

V130 SERIES

DIRECTIONAL CONTROL VALVES



TAKE CONTROL OF YOUR HYDRAULICS

The V130 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 V130 is designed for flow rates up to 55 GPM (208 LPM), and offers superior performance in a compact package. Muncie Power Products takes pride in supplying the highest quality products along with outstanding service & support.



KEY 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
- Load-checks and inlet relief valve are standard
- 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

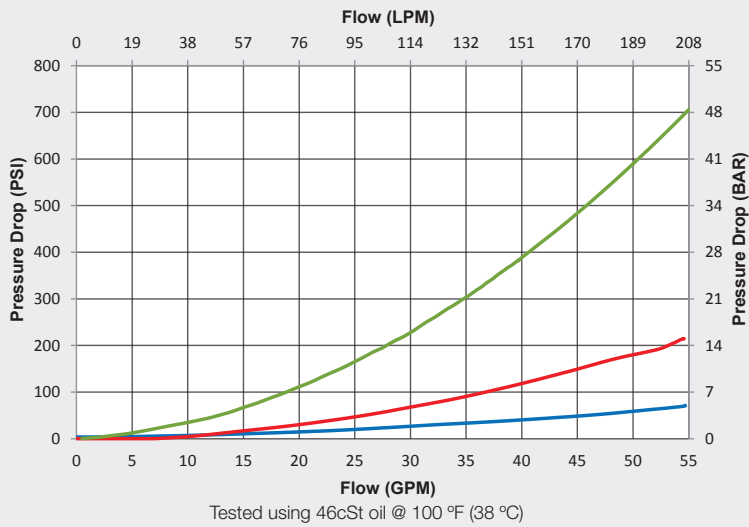
Additional options available, lead times may apply.

TECH SPECS

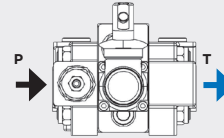
| DESIGN TYPE | SECTIONAL |
|--|--|
| Maximum Work Sections | 10 |
| Circuit Types | Open center parallel, series, tandem and closed center |
| Flow Capacity | Nominal: 34 GPM (130 LPM) Maximum: 55 GPM (208 LPM) |
| Maximum Pressure | 1 – 3 sections: 5,440 PSI (375 BAR) 4 – 6 sections: 5,075 PSI (350 BAR) 7 – 10 sections: 4,710 PSI (325 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: 13.2 lbs (6 Kg) Outlet: 10.6 lbs (4.8 Kg) Work Section: 12.8 lbs (5.8 Kg) |

PRESSURE DROP CURVES

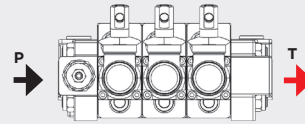
Open Center, Pressure to Tank (P-T)



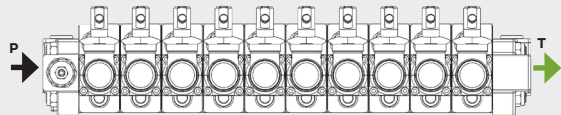
P-T, 1 Work Section



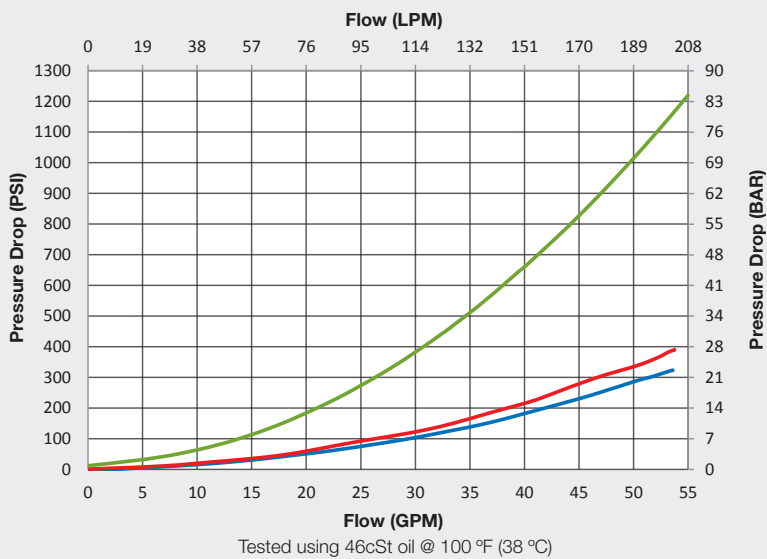
P-T, 3 Work Sections



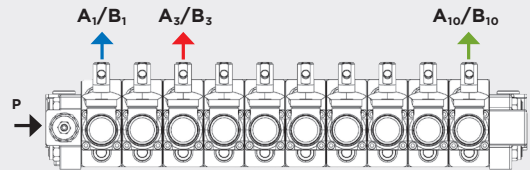
P-T, 10 Work Sections



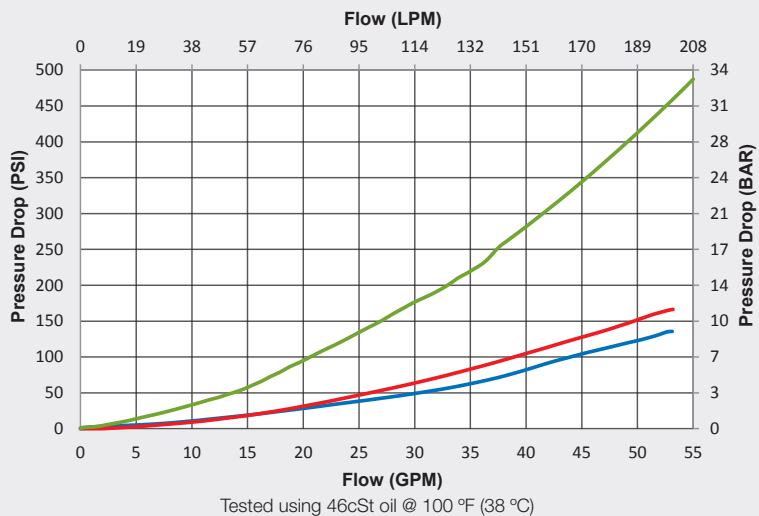
Pressure to Work Ports (P-A_x/B_x)



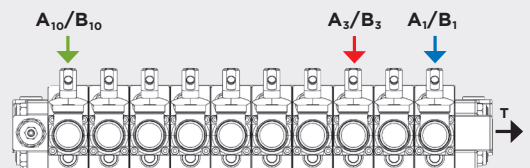
- P-A1/B1
- P-A3/B3
- P-A10/B10



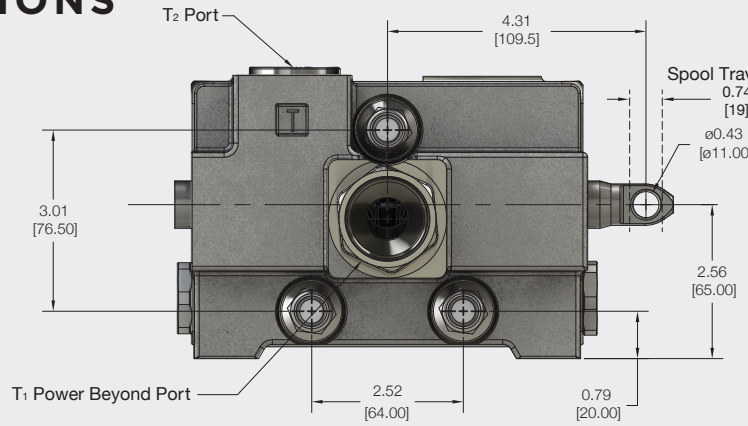
Work Ports to Tank (A_x/B_x-T)



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



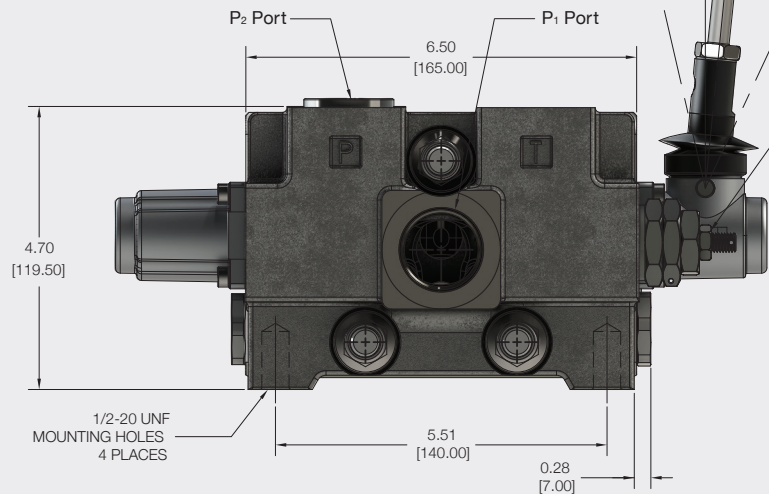
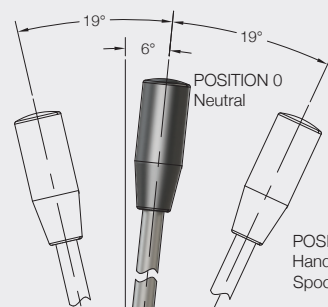
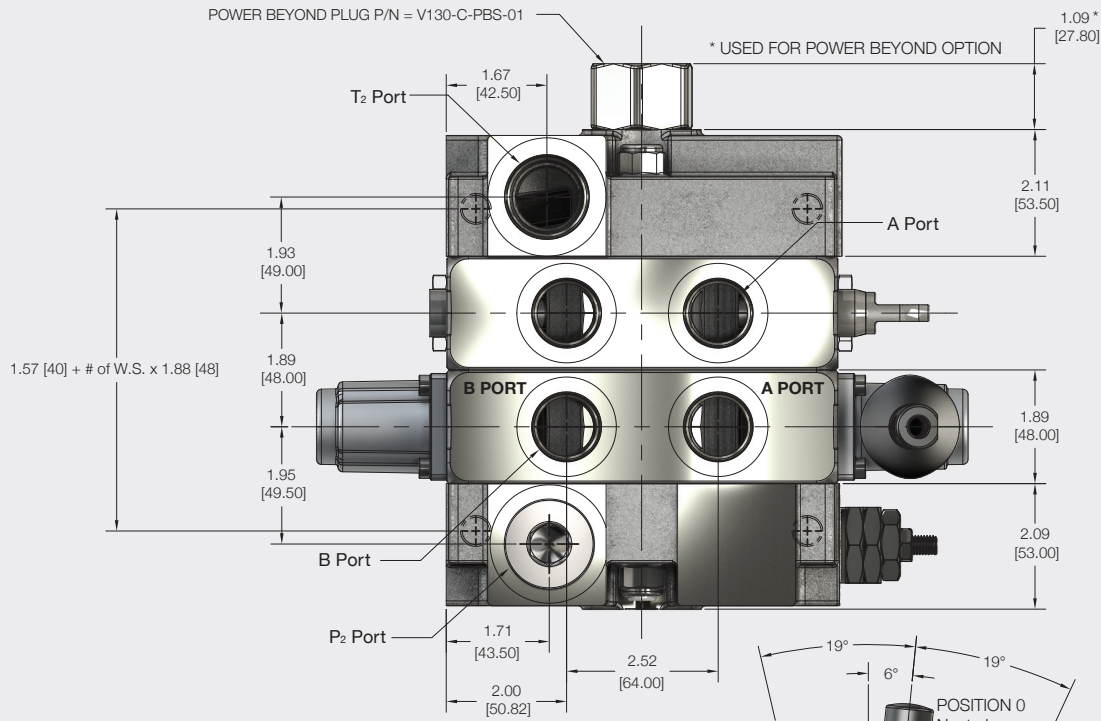
DIMENSIONS



PORT SIZE AND TYPE

INLET PORTS = -16 SAE
 WORK PORTS = -12 SAE (standard)
 OUTLET PORTS = -16 SAE
 POWER BEYOND PORT = -12 SAE (standard)

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

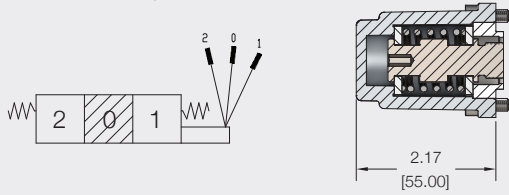


STANDARD R.V. SET @ 2175 PSI (150 BAR)
 ADJUSTABLE FROM 1175-2900 PSI (81-200 BAR)
 STANDARD R.V. P/N IS V130-AB-N150

BACK CAP OPTIONS

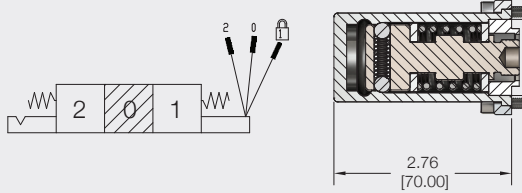
V130-BC-01

STANDARD 3 POSITION, SPRING RETURN



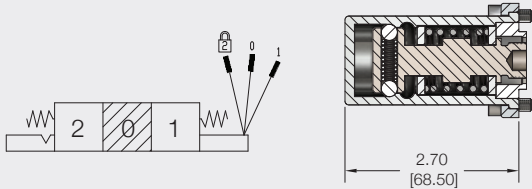
V130-BC-06

DETENT SPOOL "IN" (POS. 1), SPRING SPOOL "OUT" (POS. 2)



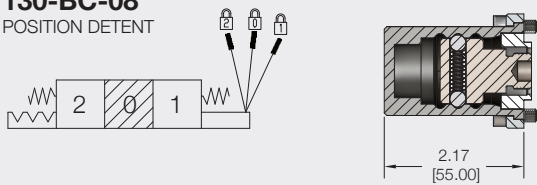
V130-BC-07

SPRING SPOOL "IN" (POS. 1), DETENT SPOOL "OUT" (POS. 2)



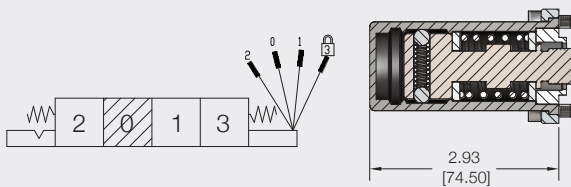
V130-BC-08

3 POSITION DETENT



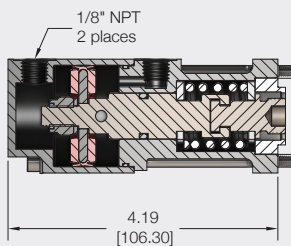
V130-BC-12

3 POSITION SPRING RETURN WITH 4th POSITION DETENT



V130-BC-33

PNEUMATIC SHIFT (use w/ control type AA, AE or AJ)

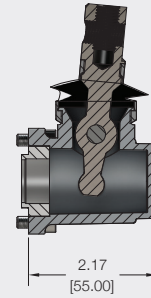


CONTROL OPTIONS

V130-CT-AA

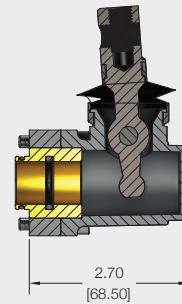
STANDARD LEVER CAP
NOTE: LEVER HANDLE NOT INCLUDED

(Standard Handle P/N: VLVH01A210)



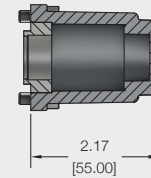
V130-CT-AB

LEVER CAP FOR FLOAT SPOOL
(4th POS. DETENT)
NOTE: LEVER HANDLE NOT INCLUDED



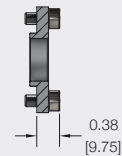
V130-CT-AE

SPOOL COVER FOR BACK-CAP CONTROL



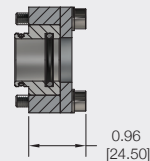
V130-CT-AJ

SPOOL EYE ONLY FOR DIRECT CONNECTION



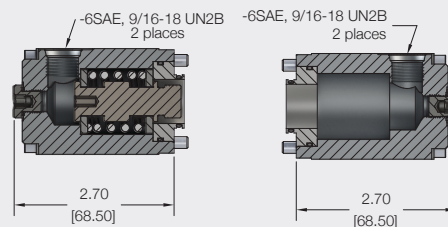
V130-CT-AK

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



V130-CT-BG

LOW PRESSURE, DUAL-SIDED, HYDRAULIC CONTROL



INLET SECTIONS

V130-A-GI-7SX-N-150

V130 Valve Series

Section Type:

A = Inlet

Port Size & Type:

GI = -16 SAE top and end

Inlet Options:

7SX = Inlet with direct acting relief valve (standard)

8SX = Inlet without relief valve (plugged)

7SP = Inlet with pilot operate relief valve (lead times may apply)

Relief Valve Setting (in BAR):

150 = 2,175 PSI (Standard Inlet RV)

210 = 3,000 PSI

XXX = No setting (Used with 8SX option)

Relief Valve Adjustment Range

B = 145-1,160 PSI (10-80 BAR)

N = 1,175-2,900 PSI (81-200 BAR) Standard option

R = 2,915-5,510 PSI (201-380 BAR)

F = 145-5,510 PSI (10-380 BAR) only for "7SP" option

X = No Relief Valve (Used w/ 8SX option)

INLET RELIEF VALVES

V130-AB-N-150-P

V130 Valve Series

Section Type:

AB = Use with inlet and mid-section only

Relief Type:

Blank = Direct Acting (Standard)

P= Pilot Operated

Relief Valve Setting:

See setting options in "Inlet Sections"

Relief Valve Adjustment Range:

See RV adjustment range in "Inlet Sections"

| SPRING CODE | B | N | R | F |
|-------------------|--------------------|---------------------|---------------------|---------------------|
| Standard Settings | 1,160 PSI (80 BAR) | 2,175 PSI (150 BAR) | 3,000 PSI (210 BAR) | 2,175 PSI (150 BAR) |

MID SECTIONS

V130-B-GI-E53-N-150

V130 Valve Series

Section Type:

B = Mid-section

Port Size & Type:

GI = -16 SAE top and side

Relief Valve Setting:

See setting options in "Inlet Sections"

Relief Valve Adjustment Range:

See RV adjustment range in "Inlet Sections"

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

V130-C-GI-3DX-XXX

V130 Valve Series

Section Type:

C = Outlet

Port Size & Type:

GI = -16 SAE top and end (standard)

FY = -12 SAE end P.B. port by -16 SAE top port
(Use w/ power beyond option 6DX)

Additional Outlet Options:

XXX = No options

Outlet Options:

3DX = Standard outlet

6DX = Outlet with power beyond

(Part Number for Power Beyond Sleeve only: V130-C-PBS-02)

WORK SECTIONS

V130-AB-AA-01-FX-02-X

V130 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)**

Special Features:

- X = No option (standard)

Work Port Options:

- 02 = Machined w/steel plugs (standard)

RV or RV+AC 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)
- 08 = RV+AC on A & B port, set at 1,000 PSI (70 BAR)

RV or RV+AC 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)
- 19 = RV+AC 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

Note: Additional port accessory valve options available on request, lead times may apply

Work Port Size & Type (both A & B):

- FX = -12 SAE (standard)

* Handle kit to be ordered separately

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

**Option "33" recommended control type is "AA"
other options are "AJ" or "AE"

Cable Control Kit Part Number: RVC-HK-233

STUD KITS

V130-T-01

V130 Valve Series

T = Tie rod

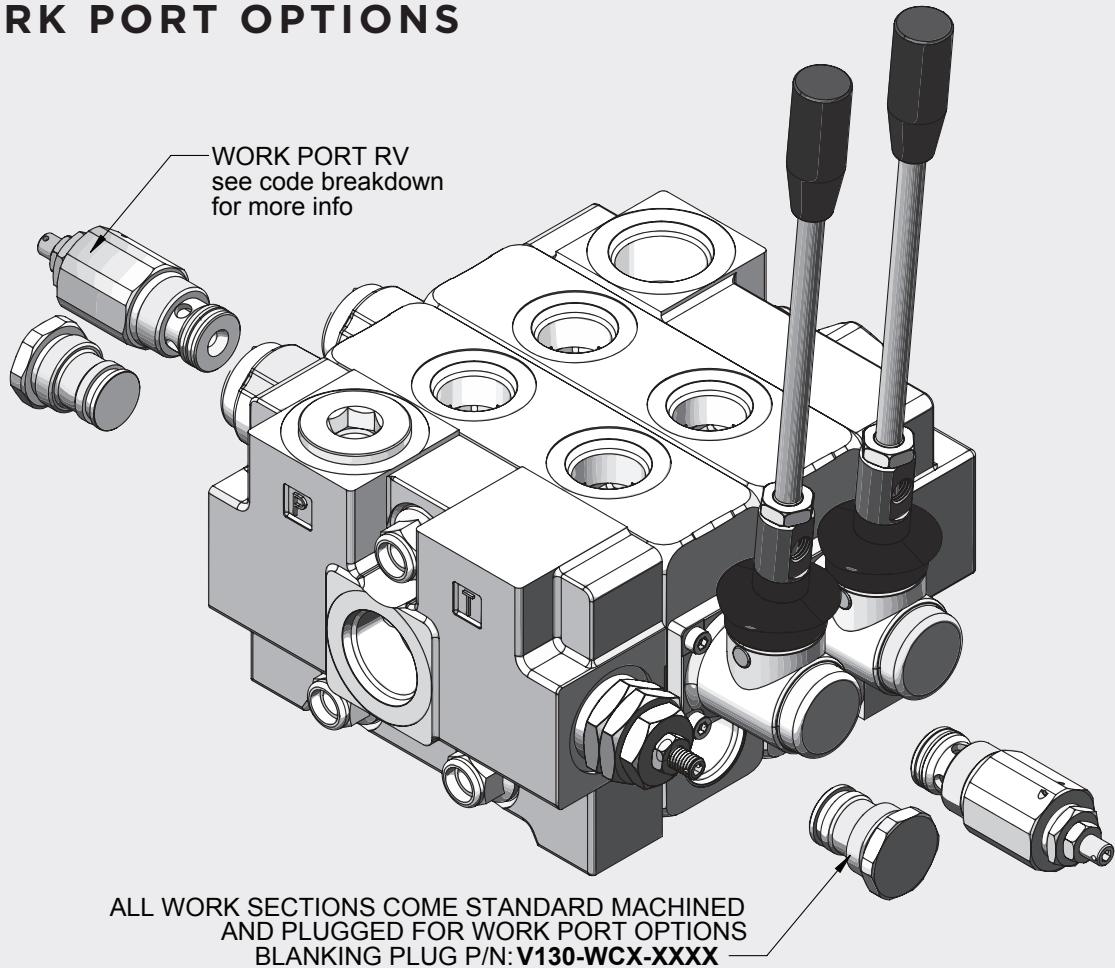
Number of Work Sections

01 - 10

| NO. OF WORK SECTIONS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
| "L" (in/mm) | 5.6 / 143 | 7.5 / 191 | 9.4 / 239 | 11.3 / 287 | 13.2 / 335 | 15.1 / 383 | 17.0 / 431 | 18.9 / 479 | 20.7 / 527 | 22.6 / 575 |



WORK PORT OPTIONS



V130-W30-N-125

V130 Valve Series _____

Work Port Option: _____

- W30 = Work Port RV
- W33 = Work Port RV + Anti-Cav
- W66 = Work Port RV + Anti-Cav (Full Flow Pilot Operated)
- W04 = Work Port Anti-Cav Only
- WCX = Blanking Plug

Note: W30 and W33 options MAX flow = 18 GPM (68LPM)

Relief Valve Setting (in BAR):

- 070 = 1,000 PSI
- 125 = 1,800 PSI
- 150 = 2,175 PSI
- 170 = 2,500 PSI
- 210 = 3,000 PSI
- XXX = No Setting (Used w/ W04 or WCX)

Relief Valve Adjustment Range:

- B = 145-1,160 PSI (10-80 BAR)
- N = 1,750-2,900 PSI (81-200 BAR)
- R = 2,915-5,510 PSI (201-380 BAR)
- F = 725-5,800 PSI (50-400 BAR) Only for W66 option
- X = No Setting (Use w/ W04 or WCX)

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 |
|-----------------------|------|---|
| V130-A-GI-7SX-N150 | 1 | Inlet with relief valve |
| V130-AC-AA-01-GI-02-X | 2 | Work section 1 & 2 |
| V130-AC-AJ-01-GI-05-X | 1 | Work section 3 |
| VLVH-01A-210 | 2 | 8.25" (210 mm) handle kits for WS 1 & 2 |
| V130-C-GI-3DX-XXX | 1 | Standard outlet |
| V130-T03 | 1 | Stud kit for 3 section assembly |

