8. Skid Mounted Packages, Manifolds, Special Products
### Section 8. Skid Mounted Packages, Manifolds and Special Products

RBV Energy supply Skid Mounted Packages, Manifolds & Special Products designed and supplied in accordance with the following specifications, where applicable, or to meet client requirements, and are supplied fully certified by independent third party authorities.

#### API PRESSURE RATINGS
- API 6A
- API 16C
- API RP53
- NPD/NMD
- NACE MR-01-75
- NORSOK

#### ANSI PRESSURE RATINGS
- ASME B16.34
- ASME VIII, PD5500
- ANSI B16.9, B31.4, B31.8, B31.3

#### PRESSURE & TEMPERATURE RATINGS

<table>
<thead>
<tr>
<th>MAX. WORKING PRESSURE</th>
<th>5,000 PSI</th>
<th>7,500 PSI</th>
<th>10,000 PSI</th>
<th>15,000 PSI</th>
<th>20,000 PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEST PRESSURE</td>
<td>7,500PSI</td>
<td>11,250PSI</td>
<td>15,000PSI</td>
<td>22,500PSI</td>
<td>30,000PSI</td>
</tr>
<tr>
<td>PRODUCT SPECIFICATION LEVELS</td>
<td>1,2,3 &amp; 4</td>
<td>1,2,3 &amp; 4</td>
<td>1,2,3 &amp; 4</td>
<td>1,2,3 &amp; 4</td>
<td>1,2,3 &amp; 4</td>
</tr>
<tr>
<td>PRODUCT RATING</td>
<td>1 &amp; 2</td>
<td>1 &amp; 2</td>
<td>1 &amp; 2</td>
<td>1 &amp; 2</td>
<td>1 &amp; 2</td>
</tr>
<tr>
<td>API TEMPERATURE RATING</td>
<td>K (-60 DEG C) TO Y (+345 DEG C)</td>
<td>K (-60 DEG C) TO Y (+345 DEG C)</td>
<td>K (-60 DEG C) TO Y (+345 DEG C)</td>
<td>K (-60 DEG C) TO Y (+345 DEG C)</td>
<td></td>
</tr>
</tbody>
</table>

#### RATING
- **150lb**
  - MAX. WORKING PRESSURE: 285 PSI
  - TEST PRESSURE: 450 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

- **300lb**
  - MAX. WORKING PRESSURE: 740 PSI
  - TEST PRESSURE: 1125 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

- **400lb**
  - MAX. WORKING PRESSURE: 990 PSI
  - TEST PRESSURE: 1500 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

- **600lb**
  - MAX. WORKING PRESSURE: 1480 PSI
  - TEST PRESSURE: 2225 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

- **900lb**
  - MAX. WORKING PRESSURE: 2220 PSI
  - TEST PRESSURE: 3350 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

- **1,500lb**
  - MAX. WORKING PRESSURE: 3705 PSI
  - TEST PRESSURE: 5575 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

- **2,500lb**
  - MAX. WORKING PRESSURE: 6170 PSI
  - TEST PRESSURE: 9275 PSI
  - OPERATING TEMPERATURE RANGE: -28 TO +540 DEG C

### GENERAL NOTES:
- Please contact RBV Energy for any special material or dimensional requirements.
- Max. working pressures stated are suitable for temperatures up to 121°C.
- De-rating of max. working pressure will occur as the operating temperature increases above 121°C.
### Section 8. Skid Mounted Packages, Manifolds and Special Products

**Diagram 8.1 Choke and Kill Manifolds**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>Size: 2½&quot; to 4½&quot; NB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESSURE RATING</td>
<td>API 3,000 to 15,000lb</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>API 6A Material Class AA to HH</td>
</tr>
<tr>
<td>DESIGN</td>
<td>API 6A, 16C, NORSOK, NPD, DNV, ABS</td>
</tr>
</tbody>
</table>

**Diagram 8.2 Standpipe Manifolds**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>Size: 3&quot; NB to 6&quot; NB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESSURE RATING</td>
<td>API 3,000 to 10,000lb</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>API 6A Material Class AA to HH</td>
</tr>
<tr>
<td>DESIGN</td>
<td>API 6A, NORSOK, NPD, DNV, ABS</td>
</tr>
</tbody>
</table>

**Diagram 8.3 Cement Manifolds**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>Size: 2&quot; to 4&quot; NB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESSURE RATING</td>
<td>API 5,000 to 15,000lb</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>API 6A Material Class AA to HH</td>
</tr>
<tr>
<td>DESIGN</td>
<td>API 6A, NORSOK, NPD, DNV, ABS</td>
</tr>
</tbody>
</table>

**Diagram 8.4 Production Manifolds**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>Size: 2&quot; NB to 24&quot; NB</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESSURE RATING</td>
<td>ANSI 150lb to 2,500lb</td>
</tr>
<tr>
<td>MATERIALS</td>
<td>Carbon Stainless, Duplex and Exotics</td>
</tr>
<tr>
<td>DESIGN</td>
<td>ANSI B31.3, B31.4, B31.8, ASME VIII, PD5500</td>
</tr>
</tbody>
</table>
Section 8. Skid Mounted Packages, Manifolds and Special Products

Diagram 8.5 Mud Gas Separators
- **SIZE**: 1000mm to 3000mm Dia.
- **PRESSURE RATING**: ANSI 150lb
- **MATERIALS**: Carbon and Low Temp Carbon Steels
- **DESIGN**: NORSOK, API 12J, ASME VIII, PD5500

Diagram 8.6 Cement & Barite Storage Silos
- **SIZE**: 1000mm to 3500mm Dia.
- **PRESSURE RATING**: ANSI 150lb
- **MATERIALS**: Carbon and Low Temp Carbon Steels
- **DESIGN**: ANSI B31.3, B31.4, B31.8, ASME VIII, PD5500

Diagram 8.7 Dust Filter Systems
- **SIZE**: 500mm to 2000mm
- **PRESSURE RATING**: ANSI 150lb
- **MATERIALS**: Carbon and Low Temp Carbon Steels
- **DESIGN**: Manufacturer Standard

Diagram 8.8 Sphere and Barred Tees
- **SIZE**: 1000mm to 3500mm Dia.
- **PRESSURE RATING**: ANSI 150lb
- **MATERIALS**: Carbon and Low Temp Carbon Steels
- **DESIGN**: ANSI B31.3, B31.4, B31.8, ASME VIII, PD5500

Visit [www.rbvenergy.com](http://www.rbvenergy.com) for more info.
Section 8. Skid Mounted Packages, Manifolds and Special Products

Diagram 8.9 Hose loading stations
- SIZE: 100mm to 500mm Dia.
- PRESSURE RATING: ANSI 150lb
- SERVICES: See Hoses under section 7
- OPERATION: Electric, Hydraulic or Pneumatic

Diagram 8.10 Production and Test Headers
- SIZE: 6" to 48" NB
- PRESSURE RATING: ANSI 150lb to 2500lb
- MATERIALS: Carbon, Stainless, Duplex and Exotics
- DESIGN: ANSI B31.3, B31.4, B31.8, ASME VIII, PD5500

Diagram 8.11 Knock out drums, production and test separators
- SIZE: 500mm upwards
- PRESSURE RATING: ANSI 150lb to 2,500lb
- MATERIALS: Carbon, Stainless, Duplex and Internally Clad
- DESIGN: ANSI B31.3, ASME VIII, PD5500

Diagram 8.12 Piping Design and Stress Analysis
- SIZE: 2" NB to 40" NB
- PRESSURE RATING: ANSI 150lb to 2,500lb
- MATERIALS: Carbon, Stainless, Duplex and Exotics
- DESIGN: API 6A, ANSI B31.3 or to suit client design