Performance Data

Innovative Solutions with Unique Advantages:
- Premier Customer Service
- Dedicated Field Sales Force
- Large Distribution Network
- Application Engineering Assistance
- ISO 9001:2000 Certification
- Flexible Manufacturing Processes
- State-of-the-Art Technology
- The World’s Largest Manufacturer of Quick Couplings

Other Quick Coupling Products

Hydraulic Quick Couplings
- Various Configurations
- Double Shut-Off
- Single Shut-Off
- Straight Through

Thermoplastic Couplings
- Various Sizes
- Chemical Compatibility
- Push-to-Connect
- Non-Spill Styles

Check Valves
- In-line Styles
- Several Sizes
- Various Configurations
- All Steel Construction

Diagnostic Equipment
- Digital Recording Meters
- Digital Gauges
- Diagnostic Quick Couplings
- Sensors and Accessories

Bulletin 3800-SVL
Parker Hannifin Corporation
Quick Coupling Division
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Minneapolis, MN 55427
Phone: 763-544-7781
Fax: 763-544-3418
www.parker.com/quickcouplings
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Pneumatic Quick Couplings
- Industry Interchanges
- Manual Connect
- Push-to-Connect
- Exhaust Styles

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Diagnostic Equipment
- Digital Recording Meters
- Digital Gauges
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- Sensors and Access
**S Series Swivels**

The pressure balanced design of the S Series swivels ensures that as pressures rise there will not be a significant increase in torque – ensuring optimum performance up to 3,000 PSI. The case hardened, forged bodies offer superior performance and durability in even the toughest applications. Parker’s compact S Series eliminates hose twist, torque and stress caused by the movement of hydraulic components – the leading cause of hose failure resulting in costly leaks and equipment down time.

Over the life of your equipment, adding Parker swivels to hose lines will significantly reduce repair and maintenance costs.

**S Series 90º Swivels – Pressure Balanced Performance in a Compact Design**

- Pressure balanced design – torque does not significantly increase with pressure
- Compact design fits in tight areas
- One piece forged body – no brazed joints
- Case hardened housing improves strength and service life
- Heavy duty design available – Unique three piece design
- Polyurethane u-cup seal
- Ball and needle bearings for greater resistance to side loads
- Repair kits available

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Parker Hydraulic Swivels…for lift trucks, car washes, backhoes, pulp and paper machinery, injection molding equipment, refuse trucks, hose reels, steel mills, palletizers, pressure washers, logging equipment – wherever hoses are subject to on-going movement.
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Performance Data

**10000 2000 3000 4000 5000**

**RPM**

**50 45 40 35 30 25 20 15 10 5 0**

**Pressure (PSI)**

**5 0**

**PS Series Recommended Max. Speed vs. Pressure**

**RPM**

**50 45 40 35 30 25 20 15 10 5 0**

**Pressure (PSI)**

**5 0**

**PS Series Torque vs. Pressure**

**Torque (in-lbs)**

**45 40 35 30 25 20 15 10 5 0**

**Pressure (PSI)**

**5 0**

**PS Series 90° Swivel 150 SUS Oil Flow vs. Pressure Drop**

**Flow in USGPM**

**S Series Swivels**

**S Series**

**Performance Data**

**PS Series Swivels**

**PS Series**

**S Series**

**Hydraulic Quick Couplings**

- Various Configurations
- Double Shut-Off
- Single Shut-Off
- Straight Through

**Thermoplastic Couplings**

- Various Sizes
- Chemical Compatibility
- Push-to-Connect
- Non-Spill Styles

**Check Valves**

- Inline Styles
- Various Sizes
- Various Configurations
- All Steel Construction

**Pneumatic Quick Couplings**

- Industry Interchanges
- Manual Connect
- Push-to-Connect
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- Digital Gauges
- Diagnostic Quick Couplings
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The pressure balanced design of the S Series swivels ensures that as pressures rise there will not be a significant increase in torque – ensuring optimum performance up to 3,000 PSI. The case hardened, forged bodies offer superior performance and durability in even the toughest applications. Parker’s compact S Series eliminates hose twist, torque and stress caused by the movement of hydraulic components – the leading cause of hose failure resulting in costly leaks and equipment down time.

Over the life of your equipment, adding Parker swivels to hose lines will significantly reduce repair and maintenance costs.

**S Series 90º Swivels**

- **30º and in-line styles**
- **Shorter overall length**
- **Full flow design minimizes pressure drop and increases performance**
- **Sealed bearing races help prevent contamination**
- **Induction hardened bearing races extend service life**
- **Wide range of sizes – 1/4” to 2”**
- **Up to 5,000 PSI**
- **Heavy duty design available**
  - Unique three piece design
  - Polyurethane u-cup seal
  - Ball and needle bearings for greater resistance to side loads
- **Repair kits available**

**S Series Swivels**

The PS Series combines the high quality and performance you expect from Parker with one of the most compact designs available today. They eliminate hydraulic hose twist, a leading cause of hose failure which leads to dangerous and expensive fluid leaks and unskilled machine downtime. These features, in-line and 90º PS Series Swivels have a bearing design that reduces damage from side loads and extends the service life of hydraulic components – saving both time and money.

Their innovative design and variety of port and seal options make the new, compact, PS Series ideal for the most demanding, dynamic high pressure applications.

**S Series Swivels**

<table>
<thead>
<tr>
<th>PS Series</th>
<th>PS Series Heavy Duty**</th>
<th>S Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sizes</td>
<td>1/4” to 1”</td>
<td>1-1/4” to 2”</td>
</tr>
<tr>
<td>Rated Pressure</td>
<td>Up to 5000 PSI*</td>
<td>Up to 4000 PSI*</td>
</tr>
<tr>
<td>In-line Style</td>
<td>✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>90º Style</td>
<td>✓ ✓ ✓</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>Temp Range Standard Swivels</td>
<td>-40º to 185º F</td>
<td>-40º to 185º F</td>
</tr>
<tr>
<td>Web Hole Design</td>
<td>Full Flow</td>
<td>Pressure Balanced</td>
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<tr>
<td>Port Options</td>
<td>Male NPTF</td>
<td>Male NPTF</td>
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<tr>
<td></td>
<td>Female NPTF</td>
<td>Female NPTF</td>
</tr>
<tr>
<td></td>
<td>Male JIC 37º</td>
<td>Male JIC 37º</td>
</tr>
<tr>
<td></td>
<td>Male SAE O-ring</td>
<td>Male SAE O-ring</td>
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<tr>
<td></td>
<td>Straight Thd</td>
<td>Straight Thd</td>
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<tr>
<td></td>
<td>Male Seal-Lok</td>
<td>Male Seal-Lok</td>
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<tr>
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<tr>
<td></td>
<td>Epoxy Proplene</td>
<td>U-cup</td>
</tr>
<tr>
<td></td>
<td>Fluorocarbon</td>
<td>EPDM</td>
</tr>
<tr>
<td></td>
<td>Resin</td>
<td>Nitrile (Std)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ethylene Propylene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluorocarbon</td>
</tr>
<tr>
<td></td>
<td>Material Options</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td></td>
<td>Carbon Steel</td>
<td>Carbon Steel</td>
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<tr>
<td></td>
<td>303 Stainless Steel</td>
<td>316 Stainless Steel</td>
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<tr>
<td></td>
<td>316 Stainless Steel</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>Plating Options</td>
<td>Zinc &amp; Chromate (Std)</td>
<td>Zinc &amp; Chromate (Std)</td>
</tr>
<tr>
<td></td>
<td>Nickel</td>
<td>Nickel</td>
</tr>
<tr>
<td></td>
<td>Repair Kits</td>
<td>✓ ✓</td>
</tr>
</tbody>
</table>

*Depends on size and port configuration.

**PS Series heavy duty version not shown.**

**Selection Guide**

---

**PS Series Swivels**

- **Pressure balanced design**
- **torque does not significantly increase with pressure**
- **Compact design fits in tight areas**
- **One piece forged body – no brazed joints**
- **Case hardened housing improves strength and service life**
- **Wide range of sizes – 1/4” to 1”**
- **Up to 3,000 PSI**
- **Compact 90º design**
- **Repair kits available**

Parker Hydraulic Swivels... for lift trucks, car washes, backhoes, pulp and paper machinery, injection molding equipment, refuse trucks, hose reels, steel mills, palletizers, pressure washers, logging equipment – wherever hoses are subject to on-going movement.
The pressure balanced design of the S Series swivels ensures that as pressures rise there will not be a significant increase in torque – ensuring optimum performance up to 3,000 PSI. The case hardened, forged bodies offer superior performance and durability in even the toughest applications.

Parker’s compact S Series eliminates hose twist, torque and stress caused by the movement of hydraulic components – the leading cause of hose failure resulting in costly leaks and equipment downtime.

Over the life of your equipment, adding Parker swivels to hose lines will significantly reduce repair and maintenance costs.

S Series 90º Swivels – Pressure Balanced Performance in a Smaller Design

• Pressure balanced design – torque does not significantly increase with pressure
• Compact design fits in tight areas
• One piece forged body – no brazed joints
• Case hardened housing improves strength and service life
• Wide range of sizes – 1/4” to 2”
• Up to 5,000 PSI
• Heavy duty design available – unique three piece design – polyurethane u-cup seal – ball and needle bearings for greater resistance to side loads
• Repair kits available

The PS Series combines the high quality and performance you expect from Parker with one of the most compact designs available today. They eliminate hydraulic hose twist, a leading cause of those failures which leads to dangerous and expensive breakdowns and unscheduled machine downtime. These features, in one and 90° PS Series Swivels bear a bearing design that reduces damage from side loads and extends the service life of hydraulic components – saving both time and money.

Their innovative design and variety of port and seal options make the new, compact, PS Series ideal for the most demanding, dynamic, high pressure applications.

The New PS Series – Increased Performance in a Smaller Package

• 90° and in-line styles
• Shorter overall length
• Full flow design minimizes pressure drop and increases performance
• Sealed bearing races help prevent contamination
• Induction hardened bearing races extend service life
• Wide range of sizes – 1/4” to 2”
• Up to 5,000 PSI
• Repair kits available

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  - Straight Through
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  - Various Sizes
  - Chemical Compatibility
  - Push-to-Connect
  - Non-Spill Styles
- Check Valves
  - In-line Styles
  - Several Sizes
  - Various Configurations
  - All-Steel Construction
- Pneumatic Quick Couplings
  - Industry Interchanges
  - Manual Connect
  - Push-to-Connect
  - Exhaust Styles

Performance Data

**PS Series Recommended Max. Speed vs. Pressure**

- 10 RPM is the Recommended Maximum Speed for All Sizes at Pressures up to 3,000 PSI

**S Series Recommended Max. Speed vs. Pressure**

**PS Series Swivels**

<table>
<thead>
<tr>
<th>Size</th>
<th>Max. Pressure (PSI)</th>
<th>Max. Speed (RPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>0-10</td>
<td>0-100</td>
</tr>
<tr>
<td>3/8</td>
<td>0-15</td>
<td>0-200</td>
</tr>
<tr>
<td>1/2</td>
<td>0-10</td>
<td>0-200</td>
</tr>
<tr>
<td>3/4</td>
<td>0-15</td>
<td>0-200</td>
</tr>
<tr>
<td>1</td>
<td>0-15</td>
<td>0-200</td>
</tr>
</tbody>
</table>

**PS Series Torque vs. Pressure**

<table>
<thead>
<tr>
<th>Size</th>
<th>Max. Torque (in-lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>0-45</td>
</tr>
<tr>
<td>3/8</td>
<td>0-40</td>
</tr>
<tr>
<td>1/2</td>
<td>0-35</td>
</tr>
<tr>
<td>3/4</td>
<td>0-30</td>
</tr>
<tr>
<td>1</td>
<td>0-25</td>
</tr>
</tbody>
</table>

**PS Series 90° PS Swivel 150 SUS Oil Flow vs. Pressure Drop**

<table>
<thead>
<tr>
<th>Size</th>
<th>Max. Flow (USGPM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>0-1</td>
</tr>
<tr>
<td>3/8</td>
<td>0-0.5</td>
</tr>
<tr>
<td>1/4</td>
<td>0-0.25</td>
</tr>
<tr>
<td>3/4</td>
<td>0-0.2</td>
</tr>
<tr>
<td>1</td>
<td>0-0.1</td>
</tr>
</tbody>
</table>

**S Series Swivels**

- Test Fluid: Oil - 150 SUS vs. Pressure Drop
- 100,000 psi is the Maximum Pressure Range

**Performance Data**

- 10000 2000 3000 4000 5000
- RPM
- Pressure (PSI)
- 1-1/2”
- 2”
- 1”
- 3/4”
- 1/2” 3/8”
- 1/4”
- 50
- 45
- 40
- 35
- 30
- 25
- 20
- 15
- 10
- 5
- 0

- 0 2000 1000 3000 4000 5000
- Torque (in-lbs)
- 1” 3/4”
- 1/2”
- 3/8”
- 1/4”
- 45
- 40
- 35
- 30
- 25
- 20
- 15
- 10
- 5
- 0

- 0 1 02 03 04 05 06 07 08 09 0
- Pressure Drop (psid)
- 1”
- 3/4”
- 1/2”
- 3/8”
- 1/4”
- 0
- 5
- 10
- 15
- 20
- 25
- 30
- 35
- 40

- 0 52 0 10 15 25 45
- Flow in USGPM
- 1/2”
- 3/8”
- 1/4”

- PS and S Series Hydraulic Swivels
- Bulletin 3800-SVL
- August, 2008

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