Installation
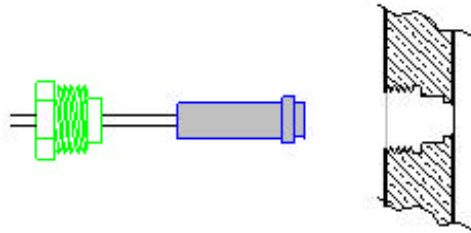
There are 2 common ways of installing an HFM. The first is to use the supplied capture nut, the second is to press fit the gage into your surface.
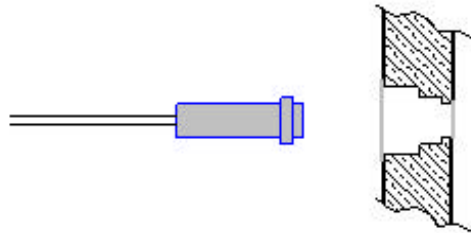
Threading
If using the capture nut, tap a hole to the appropriate specifications (1/2 -20 THD or M12 x 1.75). Then simply screw in the HFM.

Press Fit
If press fitting the gage into a test surface, machine the surface so that there is a 0.0005" interference. Then press the gage into the surface, being careful not to damage the face of the sensor.

Taking Measurements

The face of the HFM has two sensors; an RTS which measures approximate face temperature, and an HFS which measures heat flux. When the sensor is exposed to heat flux the HFS produces a voltage output signal. As temperature changes, the resistance of the RTS also changes producing a voltage output signal from a supplied current.

The HFM is calibrated by Vatell and all necessary information to interpret the output signals is included when you receive your shipment. An equation sheet and the necessary coefficients for each HFM are supplied with the sensor. If a Vatell AMP-6 is used, a disk is also provided with a computer program to convert the HFM output signals from voltage to heat flux and temperature.

Tips for Ensuring Better Results

- Use the gage only in its specified temperature range
- Be certain that the HFM has good thermal contact with the surrounding material
- Avoid touching the face of the sensor
- Send your gage to Vatell to be recalibrated once a year or after extensive use
- Handle the wiring connections with care, they are the most fragile part of the gage

The RTS

The RTS, Resistance Temperature Sensor, is on the face of the HFM to correct the heat flux measurements for temperature. When using the RTS temperature measurements remember that it measures the temperature on the face of the sensor. This temperature could be very different from the temperature of the heat source. **The RTS should not be used as the primary temperature measurement instrument in tests.**