

Insulated Electrical Leads Optional Fittings

A variety of insulated electrical leads can be installed in any Parr reactor or pressure vessel for electrical measurements or to supply power to an internal heater or other devices. Three different gland designs are available. These screw into a vessel and will have pressure and temperature ratings to match those of the vessel in which they will be used.

Transducer Glands

Transducer glands are used for applications requiring a number of small insulated wires in a single gland. Wire sizes from 14 to 24 gage are used to carry small currents and voltages in the millivolt range. A unique feature of this design is that multiple wires (up to 16) can be individually insulated through a single gland.

Electrode Glands

Applications requiring a single electrical conductor with current carrying capacities from 20 to 100 amperes and voltage ratings to 2000 volts can be handled with an electrode gland. These glands have a single conductor (or electrode) in sizes from 0.093 to 0.312 inches in diameter, with the ends of the conductor threaded so that internal and external lead wires can easily be attached.

Power Leads

Power leads can be provided with either single or multiple flexible wires in sizes from 14 to 18 gage. Current ratings range from 5 to 20 amperes at up to 600 volts. Either PTFE or ceramic insulation is available. Ceramic glands can be used to the full temperature rating of any Parr vessel. Pressure ratings will vary from 1000 to 10000 psi, depending upon the design of the gland, its size and the type of insulation used.

Miscellaneous Sensors

Parr has installed a number of different sensors in its various reactors and pressure vessels, including both single point and continuous liquid level sensors, pH electrodes and dissolved oxygen electrodes. Each of these installations must be carefully developed in consultation with the user, the electrode or probe supplier and the Parr Engineering Department. Glass electrodes with O-ring seals will obviously carry rather severe temperature and pressure restrictions. There are also space restrictions which generally dictate that accessories of this type can only be installed in 1000 mL or larger vessels.



Multiple
Electric Leads
on the Head
of a Pressure
Vessel

2000 mL Bomb Head
Assembly with Pressure
Relief Valve and Transducer