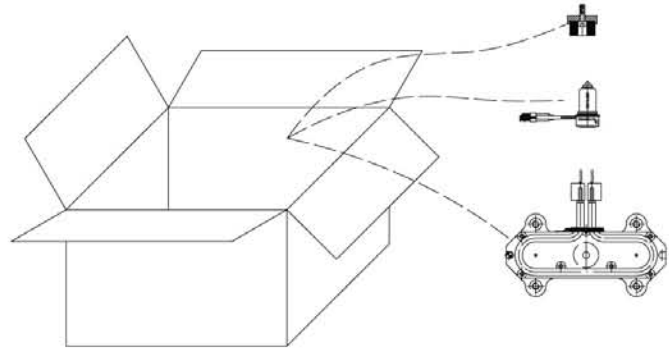


Step 1: Unpack

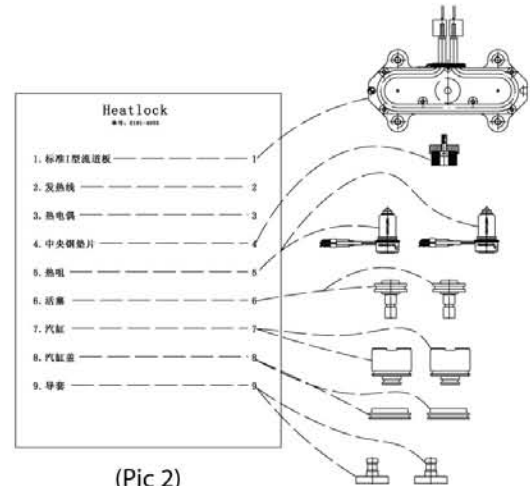
Carefully take out of all the components from box (refer to Pic 1)



(Pic 1)

Step 2: Be familiar with all components

Make sure all the components on the list are provided. Then begin to check each part. (refer to Pic 2)



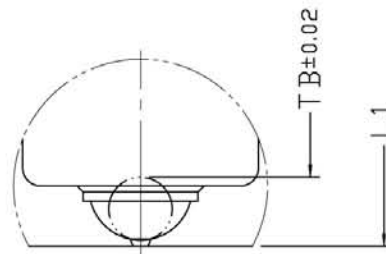
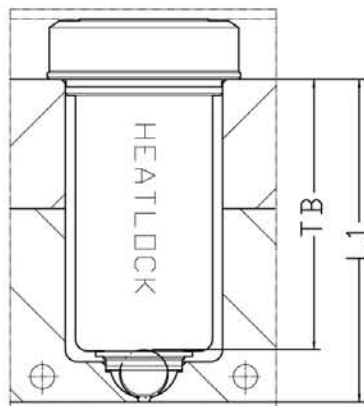
(Pic 2)

Step 3: Check dimensions

Measure mold plate thickness and pocket depth. Compare the measurements with those dimensions on the Hot Half drawing, make sure they match requirements on HEATLOCK GA drawing.

The form is TB dim. of standard nozzle

TB Dim.				
	Size 1	Size 2	Size 3	Size 4
Dia. 6	L1-6.72	L1-6.69	L1-6.96	L1-6.68
Dia. 12		L1-12.75	L1-13.08	L1-12.96



Step 4: Clean plate and every components, remove all the burrs

Use air pressure gun and grease presser to clean all the plates and every components, use muller to smoothen chamfer and remove chamfer. In this manner, heat wire and related components won't be scratched.

Step 5: Check, clean air vent

This step is for sure there is no steel chips and other impurities inside the air vent, to make the piston move smoothly.

Step 6: Install nozzle

Nozzle should be placed in the center of nozzle bore.

Step 7: Measure nozzle

Use digital micrometer to measure height of nozzle, on the top of nozzle, choose three datum points, compare measure result to make sure the top of nozzle is on the same horizontal plane to avoid leakage during operation.

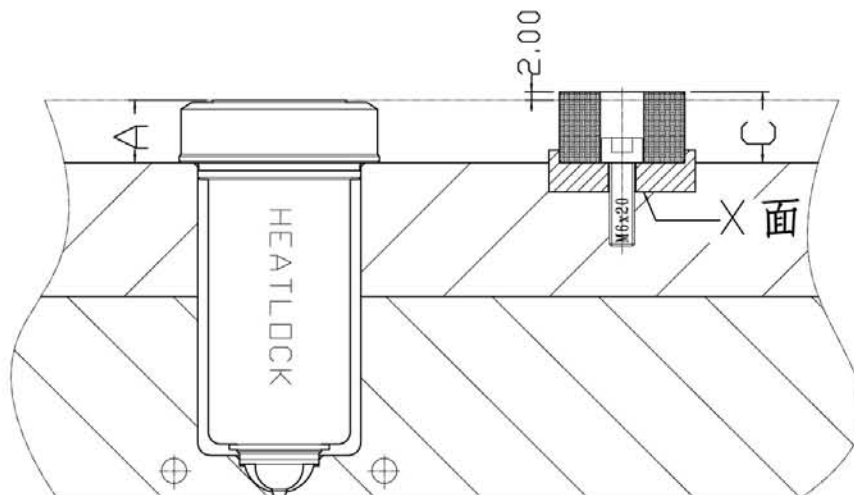
Step 8: Set up nozzle wire

According to ID card, bind each zone's power wires and T/C with tape, number each power wire and T/C, which is related to the numbers on connector(s), next lay the wires along the groove then hold wires with clamp sheet.

Remark: Never cut wires before you assemble the rest of components.

Step 9: Install dowel pin and center location ring

1. Put dowel pin in the mold. (make sure the height match requirement)
2. When location ring is in the mold, refer to drawing to measure nozzle head height A and height of center location ring C. Grind X surface to keep $A=C-2\text{mm}$ (-0.05mm is acceptable) to make manifold placed horizontally. (refer to Pic 3)



(Pic 3)

Step 10: Install manifold

1. Before assembling manifold, according to Check List to check content and tick on the related item.
2. Place valve seal on manifold.
3. Install other components on manifold including feedbush, tubular heater, T/C and screws, etc. If there is feedbush heater, make sure wire connection joint shall face to the Top.
4. When assembling manifold, make sure parallelity.

Step 11: Install holding plate

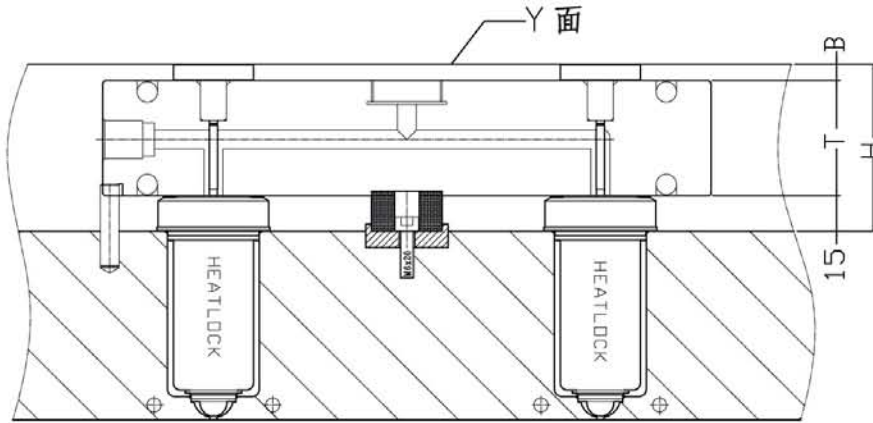
Install holding plate on the mold (make sure no press on wire section), wind manifold wires (or feedbush wires) going through holding plate to connector. According to ID card, bind each zone's power wire and T/C together, cover the wires with number tub related to the numbers on the connector(s).

Step 12: Install ID card

Put ID card in the slot which is 0.2mm wider than ID card.

Step 13: Check the dimension of valve seal

According to Valve seal calculation formula $B=H-T-15-\Delta t$, check height B. If necessary, grind surface Y. (Height can be reduced by what is equal to heat expansion), refer to Pic 4. In the formula, "15" is nozzle head height, Δt is heat expansion.



(Pic 4)

Manifold heat expansion

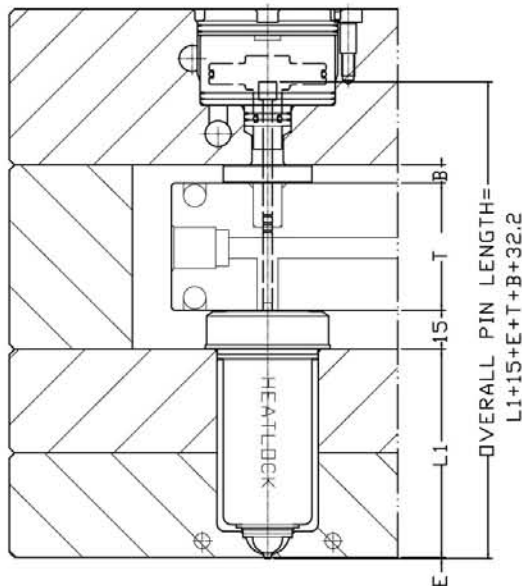
UOM: mm

Δt Heat Expansion			
°C	T=36	T=46	T=56
200	0.04	0.06	0.09
250	0.07	0.1	0.13
300	0.11	0.14	0.17
350	0.14	0.18	0.21

Step 14: Grind valve pin

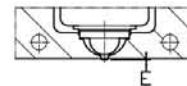
1. Valve pin provided is overlength and without chamfer.

Use formula $OVERALL\ PIN\ LENGTH=L1+15+E+T+B+32$ to calculate the necessary valve pin Length (refer to Pic5)

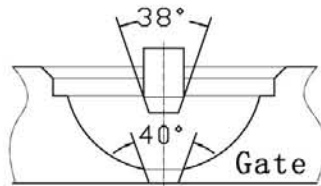


(Pic 5)

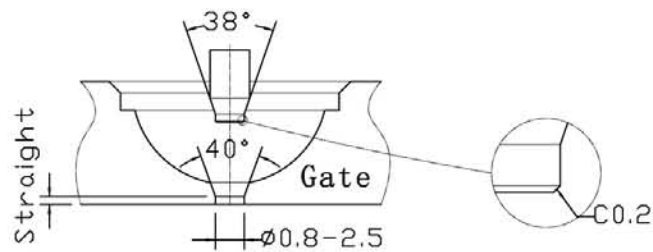
*E is the pin length out of parting line decided by customer.



- Grind valve pin. There are two options, one is to grind a 38 degrees chamfer at the bottom directly (refer to Pic6); the other one is to grind a straight section first, then grind a transition chamfer 38 degrees (refer to Pic7). After that , applying grinding oil at the front of pin and put it into nozzle, further grind together with gate well to make sure valve pin chamfer suits gate well perfectly.



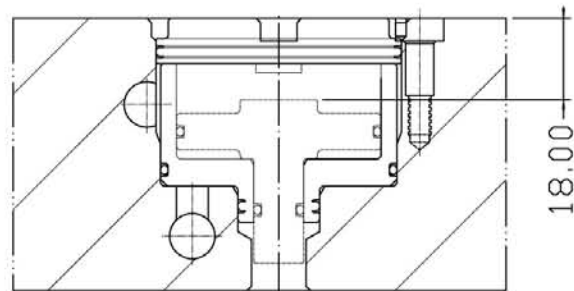
(Pic 6)



(Pic 7)

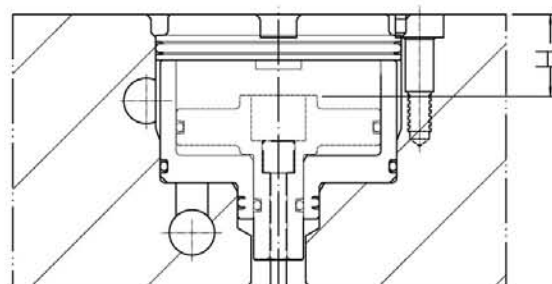
- Check up length of valve pin

Step 1. install piston in cylinder without valve pin,press the piston and measure the distance between cylinder and piston, our standard distance is 18.00mm. (refer to Pic8)



(Pic 8)

Step 2. Take out piston. Install valve pin in it. Then install piston in cylinder again. Measure the distance between Clamp and cylinder H, refer to Pic 9. Adjust to $18.00-H=0.1\sim 0.2\text{mm}$.



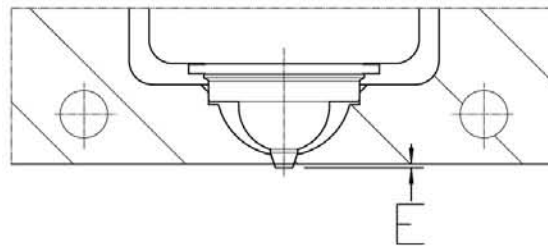
(Pic 9)

Step 15: Install clamp plate and valve nozzle components

1. Install valve pin viton oring
2. Put piston inside cylinder, next fix the assembled cylinder on the clamp plate, after that locate clamp plate
3. Put the well examined valve pin inside piston, then use grub screw to fasten pin.
4. Put cylinder lid on the top of cylinder and fasten it with screws.

Step 16: Test valve pin

Pump low pressure air into cylinder, move pin to the end. Measure the distance between the top of pin and gate well and adjust this length to make it equal to E which is decided by customer (refer to pic 10)



(Pic 10)

Step 17: Install location ring

Use screw to fix location ring onto clamp plate.

Step 18: Set up wiring

Connect power wire and T/C referring to ID card. (Note: Mold must be connected to earth)

Change Coilheater and thermocouple notice:

For fear that the function of HRS may be affected, you must use Heatlock original accessories.

Step 19: System wiring check

Use multimeter to check if there is short cut and leakage in the circuit.

1. Check short circuit of grounding, check edge continuity between earth pin of power supply wire of mould (with metal label on sideways) and manifold body shall be 1Ω .
2. Check open circuit to the ground
Measure resistance between each pin of mold power socket and earth (mold base). Display should be infinity. Some times, electronic heater will accumulate thick dust layer which may reduce resistance to $10K\Omega$ - $250K\Omega$. Controller should have a function of removing dust when starting up. If insulated, resistance should be lower than
3. Check T/C circuit
Check resistance between mould T/C power supply wires, resistance shall be between 1Ω - 20Ω .
4. Check heater circuit
When check resistance between heater power supply wires, resistance shall be within of $\pm 10\%$ actual resistance.

Step 20: Heating-up test

Connect temperature controller, rise temperature per each zone and check the temperature. Be sure to do heating up test one zone by one zone; when the temperature keep stable, turn off and turn to test another zone.

Remark: When starting up injection, use low pressure to fully fill runner to protect valve pin from being bent due to high pressure.

If you have any question, please call: (86)0769-8382 5600.