



CTS Connect™ Manual & Automatic Connectors





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Air Actuated Connectors

The CTS Connect™ air actuated internal connectors effectively seal on smooth, rough, or threaded circular features of a part. The connectors consist of an air-driven internal piston that compresses the CTS proprietary seal material against the surface of the part, creating a tight seal that meets all test pressure requirements regardless of surface shape or finish.

- Superior sealing capability without the risk of scratching the surface of the part
- Automated sealing to minimize operator fatigue and injury
- Threaded and tapered connector nose on ID Connector models
- Large test/fill port holes for better conductance
- Built-in stroke limiter
- Easy seal replacement
- Long seal life

Tooling Functions

The part to be sealed is placed into the CTS Connect connector as the pilot air pressure is applied by triggering a start switch. In automated applications, a cylinder will advance the CTS Connect connector to the part. For vacuum applications, no safety tooling is required because the vacuum will hold the additional part or

seal restraints are required to prevent a blow off condition in case the seal pilot pressure is released before the part pressure. The pressure range for the internal (CI) connector is vacuum to 120 psi.

Sealing

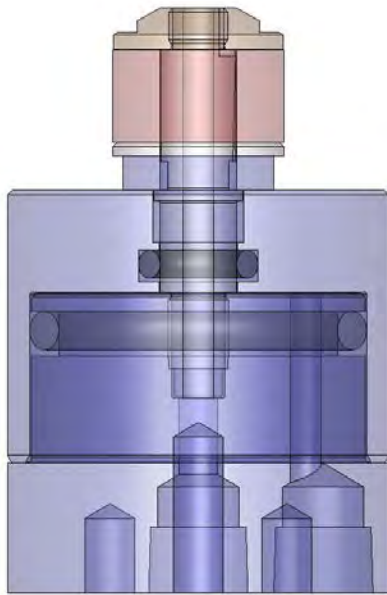
CTS Connect™ connectors are ideal for smooth or rough surfaces, and threaded holes (NPT, Metric, or SAE). The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

Pilot Pressure

CTS Connect connectors are regulated pilot pressure set to the minimum pressure needed to seal life. Normal pilot pressures extend the seal life. Normal pilot pressures range from 60 to 90 psi. Higher pilot pressures may be required for rough seal surfaces and NPT, Metric, and SAE connections. If higher pilot pressures are required, boosters are available.

CI Connector



CTS Connect CI Connector Specs

Part hole sizes: 0.270 – 4.125" I.D.

Threaded holes: 1/8" to 2" FNPT, M8-M48, SAE 5/16- 2-1/2"

Test pressures : Vacuum to 120 psig

Pilot pressure: Typically 60 – 90 psig

Connector body: Aluminum

Washer Material: Stainless steel

Spacer and Shaft Extension Spacer: Aluminum

Stem and Shaft Extension: Stainless steel

Piston: Aluminum

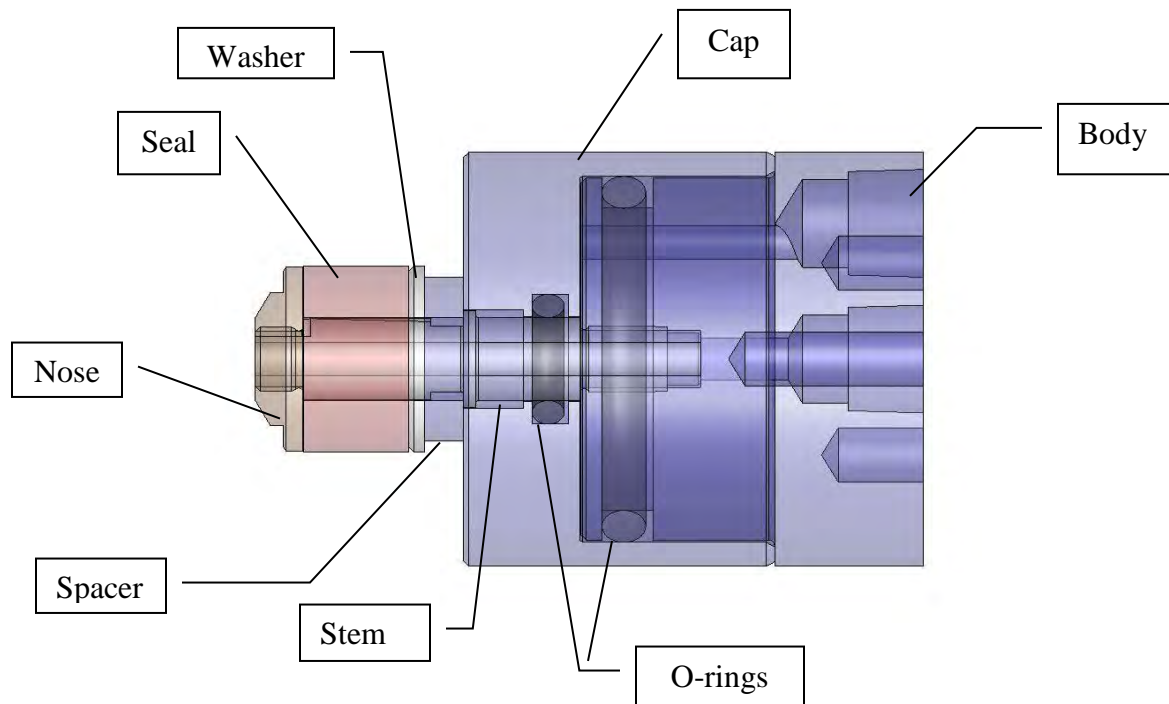
Threaded connector nose: brass

O-ring: Buna N

Part seal material: Proprietary grade seal
For regular and threaded connectors

Optional seal material:
Medical grade urethane


Connector Assembly Detail

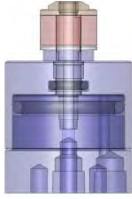


Air Actuated Internal Connector

Smooth Bore Connectors	Connector w/o main seal kit			Includes washer, seal and nose.	Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane
CI30					
0.270 – 0.290	CI30	CI30-A1	CI30-A1-MSK		CI30-A1-SKP
0.290 – 0.310	CI30	CI30-A	CI30-A-MSK		CI30-A-SKP
0.310 – 0.330	CI30	CI30-AA	CI30-AA-MSK		CI30-AA-SKP
0.330 – 0.394	CI30	CI30-AB	CI30-AB-MSK		CI30-AB-SKP
CI31					
0.394 – 0.472	CI31	CI31-AA	CI31-AA-MSK		CI31-AA-SKP
0.472 – 0.551	CI31	CI31-AC	CI31-AC-MSK		CI31-AC-SKP
0.551 – 0.630	CI31	CI31-AD	CI31-AD-MSK		CI31-AD-SKP
CI32					
0.630 – 0.709	CI32	CI32-AB	CI32-AB-MSK		CI32-AB-SKP
0.709 – 0.787	CI32	CI32-AD	CI32-AD-MSK		CI32-AD-SKP
0.787 – 0.866	CI32	CI32-AE	CI32-AE-MSK		CI32-AE-SKP
CI33					
0.866 – 0.945	CI33	CI33-AA	CI33-AA-MSK		CI33-AA-SKP
0.945 – 1.024	CI33	CI33-AC	CI33-AC-MSK		CI33-AC-SKP
1.024 – 1.102	CI33	CI33-AD	CI33-AD-MSK		CI33-AD-SKP
CI34					
1.102 – 1.181	CI34	CI34-AA	CI34-AA-MSK		CI34-AA-SKP
1.181 – 1.260	CI34	CI34-AC	CI34-AC-MSK		CI34-AC-SKP
1.260 – 1.339	CI34	CI34-AD	CI34-AD-MSK		CI34-AD-SKP
CI35					
1.339 – 1.457	CI35	CI35-AA	CI35-AA-MSK		CI35-AA-SKP
1.457 – 1.575	CI35	CI35-AB	CI35-AB-MSK		CI35-AB-SKP
1.575 – 1.693	CI35	CI35-AD	CI35-AD-MSK		CI35-AD-SKP

Air Actuated Internal Connector

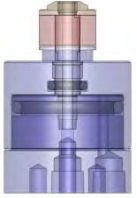

Smooth Bore Connectors	Connect w/o main seal kit		 <p>Includes washer, seal and nose.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
CI36				
1.693 – 1.850	CI36	CI36-AA	CI36-AA-MSK	CI36-AA-SKP
1.850 – 2.008	CI36	CI36-AC	CI36-AC-MSK	CI36-AC-SKP
2.008 – 2.165	CI36	CI36-AD	CI36-AD-MSK	CI36-AD-SKP
CI37				
2.165 – 2.305	CI37	CI37-AA	CI37-AA-MSK	CI37-AA-SKP
2.305 – 2.445	CI37	CI37-AC	CI37-AC-MSK	CI37-AC-SKP
2.445 – 2.585	CI37	CI37-AD	CI37-AD-MSK	CI37-AD-SKP
CI38				
2.585 – 2.725	CI38	CI38-AA	CI38-AA-MSK	CI38-AA-SKP
2.725 – 2.865	CI38	CI38-AB	CI38-AB-MSK	CI38-AB-SKP
2.865 – 3.005	CI38	CI38-AC	CI38-AC-MSK	CI38-AC-SKP
CI39				
3.005 – 3.145	CI39	CI39-AA	CI39-AA-MSK	CI39-AA-SKP
3.145 – 3.285	CI39	CI39-AB	CI39-AB-MSK	CI39-AB-SKP
3.285 – 3.425	CI39	CI39-AC	CI39-AC-MSK	CI39-AC-SKP
3.425 – 3.565	CI39	CI39-AD	CI39-AD-MSK	CI39-AD-SKP
CI40				
3.565 – 3.705	CI40	CI40-AA	CI40-AA-MSK	CI40-AA-SKP
3.705 – 3.845	CI40	CI40-AB	CI40-AB-MSK	CI40-AB-SKP
3.845 – 3.985	CI40	CI40-AC	CI40-AC-MSK	CI40-AC-SKP
3.985 – 4.124	CI40	CI40-AD	CI40-AD-MSK	CI40-AD-SKP

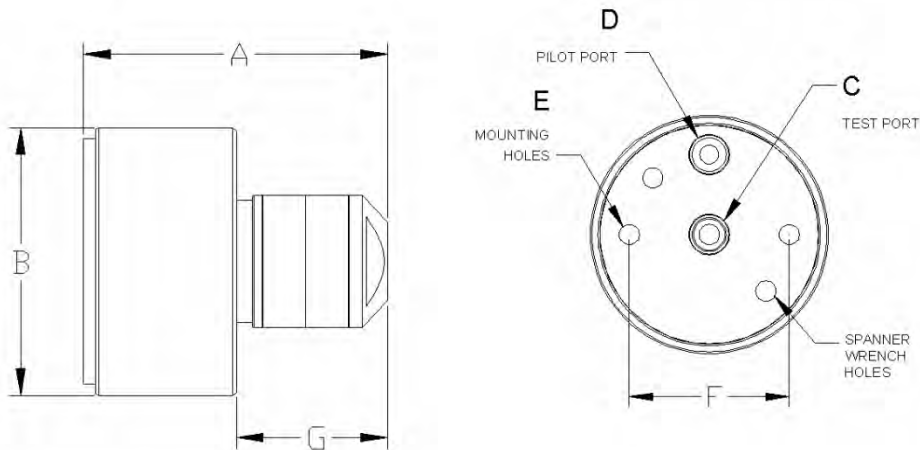
Threaded Bore Connectors	Connect w/o main seal kit		 Includes washer, seal and nose.	Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
NPT Threaded Holes				
1/8" NPT	CI30	CI30-NPT-0125	CI30-NPT-0125-MSK	CI30-NPT-0125-SKP
1/4" NPT	CI31	CI31-NPT-0250	CI31-NPT-0250-MSK	CI31-NPT-0250-SKP
3/8" NPT	CI32	CI32-NPT-0375	CI32-NPT-0375-MSK	CI32-NPT-0375-SKP
1/2" NPT	CI32	CI32-NPT-0500	CI32-NPT-0500-MSK	CI32-NPT-0500-SKP
3/4" NPT	CI33	CI33-NPT-0750	CI33-NPT-0750-MSK	CI33-NPT-0750-SKP
1" NPT	CI34	CI34-NPT-1000	CI34-NPT-1000-MSK	CI34-NPT-1000-SKP
1 1/4" NPT	CI35	CI35-NPT-1250	CI35-NPT-1250-MSK	CI35-NPT-1250-SKP
1 1/2" NPT	CI36	CI36-NPT-1500	CI36-NPT-1500-MSK	CI36-NPT-1500-SKP
2" NPT	CI37	CI37-NPT-2000	CI37-NPT-2000-MSK	CI37-NPT-2000-SKP
Metric Threaded Holes				
M8	CI30	CI30-M8	CI30-M8-MSK	CI30-M8-SKP
M10	CI30	CI30- M10	CI30-M10-MSK	CI30-M10-SKP
M12	CI31	CI31-M12	CI31-M12-MSK	CI31-M12-SKP
M14	CI31	CI31-M14	CI31-M14-MSK	CI31-M14-SKP
M16	CI31	CI31-M16	CI31-M16-MSK	CI31-M16-SKP
M18	CI31	CI31-M18	CI31-M18-MSK	CI31-M18-SKP
M20	CI32	CI32-M20	CI32-M20-MSK	CI32-M20-SKP
M22	CI32	CI32-M22	CI32-M22-MSK	CI32-M22-SKP
M24	CI32	CI32-M24	CI32-M24-MSK	CI32-M24-SKP
M26	CI33	CI33-M26	CI33-M26-MSK	CI33-M26-SKP
M27	CI33	CI33-M27	CI33-M27-MSK	CI33-M27-SKP
M33	CI34	CI34-M33	CI34-M33-MSK	CI34-M33-SKP
M36	CI34	CI34-M36	CI34-M36-MSK	CI34-M36-SKP
M42	CI35	CI35-M42	CI35-M42-MSK	CI35-M42-SKP
M45	CI35	CI35-M45	CI35-M45-MSK	CI35-M45-SKP
M48	CI36	CI36-M48	CI36-M48-MSK	CI36-M48-SKP

Air Actuated Internal Connector

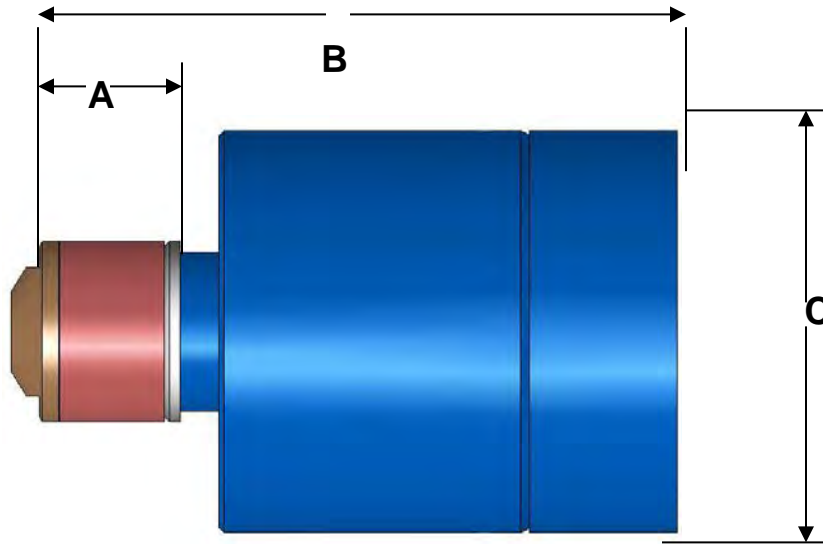
Threaded Hole Connectors	Connect w/o main seal kit		 <p>Includes washer, seal and nose.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
SAE Threaded Holes				
5/16" SAE	CI30	CI30-SAE-0312	CI30-SAE-0312-MSK	CI30-SAE-0312-SKP
3/8" SAE	CI30	CI30-SAE-0375	CI30-SAE-0375-MSK	CI30-SAE-0375-SKP
7/16" SAE	CI30	CI30-SAE-0437	CI30-SAE-0437-MSK	CI30-SAE-0437-SKP
1/2" SAE	CI31	CI31-SAE-0500	CI31-SAE-0500-MSK	CI31-SAE-0500-SKP
9/16" SAE	CI31	CI31-SAE-0562	CI31-SAE-0562-MSK	CI31-SAE-0562-SKP
5/8" SAE	CI31	CI31-SAE-0625	CI31-SAE-0625-MSK	CI31-SAE-0625-SKP
11/16" SAE	CI31	CI31-SAE-0687	CI31-SAE-0687-MSK	CI31-SAE-0687-SKP
3/4" SAE	CI32	CI32-SAE-0750	CI32-SAE-0750-MSK	CI32-SAE-0750-SKP
13/16" SAE	CI32	CI32-SAE-0812	CI32-SAE-0812-MSK	CI32-SAE-0812-SKP
7/8" SAE	CI32	CI32-SAE-0875	CI32-SAE-0875-MSK	CI32-SAE-0875-SKP
15/16" SAE	CI32	CI32-SAE-0937	CI32-SAE-0937-MSK	CI32-SAE-0937-SKP
1" SAE	CI32	CI32-SAE-1000	CI32-SAE-1000-MSK	CI32-SAE-1000-SKP
1 1/16" SAE	CI33	CI33-SAE-1062	CI33-SAE-1062-MSK	CI33-SAE-1062-SKP
1 1/8" SAE	CI33	CI33-SAE-1125	CI33-SAE-1125-MSK	CI33-SAE-1125-SKP
1 3/16" SAE	CI33	CI33-SAE-1187	CI33-SAE-1187-MSK	CI33-SAE-1187-SKP
1 1/4" SAE	CI33	CI33-SAE-1250	CI33-SAE-1250-MSK	CI33-SAE-1250-SKP
1 5/16" SAE	CI34	CI34-SAE-1312	CI34-SAE-1312-MSK	CI34-SAE-1312-SKP
1 3/8" SAE	CI34	CI34-SAE-1375	CI34-SAE-1375-MSK	CI34-SAE-1375-SKP
1 7/16" SAE	CI34	CI34-SAE-1437	CI34-SAE-1437-MSK	CI34-SAE-1437-SKP
1 1/2" SAE	CI34	CI34-SAE-1500	CI34-SAE-1500-MSK	CI34-SAE-1500-SKP
1 9/16" SAE	CI35	CI35-SAE-1562	CI35-SAE-1562-MSK	CI35-SAE-1562-SKP
1 5/8" SAE	CI35	CI35-SAE-1625	CI35-SAE-1625-MSK	CI35-SAE-1625-SKP
1 11/16" SAE	CI35	CI35-SAE-1687	CI35-SAE-1687-MSK	CI35-SAE-1687-SKP
1 3/4" SAE	CI35	CI35-SAE-1750	CI35-SAE-1750-MSK	CI35-SAE-1750-SKP

Air Actuated Internal Connector

Threaded Hole Connectors	Connector w/o main seal kit			Includes washer, seal and nose.	Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane
		Seal Range		Plug	Plug & Fill
1 13/16" SAE	CI35	CI35-SAE-1812	CI35-SAE-1812-MSK	CI35-SAE-1812-SKP	
1 7/8" SAE	CI35	CI35-SAE-1875	CI35-SAE-1875-MSK	CI35-SAE-1875-SKP	
1 15/16" SAE	CI36	CI36-SAE-1937	CI36-SAE-1937-MSK	CI36-SAE-1937-SKP	
2" SAE	CI36	CI36-SAE-2000	CI36-SAE-2000-MSK	CI36-SAE-2000-SKP	
2 1/4" SAE	CI36	CI36-SAE-2250	CI36-SAE-2250-MSK	CI36-SAE-2250-SKP	
2 1/2" SAE	CI37	CI37-SAE-2500	CI37-SAE-2500-MSK	CI37-SAE-2500-SKP	



	A	B	C	D	E	F	G
CI30	2.01	1.25	1/16-27 FNPT	1/16-27 FNPT	10-32	0.80	0.55
CI31, CI32	2.44	1.56	1/8-27 FNPT	1/8-27 FNPT	1/4-20	1.02	0.55
CI33, CI34	2.67	2.38	1/2-14 FNPT	1/8-27 FNPT	1/4-20	1.60	1.11
CI35, CI36	4.0	3.5	3/4-14 FNPT	1/8-27 FNPT	1/4-20	2.31	1.50
CI37, CI38 CI39, CI40	3.81	4.25	3/4-14 FNPT	1/8-27 FNPT	1/4-20	3.0	1.50



CI Model Dimensions (in)

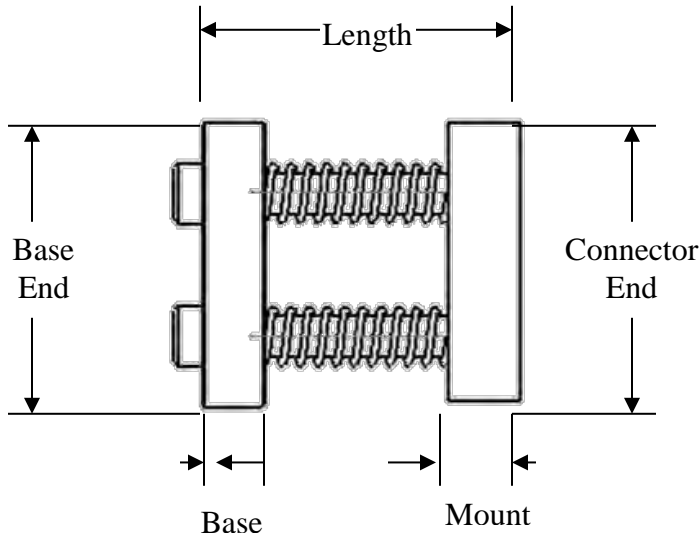
Body Size	A	B	C
30	0.55	2.01	1.25
31	0.56	2.44	1.56
32	0.57	2.44	1.56
33	1.11	2.67	2.38
34	1.11	2.71	2.38
35	1.50	4.00	3.50
36	1.53	4.03	3.50
37	1.52	3.81	4.25
38	1.52	3.81	4.25
39	1.52	3.81	4.25
40	1.52	3.81	4.75

*Note "A" corresponds to the minimum insertion depth

Dimensional information is for reference only

Air Actuated Internal Connector

Spring Mount Attachment Option

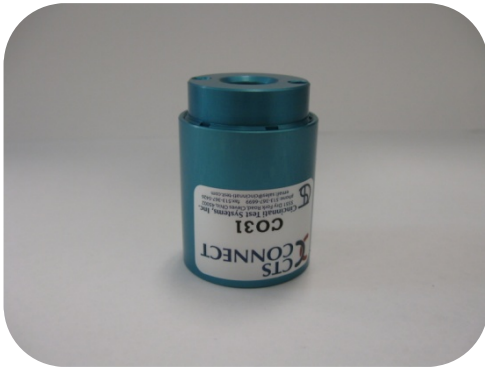


CI Spring-Mount Dimensions

Connector	Spring Mount Kit	Base End	Bolt Head	Base	Length	Mount	Connector End
CI30	SPRINGMOUNT CI30	1.75	3/16	0.38	1.94	0.44	1.75
CI31	SPRINGMOUNT CI31-32/CO31	1.75	3/16	0.38	1.94	0.44	1.70
CI32	SPRINGMOUNT CI31-32/CO31	1.75	3/16	0.38	1.94	0.44	1.70
CI33	SPRINGMOUNT CI33-34/CO32	2.23	3/16	0.38	1.94	0.44	2.20
CI34	SPRINGMOUNT CI33-34/CO32	2.23	3/16	0.38	1.94	0.44	2.20
CI35	SPRINGMOUNT CI35-36/CO33	3.48	4/16	0.50	3.81	0.56	3.33
CI36	SPRINGMOUNT CI35-36/CO33	3.48	4/16	0.50	3.81	0.56	3.33
CI37	SPRINGMOUNT CI37-38/CO34	4.23	4/16	0.50	3.81	0.56	4.03
CI38	SPRINGMOUNT CI37-38/CO34	4.23	4/16	0.50	3.81	0.56	4.03
CI39	SPRINGMOUNT CI37-38/CO34	4.23	4/16	0.50	3.81	0.56	4.03
CI40	SPRINGMOUNT CI37-38/CO34	4.23	4/16	0.50	3.81	0.56	4.03

* The Spring Mount Kit is ordered as a separate item for the appropriate Connector Assembly

Air Actuated External Connector
CTS Connects™
External (OD) Air Actuated Connectors



Air Actuated Connectors

The CTS Connect™ air actuated external connectors effectively seal on smooth, rough, or threaded circular features of a part. The connectors consist of an air-driven internal piston that compresses the CTS proprietary seal material against the surface of the part, creating a tight seal that meets all test pressure requirements regardless of surface shape or finish.

- Superior sealing capability without the risk of scratching the surface of the part
- Automated sealing to minimize operator fatigue and injury
- Large test/fill port holes for better conductance
- Built-in stroke limiter
- Easy seal replacement
- Long seal life

Tooling Functions

The part to be sealed is placed into the CTS Connect connector as the pilot air pressure is Connect connector to the part. For vacuum applications, no safety tooling is required

because the vacuum will hold the part in the connector. For pressure applications, additional applied by triggering a start switch. In automated applications, a cylinder will advance the CTS part or seal restraints are required to prevent a blow off condition in case the seal pilot pressure is released before the part pressure. The pressure range for the internal (CO) connector is vacuum to 500 psi.

Sealing

CTS Connect™ connectors are ideal for smooth or rough surfaces, and threaded holes (NPT, Metric, or SAE). The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

Pilot Pressure

CTS Connect connectors are regulated pilot pressure set to the minimum pressure needed to seal life. Normal pilot pressures extend the seal life. Normal pilot pressures range from 60 to 90 psi. Higher pilot pressures may be required for rough seal surfaces and NPT, Metric, and SAE connections. If higher pilot pressures are required, boosters are available.

CTS Connect CO Connector Specs

Part hole sizes: 0.030 –3.032" I.D.

Threaded holes: 1/8" to 2 1/2" FNPT, M8-M48, SAE 5/16- 2-1/2"

Test pressures : Vacuum to 500 psig

Pilot pressure: Typically 60 – 90 psig

Connector body: Aluminum

Washer Material: Stainless steel

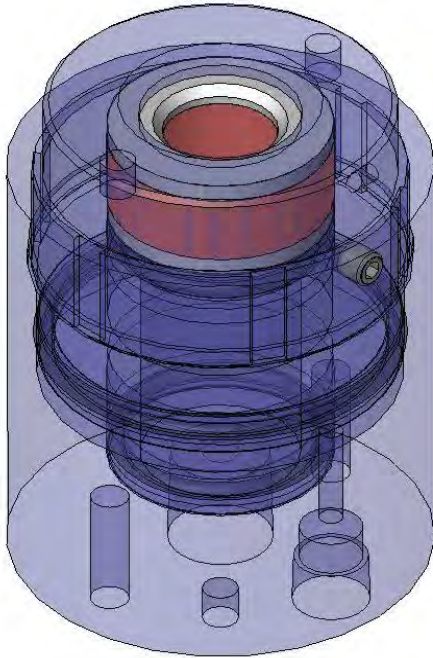
Piston: Aluminum

O-ring: Buna N

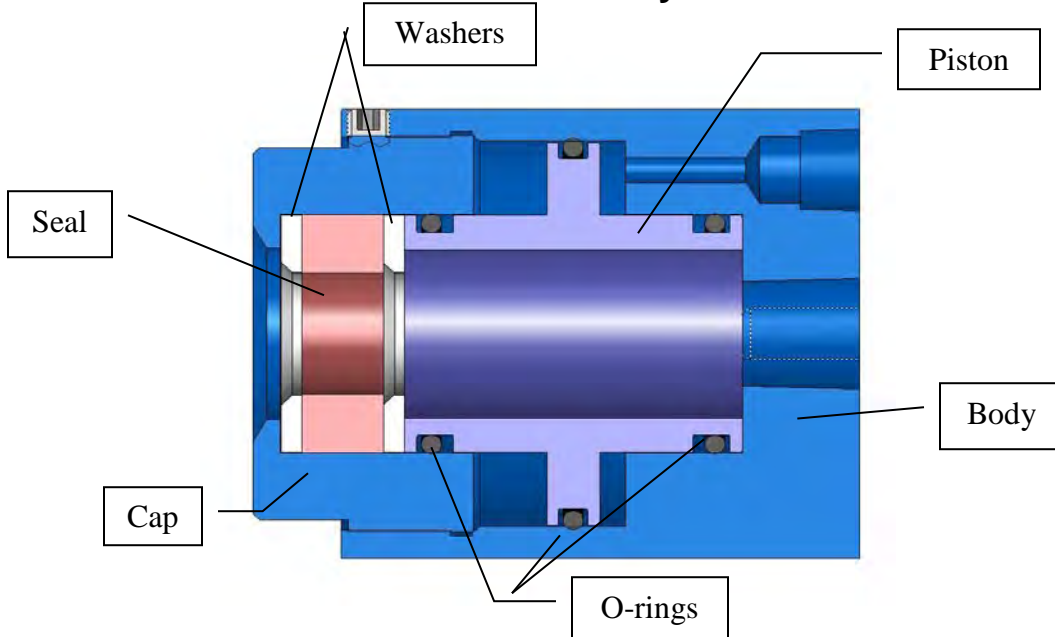
Part seal material: Proprietary grade seal
For regular and threaded connectors

Optional seal material:
Medical grade urethane

CO Connector



Connector Assembly Detail



Smooth Tube Connectors	Connector w/o main seal kit		 <p>Includes two washers and seal.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
CO30				
0.030 – 0.050	CO30	CO30-AA	CO30-AA-MSK	CO30-AA-SKP
0.050 – 0.080	CO30	CO30-AB	CO30-AB-MSK	CO30-AB-SKP
0.080 – 0.130	CO30	CO30-AC	CO30-AC-MSK	CO30-AC-SKP
CO31				
0.100 – 0.180	CO31	CO31-AA	CO31-AA-MSK	CO31-AA-SKP
0.180 – 0.260	CO31	CO31-AB	CO31-AB-MSK	CO31-AB-SKP
0.260 – 0.340	CO31	CO31-AC	CO31-AC-MSK	CO31-AC-SKP
0.340 – 0.420	CO31	CO31-AE	CO31-AE-MSK	CO31-AE-SKP
0.420 – 0.510	CO31	CO31-AF	CO31-AF-MSK	CO31-AF-SKP
CO32				
0.433 – 0.512	CO32	CO32-AA	CO32-AA-MSK	CO32-AA-SKP
0.512 – 0.591	CO32	CO32-AD	CO32-AD-MSK	CO32-AD-SKP
0.591 – 0.669	CO32	CO32-AE	CO32-AE-MSK	CO32-AE-SKP
0.669 – 0.750	CO32	CO32-AG	CO32-AG-MSK	CO32-AG-SKP
0.750 – 0.827	CO32	CO32-AH	CO32-AH-MSK	CO32-AH-SKP
CO33				
0.787 – 0.866	CO33	CO33-AB	CO33-AB-MSK	CO33-AA-SKP
0.866 – 0.945	CO33	CO33-AC	CO33-AC-MSK	CO33-AC-SKP
0.945 – 1.024	CO33	CO33-AE	CO33-AE-MSK	CO33-AD-SKP
1.024 – 1.102	CO33	CO33-AF	CO33-AF-MSK	CO33-AA-SKP
1.102 – 1.181	CO33	CO33-AG	CO33-AG-MSK	CO33-AB-SKP
1.181 – 1.260	CO33	CO33-AH	CO33-AH-MSK	CO33-AD-SKP

Smooth Tube Connectors	Connector w/o main seal kit		 <p>Includes two washers and seal.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
CO33				
1.260 – 1.339	CO33	CO33-AJ	CO33-AJ-MSK	CO33-AJ-SKP
1.339 – 1.417	CO33	CO33-AK	CO33-AK-MSK	CO33-AK-SKP
1.417 – 1.510	CO33	CO33-AL	CO33-AL-MSK	CO33-AL-SKP
CO34				
1.496 – 1.614	CO34	CO34-AA	CO34-AA-MSK	CO34-AA-SKP
1.614 – 1.732	CO34	CO34-AC	CO34-AC-MSK	CO34-AC-SKP
1.732 – 1.850	CO34	CO34-AD	CO34-AD-MSK	CO34-AD-SKP
1.850 – 1.969	CO34	CO34-AF	CO34-AF-MSK	CO34-AF-SKP
CO35				
1.969 – 2.087	CO35	CO35-AA	CO35-AA-MSK	CO35-AA-SKP
2.087 – 2.205	CO35	CO35-AB	CO35-AB-MSK	CO35-AB-SKP
2.205 – 2.323	CO35	CO35-AC	CO35-AC-MSK	CO35-AC-SKP
2.323 – 2.441	CO35	CO35-AE	CO35-AE-MSK	CO35-AE-SKP
2.441 – 2.559	CO35	CO35-AF	CO35-AF-MSK	CO35-AF-SKP
2.559 – 2.677	CO35	CO35-AG	CO35-AG-MSK	CO35-AG-SKP
2.667 – 2.795	CO35	CO35-AH	CO35-AH-MSK	CO35-AH-SKP
2.795 – 2.913	CO35	CO35-AI	CO35-AI-MSK	CO35-AI-SKP
2.913 – 3.032	CO35	CO35-AJ	CO35-AJ-MSK	CO35-AJ-SKP

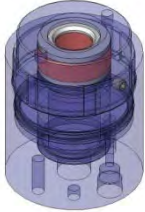

Air Actuated External Connector

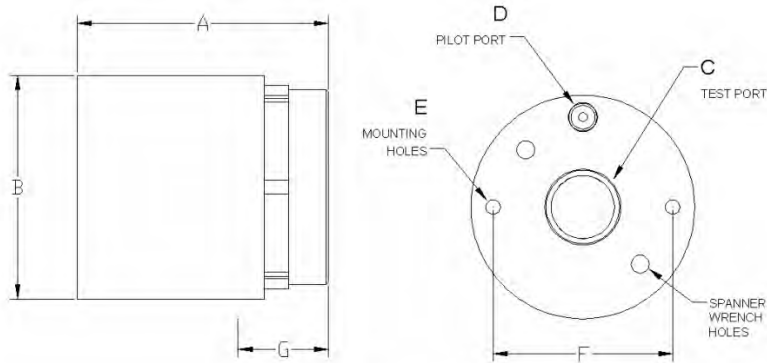
Threaded Pipe Connectors	Connect w/o main seal kit		 <p>Includes two washers and seal.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
NPT Threaded Tube				
1/8" NPT	CO31	CO31-NPT-0125	CO31-NPT-0125-MSK	CO31-NPT-0125-SKP
1/4" NPT	CO32	CO32-NPT-0250	CO32-NPT-0250-MSK	CO32-NPT-0250-SKP
3/8" NPT	CO32	CO32-NPT-0375	CO32-NPT-0375-MSK	CO32-NPT-0375-SKP
1/2" NPT	CO33	CO33-NPT-0500	CO33-NPT-0500-MSK	CO33-NPT-0500-SKP
3/4" NPT	CO33	CO33-NPT-0750	CO33-NPT-0750-MSK	CO33-NPT-0750-SKP
1" NPT	CO33	CO33-NPT-1000	CO33-NPT-1000-MSK	CO33-NPT-1000-SKP
1 ¼" NPT	CO34	CO34-NPT-1250	CO34-NPT-1250-MSK	CO34-NPT-1250-SKP
1 ½" NPT	CO34	CO34-NPT-1500	CO34-NPT-1500-MSK	CO34-NPT-1500-SKP
2" NPT	CO35	CO35-NPT-2000	CO35-NPT-2000-MSK	CO35-NPT-2000-SKP
2 ½" NPT	CO35	CO35-NPT-2500	CO35-NPT-2500-MSK	CO35-NPT-2500-SKP
Metric Threaded Tube				
M8	CO31	CO31-M8	CO31-M8-MSK	CO31-M8-SKP
M10	CO31	CO31- M10	CO31-M10-MSK	CO31-M10-SKP
M12	CO32	CO32-M12	CO32-M12-MSK	CO32-M12-SKP
M14	CO32	CO32-M14	CO32-M14-MSK	CO32-M14-SKP
M16	CO32	CO32-M16	CO32-M16-MSK	CO32-M16-SKP
M18	CO32	CO32-M18	CO32-M18-MSK	CO32-M18-SKP
M20	CO33	CO33-M20	CO33-M20-MSK	CO33-M20-SKP
M22	CO33	CO33-M22	CO33-M22-MSK	CO33-M22-SKP
M24	CO33	CO33-M24	CO33-M24-MSK	CO33-M24-SKP
M26	CO33	CO33-M26	CO33-M26-MSK	CO33-M26-SKP
M27	CO33	CO33-M27	CO33-M27-MSK	CO33-M27-SKP
M33	CO33	CO33-M33	CO33-M33-MSK	CO33-M33-SKP
M36	CO33	CO33-M36	CO33-M36-MSK	CO33-M36-SKP

Air Actuated External Connector

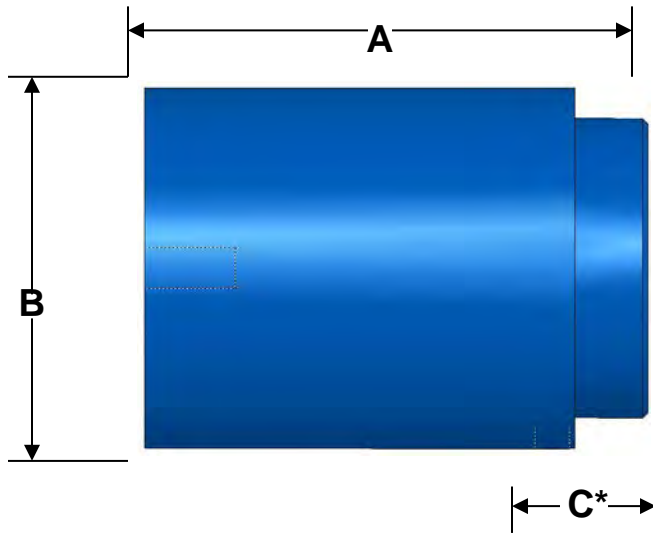
Threaded Pipe Connectors	Connect w/o main seal kit		 <p>Includes two washers and seal.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
Metric Threaded Tube				
M42	CO34	CO34-M42	CO34-M42-MSK	CO34-M42-SKP
M45	CO34	CO34-M45	CO34-M45-MSK	CO34-M45-SKP
M48	CO34	CO34-M48	CO34-M48-MSK	CO34-M48-SKP
SAE Threaded Tube				
5/16" SAE	CO31	CO31-SAE-0312	CO31-SAE-0312-MSK	CO31-SAE-0312-SKP
3/8" SAE	CO31	CO31-SAE-0375	CO31-SAE-0375-MSK	CO31-SAE-0375-SKP
7/16" SAE	CO31	CO31-SAE-0437	CO31-SAE-0437-MSK	CO31-SAE-0437-SKP
1/2" SAE	CO31	CO31-SAE-0500	CO31-SAE-0500-MSK	CO31-SAE-0500-SKP
9/16" SAE	CO32	CO32-SAE-0562	CO32-SAE-0562-MSK	CO32-SAE-0562-SKP
5/8" SAE	CO32	CO32-SAE-0625	CO32-SAE-0625-MSK	CO32-SAE-0625-SKP
11/16" SAE	CO32	CO32-SAE-0687	CO32-SAE-0687-MSK	CO32-SAE-0687-SKP
3/4" SAE	CO32	CO32-SAE-0750	CO32-SAE-0750-MSK	CO32-SAE-0750-SKP
13/16" SAE	CO32	CO32-SAE-0812	CO32-SAE-0812-MSK	CO32-SAE-0812-SKP
7/8" SAE	CO33	CO33-SAE-0875	CO33-SAE-0875-MSK	CO33-SAE-0875-SKP
15/16" SAE	CO33	CO33-SAE-0937	CO33-SAE-0937-MSK	CO33-SAE-0937-SKP
1" SAE	CO33	CO33-SAE-1000	CO33-SAE-1000-MSK	CO33-SAE-1000-SKP
1 1/16" SAE	CO33	CO33-SAE-1062	CO33-SAE-1062-MSK	CO33-SAE-1062-SKP
1 1/8" SAE	CO33	CO33-SAE-1125	CO33-SAE-1125-MSK	CO33-SAE-1125-SKP
1 3/16" SAE	CO33	CO33-SAE-1187	CO33-SAE-1187-MSK	CO33-SAE-1187-SKP
1 1/4" SAE	CO33	CO33-SAE-1250	CO33-SAE-1250-MSK	CO33-SAE-1250-SKP
1 5/16" SAE	CO33	CO33-SAE-1312	CO33-SAE-1312-MSK	CO33-SAE-1312-SKP
1 3/8" SAE	CO33	CO33-SAE-1375	CO33-SAE-1375-MSK	CO33-SAE-1375-SKP
1 7/16" SAE	CO33	CO33-SAE-1437	CO33-SAE-1437-MSK	CO33-SAE-1437-SKP
1 1/2" SAE	CO33	CO33-SAE-1500	CO33-SAE-1500-MSK	CO33-SAE-1500-SKP
1 9/16" SAE	CO34	CO34-SAE-1562	CO34-SAE-1562-MSK	CO34-SAE-1562-SKP

Air Actuated External Connector

Threaded Pipe Connectors	Connect w/o main seal kit		 Includes two washers and seal.	Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane
Seal Range	Body	Connector Assembly	Main Seal Kit	Seal Kit Pack
SAE Threaded Tube				
1 5/8" SAE	CO34	CO34-SAE-1625	CO34-SAE-1625-MSK	CO34-SAE-1625-SKP
1 11/16" SAE	CO34	CO34-SAE-1687	CO34-SAE-1687-MSK	CO34-SAE-1687-SKP
1 3/4" SAE	CO34	CO34-SAE-1750	CO34-SAE-1750-MSK	CO34-SAE-1750-SKP
1 13/16" SAE	CO34	CO34-SAE-1812	CO34-SAE-1812-MSK	CO34-SAE-1812-SKP
1 7/8" SAE	CO34	CO34-SAE-1875	CO34-SAE-1875-MSK	CO34-SAE-1875-SKP
1 15/16" SAE	CO34	CO34-SAE-1937	CO34-SAE-1937-MSK	CO34-SAE-1937-SKP
2" SAE	CO35	CO35-SAE-2000	CO35-SAE-2000-MSK	CO35-SAE-2000-SKP
2 1/2" SAE	CO35	CO35-SAE-2500	CO35-SAE-2500-MSK	CO35-SAE-2500-SKP



	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

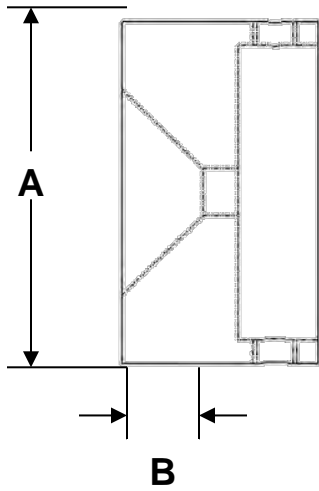


CO Model Dimensions (in)			
Body Size	A	B	C
CO30	1.72	0.84	0.51
CO31	2.03	1.49	0.51
CO32	2.78	2.22	0.60
CO33	3.50	3.11	0.98
CO34	4.50	4.23	1.51
CO35	4.60	5.48	1.45

* Note "C" corresponds to the minimum insertion depth

Dimensional information is for reference only

Tapered Guide Adapter

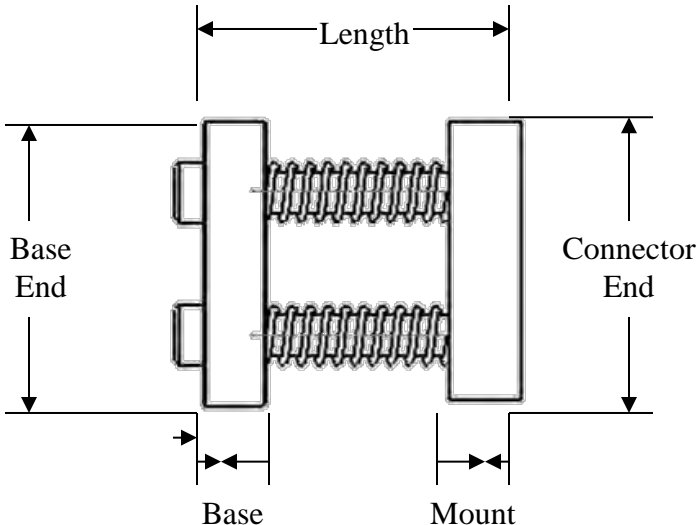


Connector Body	Dimensions	
	A (Diameter)	B (additional insertion depth)
CO30	N/A	N/A
CO31	1.49	0.50
CO32	2.22	0.50
CO33	3.11	0.50
CO34	4.23	0.50
CO35	5.48	0.50

**Tapered Adapters are ordered as a separate item.*

**Adapters are unique for each connector. The part number consists of the connector assembly number followed by -LEADIN.*

Air Actuated External Connector
Spring Mount Attachment Option



CO Spring-Mount Dimensions

Connector	Spring Mount Kit	Base End	Bolt Head	Base	Length	Mount	Connector End
CO30	SPRINGMOUNT CO30	1.75	3/16	0.38	1.94	0.44	1.75
CO31	SPRINGMOUNT CI31-32/CO31	1.75	3/16	0.38	1.94	0.44	1.70
CO32	SPRINGMOUNT CI33-34/CO32	2.23	3/16	0.38	1.94	0.44	2.20
CO33	SPRINGMOUNT CI35-36/CO33	3.48	4/16	0.50	3.81	0.56	3.33
CO34	SPRINGMOUNT CI37-38/CO34	4.23	4/16	0.50	3.81	0.56	4.03
CO35	SPRINGMOUNT CO35	5.50	4/16	0.50	3.81	0.56	5.19

* The Spring Mount Kit is ordered as a separate item for the appropriate Connector Assembly



CTS Connects™
Manual Seal Connectors

Manual Seal Connectors

The CTS Connect™ internal hand connectors effectively seal on smooth, rough, or threaded circular features of a part. The connectors consist of a cam driven piston that compresses the CTS proprietary seal material against the surface of the part, creating a tight seal that meets all test pressure requirements, regardless of surface shape or finish.

CTS Connect™ connectors provide:

- Superior sealing capability without the risk of scratching the surface of the part
- Threaded and tapered connector nose on ID Connector models
- Large test/fill port holes for better conductance
- Easy seal replacement
- Long seal life

Tooling Functions

The part to be sealed is placed over the CTS Connect™ connector and the hand cam advances the internal piston to compress the seal inside the part. For vacuum applications, no safety tooling is required because the vacuum will hold the part in the connector. For pressure applications, additional part or seal restraints are required to prevent a blow off condition in case the seal handle is released before the part pressure is exhausted. The pressure range for the internal (HI) connector is up to 35 PSI on 30 finishes, 50 PSI on 65 finishes, 75 PSI on 125 finishes, and 100 PSI on treaded ports.

Sealing

CTS Connect™ connectors are ideal for smooth or rough surfaces, and threaded holes (NPT, Metric, or SAE). The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

CTS Connect HI Connector Specs

Part hole sizes: 0.270 – 3.005" I.D.

Threaded holes: 1/8" to 2" FNPT, M8-M48, SAE 5/16- 2-1/2"

Test pressures :

- Vacuum all finishes
- 35 PSI on 30 finishes,
- 50 PSI on 65 finishes,
- 75 PSI on 125 finishes,
- 100 PSI on threaded ports

Connector body: Aluminum

Washer Material: Stainless steel

Spacer: Aluminum

Stem: Stainless steel

Piston: Aluminum

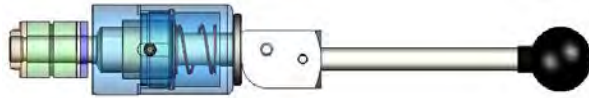
Threaded connector nose: Brass

O-ring: Buna N

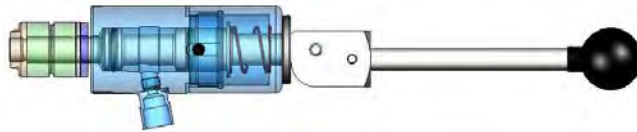
Part seal material: Proprietary grade seal
For regular and threaded connectors

Optional seal material:
Medical grade urethane

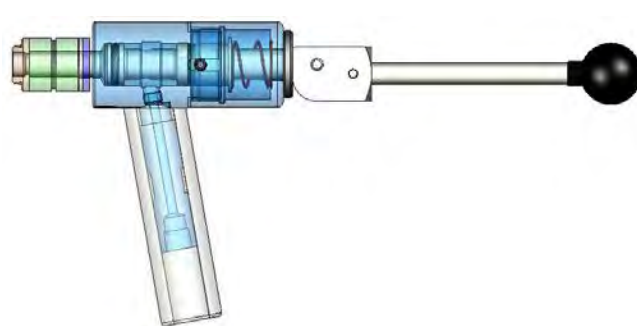
HI Type – Plug Style



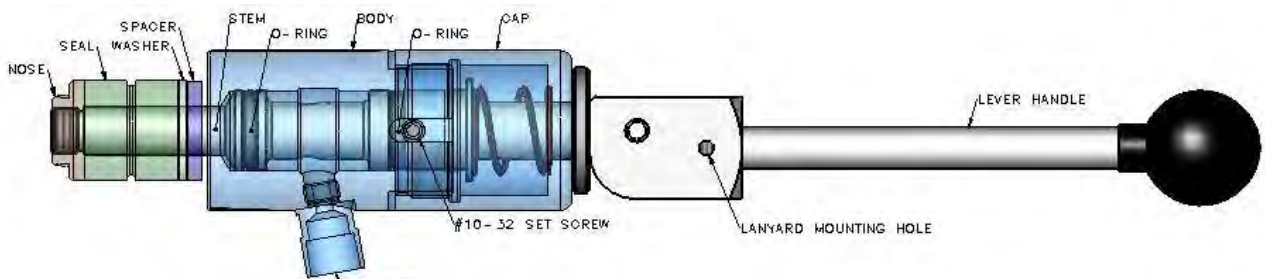
HIF Type – Fill Port



HIH Type – Fill Port with Handle






Connector Assembly Detail



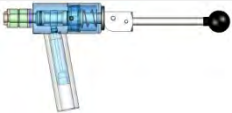


Smooth Bore Connectors			
	Seal Range	Plug	Plug & Fill
0.290 - 0.310	HI30-A	HIF30-A	HIH30-A
0.310 - 0.330	HI30-AA	HIF30-AA	HIH30-AA
0.330 - 0.360	HI30-AB	HIF30-AB	HIH30-AB
0.360 - 0.394	HI30-AB1	HIF30-AB1	HIH30-AB1
0.394 - 0.433	HI31-AA	HIF31-AA	HIH31-AA
0.433 - 0.472	HI31-AA1	HIF31-AA1	HIH31-AA1
0.472 - 0.511	HI31-AC	HIF31-AC	HIH31-AC
0.511 - 0.551	HI31-AC1	HIF31-AC1	HIH31-AC1
0.551 - 0.590	HI31-AD	HIF31-AD	HIH31-AD
0.590 - 0.630	HI31-AD1	HIF31-AD1	HIH31-AD1
0.630 - 0.669	HI32-AB	HIF32-AB	HIH32-AB
0.669 - 0.709	HI32-AB1	HIF32-AB1	HIH32-AB1
0.709 - 0.748	HI32-AD	HIF32-AD	HIH32-AD
0.748 - 0.787	HI32-AD1	HIF32-AD1	HIH32-AD1
0.787 - 0.826	HI32-AE	HIF32-AE	HIH32-AE
0.826 - 0.866	HI32-AE1	HIF32-AE1	HIH32-AE1
0.866 - 0.905	HI33-AA	HIF33-AA	HIH33-AA
0.905 - 0.945	HI33-AA1	HIF33-AA1	HIH33-AA1
0.945 - 0.984	HI33-AC	HIF33-AC	HIH33-AC
0.984 - 1.024	HI33-AC1	HIF33-AC1	HIH33-AC1
1.024 - 1.063	HI33-AD	HIF33-AD	HIH33-AD
1.063 - 1.102	HI33-AD1	HIF33-AD1	HIH33-AD1
1.102 - 1.141	HI34-AA	HIF34-AA	HIH34-AA
1.141 - 1.181	HI34-AA1	HIF34-AA1	HIH34-AA1
1.181 - 1.220	HI34-AC	HIF34-AC	HIH34-AC
1.220 - 1.260	HI34-AC1	HIF34-AC1	HIH34-AC1
1.260 - 1.299	HI34-AD	HIF34-AD	HIH34-AD

Smooth Bore Connectors			
	Plug	Plug & Fill	Plug & Fill w/handle
1.299 - 1.339	HI34-AD1	HIF34-AD1	HIH34-AD1
1.339 - 1.398	HI35-AA	HIF35-AA	HIH35-AA
1.398 - 1.457	HI35-AA1	HIF35-AA1	HIH35-AA1
1.457 - 1.516	HI35-AB	HIF35-AB	HIH35-AB
1.516 - 1.575	HI35-AB1	HIF35-AB1	HIH35-AB1
1.575 - 1.634	HI35-AD	HIF35-AD	HIH35-AD
1.634 - 1.693	HI35-AD1	HIF35-AD1	HIH35-AD1
1.693 - 1.771	HI36-AA	HIF36-AA	NA
1.771 - 1.850	HI36-AA1	HIF36-AA1	NA
1.850 - 1.929	HI36-AB	HIF36-AB	NA
1.928 - 2.008	HI36-AB1	HIF36-AB1	NA
2.008 - 2.087	HI36-AD	HIF36-AD	NA
2.087 - 2.165	HI36-AD1	HIF36-AD1	NA
2.165 - 2.244	HI37-AA	HIF37-AA	NA
2.244 - 2.305	HI37-AA1	HIF37-AA1	NA
2.305 - 2.384	HI37-AB	HIF37-AB	NA
2.384 - 2.445	HI37-AB1	HIF37-AB1	NA
2.445 - 2.515	HI37-AD	HIF37-AD	NA
2.515 - 2.585	HI37-AD1	HIF37-AD1	NA
2.585 - 2.655	HI38-AA	HIF38-AA	NA
2.655 - 2.725	HI38-AA1	HIF38-AA1	NA
2.725 - 2.795	HI38-AB	HIF38-AB	NA
2.795 - 2.865	HI38-AB1	HIF38-AB1	NA
2.865 - 2.935	HI38-AD	HIF38-AD	NA
2.935 - 3.005	HI38-AD1	HIF38-AD1	NA

Threaded Bore Connectors			
	Seal Range	Plug	Plug & Fill
NPT Threaded Holes			
1/8" NPT	HI30-NPT-0125	HIF30-NPT-0125	HIH30-NPT-0125
1/4" NPT	HI31-NPT-0250	HIF31-NPT-0250	HIH31-NPT-0250
3/8" NPT	HI32-NPT-0375	HIF32-NPT-0375	HIH32-NPT-0375
1/2" NPT	HI32-NPT-0500	HIF32-NPT-0500	HIH32-NPT-0500
3/4" NPT	HI33-NPT-0750	HIF33-NPT-0750	HIH33-NPT-0750
1" NPT	HI34-NPT-1000	HIF34-NPT-1000	HIH34-NPT-1000
1 1/4" NPT	HI35-NPT-1250	HIF35-NPT-1250	HIH35-NPT-1250
1 1/2" NPT	HI36-NPT-1500	HIF36-NPT-1500	NA
2" NPT	HI37-NPT-2000	HIF37-NPT-2000	NA
Metric Threaded Holes			
M8	HI30-M8	HIF30-M8	HIH30-M8
M10	HI30-M10	HIF30-M10	HIH30-M10
M12	HI31-M12	HIF31-M12	HIH31-M12
M14	HI31-M14	HIF31-M14	HIH31-M14
M16	HI31-M16	HIF31-M16	HIH31-M16
M18	HI31-M18	HIF31-M18	HIH31-M18
M20	HI32-M20	HIF32-M20	HIH32-M20
M22	HI32-M22	HIF32-M22	HIH32-M22
M24	HI32-M24	HIF32-M24	HIH32-M24
M26	HI33-M26	HIF33-M26	HIH33-M26
M27	HI33-M27	HIF33-M27	HIH33-M27
M33	HI34-M33	HIF34-M33	HIH34-M33
M35	HI34-M35	HIF34-M35	HIH34-M35
M42	HI35-M42	HIF35-M42	HIH35-M42
M45	HI35-M45	HIF35-M45	HIH35-M45
M48	HI36-M48	HIF36-M48	NA

Threaded Bore Connectors			
Seal Range	Plug	Plug & Fill	Plug & Fill w/handle
SAE Threaded Holes			
5/16" SAE	HI30-SAE-0312	HIF30-SAE-0312	HIH30-SAE-0312
3/8" SAE	HI30-SAE-0375	HIF30-SAE-0375	HIH30-SAE-0375
7/16" SAE	HI30-SAE-0437	HIF30-SAE-0437	HIH30-SAE-0437
1/2" SAE	HI31-SAE-0500	HIF31-SAE-0500	HIH31-SAE-0500
9/16" SAE	HI31-SAE-0562	HIF31-SAE-0562	HIH31-SAE-0562
5/8" SAE	HI31-SAE-0625	HIF31-SAE-0625	HIH31-SAE-0625
11/16" SAE	HI31-SAE-0687	HIF31-SAE-0687	HIH31-SAE-0687
3/4" SAE	HI32-SAE-0750	HIF32-SAE-0750	HIH32-SAE-0750
13/16" SAE	HI32-SAE-0812	HIF32-SAE-0812	HIH32-SAE-0812
7/8" SAE	HI32-SAE-0875	HIF32-SAE-0875	HIH32-SAE-0875
15/16" SAE	HI32-SAE-0937	HIF32-SAE-0937	HIH32-SAE-0937
1" SAE	HI32-SAE-1000	HIF32-SAE-1000	HIH32-SAE-1000
1 1/16" SAE	HI33-SAE-1062	HIF33-SAE-1062	HIH33-SAE-1062
1 1/8" SAE	HI33-SAE-1125	HIF33-SAE-1125	HIH33-SAE-1125
1 3/16" SAE	HI33-SAE-1187	HIF33-SAE-1187	HIH33-SAE-1187
1 1/4" SAE	HI33-SAE-1250	HIF33-SAE-1250	HIH33-SAE-1250
1 5/16" SAE	HI34-SAE-1312	HIF34-SAE-1312	HIH34-SAE-1312
1 3/8" SAE	HI34-SAE-1375	HIF34-SAE-1375	HIH34-SAE-1375
1 7/16" SAE	HI34-SAE-1437	HIF34-SAE-1437	HIH34-SAE-1437
1 1/2" SAE	HI34-SAE-1500	HIF34-SAE-1500	HIH34-SAE-1500
1 9/16" SAE	HI35-SAE-1562	HIF35-SAE-1562	HIH35-SAE-1562
1 5/8" SAE	HI35-SAE-1625	HIF35-SAE-1625	HIH35-SAE-1625
1 11/16" SAE	HI35-SAE-1687	HIF35-SAE-1687	HIH35-SAE-1687
1 3/4" SAE	HI35-SAE-1750	HIF35-SAE-1750	HIH35-SAE-1750
1 13/16" SAE	HI35-SAE-1812	HIF35-SAE-1812	HIH35-SAE-1812
1 7/8" SAE	HI35-SAE-1875	HIF35-SAE-1875	HIH35-SAE-1875




Threaded Bore Connectors			
Seal Range	Plug	Plug & Fill	Plug & Fill w/handle
SAE Threaded Holes			
1 15/16" SAE	HI36-SAE-1687	HIF36-SAE-1687	NA
2" SAE	HI36-SAE-2000	HIF36-SAE-2000	NA
2 1/4" SAE	HI36-SAE-2250	HIF36-SAE-2250	NA
2 1/2" SAE	HI37-SAE-2500	HIF37-SAE-2500	NA

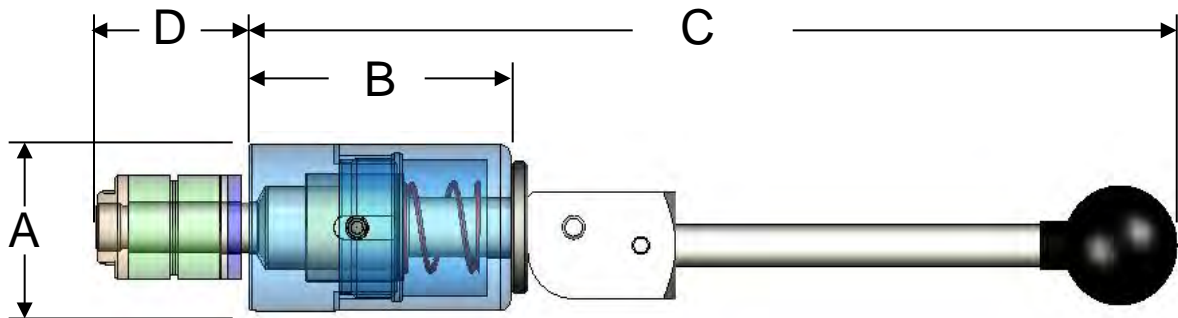
Parts & Accessories					
Smooth Bore Parts & Accessories	Connector Body Type			Seal Kits	
	Connector assembly w/o main seal kit 	Connector assembly w/o main seal kit 	Connector assembly w/o main seal kit 	Includes proprietary seal, stainless steel washer and brass nose	Includes 5 proprietary seals Add -M
Seal Range	Plug	Plug & Fill	Plug & Fill w/Handle	Main Seal Kit	Seal Kit Pack
0.290 - 0.310	HI30	HIF30	HIH30	HI30-A-MSK	HI30-A-SKP
0.310 - 0.330	HI30	HIF30	HIH30	HI30-AA-MSK	HI30-AA-SKP
0.330 - 0.360	HI30	HIF30	HIH30	HI30-AB-MSK	HI30-AB-SKP
0.360 - 0.394	HI30	HIF30	HIH30	HI30-AB1-MSK	HI30-AB1-SKP
0.394 - 0.433	HI31	HIF31	HIH31	HI31-AA-MSK	HI31-AA-SKP
0.433 - 0.472	HI31	HIF31	HIH31	HI31-AA1-MSK	HI31-AA1-SKP
0.472 - 0.511	HI31	HIF31	HIH30	HI31-AC-MSK	HI31-AC-SKP
0.511 - 0.551	HI31	HIF31	HIH30	HI31-AC1-MSK	HI31-AC1-SKP
0.551 - 0.590	HI31	HIF31	HIH31	HI31-AD-MSK	HI31-AD-SKP
0.590 - 0.630	HI31	HIF31	HIH31	HI31-AD1-MSK	HI31-AD1-SKP
0.630 - 0.669	HI32	HIF32	HIH32	HI32-AB-MSK	HI32-AB-SKP
0.669 - 0.709	HI32	HIF32	HIH32	HI32-AB1-MSK	HI32-AB1-SKP
0.709 - 0.748	HI32	HIF32	HIH32	HI32-AD-MSK	HI32-AD-SKP
0.748 - 0.787	HI32	HIF32	HIH32	HI32-AD1-MSK	HI32-AD1-SKP
0.787 - 0.826	HI32	HIF32	HIH32	HI32-AE-MSK	HI32-AE-SKP
0.826 - 0.866	HI32	HIF32	HIH32	HI32-AE1-MSK	HI32-AE1-SKP
0.866 - 0.905	HI33	HIF33	HIH33	HI33-AA-MSK	HI33-AA-SKP
0.905 - 0.945	HI33	HIF33	HIH33	HI33-AA1-MSK	HI33-AA1-SKP
0.945 - 0.984	HI33	HIF33	HIH33	HI33-AC-MSK	HI33-AC-SKP
0.984 - 1.024	HI33	HIF33	HIH33	HI33-AC1-MSK	HI33-AC1-SKP
1.024 - 1.063	HI33	HIF33	HIH33	HI33-AD-MSK	HI33-AD-SKP
1.063 - 1.102	HI33	HIF33	HIH33	HI33-AD1-MSK	HI33-AD1-SKP
1.102 - 1.141	HI34	HIF34	HIH34	HI34-AA-MSK	HI34-AA-SKP
1.141 - 1.181	HI34	HIF34	HIH34	HI34-AA1-MSK	HI34-AA1-SKP
1.181 - 1.220	HI34	HIF34	HIH34	HI34-AC-MSK	HI34-AC-SKP
1.220 - 1.260	HI34	HIF34	HIH34	HI34-AC1-MSK	HI34-AC1-SKP

Parts & Accessories					
Smooth Bore Parts & Accessories	Connector Body Type			Seal Kits	
	Connector assembly w/o main seal kit 	Connector assembly w/o main seal kit 	Connector assembly w/o main seal kit 	Includes proprietary seal, stainless steel washer and brass nose	Includes 5 proprietary seals Add -M
Seal Range	Plug	Plug & Fill	Plug & Fill w/Handle	Main Seal Kit	Seal Kit Pack
1.260 - 1.299	HI34	HIF34	HIH34	HI34-AD-MSK	HI34-AD-SKP
1.299 - 1.339	HI34	HIF34	HIH34	HI34-AD1-MSK	HI34-AD1-SKP
1.339 - 1.398	HI35	HIF35	HIH35	HI35-AA-MSK	HI35-AA-SKP
1.398 - 1.457	HI35	HIF35	HIH35	HI35-AA1-MSK	HI35-AA1-SKP
1.457 - 1.516	HI35	HIF35	HIH35	HI35-AB-MSK	HI35-AB-SKP
1.516 - 1.575	HI35	HIF35	HIH35	HI35-AB1-MSK	HI35-AB1-SKP
1.575 - 1.634	HI35	HIF35	HIH35	HI35-AD-MSK	HI35-AD-SKP
1.634 - 1.693	HI35	HIF35	HIH35	HI35-AD1-MSK	HI35-AD1-SKP
1.693 - 1.771	HI36	HIF36	NA	HI36-AA-MSK	HI36-AA-SKP
1.771 - 1.850	HI36	HIF36	NA	HI36-AA1-MSK	HI36-AA1-SKP
1.850 - 1.929	HI36	HIF36	NA	HI36-AB-MSK	HI36-AB-SKP
1.928 - 2.008	HI36	HIF36	NA	HI36-AB1-MSK	HI36-AB1-SKP
2.008 - 2.087	HI36	HIF36	NA	HI36-AD-MSK	HI36-AD-SKP
2.087 - 2.165	HI36	HIF36	NA	HI36-AD1-MSK	HI36-AD1-SKP
2.165 - 2.244	HI37	HIF37	NA	HI37-AA-MSK	HI37-AA-SKP
2.244 - 2.305	HI37	HIF37	NA	HI37-AA1-MSK	HI37-AA1-SKP
2.305 - 2.384	HI37	HIF37	NA	HI37-AB-MSK	HI37-AB-SKP
2.384 - 2.445	HI37	HIF37	NA	HI37-AB1-MSK	HI37-AB1-SKP
2.445 - 2.515	HI37	HIF37	NA	HI37-AD-MSK	HI37-AD-SKP
2.515 - 2.585	HI37	HIF37	NA	HI37-AD1-MSK	HI37-AD1-SKP
2.585 - 2.655	HI38	HIF38	NA	HI38-AA-MSK	HI38-AA-SKP
2.655 - 2.725	HI38	HIF38	NA	HI38-AA1-MSK	HI38-AA1-SKP
2.725 - 2.795	HI38	HIF38	NA	HI38-AB-MSK	HI38-AB-SKP
2.795 - 2.865	HI38	HIF38	NA	HI38-AB1-MSK	HI38-AB1-SKP
2.865 - 2.935	HI38	HIF38	NA	HI38-AD-MSK	HI38-AD-SKP
2.935 - 3.005	HI38	HIF38	NA	HI38-AD1-MSK	HI38-AD1-SKP

Parts & Accessories					
Threaded Bore Parts & Accessories	Connector Body Type			Seal Kits	
	 w/o main seal kit	 w/o main seal kit	 w/o main seal kit	Includes proprietary seal, stainless steel washer and brass nose	Includes 5 proprietary seals Add -M
Seal Range	Plug	Plug & Fill	Plug & Fill w/Handle	Main Seal Kit	Seal Kit Pack
1/8" NPT	HI30	HIF30	HIH30	HI30-NPT-0125-MSK	HI30-NPT-0125-SKP
1/4" NPT	HI31	HIF31	HIH31	HI31-NPT-0250-MSK	HI31-NPT-0250-SKP
3/8" NPT	HI32	HIF32	HIH32	HI32-NPT-0375-MSK	HI32-NPT-0375-SKP
1/2" NPT	HI32	HIF32	HIH32	HI32-NPT-0500-MSK	HI33-NPT-0500-SKP
3/4" NPT	HI33	HIF33	HIH33	HI33-NPT-0750-MSK	HI33-NPT-0750-SKP
1" NPT	HI34	HIF34	HIH34	HI34-NPT-1000-MSK	HI34-NPT-1000-SKP
1 1/4" NPT	HI35	HIF35	HIH35	HI35-NPT-1250-MSK	HI35-NPT-1250-SKP
1 1/2" NPT	HI36	HIF36	NA	HI36-NPT-1500-MSK	HI36-NPT-1500-SKP
2" NPT	HI37	HIF37	NA	HI37-NPT-2000-MSK	HI37-NPT-2000-SKP
M8	HI30	HIF30	HIH30	HI30-M8-MSK	HI30-M8-SKP
M10	HI30	HIF30	HIH30	HI30- M10-MSK	HI30- M10-SKP
M12	HI31	HIF31	HIH31	HI31-M12-MSK	HI31-M12-SKP
M14	HI31	HIF31	HIH31	HI31-M14-MSK	HI31-M14-SKP
M16	HI31	HIF31	HIH31	HI31-M16-MSK	HI31-M16-SKP
M18	HI31	HIF31	HIH31	HI31-M18-MSK	HI31-M18-SKP
M20	HI32	HIF32	HIH32	HI32-M20-MSK	HI32-M20-SKP
M22	HI32	HIF32	HIH32	HI32-M22-MSK	HI32-M22-SKP
M24	HI32	HIF32	HIH32	HI32-M24-MSK	HI32-M24-SKP
M26	HI33	HIF33	HIH33	HI33-M26-MSK	HI33-M26-SKP
M27	HI33	HIF33	HIH33	HI33-M27-MSK	HI33-M27-SKP
M33	HI34	HIF34	HIH34	HI34-M33-MSK	HI34-M33-SKP
M35	HI34	HIF34	HIH34	HI34-M35-MSK	HI34-M35-SKP
M42	HI35	HIF35	HIH35	HI35-M42-MSK	HI35-M42-SKP
M45	HI35	HIF35	HIH35	HI35-M45-MSK	HI35-M45-SKP
M48	HI36	HIF36	NA	HI36-M48-MSK	HI36-M48-SKP

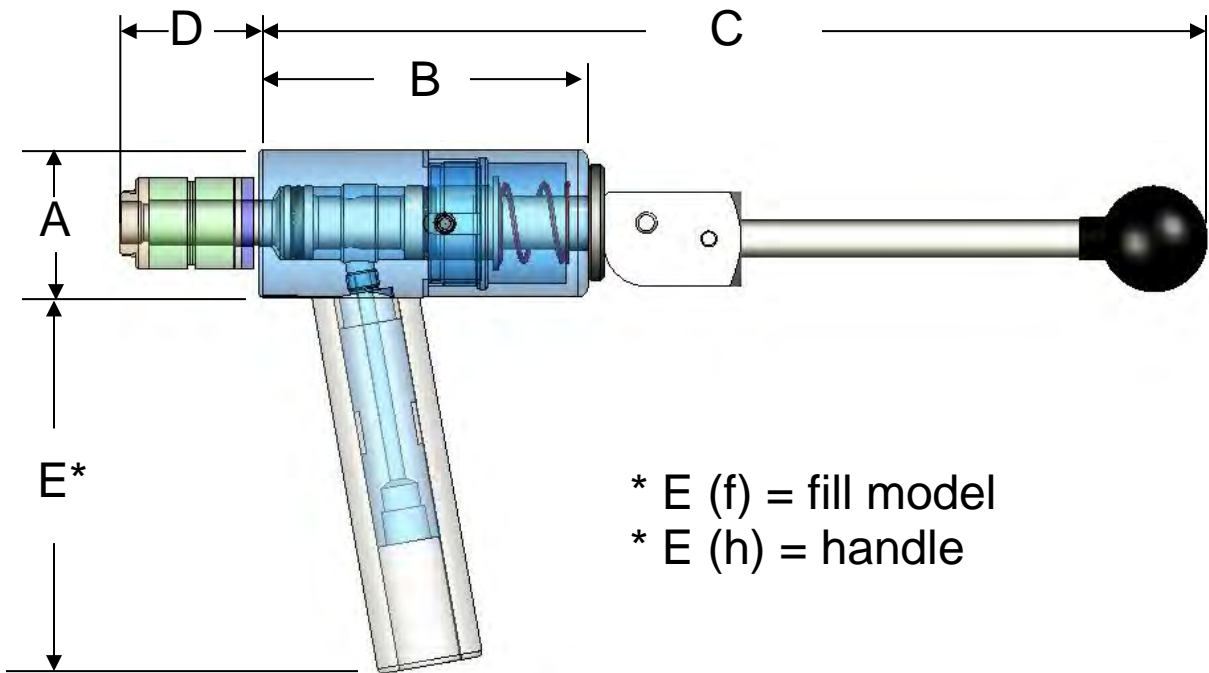
Parts & Accessories					
Threaded Bore Parts & Accessories	Connector Body Type			Seal Kits	
	 w/o main seal kit	 w/o main seal kit	 w/o main seal kit	Includes proprietary seal, stainless steel washer and brass nose	Includes 5 proprietary seals Add -M
Seal Range	Plug	Plug & Fill	Plug & Fill w/Handle	Main Seal Kit	Seal Kit Pack
5/16" SAE	HI30	HIF30	HIH30	HI30-SAE-0312-MSK	HI30-SAE-0312-SKP
3/8" SAE	HI30	HIF30	HIH30	HI30-SAE-0375-MSK	HI30-SAE-0375-SKP
7/16" SAE	HI30	HIF30	HIH30	HI30-SAE-0437-MSK	HI30-SAE-0437-SKP
1/2" SAE	HI31	HIF31	HIH31	HI31-SAE-0500-MSK	HI31-SAE-0500-SKP
9/16" SAE	HI31	HIF31	HIH31	HI31-SAE-0562-MSK	HI31-SAE-0562-SKP
5/8" SAE	HI31	HIF31	HIH31	HI31-SAE-0625-MSK	HI31-SAE-0625-SKP
11/16" SAE	HI31	HIF31	HIH31	HI31-SAE-0687-MSK	HI31-SAE-0687-SKP
3/4" SAE	HI32	HIF32	HIH32	HI32-SAE-0750-MSK	HI32-SAE-0750-SKP
13/16" SAE	HI32	HIF32	HIH32	HI32-SAE-0812-MSK	HI32-SAE-0812-SKP
7/8" SAE	HI32	HIF32	HIH32	HI32-SAE-0875-MSK	HI32-SAE-0875-SKP
15/16" SAE	HI32	HIF32	HIH32	HI32-SAE-0937-MSK	HI32-SAE-0937-SKP
1" SAE	HI32	HIF32	HIH32	HI32-SAE-1000-MSK	HI32-SAE-1000-SKP
1 1/16" SAE	HI33	HIF33	HIH33	HI33-SAE-1062-MSK	HI33-SAE-1062-SKP
1 1/8" SAE	HI33	HIF33	HIH33	HI33-SAE-1125-MSK	HI33-SAE-1125-SKP
1 3/16" SAE	HI33	HIF33	HIH33	HI33-SAE-1187-MSK	HI33-SAE-1187-SKP
1 1/4" SAE	HI33	HIF33	HIH33	HI33-SAE-1250-MSK	HI33-SAE-1250-SKP
1 5/16" SAE	HI34	HIF34	HIH34	HI34-SAE-1312-MSK	HI34-SAE-1312-SKP
1 3/8" SAE	HI34	HIF34	HIH34	HI34-SAE-1375-MSK	HI34-SAE-1375-SKP
1 7/16" SAE	HI34	HIF34	HIH34	HI34-SAE-1437-MSK	HI34-SAE-1437-SKP
1 1/2" SAE	HI34	HIF34	HIH34	HI34-SAE-1500-MSK	HI34-SAE-1500-SKP
1 9/16" SAE	HI35	HIF35	HIH35	HI35-SAE-1562-MSK	HI35-SAE-1562-SKP
1 5/8" SAE	HI35	HIF35	HIH35	HI35-SAE-1625-MSK	HI35-SAE-1625-SKP
1 11/16" SAE	HI35	HIF35	HIH35	HI35-SAE-1687-MSK	HI35-SAE-1687-SKP
1 3/4" SAE	HI35	HIF35	HIH35	HI35-SAE-1750-MSK	HI35-SAE-1750-SKP
1 13/16" SAE	HI35	HIF35	HIH35	HI35-SAE-1812-MSK	HI35-SAE-1812-SKP
1 7/8" SAE	HI35	HIF35	HIH35	HI35-SAE-1875-MSK	HI35-SAE-1875-SKP
1 15/16" SAE	HI36	HIF36	NA	HI36-SAE-1687-MSK	HI36-SAE-1687-SKP

Parts & Accessories					
Threaded Bore Parts & Accessories	Connector Body Type			Seal Kits	
		 w/o main seal kit	 w/o main seal kit	 w/o main seal kit	Includes proprietary seal, stainless steel washer and brass nose
Seal Range	Plug	Plug & Fill	Plug & Fill w/Handle	Main Seal Kit	Seal Kit Pack
2" SAE	HI36	HIF36	NA	HI36-SAE-2000-MSK	HI36-SAE-2000-SKP
2 1/4" SAE	HI36	HIF36	NA	HI36-SAE-2250-MSK	HI36-SAE-2250-SKP
2 1/2" SAE	HI37	HIF37	NA	HI37-SAE-2500-MSK	HI37-SAE-2500-SKP



HI model dimensions				
Body Size	A	B	C	D
30	1.00	2.26	8.34	0.84
31	1.00	2.26	8.34	0.84
32	1.00	2.26	8.34	0.84
33	1.75	2.88	10.17	1.58
34	1.75	2.88	10.17	1.62
35	1.75	2.88	10.17	1.87
36	2.50	2.62	10.91	2.31
37	2.50	2.62	10.91	2.31
38	2.50	2.62	10.91	2.31

Dimensional information is for reference only



HIF and HIH Model dimensions					
Body Size	A	B	C	D	E(f)/E(h)
30	1.00	3.69	9.77	.84	.73(f)/4.45(h)
31	1.00	3.69	9.77	.84	.73(f)/4.45(h)
32	1.00	3.69	9.77	.84	.73(f)/4.45(h)
33	1.75	3.88	11.18	1.58	.73(f)/4.45(h)
34	1.75	3.88	11.18	1.62	.73(f)/4.45(h)
35	1.75	3.88	11.18	1.87	.73(f)/4.45(h)
36	2.50	3.62	11.91	2.31	.88(f)
37	2.50	3.62	11.91	2.31	.88(f)
38	2.50	3.62	11.91	2.31	.88(f)

Dimensional information is for reference only

CTS Connects™
External Manual Seal Connectors



Manual Seal Connectors

The CTS Connect™ manual external connectors effectively seal on smooth, rough, or threaded circular features of a part. The connectors consist of a cam driven piston that compresses the CTS proprietary seal material against the surface of the part, creating a tight seal that meets all test pressure requirements, regardless of surface shape or finish.

CTS Connect™ connectors provide:

- Superior sealing capability without the risk of scratching the surface of the part
- Large test/fill port holes for better conductance
- Easy seal replacement
- Long seal life

Tooling Function

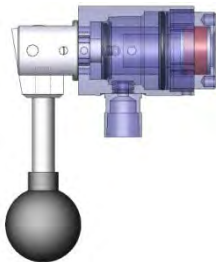
The part to be sealed is placed inside CTS Connect™ connector and the hand cam advances the internal piston to compress the seal around the outside the part. For vacuum applications, no safety tooling is required because the vacuum will hold the part in the connector. For pressure applications, additional part or seal restraints are required to prevent a blow off condition in case the seal handle is released before the part pressure is exhausted. The pressure range for the external (HO) connector is up to 35 PSI on 30 finishes, 50 PSI on 65 finishes, 75 PSI on 125 finishes, and 100 PSI on treaded ports.

Sealing

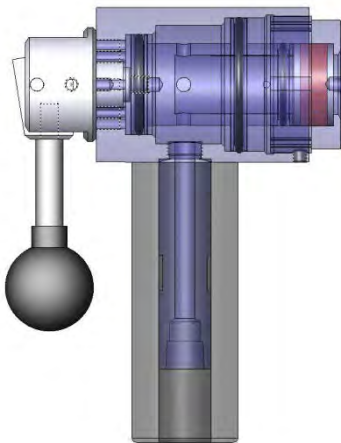
CTS Connect™ connectors are ideal for smooth or rough surfaces, and externally threaded pipes (NPT, Metric, or SAE). The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

HOF Type – Fill

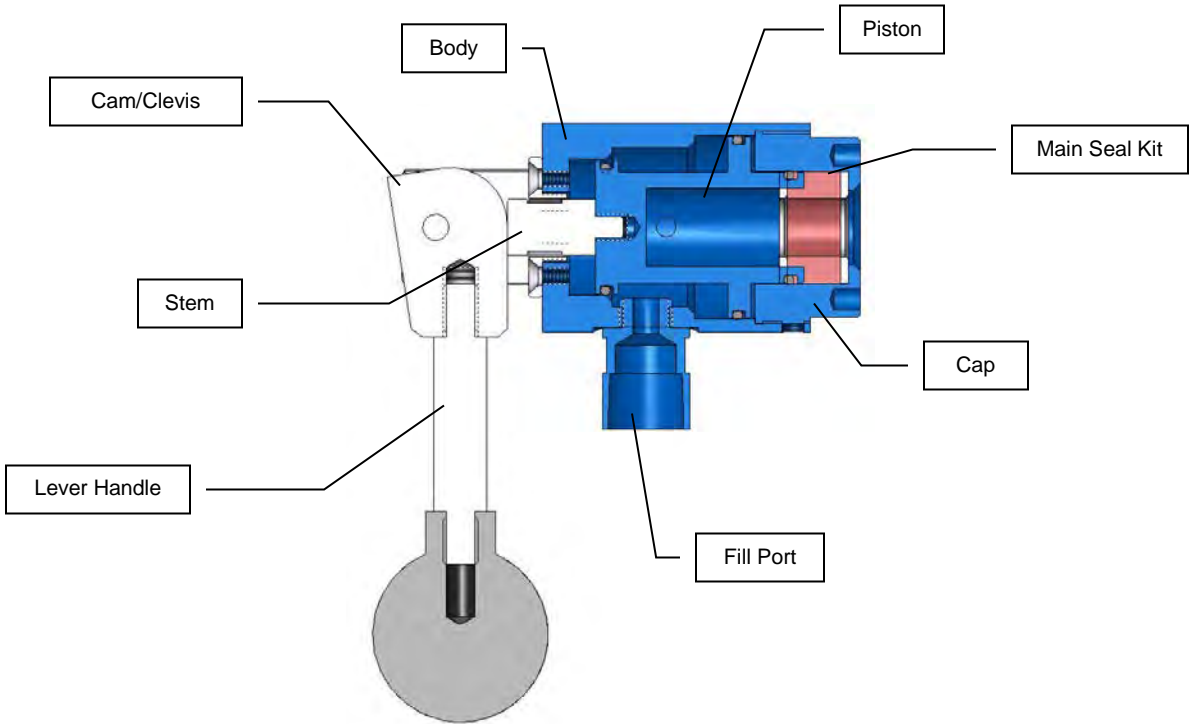



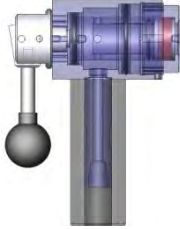
HOH Type – Fill w/Handle


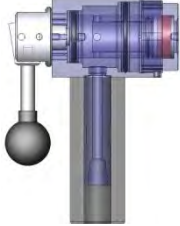


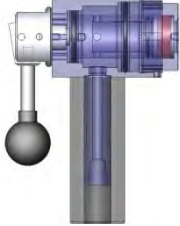
CTS Connect HO Connector Specs
Part OD Sizes: .030 – 1.510 “
Threaded holes: 1/8” to 1” FNPT, M8-M36, SAE 5/16- 1-1/2”
Test Pressures: Vacuum to 500 psig
Connector body: Aluminum
Cap: Aluminum
Washer Material: Stainless Steel
Piston: Aluminum
O-ring: Buna N
Part seal material: Proprietary grade seal For regular and threaded connectors

Connector Assembly Detail



Smooth Tube Connectors		
Seal Range	FILL	Fill w/Handle
HO30 Connector		
.030 - .050	HOF30-AA	N/A
.050 - .080	HOF30-AB	N/A
.080 - .130	HOF30-AC	N/A
HO31 Connector		
.100 - .180	HOF31-AA	N/A
.180 - .260	HOF31-AB	N/A
.260 - .340	HOF31-AC	N/A
.340 - .420	HOF31-AE	N/A
.420 - .510	HOF31-AF	N/A
HO32 Connector		
.433 - .512	HOF32-AA	HOH32-AA
.512 - .591	HOF32-AD	HOH32-AD
.591 - .669	HOF32-AE	HOH32-AE
.669 - .750	HOF32-AG	HOH32-AG
.750 - .827	HOF32-AH	HOH32-AH
HO33 Connector		
.787 - .866	HOF33-AB	HOH33-AB
.866 - .945	HOF33-AC	HOH33-AC
.945 - 1.024	HOF33-AE	HOH33-AE
1.024 - 1.102	HOF33-AF	HOH33-AF
1.102 - 1.181	HOF33-AG	HOH33-AG
1.181 - 1.260	HOF33-AH	HOH33-AH
1.260 - 1.339	HOF33-AJ	HOH33-AJ
1.339 - 1.417	HOF33-AK	HOH33-AK
1.417 - 1.510	HOF33-AL	HOH33-AL

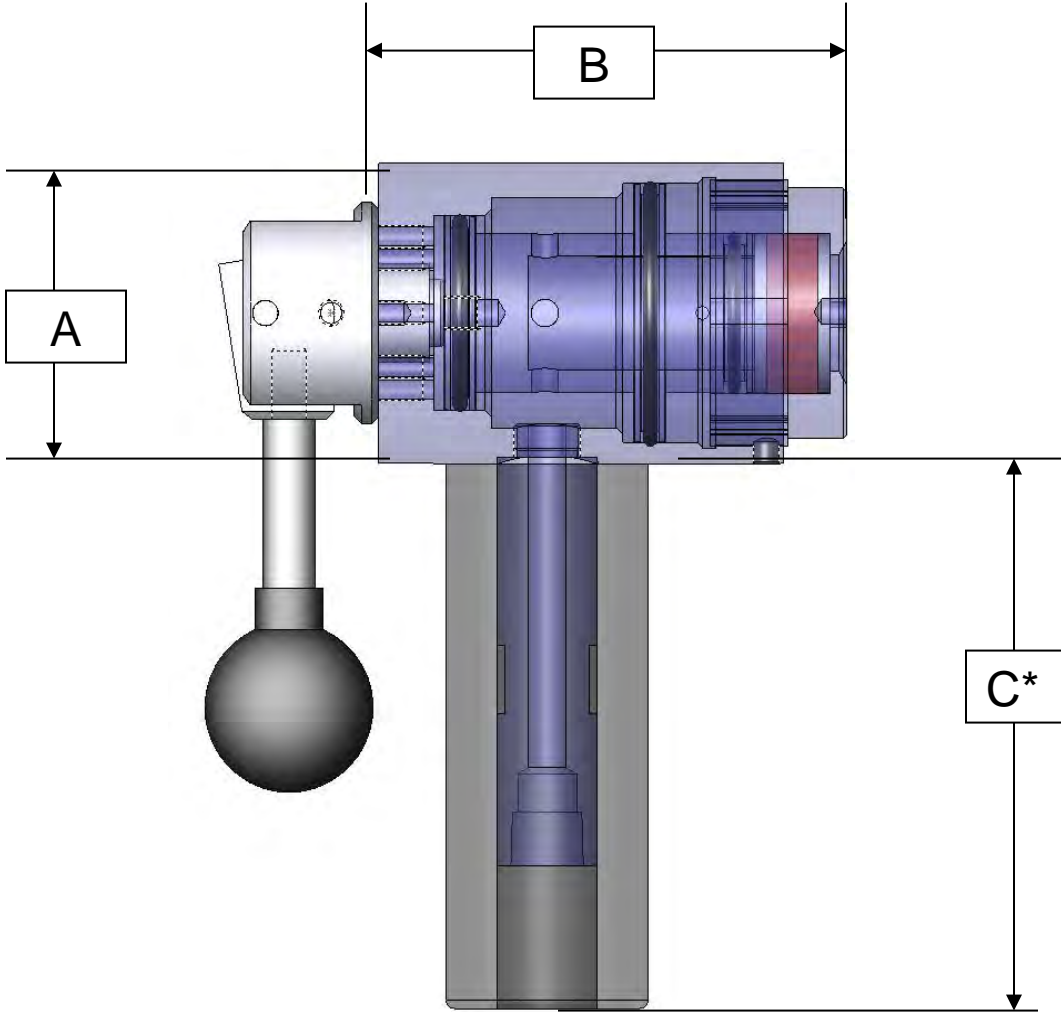
Threaded Pipe Connectors		
Seal Range	Fill	Fill w/Handle
NPT Threaded Pipe		
1/8" NPT	HOF31-NPT-0125	N/A
1/4" NPT	HOF32-NPT-0250	HOH32-NPT-0250
3/8" NPT	HOF32-NPT-0375	HOH32-NPT-0375
1/2" NPT	HOF33-NPT-0500	HOH33-NPT-0500
3/4" NPT	HOF33-NPT-0750	HOH33-NPT-0750
1" NPT	HOF33-NPT-1000	HOH33-NPT-1000
Metric Threaded Pipe		
M8	HOF31-M8	N/A
M10	HOF31-M10	N/A
M12	HOF32-M12	HOH32-M12
M14	HOF32-M14	HOH32-M14
M16	HOF32-M16	HOH32-M16
M18	HOF32-M18	HOH32-M18
M20	HOF33-M20	HOH33-M20
M22	HOF33-M22	HOH33-M22
M24	HOF33-M24	HOH33-M24
M26	HOF33-M26	HOH33-M26
M27	HOF33-M27	HOH33-M27
M33	HOF33-M33	HOH33-M33
M35	HOF33-M35	HOH33-M35

Threaded Pipe Connectors		
Seal Range	Fill	Fill w/Handle
SAE Threaded Pipe		
5/16" SAE	HOF31-SAE-0312	N/A
3/8" SAE	HOF31-SAE-0375	N/A
7/16" SAE	HOF31-SAE-0437	N/A
1/2" SAE	HOF31-SAE-0500	N/A
9/16" SAE	HOF32-SAE-0562	HOH32-SAE-0562
5/8" SAE	HOF32-SAE-0625	HOH32-SAE-0625
11/16" SAE	HOF32-SAE-0687	HOH32-SAE-0687
3/4" SAE	HOF32-SAE-0750	HOH32-SAE-0750
13/16" SAE	HOF32-SAE-0812	HOH32-SAE-0812
7/8" SAE	HOF33-SAE-0875	HOH33-SAE-0875
15/16" SAE	HOF33-SAE-0937	HOH33-SAE-0937
1" SAE	HOF33-SAE-1000	HOH33-SAE-1000
1 1/16" SAE	HOF33-SAE-1062	HOH33-SAE-1062
1 1/8" SAE	HOF33-SAE-1125	HOH33-SAE-1125
1 3/16" SAE	HOF33-SAE-1187	HOH33-SAE-1187
1 1/4" SAE	HOF33-SAE-1250	HOH33-SAE-1250
1 5/16" SAE	HOF33-SAE-1312	HOH33-SAE-1312
1 3/8" SAE	HOF33-SAE-1375	HOH33-SAE-1375
1 7/16" SAE	HOF33-SAE-1437	HOH33-SAE-1437
1 1/2" SAE	HOF33-SAE-1500	HOH33-SAE-1500

Parts and Accessories				
Smooth Bore Parts & Accessories	Connector assembly w/o main seal kit	Connector assembly w/o main seal kit	Includes proprietary seal and stainless steel washers	Includes 5 proprietary seals
Seal Range	Fill	Fill w/Handle	Main Seal Kit	Seal Kit Pack
HO30 Connector				
.030 - .050	HOF30	N/A	HO30-AA-MSK	HO30-A-SKP
.050 - .080	HOF30	N/A	HO30-AB-MSK	HO30-AA-SKP
.080 - .130	HOF30	N/A	HO30-AC-MSK	HO30-AB-SKP
HO31 Connector				
.100 - .180	HOF31	N/A	HO31-AA-MSK	HO31-AA-SKP
.180 - .260	HOF31	N/A	HO31-AB-MSK	HO31-AB-SKP
.260 - .340	HOF31	N/A	HO31-AC-MSK	HO31-AC-SKP
.340 - .420	HOF31	N/A	HO31-AE-MSK	HO31-AE-SKP
.420 - .510	HOF31	N/A	HO31-AF-MSK	HO31-AF-SKP
HO32 Connector				
.433 - .512	HOF32	HOH32	HO32-AA-MSK	HO32-AB-SKP
.512 - .591	HOF32	HOH32	HO32-AD-MSK	HO32-AD-SKP
.591 - .669	HOF32	HOH32	HO32-AE-MSK	HO32-AE-SKP
.669 - .750	HOF32	HOH32	HO32-AG-MSK	HO32-AG-SKP
.750 - .827	HOF32	HOH32	HO32-AH-MSK	HO32-AH-SKP
HO33 Connector				
.787 - .866	HOF33	HOH33	HO33-AB-MSK	HO33-AB-SKP
.866 - .945	HOF33	HOH33	HO33-AC-MSK	HO33-AC-SKP
.945 - 1.024	HOF33	HOH33	HO33-AE-MSK	HO33-AE-SKP
1.024 - 1.102	HOF33	HOH33	HO33-AF-MSK	HO33-AF-SKP
1.102 - 1.181	HOF33	HOH33	HO33-AG-MSK	HO33-AG-SKP
1.181 - 1.260	HOF33	HOH33	HO33-AH-MSK	HO33-AH-SKP
1.260 - 1.339	HOF33	HOH33	HO33-AJ-MSK	HO33-AJ-SKP
1.339 - 1.417	HOF33	HOH33	HO33-AK-MSK	HO33-AK-SKP
1.417 - 1.510	HOF33	HOH33	HO33-AL-MSK	HO33-AL-SKP

Parts and Accessories				
Threaded Bore Parts & Accessories	w/o main seal kit	w/o main seal kit	Includes proprietary seal and stainless steel washers	Includes 5 proprietary seals
Seal Range	Fill	Fill w/Handle	Main Seal Kit	Seal Kit Pack
NPT Threaded Pipe				
1/8" NPT	HOF31	N/A	HO31-NPT-0125-MSK	HO31-NPT-0125-SKP
1/4" NPT	HOF32	HOH32	HO32-NPT-0250-MSK	HO32-NPT-0250-SKP
3/8" NPT	HOF32	HOH32	HO32-NPT-0375-MSK	HO32-NPT-0375-SKP
1/2" NPT	HOF33	HOH33	HO33-NPT-0500-MSK	HO33-NPT-0500-SKP
3/4" NPT	HOF33	HOH33	HO33-NPT-0750-MSK	HO33-NPT-0750-SKP
1" NPT	HOF33	HOH33	HO33-NPT-1000-MSK	HO33-NPT-1000-SKP
Metric Treaded Pipe				
M8	HOF31	N/A	HO31-MET-M8-MSK	HO31-MET-M8-SKP
M10	HOF31	N/A	HO31-MET-M10-MSK	HO31-MET-M10-SKP
M12	HOF32	HOH32	HO32-MET-M12-MSK	HO32-MET-M12-SKP
M14	HOF32	HOH32	HO32-MET-M14-MSK	HO32-MET-M14-SKP
M16	HOF32	HOH32	HO32-MET-M16-MSK	HO32-MET-M16-SKP
M18	HOF32	HOH32	HO32-MET-M18-MSK	HO32-MET-M18-SKP
M20	HOF33	HOH33	HO33-MET-M20-MSK	HO33-MET-M20-SKP
M22	HOF33	HOH33	HO33-MET-M22-MSK	HO33-MET-M22-SKP
M24	HOF33	HOH33	HO33-MET-M24-MSK	HO33-MET-M24-SKP
M26	HOF33	HOH33	HO33-MET-M26-MSK	HO33-MET-M26-SKP
M27	HOF33	HOH33	HO33-MET-M27-MSK	HO33-MET-M27-SKP
M33	HOF33	HOH33	HO33-MET-M33-MSK	HO33-MET-M33-SKP
M36	HOF33	HOH33	HO33-MET-M36-MSK	HO33-MET-M36-SKP

Parts and Accessories				
Threaded Bore Parts & Accessories	w/o main seal kit	w/o main seal kit	Includes proprietary seal and stainless steel washers	Includes 5 proprietary seals
Seal Range	Fill	Fill w/Handle	Main Seal Kit	Seal Kit Pack
SAE Threaded Pipe				
5/16" SAE	HOF31	N/A	HO31-SAE-0312-MSK	HO31-SAE-0312 -SKP
3/8" SAE	HOF31	N/A	HO31-SAE-0375-MSK	HO31-SAE-0375-SKP
7/16" SAE	HOF31	N/A	HO31-SAE-0437-MSK	HO31-SAE-0437-SKP
1/2" SAE	HOF31	N/A	HO31-SAE-0500-MSK	HO31-SAE-0500-SKP
9/16" SAE	HOF32	HOH32	HO32-SAE-0562-MSK	HO32-SAE-0562-SKP
5/8" SAE	HOF32	HOH32	HO32-SAE-0625-MSK	HO32-SAE-0625-SKP
11/16" SAE	HOF32	HOH32	HO32-SAE-0687-MSK	HO32-SAE-0687-SKP
3/4" SAE	HOF32	HOH32	HO32-SAE-0750-MSK	HO32-SAE-0750-SKP
13/16" SAE	HOF32	HOH32	HO32-SAE-0812-MSK	HO32-SAE-0812-SKP
7/8" SAE	HOF33	HOH33	HO33-SAE-0875-MSK	HO33-SAE-0875-SKP
15/16" SAE	HOF33	HOH33	HO33-SAE-0937-MSK	HO33-SAE-0937-SKP
1" SAE	HOF33	HOH33	HO33-SAE-1000-MSK	HO33-SAE-1000-SKP
1 1/16" SAE	HOF33	HOH33	HO33-SAE-1062-MSK	HO33-SAE-1062-SKP
1 1/8" SAE	HOF33	HOH33	HO33-SAE-1125-MSK	HO33-SAE-1125-SKP
1 3/16" SAE	HOF33	HOH33	HO33-SAE-1187-MSK	HO33-SAE-1187-SKP
1 1/4" SAE	HOF33	HOH33	HO33-SAE-1250-MSK	HO33-SAE-1250-SKP
1 5/16" SAE	HOF33	HOH33	HO33-SAE-1312-MSK	HO33-SAE-1312-SKP
1 3/8" SAE	HOF33	HOH33	HO33-SAE-1375-MSK	HO33-SAE-1375-SKP
1 7/16" SAE	HOF33	HOH33	HO33-SAE-1437-MSK	HO33-SAE-1437-SKP
1 1/2" SAE	HOF33	HOH33	HO33-SAE-1500-MSK	HO33-SAE-1500-SKP



Dimension(Inches)				
	HO30	HO31	HO32	HO33
A	1.00	1.50	2.22	3.25
B	1.70	2.00	3.22	4.00
C* Fill/Handle	.750 / N/A	.750 / N/A	.750 / 3.00	.750 / 3.00

**Dimensional information is for reference only*



Air Actuated Seal Connectors

The CTS Connect™ air actuated threaded hole connectors effectively seal on internally threaded features of a part. The connectors consist of an air driven piston that expands a threaded collet that grips the internal threads of the part. The test air assisted seal holder drives the CTS proprietary seal material against the surface of the part, creating a tight fit for high-pressure applications. CTS Connect™ connectors provide:

- Superior sealing capability without the risk of scratching the surface of the part
- Threaded and tapered expander nose on Threaded ID Connector models
- Large test/fill port holes for better conductance
- Easy seal replacement
- Long seal life

Tooling Functions

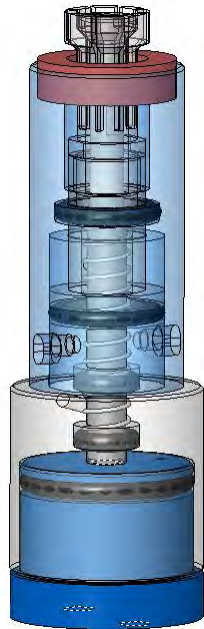
The part to be sealed is placed over the CTS Connect™ connector and pilot air advances the internal piston to expand the collet inside the part. After a firm grip is established the seal is then compressed against the part using the test-pressure assist feature. For vacuum applications, no safety tooling is required because the vacuum will hold the part in the connector. For pressure applications, additional part or seal restraints are required to prevent a blow off condition in case the seal handle is released before the part pressure is exhausted. The pressure range for the threaded internal connector is from vacuum up to 1000 PSI, depending on application and part configuration.

Sealing

CTS Connect™ connectors are ideal for threaded holes (NPT, Metric, or SAE). The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

T-CI Style Connector



CTS Connect T-CI Connector Specs

Threaded holes: 1/8" to 2" FNPT, M8-M48, SAE 5/16- 2-1/2"

Test Pressures: Vacuum to 1000 PSI

Pilot Pressure: 60-90 PSI is Recommended

Connector body: Aluminum

Seal Holder: Aluminum

Cap: Aluminum

Collet: Treated Steel

Expander: Treated Steel

Stem: Stainless Steel

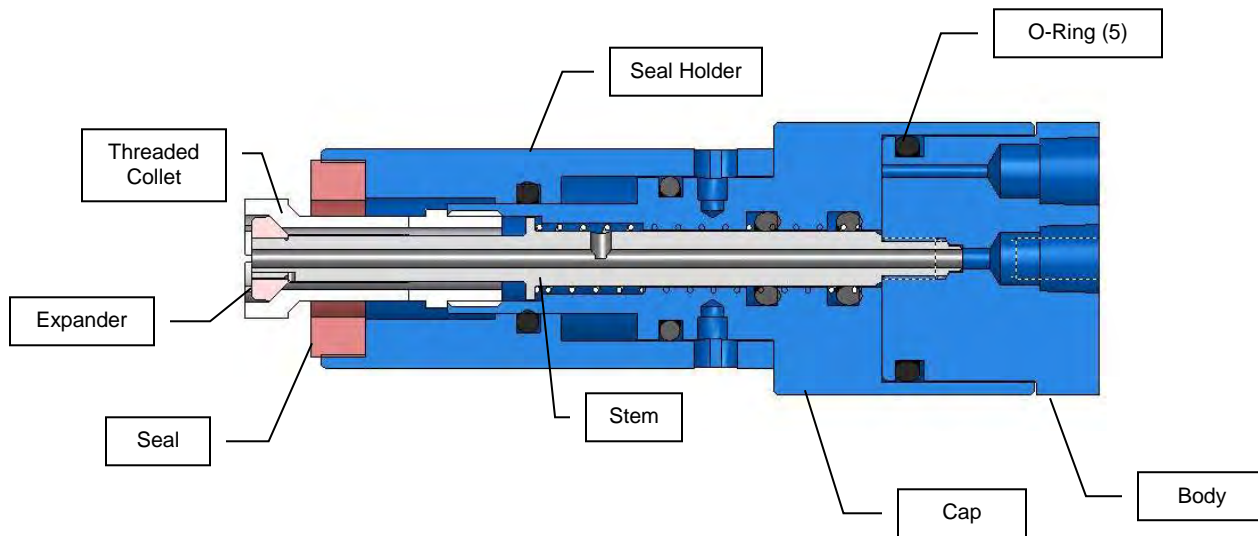
O-ring: Buna N


Part seal material: Proprietary grade seal
For regular and threaded connectors

Minimum Thread Depth: T-CI30 requires .50in
T-CI33 requires .750 in
T-CI36 requires .750 in


Rated Pressure: 1000 PSI. Actual results may vary by material and test specifications and should be verified by test prior to application.

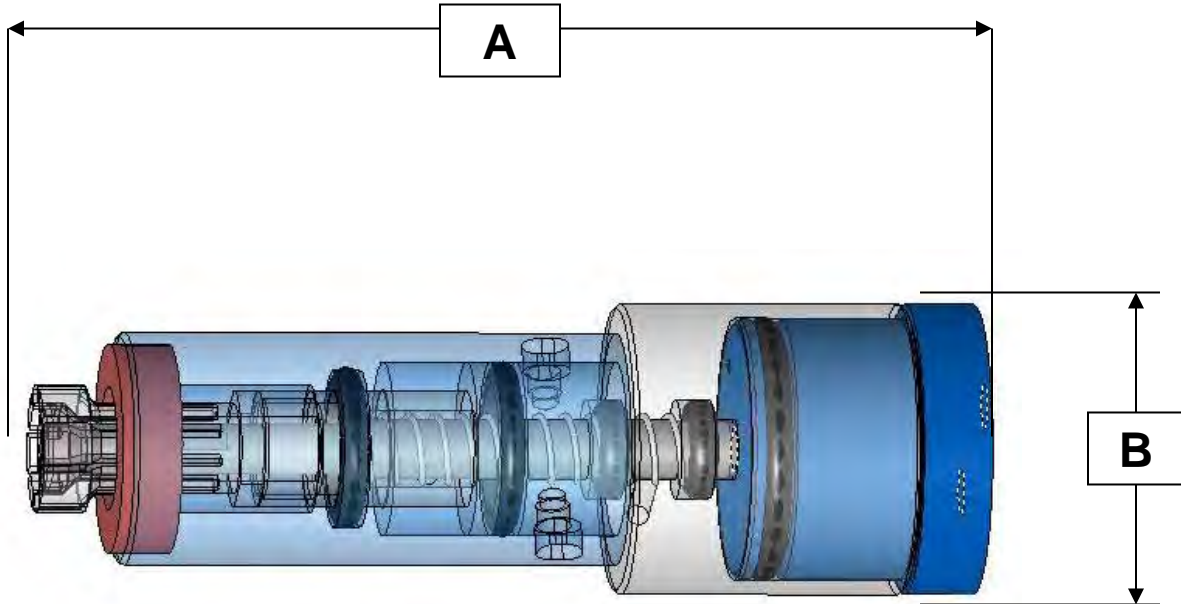
Connector Assembly Detail



T-CI Connector				
Threaded Bore Connectors			Includes Proprietary Seal, Threaded Collet, Expanding Nose, and Seal Holder	Includes Five Proprietary Seals
	Seal Range	Connector	w/o Seal Kit	Main Seal Kit
NPT Threaded Holes				
1/8" NPT	T-CI30-NPT-0125	T-CI30	T-CI30-NPT-0125-MSK	T-CI30-NPT-0125-SKP
1/4" NPT	T-CI30-NPT-0250	T-CI30	T-CI30-NPT-0250-MSK	T-CI30-NPT-0250-SKP
3/8" NPT	T-CI30-NPT-0375	T-CI30	T-CI30-NPT-0375-MSK	T-CI30-NPT-0375-SKP
1/2" NPT	T-CI30-NPT-0500	T-CI30	T-CI30-NPT-0500-MSK	T-CI30-NPT-0500-SKP
3/4" NPT	T-CI33-NPT-0750	T-CI33	T-CI33-NPT-0750-MSK	T-CI33-NPT-0750-SKP
1" NPT	T-CI33-NPT-1000	T-CI33	T-CI33-NPT-1000-MSK	T-CI33-NPT-1000-SKP
1 1/4" NPT	T-CI33-NPT-1250	T-CI33	T-CI33-NPT-1250-MSK	T-CI33-NPT-1250-SKP
1 1/2" NPT	T-CI36-NPT-1500	T-CI36	T-CI36-NPT-1500-MSK	T-CI36-NPT-1500-SKP
2" NPT	T-CI36-NPT-2000	T-CI36	T-CI36-NPT-2000-MSK	T-CI36-NPT-2000-SKP
Metric Threaded Holes				
M8	T-CI30-M8	T-CI30	T-CI30-M8-MSK	T-CI30-M8-SKP
M10	T-CI30-M10	T-CI30	T-CI30- M10-MSK	T-CI30- M10-SKP
M12	T-CI30-M12	T-CI30	T-CI30-M12-MSK	T-CI30-M12-SKP
M14	T-CI30-M14	T-CI30	T-CI30-M14-MSK	T-CI30-M14-SKP
M16	T-CI30-M16	T-CI30	T-CI30-M16-MSK	T-CI30-M16-SKP
M18	T-CI30-M18	T-CI30	T-CI30-M18-MSK	T-CI30-M18-SKP
M20	T-CI30-M20	T-CI30	T-CI30-M20-MSK	T-CI30-M20-SKP
M22	T-CI30-M22	T-CI30	T-CI30-M22-MSK	T-CI30-M22-SKP
M24	T-CI30-M24	T-CI30	T-CI30-M24-MSK	T-CI30-M24-SKP
M26	T-CI33-M26	T-CI33	T-CI33-M26-MSK	T-CI33-M26-SKP
M27	T-CI33-M27	T-CI33	T-CI33-M27-MSK	T-CI33-M27-SKP
M33	T-CI33-M33	T-CI33	T-CI33-M33-MSK	T-CI33-M33-SKP
M35	T-CI33-M35	T-CI33	T-CI33-M35-MSK	T-CI33-M35-SKP
M42	T-CI33-M42	T-CI33	T-CI33-M42-MSK	T-CI33-M42-SKP
M45	T-CI33-M45	T-CI33	T-CI33-M45-MSK	T-CI33-M45-SKP
M48	T-CI36-M48	T-CI36	T-CI36 -M48-MSK	T-CI36-M48-SKP

Parts and Accessories				
Threaded Bore Connectors			Includes Proprietary Seal, Threaded Collet, Expanding Nose, and Seal Holder	Includes Five Proprietary Seals
Seal Range	Connector	w/o Seal Kit	Main Seal Kit	Seal Kit Pack
SAE Threaded Holes				
5/16" SAE	T-CI30-SAE-0312	T-CI30	T-CI30-SAE-0312-MSK	T-CI30-SAE-0312-SKP
3/8" SAE	T-CI30-SAE-0375	T-CI30	T-CI30-SAE-0375-MSK	T-CI30-SAE-0375-SKP
7/16" SAE	T-CI30-SAE-0437	T-CI30	T-CI30-SAE-0437-MSK	T-CI30-SAE-0437-SKP
1/2" SAE	T-CI30-SAE-0500	T-CI30	T-CI30-SAE-0500-MSK	T-CI30-SAE-0500-SKP
9/16" SAE	T-CI30-SAE-0562	T-CI30	T-CI30-SAE-0562-MSK	T-CI30-SAE-0562-SKP
5/8" SAE	T-CI30-SAE-0625	T-CI30	T-CI30-SAE-0625-MSK	T-CI30-SAE-0625-SKP
11/16" SAE	T-CI30-SAE-0687	T-CI30	T-CI30-SAE-0687-MSK	T-CI30-SAE-0687-SKP
3/4" SAE	T-CI30-SAE-0750	T-CI30	T-CI30-SAE-0750-MSK	T-CI30-SAE-0750-SKP
13/16" SAE	T-CI30-SAE-0812	T-CI30	T-CI30-SAE-0812-MSK	T-CI30-SAE-0812-SKP
7/8" SAE	T-CI30-SAE-0875	T-CI30	T-CI30-SAE-0875-MSK	T-CI30-SAE-0875-SKP
15/16" SAE	T-CI30-SAE-0937	T-CI30	T-CI30-SAE-0937-MSK	T-CI30-SAE-0937-SKP
1" SAE	T-CI30-SAE-1000	T-CI30	T-CI30-SAE-1000-MSK	T-CI30-SAE-1000-SKP
1 1/16" SAE	T-CI33-SAE-1062	T-CI33	T-CI33-SAE-1062-MSK	T-CI33-SAE-1062-SKP
1 1/8" SAE	T-CI33-SAE-1125	T-CI33	T-CI33-SAE-1125-MSK	T-CI33-SAE-1125-SKP
1 3/16" SAE	T-CI33-SAE-1187	T-CI33	T-CI33-SAE-1187-MSK	T-CI33-SAE-1187-SKP
1 1/4" SAE	T-CI33-SAE-1250	T-CI33	T-CI33-SAE-1250-MSK	T-CI33-SAE-1250-SKP
1 5/16" SAE	T-CI33-SAE-1312	T-CI33	T-CI33-SAE-1312-MSK	T-CI33-SAE-1312-SKP
1 3/8" SAE	T-CI33-SAE-1375	T-CI33	T-CI33-SAE-1375-MSK	T-CI33-SAE-1375-SKP
1 7/16" SAE	T-CI33-SAE-1437	T-CI33	T-CI33-SAE-1437-MSK	T-CI33-SAE-1437-SKP
1 1/2" SAE	T-CI33-SAE-1500	T-CI33	T-CI33-SAE-1500-MSK	T-CI33-SAE-1500-SKP
1 9/16" SAE	T-CI33-SAE-1562	T-CI33	T-CI33-SAE-1562-MSK	T-CI33-SAE-1562-SKP
1 5/8" SAE	T-CI33-SAE-1625	T-CI33	T-CI33-SAE-1625-MSK	T-CI33-SAE-1625-SKP
1 11/16" SAE	T-CI33-SAE-1687	T-CI33	T-CI33-SAE-1687-MSK	T-CI33-SAE-1687-SKP
1 3/4" SAE	T-CI33-SAE-1750	T-CI33	T-CI33-SAE-1750-MSK	T-CI33-SAE-1750-SKP
1 13/16" SAE	T-CI33-SAE-1812	T-CI33	T-CI33-SAE-1812-MSK	T-CI33-SAE-1812-SKP
1 7/8" SAE	T-CI33-SAE-1875	T-CI33	T-CI36-SAE-1875-MSK	T-CI36-SAE-1875-SKP

Parts and Accessories				
Threaded Bore Connectors			Includes proprietary seal, stainless steel washer and brass nose	Includes 5 proprietary seals Add -M
Seal Range	Connector	w/o Seal Kit	Main Seal Kit	Seal Kit Pack
1 15/16"SAE	T-CI36-SAE-1937	T-CI36	T-CI36-SAE-1937-MSK	T-CI36-SAE-1937-SKP
2" SAE	T-CI36-SAE-2000	T-CI36	T-CI36-SAE-2000-MSK	T-CI36-SAE-2000-SKP
2 1/4" SAE	T-CI36-SAE-2250	T-CI36	T-CI36-SAE-2250-MSK	T-CI36-SAE-2250-SKP
2 1/2" SAE	T-CI36-SAE-2500	T-CI36	T-CI36-SAE-2500-MSK	T-CI36-SAE-2500-SKP



Dimensions (Inches)			
	T-CI30	T-CI33	T-CI36
A	3.93	4.62	*
B	1.25	2.30	*

* Dimensions for Model T-136 available on request



Manual Seal Connectors

The CTS Connect™ manual, threaded hole connectors effectively seal on threaded features of a part. The connectors consist of a cam driven expanding nose that expands the threaded collet against internal threads of the part, creating a tight grip. This allows for a test-air assisted seal holder to compress the CTS Connect™ proprietary seal against the surface of the part providing a safe and effective seal on the part for high pressure applications. Benefits include:

- Superior sealing capability without the risk of scratching the surface of the part
- Large test/fill port holes for better conductance
- Easy seal replacement
- Long seal life

Tooling Functions

The part to be sealed is placed over the CTS Connect™ connector and the hand actuated cam advances the internal stem to expand the threaded collet inside the part allowing for a test air assisted seal holder to compress the seal on the face of the part. For vacuum applications, no safety tooling is required because the vacuum will hold the part in the connector. For high pressure applications, additional part or seal restraints are required to prevent a blow off condition in case the seal handle is released before the part pressure is exhausted. The pressure range for the threaded internal connector is from vacuum up to 1000 PSI, depending on application and part configuration.

Sealing

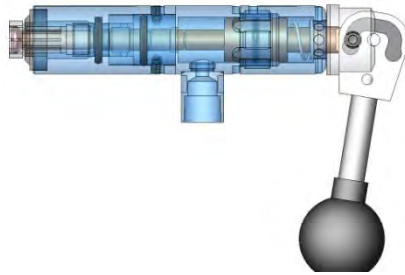
CTS Connect™ connectors are ideal for threaded holes (NPT, Metric, or SAE). The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

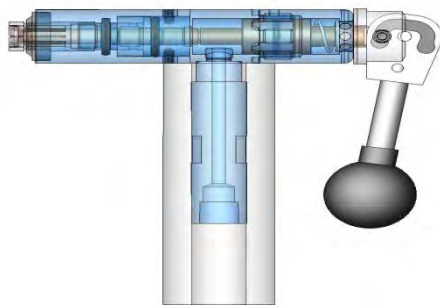
Manual Internal Collet Connector

CTS Connect T-HI Connector Specs

T-HIF-Fill Style



T-HIH-Fill Style w/Handle



Threaded holes: 1/8" to 1 1/4" FNPT, M8-M36, SAE 5/16- 1-7/8"

Test pressures : Vacuum to 1000 PSI

Connector body: Aluminum

Seal Holder : Aluminum

Cap: Aluminum

Collet : Treated Steel

Expander Nose : Treated Steel

Stem : Stainless Steel

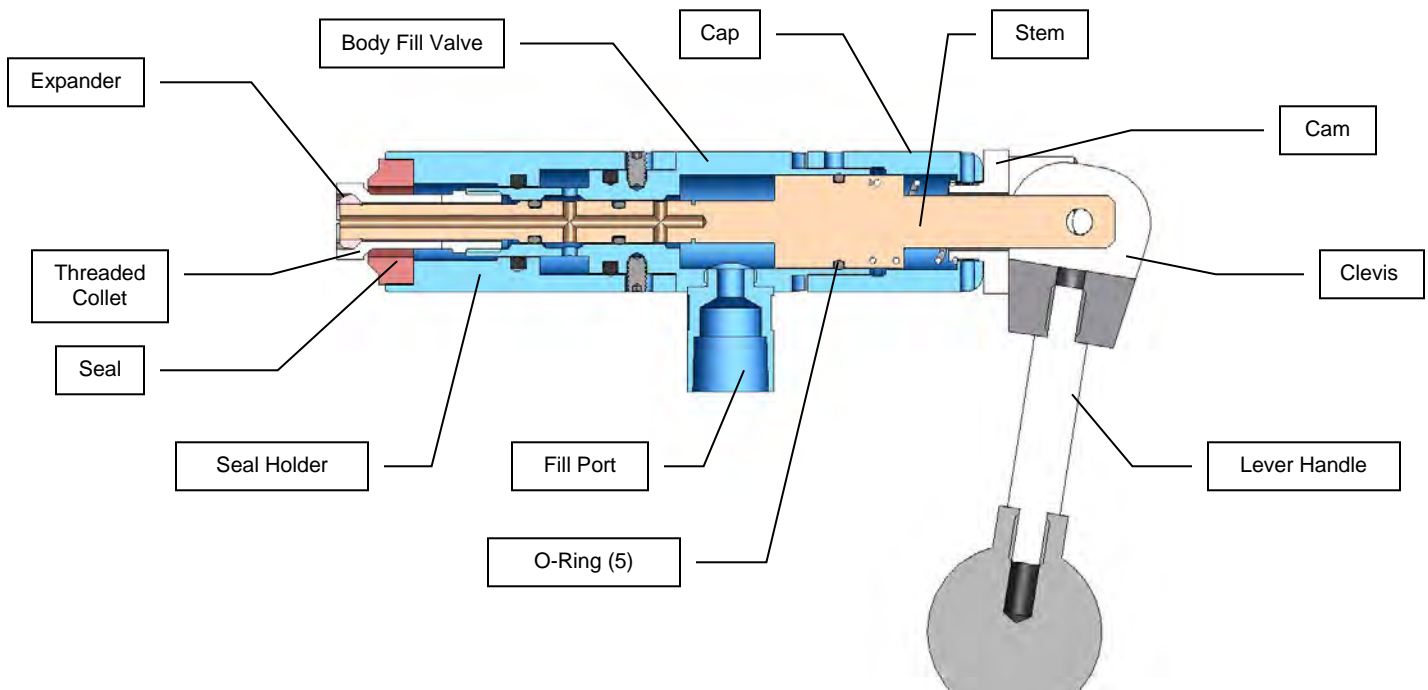
O-ring: Buna N

Part seal material: Proprietary grade seal
For regular and threaded connectors

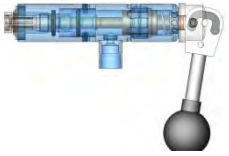
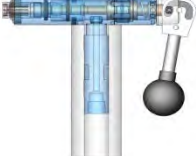
Minimum Thread Depth: T-HI30 requires .50 in
T-HI33 requires .750in

Rated Pressure: 1000 PSI. Actual results may vary by material and specifications and should be verified by test prior to application.

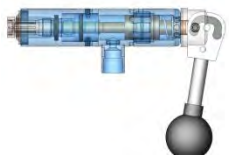
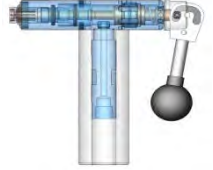
Connector Assembly Detail w/Fill Valve



Manual Internal Collet Connector

Threaded Bore Connectors			Connectors with Fill Valve Option can have either Handle (H) or Fill Option (F)
Seal Range	Fill	Fill w/Handle	Fill Valve Function
NPT Threaded Holes			
1/8" NPT	T-HIF30-NPT-0125	T-HIH30-NPT-0125	T-HI_30-V-NPT-0125
1/4" NPT	T-HIF30-NPT-0250	T-HIH30-NPT-0250	T-HI_30-V-NPT-0250
3/8" NPT	T-HIF30-NPT-0375	T-HIH30-NPT-0375	T-HI_30-V-NPT-0375
1/2" NPT	T-HIF30-NPT-0500	T-HIH30-NPT-0500	T-HI_30-V-NPT-0500
3/4" NPT	T-HIF33-NPT-0750	T-HIH33-NPT-0750	T-HI_33-V-NPT-0750
1" NPT	T-HIF33-NPT-1000	T-HIH33-NPT-1000	T-HI_33-V-NPT-1000
1 1/4" NPT	T-HIF33-NPT-1250	T-HIH33-NPT-1250	T-HI_33-V-NPT-1250
Metric Threaded Holes			
M8	T-HIF30-M8	T-HIH30-M8	T-HI_30-V-M8
M10	T-HIF30-M10	T-HIH30-M10	T-HI_30-V-M10
M12	T-HIF30-M12	T-HIH30-M12	T-HI_30-V-M12
M14	T-HIF30-M14	T-HIH30-M14	T-HI_30-V-M14
M16	T-HIF30-M16	T-HIH30-M16	T-HI_30-V-M16
M18	T-HIF30-M18	T-HIH30-M18	T-HI_30-V-M18
M20	T-HIF30-M20	T-HIH30-M20	T-HI_30-V-M20
M22	T-HIF30-M22	T-HIH30-M22	T-HI_30-V-M22
M24	T-HIF30-M24	T-HIH30-M24	T-HI_30-V-M24
M26	T-HIF33-M26	T-HIF33-M26	T-HI_33-V-M26
M27	T-HIF33-M27	T-HIF33-M27	T-HI_33-V-M27
M33	T-HIF33-M33	T-HIF33-M33	T-HI_34-V-M33
M35	T-HIF33-M35	T-HIH33-M35	T-HI_33-V-M35
M42	T-HIF33-M42	T-HIH33-M42	T-HI_33-V-M42
M45	T-HIF33-M45	T-HIH33-M45	T-HI_33-V-M45

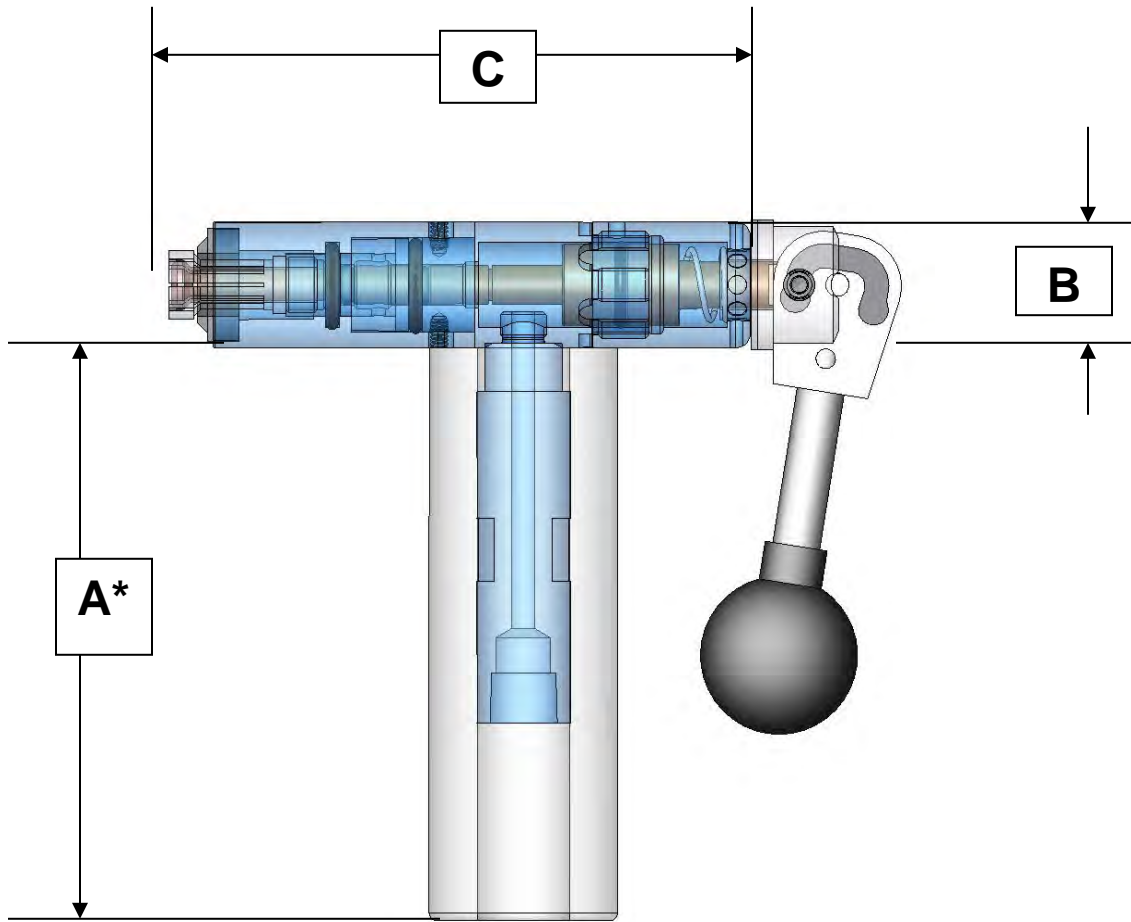
Manual Internal Collet Connector

Threaded Bore Connectors			Connectors with Fill Valve Option can have either Handle (H) or Fill Option (F)
Seal Range	Fill Style	Fill w/Handle	Fill Valve Function
SAE Threaded Holes			
5/16" SAE	T-HIF30-SAE-0312	T-HIH30-SAE-0312	T-HI_30-SAE-V-0312
3/8" SAE	T-HIF30-SAE-0375	T-HIH30-SAE-0375	T-HI_30-SAE-V-0375
7/16" SAE	T-HIF30-SAE-0437	T-HIH30-SAE-0437	T-HI_30-SAE-V-0437
1/2" SAE	T-HIF30-SAE-0500	T-HIH30-SAE-0500	T-HI_30-SAE-V-0500
9/16" SAE	T-HIF30-SAE-0562	T-HIH30-SAE-0562	T-HI_30-SAE-V-0562
5/8" SAE	T-HIF30-SAE-0625	T-HIH30-SAE-0625	T-HI_30-SAE-V-0625
11/16" SAE	T-HIF30-SAE-0687	T-HIH30-SAE-0687	T-HI_30-SAE-V-0687
3/4" SAE	T-HIF30-SAE-0750	T-HIH30-SAE-0750	T-HI_30-SAE-V-0750
13/16" SAE	T-HIF30-SAE-0812	T-HIH30-SAE-0812	T-HI_30-SAE-V-0812
7/8" SAE	T-HIF30-SAE-0875	T-HIH30-SAE-0875	T-HI_30-SAE-V-0875
15/16" SAE	T-HIF30-SAE-0937	T-HIH30-SAE-0937	T-HI_30-SAE-V-0937
1" SAE	T-HIF30-SAE-1000	T-HIH30-SAE-1000	T-HI_30-SAE-V-1000
1 1/16" SAE	T-HIF33-SAE-1062	T-HIH33-SAE-1062	T-HI_33-SAE-V-1062
1 1/8" SAE	T-HIF33-SAE-1125	T-HIH33-SAE-1125	T-HI_33-SAE-V-1125
1 3/16" SAE	T-HIF33-SAE-1187	T-HIH33-SAE-1187	T-HI_33-SAE-V-1187
1 1/4" SAE	T-HIF33-SAE-1250	T-HIH33-SAE-1250	T-HI_33-SAE-V-1250
1 5/16" SAE	T-HIF33-SAE-1312	T-HIH33-SAE-1312	T-HI_33-SAE-V-1312
1 3/8" SAE	T-HIF33-SAE-1375	T-HIH33-SAE-1375	T-HI_33-SAE-V-1375
1 7/16" SAE	T-HIF33-SAE-1437	T-HIH33-SAE-1437	T-HI_33-SAE-V-1437
1 1/2" SAE	T-HIF33-SAE-1500	T-HIH33-SAE-1500	T-HI_33-SAE-V-1500
1 9/16" SAE	T-HIF33-SAE-1562	T-HIH33-SAE-1562	T-HI_33-SAE-V-1562
1 5/8" SAE	T-HIF33-SAE-1625	T-HIH33-SAE-1625	T-HI_33-SAE-V-1625
1 11/16" SAE	T-HIF33-SAE-1687	T-HIH33-SAE-1687	T-HI_33-SAE-V-1687
1 3/4" SAE	T-HIF33-SAE-1750	T-HIH33-SAE-1750	T-HI_33-SAE-V-1750
1 13/16" SAE	T-HIF33-SAE-1812	T-HIH33-SAE-1812	T-HI_33-SAE-V-1812
1 7/8" SAE	T-HIF33-SAE-1875	T-HIH33-SAE-1875	T-HI_33-SAE-V-1875

Parts & Accessories					
	Connector Body Type			Seal Kits	
Threaded Bore Parts & Accessories	w/o Main Seal Kit	w/o Main Seal Kit	w/o Main Seal Kit (F or H)	Includes proprietary seal, seal holder, collet, and expander	Includes 5 proprietary seals
Seal Range	Fill	Fill w/Handle	Fill Valve	Main Seal Kit	Seal Kit Pack
NPT Threaded Holes					
1/8" NPT	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-NPT-0125-MSK	T-HI30-NPT-0125-SKP
1/4" NPT	T-HIF30	T-HIH31	T-HI_30-V	T-HI30-NPT-0250-MSK	T-HI30-NPT-0250-SKP
3/8" NPT	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-NPT-0375-MSK	T-HI30-NPT-0375-SKP
1/2" NPT	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-NPT-0500-MSK	T-HI30-NPT-0500-SKP
3/4" NPT	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-NPT-0750-MSK	T-HI33-NPT-0750-SKP
1" NPT	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-NPT-1000-MSK	T-HI33-NPT-1000-SKP
Metric Threaded Holes					
M8	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M8-MSK	T-HI30-M8-SKP
M10	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M10-MSK	T-HI30-M10-SKP
M12	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M12-MSK	T-HI30-M12-SKP
M14	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M14-MSK	T-HI30-M14-SKP
M16	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M16-MSK	T-HI30-M16-SKP
M18	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M18-MSK	T-HI30-M18-SKP
M20	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M20-MSK	T-HI30-M20-SKP
M22	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M22-MSK	T-HI30-M22-SKP
M24	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-M24-MSK	T-HI30-M24-SKP
M26	T-HIF33	T-HIH33	T-HI_30-V	T-HI33-M26-MSK	T-HI33-M26-SKP
M27	T-HIF33	T-HIH33	T-HI_30-V	T-HI33-M27-MSK	T-HI33-M27-SKP
M33	T-HIF33	T-HIH33	T-HI_30-V	T-HI33-M33-MSK	T-HI33-M33-SKP
M35	T-HIF33	T-HIH33	T-HI_30-V	T-HI33-M35-MSK	T-HI33-M35-SKP

Parts & Accessories					
	Connector Body Type			Seal Kits	
Threaded Hole Parts & Accessories	w/o Main Seal Kit	w/o Main Seal Kit	w/o Main Seal Kit	Includes proprietary seal, seal holder, collet, and expander	Includes 5 proprietary seals
Seal Range	Fill	Fill w/Handle	Fill Valve	Main Seal Kit	Seal Kit Pack
SAE Threaded Holes					
5/16" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0312-MSK	T-HI30-SAE-0312-SKP
3/8" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0375-MSK	T-HI30-SAE-0375-SKP
7/16" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0437-MSK	T-HI30-SAE-0437-SKP
1/2" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0500-MSK	T-HI30-SAE-0500-SKP
9/16" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0562-MSK	T-HI30-SAE-0562-SKP
5/8" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0625-MSK	T-HI30-SAE-0625-SKP
11/16" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0687-MSK	T-HI30-SAE-0687-SKP
3/4" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0750-MSK	T-HI30-SAE-0750-SKP
13/16" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0812-MSK	T-HI30-SAE-0812-SKP
7/8" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0875-MSK	T-HI30-SAE-0875-SKP
15/16" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-0937-MSK	T-HI30-SAE-0937-SKP
1" SAE	T-HIF30	T-HIH30	T-HI_30-V	T-HI30-SAE-1000-MSK	T-HI30-SAE-1000-SKP
1 1/16" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1062-MSK	T-HI33-SAE-1062-SKP
1 1/8" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1125-MSK	T-HI33-SAE-1125-SKP
1 3/16" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1187-MSK	T-HI33-SAE-1187-SKP
1 1/4" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1250-MSK	T-HI33-SAE-1250-SKP
1 5/16" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1312-MSK	T-HI33-SAE-1312-SKP
1 3/8" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1375-MSK	T-HI33-SAE-1375-SKP
1 7/16" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1437-MSK	T-HI33-SAE-1437-SKP
1 1/2" SAE	T-HIF33	T-HIH33	T-HI_33-V	T-HI33-SAE-1500-MSK	T-HI33-SAE-1500-SKP

Manual Internal Collet Connector



Dimensions (Inches)		
	T-HI30	T-HI33
A* Fill/Handle	.750 / 4.55	.750 / 4.55
B	1.00	1.75
C	4.63	6.41

*Fill model does not include handle

CTS Connects™
External Air Actuated Collet Connectors



Air Actuated Seal Connectors

The CTS Connect™ external air actuated collet connector effectively seals on the smooth or threaded features of a part. The connector consists of an air driven piston that compresses the collet creating a tight grip. This motion also compresses the CTS Connect™ proprietary seal against the surface of the part providing a safe and effective seal on the part for high pressure applications. Benefits include:

- Superior sealing capability without the risk of scratching the surface of the part
- Automated sealing to minimize operator fatigue and injury
- Large test/fill port holes for better conductance
- Built-in stroke limiter
- Easy seal replacement
- Long seal life

Tooling Functions

The part to be sealed is placed inside the CTS Connect™ connector and pilot air pressure is applied by triggering a start switch. This compresses both the collet and the seal on the outside surface of the part. For vacuum applications, no safety tooling is required because the vacuum will hold the part in the connector. For high pressure applications, additional part or seal restraints are required to prevent a blow off condition in case the seal pilot pressure is released before the part pressure is exhausted. The pressure for the external air actuated collet connector can range up to 1000 PSI depending on the size and application of the tube.

Sealing

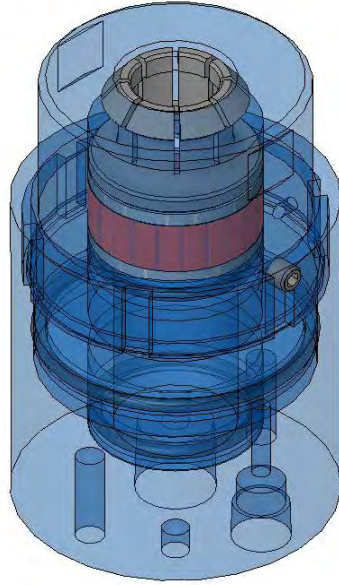
CTS Connect™ connectors are ideal for smooth and threaded features. The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

Pilot Pressure

CTS Connect connectors have regulated pilot pressure set to the minimum pressure needed to seal effectively. Normal pilot pressures extend the seal life. Normal pilot pressures range from 60 to 90 psi. Higher pilot pressures may be required for rough seal surfaces and NPT, Metric, and SAE connections. If higher pilot pressures are required, boosters are available.

T-CO & S-CO Connector



Manual External Collet Connector

CTS Connect T-CO & S-CO Specs

Part OD Sizes: .240" to .76"

Threaded Sizes: M8 – M20, 1/8 – 1/2 NPT, SAE 1/4 – 3/4"

Test pressures: Vacuum to 1000 PSI

Connector body: Aluminum

Piston: Aluminum

Cap: Aluminum

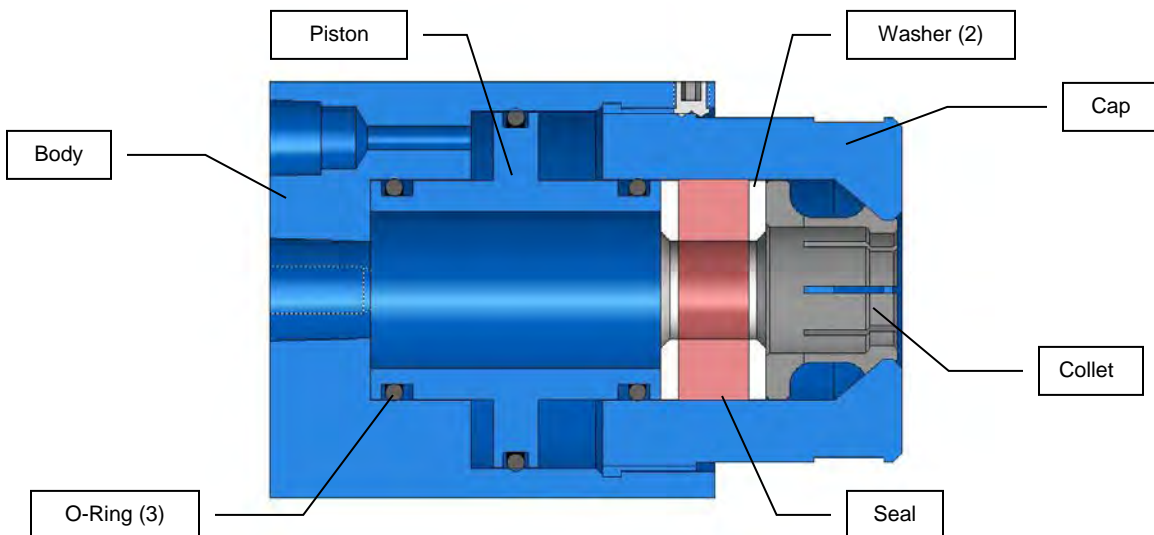
Collet: Treated Steel

O-ring: Buna N

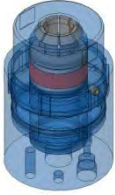

Part seal material: Proprietary grade seal
For regular and threaded connectors

Rated Pressure: Actual results may vary by material and specifications and should be verified by test prior to application.

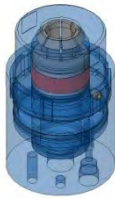

Connector Assembly Detail

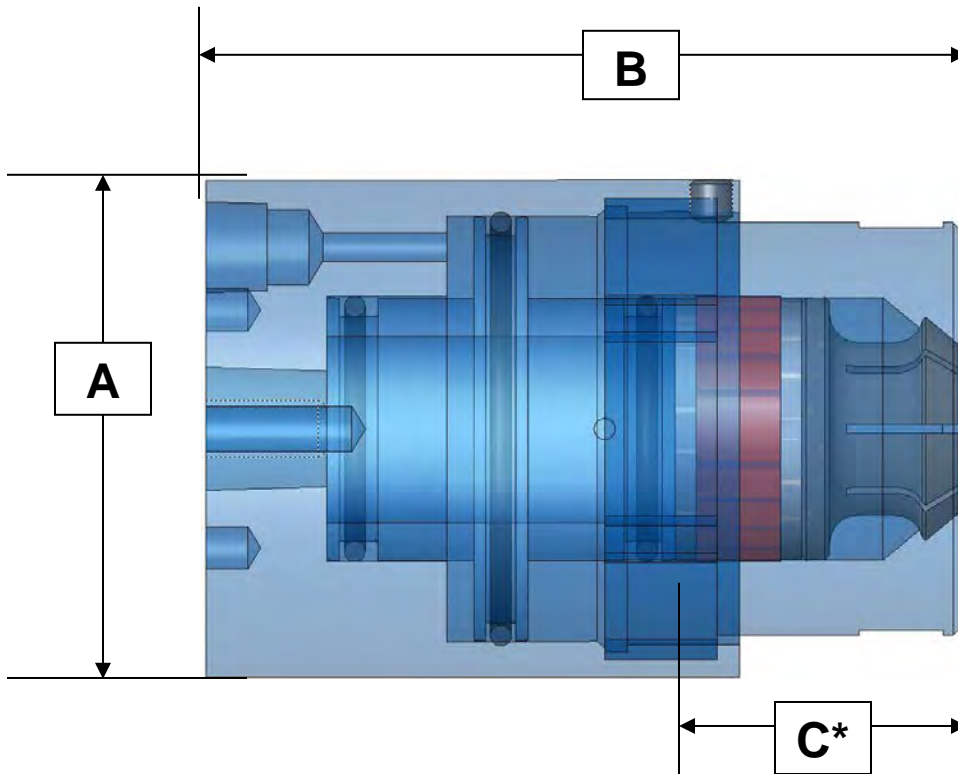


Manual External Collet Connector

Smooth Collet Connector	Connector w/o main seal kit		 <p>Includes two washers, seal, and collet.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Assembly	Main Seal Kit	Seal Kit Pack
S-CO31				
.240 - .260	S-CO31	S-CO31-AA	S-CO31-AA-MSK	S-CO31-AA-SKP
.260 - .280	S-CO31	S-CO31-AB	S-CO31-AB-MSK	S-CO31-AB-SKP
.280 - .300	S-CO31	S-CO31-AC	S-CO31-AC-MSK	S-CO31-AC-SKP
.300 - .320	S-CO31	S-CO31-AD	S-CO31-AD-MSK	S-CO31-AD-SKP
.320 - .340	S-CO31	S-CO31-AE	S-CO31-AE-MSK	S-CO31-AE-SKP
.340 - .360	S-CO31	S-CO31-AF	S-CO31-AF-MSK	S-CO31-AF-SKP
.380 - .400	S-CO31	S-CO31-AG	S-CO31-AG-MSK	S-CO31-AG-SKP
.400 - .420	S-CO31	S-CO31-AH	S-CO31-AH-MSK	S-CO31-AH-SKP
.420 - .440	S-CO31	S-CO31-AI	S-CO31-AI-MSK	S-CO31-AI-SKP
.440 - .460	S-CO31	S-CO31-AJ	S-CO31-AJ-MSK	S-CO31-AJ-SKP
.460 - .480	S-CO31	S-CO31-AK	S-CO31-AK-MSK	S-CO31-AK-SKP
.480 - .500	S-CO31	S-CO31-AL	S-CO31-AL-MSK	S-CO31-AL-SKP
S-CO32				
.500 - .520	S-CO32	S-CO32-AA	S-CO32-AA-MSK	S-CO32-AA-SKP
.520 - .540	S-CO32	S-CO32-AB	S-CO32-AB-MSK	S-CO32-AB-SKP
.540 - .560	S-CO32	S-CO32-AC	S-CO32-AC-MSK	S-CO32-AC-SKP
.560 - .580	S-CO32	S-CO32-AD	S-CO32-AD-MSK	S-CO32-AD-SKP
.580 - .600	S-CO32	S-CO32-AE	S-CO32-AE-MSK	S-CO32-AE-SKP
.600 - .620	S-CO32	S-CO32-AF	S-CO32-AF-MSK	S-CO32-AF-SKP
.620 - .640	S-CO32	S-CO32-AG	S-CO32-AG-MSK	S-CO32-AG-SKP
.640 - .660	S-CO32	S-CO32-AH	S-CO32-AH-MSK	S-CO32-AH-SKP
.660 - .680	S-CO32	S-CO32-AI	S-CO32-AI-MSK	S-CO32-AI-SKP
.680 - .700	S-CO32	S-CO32-AJ	S-CO32-AJ-MSK	S-CO32-AJ-SKP
.700 - .720	S-CO32	S-CO32-AK	S-CO32-AK-MSK	S-CO32-AK-SKP
.720 - .740	S-CO32	S-CO32-AL	S-CO32-AL-MSK	S-CO32-AL-SKP
.740 - .760	S-CO32	S-CO32-AM	S-CO32-AM-MSK	S-CO32-AM-SKP

Manual External Collet Connector

Threaded Collet Connector	Connect w/o main seal kit		 <p>Includes two washers, seal, and collet.</p>	<p>Includes 5 Proprietary Grade Seals *Add "M" for Medical Grade Urethane</p>
Seal Range	Body	Assembly	Main Seal Kit	Seal Kit Pack
NPT Threaded Tube				
1/8" NPT	T-CO31	T-CO31-NPT-0125	T-CO31-NPT-0125-MSK	T-CO31-NPT-0125-SKP
1/4" NPT	T-CO32	T-CO32-NPT-0250	T-CO32-NPT-0250-MSK	T-CO32-NPT-0250-SKP
3/8" NPT	T-CO32	T-CO32-NPT-0375	T-CO32-NPT-0375-MSK	T-CO32-NPT-0375-SKP
1/2" NPT	T-CO32	T-CO32-NPT-0500	T-CO32-NPT-0500-MSK	T-CO32-NPT-0500-SKP
Metric Threaded Tube				
M8	T-CO31	T-CO31-M8	T-CO31-M8-MSK	T-CO31-M8-SKP
M10	T-CO31	T-CO31-M10	T-CO31-M10-MSK	T-CO31-M10-SKP
M12	T-CO32	T-CO32-M12	T-CO32-M12-MSK	T-CO32-M12-SKP
M14	T-CO32	T-CO32-M14	T-CO32-M14-MSK	T-CO32-M14-SKP
M16	T-CO32	T-CO32-M16	T-CO32-M16-MSK	T-CO32-M16-SKP
M18	T-CO32	T-CO32-M18	T-CO32-M18-MSK	T-CO32-M18-SKP
M20	T-CO32	T-CO32-M20	T-CO32-M20-MSK	T-CO32-M20-SKP
SAE Threaded Tube				
1/4" SAE	T-CO31	T-CO31-SAE-0250	T-CO31-SAE-0250-MSK	T-CO31-SAE-0250-SKP
5/16" SAE	T-CO31	T-CO31-SAE-0312	T-CO31-SAE-0312-MSK	T-CO31-SAE-0312-SKP
3/8" SAE	T-CO31	T-CO31-SAE-0375	T-CO31-SAE-0375-MSK	T-CO31-SAE-0375-SKP
7/16" SAE	T-CO31	T-CO31-SAE-0437	T-CO31-SAE-0437-MSK	T-CO31-SAE-0437-SKP
1/2" SAE	T-CO32	T-CO31-SAE-0500	T-CO31-SAE-0500-MSK	T-CO31-SAE-0500-SKP
9/16" SAE	T-CO32	T-CO32-SAE-0562	T-CO32-SAE-0562-MSK	T-CO32-SAE-0562-SKP
5/8" SAE	T-CO32	T-CO32-SAE-0625	T-CO32-SAE-0625-MSK	T-CO32-SAE-0625-SKP
11/16" SAE	T-CO32	T-CO32-SAE-0687	T-CO32-SAE-0687-MSK	T-CO32-SAE-0687-SKP
3/4" SAE	T-CO32	T-CO32-SAE-0750	T-CO32-SAE-0750-MSK	T-CO32-SAE-0750-SKP



Dimensions (Inches)		
	S/T-CO31	S/T-CO32
A	1.50	2.22
B	2.70	3.375
C*	1.18	1.20

* Note “C” corresponds to the minimum insertion depth

Dimensional information is for reference only



Manual Seal Connectors

The CTS Connect™ external manual collet connector effectively seals on the smooth or threaded features of a part. The connector consists of a cam driven piston that compresses the collet creating a tight grip. This motion also compresses the CTS Connect™ proprietary seal against the surface of the part providing a safe and effective seal on the part for high pressure applications. Benefits include:

- Superior sealing capability without the risk of scratching the surface of the part
- Large test/fill port holes for better conductance
- Easy seal replacement
- Long seal life

Tooling Functions

The part to be sealed is placed inside the CTS Connect™ connector and the hand actuated cam advances the internal piston to compress both the collet and the seal on the outside surface of the part. For vacuum applications, no safety tooling is required because the vacuum will hold the part in the connector. For high pressure applications, additional part or seal restraints are required to prevent a blow off condition in case the seal handle is released before the part pressure is exhausted. The pressure for the external manual collet connector can range up to 1000 PSI depending on the size and application of the tube.

Sealing

CTS Connect™ connectors are ideal for smooth and threaded features. The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors. Available seal materials include:

- Proprietary
- Medical grade urethane

Manual External Collet Connector

CTS Connect T-HO & S-HO Specs

Part OD Sizes: .240" to .76"

Threaded Sizes: M8 – M20, 1/8 – 1/2 NPT, SAE 1/4 – 3/4"

Test pressures: Vacuum to 1000 PSI

Connector body: Aluminum

Piston: Aluminum

Cap: Aluminum

Collet: Treated Steel

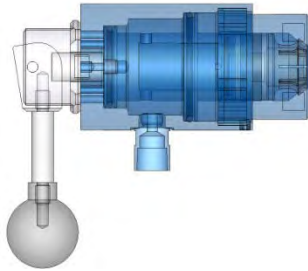
Stem: Stainless Steel

O-ring: Buna N

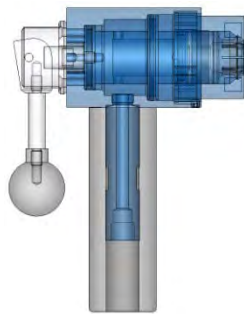
Part seal material: Proprietary grade seal
For regular and threaded connectors

Rated Pressure: Actual results may vary by material and specifications and should be verified by test prior to application.

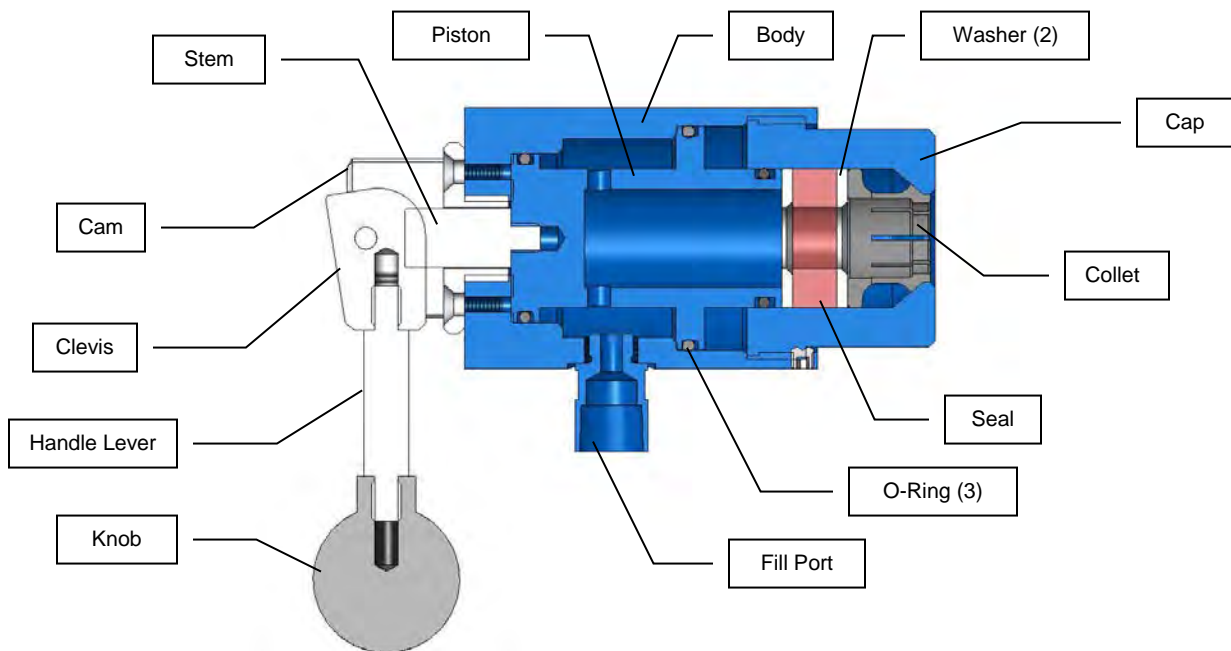
T-HOF & S-HOF-Fill Style



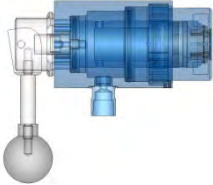
T-HOH & S-HOH-Fill Style w/Handle



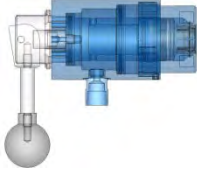
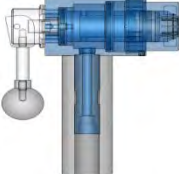
Connector Assembly Detail w/Fill Valve



Manual External Collet Connector

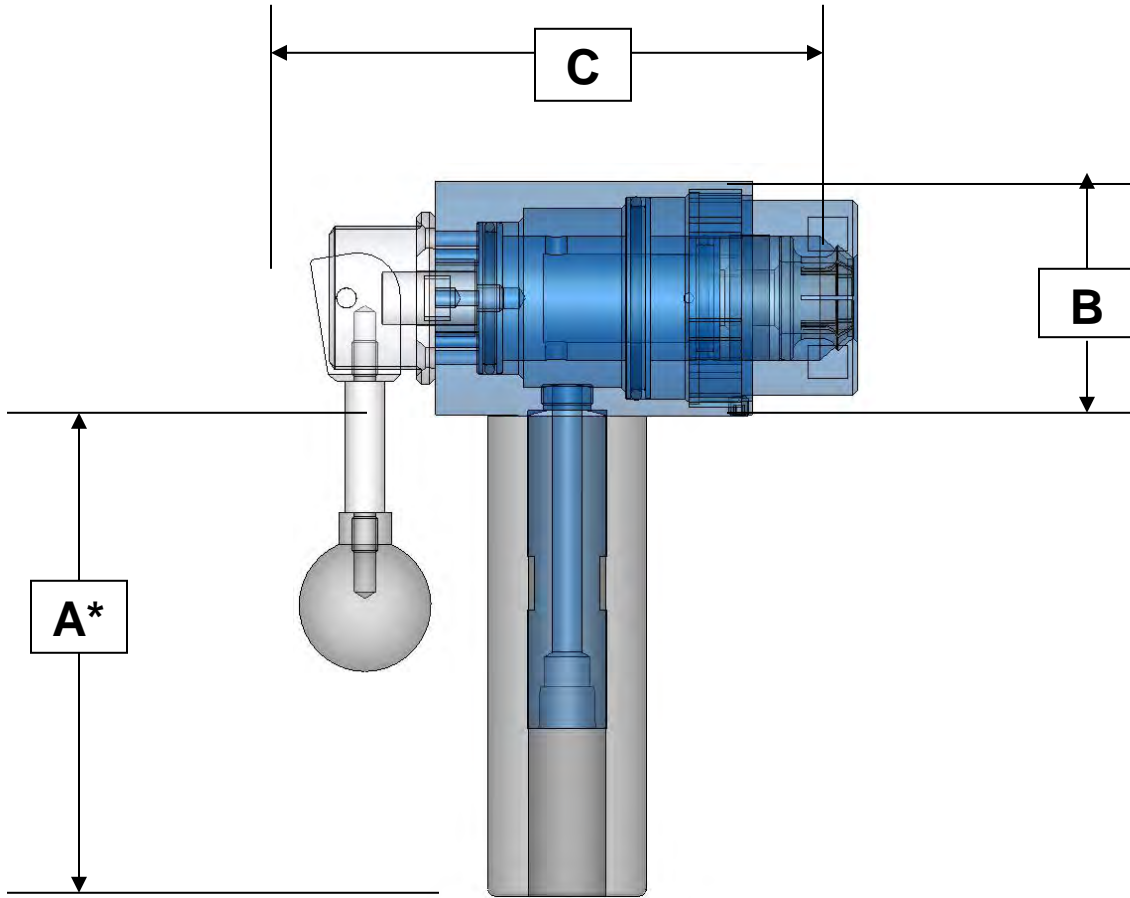
Threaded Collet Connectors			
Seal Range	Fill	Fill w/Handle	
NPT Threaded Connectors			
1/8" NPT	T-HOF31-NPT-0125	T-HOH31-NPT-0125	
1/4" NPT	T-HOF32-NPT-0250	T-HOH32-NPT-0250	
3/8" NPT	T-HOF32-NPT-0375	T-HOH32-NPT-0375	
1/2" NPT	T-HOF32-NPT-0500	T-HOH32-NPT-0500	
Metric Threaded Connectors			
M8	T-HOF31-M8	T-HOH31-M8	
M10	T-HOF31-M10	T-HOH31-M10	
M12	T-HOF32-M12	T-HOH32-M12	
M14	T-HOF32-M14	T-HOH32-M14	
M16	T-HOF32-M16	T-HOH32-M16	
M18	T-HOF32-M18	T-HOH32-M18	
M20	T-HOF32-M20	T-HOH32-M20	
SAE Threaded Connectors			
1/4" SAE	T-HOF31-SAE-0250	T-HOH31-SAE-0250	
5/16" SAE	T-HOF31-SAE-0312	T-HOH31-SAE-0312	
3/8" SAE	T-HOF31-SAE-0375	T-HOH31-SAE-0375	
7/16" SAE	T-HOF31-SAE-0437	T-HOH31-SAE-0437	
1/2" SAE	T-HOF32-SAE-0500	T-HOH32-SAE-0500	
9/16" SAE	T-HOF32-SAE-0562	T-HOH32-SAE-0562	
5/8" SAE	T-HOF32-SAE-0625	T-HOH32-SAE-0625	
11/16" SAE	T-HOF32-SAE-0687	T-HOH32-SAE-0687	
3/4" SAE	T-HOF32-SAE-0750	T-HOH32-SAE-0750	

Manual External Collet Connector

Smooth Collet Connectors			
Seal Range	Fill Style	Fill w/Handle	
Smooth Collet Connectors			
.240 - .260	S-HOF31-AA	S-HOH31-AA	
.260 - .280	S-HOF31-AB	S-HOH31-AB	
.280 - .300	S-HOF31-AC	S-HOH31-AC	
.300 - .320	S-HOF31-AD	S-HOH31-AD	
.320 - .340	S-HOF31-AE	S-HOH31-AE	
.340 - .360	S-HOF31-AF	S-HOH31-AF	
.380 - .400	S-HOF31-AG	S-HOH31-AG	
.400 - .420	S-HOF31-AH	S-HOH31-AH	
.420 - .440	S-HOF31-AI	S-HOH31-AI	
.440 - .460	S-HOF31-AJ	S-HOH31-AJ	
.460 - .480	S-HOF31-AK	S-HOH31-AK	
.480 - .500	S-HOF31-AL	S-HOH31-AL	
.500 - .520	S-HOF32-AA	S-HOH32-AA	
.520 - .540	S-HOF32-AB	S-HOH32-AB	
.540 - .560	S-HOF32-AC	S-HOH32-AC	
.560 - .580	S-HOF32-AD	S-HOH32-AD	
.580 - .600	S-HOF32-AE	S-HOH32-AE	
.600 - .620	S-HOF32-AF	S-HOH32-AF	
.620 - .640	S-HOF32-AG	S-HOH32-AG	
.640 - .660	S-HOF32-AH	S-HOH32-AH	
.660 - .680	S-HOF32-AI	S-HOH32-AI	
.680 - .700	S-HOF32-AJ	S-HOH32-AJ	
.700 - .720	S-HOF32-AK	S-HOH32-AK	
.720 - .740	S-HOF32-AL	S-HOH32-AL	
.740 - .760	S-HOF32-AM	S-HOH32-AM	

Parts & Accessories					
	Connector Body Type			Seal Kits	
Threaded Collet Parts/ Accessories	w/o Main Seal Kit	w/o Main Seal Kit	w/o Main Seal Kit (F or H)	Includes proprietary seal, washers, and threaded collet	Includes 5 proprietary seals
Seal Range	Fill	Fill w/Handle	Fill Valve	Main Seal Kit	Seal Kit Pack
NPT Threaded Connectors					
1/8" NPT	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-NPT-0125-MSK	T-HO31-NPT-0125-SKP
1/4" NPT	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-NPT-0250-MSK	T-HO32-NPT-0250-SKP
3/8" NPT	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-NPT-0375-MSK	T-HO32-NPT-0375-SKP
1/2" NPT	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-NPT-0500-MSK	T-HO32-NPT-0500-SKP
Metric Threaded Connectors					
M8	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-M8-MSK	T-HO31-M8-SKP
M10	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-M10-MSK	T-HO31-M10-SKP
M12	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-M12-MSK	T-HO32-M12-SKP
M14	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-M14-MSK	T-HO32-M14-SKP
M16	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-M16-MSK	T-HO32-M16-SKP
M18	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-M18-MSK	T-HO32-M18-SKP
M20	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-M20-MSK	T-HO32-M20-SKP
SAE Threaded Connectors					
1/4" SAE	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-SAE-0250-MSK	T-HO31-SAE-0250-SKP
5/16" SAE	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-SAE-0312-MSK	T-HO31-SAE-0312-SKP
3/8" SAE	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-SAE-0375-MSK	T-HO31-SAE-0375-SKP
7/16" SAE	T-HOF31	T-HOH31	T-HO_31-V	T-HO31-SAE-0437-MSK	T-HO31-SAE-0437-SKP
1/2" SAE	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-SAE-0500-MSK	T-HO32-SAE-0500-SKP
9/16" SAE	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-SAE-0562-MSK	T-HO32-SAE-0562-SKP
5/8" SAE	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-SAE-0625-MSK	T-HO32-SAE-0625-SKP
11/16" SAE	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-SAE-0687-MSK	T-HO32-SAE-0687-SKP
3/4" SAE	T-HOF32	T-HOH32	T-HO_32-V	T-HO32-SAE-0750-MSK	T-HO32-SAE-0750-SKP

Parts & Accessories					
	Connector Body Type			Seal Kits	
Smooth Collet Parts/ Accessories	w/o Main Seal Kit	w/o Main Seal Kit	w/o Main Seal Kit	Includes proprietary seal, washers, and smooth collet	Includes 5 proprietary seals
Seal Range	Fill	w/Handle	Fill Valve	Main Seal Kit	Seal Kit Pack
Smooth Collet Connectors					
.240 - .260	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AA-MSK	S-HO31-AA-SKP
.260 - .280	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AB-MSK	S-HO31-AB-SKP
.280 - .300	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AC-MSK	S-HO31-AC-SKP
.300 - .320	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AD-MSK	S-HO31-AD-SKP
.320 - .340	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AE-MSK	S-HO31-AE-SKP
.340 - .360	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AF-MSK	S-HO31-AF-SKP
.380 - .400	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AG-MSK	S-HO31-AG-SKP
.400 - .420	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AH-MSK	S-HO31-AH-SKP
.420 - .440	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AI-MSK	S-HO31-AI-SKP
.440 - .460	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AJ-MSK	S-HO31-AJ-SKP
.460 - .480	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AK-MSK	S-HO31-AK-SKP
.480 - .500	S-HOF31	S-HOH31	S-HO_31-V	S-HO31-AL-MSK	S-HO31-AL-SKP
.500 - .520	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AA-MSK	S-HO32-AA-SKP
.520 - .540	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AB-MSK	S-HO32-AB-SKP
.540 - .560	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AC-MSK	S-HO32-AC-SKP
.560 - .580	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AD-MSK	S-HO32-AD-SKP
.580 - .600	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AE-MSK	S-HO32-AE-SKP
.600 - .620	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AF-MSK	S-HO32-AF-SKP
.620 - .640	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AG-MSK	S-HO32-AG-SKP
.640 - .660	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AH-MSK	S-HO32-AH-SKP
.660 - .680	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AI-MSK	S-HO32-AI-SKP
.680 - .700	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AJ-MSK	S-HO32-AJ-SKP
.700 - .720	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AK-MSK	S-HO32-AK-SKP
.720 - .740	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AL-MSK	S-HO32-AL-SKP
.740 - .760	S-HOF32	S-HOH32	S-HO_32-V	S-HO32-AM-MSK	S-HO32-AM-SKP



Dimensions (Inches)		
	S/T-HO31	S/T-HO32
A* Fill/Handle	.70 / 4.53	.70 / 4.53
B	1.49	2.20
C	3.93	5.00

Dimensional information is for reference only

Luer Fitting Connector
CTS Connects™
Luer Lock Connectors (CO31L)



Air Actuated Luer Fitting Connectors

The CTS Connect™ air actuated luer lock connectors effectively seal on the face of both male and female luer lock fittings. The connectors consist of a nose piece that grips the luer fitting, and an air-driven internal piston that drives an FDA approved medical seal material into the face of the part, creating a tight seal that meets all test pressure requirements.

- Superior sealing capability without the risk of scratching the surface of the part
- Automated sealing to minimize operator fatigue and injury
- Large test port holes for better conductance
- Easy quick change nose piece that securely locks into place to accommodate multiple luer fitting designs

- All parts that come in contact with part are of the highest grade materials
- Easy seal replacement
- Long seal life
- Available for both male and female luer fittings

Tooling Functions

The part to be sealed is placed into the CTS Connect connector as the pilot air pressure is applied by triggering a start switch. The nose piece holds the part in place, while the piston advances and effectively face seals the luer fitting. The rated pressure range for the luer connector (CO31L) connector is from vacuum to 850 psi*.

**Pressure rating dependent on part design and materials of construction.*

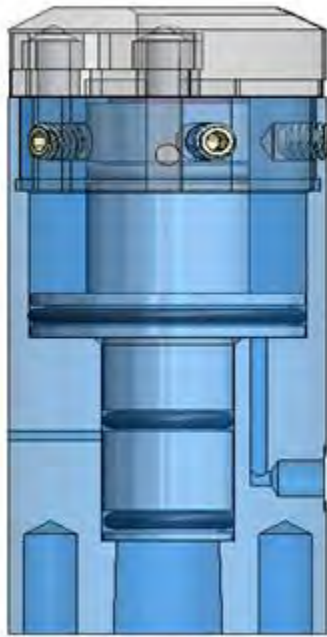
Sealing

CTS Connect™ CO31L is ideal for sealing both male and female luer fittings. The FDA medical grade seals offer superior extrusion performance as well as cut and abrasion resistance. The medical grade seal material also provides extended life. The FDA approved medical grade seal is supplied as standard in all luer connectors

Pilot Pressure

CTS Connect connectors use regulated pilot pressure set to the minimum pressure needed to effectively seal the part while maximizing seal life. Normal pilot pressures range from 60 to 90 psi. A vented port is provided between the pilot and test air to relieve any residual pressure.

CO31L Connector



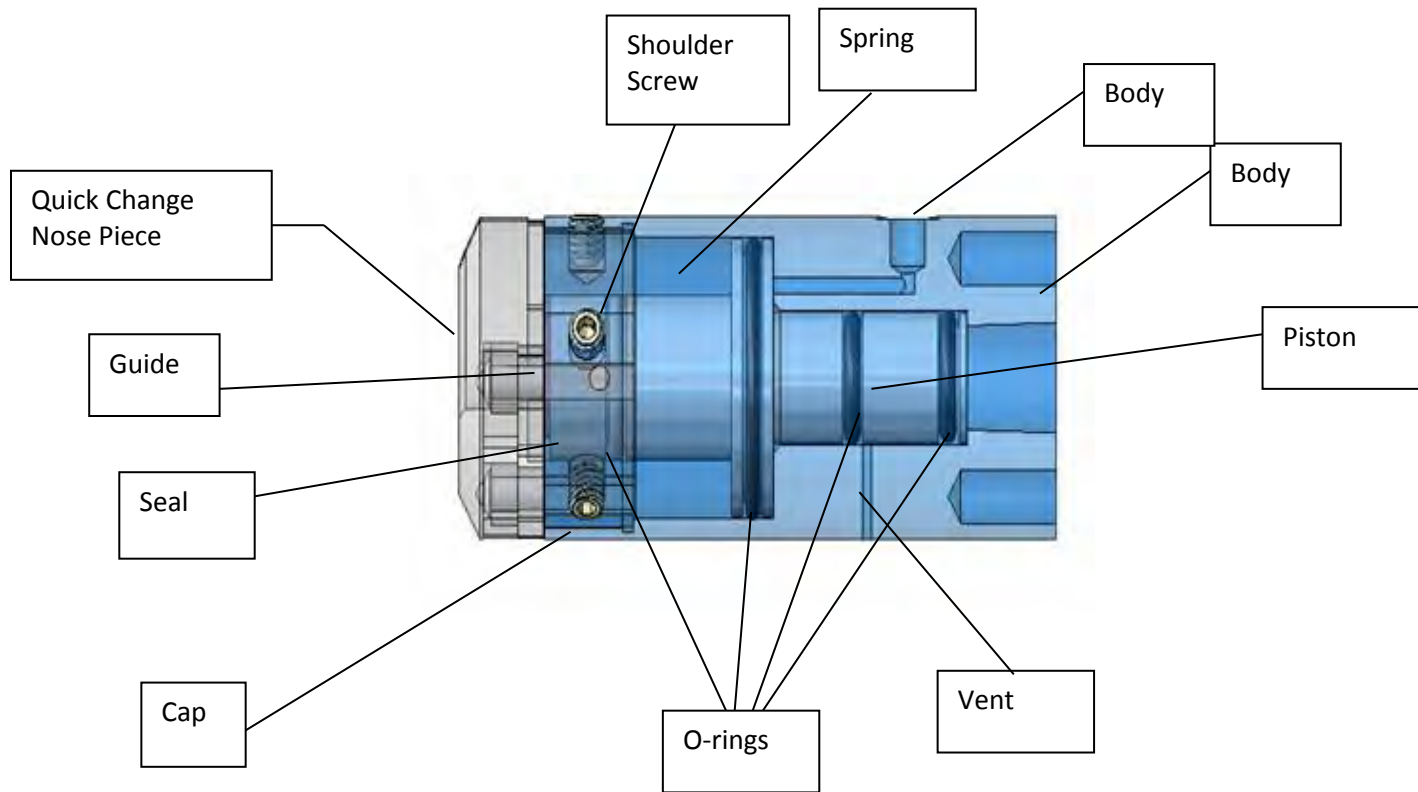
CTS Connect CO31L Connector Specs

- Luer Fittings accommodated:** Male and Female
- Test pressures :** Vacuum to 850 psig*
*Dependent upon part design
- Pilot pressure:** Typically 60 – 90 psig
(vented port between test air and pilot air)
- Connector body:** Anodized Aluminum*
* 316 Stainless Steel upgrade available
- Nose Piece:** 316 Stainless Steel
- Piston:** 316 Stainless Steel
- Shoulder Screw:** 316 Stainless Steel
- Spring:** Stainless Steel
- Piston:** 316 Stainless Steel
- Cap:** 316 Stainless Steel
- O-ring:** Buna N
- Guide:** 316 Stainless Steel
- Seal:** FDA approved medical grade material

Luer Fitting Connectors		 Includes seal and guide	 Includes 5 Medical Grade Seals
Fitting Accommodated	Connector Assembly	Main Seal Kit	Seal Kit Pack
Female	CO31LF	CO31LF-MSK	CO31LF-SKP
Male	CO31LM	CO31LM-MSK	CO31LM-SKP

** Because connections to medical devices and components come in a wide range of shapes and sizes, CTS offers specially-designed CTS Connects™ for virtually any application. Prior to ordering, a dimensional drawing or sample part will be needed in order to create a nose piece to precisely fit the desired luer fitting.*

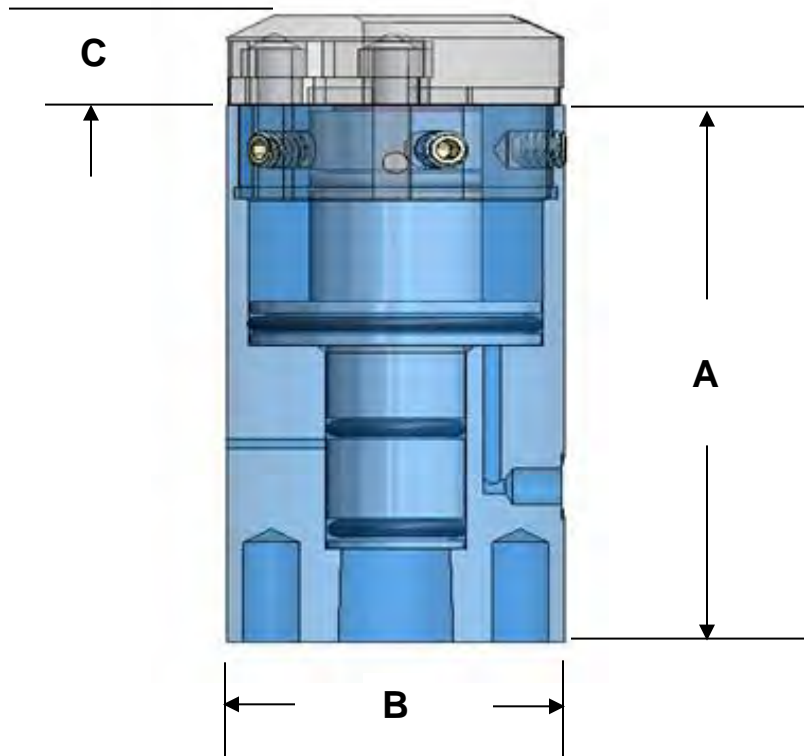
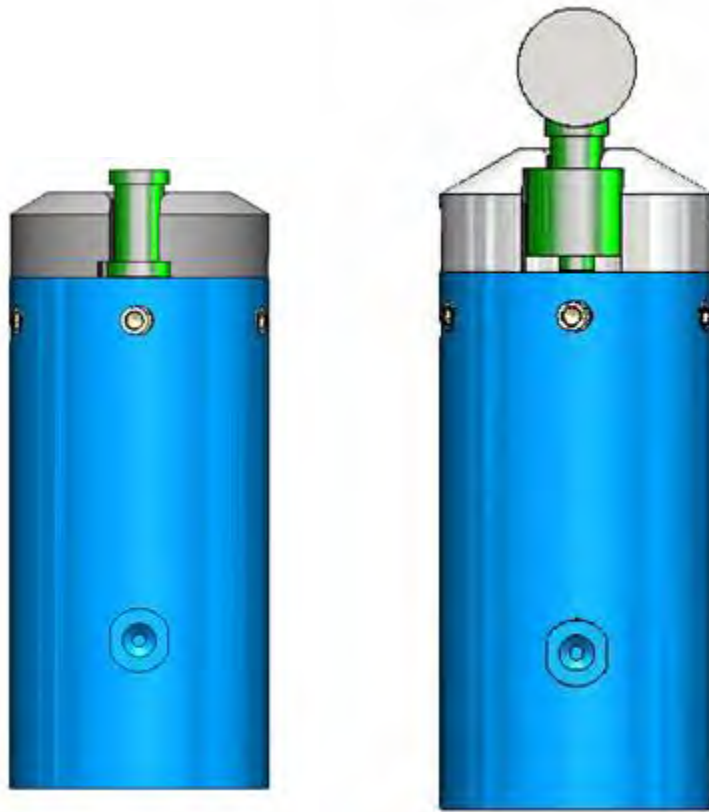
Connector Assembly Detail



CO31L shown with sample part loaded for test

Female Fitting

Male Fitting



Dimensions CO31L Model (in)			
Luer Fitting	A	B	C
Female	2.125	1.375	N/A *
Male	2.125	1.375	N/A *

Dimensional information is for reference only

*Dimension Dependent upon Specific Luer Fitting Design



Test Air Assisted SLJ Connectors

The CTS Connect™ “Spring Lock Jaw” connectors effectively face-seal on smooth circular features of parts with formed ends while utilizing spring loaded jaws to retain the part. The connectors consist of a pilot and/or test air driven internal piston that compresses the CTS proprietary seal material against the end of the tube, creating a tight seal that meets all test pressure requirements.

- Superior sealing capability at higher pressures due to test air sealing assistance
- Easy sealing at lower pressures due to pilot air driven piston
- Simple and easy manual operation
- Ideal for refrigeration applications
- Easy seal replacement

- Extra long seal life

Tooling Functions

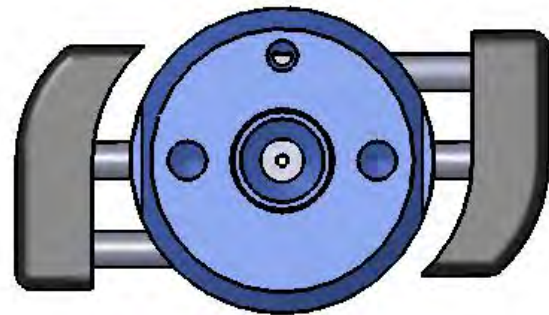
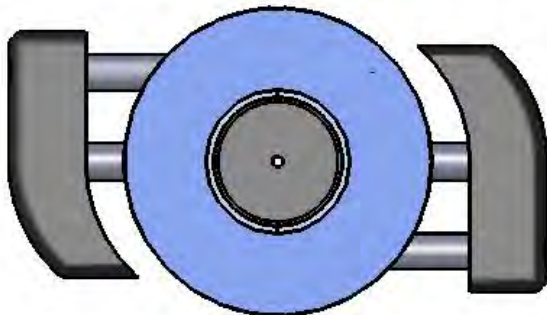
The operator first squeezes the jaw levers. Then the part to be sealed is placed into the CTS Connect connector. The spring inside loosely pushes the seal against the end of the test part. When the test is started, due to the test pressure assisted design, the seal will be pushed harder onto the face of the part. The pressure range for the SLJ connector is Vacuum-1000 psi, application dependent.

Sealing

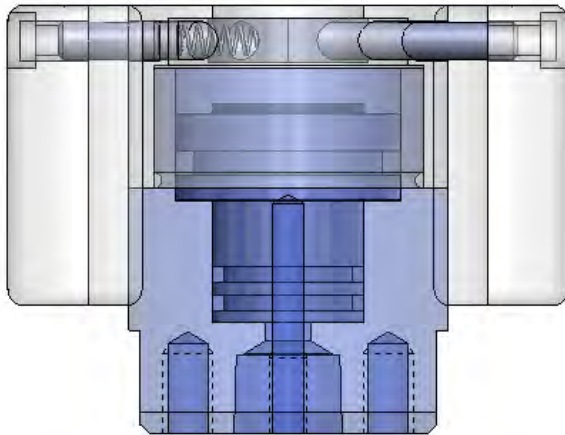
CTS SLJ connectors are ideal for smooth surfaces. The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors.

Pilot Pressure

CTS Connect SLJ connectors rely on test pressure to seal for higher pressure applications. For vacuum to lower pressures, the SLJ has a pilot air port, which drives the internal piston. This means that for lower pressures, two test lines are required, and for higher pressures, only one test line is required.



SLJ Connectors



CTS Connect CI Connector Specs

Tube sizes: .236-2.047" Actual O.D.

****Sample Part or Drawings are required with order**

Test pressures : Vacuum-1000 psi (Application dependent) Please contact for higher pressure applications.

Connector body: Aluminum

Cap: Aluminum

Lever: Stainless steel

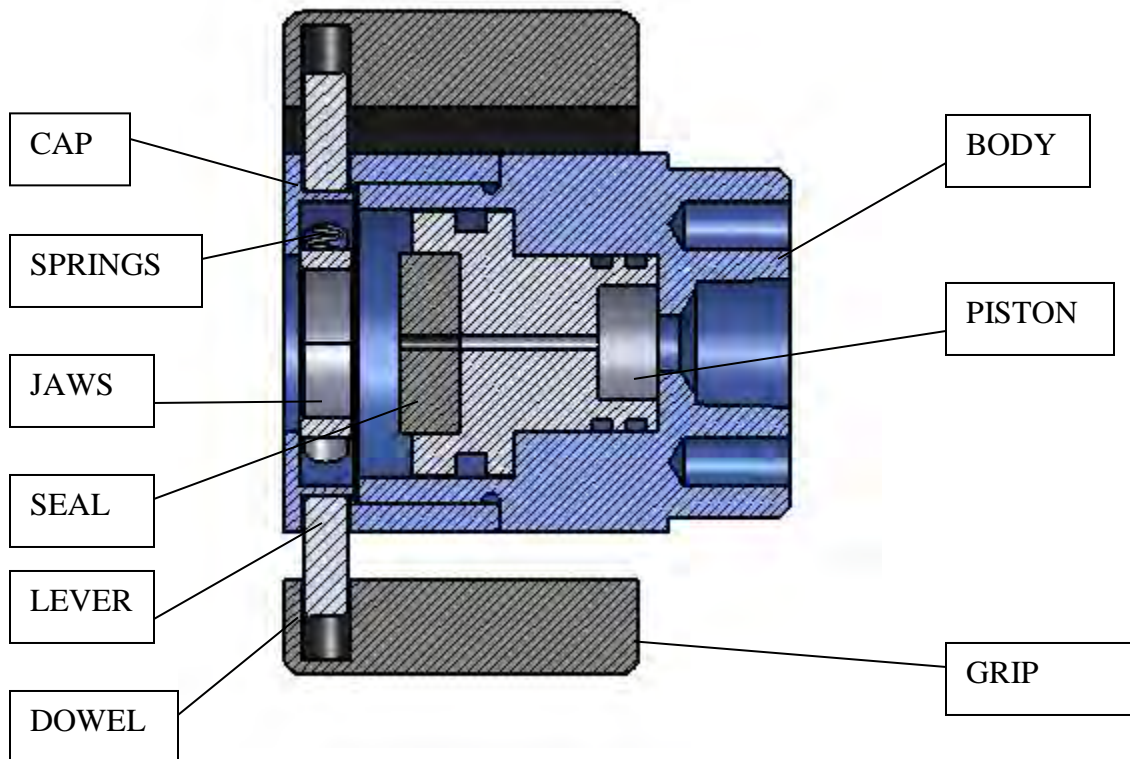
Grip: Aluminum

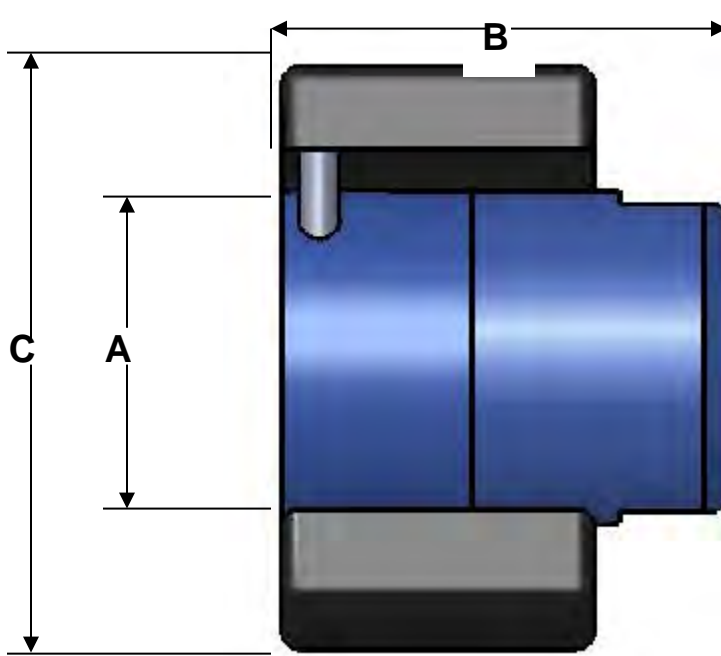
Jaws: Stainless steel

Piston: Aluminum

O-rings: Buna N

Part seal material: Proprietary grade seal





SLJ Model Dimensions (in)

Body Size	Max Part OD	A	B	C
SLJ30	0.630	1.60	2.14	2.80
SLJ31	1.260	2.65	2.14	3.77
SLJ32	2.074	3.40	2.83	4.74

Dimensional information is for reference only



Test Air Assisted SLP Connectors

The CTS Connect™ “Spring Lock Pin” connectors effectively face-seal on smooth circular features of parts with formed ends while utilizing spring-loaded pins to retain the part. The connectors consist of a test air driven internal piston that compresses the CTS proprietary seal material against the surface of the part, creating a tight seal that meets all test pressure requirements. Pins are backed by test pressure to retain part under high pressures.

- Superior sealing capability at higher pressures due to test air sealing assistance
- Manual or automated insertion capabilities
- Ideal for refrigeration applications

- Easy seal replacement
- Extra long seal life

Tooling Functions

The part to be sealed is placed into the CTS Connect connector. The spring inside loosely pushes the seal against the end of the test part. When the test is started, due to the test pressure assisted design, the seal will be pushed harder onto the face of the part. In automated applications, a cylinder will advance the CTS Connect connector to the part. The pressure range for the SLP connector is 20-800 psi (application dependent).

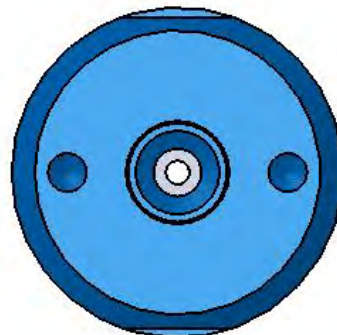
Sealing

CTS SLP connectors are ideal for smooth surfaces. The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard in all connectors.

Pilot Pressure

CTS Connect SLP connectors do not require pilot pressure, but rely on test pressure for a tight seal. This means that only one test line per connector is required.

SLP Connectors:



CTS Connect CI Connector Specs

Tube sizes: 0.236-0.875" Actual O.D.

Test pressures : 20-800 psi (App. Dependent)
Please contact us for higher pressure applications.

Connector body: Aluminum

Cap: Aluminum

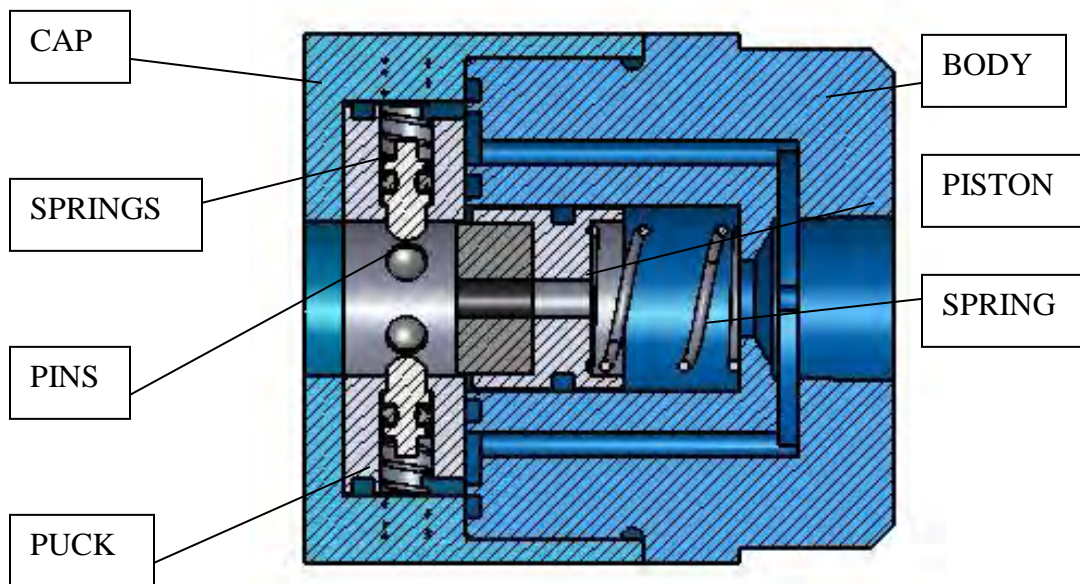
Pins: Heat treated steel

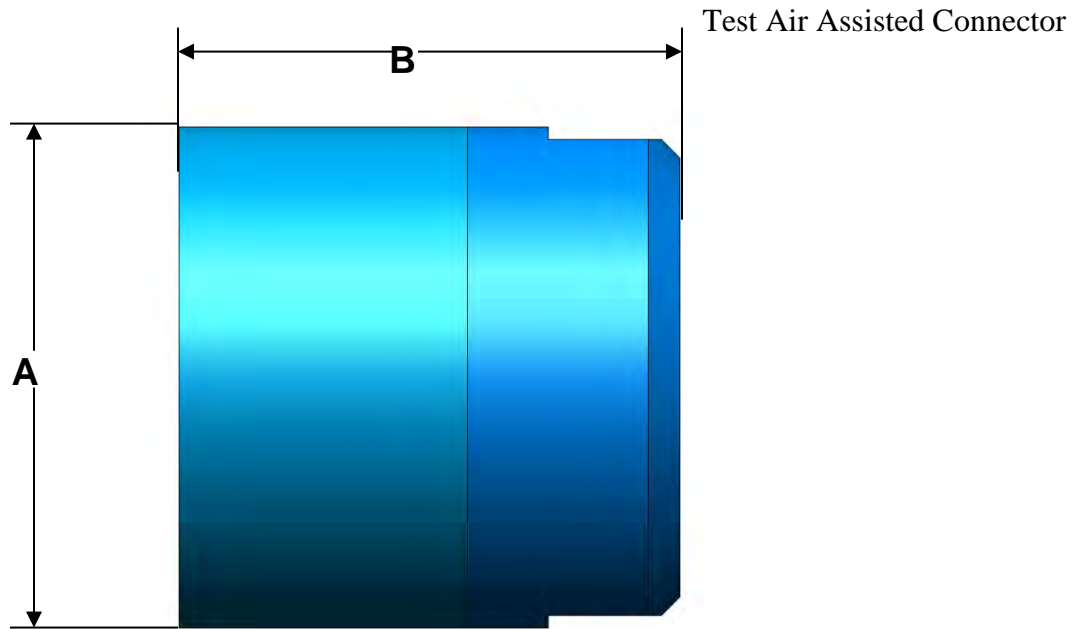
Puck: Stainless steel

Piston: Aluminum

O-rings: Buna N

Part seal material: Proprietary grade seal





SLP Model Dimensions (in)

Body Size	Max Part OD	A	B
SLP30	0.500	1.73	1.93
SLP31	0.875	2.11	1.95

Dimensional information is for reference only



Manual Seal Connectors

The CTS Connect™ OD gripping ID sealing hand connectors effectively seal various types and sizes of tubing. The connectors consist of a cam driven stem that compresses the CTS proprietary seal material against the surface of the part, creating a tight seal that meets high test pressure requirements.

CTS Connect™ SBOI connectors provide:

- Superior sealing capability without the risk of scratching the interior surface of the part
- Large test/fill port holes for better conductance
- Easy seal replacement
- Long seal life
- Ideal for high pressure applications

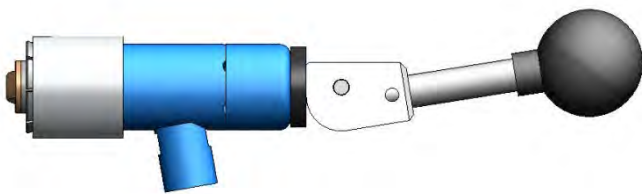
Tooling Functions

The part to be sealed is placed over the CTS Connect™ connector and the hand cam retracts the internal stem to compress the seal inside the part while the collet grips on the OD. For most applications, no safety tooling is required because the collet will hold the part in the connector. The pressure range for the SBOI connector is up to 850psi for copper tubing. (Application dependent)

Sealing

CTS Connect™ connectors are ideal for smooth or rough surfaces. The standard proprietary grade seals offer superior extrusion performance as well as cut and abrasion resistance. The proprietary grade seal material also provides extended life. The proprietary grade seal is standard on all connectors.

SBOI with Fill Port



CTS Connect SBOI Connector Specs

Tube sizes: 0.375-1.500 inches Actual O.D.

Test pressures : Vacuum –850

Connector body: Aluminum

Collet: Heat treated steel

Collet Cap: Aluminum

Washer: Stainless steel

Spacer: Stainless steel

Stem: Stainless steel

Clevis: Heat treated steel

Lever: Stainless steel

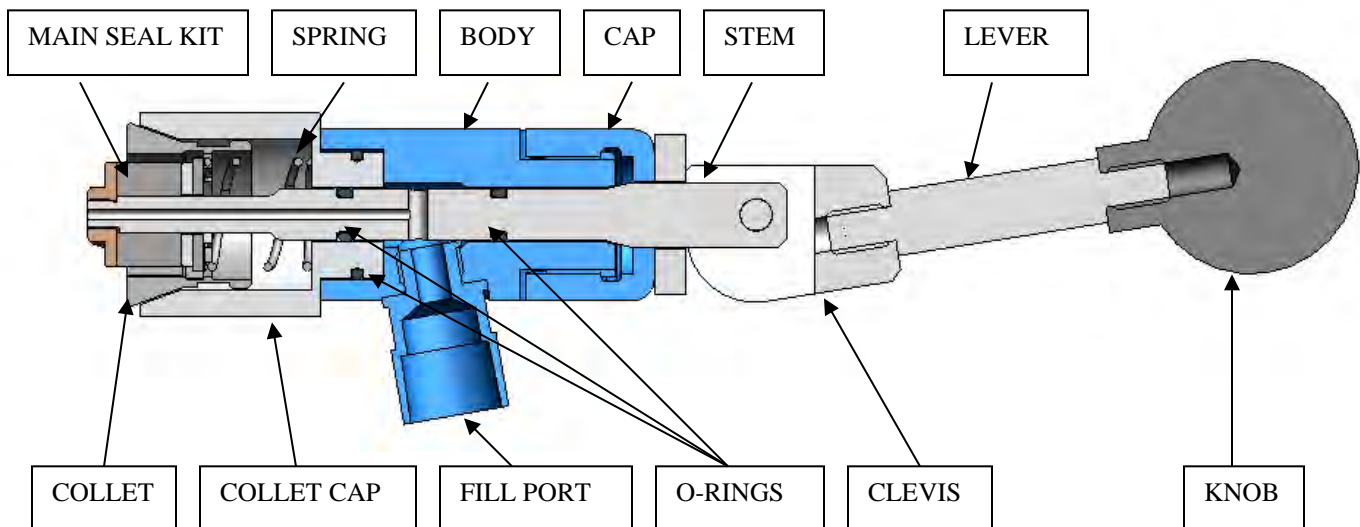
Nose: Brass

O-ring: Buna N

Part seal material: Proprietary grade seal

Optional seal material: Medical grade urethane

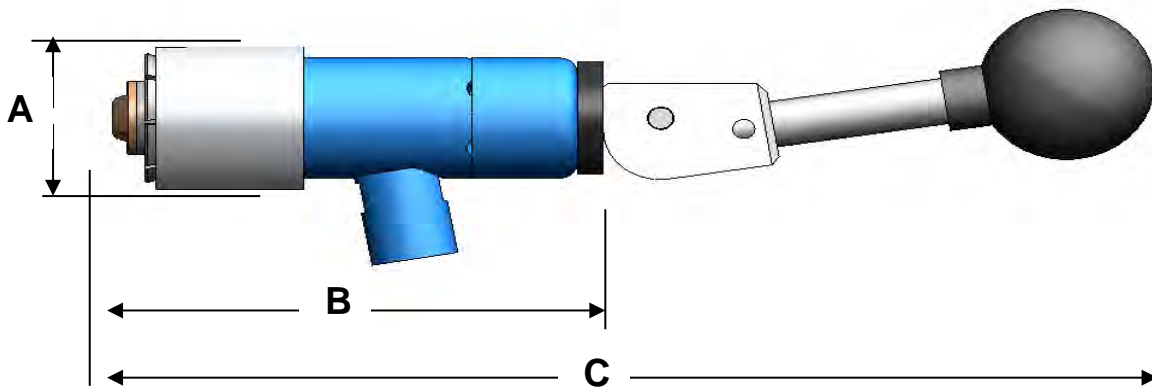
Connector Assembly Detail



Smooth Bore Connectors Sizing Chart



Tube O.D. (Actual)	Model Number
3/8"	SBOI30-0375
1/2"	SBOI31-0500
5/8"	SBOI31-0625
3/4"	SBOI32-0750
7/8"	SBOI32-0875
1"	SBOI32-1000
1 1/8"	SBOI33-1125
1 1/4"	SBOI34-1250
1 3/8"	SBOI34-1375
1 1/2"	SBOI35-1500



Smooth Bore Connectors			
Dimension A	Dimension B	Dimension C	Model Number
1.00"	3.5"	7.5"	SBOI30
1.00"	3.5"	7.5"	SBOI31
1.00"	3.5"	7.5"	SBOI32
1.75"	4.2"	11.3"	SBOI33
1.75"	4.2"	11.3"	SBOI34
1.75"	4.2"	11.3"	SBOI35

Dimensional information is for reference only



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