numatics®

RPG Series

Parallel Grippers

www.numatics.com
# RPG Series

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Gripper Summary of Operation

RPG-Series has true parallel motion that is generated by a double acting piston attached to the pinion mechanism with a linkage that is guided in the body for precise centering.

A. Body
Hardcoat Anodized, PTFE impregnated inside and out. High force to weight ratio.

B. Jaws
Jaws are aluminum bronze alloy to prevent jaw breakage. T-Slot style jaws offers superior load bearing capabilities.

C. Sensing
Proximity switches available for sensing open and closed positions.

How to Order

RPG 35 1 4 C X

Gripper Series
25 35 80

Seal Type
1 = Buna-N

Special Options
X = Standard

Sensing Position
A = Single Position Open
B = Single Position Closed
C = Open and Closed Position Sensing
D = No Sensing

Sensing Type
Standard Cord Set
4 = Prox Switch - PNP (sourcing)
5 = Prox Switch - NPN (sinking)
6 = No Sensing
Prox switches are 4 mm diameter.
RPG Series Dimensions and Technical Specifications

### Load Capacity

<table>
<thead>
<tr>
<th>RPG25</th>
<th>RPG35</th>
<th>RPG80</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2,000</td>
<td>2,750</td>
</tr>
<tr>
<td>B</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>C</td>
<td>1,840</td>
<td>2,340</td>
</tr>
<tr>
<td>D</td>
<td>1,500</td>
<td>1,500</td>
</tr>
<tr>
<td>E</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>F</td>
<td>2,250</td>
<td>3,250</td>
</tr>
<tr>
<td>G</td>
<td>1,750</td>
<td>2,250</td>
</tr>
<tr>
<td>H</td>
<td>0,400</td>
<td>0,470</td>
</tr>
<tr>
<td>J</td>
<td>0,390</td>
<td>0,390</td>
</tr>
<tr>
<td>K</td>
<td>0,870</td>
<td>1,120</td>
</tr>
<tr>
<td>L</td>
<td>0,094</td>
<td>0,094</td>
</tr>
</tbody>
</table>

### Static Condition

<table>
<thead>
<tr>
<th>Load Capacity</th>
<th>RPG25</th>
<th>RPG35</th>
<th>RPG80</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-compression</td>
<td>50 lbs.</td>
<td>60 lbs.</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>T-tension</td>
<td>50 lbs.</td>
<td>60 lbs.</td>
<td>100 lbs.</td>
</tr>
<tr>
<td>Mx</td>
<td>50 in.-lbs.</td>
<td>100 in.-lbs.</td>
<td>200 in.-lbs.</td>
</tr>
<tr>
<td>My</td>
<td>60 in.-lbs.</td>
<td>120 in.-lbs.</td>
<td>250 in.-lbs.</td>
</tr>
<tr>
<td>Mz</td>
<td>50 in.-lbs.</td>
<td>100 in.-lbs.</td>
<td>200 in.-lbs.</td>
</tr>
</tbody>
</table>

### Dynamic Condition

<table>
<thead>
<tr>
<th>Load Capacity</th>
<th>RPG25</th>
<th>RPG35</th>
<th>RPG80</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-compression</td>
<td>15 lbs.</td>
<td>20 lbs.</td>
<td>30 lbs.</td>
</tr>
<tr>
<td>T-tension</td>
<td>15 lbs.</td>
<td>20 lbs.</td>
<td>30 lbs.</td>
</tr>
<tr>
<td>Mx</td>
<td>12 in.-lbs.</td>
<td>25 in.-lbs.</td>
<td>50 in.-lbs.</td>
</tr>
<tr>
<td>My</td>
<td>15 in.-lbs.</td>
<td>30 in.-lbs.</td>
<td>60 in.-lbs.</td>
</tr>
<tr>
<td>Mz</td>
<td>12 in.-lbs.</td>
<td>25 in.-lbs.</td>
<td>50 in.-lbs.</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Load Capacity</th>
<th>RPG25</th>
<th>RPG35</th>
<th>RPG80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grip Force @ 100 PSI</td>
<td>25 lbs</td>
<td>36 lbs</td>
<td>80 lbs</td>
</tr>
<tr>
<td>Stroke</td>
<td>0.5</td>
<td>1.0</td>
<td>1.125</td>
</tr>
<tr>
<td>Repeatability</td>
<td>+/- .001</td>
<td>+/- .001</td>
<td>+/- .001</td>
</tr>
<tr>
<td>Bore Dia.</td>
<td>0.625</td>
<td>0.750</td>
<td>1.000</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>-20° to 180°F</td>
<td>-20° to 180°F</td>
<td>-20° to 180°F</td>
</tr>
<tr>
<td>Max. Actuation Speed</td>
<td>0.12 sec</td>
<td>0.15 sec</td>
<td>0.21 sec</td>
</tr>
<tr>
<td>Displacement</td>
<td>0.10 cu in</td>
<td>0.22 cu in</td>
<td>0.5 cu in</td>
</tr>
<tr>
<td>Maximum Pressure</td>
<td>120 PSI</td>
<td>120 PSI</td>
<td>120 PSI</td>
</tr>
<tr>
<td>Unit Weight</td>
<td>5 oz</td>
<td>8 oz</td>
<td>1.0 lbs</td>
</tr>
</tbody>
</table>

Information subject to change without notice. For ordering information or regarding your local sales office visit [www.numatics.com](http://www.numatics.com).
**RPG Series Gripper**

<table>
<thead>
<tr>
<th>Series</th>
<th>Bracket P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPG</td>
<td>CT-500</td>
</tr>
</tbody>
</table>

**Prox Switch (NPN NO) Flying Lead - PROX-4FL2-N**

- **Electrical Design**
  - 3-Wire DC PNP/NPN
  - Normally Open
  - 10-36 VDC
  - 100 mA
  - Yes (Non-Latching)
- **Operating Voltage**
  - 10-36 VDC
- **Current Rating**
  - 100 mA
- **Short Circuit Protection**
  - Yes
- **Reverse Polarity Protection**
  - Yes
- **Overload Protection**
  - Yes
- **Voltage Drop**
  - < 2.5V
- **Current Consumption**
  - < 15 mA @ 24V
- **Real Sensing Range**
  - 0.8mm ± 10%
- **Switching Frequency**
  - > 2000 Hz
- **Ambient Temperature**
  - -25°C to 70°C
- **Protection**
  - IP 65, III
- **Switch-Point Drift**
  - -10 - 10% OF Sr
- **Hysteresis**
  - 1 - 15% OF Sr
- **Operating Distance**
  - 0 - .65mm
- **Correction Factor**
  - Mild Steel=1, Stainless Steel=.7, Brass=.5, Alum.=.4, Copper=.3
- **Housing Material**
  - Housing: Stainless Steel: POM
- **Function Display Switching Status**
  - Yellow LED
- **Connection**
  - PVC Cable, 2m, 3x .14mm²

**Prox Switch (PNP NO) Flying Lead - PROX-4FL2-P**

- **Electrical Design**
  - 3-Wire DC PNP/NPN
  - Normally Open
  - 10-36 VDC
  - 100 mA
  - Yes (Non-Latching)
- **Operating Voltage**
  - 10-36 VDC
- **Current Rating**
  - 100 mA
- **Short Circuit Protection**
  - Yes
- **Reverse Polarity Protection**
  - Yes
- **Overload Protection**
  - Yes
- **Voltage Drop**
  - < 2.5V
- **Current Consumption**
  - < 15 mA @ 24V
- **Real Sensing Range**
  - 0.8mm ± 10%
- **Switching Frequency**
  - > 2000 Hz
- **Ambient Temperature**
  - -25°C to 70°C
- **Protection**
  - IP 65, III
- **Switch-Point Drift**
  - -10 - 10% OF Sr
- **Hysteresis**
  - 1 - 15% OF Sr
- **Operating Distance**
  - 0 - .65mm
- **Correction Factor**
  - Mild Steel=1, Stainless Steel=.7, Brass=.5, Alum.=.4, Copper=.3
- **Housing Material**
  - Housing: Stainless Steel: POM
- **Function Display Switching Status**
  - Yellow LED
- **Connection**
  - M8 Connector

**Prox Switch (PNP NO), 8 mm connector - PROX-4QDS-P**

- **Electrical Design**
  - 3-Wire DC PNP
  - Normally Open
  - 10-36 VDC
  - 100 mA
  - Yes (Non-Latching)
- **Operating Voltage**
  - 10-36 VDC
- **Current Rating**
  - 100 mA
- **Short Circuit Protection**
  - Yes
- **Reverse Polarity Protection**
  - Yes
- **Overload Protection**
  - Yes
- **Voltage Drop**
  - < 2.5V
- **Current Consumption**
  - < 15 mA @ 24V
- **Real Sensing Range**
  - 0.8mm ± 10%
- **Switching Frequency**
  - > 2000 Hz
- **Ambient Temperature**
  - -25°C to 70°C
- **Protection**
  - IP 65, III
- **Switch-Point Drift**
  - -10 - 10% OF Sr
- **Hysteresis**
  - 1 - 15% OF Sr
- **Operating Distance**
  - 0 - .65mm
- **Correction Factor**
  - Mild Steel=1, Stainless Steel=.7, Brass=.5, Alum.=.4, Copper=.3
- **Housing Material**
  - Housing: Stainless Steel: POM
- **Function Display Switching Status**
  - Red LED (4 x 90°)
- **Connection**
  - M8 Connector
- **Agency Approvals**
  - cULus-Class 2 Source Required
  - Mounting Clamp
Quick Disconnect Cables

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Type</th>
<th>Operating Voltage</th>
<th>Current Rating</th>
<th>Cable Material</th>
<th>Protection</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXCST</td>
<td>Straight 5 m Cable (3 x 26 Gauge wire)</td>
<td>60 AC/75 DC</td>
<td>3 A</td>
<td>PUR</td>
<td>IP 68, III</td>
<td>M8</td>
</tr>
<tr>
<td>PXC90</td>
<td>90° 5 m Cable (3 x 26 Gauge wire)</td>
<td>60 AC/75 DC</td>
<td>3 A</td>
<td>PUR</td>
<td>IP 68, III</td>
<td>M8</td>
</tr>
</tbody>
</table>

![Diagram of Quick Disconnect Cables]

- **PXCST**
  - Wiring: BLUE (-), BROWN (+), BLACK (OUTPUT)
  - 26 GAUGE WIRES
  - 60 AC/75 DC
  - 3 A
  - PUR
  - IP 68, III
  - M8

- **PXC90**
  - Wiring: BLUE (-), BROWN (+), BLACK (OUTPUT)
  - 26 GAUGE WIRES
  - 60 AC/75 DC
  - 3 A
  - PUR
  - IP 68, III
  - M8