

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

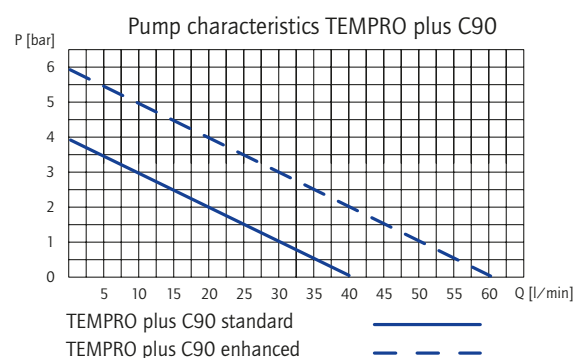
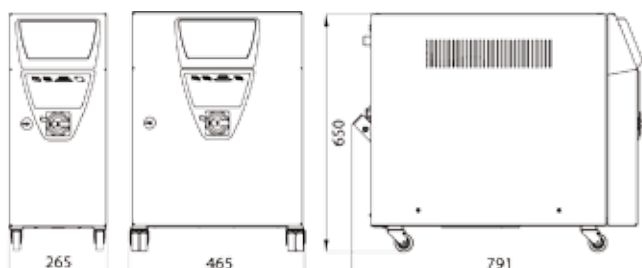
wittmann

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.

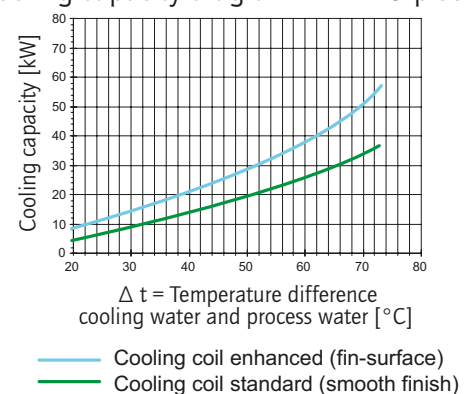
| Equipment | |
|--|----|
| TEMPRO plus D | 90 |
| Microprocessor controller, self-optimizing | • |
| Maximum temperature monitoring | • |
| Sensor break monitoring | • |
| Automatic filling with leakage and pressure monitoring | • |
| Automatic pump rotation direction detection | • |
| Dry contact for 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) | • |
| Enhanced pump, magnetically coupled | ◦ |
| Pressure measuring (system, pump, and flow pressure) | • |
| Flow measuring vortex | ◦ |
| Serial interface (RS 232, RS 485, 20 mA, CAN, SPI) | ◦ |
| Operating hour counter/clock timer/service monitoring | • |

| Technical Data | |
|--------------------------------|---------------------------------------|
| TEMPRO plus D90 | |
| Heating capacity | 9 kW (option: 12 kW) |
| Pump capacity (50 Hz) standard | 0.5 kW, max. 3.8 bar max. 40 l/min |
| Pump capacity (50 Hz) enhanced | 1 kW, max. 5.8 bar max. 60 l/min |
| Cooling water connection | G 1/4" + G 3/8" |
| Mold connection | G 3/4" |
| Power supply | standard 3 x 380 – 415 V/50 Hz |



- Standard equipment
- Optional equipment

Cooling capacity diagram TEMPRO plus D90



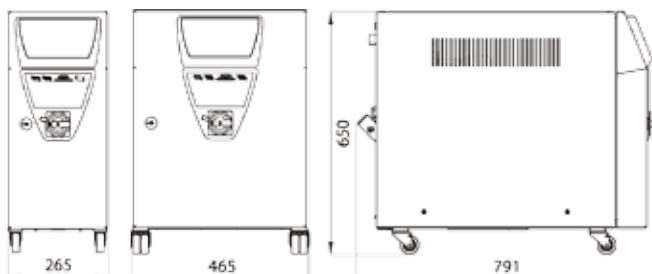
TEMPRO plus D140/160/180

Circulating water single and dual zone units

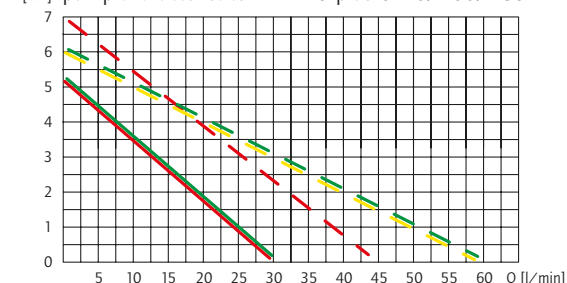
Pressurized system with powerful pumps and with magnetically coupled pumps for graduated temperature ranges.

| Equipment | | | |
|--|-----|-----|----------------|
| TEMPRO plus D | 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 | ◦ | ◦ | — |
| Dirt pan | • | • | • |
| Mold purging through pump rotation change (unlimited) | • | • | • |
| Enhanced pump, magnetically coupled | ◦ | ◦ | ◦ |
| Pressure measuring (system, pump, and flow pressure) | • | • | • |
| Flow measuring ultrasonic | ◦ | ◦ | ◦ |
| Boost pump [1 = two pumps] | • | • | • ¹ |
| 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 | 140 | 160/180 |
| Heating capacity | 9 kW (option: 12 kW) | |
| Pump capacity (50 Hz) standard | 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 | magnetically coupled, 1 kW, max. 6 bar max. 60 l/min | |
| Frequency-controlled pump (50 Hz) enhanced | 1 kW, max. 9 bar max. 50 l/min | |
| Cooling water connection | G 3/8" | |
| Mold connection | G 3/4" | |
| Power supply | standard 3 x 380 – 415 V/50 Hz | |



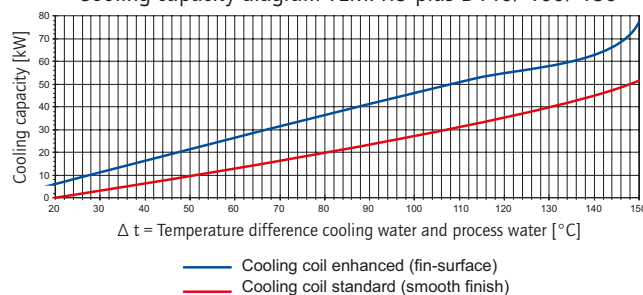
pump characteristics TEMPRO plus C140/160/180



TEMPRO plus C140 standard ———
 TEMPRO plus C140 enhanced - - -
 TEMPRO plus C160/180 standard ———
 TEMPRO plus C160 enhanced - - -
 TEMPRO plus C160/180 enhanced ———

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

Cooling capacity diagram TEMPRO plus D140/160/180



TEMPRO plus D Micro

Compact dual zone temperature controller

Wittmann

Pressurized water temperature controller

With powerful pumps, direct heating, indirect or direct cooling and supply temperatures of up to 160 °C as dual zone units.

| Equipment | |
|---|---|
| TEMPRO plus D Micro | |
| Touchscreen including set and actual temperature indication | • |
| Leakage, water level and pressure control | • |
| Microprocessor controller with ± 0.2 °C accuracy | • |
| Heater control via solid state relay | • |
| External sensor socket for PT 100 thermocouple | • |
| Unlimited mold purge function | • |
| Isolated contact for alarm | • |
| Flow measurement (optional) | ◦ |
| Connector FeCo (optional) | ◦ |
| Dirt pan for mold circuit (optional) | ◦ |
| Interfaces (optional) | ◦ |

- Standard equipment
- Optional equipment

| TEMPRO plus D Micro: 100 °C/140 °C/160 °C (Flow temp. max.) | |
|---|------------------------------|
| TEMPRO plus D Micro – dual zone units – specifications/zone | |
| Heating capacity (415 V) | 1, 4,5 or 6 kW |
| Cooling capacity | 10,000 W at 50 K diff. temp. |
| Pump capacity (50 Hz) | 0.25–0.5 kW |
| Pump pressure (50 Hz) | 4.5–5 bar |
| Pump flow (50 Hz) | 11–40 l/min |
| Internal water volume | 1 l |
| Mold connection | 3/8" |
| Cooling connection | 3/8" |
| Weight | 72–75 kg |
| Dimensions H x B x T | 580 x 265 x 605 |



TEMPRO plus D Micro dual zone unit:
display of both circuits on the touch-screen

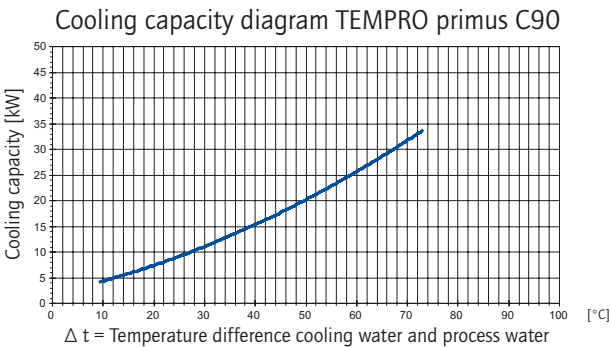
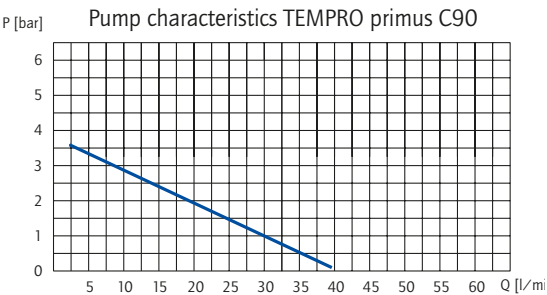
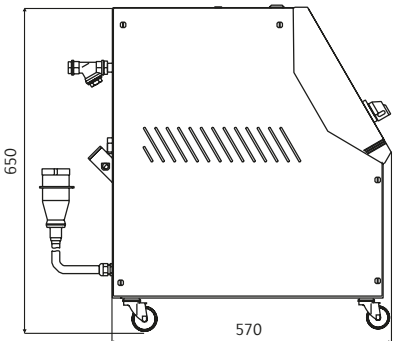
TEMPRO primus C90

- »
 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.

| Equipment | |
|---|-------|
| TEMPRO primus C90 | |
| Microprocessor controller, self-optimizing | • |
| Maximum temperature monitoring | • |
| Sensor break monitoring | • |
| Automator filling with leakage monitoring and level cont. | • |
| Leakstop function | • / ◦ |
| Mold purging through pump rotation change | ◦ / • |
| Manual filling | • |
| Operating hour counter/service monitoring | • |
| Horn | • |

- Standard equipment
- Optional equipment

| Technical Data | |
|------------------------------------|-------------------------------------|
| TEMPRO primus C90 | |
| Heating capacity | 9 kW |
| Pump capacity (50 Hz) Standar.d | 0.5 kW, max. 3.5 bar, max. 40 l/min |
| Cooling water connection | G 1 1/4" |
| Mold connection | G 3/4" / G 1/2" |
| Power supply | standard 3 x 380 – 415 V/50 Hz |



TEMPRO basic C90/basic C140

Wittmann

» 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 basic C90

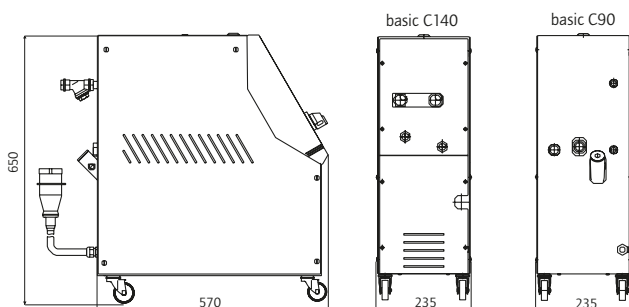
One circuit temperature controller for temperatures up to 90 °C equipped with a self-optimizing microprocessor controller (± 1 °C). Standard with leakstop function and hand selector switch for evacuating function.

» TEMPRO basic C140

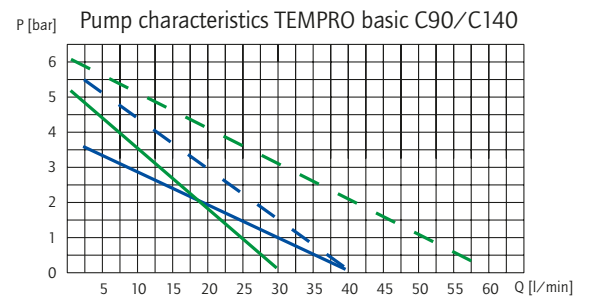
Single zone unit with pressurized system for temperatures up to 140 °C. The economic temperature controller for precise temperature control up to 140 °C.

| Equipment | | |
|---|-----------|------------|
| TEMPRO | 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 | 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 connection | G 1/4" | G 3/8" |
| Mold connection | G 3/4" / G 1/2" | G 3/4" |
| Power supply | standard 3 x 380 – 415 V/50 Hz | |

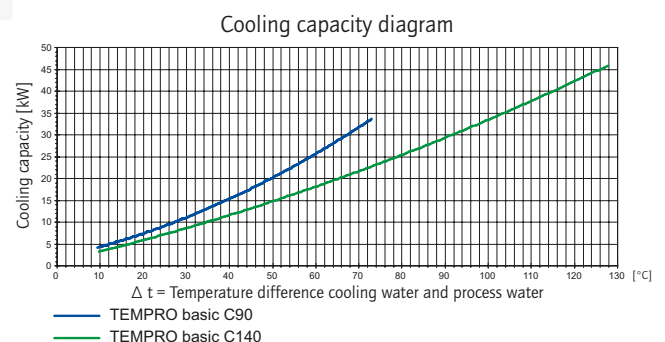


TEMPRO basic C90



TEMPRO basic C90 standard
 TEMPRO basic C90 enhanced
 TEMPRO basic C140 standard
 TEMPRO basic C140 enhanced

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



TEMPRO primus C120/basic C120

- » 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, 20 mA) | – | ◦ | ◦ |
| 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 | | |

Options:

- » Flow measurement Vortex
- » Follow-up package for basic C120-M and basic C120-L

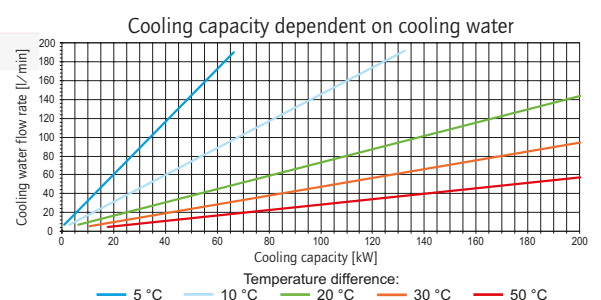
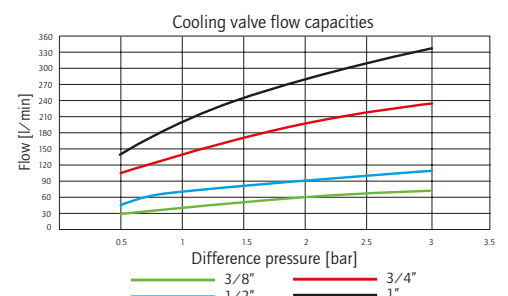
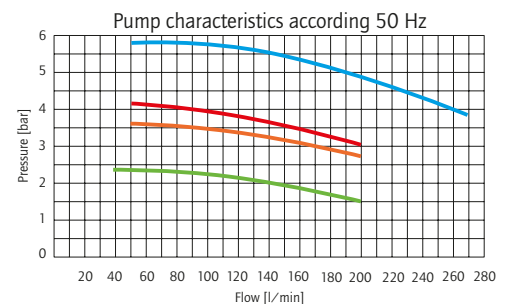
- Standard-equipment
- Optional equipment
- no supply for this model



TEMPRO primus C120



TEMPRO basic C120-L



TEMPRO plus D120-L

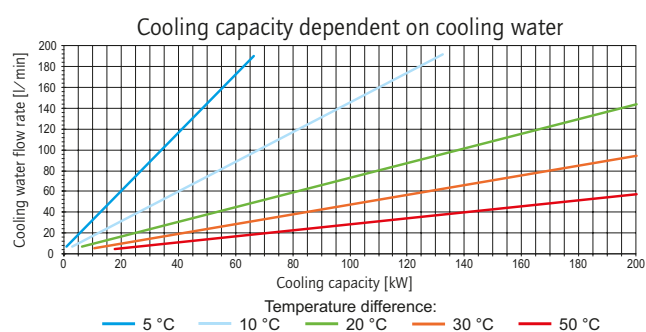
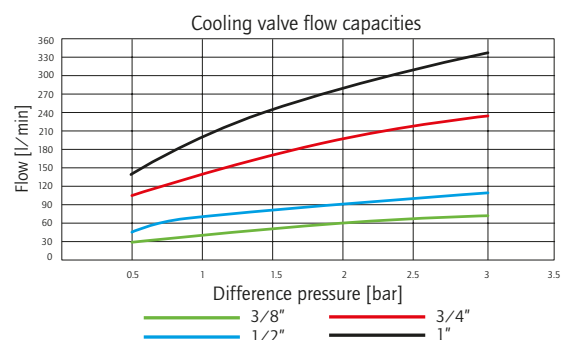
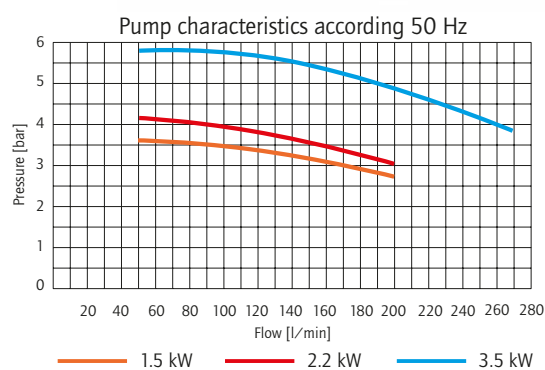
wittmann

- » The **TEMPRO plus D120-L** was specially developed for large consumers. It is equipped with radial pumps that offer high volume flow rates for different pressure ranges.
- » A temperature controller series with high ease of use, touch-display and many possibilities for every application.

| Equipment | |
|---|---|
| TEMPRO plus D120-L | |
| Microprocessor controller, self-optimizing | • |
| Maximum temperature monitoring | • |
| Sensor break monitoring | • |
| Automator filling with pressure monitoring | • |
| Dry contact for alarm output | • |
| Connector for external sensor PT 100 | • |
| Mold purging through pressurized air | ◦ |
| Enhanced pump | ◦ |
| 5,7" TFT color touch display (full text display and protective cover) | • |
| Manometer in supply and return flow | • |
| Serial interface (RS 232, RS 485, 20 mA) | ◦ |
| Analog Interface (4–20 mA / 0–10 V) | ◦ |
| Operating hour counter/Service monitoring | • |
| Horn | • |
| Pump pressure measuring and control | • |
| Option: cooling valve | ◦ |
| Thermomechanical safety limiter for shutting of the heating | • |
| Water supply filling valve for pressure decrease and water stop | • |
| Bypass including release valve for pump advance | • |
| Mold return flow safety valve (10 bar) | • |
| Flow measurement | ◦ |
| WITTMANN 4.0 Interface | ◦ |

- Standard equipment
- Optional equipment

| Technical Data | |
|--|--|
| TEMPRO plus D120-L | |
| Heating capacity | 18 kW |
| Pump capacity (50 Hz) standard | 1.5 kW 3.65 bar 200 l/min |
| Pump capacity (50 Hz) enhanced, optional | 2.2 kW 4.2 bar 200 l/min 3.5 kW 5.9 bar 280 l/min |
| Cooling water connection | 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 |

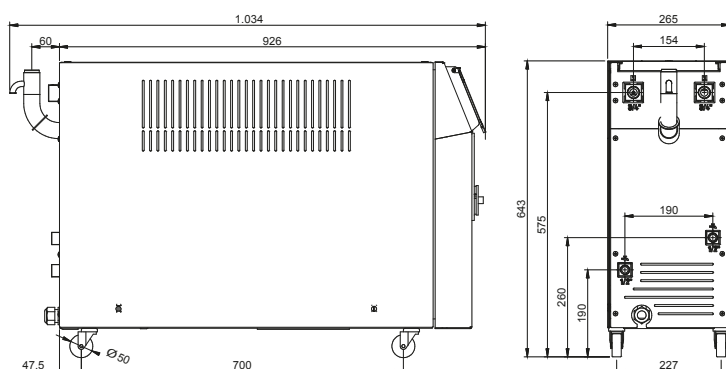


TEMPRO plus D300 OIL DEVICE

- » **With thermo-oil**
Perfect quality up to 300 °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**

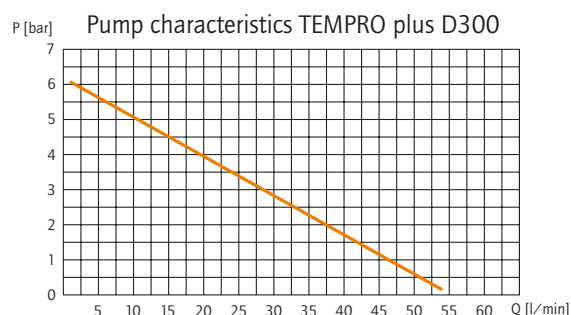
| Equipment | |
|---|---|
| TEMPRO plus D300 Oil Device | |
| Microprocessor controller, self-optimizing (± 0.5 °C) | • |
| Maximum temperature monitoring | • |
| Automatic heater control (max. heating power 16 kW) | • |
| Process pressure gauges standard | • |
| Level control max./min. (message for refilling/safety switch off) | • |
| Safety temperature limiter | • |
| Automatic pump rotation direction detection | • |
| Serial interface (RS 232, RS 485, 20 mA) | • |
| 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 D300 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 |

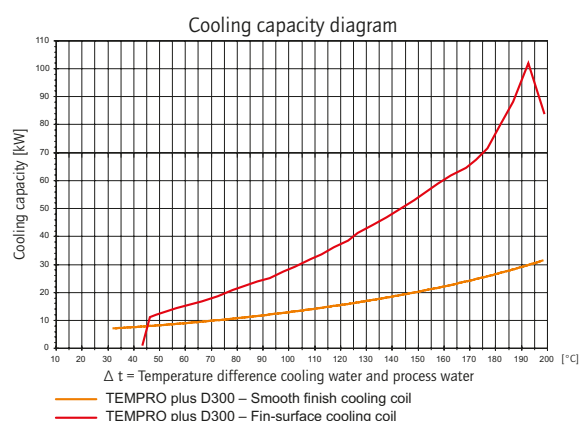


Options:

- » Cooling water bypass
- » Fin-surface cooling coil



- Standard equipment
- Optional equipment



TEMPRO plus XL 90

wittmann

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

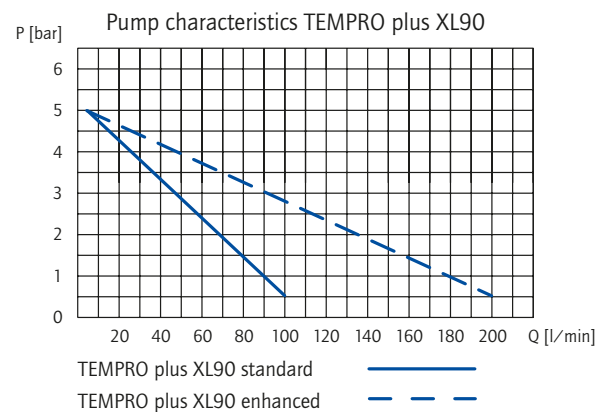
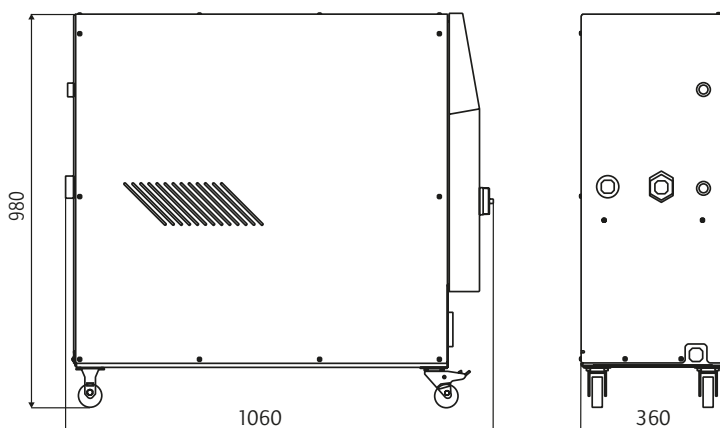
TEMPRO plus XL 90

| | |
|---|---|
| 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 | • |

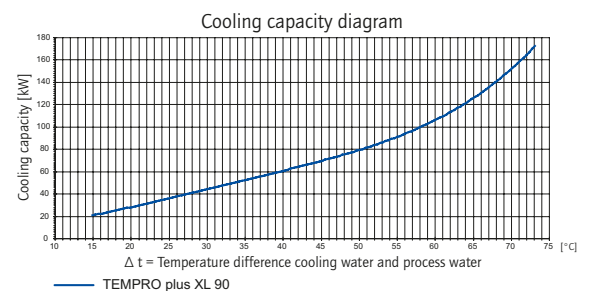
Technical Data

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 | 3.5 kW, max. 7.5 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 | |



- Standard equipment
- Optional equipment,



The Wittmann logo is located in the bottom right corner of the page. It consists of the word "Wittmann" in a white, italicized, sans-serif font, set against a dark red, parallelogram-shaped background.

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