

# MELT PRESSURE TRANSDUCER - Installation Guidelines

## 1. HOLE LOCATION

The best position to mount the transducer is in front of the screw where the polymer is in a good molten state and shear stress is minimized.

For reclaimed extrusion lines, care must be taken that the transducer is situated far enough from hopper to ensure all pellets are melted. Partially melted pellets can damage the tip.

Transducer Housing should be installed such that it doesn't get beyond 150F.

Care must be taken if transducer is mounted on the top of extruder. Heat rises and will heat the housing. If you can touch the housing, it is probably fine. If necessary, flex armour style may be recommended to get housing away from heat.

## 2. DRILLING MOUNTING HOLE

Follow outlines in the DRILL KIT MANUAL. Some points to take care.

### a. MOUNTED HOLES CONCENTRICITY:

The transducer tip must be mounted in the center of the hole (within 0.002").

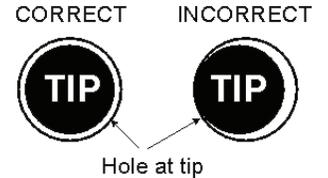
If the tip is not in the center, the transducer tip can be deformed during installation or removal.

This can increase the error, or even cause the tip to fail prematurely.

### b. RECESSING OF THE TIP

The transducer tip should be installed within 0.08" to 0.1" of the interior of the extruder barrel. Any further, and this can create a cavity for polymers to collect, harden and then interfere with the pressure reading.

Some materials (such as nylons and polycarbonates) will actually shrink and pull the diaphragm towards to interior of the extruder. This sometimes causes the diaphragm to be ripped off. These materials should be recessed to approx 0.05".



## MOUNTING HOLE DETAILS

	<h3>FILL COMPARISON</h3> <table border="1"> <thead> <tr> <th>PARAMETER</th> <th>MERCURY</th> <th>NaK</th> <th>FDA OIL</th> </tr> </thead> <tbody> <tr> <td>Fill Material</td> <td>Mercury</td> <td>NaK</td> <td>FDA Oil</td> </tr> <tr> <td>Fill Classification</td> <td>Hazardous</td> <td>Non-Hazardous</td> <td>Non-Hazardous</td> </tr> <tr> <td>Max Tem</td> <td>800°F (400°C)</td> <td>1000°F (538°C)</td> <td>660°F (350°C)</td> </tr> <tr> <td>Suitable - Food / Medical</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Temperature Drift</td> <td>15°F/100°F</td> <td>10°F/100°F</td> <td>30°F/100°F</td> </tr> </tbody> </table>	PARAMETER	MERCURY	NaK	FDA OIL	Fill Material	Mercury	NaK	FDA Oil	Fill Classification	Hazardous	Non-Hazardous	Non-Hazardous	Max Tem	800°F (400°C)	1000°F (538°C)	660°F (350°C)	Suitable - Food / Medical	No	Yes	Yes	Temperature Drift	15°F/100°F	10°F/100°F	30°F/100°F
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