

WIDDER® TOOLS



HPIINS-10000 Inspection System



The **HPIINS-10000** is a portable, field ready, extremely accurate tool for qualifying and certifying hydrostatic test pump gages. **WIDDER** Hydrostatic Inspection Systems® feature water proof, intrinsically safe, stainless steel construction, as well as, long-lasting 9V battery power. Certified and traceable to NIST standards, the **HPIINS-10000** is accurate to .02% - full range. This accuracy allows detailed inspection of both analog and digital field pumps with an accuracy advantage of 4:1 or greater. Finally, these systems can be sent to HPI Manufacturing for calibration on your schedule.

SAFETY PRECAUTIONS:

IMPORTANT: FOR YOUR SAFETY BEFORE OPERATING THIS UNIT, READ THIS OPERATOR'S MANUAL CAREFULLY AND COMPLETELY. LEARN THE OPERATION, APPLICATIONS, AND POTENTIAL HAZARDS PARTICULAR TO THIS TOOL.

1. Be sure all pressure on air and water fittings is relieved before dis-connecting any hoses or fittings
2. Wear eye protection
3. Pressurization of any materials is dangerous- follow OSHA procedures for stored energy and any pressurization cautions pertaining to the fluids used
4. This system can develop pressure up to the nameplate pressure- do not over pressure test vessels as damage can occur.
5. Use clean water that passes through an in-line strainer (standard on **WIDDER** Hydrostatic Test Systems®)

OPERATING INSTRUCTIONS:

1. Be sure pump unit is discharged of all system pressure.
2. Attach **HPIINS-10000** to the pump output using MIL Grade Teflon tape (supplied); 1-1/2 to 2 wraps. The unit is supplied with a 1/2" NPT Male Swivel and Wrench. Tighten firmly but do not over-tighten.
3. Set both **HPIINS-10000** and any system gages to 0.
4. Charge pump and purge at low/no pressure until air is removed from system.
5. Close off bleed on pump.
6. Charge pump to 5000PSI or 50% of maximum pump output. Do not exceed 10,000PSI
7. Check **HPIINS-10000** against system gages. Typical test tolerance is .5% - see table below.
8. Bleed system to 0 pressure and re-zero both **HPIINS-10000** and pump gages as necessary.
9. Recharge system and repeat test at 25%, 50% and 95% of pump range. **DO NOT EXCEED 10,000 PSI**
10. Record data, date, and **HPIINS-10000** ID # for future reference.
11. Be sure to discharge all system pressure before disconnecting inspection gage.
12. Store gage in supplied case. Keep clean and free from excess dirt, vibration, and heat.
13. Once all pressures read "0" and inputs are off, drain and disconnect test vessel.



Allowable Gage Tolerance (in psi)

Pressure	Percent Tolerance	
	.25%	.50%
1000	± 3	± 5
1500	± 4	± 8
2000	± 5	± 10
2500	± 6	± 13
3000	± 8	± 15
3500	± 9	± 18
4000	± 10	± 20
4500	± 11	± 23
5000	± 13	± 25
5500	± 14	± 28
6000	± 15	± 30
6500	± 16	± 33
7000	± 18	± 35
7500	± 19	± 38
8000	± 20	± 40
8500	± 21	± 43
9000	± 23	± 45
9500	± 24	± 48
10000	± 25	± 50

NOTE: If gage is outside of specified tolerance, it will need to be calibrated. The gage can be calibrated using our high precision calibration unit (**HPICAL-10000**) or it can be sent in for calibration.