

OPERATING PROCEDURES FOR ECONOMY TEST PLUGS**WARNING!**

- **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 WHEN PRESSURE TESTING.**
- **FOR SAFETY, AN INCOMPRESSIBLE LIQUID SUCH AS WATER SHOULD BE USED AS THE TESTMEDIUM. 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 table 1 below. Position the test plug in a clean, dry lubricant free pipe end with the whole seal within the pipe.
2. Center the plug within the pipe. For plug sizes through 1-1/2" nominal hand tighten wingnut initially. Further tighten wingnut with pliers until plug is seated with a firm seal. For 2" nominal plug sizes and above, tighten hex nut until a firm seal is achieved.
3. Begin pressure testing, never exceeding the pressures listed in Table 1 below.

**WARNING! KEEP ALL PERSONNEL CLEAR OF PLUG WHILE UNDER PRESSURE. DO NOT ATTEMPT TO ADJUST PLUG WHILE UNDER PRESSURE.**

4. At the conclusion of the test, release **all** pressure from system, loosen nut, remove and inspect plug. Any plug that is worn or damaged should be replaced before attempting further testing. Contact factory for replacement plugs.
5. Prior to storing, dry all parts of plug and lubricate the shaft threads. Keep these instructions with plugs.

Table 1. Economy Test Plug Specifications							
Nominal Plug Size	Part Number Neoprene	Pressure Rating		Unexpanded Seal OD		Tube ID Range	
		(psi)	(Bar)	(in)	(mm)	(in)	(mm)
3/8	ECY-0046-N	35	2.4	0.43	10.9	0.44 to 0.50	11.2 to 12.8
1/2	ECY-0053-N			0.50	12.7	0.51 to 0.60	12.9 to 15.4
5/8	ECY-0063-N			0.60	15.2	0.61 to 0.70	15.5 to 17.9
3/4	ECY-0073-N			0.70	17.8	0.71 to 0.80	18.0 to 20.5
7/8	ECY-0083-N			0.80	20.3	0.81 to 0.90	20.6 to 23.0
1	ECY-0093-N	15	1.0	0.90	22.9	0.91 to 1.10	23.1 to 28.1
1-1/4	ECY-0113-N			1.10	27.9	1.11 to 1.30	28.2 to 33.2
1-1/2	ECY-0133-N			1.30	33.0	1.31 to 1.70	33.3 to 43.3
2	ECY-0173-N			1.70	43.2	1.71 to 2.10	43.4 to 53.5
2-1/2	ECY-0213-N			2.10	53.3	2.11 to 2.73	53.6 to 69.5
3	ECY-0273-N	10	0.7	2.70	68.6	2.74 to 3.25	69.6 to 89.1
4	ECY-0353-N			3.50	88.9	3.51 to 4.00	89.2 to 101.6

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

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**EST Group** provides a complete range of repair products, services, and replacement parts covering the life cycle of heat exchangers and condensers; additionally EST Group provides products and services to facilitate pressure testing pipe, piping systems, pressure vessels, and their components. Visit EST Group on the Internet at <http://estgroup.cwfc.com>.



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