



CHECKLIST FOR SIZING HEATING/COOLING APPLICATION FOR TEMPERATURE CONTROL SYSTEM OR CHILLER (THOSE BOLD ARE ESSENTIAL TO SIZING)

Mold for Plastic Processing

- **Material and weight (or dimensions) of the mold**
- **Maximum operating temperature of the mold**
- **Heat-up time**
- **The necessary amount of heat to be added or to be removed or processing temperature of the plastic, mold temperature, and the quantity of processed material (lb/h)**
- **Type of material processed**
- **Operating voltage**
- **Type of heat transfer fluid (water/oil)**
- **Control requirements**
- **Pump capacity (or channel sizes and number)**
- Cooling water pressure and temperature range
- Accessories/options

Die Casting Application

- **Material and weight (or dimensions) of the die halves**
- **Maximum operating temperature of the die halves (or dimensions)**
- **The necessary amount of heat to be added or to be removed or die temperature and quantity of metal to be case and cycle time**
- **Type of material processed**
- **Operating voltage**
- **Pumping capacity (or channel sizes and number)**
- **Heat-up time**
- **Type of heat transfer fluid (water/oil)**
- **Control requirements**
- Cooling water pressure and temperature range
- Accessories/optional equipment (time switch, controller with contact, etc.)

Screws

- **Material and weight (or dimensions) of screw – Horsepower of motor**
- **Desired screw temperature**
- **Heat transfer fluid (water/oil)**
- **Processed material**
- **Quantity of material processed (lb/h)**
- **Heating capacity and cooling capacity**
- **Operating voltage**
- **Pumping capacity**
- **Other sources of heat**
- **Control requirements**
- Cooling water pressure and temperature range
- Accessories/optional equipment

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Barrels (Jacketed)

- Jacket material and weight (or diameter and thickness)
- Number of zones and their desired temperatures
- Heat transfer fluid (water/oil)
- Processed material
- Quantity of material processed (lb/h)
- Heating capacity and cooling capacity
- Operating voltage
- Pumping capacity (or connection sizes and number)
- Control requirements
- Cooling water pressure and temperature
- Insulated or not insulated
- Accessories/optional equipment

Rolls

- Material and weight of roller (or outer and inner diameter, width of roller)
- Maximum operating temperature
- Heat-up time
- The necessary amount of heat to be added or removed or the temperature of the material before and after the roller as well as the quantity of processed material
- Processed material
- Pumping capacity
- Maximum permissible pressure
- Operating voltage
- Type of roller (hollow jacket, double jacket, with peripheral bores, double spiral)
- Fluid hold-up
- Heat transfer fluid (water/oil)
- Control requirements
- Angle of contact
- Speed of roller
- Cooling water pressure and temperature range
- Accessories/optional equipment

Double-Walled Reservoirs

- For reservoirs: weight/capacity, maximum possible pressure (bar, PSI), with/without insulation
- For tubes and pipes: length, diameter with/without heat insulation
- Fluid contents
- Temperature range
- Heat-up time
- The necessary amount of heat to be added or to be removed or material throughput per hour
- Material to be processed
- Operating voltage
- Pumping capacity or connection sizes and number
- Control requirements
- Cooling water pressure and temperature
- Accessories/optional equipment

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Baths

- Fluid content
- Nature of fluid in bath
- Temperature range
- Heat-up time
- **The necessary amount of heat to be added or to be removed or the inlet temperature at the bath of the processed material**
- Material to be processed
- Operating voltage
- **Pumping capacity or connection sizes and number**
- **Control requirements**
 - Sketches, dimensions
 - Heat transfer: direct/indirect by means of inserted pipes
 - Control
 - Cooling water input: pressure and temperature range
 - Accessories/optional equipment