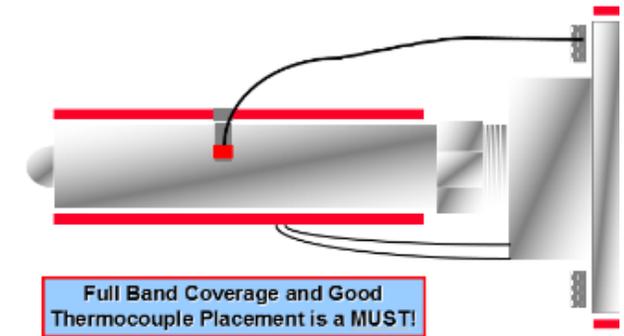
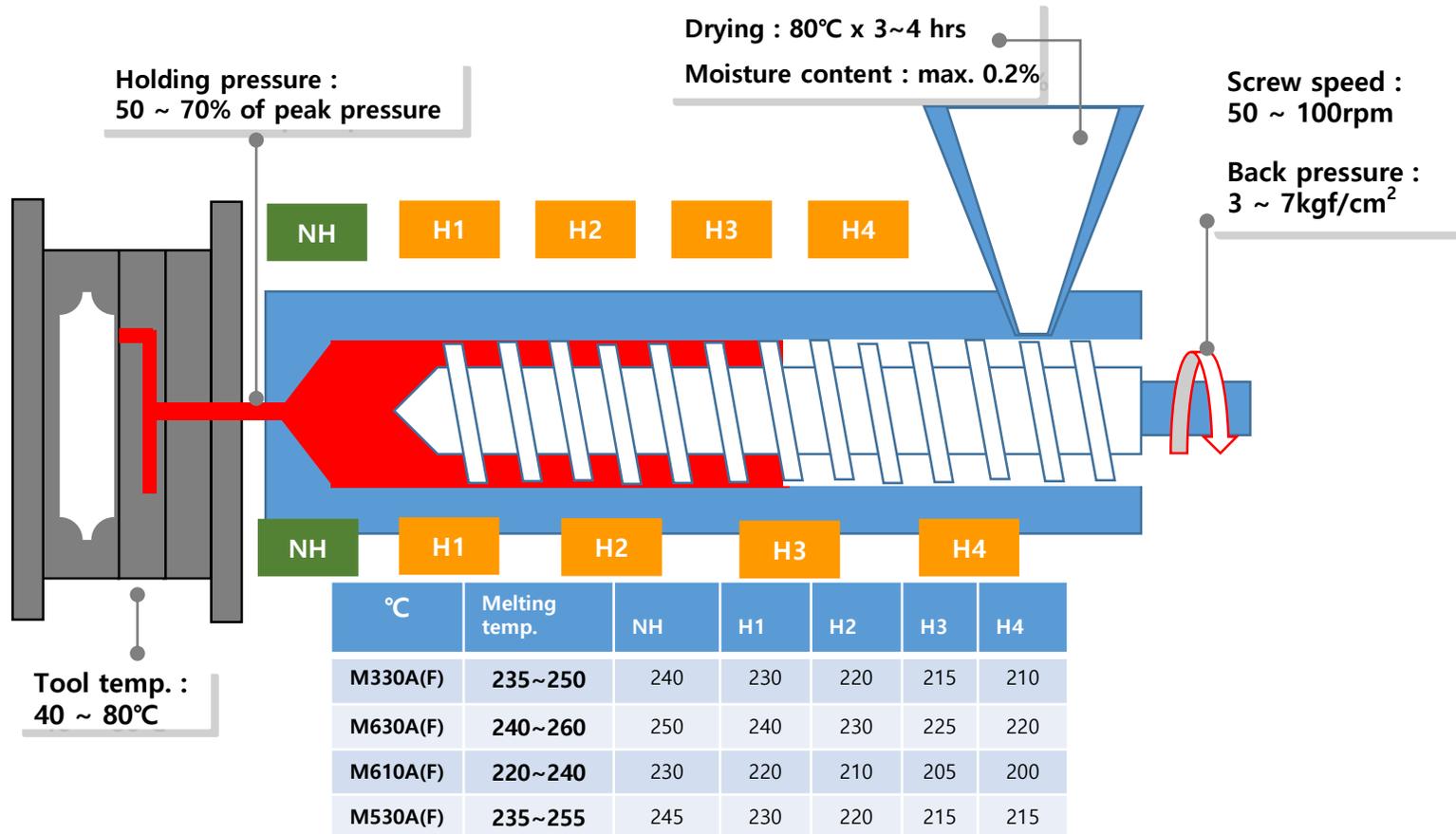


Injection Molding Guide

Injection Molding Guide

POKETONE Base Grade

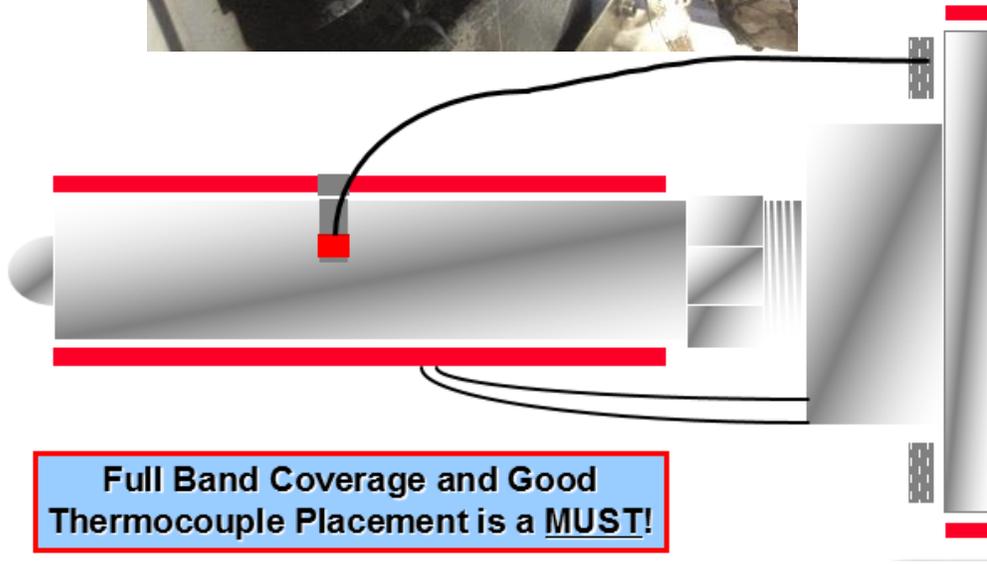


- Well-controlled heated nozzles as using enough capacity heater and separated thermocouple are strongly recommended to prevent freeze-off issue at nozzle due to small sized nozzle orifice or rapid solidification of POK.
- Should be thoroughly purged at processing temperature with purging material such as PCTG, HDPE, GPPS or other commercially available purging compounds.

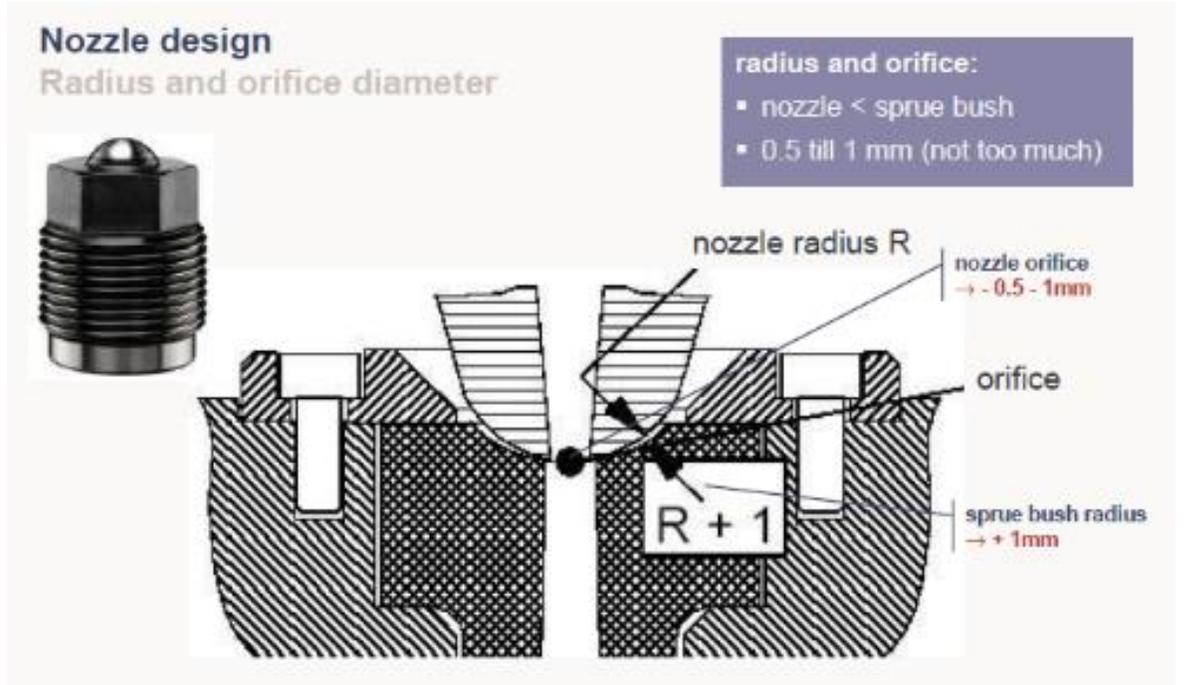


- Recommended nozzle orifice size
 - Small sized m/c (200T less): min. Ø3.5mm
 - Mid sized m/c (200~450T): min. Ø4.0mm
 - Mid~Large m/c (500T over): min. Ø5.0mm

Nozzle Design for Polyketone



- Well-controlled heated nozzle as using enough capacity heater and separated thermocouple are strongly recommended to prevent freeze-off issue at nozzle due to small sized nozzle orifice or rapid solidification of POK.
- Should be thoroughly purged at processing temperature with purging material such as PCTG, HDPE, GPPS or other commercially available purging compounds.



To improve nozzle freeze off issue :

- ✓ Enough nozzle heat capacity and Right thermocouple placement
- ✓ Set only nozzle temp. higher of 5~10 °C than barrel front zone
- ✓ Increase **nozzle orifice** as below;
 - Small m/c(below 200T): min. Ø3.5mm
 - Middle size (200~450T): min. Ø4.0mm
 - Middle to big size(over 500T): min. Ø5.0mm
 - Over 550T : min. Ø6.0mm

Shut-down Procedure for POKETONE

- At the completion of the molding run at normal barrel temperature (about 230~250°C), all traces of POKETONE should be thoroughly purged at processing temperature from the barrel with purging material such as **PCTG, high viscosity-PP, HDPE, GPPS** or other commercially available purging compound. (Should be immediately purged after PK molding)
- After the purge appears clean, the screw is left in the forward position. Barrel and nozzle heats can then be turned off.
- ❖ (Can be purged several times at higher barrel temperature of 270~300°C for better cleaning of POKETONE, then purge again at the normal barrel temperature (about 240 °C) till purging clears.)

Guide Line for downtime during injection molding

❖ **Stop within 20 minutes :**

1. Stop molding process while maintaining cylinder and Hot runner temp.
2. Purge out several times before re-started molding

❖ **Stop from 20 minutes within 2 hours :**

1. Purge out all the rest of Poketone material inside cylinder and hot runner manifold
2. Decrease the temperature from current temperature to 20~40°C on cylinder(hot runner temp) and stop molding process while turning on heater.
3. When re-started operation, please increase the temperature to the norm and purge out several times when reach to the temperature

❖ **Stop from 2 hours within 12 hours :**

1. Purge out all the rest of Poketone material inside cylinder and hot runner and decrease the temperature to 170~180°C on cylinder(hot runner temp) then stop molding process while turning on heater.
2. When re-started operation, please increase the temperature to the norm and purge out several times when reach to the temperature(when increase the temperature, firstly increase cylinder temperature then later increase hot runner temperature)

❖ **Stop more than 12 hours :**

1. Purge out all the rest of Poketone material inside cylinder and hot runner manifold
2. By using purging material(PCTG, High-density PP, HDPE, GPPS, etc), keep purging out until inside of cylinder is completely cleaned then stop molding operation

❖ **For better cleaning :**

1. After purging enough using purging material, increase barrel temp. 30 °C more (to about 270~300 °C) then purge again several times using purging material.
2. Decrease barrel temp to normal, then purge again.