A slip ring is an electromechanical device that allows the transmission of power and electrical signals from a stationary to a rotating structure. Also called a rotary electrical joint, collector or electric swivel, a slip ring can be used in any electromechanical system that requires unrestrained, intermittent or continuous rotation while transmitting power and / or data. It can improve mechanical performance, simplify system operation and eliminate damage-prone wires dangling from movable joints.

For high speed data transfer or for data transfer in EMI sensitive environments, we manufacture a line of Fiber Optic Rotary Joints (FORJ’s).

**Capability**

With over 10,000 designs, if you do not see a slip ring to match your requirements, please contact us for assistance. Our slip rings are aggressively priced, available for fast delivery and are designed for tough commercial, industrial, aerospace and military environments.

**Product Range**

As the world’s leading slip ring manufacturer, Moog offers more than 10,000 slip ring designs that are used in medical equipment -- ranging from large CT scanners to smaller camera systems -- and rugged space and aircraft vehicles. Specific applications include:

- Commercial Camera / Security Systems
- Medical / Baggage Scanning
- Downhole / Oil Exploration
- Factory Automation
- Medical
- EO / IR Sensor Pods
- Fixed and Rotary Wing Aircraft
- Ground Vehicles
- Radar Systems
- Remote Weapons Systems
- SATCOM
- Unmanned Vehicles / Remotely Operated Vehicles
- Wind Energy
Slip Rings With Through-Bores
The unobstructed bore through the center provides routing space for hydraulics, pneumatics or for a concentric shaft mount. Our through-bore slip rings feature fiber brush technology which offers several advantages over conventional slip ring technology, including multiple points of contact per brush bundle, low contact force per fiber and low contact wear rates. In addition, fiber brushes do not require lubrication and produce virtually no wear debris.

<table>
<thead>
<tr>
<th>Model</th>
<th>Through-Bore</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRA-73683</td>
<td>1/2 inch</td>
<td>1.38 x 1.07 - 1.97 (35.05 x 27.17 - 50.03)</td>
<td>6, 12, 18, 24</td>
<td>2 amps</td>
<td>210 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6438</td>
<td>1/2 inch</td>
<td>2.1 x 1.75 - 3.4 (53.60 x 44.45 - 86.36)</td>
<td>6, 12, 18, 24</td>
<td>5 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6349</td>
<td>1 inch</td>
<td>3.07 x 2.9 - 6.5 (78.0 x 73.7 - 165.1)</td>
<td>6, 12, 18, 24</td>
<td>15 amps</td>
<td>440 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC4598</td>
<td>1 1/2 inch</td>
<td>3.9 x 2.13 - 4.94 (100 x 54.10 - 125.48)</td>
<td>6, 12, 18, 24</td>
<td>10 amps</td>
<td>600 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6200</td>
<td>1 1/2 inch</td>
<td>3.9 x 2.13 - 4.94 (100 x 54.10 - 125.5)</td>
<td>12, 24, 36, 48</td>
<td>2 amps</td>
<td>220 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6815</td>
<td>1 1/2 inch</td>
<td>4.32 x 3.01 - 5.94 (109.7 x 76.45 - 150.8)</td>
<td>Up to 128</td>
<td>2, 3.5, 10 amps</td>
<td>60, 110, 220 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6428</td>
<td>1 3/8 inch</td>
<td>3.9 x 6.60 - 9.34 (99.06 x 167.6 - 237.2)</td>
<td>60, 72, 84, 96</td>
<td>2 amps</td>
<td>220 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6429</td>
<td>1 3/8 inch</td>
<td>3.9 x 7.5 (99.06 x 190.5)</td>
<td>48 @ 2 amp Plus 6 or 12 @ 10 amp</td>
<td>2 and 10 amps</td>
<td>220 VAC, 2 amp, 600 VAC 10 amp</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6275</td>
<td>2 3/4 inch</td>
<td>6.63 x 6.6 - 20.5 (168.40 x 167.64 - 520.7)</td>
<td>Various Configurations</td>
<td>5, 10, 30, 50 amps</td>
<td>250 VAC for 5 amps, 600 VAC for 10, 30, 50 amps</td>
<td>1,000 rpm</td>
</tr>
<tr>
<td>AC6098</td>
<td>4 inch</td>
<td>8.0 x 4.6 - 14.4 (203.2 x 116.84 - 365.76)</td>
<td>Various Configurations</td>
<td>10, 30, 50 amps</td>
<td>600 VAC</td>
<td>250 rpm</td>
</tr>
</tbody>
</table>
## Slip Rings With Through-Bores

<table>
<thead>
<tr>
<th>Model</th>
<th>Through-Bore</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endura-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trac™ Standard W Series</td>
<td>1 1/2 inch to 3.0 inch</td>
<td>5 - 6.5 OD (127 - 165.1)</td>
<td>To 12 Power Circuits</td>
<td>30 amps</td>
<td>600 VAC</td>
<td>60 rpm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Endura-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trac™ Plus W Series</td>
<td>1 1/2 inch to 9 inch</td>
<td>5 - 12.5 OD (127 - 317.5)</td>
<td>To 24 Power Circuits</td>
<td>30 amps</td>
<td>600 VAC</td>
<td>600 rpm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

## Slip Ring Capsules (Compact)

Our economical, compact slip ring capsule family allows tremendous flexibility in dealing with systems size requirements when larger versions are not an option. Capsules with up to 56 contacts are available.

<table>
<thead>
<tr>
<th>Model</th>
<th>Through-Bore</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRA-73540</td>
<td>No</td>
<td>.44 x .64 (11.17 x 16.25)</td>
<td>6, 12</td>
<td>2 amps</td>
<td>120 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73625</td>
<td>No</td>
<td>.44 x 1.16 (11.17 x 29.46)</td>
<td>18</td>
<td>2 amps</td>
<td>120 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6373</td>
<td>No</td>
<td>.5 x .8 - 1.07 (12.7 x 20.32 - 27.17)</td>
<td>6, 12</td>
<td>2 amps</td>
<td>120 VAC</td>
<td>100 rpm</td>
</tr>
<tr>
<td>SRA-73526, SRA-73528, SRA-73599</td>
<td>No</td>
<td>.87 x .57 - 1.24 (22.0 x 14.47 - 31.49)</td>
<td>6, 12, 18, 24</td>
<td>2 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6023</td>
<td>No</td>
<td>.87 x 1.14 - 1.95 (22.0 x 28.95 - 49.53)</td>
<td>6, 12, 18, 24</td>
<td>2 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73762</td>
<td>No</td>
<td>.61 x 1.79 (15.49 x 45.46)</td>
<td>12, 18, 24</td>
<td>2 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73574, SRA-73587</td>
<td>No</td>
<td>.87 x 2.4 (22.0 x 60.96)</td>
<td>36</td>
<td>2, 10, amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
</tbody>
</table>
## Slip Ring Capsules (Compact)

<table>
<thead>
<tr>
<th>Model</th>
<th>Through-Bore</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC6355</td>
<td>No</td>
<td>1.0 x 2.6 - 3.5 (25.4 x 66.04 - 88.9)</td>
<td>36 and 56</td>
<td>2 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6305</td>
<td>No</td>
<td>.87 x 1.95 (22.0 x 49.53)</td>
<td>3 @ 5 amps</td>
<td>5, 2 amps</td>
<td>120 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC6310</td>
<td>No</td>
<td>0.87 x 1.95 (22.0 x 49.53)</td>
<td>3 @ 10 amps and 3, or 6 @ 2 amps</td>
<td>10, 2 amps</td>
<td>120 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7094</td>
<td>No</td>
<td>2.17 x 6.0 - 7.67 (55.1 x 152.4 - 194.81)</td>
<td>30, 36, 42, 48</td>
<td>5 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7036</td>
<td>No</td>
<td>3.1 x 3.1 - 6.7 (78.74 x 78.74 - 170.18)</td>
<td>Outer options: AC6349 Inner options: AC6355, AC7217 AC7195</td>
<td>2, 5, 10, 15 amps</td>
<td>440 VAC outer 240 VAC inner</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7212</td>
<td>No</td>
<td>3.9 x 3.11 - 5.92 (99.06 x 78.99 - 150.36)</td>
<td>Outer options: AC4598 or AC6200 Inner options: AC6023, AC6355, AC7188, AC7195, AC7203, AC7217</td>
<td>2, 5, 10 amps</td>
<td>Refer to individual product data sheets</td>
<td>250 rpm</td>
</tr>
<tr>
<td>P Series</td>
<td>No</td>
<td>1.248 x 2.54 - 3.07 (31.69 x 64.51 - 77.97)</td>
<td>2, 4 and 8</td>
<td>2, 7, 14 amps</td>
<td>240 VAC</td>
<td>400 to 600 rpm</td>
</tr>
</tbody>
</table>

Moog • www.moog.com
**Commercial and Industrial**

**Ethernet and High Definition Video Slip Ring Capsules**
Moog's Ethernet slip ring solutions have been developed to provide reliable products to allow transfer of the Ethernet protocol through a rotating interface. The innovative designs meet the challenge of matching impedance, controlling crosstalk and managing losses. Wide range of product solutions are offered with combinations of data and power in multiple mechanical configurations to meet your application needs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Ethernet</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRA-73799</td>
<td>1000BaseT (or 2 100BaseT)</td>
<td>.44 x 1.16 (11.17 x 29.46)</td>
<td>Ethernet plus, 2 amp contacts</td>
<td>2 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73806</td>
<td>1000BaseT (or 2 100BaseT)</td>
<td>.61 x 1.79 (15.49 x 45.46)</td>
<td>Ethernet plus, 2 amp contacts</td>
<td>2 amps</td>
<td>210 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7203</td>
<td>10 / 100BaseT and 1000BaseT</td>
<td>.67 x 1.14 - 1.95 (22.0 x 28.95 - 49.53)</td>
<td>Ethernet plus, 2 amp, 5 amp and 10 amp</td>
<td>2, 5, 10 amps</td>
<td>240 VAC</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7188</td>
<td>HD-SDI</td>
<td>.87 x 1.68 - 1.95 (22.0 x 42.6 - 49.5)</td>
<td>Video, 2 amp and 5 amp</td>
<td>2 amps (28 AWG)</td>
<td>210 VDC / 240 VAC on standard circuits</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73810</td>
<td>HD-SDI / SD-SDI</td>
<td>.61 x 1.79 (15.4 x 45.4)</td>
<td>Video, 12, 2 amp connections</td>
<td>2 amps (26 AWG)</td>
<td>210 VDC / 240 VAC on standard circuits</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73811</td>
<td>HD-SDI / SD-SDI</td>
<td>.87 x 1.79 (22.0 x 45.4)</td>
<td>2 video, 4, 2 amp</td>
<td>2 amps (26 AWG)</td>
<td>210 VDC / 240 VAC on standard circuits</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7195</td>
<td>10 / 100BaseT and 1000BaseT</td>
<td>1.0 x 3.5 (25.4 x 88.9)</td>
<td>Ethernet plus coax, 2 amp, 5 amp, 10 amp</td>
<td>2 to 10 amps</td>
<td>240 VAC on power circuits</td>
<td>250 rpm</td>
</tr>
<tr>
<td>AC7217</td>
<td>10 / 100BaseT and 1000BaseT</td>
<td>1.0 x 2.6 (25.4 x 66.0)</td>
<td>Ethernet plus coax, 2 amp, 5 amp, 10 amp</td>
<td>2 to 10 amps</td>
<td>240 VAC on power circuits</td>
<td>250 rpm</td>
</tr>
<tr>
<td>SRA-73801</td>
<td>10 / 100BaseT and 1000BaseT</td>
<td>1.375 x 1.97 (34.92 x 50.03)</td>
<td>Ethernet plus, 2 amp contacts</td>
<td>2 amps</td>
<td>210 VDC on power circuits</td>
<td>250 rpm</td>
</tr>
</tbody>
</table>
Commercial and Industrial

Ethernet Through-Bore Slip Ring Capsule Options
Moog also offers Ethernet capability in the following through-bore slip ring capsules:

- **AC6438**  1/2 inch through-bore
- **AC6349**  1 inch through-bore
- **AC4598**  1 1/2 inch through-bore
- **AC6200**  1 1/2 inch through-bore
- **AC6428**  1 3/8 inch through-bore
- **AC6429**  1 3/8 inch through-bore
- **AC6275**  2 3/4 inch through-bore

High Speed Slip Ring Capsules
High speed slip rings are used in applications up to 10,000 rpm. Fiber brush contacts provide long-life and operation up to 10,000 rpm without the need for cooling equipment.

<table>
<thead>
<tr>
<th>Model</th>
<th>Through-Bore</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH Series</td>
<td>No</td>
<td>1.52 x 2.29 - 2.79 (38.60 x 58.16 - 70.86)</td>
<td>8 or 12</td>
<td>2 amps</td>
<td>50 Volts</td>
<td>20,000 rpm</td>
</tr>
<tr>
<td>AC3757</td>
<td>No</td>
<td>1.625 x 2.53 (41.27 x 64.26)</td>
<td>36</td>
<td>1 amp</td>
<td>70 VAC</td>
<td>6,000 rpm</td>
</tr>
<tr>
<td>AC6231</td>
<td>1 1/2 inch</td>
<td>4.25 x 2.75 (107.9 x 69.8)</td>
<td>4 / 8</td>
<td>15 amps</td>
<td>240 VAC</td>
<td>2,500 rpm</td>
</tr>
<tr>
<td>AC6266</td>
<td>1 1/2 inch</td>
<td>4.25 x 1.97 (107.9 x 50.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC3848</td>
<td>No</td>
<td>1.2 x .98 - 1.2 (30.4 x 24.8 - 30.4)</td>
<td>Up to 10 (2, 6, 8 and 10)</td>
<td>1.0 amps max. per ring</td>
<td>Low millivolt range to 120 VDC</td>
<td>10,000 rpm</td>
</tr>
<tr>
<td>PM Series</td>
<td>No</td>
<td>3.56 x 5.28 - 8.64 (90.42 x 134.11 - 219.45)</td>
<td>8, 12, 14</td>
<td>2.5 amps</td>
<td>50 VAC</td>
<td>12,000 rpm</td>
</tr>
</tbody>
</table>
Large Diameter Slip Rings

Large bore slip rings represent the union of manufacturing processes and technologies that enable us to offer large, high volume slip rings with advanced features that are cost effective.

<table>
<thead>
<tr>
<th>Part</th>
<th>Type</th>
<th>ID*</th>
<th>OD*</th>
<th>High Power Qty</th>
<th>Mid Power Qty</th>
<th>Signal Qty</th>
<th>High Power Voltage</th>
<th>High Power Current</th>
<th>Speed</th>
<th>Integr. Encoder</th>
<th>Integr. FORJ</th>
<th>FORJ Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW6455-1</td>
<td>Drum</td>
<td>31.952</td>
<td>33.044</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>480 VAC</td>
<td>100 A</td>
<td>120 rpm</td>
<td>No</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>KW6764-2</td>
<td>Drum</td>
<td>37.400</td>
<td>39.984</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>480 VAC</td>
<td>100 A</td>
<td>120 rpm</td>
<td>No</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>UY7013</td>
<td>Platter</td>
<td>38.590</td>
<td>56.194</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>400 VAC</td>
<td>100 A</td>
<td>180 rpm</td>
<td>No</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>BN7093</td>
<td>Platter</td>
<td>42.520</td>
<td>54.100</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>500 VAC</td>
<td>100 A</td>
<td>180 rpm</td>
<td>No</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>UA7138</td>
<td>Platter</td>
<td>42.047</td>
<td>54.094</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>400 VAC</td>
<td>100 A</td>
<td>120 rpm</td>
<td>No</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>MR6970-1</td>
<td>Platter</td>
<td>44.291</td>
<td>59.916</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>600 VAC</td>
<td>100 A</td>
<td>180 rpm</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>FO6536</td>
<td>FORJ Only</td>
<td>36.624</td>
<td>43.040</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>300 rpm</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*OD, ID dimensions do not include brush block or fiber optic hardware mounting dimension.

• All designs are RoHs compliant
• Design to customer specifications

Separates

Slip rings are typically used in de-icing and blade-folding systems and main and tail rotors. Instrumentation and data transfer capabilities are available and standard on many designs.

<table>
<thead>
<tr>
<th>Model</th>
<th>Through-Bore</th>
<th>Size in (mm)</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Operational Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC2690</td>
<td>No</td>
<td>.100 - .550 x .081 (2.54 - 12.7 x 2.05)</td>
<td>1-10</td>
<td>1 amp</td>
<td>-</td>
<td>100 rpm</td>
</tr>
<tr>
<td>AC259</td>
<td>No</td>
<td>.100 - .540 x .081 (2.54 - 13.72 x 2.05)</td>
<td>1-10</td>
<td>1 amp</td>
<td>-</td>
<td>100 rpm</td>
</tr>
<tr>
<td>MD6083 / MD6043</td>
<td>3/8 inch</td>
<td>.580 x .520 (8.54 x 13.2)</td>
<td>6</td>
<td>2 amp</td>
<td>249 VDC</td>
<td>60 - 100 rpm</td>
</tr>
<tr>
<td>Platter Separates</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
<td>Various</td>
</tr>
</tbody>
</table>
Fiber Optic Rotary Joints

Fiber Optic Rotary Joints (FORJs) are to optical signals what electrical slip rings are to electrical signals, a means to pass signals across rotating interfaces, particularly when transmitting large amounts of data. FORJs maintain the intrinsic advantages of fiber end to end.

### Performance

<table>
<thead>
<tr>
<th>Model</th>
<th>Fiber Type</th>
<th>Chan.</th>
<th>Insertion Loss - Maximum dB MM = 5.5 dB</th>
<th>Maximum Rotational Speed</th>
<th>Operating Temp.</th>
<th>Size in (mm)</th>
<th>Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>FO228</td>
<td>N Y</td>
<td>1</td>
<td>NA</td>
<td>4.0</td>
<td>100</td>
<td>-40 to +75° C</td>
<td>1.75 (44.45)</td>
</tr>
<tr>
<td>FO197</td>
<td>N Y</td>
<td>1</td>
<td>NA</td>
<td>3</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>2.38 (60.45)</td>
</tr>
<tr>
<td>FO206</td>
<td>Y Y</td>
<td>1</td>
<td>3.5</td>
<td>NA</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>2.36 (59.94)</td>
</tr>
<tr>
<td>FO285 *</td>
<td>Y Y</td>
<td>1</td>
<td>3.5</td>
<td>NA</td>
<td>500+</td>
<td>-55 to +75° C</td>
<td>1.02 (25.90)</td>
</tr>
<tr>
<td>FO286 *</td>
<td>N Y</td>
<td>1</td>
<td>2.5</td>
<td>NA</td>
<td>500+</td>
<td>-55 to +75° C</td>
<td>0.75 (19.05)</td>
</tr>
<tr>
<td>FO310</td>
<td>Y Y</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>100</td>
<td>-40 to +85° C</td>
<td>3.41 (86.6)</td>
</tr>
<tr>
<td>FO300A **</td>
<td>Y Y</td>
<td>2 to 17</td>
<td>&lt; 4.0 dB</td>
<td>&lt; 4.0 dB</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>4.22 (107.18)</td>
</tr>
<tr>
<td>FO300B **</td>
<td>Y Y</td>
<td>2 to 31</td>
<td>&lt; 4.5 dB</td>
<td>&lt; 5.0 dB</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>5.76 (146.2)</td>
</tr>
<tr>
<td>FO300C **</td>
<td>Y N</td>
<td>2 to 52</td>
<td>&lt; 5.0 dB</td>
<td>NA</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>6.79 (172.5)</td>
</tr>
<tr>
<td>FO215 *</td>
<td>N Y</td>
<td>2</td>
<td>NA</td>
<td>5.5</td>
<td>500+</td>
<td>-40 to +60° C</td>
<td>5.02 (127.5)</td>
</tr>
<tr>
<td>FO257</td>
<td>Plastic</td>
<td>2</td>
<td>8 ***</td>
<td>500+</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>5.02 (127.5)</td>
</tr>
<tr>
<td>FO292 *</td>
<td>N Y</td>
<td>2</td>
<td>NA</td>
<td>5.5</td>
<td>100+</td>
<td>-40 to +60° C</td>
<td>2.25 (57.15)</td>
</tr>
<tr>
<td>FO242 *</td>
<td>Y N</td>
<td>2 to 5</td>
<td>5.5</td>
<td>NA</td>
<td>100+</td>
<td>-40 to +60° C</td>
<td>5.02 (127.5)</td>
</tr>
<tr>
<td>FO291 ***</td>
<td>Y Y</td>
<td>2 to 9</td>
<td>6</td>
<td>5.5</td>
<td>100+</td>
<td>-40 to +60° C</td>
<td>5.02 (127.5)</td>
</tr>
<tr>
<td>FO190 *</td>
<td>N Y</td>
<td>2 to 21</td>
<td>NA</td>
<td>5.5</td>
<td>100</td>
<td>-40 to +60° C</td>
<td>5.02 (127.5)</td>
</tr>
</tbody>
</table>

### Physical

<table>
<thead>
<tr>
<th>Model</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>FO228</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO197</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO206</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO285 *</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO286 *</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO310</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO300A **</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO300B **</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO300C **</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO215 *</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO257</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO292 *</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO242 *</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO291 ***</td>
<td>SM MM - SM MM</td>
</tr>
<tr>
<td>FO190 *</td>
<td>SM MM - SM MM</td>
</tr>
</tbody>
</table>

### Hybrid Units

<table>
<thead>
<tr>
<th>Hybrid Units</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>H18</td>
<td>N Y</td>
</tr>
<tr>
<td>H24</td>
<td>N Y</td>
</tr>
</tbody>
</table>

* The FO242 and FO190 can be combined to offer a hybrid multimode and singlemode solution
  SM = Singlemode    MM = Multimode
* Right angle options available
** More passes are available with a custom design combination applications
*** 1 MM pass can be accommodated on the FO291
Note: Optical values for all listed multimode FORJs are based on use with LED sources.
Miniature Slip Ring Capsules

Miniature slip ring capsule assemblies economically address both critical space and weight limitations. Each assembly includes the rotor, brush blocks, frame, ball bearings and dust cover.

<table>
<thead>
<tr>
<th>Model</th>
<th>Circuits</th>
<th>Current</th>
<th>Voltage</th>
<th>Size Dia&quot; x L&quot; (mm)</th>
<th>Operational Speed</th>
<th>Through-Bore</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC264</td>
<td>20, 30, 40, 50, 60</td>
<td>0.8 amp</td>
<td>100 VDC</td>
<td>.50 x 1.04 - 2.24 (12.7 x 26.3 - 56.8)</td>
<td>100 rpm</td>
<td>No</td>
</tr>
<tr>
<td>AC267</td>
<td>16, 20, 24, 28, 32, 36</td>
<td>0.8 amp</td>
<td>100 VDC</td>
<td>.375 x .91 - 1.51 (9.525 x 23.2 - 38.4)</td>
<td>100 rpm</td>
<td>No</td>
</tr>
<tr>
<td>RE4815</td>
<td>32</td>
<td>1.2 amps</td>
<td>50 VAC / VDC</td>
<td>0.50 x 1.32 (12.7 x 33.5)</td>
<td>600 rpm</td>
<td>No</td>
</tr>
<tr>
<td>AC6292</td>
<td>80</td>
<td>0.8 amp</td>
<td>100 VDC</td>
<td>.685 x 2.0 (17.2 x 50.8)</td>
<td>40 rpm max.</td>
<td>No</td>
</tr>
<tr>
<td>RK4288</td>
<td>95</td>
<td>0.8 amp</td>
<td>70 VDC</td>
<td>.880 x 3.3 (22.35 x 83.82)</td>
<td>40 rpm</td>
<td>No</td>
</tr>
<tr>
<td>M Series</td>
<td>40 to 120</td>
<td>2 amps</td>
<td>60 VDC</td>
<td>2.70 x 2.80 - 5.50 (68.58 x 71.12 - 139.7)</td>
<td>1,000 rpm</td>
<td>No</td>
</tr>
</tbody>
</table>
### Electrical Slip Rings
Moog has delivered trusted technology products and services to the offshore petroleum, oceanographic, seismic and maritime industries for more than 20 years. Marine slip rings are designed to function in extreme marine environments.

<table>
<thead>
<tr>
<th>Model</th>
<th>Flashover Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Size in (mm)</th>
<th>Rotation Speed</th>
<th>Through-Bore</th>
</tr>
</thead>
<tbody>
<tr>
<td>129</td>
<td>24,000 VAC</td>
<td>150 amp per pass</td>
<td>5,000 VAC max.</td>
<td>15.5 dia. 1.025 per ring (394, 26.03)</td>
<td>Max. 50 rpm continuous</td>
<td>No</td>
</tr>
<tr>
<td>159</td>
<td>14,000 VAC</td>
<td>60 amp per pass max. 1,000 amp total current</td>
<td>3,500 VAC max.</td>
<td>8.5 dia. 1.025 per ring (215.9, 26.03)</td>
<td>Max. 50 rpm continuous</td>
<td>No</td>
</tr>
<tr>
<td>176</td>
<td>16,000 VAC</td>
<td>20 amp per pass max. 720 amp total current</td>
<td>5,000 VAC max.</td>
<td>7.50 dia. (190.6) Variable length</td>
<td>Max. 50 rpm continuous</td>
<td>No</td>
</tr>
<tr>
<td>180</td>
<td>2,500 VAC</td>
<td>7 amp per pass max. 100 amp total current</td>
<td>1,000 VAC max.</td>
<td>4.00 dia. (101.6) Variable length</td>
<td>Max. 100 rpm continuous</td>
<td>No</td>
</tr>
</tbody>
</table>

### FPSO Swivels
The search for new oil and gas reserves has continually forced offshore exploration companies to drill in deeper water. Under these conditions, water depth and harsh weather heavily influence which type of installation to use. We design, manufacture and deliver unique FPSO swivels to meet the demanding requirements of offshore operators worldwide.

<table>
<thead>
<tr>
<th>Model</th>
<th>Flashover Voltage</th>
<th>Current</th>
<th>Voltage</th>
<th>Rotation Speed</th>
<th>Through-Bore</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>-</td>
<td>Customer Specified</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>Floating production, storage and offloading (FPSO) including buoys, turret moorings, and offshore loading towers</td>
</tr>
<tr>
<td>295-X</td>
<td>Typical 4x V rated</td>
<td>Customer Specified</td>
<td>5,000 VAC max.</td>
<td>Max. 50 rpm continuous</td>
<td>No</td>
<td>CALM buoy, submerged turret loading vessel, FPSO swivel stacks</td>
</tr>
</tbody>
</table>
Downhole Slip Rings
The model 303 is a family of electrical slip ring products designed specifically for the extremely harsh high temperature and high pressure (HTHP) downhole environment. These products are designed and tested to operate at temperatures of up to 230°C and pressures of 25,000 psi (1700 Bar) and are generally configured for an oil-filled environment.

<table>
<thead>
<tr>
<th>Model</th>
<th>Rotational Speeds</th>
<th>Temperature</th>
<th>Pressure</th>
<th>Channels</th>
<th>Voltage</th>
<th>Current</th>
<th>Key Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>303 Miniature Bore</td>
<td>Up to 600 rpm standard</td>
<td>Up to 230°C (200°C standard)</td>
<td>25 kpsi (1,700 bar)</td>
<td>Up to 8</td>
<td>250 - 500 VAC standard</td>
<td>Up to 2 A per channel</td>
<td>0.375 in. (9.525 mm) hollow bore ID, ~1.7 in. (43.2 mm) minimum OD</td>
</tr>
<tr>
<td>303 Large Bore</td>
<td>Up to 300 rpm standard</td>
<td>Up to 230°C (200°C standard)</td>
<td>25 kpsi (1,700 bar)</td>
<td>8</td>
<td>Up to 100 VAC standard</td>
<td>10 A per channel</td>
<td>3.5 in. (88.9 mm) hollow bore ID, 3.83 in. (97.28 mm) minimum OD</td>
</tr>
<tr>
<td>303 High Voltage 20 Channel</td>
<td>20 rpm standard</td>
<td>200°C standard</td>
<td>25 kpsi</td>
<td>Up to 20</td>
<td>Up to 1 kVAC</td>
<td>Up to 5 A per channel</td>
<td>OD 1.85 in. (47 mm)</td>
</tr>
</tbody>
</table>

Multiplexers
Moog multiplexers are designed to provide reliable fiber optic transmission of video and data signals in the demanding subsea applications, robust defense systems and other platforms operating in a harsh environment.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Video</th>
<th>Serial Data (RS-232 / 422 / 485)</th>
<th>Ethernet</th>
<th>Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>903</td>
<td>Video + Data Multiplexer</td>
<td>8 x NTSC / PAL</td>
<td>64</td>
<td>3 x 10 / 100 M</td>
<td>LED, RS-232, Ethernet*</td>
</tr>
<tr>
<td>903-HD</td>
<td>Compact Video + Data Multiplexer</td>
<td>8 x NTSC / PAL</td>
<td>16</td>
<td>-</td>
<td>LED, RS-232, Ethernet*</td>
</tr>
<tr>
<td>EIB-10 / 100</td>
<td>3-Port Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>3 x 10 / 100 M</td>
<td>LED</td>
</tr>
<tr>
<td>ECL-02</td>
<td>Dual ECL (Sonar) Media Converter</td>
<td>-</td>
<td>2 x ECL / PECL, 30 - 150 Mbps</td>
<td>-</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>HDSDI-MC</td>
<td>HD-SDI Media Converter</td>
<td>1 x HD-SDI</td>
<td>-</td>
<td>-</td>
<td>LED</td>
</tr>
<tr>
<td>GBES-MC</td>
<td>4-Port Gigabit Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>4 x 10 / 100 / 1000 M</td>
<td>LED</td>
</tr>
<tr>
<td>903-GEM</td>
<td>4-Channel Gigabit Ethernet Multiplexer (Switchless)</td>
<td>-</td>
<td>0 - 48**</td>
<td>4 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>Model</td>
<td>Description</td>
<td>Video</td>
<td>Serial Data (RS-232 / 422 / 485)</td>
<td>Ethernet</td>
<td>Diagnostics</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------</td>
<td>------------------------</td>
<td>----------------------------------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td><strong>Model 303 Family (Rack Mounted 3U Eurocard Form Factor)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>903</td>
<td>Video + Data Multiplexer</td>
<td>8 x NTSC / PAL</td>
<td>64</td>
<td>3 x 10 / 100 M</td>
<td>LED, RS-232, Ethernet*</td>
</tr>
<tr>
<td>903-HD</td>
<td>Compact Video + Data Multiplexer</td>
<td>8 x NTSC / PAL</td>
<td>16</td>
<td>-</td>
<td>LED, RS-232, Ethernet*</td>
</tr>
<tr>
<td>EIB-10 / 100</td>
<td>3-Port Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>3 x 10 / 100 M</td>
<td>LED</td>
</tr>
<tr>
<td>ECL-02</td>
<td>Dual ECL (Sonar) Media Converter</td>
<td>-</td>
<td>2 x ECL / PECL, 30 - 150 Mbps</td>
<td>-</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>HDSDI-MC</td>
<td>HD-SDI Media Converter</td>
<td>1 x HD-SDI</td>
<td>-</td>
<td>-</td>
<td>LED</td>
</tr>
<tr>
<td>GBES-MC</td>
<td>4-Port Gigabit Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>4 x 10 / 100 / 1000 M</td>
<td>LED</td>
</tr>
<tr>
<td>GBES-MC</td>
<td>4-Port Gigabit Media Converter</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>LED</td>
</tr>
<tr>
<td>GBES-MC</td>
<td>4-Port Gigabit Media Converter</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>LED</td>
</tr>
<tr>
<td>903-GEM</td>
<td>4-Channel Gigabit Ethernet Multiplexer (Switchless)</td>
<td>-</td>
<td>0 - 48**</td>
<td>4 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td><strong>Model 907 Family (PC / 104 Form Factor)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>907-E</td>
<td>2-Channel Video, Ethernet and Serial Data Multiplexer</td>
<td>2 x NTSC / PAL</td>
<td>4 - 52**</td>
<td>1 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-R / C</td>
<td>3-Channel Video + Data Multiplexer</td>
<td>3 x NTSC / PAL</td>
<td>6 - 48**</td>
<td>3 x 10 / 100 M</td>
<td>LED</td>
</tr>
<tr>
<td>907 PLUS</td>
<td>4-Channel Video + Data Multiplexer</td>
<td>4 x NTSC / PAL</td>
<td>6 - 54**</td>
<td>3 x 10 / 100 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-GEM</td>
<td>4-Channel Gigabit Ethernet Multiplexer (Switchless)</td>
<td>-</td>
<td>0 - 48**</td>
<td>4 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907V</td>
<td>6-Channel Video Multiplexer</td>
<td>6 x NTSC / PAL</td>
<td>0 - 48**</td>
<td>3 x 10 / 100 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-HDM2</td>
<td>2-Channel HD-SDI / Data Mux</td>
<td>2 x HD-SDI</td>
<td>4 - 20**</td>
<td>-</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-ECL</td>
<td>ECL (Sonar) Media Converter</td>
<td>-</td>
<td>1 x ECL / PECL, 30 - 150 Mbps</td>
<td>-</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-HDV</td>
<td>HD-SDI Media Converter</td>
<td>1 x HD-SDI</td>
<td>-</td>
<td>-</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-GBE</td>
<td>Gigabit Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>1 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-GBES</td>
<td>4-Port Gigabit Media Switch</td>
<td>-</td>
<td>-</td>
<td>4 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-DIAG-E</td>
<td>Ethernet Diagnostic Card (For Access to 907 Cards)</td>
<td>-</td>
<td>-</td>
<td>1 x 10 / 100 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td>907-FLEX</td>
<td>Flexible Quad Media Converter Card</td>
<td>2 - 4 x 3 G / HD-SDI or 2 - 4 x NTSC</td>
<td>-</td>
<td>1-2 x 10 / 100 / 1000 M</td>
<td>LED, Ethernet*</td>
</tr>
<tr>
<td><strong>Model 914 Family (Credit Card Sized Form Factor)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>914-R / C</td>
<td>1-Channel Video + Data Multiplexer</td>
<td>1 x NTSC / PAL</td>
<td>4 - 6**</td>
<td>2 x 10 / 100 M Ethernet Channels</td>
<td>LED</td>
</tr>
<tr>
<td>914-MCS</td>
<td>2-Port Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>2 x 10 / 100 M</td>
<td>LED</td>
</tr>
<tr>
<td>914-GBE</td>
<td>Gigabit Ethernet Media Converter</td>
<td>-</td>
<td>-</td>
<td>1 x 10 / 100 / 1000 M</td>
<td>LED</td>
</tr>
<tr>
<td>914-HDV</td>
<td>HD-SDI Media Converter</td>
<td>1 x HD-SDI</td>
<td>-</td>
<td>-</td>
<td>LED</td>
</tr>
</tbody>
</table>

The above list is a small sample of available cards. For full product details please see product data sheets or multiplexer catalog found on the website at: www.moog.com.

*Ethernet diagnostics via FMB-X for 903 and via 907-DIAG-E card for 907.

**Minimum serial channels are included on board; maximum channels require expansion cards.
Fluid Rotary Unions (FRUs)

Moog’s fluid rotary unions are used around the world to ensure reliable transmission of life support, process, power and control fluids. Fluid rotary unions rated for pressures up to 15,000 PSI (1,000 bar) are available. Fluid rotary unions can be combined with our electrical slip rings and fiber optic rotary joints.

<table>
<thead>
<tr>
<th>Model</th>
<th>Hollow Bore</th>
<th>Passes Qty Size</th>
<th>Pressure</th>
<th>Speed (rpm)</th>
<th>Sample Applications</th>
<th>Mounting Flange</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>Optional</td>
<td>≤ 11 ≤ 1 inch</td>
<td>≤ 3,000 psi ≤ 200 bar</td>
<td>≤ 10</td>
<td>Diving Industrial Scientific</td>
<td>Standard</td>
<td>See Note 1, 2, 3, 4, 12, 13</td>
</tr>
<tr>
<td>134</td>
<td>N/A</td>
<td>1 ≤ 1 inch</td>
<td>≤ 4,000 psi ≤ 275 bar</td>
<td>≤ 5</td>
<td>Seismic</td>
<td>N/A</td>
<td>See Note 1, 2, 3, 5, 12</td>
</tr>
<tr>
<td>136</td>
<td>Optional</td>
<td>≤ 5 ≤ 1/2 inch</td>
<td>≥ 5,000 psi ≥ 345 bar</td>
<td>≤ 1000</td>
<td>Scientific Military Cooling Systems</td>
<td>Optional</td>
<td>See Note 1, 2, 3, 6, 12, 13</td>
</tr>
<tr>
<td>255</td>
<td>Optional</td>
<td>Multiple 1/4 - 1 1/2 inch</td>
<td>≤ 5,000 psi ≤ 345 bar</td>
<td>≤ 50</td>
<td>Industrial Military</td>
<td>Optional</td>
<td>See Note 1, 2, 3, 7, 12, 13</td>
</tr>
<tr>
<td>248</td>
<td>Optional</td>
<td>Multiple ≤ 1/4 inch</td>
<td>≤ 1,000 psi ≤ 70 bar</td>
<td>≤ 100</td>
<td>Scientific Industrial</td>
<td>Optional</td>
<td>See Note 1, 2, 3, 8, 12, 13</td>
</tr>
<tr>
<td>271</td>
<td>Optional</td>
<td>≤ 5 ≤ 3/4 inch</td>
<td>≤ 1,000 psi ≤ 70 bar</td>
<td>≤ 25</td>
<td>Industrial Military Scientific</td>
<td>Optional</td>
<td>See Note 1, 2, 3, 9, 12, 13</td>
</tr>
<tr>
<td>278</td>
<td>Standard</td>
<td>2 ≤ 1/2 inch</td>
<td>≤ 150 psi ≤ 10 bar</td>
<td>≤ 150</td>
<td>Military Cooling Systems</td>
<td>Optional</td>
<td>See Note 1, 2, 3, 12, 13</td>
</tr>
<tr>
<td>284</td>
<td>Standard</td>
<td>Multiple 1/4 - 2 1/2 inch</td>
<td>≤ 15,000 psi ≤ 1000 bar</td>
<td>≤ 5</td>
<td>FPSO and SPM Hydraulic Controls</td>
<td>Standard</td>
<td>See Note 1, 2, 3, 10, 11, 12, 13</td>
</tr>
<tr>
<td>290</td>
<td>Standard</td>
<td>≤ 2 ≤ 3 inch</td>
<td>≤ 200 psi ≤ 15 bar</td>
<td>≤ 5</td>
<td>FPSO and SPM Fire Suppression</td>
<td>Standard</td>
<td>See Note 1, 2, 3, 10, 11, 12, 13</td>
</tr>
<tr>
<td>301</td>
<td>N/A</td>
<td>1 1/2 inch</td>
<td>≤ 145 psi ≤ 10 bar</td>
<td>≤ 250</td>
<td>Industrial</td>
<td>Standard</td>
<td>See Note 1, 2</td>
</tr>
<tr>
<td>306</td>
<td>1-1/2 inch</td>
<td>1 1/2 inch</td>
<td>≤ 145 psi ≤ 10 bar</td>
<td>≤ 100</td>
<td>Industrial</td>
<td>Optional</td>
<td>See Note 1, 2</td>
</tr>
<tr>
<td>307</td>
<td>Standard</td>
<td>2 1/8 inch</td>
<td>≤ 145 psi ≤ 10 bar</td>
<td>≤ 200</td>
<td>Industrial</td>
<td>Optional</td>
<td>See Note 1, 2, 3</td>
</tr>
</tbody>
</table>

Notes:
1. Values are representative of a typical range only and do not indicate limits.
2. Typical uses listed. Units suitable for other applications.
3. All models are available combined with ESR and FORJ.
4. Available in a number of std configurations. Utilizes a stacked housing design.
5. Generally a COTS pipe swivel combined with an ESR.
6. May require auxiliary cooling.
7. Utilizes a single piece housing design.
8. Basically a smaller version of the FO255.
9. Includes all FRU that are fully integrated with either ESR and FORJ.
10. Leak measurement and collection ports std.
11. FPSO - floating production and off loading. SPM - Single point mooring.
12. Material selection based on application and includes chemical compatibility, design pressure, design temperature, required service life.
13. Hollow bore may be on axis or a parallel axis wire path as required for the application.
Motion Technology

**Slip Rings**
Moog is the world leader in slip ring design and manufacturing -- offering thousands of models. Slip rings are used in systems that require continuous rotation while transmitting power and data from a stationary unit to a rotating device.

**Fiber Optic Rotary Joints**
Moog’s fiber optic rotary joints are to optical signals what electrical slip rings are to electrical signals, a means to pass signals across rotating interfaces, particularly when transmitting large amounts of data.

**Motors**
Moog provides a complete line of brush and brushless DC motors. These high performance motors are developed for a wide variety of applications, including medical, automation, industrial, aerospace and defense.

**Position Sensors**
Moog supplies a variety of resolvers, synchros and rotary variable differential transformers (RVDT) for use in demanding military and aerospace environments. These rugged and reliable devices provide accurate position and velocity feedback as well as commutation, without the structural or temperature restrictions imposed by other feedback devices.

**Actuators**
Moog offers high technology and utility electromechanical rotary and linear actuators for aerospace and industrial applications. These actuators utilize brush and brushless DC motors, planetary gears, modulated smart servo amplifiers, PWM amplifiers, multi-speed resolvers and potentiometers.

**Fluid Rotary Unions**
Moog’s expanded line of fluid rotary unions offer reliable transmission of life support, process, power and control fluids. Fluid rotary unions can be combined with slip rings, fiber optic rotary joints, motors and resolver.

**Air Moving**
Moog now offers tailored airflow products that are designed using off-the-shelf components to provide cost effective solutions. With Moog’s expertise in thermal management and innovative motor technology, there are new ways to solve difficult thermal, airflow, acoustic and efficiency problems.

**Fiber Optics**
Moog expands and enhances its motion capabilities with expertise in fiber optic design. From MEMS-based fiber optic switches to large rotary joints and multiplexers to fiber optic modems, we offer an array of solutions for today’s demanding applications.

**Custom Solutions**
Moog does not stop with just standard models. Over the years, we have learned that many projects require a product that has unique specifications - either designed from scratch or modified from another design. One of Moog’s strong points is providing exactly the right custom solution.

**Recent additions to the product portfolio are Moog Aspen Motion Technologies, Moog Protokraft and Moog Tritech.**