Clippard’s line of Delrin® head stainless steel cylinders offer all of the advantages of Clippard’s high quality, reliable stainless steel cylinders, with the added benefit of corrosion resistance. These cylinders are ideal for applications where equipment cleanliness is critical, since they can be put to work in harsh environments requiring frequent use of hot water and chemicals.

Clippard corrosion resistant cylinders are available in bore sizes ranging from 5/8” to 1 1/2”. Standard stroke lengths range from 1/2” to 6”. The cylinder tubes and rods are made of stainless steel. The rods are ground, polished, and roller burnished. Buna-N® seals are standard with a Viton® option available for compatibility. A magnetic piston is also optional.

These lightweight cylinders have a temperature range from 32˚ F to 180˚ F, and have a pressure rating of 150 psig (air). A variety of mounting styles are available.

Delrin® and Viton® are registered trademarks of DuPont
Features

- Delrin® heads with a positive double seal
- Available with magnetic pistons
- 303 stainless steel ground, polished and roller burnished piston rods
- Precision rolled construction for a solid leakproof cylinder
- Buna-N seals
  (Viton® optional for compatibility only)
- 304 stainless steel tube
- Pressure Range 0 to 150 psig
- Temperature range: 32° F to 180° F
- Optional stainless steel mounting nuts
- Aluminum alloy pistons, optional Delrin® pistons available; consult factory

Delrin® is a registered trademark of Du Pont
# 5/8" Bore

## CR-SDD-10-❑-❑
- **Mount:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4
- **Options:** M, V, N, P2, P3, P4, P5, P6, P7, P8
- ** dia.**
- **#10-32 thd.**
- **7/16-20 thd.**
- **Options:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4
- **Options:** M, V, N
- ** dia.**
- **#10-32 thd.**
- **7/16-20 thd.**

## CR-SDR-10-❑-❑
- **Mount:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4
- **Options:** M, V, N, P2, P3, P4, P5, P6, P7, P8
- ** dia.**
- **#10-32 thd.**
- **7/16-20 thd.**

## CR-UDR-10-❑-❑
- **Mount:** Universal
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4
- **Options:** M, V, N, P2, P3, P4, P5, P6, P7, P8
- ** dia.**
- **#10-32 thd.**
- **7/16-20 thd.**

## Stainless Steel Mounting
- **Foot Bracket**
  - **Model Number:** FB-0892-SS
  - **Nut**
  - **Model Number:** N07-20-SS
  - **Max. Torque in lbs.:** 4.0

---

Documents Provided by Coast Pneumatics
3/4" Bore

**CR-SDD-12-□-□**
- Mount: Stud
- Type: Double Acting
- Standard Stroke Lengths: 1, 2, 3, 4, 5, 6
- Options: M, V, N, P2, P3, P4, P5, P6, P7, P8
- Furnished without nut(s).
- For magnetic option add .312

**CR-SDR-12-□-□**
- Mount: Stud
- Type: Double Acting
- Standard Stroke Lengths: 1/2, 1, 1-1/2, 2, 3, 4, 5, 6
- Options: M, V, N, P6, P7, P8
- Furnished without nut(s).
- For magnetic option add .312

**CR-UDR-12-□-□**
- Mount: Stud
- Type: Double Acting
- Standard Stroke Lengths: 1/2, 1, 1-1/2, 2, 3, 4, 5, 6, 8, 10, 12
- Options: M, V, N, P2, P3, P4, P5, P6, P7, P8
- Furnished without nut(s).
- For magnetic option add .312

**Stainless Steel Mounting**
- Foot Bracket
  - Model Number: FB-1791-SS
- Nut
  - Model Number: N10-18-SS
  - Max. Torque in lbs.: 12

Documents Provided by Coast Pneumatics
1 1/16" Bore

**CR-SDD-17-□-□**

**Mount:** Stud  
**Type:** Double Acting  
**Standard Stroke Lengths:** 1, 2, 3, 4, 5, 6  
**Options:** M, V, N, P6, P7, P8  

Furnished without nuts.  
For magnetic option add .312

**CR-SDR-17-□-□**

**Mount:** Stud  
**Type:** Double Acting  
**Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4, 5, 6  
**Options:** M, V, N  

Furnished without nuts.  
For magnetic option add .312

**CR-UDR-17-□-□**

**Mount:** Stud  
**Type:** Double Acting  
**Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4, 5, 6, 8, 10, 12  
**Options:** M, V, N, P2, P3, P4, P5, P6, P7, P8  

Furnished without nuts.  
For magnetic option add .312

---

**Stainless Steel Mounting**

**Foot Bracket**  
Model Number: FB-1791-SS  

**Nut**  
Model Number: N10-18-SS  
Max. Torque in lbs.: 12

Documents Provided by Coast Pneumatics
**1 1/4” Bore**

**CR-SDD-20-☐-☐**

- **Mount:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1, 2, 3, 4, 5, 6
- **Options:** M, V, N, P6, P7, PB

Stainless Steel Mounting

- **Foot Bracket**
  - Model Number: FB-2491-SS
- **Nut**
  - Model Number: N12-16-SS
- **Max. Torque in lbs.:** 20

Furnished without nut(s).

For magnetic option add .312

---

**CR-SDR-20-☐-☐**

- **Mount:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4, 5, 6
- **Options:** M, V, N

Stainless Steel Mounting

- **Foot Bracket**
  - Model Number: FB-2491-SS
- **Nut**
  - Model Number: N12-16-SS
- **Max. Torque in lbs.:** 20

Furnished without nut(s).

For magnetic option add .312

---

**CR-UDR-20-☐-☐**

- **Mount:** Universal
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4, 5, 6, 8, 10, 12
- **Options:** M, V, N, P2, P3, P4, P5, P6, P7, PB

Stainless Steel Mounting

- **Foot Bracket**
  - Model Number: FB-2491-SS
- **Nut**
  - Model Number: N12-16-SS
- **Max. Torque in lbs.:** 20

Furnished without nut(s).

For magnetic option add .312

---

Documents Provided by Coast Pneumatics
1 1/2” Bore

**CR-SDD-24-□-□**
- **Mount:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1, 2, 3, 4, 5, 6, 8, 10, 12
- **Options:** M, V, N, P6, P7, P8
- **Dia.:** .750
- **7/16-20 thd. both ends
- **1-14 thd. both ends
- **1/8-27 NPT both ports
- **4.500 + stroke**
- **.312 dia.**

**CR-SDR-24-□-□**
- **Mount:** Stud
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4, 5, 6, 8, 10, 12
- **Options:** M, V, N
- **Dia.:** .750
- **7/16-20 thd. both ends
- **1-14 thd. both ends
- **1/8-27 NPT both ports
- **3.437 + stroke**
- **.375 dia.**

**CR-UDR-24-□-□**
- **Mount:** Universal
- **Type:** Double Acting
- **Standard Stroke Lengths:** 1/2, 1, 1-1/2, 2, 3, 4, 5, 6, 8, 10, 12
- **Options:** M, V, N, P2, P3, P4, P5, P6, P7, P8
- **Dia.:** .750
- **7/16-20 thd. both ends
- **1-14 thd. both ends
- **1/8-27 NPT both ports
- **4.500 + stroke**
- **.375 dia.**

**Stainless Steel Mounting**

- **Foot Bracket**
  - **Model Number:** FB-2891-SS
- **Nut**
  - **Model Number:** N16-14-SS
  - **Max. Torque in lbs.:** 30

**Furnished without nut(s).**

For magnetic option add .312

**Documents Provided by Coast Pneumatics**
**POSITION SENSORS**

**Hall Effect Sensor**

<table>
<thead>
<tr>
<th>Output type</th>
<th>Sinking (open collector output)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage (Vin)</td>
<td>5 to 28 VDC</td>
</tr>
<tr>
<td>Operation temp.</td>
<td>0 to 185°F</td>
</tr>
<tr>
<td>Input current (Iin)</td>
<td>25 mA maximum</td>
</tr>
<tr>
<td>Output voltage drop</td>
<td>4 VDC maximum</td>
</tr>
<tr>
<td>Output current (Iout)</td>
<td>0.3 Vin, 300 mA maximum</td>
</tr>
<tr>
<td>Power dissipation</td>
<td>300 mW maximum</td>
</tr>
<tr>
<td>Lead Wire</td>
<td>22 ga. x 4 ft. also avail. in 12 ft. length HS-9901-12</td>
</tr>
<tr>
<td>Circuit protection</td>
<td>Reverse polarity protected, transient voltage protected and false pulse protected.</td>
</tr>
</tbody>
</table>

**Hall Effect Wiring Diagram**

![Hall Effect Wiring Diagram](image)

**Magnetic Reed Switch**

<table>
<thead>
<tr>
<th>Output type</th>
<th>Sinking (open collector output)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage (Vin)</td>
<td>5 to 28 VDC</td>
</tr>
<tr>
<td>Operation temp.</td>
<td>0 to 185°F</td>
</tr>
<tr>
<td>Input current (Iin)</td>
<td>25 mA maximum</td>
</tr>
<tr>
<td>Output voltage drop</td>
<td>4 VDC maximum</td>
</tr>
<tr>
<td>Output current (Iout)</td>
<td>0.3 Vin, 300 mA maximum</td>
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<tr>
<td>Power dissipation</td>
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</tr>
<tr>
<td>Circuit protection</td>
<td>Reverse polarity protected, transient voltage protected and false pulse protected.</td>
</tr>
</tbody>
</table>

**Circuit Diagram**

![Circuit Diagram](image)

**Universal Clamps**

Clippard’s stainless steel clamps are designed to be used with the Hall Effect and the Reed switch. All clamps should be ordered based upon the size of the cylinder on which it will be mounted. The part numbers show the bore size using the numerical code. Each clamp is 3/8” wide stainless steel, and is equipped with a locking screw with #5-40 threads.
1 1/16" BORE AFO COMPACT CYLINDER

**AF-XXXX-17-0**

- **Mounting Holes**
  - #8-32 thd.
  - .218 deep (4) pcs
  - .500 rod dia.
  - .218 typ.

- **Spring Return**
  - AF-xSR-17-x

- **Spring Extend**
  - AF-xRR-17-x

- **Double Acting**
  - Single Rod
  - AF-xDR-17-x
  - Double Rod
  - AF-xDD-17-x

- **Strokes**
  - 1/4" - 1"
  - 1 1/8" - 2"
  - 2 1/8" - 3"
  - 3 1/8" - 4"

- **Spring Return**
  - Compressed
  - At Rest
  - 11.500 lbs.
  - 5.500 lbs.

- **Spring Extend**
  - Compressed
  - At Rest
  - 11.500 lbs.
  - 5.500 lbs.

See page 71 for Air Force One numbering system

Five mounting styles give you versatility and fast, easy installation.

Mounting Styles

- Bottom Mount
  - AF-Bxx-17-x
- Universal Mount
  - AF-Uxx-17-x
- Front Mount
  - AF-Fxx-17-x
- Rear Mount
  - AF-Rxx-17-x
- Thread Mount
  - AF-Txx-17-x

Cylinder Lengths

<table>
<thead>
<tr>
<th>&quot;L&quot;</th>
<th>Stroke</th>
<th>Spring Return</th>
<th>Spring Extend</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>1/4&quot; - 1&quot;</td>
<td>7/8</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>1 1/8&quot; - 2&quot;</td>
<td>1 1/2</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>2 1/8&quot; - 3&quot;</td>
<td>2 1/8</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>3 1/8&quot; - 4&quot;</td>
<td>2 3/4</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>1/4&quot; - 1&quot;</td>
<td>1 3/8</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>1 1/8&quot; - 2&quot;</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>2 1/8&quot; - 3&quot;</td>
<td>2 5/8</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>3 1/8&quot; - 4&quot;</td>
<td>3 1/4</td>
<td></td>
</tr>
</tbody>
</table>

Overall length of body is stroke plus "L"
1 1/2” BORE AFO COMPACT CYLINDER

AF-xxxx-24-xx

- 3/8-24 thd. 1/2 deep
- 1/8 NPT typ.
- .625 rod dia.
- 234 typ.
- 2.250 dia.
- .500 flats
- .500 typ.

Mounting holes for #10 socket head cap screw (4) placed equally spaced on 2.187 dia. bolt circle

See page 71 for Air Force One numbering system

Mounting Styles

Bottom Mount
AF-Bxx-24-x

Universal Mount
AF-Uxx-24-x

Front Mount
AF-Fxx-24-x

Rear Mount
AF-Rxx-24-x

Thread Mount
AF-Txx-24-x

Cylinder Lengths

<table>
<thead>
<tr>
<th>“L”</th>
<th>Stroke</th>
<th>Spring Return</th>
<th>Spring Extend</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>1/4” - 1”</td>
<td>7/8</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>1 1/8” - 2”</td>
<td>1 1/2</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>2 1/8” - 3”</td>
<td>2 1/8</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>3 1/8” - 4”</td>
<td>2 3/4</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>1/4” - 1”</td>
<td>1 3/8</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>1 1/8” - 2”</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>2 1/8” - 3”</td>
<td>2 5/8</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>3 1/8” - 4”</td>
<td>3 1/4</td>
<td></td>
</tr>
</tbody>
</table>

Overall length of body is stroke plus “L”

- Spring Return
  - AF-xSR-24-x
  - 13 lbs., 7,500 lbs.
- Spring Extend
  - AF-xRR-24-x
  - 13 lbs., 7,500 lbs.

Documents Provided by Coast Pneumatics