

## G-650 Vacuum Joint Tester

### *Find Tube Joint Leaks Fast*

Quickly test expanded tube-to-tubesheet joints for leakage. Ideal for heat exchanger manufacturers or companies performing retubing operations. The G-650 Vacuum Joint Tester seals the tube I.D. and the tubesheet face, then evacuates the tube end at the joint. A loss of vacuum indicates a leaky tube joint.

Interchangeable manifolds and seal & washer sets allow the G-650 Tool to test tube-to-tubesheet joints on 3/8" to 1 1/4" (9.5mm to 31.8mm) O.D. tubes.

Larger G-650A Vacuum Joint Tester will accommodate tube O.D. sizes from 1 1/2" to 2 1/2" (38.1-63.5mm). Digital Pressure Gauges are also available. Uses standard compressed air supply - 40 to 125 PsiG (2.7 to 8.5 BarG).

#### **Interchangeable**

Manifolds/Seal & Washer sets for G-650 3/8 - 1 1/4 in (9.53 - 31.75 mm)  
& G-650A 1 1/2 - 2 1/2 in (38.1 - 63.5 mm)

#### **Standard Seal Material**

Neoprene, Fluoroelastomer (Viton® or equivalent) optional

#### **Lightweight**

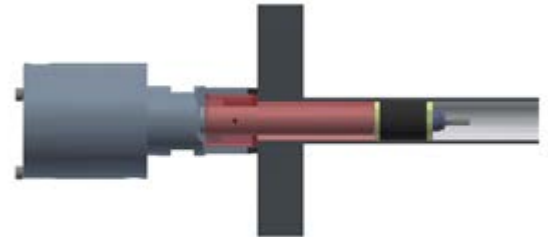
Weighs less than 2.7 lbs. (1.2 kg), when equipped with a 3/4 in manifold

#### **Uses standard plant air supplies**

40 -125 PsiG (2.8 -8.6 BarG)

Compliant with several QA Systems, including; ANSI N45.2,  
10 CFR 50 App. B, and 10 CFR 21

Manufactured in an ISO 9001 registered facility



**G-650**

Nominal Tube Size (inches(mm))	Tube ID Size Range (inches (mm))	Gun Part Number	Manifold Part Number	Square Ring Part Number
3/8 (9.5)	0.28 - 0.34 (7.1 - 8.6)	GSC-6506	GSC-6606	GSC-6706
1/2 (12.7)	0.28 - 0.46 (7.1 - 11.7)	GSC-6508	GSC-6608	GSC-6708
5/8 (15.9)	0.29 - 0.49 (7.4 - 12.4)	GSC-6509	GSC-6609	GSC-6709
5/8 (15.9)	0.50 - 0.59 (12.7 - 15.0)	GSC-6510	GSC-6610	GSC-6710
3/4 (19.1)	0.42 - 0.47 (10.7 - 11.9)	GSC-6511	GSC-6611	GSC-6711
3/4 (19.1)	0.48 - 0.71 (12.2 - 18.0)	GSC-6512	GSC-6612	GSC-6712
7/8 (22.2)	0.55 - 0.84 (14.0 - 21.3)	GSC-6514	GSC-6614	GSC-6714
1 (25.4)	0.67 - 0.96 (17.0 - 24.4)	GSC-6516	GSC-6616	GSC-6716
1 1/8 (28.6)	0.80 - 1.09 (20.3 - 27.7)	GSC-6518	GSC-6618	GSC-6718
1 1/4 (31.8)	0.92 - 1.21 (23.4 - 30.7)	GSC-6520	GSC-6620	GSC-6720

**G-650A**

Nominal Tube Size (inches(mm))	Tube ID Size Range (inches(mm))	Gun Part Number	Manifold Part Number	Square Ring Part Number
1 1/2 (38.1)	1.17 - 1.46 (29.7 - 37.1)	GSC-6524	GSC-6624	GSC-6724
1 5/8 (41.2)	1.30 - 1.59 (33.0 - 40.4)	GSC-6526	GSC-6626	GSC-6726
1 3/4 (44.5)	1.42 - 1.71 (36.1 - 43.4)	GSC-6528	GSC-6628	GSC-6728
2 (50.8)	1.64 - 1.96 (41.7 - 49.8)	GSC-6532	GSC-6632	GSC-6732
2 1/4 (57.2)	1.92 - 2.21 (48.8 - 56.1)	GSC-6536	GSC-6636	GSC-6736
2 1/2 (63.5)	2.17 - 2.46 (55.1 - 62.5)	GSC-6540	GSC-6640	GSC-6740

**G-650/G-650A Manifold**

**Extensions**

For easier testing when a channel head or water box is present.

Length (feet(cm))	Part Number
1 (30.5)	GSC-6700-01
2 (61.0)	GSC-6700-02
3 (91.4)	GSC-6700-03
4 (121.9)	GSC-6700-04

**G-650 / G-650A Neoprene Seal and Washer Set**

BWG	1/2"	5/8"	3/4"	7/8"	1"	1-1/8"	1-1/4"	1-3/8"	1-1/2"	1-5/8"	1-3/4"	2"	2-1/4"	2-1/2"
8-9		0030	0043	0056	0068	0081	0093	0106	0118	0131	0143	0168	0193	0218
10-11		0037	0047	0062	0072	0087	0097	0112	0122	0137	0147	0173	0198	0223
12-13	0028	0040	0053	0065	0078	0090	0103	0115	0128	0140	0153	0178	0203	0228
14-15	0033	0047	0056	0072	0083	0097	0110	0122	0134	0147	0158	0183	0208	0232
16-17	0037	0050	0062	0075	0087	0100	0112	0126	0137	0150	0162	0187	0212	0237
18-19	0040	0053	0065	0078	0090	0103	0115	0128	0140	0153	0165	0190	0215	0240
20-24	0043	0056	0068	0081	0093	0106	0118	0131	0143	0156	0168	0193	0218	0243

**Notes**

1. Tube ID range is for pricing of seal/washer sets only. The actual size needed for the XXXX number is listed in the BWG sizing chart below. For seal sizing and part numbers for SWG, Metric or other tubes, contact EST Group customer service.
2. Seal and Washer sets contain two seals and four washers
3. Standard seal material is (-N) Neoprene. Alternate seal material is (-V) Fluoroelastomer, Viton® or equivalent
4. Caution: G-650 tools cannot be used where the tubesheet is extremely corroded/eroded; where tube ends are flared and flares overlap; or where tube-to-tubesheet joints are welded.

**Ordering Information**

- Please provide tube OD
- Provide tube pitch & weld size if available

*Viton® is a registered trademark of Du Pont Dow Elastomers*

For more information on our full line of Tube Testing Tools, please visit [www.cw-estgroup.com](http://www.cw-estgroup.com)

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