

Aquatherm RQT Standard Series

Mold Temperature Control Units

Benefits:

- **High Flow Pumps:** Designed to meet rapid cooling requirements, our energy efficient pumps provide the best flow available in the industry. Sizes are ¾ to 3 hp (0.56 to 2.24 kW). Silicon carbide pump seals are standard.
- **Long Life Heaters:** Incoloy sheathed heater elements offer superior performance, longevity, and corrosion resistance compared to copper or stainless steel options. 9 kW, 12 kW and 18 kW heaters are standard.
- **Leak-Proof Pump/Heater Assembly:** Heavy-duty cast-iron pumps, heater tubes, and mixing tubes with O-ring seals reduce threaded fittings that can cause internal pressure losses and are prone to leaks.
- **Long Life Pump Seals/Internal Flushing System:** High temperature pump seals, with an integral flush system and turbulence ribs inside the seal chamber, extend seal life and are more energy efficient than external seal flush lines.
- **High Performance Solenoid Valves:** Fast-acting solenoid valves respond quickly and precisely to sudden changes in the process and ensure consistent mold temperatures.
- **24 VDC Control-Circuit Power:** Dependable and safe control circuit power, isolates the control circuit from static interference for stable and precise operation.
- **Warranty:** 3 year parts and labor; lifetime pump/heater casting and standard pump seal.



Engineered for Precision. Built for Performance and Value.

The Aquatherm RQT Series water temperature control units are compact, high-performance solutions designed to boost production efficiency with exceptional accuracy and reliability, in a value package.

Each unit is constructed with premium components—cast pump volutes, heater tubes, mixing assemblies, high-flow pumps with leak-resistant

silicon carbide seals, and rugged Incoloy-sheathed heaters—ensuring years of maintenance free operation in demanding environments.

Simple control and data management are at the core of the RQT Series. The RQT Standard features an intuitive LCD interface and customizable parameters for precise temperature regulation.

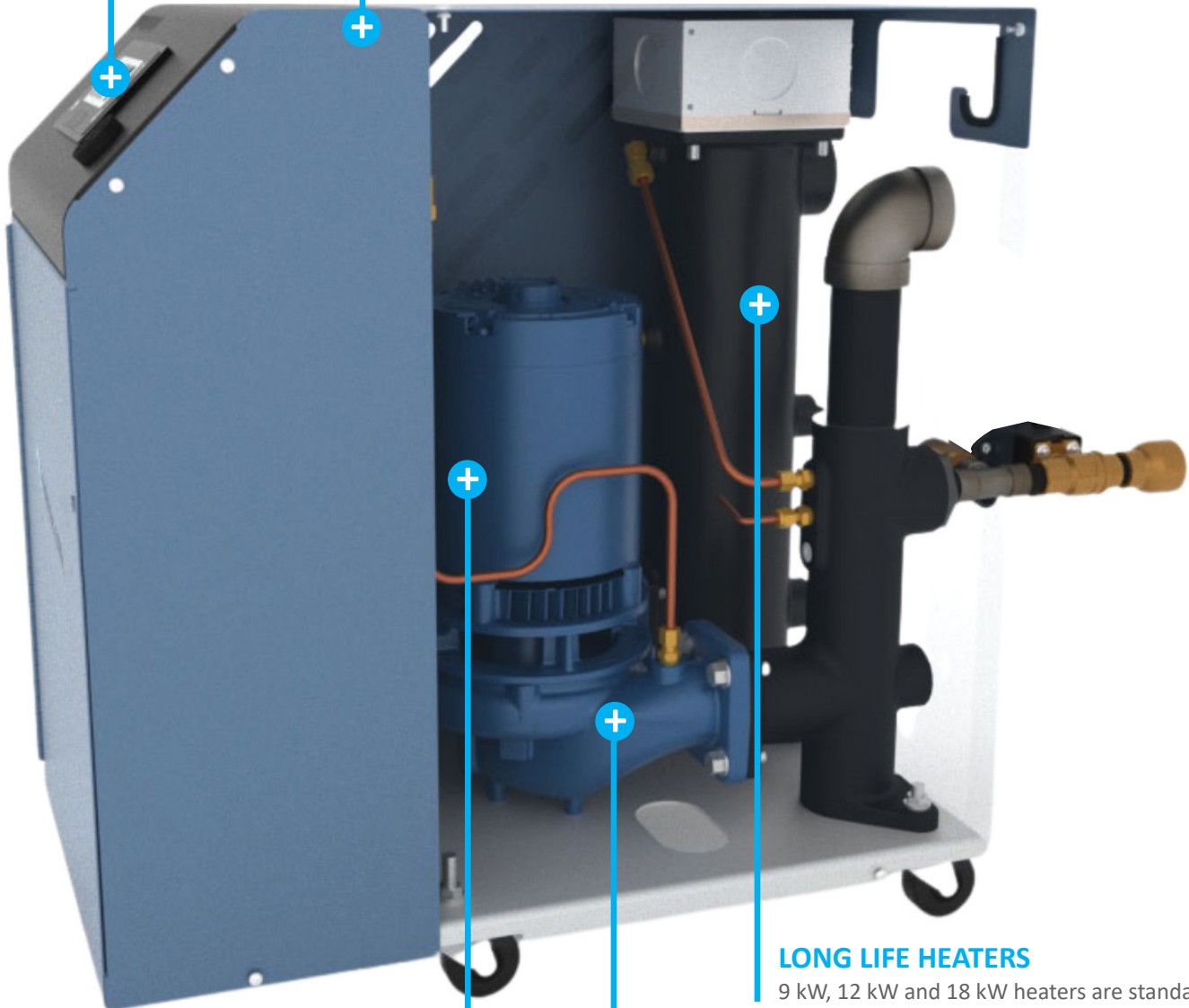
Additional Benefits of the RQT Standard Series:

STANDARD PLC CONTROLLER

Easy to use LCD screen with adjustable parameters offers exact temperature control.

PRESSURE GAUGES

Large easy-to-read supply and return water pressure gauges on the top for easy monitoring of the mold circuit and unit performance.



LONG LIFE HEATERS

9 kW, 12 kW and 18 kW heaters are standard.

LONG LIFE PUMP SEALS

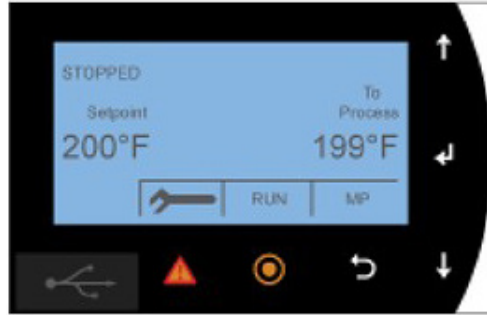
Extend seal life and are more energy efficient than external seal flush lines.

HIGH FLOW PUMP

Sizes are ¾ to 3 hp (0.56 to 2.24 kW).
Silicon carbide pump seals are standard.

Additional Benefits of the RQT Standard Series (continued):

- **Intelligent Air Purge with 120°F (49°C) Air Purge Cancel:** At start-up our automatic air purge sequence deactivates when the mold circuit is above 120°F (49°C) to avoid cooling of the mold during temporary power interruptions.
- **Standard PLC Controller Data includes:**
 - Set point and actual temperature
 - Pump running hours display
 - Temperature deviation alarms and warnings
 - Adjustable alarm delay time
 - Tracks heater contactor life
 - Machine diagnostics
 - Selectable control tuning levels



- **Pump and Heater Running Hours Display:** Running hour meters for both pump and heater provide a quick and easy way to check on total machine run time to better plan for routine maintenance.

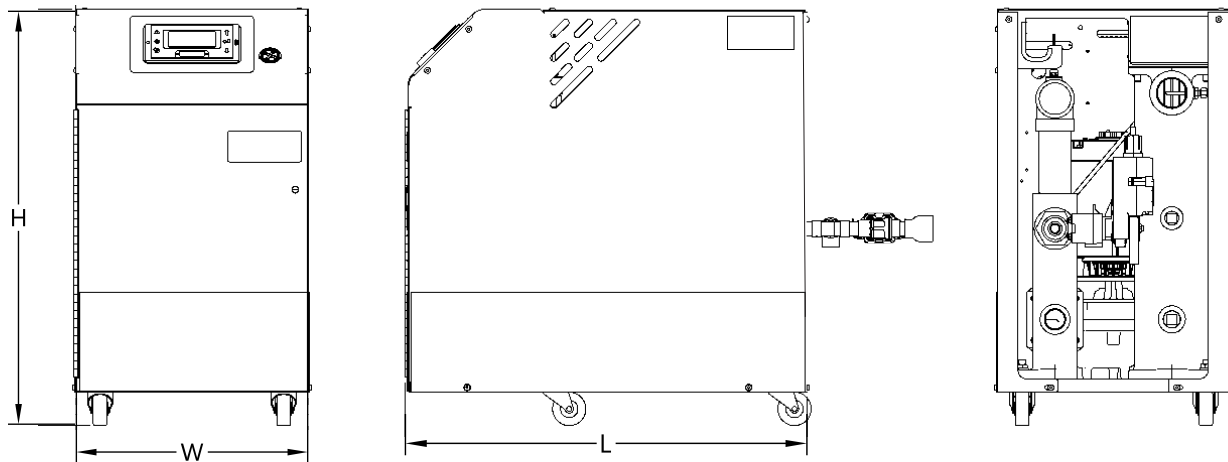
Temperature Deviation Warnings and Alarms: Provides a visual alert of a potential problem before a fault occurs. If the condition worsens, the alarm sounds and the unit stops to prevent equipment damage.

Adjustable Deviation Alarm Time Delays: A programmable alarm time delay eliminates nuisance alarms at start-up by allowing the unit to reach a stable temperature before activating the temperature alarms.

- **Supply and Return Temperature Display:** Continuous display of the set point and supply temperatures and ability to check the return temperature for complete monitoring of the process and unit operation.

Available Options:

- **Mold Purge:** Quickly evacuates fluid from the process circuit and depressurizes, allows for faster and cleaner disconnection of the unit.
- **Stacking Rack:** Saves floor space by stacking two units.



Technical Data

Model	Heating Capacity (kW)	Pump Performance			Dimensions L x W x H inch (mm)	Shipping Weight lbs (kg)
		hp (kW)	GPM (l/min)	PSI (bar)		
RQT0908	9	¾ (0.56)	50 (189)	20 (1.4)	24 x 14 x 25 (610 x 356 x 635)	280 (127)
RQT0910	9	1 (1.75)	55 (208)	25 (1.7)	24 x 14 x 25 (610 x 356 x 635)	290 (132)
RQT0920	9	2 (1.49)	75 (284)	30 (2.1)	24 x 14 x 25 (610 x 356 x 635)	298 (135)
RQT0930	9	3 (2.24)	85 (322)	32 (2.2)	24 x 14 x 25 (610 x 356 x 635)	299 (136)
RQT1208	12	¾ (0.56)	50 (189)	20 (1.4)	24 x 14 x 25 (610 x 356 x 635)	280 (127)
RQT1210	12	1 (1.75)	55 (208)	25 (1.7)	24 x 14 x 25 (610 x 356 x 635)	290 (132)
RQT1220	12	2 (1.49)	75 (284)	30 (2.1)	24 x 14 x 25 (610 x 356 x 635)	298 (135)
RQT1230	12	3 (2.24)	85 (322)	32 (2.2)	24 x 14 x 25 (610 x 356 x 635)	299 (136)
RQT1808	18	¾ (0.56)	50 (189)	20 (1.4)	24 x 14 x 25 (610 x 356 x 635)	280 (127)
RQT1810	18	1 (1.75)	55 (208)	25 (1.7)	24 x 14 x 25 (610 x 356 x 635)	290 (132)
RQT1820	18	2 (1.49)	75 (284)	30 (2.1)	24 x 14 x 25 (610 x 356 x 635)	298 (135)
RQT1830	18	3 (2.24)	85 (322)	32 (2.2)	24 x 14 x 25 (610 x 356 x 635)	299 (136)

Electrical Data

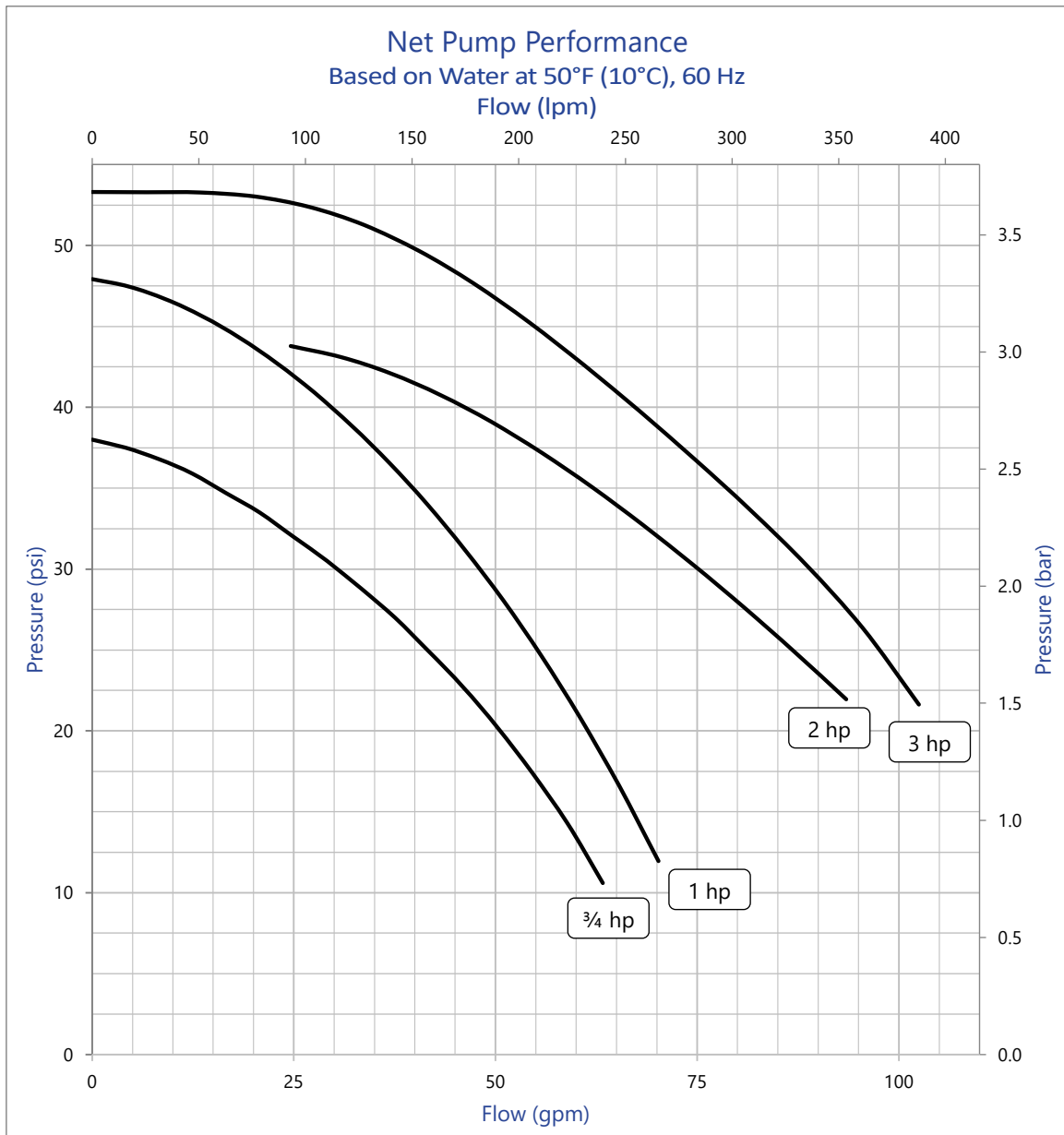
Pump hp (kW)	9 kW Heater				
	Rated Voltage FLA ¹ @ 208	Rated Voltage FLA ¹ @ 230	Rated Voltage FLA ¹ @ 400	Rated Voltage FLA ¹ @ 460	Rated Voltage FLA ¹ @ 575
¾ (0.56)	23.6	25.7	14.9	12.8	10.4
1 (0.75)	24.3	26.4	16.0	13.1	10.5
2 (1.49)	26.5	28.6	17.1	14.3	11.5
3 (2.24)	29.3	31.4	18.1	15.4	12.4

Pump hp (kW)	12 kW Heater				
	Rated Voltage FLA ¹ @ 208	Rated Voltage FLA ¹ @ 230	Rated Voltage FLA ¹ @ 400	Rated Voltage FLA ¹ @ 460	Rated Voltage FLA ¹ @ 575
¾ (0.56)	30.4	33.2	19.2	16.6	13.4
1 (0.75)	31.1	33.9	20.3	16.9	13.5
2 (1.49)	33.3	36.1	21.4	18.1	14.5
3 (2.24)	36.1	38.9	22.4	19.2	15.4

Electrical Data (Continued)

Pump hp (kW)	18 kW Heater				
	Rated Voltage FLA ¹ @ 208	Rated Voltage FLA ¹ @ 230	Rated Voltage FLA ¹ @ 400	Rated Voltage FLA ¹ @ 460	Rated Voltage FLA ¹ @ 575
¾ (0.56)	N/A	N/A	27.9	24.1	19.5
1 (0.75)	N/A	N/A	29.0	24.4	19.6
2 (1.49)	N/A	N/A	30.1	25.6	20.6
3 (2.24)	N/A	N/A	31.1	26.7	21.5

¹FLA for reference purposes only. Does not include options or accessories.



Which TCU is Right For You?

Use the chart below to compare the Aquatherm control options and chose the one perfect for your application:

Description of Functions	Model		
	RQT Standard	RQT Advanced	RQT Premium
Direct Injection	●	●	●
Closed Circuit - Common Source	—	○	○
Closed Circuit - Separate Source	—	—	○
Construction			
Standard Pump Range	¾, 1, 2, or 3 HP	¾ to 10 HP	¾ to 10 HP
Standard Heater Range	9, 12, or 18 kW	0 to 48 kW	0 to 48 kW
Cast / Heater Pump	●	●	●
Incoloy Heaters	●	●	●
Silicon Carbide Seals	●	●	●
Pressure Gauges	●	—	—
Pressure Transducer	—	●	●
Solid State Heater Relays (SSRS)	—	○	●
Controls			
PID Control	●	●	●
Setpoint / Actual Display	●	●	●
Password Protection	—	—	●
Modbus-RTU via RS-485	—	●	—
Modbus-TCP via Ethernet	—	○	●
SPI RS-485 Interface	—	—	○
OPC-UA via Ethernet	—	—	●
Retransmit Process Temp (0 to 10 VDC)	—	●	●
Auto Restart Capability	—	●	●
Mold Purge (Factory Installed)	○	○	○
Phase Detection Circuit	—	○	●
Choice of Control Points	●	●	●
Auto Cool Stop	—	●	●
Status / Alarm Lights			
Audible Alarm	—	●	●
Strobe Light	—	○	○
Alarm Dry Contacts	—	○	○
Remote RTD Support	—	●	●
Trending	—	—	●

Legend: Standard = ● Optional = ○ Not Available = —



Thermal Care is ISO 9001 Certified
 Manufacturer reserves the right to change specification
 or design without notification or obligation.

