Drain Valve

The drain valve consists of a ported body, sliding sleeve, and rotating nut, which controls the position of the sliding sleeve. The sleeve either covers or exposes the ports in the body of the valve. The drain valve is suitable for sour service at all temperatures. A drain collar and associated components are required when relieving pressure.

**Features and Benefits**
- Allows pressure trapped between two closed valves to be relieved in a controlled manner
- Used to recover large volume fluid samples

**Operation**
The drain valve is installed between any two valves that may come out of the hole with pressure or fluid trapped between them. Pressure is relieved by installing the drain collar and drain nipples on the drain valve. Valves, lines, or sample bottles may be attached to the drain nipples depending on the desired disposition of the fluid in the string. After the drain collar assembly is attached, the ports in the tool are exposed by using a chain wrench or pipe wrench to rotate the drain nut, which moves the sliding sleeve.

When the ports in the sleeve are aligned with the ports in the body of the tool, the fluid may be drained.

It is also possible to trap a large volume fluid sample between two valves if a sample chamber of some kind (tubing, drill collar, etc.) is placed between the valves. In most cases, the drain valve would be run at the bottom of the sample chamber to facilitate transfer. This will not be a PVT sample.
Drain Valve

<table>
<thead>
<tr>
<th>Nominal Size in.</th>
<th>OD in. (cm)</th>
<th>ID in. (cm)</th>
<th>Thread Connections</th>
<th>Length in. (cm)</th>
<th>Tensile Rating** lb (kg)</th>
<th>Working Pressure*** psi (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>3.06 (7.77)</td>
<td>1.00 (2.54)</td>
<td>2 1/4 CAS</td>
<td>42.00 (106.68)</td>
<td>81,000 (36,742)</td>
<td>15,000 (1034)</td>
</tr>
<tr>
<td>3.7/8</td>
<td>3.90 (9.91)</td>
<td>2.00 (5.08)</td>
<td>2 7/8 CAS</td>
<td>30.13 (76.53)</td>
<td>160,000 (72,576)</td>
<td>15,000 (1034)</td>
</tr>
<tr>
<td>5.00 (SG)</td>
<td>5.03 (12.78)</td>
<td>2.28 (5.79)</td>
<td>3 7/8 CAS</td>
<td>41.28 (104.85)</td>
<td>247,000 (112,039)</td>
<td>15,000 (1034)</td>
</tr>
<tr>
<td>7.00</td>
<td>7.00 (17.78)</td>
<td>3.50 (8.9)</td>
<td>5 1/4 CAS</td>
<td>52.20 (132.59)</td>
<td>751,462 (340,863)</td>
<td>15,000 (1034)</td>
</tr>
</tbody>
</table>

Meets NACE-0175 requirements (>175°F)

Service temperature up to 450°F (dressed with 600 series o-rings and PEEK™ backup seals)

**The values of tensile, burst, and collapse strength are calculated with new tool conditions, Lame's formulas with Von-Mise's Distortion Energy Theory for burst and collapse strength, and stress area calculations for tensile strength.

***Pressure rating is defined as the differential pressure at the tool. (Differential pressure is the difference in pressure between the casing annulus and the tool ID.)

These ratings are guidelines only. For more information, consult your local Halliburton representative.

PEEK is a trademark of ICI Americas, Inc. Poly-Ether-Ether-Ketone.

For more information on the Drain Valve contact your local Halliburton representative or email us at welltesting@halliburton.com

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