

TEMPRO MOLD TEMPERATURE CONTROLLERS

Superior Temperature Control

world of innovation



TEMPRO plus D

Touch-Screen Series for Perfect Quality

Latest design technology and operation ...

In pressurized operation, a gauge ensures that the internal pressure is always 1 bar min. 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)

Touch-screen display, 5.7", Windows CE

Heat exchanger made of stainless steel (Incoloy heating element)

Pump and system pressure gauges

Maintenance free magnetically coupled pump (standard in the TEMPRO plus D140/160/180)

Heating control via solid state relay



Optimum visibility and operation of the TEMPRO plus D

- » **Touch-screen**
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 D**
Menus to adjust values and to choose operating modes can be selected with color touch-screen.
- » **Quick selection**
Operating modes that are used frequently can be selected using the touch fields at the bottom of the screen.



Standard equipment for the TEMPRO plus D 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 140/160/180 units).
- » Timer (time switch).
- » Potential-free dry contact for alarm output plus audible alarm.
- » Operating hours counter/service interval indicator.
- » **Options**
 - Flow control and measurement.
 - Communications interfaces.
 - Mold sensor FeCo (Type J) socket.

TEMPRO plus D90/140/160/180

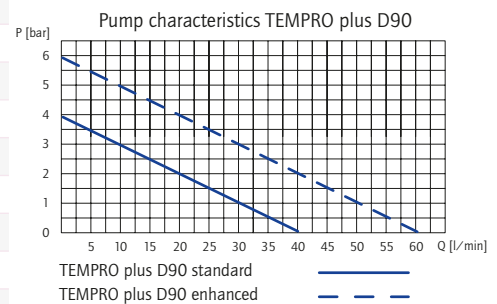
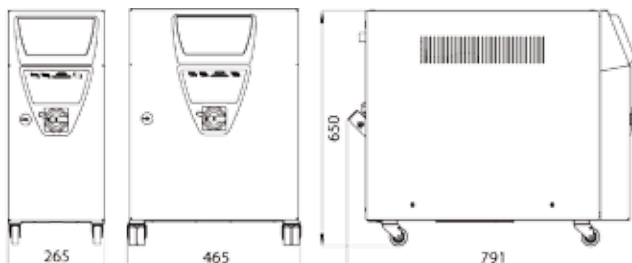
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Circulating water single and dual zone units

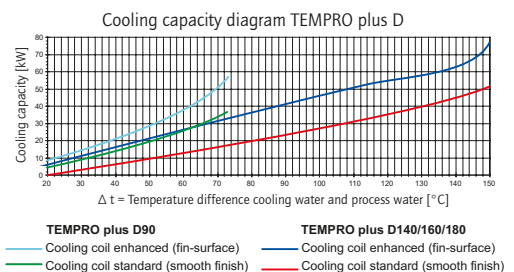
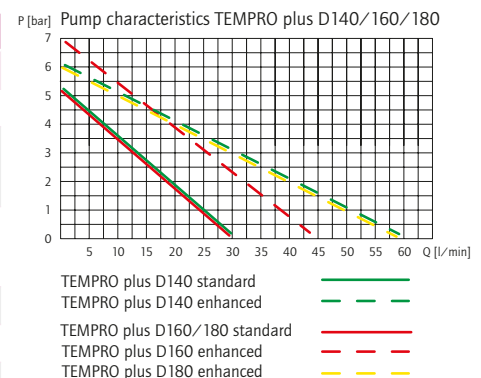
- » **TEMPRO plus D90**
For temperatures up to 90 °C.
Open system with powerful, submersible pumps without pump seals.
- » **TEMPRO plus D140/160/180**
Pressurized system with powerful pumps and with magnetically coupled pumps for graduated temperature ranges.

Equipment				
TEMPRO plus D	90	140	160	180
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 PT 100	•	•	•	•
Connector for external mold sensor FeCo Type J	○	○	○	○
Leakstop function	•	○	○	—
Mold purging through pump rotation change (max. 3 l)	•	—	—	—
Mold purging through pump rotation change (unlimited)	—	•	•	•
Enhanced pump [1 = magnetically coupled]	○	○ ¹	○ ¹	○ ¹
Pressure measuring (system, pump, and flow pressure)	•	•	•	•
Flow measuring [1 = vortex, 2 = ultrasonic]	○ ¹	○ ²	○ ²	○ ²
Boost pump [2 = two pumps]	—	•	•	• ²
Serial interface (RS 232, RS 485, 20 mA, CAN, SPI)	○	○	○	○
Operating hour counter/clock timer/service monitoring	•	•	•	•
Variotherm tempering (on request)	—	—	—	○

Technical Data			
TEMPRO plus D	90	140	160/180
Heating capacity	9 kW (option:12 kW)		
Pump capacity (50 Hz) standard	0.5 kW, max. 3.8 bar max. 40 l/min	magnetically coupled 0.5 kW, max. 4.5 bar max. 40 l/min	magnetically coupled 0.5 kW, max. 5 bar max. 30 l/min
Pump capacity (50 Hz) enhanced	1 kW, max. 5.8 bar max. 60 l/min	magnetically coupled 1 kW, max. 6 bar max. 60 l/min	magnetically coupled 1 kW, max. 6 bar max. 60 l/min
Cooling water conn.	G 1/4" + G 3/8"		G 3/8"
Mold connection	G 3/4"		
Power supply	standard 3 x 380 – 415 V/50 Hz		



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

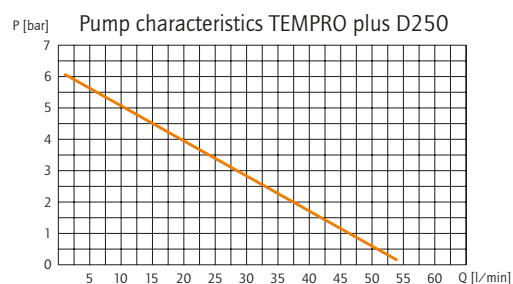
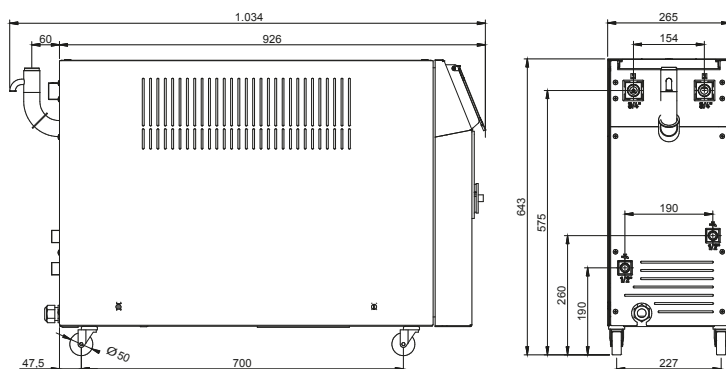


TEMPRO plus D250 OIL DEVICE

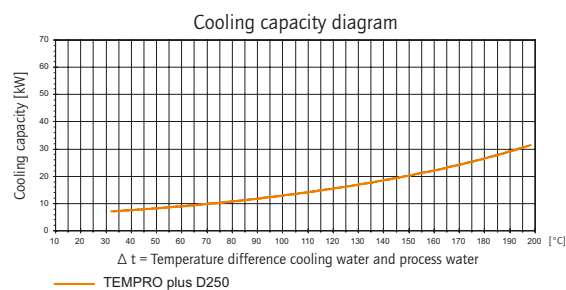
- » **With thermo-oil**
Perfect quality up to 250 °C.
- » **Precision control**
Microprocessor controlled until ± 0.5 °C accuracy.
- » **User-friendly touch-screen display**
- » **Line evacuating for mold purge**
- » **Double level control**
Refill warning, automatic switch-off.
- » **Process pressure gauges standard**
- » **Magnetically coupled pump without seal**

Equipment	
TEMPRO plus D250 Oil Device	
Microprocessor controller, self-optimizing (± 0.5 °C)	•
Maximum temperature monitoring	•
Automatic heater control (max. heating power 16 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 (RS 232, RS 485, 20mA)	•
Socket for external sensor PT 100	◦
Socket for external mold 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	•
Dry contact for alarm output plus audible alarm	•
Operating hour counter, indication of several intervals	•

Technical Data	
TEMPRO plus D250 Oil Device	
Heating capacity	max. 16 kW
Pump capacity (50 Hz)	1 kW, max. 6 bar, max. 55 l/min
Cooling water connection	G 1/2"
Mold connection	G 3/4"
Power supply	standard 3 x 380 – 415 V/50 Hz



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



TEMPRO plus XL 90

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Water units

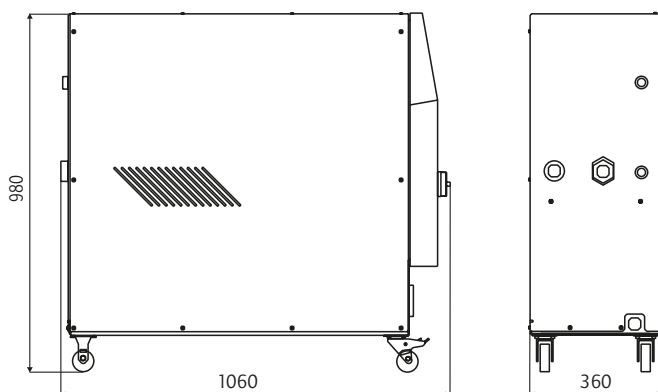
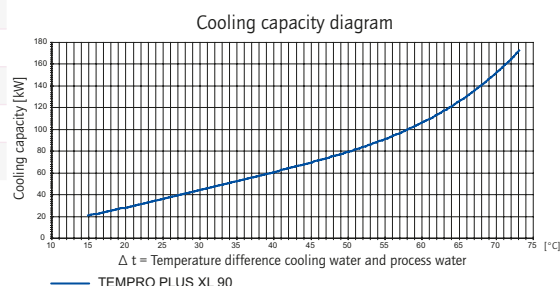
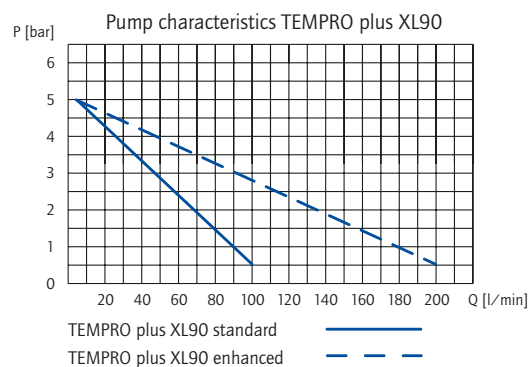
WITTMANN's **TEMPRO plus XL 90** can heat up even big molds within a short time to the required set point. Besides the strong heater (36 kW) we have reinforced flow (up to 200 l/min) and cooling capacity.

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 increased.



Equipment		
TEMPRO plus XL 90		
Microprocessor controller, self-optimizing		•
Maximum temperature monitoring		•
Sensor break monitoring		•
Automatic filling with leakage monitoring and level control		•
Dry contact for alarm output plus audible alarm		•
Connector for external sensors PT 100		•
Connector for external mold sensor FeCo Type J		◦
Leakstop function		•
Air purging for mold changes		•
Pressure gauge/flow indication		◦
Serial interface (RS 232, RS 485, 20 mA)		◦
Operating hour counter/Service monitoring		•

Technical Data		
TEMPRO plus XL 90		
Heating capacity	18 kW (option: 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	standard 3 x 380 – 415 V/50 Hz	



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 direct cooling.

» 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.

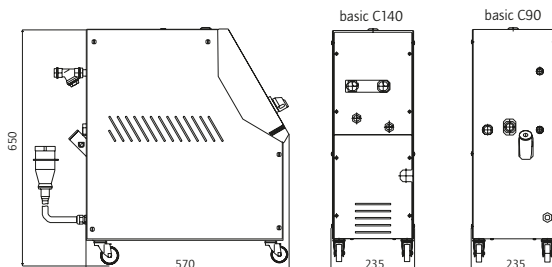
» TEMPRO basic C140

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

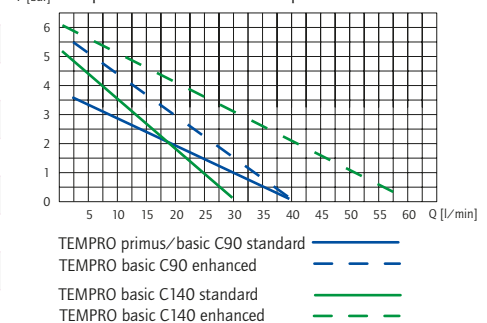


Equipment			
TEMPRO	primus C90	basic C90	basic C140
Microprocessor controller, self-optimizing	•	•	•
Maximum temperature monitoring	•	•	•
Sensor break monitoring	•	•	•
Automator filling with leakage monitoring and level cont.	•	•	•
Dry contact for alarm output	–	•	•
Connectors for external sensors PT 100	–	◦	◦
Leakstop function	• / ◦	•	•
Mold purging through pump rotation change	◦ / •	•	•
Reinforced pump	–	◦	◦
Manual filling	•	•	–
Pressure gauge/flow indication	–	◦	◦
Serial interface (RS 232, RS 485, 20 mA)	–	◦	◦
Analog interface (4–20 mA / 0–10 V)	–	◦	◦
Operating hour counter/Service monitoring	•	•	•
Horn	•	•	•

Technical Data			
TEMPRO	primus C90	basic C90	basic C140
Heating capacity	9 kW		
Pump capacity (50 Hz) Standard	0.5 kW, max. 3.5 bar, max. 40 l/min		0.5 kW, max. 5 bar max. 30 l/min
Pump capacity (50 Hz) 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"
To mold – from mold	G 3/4" / G 1/2"		G 3/4"
Power supply	standard 3 x 380 – 415 V/50 Hz		

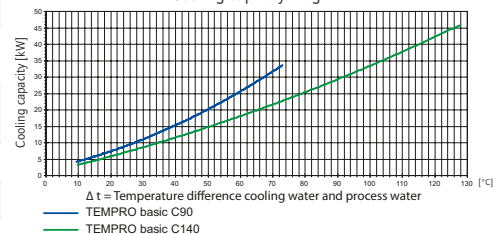


Pump characteristics TEMPRO primus/basic C90/C140



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

Cooling capacity diagram



TEMPRO primus C120/basic C120

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- » The **TEMPRO primus C120** is used for temperatures up to 120 °C. Due to direct injection of the cooling water, it is providing an exceptionally high cooling capacity.
- » The **TEMPRO basic C120** was designed for the special requirements of specific applications. It is equipped with radial pumps for high flow volumes at different pressure ranges: an economic mold temperature controller series with high user-friendliness and an extensive equipment range for every application.

Equipment			
TEMPRO	primus C120	basic C120	
		M	L
Microprocessor controller, self-optimizing	•	•	•
Maximum temperature monitoring	•	•	•
Sensor break monitoring	•	•	•
Automator filling with pressure monitoring	•	•	•
Dry contact for alarm output + audible alarm	–	◦	◦
Connector for external sensor PT 100	–	◦	◦
Mold purging through pressurized air	–	◦	◦
Enhanced pump	–	◦	◦
Pump made of bronze	–	◦	◦
Pressure gauges in pump advance and return flow	•	•	•
Serial interface (RS 232, RS 485, 20mA)	–	◦	◦
Analog interface (4–20 mA / 0–10 V)	–	◦	◦
Operating hour counter/Service monitoring	•	•	•
Horn	•	•	•
Bypass including release valve for pump advance	•	•	•
Options: cooling valves	–	G1/2", G3/4" G1"	

Technical Data			
TEMPRO	primus C120	basic C120-M	basic C120-L
Heating capacity	9kW	9 kW (opt. 18 kW)	18 kW (opt. 36/46 kW)
Pump capacity standard	0.5 kW max. 2.0 bar max. 200 l/min	1.0 kW max. 2.35 bar max. 200 l/min	1.5 kW, 3.65 bar 200 l/min
Pump capacity enhanced (max. bar/ max. l/min)	–	1.5 kW, 3.65 bar 200 l/min	2.2 kW 4.2 bar 200 l/min 3.5 kW 5.9 bar 280 l/min
Dimensions (w/h/d)	227 x 660 x 600		350 x 800 x 750
Cooling water connect.	G 3/4"		
Mold connection	G 1 1/4"		
Standard cooling valve	G 3/8"		
Power supply	standard 3 x 380 – 415 V/50 Hz		

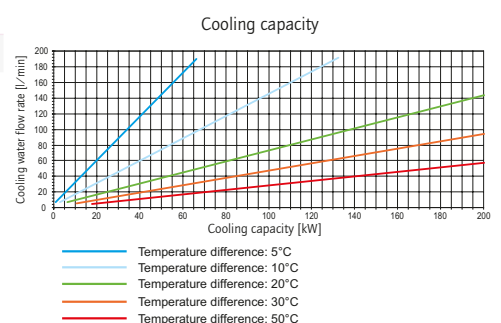
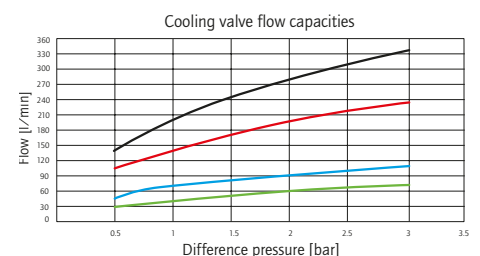
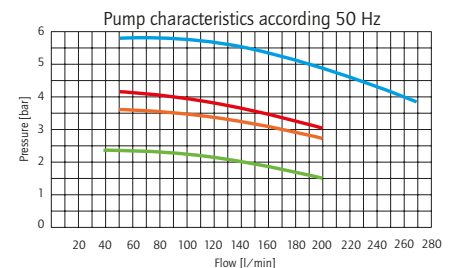
- Standard equipment
- Optional equipment
- no supply for this model



TEMPRO primus C120



TEMPRO basic C120





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