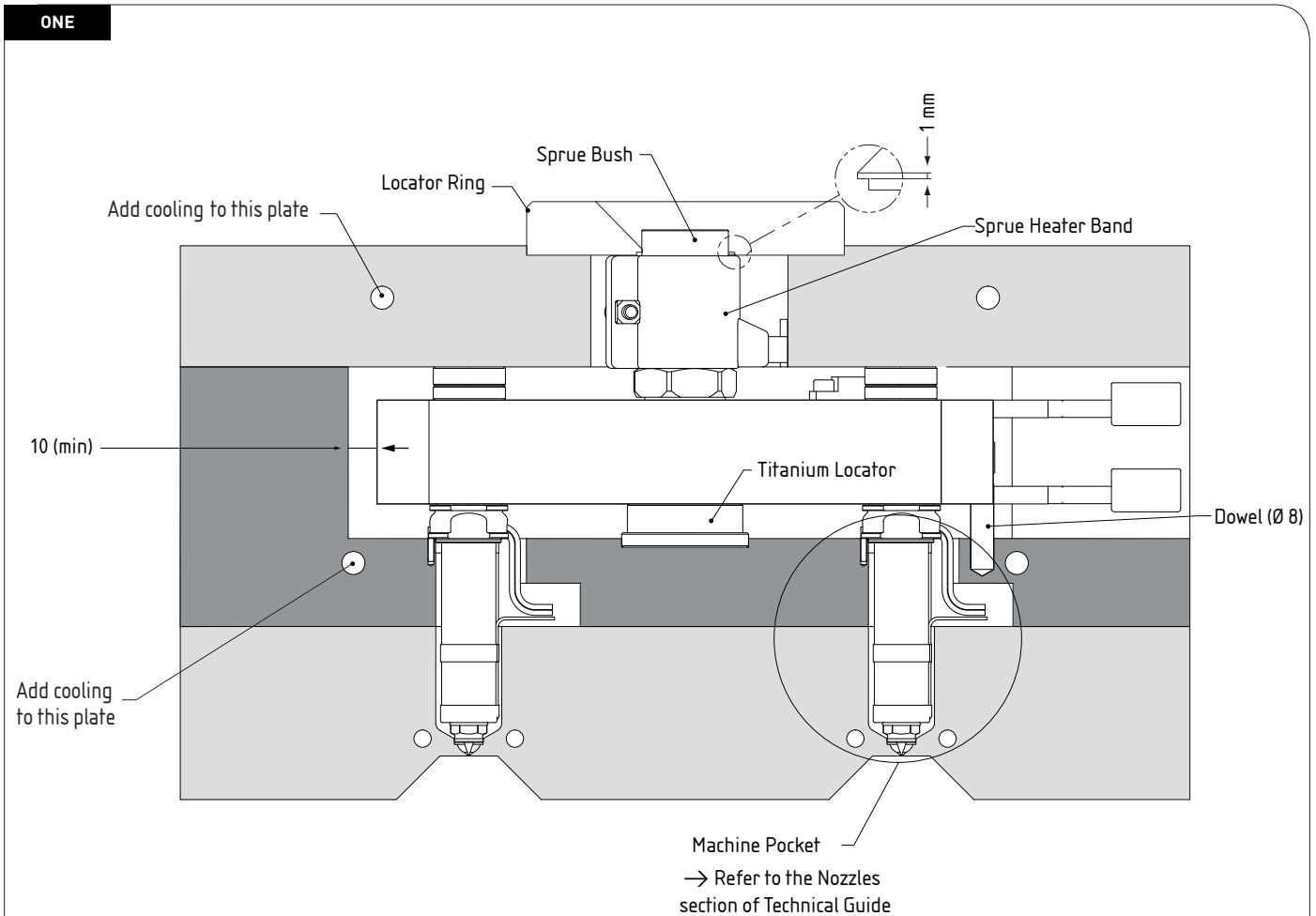


Pre Installation

- Before assembly, wipe the manifold with a dry, clean cloth.
- Fit the titanium locator and dowel pin and line up manifold between the back plate and the nozzle cavity plate. See diagram below

Installation



- Apply bearing blue the top of the nozzle faces. Fit the manifold and check all the nozzles are in full contact with the manifold surface. Carefully remove all bearing blue after the check is completed
- If applicable, assemble the O-Ring to the nozzles.
- If applicable, tighten any ear bolts. To allow for thermal expansion, always use Bellevue type washers.
- Check clearance between backplate and sprue bush heater. Make sure there is no contact.
- Check that the locator ring of the mould has the correct amount of clearance around top of sprue (0.4 mm).

Starting or Restarting Nozzles in a Manifold Application

Use the following steps to start or restart a nozzle in a manifold application:

1. Follow the wiring diagram of the system to ensure all cabling (power and thermocouple) are connected to the correct zones.
2. Turn on the manifold zones ONLY and set the temperature to 100°C. The temperature controller must be set on Soft Start mode to dry any moisture absorbed into the elements during transit.
3. Observe that all zones increase in temperature evenly and consistently.
4. Once all zones have reached 100°C, wait 5 minutes for soak and then set to required melt temperatures to + 10°C. (Machine barrels should be set at melt temperature + 5°C.)
5. While waiting for the manifold temperatures to reach set point, purge the machine with the appropriate plastic material in a natural state (preferably one with a lower melt than that to be used to make the parts). The stiffer natural material is used to fill the insulation gaps and is beneficial for faster colour changes. It is less effected by the continuous temperature and therefore reduces the build up of the colour pigments and or resident melt degradation.
6. Check machine settings. (For first startup, all speeds and pressures should be set low to limit any unforeseen damages.)
 - Maximum injection pressure set to 70 MPa (avoid first shots from flashing tool)
 - Injection speed set at 30%
 - Injection volume set at 70% of expected shot weight (if part detail allows)
 - Injection pack pressure to 30 MPa
 - Mould daylight correct set for tool
 - Mould close pressure safety set
 - Slow mould close set
7. Manifold should be approximately at 90% of the set temperature by now (20 minutes) turn on nozzles drop zones
 - The zones can be turned on in banks to more easily monitor rise in temperature
 - A similar method to heating the manifold should be followed with the first heating of the nozzles elements
 - Set to 100°C, controller must be set on soft start. (For drying of any moisture absorbed into the elements during transit)
 - Observe that all zones increase in temperature evenly and consistently.
 - Once all zones have reached 100°C, wait 5 minutes for soak and then set to required melt temp + 10°C (MX series) or + 35°C (MT series).
 - Nozzles will reach set point normally within 5 minutes.
8. Check all zones are at set point and are stable.
9. Purge machine barrel to fresh material.
10. Hunt injection unit slowly to sprue bush.
11. Switch machine to semi automatic and engage cycle.
 - The moulding machine will cycle through hunt, inject, pack, screw, recharge, and then cooling.
 - Depending on the cycle time set, the machine can be stopped at this point opened and the process repeated.
12. Repeat this process 2 to 3 times before plastic appears at the gate as all the channels where empty. Some moulding machines can manually inject into a manifold and so the filling of the manifold can be more easily observed.

Starting or Restarting Nozzles in a Manifold Application

13. Keep a careful eye on the cavities for the first sign of plastic, it will require clearing from the gates and cavity before the next shot is possible.
14. Cycle the machine fully obtaining a 70% shot.
15. Change to the correct material and colour.
16. Tuning of the mould machine to production setting can now begin. Take care with the injection pressures and shot size as you can easily flash the tool causing damage.

Note: Often the nozzle will need to run hotter than barrel temperature to achieve a good result.

If mould is left idle and needs to be restarted, repeat the above procedure.

Note: Do not increase manifold or nozzle temperatures by large amounts as increases of temperature above the design figures can damage the sealing faces of the manifold and nozzle due to excessive expansion.