CONSTANT VOLUME
PRIORITY DIVIDERS

MODEL RD-400
FIXED FLOW PRIORITY DIVIDER

The PRINCE model RD-400 is a constant volume priority divider. It can be used in applications where two circuits are to be supplied by a single pump such as power steering systems. In operation the flow of oil supplied to the inlet is divided into two flows, the priority flow and the excess flow. The priority flow will remain nearly constant with variations in pressure on either the priority or excess flow port and will also remain nearly constant with variations in the inlet flow.

The priority flow GPM is determined by a fixed orifice inside the main spool. The desired priority GPM must be specified with model number, see below. The PRINCE model RD-400-R provides the same function as described above with the addition of a built in pressure relief for the priority port only. This relief is internally adjustable and requires a separate line to tank. The relief is factory set at 1500 PSI. Relief Range is 500 to 2500psi.

VALVE SPECIFICATIONS:
Capacity: 30 gpm max inlet flow  Weight: RD-400  7 lbs.
Pressure: 3000 psi max  RD-400-R  7.5 lbs.

To complete the model number fill in the blank with the desired priority GPM from the list at right.
EX: RD-400-3 for 3 GPM priority flow; RD-405-R-6 for 6 GPM priority flow.

STANDARD MODELS AVAILABLE

<table>
<thead>
<tr>
<th>VALVE MODEL NUMBER</th>
<th>PORT SIZE</th>
<th>PRIORITY PORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD-400-____</td>
<td>3/4 NPTF</td>
<td>3/8 NPTF</td>
</tr>
<tr>
<td>RD-405-____</td>
<td>3/4 NPTF</td>
<td>1/2 NPTF</td>
</tr>
<tr>
<td>RD-412-____</td>
<td>#12 SAE</td>
<td>#8 SAE</td>
</tr>
<tr>
<td>RD-450-____</td>
<td>1/2 NPTF</td>
<td>3/8 SAE</td>
</tr>
<tr>
<td>RD-455-____</td>
<td>1/2 NPTF</td>
<td>1/2 NPTF</td>
</tr>
<tr>
<td>RD-477-____</td>
<td>3/4 NPTF</td>
<td>3/4 NPTF</td>
</tr>
</tbody>
</table>

MODEL RD-400-R
FIXED FLOW PRIORITY DIVIDER WITH PRIORITY PRESSURE RELIEF

MODEL RD-500
ADJUSTABLE FLOW PRIORITY DIVIDER

The PRINCE model RD-500 is an adjustable constant volume priority divider. This valve provides the same function as the PRINCE model RD-400 except the priority flow is adjustable from 2 GPM to 12 GPM. The priority flow is set using the adjusting screw and is then locked in place to maintain setting. This allows setting to be fine tuned in the field to the exact flow needed.

VALVE SPECIFICATIONS
Capacity: 30 gpm max inlet flow
Pressure: 3000 psi max
Weight: 7 lbs.

STANDARD MODELS AVAILABLE

<table>
<thead>
<tr>
<th>VALVE MODEL NUMBER</th>
<th>PORT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD-537</td>
<td>3/8 NPTF</td>
</tr>
<tr>
<td>RD-550</td>
<td>1/2 NPTF</td>
</tr>
<tr>
<td>RD-575</td>
<td>3/4 NPTF</td>
</tr>
</tbody>
</table>
MODEL RD-400, RD-400R AND RD-500
PARTS BREAKDOWN AND DIMENSIONS

RD-400

SEAL KIT NO. 660504001

RD-400R

SEAL KIT NO. 660504002

RD-500

SEAL KIT NO. 660505001

NOTE: spools are not available separately

SEE PAGE 23 OF THE STANDARD PRODUCT PRICE LIST FOR PRICING
PRESSURE COMPENSATED PROPORTIONAL FLOW DIVIDERS

The PRINCE model RD-200 valve is a pressure compensated proportional flow divider. The standard models of this valve will take one inlet flow and split it into two nearly equal outlet flows. The valve is also available with special ratio spools which will split the flow into two flows proportional to the ratio specified. Because the valve is pressure compensated the valve will maintain the divider ratio with quite different loads on the outlet ports as long as the inlet flow is within the range given in the chart below. **Flow through the RD-200 cannot be reversed.**

The PRINCE model RD-300 provides the same function as the RD-200 with the added feature of free reverse checks. This allows the reverse flow of oil from the outlet ports to the inlet port. The **reverse flow is not pressure compensated.**

**VALVE SPECIFICATIONS:**
- Capacity: 30 gpm max inlet flow
- Pressure: 3000 psi max
- Weight: RD-200 7 lbs.
- Weight: RD-300 7 lbs.

### STANDARD MODELS AVAILABLE

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>DIVIDER RATIO</th>
<th>PORT SIZE</th>
<th>INLET FLOW RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD-237-8</td>
<td>50:50</td>
<td>3/8 NPTF</td>
<td>4-8 GPM</td>
</tr>
<tr>
<td>RD-250-16</td>
<td>50:50</td>
<td>1/2 NPTF</td>
<td>8-16 GPM</td>
</tr>
<tr>
<td>RD-275-30</td>
<td>50:50</td>
<td>3/4 NPTF</td>
<td>16-30 GPM</td>
</tr>
<tr>
<td>RD-208-8</td>
<td>50:50</td>
<td>3/4 16 SAE</td>
<td>4-8 GPM</td>
</tr>
<tr>
<td>RD-212-30</td>
<td>50:50</td>
<td>1-1/16-12 SAE</td>
<td>16-30 GPM</td>
</tr>
</tbody>
</table>

In OEM quantities the RD-200 and RD-300 valves are available with special divider ratios. Ratios available are: 2:1, 80:20, 70:30, 60:40, and others as required. When ordering specify the divider ratio after the model number. EXAMPLE: RD-250-16 (70:30)

### MODEL RD-500P
**PROPORTIONAL DIVIDER WITH ADJUSTABLE ORIFICE**

The PRINCE model RD-500P is a pressure compensated proportional flow divider valve with one fixed and one adjustable orifice. This valve provides the same function as the RD-200 except the divider ratio can be changed in the field.

**VALVE SPECIFICATIONS:**
- Capacity: 30 gpm max inlet flow
- Pressure: 3000 psi max
- Weight: RD-500P 7 lbs.

### STANDARD MODELS AVAILABLE

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>PORT SIZE</th>
<th>INLET FLOW RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD-537P-8</td>
<td>3/8 NPTF</td>
<td>4-8 GPM</td>
</tr>
<tr>
<td>RD-550P-16</td>
<td>1/2 NPTF</td>
<td>8-16 GPM</td>
</tr>
<tr>
<td>RD-575P-30</td>
<td>3/4 NPTF</td>
<td>16-30 GPM</td>
</tr>
</tbody>
</table>

### MODEL RD-1000-S
**INTERNALLY PILOTED SEQUENCE VALVE WITH EXTERNAL DRAIN**

The PRINCE valve model RD-1000-S is an internally piloted adjustable sequence valve. This valve will prevent the flow of oil from going to the sequence port until the pressure on the inlet port reaches the sequence pressure. The sequence pressure is adjustable within the range given in chart below. A built in check valve allows flow from sequence port to inlet. To operate properly the drain port must be connected to tank. This valve is a spool type sequence valve and will provide smooth operation but should not be used in applications that require low leakage.

**VALVE SPECIFICATIONS:**
- Capacity: 30 gpm max inlet flow
- Pressure: 3000 psi max
- Weight: 7 lbs.

### STANDARD MODELS AVAILABLE

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>PORT SIZE INLET AND SEQUENCE</th>
<th>DRAIN PORT</th>
<th>SPRING</th>
<th>SEQUENCE PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RD-1050-S</td>
<td>1/2 NPTF</td>
<td>3/8 NPTF</td>
<td>L</td>
<td>40-350 PSI</td>
</tr>
<tr>
<td>RD-1075-S</td>
<td>3/4 NPTF</td>
<td>3/8 NPTF</td>
<td>M</td>
<td>350-1700 PSI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>H</td>
<td>1400-2500 PSI</td>
</tr>
</tbody>
</table>

To complete the model number fill in the blank with the spring letter that corresponds to desired counter balance pressure range. EXAMPLE: RD-1050SM for 350-1700 psi spring range.

Standard settings are 300 psi, 1500 psi and 1500 psi for ranges L, M and H respectively.
The RD-300AB valve has a built-in automatic bypass. This allows oil to crossover from one outlet to the other when the pressure difference between the two outlet reaches 750 PSI.