Rheo-Pro® Hot Runner Best Practices

Important

Cooling Water

Turn cooling water on before heating the hot runner.

Cool down hot runner before turning off cooling water (run cooling water for 30-60 minutes after turning off heaters).

To avoid corrosion and plugged cooling lines, use only clean, treated water (industry standard).

Start up

Use a temperature controller with a 'soft start' to protect your hot runner heaters.

All plastic material in the hot runner must be at processing temperature prior to injecting. After the set temperature has been reached, allow the hot runner to heat soak for 15 minutes (small systems) up to 30 minutes (for large systems).

It may be necessary to start with nozzle tip temperatures 5-15°C hotter than normal melt temperature. Do not exceed the material supplier recommended temperature as the plastic material or its additives may be heat residence time sensitive.

Reduce tip temperature after mold cycles in automatic mode. This will reduce stringing, drooling, and cooling time.

Use decompression to relax the melt after each cycle.

Molding Interruptions

Reduce hot runner temperature when cycles are interupted for time periods longer than 10 minutes (sensitive resins may degrade faster, see material supplier recommendations).

Re-starting may require elevating the nozzle tip temperatures, especially when processing semi-crystalline materials.

Valve Gates

Use only dry, non-lubricated air or nitrogen (industry standard).

Run valve actuator cooling prior to heating hot runner. Continue cooling hot runner 30-60 minutes after turning off heaters, or until mold temperature is reduced to 50°C (120°F).

For lubrication of valve actuator seals (Viton), use only high temperature lubricant or grease specified by MHS.

For best valve actuator cooling results, an individual circuit is recommended. Use soft water and glycol coolant mixture.

MHS® Mold Hotrunner Solutions