About us

With over 40 years of expertise in designing and manufacturing advanced cooling systems, Itech Chillers has solidified its reputation as a pioneer in water chilling solutions tailored for industrial and commercial applications. Our journey is marked by a relentless pursuit of innovation, quality, and customer satisfaction, culminating in our ISO 9001 certification from TUV in 2013 a testament to our commitment to maintaining the highest industry standards.

At Itech, we pride ourselves on offering a comprehensive range of cutting-edge cooling and tempering systems that not only deliver exceptional performance but also ensure an excellent quality-price ratio. This unique combination has positioned us as the market leader in industrial cooling throughout Turkey. With over 10.000 chillers sold in both domestic and export markets, Itech is recognized as a trusted brand bolstered by a dynamic sales organization, an extensive network of partners, and dedicated service centers that ensure our clients receive unparalleled support.

Our mission extends beyond merely providing cooling solutions. We are dedicated to proving that effective cooling systems can be both economically viable and energy-efficient. We believe that high production output should not come at the expense of excessive energy consumption. By leveraging advanced technologies and innovative designs, we help our clients achieve optimal operational efficiency while reducing their environmental footprint.

Sustainability is at the core of our operations. We continually strive to develop solutions that minimize energy usage and maximize performance, aligning with global efforts to promote environmental responsibility. Our team of experts is committed to staying at the forefront of technological advancements allowing us to offer state-of-the-art systems that meet the evolving needs of various industries.

At Itech Cooling Systems, we welcome your cooling challenges with open arms. Our collaborative approach involves working closely with you to assess system loads and project priorities. Together, we will identify and select the most suitable cooling system tailored to your specific requirements, ensuring that you receive a solution that not only meets but exceeds your expectations.

We are more than just a cooling systems provider. We are your partners in achieving efficiency, sustainability, and success in your operations. Trust Aytek to deliver innovative solutions that empower your business and enhance your competitive edge in the market.

ITECH COOLING SYSTEMS

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iTech
Intelligent Cooling Solutions

WE CONTROL TEMPERATURE RESPONSIBLY

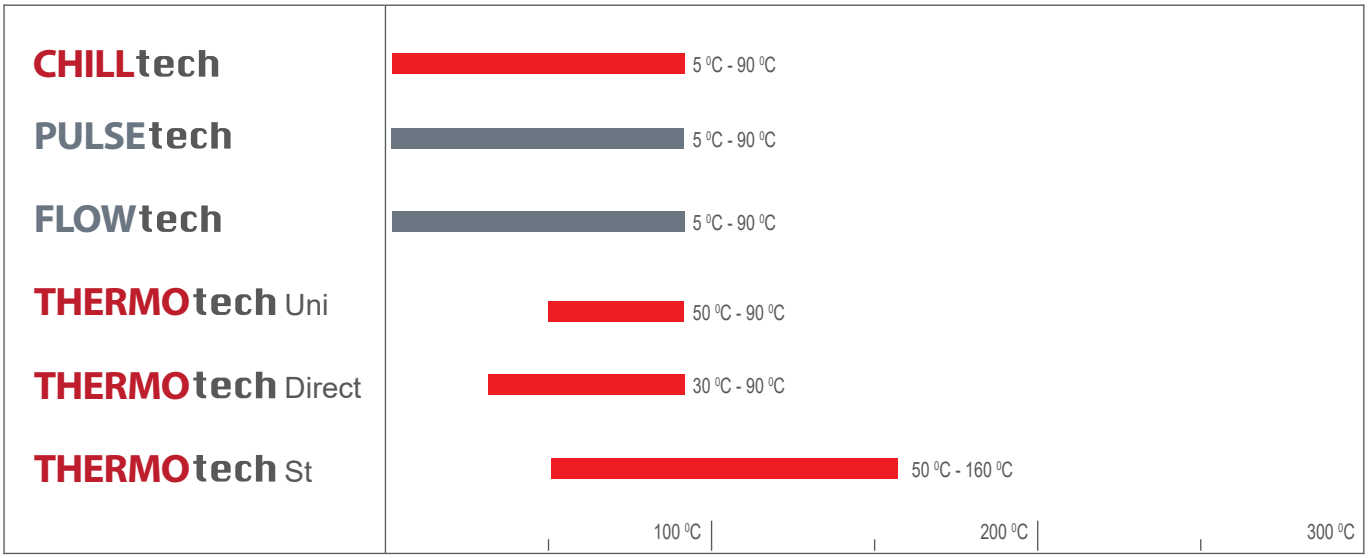
TEMPERATURE

Contents

CONTROL

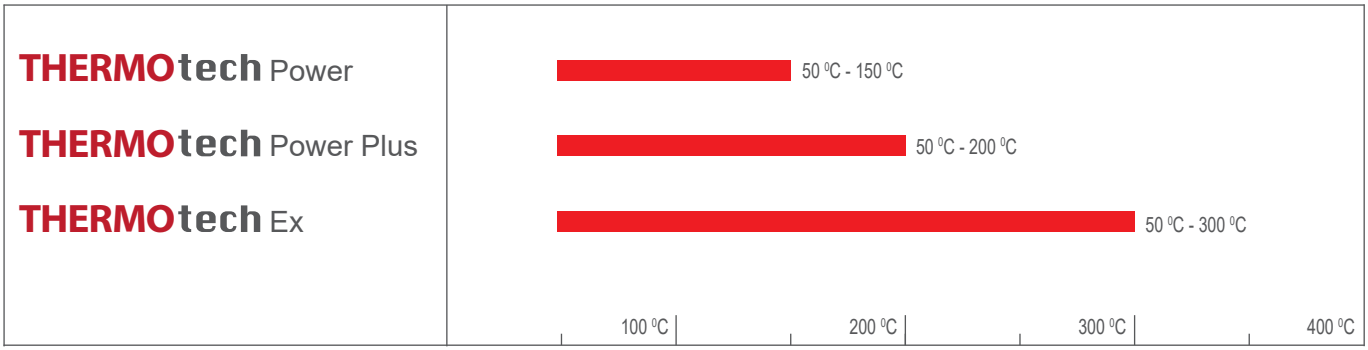
Operating Temperature Ranges

Water



Operating Temperature Ranges

Oil



CHILLtech®

Water Cooled Chiller + TCU
10 / 125 kW cooling
6 / 48 kW heating

Heating and Cooling in a Single Unit

General features

Temperature Range: Typically operates between -5 °C and 90 °C, or even higher depending on the application. Some models offer a wider range for special applications.

Temperature Accuracy: Generally provides an accuracy between ±0.5 °C and ±1° C, depending on the model. High-quality models can offer better precision.

Control Method: PID (Proportional-Integral-Derivative) control is commonly used for stable temperature regulation. Some controllers may offer adaptive control algorithms.

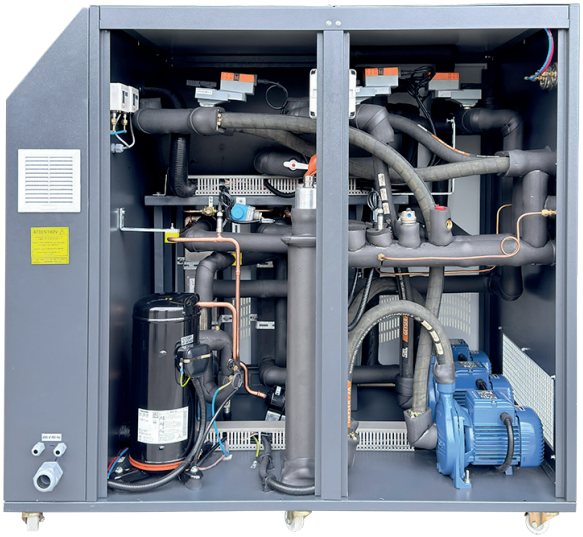
Heating/Cooling Capacity: Power output typically ranges from 6 to 120 kW, depending on the size of the system being controlled. Cooling systems may use refrigerants.

Response Time: Usually varies from a few seconds to several minutes, depending on the system design and thermal mass.

Chilltech temperature control units are specialized devices commonly used to regulate the temperature of systems in plastic processing or other industrial environments. These control units play an important role in processes where precise temperature management is critical for process stability and performance.

User Interface: Digital display (LCD or LED) for real-time temperature monitoring. Touchscreen or button interface for setting and adjusting parameters. Data logging capabilities for tracking temperature over time.

Connectivity: USB, RS-232, or Ethernet ports for data transfer and remote monitoring.



Safety Features: Over-temperature protection to prevent damage to the system. Alarm systems for temperature deviations outside the set limits. Circuit protection against electrical faults.

Power Supply: Standard voltage options (400 V–460 V) and frequency specifications (50/60 Hz) Backup battery options may be available for critical applications.

PULSEtech®

Dynamic Temperature Flow Controller
9 / 48 kW heating
26 / 80 kW cooling

Precise Temperature Control for Up to 48 Zones

Why Pulsetech?

In plastic injection applications, temperature control of the mold surface directly affects the production process. While a high mold temperature positively influences the surface quality of the product, it also extends the cooling time and increases the overall cycle time. When the mold surface temperature is reduced, the cooling time shortens, but it does not contribute positively to the surface quality of the product.

Traditional Cooling and Dynamic Temperature Control systems manage mold temperature without interfering with the existing cooling system. In traditional cooling applications, a constant flow of cooling water is used throughout the injection process. Typically, the temperature of the cooling water is equal to the mold temperature.

In Dynamic Temperature Control applications, the cooling process is intermittently interrupted by using variable amounts of water within a given time frame. This shortens the cooling time and keeps the mold temperature at an optimal level. Thanks to the reduced cooling time, energy consumption requirements decrease, resulting in energy savings.

As is known, in traditional cooling systems, the mold surface temperature and the amount of water used are fixed. Therefore, the cooling time is also constant. In dynamic temperature control, the mold surface temperature is measured, and optimal regional surface temperatures are achieved by using variable amounts and temperatures of water.

Pulsetech Operating Modes

Low Temperature / Pulse Cooling Only
Mold will heat up with the temperature of the resin and rest of the work will be accomplished by Pulse Cooling.

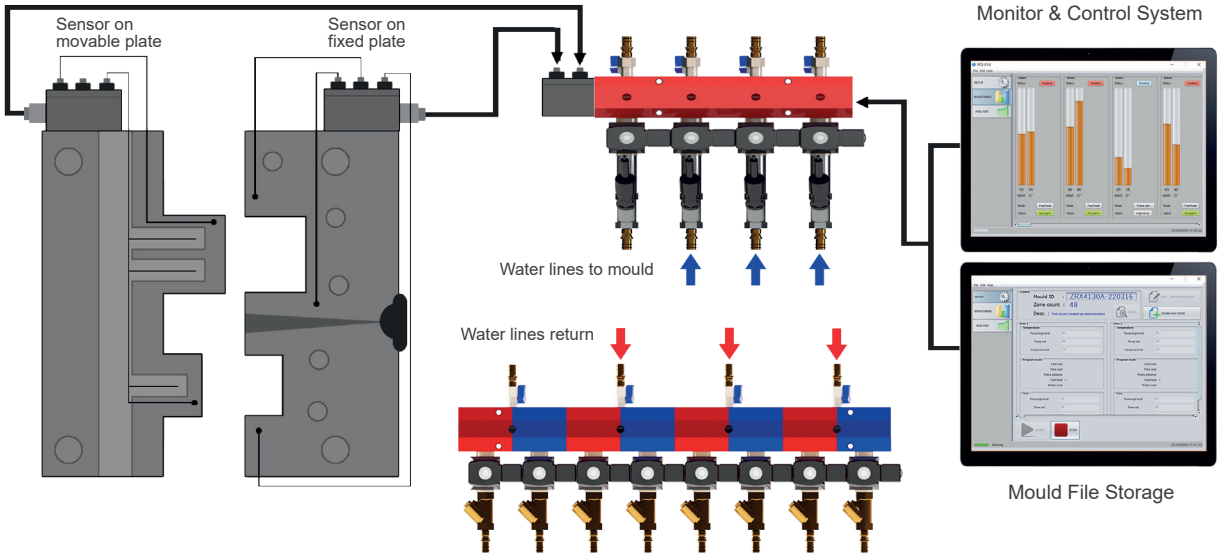
High Temperature Mode
Mold will heat up by hot water generated by Pulsetech and excess heat will be removed by Pulse Cooling

How Does Pulsetech Work ?

This technology provides measuring of the mold temperature by a sensor, and provides the required time frame on the mold surface to increase the flow ability of the melt resin in the filling stage. In the cooling stage, Pulsetech will lower down the temperature by means of immediate turbulent flow of cold water so that temperature can be lowered down quickly and not affecting the cycle time due to the fact that high temperature is only restricted on the surface area of the mold.

Why Pulsetech Leads To Better Product Quality?

Pulsetech starts cooling within a time interval with turbulent flow effect just after the melt shot is completed allowing hot&cold parts to dissipate heat when most heat is present (highest delta t) As part of the temp. difference is cooled by ambient, this will lead to a higher quality part since temperature equilibrium is achieved in a more uniform environment.



Technical Specifications

Model		PULSETECH 4	PULSETECH 6	PULSETECH 12	PULSETECH 24	PULSETECH 36	PULSETECH 48
Temperature range	°C	-5 /90					
Operating modes		Temperature monitoring, Temperature control, Pulse cooling, Low and High tempereture molding, Rapid cool and heat					
Fluid		Water					
Circuit	°n	4	6	12	24	36	48
Cooling type		Indirect					
Cooling capacity	kw	26	26	50	80	80	80
Heating capacity	kw	9	12	18	24	36	48
Flow measurement per circuit	l/min.	0,3 / 40					
Switching accuracy		±1%					
Contoller specifications		Dual core processor 1.86 GHz, 1M L2 Cache, 2Gb DDR 3 RAM					
Operator interface		15" TFT LCD Touch screen					
Mold file storage		Up to 1000 mold files, with memory function					
Mold circuit connections		1/2"					
Cooling circuit connections		1"		1 1/2"			
Power supply		380 V 50 Hz 3 Phase					

FLOWtech®

Electronic Water Temperature & Flow Regulator
2 / 4 / 6 / 8 circuits

Electronic Capabilities in Water Regulation

Flow - temperature monitoring and control of multiple cooling circuits are now easier than ever with FlowTech.

FLOWTECH

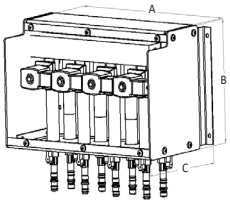
- Precise flow control is achieved with proportional valves.
- The inlet–outlet water temperature and flow data of each circuit can be monitored on a 7” touch screen.
- Thanks to FLOWtech's special software, the optimal cooling capacity for each cooling circuit is automatically calculated.
- When temperature and flow values go beyond their limits, alarms can be monitored on the screen, and if desired, alarms can also be tracked via dry contact with other auxiliary equipment or through IMM.
- Flowtech can be connected to a computer network via Ethernet, allowing remote access.
- Flow measurement is performed with advanced sensors integrated into Flowtech.
- Inlet/Outlet water temperatures are read by PT100 sensors.
- It operates with a temperature tolerance of +/- 1 °C.
- Flowtech is mounted inside epoxy powder-coated galvanized steel.

General Features

- Monitoring flow and temp In & Out 2 / 4 / 6 / 8 circuits
- Flow range 2 / 40 liters/minute per circuit
- Flow measurument as a function of velocity and temperature
- Working temperature up to 125 ^{0}C
- Flowtech software to calculate cooling capacity for each circuit
- PLC / touch pad display
- Reftrofit versions available

Technical Parameters	Dimensions
Manifold ports	2-4-6-8 (Other sizes optional)
Port Dimensions	1/2”
Main Water Supply / Return	11/2”
Flow Per Circuit	2-40 liters per minute
Working Temperature	Up 10 90^{0}C (Higher Temperatures Optional)
Maximum Operating Pressure	10 bar
Electric Connection	230V 50Hz

Technical Details	Dimension (mm)		
Circuit No	A	B	C
2	450	400	210
4	600	400	210
6	800	400	210
8	1000	400	210

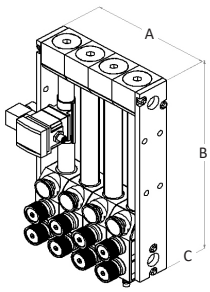


FLOWtech - Custom Fit

Existing flow regulators can be updated with a digital flow meter to adjust the right flow and pressure for more convenient monitoring and control.

- Manual adjustment of each circuit while flow can be digitally monitored for better control.
- Multizone control up to maximum 8 circuits.
- Water Pressure 4 / 10 bar depending on number of circuits.
- Large diamater polycorbonate tubes to enable minimum pressure drop.

Technical Details	Dimension (mm)		
Circuit No	A	B	C
2	150	120	420
4	260	120	420
6	400	120	420
8	550	120	420
10	700	120	420
12	850	120	420



Technical Parameters	Dimensions
Manifold ports	2-4-6-8 (Other sizes optional)
Port Dimensions	1/2”
Main Water Supply / Return	11/2”
Flow Per Circuit	2-25 liters per minute
Working Temperature	Up 10 90^{0}C (Higher Temperatures Optional)
Maximum Operating Pressure	10 bar
Electric Connection	230V 50Hz

THERMOtech®
UNI

Water Temperature Control Unit
6 / 9 / 12 kW Heating
30 kW Cooling

Precise Temperatures Sustainable Results

Technical Specifications for High-Temperature Control Units (Up to 90 °C)

Temperature Range: Heating: 40 / 90 °C

Temperature Control Accuracy:: - ±1 °C

Heating Capacity: 6 / 9 / 12 kW

Cooling Capacity: 30 kW

Fluid Type: Uses water as the heat transfer medium, depending on the required temperature range and application.

Pump Specifications:
Flow Rate: Typically between 30 and 60 L/min
Pressure: Typical operating pressure between 2 and 3 bar

Control System: User-friendly interface with LCD display for temperature settings and monitoring. Remote monitoring capabilities via Ethernet, Wi-Fi, or RS-232/RS-485, OPC UA.

Safety Features: Overtemperature protection, Low fluid level alarms, Circuit protection (fuses, thermal overload)

Construction: Durable and corrosion-resistant materials, including steel and high-quality plastics. Compact design for easy integration into existing production setups.

Power Supplay: Typically 3-phase power (380–480V), with single-phase options available.

Connections: Standardized fittings for easy connection to molds and other equipment.
Inlet and outlet ports for heat transfer fluid.

Connections:
Inlet/Outlet Ports: Standard connections for easy integration with molds and piping systems.
Quick Couplings: Facilitate easy maintenance and fluid replacement. (Optional)

Weight and Dimensions: Vary depending on capacity and design; generally compact for easy installation in production environments.

Operating Environment: Designed to withstand industrial conditions, including fluctuations in temperature and humidity.

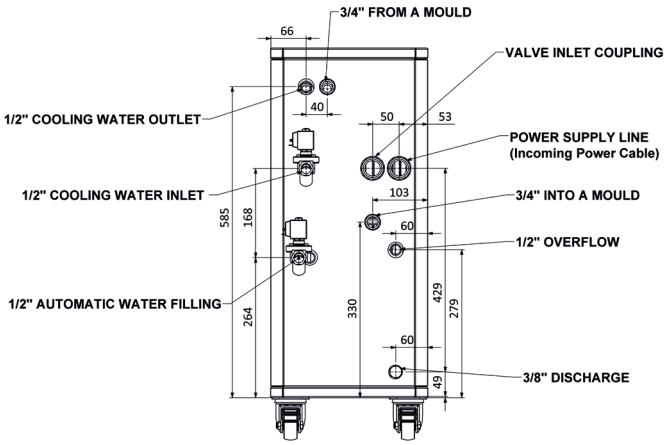
Additional Features

Data Logging: Capability to record temperature and pressure data for quality control and process optimization.

Remote Monitoring:
Remote access and control via Ethernet, Wi-Fi, or other communication protocols.

Applications

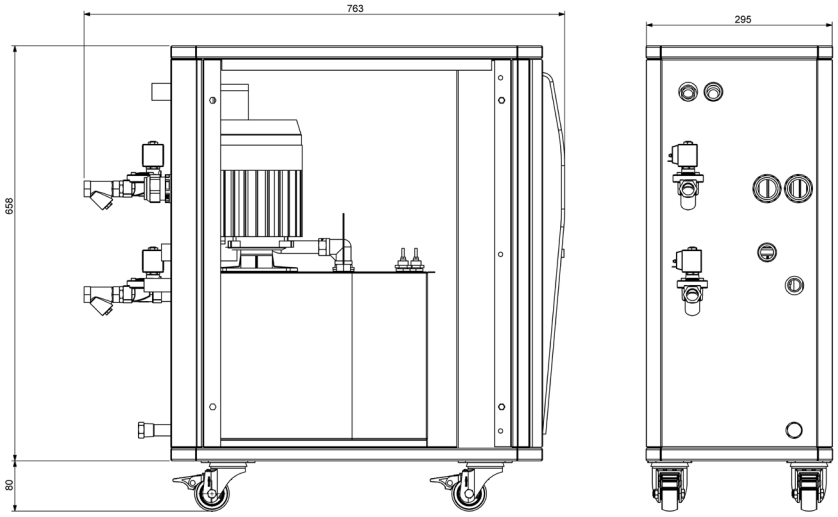
Injection molding, die casting, thermoforming, and other processes requiring high-temperature control.



Thermotech Uni mold temperature control units are used with indirect cooling across various industries particularly in injection molding processes to maintain the optimal mold temperature during production.

General Features

- 6 / 9 / 12 kW heating capacity
- 90 ^{0}C maximum water temp set point
- +- 0.5 ^{0}C PID temperature control
- 26 kW indirect cooling capacity
- Submersible water pump
- PLC / touch pad display
- Optional flow–pressure monitoring
- Optional communication Via RS 485



THERMOtech® DIRECT

Water Mixing Temperature Controller
9 / 48 kW Heating

Mixing Fluids Perfect Balance

Thermotech Direct Mold Temperature Control Units Technical Specifications

Temperature Range:
Heating: Typically from ambient temperature +10° C up to 90 °C
Cooling: Down to 10° C

Temperature Control Accuracy: Typically ±1 °C, which is critical for product quality.

Heating and Cooling Capacity: Generally between 9 kW and 48 kW, depending on the model.

Heat Transfer Fluid: Uses water as the heat transfer medium.

Pump Specifications:
Flow Rate: Typically between 10 and 100 L/min, depending on model and application.
Pressure: Typical operating pressure ranges from 1 to 6 bar.

Control System:
Digital or programmable controllers with PID (Proportional-Integral-Derivative) control features. User-friendly interface with LCD display for real-time temperature adjustment and monitoring. Remote monitoring capabilities via Ethernet, Wi-Fi, or RS-232/RS-485 for seamless integration with factory automation systems.

Safety Features:
Overtemperature protection and alarms to prevent overheating, Low fluid level alarms to ensure safe operation, Circuit protection features such as fuses and thermal overload protection.

Construction:
Manufactured from durable and corrosion-resistant materials, typically stainless steel or high-quality plastics. Compact design for easy integration into existing production layouts.

Power Supply:
Generally requires a 3-phase power supply (380–480V), with some models offering single-phase options.

Connections: Inlet/Outlet Ports: Standard connections for easy integration with molds and piping systems.

Quick Couplings: Facilitate easy maintenance and fluid replacement.

Weight and Dimensions: Vary depending on capacity and design; generally compact for easy installation in production environments.

Operating Environment: Designed to withstand industrial conditions, including fluctuations in temperature and humidity.

Additional Features

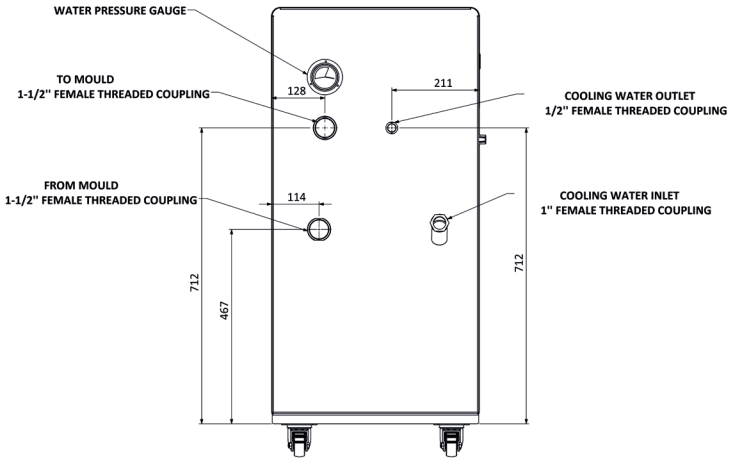
Data Logging: Ability to log temperature data for quality control.

Integration: Compatibility with existing machinery and automation systems.

Maintenance Alerts: Notifications for regular maintenance checks to ensure optimal performance.

Applications

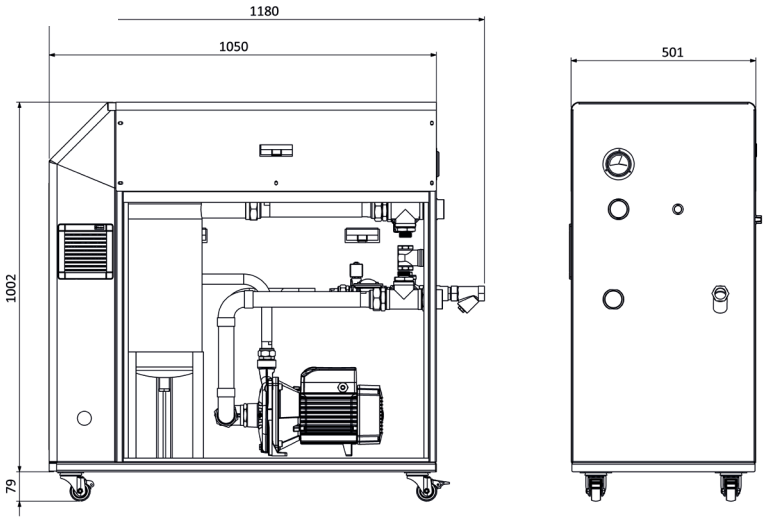
Injection molding, die casting, thermoforming, and other processes requiring high temperature control.



Thermotech mold temperature controllers with direct cooling are utilized in various industries, especially in injection molding processes, to maintain optimal mold temperatures directly through a cooling medium. Here are typical technical specifications for direct cooling mold temperature controllers:

General Features

- Maximum water set temperature 90 ^{0}C
- 9 / 48 kW heating power
- Direct cooling
- Pressurized tank
- High flow water pump
- Mixing valve for precise temperature
- PLC / touch pad display
- Optional flow–pressure monitoring
- Optional communication Via RS 485



THERMOtech® ST

Pressurized Water Temperature Controller
9 / 48 kW Heating

High Temperature Tight Control

Technical Specifications for Mold Pressurized Water Temperature Controllers (120-160 °C)

Temperature Range:
Operating Temperature: 120 °C to 160 °C Set Point Accuracy: ±1 °C

Heating Capacity: 9 / 48 kW,

Cooling Capacity: 48 kw

Fluid Type: Water.

Pressure Ratings:
Operating Pressure: Generally designed to operate at pressures up to 10 bar to ensure efficient heat transfer.

Pump Specifications:
Flow Rate: Ranges from 10 L/min to 100 L/min, depending on the system design.
Pump Type: High efficiency centrifugal pumps designed for continuous operation.

Control System:
Controller Type: Digital or programmable with PID control for precise temperature regulation.
Display: LCD or touchscreen interface for easy monitoring and adjustments.
User Interface: Features like set point adjustments, alarms, and operational status indicators.

Safety Features:
Overtemperature Protection: Automatic shutdown in case of overheating.
Pressure Relief Valve: To prevent over pressurization of the system.
Low Water Level Alarm: To alert operators of insufficient fluid levels.

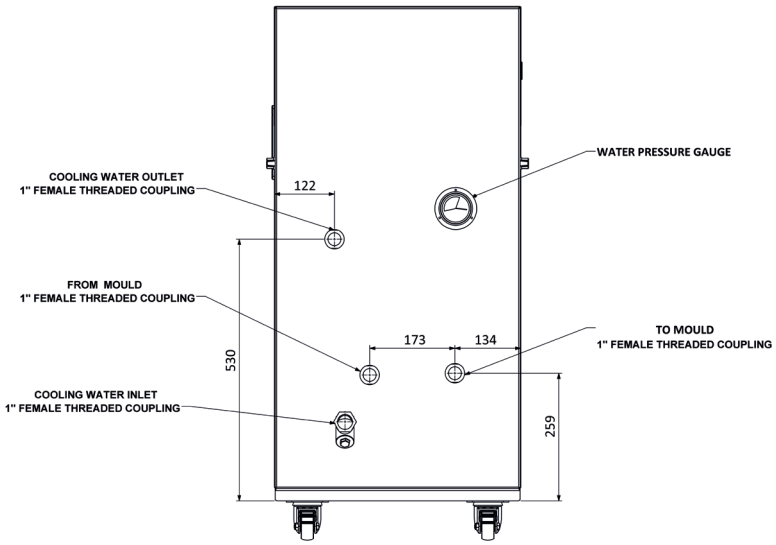
Construction:
Material: Robust construction using steel or high grade thermoplastics to resist corrosion and wear.
Insulation: Proper insulation to minimize heat loss and improve efficiency.

Power Supply:
Voltage: Typically 3phase power supply (380-480V) with some models available for singlephase (220-240V).

Connections:
Inlet/Outlet Ports: Standardized connections for easy integration with molds and piping systems.
Quick Disconnect Fittings: For ease of maintenance and fluid changes.

Weight and Dimensions:
Varies based on capacity and design; typically compact for easy installation in production environments.

Operating Environment:
Designed for industrial conditions, capable of withstanding temperature and humidity variations.



Additional Features:

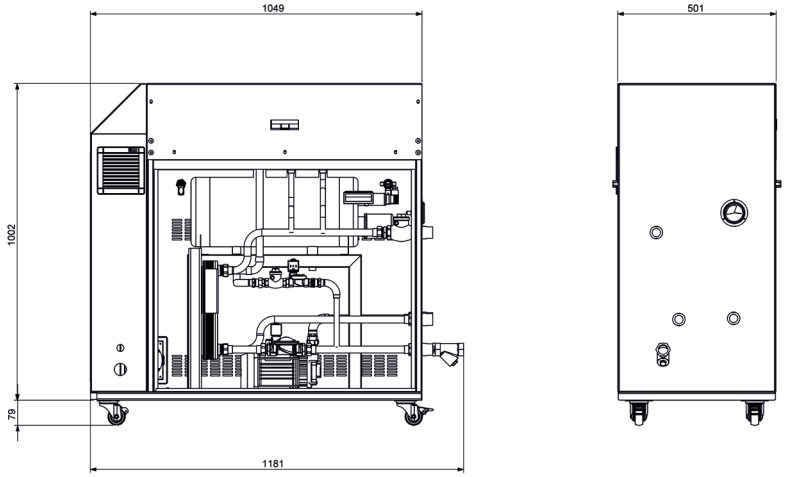
Data Logging:
Capability to record temperature and pressure data for quality control and process optimization.

Remote Monitoring:
Options for remote access and control via Ethernet, WiFi, or other communication protocols.

Operating Environment:
Designed for industrial conditions, capable of withstanding temperature and humidity variations.

General Features

- Maximum water set temperature 160 ^{0}C
- 9 / 48 kW heating power
- 48 kW cooling power
- Pressurized tank
- Stainless steel water pump
- Stainless steel plate type heat exchanger
- PLC / touch pad display
- Optional flow–pressure monitoring
- Optional communication Via RS 485



THERMOtech®
POWER

Oil Temperature Control Unit
6 / 9 / 12 kW Heating
20 kW Cooling

Smart Power in Temperature Regulation

Technical Specifications for Mold Oil Temperature Control Units (Up to 150°C)

Temperature Range: Heating: 40 / 150 °C

Temperature Control Accuracy: ±1 °C

Heating Capacity: Heating Capacity 6 / 9 / 12 kw

Cooling Capacity: Cooling Capacity 20 kw

Fluid Type: Uses oil as the heat transfer medium, depending on the required temperature range and application.

Pump Specifications:
Flow Rate: Typically between 30 to 60 liters per minute (L/min).
Pressure: Operating pressure usually between 2 to 3 bar

Control System: Digital or programmable controllers with PID control. Userfriendly interface with LCD display for temperature settings and monitoring. Remote monitoring capabilities via Ethernet WiFi, or RS232/RS485, OPC UA

Safety Features: Overtemperature protection, Low fluid level alarms, Circuit protection (fuses, thermal overload).

Construction: Robust and corrosionresistant materials, steel & highgrade plastics. Compact design for easy integration into existing production setups.

Additional Features

Data Logging:
Ability to log temperature data for quality control.

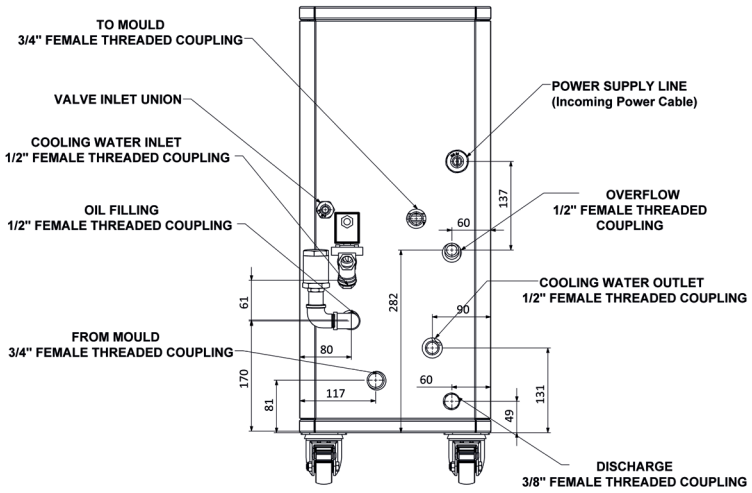
Integration:
Compatibility with existing machinery and automation systems.

Maintenance Alerts:
Notifications for regular maintenance checks to ensure optimal performance.

Operating Environment:
Designed for industrial conditions, capable of withstanding temperature and humidity variations.

Power Supply: Typically 3-phase power supply (380-480V), but singlephase options may be available.

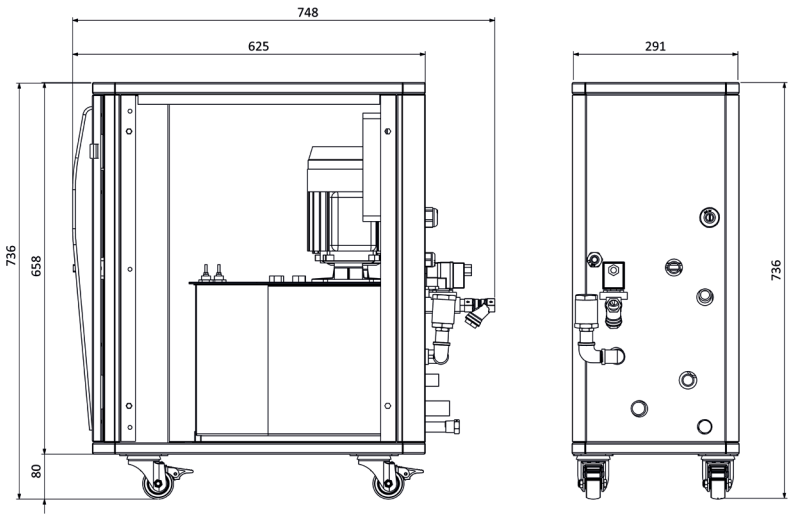
Connections: Standardized fittings for easy connection to molds and other equipment. Inlet and outlet ports for the heat transfer fluid.



Thermotech Power oil mold temperature controllers with indirect cooling are used in various industries, particularly in injection molding, to maintain the optimal temperature of molds during production processes.

General Features

- Maximum oil set temperature 150 ^{0}C
- 6 / 12 kW heating power
- 20 kW cooling power
- Stainless steel tank
- Submersible turbine oil pump
- PLC / touch pad display
- Optional flow–pressure monitoring
- Optional communication Via RS 485



THERMOtech®
POWER PLUS

High Temperature Control Units
9 / 48 kW Heating

Smart Solutions For Thermal Equilibrium

Technical Specifications for Mold Oil Temperature Controllers (Up to 200°C)

Temperature Range: Operating Temperature: Up to 200°C Set Point Accuracy: ±1 °C

Heating Capacity:
Heating Power: Generally ranges from 9 kW to 48 kW, depending on the application and mold size.

Fluid Type: Medium: Uses thermal oil or heat transfer oil, which is stable at high temperatures and provides efficient heat transfer.

Pressure Ratings:
Operating Pressure: Designed to operate at pressures up to 10 bar to ensure effective heat transfer.

Pump Specifications:
Flow Rate: Ranges from 5 L/min to 50 L/min, depending on the specific design and application requirements.
Pump Type: High efficiency centrifugal pumps designed for continuous operation.

Control System:
Controller Type: Digital or programmable with PID control for precise temperature regulation.
Display: LCD or touchscreen interface for easy monitoring and adjustments.
User Interface: Features for set point adjustments, alarms, and operational status indicators.

Safety Features:
Overtemperature Protection: Automatic shutdown in case of overheating.
Pressure Relief Valve: To prevent over pressurization of the system.
Low Oil Level Alarm: Alerts operators of insufficient oil levels.

Construction:
Material: Robust construction using stainless steel or highgrade thermoplastics to resist corrosion and wear.
Insulation: Proper insulation to minimize heat loss and improve efficiency.

Additional Features

Data Logging: Capability to record temperature and pressure data for quality control and process optimization.

Remote Monitoring: Options for remote access and control via Ethernet, WiFi, or other communication protocols.

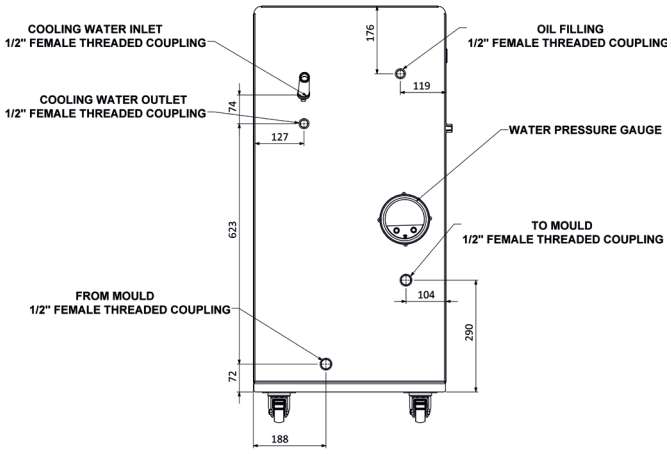
Maintenance Notifications: Alerts for routine maintenance to ensure continuous operation.

Applications: Injection molding, Die casting, Thermoforming Other processes requiring precise temperature control at elevated temperatures

Connections:
Inlet/Outlet Ports: Standardized connections for easy integration with molds and piping systems.
QuickDisconnect Fittings: For ease of maintenance and oil changes.

Weight and Dimensions:
Varies based on capacity and design; typically compact for easy installation in production environments.

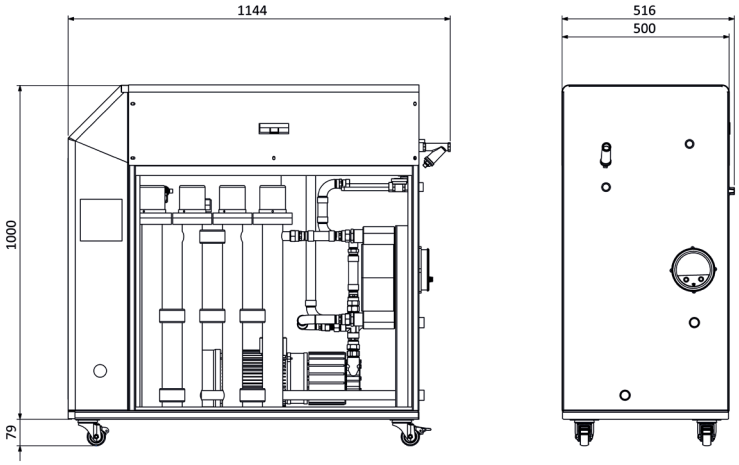
Operating Environment:
Designed for industrial conditions, capable of withstanding temperature and humidity variations.



Thermotech Power Plus mold oil temperature controllers are specialized devices used in industrial processes such as injection molding, die casting, and other applications where precise temperature control of molds is required. These controllers use oil as the heating medium, which can achieve and maintain higher temperatures compared to water-based systems.

General Features

- Maximum oil set temperature 200 ^{0}C
- 9 / 48 kW heating power
- 40 / 65 kW cooling power
- Stainless steel plate type or shell&tube heat exchanger
- High flow oil pump
- PLC / touch pad display
- Optional flow–pressure monitoring
- Optional Communication Via RS 485



THERMOtech® EX

300 ^{0}C Temperature Control Unit
6 / 60 kW Heating

Extreme Temperatures Advanced Engineering

Mold Oil Temperature Controller Specifications (Up to 300 °C)

Temperature Range:
Operating Temperature: Up to 300 °C Set Point Accuracy: ±1 °C

Heating Capacity:
Heating Power: Typically ranges from 6 kW to 60 kW, depending on the application and mold size.

Heat Transfer Fluid: High temperaturere sistant thermal oil or heat transfer oil that can efficiently transfer heat at high temperatures.

Operating Pressure: Designed to operate at pressures ranging from 2 to 4 bar to ensure effective heat transfer.

Pump Specifications:
Flow Rate: Up to 100 L/min, depending on specific design and application requirements.
Pump Type: Highefficiency gear or magnetic driven centrifugal pumps suitable for continuous operation.

Control System:
Controller Type: Digital or programmable PID control for precise temperature regulation.
Display: LCD or touch screen interface for easy monitoring and adjustments.
User Interface: Features for set point adjustments, alarms, and operational status indicators.

Safety Features:
Overtemperature Protection: Automatic shutoff in case of overheating.
Pressure Relief Valve: Prevents excessive pressure buildup in the system.
Low Oil Level Alarm: Alerts operators to insufficient oil levels.

Construction:
Material: Constructed from corrosion resistant galvanised steel or high quality thermoplastics for durability.
Insulation: Proper insulation to minimize heat loss and enhance efficiency.

Connections: Inlet/Outlet Ports: Standard connections for easy integration with molds and piping systems.
QuickConnect Fittings: Facilitate maintenance and oil changes.

Weight and Dimensions: Varies based on capacity and design; generally compact for easy installation in production environments.

Operating Environment: Designed to withstand industrial conditions, including fluctuations in temperature and humidity.

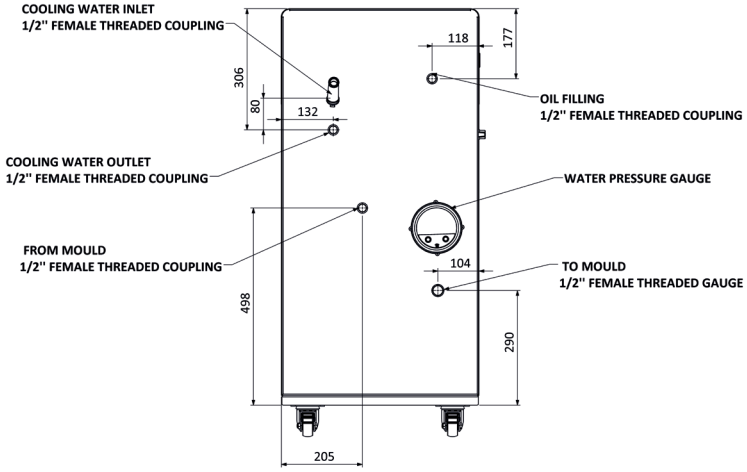
Additional Features

Data Logging: Capability to record temperature and pressure data for quality control and process optimization.

Remote Monitoring: Options for remote access and control via Ethernet, WiFi, or other communication protocols.

Maintenance Alerts: Notifications for routine maintenance to ensure continuous operation.

Applications: Injection molding, Die casting, Thermoforming Other processes requiring precise temperature control at high temperatures



Thermotek EX mold oil temperature controller designed to operate at temperatures up to 300°C is specifically engineered for high-temperature applications in industries such as injection molding, die casting, and other processes requiring precise thermal management.

General Features

- Maximum oil set temperature 300 ^{0}C
- 6 / 60 kW heating power
- 40 / 65 kW cooling power
- Stainless steel plate type or shell&tube heat exchanger
- High flow magnetic oil pump
- PLC / touch pad display
- Optional flow–pressure monitoring
- Optional communication Via RS 485