

**INTRODUCTION**

The Dynisco GRMT (Graduated Retractable Melt Thermocouple) are used to measure temperature inside the melt stream. The depth of immersion of the junction into the hot melt stream can be varied from zero to mid-stream during maximum flow and pressure conditions, without removing the unit from the adapter. Temperature measurements at various depths in the melt stream during full operation are now possible with Dynisco's Retractable Melt Thermocouple.

**OPERATION**

Adjusting the setting of the knurled adjusting screw controls the position of the measuring junction. Turning the screw clockwise increases the immersion of the probe. The probe should be brought back to minimum immersion before melt cool down.

Do not force the adjusting screw when resistance is felt. The adjustment screw has a positive stop to prevent accidental removal from the hex nut.

**SPECIFICATIONS**

Thermocouple: 22 Ga. "J" calibration with MgO insulation and 1/8" OD 304SS sheath standard (3/16" protection tube available).

Probe: Exposed junction

Maximum Temperature Rating: 900°C

Body: Stainless Steel with 1/2"-20 UNF x 1-3/4" thread on 3", 5" or 7" standard body length; 3/8" wrench flats.

Immersion Range: Flush – 1" and Flush – 2 1/2" standard.

Pressure range: 15,000 psi

Reference End Termination: Polarized male plug rated at 475°F.

Adjusting Mechanism: Adjusting screw with positive stop to prevent accidental disengagement under full pressure operation. Lava gland and follower for pressure seal inside standard or graduated hex nut.

**INSTALLATION**

Prior to replacing complete the probe:

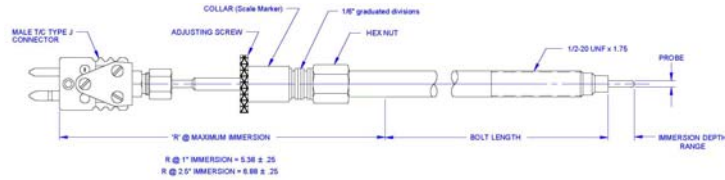
- A. Retract element to minimum immersion while plastic is hot.
- B. Allow machine to cool.
- C. BE ABSOLUTELY SURE THAT THERE IS NO PRESSURE WITHIN THE BARREL BEFORE REMOVING THE MELT THERMOCOUPLE OR ANY OF ITS COMPONENTS!

1. For operation under pressure, hex nut must be tighten on body at least hand tight to crush lava gland.
2. To insert or remove body, use 3/8" wrench flats – DO NOT use hex nut or polarized plug.

| DESCRIPTION   | MODEL | IMMERSION DEPTH<br>CODE   LENGTH       | SENSOR<br>CODE   TYPE                           | PROBE<br>OUTSIDE DIA                       | BOLT<br>LENGTH                   | ELEMENT<br>STYLE   | MATERIAL                          |
|---|-------|--|---|--|----------------------------------|--|-----------------------------------|
| GRADUATED RETRACTABLE MELT THERMOCOUPLE (1/8" GRAD) | GRMT  | 45   FLUSH TO 1"<br>47   FLUSH TO 2.5" | 2   J (STD)<br>4   K<br>9   RTD<br>SPECIFY TYPE | 1/8"<br>1/8" WITH<br>3/16" PROTECTION TUBE | 0.3   3"<br>0.6   6"<br>0.9   9" | S   SINGLE (STD)<br>D   DUAL<br>U1   2 WIRE RTD<br>U2   3 WIRE RTD<br>DU1   DUAL 2 WIRE RTD<br>DU2   DUAL 3 WIRE RTD | BLANK STD<br>HAST C   HASTELLOY C |

**Figure 1. Graduated Retractable Melt Detail (GRMT4522)**

The Graduated Melt Thermocouple (GRMT4522) provides graduated divisions spaced equally spaced apart on a modified hex nut. A collar is attached to the thumb screw to form the scale marker. The total number of divisions visible indicates the degree of retraction from full immersion. Full immersion lengths are available in 1" and 2.5" versions.



**Figure 2. Dimensional Assembly**

**THERMOCOUPLE REPAIR**

Questions concerning warranty, repair cost, delivery, and requests for a RA# should be directed to the Dynisco Repair Department, 508-541-9400 or email: repair@dynisco.com. Please call for a return authorization number (RA#) before returning any product. Damaged thermocouples should be returned to:

Dynisco Instruments  
Attn: RA # \_\_\_\_\_  
38 Forge Parkway  
Franklin, MA 02038

**TECHNICAL ASSISTANCE**

Please call 800-221-2201 or 508-541-9400 or fax 508-541-9436.

**WARRANTY**

This Dynisco product is warranted under terms and conditions set forth in the Dynisco Web Pages. Go to [www.dynisco.com](http://www.dynisco.com) and click on "Instruments". Click "Product Warranty" at the bottom of any page for complete details.

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# SENSORS

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## INCORPORATED

507 Kelsey Street • Delano, MN 55328  
Phone 763-972-1040 Fax 763-972-1041  
Toll Free 888-920-0939  
[Sensorsincorporated.com](http://Sensorsincorporated.com)