RWB API Insert Pumps

RWC and RWBM standard sucker rod pumps

**APPLICATIONS**
- Low-sand wells
- Low-fluid-level wells
- Shallow- to moderate-depth wells

**ADVANTAGES**
- Highly adaptable
- High-fluid-volume insert pump
- Thin-walled barrel
- Bottom hold-down
- Universally accepted design

RWB API insert pumps are thin-walled, stationary barrel, bottom hold-down pumps recognized by API as a standard design. These pumps are most often used in shallow to moderate depths where there is little chance of sand accumulation. If sand is an issue, a top hold-down design may be more suitable. Alternatively, nonstandard accessories such as a top seal may be used to eliminate a stuck-pump scenario. The thin-walled barrel is threaded on the inside, which reduces the number of connections needed on the pump and enables a larger bore.

Seating options on this pump include mechanical or cup types suitable for high temperatures and mechanical types for simplified well maintenance. A mechanical hold-down does not require repair unless major damage has occurred, and cups should be replaced each time the pump is unset. Both hold-down types follow the same procedure of setting and unsetting by placing the weight of the sucker rods down on the pump or by lifting up.

Like all API pumps, RWB API insert pumps can be modified with specialty components to better address pumping issues caused by sand and gas. Because of the exposure to stagnant fluid on the exterior of the pump barrel, a bottom discharge valve is recommended to enable fresh fluid to be moved into the area directly above the standing valve of the pump.

**Enhance operational flexibility and extend the life of your rod system**

Schlumberger offers a range of tools and specialty products engineered to address common problems such as rodstring wear and damage due to gas interference, erosion, or insufficient fluid levels. These products provide greater flexibility during operations and can extend the life of the rod lift system.

**Sand specialty products**
- Prevent a stuck pump scenario caused by solids accumulation around the hold-down with a top seal.
- Direct solids away from the pump barrel, maintain downhole pump integrity, and extend run life with the sand diverter.
- Keep particulate matter from settling and sticking the pump and greatly reduce the adverse effects of corrosive fluid, by using the bottom discharge valve.

**Gas specialty products**
- Stabilize and protect the valve rod during the pump stroke with a carbide insert valve rod guide.

**PumpTrak system**
- Continuously improve operations with the PumpTrak® web-based pump service tracking system, which serves as a repository of detailed service information including service history, installation and pull date, days in use, and failure and cost analysis.

RWB API insert pump.
# RWB API Insert Pumps

## Stationary-Barrel, Bottom-Anchor, Cup-Type Hold-Down

<table>
<thead>
<tr>
<th>Description</th>
<th>Item Req.</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubing × Bore Size, in [mm]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 ⁵/₈ × 1 ⁵/₈</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(48.260 × 31.750)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ⁵/₈ × 1 ⁵/₈</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(60.325 × 31.750)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ⁵/₈ × 1 ¹/₂</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(60.325 × 38.100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 ⁷/₈ × 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(73.025 × 50.800)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 ¹/₂ × 2 ¹/₂</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(88.900 × 63.500)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Stationary Assembly

- **Guide, valve rod**
  - Item: A
  - Part Numbers: GR111, GR211, GR211, GR321, GR4310

- **Connector, upper barrel**
  - Item: B
  - Part Numbers: C101, C222, C222, C332, C443

- **Barrel, thin wall**
  - Item: C
  - Part Numbers: BT0316C, BT0316C, BT0516C, BT1216C, BT1616C

- **Cage, closed barrel**
  - Item: D
  - Part Numbers: CF32, CF48, CF42, CF62, CF82

- **Valve, ball and seat**
  - Item: E
  - Part Numbers: 045 + 03, 047 + 04, 047 + 04, 049 + 06, 051 + 07

### Traveling Assembly

- **Bushing, valve rod**
  - Item: F
  - Part Numbers: BR0-0, BR1-1-D, BR1-1-D, BR1-1-D, BR3-1-D

- **Rod, valve**
  - Item: G
  - Part Numbers: VR1-149, VR1-149, VR1-149, VR2-149, VR3-149

- **Coupling, plunger adapter**
  - Item: H
  - Part Numbers: PA21, PA21, PA310, PA52, PA73

- **Plunger**
  - Item: I

- **Cage, closed plunger**
  - Item: J
  - Part Numbers: CF21, CF21, CF31, CF51, CF71

- **Valve, ball and seat**
  - Item: K
  - Part Numbers: 043 + 02, 043 + 02, 045 + 03, 048 + 05, 051 + 07

- **Plug, seat**
  - Item: L
  - Part Numbers: PS21, PS21, PS31, PS51, PS71

### Seating Assembly

- **API, 3-cup†**
  - Item: M
  - Part Numbers: HM31, HM41, HM41, HM51, HM61

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*Mark of Schlumberger
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*Bars, barrel extensions, plunger, and valve rod must all be specified in length.
All components may be specified by material and coating type.
†API mechanical type seating assembly also available.