

TEMPRO Mold Temperature Controllers



Superior Temperature Control

Technology working for you.

Wittmann

Progress through Innovation

Superior TEMPRO plus C Series with the PLUS for Perfect Quality

Latest design technology and operation ...

In pressurized operation, two gauges ensure that the internal pressure is always approx. 1 bar over the steam pressure curve.

Because of the smaller heat exchanger there is less circulating water. As a result, the preheating time and the cool down period have been reduced.

Booster pump (for filling under pressure at temperatures of more than 100 °C)

Color TFT-LCD display

Heat exchanger made of stainless steel (Incoloy heating element)

Pump and system pressure gauges

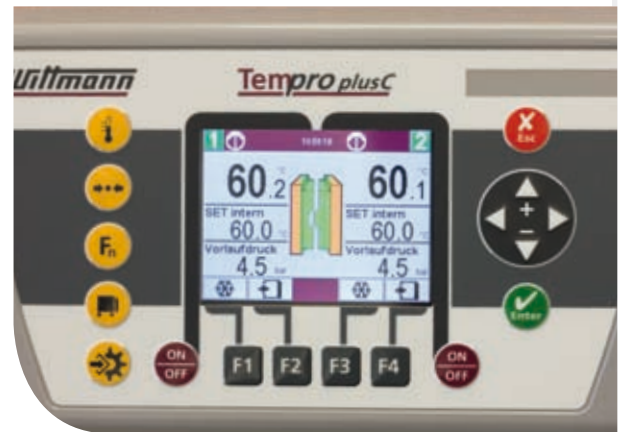
Maintenance free magnetically coupled pump (standard in the TEMPRO plus C 160)

Heating control via solid state relay



Optimum visibility and operation of the TEMPRO plus C

- **Set point**
The actual value and set point are displayed simultaneously.
- **Visual temperature control**
The mold symbol color indicates if the temperature is in the tolerance band (green: within tolerance; red: too hot; blue: too cold).
- **Additional information on the display**
The operator can choose an additional value to be displayed on the screen (pressure, flow).
- **Easy operation with the TEMPRO plus C**
Menus to adjust values and to choose operating modes can be selected with the yellow buttons.
- **Quick selection**
Operating modes that are used frequently can be selected using the F1 or F4 buttons without entering a menu.



Standard equipment for the TEMPRO plus C series

- Microprocessor controller with +/- 0,2 °C accuracy.
- Automatic filling and constant pressure monitoring.
- Pressure gauges (system and pump pressures).
- Automatic pump rotation detection.
- Maximum temperature monitoring.
- Heater control with solid state relay.
- Pumps safe to run dry.
- Backflow sensor.
- Sensor break monitoring.
- External sensor socket for PT 100 sensors.
- Air purging (unlimited mold purge for 140/160 units).
- Timer (time switch).
- Dry contact for alarm output plus audible alarm.
- Operating hours counter with service interval indicator.
- Options: Ultrasonic flow measurement
Communications interfaces
Mold sensor FeCo (Type J) socket

TEMPRO plus C90/140/160

Circulating Water Single and Dual Zone Units

TEMPRO plus C90

- For temperatures up to 90 °C.
- Open system with powerful, submersible pumps without pump seals.

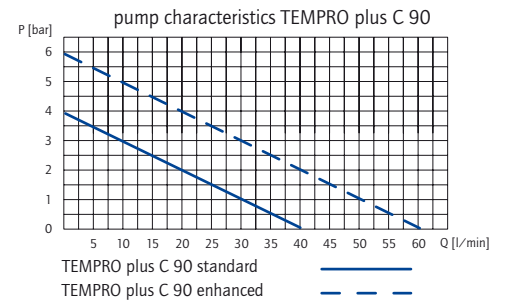
TEMPRO plus C140/160

- For temperatures up to 140 °C and 160 °C.
- Pressurized system with powerful pumps and with magnetically coupled pumps for TEMPRO plus C 160

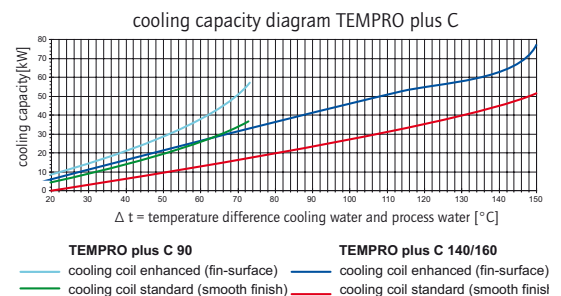
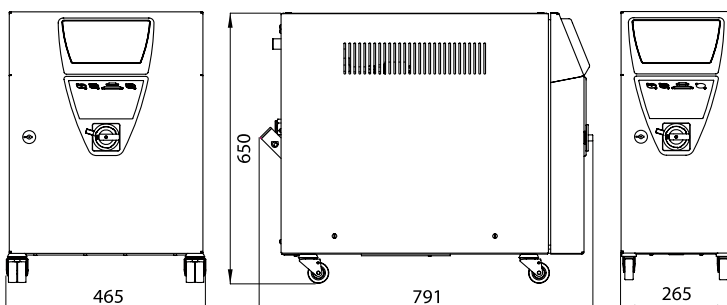
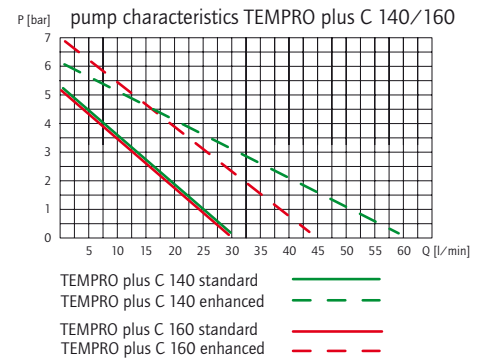


- Standard equipment
- Optional equipment
- no supply for this model

TEMPRO plus C	90	140	160
Microprocessor controller, self-optimizing	•	•	•
Maximum temperature monitoring	•	•	•
Sensor break monitoring	•	•	•
Automatic filling with leakage and pressure monitoring	•	•	•
Automatic pump rotation direction detection	•	•	•
Dry contact for alarm output plus audible alarm	•	•	•
Connectors for external sensors (PT100)	•	•	•
Leakstop function	•	–	–
Air purging for mold changes	•	•	•
Reinforced pump	◦	◦	◦
Manual filling	•	–	–
Pressure measuring	•	•	•
Flow measuring	◦	◦	◦
Boost pump	–	•	•
Serial interface (RS 232, RS 485, 20 mA, CAN)	◦	◦	◦
Operating hour counter	•	•	•
Horn	•	•	•

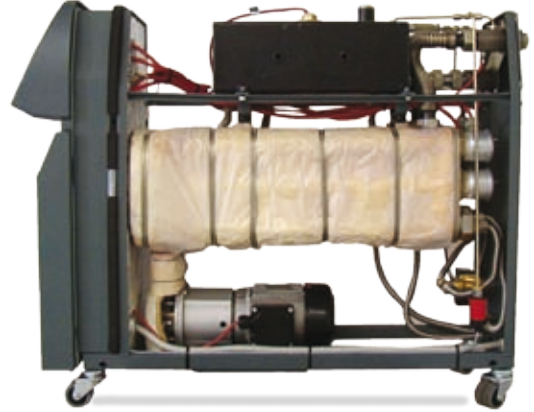


Technical data	TEMPRO plus C 90	TEMPRO plus C 140	TEMPRO plus C 160
Heating capacity	9 kW (option: 12 kW – only available with enhanced pump)		
Pump capacity standard	0.5 kW, max. 3.8 bar max. 40 l/min	0.5 kW, max. 4.6 bar max. 30 l/min	no seals 0.5 kW, max. 5 bar 30 l/min
Pump capacity enhanced	1 kW, max. 5.8 bar max. 60 l/min	0.75 kW, max. 6 bar max. 60 l/min	no seals 1 kW, max. 7 bar max. 45 l/min
Cooling water conn.	G 1/4"	G 3/8"	
Mold connection	G 3/4"		
Power supply	3 x 400 V/50 Hz		



TEMPRO plus 250

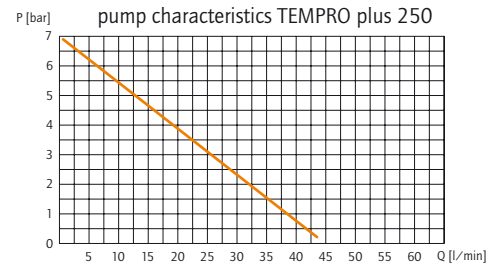
- **With Thermic Oil**
Perfect quality up to 250 °C.
- **Precision Control**
Microprocessor controlled until +/-1 °C accuracy.
- **User Friendly Simplistic Display**
- **Double Level Control**
Refill warning, automatic switch-off.
- **Process Pressure Gauges Standard**
- **Line Evacuating for Mold Purge**
- **Magnetically Coupled Pump Without Seal**



- Standard equipment
- Optional equipment
- no supply for this model

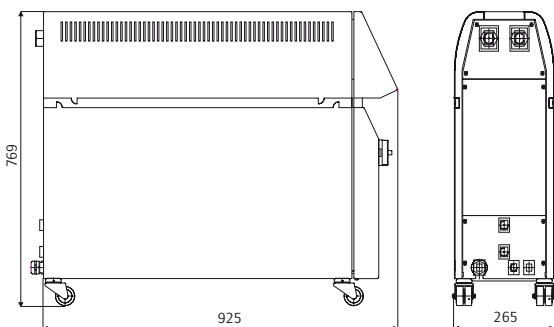
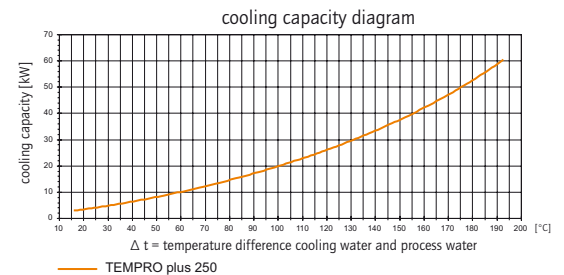
TEMPRO plus 250

Microprocessor controller, self-optimizing	•
Maximum temperature monitoring	•
Automatic heater control (max. heating power 12 kW)	•
Process pressure gauges standard	•
Level control max./min. (message for refilling/safety switch off)	•
Safety temperature limiter	•
Automatic pump rotation direction detection	•
Serial interface	◦
Socket for external sensor FeCo, type J	◦
Magnetically coupled pump without seal	•
Automatic venting of system pressure	•
Line evacuating for mold changing	•
Sensor break monitoring	•
Back flow sensor	•
Socket for external sensor PT 100	•
Dry contact for alarm output plus audible alarm	•
Operating hour counter, indication of several intervals	•



Technical Data

Heating capacity	max. 12 kW
Pump capacity	1 kW, max. 7 bar, max. 45 l/min
Cooling water connection	G 1/2"
Mold connection	G 3/4"
Power supply	3 x 400 V/50 Hz + MP



TEMPRO plus XL 90

Water Units

WITTMANN's new TEMPRO plus XL 90 can heat up even big molds within a short time to the required set point. Besides the strong heater (36 kW) we have reinforced flow (up to 200 l/min) and cooling capacity.

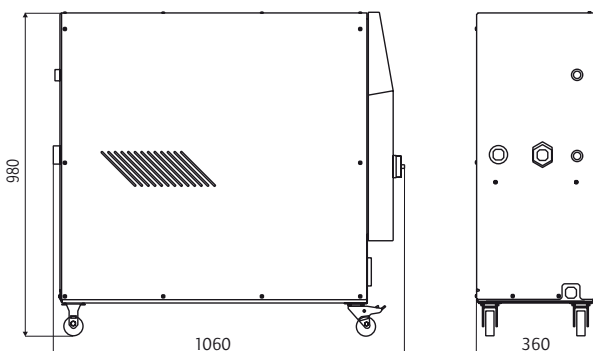
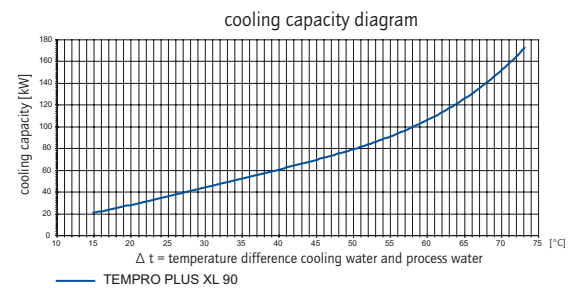
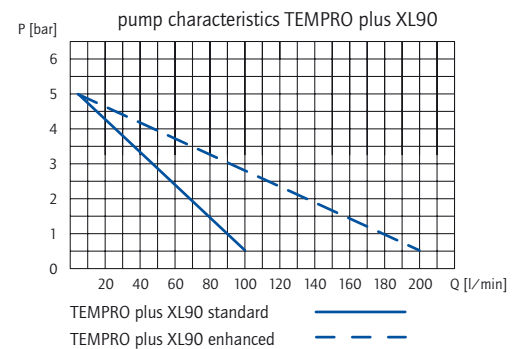
Purge out of molds is supported by an additional pump which pumps the water to the return line or drain. Thus the purge volume is unlimited.



- Standard equipment
- Optional equipment
- no supply for this model

TEMPRO plus XL 90	
Microprocessor controller, self-optimizing	•
Maximum temperature monitoring	•
Sensor break monitoring	•
Automatic filling with leakage monitoring and level control	•
Automatic pump rotation direction detection	•
Dry contact for alarm output plus audible alarm	•
Connectors for external sensors (PT 100)	•
Leakstop function	•
Air purging for mold changes	•
Pressure gauge/flow indication	◦
Serial interface (RS 232, RS 485, 20 mA, EUROMAP 17)	◦
Operating hour counter	•
Horn	•

Technical Data	
Heating capacity	18/36 kW
Pump standard T1001-50/60 Hz	2.2 kW, max. 5 bar, max. 100 l/min
Pump enhanced T2001-50/60 Hz	2.8 kW, max. 5 bar, max. 200 l/min
Cooling water connection	G 3/4"
Mold connection	G 1 1/4"
Power supply	3 x 400 V/50 Hz + MP



TEMPRO primus C90/basic C90/basic C140

— The Economic Solution

The ideal temperature controller for any application requiring exact temperature control and high user-friendliness, however without additional functions such as interfaces.

— TEMPRO primus C90

Single zone temperature controller up to 90 °C. Standard features include air purging for mold changes.

— TEMPRO basic C90

One circuit temperature controller for temperatures up to 90 °C equipped with a self-optimizing microprocessor controller (+/- 1 °C). Standard with leakstop function and hand selector switch for evacuating function.

— TEMPRO basic C140

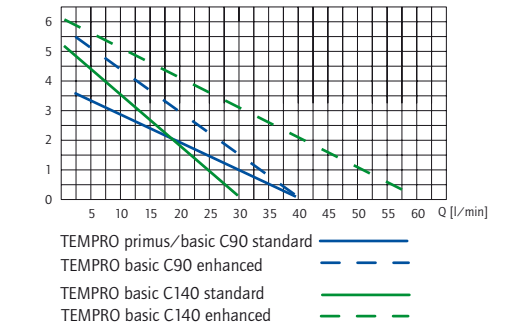
Single zone unit with pressurized system for temperatures up to 140 °C. The economic mold temperature controller for precise temperature control up to 140 °C.



- Standard equipment
- Optional equipment
- no supply for this model

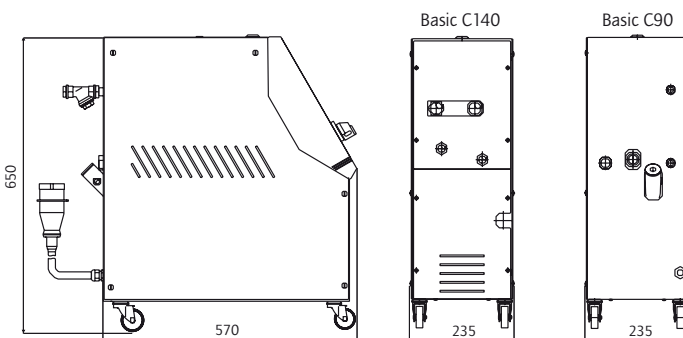
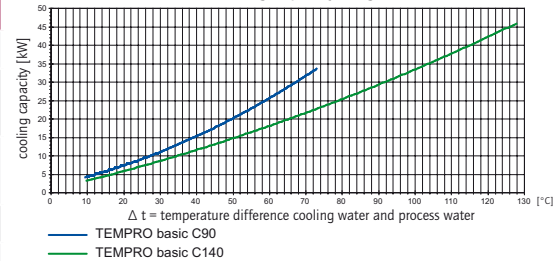
TEMPRO basic/primus	basic C90	basic C140	primus C90
Microprocessor controller, self-optimizing	•	•	•
Maximum temperature monitoring	•	•	•
Sensor break monitoring	•	•	•
Automator filling with leakage monitoring and level control	•	•	•
Automatic pump rotation direction detection	–	–	–
Dry contact for alarm output	•	•	–
Connectors for external sensors	◦	◦	–
Leakstop function	•	•	•
Air purging for mold changes	•	•	•
Reinforced pump	◦	◦	–
Manual filling	•	–	•
Pressure gauge/flow indication	–	–	–
Boost pump	–	–	–
Serial interface (RS 232, RS 485, 20 mA, EUROMAP 17)	–	–	–
Operating hour counter	•	•	•
Horn	•	•	•

P [bar] pump characteristics TEMPRO primus/basic C90/C140



Technical Data	TEMPRO primus C90	TEMPRO basic C90	TEMPRO basic C140
Heating capacity	9 kW		
Pump capacity Standard	0.5 kW, max. 3.5 bar, max. 40 l/min		0.5 kW, max. 5 bar max. 30 l/min
Pump capacity enhanced	–	0.75 kW, max. 5,5 bar max. 40 l/min	0.75 kW, max. 6 bar max. 60 l/min
Cooling water connect.	G 1/4"		G 3/8"
Mold connection	G 3/4"		G 3/4"
Power supply	3 x 400 V/50 Hz		

cooling capacity diagram



TEMPRO direct 120

Equipped with a self-optimizing microprocessor controller (+/-1 °C) for temperatures up to 120 °C. Powerful pumps (pressure up to 6 bar) guarantee a high flow of process water and thus a short preheating time and because of its direct cooling design, a high cooling capacity.

TEMPRO direct 120

The economic solution offering high flow rate pumps and reinforced cooling.

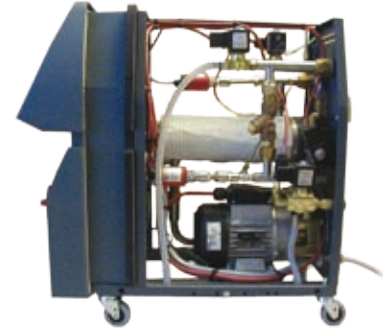
TEMPRO plus direct 120

Equipped with additional monitoring functions. Two pressure sensors monitor the differential pressure between the supply and return pressure from the mold in order to show the precise flow rate through the mold. A deviation in flow rate and pressure over or below the set values will activate an alarm. When air purging the mold, the return water is pumped into the cooling system, allowing large volumes to be purged.

TEMPRO direct 120



TEMPRO plus direct 120

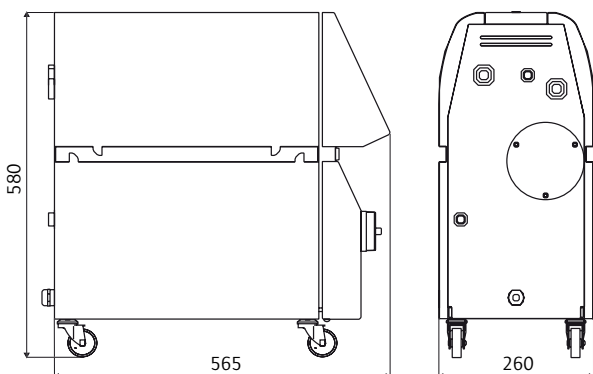
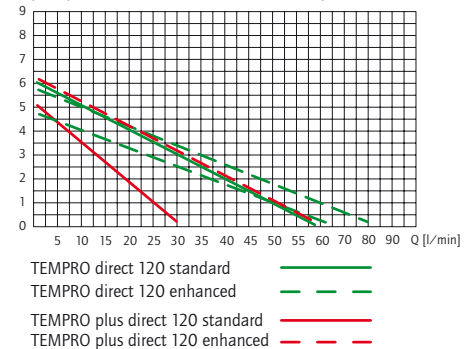


TEMPRO direct 120	direct 120	plus direct 120
Microprocessor controller, self-optimizing	•	•
Maximum temperature monitoring	•	•
Automatic pump rotation direction detection	–	•
Automator filling with pressure monitoring	•	•
Sensor break monitoring	•	•
Pressure indication and monitoring	–	•
Flow indication and monitoring	–	•
Adjustable maximum internal pressure	–	•
Air purging for mold changes	◦	•
Dry contact for alarm output + audible alarm	•	•
Connector for external sensor (PT 100)	◦	◦
Pump made of stainless steel	◦	◦
Serial interface to IMM	–	◦
Operating hour counter	•	•
Horn	•	•

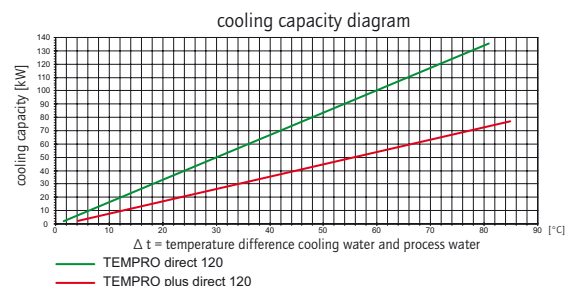
- Standard equipment
- Optional equipment
- no supply for this model
- * Also available without slip ring seal (magnetically coupled)

Technical Data	TEMPRO direct 120	plus direct 120
Heating capacity	9 kW	6 kW
Pump capacity Standard	0.75 kW, max. 6 bar, max. 60 l/min	0.5 kW, max. 5 bar* max. 30 l/min
Pump capacity enhanced	1.5 kW, max. 4,8 bar max 65l /min	2.2 kW, max. 5,7 bar max. 82 l/min
Cooling water connect.	G 1/2"	G 3/8"
Mold connection	G 1"	G 3/4"
Power supply	3 x 400 V/50 Hz + MP	

P [bar] pump characteristics TEMPRO direct/plus direct 120



Dimensions of TEMPRO direct 120 identical to BASIC series.





Technology working for you.

Wittmann Kunststoffgeräte GmbH

Lichtblaustraße 10

1220 Vienna | Austria

Tel.: +43 1 250 39 0 | Fax: +43 1 259 71 70

info@wittmann-robot.com

www.wittmann-robot.at