

**Series VDP**

|                    |                                         |       |
|--------------------|-----------------------------------------|-------|
| Introduction ..... | Enbloc Directional Control Valves ..... | E3-E4 |
|--------------------|-----------------------------------------|-------|

**Series VDP11**

|                             |                                         |                     |
|-----------------------------|-----------------------------------------|---------------------|
| Technical Information ..... | Enbloc Directional Control Valves ..... | E5-E6, E12-E13, E16 |
| Dimensions .....            | Enbloc Directional Control Valves ..... | E7                  |
| Accessories .....           | Enbloc Directional Control Valves ..... | E14-E15             |
| Ordering Information .....  | Enbloc Directional Control Valves ..... | E17                 |
| Service Parts .....         | Enbloc Directional Control Valves ..... | E25                 |

**Series VDP12\***

|                             |                                         |                     |
|-----------------------------|-----------------------------------------|---------------------|
| Technical Information ..... | Enbloc Directional Control Valves ..... | E8-E9, E12-E13, E16 |
| Dimensions .....            | Enbloc Directional Control Valves ..... | E10-E11             |
| Accessories .....           | Enbloc Directional Control Valves ..... | E14-E15             |
| Ordering Information .....  | Enbloc Directional Control Valves ..... | E18                 |
| Service Parts .....         | Enbloc Directional Control valves ..... | E26                 |

**Series VY13**

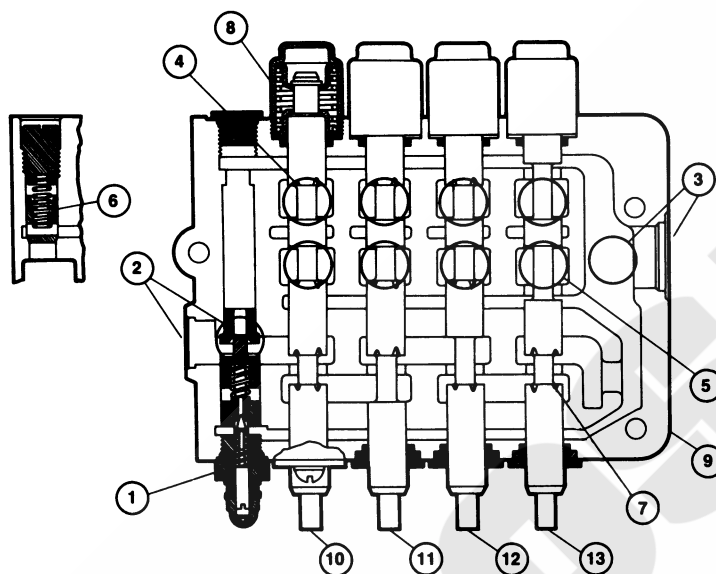
|                             |                                |         |
|-----------------------------|--------------------------------|---------|
| Introduction .....          | Auxiliary Control Valves ..... | E19     |
| Technical Information ..... | Auxiliary Control Valves ..... | E20-E21 |
| Ordering Information .....  | Auxiliary Control Valves ..... | E24     |
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**Series VPRP5B**

|                             |                                |     |
|-----------------------------|--------------------------------|-----|
| Technical Information ..... | Auxiliary Control Valves ..... | E22 |
| Dimensions .....            | Auxiliary Control Valves ..... | E23 |
| Ordering Information .....  | Auxiliary Control Valves ..... | E24 |
| Service Parts .....         | Auxiliary Control valves ..... | E24 |



# VDP11 & VDP12H



Select models with up to six\* chrome-plated and ground spools (items 10, 11, 12 & 13) available in double-acting, single-acting, and motor configurations. Meter precisely thanks to specifically designed precision spool notches (item 7). Pilot operated relief valves (item 1) insure quiet operation with minimum pressure spike. Each spool has individual load drop checks (item 6) standard.

Specify standard spring return to neutral positioning (item 8) or standard position holding detents. High pressure carry over is available on all models. Each valve has the flexibility of a top or side inlet (item 2) and a top or side outlet (item 3). For a complete list of options, see page B-18. All stocked valves include a spring-return, double-acting spool and a main relief set at 1750 PSI. All other components and options listed can be installed by your Distributor or by us.

Whether you are designing a Mobile circuit or want to add Mobile valve performance capability to another type of product, we are ready, willing and able to help.

## Features:

- ☐ Pressures to 3500 PSI (VDP11 limited to 2000 PSI)

- ☐ Flows to 25 GPM
- ☐ Pilot operated adjustable relief valve
- ☐ Top & side ports
- ☐ High pressure carry over (power beyond) port
- ☐ Superior metering
- ☐ Open center standard, can be converted to closed center
- ☐ Parallel circuit
- ☐ Load drop checks
- ☐ Spring return to neutral or detented spool control

An enbloc directional control valve consists of a body with internal passages which are connected and disconnected by a moveable part referred to as a spool. A directional control valve will start, stop, direct fluid flow to a hydraulic cylinder or motor.

Parker's enbloc valves provide a space saving one piece iron construction (item 9) which requires a minimum of installation space. Control the independent or simultaneous operation of one or more cylinders (items 4 & 5) or hydraulic motors at one time with Parker open center enbloc directional control valves.

**\*6 Spool VDP12 only**



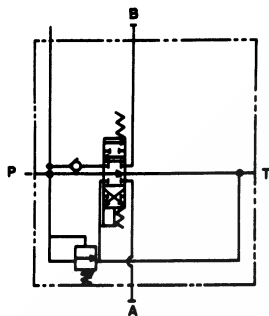
E

- ☐ **Fluids:** Viscosity range at operating temperature between 30-1000 SSU (1-220 cSt.). Oil should have maximum antiwear properties, rust, oxidation and anti-foam treatment or meet SAE J183. For applications requiring other fluids, please contact the Division.
- ☐ **Temperature Range:** -20°F (-29°C) to 185°F (85°C). For applications requiring higher operating temperatures, please contact the Division.
- ☐ **Filtration:** For maximum system component life, the system should be protected from contamination at a level not to exceed 214 particles greater than 10 microns per milliliter of fluid. A Parker full-flow filter with a Beta 10 rating of at least 2.2 should provide this level of cleanliness if maintained properly and never allowed to go into by-pass condition.
- ☐ **Special Applications:** Consult your Parker representative for any applications that do not meet the above criteria.

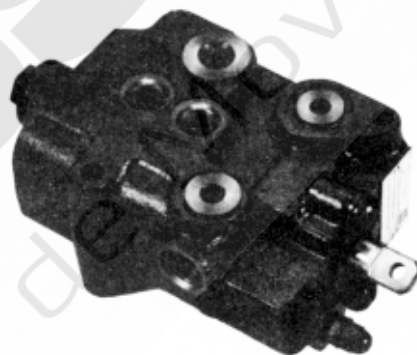
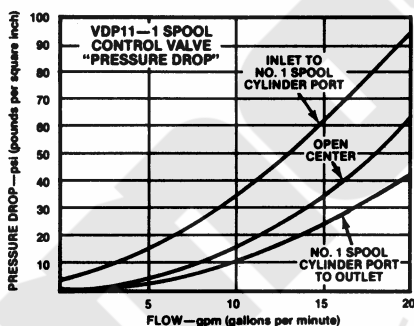
# Multi-Spool Control Valves 1, 2, 3, 4, 5 Spool

- ☐ Flows to 20 GPM
- ☐ Operating pressure 2000 PSI
- ☐ Relief valve adjustable from 600 to 2000 PSI
- ☐ High pressure carry over (power beyond)—See Page 12.
- ☐ Dimensions & Porting—See Page 6.
- ☐ Accessories, Options & Kits—See Pages 11, 12, 13, 14.
- ☐ How to order—See Pages 15, 16.

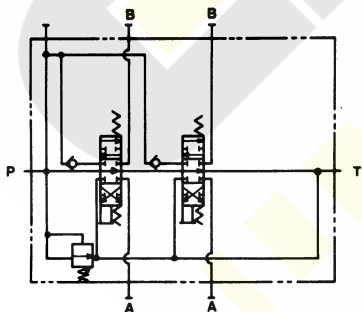
## VDP11 - One Spool



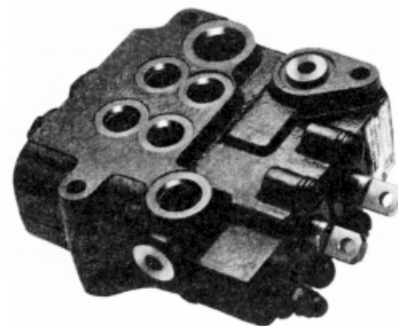
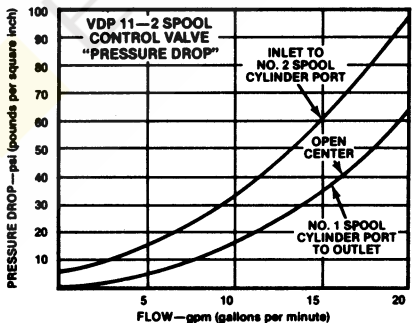
Double acting "D" spool shown



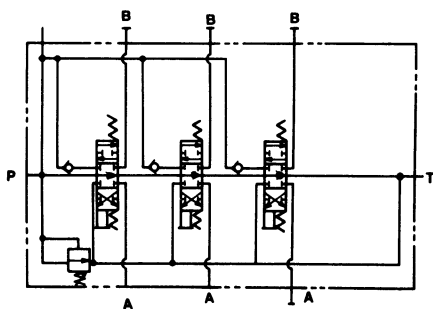
## VDP11 - Two Spool



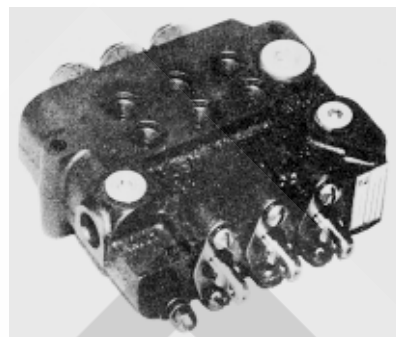
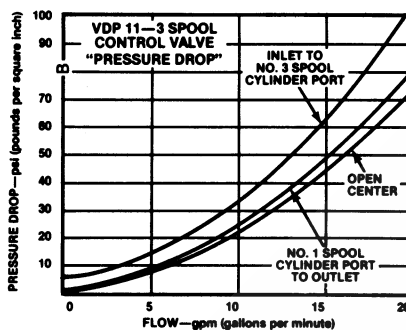
Double acting "D" spool shown



## VDP11 - Three Spool

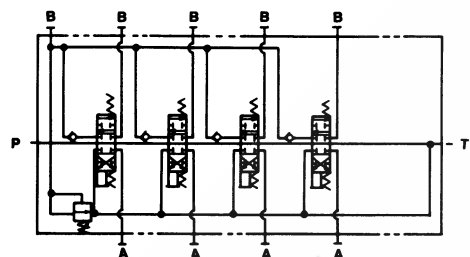


Double acting "D" spool shown

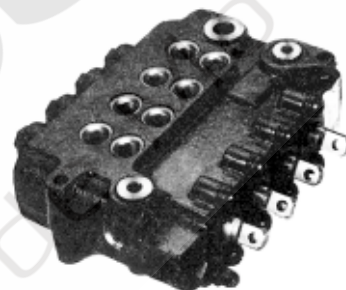
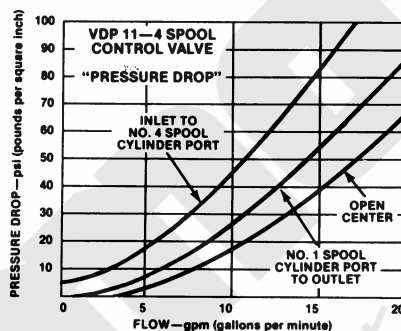


**E**

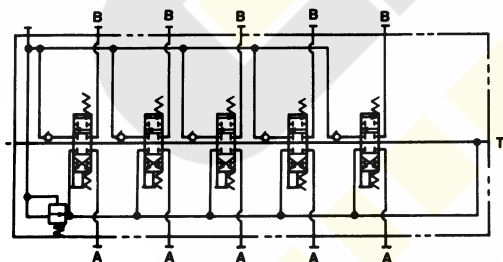
## VDP11 - Four Spool



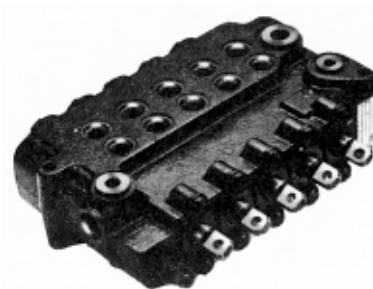
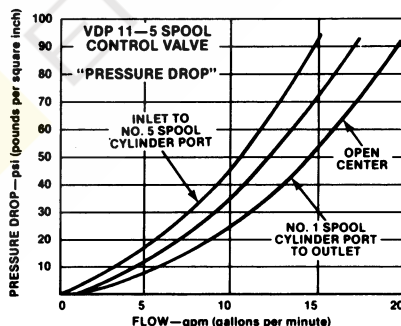
Double acting "D" spool shown



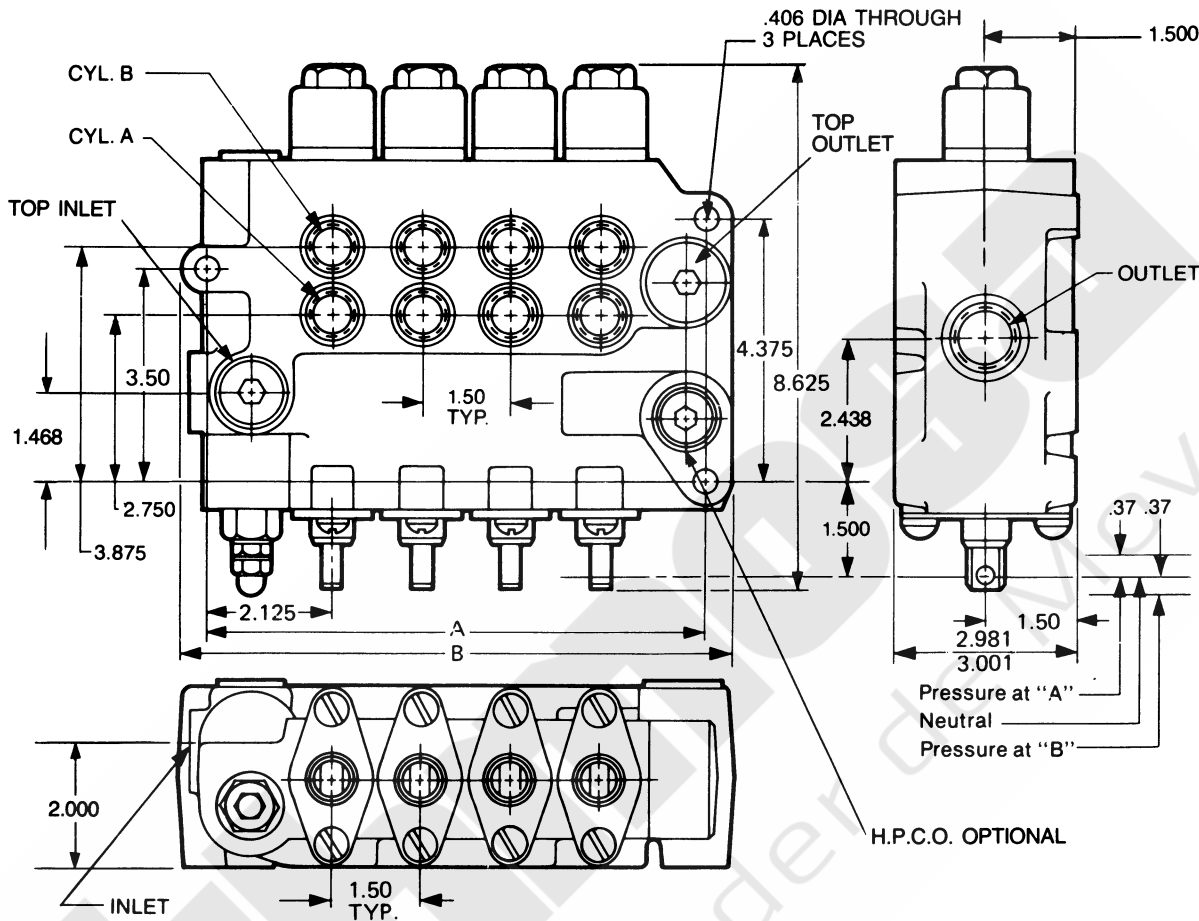
## VDP11 - Five Spool



Double acting "D" spool shown



For millimeter equivalents multiply inch dimensions X 25.4.



Double Acting "D" Spool Shown

| VARIABLE DIMENSIONS - VDP11 |         |         |         |         |         |
|-----------------------------|---------|---------|---------|---------|---------|
|                             | 1 SPOOL | 2 SPOOL | 3 SPOOL | 4 SPOOL | 6 SPOOL |
| "A"                         | 3.88    | 5.38    | 6.88    | 8.38    | 9.88    |
| "B"                         | 4.19    | 6.312   | 7.812   | 9.312   | 10.812  |

| VDP 11 SPOOL TRAVEL<br>(each direction) |     |     |     |
|-----------------------------------------|-----|-----|-----|
| P                                       | S   | D   | C   |
| .37                                     | .37 | .37 | .31 |

Spool eye is shown in neutral position.

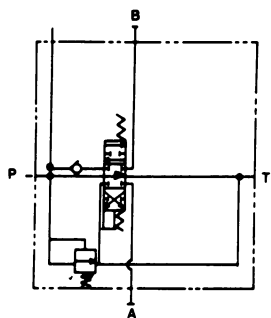
| CYLINDER<br>PORTS | LOCATION              |                       |
|-------------------|-----------------------|-----------------------|
|                   | INLET                 | OUTLET                |
| -8 SAE            | -10 SAE<br>TOP & SIDE | -12 SAE<br>TOP & SIDE |

# Multi-Spool Control Valves 1, 2, 3, 4, 6 Spool

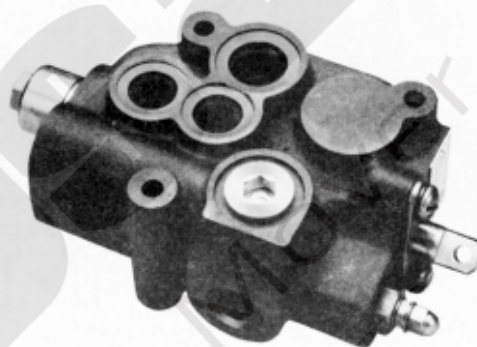
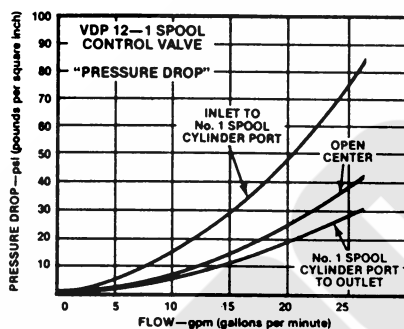
- ☐ Flows up to 25 GPM
- ☐ Operating pressure to 3500 PSi
- ☐ Relief value adjustable from 600 to 3500 PSI
- ☐ High pressure carry over (power beyond)– See Page 12.
- ☐ Dimensions & Porting– See Pages 9, 10.
- ☐ Accessories, Options & Kits– See Pages 11, 12, 13, 14.
- ☐ How to order– See Pages 15, 16.

(VDP12 is available only in six spool configurations, 2000 PSI operating pressure)

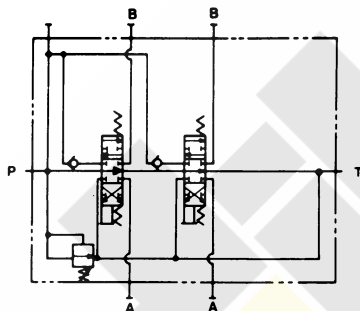
## VDP12H - One Spool



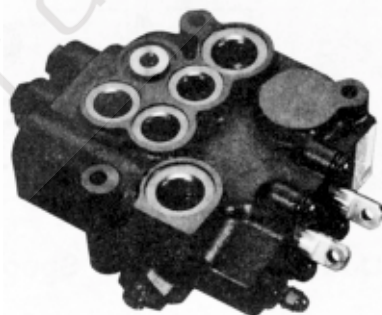
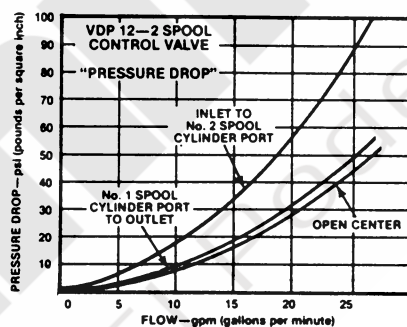
Double acting "D" spool shown



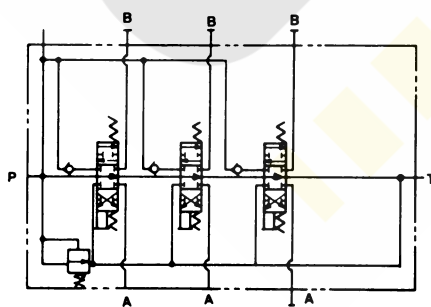
## VDP12 - Two Spool



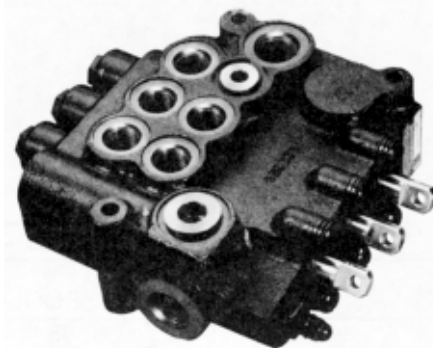
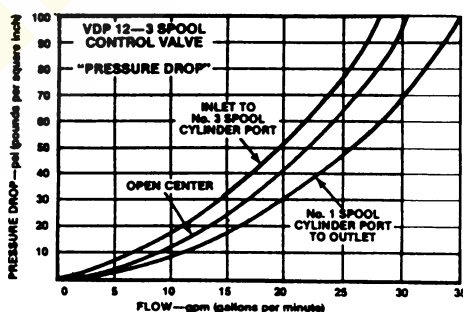
Double acting "D" spool shown



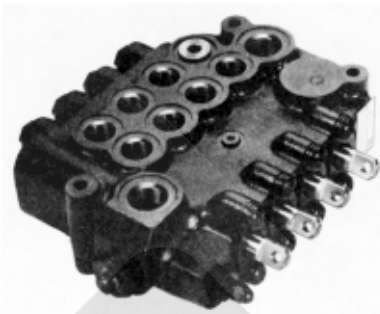
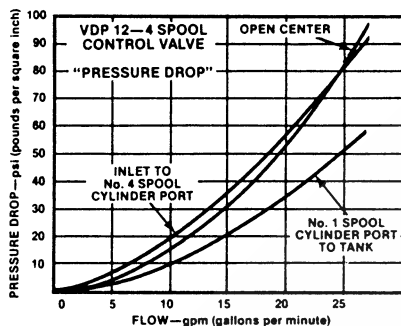
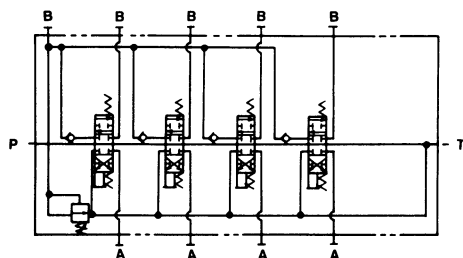
## VDP12 - Three Spool



Double acting "D" spool shown

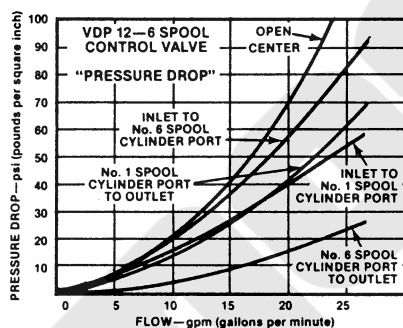
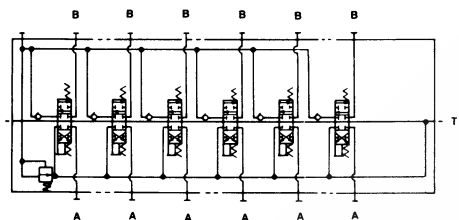


## VDP12 - Four Spool



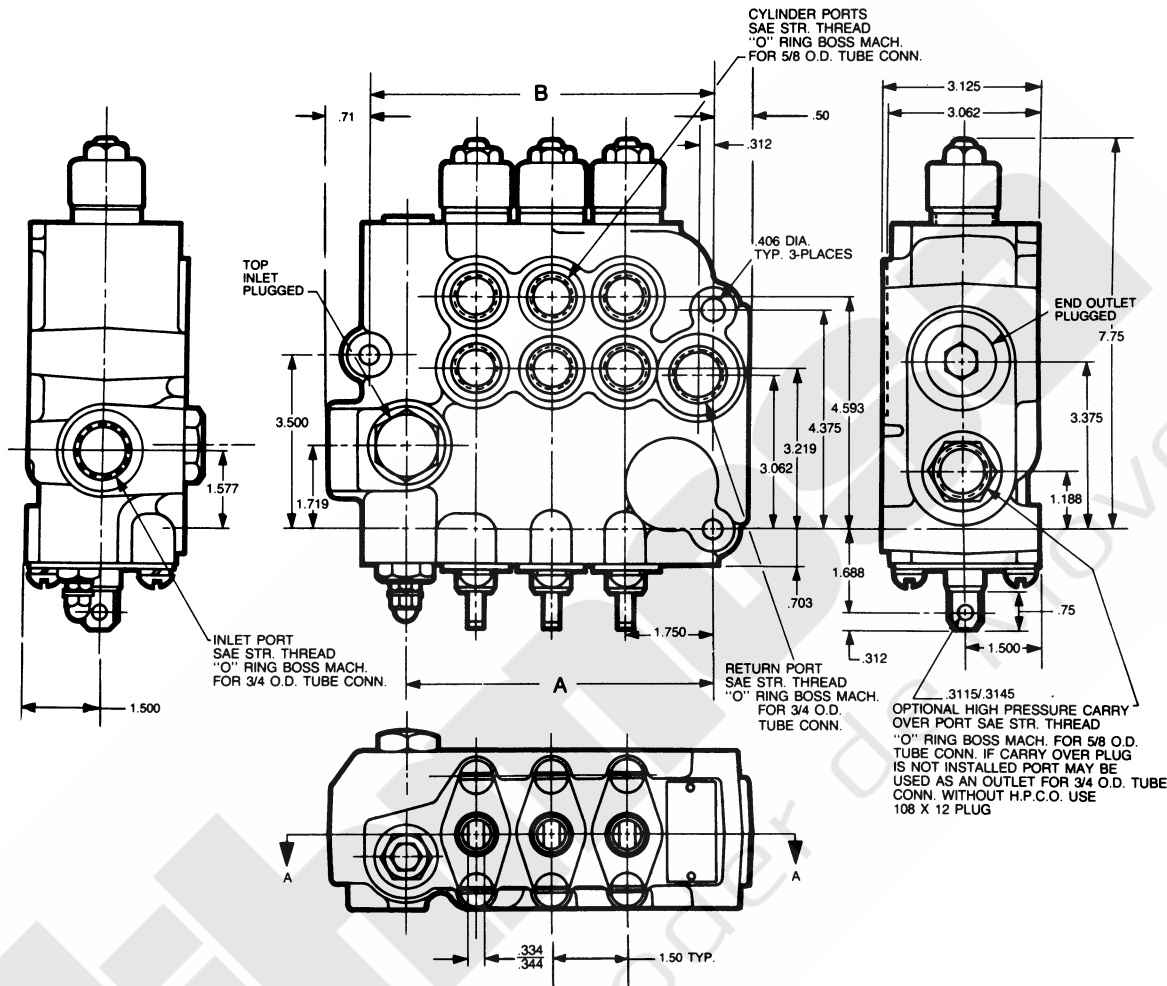
Double acting "D" spool shown

## VDP12 - Six Spool



Double acting "D" spool shown

For millimeter equivalents multiply inch dimensions X 25.4.



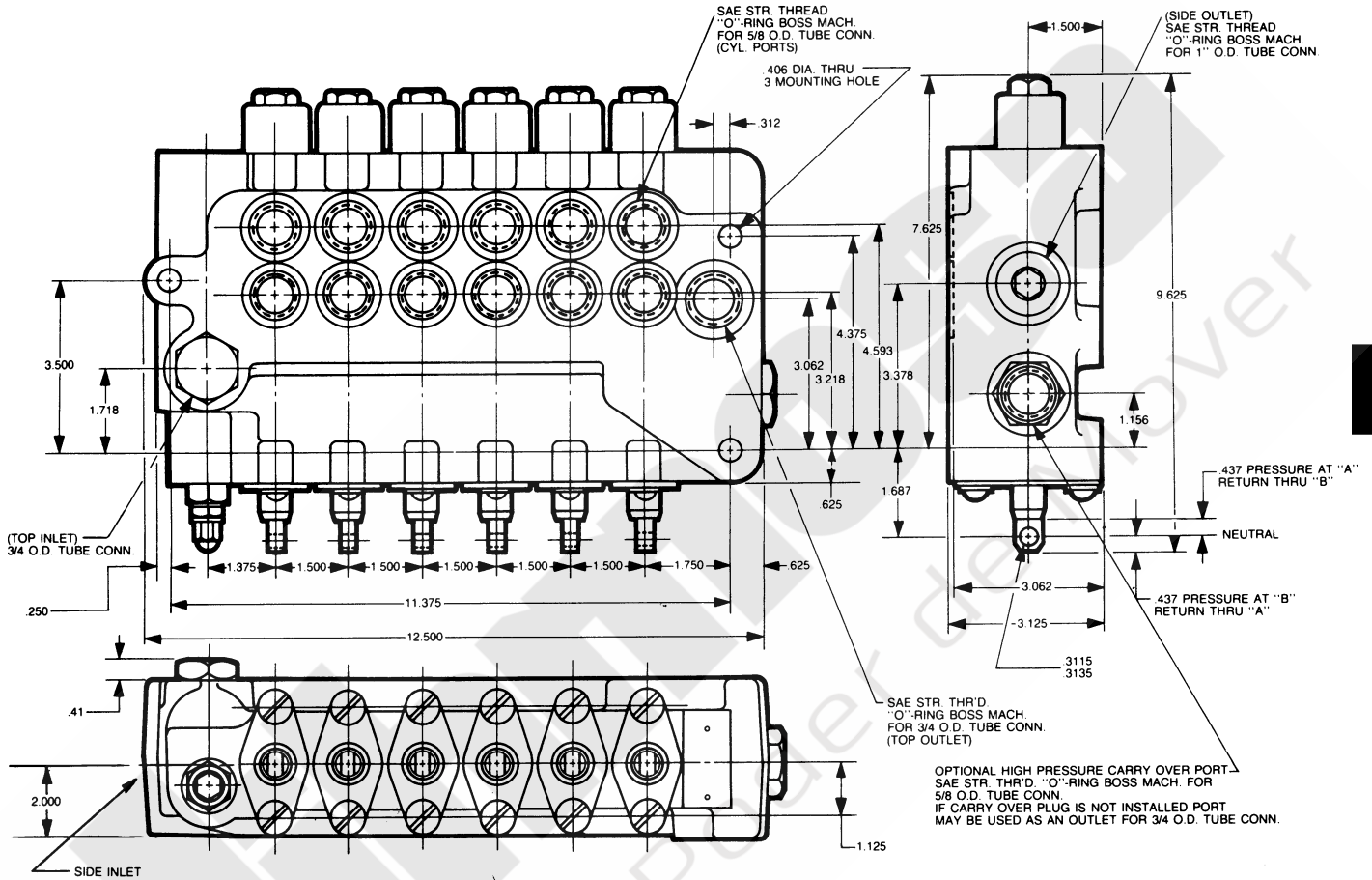
VDP 12H SPOOL TRAVEL  
(each direction)

| P    | S    | D    | C    |
|------|------|------|------|
| .406 | .406 | .437 | .312 |

VARIABLE DIMENSIONS - VDP12H

|     | 1<br>SPOOL | 2<br>SPOOL | 3<br>SPOOL | 4<br>SPOOL | 5<br>SPOOL |
|-----|------------|------------|------------|------------|------------|
| "A" | 3.125      | 4.625      | 6.125      | 7.625      | 9.125      |
| "B" | 3.825      | 5.325      | 6.875      | 8.325      | 9.825      |

For millimeter equivalents multiply inch dimensions X 25.4.



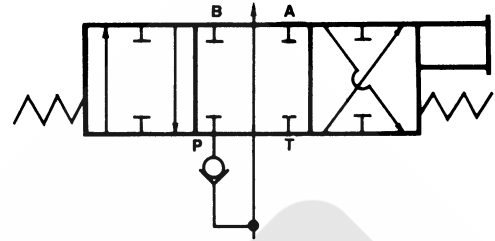
**VDP 12 SPOOL TRAVEL**  
**(each direction)**

| P    | S    | D    | C    |
|------|------|------|------|
| .437 | .437 | .437 | .312 |

## Spool Configurations

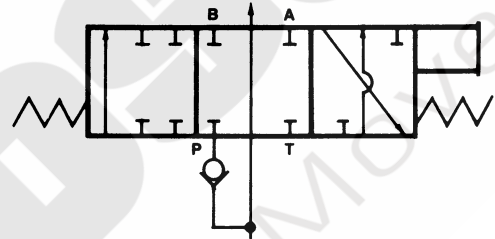
### “D” Spool (Double Acting Spool)

In the neutral mode, pump flow is open to tank, and both cylinder ports are blocked. By shifting the spool in, pump flow is connected to the A port and the B port is open to tank. By shifting the spool out, pump flow is connected to the B port and the A port is open to tank. The most common application of this spool is in a circuit using a double acting cylinder.



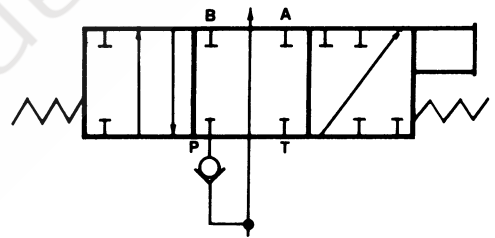
### “P” Spool (Single Acting Spool)

In the neutral mode, pump flow is open to tank, and the cylinder port is blocked. By shifting the spool out, pump flow is connected to the B port. By shifting the spool in, the B port is open to tank. The A port is not used.



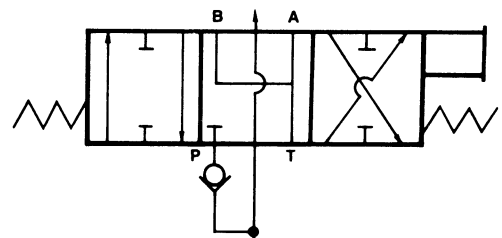
### “S” Spool (Single Acting Spool)

In the neutral mode, pump flow is open to tank and the cylinder port is blocked. By shifting the spool in, pump flow is connected to the A port. By shifting the spool out, the A port is open to tank. The B port is not used.



### “C” Spool (Motor Spool)

In the neutral mode, pump flow is open to tank and both cylinder ports are also open to tank (this allows a motor to gradually coast to a stop). By shifting the spool in, pump flow is connected to the A port and the B port is open to tank. By shifting the spool out, pump flow is connected to the B port and the A port is open to tank. The most common application of this spool is in a circuit with a hydraulic motor.

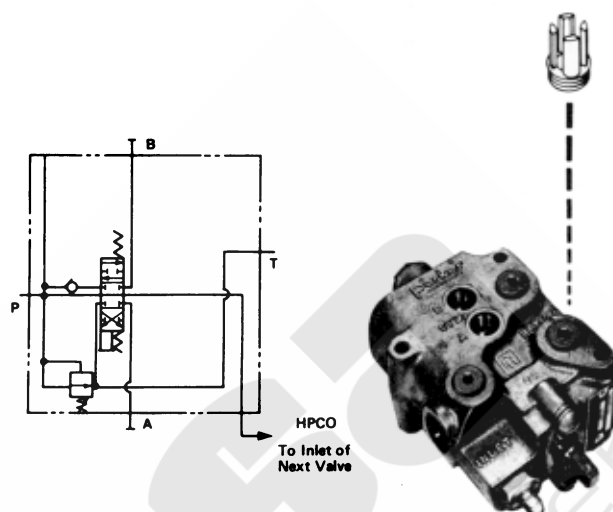


# High Pressure Carry Over (Power Beyond) VDP11

- ☐ High pressure carry over is used for piping flow to another valve in the system. Flow from this port should be piped to the inlet of the second valve. Flow to the second valve is available only when all spools in the first valve are in neutral position.

**Caution:**

- ☐ When using H.P.C.O. all valves must be piped to tank.
- ☐ Do not pipe from outlet of first valve to inlet of second valve. Pipe tank line of first valve to tank; pipe H.P.C.O. line of first valve directly to the inlet of the second valve.
- ☐ VDP11 H.P.C.O. port machining located on top of valve.
- ☐ Use by inserting H.P.C.O. sleeve 572023 and install standard SAE fitting for piping second valve.
- ☐ H.P.C.O. port size is -8 SAE straight thread.
- ☐ For closed center operation, install H.P.C.O. and plug it.



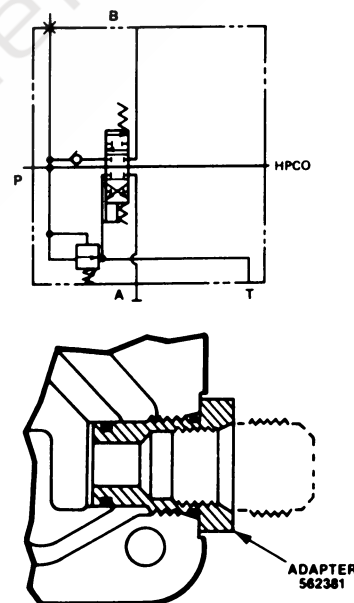
**E**

# High Pressure Carry Over

- ☐ High pressure carry over is used for piping flow to another valve in the system. Flow from this port should be piped to the inlet of the second valve. Flow to the second valve is available only when all spools in the first valve are in neutral position.

**Caution:**

- ☐ When using H.P.C.O. all valves must be piped to tank.
- ☐ Do not pipe from outlet of first valve to inlet of second valve. Pipe tank line of first valve to tank; pipe H.P.C.O. line of first valve directly to the inlet of the second valve.
- ☐ VDP12 and VDP12H H.P.C.O. port machining is on the side of the valve.
- ☐ Use by inserting special adapter 562381 and install standard SAE fitting for piping second valve.
- ☐ H.P.C.O. port size is -10 SAE.
- ☐ For closed center operation, install H.P.C.O. and plug it.

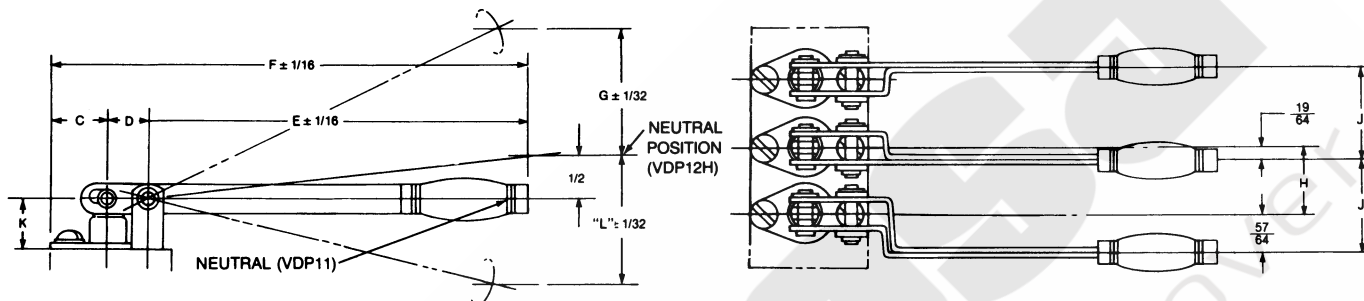


# Handles

VDP11&12 Handles (Three Spool Shown) Travel Shown For "D" Spool.

| Dimensional Data |       |       |         |         |         |       |        |       |        |
|------------------|-------|-------|---------|---------|---------|-------|--------|-------|--------|
| MODEL            | C     | D     | E       | F       | G       | H     | J      | K     | L      |
| VDP11            | 1-1/2 | 1-1/8 | 8-11/16 | 11-1/16 | 2-17/32 | 1-1/2 | 2-3/32 | 1     | 2-3/4  |
| VDP12H           | 1-1/2 | 27/32 | 8-11/16 | 11-1/16 | 3-1/16  | 1-1/2 | 2-3/32 | 63/64 | 3-1/16 |

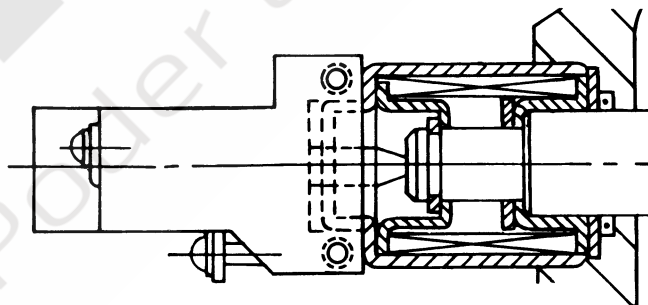
For metric equivalents multiply inch dimension x 25.4.



Seal & Repair Kits are available from stock — Consult factory.

## Electric Switches and Spool Caps

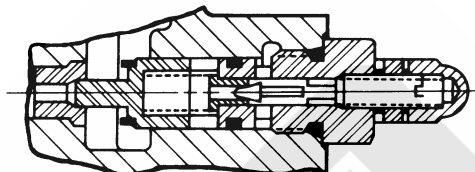
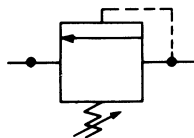
These are generally used in an energy savings manner on fork lift trucks. These switches are fitted on the cap end of the spool. As the spool is shifted, the switch closes an electric circuit. The circuit controls a pump connected to an electric motor. As the motor and pump are engaged, the pump supplies pressure and flow to the valve; enabling the operator to raise and lower the forks or tilt the forks.



## Main Relief

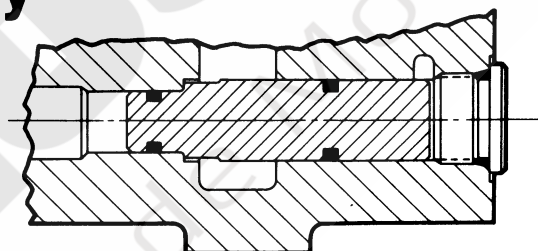
The main relief functions as the main pressure regulating device. It is a pilot operated type relief. By pilot operation, the main piston and spring stage of the relief is piloted by a dart and a stiff spring. The pilot stage handles low

flows at high pressures. The main stage handles high flows at low pressures. By using the two together, large flows can be handled at high pressures without the typical instabilities associated with a direct acting relief.



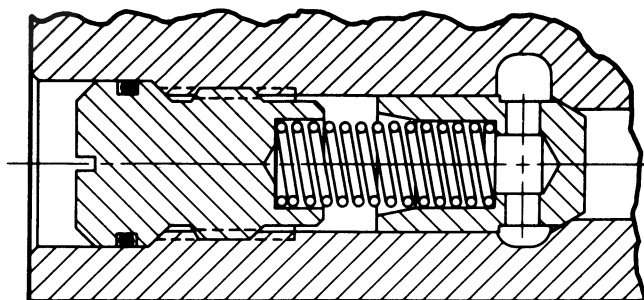
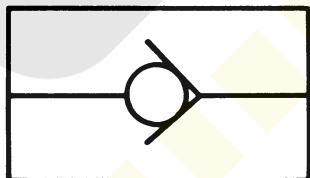
## Plug For Main Relief Cavity

Some applications require no main relief. Included in these applications are closed center circuits and accumulator circuits where, an external unloader is used; and a power-beyond circuit where two or more valves have the same pressure requirements.



## Load Drop Checks

This check within the valve prevents a momentary load drop as a spool is being shifted. It is a standard feature in our valves.



# Valve Data Sheet

**System:** Closed Center ☐  
Open Center ☐ Pump Flow \_\_\_\_\_ GPM  
System Temperature \_\_\_\_\_ °F

**Main Relief:** Plugged ☐  
Installed ☐ Setting: \_\_\_\_\_ PSI at \_\_\_\_\_ GPM

**Porting:** Inlet: Side ☐  
Top ☐  
Size \_\_\_\_\_ Outlet: Side ☐  
Top ☐  
Size \_\_\_\_\_ Cylinder Port Size \_\_\_\_\_

**H.P.C.O. Installed:** Yes ☐  
No ☐

**Valve Model:** VDP11 ☐  
VDP12 ☐  
VDP12H ☐

## Options

|                            | Spool Number | 1                        | 2                        | 3                        | 4                        | 5                        | 6                        |
|----------------------------|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                            |              |                          |                          |                          |                          | VDP11 Only               | VDP12 Only               |
| Spool Type (D, C, P, or S) |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Spring Return              |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 Position Detent          |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Counterbalance - A Port    |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Counterbalance - B Port    |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Electric Switches          |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Handles                    |              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                                  |                    |                                 |   |           |       |                 |                          |                  |
|----------------------------------|--------------------|---------------------------------|---|-----------|-------|-----------------|--------------------------|------------------|
| <b>VDP</b>                       | <b>11</b>          |                                 | — | <b>10</b> |       |                 |                          |                  |
| Valve<br>Directional<br>Parallel | Design             | Number<br>and Type<br>of Spools |   | Variation | Seals | Power<br>Beyond | Detented Spool<br>Option | Relief<br>Option |
|                                  | 20 GPM<br>2000 PSI |                                 |   |           |       |                 |                          |                  |

| Basic Valve |         |
|-------------|---------|
| Spool       | Weight  |
| D           | 15 lbs. |
| DD          | 19 lbs. |
| DDD         | 23 lbs. |
| DDDD        | 29 lbs. |
| DDDDD       | 35 lbs. |

| Spring Return Spool Adders (Installed In Valve) |                                  |             |
|-------------------------------------------------|----------------------------------|-------------|
| Code                                            | Description                      | Part Number |
| D                                               | Spring Centered D Spool Assembly | 572024      |
| C                                               | Spring Centered C Spool Assembly | 572027      |
| S                                               | Spring Centered S Spool Assembly | 572025      |
| P                                               | Spring Centered P Spool Assembly | 572026      |

| Three Position Detented Spool Adders (Installed In Valve) |                                      |             |
|-----------------------------------------------------------|--------------------------------------|-------------|
| Code                                                      | Description                          | Part Number |
| Omit                                                      | All Spring Return Spools             | —           |
| D*                                                        | 3 Position Detented D Spool Assembly | 572214      |
| S*                                                        | 3 Position Detented S Spool Assembly | 572215      |
| P*                                                        | 3 Position Detented P Spool Assembly | 572216      |
| C*                                                        | 3 Position Detented C Spool Assembly | 602809      |

\*Specifies Spool Position —  
 Example: D2 means the second spool assembly is detented.

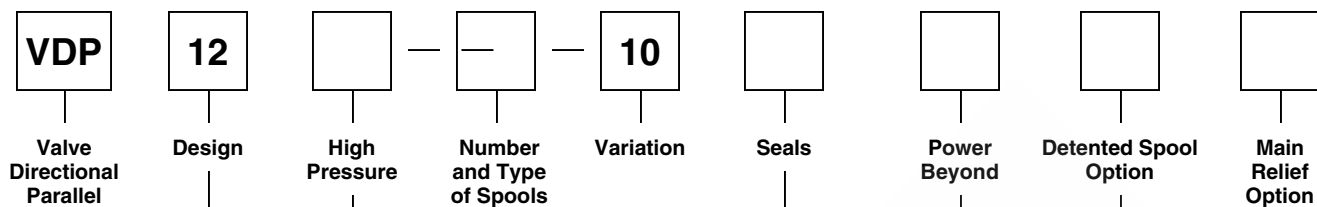
| Please Specify in Writing as Separate Line Items |                               |
|--------------------------------------------------|-------------------------------|
| Part Number                                      | Description                   |
| 572016                                           | One Spool Handle Assembly     |
| 572017                                           | Two Spool Handle Assembly     |
| 572018                                           | Three Spool Handle Assembly   |
| 572019                                           | Four Spool Handle Assembly    |
| 602842                                           | Five Spool Handle Assembly    |
| 665330                                           | Switch Assembly               |
| 635794                                           | Spool Cap for Switch Assembly |

| Code | Description                                                         |
|------|---------------------------------------------------------------------|
| Omit | Main Relief Installed and set at 1750 PSI & 1 GPM                   |
| ***  | Main Relief at other settings<br>Times 10 = PSI<br>(180 = 1800 PSI) |
| NR   | Plugged Relief                                                      |

**Note:** Switch Assemblies and Handles shipped with valve, but not installed to prevent damage in transit.



| Code | Description                                  |
|------|----------------------------------------------|
| Omit | 25 GPM, 2000 PSI<br>2, 3, 4, & 6 Spool Valve |
| H    | 25 GPM, 3000 PSI<br>1 Spool Valve Only       |

| Code | Description  |
|------|--------------|
| Omit | Nitrile      |
| V    | Fluorocarbon |

| Code | Description                 |
|------|-----------------------------|
| Omit | Without Power Beyond Sleeve |
| H    | With Power Beyond Sleeve    |

| Basic Valve |           |
|-------------|-----------|
| Spool       | Weight    |
| D           | 17.5 lbs. |
| DD          | 23.5 lbs. |
| DDD         | 29.5 lbs. |
| DDDD        | 35.0 lbs. |
| DDDDDD      | 49.5 lbs. |

| Spring Return Spool Adders (Installed In Valve) |                                         |
|-------------------------------------------------|-----------------------------------------|
| Code                                            | Description                             |
| D                                               | Spring Centered D Spool Assy.—VDP12 (H) |
| C                                               | Spring Centered C Spool Assy.—VDP12 (H) |
| S                                               | Spring Centered S Spool Assy.—VDP12 (H) |
| P                                               | Spring Centered P Spool Assy.—VDP12 (H) |

| Code | Description                                    |
|------|------------------------------------------------|
| Omit | All Spring Return Spools                       |
| D*   | 3 Position Detented D Spool Assembly—VDP12 (H) |
| S*   | 3 Pos. Detented S Spool Assembly—VDP12 (H)     |
| P*   | 3 Pos. Detented P Spool Assembly—VDP12 (H)     |
| C*   | 3 Pos. Detented C Spool Assembly—VDP12 (H)     |

\*Specifies Spool Position — Example: D2 means the second spool assembly is detented.

| Please Specify in Writing as Separate Line Items |                                |
|--------------------------------------------------|--------------------------------|
| Part Number                                      | Description                    |
| 825067                                           | One Spool Handle Assy.—VDP12H  |
| 572017                                           | Two Spool Handle Assy.—VDP12   |
| 572018                                           | Three Spool Handle Assy.—VDP12 |
| 572019                                           | Four Spool Handle Assy.—VDP12  |
| 602672                                           | Six Spool Handle Assy.—VDP12   |
| 665330                                           | Switch Assembly                |
| 635794                                           | Spool Cap for Switch Assembly  |

**Note:** Part numbers for individual spool assemblies are listed on page 5.

| Code | Description                                                         |
|------|---------------------------------------------------------------------|
| Omit | Main Relief Installed and set at 1750 PSI & 1 GPM                   |
| ***  | Main Relief at other settings<br>Times 10 = PSI<br>(180 = 1800 PSI) |
| NR   | Plugged Relief                                                      |

**Note:** Switch Assemblies and Handles shipped with valve, but not installed to prevent damage in transit.

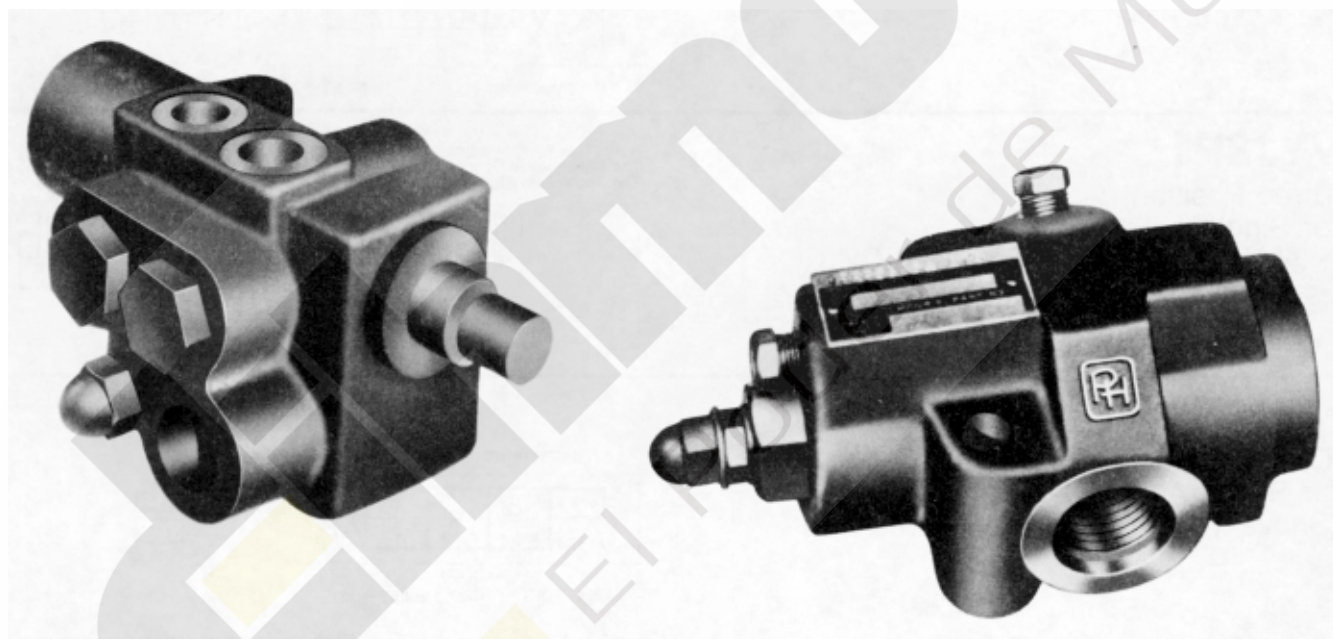
# What Are Parker's Auxiliary Control Valves?

Parker's auxiliary control valves feature the same tough, durable, one piece iron construction as our enbloc valves. These rugged auxiliary control valves are designed for long trouble-free service under the most demanding operating conditions.

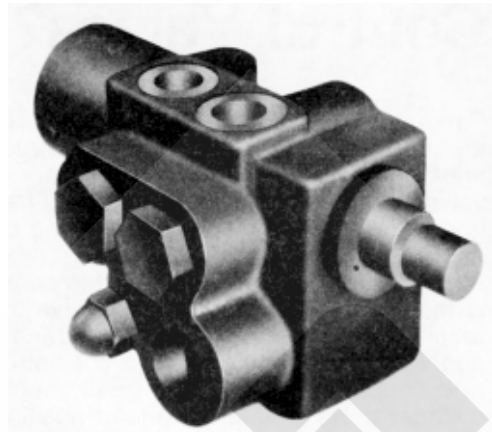
Parker's VY13 valve leads off this series. The VY13 is more of a directional control valve than an auxiliary control valve. A hardened, chrome-plated spool provides precise control for both single acting and double acting cylinders. Ball checks in the cylinder ports maintain the load position as the spool is shifted back to neutral. A built in main relief provides protection from pressure surges. The VY13 valve's primary application is in the small garden tractor industry.

The VPRP5B relief valve has the flexibility of being offset or in-line mounted. The valve is pilot operated and screw adjustable. The VPRP5B will handle 300-3000 PSI at up to 30 GPM. The VPRP5B can be used in both Mobile and non-Mobile applications.

Rely upon Parker application assistance in selecting the best valve for your requirements...Parker manufacturing, expertise and quality control to assure consistent, dependable performance.



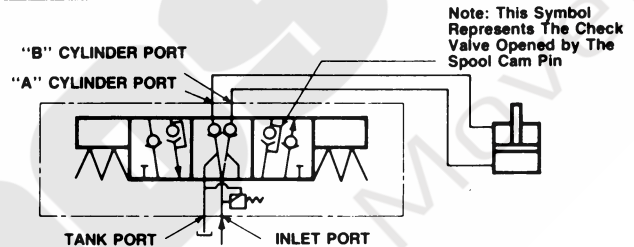
- ☐ **Valve Body:** Material — High Tensile Gray Iron Casting. Ports — SAE Straight Thread. "O" Ring Boss For 1/4 O.D. Tube Connections.
- ☐ **Check Valve:** Ball Checks to maintain load position with valve in neutral.
- ☐ **Relief Valve:** Screw adjustable.
- ☐ **Spool:** Metering — .380 spool travel assures precise positioning. Material — Hardened steel to resist corrosion and wear.
- ☐ **Handles:** Optional — See reverse side for dimensions.
- ☐ **Spool Control:** Spools furnished with spring return to neutral from operating positions.
- ☐ **Operating Temperature:** -20°F (-29°C) to 185°F (85°C).
- ☐ A version of this valve without the relief and/or without the checks is available. Please consult the factory for a VY03.



Individual Load Checks for each Cylinder Port. 2000 PSI Operating Pressure.

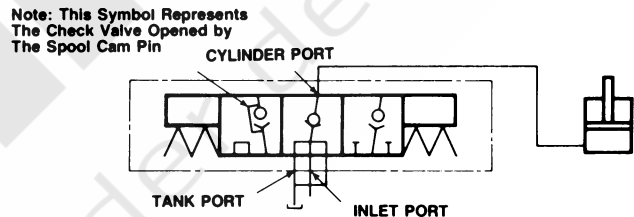
## VY13D1

Three Position,  
 for Double Acting Cylinders.



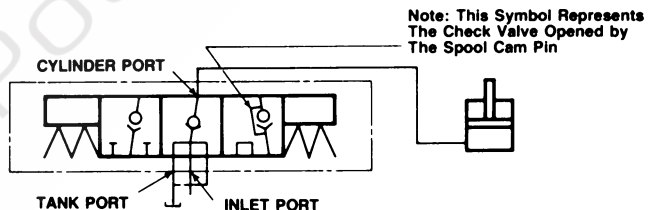
## VY13P1

Three Position,  
 for Single Acting Cylinders.  
 (Pull Valve Spool out to Power Cyl.)



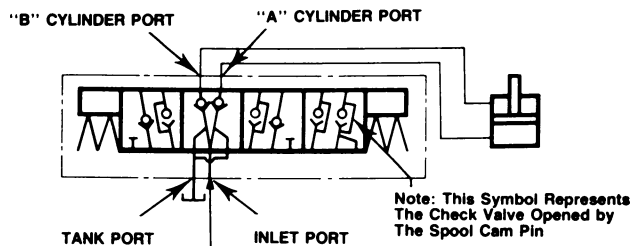
## VY13S1

Three Position,  
 for Single Acting Cylinders.  
 (Shove Valve Spool in to Power Cyl.)



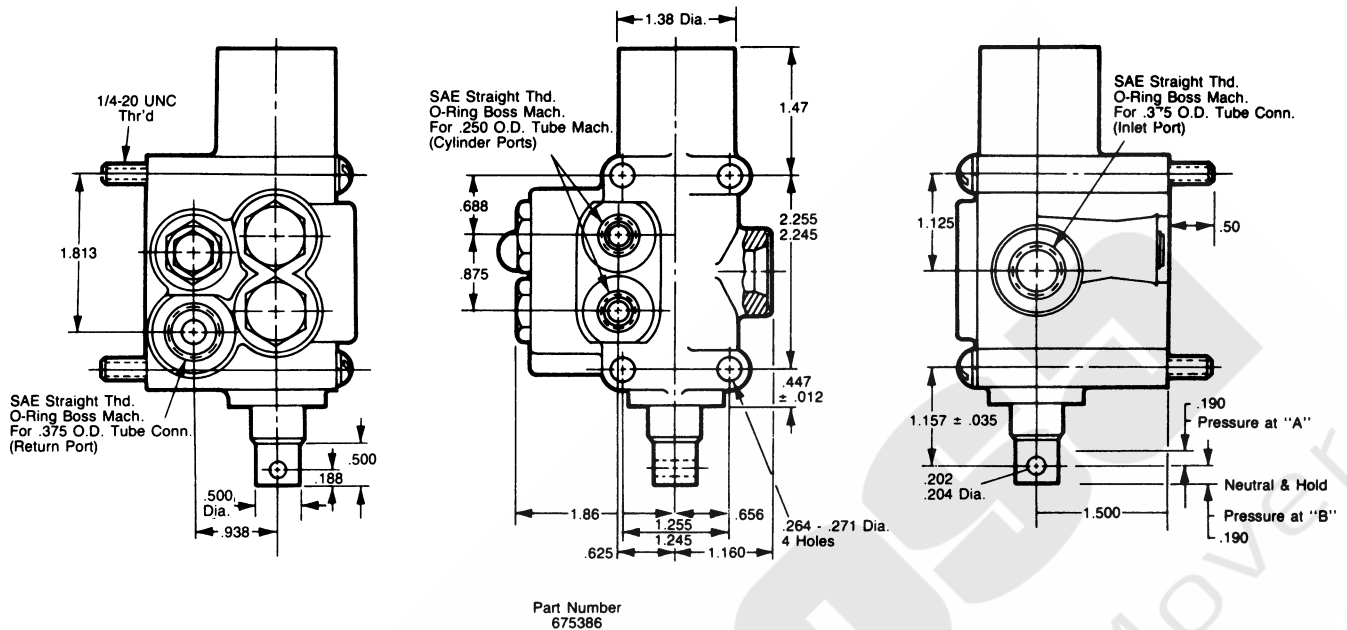
## VY13F\*\*

Four Position,  
 for Double Acting Cylinders  
 That Require A Float Function.

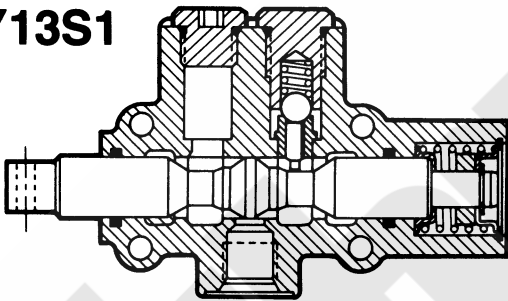


**How To Order:**  
 Select from above models

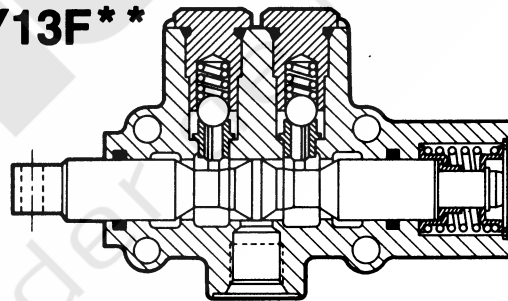
# Auxiliary Control Valve Dimensions



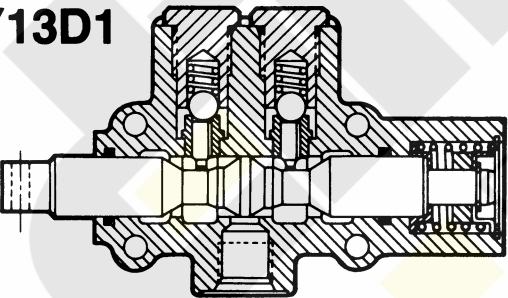
**VY13S1**



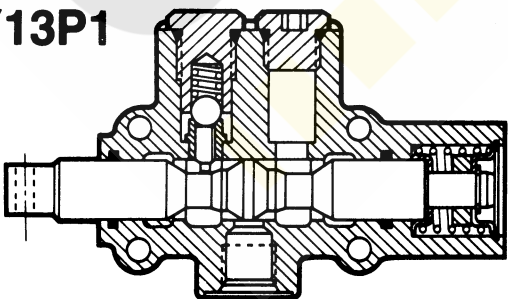
**VY13F\*\***



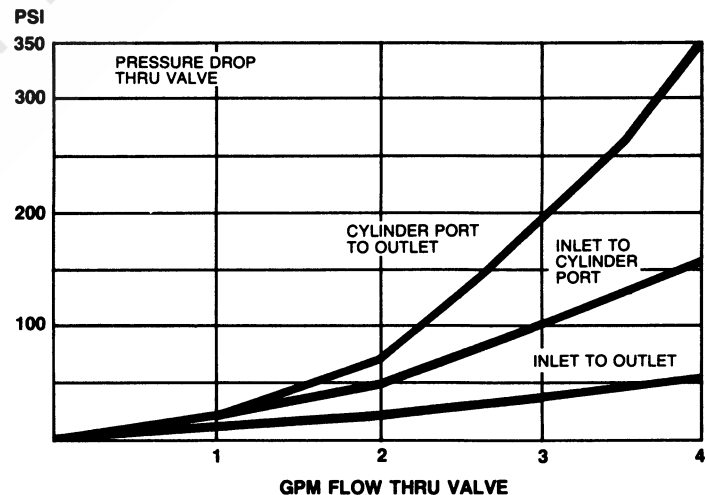
**VY13D1**



**VY13P1**



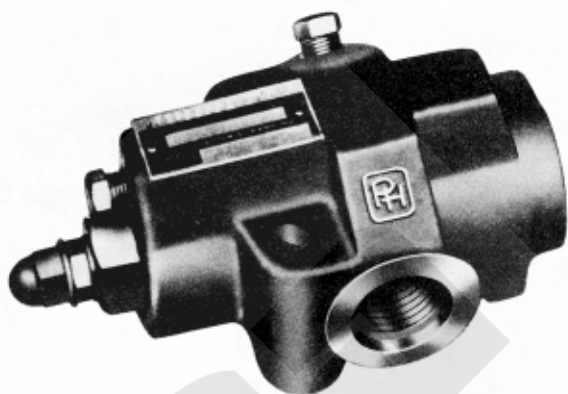
**Note: Seal & Repair Kits are available from stock — Consult factory.**



# Pilot Operated Relief Valve

## General Specifications:

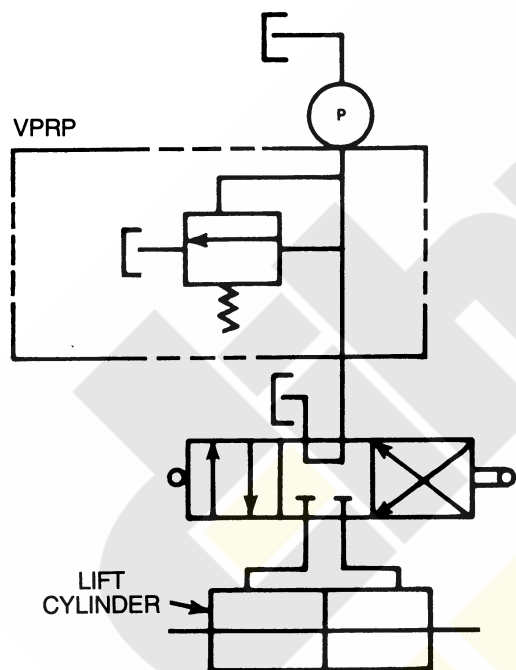
- ☐ Unit is a pilot operated in-line or offset mounted relief valve. It can be used in circuits with widely varying flow rates and still maintain a constant pressure within the circuit.
- ☐ Pressure adjustment is from 500-2500 PSI STD.
- ☐ Maximum recommended flow is 30 GPM.
- ☐ Operating temperature: -20°F (-29°C) to 185°F (85°C).
- ☐ Seal compound: BUNA-N-
- ☐ Porting: See chart.
- ☐ Material: Cast iron body with hardened steel seats and plungers.
- ☐ Reseating pressure 95% of cracking pressure.
- ☐ Optional pressure ranges available for 300-1000 PSI setting and 2500-3000 PSI setting.



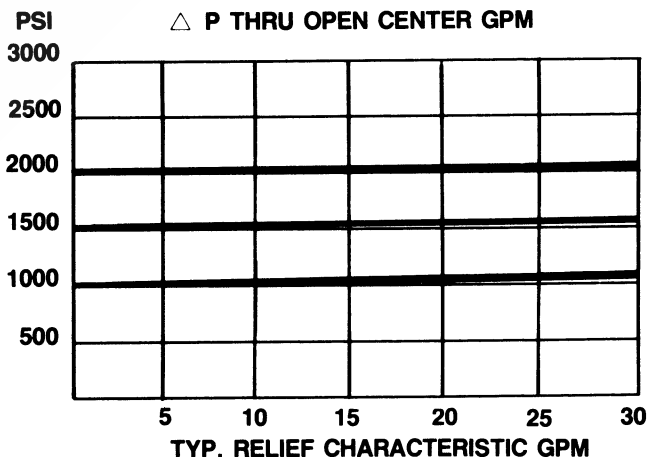
**VPRP5B**

## E

## Typical Applications

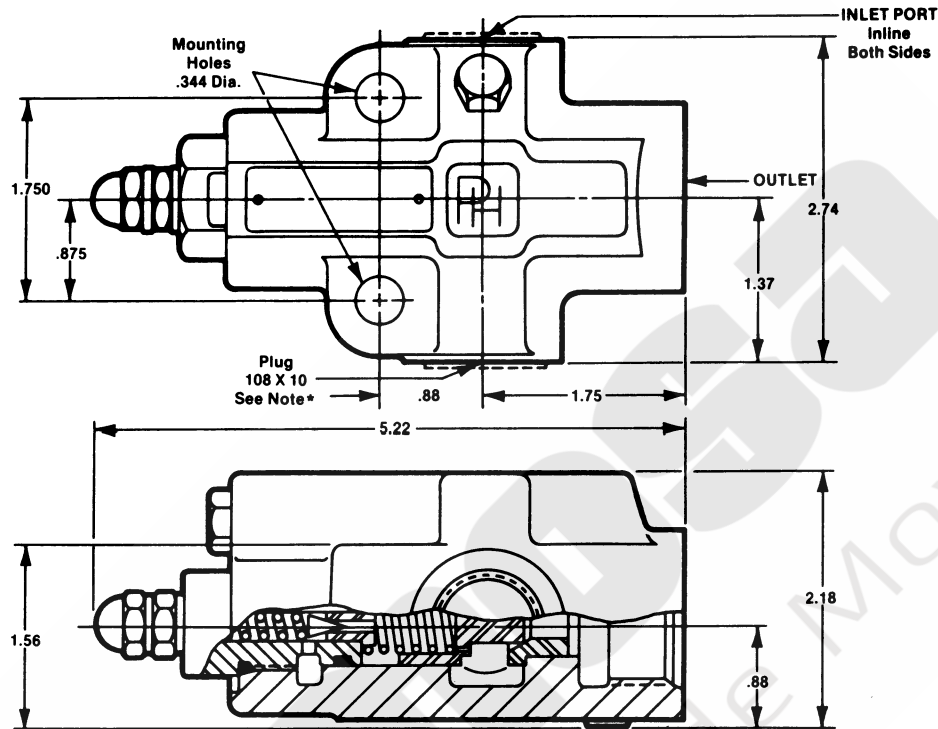


## Typical Performance



Dimensions

For millimeter equivalents multiply inch dimensions X 25.4.



Ordering Information

VPRP5B-3-A-A-175

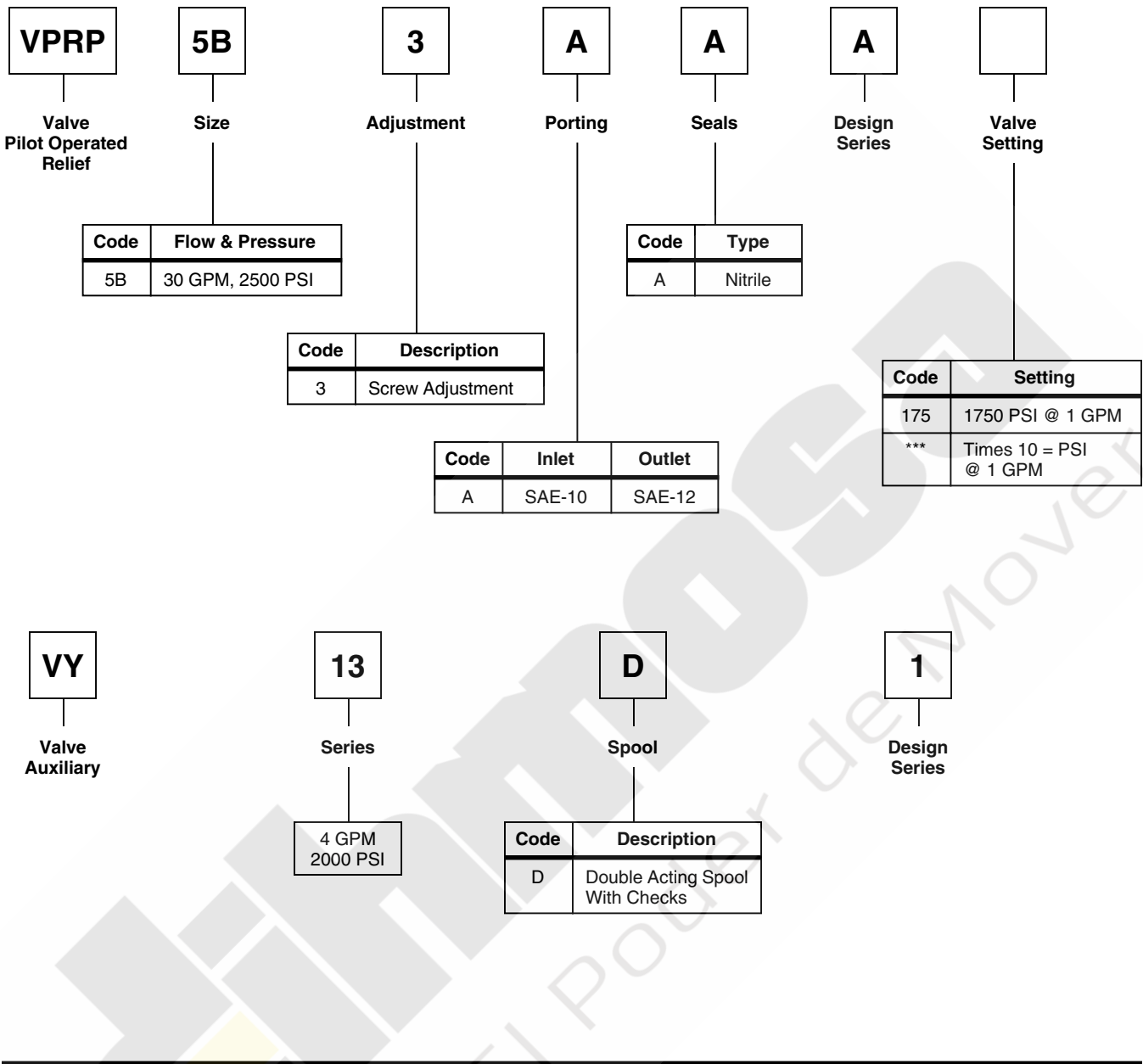
| CODE | ADJUSTMENT |
|------|------------|
| 3    | Screw      |

| CODE | INLET         | OUTLET           |
|------|---------------|------------------|
| A    | 7/8-14 UNF-2B | 1-1/16-12 UNF-2B |

| CODE ***                                                                           |
|------------------------------------------------------------------------------------|
| Three Digit Code Number Shall Represent 10% of Cracking Pressure                   |
| Pressure setting must be specified on your purchase order. 175 = 1750 PSI          |
| Note*: If valve is used as angle rather than in-line relief add one 108 x 10 plug. |

| CODE | SEAL COMPOUND |
|------|---------------|
| A    | Buna "N"      |

Note: Seal & Repair Kits are available from stock — Consult factory.



Service Parts

| Common Service Parts For VPRP 5B |                                               |
|----------------------------------|-----------------------------------------------|
| Part Number                      | Description                                   |
| 592644P                          | VPRP5 Main Relief Assembly                    |
| 835127K                          | VPRP5 Seal Kit                                |
| 10HP50N-S                        | VPRP5 Inlet Plug (when valve is used in-line) |

| Common Service Parts For VY 13 D1 |                         |
|-----------------------------------|-------------------------|
| Part Number                       | Description             |
| 835131K                           | Seal Kit                |
| 835132K                           | Main Relief Rebuild Kit |
| 686051P                           | Main Relief Assembly    |

| <b>Common Service Parts For VDP 11</b> |                                                    |
|----------------------------------------|----------------------------------------------------|
| <b>Part Number</b>                     | <b>Description</b>                                 |
| 572027P                                | Spring Centered C Spool Assembly                   |
| 572025P                                | Spring Centered S Spool Assembly                   |
| 572026P                                | Spring Centered P Spool Assembly                   |
| 572024P                                | Spring Centered D Spool Assembly                   |
| 572214P                                | 3 Position Detented D Spool Assembly               |
| 572215P                                | 3 Position Detented S Spool Assembly               |
| 572216P                                | 3 Position Detented P Spool Assembly               |
| 602809P                                | 3 Position Detented C Spool Assembly               |
| 572023                                 | HPCO (Power Beyond) Sleeve                         |
| 572016                                 | One Spool Handle Assembly                          |
| 572017                                 | Two Spool Handle Assembly                          |
| 572018                                 | Three Spool Handle Assembly                        |
| 572019                                 | Four Spool Handle Assembly                         |
| 602842                                 | Five Spool Handle Assembly                         |
| 592644P                                | Main Relief Valve Assembly                         |
| 562095P                                | Load Check Assembly                                |
| 885023AP                               | Spool Cap Assembly                                 |
| 635794                                 | Spool Cap for Switch Assembly                      |
| 665330                                 | Switch Assembly                                    |
| 612087P                                | Main Relief Plug Assembly                          |
| 775273                                 | Bleeder Plug for 775725 Spool Cap                  |
| 885014-1                               | One Spool Valve Nitrile Seal Kit — VDP11           |
| 885014-2                               | Two Spool Valve Nitrile Seal Kit — VDP11           |
| 885014-3                               | Three Spool Valve Nitrile Seal Kit — VDP11         |
| 885014-4                               | Four Spool Valve Nitrile Seal Kit — VDP11          |
| 885014-5                               | Five Spool Valve Nitrile Seal Kit — VDP11          |
| 885012-1                               | One Spool Valve Fluorocarbon Seal Kit — VDP11      |
| 885012-2                               | Two Spool Valve Fluorocarbon Seal Kit — VDP11      |
| 885012-3                               | Three Spool Valve Fluorocarbon Seal Kit — VDP11    |
| 885012-4                               | Four Spool Valve Fluorocarbon Seal Kit — VDP11     |
| 885012-5                               | Five Spool Valve Fluorocarbon Seal Kit — VDP11     |
| 885017-1                               | One Spool Valve Nitrile Rebuild Kit — VDP11        |
| 885017-2                               | Two Spool Valve Nitrile Rebuild Kit — VDP11        |
| 885017-3                               | Three Spool Valve Nitrile Rebuild Kit — VDP11      |
| 885017-4                               | Four Spool Valve Nitrile Rebuild Kit — VDP11       |
| 885017-5                               | Five Spool Valve Nitrile Rebuild Kit — VDP11       |
| 885016-1                               | One Spool Valve Fluorocarbon Rebuild Kit — VDP11   |
| 885016-2                               | Two Spool Valve Fluorocarbon Rebuild Kit — VDP11   |
| 885016-3                               | Three Spool Valve Fluorocarbon Rebuild Kit — VDP11 |
| 885016-4                               | Four Spool Valve Fluorocarbon Rebuild Kit — VDP11  |
| 885016-5                               | Five Spool Valve Fluorocarbon Rebuild Kit — VDP11  |

**E**

| <b>Common Service Parts For VDP 12, 12H</b> |                                                          |
|---------------------------------------------|----------------------------------------------------------|
| <b>Part Number</b>                          | <b>Description</b>                                       |
| 562352P                                     | Spring Centered C Spool Assembly — VDP12                 |
| 562093P                                     | Spring Centered S Spool Assembly — VDP12                 |
| 562094P                                     | Spring Centered P Spool Assembly — VDP12                 |
| 562092P                                     | Spring Centered D Spool Assembly — VDP12                 |
| 562251P                                     | 3 Position Detented D Spool Assembly — VDP12             |
| 562252P                                     | 3 Position Detented S Spool Assembly — VDP12             |
| 562253P                                     | 3 Position Detented P Spool Assembly — VDP12             |
| 572261P                                     | 3 Position Detented C Spool Assembly — VDP12             |
| 825487                                      | Spring Centered C Spool Assembly — VDP12H                |
| 805605P                                     | Spring Centered S Spool Assembly — VDP12H                |
| 805606P                                     | Spring Centered P Spool Assembly — VDP12H                |
| 805607P                                     | Spring Centered D Spool Assembly — VDP12H                |
| 975011P                                     | 3 Position Detented D Spool Assembly — VDP12H            |
| 825074                                      | 3 Position Detented P Spool Assembly — VDP12H            |
| 975012                                      | 3 Position Detented C Spool Assembly — VDP12H            |
| 562381                                      | HPCO (Power Beyond) Fitting — VDP12 & 12H                |
| 572016                                      | One Spool Handle Assembly — VDP12                        |
| 825067                                      | One Spool Handle Assembly — VDP12H                       |
| 572017                                      | Two Spool Handle Assembly — VDP12                        |
| 572018                                      | Three Spool Handle Assembly — VDP12                      |
| 572019                                      | Four Spool Handle Assembly — VDP12                       |
| 602672                                      | Six Spool Handle Assembly — VDP12                        |
| 592644P                                     | Main Relief Valve Assembly — VDP12 & 12H                 |
| 715253P                                     | Main Relief Valve Assembly — VDP12H                      |
| 612087P                                     | Main Relief Valve Plug Assembly — VDP12 & 12H            |
| 562095P                                     | Load Check Assembly — VDP12                              |
| 572434                                      | Load Check Assembly — VDP12H                             |
| 885023AP                                    | Spool Cap Assembly — VDP12 or VDP12H                     |
| 775273                                      | Bleeder Plug for 775725 Spool Cap                        |
| 635794                                      | Spool Cap for Switch Assembly — VDP12 & 12H              |
| 665330                                      | Switch Assembly — VDP12 & 12H                            |
| 885015-1                                    | One Spool Valve Nitrile Seal Kit — VDP12 & 12H           |
| 885015-2                                    | Two Spool Valve Nitrile Seal Kit — VDP12 & 12H           |
| 885015-3                                    | Three Spool Valve Nitrile Seal Kit — VDP12 & 12H         |
| 885015-4                                    | Four Spool Valve Nitrile Seal Kit — VDP12 & 12H          |
| 885015-6                                    | Six Spool Valve Nitrile Seal Kit — VDP12                 |
| 885013-1                                    | One Spool Valve Fluorocarbon Seal Kit — VDP12 & 12H      |
| 885013-2                                    | Two Spool Valve Fluorocarbon Seal Kit — VDP12 & 12H      |
| 885013-3                                    | Three Spool Valve Fluorocarbon Seal Kit — VDP12 & 12H    |
| 885013-4                                    | Four Spool Valve Fluorocarbon Seal Kit — VDP12 & 12H     |
| 885013-6                                    | Six Spool Valve Fluorocarbon Seal Kit — VDP12            |
| 885019-1                                    | One Spool Valve Nitrile Rebuild Kit — VDP12 & 12H        |
| 885019-2                                    | Two Spool Valve Nitrile Rebuild Kit — VDP12 & 12H        |
| 885019-3                                    | Three Spool Valve Nitrile Rebuild Kit — VDP12 & 12H      |
| 885019-4                                    | Four Spool Valve Nitrile Rebuild Kit — VDP12 & 12H       |
| 885019-6                                    | Six Spool Valve Nitrile Rebuild Kit — VDP12              |
| 885018-1                                    | One Spool Valve Fluorocarbon Rebuild Kit — VDP12 & 12H   |
| 885018-2                                    | Two Spool Valve Fluorocarbon Rebuild Kit — VDP12 & 12H   |
| 885018-3                                    | Three Spool Valve Fluorocarbon Rebuild Kit — VDP12 & 12H |
| 885018-4                                    | Four Spool Valve Fluorocarbon Rebuild Kit — VDP12 & 12H  |
| 885018-6                                    | Six Spool Valve Fluorocarbon Rebuild Kit — VDP12         |