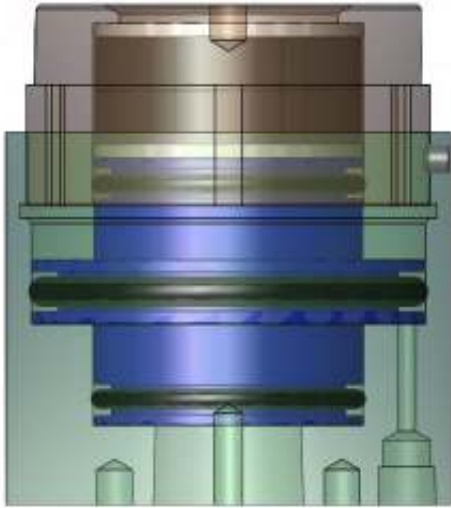


# CTS Connect

## CO CONNECTOR



### SEAL ASSEMBLY AND INSTALLATION

1. Check CO connector assembly for the proper seal size, seal material, number of seals, and washers in the connector assembly.
2. There are six basic connector bodies with multiple seal sizes and materials available. See table.
3. To replace or check the seals, loosen the set screw on the side of the connector body so that it clears the threads of the cap.
4. Unscrew and remove the cap using the spanner holes provided on the face of the cap and bottom of the body.
5. There are a number of seals and two washers depending on the connector body size detailed in the table.
6. Check for correct seal and washer sizes and that the ID dimensions are the same.
7. Re-assemble the connector components into the connector body per the diagram.
8. Tighten the cap to connector body using spanner wrenches.
9. Align the set screw with one of the slots in the cap and tightened the set screw.

### CO Pneumatic Actuated Connectors

CTS Connect air actuated CO connectors effectively seal on smooth, rough, and threaded circular features of a part for either pressure or vacuum testing, filling, or flushing .

The connectors consist of an air-driven internal piston that compresses seal material against the surface of the part, creating a tight seal that meets all test pressure requirements.

Assembly Body	Seal Set	Range	Number of seals
CO30	AA	0.030"-0.050"	1
	AB	0.050"-0.080"	1
	AC	0.080"-0.130"	1
CO31	AA	0.100"-0.180"	1
	AB	0.180"-0.260"	1
	AC	0.260"-0.340"	1
	AD	1/8"NPT	1
	AE	0.340"-0.420"	1
	AF	0.420"-0.510"	1
CO32	AA	0.433"-0.512"	1
	AB	1/4"NPT	1
	AD	0.512"-0.591"	1
	AE	0.591"-0.669"	1
	AF	3/8"NPT	1
	AG	0.669"-0.750"	1
	AH	0.750"-0.827"	1
CO33	AA	1/2"NPT	1
	AB	0.787"-0.866"	2
	AC	0.866"-0.945"	2
	AD	3/4"NPT	1
	AE	0.945"-1.024"	2
	AF	1.024"-1.102"	2
	AG	1.102"-1.181"	2
	AH	1.181"-1.260"	2
	AI	1"NPT	1
	AJ	1.260"-1.339"	2
	AK	1.339"-1.417"	2
	AL	1.417"-1.510"	2
CO34	AA	1.496"-1.614"	3
	AB	1-1/4"NPT	1
	AC	1.614"-1.732"	3
	AD	1.732"-1.850"	3
	AE	1-1/2"NPT	1
	AF	1.850"-1.969"	3
CO35	AA	1.969"-2.087"	3
	AB	2.087"-2.205"	3
	AC	2.205"-2.323"	3
	AD	2"NPT	1
	AE	2.323"-2.441"	3

## CO Connector Operation and Integration

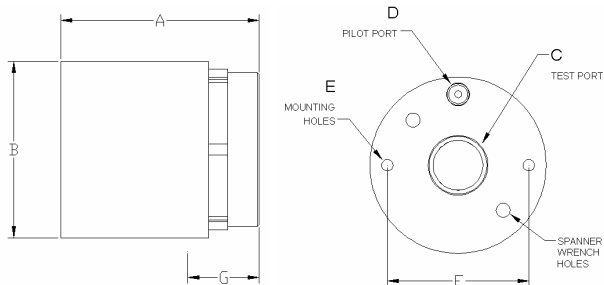
For safe operation in pressure applications, the CO Connector must be restrained or secured to the test part to counteract the test pressure force and to prevent blow out while under pressure in case of premature pilot pressure release.

Maximum test pressure is 500 psi with typical pilot pressure of 60-90 psi.

The CO connector should be secured over the hole to be sealed by a clamp, cylinder, or other fixture device with sufficient coupling force to overcome the test force (area of opening times the test pressure).

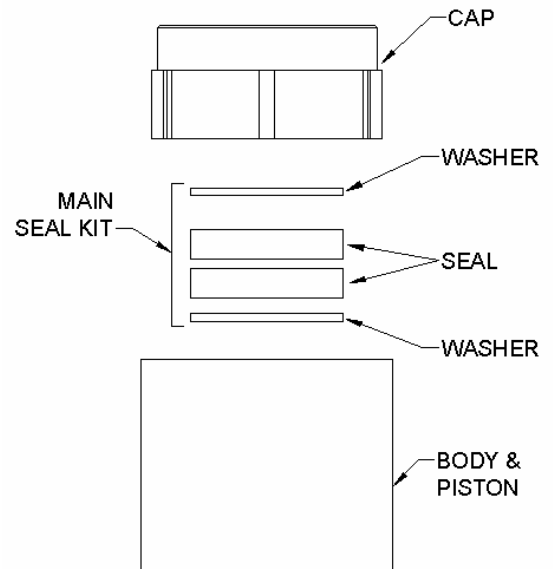
## Mounting the CO Connector

The connector body can be attached directly to a fixture, clamp, or cylinder device via the two or three mounting holes located on the connector body hole E. The hole/port dimensions and locations per connector body are detailed in the table below:



	A	B	C	D	E	F	G
CO30	1.72	0.84	1/16-27 FNPT	10-32	1/4-20	0.63	0.51
CO31	2.03	1.49	1/8-27 FNPT	1/16-27 FNPT	1/4-20	1.10	0.51
CO32	2.78	2.22	1/4-20 FNPT	1/8-27 FNPT	1/4-20	1.62	0.60
CO33	3.50	3.11	3/4-14 FNPT	1/8-27 FNPT	1/4-20	2.50	0.98
CO34	4.50	4.23	1 FNPT	1/8-27 FNPT	1/4-20	3.25	1.51
CO35	4.60	5.48	1 1/2 FNPT	1/8-27 FNPT	1/4-20	4.25	1.45

TABLE 2: DIMENSIONS



## Pressure Connections

- There are two pressure port connections on the CO body. They are the test port and pilot port. The port dimensions are detailed in Table 2.
- Attach the pilot air to port D. The pneumatic pilot pressure source should be regulated to a consistent pressure to assure reliable sealing.
- The recommended pilot pressure is 60-90 psi. The pressure should be set to the lowest possible pressure while providing consistent sealing to minimize seal wear.
- Attach the test pressure to hole C.

## Operating the CO Connectors

- Provide a control method to advance the CO Connector over the hole.
- Activate the pilot air pressure.
- Apply the test pressure to the connector.
- Test, fill or flush part while assuring that the test pressure will be relieved before the pilot air pressure is relieved.
- Relieve test pressure
- Relieve pilot pressure.
- Withdraw CO Connector from part.

## CO Connector Optional Accessories

### SPRINGMOUNT ADAPTER



Springmount adapters are a great way to solve minor alignment and fixturing issues. The spring mount allows the connector to float in all directions to help ensure proper alignment during the advancement to the seal area.

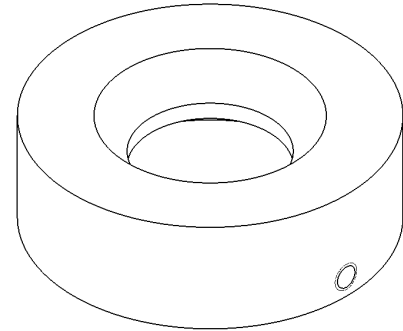
### MAIN SEAL KIT



The main seal kit contains seals and washers



### TAPERED GUIDE ADAPTER



The attachable delrin taper guide mounts to the cap of the CO Connector. It quickly and easily guides parts into the seal opening without damaging the cap, front edge of the seal, or the part being sealed.

### SPARE SEALS



Spare seals are available to order in minimum quantities per connector type.

## CINCINNATI TEST SYSTEMS, INC. PRODUCT WARRANTY

Because of the variety of uses for this equipment and because of the differences between this solid state equipment and elec-tromechanical equipment, the user of and those responsible for applying this equipment must satisfy themselves as to the acceptability of each application and use of the equipment. In no event will Cincinnati Test Systems be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The illustrations, charts, and layout examples shown in this manual are intended solely to illustrate the text of this manual. Because of the many variables and requirements associated with any particular installation, Cincinnati Test Systems cannot assume responsibility or liability for actual use based upon the illustrative uses and applications.

CTS warrants that the Products, under normal and proper use, shall be free from defects in material and workmanship that impair its usefulness, for a period of 1 year from the date of shipment. CTS' obligation under this warranty is limited to repair-ing or replacing, at CTS' option, any defective non-consumable parts. Consumable parts are specifically excluded from this warranty, including elastomers and seals,. This warranty is conditioned upon Buyer furnishing satisfactory evidence that the Products alleged to be defective has been properly maintained and correctly operated under normal conditions with competent supervision and within the operating limits for which such Products are offered and sold.