



# QUICK SEAL<sup>®</sup>

Leak Testing and Filling Connectors



Tuthill Coupling Group / HANSEN<sup>™</sup> QUICK SEAL<sup>®</sup> COUPLEURS GROMELLE<sup>™</sup>

Catalog QS-1207



## APPLICATIONS:

- PUMPS
- VALVES
- CASTINGS
- AIR CONDITIONING
- REFRIGERATION EQUIPMENT
- BEVERAGE DISPENSERS
- ICE MACHINES
- DRINKING FOUNTAINS
- WATER HEATERS
- FURNACES
- GAS STOVES
- GAS TANKS
- ENGINE BLOCKS
- MUFFLERS
- OIL SYSTEMS



## Leak Testing And Filling Connectors

# QUICK SEAL®

QUICK SEAL® products are used for connecting vacuum and pressure lines to tubing for pressure testing, vacuum dehydrating, charging and other applications requiring a quick, leak-free connection. Since 1962, QUICK SEAL has been an industry leader in providing leak test plugs and filling connectors that have been recognized for their superior quality.

### Quality Control:

Tuthill Coupling Group's Quality Management System is registered to rigid ISO 9001:2000 standards. We use the highest quality raw materials and components to manufacture each part. Plus, we maintain our manufacturing tolerances in the day-to-day production of our products through constant monitoring and calibrating of our production equipment.



### Reliability:

Tuthill QUICK SEAL leak testing and filling connectors have proven their efficiency and dependability in the field. Also, new designs can be easily developed to meet special requirements.

### **⚠ WARNING**

Read safety instructions before using.

All parts and their features, specifications, designs, availability and pricing are subject to change without notice.

# QUICK SEAL®

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## Basic Sealing Methods



### End Seal — Seals on End of Tube

- Inexpensive general purpose leak testing.
- For air, water, refrigerant.



### Inside Diameter (I.D.) Seal

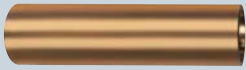








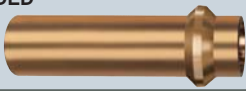



- Works well with all test media including helium, air, and most refrigerants and gases.
- Seals in area where tube manufacturers hold their closest tolerances — assures a consistent tight fit. (except SBP)
- Seals on smooth area — provides longer seal life. (except SBP)
- I.D. sealing usually done with inexpensive, easy to replace O-rings.



















### Outside Diameter (O.D.) Seal

- Full flow, minimal restrictions.
- Seals on smooth surface.
- Seals have minimal exposure to test medium, last longer in hazardous duty.
- Seals are larger and longer for better sealing.

# QUICK SEAL® REFERENCE GUIDE

TUBE CONNECTOR PART	PR	TC	RTC	OTC	L-LR	LB-LRB	SBP	THV-TH-TK
<b>STANDARD TUBE SIZES:</b> (inches)	1/4 thru 7/8	1/8 thru 2-1/4	1/4 thru 1	.060 thru 3/8	1/4 thru 7/8	1/4 thru 7/8	1/4 thru 7/8	5/16 and 3/8
<b>METRIC TUBE SIZES:</b> (mm)	7 mm thru 22 mm	3 mm thru 57 mm	7 mm thru 25 mm	2 mm thru 9 mm	7 mm thru 22 mm	7 mm thru 22 mm	N/A	N/A
<b>MAX. PRESSURE - PSI (BAR)</b>	650 (44)	650 (44)	650 (44)	650 (44)	650 (44)	650 (44)	650 (44)	625 (43)
<b>VACUUM (MICRONS)</b>	10	**	**	**	**	**	75	75
<b>*SEALING METHOD</b>	O.D.	E	E	O.D.	E	E	I.D.	I.D.
<b>TUBE TYPE</b>								
<b>STRAIGHT</b> 								
<b>EXPANDED</b> 								
<b>BEADED</b> 								
<b>BARBED</b> 								
<b>PAGE NUMBERS</b>	pages 6, 7	pages 8, 9	pages 8, 9	pages 8, 9	page 10	page 10	page 11	page 12

TEST PLUG/FILLING CONNECTOR PART	B	E	Q	EQ	H	K	CV-XCV
<b>STANDARD BORE SIZES (inches)</b>	0.421 thru 1.562	0.687 thru 1.281	0.751 thru 1.000	0.751 thru 1.000	0.343 thru 4.250	0.343 thru 4.250	0.437 thru 1.156
<b>METRIC BORE SIZES (mm)</b>	N/A	N/A	N/A	N/A	9 mm thru 108 mm	9 mm thru 108 mm	11 mm thru 29 mm
<b>MAXIMUM PRESSURE</b>							
SMOOTH BORE - PSI (BAR)	500 (34.5)	500 (34.5)	500 (34.5)	500 (34.5)	50 (3.4)	50 (3.4)	30 (2.1)
THREADED BORE - PSI (BAR)	500 (34.5)	500 (34.5)	500 (34.5)	500 (34.5)	100 (6.8)	100 (6.8)	60 (4.2)
<b>*SEALING METHOD</b>	E	E	E	E	I.D.	I.D.	I.D.
<b>OPENING TYPE</b>							
<b>SMOOTH BORE</b> 							
<b>THREADED BORE</b> 							
<b>PAGE NUMBERS</b>	page 13	page 13	page 13	page 13	page 14	page 14	page 15

\* Sealing Method: E = End Seal I.D. = Seal on Inside Diameter O.D. = Seal on Outside Diameter  
 \*\* Not recommended for vacuum applications  
 For special applications, consult factory

# PR

1/4" to 7/8" O.D.  
 (7 mm to 22 mm)  
 Pressures to 650 PSI  
 (44 BAR)



## TUBE CONNECTORS – STRAIGHT TUBE

For pressure testing, vacuum dehydrating, and other applications requiring a quick, leak-free connection.

**SPECIAL APPLICATIONS:**  
 Don't See the Size or Configuration You Want? Contact Us.



PR tube connectors in use for refrigeration testing and filling.

### Automatic Self-Locking Retention

No adjustments other than routine maintenance by the operator are ever necessary.

### Single 1/4" Long Seal

Lasts longer and provides a greater sealing surface which enables it to withstand the sensitivity of helium leak testing.

### Independent Locking and Sealing Actuation

Allows the operator to safely release pressure before removing the connector from the tube.

Designed to provide the sealing necessary for the greater sensitivity of today's demanding leak detection techniques.

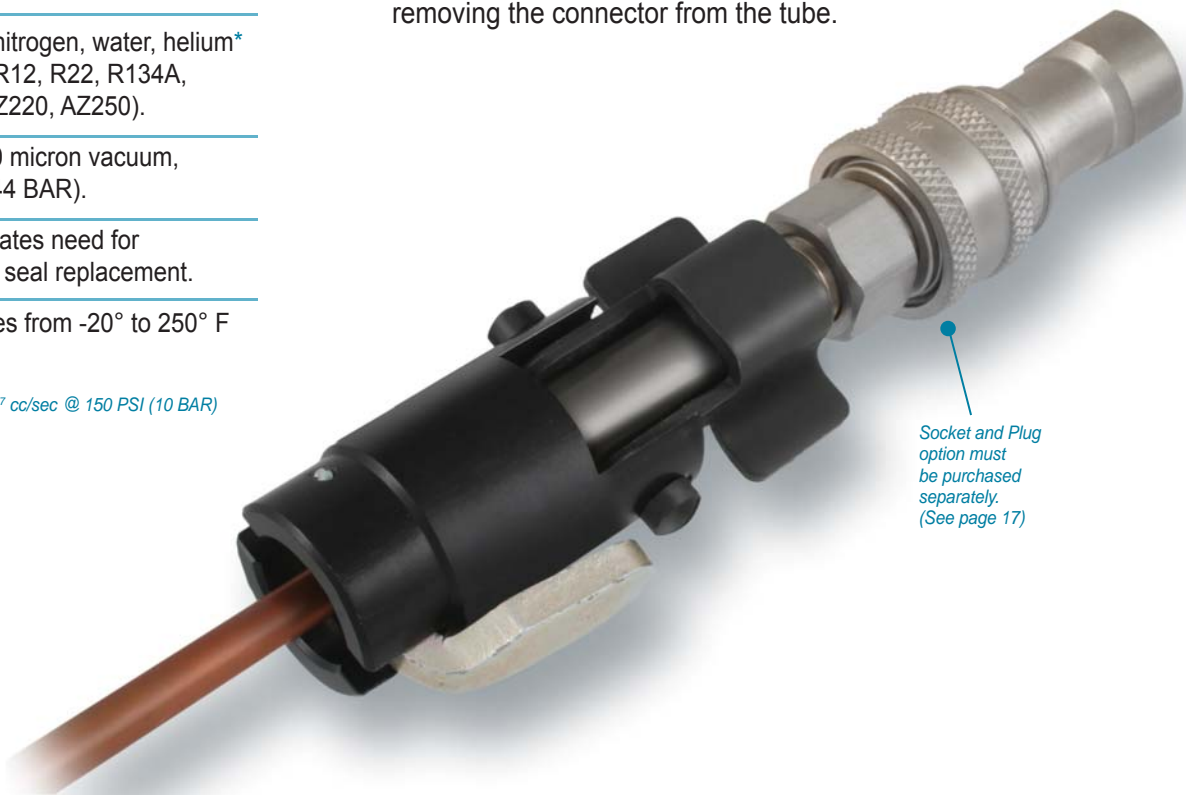
Specially designed for nitrogen, water, helium\* and most refrigerants (R12, R22, R134A, R407, R409A, R410, AZ220, AZ250).

Capable of sealing a 10 micron vacuum, pressures to 650 PSI (44 BAR).

Exclusive design eliminates need for lubrication, allows easy seal replacement.

Withstands temperatures from -20° to 250° F (-29° to 121° C).

\*Helium leak rate less than  $1 \times 10^{-7}$  cc/sec @ 150 PSI (10 BAR)



Socket and Plug option must be purchased separately. (See page 17)

**The PR Tube Connectors** feature the Tuthill automatic self-locking device, which instantly connects seal pressure and vacuum lines to straight end tubing creating a leak-free seal. These units work on the push-on, pull-off principle – the higher the pressure, the tighter the hold.

Connection to tube is instantaneous. Just connect unit to service line, depress the lock lever, push on over tubing, pressing firmly to stop position and actuate cam lever. This automatically locks the tube in place for a leak-free seal, ready for pressure testing, vacuum dehydrating or charging with refrigerant. To disconnect from tubing, relieve test pressure, actuate cam lever 90°, depress lock lever and pull off. It's that simple.

Simplified design eliminates lubrication requirements and allows easy seal replacement – only one seal which can be replaced in seconds.

The seal is compressed around the O.D. of tube and actuated by the cam lever independent of the locking mechanism. Since it's not an end type seal, the surface condition of the tube's cut-off end does not affect the seal. It lasts longer and has a greater sealing area to withstand the sensitivity of helium and freon testing.

A quick disconnect can be assembled directly to the male pipe thread inlet port without the need of a short nipple or adapter.

Recommended for a range of services including helium, air, water, vacuum, and most refrigerants. The PR is constructed with a heat treated and plated steel lock lever and neoprene seal suitable for temperatures from -20° to 250° F (-29° to 121° C).



Design allows full flow for quick evacuation and charging. No restrictive small seal or plunger.

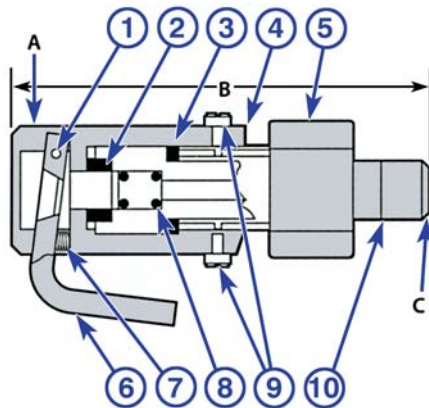
**Two locking positions for highest possible secured seal.**



Lock Lever



Locking Cam Lever compresses seal around O.D. of tube.



**PART material**

- ① LEVER PIN hardened and plated steel
- ② SEAL neoprene
- ③ WEAR WASHER hardened and plated steel
- ④ BODY anodized aluminium
- ⑤ CAM LEVER hardened and plated steel
- ⑥ LOCK LEVER hardened and plated steel
- ⑦ LEVER SPRING stainless steel
- ⑧ SPRING stainless steel
- ⑨ SCREWS hardened and plated steel
- ⑩ PISTON stainless steel

Part Number*	Tube Size	Minimum Tube Length	Connector Dimensions		
			O.D. (A)	Length (B)	Inlet (C)
<b>PR SERIES</b>					
PR0250-57	1/4"	1.00"	1.13" rd.	3.50"	1/4" NPT
PR0312-57	5/16"				
PR0375-57	3/8"				
PR0437-57	7/16"	1.13"	1.38" rd.	3.63"	1/4" NPT
PR0500-57	1/2"				
PR0625-57	5/8"				
PR0750-57	3/4"				
PR0875-57	7/8"	1.38"	2.00" hex	5.25"	3/4" NPT
<b>MPR SERIES</b>					
MPR5070-57	7 mm	25 mm	1.13" rd.	3.50"	1/4" NPT
MPR5080-57	8 mm				
MPR5100-57	10 mm				

\* When ordering, please specify part number, tube O.D., minimum available tube length, test pressure, media and media temperature. Tube O.D. tolerance must be +.003/- .005 maximum.



See page 17 for details.

TC  
RTC  
OTC



QUICK SEAL®

**TUBE CONNECTORS –  
STRAIGHT TUBE SINGLE  
MOTION/HIGH SPEED LEAK  
TEST TOOL**

Pressure to 650 PSI (44 BAR)

**SPECIAL APPLICATIONS:**  
Don't See the Size  
or Configuration  
You Want?  
Contact Us.

**This self-sealing, automatic locking device works on a push-on, pull-off principle. Instantly connects and seals pressure lines.**

**TC Tube Connectors**

1/8" to 2-1/4" O.D. (3 to 57 mm)

The **TC Tube Connectors** were originally developed for production line use on refrigeration coils, but have also earned overwhelming acceptance for use on compressor units, heat exchangers and any other assemblies which require a quick, easy and efficient way to attach pressure lines to straight end tubing.

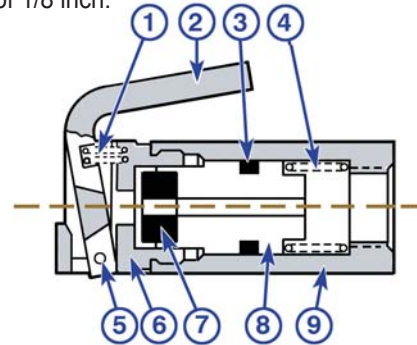
**PART material**

- ① LEVER SPRING stainless steel
- ② LOCK LEVER hardened and plated steel
- ③ QUAD RING neoprene
- ④ COMPRESSION SPRING stainless steel
- ⑤ LEVER PIN hardened and plated steel
- ⑥ HEAD anodized aluminum
- ⑦ TUBE SEAL neoprene
- ⑧ PLUNGER anodized aluminum
- ⑨ CYLINDER anodized aluminum

**RTC Tube Connectors**

For short length tubes 1/4" to 1" O.D. (7 to 25 mm)

The **RTC Tube Connectors** have been specially designed for use in applications where only a short length of tube is available for engagement. Just attach the connector to the service line, depress the lock lever and push on over the tubing, until the spring loaded seat and plunger assembly is depressed a minimum of 1/8 inch.

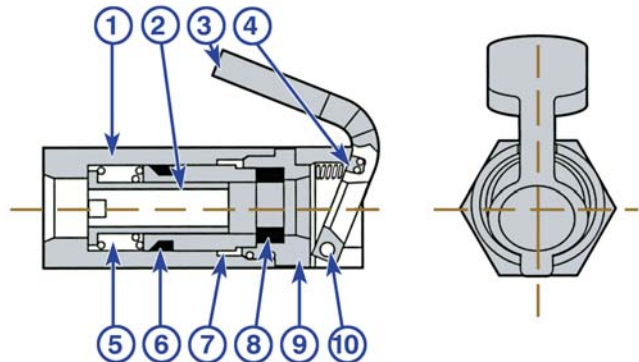


**OTC with Outside Diameter Type Seal 0.060" to 3/8" O.D. (2 mm to 9 mm)**

The **OTC Tube Connectors** have been designed specifically for use in those applications where there are advantages in making the tube connector's seal on the outside diameter of the tube – for example, where connection has to be made to smooth tubes which do not have square cut ends. They feature "Full Flow" design with an internal tube stop. A seal is compressed around the tube by the plunger as it is actuated by the test pressure. In 1500 Series OTC connectors for capillary tubes, a leak-free seal is created by an O-ring which is compressed around the tube by the plunger as it is actuated by the test pressure. A lock lever grips the tube for positive hold.

**PART material**

- ① CYLINDER anodized aluminum
- ② STOP SLEEVE stainless steel
- ③ LOCK LEVER hardened and plated steel
- ④ LEVER SPRING stainless steel
- ⑤ COMPRESSION SPRING stainless steel
- ⑥ QUAD RING neoprene
- ⑦ PLUNGER anodized aluminum
- ⑧ SEAL neoprene
- ⑨ HEAD anodized aluminum
- ⑩ LEVER PIN stainless steel



# TC, RTC & OTC Connectors

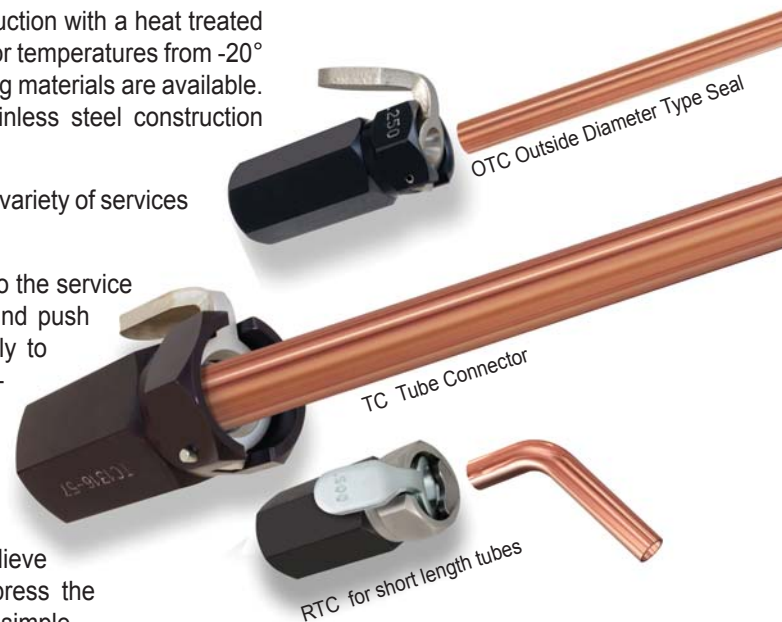
Standard **TC**, **RTC** and **OTC Connectors** are of aluminum construction with a heat treated and plated steel lock lever. Neoprene seals and packing, suitable for temperatures from -20° to 250° F (-29° to 121° C) are standard, but other seal and quad ring materials are available. Also available are STC, SRTC and SOTC connectors with stainless steel construction (except the lock lever).

Tuthill TC, RTC and OTC Connectors are recommended for a wide variety of services with air, water, and most refrigerants.

Connection to tubing is instantaneous. Just attach the connector to the service line, depress the lock lever and push on over tubing, pressing firmly to the stop position. This automatically locks the tube into place for a leak-free seal, ready for pressure testing or charging with refrigerant.



To disconnect the tubing, relieve the test pressure and then press the lock lever and pull off. It's that simple.



Part Number*	Tube Size	Minimum Tube Length	Connector Dimensions		
			Hex	Length	Inlet
<b>TC SERIES</b>					
TC1300-57*	1/8"	1.25"	0.88"	2.38"	1/4" NPT
TC1301-57*	3/16"				
TC1302-57	1/4"				
TC1303-57	5/16"	1.00"	0.88"	2.38"	1/4" NPT
TC1304-57	3/8"				
TC1305-57	1/8" pipe	1.25"	1.25"	3.00"	1/4" NPT
TC1306-57	7/16"				
TC1307-57	1/2"				
TC1308-57	1/4" pipe				
TC1309-57	9/16"				
TC1310-57	5/8"				
TC1311-57	3/8" pipe				
TC1312-57	11/16"				
TC1313-57	3/4"				
TC1314-57	13/16"				
TC1315-57	1/2" pipe				
TC1316-57**	7/8"	1.88"	2.25"	5.06"	1/2" NPT
TC1317-57**	15/16"				
TC1000-57	1"				
TC1319-57	3/4" pipe				
TC1321-57	1-1/8"				
TC1322-57	1-3/16"				
TC1323-57	1-1/4"				
TC1324-57	1-5/16"				
TC1325-57	1" pipe				
TC1326-57**	1-3/8"				
TC1327-57**	1-1/2"				
TC1328-57	1-5/8"				
TC1329-57	1-1/4" pipe				
TC1332-57	1-1/2" pipe				
TC1333-57	2"	2.25"	3.00"	6.13"	3/4" NPT
TC1334-57**	2-1/8"				
TC1335-57**	2-1/4"				

Part Number*	Tube Size	Minimum Tube Length	Connector Dimensions		
			Hex	Length	Inlet
<b>MTC SERIES</b>					
MTC5060-57	6 mm	25 mm	0.88"	2.38"	1/4" NPT
MTC5070-57	7 mm				
MTC5090-57	9 mm				
MTC5100-57	10 mm	32 mm	1.25"	3.00"	1/4" NPT
MTC5120-57	12 mm				
MTC5140-57	14 mm				
MTC5150-57	15 mm				
MTC5160-57	16 mm	38 mm	1.75"	3.88"	3/8" NPT
MTC5180-57	18 mm				
MTC5200-57	20 mm				
MTC5220-57	22 mm	48 mm	2.25"	5.06"	1/2" NPT
MTC5280-57	28 mm				
MTC5540-57***	54 mm	57 mm	3.00"	6.13"	3/4" NPT
<b>RTC SERIES</b>					
RTC1602-57	1/4"	0.69"	0.88"	2.38"	1/4" NPT
RTC1603-57	5/16"				
RTC1604-57	3/8"				
RTC1605-57	1/8" pipe	0.88"	1.25"	3.00"	1/4" NPT
RTC1606-57	7/16"				
RTC1607-57	1/2"				
RTC1608-57	1/4" pipe				
RTC1609-57	9/16"				
RTC1610-57	5/8"	1.00"	1.75"	3.88"	3/8" NPT
RTC1611-57	3/8" pipe				
RTC1613-57	3/4"				
RTC1616-57	7/8"	1.25"	2.25"	5.06"	1/2" NPT
RTC1000-57	1"				
<b>OTC SERIES</b>					
OTC2502-57	1/4"	1.00"	0.88"	2.38"	1/4" NPT
OTC2503-57	5/16"				
OTC2504-57	3/8"				
OTC1500-57	.060 - .063"	1.00"	0.88"	2.38"	1/4" NPT
OTC1501-57	.072 - .078"				
OTC1502-57	.081 - .087"				
OTC1503-57	.093 - .099"				
OTC1504-57	.106 - .112"				

\* Seal on O.D. of tube  
 \*\* Pressures to 500 PSI only  
 \*\*\* Pressures to 300 PSI only

When ordering, please specify part number, tube O.D., minimum available length, test pressure, media and media temperature. Tolerance of tube O.D. must be +.003/-.005 maximum.

For OTC: Tolerance of tube O.D. must be +.002/-.002 maximum.

# L & LR

For Expanded and Barbed End Tubing

# LB & LRB

For Beaded O.D. Tubing or Fittings with Flange or Shoulder



## SPECIAL PURPOSE CONNECTORS

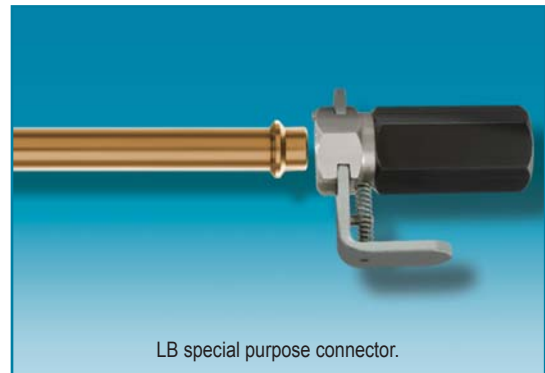
Pressure to 650 PSI (44 BAR)  
1/4" to 7/8" O.D. (7 mm to 22 mm)

### For tubes and fittings with expanded, barbed, beaded and flanged ends.

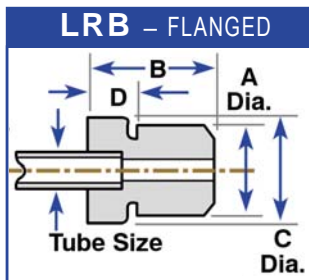
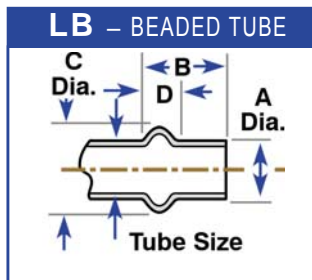
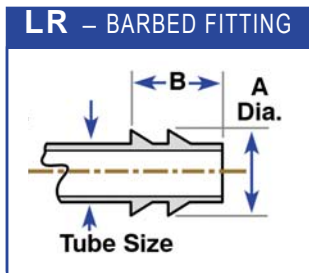
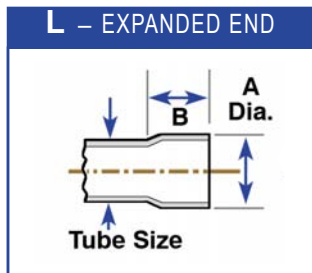
L, LR, LB and LRB tube connectors have the same positive self-sealing action as the TC connectors, but also have a specially designed sliding keyhole latch for retaining expanded, barbed, beaded and flanged ends on tubes or fittings. These units are designed for pressure testing, charging of refrigerants and other quick-connect applications.

These special purpose connectors can be provided for tubing from 1/4" to 7/8" outside diameter. When ordering, please specify:

- Tube size
- Dimensions A, B, C and D from the drawings below
- Test medium
- Test pressure



LB special purpose connector.



Part Number	Tube Size
<b>L SERIES</b>	
L1702-57-V	1/4"
L1703-57-V	5/16"
L1704-57-V	3/8"
L1706-57-V	7/16"
L1707-57-V	1/2"
L1710-57-V	5/8"
L1713-57-V	3/4"
L1716-57-V	7/8"
<b>LB SERIES</b>	
LB1702-57-V	1/4"
LB1703-57-V	5/16"
LB1704-57-V	3/8"
LB1706-57-V	7/16"
LB1707-57-V	1/2"
LB1710-57-V	5/8"
LB1713-57-V	3/4"

Part Number	Tube Size
<b>LR SERIES</b>	
LR1701-57-V	3/16"
LR1702-57-V	1/4"
LR1703-57-V	5/16"
LR1704-57-V	3/8"
LR1706-57-V	7/16"
LR1707-57-V	1/2"
LR1710-57-V	5/8"
LR1713-57-V	3/4"
LR1716-57-V	7/8"
<b>LRB SERIES</b>	
LRB1701-57-V	3/16"
LRB1702-57-V	1/4"
LRB1703-57-V	5/16"
LRB1704-57-V	3/8"
LRB1706-57-V	7/16"
LRB1707-57-V	1/2"
LRB1710-57-V	5/8"
LRB1713-57-V	3/4"

**Standard Construction** consists of

- Aluminum cylinder and plunger
- Stainless steel head
- Heat treated, plated steel lock lever
- Neoprene seals and quad ring which are suitable for operation from -20° to 250° F (-29° to 121° C).



# SBP



## LOW COST CONNECTORS FOR EXPANDED TUBES

Pressure to 650 PSI (44 BAR)

75 Micron Vacuum

Leak Rate Less than  $1 \times 10^{-7}$  cc/sec

Helium @ 150 PSI (10 BAR)

### Designed for High Reliability 1/4" to 7/8"

No disassembly required for seal replacement. No adjustments necessary, keeping maintenance costs to a minimum. Dual O-ring seal design provides greater reliability. Easy push-on/pull-off one motion operation. Hardened stainless steel balls provide dependable tube retention.

### Particularly Effective for Ultra Sensitive Testing

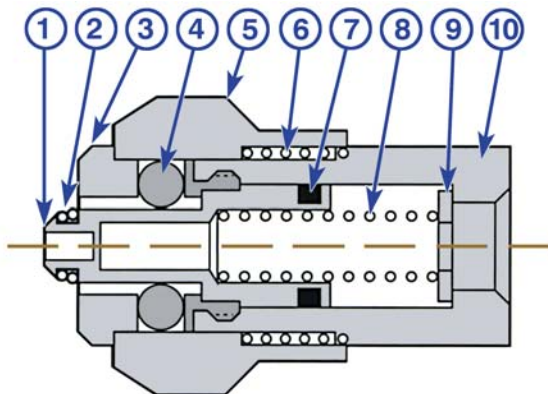
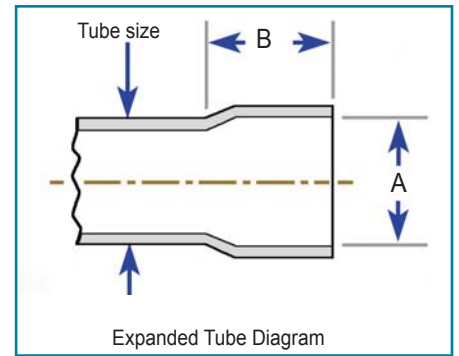
Halogen detection

Pressure decay

Helium mass spectrometry

Part Number*	Tube Size	Min. A	Max. A	Min. B	Max. B	Flow Dia.	Inlet
<b>SBP SERIES</b>							
SBP1702-57	1/4"	0.250"	0.260"	0.315"	0.565"	0.100"	1/4" NPT
SBP1703-57	5/16"	0.313"	0.325"	0.315"	0.625"	0.100"	1/4" NPT
SBP1704-57	3/8"	0.375"	0.385"	0.315"	0.625"	0.100"	1/4" NPT
SBP1707-57	1/2"	0.500"	0.510"	0.380"	0.750"	0.187"	1/4" NPT
SBP1710-57	5/8"	0.625"	0.635"	0.500"	0.750"	0.250"	1/4" NPT
SBP1713-57	3/4"	0.750"	0.760"	0.625"	0.875"	0.375"	3/8" NPT
SBP1716-57	7/8"	0.875"	0.885"	0.750"	0.875"	0.422"	3/8" NPT

\* When ordering, please specify part number, dimensions "A", "B" and tube O.D., test pressure, media and media temperature. Tolerance of bore "A" must be  $\pm .003/- .003$  maximum.



#### PART material

- ① PLUNGER anodized aluminum
- ② O-RINGS neoprene
- ③ HEAD anodized aluminum
- ④ BALL stainless steel
- ⑤ SLEEVE hardened and plated steel
- ⑥ SLEEVE SPRING stainless steel
- ⑦ QUAD RING neoprene
- ⑧ PLUNGER SPRING stainless steel
- ⑨ WASHER stainless steel
- ⑩ CYLINDER anodized aluminum

#### Simple to Operate

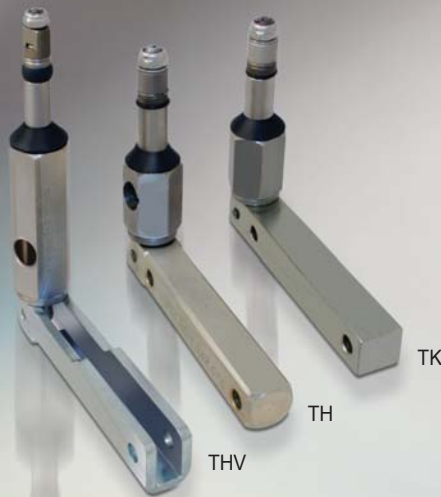
##### Turn off unit pressure –

- Retract sleeve ⑤.
- Insert plunger ① into device to be tested.
- Release sleeve ⑤.
- Push connector forward until sleeve snaps into place.

##### To remove unit –

- Exhaust test pressure.
- Push connector forward.
- Retract sleeve and remove connector from device being tested.

# THV TH TK



## TESTING AND FILLING CONNECTORS FOR REFRIGERATION COILS

Pressure to 625 PSI (43 BAR)

### THV Filling Connectors for Rifled Refrigeration Tubing

- For testing/filling 3/8" (0.360" I.D.) rifled tube or coil assemblies
- Pressure to 625 PSI (43 BAR)
- Vacuum to 75 microns
- Vented stem for prolonged seal life



### TH Filling Connectors and TK Test Plugs

- For testing/filling 5/16" (0.299" I.D.) and 3/8" (0.360" I.D.) smooth-bore tube or coil assemblies
- Pressure to 625 PSI (43 BAR)
- Vacuum to 75 microns



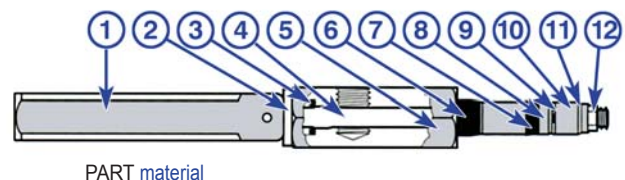
**THV, TH, and TK Quick Connectors** are designed for testing and filling copper tubing, such as that used in refrigeration coils. They are particularly useful in applications where the length of tube extending out of the header plate is not long enough to permit the use of a standard O.D. retaining tube connector. Construction materials include stainless steel, hardened and plated carbon steel and neoprene seals.

To connect, insert the connector stem into the tube and bottom the upper seal against the tube end; then, rotate the handle 90° to the locked position. Rotating the handle causes the retaining ring and the primary seal to expand; thus, locking the connector in place and effecting a leak-free seal.

To disconnect, relieve pressure, rotate the handle to the unlocked position and pull out the connector.

Part Number*	Tube Size	Inlet
TH0299-57	5/16"	1/8" NPT
TH0360-57	3/8"	1/8" NPT
THV0360-57	3/8"	1/8" NPT
TK0299-57	5/16"	N/A
TK0360-57	3/8"	N/A

\* When ordering, please specify part number, tube I.D., test pressure, media and media temperature. Tolerance of tube I.D. must be +.002/- .002.



- PART material
- |                              |                                  |
|------------------------------|----------------------------------|
| ① HANDLE steel               | ⑦ PRIMARY SEAL neoprene          |
| ② CAM WASHER stainless steel | ⑧ ACTUATING RING stainless steel |
| ③ O-RING neoprene            | ⑨ RETAINING RING stainless steel |
| ④ STEM stainless steel       | ⑩ SPACER stainless steel         |
| ⑤ BODY stainless steel       | ⑪ LOCKWASHER stainless steel     |
| ⑥ UPPER SEAL neoprene        | ⑫ STOPNUT stainless steel        |

# B & Q

Self-Sealing Plugs

# E & EQ

Self-Sealing Filling Connectors



## SELF-SEALING TEST PLUGS AND FILLING CONNECTORS - For Pressure Vessels Pressures to 500 PSI (34.5 BAR)

- B** 0.421" to 1.562" Bore
- Q** 0.751" to 1.000" Bore

**B and Q Self-Sealing Plugs** provide a quick-acting seal to plug pressure vessel openings. Construction features include a cylinder with bayonet lock, seal, plunger and T-head stem (fixed for Type B and pivoted for Type Q).

The Q plug is intended for use with openings that are deeper than the B plug can reach.

### B & Q SELF-SEALING PLUGS

Part Number*	Piped Tapped	Opening To Be Sealed			
		Depth		Bore Range	
		Min.	Max.	Min.	Max.
B7051-57	1/4" NPT	0.312"	0.375"	0.421"	0.475"
B7052-57	3/8" NPT	0.312"	0.437"	0.562"	0.593"
B7053-57	1/2" NPT	0.406"	0.500"	0.687"	0.781"
B7054-57	3/4" NPT	0.506"	0.687"	0.906"	1.000"
B7055-57	1" NPT	0.563"	0.750"	1.125"	1.281"
B7056-57	1-1/4" NPT	0.613"	0.750"	1.421"	1.562"
Q3145-57	3/4" NPT	0.625"	3.000"	0.751"	1.000"

\*When ordering, please specify part number, diameter and depth of opening sealed, test pressure, media and media temperature.

- E** 0.687" to 1.281" Bore
- EQ** 0.751" to 1.000" Bore

**E and EQ Self-Sealing Filling Connectors** have inlet openings that are pipe tapped for connecting pressure lines. Construction features include a cylinder with bayonet lock, seal, plunger and T-head stem (fixed for Type E and pivoted for Type EQ).

The EQ filling connector is intended for use with openings that are deeper than the E filling connector can reach.

### E & EQ SELF-SEALING FILLING CONNECTORS

Part Number*	Piped Tapped	Opening To Be Sealed				Inlet
		Depth		Bore Range		
		Min.	Max.	Min.	Max.	
E7166-57	1/2" NPT	0.406"	0.500"	0.687"	0.781"	1/2" NPT
E7167-57	3/4" NPT	0.506"	0.687"	0.906"	1.000"	3/4" NPT
E7168-57	1" NPT	0.563"	0.750"	1.125"	1.281"	3/4" NPT
EQ4145-57	3/4" NPT	0.625"	3.000"	0.751"	1.000"	3/4" NPT

\*When ordering, please specify part number, diameter and depth of opening sealed, test pressure, media and media temperature.

**B, Q, E and EQ** construction materials are aluminum and carbon steel, both treated for corrosion resistance. Neoprene seals are standard.

To connect, insert the connector into the hole, push the cylinder inward and twist it to release the bayonet lock, bringing the seal against the hole ready for test pressure. The seal is energized by a combination of spring force and test pressure.

To disconnect, relieve pressure, push cylinder inward, twist it to engage the bayonet lock and pull out the connector.



E self-sealing filling connector used in a pressure vessel.

# H

Expanding Seal Filling Connectors

# K

Expanding Seal Test Plugs



Plug option must be purchased separately. (See page 18)



## EXPANDING SEAL FILLING CONNECTORS AND PLUGS

0.343" to 4.25" (9 mm to 108 mm) Bores

Threaded Holes – Pressures to 100 PSI (6.8 BAR)

Smooth Bore Holes – Pressures to 50 PSI (3.4 BAR)

**SPECIAL APPLICATIONS:**  
Don't See the Size or Configuration You Want? Contact Us.

### H EXPANDING SEAL FILLING CONNECTORS

**H Expanding Seal Filling Connectors** are widely used for adapting and connecting pressure lines to tanks, drums, castings, etc., during leak testing. These tools effectively seal flanges, couplings, blind holes, deep openings or holes with restricted clearance. Actuation of the hand cam lever expands the seal firmly inside an opening, creating a dependable leak-free connection. Inlet openings are pipe tapped for connecting pressure lines. To remove the connector, relieve test pressure and lift cam lever.

Construction materials are aluminum, stainless steel, and plated carbon steel. Neoprene seals are standard.

The connectors are suitable for operation from -20° to 250° F (-29° to 121° C).

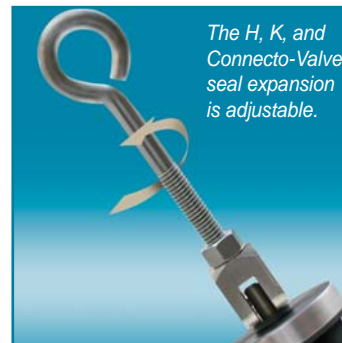


H expanding seal filling connector shown servicing an automotive radiator.

### K EXPANDING SEAL TEST PLUGS

**K Test Plugs** use the same sealing principle, materials of construction and action as the type H filling connector, but do not have an inlet port. They are frequently used in pressure testing rough castings. Seals are made of tough long-wearing neoprene and are easily replaced.

All expanding seal plugs and connectors are ruggedly built to assure long, trouble-free service.



The H, K, and Connecto-Valve seal expansion is adjustable.

Part Number*	Pipe Tapped	Opening To Be Sealed		Inlet
		Bore	Min. Depth	
H2075-57	1/8" NPT	0.339"	0.59"	1/4" NPT
H2076-57	1/4" NPT	0.438"	0.72"	1/4" NPT
H2077-57	3/8" NPT	0.578"	0.72"	1/4" NPT
H2078-57	1/2" NPT	0.719"	0.88"	3/8" NPT
H2079-57	3/4" NPT	0.922"	1.13"	3/8" NPT
H2080-57	1" NPT	1.156"	1.38"	1/2" NPT
H2081-57	1-1/4" NPT	1.500"	1.38"	1/2" NPT
H2082-57	1-1/2" NPT	1.734"	1.69"	1/2" NPT
H2083-57	2" NPT	2.219"	1.69"	1/2" NPT
H9084-57	2-1/2" NPT	2.625"	1.56"	3/4" NPT
H9085-57	3" NPT	3.250"	1.56"	3/4" NPT
H9086-57	3-1/2" NPT	3.750"	1.56"	3/4" NPT
H9087-57	4" NPT	4.250"	1.69"	3/4" NPT

\* To order, specify thread size, depth of hole, test pressure and test media.

Part Number*	Pipe Tapped	Opening To Be Sealed	
		Bore	Min. Depth
K2063-57	1/8" NPT	0.339"	0.59"
K2064-57	1/4" NPT	0.438"	0.72"
K2065-57	3/8" NPT	0.578"	0.72"
K2066-57	1/2" NPT	0.719"	0.88"
K2067-57	3/4" NPT	0.922"	1.13"
K2068-57	1" NPT	1.156"	1.38"
K2069-57	1-1/4" NPT	1.500"	1.38"
K2070-57	1-1/2" NPT	1.734"	1.69"
K2071-57	2" NPT	2.219"	1.69"
K9072-57	2-1/2" NPT	2.625"	1.56"
K9073-57	3" NPT	3.250"	1.56"
K9074-57	3-1/2" NPT	3.750"	1.56"
K9075-57	4" NPT	4.250"	1.69"

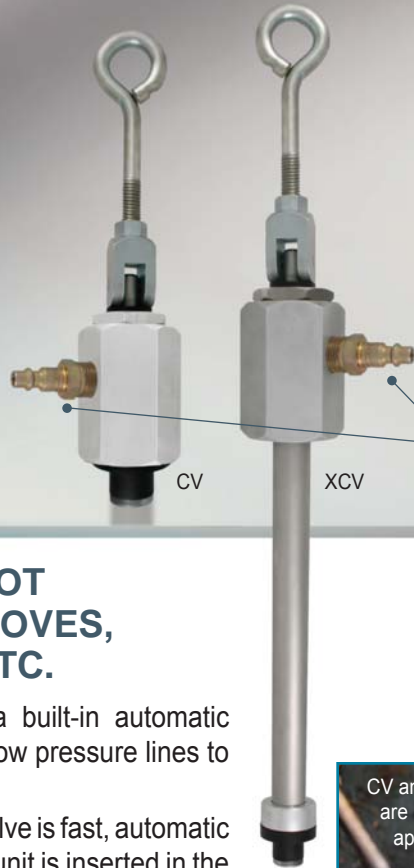
\* To order, specify thread size, depth of hole, test pressure and test media.

# CV

Connecto-Valves

# XCV

Extended  
Connecto-Valves



## CONNECTO-VALVES FOR GAS LEAK DETECTION

0.437" to 1.156" (11 mm to 29 mm)

Threaded Openings – Pressures to 60 PSI (4.2 BAR)

Smooth Openings – Pressures to 30 PSI (2.1 BAR)

Plug options must be  
purchased separately.  
(See page 18)

**SPECIAL APPLICATIONS:**  
Don't See the Size  
or Configuration  
You Want?  
Contact Us.

### FOR GAS TESTING HOT WATER HEATERS, STOVES, VALVES, FITTINGS, ETC.

**CV Connecto-Valves** include a built-in automatic valve for connecting gas or any low pressure lines to standard threaded openings.

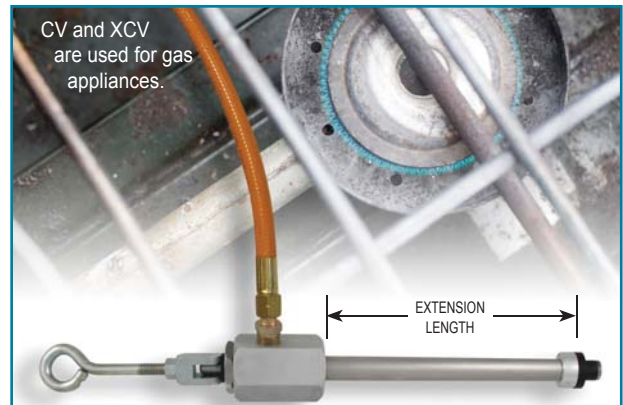
The operation of the Connecto-Valve is fast, automatic and extremely simple. When the unit is inserted in the opening and the cam lever is actuated, the expanding seal and valve are actuated simultaneously, thus creating a positive holding action and releasing a full flow of gas to the appliance being tested. Returning the handle to its original position shuts the valve, stops the gas flow and contracts the seal allowing the valve to be withdrawn from the opening.

Construction materials are aluminum, stainless steel and plated carbon steel. Neoprene seals are standard. Connecto-Valves are suitable for applications from -20° to 250° F (-29° to 121° C).

**The Extended Connecto-Valves (XCV)** are similar to the Connecto-Valve but incorporate a long hollow shaft which enables production line workers to make quick leak-tight connections of gas lines to burners already installed in appliances. Hard to reach connections can be easily accessed.

**Modified CV** units for smooth bore or straight threaded openings can be ordered by specifying the CV unit for a specific bore size or thread size, test pressure, test medium and depth of opening.

**Modified XCV** units for smooth bore or straight threaded openings can be ordered by specifying the XCV unit for a specific bore size or thread size of opening to be sealed, test pressure, test medium, depth of opening and length of extension.



CV and XCV are used for gas appliances.

#### HOW TO ORDER THE XCV:

XCV2405-57-X X = Extension Length

(using 2" increments add suffix: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, or 24)

The length of extension, for the XCV, is measured from the seal flange face to the underside of the connector body. Specify extension lengths, from 2" up to 24", in 2" increments. (See ordering instructions above.)

Part Number	Pipe Tapped	Opening To Be Sealed		Inlet
		Bore	Min. Depth	
CV2402-57	1/4" NPT	0.438"	0.59"	3/8" NPT
XCV2402-57				
CV2403-57	3/8" NPT	0.578"	0.59"	3/8" NPT
XCV2403-57				
CV2404-57	1/2" NPT	0.719"	0.88"	3/8" NPT
XCV2404-57				
CV2405-57	3/4" NPT	0.922"	0.88"	3/8" NPT
XCV2405-57				
CV2406-57	1" NPT	1.156"	0.88"	3/8" NPT
XCV2406-57				

**AR0251-57**  
**H2083-8235**  
**MP2128**



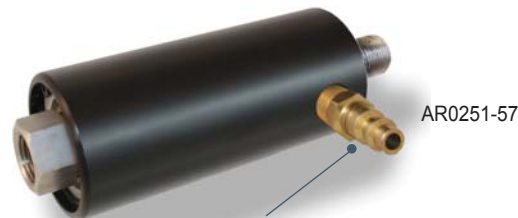
**SPECIAL PURPOSE**

- Automatic Release
- Drum Plug Connectors
- Ammonia Hose Connectors

**AR0251-57 AUTOMATIC RELEASE**

**Automatic Release Units** are used instead of the conventional pressure/vacuum production line socket. They are designed to speed up the leak testing process by detaching themselves after testing is completed, without operator aid.

A test pressure of 500 PSI (34.5 BAR) maximum can be achieved for leak testing through the AR0251-57 unit. After the test is completed and the pressure is exhausted, this socket automatically detaches itself from the connector plug at 160 PSI (11 BAR). The connector and plug fitting will remain locked onto the copper process tube to allow additional tests to be performed.



AR0251-57

*Plug option must be purchased separately. (See page 18)*



**H2083-8235 DRUM PLUG CONNECTORS**

**Drum Plug Connectors** are used for testing large industrial drums and other shallow openings. Insert the connector straight into a pipe tapped opening. Push the seal flange face against the face of the opening, then actuate the cam handle 90° to the locked position, effecting a positive seal. The sealing is created by the flange of the seal being drawn against the outer face of the opening. Maximum pressure for a standard pipe tapped opening is 100 PSI (6.8 BAR)



H2083-8235

**MP2128 AMMONIA HOSE CONNECTORS**

**Ammonia Hose Connectors** allow a safe, positive connection to gas cylinders in a few seconds. They provide a quick, safe method of adapting service lines to standard right-angle valves used on ammonia tanks. Connectors are provided with a 1/2" NPT opening.

These connectors are easily slipped over the valve. A few turns of the handle then clamps the movable jaw against the valve body. This forces a resilient neoprene sealing washer against the valve outlet, insuring a leak-free connection. A complete change-over is finished in a matter of seconds.

A one piece malleable iron frame and jaw provides strength, handling ease and a high safety factor. These parts are coated for corrosion resistance.



MP2128

SERIES HK ISO 7241-1 Series B Two-Way Couplings



**Series HK Couplings** are designed for general purpose hydraulic service. Some are suitable for use with various liquids, chemicals, steam, gases and vacuum. Series HK couplings conform to the dimensional requirements of the ISO 7241-1 Series B standard.

Body sizes in the chart below range from 1/8" to 1". See our coupling catalog for the complete product line.

**Features**

- End connections are female NPTF (BSPP also available)

**Standard Materials**

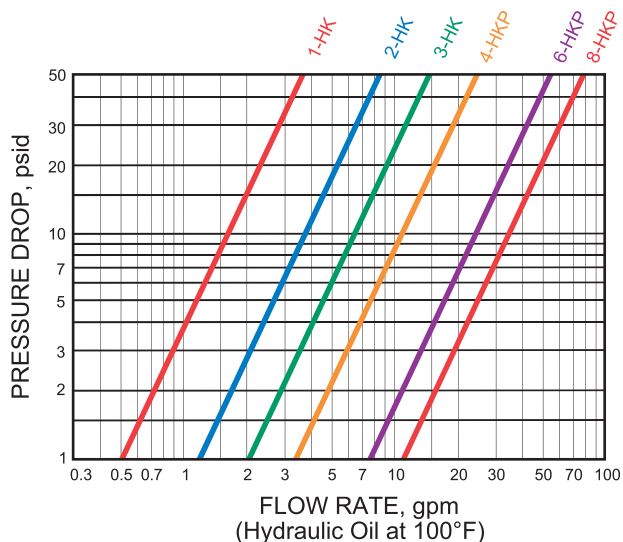
- Zinc-plated steel construction (also available in brass and stainless steel)
- Stainless steel springs, balls and retaining rings
- Buna-N (Nitrile) seals
- PTFE back-up rings in 1-HK through 8-HK steel sockets

**Options**

- Bleeder-style plug
- Sleeve lock
- Seals: Ask about availability

**Series HK Accessories**

- Dust caps and dust plugs
- Release clamp with chain

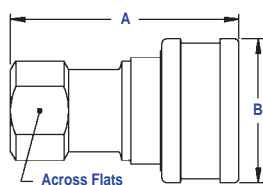


Rated Pressure and Flow Capacity

Series	Body Size	PSI	BAR
1-HK	1/8"	4,000	275
2-HK	1/4"	5,000	345
3-HK	3/8"	3,700	255
4-HKP	1/2"	5,000	345
6-HKP	3/4"	4,000	275
8-HKP	1"	4,000	275

Other sizes available.

**SOCKET**

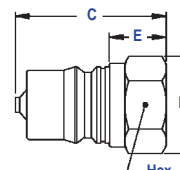


**Steel Construction**  
(also available in brass and stainless steel)

Body Size (inch)	Part Number	Thread Size Female NPTF	Dimensions (inches)		
			A	B	Across Flats
1/8	1-H11	1/8-27	1.91	0.98	0.56
1/4	2-H16	1/4-18	2.26	1.17	0.75
3/8	3-H21	3/8-18	2.56	1.42	0.88
1/2	4-HP26	1/2-14	2.96	1.86	1.13
3/4	6-HP31	3/4-14	3.48	2.22	1.31
1	8-HP36	1-11½	4.13	2.61	1.75

A = Overall length B = Maximum diameter

**PLUG**



**Steel Construction**  
(also available in brass and stainless steel)

Body Size (inch)	Part Number	Thread Size Female NPTF	Dimensions (inches)			
			C	D	E	Hex
1/8	1-K11	1/8-27	1.26	0.65	0.44	0.56
1/4	2-K16	1/4-18	1.52	0.87	0.56	0.75
3/8	3-K21	3/8-18	1.76	1.01	0.61	0.88
1/2	4-KP26	1/2-14	2.03	1.30	0.76	1.13
3/4	6-KP31	3/4-14	2.36	1.52	0.71	1.31
1	8-KP36	1-11½	2.85	1.88	0.97	1.63

C = Overall length D = Maximum diameter E = Exposed length when connected

MORE PLUG AND SOCKET CONFIGURATIONS ARE AVAILABLE – SEE OUR COUPLING CATALOG FOR THE COMPLETE PRODUCT LINE.

# Series 3000/4000/5000/6000 One Way Couplings

**Industrial Interchange Pin Lock Couplings** are designed for compressed air, gases and liquids. Body sizes are 1/4", 3/8", 1/2" and 3/4".

### Features

- The original automatic one-way shutoff coupling designed by Hansen—The Industry Standard
- Rugged, reliable
- Easy, automatic, push-to-connect design provides instantaneous connection and disconnection of lines, plus automatic shut-off of socket end of line
- 1/4" and 1/2" sockets accept MIL-C-4109 plug
- Optional sleeve lock prevents accidental disconnection
- Optional seal and valve materials available

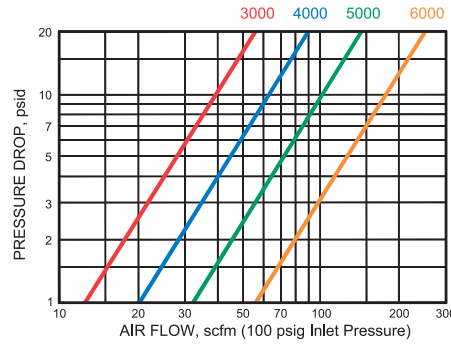
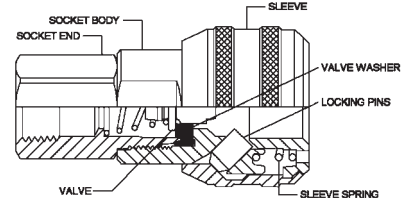


### Standard Materials

- Socket
  - Brass Body
  - Zinc Plated Steel Valve
  - Buna-N (Nitrile) Seal
  - Stainless Steel Springs
  - Stainless Steel Locking Pins
- Plug
  - Zinc Plated Case-Hardened Steel (All Sizes)
  - Brass (All Sizes)
  - Stainless Steel (Series 3000)

### Accessories

- Dust caps and dust plugs

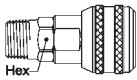


Rated Pressure			
Series	Size	PSI	BAR
3000	1/4"	2,000	138
4000	3/8"	1,000	69
5000	1/2"	500	35
6000	3/4"	220	15

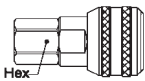
Flow Capacity	
Series	* Ac
3000	28
4000	45
5000	72
6000	125

\* Air flow (scfm) with 5 PSI pressure drop and 100 PSIG inlet pressure

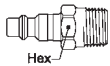
## Series 3000 1/4" Nominal



SOCKET -male end connections		
MODEL	THREAD SIZE	FINISH
2900	1/8-27 NPTF	Brass
3100	1/4-18 NPTF	Brass
3300	3/8-18 NPTF	Brass

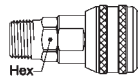


SOCKET -female end connections		
MODEL	THREAD SIZE	FINISH
2800	1/8-27 NPTF	Brass
3000	1/4-18 NPTF	Brass
3200	3/8-18 NPTF	Brass

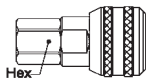


PLUG -male end connections		
MODEL	THREAD SIZE	FINISH
10	1/4-18 NPTF	Steel
14	3/8-18 NPTF	Steel
B-10	1/4-18 NPTF	Brass
LL-10	1/4-18 NPTF	Stainless

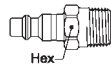
## Series 4000 3/8" Nominal



SOCKET -male end connections		
MODEL	THREAD SIZE	FINISH
4100-A	1/8-27 NPTF	Brass
4100	1/4-18 NPTF	Brass
4300	3/8-18 NPTF	Brass
4500	1/2-14 NPTF	Brass

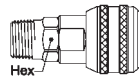


SOCKET -female end connections		
MODEL	THREAD SIZE	FINISH
4000-A	1/8-27 NPTF	Brass
4000	1/4-18 NPTF	Brass
4200	3/8-18 NPTF	Brass
4400	1/2-14 NPTF	Brass

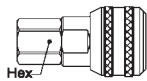


PLUG -male end connections		
MODEL	THREAD SIZE	FINISH
38	1/8-27 NPTF	Steel
40	1/4-18 NPTF	Steel
42	3/8-18 NPTF	Steel
44	1/2-14 NPTF	Steel
B-40	1/4-18 NPTF	Brass
B-42	3/8-18 NPTF	Brass

## Series 5000 1/2" Nominal



SOCKET -male end connections		
MODEL	THREAD SIZE	FINISH
50100	1/4-18 NPTF	Brass
5100	3/8-18 NPTF	Brass
5300	1/2-14 NPTF	Brass
5500	3/4-14 NPTF	Brass

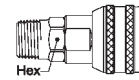


SOCKET -female end connections		
MODEL	THREAD SIZE	FINISH
5000-A	1/4-18 NPTF	Brass
5000	3/8-18 NPTF	Brass
5200	1/2-14 NPTF	Brass
5400	3/4-14 NPTF	Brass

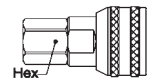


PLUG -male end connections		
MODEL	THREAD SIZE	FINISH
50	1/4-18 NPTF	Steel
52	3/8-18 NPTF	Steel
54	1/2-14 NPTF	Steel
56	3/4-14 NPTF	Steel
B-52	3/8-18 NPTF	Brass
B-54	1/2-14 NPTF	Brass

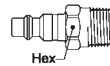
## Series 6000 3/4" Nominal



SOCKET -male end connections		
MODEL	THREAD SIZE	FINISH
6300	1/2-14 NPTF	Brass
6500	3/4-14 NPTF	Brass
6700	1-11/2 NPTF	Brass



SOCKET -female end connections		
MODEL	THREAD SIZE	FINISH
6200	1/2-14 NPTF	Brass
6400	3/4-14 NPTF	Brass
6600	1-11/2 NPTF	Brass



PLUG -male end connections		
MODEL	THREAD SIZE	FINISH
64A	1/2-14 NPTF	Steel
66A	3/4-14 NPTF	Steel
68A	1-11/2 NPTF	Steel
B-64A	1/2-14 NPTF	Steel
B-66A	3/4-14 NPTF	Brass

MORE PLUG AND SOCKET CONFIGURATIONS ARE AVAILABLE – SEE OUR COUPLING CATALOG FOR THE COMPLETE PRODUCT LINE.

# APPLICATION DATA

APPLICATION INFORMATION - TUBES				
<b>Tube Type (Circle One)</b>	Test Pressure	Vacuum	Test Medium	
<p><b>STRAIGHT</b></p> <p><b>EXPANDED</b></p> <p><b>BEADED</b></p> <p><b>BARBED</b></p> <p><b>FLARED</b></p>	Quantity of Connectors Required			
	Connector Now Being Used:			
	Brand Name		Type	
	Temperature	I.D. Seal	O.D. Seal	End Seal
	Tube O.D.		Wall Thickness	Material
	Dimension A	Dimension B	Dimension C	Dimension D
	Available Tube Length			
	Are there any obstructions? (Describe)			
	<input type="checkbox"/> I will be Sending Drawings <input type="checkbox"/> I will be Sending Samples			

APPLICATION INFORMATION - EXPANDING SEAL				
<b>Opening Type (Circle One)</b>	<b>Finish of Opening: (Check One)</b>			
<p><b>THREADED</b></p> <p><b>SMOOTH</b></p>	<input type="checkbox"/> Smooth	<input type="checkbox"/> Rough	<input type="checkbox"/> Threaded	
	<input type="checkbox"/> Cored			
	Thread Size (A)		or Inside Diameter of Hole (A)	
	Thread Type			
	Depth of Hole (B)		Test Medium	
	Test Pressure (in PSI)		Temperature	
	Are there any obstructions? (Describe)			
	<input type="checkbox"/> I will be Sending Drawings <input type="checkbox"/> I will be Sending Samples			

Contact Details			
Company name:		Contact person:	
Title:		Email address:	
Address:		City, State, Zip:	
Telephone:		Fax:	



Since 1962, **QUICK SEAL®** has been an industry leader in providing leak testing and filling connectors that have been recognized for their superior quality.

**Tuthill Coupling Group**, comprised of the Hansen™, Coupleurs Gromelle™ and QUICK SEAL® brands, manufactures a comprehensive range of quick coupling and quick testing solutions at its Berea, Ohio and Annemasse, France locations. Tuthill's precision products are widely marketed through a strong network of global distributorships.

**High Speed Actuation**

**Low Cost**

**Easy Maintenance**

**Uses Include a Variety of Test Media: Helium, Air, Nitrogen and Refrigerants**

**Wide Variety of Sealing and Retaining Options**

**Metric Sizes Available**

**ISO 9001 Certified**

## QUICK SEAL® Leak Testing and Filling Connectors

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