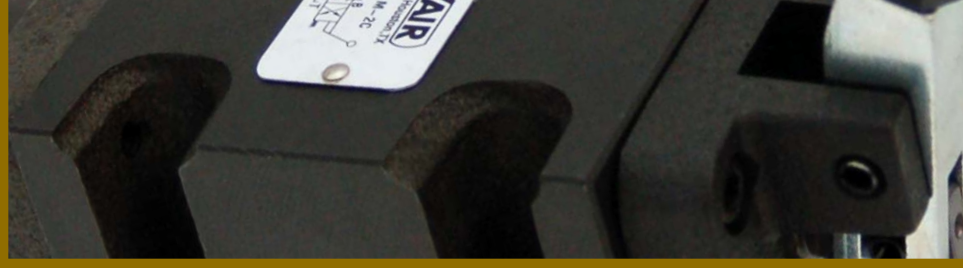
HYVAIR

INDUSTRIAL FLUID POWER COMPONENTS AND SYSTEMS



D03 & D05 SERIES

Lever Actuated Valves

D03M-2F

D05M-2C

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D03 & D05 Series
Lever Actuated Valves

Features

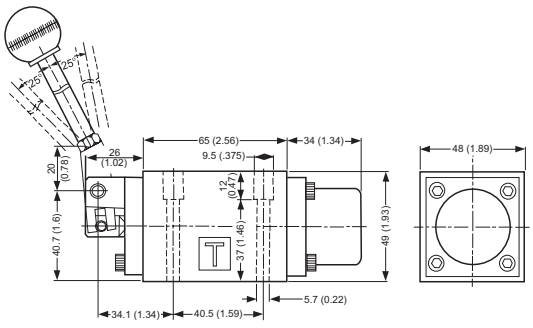
1. **High Pressure, High Flow:** 7 gpm (D03) and 12 gpm (D05) at 3000 psi working pressure
2. **High Reliability:** Valve designed to last 30 million spool shifts under proper use

Specifications

Size		D03	D05
Nominal Flow Rates	@ 3000 psi	7 gpm (27 lpm)	12 gpm (46 lpm)
	@ 1000 psi	10 gpm (38 lpm)	18 gpm (68 lpm)
Maximum Operating Pressure	P, A, B, Ports	3000 psi (210 bar)	
	T Port- Including Surges	1000 psi (140 bar)	
Internal Leakage	@ 3000 psi	0.18 cu-in/ min (3 ml/ min)	0.22 cu-in/ min (3.5 ml/ min)
Mounting Surface	NFPA	T3.5.1.MR1-D03	T3.5.1.MR1-D05
	ISO	ISO 4401- 03	ISO 4401- 05
Weight		2.9 lbs (1.3 kg)	8.8 lbs (4 kg)
Operating Conditions	Working Temperature	40- 160 ^{0}F (5- 70 ^{0}C)	
	Operating Viscosity	80- 300 SUS (17- 65 cSt)	
	Max. Start-up Viscosity	1500 SUS (315 cSt)	
	Filtration	25 micron or less, (ISO 18/15)	
	Recommended Fluids	Petroleum Based Fluids- ISO VG32-68	

Dimensional/ Mounting Data

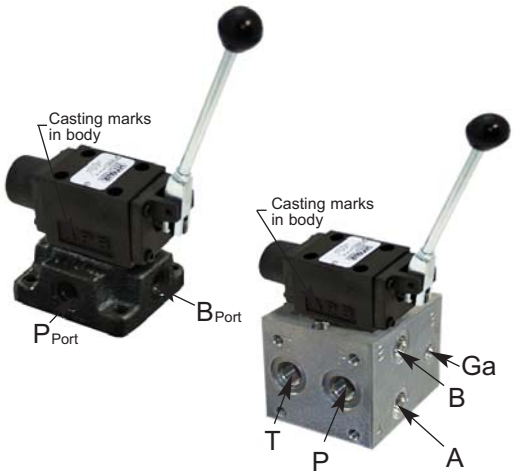
Series D03M



Units: mm/ (Inch)

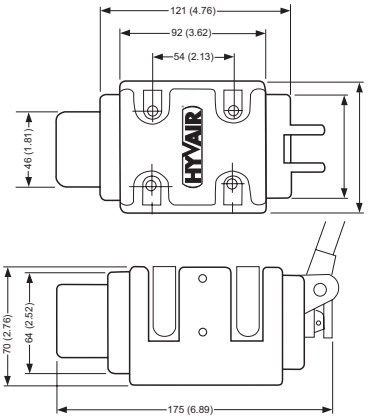
Note: Use (4) 10-24 SHCS X 1-3/4" mounting screws

(Handle Length= 5.5")



D03 Mounting Orientation

Series D05M



Units: mm/ (Inch)

Note: Use (4) 1/4-20 SHCS X 1-1/2" mounting screws

(Handle Length= 7.5")

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D03 & D05 Series
Lever Actuated Valves

Spool Codes

The following examples represent most common valve spools, many other configurations are available.
(Left side of symbol is when handle is pushed, right side of symbol is handle pulled. (Symbols shown with springs, 2 & 3 position detented valves available)

A

P to A, B to T

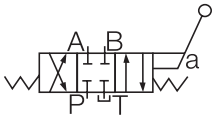
C

P to T, A & B Blocked

H

All Ports Open

B



All Ports Blocked

F

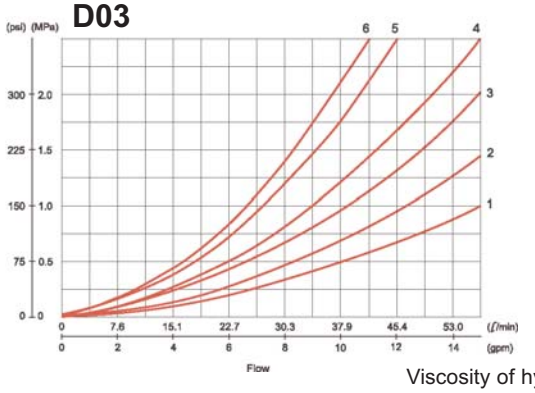
P Blocked, A & B to T

T

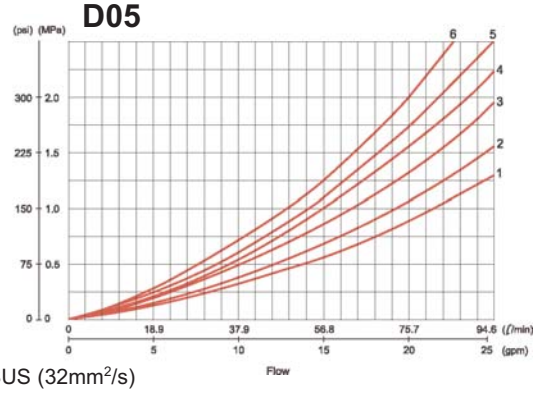
P to A & B, T Blocked

Typical Pressure Drop Curves

D03



D05



Viscosity of hydraulic fluid: 150SUS (32mm^2/s)

Spool Code	Flow Curve Number				
	Spool Shifted		Spool Centered		
	P→A	P→B	A→T	B→T	P→T
A	2	2	2	2	-
B	2	2	2	2	-
C	6	5	4	4	4
F	2	3	1	1	-
H	1	1	1	1	2
T	2	2	2	2	-

Approximate pressure drop for different specific gravity fluid:

$$P\ (\text{other fluid}) = \frac{\Delta P\ (\text{from graph}) \times SG\ (\text{other fluid})}{0.87}$$

Fluid Viscosities	SUS / cSt	75 / 14.5	100 / 20.5	150 / 32	200 / 43	250 / 54	300 / 65	350 / 86
Multiplier		0.93	1.00	1.11	1.19	1.26	1.32	1.41

Ordering Information

D03 M - 2 B

D03 Series or D05 Series

Actuator
M = Manual (Lever)

Configuration
1 = 2 position, spring offset
2 = 3 position, spring centered
3 = 2 position, detented
4 = 3 position, detented

Function
A = P to A, B to T
B = All Ports Blocked
C = P to T, A & B Blocked
F = P Blocked, A & B to T
H = All Ports Open
T = P to A & B, T Blocked

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