

OPERATING PROCEDURES FOR WING NUT TEST PLUGS

WARNINGS!

PRESSURE TESTING IS INHERENTLY DANGEROUS. STRICT ADHERENCE TO THESE OPERATION INSTRUCTIONS AND INDUSTRY SAFETY PRACTICES COULD PREVENT INJURY TO PERSONNEL. ALL PERSONNEL MUST BE CLEAR OF TEST PLUG DURING PRESSURE TESTING. FOR SAFETY, AN INCOMPRESSIBLE LIQUID SUCH AS WATER SHOULD BE USED AS THE TEST MEDIUM. RESIDUAL AIR OR GAS IS TO BE EVACUATED FROM THE PIPE PRIOR TO TESTING.

1. The pipe to be tested must have an ID within the variance listed in the table below. Position the test plug in a clean, lubricant free pipe end with the whole seal within the pipe.
2. Thread test medium source onto shaft port using hydraulic fluid sealant or other means to ensure leak tight seal. Center plug in pipe with entire seal in pipe ID and begin hand tightening wing nut. A firm seal that securely seats plug should be achieved. This will require strong but not excessive tightening of the wing nut.
3. Begin pressure testing. **NEVER** exceed the pressures listed in the table below.
CAUTION: AS PRESSURE INCREASES, MOVEMENT OF THE PLUG AS LARGE AS 0.10" MAY BE DETECTED. SHOULD MOVEMENT OF THE SHAFT OR PLUG EXCEED 0.10", RELEASE ALL PRESSURE IMMEDIATELY, REMOVE PLUG, EXAMINE, REINSTALL AND BEGIN TESTING IN ACCORDANCE WITH THIS OPERATING PROCEDURE.
CAUTION: KEEP ALL PERSONNEL CLEAR OF PLUG WHILE UNDER PRESSURE. DO NOT ATTEMPT TO ADJUST PLUG WHILE UNDER PRESSURE.
4. After test has been performed remove **ALL** pressure from component prior to loosening wing nut and removing plug. Any plug part which is damaged must be replaced before further testing. Contact factory for replacement part information.
5. Prior to storing, dry all parts of plug and lubricate the shaft threads. Keep these instructions with plugs.

NOMINAL SIZE	PART NUMBER	UNEXPANDED OD +/- 1/8 in (mm)	PLUG RANGE in (mm)	PRESSURE psi (bar)
2 (50 mm)	WNT-0200-N	1.89 (48 mm)	1.94 – 2.12 (49 mm – 54 mm)	10 (0.69 bar)
3 (75 mm)	WNT-0300-N	2.76 (70 mm)	2.82 – 3.12 (72 mm – 80 mm)	10 (0.69 bar)
4 (100 mm)	WNT-0400-N	3.54 (90 mm)	3.60 – 4.12 (92 mm – 105 mm)	10 (0.69 bar)
6 (150 mm)	WNT-0600-N	5.51 (140 mm)	5.57 – 6.12 (142 mm – 155 mm)	6 (0.41 bar)
8 (200 mm)	WNT-0800-N	7.48 (190 mm)	7.72 – 8.20 (196 mm – 208 mm)	5 (0.34 bar)
10 (250 mm)	WNT-1000-N	9.45 (240 mm)	9.80 – 10.20 (249 mm – 260 mm)	4 (0.28 bar)
12 (300 mm)	WNT-1200-N	11.42 (290 mm)	11.56 – 12.20 (294 mm – 310 mm)	2 (0.14 bar)

QUESTIONS? Contact EST Customer Service at any of the following locations with questions.

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On the Internet: www.expansionseal.com

Expansion Seal Technologies is part of the EST Group of companies. **EST Group** provides a complete range of repair products, services and replacement parts covering the life cycle of tubular heat exchangers and condensers; additionally EST provides products and services to facilitate pressure testing pipe, piping systems, pressure vessels and their components. Visit EST Group on the internet at www.estgrp.com.



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Wing Nut Test Plug



Wing Nut Test Plug

Inflate-A-Plug

Threaded Pipe Stopper

Economy Test Plug

Rim Bolt Test Plug

Bolt Type Test Plug

EST's "Plumbers Plug"

EST's Wing Nut Test plug is a low pressure, ported test plug ideal to seal pipe, tube & round holes. The Wing Nut plug is fast and easy to use.

- Cast Iron or Fabricated Steel with Buna-S Seals
- Sizes available 1 1/2" to 24"

Specifications subject to change without notice.



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SPECIALISTS IN TUBE TESTING, SLEEVING AND PLUGGING TECHNOLOGY

AN ISO-9001 REGISTERED COMPANY

Dimensions

Nominal Pipe Size	Part No.	Pipe OD				Maximum Op. Press		Unexpanded O.D. +/- 1/8	
		Min (in)	Max (in)	Min (mm)	Max (mm)	(psi)	(bar)	(in)	(mm)
1 1/2"	WNT-0150-A	1.50	1.75	38.1	44.5	25	1.72	1.38	35.1
2"	WNT-0200-A	1.88	2.25	47.7	57.2	25	1.72	1.75	44.5
2 1/2"	WNT-0250-A	2.50	2.75	63.5	69.9	20	1.38	2.38	60.5
3"	WNT-0300-A	2.88	3.25	73.2	82.5	15	1.03	2.75	69.9
3 1/2"	WNT-0350-A	3.50	3.75	88.9	95.3	15	1.03	3.38	85.9
4"	WNT-0400-A	3.75	4.25	95.3	107.9	12	0.82	3.63	92.2
5"	WNT-0500-A	4.63	5.25	117.6	133.4	10	0.69	4.50	114.3
6"	WNT-0600-A	5.63	6.25	143.0	158.8	6	0.41	5.50	139.7
8"	WNT-0800-A	7.63	8.25	193.8	209.6	5	0.34	7.50	190.5
10"	WNT-1000-A	9.63	10.25	244.6	260.4	4	0.27	9.50	241.3
12"	WNT-1200-A	11.63	12.25	295.4	311.1	2	0.14	11.50	571.5
14"	WNT-1400-A	13.75	14.25	349.3	361.9	2	0.14	13.63	346.2
15"	WNT-1500-A	14.75	15.25	374.7	387.4	2	0.14	14.63	371.6
16"	WNT-1600-A	15.75	16.25	400.0	412.8	2	0.14	15.63	397.0
18"	WNT-1800-A	17.75	18.25	450.8	463.6	1	0.07	17.63	447.8
20"	WNT-2000-A	19.75	20.25	501.7	514.4	1	0.07	19.63	498.6
21"	WNT-2100-A	20.75	21.25	527.1	539.8	1	0.07	20.63	524.0
22"	WNT-2200-A	21.75	22.25	552.5	565.2	1	0.07	21.63	549.4
24"	WNT-2400-A	23.75	24.25	603.3	615.9	1	0.07	23.63	600.2

Standard material: Cast Iron or Fabricated Steel with Buna-S seals.

Ordering Information

When ordering please specify the following information:

- Tube or Pipe I.D.
- Pipe Materials
- Maximum test pressure
- Temperature
- Fluid Medium

Note: Please contact factory for all non-metallic applications such as plastics, concrete, etc. These applications will be evaluated on an as needed basis.

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