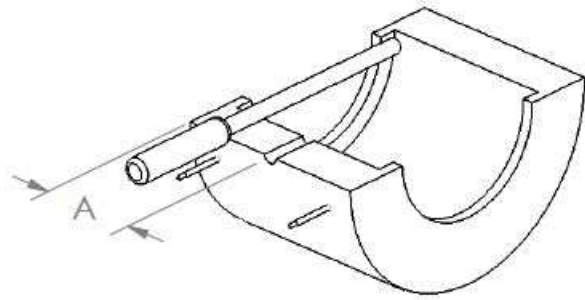
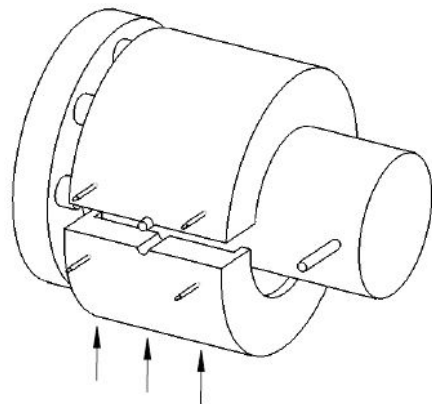


6



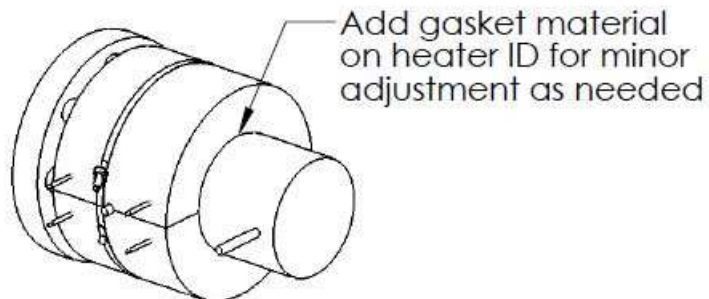
Use measurement A from step 4 to locate where the thermocouple will lie within the first set of heater halves. Use a 5/8" diameter round file to cut **half** the of the thermocouple hole on each heater half. **Do not exceed 3/8" depth of cut on either half!**

7



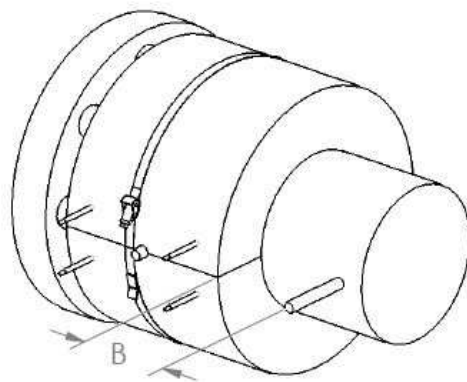
Place the heater halves on the barrel, and place the strap(s) around the heater. Two straps are supplied for any heater 9.25" or longer. **Move to step 8 before tightening the strap!**

8



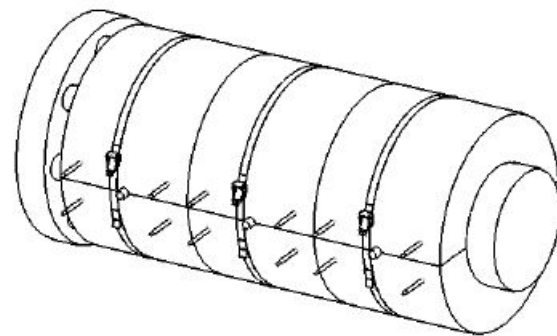
Secure the heater to the barrel firmly by fastening the strap(s) to a maximum of 10 in-lb. **Over tightening can cause damage to the heater,** however the heater should not be movable by hand when tight. Align the straps on each heater in a way that allows for the cable tray to be installed level across the barrel. See the diagram above step 1 for reference on how the cable tray will be installed.

9



Measure dimension B from the edge of the first installed zone to the center of the next zone thermocouple.

10



Repeat installation steps for each zone. There should be little or no gap between zones, and the last heater will generally stop short of the end cap.

11

Check before wiring!

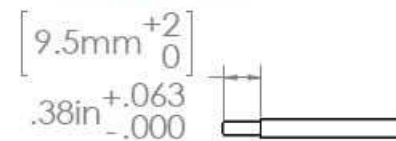
Note the voltage printed on each heater half and also specified on the BOM document.

Heaters are rated in halves. Heater halves must be wired in series; when zone voltage is twice the marked heater voltage, and in parallel if zone voltage is equal to the marked heater half voltage. Jumper wires are supplied in the TCS System Kit if the design called for heaters to be wired in series. See step 12 prior to making electrical connections.

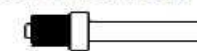
12

Care Required!

1. STRIP INSULATION FROM WIRES



2. INSERT WIRE INTO MALE END OF CONNECTOR



3. SCREW MALE END INTO CONNECTOR BODY AND TIGHTEN



4. REPEAT FOR SECOND WIRE

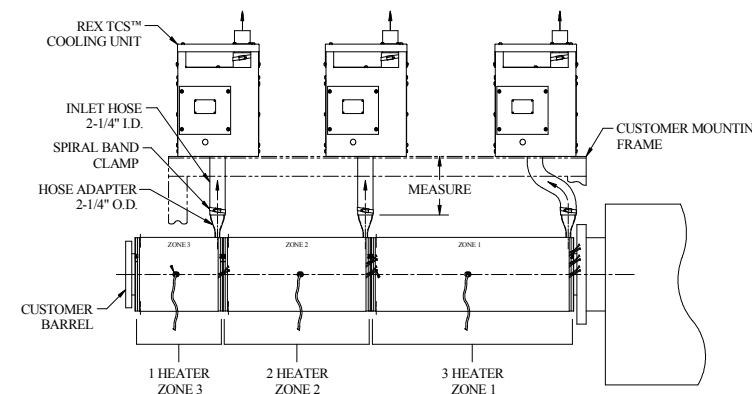


TCS barrel cooling
Installation guidelines

cooling incorporates a flexible design for continuous extrusion, blow molding, and some injection molding applications. In extrusion and blow molding applications Cooling Units can be used to cool individual zones using an existing heat and cool temperature controller. In injection molding applications cooling can be applied to a section of the barrel or to the entire barrel to accelerate job changeovers from high to low temperatures. Follow steps C1-C6 on the following

Zone Cooling Option

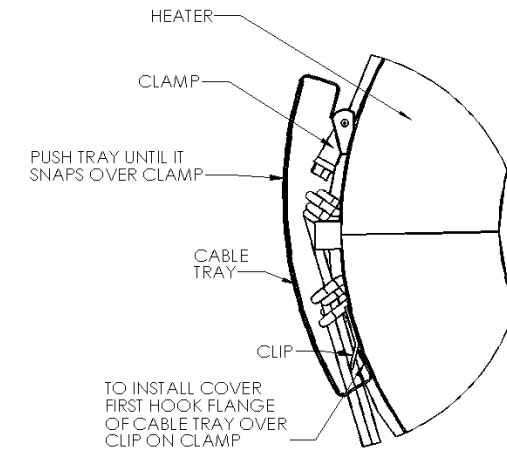
- Must utilize a temperature controller with separate heating and cooling signal outputs.
- Each zone is cooled using separate Cooling Unit(s), end rings, and hose adaptor hardware.
- Hot air from the barrel can be directed away from the machine in any direction, and can be exhausted from the building using a header pipe if desired.
- Ideal inlet hose length range is 1 to 3 ft. Additional hose length can diminish cooling capacity.
- The diagram below shows three individually cooled zones.



Before Installing - See the diagram above step 1 for a visual of the installed cable tray.

13

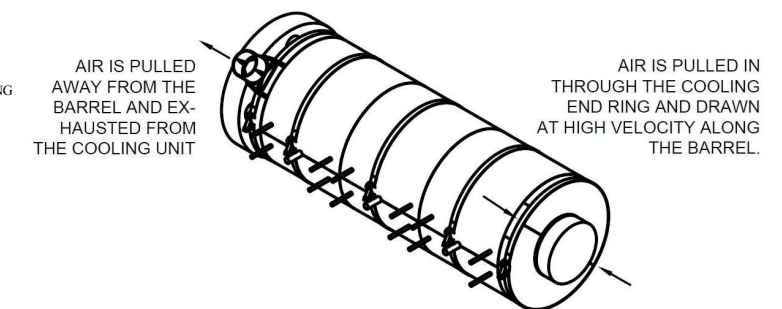
Snap the Cable tray covers onto the heater straps and over the wires and terminals as shown by hooking one flange of the tray under the clip and then snap the top of the cable tray over the clamp on the strap. Straps must be aligned along the zones to ensure the cable tray is mounted straight along the heaters. Wires can be neatly routed underneath the cable trays. Minor modifications can be made to the cable trays upon installation to allow for thermocouple adaptors and other possible interference points.



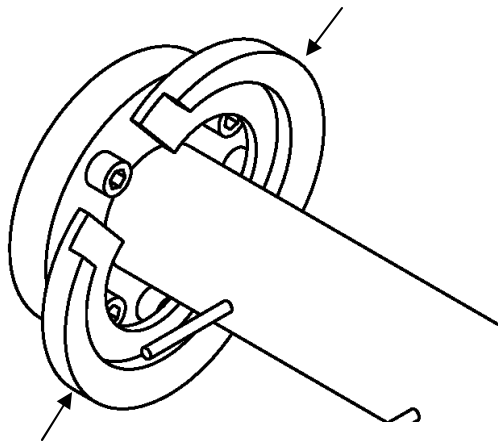
TCS barrel

Barrel Cool Down Option

- A single Cooling Unit may be utilized to cool the entire barrel or separate Cooling Units can be used for sections of the barrel to further accelerate barrel cool down.
- Can be wired to use a signal from a hard or soft switch, timer, or from a temperature controller over-temperature alarm signal.
- Any logic used to activate the barrel cool down should not allow the Cooling Unit to operate when heater output is on.
- The diagram below shows a three zone injection barrel set up for barrel cool down with a single Cooling Unit.

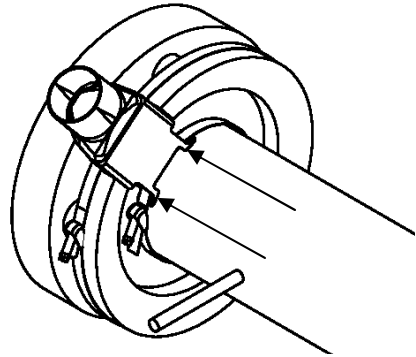


C1



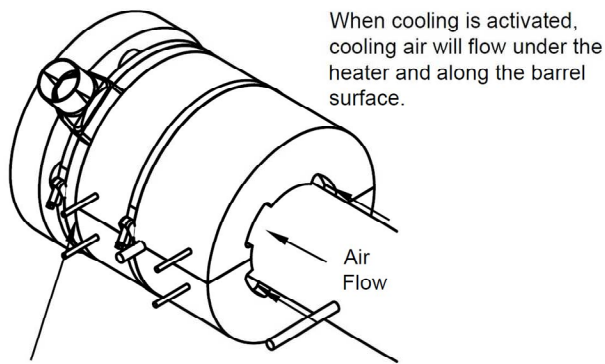
Care required!
Carefully place, then secure the first end ring firm to the barrel using the strap supplied. Fasten the strap to a maximum of 10 in-lb. The ring should be placed on the barrel flush against the feed end bolt heads or platen.

C2



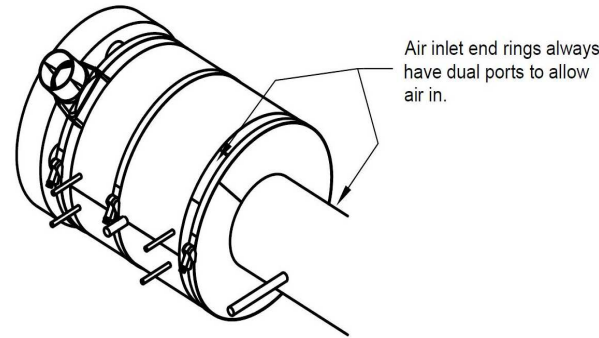
Install the hose adaptor(s) specified. Push the adaptor all the way back into the inlet end ring cavity. If the BOM calls for two hose adaptors in a single zone or barrel cooled section, both adaptors are fastened with the same clamp and are to be installed 180° from each other.

C3 Install specified heater(s) per the BOM layout and installation steps.



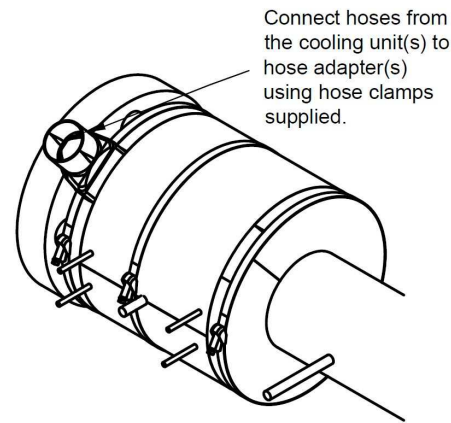
When cooling is activated, cooling air will flow under the heater and along the barrel surface.
The heater should be pushed flush against the end ring with no gap. Gaps around the barrel hose adapter should be filled using the Pyrolite EZ-Fill tube in your cooling install kit. This material is applied to prevent air from "shorting" into this end of the zone resulting in lower air flow. Do not substitute for EZ-Fill material.

C4



Install the air inlet end ring flush against the heater to encapsulate the area for barrel cooling. The air inlet ring will allow for air to enter and flow under the heater as shown in C3.

C5

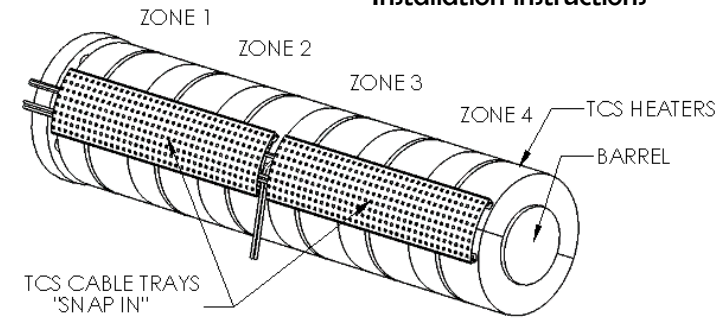


Install BOM indicates cooling unit zone designation. Refer to DOC-0200001, DOC-0200002, and DOC-0200003, for details on Cooling Unit mounting and wiring.



TCS barrel heating & optional cooling system

Installation instructions

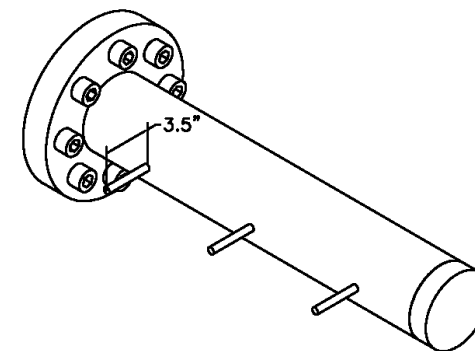


- **For additional installation, safety and troubleshooting information please visit www.rexmaterials.com**

1

- Remove power to the machine and follow lock out tag out procedures.
- Disconnect and mark lead wires, and then remove existing heater bands.
- Clean the barrel surface with an emory cloth and rag to remove excess dirt, rust, or burrs. A perfectly smooth surface is not required.
- Comply with requirements and recommendations outlined in safety document DOC-0300002 during the installation process. This document is available in the package with each heater.
- If your system was supplied with a cooling option read steps C1 thru C6 before starting installation of heaters.

2



Replace thermocouple adaptors with a longer adaptor if the existing adaptor is shorter than 3.5". 4" adaptor length is recommended. Thermocouple adaptors are not included in the TCS System kit.

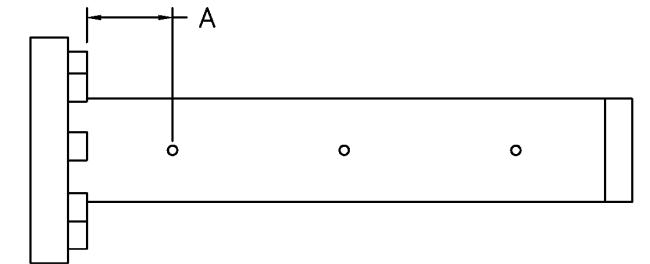
3

TCS-0xxxxx TCS System Kit

Zone	Qty per zone	Item Number	Description
1	1	TCS-120xxxx	TCS HTR HALF x.xD12.0L480VxxxxW
1	2	TCS-070xxxx	TCS HEATER STRAPS x.xD
1	2	TCS-060xxxx	TCS CABLE TRAY xL
1	1	TCS-060xxxx	TCS JUMPER WIRE x.xL
2	2	TCS-120xxxx	TCS HTR HALF 5.5Dx.xL480V5290W
2	2	TCS-070xxxx	TCS HEATER STRAPS x.xD
2	2	TCS-060xxxx	TCS CABLE TRAY xL
2	1	TCS-060xxxx	TCS JUMPER WIRE x.xL

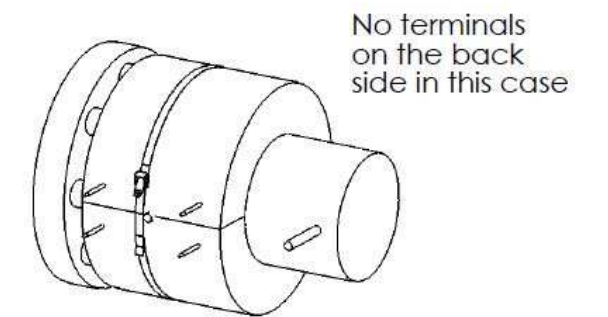
Review the installation BOM for your specific machine make, model, and size to identify all parts needed for each zone.

4



Measure distance A from the starting point on the feed end of the barrel to the center of the first thermocouple. The starting point should be the edge of the feed end platen or bolt heads.

5



Check before installing! Heater halves are supplied with two terminal connections on each half. The two terminals on a half could be on the same or opposite sides depending upon the length of the heater. In the case where both terminal connections are on the same side of each half the heaters should be installed such that all four terminals are on the same side of the barrel.