



# THERMOWELLS

## Two Part Welded Wells



ACI's two part Welded Thermowells are used with temperature instruments in process systems where gas or liquid medias are used to provide a degree of protection to the sensing element when installed inside of a pipe, tank, or piece of equipment. The thermowell provides easy access for NIST Certified applications and enables users to easily replace the sensor without having to drain the entire system. Thermowells also protect the small diameter sensing probes from stresses created by high temperatures and pressures, corrosive environments, or the flow of gas and liquid medias through pipes or equipment. ACI's standard thermowells are made of 304 stainless steel which ensures long lasting reliability and good corrosion resistance. For applications requiring higher flow rates, corrosion resistance, operating temperatures and pressures, please see the ACI Machined Thermowell product data sheet where the thermowells are machined out of a solid piece

of 304 or 316 Series Stainless steel. Thermal Grease or Heat Transfer paste is not required to be used with any of the ACI Thermowells due to the tight tolerances maintained between the sensor probe and thermowell. When necessary, thermal grease is available from ACI to improve the sensor's response time. Insertion depth should be long enough to permit the entire temperature-sensitive section of the temperature probe to project into the medium being monitored, thus maximizing measurement accuracy. The ACI Welded Thermowell Series is only offered in three lengths in order to eliminate premature failures.

**Applications:** Chilled and Hot Water Systems, Hydronic Heating Systems, Boilers, Pumps, Compressors, Chillers, Refrigeration Systems, Tanks, Aquariums, Process Control Systems, Compressed Air and Gas lines

**The ACI Thermowells are covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, [workaci.com](http://workaci.com).**

### PRODUCT SPECIFICATIONS

<b>Thermowell Hex Size:</b>	1.125" (28.57 mm)
<b>Insertion Length:</b>	See Ordering Grid   Tolerance: +/- 0.060" (+/- 1.524 mm)
<b>Shank Type:</b>	Straight
<b>Bore Inside Diameter:</b>	0.260" +/- 0.003" (6.60 mm +/- 0.0762 mm)
<b>Shank Outside Diameter:</b>	0.375" (9.52 mm) +/- 0.010" (0.254 mm)
<b>Tip Thickness:</b>	0.060" (1.524 mm) +/- 0.010" (0.254 mm)
<b>Tensile Strength (304 Stainless Welded Tube)<sup>1</sup>:</b>	75,000 PSI @ Ambient Room Temperature
<b>Allowable Stress (Factor of Safety = 4)<sup>2</sup>:</b>	15,000 PSI (1034 Bar) (Weld Joint Efficiency = 0.80)
<b>Maximum Allowable Working Pressure<sup>2</sup>:</b>	6392 PSI (440.71 Bar) from -20°F (-28.9°C) to 100°F (37.8°C)
<b>Calculated Burst Pressure<sup>2</sup>:</b>	30,130 PSI (2077.39 Bar)
<b>Maximum Operating Temperature:</b>	700°F (371°C) (Weld Integrity due to Corrosion may occur above 700°F)
<b>Pressure (100% Leak) Tested:</b>	100 PSI nominal @ Ambient Air Temperature
<b>Internal "Instrument" Thread:</b>	½" NPS
<b>External "Process" Thread:</b>	½" MNPT - 14
<b>Material Type:</b>	304 Series Stainless Steel
<b>Surface Finish:</b>	Polished to 16 RMS

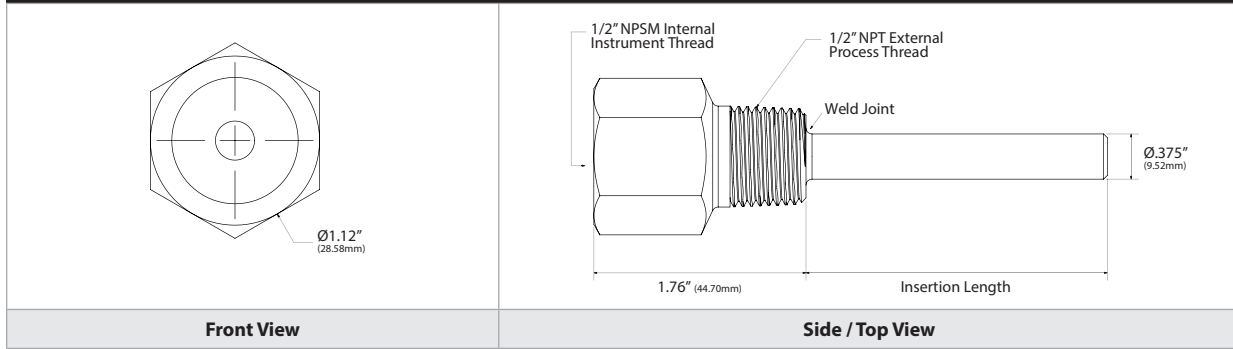
**Note 1:** All maximum ratings have been calculated using the theoretical values of the materials being used | **Note 2:** All of the theoretical pressure ratings above are for reference purposes only using a Safety Factor of 4

### MAXIMUM ALLOWABLE WORKING PRESSURE VS TEMPERATURE RATINGS [304 STAINLESS STEEL]

<b>Temperature:</b>	-20°F (-28.9°C)	100°F (37.8°C)	200°F (93.3°C)	300°F (148.9°C)	400°F (204.4°C)	500°F (260.0°C)	700°F (371.1°C)
<b>PSIG (Bar):</b>	6392 (440.7)	6392 (440.7)	5369 (370.1)	4794 (330.5)	4410 (304.0)	4154 (286.4)	3835 (264.4)



**DIMENSIONAL DRAWING**



**STANDARD ORDERING**

Model # Example: **A/2.5"** -OR- **128349**

Model #	Item #	Description	Material Type	Insertion Length	Internal Thread	External Thread	Shipping Weight
<b>A/2.5"</b>	128349	2.50" 2-Part Thermowell	304 SS	2.50" (63.5 mm)	1/2" NPS Thread	1/2" NPT Thread	0.34 lbs (0.16 kg)
<b>A/4"</b>	128350	4" 2-Part Thermowell	304 SS	4.00" (101.6 mm)	1/2" NPS Thread	1/2" NPT Thread	0.36 lbs (0.17 kg)
<b>A/6"</b>	128351	6" 2-Part Thermowell	304 SS	6.00" (152.4 mm)	1/2" NPS Thread	1/2" NPT Thread	0.40 lbs (0.19 kg)

**ACCESSORIES ORDERING**

Model # Example: **A/3/4" TO 1/2" REDUCER** -OR- **138479**

Model #	Item #	Description
<b>SG</b>	102951	Silicone Grease, 5.0 oz, -40 to 392 °F
<b>NSG HEAT TRANSFER PASTE 2 OZ</b>	102595	Non-Silicone Grease, 2.0 oz, -40 to 320 °F
<b>A/3/4" TO 1/2" REDUCER</b>	138479	3/4" to 1/2" Reducer Steel, 3/4" MNPT to 1/2" FNPT
<b>A/1/8" TO 1/4" ADAPTER</b>	138480	1/8" to 1/4" Adapter Steel, 1/8" FNPT to 1/4" MNPT
<b>A/1/2" TO 1/4" REDUCER</b>	138478	1/2" to 1/4" Reducer Brass, 1/2" FNPT to 1/4" MNPT

