

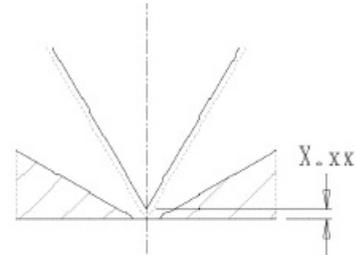
Length of nozzle

Heat expansion of the nozzle must be considered in order to ensure minimum vestige on the part. Expansion values (X.xx) for various temperatures and nozzle lengths are illustrated in the table below:

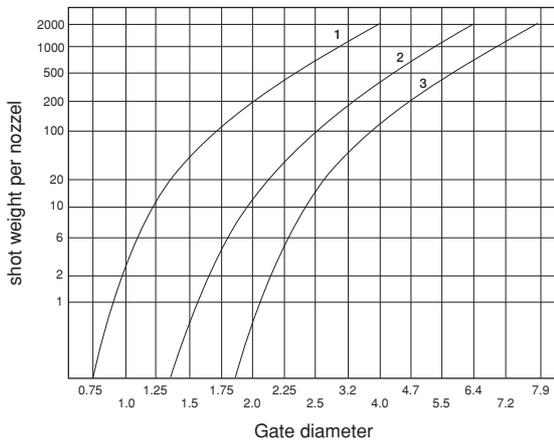
Length Expansion (L1 = L + X.XX) (mm)

T	L	40	60	80	100	120	140	160	180	200
200		0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4
250		0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
300		0.1	0.2	0.3	0.3	0.4	0.5	0.5	0.6	0.6
350		0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.8

(table 1)



Gate diameter



1. low viscosity :PS PE PP
2. medium viscosity :ABS SAN PA POM
3. high viscosity: PC PMMA

Note 1: for filled materials ,gate diameter should increase 20%

Note 2: for TP nozzle ,gate diameter should decrease 30%.

The typical gate diameter is 2mm and can be increased to 5mm. The taper angle is 1.5°. The diagram above is a guideline for gate diameters needed for various plastics and shot weights.

Note: If the gate diameter is too small, an unnecessarily high bushing temperature will have to be set for the gate not to freeze between shots. The suggested figures are approximate. Gate dimensions may be influenced by the shape of the part and the design of the mould, etc.

The balance between shot weight, injection speed, mould temperature, temperature opposite the gate, cooling around the gate, and injection pressure are all factors that affect gate size. A small gate freezes quicker than a large gate. When injection moulding with very short cycle times and short injection times, it may be necessary to design gate cooling so that the gate area does not overheat.

If the sprue bushing is feeding a runner which has a gate into a cavity, it may be suitable to make the bushing gate larger than actually necessary in order to reduce pressure drop and shear. If an electric sprue bushing is used, this will reduce the length of flow in cold steel therefore allowing the reduction of the cross section of the cold runner. This is important in order to get the shortest possible cycle time. Start with a smaller gate than indicated in the table.

Wiring instructions

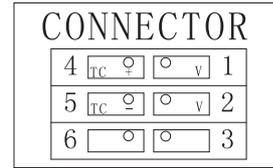
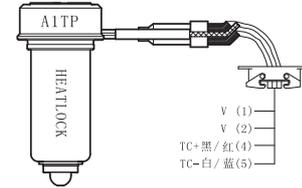
Attention: Only connectors designed to match the temperature Controller are to be used.

Heater and T/C wiring must not be connected in parallel.

6 Pin Connector

HEATLOCK connections as per illustration at right:

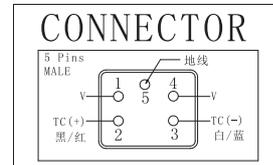
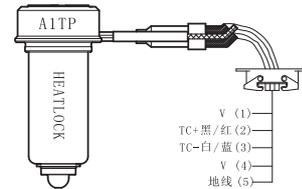
1. connect (1)(2) with heater.
2. connect T/C wire (black/red) with (4).
3. connect T/C wire (white/blue) with (5).
4. connect mould with ground wire & insert.



5 Pin Connector

HEATLOCK connections as per illustration at right:

1. connect (1)(4) with heater.
2. connect T/C wire (black/red) with (2).
3. connect T/C wire (white/blue) with (3).
4. connect mould with ground wire & insert.



Instructions for replacement of heater or T/C

Attention: For best performance use HEATLOCK original components.

Disassembly:

1. open lock ring.
2. slide reflector off of nozzle.
3. remove adhesive tape from heater & T/C .
4. carefully slide heater off of nozzle.

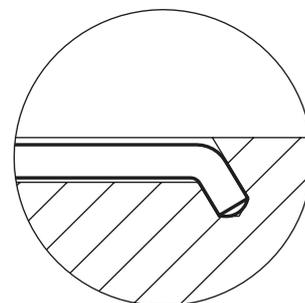
Assembly

If necessary, replace T/C by inserting new T/C into small hole at the end of slot. Ensure that the tip is in full contact with the bottom of the bore before bending the T/C along the slot. Install heater onto nozzle ensuring that the T/C is not displaced. Bundle the heater and T/C together using high temperature adhesive tape.

When reassembling the tip to the nozzle body or installing a replacement tip, please use the torque settings provided in Table 2.

Nozzle assembly torque	
Size No.	Torque (N-m)
size1	15
size2	20
size3	25
size4	30

(table 2)



If there are any problems encountered during assembly, please call: (86) 769 8382 5600.