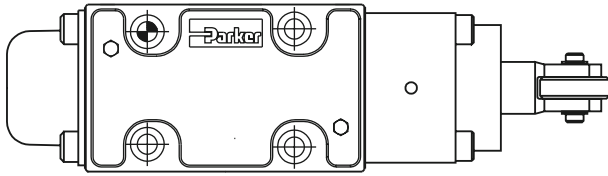
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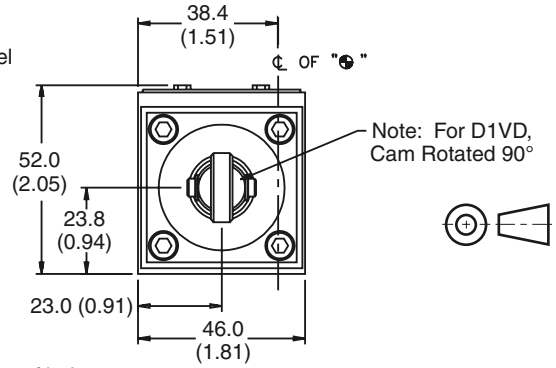
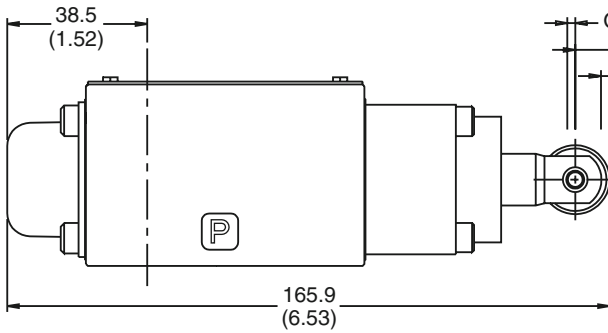
Inch equivalents for millimeter dimensions are shown in (\*\*)

**A**

**Cam Operated D1VC and D1VD**



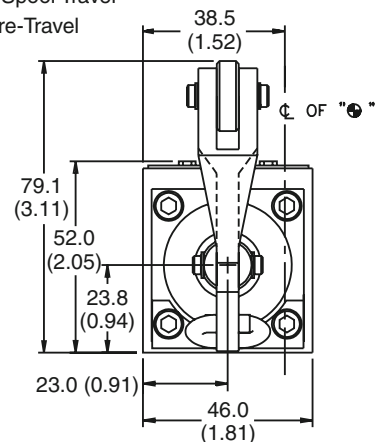
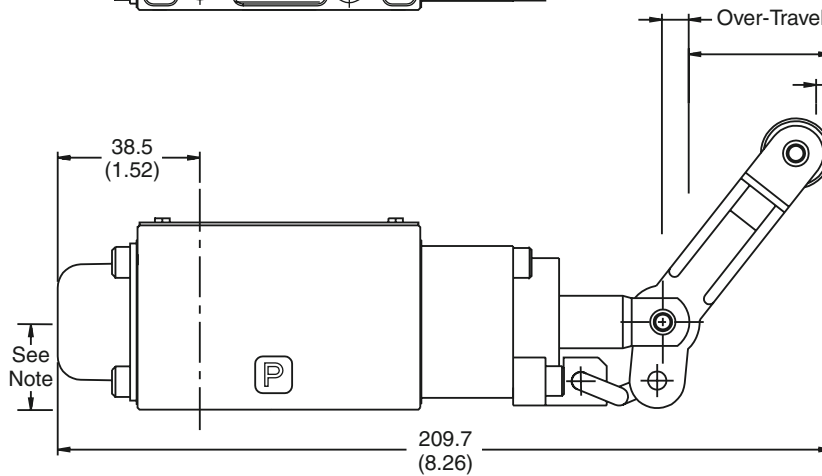
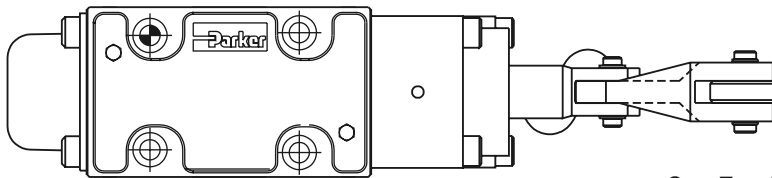
Valve Type	Pre-Travel	Full Spool Travel	Over-Travel
Standard Valve	2.00 (0.079)	9.06 (0.357)	2.03 (0.080)
P05 Short Stroke	0 (0)	7.06 (0.278)	4.03 (0.159)



**Note:** 22.0 mm (0.87") from bottom of bolt hole counterbore to bottom of valve.

**Cam Lever Operated D1VG**

Valve Type	Pre-Travel	Full Spool Travel	Over-Travel
Standard Valve	6.95 (0.27)	39.63 (1.56)	10.00 (0.39)
P05 Short Stroke	0 (0)	30.12 (1.19)	18.40 (0.72)



**Note:** 22.0 mm (0.87") from bottom of bolt hole counterbore to bottom of valve.