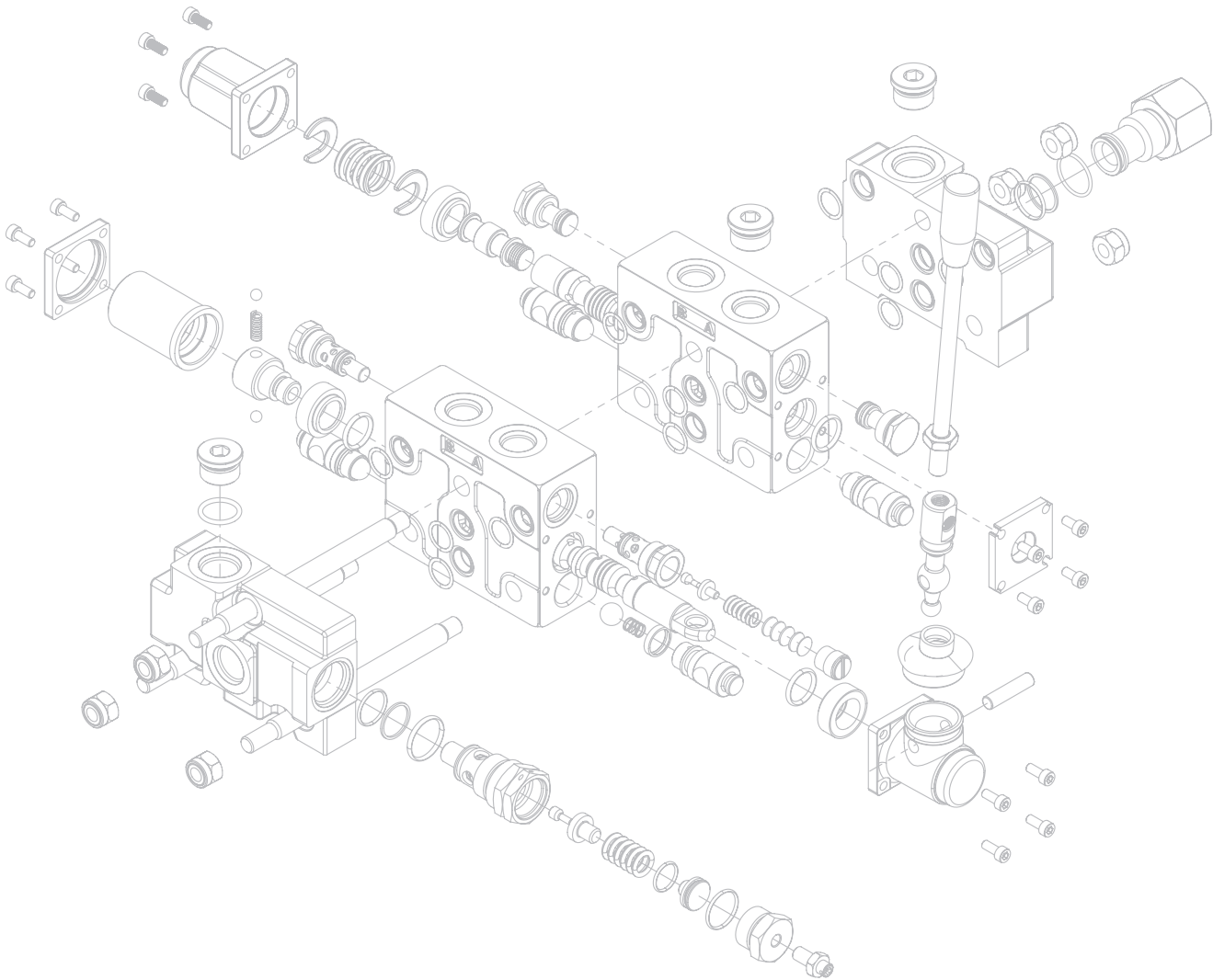




V080 SERIES

DIRECTIONAL CONTROL VALVE





TAKE CONTROL

Take control with Muncie Power Products' V080 directional control valve. The V080 is constructed with high grade iron castings and nickel-plated spools for use in high pressure applications and can be configured with many different spool, control and positioner options.

The V080 is designed for flow rates up to 30GPM (114LPM), and offers superior performance in a compact package.

Muncie Power Products takes pride in supplying the highest quality products along with outstanding service & support.

Let us put you in control of your hydraulic systems.
The V080 can be configured with custom options and controls.
If you don't see what you need here, call us at

(800) 367-7867



V080 SERIES

DIRECTIONAL CONTROL VALVE

FEATURES

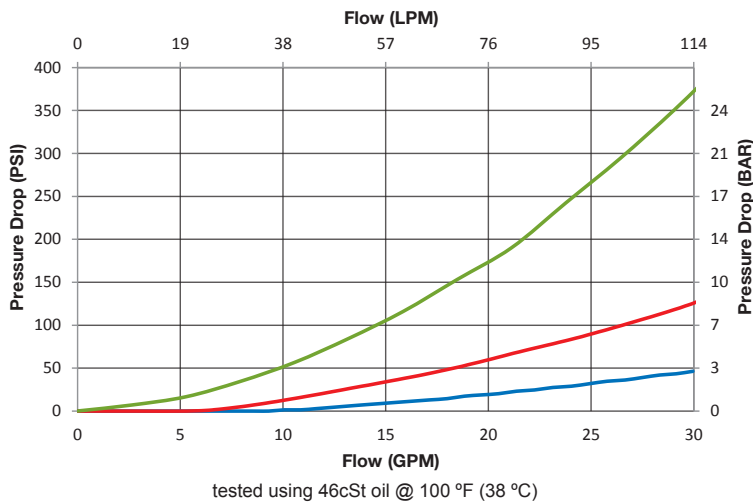
- High grade iron castings allow for high pressure capabilities for the most extreme applications
- Nickel plated spools resist wear allowing for long life under high pressure conditions
- Tight tolerances and precision machining keep internal, spool leakages low
- Internal oil core design allows for higher flow rates and low pressure drops, all in a smaller package
- High pressure carry over (power beyond) and closed center options are available
- Load-checks are standard on all work sections
- Work port relief valves, anti-cavitation valves, combination reliefs/anti-cavitation valves and pilot operated check valves (lock valves) are available
- Inlet relief valve is standard
- Parallel, series, tandem and metered spools are available (lead times apply to nonstandard options)
- Very versatile design can be configured with many different spool, control, positioner and accessory options
- Work sections are pre-assembled and 100% tested prior to shipping

TECH SPECS

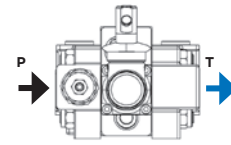
Design Type	Sectional
Maximum Work Sections	10
Circuit Types	Open center parallel, series, tandem and closed center
Flow Capacity	Nominal: 21 GPM (80 LPM) Maximum: 30 GPM (114 LPM)
Maximum Pressure	1 – 3 sections: 5,075 PSI (350 BAR) 4 – 6 sections: 4,650 PSI (320 BAR) 7 – 10 sections: 4,350 PSI (300 BAR)
Maximum Back Pressure	365 PSI (25 BAR)
Recommended Filtration	20 / 18 / 15 (ISO 4406:1999)
Oil Viscosity Range	60 to 1,950 SUS (10 to 400 cSt)
Oil Temperature Range	-20 to 180 °F (-29 to 82 °C)
Recommended Oil Temperature	85 to 140 °F (30 to 60 °C)
Approximate Weights (Standard Options)	Inlet: 5.1 lbs (2.3 Kg) Outlet: 4.2 lbs (1.9 Kg) Work Section: 8.6 lbs (3.9 Kg)

PRESSURE DROP CURVES

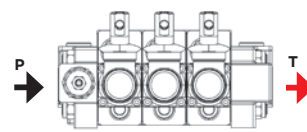
Open Center, Pressure to Tank (P-T)



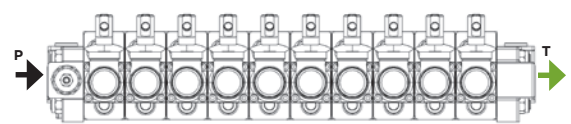
P-T, 1 Work Section



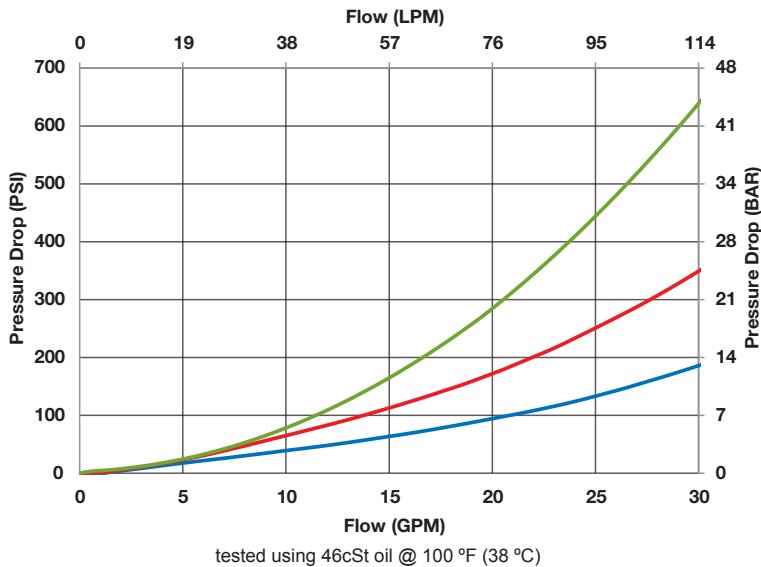
P-T, 3 Work Sections



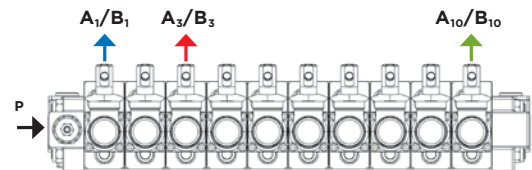
P-T, 10 Work Sections



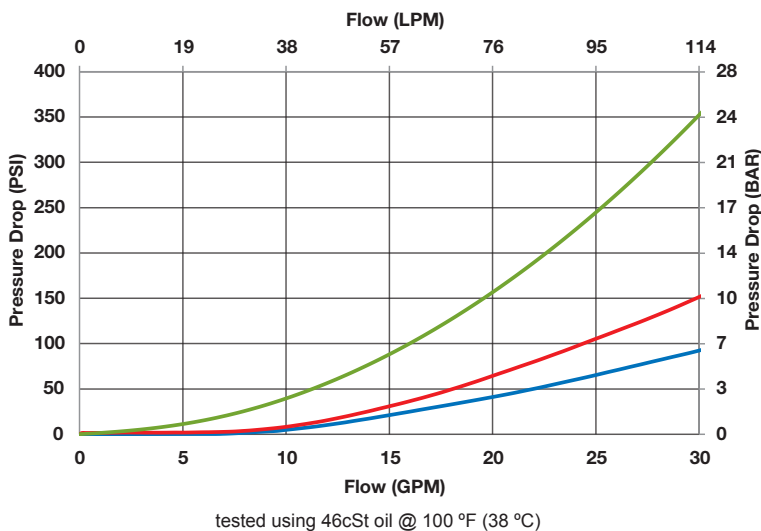
Pressure to Work Ports (P - A_x/B_x)



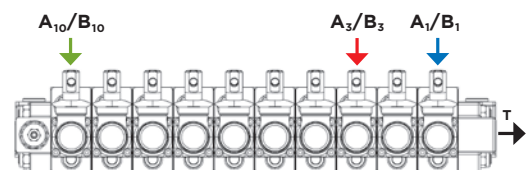
- P-A1/B1
- P-A3/B3
- P-A10/B10



Work Ports to Tank (A_x/B_x - T)



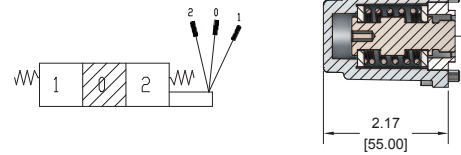
- A1/B1-T
- A3/B3-T
- A10/B10-T



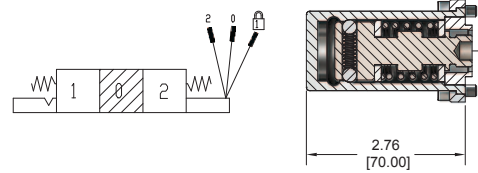
BACK-CAP OPTIONS

CONTROL OPTIONS

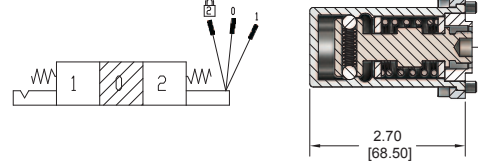
V080-BC-01
STANDARD 3 POSITION, SPRING RETURN



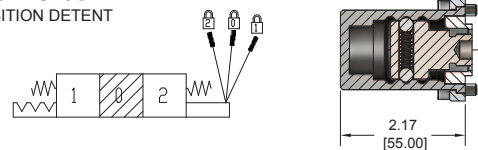
V080-BC-06
DETENT SPOOL "IN" (POS. 1), SPRING SPOOL "OUT" (POS. 2)



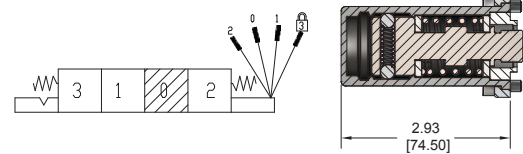
V080-BC-07
SPRING SPOOL "IN" (POS. 1), DETENT SPOOL "OUT" (POS. 2)



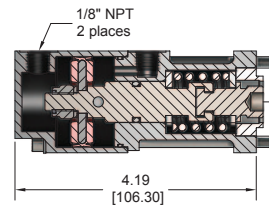
V080-BC-08
3 POSITION DETENT



V080-BC-12
3 POSITION, SPRING RETURN WITH 4th POSITION DETENT



V080-BC-33
PNEUMATIC SHIFT, ON/OFF or Proportional (use w/ control type AA, AE or AJ)

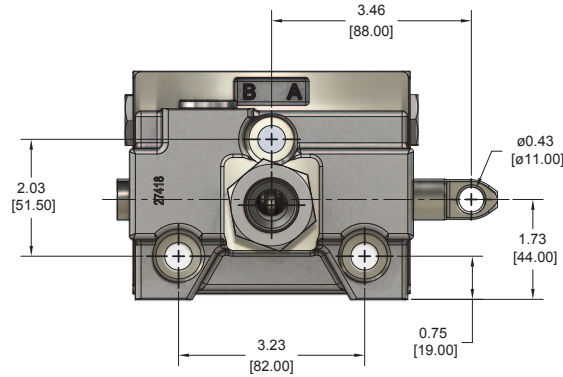
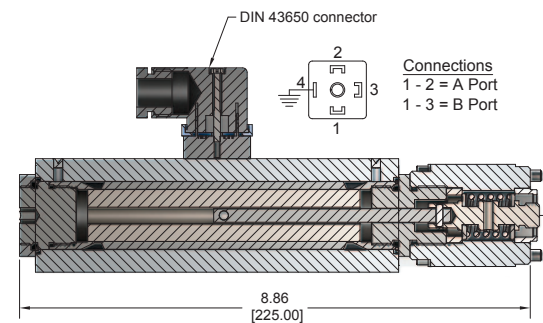


V080-BC-35 (comes w/ single acting spool "AB")

V080-BC-36 (comes w/ double acting spool "AC")

V080-BC-37 (comes w/ motor spool "AJ")

ON/OFF (BANG-BANG) ELECTRICAL CONTROL



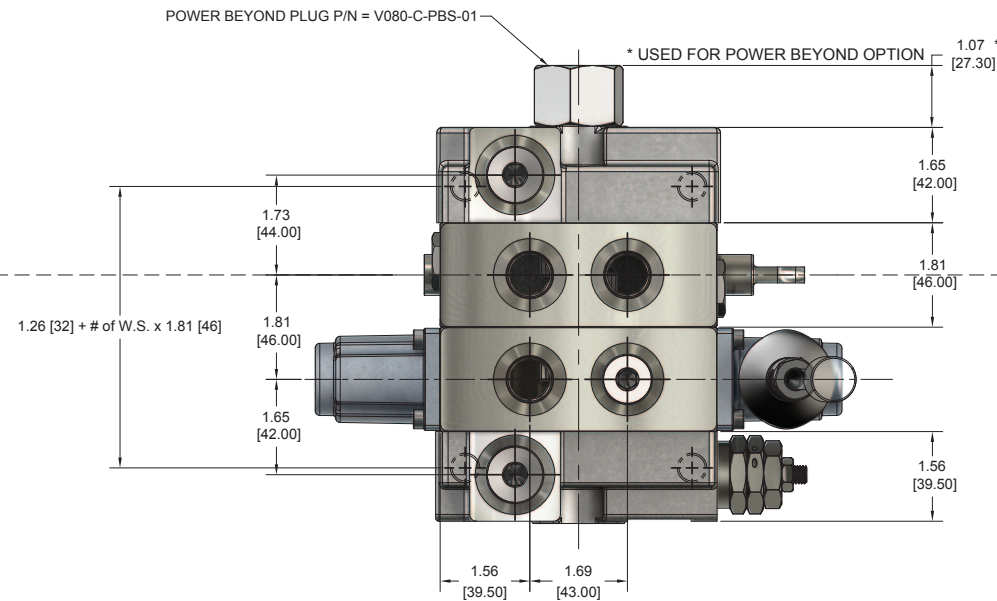
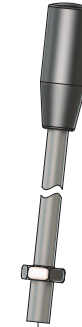
PORT SIZE AND TYPE

INLET PORTS = -12SAE
WORK PORTS = -10SAE (standard)
OUTLET PORTS = -12SAE
POWER BEYOND PORT = -10SAE (standard)

Note: other ports sizes are available upon special request (lead times may apply)

STANDARD LEVER HANDLE KIT

P/N: VLVH-01A-210
LENGTH: 8.25" (210mm)



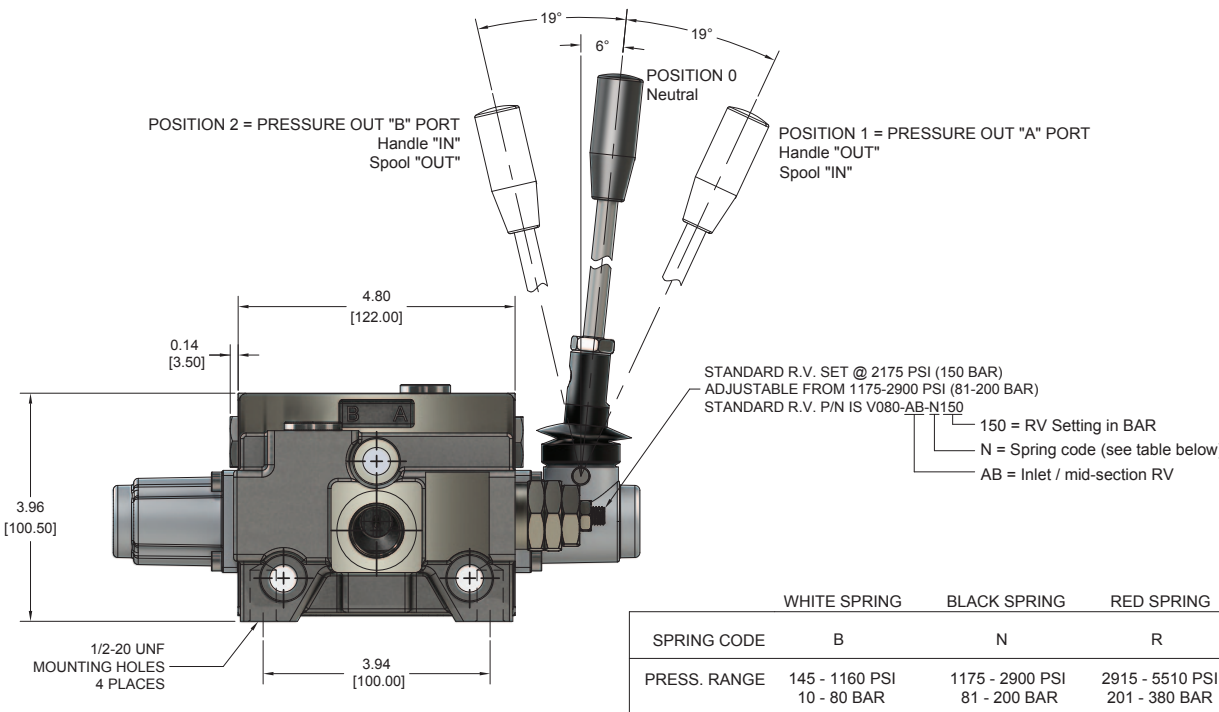
POWER BEYOND PLUG P/N = V080-C-PBS-01

* USED FOR POWER BEYOND OPTION

POSITION 2 = PRESSURE OUT "B" PORT
Handle "IN"
Spool "OUT"

POSITION 1 = PRESSURE OUT "A" PORT
Handle "OUT"
Spool "IN"

POSITION 0
Neutral



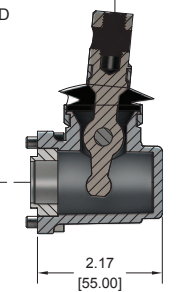
STANDARD R.V. SET @ 2175 PSI (150 BAR)
ADJUSTABLE FROM 1175-2900 PSI (81-200 BAR)
STANDARD R.V. P/N IS V080-AB-N150

150 = RV Setting in BAR
N = Spring code (see table below)
AB = Inlet / mid-section RV

	WHITE SPRING	BLACK SPRING	RED SPRING
SPRING CODE	B	N	R
PRESS. RANGE	145 - 1160 PSI 10 - 80 BAR	1175 - 2900 PSI 81 - 200 BAR	2915 - 5510 PSI 201 - 380 BAR

V080-CT-AA
STANDARD LEVER CAP

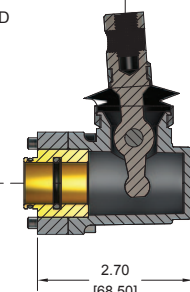
NOTE: HANDLE LEVER NOT INCLUDED



V080-CT-AB

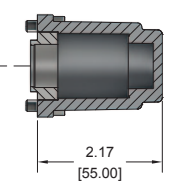
LEVER CAP FOR FLOAT SPOOL (4th POS. DETENT)

NOTE: HANDLE LEVER NOT INCLUDED



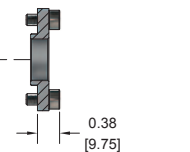
V080-CT-AE

SPOOL COVER FOR BACK-CAP CONTROL



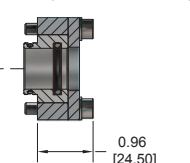
V080-CT-AJ

SPOOL EYE ONLY FOR DIRECT CONNECTION



V080-CT-AK

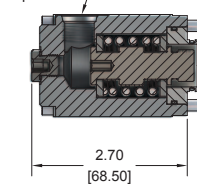
SPOOL EYE ONLY FOR FLOAT SPOOL (4th POS. DETENT)



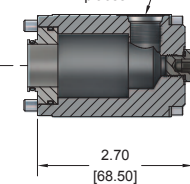
V080-CT-BG

LOW PRESSURE, HYDRAULIC CONTROL

-6SAE, 9/16-18 UN2B
2 places



-6SAE, 9/16-18 UN2B
2 places



MODEL NUMBER CONSTRUCTION

WORK SECTIONS

V080-AB-AA-01-FM-02-X

V080 Valve Series

Spool Type:

- AB = 3P3W, Single acting cylinder, pressure out B port
- AC = 3P4W, Double acting cylinder
- AJ = 3P4W, Bi-rotational motor, work ports connected to tank in neutral
- AM = 4P4W, Double acting cylinder w/ float (4th position detent)

Control Type:

- AA = Lever Cap (handle not included)*
- AB = Lever Cap for float spool "AM" (handle not included)*
- AE = Spool cover for back-cap controls
- AJ = Spool eye only for direct connection
- AK = Spool eye only for direct connection with float spool "AM"
- BG = Low pressure hydraulic control

Back-cap Positioners & Controls:

- 00 = No positioner, use with BG control type
- 01 = 3 position, spring return
- 06 = Detent spool IN, spring spool OUT
- 07 = Detent spool OUT, spring spool IN
- 08 = 3 position detent
- 12 = 3 position, spring return with 4th position detent
- 33 = Pneumatic positioning (on/off or proportional)
- 35 = On/Off (bang-bang) 12V electrical control for single acting spool (use w/ spool code AB)**
- 36 = On/Off (bang-bang) 12V electrical control for double acting spool (use w/ spool code AC)**
- 37 = On/Off (bang-bang) 12V electrical control for motor spool (use w/ spool code AJ)**

Special Features:

- X = No option (standard)

Work Port Options:

- 02 = Machined w/steel plugs (standard)

RV Set @ 1,000 PSI (70 BAR)

adjustable from 435-1,160 PSI (30-80 BAR)

- 03 = RV on A port, set at 1,000 PSI (70 BAR)
- 04 = RV on B port, set at 1,000 PSI (70 BAR)
- 05 = RV on A & B port, set at 1,000 PSI (70 BAR)

RV Set @ 1,800 PSI (125 BAR)

adjustable from 1,175-2,900 PSI (81-200 BAR)

- 14 = RV on A port, set at 1,800 PSI (125 BAR)
- 15 = RV on B port, set at 1,800 PSI (125 BAR)
- 16 = RV on A & B port, set at 1,800 PSI (125 BAR)

Anti-Cavitation Valves

- 11 = Anti-cav on A port
- 12 = Anti-cav on B port
- 13 = Anti-cav on A & B port

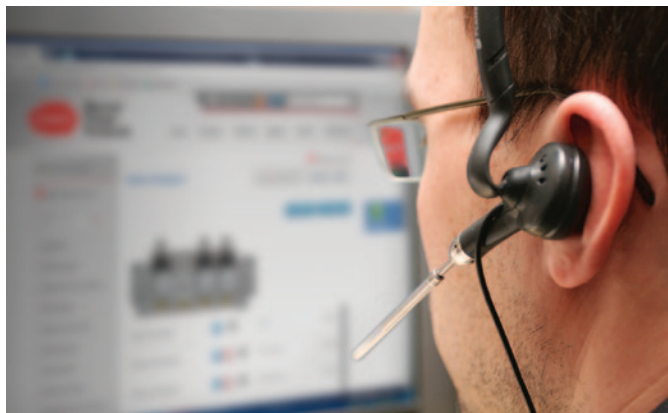
Port Type:

- FC = -8 SAE
- FM = -10 SAE (standard)
- FX = -12 SAE

* Handle kit to be ordered separately

Standard handle kit P/N: VLVH-01A-210
Length: 8.25" (210mm)

**Options 35-37 must use control type "AA"



Muncie Power Products offers a full line of valve options and accessories. If you don't see what you need here, give our customer service department a call for your specific application needs.

(800) 367-7867

INLET SECTIONS

V080-A-FX-7SX-N150

V080 Valve Series

Section Type:

A = Inlet

Port Size & Type:

FX = -12 SAE top and end

Relief Valve Setting:

N150 = 2,175 PSI (150 BAR)

XXXX = No relief valve option
(use w/ 8SX option)

Inlet Options:

7SX = Inlet with relief valve (standard)

8SX = Inlet without relief valve (plugged)

MID SECTIONS

V080-B-FX-E51-N150

V080 Valve Series

Section Type:

B = Mid-section

Port Size & Type:

FM = -10 SAE top & side (E53 only)

FX = -12 SAE side (E51 only)

Relief Valve Setting:

XXXX = No RV option (E51 only)

N150 = 2,175 PSI (150 BAR) (E53 only)

Mid-section Type:

E51 = Split flow mid-outlet*

E53 = Combined flow mid-inlet with RV

* Split flow mid-outlets utilize 2 inlet sections on the valve assembly, and the mid-outlet acts as the outlet for each inlet.

OUTLETS

V080-C-FX-3DX-XXX

V080 Valve Series

Section Type:

C = Outlet

Port Size & Type:

FX = -12 SAE top and end

FN = -10SAE end P.B. port by -12SAE top port
(use w/ power beyond option 6DX)

Additional Outlet Options:

XXX = No options

Mid-Inlet Type:

3DX = Standard outlet

6DX = Outlet with power beyond

STUD KITS

V080-T01

V080 Valve Series

Number of Work Sections

Stud Length

In (mm)

T01 = 1 work section kit 4.7 (120)

T02 = 2 work section kit 6.5 (166)

T03 = 3 work section kit 8.3 (212)

T04 = 4 work section kit 10.2 (258)

T05 = 5 work section kit 12.0 (304)

T06 = 6 work section kit 13.8 (350)

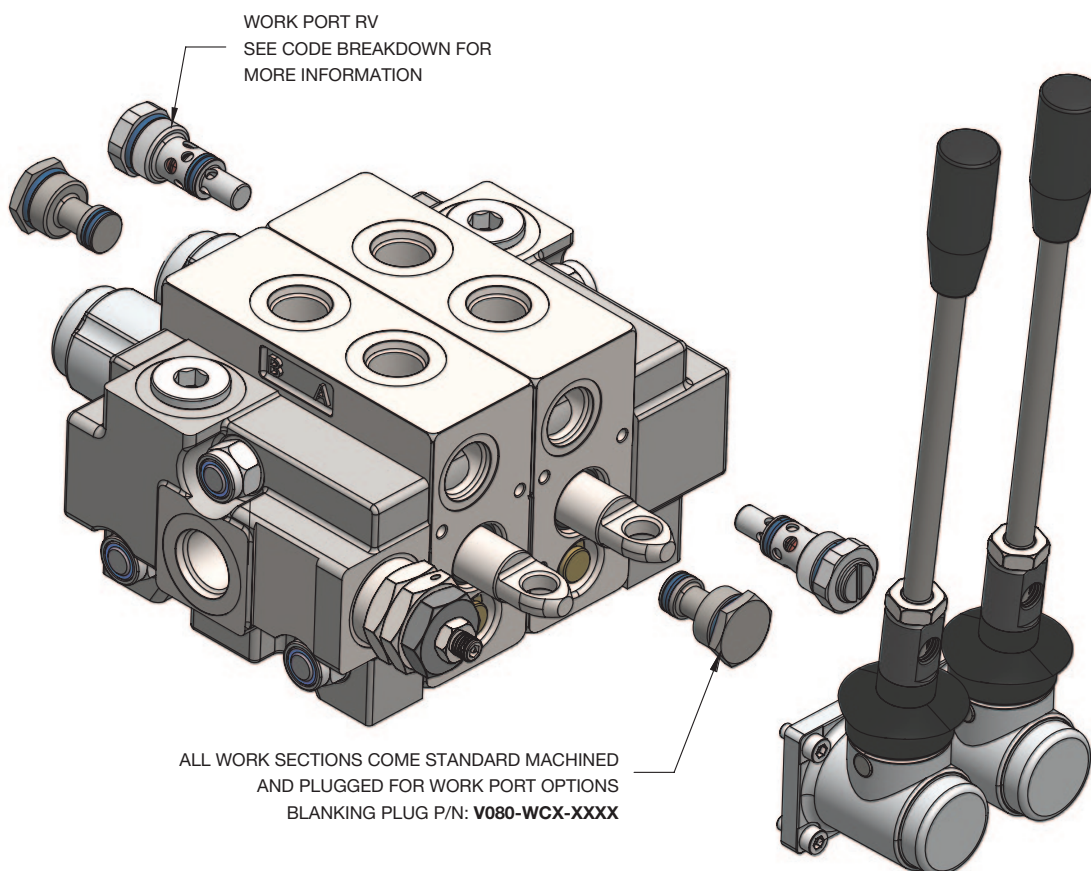
T07 = 7 work section kit 15.6 (396)

T08 = 8 work section kit 17.4 (442)

T09 = 9 work section kit 19.2 (488)

T10 = 10 work section kit 21.0 (534)

WORK PORT OPTIONS



V080-W30-N120

V080 Valve Series

Work Port Option:

W30 = Work Port RV

W33 = Work Port RV + Anti-Cav

W04 = Work Port Anti-Cav Only

WCX = Blanking Plug

RV Setting in BAR:

Use "XXX" for anti-cav only & plug options

RV Spring Code:

B = Adjustable from 145-1160PSI (10-80BAR)

N = Adjustable from 1175-2900PSI (81-200BAR)

R = Adjustable from 2915-5510PSI (201-380BAR)

X = for plug and anti-cav only options

NOTE: V080 work port relief valves are low profile to avoid interference with control options. To achieve full adjustment range of relief valve spring, spacer shims must be used. V080 work port RV shim kit P/N = **V080-W30-SHIMKIT**

ORDER EXAMPLE

If you would like to order a valve assembly, you will have to order each item separately. The order in which parts are entered is how the valve will be built from left to right. On the right is an example of a 3 work section valve order:

Part Number	Qty.	Description
V080-A-FX-7SX-N150	1	Inlet with relief valve
V080-AC-AA-01-FM-02-X	2	Work section 1 & 2
V080-AC-AJ-33-FM-05-X	1	Work section 3
VLVH-01A-210	2	8.25" (210 mm) handle kits for WS 1 & 2
V080-C-FX-3DX-XXX	1	Standard outlet
V080-T03	1	Stud kit for 3 section assembly

WARRANTY

Muncie's V080 Valve Series is warranted against any defect in material and workmanship which existed at the time of sale by Muncie Power Products, according to the following provision, subject to the requirements that the valve must be used only in accordance with catalog and package instructions.

The valve is warranted for a period of one year from date of installation. If during the warranty period the valve fails to operate to Muncie Power Products' specifications due to a defect in any part in material or workmanship that existed at the time of sale by Muncie Power Products, the defective part will be repaired or replaced, at Muncie Power Products' election, at no charge, if the defective part is returned to Muncie Power Products with transportation prepaid.

WARNING: The warranty shall terminate if any alterations or repairs are made to the valve other than at a Muncie Power Products facility, or if the valve is used on any equipment other than the equipment upon which first installed.

The foregoing warranties are in lieu of all other obligations and liabilities, including negligence and all warranties of merchantability and suitability, expressed or implied and state Muncie Power Products' entire and exclusive liability and buyer's exclusive remedy for any claim of damages in connection with the sale, repair or replacement of above goods, their design, installation or operation. Muncie Power Products will in no event be liable for any direct, indirect, special, incidental or consequential damages whatsoever, and our liability under no circumstances will exceed the contract price for the goods for which liability is claimed.



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