

Thermocouples

Parr offers a variety of thermocouples for use in our reactors and pressure vessels. The standard thermocouple is a Type J (iron-constantan) which is compatible with the operating temperature range of these vessels.

The thermocouples are furnished with a sealed 1/8" OD stainless steel sheath and include a standard plug connection at the end of the probe. Our standard thermocouples are manufactured in accordance to ASTM E230.

Alternate thermocouple materials including Alloys C276 and 600 are readily available. Platinum resistance elements (3-wire RTD) are available as special orders as well as multiple point thermocouples.

Most commonly, in small volume vessels the thermocouple probe is installed directly into the vessel with a compression fitting and in larger vessels the probe sits inside a thermowell. The thermowell arrangement offers protection to the thermocouple from physical damage. We also furnish thermowells in vessels manufactured in

materials other than stainless steel so the thermowell will be the alternate alloy and the thermocouple probe can be stainless steel.

Additionally, dual element thermocouples with two separate thermocouples in a single sheath are furnished in smaller volume vessels for use with accessory temperature meters. We also offer spring loaded thermocouples which are designed to be installed through the heater wall to the outside wall of the pressure vessel.

An extension wire is furnished to connect the thermocouple to the control device. The standard length is 5 feet but longer lengths are available if the control is to be mounted away from the reactor.

Type J Thermocouples with 1/8" Diameter

Part Number	Stem Length, in.	Sheath Material
A472E	7.5	T316 Stainless Steel
A472E2	9.5	T316 Stainless Steel
A472E3	11.5	T316 Stainless Steel
A472E6	15.5	T316 Stainless Steel
A472E5	21.5	T316 Stainless Steel
A472E4	5.5	T316 Stainless Steel
A472E8	2.5	T316 Stainless Steel

Most of the above listed thermocouples are also available as Type K (Chromel-Alumel) or Type T (Copper-Constantan).