Standard Molded Seals

Molded Polyurethane Seals for Leak Testing

- **Durable, cut-resistant material**
- **Different shapes and sizes are available to match applications**
- **Molded and sold to a specified durometer in quantity increments of the mold size**

When ordering:

- Must specify durometer
- Must order in increments of the mold size for each seal
- Minimum order is $100
- MasterCard, VISA, and American Express Accepted

Molded Polyurethane material

Non-compressible

Durometer hardness measured on A and some D scales.

Color coded to easily identify durometer.

30 - Yellow
40 - Light Blue
50 - Green
60 - Dark Blue
70 - Red
80 - Black
90 - Orange or Clear

Oil Resistance = Good

Heat Resistance = Excellent

Chemical Resistance = Poor

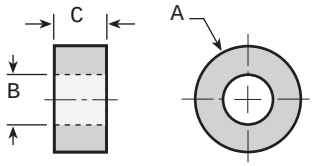
Temperature specifications range from -40 to 150 degrees Fahrenheit

Molded in multi-cavity molds to order

Fluid Compatibility and Comparison of Properties = Call CTS

Cincinnati Test Systems, Inc.
Member of *TASI* - A Total Automated Solutions Inc. Company
5555 Dry Fork Road, Village of Cleves, OH 45002 • Tel. 513-367-6699 • Fax 513-367-5426
Website: www.cincinnati-test.com • E-mail: sales@cincinnati-test.com

Flat Round Seals



Seal Number	Mold Size	Seal O.D. A - dia.	Seal I.D. B - Dia.	Seal Thickness C
HCM-170	12	0.20	0.14	0.07
HCM-161	100	0.25	No Hole	0.50
CTS-25	40	0.31	No Hole	0.30
HCM-139	50	0.35	0.20	0.60
HCM-62	4	0.38	0.06	0.82
HCM-149	100	0.39	No Hole	0.38
HCM-115	50	0.41	0.24	0.38
CTS-9	100	0.42	0.21	0.22
HCM-189	50	0.42	0.25	0.22
HCM-125	40	0.44	0.19	0.13
CTS-27	20	0.44	No Hole	0.80
HCM-50	50	0.50	0.27	0.50
HCM-140	50	0.50	0.28	0.60
CTS-26	40	0.50	No Hole	0.90
CTS-49	25	0.52	0.22	0.25
HCM-155	100	0.53	0.22	0.38
HCM-137	50	0.55	0.25	0.39
HCM-83	2	0.55	0.25	0.38
HCM-87	25	0.55	0.25	0.38
HCM-47	20	0.55	0.30	0.38
HCM-186[1]	40	0.56	0.22	0.38
HCM-49	50	0.60	0.36	0.38
HCM-136	50	0.63	0.35	0.39
HCM-48	50	0.65	0.36	0.38
HCM-86	25	0.68	0.35	0.38
CTS-50	25	0.68	0.37	0.50
HCM-28	50	0.70	0.31	0.38
HCM-81	50	0.70	0.36	0.38
HCM-129	50	0.75	0.23	0.48
HCM-46	20	0.76	0.36	0.38
CTS-33B	20	0.80	0.29	0.38
CTS-33D	20	0.80	0.32	0.38
HCM-41	50	0.80	0.33	0.38
CTS-33A	20	0.80	0.36	0.38
CTS-33C	20	0.80	0.38	0.38
HCM-42	50	0.80	0.41	0.38
CTS-33F	20	0.80	0.42	0.38
HCM-43	50	0.80	0.48	0.38
HCM-44	20	0.80	0.58	0.38

Flat Round Seals

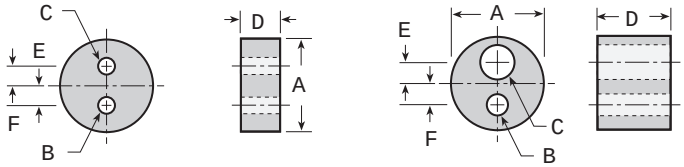
Seal Number	Mold Size	Seal O.D. A - dia.	Seal I.D. B - Dia.	Seal Thickness C
HCM-45	20	0.80	0.63	0.38
CTS-45	20	0.83	0.21	0.38
CTS-40A	12	0.84	0.63	0.50
HCM-138	50	0.85	0.65	0.50
HCM-35	20	0.94	0.53	0.38
HCM-39	20	0.95	0.39	0.19
HCM-35	20	0.96	0.53	0.38
CTS-40B	12	0.97	0.76	0.50
HCM-16	50	1.00	No Hole	0.50
CTS-14	100	1.06	0.32	0.12
HCM-27	10	1.06	0.31	0.75
HCM-12	10	1.06	0.53	0.75
HCM-29[4]	20	1.08	0.54	0.25
HCM-30	20	1.17	0.50	0.38
HCM-132	20	1.17	0.53	0.38
HCM-31	20	1.17	0.63	0.38
HCM-32	20	1.17	0.76	0.38
HCM-15	10	1.18	0.53	0.75
HCM-142	100	1.19	0.16	0.25
HCM-141	100	1.19	0.42	0.25
HCM-36	20	1.21	0.53	0.38
HCM-14	10	1.25	0.53	0.75
HCM-13	10	1.38	0.53	0.75
CTS-44	21	1.38	0.75	0.25
HCM-177	5	1.38	1.00	0.38
HCM-22	10	1.40	0.53	0.75
HCM-37	20	1.45	0.89	0.38
HCM-176[5]	5	1.50	0.90	0.50
HCM-33	20	1.85	0.93	0.38
HCM-34	20	1.85	1.05	0.38
CTS-48	15	1.87	0.54	0.38
CTS-51[6]	15	1.87	0.54	0.38
HCM-193	6	1.90	1.50	0.80
HCM-38	20	1.92	0.89	0.38
HCM-165	25	2.00	No Hole	0.50
HCM-166[7]	10	2.10	No Hole	0.50
CTS-18B	2	2.40	0.75	0.75
HCM-150	50	2.88	2.44	0.25
CTS-18A	2	3.00	No Hole	1.00
HCM-106	1	3.13	2.38	1.00
CTS-41	6	3.29	2.55	0.25
HCM-178[8]	20	3.50	3.00	0.25
HCM-184	2	3.62	3.25	0.50
HCM-185	2	4.00	3.56	0.50
HCM-182[2]	2	4.72	4.33	0.63
HCM-181[3]	2	4.80	4.03	0.38
HCM-82	1	5.64	4.95	0.63
CTS-1A	1	5.70	5.00	0.53
CTS-1B	1	5.82	5.13	0.50
HCM-194	1	11.13	10.38	0.50
HCM-127	1	21.13	13.56	0.13

Special Dimensional Features

1 Chamfer O.D. 0.13 x 45°one end.
2 Two Step I.D. 4.52 x .09 depth.
3 Two .09 mounting holes at r=2.20
4 0.03 radius on all corners
5 Two step I.D. with 1.1 dia. for 0.25 height
6 Two step I.D. with 0.63 dia. to 0.19 depth
7 Smaller pedestal on base at 1.81 dia. x 0.3 height
8 Two step O.D. 3.2 dia. for .25″ height

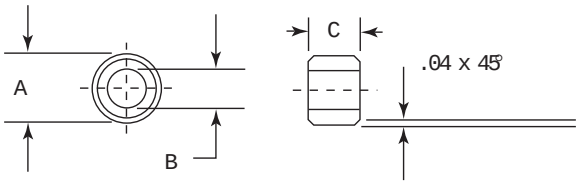
Note: Dimensions are shown in inches and specifications are subject to change without notice.

Flat Round Seals With 2 Holes



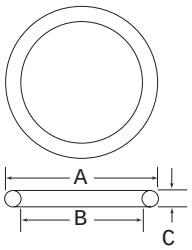
Seal Number	Mold Size	Outside Diameter A - Dia.	Hole Diameters B and C - Dia.	Thickness D	Hole Separations E	F
CTS-8	16	1.85	0.34 each	0.75	0.27	0.27
HCM-18	10	1.85	0.37 each	0.75	0.39	0.39
HCM-108	8	1.85	0.39 each	0.75	0.50	0.50
CTS-28	40	1.12	0.26 and 0.42	0.88	0.25	0.23

Flat Round Seals With Beveled Edges



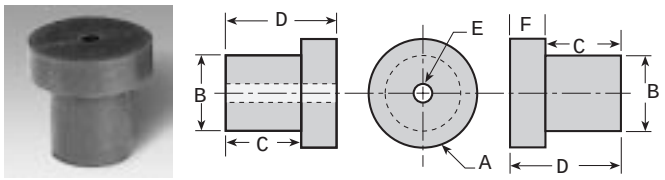
Seal Number	Mold Size	Outside Seal Dia. A - Dia.	Inside Diameter B - Dia.	Thickness C
HCM-73	50	0.52	0.30	0.38
HCM-79	50	0.54	0.30	0.38
HCM-76	50	0.60	0.36	0.38
HCM-74	50	0.64	0.36	0.38
HCM-107	10	0.68	0.41	0.65
HCM-75	50	0.74	0.36	0.38
HCM-77	20	0.87	0.36	0.38

O Ring Seals



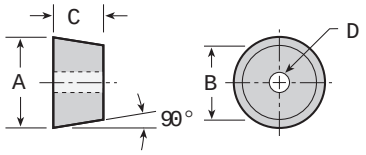
Seal Number	Mold Size	Outside Diameter A - Dia.	Inside Diameter B - Dia.	Thickness Diameter C	Features
HCM-146	10	2.00	1.50	0.25	O RING STYLE
HCM-145	2	2.19	1.68	0.25	O RING STYLE
HCM-65	1	3.05	2.30	0.38	O RING STYLE
HCM-110	1	3.66	2.91	0.38	O RING STYLE
HCM-60	2	3.77	2.95	0.41	O RING STYLE
HCM-109	1	3.91	3.16	0.38	O RING STYLE

Flat Seals With Mounting Stem



Seal Number	Mold Size	Fill Hole	Head Diameter A - Dia.	Stem Diameter B - Dia.	Stem Length C	Overall Length D	Hole Diameter E - Dia.	Head Thickness F
CTS-20D	25	w/o hole	0.50	0.31	0.50	0.69	NA	0.19
CTS-20C	25	3/32 hole	0.50	0.31	0.50	0.69	0.09	0.19
CTS- 43	50	1/4 hole	0.75	0.35	0.36	0.61	0.25	0.25
CTS-11C	100	1/8 hole	0.75	0.50	0.50	0.75	0.12	0.25
CTS-11D	100	w/o hole	0.75	0.50	0.50	0.75	NA	0.25
CTS-19E	50	1/8 hole	1.00	0.50	0.52	0.75	0.12	0.23
HCM-173	25	w/o hole	1.00	0.50	0.50	0.75	NA	0.25
CTS-19F	50	1/4 hole	1.00	0.75	0.50	0.72	0.25	0.22
CTS-19G	50	w/o hole	1.00	0.75	0.50	0.72	NA	0.22
HCM-187	50	w/o hole	1.25	0.50	0.50	0.60	NA	0.10
HCM-221	16	w/o hole	1.25	0.50	0.50	0.88	NA	0.38
HCM-188	1	0.76 hole	1.44	0.98	1.31	1.56	0.76	0.25

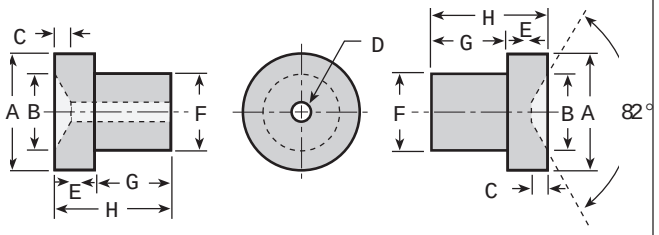
Tapered Flat Round Seals



Seal Number	Mold Size	Larger Outer Dia. A - Dia.	Smaller Diamter B - Dia	Seal Thickness C	Hole Diameter D - Dia.	Features
CTS-10	100	0.83	0.71	0.38	NA	O.D. Tapered 9 Degrees
CTS-13A	49	0.92	0.81	0.50	0.19	O.D. Tapered 9 Degrees
CTS-13B	49	0.92	0.81	0.50	NA	O.D. Tapered 9 Degrees
HCM-78	10	1.24	1.09	0.50	0.75	O.D. Tapered 9 Degrees
HCM-153	2	1.31	1.25	0.50	NA	Tapered half way down on O.D.
CTS-15A	40	1.63	1.50	0.38	1.06	O.D. Tapered 9 Degrees
CTS-15B	60	1.63	1.50	0.38	NA	O.D. Tapered 9 Degrees
HCM-151	5	1.74	1.73	0.12	1.60	I.D. and O.D. 4° Taper
HCM-133	20	1.97	1.85	0.38	0.39	O.D. Tapered 9 Degrees
HCM-144	20	1.97	1.85	0.38	0.63	O.D. Tapered 9 Degrees
HCM-152	5	2.61	2.52	0.50	1.62	Hole chamfered 1.706 to 1.620
CTS-34	1	2.90	2.63	0.88	1.63	O.D.Tapered 5 Degrees
HCM-162	2	4.88	4.76	0.38	3.76	O.D. Tapered 9 Degrees
HCM-148	1	5.13	5.01	0.38	4.00	
HCM-168	2	5.63	5.51	0.38	4.51	O.D. Tapered 9 Degrees
.HCM-124	2	8.70	8.58	0.38	4.91	O.D. Tapered 9 Degrees

Note: Dimensions are shown in inches and specifications are subject to change without notice.

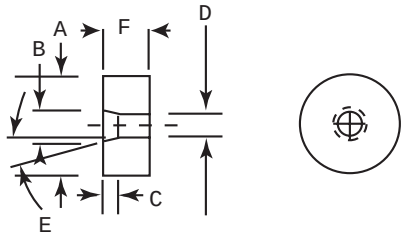
Round Flat Seals with Inverted Bullet Nose and Mounting Stem



Inverted Bullet Nose Seals are primarily used for sealing nozzles, or surfaces inside a cavity.

Seal Number	Mold Size	Head O.D. A - Dia.	Chamfer O.D. B - Dia.	Chamfer Depth C	Hole I.D. D- Dia.	Head Thickness E	Stem Diameter F - Dia.	Stem Length G	Overall Length H
CTS-11E	100	0.75	0.50	0.10	0.12	0.25	0.50	0.50	0.75
CTS-11F	100	0.75	0.50	0.10	NA	0.25	0.50	0.50	0.75
CTS-19H	50	1.00	0.75	0.13	0.25	0.25	0.75	0.50	0.75
CTS-19J	50	1.00	0.75	0.13	NA	0.25	0.75	0.50	0.75

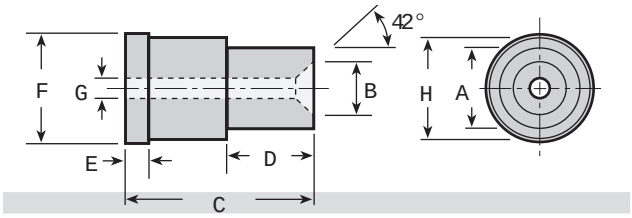
Round Flat Seals with Inverted Bullet Nose (chamfered charge hole)



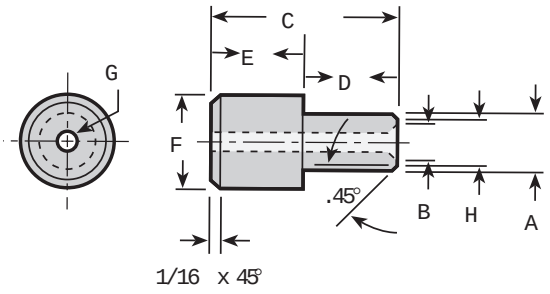
Seal Number	Mold Size	Seal O.D. A - dia.	Chamfer O.D. B - Dia.	Chamfer Depth C	Hole I.D. D - Dia.	Chamfer Angle E	Seal Thickness F
HCM-135	20	0.45	0.38	0.14	0.09	45°	0.43
CTS-33E	20	0.80	0.26	0.13	0.19	15°	0.38
HCM-66[8]	50	0.80	0.41	0.04	0.33	45°	0.38
HCM-67[8]	50	0.80	0.49	0.04	0.41	45°	0.38
HCM-68[8]	50	0.80	0.56	0.04	0.48	45°	0.38
HCM-69[8]	50	0.80	0.56	0.04	0.48	45°	0.38
HCM-70[8]	50	0.80	0.66	0.04	0.58	45°	0.38
HCM-72[8]	50	0.80	0.69	0.04	0.61	45°	0.38
HCM-71[8]	50	0.80	0.71	0.04	0.63	45°	0.38

8 Chamfer on both sides of hole

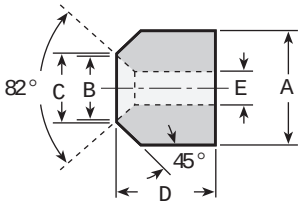
Inverted Bullet Nose Seals



Seal Number	Mold Size	Inner head O.D. A - Dia.	Chamfer O.D B - Dia.	Overall Length C	Inner head Length D	Mounting Stem E	Stem O.D. F	Hole I.D. G	Intermediate Stem H - Dia.
HCM-208	20	0.30	0.21	1.25	0.88	0.38	0.38	0.12	NA
HCM-06	20	0.30	0.25	0.90	0.37	0.12	0.51	0.09	0.50
HCM-07	20	0.35	0.31	0.93	0.37	0.12	0.51	0.09	0.50
HCM-05	20	0.40	0.25	0.94	0.44	0.12	0.51	0.09	0.50
CTS-16	10	0.45	0.31	0.91	0.43	0.37	0.50	0.09	0.49



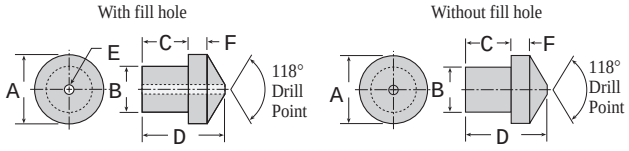
Seal Number	Mold Size	Inner head O.D. A - Dia.	Chamfer O.D B - Dia.	Overall Length C	Inner head Length D	Mounting Stem E	Stem O.D. F	Hole I.D. G	Intermediate Stem H - Dia.
HCM-01	30	0.30	0.18	1.00	0.50	0.50	0.50	0.13	0.25



Seal Number	Mold Size	Outer Diameter A-dia	Chamfer Diameter B - dia.	Outer Diameter C - Dia.	Overall Length D	Hole Diameter E - Dia.
HCM-24	12	1.20	0.75	0.75	1.16	0.44
HCM-23	12	1.55	0.85	0.90	1.35	0.44

Note: Dimensions are shown in inches and specifications are subject to change without notice.

Bullet Nose Seals With Mounting Stem

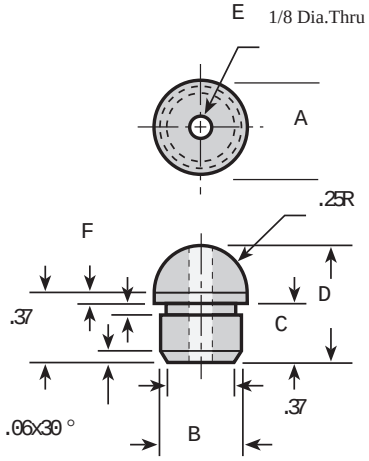


Bullet Nose Seals are used to seal small circular holes. The sloped surface helps them to seek the center. It seals on the edge of the opening, or chamfer which is often machined.

Seal Number	Mold Size	Fill Hole	O.D. A - Dia.	Stem Diameter B - Dia.	Stem Length C	Overall Length D	Hole Diameter E - Dia.	Shoulder Height F
CTS-20B	25	1/8 flat	0.50	0.31	0.50	0.80	NA	0.19
CTS-20A	25	3/32 hole	0.50	0.32	0.50	0.80	0.09	0.19
CTS-11A	100	3/32 hole	0.75	0.50	0.53	0.91	0.09	0.19
CTS-11B	100	3/32 flat	0.75	0.50	0.53	0.92	NA	0.19
CTS-19A	50	1/8 hole	1.00	0.50	0.52	0.96	0.13	0.19
CTS-19B	50	1/8 flat	1.00	0.50	0.52	0.96	NA	0.19
HCM-192	10	0.2 hole	1.00	0.50	0.51	0.93	0.20	0.19
CTS-19C	50	1/4 hole	1.00	0.75	0.50	0.90	0.25	0.19
CTS-19D	50	1/8 flat	1.00	0.75	0.50	0.94	NA	0.19
HCM-204	10	.25	1.50	0.75	0.56	1.54	0.25	0.56

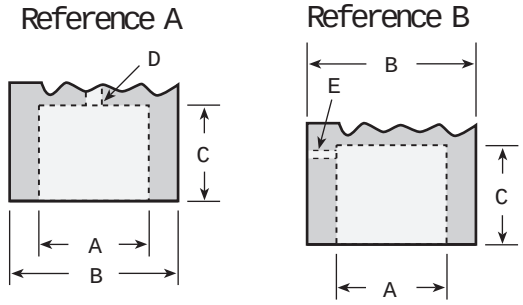
CTS-30 with fill hole

Outside Dimension: 0.50"
Stem Dimension: 0.43"
Other Dimensions: See sketch
Seal Holder †: Ref A



Seal Number	Mold Size	Fill Hole	O.D. A - Dia.	Stem Diameter B - Dia.	Stem Length C	Overall Length D	Hole Diameter E - Dia.	Shoulder Height F
CTS-30	50	1/8 hole	0.50	0.435	0.31	0.62	0.13	0.09

Seal Holder Dimensions

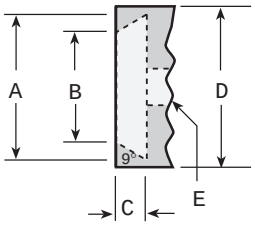


Seal holders with fill holes have no side vent (dim. E) but do have a fill hole (dim. D).

Seal	Hole A Dia.	Holder B-Dia.(Min)	Depth C	Fill Hole D-Dia.	Vent E-Dia.
CTS-11A	0.50	0.75	0.44	3/32	w/o
CTS-11B	0.50	0.75	0.44	w/o	1/16
CTS-11C	0.50	0.75	0.44	1/8	w/o
CTS-11D	0.50	0.75	0.44	w/o	1/16
CTS-11E	0.50	0.75	0.44	1/8	w/o
CTS-11F	0.50	0.75	0.44	w/o	1/16
CTS-16	0.50	0.75	0.44	3/32	w/o
CTS-19A	0.50	0.75	0.44	1/8	w/o
CTS-19B	0.50	0.75	0.44	w/o	1/16
CTS-19C	0.75	1.00	0.44	1/4	w/o
CTS-19D	0.75	1.00	0.44	w/o	1/16
CTS-19E	0.50	0.75	0.44	1/8	w/o
CTS-19F	0.75	1.00	0.44	w/o	1/16
CTS-19G	0.75	1.00	0.44	w/o	1/16
CTS-19H	0.75	1.00	0.44	1/4	w/o
CTS-19J	0.75	1.00	0.44	w/o	1/16
CTS-20A	0.30	0.44	0.38	3/32	w/o
CTS-20B	0.30	0.50	0.38	w/o	1/16
CTS-20C	0.30	0.50	0.38	3/32	w/o
CTS-20D	0.30	0.50	0.38	w/o	1/16
CTS-25	0.31	0.44	0.31	w/o	1/16
CTS-26	0.50	0.75	0.50	w/o	1/16
CTS-27	0.43	0.63	0.50	w/o	1/16
CTS-30	0.43	0.70	0.25	1/8	w/o
HCM-01	0.50	0.75	0.44	1/8	w/o
HCM-05	0.50	0.75	0.44	3/32	w/o
HCM-06	0.50	0.75	0.44	3/32	w/o
HCM-07	0.50	0.75	0.44	3/32	w/o
HCM-16	1.00	1.25	0.25	w/o	w/o
HCM-192	0.50	1.00	0.44	0.2	w/o

Reference C

Reference C is especially designed for tapered molded seals



Seal	Internal Hole Dia. A - Dia.	External Hole Dia. B - Dia.(Min)	Hole Depth C	Overall Holder D - Dia.	Fill Hole E-dia.
CTS-10	0.81	0.73	0.25	1.00	None
CTS-13A	0.91	0.83	0.25	1.00	3/16
CTS-13B	0.91	0.83	0.25	1.00	none
CTS-15A	1.60	1.52	0.25	1.75	1- 1/16
CTS-15B	1.60	1.52	0.25	1.75	none
CTS-34	2.84	2.80	0.25	3.00	1- 5/8

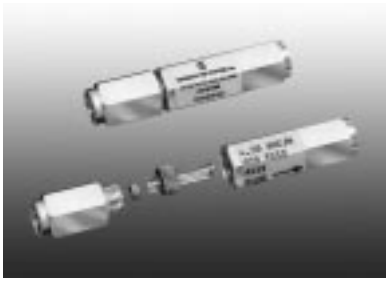
Note: Dimensions are shown in inches and specifications are subject to change without notice.

Quality Leak Testing Equipment & Supplies

Cincinnati Test Systems, Inc ... a leading supplier of quality in-process leak detection systems and instruments for all industries. Combining, the most advanced technology available with field-proven control techniques, the design and manufacture of our products yield optimal performance. From dedicated test stands to fully automated systems, we have the practical experience and engineering know-how to solve your most challenging production leak testing problems.

Calibrated Orifices

Stable glass orifices for flow measurement or leak testing operations are available individually sized to your specific leak rate or air flow requirements. These orifices simplify system calibration, verify system performance and adapt to instrumentation or master parts.



Sizes available from 0.5 to 50,000 sccm at -14.0 to 300 psi. Each orifice is shipped with certificate of NIST traceability. Optional protective housing with filter and line connections is highly recommended.

Sentinel Compact Leak Test Instruments

Sentinel C-20 and 1-21 are high performance, pressure decay leak detection instruments. These technically advanced units can be equipped for single or dual pressure testing. They may also be configured for flow blockage or integrity (burst) testing.

A gauge pressure transducer and 24-bit integrating analog-to-digital converter provide excellent sensitivity and repeatability for a measuring range up to 300 psi. These Sentinel instruments are equipped with a self-calibration feature permitting automatic calibration to a master part. The instruments sequence through two test cycles determining the part volume, baseline adiabatic temperature effect and reject limits. Greater accuracy is provided by dynamic compensation function which corrects for the drift in test results due to changing test conditions such as temperature or elasticity.

Our multitasking software, common to all Sentinel systems, analyzes and communicates accumulated data while performing test functions. With the push of a button or remote cue from a host computer, test results and other test information can be sent to a printer or computer for review and analysis.

We'd be pleased to assist you in any challenges you face with production leak testing problems. Call us for a free application analysis.

Cincinnati Test Systems, Inc.

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