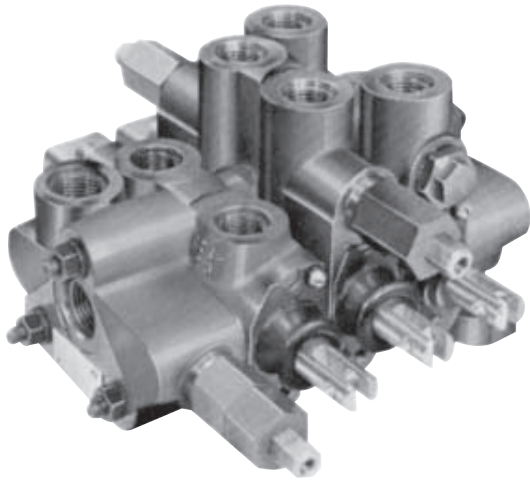


Series V12 Directional Control Valves

Sectional Body



Effective: February 1, 2004
Supersedes: Cat. No. GPD-1108 dated 9/84

Description

The Parker Series V12 Directional Control Valve is designed for parallel hydraulic circuit applications, up to 3000 PSI (207 bar) continuous operating pressure.

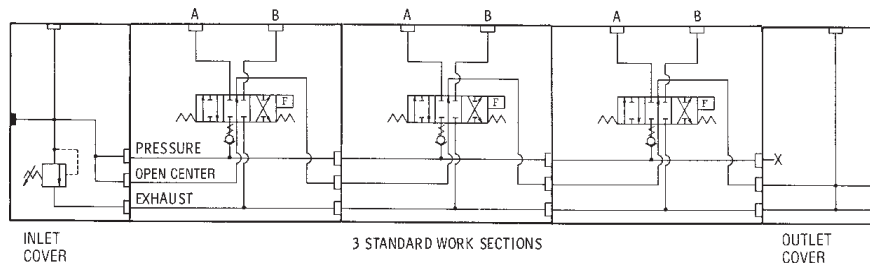
Each valve stack consists of an inlet cover, one or more work sections and an outlet cover. A variety of work sections, spools, and spool actions, end covers and relief combinations are available to provide the exact type of valve assembly required for any given application whether mobile, industrial or agricultural.

The Series V12 is a parallel circuit valve. The parallel circuit is the most commonly used circuit in mobile equipment

because more than one function can be operated at the same time at random in the valve bank assembly.

The open center passage is closed off when a spool is fully shifted and hydraulic oil will flow directly to the power core passage, making oil available to all work ports. If two or more spools are fully shifted at the same time, the oil will follow the path of least resistance, and the hydraulic cylinder or the hydraulic motor with the lightest load will begin to function first.

The hydraulic oil can be divided so that it will flow to two or more functions by metering the spools.



Specifications

Parallel Hydraulic Circuit

Pressure Rating:

Continuous Operating, Max. 3000 PSI [207 bar]
Tank Port (Exhaust), Max. 500 PSI [34.5 bar]

Flow Rating, Nominal 12 GPM [45.4 litres/min.]

Operating Temperature - 40°F [- 40°C] to 176°F [80°C]

Port Size

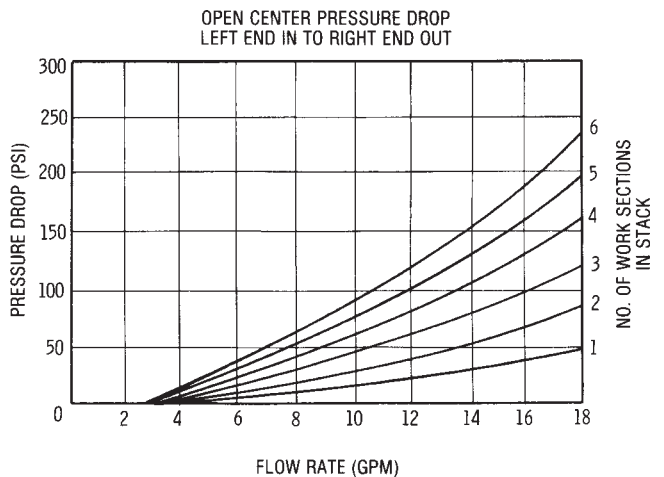
Inlet SAE 10
Outlet SAE 10
Work Ports SAE 8
Power Beyond SAE 8, SAE 10

Filtration Required, Min. 33 micrometre

Weight:

Inlet Cover Approx. 3.3 lbs. [1.5 kg]
Outlet Cover Approx. 3.3 lbs. [1.5 kg]
Work Sections
Standard Approx. 5 lbs. [2.3 kg]
Accessory Approx. 6.5 lbs. [2.7 kg]

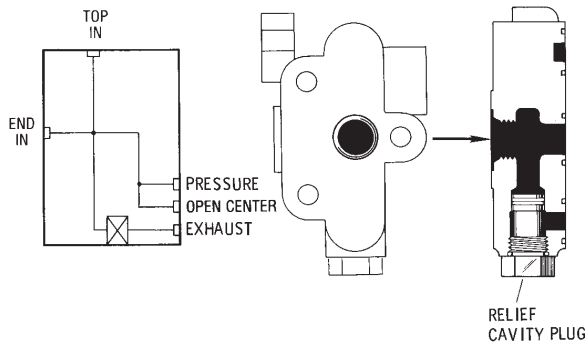
Performance



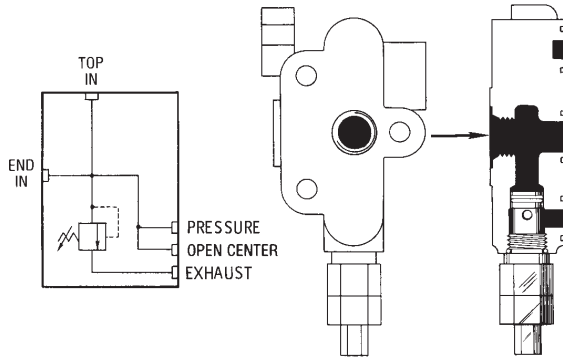
Curves are typical results derived from laboratory tests run with 123 SUS oil, at 120°F [50°C].

Inlet Cover Options Series V12P

INLET WITHOUT MAIN RELIEF



INLET WITH MAIN RELIEF RELIEF POSITION B



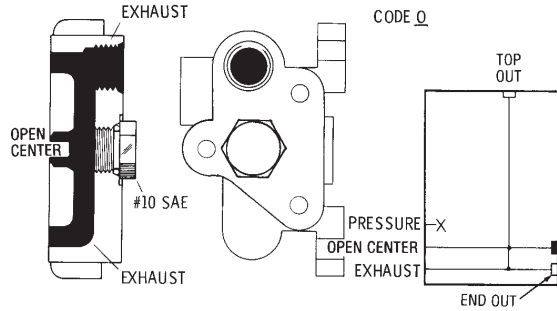
Both top and end ports are machined on all inlet and outlet covers. The unused ports will be plugged.

All V12E outlet covers are machined to accept closed center plugs or power beyond sleeves.

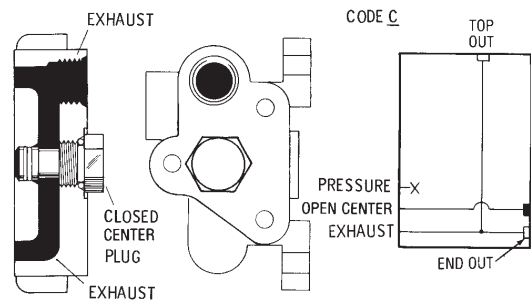
(ALL COVERS SHOWN WITH TOP AND END PORTS)

Outlet Cover Options Series V12E

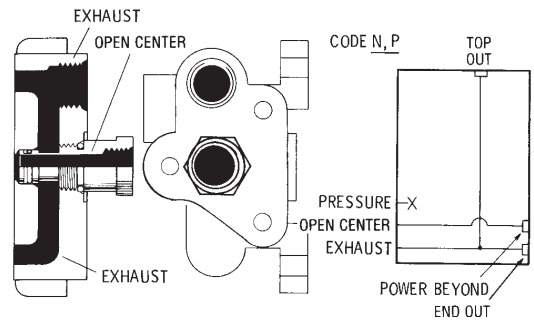
OUTLET WITH OPEN CENTER



OUTLET WITH CLOSED CENTER

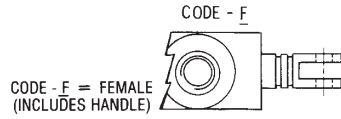


POWER BEYOND SLEEVE

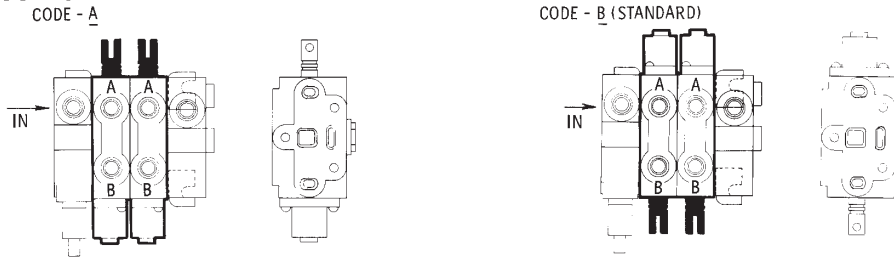


Work Section Options Series V12P

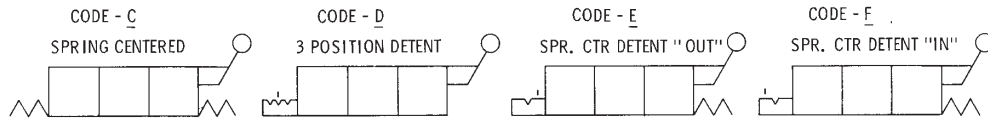
SPOOL ENDS



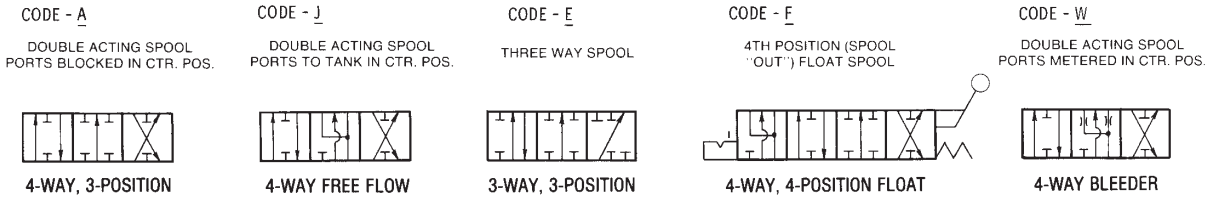
SPOOL END POSITION



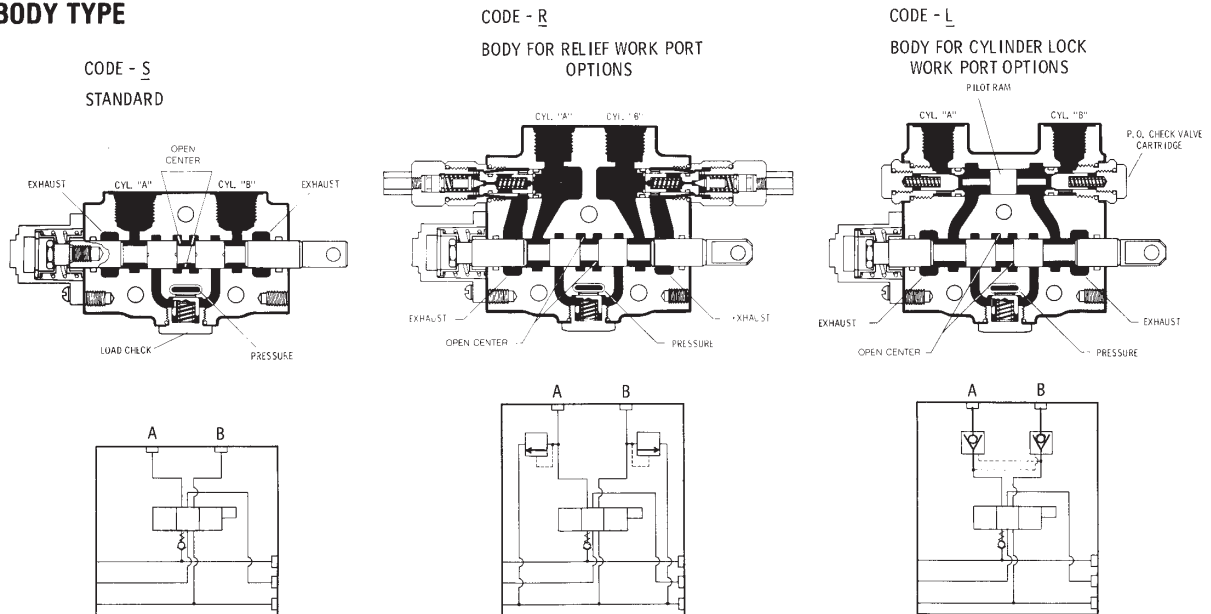
SPOOL ACTION



SPOOL VARIATION



BODY TYPE

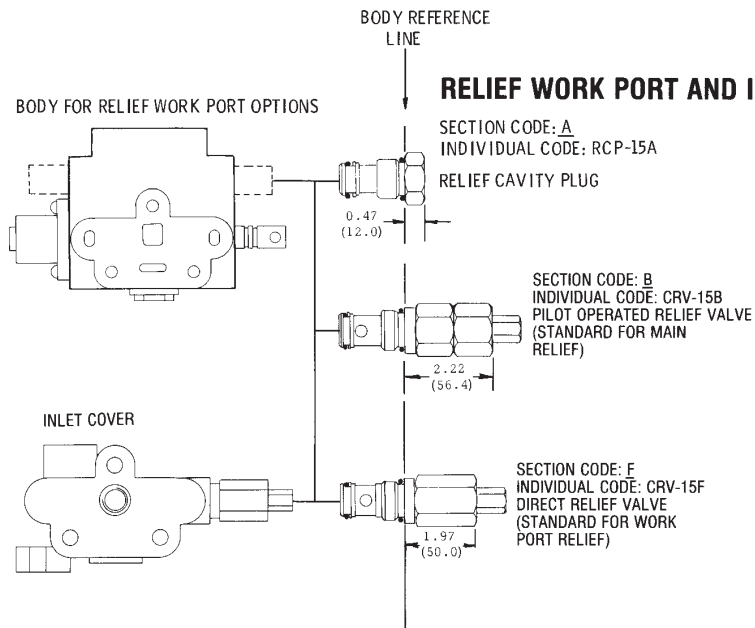


CONVERSION SECTIONS

INDIVIDUAL CODES: V12S-2TB (Split Flow)
V12C-2TB (Combined Flow)

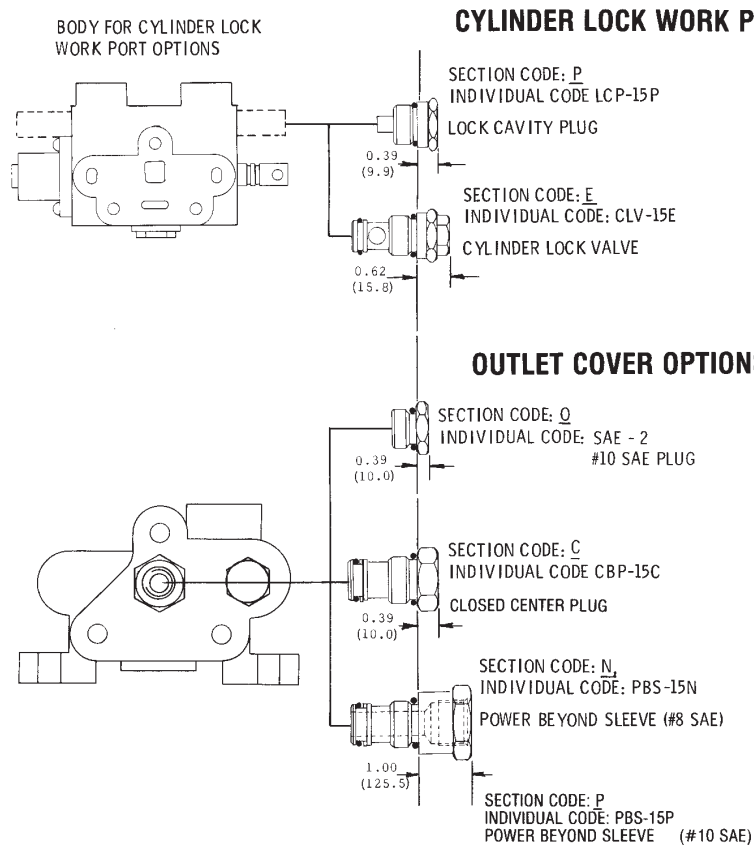
Conversion Sections have SAE 10 ports and include pilot operated relief valves.

Valve Components and Accessories



ADDITIONAL RELIEF WORK PORT OPTIONS

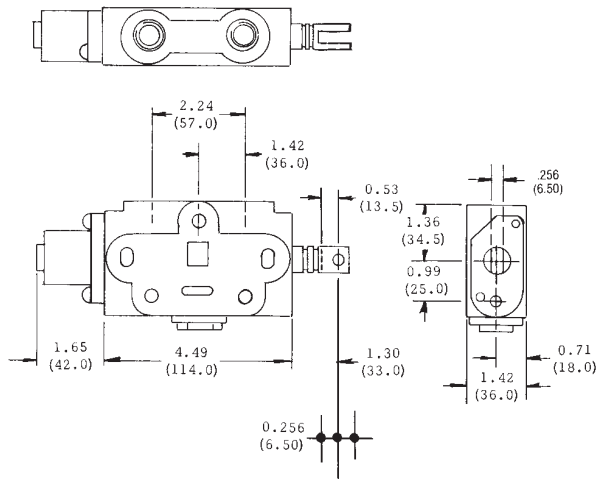
- Section Code: C
Combined Relief/Anti-Cav.
- Section Code: H
Anti-Cavitation Check
- Section Code: N
Plastic Relief Cavity Plug
- Shim Adjustable Relief Valve Option



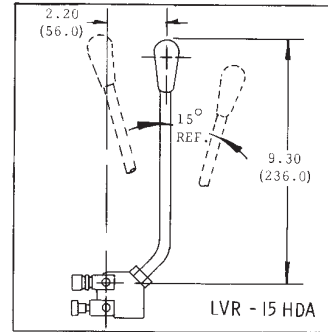
DIMENSIONS

WORK SECTIONS

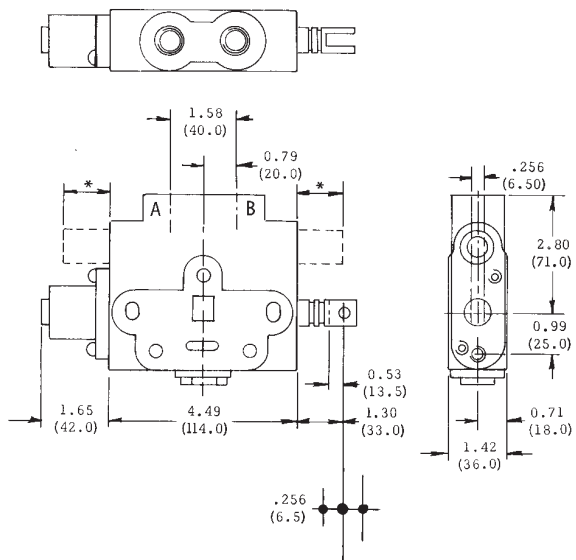
S - STANDARD (LOW SECTION)



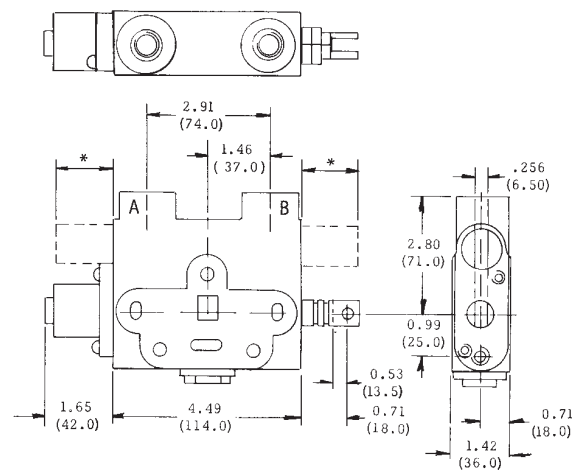
STANDARD LEVER



"R" BODY FOR RELIEF WORK PORT OPTIONS



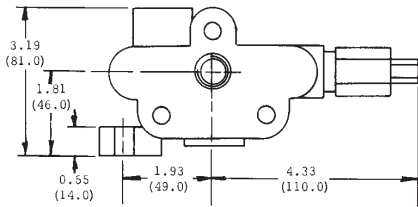
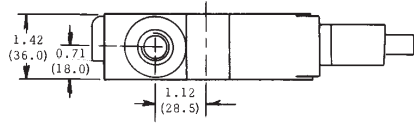
"L" BODY FOR CYLINDER LOCK WORK PORT OPTIONS



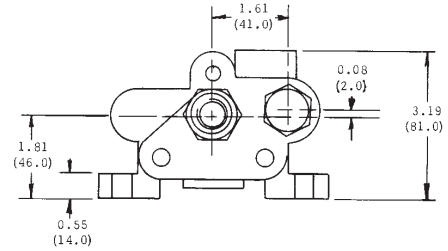
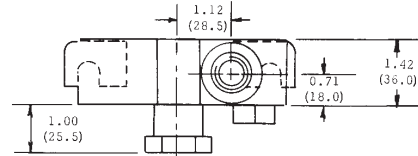
DIMENSIONS ARE IN INCHES (MILLIMETERS) AND ARE FOR REFERENCE ONLY.

DIMENSIONS

INLET COVER

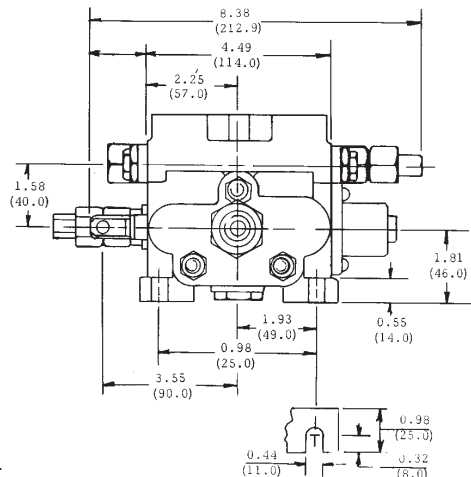
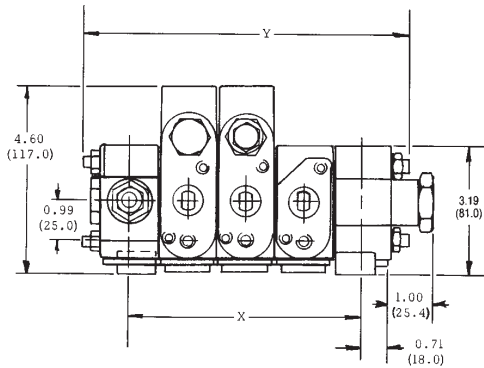
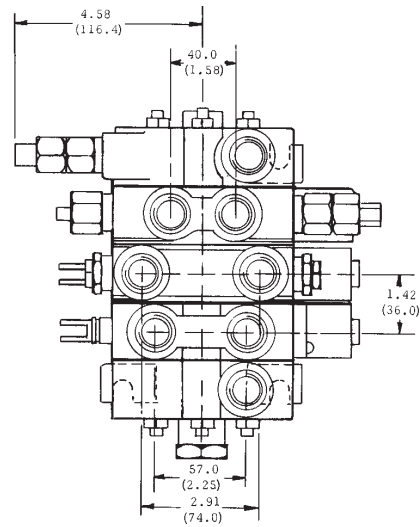


OUTLET COVER



TYPICAL STACK

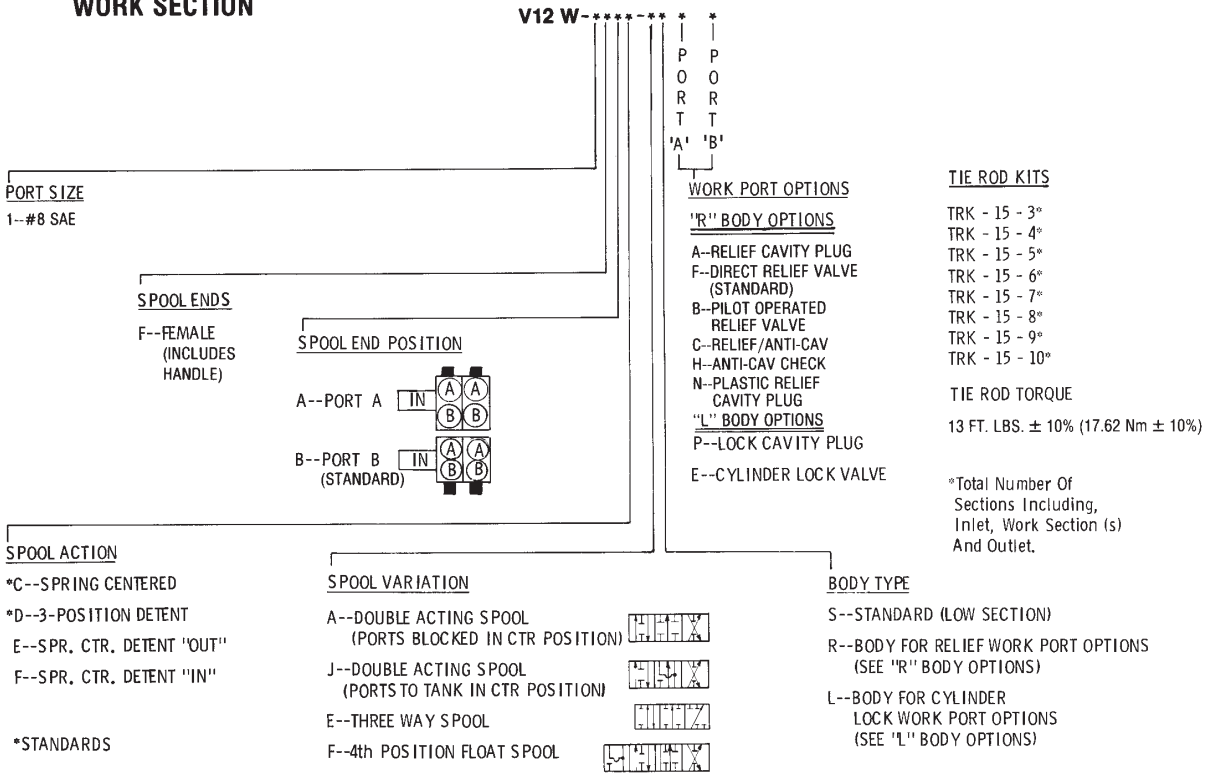
WORK SECTIONS	X	Y
3	2.834 (72.0)	4.96 (126.0)
4	4.252 (108.0)	6.38 (162.0)
5	5.670 (144.0)	7.79 (198.0)
6	7.087 (180.0)	9.21 (234.0)
7	8.50 (216.0)	10.63 (270.0)
8	9.92 (252.0)	12.05 (306.0)
9	11.34 (288.0)	13.46 (342.0)
10	12.76 (324.0)	14.88 (378.0)



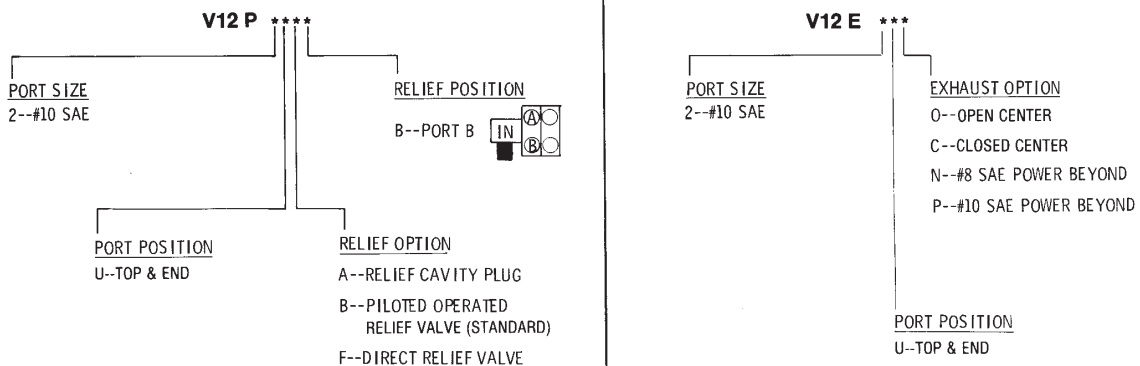
DIMENSIONS ARE IN INCHES (MILLIMETERS) AND ARE FOR REFERENCE ONLY.

ORDER CODE

WORK SECTION



INLET COVER



ADDITIONAL OPTION LIST

- SHIM ADJUSTABLE RELIEF VALVES
- CONVERSION SECTIONS
- WORK PORT FLOW RESTRICTORS
- STAINLESS STEEL SPOOLS

Contact the factory for Electro Porportional Control and On-Off Solenoid-Controlled remote spool actuator options.

 **WARNING**

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