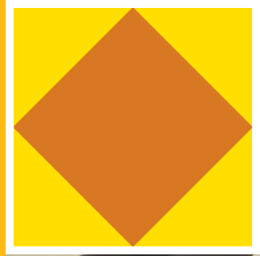


# PNEUMATICS & HYDRAULICS



## Air & Hydraulic Pressure Gauges

959



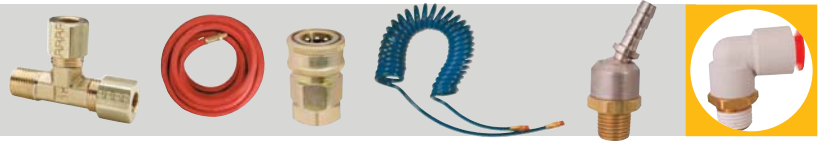
## Air Cylinders & Accessories

945 - 950



## Air Hoses & Hose Accessories

941 - 944



## Air Products

951 - 957



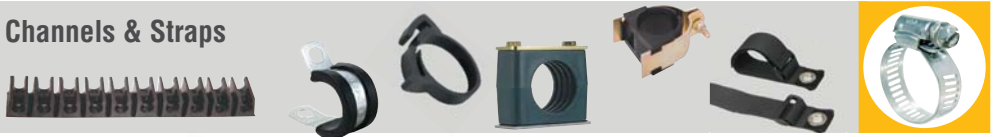
## Air Tools & Accessories

937 - 940



## Hose & Pipe Clamps, Channels & Straps

927 - 936



## Hose Protection

924 - 926



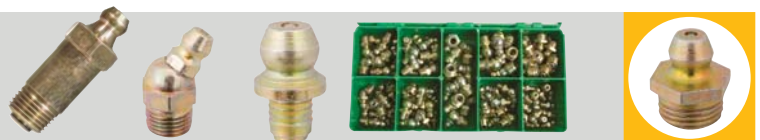
## Hydraulic Cylinders & Accessories

960 - 961



## Hydraulic Grease Fittings

958



## Level Indicators & Breather Caps

962 - 963



## Manifolds

965



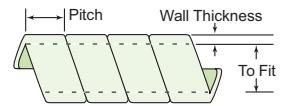
## O-Rings

964





**SGX Series**  
**TECTORGUARD™ Heavy & Medium Duty Hose Guards**



**Specifications:**

- Material: High-Density Polyethylene
- Color: Refer to Chart

**Features:**

- TECTORGUARD™ protects against cuts, abrasions, crushing and ultraviolet rays that regularly destroy your expensive hoses
- Easy and safe to install either before or after the hose assembly is mounted
- The heavy-duty, double-beveled design on the inside and outside edge prevents snagging or cutting during installation

**Heavy Duty - Heavy Abrasion**

| Black Item No. | Yellow Item No. | To Fit |       | Wall Thickness |       | Pitch  |     | Roll Length |   |
|----------------|-----------------|--------|-------|----------------|-------|--------|-----|-------------|---|
|                |                 | In     | In    | mm             | mm    | In     | mm  | Ft          | m |
| SGX16HA        | -               | 0.492  | 0.069 | 1.75           | 0.490 | 12.45  | 100 | 30.48       |   |
| SGX20HA        | -               | 0.668  | 0.086 | 2.18           | 0.610 | 15.49  | 100 | 30.48       |   |
| SGX25HA        | SGX25HB         | 0.750  | 0.110 | 2.79           | 0.950 | 24.13  | 100 | 30.48       |   |
| SGX32HA        | SGX32HB         | 1.014  | 0.118 | 2.99           | 1.040 | 26.42  | 100 | 30.48       |   |
| SGX39HA        | SGX39HB         | 1.250  | 0.132 | 3.35           | 1.350 | 34.29  | 100 | 30.48       |   |
| SGX45HA        | SGX45HB         | 1.500  | 0.140 | 3.55           | 1.500 | 38.10  | 100 | 30.48       |   |
| SGX50HA        | -               | 1.600  | 0.150 | 3.81           | 1.530 | 38.68  | 50  | 15.24       |   |
| SGX59HA        | -               | 2.000  | 0.160 | 4.06           | 1.600 | 40.64  | 100 | 30.48       |   |
| SGX75HA        | SGX75HB         | 2.457  | 0.209 | 5.30           | 1.610 | 40.89  | 50  | 15.24       |   |
| SGX90HA        | SGX90HC         | 3.064  | 0.218 | 5.53           | 1.970 | 50.04  | 35  | 10.66       |   |
| SGX102HA       | SGX102HB        | 3.500  | 0.250 | 6.35           | 1.950 | 49.53  | 25  | 7.62        |   |
| SGX114HA       | SGX114HB        | 4.000  | 0.250 | 6.35           | 2.100 | 53.34  | 20  | 6.09        |   |
| SGX165HA       | SGX165HB        | 6.000  | 0.250 | 6.35           | 4.000 | 101.60 | 15  | 4.57        |   |

**Medium Duty - Flexible with Medium Abrasion**

| Item No. | To Fit |       | Wall Thickness |       | Pitch |       | Color | Roll Length |   |
|----------|--------|-------|----------------|-------|-------|-------|-------|-------------|---|
|          | In     | In    | mm             | mm    | In    | mm    |       | Ft          | m |
| SGX16MA  | 0.492  | 0.045 | 1.14           | 0.490 | 12.45 | Black | 100   | 30.48       |   |
| SGX20MA  | 0.668  | 0.052 | 1.32           | 0.610 | 15.49 | Black | 100   | 30.48       |   |
| SGX25MA  | 0.750  | 0.062 | 1.57           | 0.800 | 20.32 | Black | 100   | 30.48       |   |
| SGX32MA  | 1.014  | 0.071 | 1.80           | 1.040 | 26.42 | Black | 100   | 30.48       |   |
| SGX39MA  | 1.250  | 0.080 | 2.03           | 1.350 | 34.29 | Black | 100   | 30.48       |   |
| SGX50MA  | 1.600  | 0.090 | 2.28           | 1.530 | 38.66 | Black | 50    | 15.24       |   |
| SGX75MA  | 2.457  | 0.125 | 3.17           | 1.610 | 40.89 | Black | 50    | 15.24       |   |
| SGX90MA  | 3.064  | 0.131 | 3.32           | 1.970 | 50.04 | Black | 35    | 10.66       |   |

**SGX FRAS Series**  
**SPIRALGUARD™ Flame Retardant Antistatic Series**

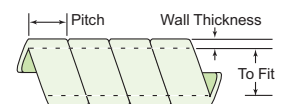
**Specifications:**

- Material: High-Density Polyethylene
- Color: Dark Gray



**Features:**

- Exceptional anti-crushing performance
- High abrasion resistance
- Good resistance to UV rays
- Reduces risk of industrial injury
- Suitable for wrapping single or multiple hoses
- Proven in arduous conditions
- Suitable for the protection of most types of hydraulic, pneumatic and industrial hose assemblies across a wide range of industries: mining, quarrying, drilling, tunnelling, forestry, welding, manufacturing, agricultural, automotive, marine sub-sea, offshore oil and gas construction



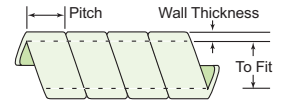
**Approvals and Certifications:**

- Tested and approved in accordance with the former British Coal specification 182:1986, satisfying the requirements of the non-metallics scheme for use underground
- Tested and approved by Mine Safety Laboratory, Department of Mineral Resources NSW to AS2660 FRAS Compliance – 1991 International Standard: ISO6805
- Patented product US6286557B1

| Item No.    | To Fit |       | Wall Thickness |       | Pitch |       | Roll Length |   |
|-------------|--------|-------|----------------|-------|-------|-------|-------------|---|
|             | In     | In    | mm             | mm    | In    | mm    | Ft          | m |
| SGX16FRASA  | 0.472  | 0.089 | 2.25           | 0.510 | 12.95 | 65.62 | 20          |   |
| SGX20FRASA  | 0.591  | 0.098 | 2.50           | 0.610 | 15.49 | 65.62 | 20          |   |
| SGX25FRASA  | 0.748  | 0.108 | 2.75           | 0.750 | 19.05 | 65.62 | 20          |   |
| SGX32FRASA  | 0.906  | 0.138 | 3.50           | 0.900 | 22.86 | 65.62 | 20          |   |
| SGX40FRASA  | 1.201  | 0.167 | 4.25           | 1.140 | 28.96 | 65.62 | 20          |   |
| SGX50FRASA  | 1.496  | 0.167 | 4.25           | 1.420 | 36.07 | 65.62 | 20          |   |
| SGX63FRASA  | 1.850  | 0.217 | 5.50           | 1.550 | 39.37 | 65.62 | 20          |   |
| SGX75FRASA  | 2.402  | 0.236 | 6.00           | 1.730 | 43.94 | 65.62 | 20          |   |
| SGX90FRASA  | 2.776  | 0.276 | 7.00           | 2.000 | 50.80 | 65.62 | 20          |   |
| SGX110FRASA | 3.307  | 0.295 | 7.50           | 2.200 | 55.88 | 32.81 | 10          |   |



**TFG Series**  
Lightweight & Flexible



**Specifications:**

- Material: Cellulose Acetate
- Color: Black

**Features:**

- Unique profile will cover much more hose surface during a bending process than any other wrap
- The inner core assures flexibility while the external profile assures resistance to abrasion and to electrical conductivity
- Lightweight and flexible
- Crush resistant
- Excellent memory

| Item No. | To Fit |       | Wall Thickness |       | Pitch |    | Roll Length |   |
|----------|--------|-------|----------------|-------|-------|----|-------------|---|
|          | In     | In    | mm             | mm    | In    | mm | ft          | m |
| TFG08HA  | 0.250  | 0.050 | 1.27           | 0.250 | 6.35  | 40 | 12.19       |   |
| TFG12HA  | 0.370  | 0.050 | 1.27           | 0.250 | 6.35  | 40 | 12.19       |   |
| TFG16HA  | 0.500  | 0.070 | 1.78           | 0.500 | 12.70 | 40 | 12.19       |   |
| TFG20HA  | 0.620  | 0.070 | 1.78           | 0.500 | 12.70 | 40 | 12.19       |   |
| TFG25HA  | 0.750  | 0.090 | 2.29           | 0.620 | 15.74 | 40 | 12.19       |   |
| TFG32HA  | 1.000  | 0.090 | 2.29           | 0.620 | 15.74 | 40 | 12.19       |   |
| TFG35HA  | 1.100  | 0.090 | 2.29           | 1.000 | 25.40 | 40 | 12.19       |   |
| TFG39HA  | 1.250  | 0.090 | 2.29           | 1.000 | 25.40 | 40 | 12.19       |   |
| TFG44HA  | 1.380  | 0.090 | 2.29           | 1.000 | 25.40 | 40 | 12.19       |   |

| Item No. | To Fit |       | Wall Thickness |       | Pitch |    | Roll Length |   |
|----------|--------|-------|----------------|-------|-------|----|-------------|---|
|          | In     | In    | mm             | mm    | In    | mm | ft          | m |
| TFG45HA  | 1.500  | 0.090 | 2.29           | 1.000 | 25.40 | 40 | 12.19       |   |
| TFG50HA  | 1.600  | 0.090 | 2.29           | 1.000 | 25.40 | 40 | 12.19       |   |
| TFG56HA  | 1.750  | 0.110 | 2.79           | 1.400 | 35.56 | 40 | 12.19       |   |
| TFG59HA  | 2.000  | 0.130 | 3.30           | 1.400 | 35.56 | 40 | 12.19       |   |
| TFG82HA  | 2.560  | 0.150 | 3.81           | 1.400 | 35.56 | 25 | 7.62        |   |
| TFG90HA  | 3.000  | 0.150 | 3.81           | 1.400 | 35.56 | 25 | 7.62        |   |
| TFG95HA  | 3.150  | 0.150 | 3.81           | 1.400 | 35.56 | 25 | 7.62        |   |
| TFG102HA | 3.500  | 0.150 | 3.81           | 1.000 | 25.40 | 25 | 7.62        |   |
| TFG114HA | 4.000  | 0.150 | 3.81           | 1.260 | 32.00 | 25 | 7.62        |   |

**THP Series**  
Point of Contact Protectors

**Specifications:**

- Material: PVC
- Color: Refer to Chart

**Features:**

- Protects hose and wire abrasion caused by points of contact wear with frames or other abrasive surfaces
- Material is very durable and has a high wear factor
- Molded in grooves prevent the slipping and wear of cable ties
- Easy to assemble and remove
- Typically used on hydraulic hoses, fuel and oil lines, brake systems, wiring harnesses and battery cables
- The THPSD4B is to be used on 1/2" hoses and smaller since it is designed with a smaller radius



| Item No. | Color  |        |        | Length In | Pack Qty. | Bulk Pack Qty. |
|----------|--------|--------|--------|-----------|-----------|----------------|
|          | Black  | Orange | Yellow |           |           |                |
| THPSD4B  | -      | -      | -      | 4         | 1         | 50             |
| THP4B    | THP4A  | THP4C  |        | 4         | 1         | 50             |
| THP6B    | THP6A  | THP6C  |        | 6         | 1         | 50             |
| THP8B    | THP8A  | THP8C  |        | 8         | 1         | 50             |
| THP10B   | THP10A | THP10C |        | 10        | 1         | 10             |
| THP12B   | THP12A | THP12C |        | 12        | 1         | 10             |

**Each THP Assembly Requires 3 Ties**



**Specifications:**

- Material: UL Approved 94V-2 Nylon 6/6
- Color: Refer to Chart
- Service Temperature: -40°F to 185°F (-40°C to 85°C)

**Features:**

- Complies with MS-3367 and MIL-S-23190E
- RoHS Compliant

| Item No. | Color   |        |        |        |        |        |        |
|----------|---------|--------|--------|--------|--------|--------|--------|
|          | Natural | Black  | Green  | Red    | Yellow | Blue   | Silver |
| CT025A   | CT025B  | CT025G | CT025K | CT025Y | CT025L | CT025S |        |

| Item No. | Length |     | Width |     | Maximum Bundle Dia. |    | Minimum Tensile Strength |     | Classification | Bulk Pack Qty. |
|----------|--------|-----|-------|-----|---------------------|----|--------------------------|-----|----------------|----------------|
|          | In     | mm  | In    | mm  | In                  | mm | Lbs                      | kgs |                |                |
| CT025A   | 11-7/8 | 300 | 0.189 | 4.8 | 3.350               | 85 | 50                       | 222 | Standard       | 100            |

**TQS Series**  
**Quick Assemble Hose Sleeves**



**Specifications:**

- Material: Nylon with a Urethane Coating on one Side
- Color: Black

| Item No. | Bundle O.D. |        | Flat Width |        | Roll Length |       |
|----------|-------------|--------|------------|--------|-------------|-------|
|          | In          | mm     | In         | mm     | Ft          | m     |
| TQS2A    | 2           | 50.80  | 7.750      | 196.85 | 150         | 45.72 |
| TQS3A    | 3           | 76.20  | 10.900     | 276.86 | 150         | 45.72 |
| TQS4A    | 4           | 101.60 | 14.000     | 355.60 | 150         | 45.72 |
| TQS5A    | 5           | 127.00 | 17.250     | 438.15 | 150         | 45.72 |

**Features:**

- Excellent for use in the field or for applications where the winding of spiral-formed products is very difficult
- Resistant to heat, ozone and abrasion
- Special innovative Python® hook-and-loop design closure promotes a quick and easy bundling of hose groups
- Close quarter operator protection from hose failures
- Easy assembly and removal
- Containment of hoses and tighter bundling
- Professional appearance – enhances the aesthetics of your equipment

| Item No. | Bundle O.D. |        | Flat Width |        | Roll Length |       |
|----------|-------------|--------|------------|--------|-------------|-------|
|          | In          | mm     | In         | mm     | Ft          | m     |
| TQS6A    | 6           | 152.40 | 20.380     | 517.65 | 150         | 45.72 |
| TQS7A    | 7           | 177.80 | 23.500     | 596.90 | 150         | 45.72 |
| TQS8A    | 8           | 203.20 | 26.620     | 676.15 | 150         | 45.72 |

**TSL Series**  
**Mining Safety Approved Sleeves**



**Approvals and Certifications:**

- M.S.H.A. Approval #M.S.H.A. IC-234/0
- Meets FED-STD-191 test method 5309 for abrasion resistance
- Meets ASTM D6770 for abrasion resistance of textile webbing

**Specifications:**

- Material: Polyamide 6 Yarn
- Color: Black

**Features:**

- Protects people, environment and machinery against any possible hydraulic hose oil leakage or spills
- Very dense, yet not bulky
- Optimum UV and abrasion protection
- High degree of burst resistance
- Effective in reducing the concentrated stream of pinhole leaks
- Good leakage containment

| Item No. | Min Round I.D. |       | Max Round |       | External Flattened Width |       | Roll Length |       |
|----------|----------------|-------|-----------|-------|--------------------------|-------|-------------|-------|
|          | In             | mm    | In        | mm    | In                       | mm    | Ft          | m     |
| TSL067A  | 0.680          | 17.27 | 0.840     | 21.34 | 1.180                    | 29.97 | 300         | 91.44 |
| TSL079A  | 0.790          | 20.06 | 0.950     | 24.13 | 1.340                    | 34.03 | 300         | 91.44 |
| TSL091A  | 0.910          | 23.11 | 1.030     | 26.16 | 1.540                    | 39.11 | 300         | 91.44 |
| TSL098A  | 0.980          | 24.89 | 1.100     | 27.94 | 1.650                    | 41.91 | 300         | 91.44 |
| TSL106A  | 1.060          | 26.92 | 1.180     | 29.97 | 1.770                    | 44.95 | 300         | 91.44 |
| TSL122A  | 1.220          | 30.98 | 1.340     | 34.04 | 2.050                    | 52.07 | 300         | 91.44 |
| TSL142A  | 1.420          | 36.06 | 1.540     | 39.12 | 2.390                    | 60.71 | 300         | 91.44 |
| TSL157A  | 1.570          | 39.87 | 1.730     | 43.94 | 2.600                    | 66.04 | 300         | 91.44 |

| Item No. | Min Round I.D. |        | Max Round |        | External Flattened Width |        | Roll Length |       |
|----------|----------------|--------|-----------|--------|--------------------------|--------|-------------|-------|
|          | In             | mm     | In        | mm     | In                       | mm     | Ft          | m     |
| TSL173A  | 1.730          | 43.94  | 1.890     | 48.01  | 2.830                    | 71.88  | 300         | 91.44 |
| TSL185A  | 1.850          | 46.99  | 2.010     | 51.05  | 3.030                    | 76.96  | 300         | 91.44 |
| TSL217A  | 2.190          | 55.63  | 2.350     | 59.69  | 3.500                    | 88.90  | 300         | 91.44 |
| TSL236A  | 2.380          | 60.45  | 2.540     | 64.52  | 3.820                    | 97.02  | 300         | 91.44 |
| TSL260A  | 2.620          | 66.54  | 2.780     | 70.61  | 4.210                    | 106.93 | 300         | 91.44 |
| TSL287A  | 2.880          | 73.15  | 3.040     | 77.22  | 4.650                    | 118.11 | 300         | 91.44 |
| TSL366A  | 3.660          | 92.96  | 3.820     | 97.03  | 5.870                    | 149.09 | 300         | 91.44 |
| TSL441A  | 4.410          | 112.01 | 4.570     | 116.08 | 7.050                    | 179.07 | 300         | 91.44 |

**FPS Series**  
**Fire Protection Sleeve**



| Item No. | I.D.  | Roll Length Ft |
|----------|-------|----------------|
| FPS1/4A  | 1/4"  | 50             |
| FPS5/16A | 5/16" | 50             |
| FPS3/8A  | 3/8"  | 50             |
| FPS1/2A  | 1/2"  | 50             |
| FPS5/8A  | 5/8"  | 50             |
| FPS3/4A  | 3/4"  | 50             |
| FPS7/8A  | 7/8"  | 50             |
| FPS1A    | 1"    | 50             |

| Item No.  | I.D.   | Roll Length Ft |
|-----------|--------|----------------|
| FPS1-1/4A | 1-1/4" | 50             |
| FPS1-1/2A | 1-1/2" | 50             |
| FPS2A     | 2"     | 50             |
| FPS2-1/2A | 2-1/2" | 50             |
| FPS3A     | 3"     | 50             |
| FPS3-1/2A | 3-1/2" | 50             |
| FPS4A     | 4"     | 50             |

**Specifications:**

- Material: Outer Sleeve - Proprietary Iron Oxide Red Silicone Rubber  
Inner Sleeve - Knitted high bulk glass fiber

**Features:**

- Has excellent elasticity great for protecting or bundling hoses, tubes, and cables in a variety of hostile environments
- The insulation properties provide close quartered personnel with effective protection against burns from hot hoses and reduce heat energy loss
- Withstands intense radiant heat and flame
  - Continuous exposure up to 500°F(260°C)
  - 15-20 minutes up to 2000°F(1090°C)
  - 15-30 seconds up to 3000°F(1650°C)
- Immediately sheds splash
  - Withstands repeated exposures to molten steel, molten aluminum and molten glass up to 3000°F(1650°C)



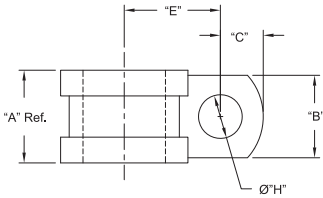
**SPN/SPNW**  
Steel Clamp with Rubber Cushion



Provides electrical insulation and vibration absorption. Ideal for long-life applications.

**.500" Width**

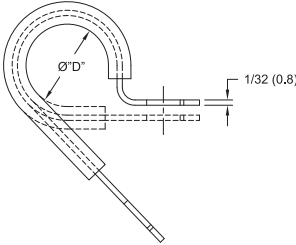
- Material: Cold Rolled Steel, Zinc Electroplated
- Cushion: TPE
- Color: Steel with Black Cushion



| Item No. | "D" Holding Ø | "E" Ref.    | Ø"H" Hole  | "A" Width Ref. | "B"        | "C"       | Pack Qty. | Bulk Pack Qty. |
|----------|---------------|-------------|------------|----------------|------------|-----------|-----------|----------------|
| SPN-3    | 3/16 (4.8)    | .50 (12.7)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-4    | 1/4 (6.4)     | .53 (13.5)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-5    | 5/16 (7.9)    | .56 (14.2)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-6    | 3/8 (9.5)     | .59 (15)    | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-7    | 7/16 (11.1)   | .62 (15.7)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-8    | 1/2 (12.7)    | .65 (16.5)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-9    | 9/16 (14.3)   | .75 (19.1)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-10   | 5/8 (15.9)    | .78 (19.8)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-11   | 11/16 (17.5)  | .81 (20.6)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-12   | 3/4 (19.1)    | .84 (21.3)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 500            |
| SPN-14   | 7/8 (22.2)    | .90 (22.9)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 100            |
| SPN-16   | 1 (25.4)      | .96 (24.4)  | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 100            |
| SPN-18   | 1-1/8 (28.6)  | 1.05 (26.7) | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 100            |
| SPN-20   | 1-1/4 (31.8)  | 1.11 (28.2) | .266 (6.7) | .650 (16.5)    | 1/2 (12.7) | .26 (6.6) | 1         | 100            |

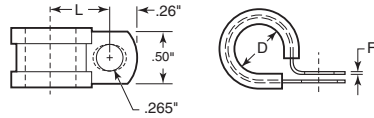
**.625" Width**

- Material: Cold Rolled Steel, Zinc Electroplated, Cushion: Neoprene
- Color: Steel with Black Cushion



| Item No. | "D" Holding Ø | "E" Ref.    | Ø"H" Hole   | "A" Width Ref. | "B"        | "C"        | Pack Qty. | Bulk Pack Qty. |
|----------|---------------|-------------|-------------|----------------|------------|------------|-----------|----------------|
| SPNW-4   | 1/4 (6.4)     | .53 (13.5)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-5   | 5/16 (7.9)    | .56 (14.2)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-6   | 3/8 (9.5)     | .59 (15)    | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-7   | 7/16 (11.1)   | .62 (15.7)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-8   | 1/2 (12.7)    | .65 (16.5)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-10  | 5/8 (15.9)    | .78 (19.8)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-11  | 11/16 (17.5)  | .81 (20.6)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-14  | 7/8 (22.2)    | .90 (22.9)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-16  | 1 (25.4)      | .96 (24.4)  | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |
| SPNW-20  | 1-1/4 (31.8)  | 1.11 (28.2) | .406 (10.3) | 3/4 (19.1)     | 5/8 (15.9) | 5/16 (7.9) | 1         | 100            |

**Loop Clamps**  
SPN Series  
Steel and Stainless



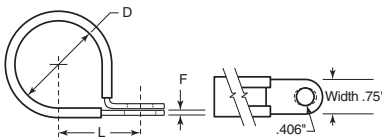
- Light to medium duty steel clamp
- EPDM cushion for electrical insulation and vibration absorption
- Steel clamps are zinc electroplated for corrosion resistance
- Temperature range -50 degrees Fahrenheit to +275 degrees Fahrenheit

| Steel Item No. | Stainless Item No. | Size  | D     | L      | F    | Pack Qty. |
|----------------|--------------------|-------|-------|--------|------|-----------|
| ZS-404         | ZS-434             | 3/16  | .188  | 3/8    | .032 | 1         |
| ZS-406         | ZS-436             | 1/4   | .250  | 13/32  | .032 | 1         |
| ZS-408         | —                  | 5/16  | .312  | 7/16   | .032 | 1         |
| ZS-410         | ZS-438             | 3/8   | .375  | 15/32  | .032 | 1         |
| ZS-412         | —                  | 7/16  | .438  | 1/2    | .032 | 1         |
| ZS-414         | ZS-440             | 1/2   | .500  | 17/32  | .032 | 1         |
| ZS-416         | —                  | 9/16  | .562  | 9/16   | .032 | 1         |
| ZS-418         | ZS-442             | 5/8   | .625  | 19/32  | .032 | 1         |
| ZS-420         | —                  | 11/16 | .688  | 5/8    | .032 | 1         |
| ZS-422         | ZS-444             | 3/4   | .750  | 3/4    | .032 | 1         |
| ZS-424         | ZS-446             | 7/8   | .875  | 13/16  | .032 | 1         |
| ZS-426         | ZS-448             | 1     | 1.000 | 7/8    | .032 | 1         |
| ZS-428         | ZS-450             | 1 1/8 | 1.125 | 15/16  | .032 | 1         |
| ZS-430         | ZS-452             | 1 1/4 | 1.250 | 1      | .032 | 1         |
| ZS-432         | —                  | 1 1/2 | 1.500 | 1 1/32 | .032 | 1         |

**Loop Clamps**  
SPW Series  
Steel

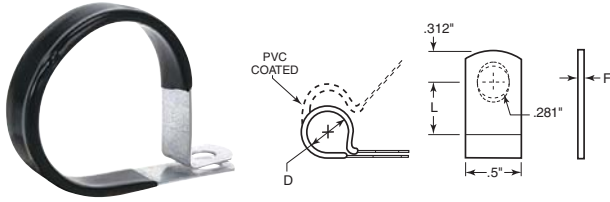


- Light to medium duty steel clamp
- EPDM cushion for electrical insulation and vibration absorption
- Steel clamps are zinc electroplated for corrosion resistance
- Temperature range -50 degrees Fahrenheit to +275 degrees Fahrenheit



| Item No. | Size  | D     | L     | F    | Pack Qty. |
|----------|-------|-------|-------|------|-----------|
| ZS-454   | 1/4   | .250  | .656  | .031 | 1         |
| ZS-456   | 3/8   | .375  | .718  | .031 | 1         |
| ZS-458   | 1/2   | .500  | .781  | .031 | 1         |
| ZS-460   | 5/8   | .625  | .843  | .031 | 1         |
| ZS-462   | 3/4   | .750  | .906  | .031 | 1         |
| ZS-464   | 1     | 1.000 | 1.031 | .031 | 1         |
| ZS-466   | 1 1/8 | 1.125 | 1.093 | .050 | 1         |
| ZS-468   | 1 1/4 | 1.250 | 1.000 | .032 | 1         |
| ZS-470   | 1 1/2 | 1.500 | 1.218 | .032 | 1         |
| ZS-472   | 2     | 2     | 1.468 | .040 | 1         |

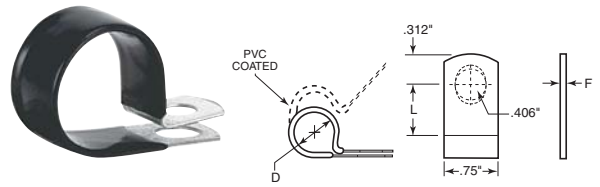
**Loop Clamps  
SVN Series  
Steel**



- Medium duty steel clamp that can be slipped over a tube or wire and closed with a bolt at assembly. Holes provide easy alignment. Its pre-developed shape allows for proper closing and excellent fit of the clamp.
- Galvanized steel
- PVC coated, black color
- Temperature range -25 degrees Fahrenheit to +160 degrees Fahrenheit

| Item No. | Size  | D     | L    | F    | Pack Qty. |
|----------|-------|-------|------|------|-----------|
| ZS-474   | 3/16  | .187  | .500 | .032 | 1         |
| ZS-476   | 1/4   | .250  | .531 | .032 | 1         |
| ZS-478   | 5/16  | .312  | .562 | .032 | 1         |
| ZS-480   | 3/8   | .375  | .593 | .032 | 1         |
| ZS-482   | 1/2   | .500  | .656 | .048 | 1         |
| ZS-484   | 5/8   | .625  | .687 | .048 | 1         |
| ZS-486   | 3/4   | .750  | .718 | .048 | 1         |
| ZS-488   | 7/8   | .875  | .781 | .048 | 1         |
| ZS-490   | 1     | 1.000 | .843 | .048 | 1         |
| ZS-492   | 1 1/8 | 1.125 | .906 | .048 | 1         |
| ZS-494   | 1 1/4 | 1.250 | .968 | .048 | 1         |

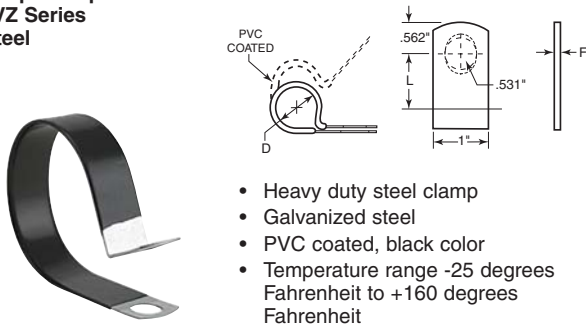
**Loop Clamps  
SVW Series  
Steel**



- Medium duty steel clamp that can be slipped over a tube or wire and closed with a bolt at assembly. Holes provide easy alignment. Its pre-developed shape allows for proper closing and excellent fit of the clamp
- Galvanized steel
- PVC coated, black color
- Temperature range -25 degrees Fahrenheit to +160 degrees Fahrenheit

| Item No. | Size  | D     | L     | F    | Pack Qty. |
|----------|-------|-------|-------|------|-----------|
| ZS-496   | 1/4   | .250  | .656  | .032 | 1         |
| ZS-498   | 3/8   | .375  | .718  | .032 | 1         |
| ZS-500   | 1/2   | .500  | .781  | .048 | 1         |
| ZS-502   | 5/8   | .625  | .812  | .048 | 1         |
| ZS-504   | 3/4   | .750  | .843  | .048 | 1         |
| ZS-506   | 7/8   | .875  | .906  | .048 | 1         |
| ZS-508   | 1     | .937  | .937  | .048 | 1         |
| ZS-510   | 1 1/8 | .968  | .968  | .048 | 1         |
| ZS-512   | 1 1/4 | 1.000 | 1.000 | .048 | 1         |
| ZS-514   | 1 1/2 | 1.031 | 1.031 | .048 | 1         |
| ZS-516   | 1 3/4 | 1.062 | 1.062 | .048 | 1         |
| ZS-518   | 2     | 1.092 | 1.092 | .048 | 1         |

**Loop Clamps  
LVZ Series  
Steel**



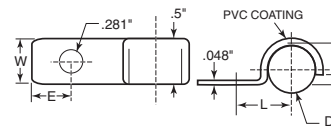
- Heavy duty steel clamp
- Galvanized steel
- PVC coated, black color
- Temperature range -25 degrees Fahrenheit to +160 degrees Fahrenheit

| Item No. | Size  | D     | L     | F    | Pack Qty. |
|----------|-------|-------|-------|------|-----------|
| ZS-520   | 1 1/2 | 1.130 | 1.218 | .048 | 1         |
| ZS-522   | 1 3/4 | 1.190 | 1.250 | .048 | 1         |
| ZS-524   | 2     | 1.250 | 1.281 | .048 | 1         |
| ZS-526   | 2 1/8 | 1.310 | 1.312 | .048 | 1         |
| ZS-528   | 2 1/4 | 1.500 | 1.406 | .048 | 1         |
| ZS-530   | 2 1/2 | 1.560 | 1.437 | .048 | 1         |
| ZS-532   | 2 3/4 | 1.750 | 1.531 | .048 | 1         |
| ZS-534   | 3     | 1.810 | 1.562 | .048 | 1         |
| ZS-536   | 3 1/8 | 2.000 | 1.687 | .048 | 1         |
| ZS-538   | 3 1/4 | 2.060 | 1.718 | .048 | 1         |
| ZS-540   | 3 1/2 | 2.250 | 1.812 | .048 | 1         |
| ZS-542   | 3 3/4 | 2.500 | 1.937 | .048 | 1         |
| ZS-544   | 4     | 2.630 | 2.000 | .048 | 1         |
| ZS-546   | 4 1/4 | 2.750 | 2.062 | .048 | 1         |
| ZS-548   | 4 1/2 | 2.880 | 2.125 | .048 | 1         |
| ZS-550   | 4 3/4 | 3.560 | 2.437 | .048 | 1         |

**Loop Clamps  
HVN Series  
Steel**



| Item No. | Size | D    | L    | E    | B    | C    | W   | Pack Qty. |
|----------|------|------|------|------|------|------|-----|-----------|
| ZS-552   | 1/4  | .250 | .500 | .250 | .250 | .188 | 1/2 | 1         |
| ZS-554   | 3/16 | .312 | .531 | .312 | .312 | .218 | 5/8 | 1         |
| ZS-556   | 1/8  | .375 | .562 | .312 | .375 | .281 | 3/4 | 1         |
| ZS-558   | 1/2  | .500 | .687 | .312 | .500 | .343 | 5/8 | 1         |
| ZS-560   | 3/8  | .562 | .750 | .312 | .562 | .437 | 3/4 | 1         |
| ZS-562   | 1/4  | .625 | .812 | .312 | .625 | .406 | 3/4 | 1         |
| ZS-564   | 3/4  | .750 | .875 | .312 | .750 | .468 | 3/4 | 1         |

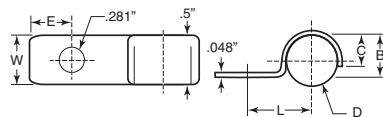


- Black vinyl plastic coated (PVC)
- Galvanized steel for corrosion resistance
- Temperature range -25 degrees Fahrenheit to +160 degrees Fahrenheit

**Loop Clamps  
HSN Series**



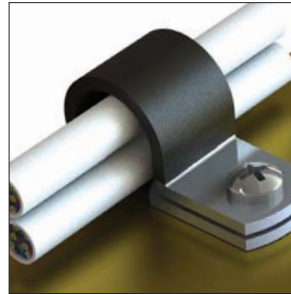
- Stainless steel 1/2" wide
- Type 301 or 304



| Item No. | Size | D    | L    | E    | B    | C    | W   | Pack Qty. |
|----------|------|------|------|------|------|------|-----|-----------|
| ZS-566   | 1/4  | .250 | .500 | .250 | .250 | .188 | 1/2 | 1         |
| ZS-568   | 3/16 | .312 | .531 | .312 | .312 | .218 | 5/8 | 1         |
| ZS-570   | 1/8  | .375 | .562 | .312 | .375 | .281 | 3/4 | 1         |
| ZS-572   | 1/2  | .500 | .687 | .312 | .500 | .343 | 5/8 | 1         |
| ZS-574   | 3/8  | .562 | .750 | .312 | .562 | .437 | 3/4 | 1         |
| ZS-576   | 1/4  | .625 | .812 | .312 | .625 | .406 | 3/4 | 1         |
| ZS-578   | 3/4  | .750 | .875 | .312 | .750 | .468 | 3/4 | 1         |

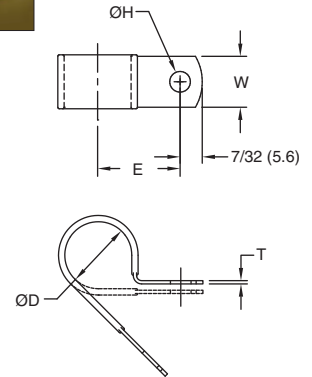


**NE**  
Aluminum Clamp with Vinyl Coating

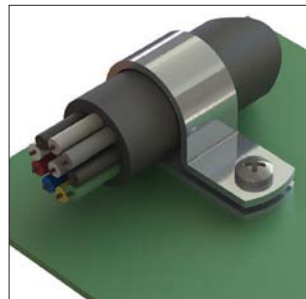


- Vinyl coating allows a more permanent solution for protecting cables against vibration
- Screw mount area is bare to ensure firm tightening
- Material: Aluminum Alloy 5052 H-32, TPV Coating
- Color: Aluminum with Black Coating

| Item No. | "D" Holding Ø | Ø"H" Hole  | "E" Ref.    | "T"        | "W"        | Pack Qty. | Bulk Pack Qty. |
|----------|---------------|------------|-------------|------------|------------|-----------|----------------|
| NE3      | 3/16 (4.8)    | .204 (5.2) | .50 (12.7)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE4      | 1/4 (6.4)     | .204 (5.2) | .53 (13.5)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE5      | 5/16 (7.9)    | .204 (5.2) | .56 (14.2)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE6      | 3/8 (9.5)     | .204 (5.2) | .59 (15)    | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE7      | 7/16 (11.1)   | .204 (5.2) | .62 (15.7)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE8      | 1/2 (12.7)    | .204 (5.2) | .65 (16.5)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE9      | 9/16 (14.3)   | .204 (5.2) | .75 (19.1)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE10     | 5/8 (15.9)    | .204 (5.2) | .78 (19.8)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| NE11     | 11/16 (17.5)  | .204 (5.2) | .81 (20.6)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| NE12     | 3/4 (19.1)    | .204 (5.2) | .84 (21.3)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| NE14     | 7/8 (22.2)    | .204 (5.2) | .90 (22.9)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| NE16     | 1 (25.4)      | .204 (5.2) | .96 (24.4)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| NE18     | 1-1/8 (28.6)  | .204 (5.2) | 1.05 (26.7) | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| NE20     | 1-1/4 (31.8)  | .204 (5.2) | 1.11 (28.2) | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |

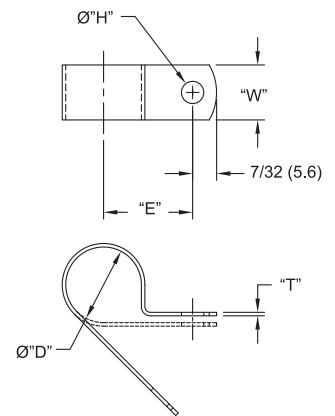


**AL**  
Aluminum Clamp



- Material: Aluminum Alloy 5052 H-32
- Color: Aluminum

| Item No. | "D" Holding Ø | Ø"H" Hole  | "E" Ref.    | "T"        | "W"        | Pack Qty. | Bulk Pack Qty. |
|----------|---------------|------------|-------------|------------|------------|-----------|----------------|
| AL2A     | 1/8 (3.2)     | .204 (5.2) | .46 (11.7)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL3A     | 3/16 (4.8)    | .204 (5.2) | .50 (12.7)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL4A     | 1/4 (6.4)     | .204 (5.2) | .53 (13.5)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL5A     | 5/16 (7.9)    | .204 (5.2) | .56 (14.2)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL6A     | 3/8 (9.5)     | .204 (5.2) | .59 (15)    | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL7A     | 7/16 (11.1)   | .204 (5.2) | .62 (15.7)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL8A     | 1/2 (12.7)    | .204 (5.2) | .65 (16.5)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL9A     | 9/16 (14.3)   | .204 (5.2) | .75 (19.1)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL10A    | 5/8 (15.9)    | .204 (5.2) | .78 (19.8)  | 1/32 (0.8) | 3/8 (9.5)  | 1         | 1,000          |
| AL11     | 11/16 (17.5)  | .204 (5.2) | .81 (20.6)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| AL12     | 3/4 (19.1)    | .204 (5.2) | .84 (21.3)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| AL14     | 7/8 (22.2)    | .204 (5.2) | .90 (22.9)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| AL16     | 1 (25.4)      | .204 (5.2) | .96 (24.4)  | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| AL18     | 1-1/8 (28.6)  | .204 (5.2) | 1.05 (26.7) | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |
| AL20     | 1-1/4 (31.8)  | .204 (5.2) | 1.11 (28.2) | 1/16 (1.6) | 1/2 (12.7) | 1         | 500            |



**MHC Series**  
Mini Worm Gear Hose Clamps

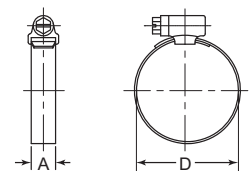


Specifications:

- Band and Housing: Stainless steel
- Screw: 1/4 inch hex-head. Plated carbon steel

Features:

- To be used on small hose applications
- Low profile housing and thin band make them easier to install or remove in confined areas



| Item No. | Diameter Range D |          |          |        | Pack Qty. | Bulk Pack Qty. |
|----------|------------------|----------|----------|--------|-----------|----------------|
|          | SAE Size         | Min (In) | Max (In) | A (In) |           |                |
| MHC04A   | 4                | 0.250    | 0.625    | 0.312  | 1         | 100            |
| MHC05A   | 5                | 0.250    | 0.687    | 0.312  | 1         | 100            |
| MHC06A   | 6                | 0.312    | 0.875    | 0.312  | 1         | 100            |
| MHC08A   | 8                | 0.375    | 1.000    | 0.312  | 1         | 100            |
| MHC10A   | 10               | 0.375    | 1.062    | 0.312  | 1         | 100            |
| MHC12A   | 12               | 0.500    | 1.250    | 0.312  | 1         | 50             |
| MHC16A   | 16               | 0.500    | 1.500    | 0.312  | 1         | 50             |
| MHC20A   | 20               | 0.750    | 1.750    | 0.312  | 1         | 50             |

| Item No. | Diameter Range D |          |          |        | Pack Qty. | Bulk Pack Qty. |
|----------|------------------|----------|----------|--------|-----------|----------------|
|          | SAE Size         | Min (In) | Max (In) | A (In) |           |                |
| MHC24A   | 24               | 1.000    | 2.000    | 0.312  | 1         | 50             |
| MHC28A   | 28               | 1.250    | 2.250    | 0.312  | 1         | 20             |
| MHC30A   | 30               | 1.375    | 2.375    | 0.312  | 1         | 25             |
| MHC32A   | 32               | 1.500    | 2.500    | 0.312  | 1         | 25             |
| MHC36A   | 36               | 1.750    | 2.750    | 0.312  | 1         | 25             |
| MHC44A   | 44               | 2.250    | 3.250    | 0.312  | 1         | 20             |
| MHC48A   | 48               | 2.500    | 3.500    | 0.312  | 1         | 20             |



**Hose Clamps**



- All hose clamps have rounded edges to protect the hose
- Three piece interlock construction-no spot welds to corrode
- Easily installed with screwdriver, nut driver, or socket wrench

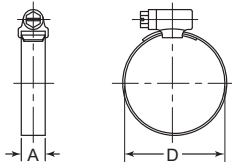
**Partial Stainless** - Stainless steel band and housing with carbon screw. Recommended for most applications.

**All 300 Stainless** - 300 series stainless steel band, housing and screw. Highly corrosion resistant and low in magnetic permeability.

**All 316 Stainless** - Marine grade 316 stainless steel band, housing and screw. Recommended in highly corrosive and salt-water environments. Non-magnetic.

| Partial Stainless | All 300 Stainless | All 316 Stainless | Clamp Diameter Fractional Min. | Clamp Diameter Fractional Max. | Clamp Diameter Metric Min. | Clamp Diameter Metric Max. | SAE # | Pack Qty. |
|-------------------|-------------------|-------------------|--------------------------------|--------------------------------|----------------------------|----------------------------|-------|-----------|
| <b>5/16" Band</b> |                   |                   |                                |                                |                            |                            |       |           |
| HCL-M4P           | HCL-M4HSP         | HCL-M4HSPX        | 7/32                           | 5/8                            | 5.6                        | 15.9                       | 4     | 10        |
| HCL-M6P           | HCL-M6HSP         | HCL-M6HSPX        | 9/16                           | 7/8                            | 7.9                        | 22.2                       | 6     | 10        |
| HCL-M8P           | —                 | —                 | 7/16                           | 1                              | 11.1                       | 25.4                       | 8     | 10        |
| <b>1/2" Band</b>  |                   |                   |                                |                                |                            |                            |       |           |
| HCL-6H            | HCL-6HSP          | HCL-6HSPX         | 3/8                            | 7/8                            | 9.5                        | 22.2                       | 6     | 10        |
| HCL-8H            | HCL-8HSP          | HCL-8HSPX         | 7/16                           | 1                              | 11.1                       | 25.4                       | 8     | 10        |
| HCL-10H           | HCL-10HSP         | HCL-10HSPX        | 9/16                           | 1 1/8                          | 14.3                       | 27                         | 10    | 10        |
| HCL-12H           | HCL-12HSP         | HCL-12HSPX        | 5/8                            | 1 1/4                          | 14.3                       | 31.7                       | 12    | 10        |
| HCL-16H           | HCL-16HSP         | HCL-16HSPX        | 1 1/16                         | 1 1/2                          | 17.5                       | 38.1                       | 16    | 10        |
| HCL-20H           | HCL-20HSP         | HCL-20HSPX        | 3/4                            | 1 3/4                          | 19.1                       | 44.4                       | 20    | 10        |
| HCL-24H           | HCL-24HSP         | HCL-24HSPX        | 1 1/16                         | 2                              | 27                         | 50.8                       | 24    | 10        |
| HCL-28H           | HCL-28HSP         | HCL-28HSPX        | 1 3/16                         | 2 1/4                          | 33.3                       | 57.2                       | 28    | 10        |
| HCL-32H           | HCL-32HSP         | HCL-32HSPX        | 1 3/8                          | 2 1/2                          | 39.7                       | 63.5                       | 32    | 10        |
| HCL-36H           | HCL-36HSP         | HCL-36HSPX        | 1 1/2                          | 2 3/4                          | 46                         | 69.9                       | 36    | 10        |
| HCL-40H           | HCL-40HSP         | HCL-40HSPX        | 2 1/16                         | 3                              | 52.4                       | 76.2                       | 40    | 10        |
| HCL-44H           | HCL-44HSP         | HCL-44HSPX        | 2 3/16                         | 3 1/4                          | 58.7                       | 82.6                       | 44    | 10        |
| HCL-48H           | HCL-48HSP         | HCL-48HSPX        | 2 1/2                          | 3 1/2                          | 65.1                       | 88.9                       | 48    | 10        |
| HCL-52H           | HCL-52HSP         | HCL-52HSPX        | 2 3/8                          | 3 3/4                          | 71.4                       | 95.3                       | 52    | 10        |
| HCL-56H           | HCL-56HSP         | —                 | 3 1/8                          | 4                              | 77.8                       | 101.6                      | 56    | 10        |
| HCL-64H           | HCL-64HSP         | HCL-64HSPX        | 3 3/8                          | 4 1/2                          | 90.5                       | 114.3                      | 64    | 10        |
| HCL-80H           | HCL-80HSP         | HCL-80HSPX        | 4 3/8                          | 5 1/2                          | 117.5                      | 139.7                      | 80    | 10        |
| HCL-96H           | HCL-96HSP         | HCL-96HSPX        | 4 1/2                          | 6 1/2                          | 104                        | 152.4                      | 96    | 10        |

**WDHC Series**  
Worm Drive or Worm Gear Hose Clamps

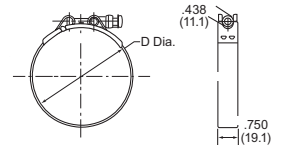


- Specifications:
- Material: Refer to Chart

- Features:
- Can be used with the TSL or TQS series sleeves
  - Band detaches from the housing so you can install or remove them without disconnecting the hose or tube
  - Screw is same material as band

| Item No.     |                 | Dia Range D |          |          | Pack Qty |
|--------------|-----------------|-------------|----------|----------|----------|
| Carbon Steel | Stainless Steel | SAE #       | Min (In) | Max (In) | A (In)   |
| WDHC04A      | WDHC04B         | 4           | 0.250    | 0.625    | 0.320    |
| WDHC06A      | WDHC06B         | 6           | 0.438    | 0.750    | 0.320    |
| WDHC08A      | WDHC08B         | 8           | 0.500    | 0.875    | 0.320    |
| WDHC10A      | WDHC10B         | 10          | 0.500    | 1.063    | 0.500    |
| WDHC12A      | WDHC12B         | 12          | 0.500    | 1.250    | 0.500    |
| WDHC16A      | WDHC16B         | 16          | 1.063    | 1.500    | 0.500    |
| WDHC20A      | WDHC20B         | 20          | 0.750    | 1.750    | 0.500    |
| WDHC24A      | WDHC24B         | 24          | 1.000    | 2.000    | 0.500    |
| WDHC28A      | WDHC28B         | 28          | 1.250    | 2.250    | 0.500    |
| WDHC32A      | WDHC32B         | 32          | 1.500    | 2.500    | 0.500    |
| WDHC36A      | WDHC36B         | 36          | 1.750    | 2.750    | 0.500    |
| WDHC44A      | WDHC44B         | 44          | 2.250    | 3.250    | 0.500    |
| WDHC48A      | WDHC48B         | 48          | 2.500    | 3.500    | 0.500    |
| WDHC52A      | WDHC52B         | 52          | 2.750    | 3.750    | 0.500    |
| WDHC56A      | WDHC56B         | 56          | 3.000    | 4.000    | 0.500    |
| WDHC60A      | WDHC60B         | 60          | 3.250    | 4.250    | 0.500    |
| WDHC64A      | WDHC64B         | 64          | 3.500    | 4.500    | 0.500    |
| WDHC72A      | WDHC72B         | 72          | 3.000    | 5.000    | 0.500    |
| WDHC80A      | WDHC80B         | 80          | 3.500    | 5.500    | 0.500    |
| WDHC88A      | WDHC88B         | 88          | 4.000    | 6.000    | 0.500    |
| WDHC96A      | WDHC96B         | 96          | 4.500    | 6.500    | 0.500    |

**TBC Series**  
T-Bolt Hose Clamps



- Specifications:
- All components 301 stainless steel
  - Bolt: 1/4 - 28 inch
  - Nut: 7/16 inch hex, nylon insert

- Features:
- Designed to provide a dependable seal on large diameter applications where high vibration occurs

| Item No. | SAE Size | Diameter Range D |          | Pack Qty |
|----------|----------|------------------|----------|----------|
|          |          | Min (In)         | Max (In) |          |
| TBC15A   | ----     | 1.375            | 1.562    | 25       |
| TBC17A   | ----     | 1.625            | 1.875    | 25       |
| TBC28A   | 28       | 1.750            | 1.937    | 25       |
| TBC32A   | 32       | 1.875            | 2.187    | 25       |
| TBC36A   | 36       | 2.125            | 2.312    | 25       |
| TBC40A   | 40       | 2.250            | 2.437    | 10       |
| TBC44A   | 44       | 2.375            | 2.562    | 10       |
| TBC48A   | 48       | 2.375            | 2.687    | 10       |
| TBC52A   | 52       | 2.500            | 2.812    | 10       |
| TBC56A   | 56       | 2.625            | 2.937    | 10       |
| TBC60A   | 60       | 2.750            | 3.062    | 10       |
| TBC64A   | 64       | 2.875            | 3.187    | 10       |
| TBC68A   | 68       | 3.000            | 3.312    | 10       |
| TBC76A   | 76       | 3.250            | 3.562    | 5        |
| TBC84A   | 84       | 3.500            | 3.812    | 5        |
| TBC92A   | 92       | 3.750            | 4.062    | 5        |
| TBC100A  | 100      | 4.000            | 4.312    | 5        |
| TBC108A  | 108      | 4.250            | 4.562    | 5        |
| TBC116A  | 116      | 4.500            | 4.812    | 5        |
| TBC124A  | 124      | 4.750            | 5.062    | 5        |
| TBC132A  | 132      | 5.000            | 5.312    | 5        |
| TBC140A  | 140      | 5.250            | 5.562    | 5        |
| TBC148A  | 148      | 5.500            | 5.812    | 5        |
| TBC156A  | 156      | 5.750            | 6.062    | 5        |
| TBC172A  | 172      | 6.250            | 6.562    | 2        |
| TBC188A  | 188      | 6.750            | 7.062    | 2        |
| TBC204A  | 204      | 7.250            | 7.562    | 2        |



**TCS & THCS Series  
Standard & Hanging Cinch Straps**



TCS Series

THCS Series



TCS Heavy



THCS Heavy

**Specifications:**

- Material:
  - Standard: Nylon 22, Delrin Buckles
  - Heavy Duty: Woven Nylon Webbing, Nickel-Plated Steel Buckles
- Color: Black

**Features:**

- Add, remove or adjust hose bundles in minutes.
- Cuts normal installation time by 50%
- The hook and loop design holds hoses securely while allowing natural hose expansion and contraction movement without damage
- The grommet on the THCS strap can be attached to any convenient bulkhead or mounting surface
- Excellent UV and weather resistance

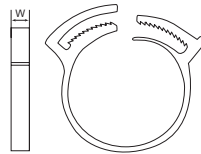
**Cinch Straps**

| Item No. | Bundle Diameter |       | Pack Qty. | Bulk Pack Qty. |     |
|----------|-----------------|-------|-----------|----------------|-----|
|          | Standard        | Heavy |           |                | In  |
| TCS4A    | TCS4HA          | 1.270 | 32.25     | 1              | 100 |
| TCS8A    | TCS8HA          | 2.540 | 64.51     | 1              | 100 |
| TCS12A   | TCS12HA         | 3.820 | 97.02     | 1              | 50  |
| TCS16A   | TCS16HA         | 5.100 | 129.54    | 1              | 50  |
| TCS20A   | TCS20HA         | 6.370 | 161.79    | 1              | 50  |

**Hanging Cinch Straps**

| Item No. | Bundle Diameter |       | Pack Qty. | Bulk Pack Qty. |     |
|----------|-----------------|-------|-----------|----------------|-----|
|          | Standard        | Heavy |           |                | In  |
| THCS1A   | -               | 0.320 | 8.12      | 1              | 100 |
| THCS4A   | THCS4HA         | 1.270 | 32.25     | 1              | 100 |
| THCS8A   | THCS8HA         | 2.540 | 64.51     | 1              | 100 |
| THCS12A  | THCS12HA        | 3.820 | 97.02     | 1              | 50  |
| THCS16A  | THCS16HA        | 5.100 | 129.54    | 1              | 50  |
| THCS20A  | THCS20HA        | 6.370 | 161.79    | 1              | 50  |

**THC & SHC Series  
Quick Assemble Hose Clamps**



**Specifications:**

- Material: THC Series - UL94V-2 Nylon 6/6  
SHC Series - UL94 HB Nylon 6/6
- Color: THC Series: Black  
SHC Series: White

**Features:**

- Quick and easy assembly or removal
- Adjustable locking range to fit various diameters
- Excellent for securing the ends of textile covers to the hose assembly

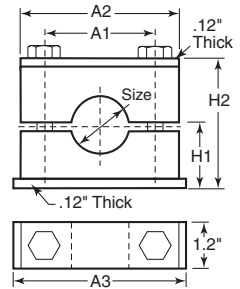
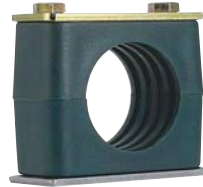
| Item No. | Bundle Range  |             | W     |     | Pack Qty. | Bulk Pack Qty. |
|----------|---------------|-------------|-------|-----|-----------|----------------|
|          | In            | mm          | In    | mm  |           |                |
| THC1A    | 0.260 - 0.315 | 6.6 - 8.0   | 0.197 | 5.0 | 1         | 100            |
| THC2A    | 0.315 - 0.362 | 8.0 - 9.2   | 0.197 | 5.0 | 1         | 100            |
| SHC-23   | 0.359 - 0.390 | 9.1 - 9.9   | 0.220 | 5.6 | 1         | 100            |
| THC3A    | 0.362 - 0.413 | 9.2 - 10.5  | 0.197 | 5.0 | 1         | 100            |
| SHC-26   | 0.390 - 0.468 | 9.9 - 11.9  | 0.220 | 5.6 | 1         | 100            |
| THC4A    | 0.413 - 0.472 | 10.5 - 12.0 | 0.236 | 6.0 | 1         | 100            |
| SHC-30   | 0.468 - 0.531 | 11.9 - 13.5 | 0.220 | 5.6 | 1         | 100            |
| THC6A    | 0.504 - 0.591 | 12.8 - 15.0 | 0.276 | 7.0 | 1         | 100            |
| SHC-32   | 0.531 - 0.593 | 13.5 - 15.1 | 0.220 | 5.6 | 1         | 100            |
| THC7A    | 0.591 - 0.677 | 15.0 - 17.2 | 0.276 | 7.0 | 1         | 100            |
| SHC-38   | 0.593 - 0.674 | 15.1 - 16.7 | 0.220 | 5.6 | 1         | 100            |
| THC8A    | 0.670 - 0.728 | 17.0 - 18.5 | 0.276 | 7.0 | 1         | 100            |
| SHC-44   | 0.687 - 0.812 | 17.5 - 20.6 | 0.220 | 5.6 | 1         | 100            |
| THC9A    | 0.717 - 0.807 | 18.2 - 20.5 | 0.276 | 7.0 | 1         | 100            |
| SHC-50   | 0.750 - 0.875 | 19.1 - 22.2 | 0.220 | 5.6 | 1         | 100            |
| THC10A   | 0.807 - 0.906 | 20.5 - 23.0 | 0.276 | 7.0 | 1         | 100            |
| THC11A   | 0.866 - 0.984 | 22.0 - 25.0 | 0.276 | 7.0 | 1         | 100            |
| SHC-56   | 0.875 - 1.000 | 22.2 - 25.4 | 0.220 | 5.6 | 1         | 100            |
| SHC-62   | 0.953 - 1.093 | 24.2 - 27.8 | 0.310 | 7.9 | 1         | 100            |
| THC12A   | 0.984 - 1.102 | 25.0 - 28.0 | 0.276 | 7.0 | 1         | 100            |

| Item No. | Bundle Range  |             | W     |      | Pack Qty. | Bulk Pack Qty. |
|----------|---------------|-------------|-------|------|-----------|----------------|
|          | In            | mm          | In    | mm   |           |                |
| THC13A   | 1.063 - 1.181 | 27.0 - 30.0 | 0.295 | 7.5  | 1         | 100            |
| SHC-68   | 1.093 - 1.187 | 26.2 - 30.2 | 0.310 | 7.9  | 1         | 100            |
| THC14A   | 1.161 - 1.280 | 29.5 - 32.5 | 0.295 | 7.5  | 1         | 100            |
| THC15A   | 1.280 - 1.398 | 32.5 - 35.5 | 0.315 | 8.00 | 1         | 100            |
| SHC-80   | 1.250 - 1.437 | 31.8 - 36.5 | 0.310 | 7.9  | 1         | 100            |
| THC16A   | 1.378 - 1.516 | 35.0 - 38.5 | 0.315 | 8.0  | 1         | 50             |
| SHC-92   | 1.406 - 1.625 | 35.7 - 41.3 | 0.360 | 9.1  | 1         | 100            |
| THC17A   | 1.496 - 1.634 | 38.0 - 41.5 | 0.315 | 8.0  | 1         | 50             |
| THC18A   | 1.614 - 1.752 | 41.0 - 44.5 | 0.315 | 8.0  | 1         | 50             |
| THC19A   | 1.732 - 1.870 | 44.0 - 47.5 | 0.315 | 8.0  | 1         | 50             |
| THC20A   | 1.850 - 1.988 | 47.0 - 50.5 | 0.315 | 8.0  | 1         | 50             |
| THC21A   | 1.969 - 2.106 | 50.0 - 53.5 | 0.315 | 8.0  | 1         | 50             |
| THC22A   | 2.087 - 2.244 | 53.0 - 57.0 | 0.315 | 8.0  | 1         | 50             |
| SHC-134  | 2.125 - 2.375 | 54.0 - 60.3 | 0.400 | 10.2 | 1         | 100            |
| THC23A   | 2.224 - 2.382 | 56.5 - 60.5 | 0.315 | 8.0  | 1         | 50             |
| THC24A   | 2.362 - 2.559 | 60.0 - 65.0 | 0.315 | 8.0  | 1         | 50             |
| THC25A   | 2.598 - 2.756 | 66.0 - 70.0 | 0.315 | 8.0  | 1         | 50             |
| THC26A   | 2.756 - 2.953 | 70.0 - 75.0 | 0.315 | 8.0  | 1         | 50             |
| THC27A   | 2.992 - 3.150 | 76.0 - 80.0 | 0.315 | 8.0  | 1         | 50             |
| THC28A   | 3.150 - 3.346 | 80.0 - 85.0 | 0.315 | 8.0  | 1         | 50             |

Beta clamps are ideal for clamping pipe, tube, hose and electric cables. They are an economical and easy way of securing them in all types of terrestrial, marine, OEM and industrial applications. Beta clamps are used in all areas of industrial, mobile and marine hydraulics, general industrial pipe construction, the field of press technology, instrumentation and control technology and many more.

- Beta clamps offer shock-absorption, vibration dampening and noise reducing properties
- Beta clamps feature a practical and economical design which make for quick, easy pipe installation and layout
- Using weldable plates, it's easy to anchor the clamps to machinery and steel work
- Fast, safe, economic installation and service in piping system
- Upper and lower clamp half are identical
- Ribs in clamp bore are designed to absorb shock and vibration in the direction of the tube axis
- Clamps can be easily cleaned due to their design

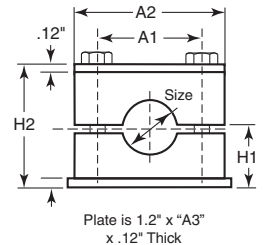
**Beta Clamps  
Standard Series  
Steel or 304 Stainless Components**



- Cushions are polypropylene (green color)
- Recommended for systems with less than 1500 PSI without dynamic loads

| Steel    | Stainless |       |           |           |      |      |      |      |      |                |           |
|----------|-----------|-------|-----------|-----------|------|------|------|------|------|----------------|-----------|
| Item No. | Item No.  | Group | Tube Size | Pipe Size | A1   | A2   | A3   | H1   | H2   | Bolt           | Pack Qty. |
| ZS-200   | ZS-226    | S2    | 1/2       | —         | 1.02 | 1.57 | 1.65 | .76  | 1.54 | 1/4-20 x 1 1/2 | 1         |
| ZS-202   | ZS-228    | S2    | —         | 1/4       | 1.02 | 1.57 | 1.65 | .76  | 1.54 | 1/4-20 x 1 1/2 | 1         |
| ZS-204   | ZS-230    | S2    | 3/8       | —         | 1.02 | 1.57 | 1.65 | .76  | 1.54 | 1/4-20 x 1 1/2 | 1         |
| ZS-206   | ZS-232    | S3    | 3/4       | —         | 1.29 | 1.96 | 2.04 | .80  | 1.61 | 1/4-20 x 1 1/2 | 1         |
| ZS-208   | ZS-234    | S3    | —         | 1/2       | 1.29 | 1.96 | 2.04 | .80  | 1.61 | 1/4-20 x 1 1/2 | 1         |
| ZS-210   | ZS-236    | S3    | 7/8       | —         | 1.29 | 1.96 | 2.04 | .80  | 1.61 | 1/4-20 x 1 1/2 | 1         |
| ZS-212   | ZS-238    | S3    | 1         | —         | 1.29 | 1.96 | 2.04 | .80  | 1.61 | 1/4-20 x 1 1/2 | 1         |
| ZS-214   | ZS-240    | S4    | —         | 3/4       | 1.57 | 2.28 | 2.36 | .94  | 1.88 | 1/4-20 x 1 1/4 | 1         |
| ZS-216   | ZS-242    | S5    | 1 1/4     | —         | 2.04 | 2.75 | 2.83 | 1.25 | 2.52 | 1/4-20 x 2 1/2 | 1         |
| ZS-218   | ZS-244    | S5    | —         | 1         | 2.04 | 2.75 | 2.83 | 1.25 | 2.52 | 1/4-20 x 2 1/2 | 1         |
| ZS-220   | ZS-246    | S5    | 1 1/2     | —         | 2.04 | 2.75 | 2.83 | 1.25 | 2.52 | 1/4-20 x 2 1/2 | 1         |
| ZS-222   | ZS-248    | S5    | —         | 1 1/4     | 2.04 | 2.75 | 2.83 | 1.25 | 2.52 | 1/4-20 x 2 1/2 | 1         |
| ZS-224   | ZS-250    | S6    | 2         | —         | 2.59 | 3.38 | 3.46 | 1.41 | 2.83 | 1/4-20 x 2 3/4 | 1         |

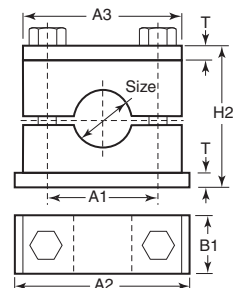
**Beta "Smoothie" Clamps  
Standard Series  
Steel and 304 Stainless Components**



- Cushions are polypropylene (green color)
- Chamfered and small core protects hose cover and extends hose life
- Reduces wear on hose connection caused by vibration and surge
- Uses standard beta hardware

| Steel    | Stainless |       |                     |      |      |      |      |      |                |           |  |
|----------|-----------|-------|---------------------|------|------|------|------|------|----------------|-----------|--|
| Item No. | Item No.  | Group | SAE 100R1 Hose Size | A1   | A2   | A3   | H1   | H2   | Bolt           | Pack Qty. |  |
| ZS-252   | ZS-264    | S2    | 1/4                 | 1.02 | 1.57 | 1.65 | .76  | 1.54 | 1/4-20 x 1 1/2 | 1         |  |
| ZS-254   | ZS-266    | S2    | 3/8                 | 1.02 | 1.57 | 1.65 | .76  | 1.54 | 1/4-20 x 1 1/2 | 1         |  |
| ZS-256   | ZS-268    | S3    | 1/2                 | 1.29 | 1.96 | 2.04 | .80  | 1.61 | 1/4-20 x 1 1/2 | 1         |  |
| ZS-258   | ZS-270    | S3    | 3/4                 | 1.29 | 1.96 | 2.04 | .80  | 1.61 | 1/4-20 x 1 1/2 | 1         |  |
| ZS-260   | ZS-272    | S4    | 3/4                 | 1.57 | 2.28 | 2.36 | .94  | 1.88 | 1/4-20 x 1 1/4 | 1         |  |
| ZS-262   | ZS-274    | S5    | 1                   | 2.05 | 2.75 | 2.83 | 1.25 | 2.52 | 1/4-20 x 2 1/2 | 1         |  |

**Beta Clamps  
Heavy Series  
Steel and 304 Stainless Components**



- Cushions are polypropylene (green color)
- Recommended for systems with greater than 1500 PSI operating pressure, operations with pressure surges and applications with wide temperature fluctuations
- Absorbs high levels of shock, noise and vibration

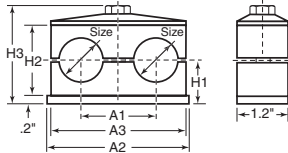
| Steel    | Stainless |       |           |           |      |      |      |      |                |           |  |
|----------|-----------|-------|-----------|-----------|------|------|------|------|----------------|-----------|--|
| Item No. | Item No.  | Group | Tube Size | Pipe Size | A1   | A2   | A3   | H2   | Bolt           | Pack Qty. |  |
| ZS-348   | ZS-376    | H3    | 1/2       | —         | 1.29 | 2.87 | 2.16 | 1.88 | 3/8-16 x 1 1/4 | 1         |  |
| ZS-350   | ZS-378    | H3    | —         | 1/4       | 1.29 | 2.87 | 2.16 | 1.88 | 3/8-16 x 1 1/4 | 1         |  |
| ZS-352   | ZS-380    | H3    | 3/8       | —         | 1.29 | 2.87 | 2.16 | 1.88 | 3/8-16 x 1 1/4 | 1         |  |
| ZS-354   | ZS-382    | H4    | 3/4       | —         | 1.77 | 3.34 | 2.75 | 2.51 | 3/8-16 x 2 1/4 | 1         |  |
| ZS-356   | ZS-384    | H4    | —         | 1/2       | 1.77 | 3.34 | 2.75 | 2.51 | 3/8-16 x 2 1/4 | 1         |  |
| ZS-358   | ZS-386    | H4    | 7/8       | —         | 1.77 | 3.34 | 2.75 | 2.51 | 3/8-16 x 2 1/4 | 1         |  |
| ZS-360   | ZS-388    | H4    | 1         | —         | 1.77 | 3.34 | 2.75 | 2.51 | 3/8-16 x 2 1/4 | 1         |  |
| ZS-362   | ZS-390    | H4    | —         | 3/4       | 1.77 | 3.34 | 2.75 | 2.51 | 3/8-16 x 2 1/4 | 1         |  |
| ZS-364   | ZS-392    | H5    | 1 1/4     | —         | 2.36 | 3.93 | 3.30 | 2.99 | 3/8-16 x 2 3/4 | 1         |  |
| ZS-366   | ZS-394    | H5    | —         | 1         | 2.36 | 3.93 | 3.30 | 2.99 | 3/8-16 x 2 3/4 | 1         |  |
| ZS-368   | ZS-396    | H5    | 1 1/2     | —         | 2.36 | 3.93 | 3.30 | 2.99 | 3/8-16 x 2 3/4 | 1         |  |
| ZS-370   | ZS-398    | H5    | —         | 1 1/4     | 2.36 | 3.93 | 3.30 | 2.99 | 3/8-16 x 2 3/4 | 1         |  |
| ZS-372   | ZS-401    | H6    | —         | 1 1/2     | 3.54 | 5.90 | 4.52 | 4.33 | 3/8-16 x 2 3/4 | 1         |  |
| ZS-374   | ZS-402    | H6    | 2         | —         | 3.54 | 5.90 | 4.52 | 4.33 | 3/8-16 x 2 3/4 | 1         |  |



Beta clamps are ideal for clamping pipe, tube, hose and electric cables. They are an economical and easy way of securing them in all types of terrestrial, marine, OEM and industrial applications. Beta clamps are used in all areas of industrial, mobile and marine hydraulics, general industrial pipe construction, the field of press technology, instrumentation and control technology and many more.

- Beta clamps offer shock-absorption, vibration dampening and noise reducing properties
- Beta clamps feature a practical and economical design which make for quick, easy pipe installation and layout
- Using weldable plates, it's easy to anchor the clamps to machinery and steel work
- Fast, safe, economic installation and service in piping system
- Upper and lower clamp half are identical
- Ribs in clamp bore are designed to absorb shock and vibration in the direction of the tube axis
- Clamps can be easily cleaned due to their design

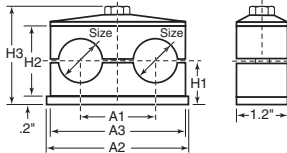
**Beta Clamps  
Twin Series  
Steel and 304 Stainless Components**



- Cushions are polypropylene (green color)
- Ideal for general-duty applications subject to moderate levels of shock and vibration

| Steel Item No. | Stainless Item No. | Group | Tube Size | Pipe Size | A1   | A2   | A3   | H1   | H2   | H3   | Bolt            | Pack Qty. |
|----------------|--------------------|-------|-----------|-----------|------|------|------|------|------|------|-----------------|-----------|
| ZS-276         | ZS-300             | T2    | 1/2       | —         | 1.14 | 2.16 | 2.08 | .70  | 1.02 | 1.71 | 5/16-18 x 1 1/8 | 1         |
| ZS-278         | ZS-302             | T2    | —         | 1/4       | 1.14 | 2.16 | 2.08 | .70  | 1.02 | 1.71 | 5/16-18 x 1 1/8 | 1         |
| ZS-280         | ZS-304             | T2    | 5/8       | —         | 1.14 | 2.16 | 2.08 | .70  | 1.02 | 1.71 | 5/16-18 x 1 1/8 | 1         |
| ZS-282         | ZS-306             | T3    | 3/4       | —         | 1.41 | 2.75 | 2.63 | .92  | 1.45 | 2.14 | 5/16-18 x 1 3/4 | 1         |
| ZS-284         | ZS-308             | T3    | —         | 1/2       | 1.41 | 2.75 | 2.63 | .92  | 1.45 | 2.14 | 5/16-18 x 1 3/4 | 1         |
| ZS-286         | ZS-310             | T3    | 7/8       | —         | 1.41 | 2.75 | 2.63 | .92  | 1.45 | 2.14 | 5/16-18 x 1 3/4 | 1         |
| ZS-288         | ZS-312             | T3    | 1         | —         | 1.41 | 2.75 | 2.63 | .92  | 1.45 | 2.14 | 5/16-18 x 1 3/4 | 1         |
| ZS-290         | ZS-314             | T4    | —         | 3/4       | 1.77 | 3.34 | 3.22 | 1.02 | 1.65 | 2.34 | 5/16-18 x 2     | 1         |
| ZS-292         | ZS-316             | T5    | 1 1/4     | —         | 2.20 | 4.33 | 4.17 | 1.25 | 2.12 | 2.81 | 5/16-18 x 2 3/8 | 1         |
| ZS-294         | ZS-318             | T5    | —         | 1         | 2.20 | 4.33 | 4.17 | 1.25 | 2.12 | 2.81 | 5/16-18 x 2 3/8 | 1         |
| ZS-296         | ZS-320             | T5    | 1 1/2     | —         | 2.20 | 4.33 | 4.17 | 1.25 | 2.12 | 2.81 | 5/16-18 x 2 3/8 | 1         |
| ZS-298         | ZS-322             | T5    | —         | 1 1/4     | 2.20 | 4.33 | 4.17 | 1.25 | 2.12 | 2.81 | 5/16-18 x 2 3/8 | 1         |

**Beta "Smoothie" Clamps  
Twin Series  
Steel and 304 Stainless Components**



- Cushions are polypropylene (green color)
- Chamfered and smooth core protects hose cover and extends the life of the hose
- Reduces wear on hose connection caused by vibration
- Uses standard beta twin hardware

| Steel Item No. | Stainless Item No. | Group | SAE 100R1 Hose Size | A1   | A2   | A3   | H1   | H2   | H3   | Bolt            | Pack Qty. |
|----------------|--------------------|-------|---------------------|------|------|------|------|------|------|-----------------|-----------|
| ZS-324         | ZS-336             | T2    | 1/4                 | 1.14 | 2.16 | 2.08 | .70  | 1.02 | 1.71 | 5/16-18 x 1 1/8 | 1         |
| ZS-326         | ZS-338             | T2    | 3/8                 | 1.14 | 2.16 | 2.08 | .70  | 1.02 | 1.71 | 5/16-18 x 1 1/8 | 1         |
| ZS-328         | ZS-340             | T3    | 1/2                 | 1.41 | 2.75 | 2.63 | .92  | 1.45 | 2.14 | 5/16-18 x 1 3/4 | 1         |
| ZS-330         | ZS-342             | T4    | 5/8                 | 1.77 | 3.34 | 3.22 | 1.02 | 1.65 | 2.34 | 5/16-18 x 2     | 1         |
| ZS-332         | ZS-344             | T4    | 3/4                 | 1.77 | 3.34 | 3.22 | 1.02 | 1.65 | 2.34 | 5/16-18 x 2     | 1         |
| ZS-334         | ZS-346             | T5    | 1                   | 2.20 | 4.33 | 4.17 | 1.25 | 2.12 | 2.81 | 5/16-18 x 2 3/8 | 1         |



# CLAMPS & WORKHOLDING

**Spring Retractable Hose Reels**

Properly stores hose when not in use to prevent tripping and injury. Saves time over manually coiling hose after use. All steel construction with durable baked on powder coat finish. Multi-position guide arm allows for mounting on either floor, wall, ceiling, bench or pit. Automatically maintains desired working length of hose and adjustable hose bumpers allow any length of hose to be maintained outside the reel. Comes complete with hose. Supplied with standard PVC hose.



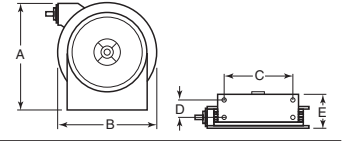
Style A



Style B



| Item No. | Reelcraft | Style | Hose I.D. | Lgth. (Ft.) | psi | Max. Temp. Degrees | Application | A      | B      | C     | D     | E     | Mounting Holes Dia. | Weight | Pack Qty. |
|----------|-----------|-------|-----------|-------------|-----|--------------------|-------------|--------|--------|-------|-------|-------|---------------------|--------|-----------|
| RHR-10   | 4420      | A     | 1/4       | 20          | 300 | 150                | Air/Water   | 12 7/8 | 12 3/8 | 8     | 2 1/2 | 5 3/8 | 5/16                | 20     | 1         |
| RHR-15   | 4435      | A     | 1/4       | 35          | 300 | 150                | Air/Water   | 12 7/8 | 12 3/8 | 8     | 2 1/2 | 5 3/8 | 5/16                | 21     | 1         |
| RHR-25   | 4625      | A     | 3/8       | 25          | 300 | 150                | Air/Water   | 12 7/8 | 12 3/8 | 8     | 2 1/2 | 5 3/8 | 5/16                | 22     | 1         |
| RHR-30   | 5635      | A     | 3/8       | 35          | 300 | 150                | Air/Water   | 14 1/2 | 13 3/4 | 9 3/4 | 2 1/2 | 6     | 5/16                | 28     | 1         |
| RHR-35   | 5650      | A     | 3/8       | 50          | 300 | 150                | Air/Water   | 17 1/2 | 16 1/2 | 9 3/4 | 2 1/2 | 6     | 5/16                | 40     | 1         |
| RHR-50   | 7850      | B     | 1/2       | 50          | 300 | 150                | Air/Water   | 20 1/4 | 19     | 7 7/8 | 3 3/8 | 7     | 1/2                 | 57     | 1         |



**"Competitor" Large Capacity Hose Reel**



One piece all welded steel "A" frame construction, low profile outlet and open drum slot riser for smooth even hose wraps and no kinking. Solid steel crank with smooth round handle easily rotates drum riding on permanently lubricated pillow-block bearings. Durable proprietary CPC® powder coat finish. Brass NPT swivel inlet is machined from solid. Long handled lock pin secures reel and rotation when not in use. Hose not included.

| Item No.      | Hose Capacity (FL) |           |        | Max Temp Degrees F | WxHxL                    | Weight (Lbs.) | Pack Qty. |
|---------------|--------------------|-----------|--------|--------------------|--------------------------|---------------|-----------|
|               | 3/8" I.D.          | 1/2" I.D. | p.s.i. |                    |                          |               |           |
| CX-1125-4-100 | 140                | 100       | 3,000  | 225                | 21 3/4 x 18 1/8 x 17 1/2 | 36            | 1         |
| CX-1125-4-200 | 300                | 200       | 3,000  | 225                | 27 3/4 x 18 1/8 x 17 1/2 | 39            | 1         |
| CX-1125-4-325 | 450                | 325       | 3,000  | 225                | 33 3/4 x 18 1/8 x 17 1/2 | 48            | 1         |

**Self-Retracting Hose Reels**



Style A

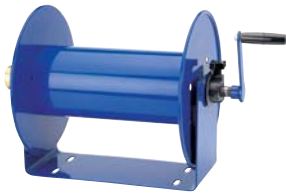


Style B

For air, water or oil. Lubricated factory-balanced containerized spring motor ensures long lasting reliability. 1/4" steel base and post adds rigidity reducing vibration. Larger size and double supported axle on B series models. Triple support points to the center shaft and dual pedestal support arms on C series models. Solid 1" steel axle with self-lubricated precision bearings. Guide arm adjusts to wall, floor and ceiling mounting positions. Multi-position lock ratchet secures hose at desired length. Includes hose and adjustable hose stop.

| Item No.    | Style | I.D. | Length (Ft.) | p.s.i. | Max Temp Degrees F | WxHxL               | Weight (Lbs.) | Pack Qty. |
|-------------|-------|------|--------------|--------|--------------------|---------------------|---------------|-----------|
|             |       |      |              |        |                    |                     |               |           |
| CX-SH-N-350 | B     | 3/8  | 50           | 300    | 150                | 8 3/4 x 21 x 19 3/8 | 50            | 1         |

**"Challenger" Hand Crank Hose Reel**



Lightweight compact design, with high-quality heavy-duty steel construction and Coxreels' proprietary CPC® powder coat finish. Direct hand crank rewind action, with comfortable round tapered handle. Adjustable hand brake prevents unreeling backlash. Solid brass full-flow NPT swivel inlet, rolled edges on discs provide maximum protection. High pressure 4,000psi. Hose not included.

| Item No.     | I.D. | Length (Ft.) | p.s.i. | Max Temp Degrees F | WxHxL x x        | Weight (Lbs.) | Pack Qty. |
|--------------|------|--------------|--------|--------------------|------------------|---------------|-----------|
| CX-112-3-100 | 3/8  | 100          | 4,000  | 225                | 15 1/4 x 13 x 12 | 19            | 1         |
| CX-112-3-150 | 3/8  | 150          | 4,000  | 225                | 19 3/4 x 13 x 12 | 21            | 1         |
| CX-117-3-250 | 3/8  | 250          | 4,000  | 225                | 15 1/4 x 18 x 17 | 30            | 1         |
| CX-117-4-225 | 1/2  | 225          | 4,000  | 225                | 20 x 18 x 17     | 31            | 1         |

**EZ-Coil™ Controlled Retraction Hose Reels**

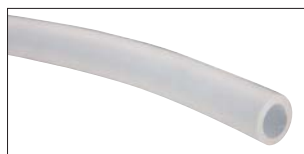


Equipped with all the high-quality features and components found Coxreels' standard reels with the extra added safety of EZ-Coil™. Controlled retraction reduces workplace accidents and injuries caused by careless hose reel operation. Guide arm adjusts for various mounting positions. Locking ratchet secures desired hose length. For air, water or oil. Includes hose and adjustable rubber hose stop.

| Item No.       | I.D. | Length (Ft.) | p.s.i. | Max Temp Degrees F | WxHxL                   | Weight (Lbs.) | Pack Qty. |
|----------------|------|--------------|--------|--------------------|-------------------------|---------------|-----------|
| CX-EZ-P-LP-325 | 3/8  | 25           | 300    | 150                | 6 1/4 x 14 1/2 x 13 3/4 | 35            | 1         |
| CX-EZ-P-LP-350 | 3/8  | 50           | 300    | 150                | 6 1/8 x 18 1/4 x 17 3/4 | 51            | 1         |



**Nylon Tubing**



High quality nylon tubing for applications requiring lightweight, toughness, flexibility and chemical resistance. It is dimensionally stable.

**Tubing is compatible with SMC fittings. See page 944.**

| Black    |          | Natural  |          | OD   | ID   | Wall Thickness | Working Pressure | Roll Length Feet |
|----------|----------|----------|----------|------|------|----------------|------------------|------------------|
| Item No. | Item No. | Item No. | Item No. |      |      |                |                  |                  |
| TUB-10   | TUB-13   | 1/8      |          | .093 | .016 | 225            | 500              |                  |
| TUB-15   | TUB-18   | 1/4      |          | .170 | .040 | 265            | 500              |                  |
| TUB-20   | —        | 3/8      |          | .275 | .050 | 220            | 500              |                  |
| —        | TUB-23   | 1/2      |          | .275 | .050 | 220            | 100              |                  |
| TUB-25   | TUB-28   | 1/2      |          | .375 | .062 | 200            | 500              |                  |

**Note:** The working pressure PSI @ 75 degrees Fahrenheit.

**Polyurethane Tubing**



Made from ether based compound, it will not hydrolyze or degrade when exposed to water. Extremely flexible and resistant to kinking. Stands up well to fuels and oils.

**Tubing is compatible with SMC fittings. See page 944.**

| Black    |          | Natural  |          | OD   | ID   | Wall Thickness | Working Pressure | Roll Length Feet |
|----------|----------|----------|----------|------|------|----------------|------------------|------------------|
| Item No. | Item No. | Item No. | Item No. |      |      |                |                  |                  |
| TUB-70   | TUB-73   | 1/8      | 1/16     |      | .031 | 233            | 500              |                  |
| TUB-75   | TUB-78   | 1/4      |          | .160 | .045 | 148            | 500              |                  |
| TUB-80   | TUB-83   | 3/8      |          | 1/4  | .062 | 147            | 100              |                  |
| TUB-85   | —        | 1/2      |          | .320 | .090 | 140            | 250              |                  |
| —        | TUB-88   | 1/2      |          | .320 | .090 | 140            | 100              |                  |

**Note:** The working pressure PSI @ 75 degrees Fahrenheit.

**Polyethylene Tubing**



| Black    |          | Natural  |          | OD   | ID   | Wall Thickness | Working Pressure | Roll Length Feet |
|----------|----------|----------|----------|------|------|----------------|------------------|------------------|
| Item No. | Item No. | Item No. | Item No. |      |      |                |                  |                  |
| TUB-50   | TUB-53   | 1/8      |          | .062 | .031 | 120            | 100              |                  |
| TUB-55   | TUB-58   | 1/4      |          | .170 | .040 | 173            | 100              |                  |
| TUB-60   | TUB-63   | 3/8      |          | .250 | .062 | 192            | 100              |                  |
| TUB-65   | —        | 1/2      |          | .375 | .062 | 123            | 100              |                  |

**Note:** The working pressure PSI @ 75 degrees Fahrenheit.

**Tubing & Accessories  
 Plastic Tubing Cutter**



Tubing Cutter



Replacement Blades



Tubing Cutter with Leash

Provides a square cut without deforming the tubing. Allows for a secure connection into a fitting. Ideal for plastic tubing 1/8" to 3/4" OD. The leash allows you to affix to clothing or cutting location.

| Item No. | Description                 | Pack Qty. |
|----------|-----------------------------|-----------|
| TUB-100  | Plastic Tube Cutter         | 1         |
| TUB-105  | Plastic Tube Cutter w/Leash | 1         |
| TUB-110  | Tube Cutter Blades          | 1         |

**Tubing & Accessories  
 Plastic Tube Channels**



- Keeps tubing neat and organized
- Makes runs easy to follow
- Ten channels for tubing with 1/4" outside diameter
- Adhesive back for mounting

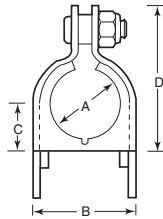
| Item No. | Description           | Pack Qty. |
|----------|-----------------------|-----------|
| TUB-130  | Plastic Tube Channels | 1         |

A low pressure tubing that is widely used due to its resistance to most chemicals and solvents, good flexibility and economical cost.

**Tubing is compatible with SMC fittings. See page 944.**

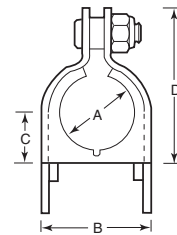
Cush-A-Clamp® channel mounted clamping systems are ideal for multiple line runs, while absorbing shock and vibration, reducing unwanted noise and preventing galvanic corrosion. The clamp includes a unique shoulder stud which is securely fastened to one clamp half. This design eliminates overtightening and rotation while a nylon insert nut assures a positive lock. Clamps are steel with electrochromate finish. Fits any standard 1 5/8" wide channel (available below). The cushion is manufactured from a thermoplastic elastomer which withstands the effects of most oils, chemicals, and industrial cleaning compounds, in temperatures from -50 degrees Fahrenheit to 270 degrees Fahrenheit. A patented "living hinge" allows the cushion to be spread apart for quick, easy installation. Interlock edges and channel locator legs insure that the cushion remains in place. Retrofits can be added without disassembling your present system.

**Tube Clamps**



| Item No. | Copper & Steel Tubing OD | Copper Water Pipe Nom. OD | A   | B    | C   | D    | Pack Qty. |
|----------|--------------------------|---------------------------|-----|------|-----|------|-----------|
| ZS-12    | 3/4                      | 5/8                       | .75 | 1.20 | .52 | 1.68 | 1         |
| ZS-14    | 7/8                      | 3/4                       | .87 | 1.31 | .58 | 1.82 | 1         |

**Pipe Clamps**

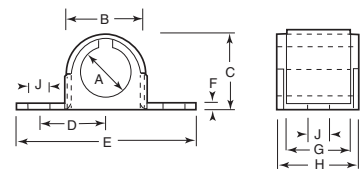


| Item No. | Nominal Pipe Size | A    | B    | C    | D    | Pack Qty. |
|----------|-------------------|------|------|------|------|-----------|
| ZS-21    | 1                 | 1.31 | 1.76 | .81  | 2.34 | 1         |
| ZS-27    | 1 1/4             | 1.66 | 2.17 | .99  | 2.73 | 1         |
| ZS-30    | 1 1/2             | 1.90 | 2.35 | 1.09 | 2.86 | 1         |

**U-Strap Clamps**

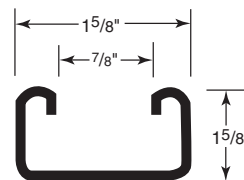
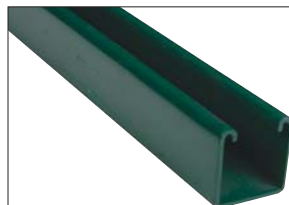


The Omega Series® clamp assembly retains, guides, protects, and uniformly spaces line runs. Attached with two standard fasteners (not included) to any flat surface, the Omega Series eliminates the use of special channels, providing a savings in both space and cost. Clamp is steel with electrochromate finish. The cushion is manufactured from a thermoplastic elastomer which withstands the effects of most oils, chemicals, and industrial cleaning compounds, in temperatures from -50 to 275 degree Fahrenheit. Interlock edges insure that the cushion remains in place. Fasteners not included.



| Item No. | Copper & Steel Tubing OD | Copper Water Pipe Nom. OD | Nominal Pipe Size | A   | B    | C    | D   | E    | F   | G   | H   | J   | Pack Qty. |
|----------|--------------------------|---------------------------|-------------------|-----|------|------|-----|------|-----|-----|-----|-----|-----------|
| ZS-108   | 1/2                      | 3/8                       | 1/4               | .50 | .82  | .75  | .80 | 2.20 | .06 | .75 | .98 | .26 | 1         |
| ZS-110   | 5/8                      | 1/2                       | 3/8               | .62 | .94  | .87  | .86 | 2.32 | .06 | .75 | .98 | .26 | 1         |
| ZS-114   | 3/4                      | 5/8                       | 1/2               | .87 | 1.18 | 1.03 | .98 | 2.56 | .06 | .75 | .98 | .26 | 1         |

**Cush-A-Clamp® Channel**



Made of low gauge carbon steel painted green. Channel comes in 5' lengths.

| Item No. | Max. Load | Pack Qty. |
|----------|-----------|-----------|
| ZS-1000  | 190       | 1         |



**Air Guns  
Safety Tip - Bottom Hook**



- Chrome plated casting
- Maximum safety and efficiency
- Non-corrosive
- Bottom hook

| Item No. | Description         | Inlet | Pack Qty. |
|----------|---------------------|-------|-----------|
| COL-600S | Thumb Lever Control | ¼ FPT | 1         |
| COL-700S | Pistol Grip         | ¼ FPT | 1         |

**Air Guns  
Extension Safety Tip**



- Chrome plated casting
- 5/16" OD tip facilitates use in tight places
- Bottom hook
- Thumb lever control

| Item No.  | Description          | Inlet | Pack Qty. |
|-----------|----------------------|-------|-----------|
| COL-603-S | 3" Safety Extension  | ¼ FPT | 1         |
| COL-606-S | 6" Safety Extension  | ¼ FPT | 1         |
| COL-608-S | 8" Safety Extension  | ¼ FPT | 1         |
| COL-610-S | 10" Safety Extension | ¼ FPT | 1         |
| COL-612-S | 12" Safety Extension | ¼ FPT | 1         |

**Air Guns  
High Volume Air Flow Safety Tip**



High Volume Tip

Premium

Standard

Designed to increase flow while reducing air consumption. Provides more efficient blow off operation and savings in compressed air costs. Conforms to OSHA standards for outlet pressure requirements (1910.2424B) and occupational noise level exposure (1910.95). Tips are nickel plated brass with 1/8" MPT. Available in either standard or premium models.

| Item No.    | Description               | Inlet | Pack Qty. |
|-------------|---------------------------|-------|-----------|
| COL-600PV-S | Premium High Volume Blow  | ¼ FPT | 1         |
| COL-600V-S  | Standard High Volume Blow | ¼ FPT | 1         |
| COL-SVT10   | High Volume Blow Gun Tip  | —     | 1         |

**Air Guns  
Premium Safety Tip and Extension**



Standard

3" Standard

Standard Replacement Nozzle

Tough zinc die cast body with flat black powder coat finish and nickel plated tips combined for superior corrosion resistance. Ergonomic design and large operating lever reduce user fatigue and discomfort even during long term use. All come with safety tips.

**Air Guns  
Safety Tamperproof**



- Safety tip permanently attached to body
- Internal valve to keep pressure below 30 psi @ 150 psi
- Chrome plated castings

| Item No.  | Inlet | Pack Qty. |
|-----------|-------|-----------|
| COL-600ST | ¼ FPT | 1         |

**Air Guns  
Safety Booster Tip**



- Venturi holes maximize air volume
- Chrome plated casting
- Non-corrosive and leak proof
- Thumb lever control
- Lightweight

| Item No.   | Inlet | Pack Qty. |
|------------|-------|-----------|
| COL-600-SB | ¼ FPT | 1         |

**Air Guns  
Safety Flex Tip**



- Chrome plated casting
- Flexible neoprene tip allows easy access into brake and transmission fluid lines and passages
- Bottom hook
- Thumb lever control

| Item No.     | Description         | Inlet | Pack Qty. |
|--------------|---------------------|-------|-----------|
| COL-600-FF06 | 6" Safety Flex Tip  | ¼ FPT | 1         |
| COL-600-FF12 | 12" Safety Flex Tip | ¼ FPT | 1         |

**Rubber Tip**



Thumb Lever



Pistol Grip

- High pressure output
- Chrome plated casting

| Item No. | Description | Inlet | Pack Qty. |
|----------|-------------|-------|-----------|
| COL-601  | Thumb Lever | ¼ FPT | 1         |
| COL-701  | Pistol Grip | ¼ FPT | 1         |

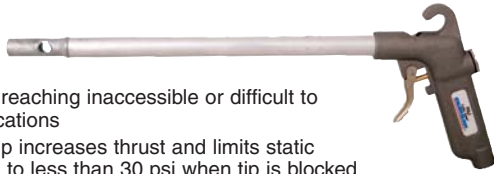
| Item No.   | Description | Inlet | Pack Qty. | Replacement Nozzle Item No. |
|------------|-------------|-------|-----------|-----------------------------|
| COL-600P-S | Standard    | ¼ FPT | 1         | COL-ST10                    |
| COL-603P-S | 3" Standard | ¼ FPT | 1         | COL-ST203                   |



# AIR GUNS

Buy One or Buy Bulk & SAVE

## Air Guns Long John Safety



- Ideal for reaching inaccessible or difficult to reach locations
- Venturi tip increases thrust and limits static pressure to less than 30 psi when tip is blocked
- 1/4" NPT inlet
- Maximum operating pressure 150 psi
- Lightweight pistol style grip and standard aluminum extension
- Available in four lengths
- Meets OSHA standards

| Item No. | Length (ft.) | Pack Qty. | Item No. | Length (ft.) | Pack Qty. |
|----------|--------------|-----------|----------|--------------|-----------|
| OG-1     | 1            | 1         | OG-3     | 3            | 1         |
| OG-2     | 2            | 1         | OG-4     | 4            | 1         |

## Air Guns Jet Guard Safety



- Delivers high thrust with pinpoint accuracy
- Safety air shield protects workers from chip fly-back
- Limits static pressure to 30 psi when tip is blocked
- Knurled adjusting nut to control air volume
- 1/4" NPT inlet
- Maximum operating pressure 120 psi
- Cast aluminum pistol grip with hanging hook
- Meets OSHA standards

| Item No. | Description              | Pack Qty. |
|----------|--------------------------|-----------|
| OG-5     | Jet Guard Safety Air Gun | 1         |

## Air Guns Whisper Jet Safety



- Unique nozzle design reduces noise levels 6-20 dB less than conventional air guns
- Solid conical tip design prevents blockage of nozzle
- 1/4" NPT inlet
- Maximum operating pressure 150 psi
- Cast aluminum pistol grip with hanging hook
- Meets OSHA standards

| Item No. | Description                | Pack Qty. |
|----------|----------------------------|-----------|
| OG-6     | Whisper Jet Safety Air Gun | 1         |

## Air Gun Kit Patented Quick Coupler System

- Patented quick change adapter to switch nozzles quickly
- High quality lever-operated heavy-duty air gun
- Includes five nozzles:
  - High flow safety nozzle
  - Six inch extension safety nozzle
  - Rubber tip nozzle
  - Needle tip nozzle
  - Air-screen safety nozzle
- Clear vinyl compartmented snap pouch included

## Air Guns Brass Tip - Non-Venting



- Won't scratch or nick delicate surfaces
- Great for blowing out molds
- Chrome plated casting

| Item No. | Description         | Size    | Pack Qty. |
|----------|---------------------|---------|-----------|
| COL-605  | Thumb Lever Control | 1/4 FPT | 1         |

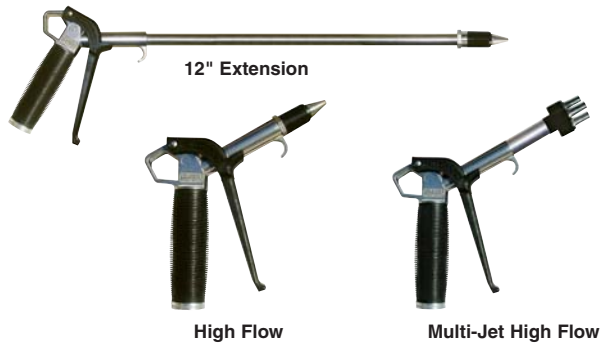
## Air Guns Safety Blow Brush



- Combines cleaning capabilities of a brush and a blow gun
- Steel brush permanently attached
- Thumb lever control
- Chrome plated casting

| Item No. | Inlet   | Pack Qty. |
|----------|---------|-----------|
| COL-801  | 1/4 FPT | 1         |

## Air Guns High Volume



- Ideal for heavy-duty clean-up and blow-off
- Light weight, sleek design
- Meets or exceeds OSHA regulations
- Has a variable flow trigger for controlled blow-off
- COL-TYP2500 = 2.1 lbs. thrust, 34 cfm @ 125 psi
- COL-TYP3800 = 3.1 lbs. thrust, 51 cfm @ 125 psi

| Item No.      | Description                   | Inlet | Pack Qty. |
|---------------|-------------------------------|-------|-----------|
| COL-TYP2500CS | High Flow Tip                 | 1/4   | 1         |
| COL-TYP2512   | 12" Extension                 | 1/4   | 1         |
| COL-TYP2524   | 24" Extension                 | 1/4   | 1         |
| COL-TYP2536   | 36" Extension                 | 1/4   | 1         |
| COL-TYP2548   | 48" Extension                 | 1/4   | 1         |
| COL-TYP3800CS | Multi-Jet with High Flow Tips | 3/8   | 1         |



| Item No. | Description | Pack Qty. |
|----------|-------------|-----------|
| ZS-400   | Air Gun Kit | 1         |



# AIR GUNS



## Air Guns Extended Nozzle Pistol Grip



- Plastic body for light weight
- Pistol grip for comfortable use
- Variable output trigger
- Four inch extended nozzle
- OSHA compliant

| Item No.  | Inlet | Pack Qty. |
|-----------|-------|-----------|
| COL-750-S | ¼ FPT | 1         |

## Air Guns Siphon Spray



- Sprays solvents, mold release, cleaning, etc.
- Eight foot clear plastic suction tubing included
- Thumb lever control



| Item No. | Inlet | Pack Qty. |
|----------|-------|-----------|
| COL-602  | ¼ FPT | 1         |

## Air Guns Button



Economical alternative to the lever operated and pistol grip styles. Black polyurethane epoxy finish assures long term protection against corrosion.

| Item No.  | Description    | Inlet | Pack Qty. |
|-----------|----------------|-------|-----------|
| COL-660-S | Safety Tip     | ¼ FPT | 1         |
| COL-665   | Non-Safety Tip | ¼ FPT | 1         |

## Air Gun Accessories High Volume Air Gun Tips



| Item No.     | Description                           | Pack Qty. |
|--------------|---------------------------------------|-----------|
| COL-HFN00MDL | High Flow Tip with Male Pipe Thread   | 1         |
| COL-HFN00FDL | High Flow Tip with Female Pipe Thread | 1         |
| COL-MJNODL   | Multi-Jet Tip (Female)                | 1         |

## Air Guns Syphon Spray



- Pistol grip spray gun for heavy duty use
- High vacuum syphon delivers up to 16 gallons per hour
- 12" extension for reaching difficult, hard to reach locations
- Adjustable trigger and nozzle tip control volume and spray pattern
- Comes with six foot syphon hose and sinker
- ¼" NPT inlet
- Maximum operating pressure 150 psi
- Meets OSHA standards

| Item No. | Description  | Pack Qty. |
|----------|--------------|-----------|
| OG-7     | Syphon Spray | 1         |

## Air Guns Blind Hole



- Delivers a high velocity jet of air into deep crevices and blind holes to flush out chips and dirt
- Six inch long, 3/16" OD brass extension with 1/8" diameter plastic stylus for access into narrow holes
- Safety air cone protects workers from chip fly-back
- ¼" NPT inlet
- Maximum operating pressure 120 psi
- Meets OSHA standards

| Item No. | Description        | Pack Qty. |
|----------|--------------------|-----------|
| OG-8     | Blind Hole Air Gun | 1         |

# AIR GUNS & ACCESSORIES

Buy One or Buy Bulk & SAVE

## Air Gun Accessories Needle Blow Gun Tips



Needle tips allow user to get into and blow out tight cavities, crevices and dies too narrow for other tips to reach. Stainless steel needles with nickel plated brass base. 1/8" MPT will fit most blow guns. Available individually or in an assortment of all five. Not vented.

| Item No.    | Dia. of Needle  | Length | Pack Qty. |
|-------------|-----------------|--------|-----------|
| COL-SNT-1   | .042            | 1 5/16 | 1         |
| COL-SNT-2   | .050            | 1 3/16 | 1         |
| COL-SNT-3   | .072            | 1 1/4  | 1         |
| COL-SNT-4   | .095            | 2 1/32 | 1         |
| COL-SNT-5   | .134            | 2 3/4  | 1         |
| COL-KIT-DPB | Kit of All Five |        | 1         |



## Air Gun Accessories Hose and Gun Sets



Includes safety air gun (COL-600S) and 1/4" ID coiled nylon hose with 1/4" rigid male fittings.

| Item No. | Hose Length (ft.) | Pack Qty. |
|----------|-------------------|-----------|
| COL-K1   | 12                | 1         |
| COL-K2   | 25                | 1         |

## Self-Storing Air Hoses Nylon and Polyurethane



Lightweight and permanently coiled. Made from either nylon or polyurethane. Polyurethane offers better kinking, abrasion resistance and coil memory. Hoses come with swivel fittings on both ends to avoid tangling and twisting.

| Item No.     | Material | Connection | Hose ID | Length (ft.) | Pack Qty. |
|--------------|----------|------------|---------|--------------|-----------|
| COL-N14-12B  | Nylon    | 1/4        | 1/4     | 12           | 1         |
| COL-N14-25B  | Nylon    | 1/4        | 1/4     | 25           | 1         |
| COL-PU14-5B  | Poly     | 1/4        | 1/4     | 5            | 1         |
| COL-PU14-10B | Poly     | 1/4        | 1/4     | 10           | 1         |
| COL-PU14-15B | Poly     | 1/4        | 1/4     | 15           | 1         |
| COL-PU14-20B | Poly     | 1/4        | 1/4     | 20           | 1         |
| COL-PU14-25B | Poly     | 1/4        | 1/4     | 25           | 1         |
| COL-N38-12B  | Nylon    | 3/8        | 3/8     | 12           | 1         |
| COL-N38-25B  | Nylon    | 3/8        | 3/8     | 25           | 1         |

Note: All connections are male pipe threads.

## Air Gun Accessories Neoprene Hose



- Blue neoprene cover with black nitrile tube
- Flexible, bendable coolant and air hose
- Adjust to any position and won't shift
- Allows air or coolant to be precisely directed to the work area
- RMA Class A-high oil resistance
- Leakproof and engineered with brass nozzles



| Item No.  | Description                | Pack Qty. |
|-----------|----------------------------|-----------|
| COL-90406 | 1/4 MPT x 6" Nitrile Hose  | 1         |
| COL-90409 | 1/4 MPT x 9" Nitrile Hose  | 1         |
| COL-90412 | 1/4 MPT x 12" Nitrile Hose | 1         |
| COL-90415 | 1/4 MPT x 15" Nitrile Hose | 1         |

## Blow Gun Tips



Fits all Coilhose Pneumatic air guns in this catalog, as well as any air gun that will take 1/8" MPT tip.

| Item No.  | Description                 | Pack Qty. |
|-----------|-----------------------------|-----------|
| COL-ST10  | Standard Replacement Nozzle | 1         |
| COL-ST11  | Safety Air Booster Tip      | 1         |
| COL-ST12  | Safety Shield Tip           | 1         |
| COL-SAT13 | Rubber Tip                  | 1         |

## Air Gun Accessories Blow-Off Nozzles

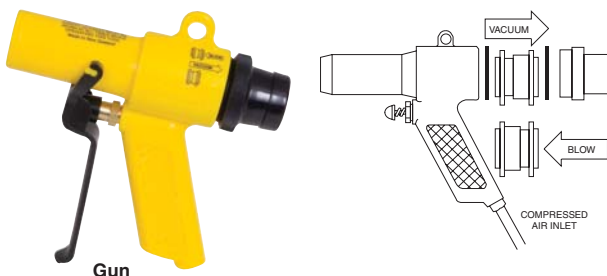


High thrust air nozzle saves compressed air by flow amplification of 25 times and delivers precise airflow. Adjustable setting allows flow adjustment independent of regulator to minimize air consumption required for blow off, part ejection, cooling or drying. OSHA approved. 1/8" NPT connection. 1.88" length.



| Item No.  | Description               | Pack Qty. |
|-----------|---------------------------|-----------|
| VOR-900   | Aluminum Blow-Off Nozzle  | 1         |
| VOR-900SS | Stainless Blow-Off Nozzle | 1         |

## Blow/Vacuum Gun



Gun



Gun with Dust Bag Kit



8' Suction Hose

- Two cleaning tools in one
- Made of tough nylon material
- Resists most chemicals
- Venturi design increases air volume

Two-in-one cleaning tool operates off shop air to create a powerful vortex for either blowing or vacuuming. Blows clean lathes, saws, etc. Can also be used to provide cooling in manufacturing. Vacuums metal filing, dust, trimmings, etc., as well as liquid and granulated materials. Hose not included and may be purchased separately.

| Item No. | Description              | Pack Qty. |
|----------|--------------------------|-----------|
| JMC-1    | Gun                      | 1         |
| JMC-2    | Gun w/Dust Bag Kit       | 1         |
| JMC-4    | 8' Suction Hose (1 1/2") | 1         |

# AIR HOSE & QUICK DISCONNECTS



## Coiled Hose Polyurethane Air Hose Assemblies



Polyurethane air hose assemblies are lightweight and highly kink and abrasion resistant. They will withstand the rigors of tough industrial environments while maintaining their resiliency over a long period of time. Resistant to most oils and fuels. Features include straight tails that provide built-in whip hose and reusable fittings.

1/4" working pressure rated at 145 psi @ 75 degrees Fahrenheit  
 3/8" working pressure rated at 135 psi @ 75 degrees Fahrenheit

| Item No.     | ID x OD    | Lgth. (ft.) | MPT Fitting            | Coil OD | Retracted Length | Pack Qty. |
|--------------|------------|-------------|------------------------|---------|------------------|-----------|
| COL-PR145AB  | 1/4 x 3/8  | 5           | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 2 1/2            | 1         |
| COL-PR1410AB | 1/4 x 3/8  | 10          | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 6                | 1         |
| COL-PR1415AB | 1/4 x 3/8  | 15          | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 9 1/2            | 1         |
| COL-PR1420AB | 1/4 x 3/8  | 20          | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 13               | 1         |
| COL-PR1425AB | 1/4 x 3/8  | 25          | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 16               | 1         |
| COL-PR1430AB | 1/4 x 3/8  | 30          | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 19               | 1         |
| COL-PR1450AB | 1/4 x 3/8  | 50          | 1/4 Rigid / 1/4 Swivel | 2 1/2   | 32 1/2           | 1         |
| COL-PR3810AB | 3/8 x 3/16 | 10          | 3/8 Rigid / 3/8 Swivel | 4 1/8   | 5 1/2            | 1         |
| COL-PR3815AB | 3/8 x 3/16 | 15          | 3/8 Rigid / 3/8 Swivel | 4 1/8   | 8 1/2            | 1         |
| COL-PR3820AB | 3/8 x 3/16 | 20          | 3/8 Rigid / 3/8 Swivel | 4 1/8   | 11               | 1         |
| COL-PR3825AB | 3/8 x 3/16 | 25          | 3/8 Rigid / 3/8 Swivel | 4 1/8   | 14               | 1         |
| COL-PR3830AB | 3/8 x 3/16 | 30          | 3/8 Rigid / 3/8 Swivel | 4 1/8   | 17               | 1         |

## Straight Hose General Purpose



General purpose hose features a black EPDM tube; red EPDM cover with a reinforcement of multiple textile spirals. Designed for air and water applications where contact with petroleum products is minimal. It adheres to a 4:1 safety factor and RMA Class C - medium oil resistance. Temperature range -40 to +212 degree Fahrenheit; working pressures at 70 degree Fahrenheit 200 psi.

| Item No.    | ID  | OD     | Lgth. (ft.) | Fitting MPT | Pack Qty. |
|-------------|-----|--------|-------------|-------------|-----------|
| COL-H14012N | 1/4 | 1 1/32 | 12          | 1/4 MPT     | 1         |
| COL-H14025N | 1/4 | 1 1/32 | 25          | 1/4 MPT     | 1         |
| COL-H14050N | 1/4 | 1 1/32 | 50          | 1/4 MPT     | 1         |
| COL-H38012N | 3/8 | 2 1/32 | 12          | 3/8 MPT     | 1         |
| COL-H38025N | 3/8 | 2 1/32 | 25          | 3/8 MPT     | 1         |
| COL-H38050N | 3/8 | 2 1/32 | 50          | 3/8 MPT     | 1         |

## Air Hose Thermoplastic



Thermoplastic combines prime PVC with special additives allowing this hose to resist long term deterioration caused by exposure to air line lubricating oils. A tough cover protects against scuffs, cuts and abrasions while rayon spiral synthetic cord assures added strength, making this a product a popular choice for industrial environments. Temperature range -20 to +150 degree Fahrenheit; working pressure at 70 degree Fahrenheit 300 psi.

| Item No.   | ID  | OD     | Lgth. (ft.) | Fitting MPT | Pack Qty. |
|------------|-----|--------|-------------|-------------|-----------|
| COL-TP4025 | 1/4 | 1 1/32 | 25          | 1/4 MPT     | 1         |
| COL-TP4050 | 1/4 | 1 1/32 | 50          | 1/4 MPT     | 1         |
| COL-TP6025 | 3/8 | 2 1/64 | 25          | 3/8 MPT     | 1         |
| COL-TP6050 | 3/8 | 2 1/64 | 50          | 3/8 MPT     | 1         |

Ball lock mechanism provides positive connection on all general purpose and push-to-connect couplings. Hardened stainless steel balls along with a radiused and induction hardened steel ball race gives extended life to the couplings. All are female NPT end fittings.

## Quick Disconnects Push To Connect - Dry Break Couplings



For hydraulic service, chemical service, test stands, and other applications where endurance and cleanliness is required (dry break). Flush valve minimizes fluid loss and air inclusion. Dirt tolerant, low pressure drop permits easy tool changeover. Det Norske Veritas approved. High strength steel with zinc yellow dichromate plating. Working pressure to 10,000 psi.

| Coupler Item No. | Nipple Item No. | Coupling Size | End Fitting Size NPTF | Pack Qty. |
|------------------|-----------------|---------------|-----------------------|-----------|
| QD-606           | QD-616          | 3/8           | 3/8                   | 1         |
| QD-608           | QD-618          | 1/2           | 1/2                   | 1         |

## Quick Disconnects Industrial Interchange



Meets or exceeds ISO 7241-1 series B interchange for applications in plant, plastic molding, machine tool, test equipment, department of transportation, and mobile hydraulic. Interchangeable with other ISO-7241-1 series B couplings. Proven ball lock mechanism provides positive connection. Poppet style double shut off. High strength steel with zinc clear dichromate plating. Working pressure to 7,500 psi.

| Coupler Item No. | Nipple Item No. | Coupling Size | End Fitting Size NPTF | Pack Qty. |
|------------------|-----------------|---------------|-----------------------|-----------|
| QD-204           | QD-214          | 1/4           | 1/4                   | 1         |
| QD-206           | QD-216          | 3/8           | 3/8                   | 1         |
| QD-208           | QD-218          | 1/2           | 1/2                   | 1         |

## Quick Disconnects General Purpose



For hydraulic and pneumatic general purpose applications. Meets or exceeds MIL-C-51234. High strength steel with zinc yellow dichromate plating. Valves automatically open in both coupler and nipple halves when connected and automatically close when unit is disconnected. For a double shut off coupling, order a valve coupler and a valve nipple. For a single shut off coupling, order valve coupler and without valve nipple. For no shut off or straight through, order plain coupling and nipple. The two-piece body construction permits larger flow passages than the designated size of the coupling, permitting greater flow, while maintaining low pressure drop. Couplers connect and disconnect in seconds. To connect, pull back the sleeve, insert the nipple into the coupler and release the sleeve. To disconnect, pull back the sleeve, remove the nipple and the halves are disconnected. Standard Buna-N Packer seal is standard on all couplings. Seal provides contact over several times the normal O-ring sealing area. Permits a positive seal at all pressures and enables the coupling to seal under adverse conditions such as side load, scratches and dirt on the nipple. Temperature range 40 to 200 degree Fahrenheit. Working pressure to 11,000 psi on straight through units. 4,000 psi on valved units.

| Coupler Item No.     | Nipple Item No. | Coupling Size | End Fitting Size NPTF | Pack Qty. |
|----------------------|-----------------|---------------|-----------------------|-----------|
| <b>With Valve</b>    |                 |               |                       |           |
| QD-104               | QD-114          | 1/4           | 1/4                   | 1         |
| QD-106               | QD-116          | 3/8           | 3/8                   | 1         |
| <b>Without Valve</b> |                 |               |                       |           |
| QD-124               | QD-134          | 1/4           | 1/4                   | 1         |

**Air Gun Accessories  
Ball Swivel Fittings**



Fitting



Conversion Fitting



Connector

Brass ball swivel fittings are used between the tool and air supply hose to eliminate kinking and twisting. 20 to 25 degree bend. Greater flow capacity than other ball swivels. Swivel fittings offer a 1/4" body size and industrial or ARO interchange connector. A conversion fitting to convert from rigid to ball swivel fitting is also available. Ball swivels have nickel plated barbs. Connectors are zinc plated steel with yellow chromate finish.

| Item No.      | Description           | Size               | Pack Qty. |
|---------------|-----------------------|--------------------|-----------|
| COL-B0404BS   | Ball Swivel Fitting   | 1/4 Barb x 1/4 MPT | 1         |
| COL-B0604BS   | Ball Swivel Fitting   | 3/8 Barb x 1/4 MPT | 1         |
| COL-CF0404BS  | Conversion Fitting    | 1/4 FPT x 1/4 MPT  | 1         |
| COL-15-04BS*  | Ball Swivel Connector | 1/4 Body x 1/4 MPT | 1         |
| COL-14-04BS** | Ball Swivel Connector | 1/4 Body x 1/4 MPT | 1         |

\*Industrial connector compatible with COL-150 series couplers

\*\*ARO connector compatible with COL-140 series couplers

**Air Gun Accessories  
Adapter Swivel**



- Attaches to tools and guns to prevent air line twisting and tangling
- 1/4" MPT x 1/4" FPT

| Item No.     | Description    | Pack Qty. |
|--------------|----------------|-----------|
| COL-CFO-404S | Adapter Swivel | 1         |

Plated steel couplers, hardened steel connectors. Max. 300 psi. Available in automotive (Tru-Flate) type "16", industrial type "15" and ARO type "14".

**Automotive (Tru-Flate) Interchange  
Type "16"**



Coupler



Connector

Does not interchange with industrial or ARO connectors.

| Item No. | Type      | Body Size | Thread Size | Pack Qty. |
|----------|-----------|-----------|-------------|-----------|
| COL-160  | Coupler   | 1/4       | 1/4 FPT     | 1         |
| COL-162  | Coupler   | 1/4       | 1/4 MPT     | 1         |
| COL-1602 | Connector | 1/4       | 1/4 FPT     | 1         |
| COL-1601 | Connector | 1/4       | 1/4 MPT     | 1         |

**Couplers & Connectors  
Rigid Hose Barbs**



| Item No.   | Hose ID | Size    | Pack Qty. |
|------------|---------|---------|-----------|
| COL-B0404  | 1/4     | 1/4 MPT | 1         |
| COL-FR0404 | 1/4     | 1/4 FPT | 1         |
| COL-B0604  | 3/8     | 1/4 MPT | 1         |
| COL-FR0604 | 3/8     | 1/4 FPT | 1         |
| COL-B0606  | 3/8     | 3/8 MPT | 1         |
| COL-B0808  | 1/2     | 1/2 MPT | 1         |

**Industrial Interchange  
Type "15"**



Coupler



Connector

Does not interchange with automotive or ARO connectors.

| Item No. | Type      | Body Size | Thread Size   | Pack Qty. |
|----------|-----------|-----------|---------------|-----------|
| COL-150  | Coupler   | 1/4       | 1/4 FPT       | 1         |
| COL-152  | Coupler   | 1/4       | 1/4 MPT       | 1         |
| COL-156  | Coupler   | 1/4       | 3/8 Hose Barb | 1         |
| COL-580  | Coupler   | 3/8       | 3/8 FPT       | 1         |
| COL-581  | Coupler   | 3/8       | 3/8 MPT       | 1         |
| COL-586  | Coupler   | 3/8       | 3/8 Hose Barb | 1         |
| COL-120  | Coupler   | 1/2       | 1/2 FPT       | 1         |
| COL-1501 | Connector | 1/4       | 1/4 MPT       | 1         |
| COL-1502 | Connector | 1/4       | 1/4 FPT       | 1         |
| COL-1506 | Connector | 1/4       | 1/4 Hose Barb | 1         |
| COL-1508 | Connector | 1/4       | 3/8 Hose Barb | 1         |
| COL-5801 | Connector | 3/8       | 3/8 MPT       | 1         |
| COL-5802 | Connector | 3/8       | 3/8 FPT       | 1         |
| COL-5806 | Connector | 3/8       | 3/8 Hose Barb | 1         |
| COL-1201 | Connector | 1/2       | 1/2 MPT       | 1         |

**Couplers & Connectors  
Plated Steel Couplers,  
Hardened Steel Connectors. Max. 300 psi  
Universal Interchange Couplers**



Interchanges with the three most popular 1/4" connectors: industrial (MIL-C4109) type "15", automotive (TRU-FLATE) type "16" and ARO type "14". Push to connect for one hand use. Brass.

| Item No. | Type    | Body Size | Thread Size | Pack Qty. |
|----------|---------|-----------|-------------|-----------|
| COL-150U | Coupler | 1/4       | 1/4 FPT     | 1         |
| COL-152U | Coupler | 1/4       | 1/4 MPT     | 1         |

**ARO Interchange  
Type "14"**



Female Coupler



Connector

Does not interchange with automotive or industrial connectors.

| Item No. | Coupler   | Body Size | Thread Size | Pack Qty. |
|----------|-----------|-----------|-------------|-----------|
| COL-140  | Coupler   | 1/4       | 1/4 FPT     | 1         |
| COL-142  | Coupler   | 1/4       | 1/4 MPT     | 1         |
| COL-1401 | Connector | 1/4       | 1/4 MPT     | 1         |
| COL-1402 | Connector | 1/4       | 1/4 FPT     | 1         |

# COMPRESSION TUBE FITTINGS



Compression fittings require no flaring, soldering, or other tube preparation for assembly and are approved for use with annealed copper, aluminum, and thermoplastic tubing.

## Compression Tube Fittings Brass Union Tee



| Item No. | Tube Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-------------|-----------|---------------------|
| MFP-600  | 1/8       | 5/16-24     | 1         | MFP-902             |
| MFP-601  | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-602  | 5/16      | 1/2-24      | 1         | MFP-905             |
| MFP-603  | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-604  | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-605  | 5/8       | 1 3/16-18   | 1         | MFP-910             |
| MFP-606  | 3/4       | 1-18        | 1         | MFP-912             |

## Compression Tube Fittings Brass Combination Union Tee



| Item No. | Tube Size       | Pack Qty. | Replacement Ferrule |
|----------|-----------------|-----------|---------------------|
| MFP-607  | 3/8 x 1/4 x 1/4 | 1         | MFP-906             |

## Compression Tube Fittings Brass Union Elbow



| Item No. | Tube Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-------------|-----------|---------------------|
| MFP-608  | 1/8       | 5/16-24     | 1         | MFP-902             |
| MFP-609  | 3/16      | 3/8-24      | 1         | MFP-903             |
| MFP-610  | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-611  | 5/16      | 1/2-24      | 1         | MFP-905             |
| MFP-612  | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-613  | 7/16      | 5/8-24      | 1         | MFP-907             |
| MFP-614  | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-615  | 5/8       | 1 3/16-18   | 1         | MFP-910             |
| MFP-616  | 3/4       | 1-18        | 1         | MFP-912             |

## Compression Tube Fittings Brass Straight Union



| Item No. | Tube Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-------------|-----------|---------------------|
| MFP-635  | 1/8       | 5/16-24     | 1         | MFP-902             |
| MFP-636  | 3/16      | 3/8-24      | 1         | MFP-903             |
| MFP-637  | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-638  | 5/16      | 1/2-24      | 1         | MFP-905             |
| MFP-639  | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-640  | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-641  | 5/8       | 1 3/16-18   | 1         | MFP-910             |
| MFP-642  | 3/4       | 1-18        | 1         | MFP-912             |
| MFP-643  | 7/8       | 1 1/8-18    | 1         | MFP-914             |

## Compression Tube Fittings Brass Bulkhead Union



| Item No. | Tube Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-------------|-----------|---------------------|
| MFP-644  | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-645  | 3/8       | 9/16-24     | 1         | MFP-906             |

## Compression Tube Fittings Brass Male Elbow



| Item No. | Tube Size | Pipe Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-----------|-------------|-----------|---------------------|
| MFP-617  | 1/8       | 1/16      | 5/16-24     | 1         | MFP-902             |
| MFP-618  | 1/4       | 1/8       | 7/16-24     | 1         | MFP-904             |
| MFP-619  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-620  | 1/4       | 3/8       | 7/16-24     | 1         | MFP-904             |
| MFP-621  | 3/8       | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-622  | 1/2       | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-623  | 3/4       | 3/4       | 1-18        | 1         | MFP-912             |

## Compression Tube Fittings Brass Female Elbow



| Item No. | Tube Size | Pipe Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-----------|-------------|-----------|---------------------|
| MFP-624  | 1/8       | 1/8       | 5/16-24     | 1         | MFP-902             |
| MFP-625  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-626  | 3/8       | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-627  | 1/2       | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-628  | 3/4       | 3/4       | 1-18        | 1         | MFP-912             |

## Compression Tube Fittings Brass Male Run Tee



| Item No. | Tube Size | Pipe Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-----------|-------------|-----------|---------------------|
| MFP-629  | 1/8       | 1/8       | 5/16-24     | 1         | MFP-902             |
| MFP-630  | 3/16      | 1/8       | 3/8-24      | 1         | MFP-903             |
| MFP-631  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-632  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-633  | 3/8       | 1/4       | 9/16-24     | 1         | MFP-906             |

## Compression Tube Fittings Brass Female Branch Tee



| Item No. | Tube Size | Pipe Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-----------|-------------|-----------|---------------------|
| MFP-634  | 1/4       | 1/8       | 7/16-24     | 1         | MFP-904             |

## Compression Tube Fittings Brass Female Connector

| Item No. | Tube Size | Pipe Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-----------|-------------|-----------|---------------------|
| MFP-646  | 1/8       | 1/8       | 5/16-24     | 1         | MFP-902             |
| MFP-647  | 3/16      | 1/8       | 3/8-24      | 1         | MFP-903             |
| MFP-648  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-649  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-650  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-651  | 3/8       | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-652  | 1/2       | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-653  | 1/2       | 1/2       | 1 1/16-20   | 1         | MFP-908             |

## Compression Tube Fittings Brass Male Connector

| Item No. | Tube Size | Pipe Size | Thread Size | Pack Qty. | Replacement Ferrule |
|----------|-----------|-----------|-------------|-----------|---------------------|
| MFP-654  | 1/8       | 1/16      | 5/16-24     | 1         | MFP-902             |
| MFP-655  | 3/8       | 1/8       | 9/16-24     | 1         | MFP-902             |
| MFP-656  | 1/4       | 1/8       | 7/16-24     | 1         | MFP-904             |
| MFP-657  | 1/4       | 1/4       | 7/16-24     | 1         | MFP-904             |
| MFP-658  | 1/4       | 3/8       | 7/16-24     | 1         | MFP-904             |
| MFP-659  | 3/8       | 3/8       | 9/16-24     | 1         | MFP-906             |
| MFP-660  | 1/2       | 3/8       | 1 1/16-20   | 1         | MFP-908             |
| MFP-661  | 1/2       | 1/2       | 1 1/16-20   | 1         | MFP-908             |
| MFP-662  | 3/4       | 3/4       | 1-18        | 1         | MFP-912             |

## Compression Tube Fittings Brass Ferrules

| Item No. | Description          | For Tube Size | Pack Qty. |
|----------|----------------------|---------------|-----------|
| MFP-902  | Brass Sleeve Ferrule | 1/8           | 1         |
| MFP-903  | Brass Sleeve Ferrule | 3/16          | 1         |
| MFP-904  | Brass Sleeve Ferrule | 1/4           | 1         |
| MFP-905  | Brass Sleeve Ferrule | 5/16          | 1         |
| MFP-906  | Brass Sleeve Ferrule | 3/8           | 1         |
| MFP-907  | Brass Sleeve Ferrule | 7/16          | 1         |
| MFP-908  | Brass Sleeve Ferrule | 1/2           | 1         |
| MFP-910  | Brass Sleeve Ferrule | 5/8           | 1         |
| MFP-912  | Brass Sleeve Ferrule | 3/4           | 1         |
| MFP-914  | Brass Sleeve Ferrule | 7/8           | 1         |

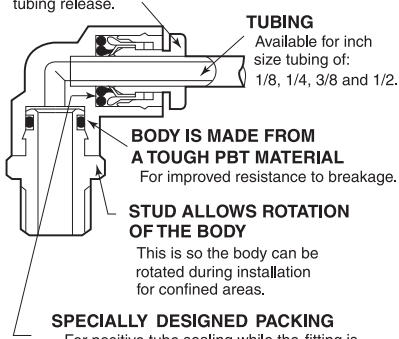


# AIR FITTINGS

Buy One or Buy Bulk & SAVE

## RELEASE BUTTON HAS A LOW DISCONNECTION FORCE

The collet and chuck are both released when the release button is depressed for effortless tubing release.



**SPECIALY DESIGNED PACKING**  
For positive tube sealing while the fitting is under pressure which allows even polyurethane tubing to be used. In addition, it allows for less resistance when tubing is inserted.

### Air Fittings One Touch Male Connector



| Item No. | SMC        | Tube Size OD | Thread NPT | Hex    | Lgth. | Pack Qty. |
|----------|------------|--------------|------------|--------|-------|-----------|
| SMC-10*  | KQ2H01-32  | 1/8          | 10-32      | 5/16   | .97   | 1         |
| SMC-15   | KQ2H01-34S | 1/8          | 1/8        | 7/16   | .87   | 1         |
| SMC-20   | KQ2H01-35S | 1/8          | 1/4        | 9/16   | .77   | 1         |
| SMC-25*  | KQ2H07-32  | 1/4          | 10-32      | 5/16   | .94   | 1         |
| SMC-30   | KQ2H07-34S | 1/4          | 1/8        | 1/2    | .89   | 1         |
| SMC-35   | KQ2H07-35S | 1/4          | 1/4        | 9/16   | .87   | 1         |
| SMC-40   | KQ2H07-36S | 1/4          | 3/8        | 11/16  | .91   | 1         |
| SMC-45   | KQ2H11-34S | 3/8          | 1/8        | 1 1/16 | 1.20  | 1         |
| SMC-50   | KQ2H11-35S | 3/8          | 1/4        | 1 1/16 | 1.32  | 1         |
| SMC-55   | KQ2H11-36S | 3/8          | 3/8        | 1 1/16 | 1.14  | 1         |
| SMC-60   | KQ2H11-37S | 3/8          | 1/2        | 7/8    | 1.06  | 1         |
| SMC-70   | KQ2H13-36S | 1/2          | 3/8        | 7/8    | 1.32  | 1         |
| SMC-75   | KQ2H13-37S | 1/2          | 1/2        | 7/8    | 1.18  | 1         |

\*UNF threads

### Air Fittings One Touch Straight Union



| Item No. | SMC       | Tube Size OD | Body Dia. | Lgth. | Pack Qty. |
|----------|-----------|--------------|-----------|-------|-----------|
| SMC-105  | KQ2H01-00 | 1/8          | .38       | 1.24  | 1         |
| SMC-110  | KQ2H07-00 | 1/4          | .52       | 1.36  | 1         |
| SMC-115  | KQ2H11-00 | 3/8          | .70       | 1.67  | 1         |
| SMC-120  | KQ2H13-00 | 1/2          | .85       | 1.75  | 1         |

### Air Fittings One Touch Male Elbow



| Item No. | SMC        | Tube Size OD | Thread NPT | Height | Pack Qty. |
|----------|------------|--------------|------------|--------|-----------|
| SMC-130* | KJL01-32   | 1/8          | 10-32      | .66    | 1         |
| SMC-135  | KQ2L01-34S | 1/8          | 1/8        | .89    | 1         |
| SMC-140  | KQ2L01-35S | 1/8          | 1/4        | .96    | 1         |
| SMC-145* | KQ2L07-32  | 1/4          | 10-32      | .95    | 1         |
| SMC-150  | KQ2L07-34S | 1/4          | 1/8        | 1.02   | 1         |
| SMC-155  | KQ2L07-35S | 1/4          | 1/4        | 1.10   | 1         |
| SMC-160  | KQ2L07-36S | 1/4          | 3/8        | 1.16   | 1         |
| SMC-165  | KQ2L11-35S | 3/8          | 1/4        | 1.28   | 1         |
| SMC-170  | KQ2L11-36S | 3/8          | 3/8        | 1.34   | 1         |
| SMC-175  | KQ2L11-37S | 3/8          | 1/2        | 1.44   | 1         |
| SMC-180  | KQ2L13-35S | 1/2          | 1/4        | 1.44   | 1         |
| SMC-185  | KQ2L13-36S | 1/2          | 3/8        | 1.52   | 1         |
| SMC-190  | KQ2L13-37S | 1/2          | 1/2        | 1.57   | 1         |

\*UNF threads

Note: Height value is after thread installation.

Can be used with nylon, soft nylon, polyurethane and polyethylene tubing. Max operating pressure of 150 psig. Proof pressure 430 psig. Ambient and media temperatures of 30-140 degrees Fahrenheit. Threads are NPT unless otherwise noted.

See page 935 for tubing.

### Air Fittings One Touch Union Elbow



| Item No. | SMC       | Tube Size OD | Pack Qty. |
|----------|-----------|--------------|-----------|
| SMC-210  | KQ2L01-00 | 1/8          | 1         |
| SMC-215  | KQ2L07-00 | 1/4          | 1         |
| SMC-220  | KQ2L11-00 | 3/8          | 1         |
| SMC-225  | KQ2L13-00 | 1/2          | 1         |

### Air Fittings One Touch Extended Male Elbow



| Item No. | SMC        | Tube Size OD | Thread NPT | Height | Pack Qty. |
|----------|------------|--------------|------------|--------|-----------|
| SMC-230  | KQ2W01-34S | 1/8          | 1/8        | 1.50   | 1         |
| SMC-240  | KQ2W07-34S | 1/4          | 3/8        | 1.69   | 1         |
| SMC-245  | KQ2W07-35S | 1/4          | 1/4        | 1.85   | 1         |
| SMC-255  | KQ2W11-35S | 3/8          | 1/4        | 2.32   | 1         |

Note: Height value is after thread installation.

### Air Fittings One Touch Branch Tee



| Item No. | SMC        | Tube Size OD | Thread NPT | Height | Pack Qty. |
|----------|------------|--------------|------------|--------|-----------|
| SMC-305  | KQ2T01-34S | 1/8          | 1/8        | .89    | 1         |
| SMC-310  | KQ2T01-35S | 1/8          | 1/4        | .96    | 1         |
| SMC-315  | KQ2T07-34S | 1/4          | 1/8        | 1.02   | 1         |
| SMC-320  | KQ2T07-35S | 1/4          | 1/4        | 1.10   | 1         |
| SMC-325  | KQ2T07-36S | 1/4          | 3/8        | 1.16   | 1         |
| SMC-330  | KQ2T11-35S | 3/8          | 1/4        | 1.28   | 1         |
| SMC-335  | KQ2T11-36S | 3/8          | 3/8        | 1.34   | 1         |

Note: Height value is after thread installation.

### Air Fittings One Touch Union Tee



| Item No. | SMC        | Tube Size OD | Pack Qty. |
|----------|------------|--------------|-----------|
| SMC-380  | KQ2T01-00  | 1/8          | 1         |
| SMC-385  | KQ2T07-00A | 1/4          | 1         |
| SMC-390  | KQ2T11-00  | 3/8          | 1         |
| SMC-395  | KQ2T13-00  | 1/2          | 1         |

### Air Fittings One Touch Male Run Tee



| Item No. | SMC        | Tube Size OD | Thread NPT | Pack Qty. |
|----------|------------|--------------|------------|-----------|
| SMC-415  | KQ2Y07-34S | 1/4          | 1/8        | 1         |
| SMC-420  | KQ2Y07-35S | 1/4          | 1/4        | 1         |
| SMC-425  | KQ2Y07-36S | 1/4          | 3/8        | 1         |
| SMC-430  | KQ2Y11-35S | 3/8          | 1/4        | 1         |
| SMC-450  | KQ2Y13-36S | 1/2          | 3/8        | 1         |

### Air Fittings One Touch Union Y



| Item No. | SMC       | Tube Size OD | Pack Qty. |
|----------|-----------|--------------|-----------|
| SMC-605  | KQ2U01-00 | 1/8          | 1         |
| SMC-610  | KQ2U07-00 | 1/4          | 1         |

### Air Fittings One Touch Branch Y



| Item No. | SMC        | Tube Size OD | Thread NPT | Pack Qty. |
|----------|------------|--------------|------------|-----------|
| SMC-625  | KQ2U07-34S | 1/4          | 1/8        | 1         |
| SMC-630  | KQ2U07-35S | 1/4          | 1/4        | 1         |
| SMC-635  | KQ2U07-36S | 1/4          | 3/8        | 1         |
| SMC-645  | KQ2U11-36S | 3/8          | 3/8        | 1         |
| SMC-650  | KQ2U11-37S | 3/8          | 1/2        | 1         |

### Air Fittings One Touch Bulkhead Union



| Item No. | SMC       | Tube Size OD | Thread UNF | Pack Qty. |
|----------|-----------|--------------|------------|-----------|
| SMC-475  | KQ2E01-00 | 1/8          | 1/2-20     | 1         |
| SMC-480  | KQ2E07-00 | 1/4          | 3/16-18    | 1         |
| SMC-485  | KQ2E11-00 | 3/8          | 7/16-14    | 1         |

### Air Fittings One Touch Bulkhead Connector



| Item No. | SMC       | Tube Size OD | Thread NPT | Pack Qty. |
|----------|-----------|--------------|------------|-----------|
| SMC-495  | KQ2E01-35 | 1/8          | 1/4        | 1         |
| SMC-500  | KQ2E07-35 | 1/4          | 1/4        | 1         |
| SMC-505  | KQ2E11-36 | 3/8          | 3/8        | 1         |

### Air Fittings One Touch Plug



| Item No. | SMC     | Tube Size OD | Pack Qty. |
|----------|---------|--------------|-----------|
| SMC-520  | KQ2P-01 | 1/8          | 1         |
| SMC-525  | KQ2P-07 | 1/4          | 1         |
| SMC-530  | KQ2P-11 | 3/8          | 1         |

# STAINLESS STEEL PNEUMATIC CYLINDERS



- Polished ID 304 stainless tubes for low break away
- Precision rolled construction for a solid, leak-proof cylinder
- Machined aluminum heads, clear anodized for extra protection
- Ground, polished and roller burnished 303 stainless rods for longer life cycles
- Temperature range -30 to 230 degrees Fahrenheit, maximum 250 psi

See page 946 for mounting accessories.

## 5/16" Bore Stud Mount Double Acting



| Item No. | Clippard     | Stroke | L      | Pack Qty. |
|----------|--------------|--------|--------|-----------|
| PAC-5    | SDR-05-1/2   | 1/2    | 2 1/16 | 1         |
| PAC-10   | SDR-05-1     | 1      | 2 9/16 | 1         |
| PAC-15   | SDR-05-1-1/2 | 1 1/2  | 3 1/16 | 1         |

Note: Furnished with nut.

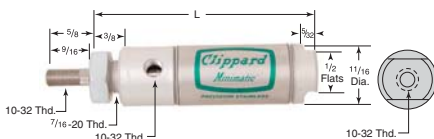
## 1/2" Bore Stud Mount Double Acting



| Item No. | Clippard   | Stroke | L     | Pack Qty. |
|----------|------------|--------|-------|-----------|
| PAC-20   | SDR-08-1/2 | 1/2    | 2 5/8 | 1         |
| PAC-35   | SDR-08-2   | 2      | 4 1/8 | 1         |

Note: Furnished with nut.

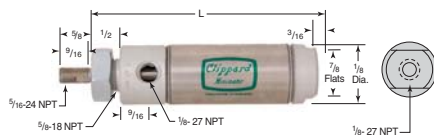
## 5/8" Bore Stud Mount Double Acting



| Item No. | Clippard     | Stroke | L     | Pack Qty. |
|----------|--------------|--------|-------|-----------|
| PAC-70   | SDR-10-1/2   | 1/2    | 2 5/8 | 1         |
| PAC-75   | SDR-10-1     | 1      | 3 1/8 | 1         |
| PAC-80   | SDR-10-1-1/2 | 1 1/2  | 3 5/8 | 1         |
| PAC-85   | SDR-10-2     | 2      | 4 1/8 | 1         |
| PAC-90   | SDR-10-3     | 3      | 5 1/8 | 1         |

Note: Furnished with nut.

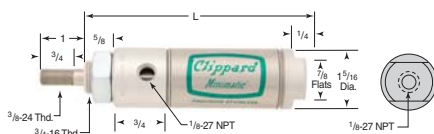
## 1 1/16" Bore Stud Mount Double Acting



| Item No. | Clippard | Stroke | L     | Pack Qty. |
|----------|----------|--------|-------|-----------|
| PAC-130  | SDR-17-1 | 1      | 4 1/8 | 1         |
| PAC-135  | SDR-17-2 | 2      | 5 1/8 | 1         |
| PAC-140  | SDR-17-3 | 3      | 6 1/8 | 1         |
| PAC-145  | SDR-17-4 | 4      | 7 1/8 | 1         |

Note: Furnished with nut.

## 1 1/4" Bore Stud Mount Double Acting

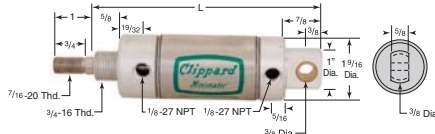


| Item No. | Clippard | Stroke | L     | Pack Qty. |
|----------|----------|--------|-------|-----------|
| PAC-170  | SDR-20-1 | 1      | 4 3/4 | 1         |
| PAC-175  | SDR-20-2 | 2      | 5 3/4 | 1         |
| PAC-180  | SDR-20-3 | 3      | 6 3/4 | 1         |
| PAC-185  | SDR-20-4 | 4      | 7 3/4 | 1         |

Note: Furnished with nut.

| Force = Power Factor (IA Sq.) x Pressure (PSIG) |              |
|---|--------------|
| Bore Size                                       | Power Factor |
| 5/16  | .07          |
| 1/2   | .19          |
| 5/8   | .31          |
| 3/4   | .44          |
| 1 1/16  | .88          |
| 1 1/4   | 1.20         |
| 1 1/2   | 1.70         |
| 1 3/4   | 2.40         |
| 2   | 3.10         |
| 2 1/2   | 4.90         |

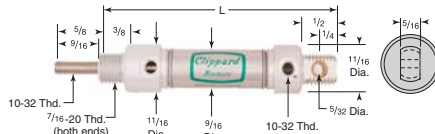
## 1 1/2" Bore Clevis Mount Double Acting



| Item No. | Clippard | Stroke | L     | Pack Qty. |
|----------|----------|--------|-------|-----------|
| PAC-230  | CDR-24-1 | 1      | 5 1/2 | 1         |
| PAC-235  | CDR-24-2 | 2      | 6 1/2 | 1         |
| PAC-240  | CDR-24-3 | 3      | 7 1/2 | 1         |
| PAC-245  | CDR-24-4 | 4      | 8 1/2 | 1         |

Note: Furnished without nuts.

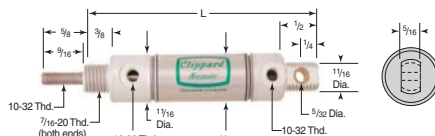
## 1" Bore Universal Mount Double Acting



| Item No. | Clippard     | Stroke | L       | Pack Qty. |
|----------|--------------|--------|---------|-----------|
| PAC-50   | UDR-08-1     | 1      | 3 13/16 | 1         |
| PAC-55   | UDR-08-1-1/2 | 1 1/2  | 4 5/16  | 1         |

Note: Furnished without nuts.

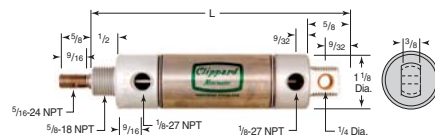
## 5/8" Bore Universal Mount Double Acting



| Item No. | Clippard     | Stroke | L       | Pack Qty. |
|----------|--------------|--------|---------|-----------|
| PAC-100  | UDR-10-1/2   | 1/2    | 3 3/16  | 1         |
| PAC-105  | UDR-10-1     | 1      | 3 13/16 | 1         |
| PAC-110  | UDR-10-1 1/2 | 1 1/2  | 4 5/16  | 1         |
| PAC-115  | UDR-10-2     | 2      | 4 19/16 | 1         |
| PAC-120  | UDR-10-3     | 3      | 5 13/16 | 1         |

Note: Furnished without nuts.

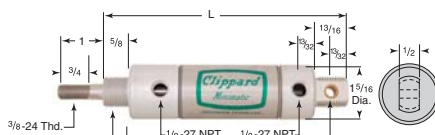
## 1 1/16" Bore Universal Mount Double Acting



| Item No. | Clippard | Stroke | L | Pack Qty. |
|----------|----------|--------|---|-----------|
| PAC-150  | UDR-17-1 | 1      | 5 | 1         |
| PAC-155  | UDR-17-2 | 2      | 6 | 1         |
| PAC-160  | UDR-17-3 | 3      | 7 | 1         |

Note: Furnished without nuts.

## 1 1/4" Bore Universal Mount Double Acting

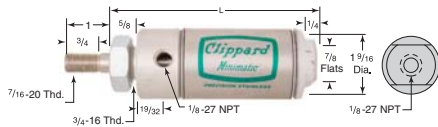


| Item No. | Clippard | Stroke | L     | Pack Qty. |
|----------|----------|--------|-------|-----------|
| PAC-190  | UDR-20-1 | 1      | 5 7/8 | 1         |
| PAC-195  | UDR-20-2 | 2      | 6 7/8 | 1         |
| PAC-200  | UDR-20-3 | 3      | 7 7/8 | 1         |
| PAC-205  | UDR-20-4 | 4      | 8 7/8 | 1         |

Note: Furnished without nuts.



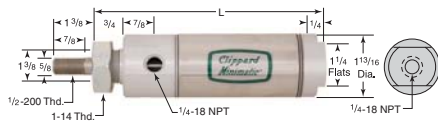
**1 1/2" Bore  
Stud Mount  
Double Acting**



| Item No. | Clippard | Stroke | L      | Pack Qty. |
|----------|----------|--------|--------|-----------|
| PAC-210  | SDR-24-1 | 1      | 4 1/16 | 1         |
| PAC-215  | SDR-24-2 | 2      | 5 5/16 | 1         |
| PAC-220  | SDR-24-3 | 3      | 6 7/16 | 1         |
| PAC-225  | SDR-24-4 | 4      | 7 7/16 | 1         |

Note: Furnished with nut.

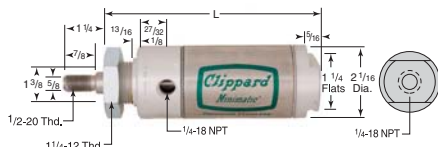
**1 3/4" Bore  
Stud Mount  
Double Acting**



| Item No. | Clippard | Stroke | L     | Pack Qty. |
|----------|----------|--------|-------|-----------|
| PAC-255  | SDR-28-2 | 2      | 6 3/8 | 1         |
| PAC-265  | SDR-28-4 | 4      | 8 3/8 | 1         |

Note: Furnished with nut.

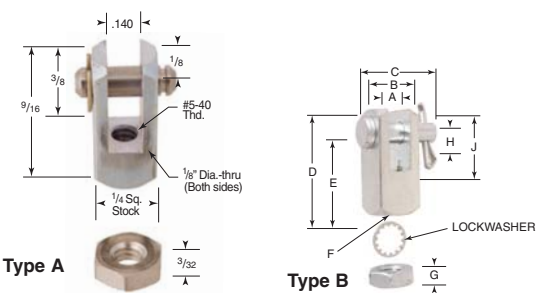
**2" Bore  
Stud Mount  
Double Acting**



| Item No. | Clippard | Stroke | L      | Pack Qty. |
|----------|----------|--------|--------|-----------|
| PAC-290  | SDR-32-1 | 1      | 5 5/16 | 1         |
| PAC-295  | SDR-32-2 | 2      | 6 5/16 | 1         |
| PAC-300  | SDR-32-3 | 3      | 7 5/16 | 1         |

Note: Furnished with nut.

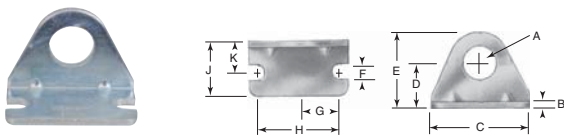
**Pneumatic Cylinder Mounts  
Zinc Plated Steel  
Rod Clevis Assemblies**



| Item No. | Type | For Bore Size | A                               | B   | C      | D      | E      | F       | G    | H    | J      | Pack Qty. |
|----------|------|---------------|---------------------------------|-----|--------|--------|--------|---------|------|------|--------|-----------|
| PAC-610* | A    | 5/16          | See Line Drawing for Dimensions |     |        |        |        |         |      |      |        | 1         |
| PAC-620  | B    | 1/2 & 5/8     | 3/16                            | 3/8 | 29/32  | 15/16  | 3/4    | 10-32   | 1/8  | 3/16 | 9/16   | 1         |
| PAC-640  | B    | 1 1/16        | 1/4                             | 1/2 | 31/32  | 1 1/16 | 1 5/16 | 5/16-24 | 3/16 | 1/4  | 1 1/16 | 1         |
| PAC-650  | B    | 1 1/4         | 3/8                             | 3/4 | 1 1/32 | 1 1/16 | 1 5/16 | 3/8-24  | 1/4  | 3/8  | 1 5/16 | 1         |
| PAC-660  | B    | 1 1/2         | 3/8                             | 3/4 | 1 1/32 | 1 1/16 | 1 5/16 | 7/16-20 | 1/4  | 3/8  | 1 5/16 | 1         |
| PAC-670  | B    | 2 & 2 1/2     | 3/8                             | 3/4 | 1 1/32 | 1 1/16 | 1 5/16 | 1/2-20  | 3/16 | 3/8  | 1 5/16 | 1         |

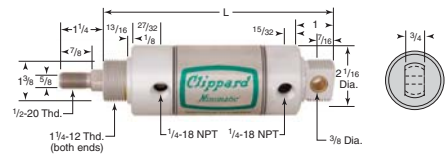
\* PAC-610 includes pin and two E-clips

**Pneumatic Cylinder Mounts  
Zinc Plated Steel  
Foot Mounting Brackets**



| Item No. | For Bore Size | A     | B    | C     | D     | E     | F      | G      | H     | J      | K    | Pack Qty. |
|----------|---------------|-------|------|-------|-------|-------|--------|--------|-------|--------|------|-----------|
| PAC-840  | 1/2 & 5/8     | 7/16  | 1/16 | 1 1/8 | 9/16  | 7/8   | 1 3/64 | 1/2    | 1     | 1 1/16 | 3/8  | 1         |
| PAC-860  | 3/4 & 1 1/16  | 5/8   | 1/8  | 1 1/8 | 1 1/8 | 1 1/8 | 1 1/64 | 3/4    | 1 1/2 | 1      | 9/16 | 1         |
| PAC-870  | 1 1/4 & 1 1/2 | 3/4   | 9/32 | 2 1/2 | 1     | 1 3/4 | 1 1/64 | 1 5/16 | 1 7/8 | 1 1/2  | 3/4  | 1         |
| PAC-890  | 2 & 2 1/2     | 1 1/8 | 1/4  | 3 1/8 | 1 1/2 | 2 1/2 | 2 1/64 | 1 1/8  | 2 1/4 | 1 1/8  | 1    | 1         |

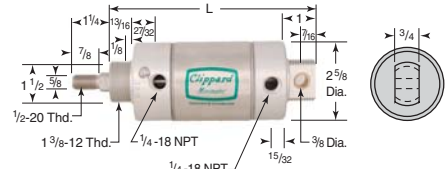
**2" Bore  
Universal Mount  
Double Acting**



| Item No. | Clippard | Stroke | L       | Pack Qty. |
|----------|----------|--------|---------|-----------|
| PAC-310  | UDR-32-1 | 1      | 6 11/16 | 1         |
| PAC-315  | UDR-32-2 | 2      | 7 11/16 | 1         |
| PAC-320  | UDR-32-3 | 3      | 8 11/16 | 1         |
| PAC-325  | UDR-32-4 | 4      | 9 11/16 | 1         |

Note: Furnished without nuts.

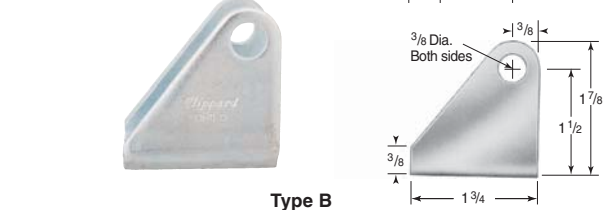
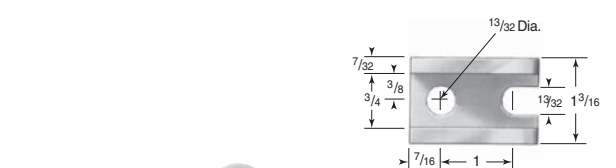
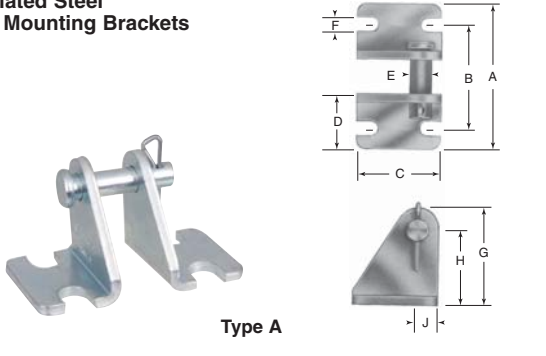
**2 1/2" Bore  
Universal Mount  
Double Acting**



| Item No. | Clippard | Stroke | L       | Pack Qty. |
|----------|----------|--------|---------|-----------|
| PAC-330  | UDR-40-1 | 1      | 6 11/16 | 1         |
| PAC-335  | UDR-40-2 | 2      | 7 11/16 | 1         |
| PAC-340  | UDR-40-3 | 3      | 8 11/16 | 1         |
| PAC-345  | UDR-40-4 | 4      | 9 11/16 | 1         |

Note: Furnished without nuts.

**Pneumatic Cylinder Mounts  
Zinc Plated Steel  
Clevis Mounting Brackets**



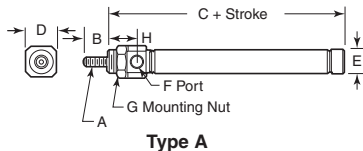
| Item No. | Type | For Bore Size | A                               | B     | C     | D      | E    | F      | G      | H     | J     | Pack Qty. |
|----------|------|---------------|---------------------------------|-------|-------|--------|------|--------|--------|-------|-------|-----------|
| PAC-720  | A    | 1/2 & 5/8     | 1 5/16                          | 7/8   | 3/4   | 1/2    | 5/32 | 13/64  | 3/4    | 9/16  | 13/64 | 1         |
| PAC-730  | A    | 3/4 & 1 1/16  | 2                               | 1 1/4 | 1 1/8 | 1 3/16 | 1/4  | 1 1/64 | 1 3/16 | 7/8   | 5/16  | 1         |
| PAC-740  | A    | 1 1/4         | 2 1/8                           | 1 3/8 | 1 1/2 | 1 3/16 | 1/4  | 1 1/64 | 1 3/16 | 7/8   | 5/16  | 1         |
| PAC-750  | A    | 1 1/2         | 2 3/8                           | 1 7/8 | 1 1/2 | 1      | 3/8  | 1 1/64 | 1 3/4  | 1 3/8 | 3/8   | 1         |
| PAC-760  | B    | 2 & 2 1/2     | See Line Drawing for Dimensions |       |       |        |      |        |        |       |       | 1         |

Note: Clevis pin included.

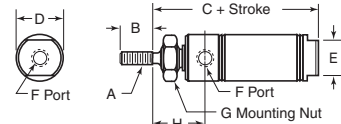


Type 304 stainless steel polished to a micro-inch finish on the ID to provide for low friction and long life on cylinder tube. OD has matte finish. Heads and caps are made of aluminum construction for smooth breakaway. Piston rods are made of a 303 stainless steel. All cylinders are pre-lubricated. All piston and rod seals are of a lip seal construction. Maximum pressure 250 psi. Temperature rating -10 to 165 degrees Fahrenheit. **MFP-1 through MFP-27 include a mounting nut.**

**Air Cylinders  
Front Nose Mount - Double Acting**



Type A

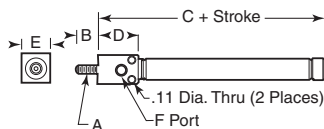


Type B

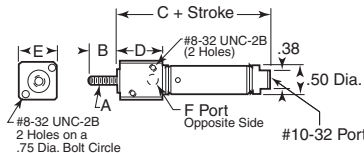
| Item No. | Parker       | Type | Bore  | Stroke | A       | B    | C    | D    | E    | F      | G        | H    | Pack Qty. |
|----------|--------------|------|-------|--------|---------|------|------|------|------|--------|----------|------|-----------|
| MFP-1    | .31DSR-1.00  | A    | 5/16  | 1      | 5-40    | .375 | 1.64 | .500 | .360 | 10-32  | 3/8-24   | .47  | 1         |
| MFP-2    | .31DSR-2.00  | A    | 5/16  | 2      | 5-40    | .375 | 1.64 | .500 | .360 | 10-32  | 3/8-24   | .47  | 1         |
| MFP-3    | .31DSR-3.00  | A    | 5/16  | 3      | 5-40    | .375 | 1.64 | .500 | .360 | 10-32  | 3/8-24   | .47  | 1         |
| MFP-4    | .31DSR-4.00  | A    | 5/16  | 4      | 5-40    | .375 | 1.64 | .500 | .360 | 10-32  | 3/8-24   | .47  | 1         |
| MFP-5    | .75DSR-1.00  | A    | 3/4   | 1      | 1/4-28  | .500 | 2.97 | .860 | .810 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-6    | .75DSR-2.00  | A    | 3/4   | 2      | 1/4-28  | .500 | 2.97 | .860 | .810 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-7    | .75DSR-3.00  | A    | 3/4   | 3      | 1/4-28  | .500 | 2.97 | .860 | .810 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-8    | .75DSR-4.00  | A    | 3/4   | 4      | 1/4-28  | .500 | 2.97 | .860 | .810 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-9    | .75DSR-5.00  | A    | 3/4   | 5      | 1/4-28  | .500 | 2.97 | .860 | .810 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-10   | .75DSR-6.00  | A    | 3/4   | 6      | 1/4-28  | .500 | 2.97 | .860 | .810 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-11   | .88DSR-1.00  | A    | 7/8   | 1      | 1/4-28  | .500 | 2.94 | .930 | .930 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-12   | .88DSR-2.00  | A    | 7/8   | 2      | 1/4-28  | .500 | 2.94 | .930 | .930 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-13   | .88DSR-3.00  | A    | 7/8   | 3      | 1/4-28  | .500 | 2.94 | .930 | .930 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-14   | .88DSR-4.00  | A    | 7/8   | 4      | 1/4-28  | .500 | 2.94 | .930 | .930 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-15   | .88DSR-5.00  | A    | 7/8   | 5      | 1/4-28  | .500 | 2.94 | .930 | .930 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-16   | .88DSR-6.00  | A    | 7/8   | 6      | 1/4-28  | .500 | 2.94 | .930 | .930 | 1/2-27 | 3/8-18   | .97  | 1         |
| MFP-17   | 1.25DSR-2.00 | B    | 1 1/4 | 2      | 7/16-20 | .750 | 4.00 | 1.34 | .88  | 1/2-27 | 3/4-16   | 1.62 | 1         |
| MFP-19   | 1.25DSR-4.00 | B    | 1 1/4 | 4      | 7/16-20 | .750 | 4.00 | 1.34 | .88  | 1/2-27 | 3/4-16   | 1.62 | 1         |
| MFP-20   | 1.25DSR-5.00 | B    | 1 1/4 | 5      | 7/16-20 | .750 | 4.00 | 1.34 | .88  | 1/2-27 | 3/4-16   | 1.62 | 1         |
| MFP-21   | 1.25DSR-6.00 | B    | 1 1/4 | 6      | 7/16-20 | .750 | 4.00 | 1.34 | .88  | 1/2-27 | 3/4-16   | 1.62 | 1         |
| MFP-22   | 1.50DSR-1.00 | B    | 1 1/2 | 1      | 7/16-20 | .750 | 3.69 | 1.56 | .88  | 1/2-27 | 3/4-16   | 1.50 | 1         |
| MFP-23   | 1.50DSR-2.00 | B    | 1 1/2 | 2      | 7/16-20 | .750 | 3.69 | 1.56 | .88  | 1/2-27 | 3/4-16   | 1.50 | 1         |
| MFP-24   | 1.50DSR-3.00 | B    | 1 1/2 | 3      | 7/16-20 | .750 | 3.69 | 1.56 | .88  | 1/2-27 | 3/4-16   | 1.50 | 1         |
| MFP-25   | 1.50DSR-4.00 | B    | 1 1/2 | 4      | 7/16-20 | .750 | 3.69 | 1.56 | .88  | 1/2-27 | 3/4-16   | 1.50 | 1         |
| MFP-26   | 1.50DSR-5.00 | B    | 1 1/2 | 5      | 7/16-20 | .750 | 3.69 | 1.56 | .88  | 1/2-27 | 3/4-16   | 1.50 | 1         |
| MFP-27   | 1.50DSR-6.00 | B    | 1 1/2 | 6      | 7/16-20 | .750 | 3.69 | 1.56 | .88  | 1/2-27 | 3/4-16   | 1.50 | 1         |
| MFP-28*  | 2.00DSR-2.00 | B    | 2     | 2      | 1/2-20  | .880 | 4.69 | 2.08 | 1.25 | 1/4-18 | 1 1/4-12 | 1.84 | 1         |
| MFP-29*  | 2.00DSR-3.00 | B    | 2     | 3      | 1/2-20  | .880 | 4.69 | 2.08 | 1.25 | 1/4-18 | 1 1/4-12 | 1.84 | 1         |
| MFP-30*  | 2.00DSR-4.00 | B    | 2     | 4      | 1/2-20  | .880 | 4.69 | 2.08 | 1.25 | 1/4-18 | 1 1/4-12 | 1.84 | 1         |
| MFP-31*  | 2.00DSR-5.00 | B    | 2     | 5      | 1/2-20  | .880 | 4.69 | 2.08 | 1.25 | 1/4-18 | 1 1/4-12 | 1.84 | 1         |
| MFP-32*  | 2.00DSR-6.00 | B    | 2     | 6      | 1/2-20  | .880 | 4.69 | 2.08 | 1.25 | 1/4-18 | 1 1/4-12 | 1.84 | 1         |
| MFP-33*  | 3.00DSR-3.00 | B    | 3     | 3      | 3/8-18  | 1.25 | 5.25 | 3.16 | 2.00 | 3/8-18 | 1 1/2-12 | 2.09 | 1         |
| MFP-34*  | 3.00DSR-4.00 | B    | 3     | 4      | 3/8-18  | 1.25 | 5.25 | 3.16 | 2.00 | 3/8-18 | 1 1/2-12 | 2.09 | 1         |
| MFP-35*  | 3.00DSR-5.00 | B    | 3     | 5      | 3/8-18  | 1.25 | 5.25 | 3.16 | 2.00 | 3/8-18 | 1 1/2-12 | 2.09 | 1         |
| MFP-36*  | 3.00DSR-6.00 | B    | 3     | 6      | 3/8-18  | 1.25 | 5.25 | 3.16 | 2.00 | 3/8-18 | 1 1/2-12 | 2.09 | 1         |

\*Mounting nut must be ordered separately, see page 948.

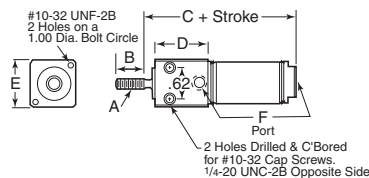
**Air Cylinders  
Front Block Mount - Double Acting**



Type A



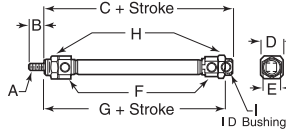
Type B



Type C

| Item No. | Parker        | Type | Bore | Stroke | A      | B    | C    | D    | E (Sq.) | F      | Pack Qty. |
|----------|---------------|------|------|--------|--------|------|------|------|---------|--------|-----------|
| MFP-48   | .31BFDSR-1.00 | A    | 5/16 | 1      | 5-40   | .380 | 1.72 | .710 | .50     | 10-32  | 1         |
| MFP-49   | .31BFDSR-2.00 | A    | 5/16 | 2      | 5-40   | .380 | 1.72 | .710 | .50     | 10-32  | 1         |
| MFP-50   | .31BFDSR-3.00 | A    | 5/16 | 3      | 5-40   | .380 | 1.72 | .710 | .50     | 10-32  | 1         |
| MFP-51   | .31BFDSR-4.00 | A    | 5/16 | 4      | 5-40   | .380 | 1.72 | .710 | .50     | 10-32  | 1         |
| MFP-52   | .44BFDSR-1.0  | B    | 7/16 | 1      | 10-32  | .500 | 2.12 | .880 | .75     | 10-32  | 1         |
| MFP-53   | .44BFDSR-2.00 | B    | 7/16 | 2      | 10-32  | .500 | 2.12 | .880 | .75     | 10-32  | 1         |
| MFP-54   | .44BFDSR-3.00 | B    | 7/16 | 3      | 10-32  | .500 | 2.12 | .880 | .75     | 10-32  | 1         |
| MFP-55   | .44BFDSR-4.00 | B    | 7/16 | 4      | 10-32  | .500 | 2.12 | .880 | .75     | 10-32  | 1         |
| MFP-56   | .75BFDSR-1.00 | C    | 3/4  | 1      | 1/4-28 | .750 | 3.22 | 1.12 | 1.00    | 1/2-27 | 1         |
| MFP-57   | .75BFDSR-2.00 | C    | 3/4  | 2      | 1/4-28 | .750 | 3.22 | 1.12 | 1.00    | 1/2-27 | 1         |
| MFP-58   | .75BFDSR-3.00 | C    | 3/4  | 3      | 1/4-28 | .750 | 3.22 | 1.12 | 1.00    | 1/2-27 | 1         |
| MFP-59   | .75BFDSR-4.00 | C    | 3/4  | 4      | 1/4-28 | .750 | 3.22 | 1.12 | 1.00    | 1/2-27 | 1         |
| MFP-60   | .75BFDSR-5.00 | C    | 3/4  | 5      | 1/4-28 | .750 | 3.22 | 1.12 | 1.00    | 1/2-27 | 1         |
| MFP-61   | .75BFDSR-6.00 | C    | 3/4  | 6      | 1/4-28 | .750 | 3.22 | 1.12 | 1.00    | 1/2-27 | 1         |

**Air Cylinders**  
Rear Pivot Mount - Double Acting

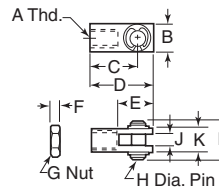


MFP-62 through MFP-106 include a mounting nut.

| Item No. | Parker        | Bore  | Stroke | A       | B    | C    | D (Sq.) | E   | Port F | G    | Mtg. Nut H | I    | Pack Qty. |
|----------|---------------|-------|--------|---------|------|------|---------|-----|--------|------|------------|------|-----------|
| MFP-62   | .31DXPSR1.00  | 5/16  | 1      | 5-40    | .38  | 2.19 | .50     | .25 | 10-32  | 2.03 | 3/8-24     | .125 | 1         |
| MFP-63   | .31DXPSR2.00  | 5/16  | 2      | 5-40    | .38  | 2.19 | .50     | .25 | 10-32  | 2.03 | 3/8-24     | .125 | 1         |
| MFP-64   | .31DXPSR3.00  | 5/16  | 3      | 5-40    | .38  | 2.19 | .50     | .25 | 10-32  | 2.03 | 3/8-24     | .125 | 1         |
| MFP-65   | .31DXPSR4.00  | 5/16  | 4      | 5-40    | .38  | 2.19 | .50     | .25 | 10-32  | 2.03 | 3/8-24     | .125 | 1         |
| MFP-66   | .75DXPSR1.00  | 3/4   | 1      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-67   | .75DXPSR2.00  | 3/4   | 2      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-68   | .75DXPSR3.00  | 3/4   | 3      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-69   | .75DXPSR4.00  | 3/4   | 4      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-70   | .75DXPSR5.00  | 3/4   | 5      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-71   | .75DXPSR6.00  | 3/4   | 6      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-72   | .75DXPSR7.00  | 3/4   | 7      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-73   | .75DXPSR8.00  | 3/4   | 8      | 1/4-28  | .50  | 4.03 | .86     | .38 | 1/2-27 | 3.75 | 5/8-18     | .251 | 1         |
| MFP-74   | .88DXPSR1.00  | 7/8   | 1      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-75   | .88DXPSR2.00  | 7/8   | 2      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-76   | .88DXPSR3.00  | 7/8   | 3      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-77   | .88DXPSR4.00  | 7/8   | 4      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-78   | .88DXPSR5.00  | 7/8   | 5      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-79   | .88DXPSR6.00  | 7/8   | 6      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-80   | .88DXPSR7.00  | 7/8   | 7      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-81   | .88DXPSR8.00  | 7/8   | 8      | 1/4-28  | .50  | 3.84 | .93     | .38 | 1/2-27 | 3.56 | 5/8-18     | .251 | 1         |
| MFP-82   | 1.25DXPSR2.00 | 1 1/4 | 2      | 7/16-20 | .75  | 5.12 | 1.34    | .50 | 7/8-27 | 4.72 | 3/4-16     | .251 | 1         |
| MFP-84   | 1.25DXPSR4.00 | 1 1/4 | 4      | 7/16-20 | .75  | 5.12 | 1.34    | .50 | 7/8-27 | 4.72 | 3/4-16     | .251 | 1         |
| MFP-85   | 1.25DXPSR5.00 | 1 1/4 | 5      | 7/16-20 | .75  | 5.12 | 1.34    | .50 | 7/8-27 | 4.72 | 3/4-16     | .251 | 1         |
| MFP-86   | 1.25DXPSR6.00 | 1 1/4 | 6      | 7/16-20 | .75  | 5.12 | 1.34    | .50 | 7/8-27 | 4.72 | 3/4-16     | .251 | 1         |
| MFP-87   | 1.25DXPSR7.00 | 1 1/4 | 7      | 7/16-20 | .75  | 5.12 | 1.34    | .50 | 7/8-27 | 4.72 | 3/4-16     | .251 | 1         |
| MFP-88   | 1.25DXPSR8.00 | 1 1/4 | 8      | 7/16-20 | .75  | 5.12 | 1.34    | .50 | 7/8-27 | 4.72 | 3/4-16     | .251 | 1         |
| MFP-100  | 1.50DXPSR2.00 | 1 1/2 | 2      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-101  | 1.50DXPSR3.00 | 1 1/2 | 3      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-102  | 1.50DXPSR4.00 | 1 1/2 | 4      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-103  | 1.50DXPSR5.00 | 1 1/2 | 5      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-104  | 1.50DXPSR6.00 | 1 1/2 | 6      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-105  | 1.50DXPSR7.00 | 1 1/2 | 7      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-106  | 1.50DXPSR8.00 | 1 1/2 | 8      | 7/16-20 | .75  | 5.00 | 1.56    | .62 | 7/8-27 | 4.63 | 3/4-16     | .376 | 1         |
| MFP-107* | 2.00DXPSR2.00 | 2     | 2      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-108* | 2.00DXPSR3.00 | 2     | 3      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-109* | 2.00DXPSR4.00 | 2     | 4      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-110* | 2.00DXPSR5.00 | 2     | 5      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-111* | 2.00DXPSR6.00 | 2     | 6      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-112* | 2.00DXPSR7.00 | 2     | 7      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-113* | 2.00DXPSR8.00 | 2     | 8      | 1/2-20  | .88  | 6.06 | 2.08    | .75 | 1/4-18 | 5.62 | 1 1/4-12   | .376 | 1         |
| MFP-114* | 3.00DXPSR3.00 | 3     | 3      | 5/8-18  | 1.25 | 7.12 | 3.16    | .88 | 5/8-18 | 6.50 | 1 1/2-12   | .500 | 1         |
| MFP-115* | 3.00DXPSR4.00 | 3     | 4      | 5/8-18  | 1.25 | 7.12 | 3.16    | .88 | 5/8-18 | 6.50 | 1 1/2-12   | .500 | 1         |
| MFP-118* | 3.00DXPSR7.00 | 3     | 7      | 5/8-18  | 1.25 | 7.12 | 3.16    | .88 | 5/8-18 | 6.50 | 1 1/2-12   | .500 | 1         |
| MFP-119* | 3.00DXPSR8.00 | 3     | 8      | 5/8-18  | 1.25 | 7.12 | 3.16    | .88 | 5/8-18 | 6.50 | 1 1/2-12   | .500 | 1         |

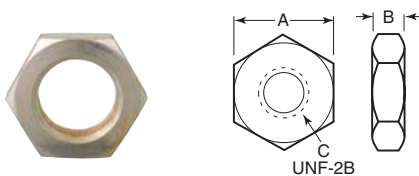
\*Mounting nut must be ordered separately. See below.

**Air Cylinder Accessories**  
Piston Rod Clevises



| Item No. | Parker     | Use With Cylinder Size | A       | B    | C    | D    | E    | F   | G       | H   | J   | K    | L    | Pack Qty. |
|----------|------------|------------------------|---------|------|------|------|------|-----|---------|-----|-----|------|------|-----------|
| MFP-120  | L071300025 | 5/16                   | 5-40    | .31  | .44  | .56  | .38  | .11 | 5-40    | .12 | .13 | .31  | .50  | 1         |
| MFP-121  | L071300200 | 3/4, 7/8               | 1/4-28  | .50  | .94  | 1.19 | .68  | .16 | 1/4-28  | .25 | .25 | .50  | .69  | 1         |
| MFP-122  | L071300400 | 1 1/4, 1 1/2           | 7/16-20 | .75  | 1.31 | 1.69 | .94  | .25 | 7/16-20 | .38 | .38 | .75  | 1.03 | 1         |
| MFP-123  | L071300500 | 2                      | 1/2-20  | .75  | 1.31 | 1.69 | .94  | .31 | 1/2-20  | .38 | .38 | .75  | 1.03 | 1         |
| MFP-124  | L071300600 | 3                      | 5/8-18  | 1.00 | 2.25 | 2.75 | 1.50 | .38 | 5/8-18  | .50 | .50 | 1.00 | 1.38 | 1         |

**Air Cylinder Accessories**  
Mounting Nuts

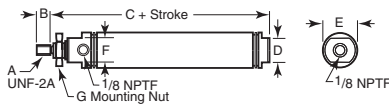


| Item No. | Parker     | Used On Bore | A    | B   | C        | Pack Qty. |
|----------|------------|--------------|------|-----|----------|-----------|
| MFP-550  | L073801200 | 2            | 1.88 | .50 | 1 1/4-12 | 1         |
| MFP-551  | L073801500 | 3            | 2.25 | .84 | 1 1/2-12 | 1         |



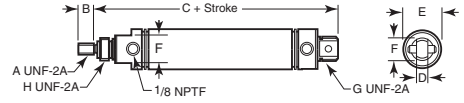
Stainless steel cylinder tube for breakaway friction and attractive appearance. Clear anodized head covers for protection against corrosion. The piston rod is stainless steel on the 3/4" and 7/8" sizes and hard chrome plated steel on the other sizes. Max pressure 250 psi. Pre-lubricated.

**Air Cylinder  
Double Acting - Front Nose**



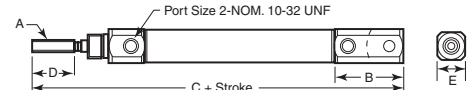
| Item No. | Bore   | Stroke | A       | B   | C    | D    | E    | F    | G      | Pack Qty. |
|----------|--------|--------|---------|-----|------|------|------|------|--------|-----------|
| SMC-4003 | 3/4    | 1      | 1/4-28  | .50 | 2.97 | .62  | .86  | .75  | 5/8-18 | 1         |
| SMC-4005 | 3/4    | 2      | 1/4-28  | .50 | 2.97 | .62  | .86  | .75  | 5/8-18 | 1         |
| SMC-4007 | 3/4    | 3      | 1/4-28  | .50 | 2.97 | .62  | .86  | .75  | 5/8-18 | 1         |
| SMC-4011 | 3/4    | 5      | 1/4-28  | .50 | 2.97 | .62  | .86  | .75  | 5/8-18 | 1         |
| SMC-4013 | 3/4    | 6      | 1/4-28  | .50 | 2.97 | .62  | .86  | .75  | 5/8-18 | 1         |
| SMC-4015 | 7/8    | 1      | 1/4-28  | .50 | 2.94 | .75  | .93  | .75  | 5/8-18 | 1         |
| SMC-4017 | 7/8    | 2      | 1/4-28  | .50 | 2.94 | .75  | .93  | .75  | 5/8-18 | 1         |
| SMC-4021 | 7/8    | 4      | 1/4-28  | .50 | 2.94 | .75  | .93  | .75  | 5/8-18 | 1         |
| SMC-4027 | 1 1/16 | 1      | 5/16-24 | .50 | 3.25 | .88  | 1.12 | .88  | 5/8-18 | 1         |
| SMC-4029 | 1 1/16 | 2      | 5/16-24 | .50 | 3.25 | .88  | 1.12 | .88  | 5/8-18 | 1         |
| SMC-4031 | 1 1/16 | 3      | 5/16-24 | .50 | 3.25 | .88  | 1.12 | .88  | 5/8-18 | 1         |
| SMC-4033 | 1 1/16 | 4      | 5/16-24 | .50 | 3.25 | .88  | 1.12 | .88  | 5/8-18 | 1         |
| SMC-4037 | 1 1/16 | 6      | 5/16-24 | .50 | 3.25 | .88  | 1.12 | .88  | 5/8-18 | 1         |
| SMC-4039 | 1 1/4  | 1      | 3/16-20 | .75 | 4.00 | 1.06 | 1.32 | 1.06 | 3/4-16 | 1         |
| SMC-4041 | 1 1/4  | 2      | 3/16-20 | .75 | 4.00 | 1.06 | 1.32 | 1.06 | 3/4-16 | 1         |
| SMC-4043 | 1 1/4  | 3      | 3/16-20 | .75 | 4.00 | 1.06 | 1.32 | 1.06 | 3/4-16 | 1         |
| SMC-4045 | 1 1/4  | 4      | 3/16-20 | .75 | 4.00 | 1.06 | 1.32 | 1.06 | 3/4-16 | 1         |
| SMC-4049 | 1 1/4  | 6      | 3/16-20 | .75 | 4.00 | 1.06 | 1.32 | 1.06 | 3/4-16 | 1         |
| SMC-4051 | 1 1/2  | 1      | 7/16-20 | .75 | 3.69 | 1.25 | 1.56 | 1.25 | 3/4-16 | 1         |
| SMC-4053 | 1 1/2  | 2      | 7/16-20 | .75 | 3.69 | 1.25 | 1.56 | 1.25 | 3/4-16 | 1         |
| SMC-4055 | 1 1/2  | 3      | 7/16-20 | .75 | 3.69 | 1.25 | 1.56 | 1.25 | 3/4-16 | 1         |
| SMC-4061 | 1 1/2  | 6      | 7/16-20 | .75 | 3.69 | 1.25 | 1.56 | 1.25 | 3/4-16 | 1         |

**Air Cylinder  
Double Acting - Rear Pivot Mount**



| Item No. | Bore   | Stroke | A       | B   | C    | D   | E    | F    | G      | H      | Pack Qty. |
|----------|--------|--------|---------|-----|------|-----|------|------|--------|--------|-----------|
| SMC-4129 | 3/4    | 1      | 1/4-28  | 1/2 | 4.03 | .38 | .86  | .75  | 5/8-18 | 5/8-18 | 1         |
| SMC-4131 | 3/4    | 2      | 1/4-28  | 1/2 | 4.03 | .38 | .86  | .75  | 5/8-18 | 5/8-18 | 1         |
| SMC-4133 | 3/4    | 3      | 1/4-28  | 1/2 | 4.03 | .38 | .86  | .75  | 5/8-18 | 5/8-18 | 1         |
| SMC-4155 | 1 1/16 | 2      | 5/16-24 | 1/2 | 4.12 | .38 | 1.12 | .88  | 5/8-18 | 5/8-18 | 1         |
| SMC-4157 | 1 1/16 | 3      | 5/16-24 | 1/2 | 4.12 | .38 | 1.12 | .88  | 5/8-18 | 5/8-18 | 1         |
| SMC-4179 | 1 1/2  | 2      | 7/16-20 | 3/4 | 4.75 | .62 | 1.56 | 1.25 | —      | 3/4-16 | 1         |

**Air Cylinder  
Double End**

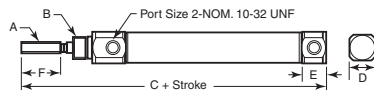


| Item No. | Bore | Stroke | A     | B    | C    | D   | E   | Pack Qty. |
|----------|------|--------|-------|------|------|-----|-----|-----------|
| SMC-5083 | 3/8  | 8      | 10-32 | 1.08 | 3.66 | .60 | .71 | 1         |

**Miniature  
Stainless Steel Bodies  
Double Acting - Single Rod**

These stainless cylinders offer space savings, high performance, and interchangeability with other stainless cylinders. A wear ring extends the seal life and a bronze rod bushing is standard.

**Air Cylinder  
Front Nose**



| Item No. | Bore | Stroke | A     | B       | C    | D   | E   | F   | Pack Qty. |
|----------|------|--------|-------|---------|------|-----|-----|-----|-----------|
| SMC-5015 | 3/8  | 1      | 6-40  | 5/16-24 | 2.91 | .47 | .37 | .60 | 1         |
| SMC-5021 | 3/8  | 3      | 6-40  | 5/16-24 | 2.91 | .47 | .37 | .60 | 1         |
| SMC-5029 | 3/8  | 1/2    | 10-32 | 3/8-24  | 2.95 | .71 | .37 | .60 | 1         |
| SMC-5031 | 3/8  | 1      | 10-32 | 3/8-24  | 2.95 | .71 | .37 | .60 | 1         |
| SMC-5037 | 3/8  | 3      | 10-32 | 3/8-24  | 2.95 | .71 | .37 | .60 | 1         |

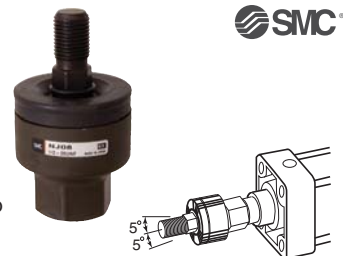
**Air Cylinder Accessories  
Multi-Connectors**



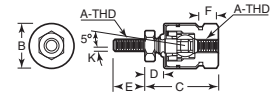
These multi-connectors save a great deal of time when connecting or disconnecting multi-line pneumatic components because multiple tubes can be handled in a one-touch operation without error. Comes with one-touch fittings which allows for easy tubing set up. Excellent for exchanging panels when a failure occurs. There is also a substantial reduction in mounting area in comparison to a panel requiring many bulkhead unions. Max operating pressure 150 psi.

| Item No. | Tube Size | No. of Tubes | Pack Qty. | Item No. | Tube Size | No. of Tubes | Pack Qty. |
|----------|-----------|--------------|-----------|----------|-----------|--------------|-----------|
| SMC-7060 | 1/8       | 10           | 1         | SMC-7075 | 1/4       | 20           | 1         |
| SMC-7065 | 1/4       | 10           | 1         |          |           |              |           |

**Air Cylinder Accessories  
Floating Joints**

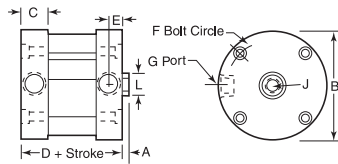


These floating joints fit on the end of pneumatic cylinders to protect against cylinder misalignment and to align deflected loads. The compact design allows for high loading, maximum 5 degree misalignment. Sealed and pre-lubricated for long life. Not suitable for rotation operations.



| Item No. | A       | B    | C    | D   | E    | F    | Pack Qty. |
|----------|---------|------|------|-----|------|------|-----------|
| SMC-7005 | 5-40    | .47  | .82  | .22 | .38  | .27  | 1         |
| SMC-7015 | 10-32   | .63  | 1.16 | .23 | .63  | .50  | 1         |
| SMC-7020 | 1/4-28  | .94  | 1.38 | .25 | .50  | .50  | 1         |
| SMC-7025 | 3/16-24 | .94  | 1.38 | .25 | .50  | .50  | 1         |
| SMC-7030 | 1/8-20  | 1.22 | 1.83 | .31 | .75  | .75  | 1         |
| SMC-7035 | 1/2-20  | 1.61 | 2.11 | .31 | .75  | .75  | 1         |
| SMC-7040 | 3/4-16  | 1.97 | 2.91 | .50 | 1.13 | 1.13 | 1         |

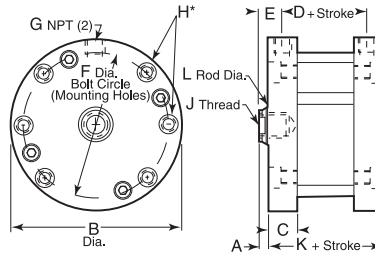
**Air Cylinders Compact & Composite**



Cylinders are double acting, with a single rod end. Cylinder barrel is made from a unique cross-wound thermo set epoxy. This creates a very strong and lightweight cylinder. The high impact resistance reduces the chances of cylinder failure due to dings or dents. Interior surface is self-lubricating, which insures highly reliable performance and an extended seal life. Cylinder heads are clear anodized aluminum alloy with stainless steel tie bolts. Maximum pressure is 200 psi. Cylinder temperature rating is -25 to +225 degree Fahrenheit.

| Item No. | ARO             | Bore Dia. | Stroke | A   | B    | C   | D    | E   | F    | G         | J           | L   | Pack Qty. |
|----------|-----------------|-----------|--------|-----|------|-----|------|-----|------|-----------|-------------|-----|-----------|
| ARO-610  | CCD07-SBP-010-R | 3/4       | 1      | .13 | 1.50 | .34 | .56  | .14 | 1.22 | 10-32 UNF | 10-32 UNF   | .31 | 1         |
| ARO-615  | CCD07-SBP-020-R | 3/4       | 2      | .13 | 1.50 | .34 | .56  | .14 | 1.22 | 10-32 UNF | 10-32 UNF   | .31 | 1         |
| ARO-625  | CCD07-SBP-040-R | 3/4       | 4      | .13 | 1.50 | .34 | .56  | .14 | 1.22 | 10-32 UNF | 10-32 UNF   | .31 | 1         |
| ARO-635  | CCD11-SBP-010-R | 1 1/16    | 1      | .13 | 2.00 | .50 | .88  | .25 | 1.69 | 1/4 UNF   | 5/16-24 UNF | .50 | 1         |
| ARO-650  | CCD11-SBP-040-R | 1 1/16    | 4      | .13 | 2.00 | .50 | .88  | .25 | 1.69 | 1/4 UNF   | 5/16-24 UNF | .50 | 1         |
| ARO-665  | CCD15-SBP-020-R | 1 1/16    | 2      | .13 | 2.62 | .50 | .88  | .25 | 2.19 | 1/4 UNF   | 5/16-24 UNF | .63 | 1         |
| ARO-675  | CCD15-SBP-040-R | 1 1/16    | 4      | .13 | 2.62 | .50 | .88  | .25 | 2.19 | 1/4 UNF   | 5/16-24 UNF | .63 | 1         |
| ARO-705  | CCD25-SBP-010-R | 2 1/2     | 1      | .13 | 3.75 | .66 | 1.19 | .33 | 3.25 | 1/4 UNF   | 1/2-20 UNF  | .75 | 1         |
| ARO-710  | CCD25-SBP-020-R | 2 1/2     | 2      | .13 | 3.75 | .66 | 1.19 | .33 | 3.25 | 1/4 UNF   | 1/2-20 UNF  | .75 | 1         |
| ARO-715  | CCD25-SBP-030-R | 2 1/2     | 3      | .13 | 3.75 | .66 | 1.19 | .33 | 3.25 | 1/4 UNF   | 1/2-20 UNF  | .75 | 1         |

**Air Cylinders Low Profile**



Parker low profile cylinders are designed to meet the demands for saving space. The cylinder body is made of heavy wall aluminum alloy. The tube ID coating has extreme hardness, excellent wear, seizure resistance, low coefficient of friction and high corrosion resistance. The piston rod is made of high strength steel, hard chrome plated for smooth performance, and extended seal wear. The piston seal and the piston rod seal are made of Buna-N material for positive sealing. Maximum operating pressure 250 psi with an operating temperature range of -10 to 165 degree Fahrenheit.

| Item No. | Parker         | Bore Dia. | Stroke | A   | B     | C     | D     | E     | F      | G      | H      | J      | K      | L    | Pack Qty. |
|----------|----------------|-----------|--------|-----|-------|-------|-------|-------|--------|--------|--------|--------|--------|------|-----------|
| MFP-230  | .75NLP9-1.00   | 3/4       | 1      | 1/8 | 1 1/2 | 23/64 | 3/8   | 17/64 | 1.219  | 10-32  | #6     | 10-32  | 21/32  | 5/16 | 1         |
| MFP-231  | .75NLPB9-2.0   | 3/4       | 2      | 1/8 | 1 1/2 | 23/64 | 3/8   | 17/64 | 1.219  | 10-32  | #6     | 10-32  | 21/32  | 5/16 | 1         |
| MFP-232  | .75NLPB9-3.00  | 3/4       | 3      | 1/8 | 1 1/2 | 23/64 | 3/8   | 17/64 | 1.219  | 10-32  | #6     | 10-32  | 21/32  | 5/16 | 1         |
| MFP-233  | .75NLPB9X4     | 3/4       | 4      | 1/8 | 1 1/2 | 23/64 | 3/8   | 17/64 | 1.219  | 10-32  | #6     | 10-32  | 21/32  | 5/16 | 1         |
| MFP-234  | 1.50NLPB9-1.00 | 1 1/2     | 1      | 1/8 | 2 1/2 | 1/2   | 1/2   | 3/8   | 2.187  | 1/8-27 | #10    | 3/8-24 | 1      | 5/8  | 1         |
| MFP-235  | 1.50NLPB9-2.00 | 1 1/2     | 2      | 1/8 | 2 1/2 | 1/2   | 1/2   | 3/8   | 2.187  | 1/8-27 | #10    | 3/8-24 | 1      | 5/8  | 1         |
| MFP-236  | 1.50NLPB9X3    | 1 1/2     | 3      | 1/8 | 2 1/2 | 1/2   | 1/2   | 3/8   | 2.187  | 1/8-27 | #10    | 3/8-24 | 1      | 5/8  | 1         |
| MFP-237  | 1.50NLPB9X4    | 1 1/2     | 4      | 1/8 | 2 1/2 | 1/2   | 1/2   | 3/8   | 2.187  | 1/8-27 | #10    | 3/8-24 | 1      | 5/8  | 1         |
| MFP-238  | 2.00NLPB9-1.00 | 2         | 1      | 1/8 | 3 1/8 | 9/16  | 3/8   | 2.687 | 1/8-27 | #10    | 1/2-20 | 1 1/16 | 3/4    | 1    |           |
| MFP-239  | 2.00NLPB9X2    | 2         | 2      | 1/8 | 3 1/8 | 1/2   | 9/16  | 3/8   | 2.687  | 1/8-27 | #10    | 1/2-20 | 1 1/16 | 3/4  | 1         |
| MFP-240  | 2.00NLPB9X3    | 2         | 3      | 1/8 | 3 1/8 | 1/2   | 9/16  | 3/8   | 2.687  | 1/8-27 | #10    | 1/2-20 | 1 1/16 | 3/4  | 1         |
| MFP-241  | 2.00NLPB9X4    | 2         | 4      | 1/8 | 3 1/8 | 1/2   | 9/16  | 3/8   | 2.687  | 1/8-27 | #10    | 1/2-20 | 1 1/16 | 3/4  | 1         |
| MFP-242  | 3.00NLP9-1.00  | 3         | 1      | 1/8 | 4 1/4 | 43/64 | 7/16  | 3.781 | 1/4-18 | 1/4    | 5/8-18 | 1 9/32 | 7/8    | 1    |           |
| MFP-243  | 3.00NLPB9-2.00 | 3         | 2      | 1/8 | 4 1/4 | 43/64 | 7/16  | 3.781 | 1/4-18 | 1/4    | 5/8-18 | 1 9/32 | 7/8    | 1    |           |
| MFP-244  | 3.00NLPB9X3    | 3         | 3      | 1/8 | 4 1/4 | 43/64 | 7/16  | 3.781 | 1/4-18 | 1/4    | 5/8-18 | 1 9/32 | 7/8    | 1    |           |
| MFP-245  | 3.00NLPB9X4    | 3         | 4      | 1/8 | 4 1/4 | 43/64 | 7/16  | 3.781 | 1/4-18 | 1/4    | 5/8-18 | 1 9/32 | 7/8    | 1    |           |
| MFP-246  | 4.00NLPB9X1    | 4         | 1      | 1/8 | 5 1/2 | 27/32 | 49/64 | 4.937 | 3/8-18 | 5/16   | 3/4-16 | 1 1/8  | 1      | 1    |           |
| MFP-247  | 4.00NLPB9-2.00 | 4         | 2      | 1/8 | 5 1/2 | 27/32 | 49/64 | 4.937 | 3/8-18 | 5/16   | 3/4-16 | 1 1/8  | 1      | 1    |           |
| MFP-248  | 4.00NLPB9X3    | 4         | 3      | 1/8 | 5 1/2 | 27/32 | 49/64 | 4.937 | 3/8-18 | 5/16   | 3/4-16 | 1 1/8  | 1      | 1    |           |
| MFP-249  | 4.00NLPB9X4    | 4         | 4      | 1/8 | 5 1/2 | 27/32 | 49/64 | 4.937 | 3/8-18 | 5/16   | 3/4-16 | 1 1/8  | 1      | 1    |           |

Note: Threaded hole size for mounting counterbore SHCS. Four places equally spaced for bore diameter 1 1/2" through 4". Two places on 3/4" in bore 180° apart.

**Air Accessories Extra Low Profile Reed Sensor**



- Three meter cord
- Output function is normally open, with output voltage of 10-120 vac
- Continuous current is 100 mA
- Response sensitivity 3 MT, with switching frequency 400 Hz
- Voltage drop is 3V
- Ambient temperature range of -13 to 167 degree Fahrenheit
- Standard sensor mount flush to cylinder body



| Item No. | Parker    | Description                | Pack Qty. |
|----------|-----------|----------------------------|-----------|
| MFP-286  | P8S-GRFLX | Reed Sensor w/Flying Leads | 1         |



**Speed Controller  
One Touch Fittings  
Inline Type**



Minimizes installation time and cost. The one touch fittings accept nylon and polyurethane tubing. The speed may be accurately controlled, even on low speed. Constant speed is easily set. Body and handle made from PBT.



| Item No. | SMC         | Tube Size OD | Body Size | Cylinder Bore Size (mm) | Pack Qty. |
|----------|-------------|--------------|-----------|-------------------------|-----------|
| SMC-2005 | AS1002F-01  | 1/8          | M5        | 6, 10, 15, 20           | 1         |
| SMC-2010 | AS2002F-07  | 1/4          | 1/8       | 20, 25, 32              | 1         |
| SMC-2015 | AS2051F-07  | 1/4          | 1/4       | 20, 25, 32, 40          | 1         |
| SMC-2020 | AS3001F     | 3/4          | 3/8       | 40, 50, 63              | 1         |
| SMC-2025 | AS3002F-11  | 3/4          | 3/8       | 40, 50, 63              | 1         |
| SMC-2030 | AS4002F-11  | 3/8          | 1/2       | 63, 80, 100             | 1         |
| SMC-2035 | NAS4001F-13 | 1/2          | 1/2       | 63, 80, 100             | 1         |

**Speed Controller Fittings  
Threaded Elbow Type**



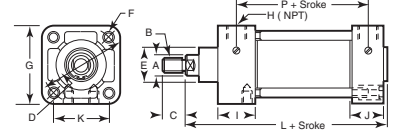
Speed may be accurately controlled, even at low speeds. Body swivels 360 degrees. Body made from die cast aluminum. Retainer prevents accidental loss of needle.



| Item No. | SMC         | Thread NPT | Body Size | Cylinder Bore Size (mm) | Pack Qty. |
|----------|-------------|------------|-----------|-------------------------|-----------|
| SMC-2050 | NAS2200-N01 | 1/8        | 1/8       | 20, 25, 30, 40          | 1         |
| SMC-2055 | AS2200-N02  | 1/4        | 1/4       | 20, 25, 30, 40          | 1         |
| SMC-2060 | NAS3200-N03 | 3/8        | 3/8       | 30, 40, 50, 63          | 1         |
| SMC-2065 | NAS4200-N04 | 1/2        | 1/2       | 80, 100                 | 1         |

**Interchangeable Tie Rod Cylinders  
With or Without Magnetic Rings**

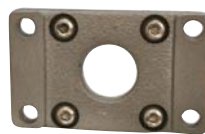
These medium duty, double acting, tie rod cylinders are NFPA interchangeable. They are available with or without position indicating magnet. Standard wear ring extends seal life. Basic mount. Pre-lubricated. 250 psi max. operating pressure.



| w/o Magnetic |          | w/ Magnetic |          | Bore Size | Stroke  | A     | B    | C     | D       | E     | F   | G    | H    | I    | J     | K    | L | P | Pack Qty. |
|--------------|----------|-------------|----------|-----------|---------|-------|------|-------|---------|-------|-----|------|------|------|-------|------|---|---|-----------|
| Item No.     | Item No. | Item No.    | Item No. |           |         |       |      |       |         |       |     |      |      |      |       |      |   |   |           |
| SMC-8005     | —        | 1 1/2       | 2        | 5/8       | 7/16-20 | 3/4   | 2.02 | 1 1/8 | 1/4-28  | 2     | 3/8 | 1.26 | 1.10 | 1.43 | 4 3/4 | 2.36 | 1 |   |           |
| —            | SMC-8110 | 1 1/2       | 4        | 5/8       | 7/16-20 | 3/4   | 2.02 | 1 1/8 | 1/4-28  | 2     | 3/8 | 1.26 | 1.10 | 1.43 | 4 3/4 | 2.36 | 1 |   |           |
| —            | SMC-8115 | 1 1/2       | 6        | 5/8       | 7/16-20 | 3/4   | 2.02 | 1 1/8 | 1/4-28  | 2     | 3/8 | 1.26 | 1.10 | 1.43 | 4 3/4 | 2.36 | 1 |   |           |
| SMC-8025     | SMC-8120 | 2           | 2        | 5/8       | 7/16-20 | 3/4   | 2.60 | 1 1/8 | 5/16-24 | 2 1/2 | 3/8 | 1.26 | 1.06 | 1.84 | 4 3/4 | 2.40 | 1 |   |           |
| SMC-8030     | SMC-8125 | 2           | 4        | 5/8       | 7/16-20 | 3/4   | 2.60 | 1 1/8 | 5/16-24 | 2 1/2 | 3/8 | 1.26 | 1.06 | 1.84 | 4 3/4 | 2.40 | 1 |   |           |
| SMC-8035     | SMC-8135 | 2           | 6        | 5/8       | 7/16-20 | 3/4   | 2.60 | 1 1/8 | 5/16-24 | 2 1/2 | 3/8 | 1.26 | 1.06 | 1.84 | 4 3/4 | 2.40 | 1 |   |           |
| SMC-8040     | SMC-8140 | 2           | 8        | 5/8       | 7/16-20 | 3/4   | 2.60 | 1 1/8 | 5/16-24 | 2 1/2 | 3/8 | 1.26 | 1.06 | 1.84 | 4 3/4 | 2.40 | 1 |   |           |
| SMC-8045     | —        | 2 1/2       | 2        | 5/8       | 7/16-20 | 3/4   | 3.10 | 1 1/8 | 5/16-24 | 3     | 3/8 | 1.26 | 1.06 | 2.19 | 4 7/8 | 2.48 | 1 |   |           |
| SMC-8060     | —        | 2 1/2       | 8        | 5/8       | 7/16-20 | 3/4   | 3.10 | 1 1/8 | 5/16-24 | 3     | 3/8 | 1.30 | 1.06 | 2.19 | 4 7/8 | 2.48 | 1 |   |           |
| —            | SMC-8180 | 3 1/4       | 8        | 1         | 3/4-16  | 1 1/8 | 3.90 | 1 1/2 | 5/16-24 | 3 3/4 | 1/2 | 1.57 | 1.18 | 2.76 | 5 5/8 | 2.72 | 1 |   |           |
| SMC-8085     | —        | 4           | 2        | 1         | 3/4-16  | 1 1/8 | 4.70 | 1 1/2 | 5/16-24 | 4 1/2 | 1/2 | 1.57 | 1.18 | 3.32 | 5 5/8 | 2.72 | 1 |   |           |
| SMC-8090     | —        | 4           | 4        | 1         | 3/4-16  | 1 1/8 | 4.70 | 1 1/2 | 5/16-24 | 4 1/2 | 1/2 | 1.57 | 1.18 | 3.32 | 5 5/8 | 2.72 | 1 |   |           |
| SMC-8100     | —        | 4           | 8        | 1         | 3/4-16  | 1 1/8 | 4.70 | 1 1/2 | 5/16-24 | 4 1/2 | 1/2 | 1.57 | 1.18 | 3.32 | 5 5/8 | 2.72 | 1 |   |           |

**Cylinder  
Mounting Brackets - with Bolts**

| Flange Type |          | Clevis Type |          | Bore Size | Pack Qty. |
|-------------|----------|-------------|----------|-----------|-----------|
| Item No.    | Item No. | Item No.    | Item No. |           |           |
| —           | SMC-8240 | —           | SMC-8240 | 1 1/2     | 1         |
| SMC-8220    | SMC-8245 | —           | SMC-8245 | 2         | 1         |
| —           | SMC-8260 | —           | SMC-8260 | 4         | 1         |



Flange Type



Clevis Type

**Solenoid Valves  
Five Port Pilot Type  
Metal Seal  
Plug-in Type**



All valves include indicator light and surge voltage suppressor. Electrical entry is plug-in-conduit terminal (base access).



| Specifications |                     |
|----------------|---------------------|
| Fluid          | — Air and Inert Gas |
| Max. Pressure  | — 150 psi           |
| Min. Pressure  | — 2 Position 15 psi |
| Min. Pressure  | — 3 Position 22 psi |
| Temp Range     | — 14°F to 140°F     |
| Lubrication    | — Not Required      |

| 24 V DC  |              | 110 V DC |              | Type                     | Port NPTF | CV Factor | Max. Operation Cycles (CPM) | Response Time (MS) | Pack Qty. |
|----------|--------------|----------|--------------|--------------------------|-----------|-----------|-----------------------------|--------------------|-----------|
| Item No. | SMC          | Item No. | SMC          |                          |           |           |                             |                    |           |
| SMC-2105 | VQ4100-5-02T | SMC-2155 | VQ4100-3-02T | 2 Position Single        | 1/4       | .83       | 1,200                       | 15 or less         | 1         |
| SMC-2110 | VQ4100-5-03T | —        | —            | 2 Position Single        | 3/8       | 2.00      | 1,200                       | 20 or less         | 1         |
| SMC-2125 | VQ4300-5-02T | —        | —            | 3 Position Closed Center | 1/4       | .67       | 600                         | 20 or less         | 1         |

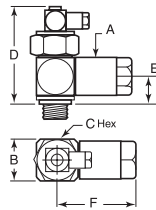
**Air Products  
Exhaust Port Mufflers**



- Inlet pressure is 250 psi
- Operating temperature is 0 to 300 degrees Fahrenheit
- 40 micron sintered bronze element

| Item No. | Parker | Port Size | Overall Length | Hex | Pack Qty. |
|----------|--------|-----------|----------------|-----|-----------|
| MFP-200  | EM12   | 1/8"      | 1.13           | .44 | 1         |
| MFP-201  | EM25   | 1/4"      | 1.38           | .56 | 1         |
| MFP-202  | EM37   | 3/8"      | 1.50           | .69 | 1         |
| MFP-203  | EM50   | 1/2"      | 1.88           | .88 | 1         |

**Air Products  
Blocking Valves w/Threaded Connection**

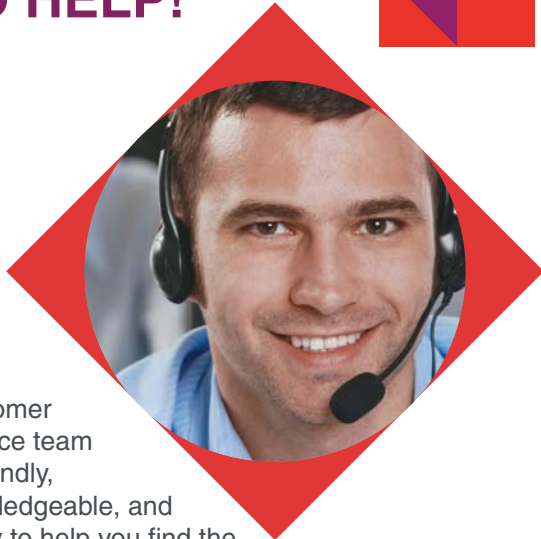


Blocking valves are designed for precise repeatable stopping of moving cylinders or to maintain the position of a cylinder in the event of an air pilot signal loss. Blockers are used for positioning, jogging, and safety purposes. Operating pressure is 0-150 psi with a temperature range of 5 to 140 degrees Fahrenheit. Maximum operating frequency is 10 Hz with a life expectancy of 10 million cycles at 90 psi, 68 degrees Fahrenheit, dry air and 1 Hz operating frequency.

| Item No. | Parker    | Size Port NPT | Pilot Port | A    | B    | C      | D    | E   | F    | Flow Cv | Pack Qty. |
|----------|-----------|---------------|------------|------|------|--------|------|-----|------|---------|-----------|
| MFP-487* | PWBA3888  | 1/8"          | 5/32"      | .90  | .86  | 15/16" | 2.41 | .80 | 1.59 | .78     | 1         |
| MFP-488  | PWBA3899P | 1/4"          | 10-32      | .90  | .86  | 15/16" | 2.16 | .55 | 1.59 | 1.02    | 1         |
| MFP-489  | PWBA3833P | 3/8"          | 10-32      | 1.10 | 1.14 | 15/16" | 2.16 | .57 | 2.04 | 1.67    | 1         |

\*Pilot Port is an instant tube connection.

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**Solenoid Valves**



These 4-way valves are 2-position, with a single solenoid and spring return. Valves are direct acting and have a non-locking manual override. Stacking models are great for multi-valve applications where space is limited. CFM on all models is 6.9; Cv is 0.2. Maximum temperature range is 0 to 180 degree Fahrenheit. Maximum operating pressure is 120 psi. Stacking end plate kits must be ordered separately.

| Item No.                                    | Port Size (NPT) | Actuator/Return   | Coil    | Length | Width | Height | Pack Qty. |
|---|-----------------|-------------------|---------|--------|-------|--------|-----------|
| <b>4-Way Stacking without Speed Control</b> |                 |                   |         |        |       |        |           |
| ARO-455                                     | 1/8"            | Solenoid / Spring | 120 VAC | 2.4    | .8    | 1.7    | 1         |
| ARO-465                                     | 1/8"            | Solenoid / Spring | 12 VDC  | 2.4    | .8    | 1.7    | 1         |
| <b>4-Way Stacking with Speed Control</b>    |                 |                   |         |        |       |        |           |
| ARO-470                                     | 1/8"            | Solenoid / Spring | 120 VAC | 2.4    | .8    | 1.7    | 1         |
| ARO-480                                     | 1/8"            | Solenoid / Spring | 12 VDC  | 2.4    | .8    | 1.7    | 1         |

**Stacking End Plate Kit**



| Item No. | Description                       | Pack Qty. |
|----------|-----------------------------------|-----------|
| ARO-490  | 1/4" 4-Way Stacking End Plate Kit | 1         |

**Air Products  
Needle, Check and Flow Control Valves**



Needle



Check



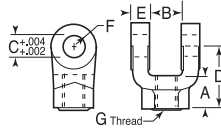
Flow Control

- Operating temperature: 0 to 140 degrees Fahrenheit
- Operating pressure: 2,000 psi max.

| Item No.            | Parker  | Port Size NPT | Flow SCFM | Pack Qty. |
|---------------------|---------|---------------|-----------|-----------|
| <b>Needle</b>       |         |               |           |           |
| MFP-302             | PN600B  | 3/8"          | 33.1      | 1         |
| MFP-300             | PN200B  | 1/8"          | 8.8       | 1         |
| MFP-301             | PN400B  | 1/4"          | 19.3      | 1         |
| MFP-303             | PN800B  | 1/2"          | 55.2      | 1         |
| <b>Check</b>        |         |               |           |           |
| MFP-304             | C200B   | 1/8"          | 29.2      | 1         |
| MFP-305             | C400B   | 1/4"          | 86.1      | 1         |
| MFP-306             | C600B   | 3/8"          | 125.3     | 1         |
| MFP-307             | C800B   | 1/2"          | 282.0     | 1         |
| <b>Flow Control</b> |         |               |           |           |
| MFP-308             | SPF200B | 1/8"          | 8.8       | 1         |
| MFP-309             | SPF400B | 1/4"          | 19.3      | 1         |
| MFP-310             | SPF600B | 3/8"          | 33.1      | 1         |
| MFP-311             | SPF800B | 1/2"          | 55.2      | 1         |

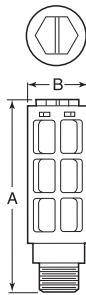


**Air Products  
Rod Clevises**



| Item No. | Parker     | A     | B     | C   | D     | E   | F   | G       | Load Capacity | Pack Qty. |
|----------|------------|-------|-------|-----|-------|-----|-----|---------|---------------|-----------|
| MFP-176  | 1458030044 | 3/4   | 3/4   | 1/2 | 1 1/2 | 1/2 | 1/2 | 7/16-20 | 4,250         | 1         |
| MFP-177  | 1458030075 | 1 1/8 | 1 1/4 | 3/4 | 2 1/2 | 3/8 | 3/4 | 3/4-16  | 11,200        | 1         |

**Air Product  
Silencer**



Designed to give excellent noise reduction with a minimum effect on air efficiency. Silencer fits into tight places without extra plumbing or fittings due to its trim design. Fits directly into the exhaust port of most commercial valves. Open surface of element allows for rapid discharge of air without undesirable back pressure. Body is acetal, and element is polyethylene. Pressure rating is 0 to 150 psi. SCFM rate is 124 with a 100 psi inlet. Temperature rating is 14 to 140 degree Fahrenheit. Thread size is 1/4".

| Item No. | A    | B   | Pack Qty. |
|----------|------|-----|-----------|
| MFP-1000 | 2.56 | .83 | 1         |

**Air Products  
Pneumatic Exhaust Mufflers**



Type A



Type B

Lightweight plastic mufflers resist clogging. Fail-safe feature guards against excessive back pressure build up. Made of glass filled polypropylene with a multi-layered brass wire mesh muffler that is impervious to solvents. These mufflers resist cross threading and the corrosion that is caused by metal-to-metal contact. The housing has a screw-off top so you can clean the inner wire mesh muffler. Mufflers reduce exhaust noise by more than 20 Db to bring within OSHA standards. They have a NPT male connection. Maximum pressure is 150 psi and maximum temperature is 175 degree Fahrenheit.

| Item No.      | Pipe Size | Length | Diameter | Pack Qty. | Item No.      | Pipe Size | Length | Diameter | Pack Qty. |
|---------------|-----------|--------|----------|-----------|---------------|-----------|--------|----------|-----------|
| <b>Type A</b> |           |        |          |           | <b>Type B</b> |           |        |          |           |
| JM-01         | 1/4       | 1.76   | 1.62     | 1         | JM-13         | 3/8       | 3.55   | 1.34     | 1         |
| JM-02         | 1/4       | 1.81   | 1.62     | 1         | JM-14         | 1/2       | 3.68   | 1.34     | 1         |
| <b>Type B</b> |           |        |          |           | JM-16         | 3/4       | 5.60   | 1.90     | 1         |
| JM-11         | 1/4       | 2.35   | .95      | 1         | JM-18         | 1         | 5.85   | 1.90     | 1         |
| JM-12         | 1/4       | 2.48   | .95      | 1         |               |           |        |          |           |

**Air Product  
Pre-Assembled Two-Hand Control Enclosure**



Two-hand control with two mushroom head buttons and 5/32" connections.

| Item No. | Parker  | Description                | Pack Qty. |
|----------|---------|----------------------------|-----------|
| MFP-486  | PXPC111 | Two-Hand Control Enclosure | 1         |

**Quick Exhaust and Shuttle Valves  
With Urethane Diaphragm**



| Item No. | Parker | Inlet Port NPTF | Cyl. Port NPTF | Exhaust Port NPTF | Flow SCFM | Pack Qty. |
|----------|--------|-----------------|----------------|-------------------|-----------|-----------|
| MFP-213  | OR25B  | 1/4             | 1/4            | 1/4               | 90        | 1         |
| MFP-214  | OR37B  | 3/8             | 3/8            | 3/8               | 240       | 1         |
| MFP-215  | OR50B  | 1/2             | 1/2            | 1/2               | 450       | 1         |

Note: Flow Rate is at 100 psi inlet pressure with full pressure drop.

**Air Products  
Exhaust Port Silencers**



| Item No. | Parker | Port Size | Overall Length | Pack Qty. |
|----------|--------|-----------|----------------|-----------|
| MFP-210  | ES25MB | 1/4       | 2.41           | 1         |
| MFP-211  | ES37MC | 3/8       | 3.06           | 1         |
| MFP-212  | ES50MB | 1/2       | 3.19           | 1         |

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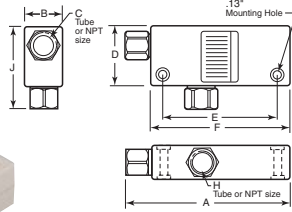
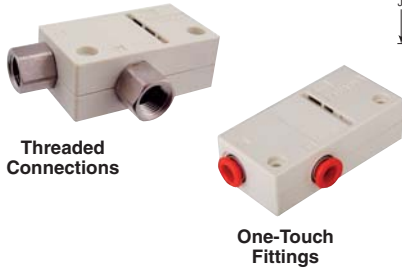
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**Vacuum Ejectors  
Built-In Silencer Type**



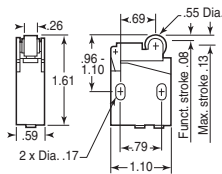
| Max. Suction Rate/Air Consumption (SCFM) |       |       |       |       |
|--|-------|-------|-------|-------|
| Nozzle Size                              | 0.5mm | 0.7mm | 1.0mm | 1.3mm |
| Max. Suction Flow                        | .18   | .42   | .85   | 1.41  |
| Air Consumption                          | .35   | .71   | 1.20  | 2.41  |

Available with built-in silencer that has muffled exhaust or body ported type that has an individual exhaust port. Available with one touch fittings for tubing or threaded ports. Solid resin design of nozzle and body makes these units lightweight and compact. Max. vacuum pressure 26 Hg. Max. operating pressure 100 psi. Should only be used with clean supply side air without oil.

See pages 306 and 307 for suction cups.

| Item No.                    | SMC              | Nozzle Size (mm) | A    | B    | C   | D    | E    | F    | H   | J    | Pack Qty. |
|-----------------------------|------------------|------------------|------|------|-----|------|------|------|-----|------|-----------|
| <b>Threaded Connections</b> |                  |                  |      |      |     |      |      |      |     |      |           |
| SMC-8510                    | NZHI05BS-T01-T01 | .5               | 2.44 | 0.75 | 1/8 | 1.10 | 1.50 | 2.01 | 1/8 | 1.57 | 1         |
| SMC-8530                    | NZHI10BS-T01-T01 | 1.0              | 2.94 | 0.75 | 1/8 | 1.26 | 2.00 | 2.52 | 1/8 | 1.69 | 1         |
| SMC-8535                    | NZHI13BS-T01-T02 | 1.3              | 3.50 | .98  | 1/4 | 1.50 | 2.50 | 2.99 | 1/4 | 2.13 | 1         |
| <b>One-Touch Fittings</b>   |                  |                  |      |      |     |      |      |      |     |      |           |
| SMC-8515                    | NZHI07BS-07-07   | .7               | 2.36 | 0.75 | 1/4 | 1.10 | 1.75 | 2.24 | 1/4 | 1.26 | 1         |
| SMC-8525                    | NZHI10BS-07-07   | 1.0              | 2.64 | 0.75 | 1/4 | 1.26 | 2.00 | 2.52 | 1/4 | 1.38 | 1         |

**Air Products  
Limit Switches**



| Item No. | Parker  | Actuator       | Type of Switch | Connection | Pack Qty. |
|----------|---------|----------------|----------------|------------|-----------|
| MFP-480  | PXCM121 | Plastic Roller | NNP            | 1/32       | 1         |

**Air Products  
Vacuum Generator**



Vacuum generators are designed to be compact and lightweight with a minimal air consumption and high vacuum levels. 5 micron filter of unlubricated air and pressure range

of 20 to 110 psi with a temperature range of 10 to 160 degrees Fahrenheit. Removable cartridge on MFP-463.

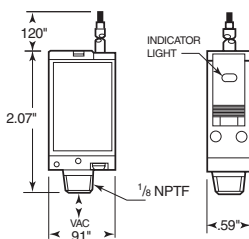
See pages 306 and 307 for suction cups.

| Item No. | Parker   | Air Consumption | Inlet | Vacuum NPT | Exhaust NPT | Mounting Holes | Pack Qty. |
|----------|----------|-----------------|-------|------------|-------------|----------------|-----------|
| MFP-460  | CV-10HSN | 30              | 1/4   | 1/4        | 1/4         | 1/4-20         | 1         |

**Air Products  
Vacuum Switch**

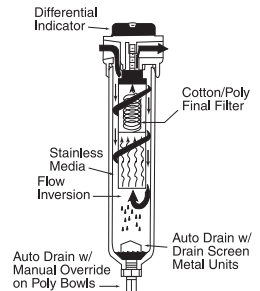


This diaphragm-type switch is compact, lightweight, and non-contact solid state. Vacuum settings screw allows you to increase or decrease pressure. Indicator light comes on under "on" condition. Maximum pressure 75 psi. 1/8" NPTF ports. 120" lead wire length. Pressure range -8 to -26 in Hg.



| Item No. | SMC        | Type        | Voltage | Pack Qty. |
|----------|------------|-------------|---------|-----------|
| SMC-8650 | ZSM1-T115L | Non-Contact | 24 VDC  | 1         |

**Point of Use Dryers**

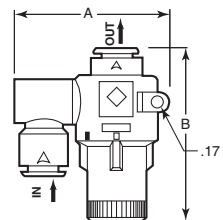


Filters contaminant water, dirt and oil out of shop air. Uses a centrifugal spinning action which forces heavy contaminants out. The air is then circulated back up through a stainless steel media with filtration to 3 micron with greater than 99.9% efficiency. A final cotton polyester friction filter filters to 1 micron. Available with a polycarbonate bowl. Each dryer includes an automatic float drain to expel any liquids that build up inside the bowl. Maximum operating pressure 150 psig. Maximum operating temperature 125 degree Fahrenheit. Made in USA.

See page 956 for other dryers.

| Item No. | Bowl Material | Flow Rate SCFM @ 100 PSI |      | NPT Port Size | Overall Height | Overall Width | Overall Depth | Pack Qty. |
|----------|---------------|--------------------------|------|---------------|----------------|---------------|---------------|-----------|
|          |               | Min.                     | Max. |               |                |               |               |           |
| F-1      | Polycarbonate | 2.0                      | 20.0 | 1/4           | 7.5            | 3.00          | 2.60          | 1         |

**Air Products  
Suction Filters**



Protects vacuum ejectors, pumps, switches and valves from particle contamination. The element can be easily changed without tools or removing the tubing. One-touch tubing fittings for easy installation and removal. Made from light weight molded resin material.

| Item No. | Flow Max. SCFM | Tube Size | Replacement Element |      | Pack Qty. | Item No. |
|----------|----------------|-----------|---------------------|------|-----------|----------|
|          |                |           | A                   | B    |           |          |
| SMC-8605 | 1.1            | 1/4       | 2.05                | 2.56 | 1         | SMC-8625 |
| SMC-8610 | 2.1            | 3/8       | 2.24                | 2.76 | 1         | SMC-8630 |



**Air Products  
Regulators with Gauge**



These regulators are designed to provide quick response and accurate pressure regulation for the most demanding industrial applications. Rolling diaphragm design gives repeatable performance with low hysteresis over a wide range of pressures. Pressure range is 2-125 psi and temperature range is 32 to 125 degrees Fahrenheit.

| Item No. | Parker   | Description        | Pack Qty. |
|----------|----------|--------------------|-----------|
| MFP-367  | 07R418A  | Regulator 3/4" NPT | 1         |
| MFP-365  | 07R318A  | Regulator 3/8" NPT | 1         |
| MFP-366  | 07R318A  | Regulator 1/2" NPT | 1         |
| MFP-364* | 05R118AD | Regulator 3/4" NPT | 1         |

\*Max psi 125

**"Piggyback" Filter/Regulator**



**Mounting Bracket**



Integral filter regulator "piggy backs" are an excellent choice where accurate pressure regulation and high moisture removal are required in a space saving package. All "piggy backs" come with a polycarbonate bowl (150 psi max.) and a temperature range of 32 to 125 degrees Fahrenheit. Auto drain is standard on these models with a metal bowl guard. Comes with a 40 micron filter. 30 SCFM.

| Item No. | Parker     | Description                           | Pack Qty. |
|----------|------------|---------------------------------------|-----------|
| MFP-354  | 05E12A18AB | Piggyback Filter / Regulator 1/4" NPT | 1         |
| MFP-355  | 05E2PA13A  | Piggyback Filter / Regulator 3/8" NPT | 1         |
| MFP-371  | PS963P     | Mounting Bracket                      | 1         |

**Air Products  
Combination FRL'S**



**Mounting Bracket**

- Polycarbonate bowls with metal bowl guards
- Operating temperature range: 32 to 125 degrees Fahrenheit
- Pressure rating: 150 psi max.
- All items below include a filter with a manual drain, relieving regulator (2-125 psi) and micro mist lubricator
- Mounting brackets sold separately

| Item No. | Parker        | Description                            | Pack Qty. |
|----------|---------------|--|-----------|
| MFP-350  | 15B12A13A2NE  | 3 Unit Combination 1/4" NPT            | 1         |
| MFP-351  | 15B12A13A2NEK | 3 Unit Combination 1/4" NPT w/ Lockout | 1         |
| MFP-352  | 15B22A13A2N   | 3 Unit Combination 3/8" NPT            | 1         |
| MFP-353  | 15B22A13A2N   | 3 Unit Combination 3/8" NPT w/ Lockout | 1         |
| MFP-370  | PS955P        | Mounting Bracket                       | 1         |

**Air Products  
Filters**



These filters provide excellent water removal efficiency. Unique deflector plate and shroud creates a swirling of the air stream, ensuring maximum water and dirt separation. Operating pressure is 150 psi and a temperature range of 32 to 125 degrees Fahrenheit. Each unit comes with a 40 micron filter and polycarbonate bowl. Metal bowl guards sold separately.

| Item No. | Parker  | Description     | Pack Qty. |
|----------|---------|-----------------|-----------|
| MFP-356  | 05F12A  | Filter 1/4" NPT | 1         |
| MFP-357  | 07F21A  | Filter 3/8" NPT | 1         |
| MFP-358  | 07F31A  | Filter 1/2" NPT | 1         |
| MFP-359  | 07F42AC | Filter 3/4" NPT | 1         |

See pages 956-957 for other filters, lubricators and regulators

**Air Products  
Lubricators**



These lubricators are designed to provide optimum and uniform lubrication with fine micro-mist particles of two micron or smaller. Units should be installed close to the application, ensuring effective distribution of oil to pneumatic components. All units have a polycarbonate bowl. Metal bowl guards sold separately. Maximum pressure is 150 psi and temperature range of 32 to 125 degrees Fahrenheit.

| Item No. | Parker  | Description         | Pack Qty. |
|----------|---------|---------------------|-----------|
| MFP-360  | 15L12N  | Lubricator 1/4" NPT | 1         |
| MFP-363  | 07L42BE | Lubricator 3/4" NPT | 1         |

**"Piggyback" Filter/Regulators with Gauge**



Integral filter/regulator "piggybacks" are an excellent choice where accurate pressure regulation and high moisture removal efficiency are required in a space saving package. Pressure rating 150 psi and a temperature range of 32 to 125 degrees Fahrenheit. Polycarbonate bowl and manual drain are standard on units. 67 SCFM flow rate. Comes with a 40 micron filter.

| Item No. | Parker    | Description                           | Pack Qty. |
|----------|-----------|---------------------------------------|-----------|
| MFP-368  | 07E31A18A | Piggyback Filter / Regulator 1/2" NPT | 1         |
| MFP-369  | 07E42A18A | Piggyback Filter / Regulator 3/4" NPT | 1         |

**Right Angle Flow Controls  
with Presto Lock Fittings**



- Temperature range: 0 to 140 degrees Fahrenheit
- Pressure range: 125 psi max.

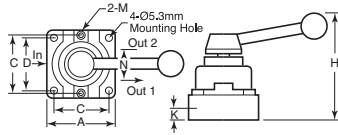
| Item No. | Parker     | Thread NPT | Tube Size | Cv Adj. Flow | Cv Free Flow | Pack Qty. |
|----------|------------|------------|-----------|--------------|--------------|-----------|
| MFP-328  | 03251-3838 | 3/8"       | 3/8"      | .78          | .65          | 1         |

**Air Products  
40 Micron Filter Elements**

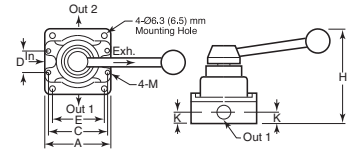


| Item No. | Parker | Use With                    | Pack Qty. |
|----------|--------|-----------------------------|-----------|
| MFP-512  | PS901P | MFP-354, 355, 356           | 1         |
| MFP-513  | PS801P | MFP-357, 358, 359, 368, 369 | 1         |

Rotary Hand Valves



VH2



VH3

An ideal manual directional control valve for use with all pneumatic systems. Precision lapped rotor and seals offers high tolerance to dirt contamination. Offered as four-way, these valves may be used as two or three-way by plugging unused ports. (Note: "In" port must be used as pressure inlet port to assure efficient operation.) Max supply pressure 220 psig. Operating pressure 150 psig. Body is made from aluminum die cast. Can be used with any non-flammable, non-toxic, non-corrosive gases, except oxygen.

| Item No. | SMC       | Actuation                        | NPT | A    | C    | D    | E    | H    | K   | M      | N   | Pack Qty. |
|----------|-----------|----------------------------------|-----|------|------|------|------|------|-----|--------|-----|-----------|
| SMC-1005 | VH200-N02 | 3 Position - Center Blocked      | 1/4 | 2.44 | 1.93 | 1.93 | —    | 3.88 | .45 | M4 x 6 | .98 | 1         |
| SMC-1010 | VH201-N02 | 3 Position - Cylinder to Exhaust | 1/4 | 2.44 | 1.93 | 1.93 | —    | 3.88 | .45 | M4 x 6 | .98 | 1         |
| SMC-1015 | VH202-N02 | 2 Position - Detented            | 1/4 | 2.44 | 1.93 | 1.93 | —    | 3.88 | .45 | M4 x 6 | .98 | 1         |
| SMC-1020 | VH300-N02 | 3 Position - Center Blocked      | 1/4 | 2.91 | 2.60 | .71  | 2.44 | 4.49 | .51 | M5 x 6 | —   | 1         |
| SMC-1025 | VH301-N02 | 3 Position - Cylinder to Exhaust | 1/4 | 2.91 | 2.60 | .71  | 2.44 | 4.49 | .51 | M5 x 6 | —   | 1         |
| SMC-1030 | VH302-N02 | 2 Position - Detented            | 1/4 | 2.91 | 2.60 | .71  | 2.44 | 4.49 | .51 | M5 x 6 | —   | 1         |
| SMC-1035 | VH300-N03 | 3 Position - Center Blocked      | 3/8 | 2.91 | 2.60 | .71  | 2.44 | 4.49 | .51 | M5 x 6 | —   | 1         |
| SMC-1040 | VH301-N03 | 3 Position - Cylinder to Exhaust | 3/8 | 2.91 | 2.60 | .71  | 2.44 | 4.49 | .51 | M5 x 6 | —   | 1         |
| SMC-1045 | VH302-N03 | 2 Position - Detented            | 3/8 | 2.91 | 2.60 | .71  | 2.44 | 4.49 | .51 | M5 x 6 | —   | 1         |

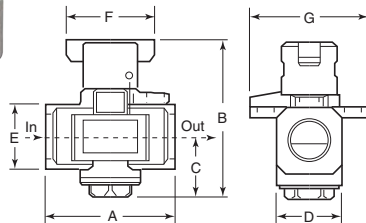
Modular Filters Complete FRL's



Sold as a complete unit. The space saving modular design allows for easy assembly and disassembly for maintenance. No fittings, nipples etc. needed for assembly. Regulating range of 7 to 125 psi. Polycarbonate bowl with sight guard. Pressure gauge included.

| Item No. | SMC           | Port Size | Overall Height | Pack Qty. |
|----------|---------------|-----------|----------------|-----------|
| SMC-6015 | AC30A-N03G-3Z | 3/8 NPT   | 8.31           | 1         |
| SMC-6010 | AC20A-N02G-CZ | 1/4 NPT   | 6.48           | 1         |
| SMC-6020 | AC40A-N04G-Z  | 1/2 NPT   | 10.33          | 1         |

Lock Out Valves Three Port



OSHA Rule 29 CFR1910.147 requires energy sources for certain equipment be turned off or disconnected and that device either be locked or labeled with a warning tag. When in the exhaust position, the valve may be padlocked secure.

| Item No. | SMC         | NPT Port | Exh. Port | A    | B    | C    | D    | E    | F    | G    | Pack Qty. |
|----------|-------------|----------|-----------|------|------|------|------|------|------|------|-----------|
| SMC-1065 | VHS30-N02-Z | 1/4      | 1/4       | 2.09 | 3.07 | 1.14 | 1.89 | 1.18 | 1.77 | 2.09 | 1         |
| SMC-1070 | VHS30-N03-Z | 3/8      | 3/8       | 2.09 | 3.07 | 1.14 | 1.89 | 1.18 | 1.77 | 2.09 | 1         |
| SMC-1080 | VHS40-N03-Z | 3/8      | 3/8       | 2.76 | 3.35 | 1.26 | 1.42 | 1.42 | 1.93 | 2.52 | 1         |
| SMC-1085 | VHS40-N04-Z | 1/2      | 1/2       | 2.76 | 3.35 | 1.26 | 1.42 | 1.42 | 1.93 | 2.52 | 1         |

Filter Regulators Non-Lube Systems



Combines a filter and regulator into one unit for easy assembly and space savings. Comes with polycarbonate bowl with metal sight guard, pressure gauge and mounting bracket.

| Item No. | SMC           | Port Size | Overall Height | Pack Qty. |
|----------|---------------|-----------|----------------|-----------|
| SMC-6025 | AW20-N02BG-CZ | 1/4 NPT   | 6.48           | 1         |
| SMC-6030 | AW30-N03BG-Z  | 3/8 NPT   | 8.31           | 1         |
| SMC-6035 | AW40-N04BG-Z  | 1/2 NPT   | 10.33          | 1         |

Ambient Dryers



Allows "point of use" installation wherever moisture needs to be removed from the air supply. 99% of all moisture can be removed at the air inlet or the end of an air line. They have a built in automatic drain for continuous non-stop operation. Special resin element for long life. These dryers are lightweight, compact and easy to install. Brackets sold separately. Best if used after air filter, however, this is not required. Do not use after air line lubricator.

| Item No. | SMC          | Port Size                        | Flow Rate SCFM | Height | Width | Pack Qty. |   |
|----------|--------------|----------------------------------|----------------|--------|-------|-----------|---|
| SMC-6050 | AMG150-N02C  | 1/4                              | 10.5           | 5 1/2  | 2 1/2 | 1         |   |
| SMC-6055 | AMG250C-N03C | 3/8                              | 26             | 6      | 3     | 1         |   |
| SMC-6060 | AMG350C-N04C | 1/2                              | 53             | 7 1/4  | 3 1/2 | 1         |   |
| SMC-6065 | AM-BM101     | Bracket for SMC-6050             |                |        |       |           | 1 |
| SMC-6080 | AMG-EL150    | Replacement Element for SMC-6050 |                |        |       |           | 1 |
| SMC-6085 | AMG-EL250    | Replacement Element for SMC-6055 |                |        |       |           | 1 |
| SMC-6090 | AMG-EL350    | Replacement Element for SMC-6060 |                |        |       |           | 1 |

# FILTERS, LUBRICATORS & REGULATORS



## Filters, Lubricators and Regulators Economy Series



Compact and durable. Bodies are made of die cast aluminum and the filter and lubricator have a transparent polycarbonate bowl with a plastic guard. Filter is 40 micron. Lubricator allows lubricant to be added without shutting off air line. Once delivery rate is set, the lubricant is proportionately delivered at all air flows. Regulator has two full flow gauge ports. Maximum pressure of 150 psi and maximum temperature is 120 degree Fahrenheit.

| Item No. | Description | Pipe Size | Height | Width | Pack Qty. |
|----------|-------------|-----------|--------|-------|-----------|
| COL-26F2 | Filter      | 1/4       | 6      | 2     | 1         |
| COL-26F3 | Filter      | 3/8       | 6      | 2     | 1         |
| COL-26L2 | Lubricator  | 1/4       | 6 1/2  | 2     | 1         |
| COL-26L3 | Lubricator  | 3/8       | 6 1/2  | 2     | 1         |
| COL-26R2 | Regulator   | 1/4       | 4      | 2     | 1         |
| COL-26R3 | Regulator   | 3/8       | 4      | 2     | 1         |

## Heavy Duty Filters



- 40 micron filter
- Quick disassembly by hand
- Supplied with bowl guard
- Polycarbonate bowl
- Maximum supply pressure 150 psi
- Maximum operating temperature 120 degree Fahrenheit

See page 955 for other filters, lubricators, and regulators.

| Item No.  | Pipe Size | Height | Width  | Pack Qty. |
|-----------|-----------|--------|--------|-----------|
| COL-8822R | 1/4       | 6      | 2 1/16 | 1         |
| COL-8824R | 1/2       | 6 1/8  | 3 1/16 | 1         |

## Heavy Duty Lubricators



- Allows filling without shutting down
- Proportional oil flow at all pressures
- Supplied with bowl guard
- Polycarbonate bowl
- Maximum supply pressure 150 psi
- Maximum operating temperature 120 degrees Fahrenheit

| Item No.  | Pipe Size | Fluid Capacity | Height | Width  | Pack Qty. |
|-----------|-----------|----------------|--------|--------|-----------|
| COL-8842R | 1/4       | 4 oz           | 6 1/8  | 2 1/16 | 1         |
| COL-8843R | 3/8       | 4 oz           | 6 1/8  | 2 1/16 | 1         |
| COL-8844R | 1/2       | 9 oz           | 7 1/8  | 3 1/16 | 1         |

## Heavy Duty Regulators



- Diaphragm prevents ruptures from surges
- Pressure bleed valve
- 1/4" gauge ports

| Item No. | Pipe Size | Working Range | Body Style | Height | Width  | Pack Qty. |
|----------|-----------|---------------|------------|--------|--------|-----------|
| COL-8802 | 1/4       | 5-125         | T-Handle   | 5 1/16 | 2 1/16 | 1         |
| COL-8803 | 3/8       | 5-125         | T-Handle   | 5 1/16 | 2 1/16 | 1         |
| COL-8804 | 1/2       | 5-125         | T-Handle   | 6 1/8  | 3 3/8  | 1         |

## In Line Filters, Lubricators and Regulators



Filter



Lubricator



Regulator

| Item No.   | Description | Inlet   | Outlet  | Lgth. | Pack Qty. |
|------------|-------------|---------|---------|-------|-----------|
| COL-4022   | Filter      | 1/4 FPT | 1/4 MPT | 1 3/4 | 1         |
| COL-40014* | Lubricator  | 1/4 FPT | 1/4 MPT | 3     | 1         |
| COL-4002   | Regulator   | 1/4 FPT | 1/4 MPT | 1 3/4 | 1         |
| COL-4003   | Regulator   | 3/8 FPT | 3/8 MPT | 1 3/4 | 1         |

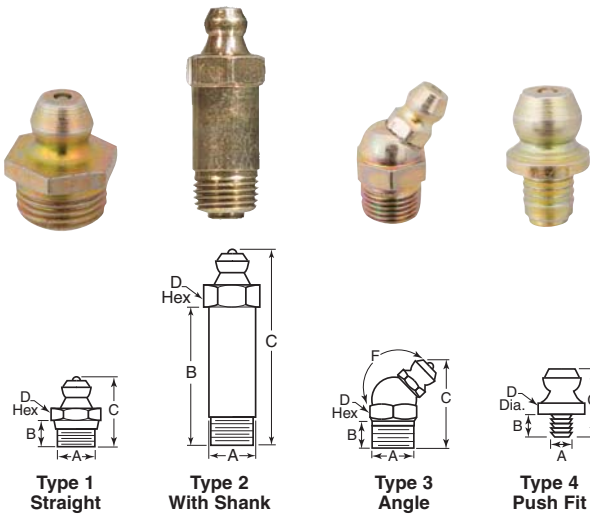
\*5cc capacity



# ACCESS HARDWARE

Pages 120 - 185

**Hydraulic Grease Fittings**



Available standard, NPT, or metric threaded or barbed press fit. Press fit are used in unthreaded holes using a drive tool. All have a ball check except where indicated.

| Item No.         | A Thread Size  | Type | B      | C      | D    | Head Type | Degree F | Pack Qty. |
|------------------|----------------|------|--------|--------|------|-----------|----------|-----------|
| <b>Steel</b>     |                |      |        |        |      |           |          |           |
| HGF-1            | 1/8 NPT        | 1    | 13/64  | 19/32  | 7/16 | Hex       | —        | 1         |
| HGF-9            | 1/8 NPT        | 1    | 1/4    | 5/8    | 7/16 | Hex       | —        | 1         |
| HGF-3            | 1/8 NPT        | 2    | 29/32  | 1 1/4  | 7/16 | Hex       | —        | 1         |
| HGF-4            | 1/8 NPT        | 2    | 1 1/64 | 1 3/4  | 7/16 | Hex       | —        | 1         |
| HGF-5            | 1/8 NPT        | 2    | 2 3/16 | 2 7/8  | 7/16 | Hex       | —        | 1         |
| HGF-22           | 1/8 NPT        | 3    | 9/32   | 29/32  | 7/16 | Hex       | 30       | 1         |
| HGF-6            | 1/8 NPT        | 3    | 1 1/64 | 63/64  | 7/16 | Hex       | 45       | 1         |
| HGF-25           | 1/8 NPT        | 3    | 1 1/64 | 7/8    | 7/16 | Hex       | 65       | 1         |
| HGF-15           | 1/8 NPT        | 3    | 2 1/64 | 1 3/16 | 7/16 | Hex       | 90       | 1         |
| HGF-11           | 1/4 NPT        | 1    | 2 1/64 | 5 1/64 | 9/16 | Hex       | —        | 1         |
| HGF-2            | 1/4-28         | 1    | 1 1/64 | 3 5/64 | 9/16 | Hex       | —        | 1         |
| HGF-14           | 1/4-28         | 1    | 2 1/64 | 1 1/16 | 9/16 | Hex       | —        | 1         |
| HGF-16           | 1/4-28         | 2    | 5/8    | 3 1/32 | 9/16 | Hex       | —        | 1         |
| HGF-17           | 1/4-28         | 2    | 1      | 1 7/8  | 9/16 | Hex       | —        | 1         |
| HGF-18           | 1/4-28         | 3    | 1 1/64 | 7/8    | 9/16 | Hex       | 45       | 1         |
| HGF-19           | 1/4-28         | 3    | 1 1/64 | 3 1/32 | 9/16 | Hex       | 45       | 1         |
| HGF-13           | 1/4-28         | 3    | 1 1/64 | 1 1/16 | 9/16 | Hex       | 90       | 1         |
| HGF-21           | 1/4-28         | 3    | 1 1/64 | 5 1/64 | 9/16 | Hex       | 90       | 1         |
| HGF-23           | 1/4-28         | 1    | 5/32   | 1/2    | 9/32 | Hex       | —        | 1         |
| HGF-7            | 3/16-24        | 1    | 7/32   | 3 5/64 | 9/16 | Hex       | —        | 1         |
| HGF-8            | 3/8-24         | 1    | 1 1/64 | 4 1/64 | 9/16 | Hex       | —        | 1         |
| HGF-26*          | 1/8 Press-Fit  | 4    | 5/32   | 1 1/32 | 9/16 | Round     | —        | 1         |
| HGF-27           | 3/16 Press-Fit | 4    | 1 1/64 | 1/2    | 9/16 | Round     | —        | 1         |
| HGF-28*          | 3/16 Press-Fit | 4    | 7/32   | 1/2    | 9/16 | Round     | —        | 1         |
| HGF-29           | 3/16 Press-Fit | 3    | 7/32   | 5 3/64 | 9/16 | Hex       | 45       | 1         |
| HGF-30           | 1/4 Press-Fit  | 4    | 1 1/64 | 1/2    | 9/16 | Round     | —        | 1         |
| HGF-32           | 1/4 Press-Fit  | 3    | 9/32   | 3/4    | 9/16 | Hex       | 65       | 1         |
| HGF-33           | 3/16 Press-Fit | 4    | 7/32   | 3 7/64 | 9/32 | Round     | —        | 1         |
| HGF-34*          | 3/8 Press-Fit  | 4    | 7/32   | 3 7/64 | 7/16 | Round     | —        | 1         |
| <b>Stainless</b> |                |      |        |        |      |           |          |           |
| HGF-38           | 1/8 NPT        | 1    | 1/4    | 5/8    | 7/16 | Hex       | —        | 1         |
| HGF-39           | 1/8 NPT        | 3    | 1 1/32 | 63/64  | 7/16 | Hex       | 45       | 1         |
| HGF-40           | 1/8 NPT        | 3    | 1 1/64 | 1 3/16 | 7/16 | Hex       | 90       | 1         |
| HGF-42           | 1/4-28         | 1    | 3/16   | 1 7/32 | 9/16 | Round     | —        | 1         |

\*No ball check  
 Note: NPT = standard pipe thread.

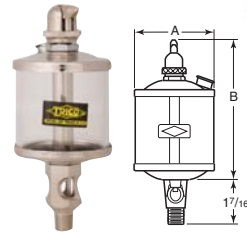
**Metric Grease Fittings**



| Item No. | Thread Size | Angle Type | Pack Qty. | Item No. | Thread Size   | Type           | Angle Degree | Pack Qty. |
|----------|-------------|------------|-----------|----------|---------------|----------------|--------------|-----------|
| MK-MF-10 | 6 x 1       | 1          | —         | MK-MF-35 | 8 x 1         | 3              | 90           | 1         |
| MK-MF-15 | 6 x 1       | 3          | 45        | MK-MF-40 | 10 x 1        | 1              | —            | 1         |
| MK-MF-20 | 6 x 1       | 3          | 90        | MK-MF-50 | 10 x 1        | 3              | 90           | 1         |
| MK-MF-25 | 8 x 1       | 1          | —         | MK-105-9 | 105 Pc. Asst. | in Plastic Box | —            | 1         |

**Gravity Feed Oilers KG Model**

"KG" gravity feed oilers are designed for heavy-duty, high temperature lubricating applications. The rate of oil feed is adjustable and a lock ring maintains the setting. Ideal for bearing or gear lubrication. Three position toggle switch provides easy to use on-off control, and a flushing option to avoid dry start-ups. Heavy wall heat resistant glass reservoir and oil sight operate continuously up to 250 degrees Fahrenheit. Vented sight chamber ensures proper operation when used with tight or high speed bearings. Copper brazing of all steel connections provides long life and leak proof design. Made of heavy gauge nickel plated steel. Gaskets are Buna-N.



| Item No.  | Capacity Oz. | Connection (NPT) | A     | B     | Pack Qty. |
|-----------|--------------|------------------|-------|-------|-----------|
| TMC-37011 | 1            | 1/8              | 1 1/8 | 3 1/4 | 1         |
| TMC-37012 | 1            | 1/4              | 1 1/8 | 3 1/4 | 1         |
| TMC-37013 | 2.5          | 1/8              | 2 1/8 | 4     | 1         |
| TMC-37014 | 2.5          | 1/4              | 2 1/8 | 4     | 1         |

**Brush Applicators Brush Type - 1/8" NPT Connection**



**Even-Flo**  
 Contains internal reservoir to allow uniform dispensing of oil for chain lubricants that include graphite or molybdenum.

**Ever-Last**  
 Ordinary shears may be used to trim brush to fit the exact size of the chain and eliminate uneven wear of the applicator or side dripping of the lubricant. Four part construction using a neoprene cover and felt plate. The mechanical motion of the chain sets up a pumping action in the applicator.

**Round**  
 Used in applications requiring broad contact surfaces for lubricating and cleaning.

| Item No.  | Type      | Bristle Type  | A   | Pack Qty. |
|-----------|-----------|---------------|-----|-----------|
| TMC-36051 | Even-Flo  | Nylon         | 2   | 1         |
| TMC-36036 | Ever-Last | Neoprene/Felt | 2   | 1         |
| TMC-36039 | Round     | Nylon         | 5/8 | 1         |
| TMC-36045 | Round     | Nylon         | 1   | 1         |

**Chip and Oil Brushes**



100% high quality bristle. Vulcanized in rubber nicked ferrule. Very handy around the machine shop, tool room and maintenance departments. Use for cleaning chips and shavings from machinery and parts, applying oils or rust preventatives. Satisfactory for touch-up paint jobs. Available with black plastic handle and black bristle or unfinished wood handle with natural bristles.

| Plastic Handle |          | Wood Handle |          | Size  | Pack Qty. |
|----------------|----------|-------------|----------|-------|-----------|
| Item No.       | Item No. | Item No.    | Item No. |       |           |
| BR-1           | BR-11    | BR-1        | BR-11    | 1/2   | 1         |
| BR-2           | BR-12    | BR-2        | BR-12    | 1     | 1         |
| BR-3           | BR-13    | BR-3        | BR-13    | 1 1/2 | 1         |
| BR-4           | BR-14    | BR-4        | BR-14    | 2     | 1         |
| BR-5           | BR-15    | BR-5        | BR-15    | 2 1/2 | 1         |
| BR-6           | BR-16    | BR-6        | BR-16    | 3     | 1         |
| —              | BR-17    | BR-6        | BR-17    | 4     | 1         |



**Heavy Duty  
Liquid Filled**

- Designed to perform in rugged and harsh environmental conditions where corrosive and/or media is not an issue
- Liquid filling protects against pulsation and vibration offering a cushioning and dampening effect
- Forged brass one-piece design reduces the chance of leaks and allows field filling as an easy option



**Forged brass  
one-piece design**

| Item No.  | Marsh   | Pressure Range  | Pack Qty. |
|---|---------|-----------------|-----------|
| <b>2 1/2" Diameter Face - 1/4" NPT Connection</b> |         |                 |           |
| MBF-310   | W9005PE | 30" Hg/0 Vacuum | 1         |
| MBF-311   | W9046PE | 0-60            | 1         |
| MBF-312   | W9048PE | 0-100           | 1         |
| MBF-313   | W9052PE | 0-160           | 1         |
| MBF-314   | W9054PE | 0-200           | 1         |
| MBF-315   | W9058PE | 0-300           | 1         |
| MBF-316   | W9064PE | 0-600           | 1         |
| MBF-317   | W9072PE | 0-1000          | 1         |
| MBF-318   | W9076PE | 0-2000          | 1         |
| MBF-319   | W9078PE | 0-3000          | 1         |
| MBF-320   | W9082PE | 0-5000          | 1         |
| MBF-321   | W9090PE | 0-10000         | 1         |

**Pressure Gauges  
Dry Type**



**Polycarbonate**



**Chrome Plated**

All gauges are dry type with either polycarbonate or metal cases and polycarbonate or glass lenses. Accuracy is 3-2-3%.

| Item No.     | Pressure Range | Dial Size | Connection Mounting | Size | Case Type     | Pack Qty. |
|--------------|----------------|-----------|---------------------|------|---------------|-----------|
| COL-8800-60  | 0-60           | 2         | Ctr. Back           | 1/4  | Polycarbonate | 1         |
| COL-8800-160 | 0-160          | 2         | Ctr. Back           | 1/4  | Polycarbonate | 1         |
| COL-G14160   | 0-160          | 2         | Ctr. Back           | 1/4  | Chrome-Plated | 1         |
| COL-G14300   | 0-300          | 2         | Ctr. Back           | 1/4  | Chrome-Plated | 1         |

**Pressure Gauges  
Industrial Series**



**Lower Mount**



**Center Back Mount**

- Designed to perform in rugged and harsh environmental conditions especially where pulsation and vibration occur
- Accuracy ASME Grade B - +/-3/2/3% (+/-2% of range across middle half of scale)
- 304 stainless steel case, liquid filled, copper alloy internals, ventable top fill plug for pressure relief

| Lower Mount                                       |         | Center Mount |         | Pressure Range  | Pack Qty. |
|---|---------|--------------|---------|-----------------|-----------|
| Item No.  | Marsh   | Item No.     | Marsh   |                 |           |
| <b>2 1/2" Diameter Face - 1/4" NPT Connection</b> |         |              |         |                 |           |
| MBF-201   | J7605P  | MBF-221      | J6405P  | 30" Hg/0 Vacuum | 1         |
| MBF-202   | J7614P  | —            | —       | 30 Hg 0-60      | 1         |
| MBF-203   | J7642P  | MBF-223      | J6442P  | 0-30            | 1         |
| MBF-204   | J7646P  | MBF-224      | J6446P  | 0-60            | 1         |
| MBF-205   | J7648P  | MBF-225      | J6448P  | 0-100           | 1         |
| MBF-206   | J7652P  | MBF-226      | J6452P  | 0-160           | 1         |
| MBF-207   | J7658P  | MBF-227      | J6458P  | 0-300           | 1         |
| MBF-208   | J7664P  | MBF-228      | J6464P  | 0-600           | 1         |
| MBF-209   | J7672P  | MBF-229      | J6472P  | 0-1000          | 1         |
| MBF-210   | J7674P  | MBF-230      | J6474P  | 0-1500          | 1         |
| MBF-211   | J7678P  | MBF-231      | J6478P  | 0-3000          | 1         |
| MBF-212   | J7682P  | MBF-232      | J6482P  | 0-5000          | 1         |
| <b>4" Diameter Face - 1/4" NPT Connection</b>     |         |              |         |                 |           |
| MBF-241   | X32965P | —            | —       | 30" Hg/0 Vacuum | 1         |
| —   | —       | MBF-267      | X32552P | 0-300           | 1         |
| MBF-249   | X32513P | —            | —       | 0-1000          | 1         |
| MBF-250   | X32514P | —            | —       | 0-1500          | 1         |
| MBF-251   | X32516P | —            | —       | 0-3000          | 1         |
| MBF-252   | X32518P | MBF-272      | X32560P | 0-5000          | 1         |

**Air Gun Accessories**

**Three Way Aluminum Manifold**



Allows multiple hoses running from one connection point.

| Item No. | Size      | Pack Qty. |
|----------|-----------|-----------|
| COL-3002 | 1/4 x 1/4 | 1         |
| COL-3003 | 3/8 x 1/4 | 1         |

**Pressure Gauges  
Standard Series**



**Lower Mount**

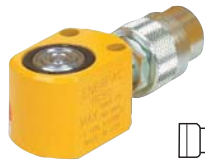


**Center Back Mount**

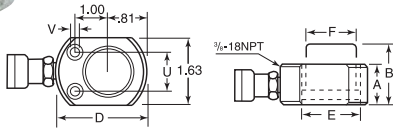
- For hydraulics and pneumatic systems, pumps compressors, boilers, regulators, dryers as well as commercial and industrial equipment
- Accuracy ASME Grade B - +/-3/2/3% (+/-2% of range across middle half of scale)
- Copper alloy tube and socket, steel black painted case, black markings on white dial
- Dual scale psi and kPa

| Lower Mount                                       |       | Center Mount |       | Pressure Range  | Pack Qty. |
|---|-------|--------------|-------|-----------------|-----------|
| Item No.  | Marsh | Item No.     | Marsh |                 |           |
| <b>1 1/2" Diameter Face - 1/8" NPT Connection</b> |       |              |       |                 |           |
| MBF-101   | J0405 | MBF-111      | J0605 | 30" Hg/0 Vacuum | 1         |
| MBF-102   | J0440 | MBF-112      | J0640 | 0-15            | 1         |
| MBF-103   | J0442 | MBF-113      | J0642 | 0-30            | 1         |
| MBF-104   | J0446 | MBF-114      | J0646 | 0-60            | 1         |
| MBF-105   | J0448 | MBF-115      | J0648 | 0-100           | 1         |
| MBF-106   | J0452 | MBF-116      | J0652 | 0-160           | 1         |
| MBF-107   | J0454 | MBF-117      | J0654 | 0-200           | 1         |
| <b>2" Diameter Face - 1/8" NPT Connection</b>     |       |              |       |                 |           |
| MBF-121   | J1105 | MBF-131      | J1805 | 30" Hg/0 Vacuum | 1         |
| MBF-122   | J1142 | MBF-132      | J1842 | 0-30            | 1         |
| MBF-123   | J1146 | MBF-133      | J1846 | 0-60            | 1         |
| MBF-124   | J1148 | MBF-134      | J1848 | 0-100           | 1         |
| MBF-125   | J1152 | MBF-135      | J1852 | 0-160           | 1         |
| MBF-126   | J1158 | MBF-136      | J1858 | 0-300           | 1         |
| <b>2" Diameter Face - 1/4" NPT Connection</b>     |       |              |       |                 |           |
| MBF-141   | J1405 | MBF-151      | J2005 | 30" Hg/0 Vacuum | 1         |
| MBF-142   | J1442 | MBF-152      | J2042 | 0-30            | 1         |
| MBF-143   | J1446 | MBF-153      | J2046 | 0-60            | 1         |
| MBF-144   | J1448 | MBF-154      | J2048 | 0-100           | 1         |
| MBF-145   | J1452 | MBF-155      | J2052 | 0-160           | 1         |
| MBF-146   | J1458 | MBF-156      | J2058 | 0-300           | 1         |
| <b>2 1/2" Diameter Face - 1/4" NPT Connection</b> |       |              |       |                 |           |
| MBF-161   | J4605 | MBF-171      | J5405 | 30" Hg/0 Vacuum | 1         |
| MBF-163   | J4642 | —            | —     | 0-30            | 1         |
| MBF-164   | J4646 | MBF-174      | J5446 | 0-60            | 1         |
| MBF-165   | J4648 | MBF-175      | J5448 | 0-100           | 1         |
| MBF-166   | J4652 | MBF-176      | J5452 | 0-160           | 1         |
| MBF-167   | J4658 | —            | —     | 0-300           | 1         |
| MBF-168   | J4664 | —            | —     | 0-600           | 1         |
| MBF-169   | J4672 | MBF-179      | J5472 | 0-1000          | 1         |

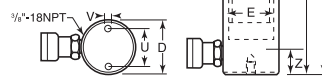
**Industrial Hydraulics  
Single Acting Cylinders**



Type A



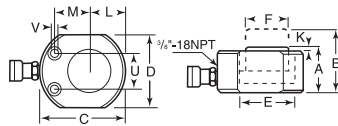
Type B



General purpose cylinders. Maximum operating pressure is 10,000 psi. Type A has a non-removable saddle and non-threaded collar. Coupler included with each cylinder. Type B has a removable saddle.

| Item No. | Enerpac | Type | Cylinder Capacity (Tons) | Stroke | Cylinder Effective Area (Sq. In.) | Oil Capacity (Cu. In.) | Collapsed Height A | Extended Height B | Outside Dia. D | Cylinder Bore Dia. E | Plunger Dia. F | J    | K   | Plunger Internal Thread O | Plunger Thread Length P | Base Mounting Holes |              |                 |              | Collar Thread Length X | Pack Qty. |
|----------|---------|------|--------------------------|--------|-----------------------------------|------------------------|--------------------|-------------------|----------------|----------------------|----------------|------|-----|---------------------------|-------------------------|---------------------|--------------|-----------------|--------------|------------------------|-----------|
|          |         |      |                          |        |                                   |                        |                    |                   |                |                      |                |      |     |                           |                         | Bolt Circle U       | Thd. Depth Z | Collar Thread W | Thd. Depth V |                        |           |
| EH-1     | RC-50   | A    | 5                        | .63    | .99                               | .62                    | 1.63               | 2.25              | 2.31           | 1.13                 | 1.00           | —    | —   | —                         | —                       | 1.12                | .22          | —               | —            | —                      | 1         |
| EH-2     | RC-51   | B    | 5                        | 1.00   | .99                               | .99                    | 4.34               | 5.34              | 1.50           | 1.13                 | 1.00           | 1.00 | .25 | 3/4-16                    | .56                     | 1.00                | 1/4-20       | .56             | 1 1/2-16     | 1.13                   | 1         |
| EH-3     | RC-53   | B    | 5                        | 3.00   | .99                               | 2.97                   | 6.50               | 9.50              | 1.50           | 1.13                 | 1.00           | 1.00 | .25 | 3/4-16                    | .56                     | 1.00                | 1/4-20       | .56             | 1 1/2-16     | 1.13                   | 1         |
| EH-4     | RC-55   | B    | 5                        | 5.00   | .99                               | 4.95                   | 8.50               | 13.50             | 1.50           | 1.13                 | 1.00           | 1.00 | .25 | 3/4-16                    | .56                     | 1.00                | 1/4-20       | .56             | 1 1/2-16     | 1.13                   | 1         |
| EH-5     | RC-57   | B    | 5                        | 7.00   | .99                               | 6.93                   | 10.75              | 17.75             | 1.50           | 1.13                 | 1.00           | 1.00 | .25 | 3/4-16                    | .63                     | 1.00                | 1/4-20       | .56             | 1 1/2-16     | 1.13                   | 1         |
| EH-6     | RC-59   | B    | 5                        | 9.13   | .99                               | 9.04                   | 12.75              | 21.88             | 1.50           | 1.13                 | 1.00           | 1.00 | .25 | 3/4-16                    | .63                     | 1.00                | 1/4-20       | .56             | 1 1/2-16     | 1.13                   | 1         |
| EH-8     | RC-102  | B    | 10                       | 2.13   | 2.23                              | 4.75                   | 4.78               | 6.91              | 2.25           | 1.69                 | 1.50           | 1.38 | .25 | 1-8                       | .75                     | 1.56                | 5/16-18      | .50             | 2 1/4-14     | 1.13                   | 1         |
| EH-26    | RC-256  | B    | 25                       | 6.25   | 5.15                              | 32.19                  | 10.75              | 17.00             | 3.38           | 2.56                 | 2.25           | 2.00 | .41 | 1 1/2-16                  | 1.00                    | 2.31                | 3/8-12       | .75             | 3/16-12      | 1.94                   | 1         |

**Single Acting Cylinders  
Flat-Jac®**



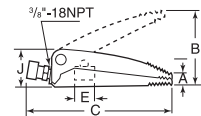
Extremely flat design for use where other cylinders will not fit. Mounting holes permit easy fixturing. Baked enamel finish. Plunger is chrome plated and plunger wiper reduces contamination. Coupler and dust cap included with each cylinder. Maximum operating pressure is 10,000 psi.



| Item No. | Enerpac | Cylinder Capacity (Tons) | Stroke | Cylinder Effective Area (Sq. In.) | Oil Capacity (Cu. In.) | Collapsed Height A | Extended Height B | C    | D    | Cylinder Bore Dia. E | Plunger Dia. F | Plunger Protrusion from Base K | Plunger to Base L | Plunger to Mtg. Hole M | Base Mounting Holes |             |                     |                      | Pack Qty. |   |
|----------|---------|--------------------------|--------|-----------------------------------|------------------------|--------------------|-------------------|------|------|----------------------|----------------|--------------------------------|-------------------|------------------------|---------------------|-------------|---------------------|----------------------|-----------|---|
|          |         |                          |        |                                   |                        |                    |                   |      |      |                      |                |                                |                   |                        | Bolt Circle U       | Hole Dia. V | Counter Bore Dia. W | Counter Bore Depth X |           |   |
| EH-50    | RSM-50  | 5                        | .25    | .99                               | .25                    | 1.28               | 1.53              | 2.31 | 1.63 | 1.13                 | 1.00           | .04                            | .81               | .88                    | 1.12                | .20         | .312                | .17                  | .17       | 1 |
| EH-51    | RSM-100 | 10                       | .44    | 2.24                              | .98                    | 1.69               | 2.13              | 3.25 | 2.19 | 1.69                 | 1.50           | .04                            | 1.09              | 1.34                   | 1.44                | .28         | .422                | .31                  | .31       | 1 |
| EH-53    | RSM-300 | 30                       | .50    | 6.51                              | 3.25                   | 2.31               | 2.81              | 4.63 | 3.75 | 2.88                 | 2.00           | .08                            | 1.88              | 1.75                   | 2.06                | .40         | .625                | .44                  | .44       | 1 |

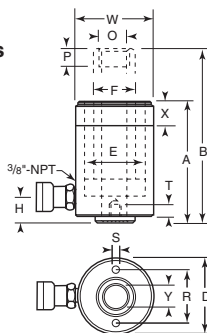
**Hydraulic Wedge and Spread Cylinder**

For use in very confined work areas. Compact design allows cylinder to be wedged into tight areas and then can be spread to position or hold. Maximum operating pressure 10,000 psi. Maximum stroke is 1 1/2".

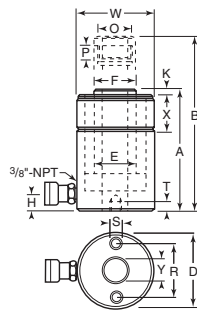


| Item No. | Enerpac | Cylinder Capacity (Tons) | Tip Clearance | Cylinder Effect. Area (Sq. In.) | Oil Capacity (Cu. In.) | A   | B    | C    | E    | J    | Wedge Width | Pack Qty. |
|----------|---------|--------------------------|---------------|---------------------------------|------------------------|-----|------|------|------|------|-------------|-----------|
| EH-112   | WR-5    | 1                        | .38           | 1.00                            | .61                    | .38 | 3.70 | 8.78 | 1.13 | 2.01 | 2.01        | 1         |

**Hydraulic  
Single Acting Hollow Plunger Cylinders**



12 Ton Capacity



20 Ton Capacity

Hollow plunger design allows for both pull and push forces. Cylinders have a single-acting spring return, baked enamel finish for increased corrosion resistance, and collar threads for easy fixturing.

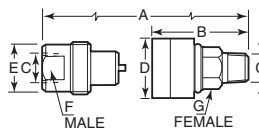


| Item No. | Enerpac | Cylinder Capacity (Tons) | Stroke | Cylinder Effective Area (Sq. In.) | Oil Capacity (Cu. In.) | Collapsed Height A | Extended Height B | Outside Dia. D | Cylinder Bore Dia. E | Plunger Dia. F | H   | Saddle Profile from Plgr. K | Plunger Internal Thread O | Plunger Thread Length P | Base Mounting Holes |              |                 |                        | Collar Thread Length X | Center Hole Dia. Y | Pack Qty. |
|----------|---------|--------------------------|--------|-----------------------------------|------------------------|--------------------|-------------------|----------------|----------------------|----------------|-----|-----------------------------|---------------------------|-------------------------|---------------------|--------------|-----------------|------------------------|------------------------|--------------------|-----------|
|          |         |                          |        |                                   |                        |                    |                   |                |                      |                |     |                             |                           |                         | Bolt Circle R       | Thd. Depth T | Collar Thread W | Collar Thread Length V |                        |                    |           |
| EH-70    | RCH-120 | 12                       | .31    | 2.77                              | .86                    | 2.19               | 2.50              | 2.75           | 2.13                 | 1.38           | .38 | —                           | 3/4-16                    | .63                     | 2.00                | 5/16-18      | .25             | 2 1/4-16               | 1.19                   | .77                | 1         |
| EH-71    | RCH-121 | 12                       | 1.63   | 2.77                              | 4.52                   | 4.75               | 6.38              | 2.75           | 2.13                 | 1.38           | .75 | —                           | 3/4-16                    | .63                     | 2.00                | 5/16-18      | .25             | 2 1/4-16               | 1.19                   | .77                | 1         |
| EH-74    | RCH-202 | 20                       | 2.00   | 4.72                              | 9.44                   | 6.31               | 8.31              | 3.88           | 2.88                 | 2.13           | .75 | .27                         | 1 1/8-16                  | .75                     | 3.25                | 3/8-16       | .62             | 3/8-12                 | 1.50                   | 1.06               | 1         |



**Hydraulic Couplers  
 High Flow**

**ENERPAC**

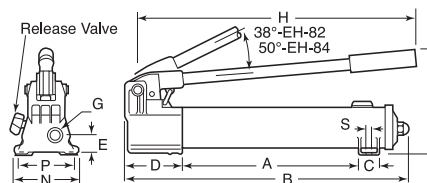


| Item No. | Enerpac | Description  | Max. Flow Capacity (Cu. In./Min) | A    | B    | C NPT | D    | E    | F   | G    | Pack Qty. |
|----------|---------|--------------|----------------------------------|------|------|-------|------|------|-----|------|-----------|
| EH-140   | C-604   | Complete Set | 2,500                            | 2.72 | 2.14 | 3/8   | 1.39 | 1.09 | .93 | .875 | 1         |
| EH-141   | CR-400  | Female Half  | 2,500                            | —    | 2.14 | 3/8   | 1.39 | —    | —   | .875 | 1         |
| EH-142   | CH-604  | Male Half    | 2,500                            | —    | —    | 3/8   | —    | 1.09 | .93 | —    | 1         |

**Note:** Dimension A is total length when male and female are connected.

**Hydraulic  
 Light Weight Hand Pumps**

**ENERPAC**



These compact pumps have a two speed operation to reduce operator fatigue. The pump base is made of nylon encapsulated aluminum and the reservoir is made of glass filled nylon for resistance to corrosion. The handle is made of non-conductive fiberglass and locks for easy carrying. There is an internal pressure relief valve for overload protection.

See page 955 for other pumps.

| Item No. | Enerpac | Useable Oil Capacity (Cu. In.) | Pressure Rating (PSI) |           | Oil Displacement Per Stroke (Cu. In.) |           | Max. Handle Effort (Lbs.) | Piston Stroke (In.) | A     | B     | C    | D    | E    | G      | H     | L    | N    | P    | S   | Pack Qty. |
|----------|---------|--------------------------------|-----------------------|-----------|---------------------------------------|-----------|---------------------------|---------------------|-------|-------|------|------|------|--------|-------|------|------|------|-----|-----------|
|          |         |                                | 1st Stage             | 2nd Stage | 1st Stage                             | 2nd Stage |                           |                     |       |       |      |      |      |        |       |      |      |      |     |           |
| EH-82    | P-142   | 20                             | 200                   | 10,000    | .221                                  | .055      | 78                        | .50                 | 7.31  | 13.25 | 1.13 | 3.37 | 1.13 | 1/4-18 | 12.56 | 5.63 | 3.75 | 3.18 | .28 | 1         |
| EH-84    | P-392   | 55                             | 200                   | 10,000    | .687                                  | .151      | 93                        | 1.00                | 13.56 | 21.00 | 1.44 | 3.93 | 1.31 | 3/8-18 | 20.56 | 7.00 | 4.75 | —    | —   | 1         |

**High Pressure Hydraulic Hoses  
 Heavy Duty Rubber**

**ENERPAC**



**High-Flow Coupler**



**3/8" NPT**



**Spee-D-Coupler**

- Rubber coated with two layers of braided steel
- Complies with Material Handling Institute IJ-100 hose specification
- Crimped on rubber strain relief for durability
- Flexible with little memory
- Maximum operating pressure is 10,000 psi

| Item No. | Enerpac | Type              | Oil Capacity (Cu. In.) | ID  | Length Feet | Hose Ends NPT | Pack Qty. |
|----------|---------|-------------------|------------------------|-----|-------------|---------------|-----------|
| EH-122   | HC-9203 | High Flow Coupler | 1.77                   | 1/4 | 3           | 3/8           | 1         |
| EH-120   | H-9206  | 3/8" NPT          | 3.54                   | 1/4 | 6           | 3/8           | 1         |
| EH-121   | HA-9206 | Spee-D-Coupler    | 3.54                   | 1/4 | 6           | 3/8           | 1         |
| EH-123   | HC-9210 | High Flow Coupler | 5.89                   | 1/4 | 10          | 3/8           | 1         |

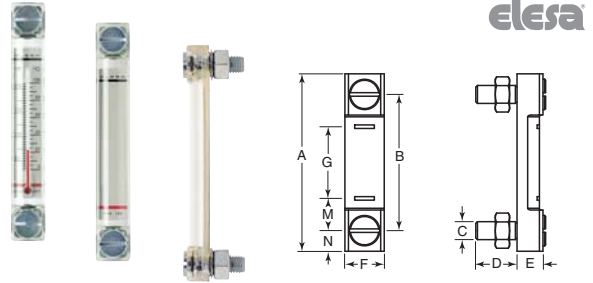


# COLUMN LEVEL INDICATORS

Buy One or Buy Bulk & SAVE

## Column Level Indicators Transparent Polyamide Based Technopolymer Slim Design

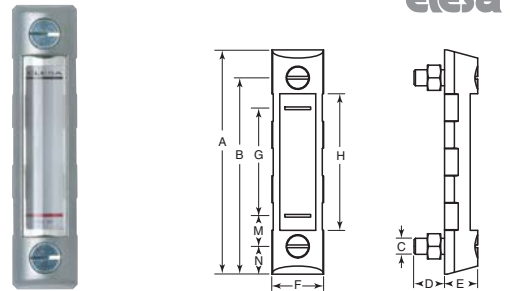
Transparent polyamide based (PA-T) technopolymer is highly resistant to shocks, solvents, oils with additives, aliphatic and aromatic hydrocarbons, petrol, naptha and phosphoric esters. Avoid contact with alcohol or detergents containing alcohol. Assembled using ultrasonic welding to guarantee a perfect seal. Maximum continuous working temperature of 190 degrees Fahrenheit (90 degrees Celsius) (with oil).



| w/o Thermometer |          | w/ Thermometer                 |      |      |     |      |      |      |      |      |      |           |
|-----------------|----------|--------------------------------|------|------|-----|------|------|------|------|------|------|-----------|
| Item No.        | Item No. | Thermometer Scale (Fahrenheit) | A    | B    | C   | D    | E    | F    | G    | M    | N    | Pack Qty. |
| EPN-330         | EPN-350  | 32-210                         | 3.9  | 2.99 | M10 | 0.91 | 0.57 | 1.06 | 1.57 | 0.71 | 0.45 | 1         |
| EPN-340         | EPN-360  | 32-210                         | 5.91 | 5    | M12 | 0.91 | 0.57 | 1.06 | 3.15 | 0.91 | 0.45 | 1         |

## Column Level Indicators Transparent Polyamide Based Technopolymer Protection Frame HCX-P HCX/T-P

Transparent polyamide based (PA-T) technopolymer is highly resistant to shocks, solvents, oils with additives, aliphatic and aromatic hydrocarbons, petrol, naptha and phosphoric esters. Avoid contact with alcohol or detergents containing alcohol. Assembled using ultrasonic welding to guarantee a perfect seal. Protective frame made of sandblasted zinc-alloy, with a treated finish. Maximum continuous working temperature of 190 degrees Fahrenheit (90 degrees Celsius) (with oil).



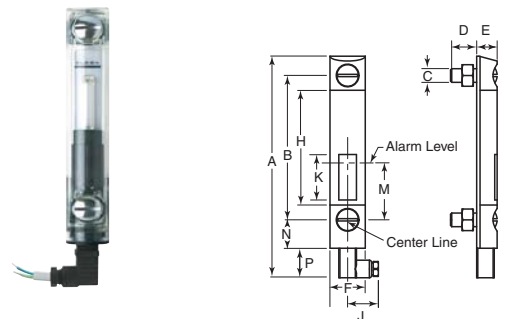
| w/o Thermometer |          | w/ Thermometer                 |      |   |     |      |      |      |      |      |      |      |           |
|-----------------|----------|--------------------------------|------|---|-----|------|------|------|------|------|------|------|-----------|
| Item No.        | Item No. | Thermometer Scale (Fahrenheit) | A    | B | C   | D    | E    | F    | G    | H    | M    | N    | Pack Qty. |
| EPN-370         | EPN-380  | 32-210                         | 6.65 | 5 | M12 | 0.91 | 0.98 | 1.54 | 3.15 | 4.06 | 0.91 | 0.83 | 1         |

## Column Level Indicators Transparent Polyamide Based Technopolymer MIN Level Electrical Sensor

Transparent polyamide based (PA-T) technopolymer is highly resistant to shocks, solvents, oils with additives, aliphatic and aromatic hydrocarbons, petrol, naptha and phosphoric esters. Avoid contact with alcohol or detergents containing alcohol. Assembled using ultrasonic welding to guarantee a perfect seal. Maximum continuous working temperature of 190 degrees Fahrenheit (90 degrees Celsius) (with oil). The column level indicator, in addition to the visual control, generates an electric signal when the oil level drops to a minimum.

**EPN-390:** Electrical contact normally open but closes when minimum fluid level is reached.

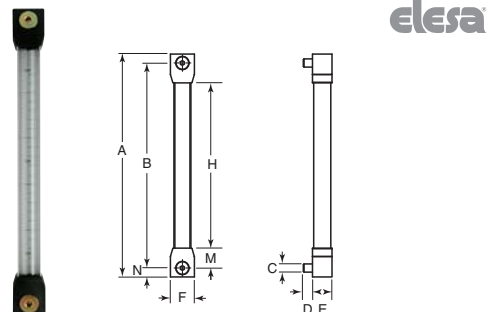
**EPN-400:** Electrical contact normally closed, but opens when minimum fluid level is reached.



| Item No. | A    | B | C   | D    | E    | F    | H    | J    | K    | M    | N    | P    | Pack Qty. |
|----------|------|---|-----|------|------|------|------|------|------|------|------|------|-----------|
| EPN-390  | 7.68 | 5 | M12 | 0.91 | 0.71 | 1.22 | 3.98 | 1.06 | 1.57 | 1.97 | 0.98 | 1.34 | 1         |
| EPN-400  | 7.68 | 5 | M12 | 0.91 | 0.71 | 1.22 | 3.98 | 1.06 | 1.57 | 1.97 | 0.98 | 1.34 | 1         |

## Column Level Indicators Transparent Polyamide Based Technopolymer Cut-To-Length

Transparent tube with lenticular effect in acrylic material. Aluminum protection in natural color. Glass-fiber reinforced polyamide based (PA) technopolymer in black. Graduated contrast screen in plastic material that resists grease and oil. Fitted to the aluminum protection frame with adhesive tape. Maximum continuous working temperature of 160 degrees Fahrenheit (70 degrees Celsius) (with oil or water). Shorter lengths can be made by cutting the column level indicator to size.



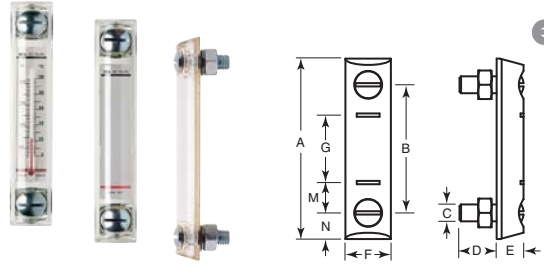
| Item No. | A     | B     | C   | D    | E    | F    | H     | M    | N    | Pack Qty. |
|----------|-------|-------|-----|------|------|------|-------|------|------|-----------|
| EPN-420  | 16.77 | 15.75 | M12 | 0.53 | 1.12 | 1.38 | 13.46 | 1.65 | 0.51 | 1         |
| EPN-430  | 20.71 | 19.69 | M12 | 0.53 | 1.12 | 1.38 | 17.44 | 1.65 | 0.51 | 1         |
| EPN-410  | 12.83 | 11.81 | M12 | 0.53 | 1.12 | 1.38 | 9.53  | 1.65 | 0.51 | 1         |

# COLUMN LEVEL INDICATORS & ACCESSORIES



## Column Level Indicators Transparent Polyamide Based Technopolymer

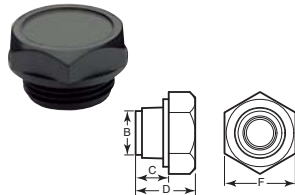
Transparent polyamide based (PA-T) technopolymer is highly resistant to shocks, solvents, oils with additives, aliphatic and aromatic hydrocarbons, petrol, naphtha and phosphoric esters. Avoid contact with alcohol or detergents containing alcohol. Assembled using ultrasonic welding to guarantee a perfect seal. Maximum continuous working temperature of 190 degrees Fahrenheit (90 degrees Celsius) (with oil).



| w/o Thermometer |          | w/ Thermometer                 |       |      |     |      |      |      |      |      | Pack Qty. |   |
|-----------------|----------|--------------------------------|-------|------|-----|------|------|------|------|------|-----------|---|
| Item No.        | Item No. | Thermometer Scale (Fahrenheit) | A     | B    | C   | D    | E    | F    | G    | M    | N         |   |
| EPN-250         | EPN-290  | 32-210                         | 4.21  | 2.99 | M10 | 0.87 | 0.63 | 1.06 | 1.57 | 0.71 | 0.61      | 1 |
| EPN-260         | EPN-300  | 32-210                         | 6.34  | 5    | M10 | 0.91 | 0.71 | 1.22 | 3.15 | 0.91 | 0.67      | 1 |
| EPN-270         | EPN-310  | 32-210                         | 6.34  | 5    | M12 | 0.91 | 0.71 | 1.22 | 3.15 | 0.91 | 0.67      | 1 |
| EPN-280         | EPN-320  | 32-210                         | 11.46 | 10   | M12 | 0.83 | 0.71 | 1.38 | 7.99 | 1.02 | 0.73      | 1 |

## Plugs Polyamide Based Technopolymer Black Matte Finish

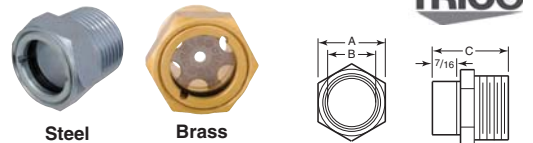
Glass-fibre reinforced polyamide based (PA) technopolymer is resistant to solvents, oils, greases and other chemical agents. Maximum continuous working temperature is 270 degrees Fahrenheit (130 degrees Celsius).



| Item No. | B     | C    | D    | F    | Tightening Torque (ft-lbs) | Pack Qty. |
|----------|-------|------|------|------|----------------------------|-----------|
| EPN-10   | ¼ NPT | 0.35 | 0.63 | 0.75 | 3-4 foot                   | 1         |
| EPN-20   | ¾ NPT | 0.35 | 0.63 | 0.87 | 6-7 foot                   | 1         |
| EPN-30   | ½ NPT | 0.43 | 0.71 | 1.02 | 6-7 foot                   | 1         |
| EPN-40   | ¾ NPT | 0.47 | 0.79 | 1.26 | 7-9 foot                   | 1         |



## Viewports



Glass viewports allow the viewing of liquid levels in various applications. Available in either brass or zinc plated steel. Available with or without a baffle. The baffles make it easier to view the oil level and also dampen fluid movement in some applications.

| Brass                              |          | Steel    |     |   |    |   | Pack Qty. |
|------------------------------------|----------|----------|-----|---|----|---|-----------|
| Item No.                           | Item No. | NPT Size | A   | B | C  |   |           |
| <b>Glass Window with Baffle</b>    |          |          |     |   |    |   |           |
| TMC-341                            | —        | ½        | 7/8 | ½ | 1½ | 1 |           |
| —                                  | TMC-306  | ¾        | 1½  | ¾ | 1½ | 1 |           |
| <b>Glass Window without Baffle</b> |          |          |     |   |    |   |           |
| TMC-352                            | TMC-321  | ¾        | 1½  | ¾ | 1½ | 1 |           |
| TMC-353                            | —        | 1        | 1½  | 1 | 1½ | 1 |           |

## Breather Caps Polyamide Based Technopolymer Cover - Orange Semi-Matte Finish, Marked "Oil" Thread Connector - Black Semi-Matte Finish

Polyamide based (PA) technopolymer is resistant to solvents, oils, greases and other chemical agents. Foam filter standard on both designs. Maximum continuous working temperature is 210 degrees Fahrenheit (100 degrees Celsius).



| w/o Splash |          | w/ Splash |      |       |      |      |      |      |   |  | Pack Qty. |
|------------|----------|-----------|------|-------|------|------|------|------|---|--|-----------|
| Item No.   | Item No. | F         | A    | B     | C    | D    | G    | H    |   |  |           |
| EPN-50     | EPN-120  | 0.79      | 1.22 | ¼ NPT | 0.39 | 1.38 | 0.28 | 0.28 | 1 |  |           |
| EPN-60     | EPN-130  | 1.18      | 1.65 | ¼ NPT | 0.39 | 1.54 | 0.28 | 0.28 | 1 |  |           |
| EPN-70     | EPN-140  | 1.18      | 1.65 | ¾ NPT | 0.59 | 1.73 | 0.28 | 0.31 | 1 |  |           |
| EPN-80     | EPN-150  | 1.18      | 1.65 | ½ NPT | 0.67 | 1.81 | 0.28 | 0.47 | 1 |  |           |
| EPN-90     | EPN-160  | 1.18      | 1.65 | ¾ NPT | 0.71 | 1.81 | 0.28 | 0.71 | 1 |  |           |
| EPN-100    | EPN-170  | 1.54      | 2.24 | ¾ NPT | 0.71 | 1.87 | 0.28 | 0.63 | 1 |  |           |
| EPN-110    | EPN-180  | 1.38      | 2.76 | ¾ NPT | 0.59 | 2.48 | 0.24 | 0.63 | 1 |  |           |

## Oil Level Indicators Polyamide Based Technopolymer Black Glossy Finish

Polyamide based (PA) technopolymer is resistant to solvents, oils, greases and other chemical agents. Window is resistant to alcohol, solvents, oils with additives, greases, acids and alkalis. Maximum continuous working temperature is 210 degrees Fahrenheit (100 degrees Celsius) at 3 bar pressure.



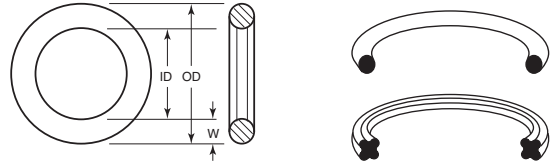
| Transparent Window |          | Prismatic Window |       |      |      |      |      |                            |   |  | Pack Qty. |
|--------------------|----------|------------------|-------|------|------|------|------|----------------------------|---|--|-----------|
| Item No.           | Item No. | A                | B     | C    | D    | E    | F    | Tightening Torque (ft-lbs) |   |  |           |
| EPN-190            | EPN-220  | 1.1              | ½ NPT | 0.39 | 0.72 | 0.57 | .94  | 4-6                        | 1 |  |           |
| EPN-200            | EPN-230  | 1.38             | ¾ NPT | 0.37 | 0.70 | 0.71 | 1.26 | 6-7                        | 1 |  |           |
| EPN-210            | EPN-240  | 1.37             | 1 NPT | 0.43 | 0.80 | 0.91 | 1.5  | 7-9                        | 1 |  |           |

**Buna-N - Viton - Quattro**

**Buna-N** Nitrile are the most commonly used seals. Resists most oils. 70 durometer. Temperature range -65 degrees fahrenheit to 275 degrees fahrenheit.

**Viton** offers good resistance to oxidation, chemicals, oils, solvents and heat. 75 durometer. Temperature range -10 degrees fahrenheit to 400 degrees fahrenheit.

**Quattro** Seals are made of Buna-N and are designed to have four sealing surfaces instead of two like O-Rings. 70 durometer. Reduces the amount of squeeze needed for positive seal, reducing friction and extending seal life.



| Buna-N             | Viton  | Quattro | AS568A Size | ID    | OD    | Pack Qty. |
|--------------------|--------|---------|-------------|-------|-------|-----------|
| <b>1/16" Width</b> |        |         |             |       |       |           |
| OR-003             | —      | —       | 003         | 1/16  | 3/16  | 100       |
| OR-006             | —      | —       | 006         | 1/8   | 1/4   | 100       |
| OR-008             | —      | —       | 008         | 3/16  | 5/16  | 100       |
| OR-010             | —      | —       | 010         | 1/4   | 3/8   | 100       |
| OR-011             | —      | QR-011  | 011         | 5/16  | 7/16  | 100       |
| —                  | VR-011 | —       | 011         | 5/16  | 7/16  | 25        |
| OR-012             | —      | —       | 012         | 3/8   | 1/2   | 100       |
| OR-013             | —      | —       | 013         | 7/16  | 9/16  | 100       |
| —                  | VR-013 | —       | 013         | 7/16  | 9/16  | 25        |
| OR-014             | —      | —       | 014         | 1/2   | 5/8   | 100       |
| OR-016             | —      | QR-016  | 016         | 5/8   | 3/4   | 100       |
| OR-018             | —      | —       | 018         | 3/4   | 7/8   | 100       |
| <b>3/32" Width</b> |        |         |             |       |       |           |
| OR-111             | —      | —       | 111         | 7/16  | 5/8   | 100       |
| OR-112             | —      | —       | 112         | 1/2   | 11/16 | 100       |
| —                  | VR-113 | —       | 113         | 9/16  | 3/4   | 25        |
| OR-114             | —      | —       | 114         | 5/8   | 11/16 | 100       |
| OR-115             | —      | —       | 115         | 11/16 | 7/8   | 100       |
| OR-116             | —      | —       | 116         | 3/4   | 11/16 | 100       |

| Buna-N            | Viton  | Quattro | AS568A Size | ID    | OD     | Pack Qty. |
|-------------------|--------|---------|-------------|-------|--------|-----------|
| <b>1/8" Width</b> |        |         |             |       |        |           |
| OR-210            | —      | —       | 210         | 3/4   | 1      | 100       |
| —                 | VR-210 | —       | 210         | 3/4   | 1      | 25        |
| OR-211            | —      | QR-211  | 211         | 13/16 | 1 1/16 | 100       |
| OR-212            | —      | —       | 212         | 7/8   | 1 1/8  | 100       |
| OR-214            | —      | —       | 214         | 1     | 1 1/4  | 100       |
| OR-216            | —      | —       | 216         | 1 1/8 | 1 3/8  | 100       |
| —                 | VR-216 | —       | 216         | 1 1/8 | 1 3/8  | 25        |
| OR-218            | —      | QR-218  | 218         | 1 1/4 | 1 7/8  | 100       |
| OR-220            | —      | —       | 220         | 1 3/8 | 1 7/8  | 100       |
| OR-222            | —      | —       | 222         | 1 1/2 | 1 7/4  | 100       |
| OR-223            | —      | —       | 223         | 1 5/8 | 1 7/8  | 100       |
| OR-225            | —      | —       | 225         | 1 7/8 | 2 1/8  | 100       |
| OR-228            | —      | —       | 228         | 2 1/4 | 2 1/2  | 100       |
| OR-229            | —      | —       | 229         | 2 3/8 | 2 7/8  | 100       |

**Buna-N O-Ring Assortments**



| Item No.  | Description                 |
|-----------|-----------------------------|
| MK-400-30 | 400 Piece O-Ring Assortment |
| MK-300-24 | 300 Piece O-Ring Assortment |

| Item No. | Qty in 300 Pc. Asst. | Qty in 400 Pc. Asst. | Body Diameter | OD     | Pack Qty. |
|----------|----------------------|----------------------|---------------|--------|-----------|
| MK-A-5   | 20                   | 20                   | 1/16          | 7/32   | 1         |
| MK-A-6   | 20                   | 20                   | 1/16          | 1/4    | 1         |
| MK-A-7   | 20                   | 20                   | 1/16          | 9/32   | 1         |
| MK-A-8   | 20                   | 15                   | 1/16          | 5/16   | 1         |
| MK-A-9   | 15                   | 15                   | 1/16          | 11/32  | 1         |
| MK-A-10  | 15                   | —                    | 1/16          | 3/8    | 1         |
| MK-A-11  | 15                   | 15                   | 1/16          | 7/16   | 1         |
| MK-A-12  | 15                   | 15                   | 1/16          | 1/2    | 1         |
| MK-C-210 | 10                   | 15                   | 1/8           | 1      | 1         |
| MK-C-211 | 10                   | 15                   | 1/8           | 1 1/16 | 1         |
| MK-C-212 | 10                   | 15                   | 1/8           | 1 1/8  | 1         |
| MK-C-213 | 10                   | 15                   | 1/8           | 1 3/16 | 1         |
| MK-C-214 | 10                   | 15                   | 1/8           | 1 1/4  | 1         |
| MK-C-215 | 10                   | 15                   | 1/8           | 1 5/16 | 1         |
| MK-C-216 | 5                    | 7                    | 1/8           | 1 3/8  | 1         |
| MK-C-218 | 5                    | 7                    | 1/8           | 1 1/2  | 1         |

| Item No. | Qty in 300 Pc. Asst. | Qty in 400 Pc. Asst. | Body Diameter | OD     | Pack Qty. |
|----------|----------------------|----------------------|---------------|--------|-----------|
| MK-C-220 | 5                    | 7                    | 1/8           | 1 5/8  | 1         |
| MK-C-222 | 5                    | 7                    | 1/8           | 1 3/4  | 1         |
| MK-B-110 | 15                   | 20                   | 3/32          | 9/16   | 1         |
| MK-B-111 | 15                   | 20                   | 3/32          | 5/8    | 1         |
| MK-B-112 | 15                   | 15                   | 3/32          | 11/16  | 1         |
| MK-B-113 | 15                   | 15                   | 3/32          | 3/4    | 1         |
| MK-B-114 | 10                   | 15                   | 3/32          | 13/16  | 1         |
| MK-B-115 | 10                   | 15                   | 3/32          | 7/8    | 1         |
| MK-D-325 | —                    | 5                    | 3/16          | 1 1/8  | 1         |
| MK-A-15  | —                    | 5                    | 1/16          | 1 1/16 | 1         |
| MK-A-14  | —                    | 5                    | 1/16          | 5/8    | 1         |
| MK-D-327 | —                    | 5                    | 3/16          | 2 1/8  | 1         |
| MK-D-329 | —                    | 5                    | 3/16          | 2 3/8  | 1         |
| MK-A-16  | —                    | 5                    | 1/16          | 3/4    | 1         |
| MK-A-13  | —                    | 5                    | 1/16          | 9/16   | 1         |
| MK-D-326 | —                    | 5                    | 3/16          | 2      | 1         |
| MK-C-217 | —                    | 7                    | 1/8           | 1 7/16 | 1         |

**O-Ring Making Kit**

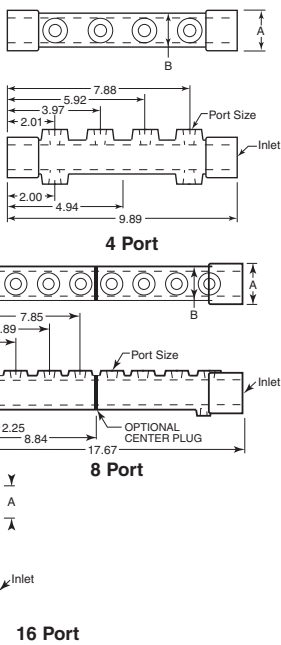
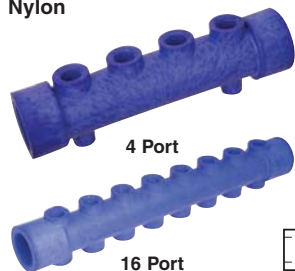


Eliminates the need for extensive O-Ring inventories. Contains everything to make fast, on the spot O-Rings of any size. Contains four 3' lengths of 3/32", 1/8", 3/16", and 1/4" Buna-N O-Ring cord, cord cutter, adhesive and splicing fixture. Replacement O-Ring cords come in 10 foot lengths.

| Item No.   | Description       | Pack Qty. |
|------------|-------------------|-----------|
| PER-80851  | O-Ring Making Kit | 1         |
| PER-80851A | 3/32" Buna-N Cord | 1         |
| PER-80851B | 1/8" Buna-N Cord  | 1         |
| PER-80851C | 3/16" Buna-N Cord | 1         |
| PER-80851D | 1/4" Buna-N Cord  | 1         |



Manifolds Nylon

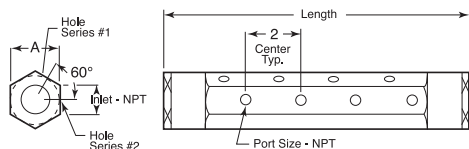


An economical replacement to steel manifolds. Nylon manifolds are molded from specialty-blended nylon material that is extremely durable and resistant to impact and corrosion. Used for air, water, lubricants or coolants in various applications. The nylon, with 6% fiberglass fill construction, allows leak-free NPT pipe connections. Can be used with steel or brass fittings. Marked in and out and numbered porting for easy installation and identification.

| Blue Item No. | White Item No. | No. of Ports | Inlet Size | Port Size | A    | B    | Pack Qty. |
|---------------|----------------|--------------|------------|-----------|------|------|-----------|
| NM-01         | NM-21          | 4            | 1          | 1/4       | 1.81 | 1.51 | 1         |
| NM-02         | NM-22          | 4            | 1          | 3/8       | 1.81 | 1.51 | 1         |
| NM-04         | NM-24          | 4            | 1 1/2      | 1/2       | 2.42 | 1.98 | 1         |
| NM-05         | NM-25          | 8            | 1          | 1/4       | 1.81 | 1.51 | 1         |
| NM-06         | NM-26          | 8            | 1          | 3/8       | 1.81 | 1.51 | 1         |
| —             | NM-27          | 8            | 1 1/2      | 3/8       | 2.42 | 1.98 | 1         |
| NM-08         | —              | 8            | 1 1/2      | 1/2       | 2.42 | 1.98 | 1         |
| NM-13         | —              | 16           | 1          | 1/4       | 1.81 | 1.51 | 1         |
| NM-15         | —              | 16           | 1 1/2      | 3/8       | 2.42 | 1.98 | 1         |
| NM-16         | —              | 16           | 1 1/2      | 1/2       | 2.42 | 1.98 | 1         |
| NM-20*        | —              | 16           | 1 1/2      | 1/2       | 2.42 | 1.98 | 1         |

\*Manifolds have a solid plug in the center.

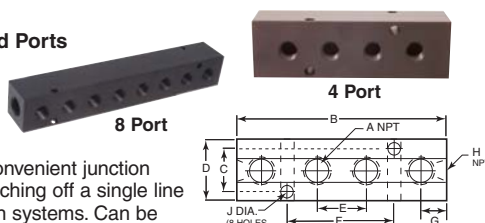
Manifolds Aluminum



Ready to use, no threading required. Positive seal. Use with brass or steel fittings. Hardcoat color anodized finish available in black, blue, or red. Automotive tested approval. Tensile 38,000 psi, yield 35,000 psi. Hardened to T6511. Can withstand pH 4.5. Honed ID. Dipped to remove blemishes and chips. Brackets are sold separately.

| Black Item No. | Blue Item No. | Red Item No. | No. of Ports | Lgth. | Hole Series | A    | Inlet | Port Size | Pack Qty. |
|----------------|---------------|--------------|--------------|-------|-------------|------|-------|-----------|-----------|
| —              | NM-303        | NM-403       | 4            | 11    | 1           | 1.75 | 1     | 3/8       | 1         |
| NM-207         | —             | —            | 8            | 11    | 1 & 2       | 1.50 | 3/4   | 3/8       | 1         |
| —              | NM-321        | NM-421       | 8            | 11    | 1 & 2       | 1.75 | 1     | 1/4       | 1         |
| —              | NM-322        | NM-422       | 8            | 11    | 1 & 2       | 1.75 | 1     | 1/2       | 1         |
| —              | —             | NM-409       | 8            | 11    | 1 & 2       | 2.50 | 1 1/2 | 1/2       | 1         |
| NM-218         | —             | —            | 16           | 19    | 1 & 2       | 1.75 | 1     | 3/8       | 1         |

Manifolds Single Sided Ports

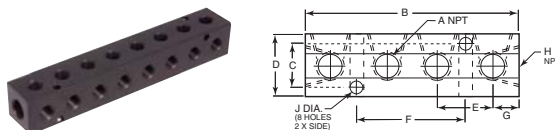


Provides a convenient junction point for branching off a single line on distribution systems. Can be used on air, hydraulic, water, coolant, machine and other distribution lines. Made of 6061 aluminum with black anodized finish unless noted below. Eight drilled mounting holes (two per side). Operating pressure: 1,000 psi air and, 5,000 psi non-shock hydraulic. All threads are NPT.

| Item No. | No. of Ports | NPT A | B     | C    | D    | E    | F     | G    | NPT H | J    | Pack Qty. |
|----------|--------------|-------|-------|------|------|------|-------|------|-------|------|-----------|
| MM-90    | 4            | 1/8   | 3.25  | .70  | 1.00 | .75  | 1.50  | .50  | 1/4   | .170 | 1         |
| MM-50    | 4            | 1/8   | 4.12  | .88  | 1.25 | .88  | 1.75  | .75  | 3/8   | .200 | 1         |
| MM-10    | 4            | 1/4   | 4.12  | .88  | 1.25 | .88  | 1.75  | .75  | 3/8   | .200 | 1         |
| MM-210   | 4            | 1/4   | 6.25  | .88  | 1.25 | 1.50 | 3.00  | .88  | 3/8   | .200 | 1         |
| MM-230*  | 4            | 1/4   | 9.75  | 1.62 | 2.25 | 2.25 | 4.50  | 1.50 | 1     | .265 | 1         |
| MM-200   | 4            | 3/8   | 4.75  | 1.12 | 1.50 | 1.00 | 2.00  | .88  | 1/2   | .200 | 1         |
| MM-220   | 4            | 3/8   | 6.25  | 1.12 | 1.50 | 1.50 | 3.00  | .88  | 1/2   | .200 | 1         |
| MM-240*  | 4            | 3/8   | 9.75  | 1.62 | 2.25 | 2.25 | 4.50  | 1.50 | 1     | .265 | 1         |
| MM-250*  | 4            | 1/2   | 9.75  | 1.62 | 2.25 | 2.25 | 4.50  | 1.50 | 1     | .265 | 1         |
| MM-260*  | 4            | 3/4   | 12.00 | 1.62 | 2.25 | 3.00 | 6.00  | 1.50 | 1     | .265 | 1         |
| MM-100   | 6            | 1/8   | 4.75  | .70  | 1.00 | .75  | 3.00  | .50  | 1/4   | .170 | 1         |
| MM-60    | 6            | 1/8   | 5.88  | .88  | 1.25 | .88  | 3.50  | .75  | 3/8   | .200 | 1         |
| MM-20    | 6            | 1/4   | 5.88  | .88  | 1.25 | .88  | 3.50  | .75  | 3/8   | .200 | 1         |
| MM-320   | 6            | 1/4   | 9.25  | .88  | 1.25 | 1.50 | 6.00  | .88  | 3/8   | .200 | 1         |
| MM-310   | 6            | 3/8   | 6.75  | 1.12 | 1.50 | 1.00 | 4.00  | .88  | 1/2   | .200 | 1         |
| MM-330   | 6            | 3/8   | 9.25  | 1.12 | 1.50 | 1.50 | 6.00  | .88  | 1/2   | .200 | 1         |
| MM-350*  | 6            | 3/8   | 14.25 | 1.62 | 2.25 | 2.25 | 9.00  | 1.50 | 1     | .265 | 1         |
| MM-360*  | 6            | 1/2   | 14.25 | 1.62 | 2.25 | 2.25 | 9.00  | 1.50 | 1     | .265 | 1         |
| MM-110   | 8            | 1/8   | 6.25  | .70  | 1.00 | .75  | 4.50  | .50  | 1/4   | .170 | 1         |
| MM-70    | 8            | 1/8   | 7.62  | .88  | 1.25 | .88  | 5.25  | .75  | 3/8   | .200 | 1         |
| MM-30    | 8            | 1/4   | 7.62  | .88  | 1.25 | .88  | 5.25  | .75  | 3/8   | .200 | 1         |
| MM-420   | 8            | 1/4   | 12.25 | .88  | 1.25 | 1.50 | 9.00  | .88  | 3/8   | .200 | 1         |
| MM-440*  | 8            | 1/4   | 18.75 | 1.62 | 2.25 | 2.25 | 13.50 | 1.50 | 1     | .265 | 1         |
| MM-410   | 8            | 3/8   | 8.75  | 1.12 | 1.50 | 1.00 | 6.00  | .88  | 1/2   | .200 | 1         |
| MM-430   | 8            | 3/8   | 12.25 | 1.12 | 1.50 | 1.50 | 9.00  | .88  | 1/2   | .200 | 1         |
| MM-450*  | 8            | 3/8   | 18.75 | 1.62 | 2.25 | 2.25 | 13.50 | 1.50 | 1     | .265 | 1         |
| MM-470*  | 8            | 3/4   | 24.00 | 1.62 | 2.25 | 3.00 | 18.00 | 1.50 | 1     | .265 | 1         |
| MM-120   | 10           | 1/8   | 7.75  | .70  | 1.00 | .75  | 6.00  | .50  | 1/4   | .170 | 1         |
| MM-80    | 10           | 1/8   | 9.38  | .88  | 1.25 | .88  | 7.00  | .75  | 3/8   | .200 | 1         |
| MM-40    | 10           | 1/4   | 9.38  | .88  | 1.25 | .88  | 7.00  | .75  | 3/8   | .200 | 1         |
| MM-520   | 10           | 1/4   | 15.25 | .88  | 1.25 | 1.50 | 12.00 | .88  | 3/8   | .200 | 1         |
| MM-530   | 10           | 3/8   | 15.25 | 1.12 | 1.50 | 1.50 | 12.00 | .88  | 1/2   | .200 | 1         |

\*Not black anodized.

Manifolds Double Sided Ports - 90 degree



| Item No. | No. of Ports | NPT A | B     | C    | D    | E    | F    | G   | NPT H | J    | Pack Qty. |
|----------|--------------|-------|-------|------|------|------|------|-----|-------|------|-----------|
| MM-600   | 4            | 1/8   | 3.25  | .70  | 1.00 | .75  | 1.50 | .50 | 1/4   | .170 | 1         |
| MM-610   | 4            | 1/8   | 4.12  | .88  | 1.25 | .88  | 1.75 | .75 | 3/8   | .200 | 1         |
| MM-620   | 4            | 3/8   | 4.75  | 1.12 | 1.50 | 1.00 | 2.00 | .88 | 1/2   | .200 | 1         |
| MM-700   | 6            | 1/8   | 4.75  | .70  | 1.00 | .75  | 3.00 | .50 | 1/4   | .170 | 1         |
| MM-710   | 6            | 1/4   | 5.88  | .88  | 1.25 | .88  | 3.50 | .75 | 3/8   | .200 | 1         |
| MM-810   | 6            | 3/8   | 6.75  | 1.12 | 1.50 | 1.00 | 4.00 | .88 | 1/2   | .200 | 1         |
| MM-800   | 8            | 1/8   | 6.25  | .70  | 1.00 | .75  | 4.50 | .50 | 1/4   | .170 | 1         |
| MM-810   | 8            | 1/4   | 7.62  | .88  | 1.25 | .88  | 5.25 | .75 | 3/8   | .200 | 1         |
| MM-820   | 8            | 3/8   | 8.75  | 1.12 | 1.50 | 1.00 | 6.00 | .88 | 1/2   | .200 | 1         |
| MM-900   | 10           | 1/8   | 7.75  | .70  | 1.00 | .75  | 6.00 | .50 | 1/4   | .170 | 1         |
| MM-910   | 10           | 1/4   | 9.38  | .88  | 1.25 | .88  | 7.00 | .75 | 3/8   | .200 | 1         |
| MM-920   | 10           | 3/8   | 10.75 | 1.12 | 1.50 | 1.00 | 8.00 | .88 | 1/2   | .200 | 1         |

Manifold Mounting Bracket Kit



| Item No. | Description   | Pack Qty. |
|----------|---|-----------|
| NM-101   | For Single Manifold (2 Brackets, 2 Bolts)             | 1         |
| NM-102   | For Two Manifolds (2 Brackets, 4 Bolts)               | 1         |
| NM-103   | Right Angle for Single Manifold (2 Brackets, 2 Bolts) | 1         |

Manifold Mounting Bracket

| Item No. | For Inlet Size | Pack Qty. | Item No. | For Inlet Size | Pack Qty. | Item No. | For Inlet Size | Pack Qty. |
|----------|----------------|-----------|----------|----------------|-----------|----------|----------------|-----------|
| NM-105   | 3/4            | 1         | NM-106   | 1              | 1         | NM-107   | 1 1/2          | 1         |