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Easytherm, Thermovan

Технические характеристики

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Easytherm

EMP / EMP-ID



PRESSURISED TEMPERATURE CONTROLLER

up to 140 °C

Easytherm is the new mould temperature control unit characterized by user-friendliness, flexibility and reliability, for injection and blow moulding and extrusion processes.

A new interior and exterior layout, coupled with high-end components, characterise a versatile machine that guarantees reliability and long term performances.



Precise and effective thanks to cutting edge thermal elements



Easy to use thanks to the practical controller



Robust because of the use of best in class components



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Compounds

| | |
|---------------------------|--|
| Process fluid | Pressurised water |
| Cooling mode | Indirect or direct |
| Electrical feeding | 380/3/60, 400/3/50, 380/3/60, 440/3/60, 460/3/60 (V, Ph, Hz) |
| Main options | 2 or 4 ways manifolds, additional filters, communication interface (Current loop or Modbus RTU), process water loading line separate from the cooling circuit and pressure switch to detect water flow, sludge remover filter. |



Easytherm has an ergonomic design with an integrated handlebar



The FTH (Flow Through Heater) avoids any risk of corrosion and failure of the heating elements and maximize heat transfer



Easytherm is one of the most small unit on the market: all the high flow rate models even in HT version share the same compact chassis

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) | Heat exchanger |
|-----------------|---------------|--------------------|---|------------------|
| EMP06 | 140 | 6 | 82 ($\Delta T = 130^{\circ}\text{C}$, 15 l/min) | Plate type |
| EMP12 | | 12 | | |
| EMP06-ID | 90 | 6 | 80 ($\Delta T = 70^{\circ}\text{C}$, 15 l/min) | Direct injection |
| EMP12-ID | | 12 | | |

| | Maximum flow rate (l/min) | Pump type | Head (m) | Load power (kW) | Reversible | Model compatibility |
|-----------------|---------------------------|--------------------|----------|-----------------|------------|--|
| Pump P8 | 40 | Mechanical sealing | 60 | 0.75 | Yes | EMP06 EMP12 EMP06-ID EMP12-ID |
| Pump P9 | 60 | | 60 | 0.75 | Yes | |
| Pump P10 | 60 | Magnetic drive | 60 | 1 | Yes | |

Easytherm

EMP / EMP ID 112-124



HIGH CAPACITY WATER TEMPERATURE CONTROLLER

up to 140 °C

The EMP100 mould temperature series uses pressurized water as a process fluid.

The ETP100 series is manufactured using components with the highest level of quality and reliability.

The machine can be configured with different heating and cooling power and with the process pump that provides the right combination of flow rate and pressure.



Suitable for a wide range of water flow rate, pressure and temperatures



Easy to use thanks to the practical controllers



Highest standards of quality and reliability



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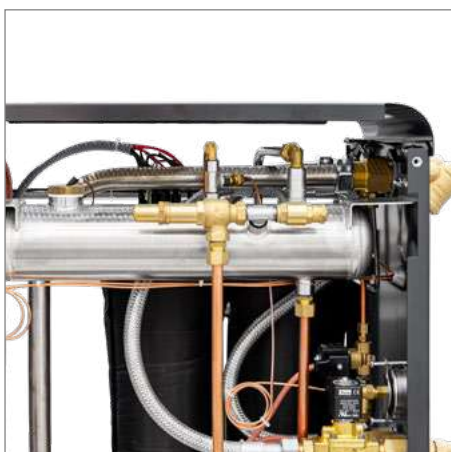


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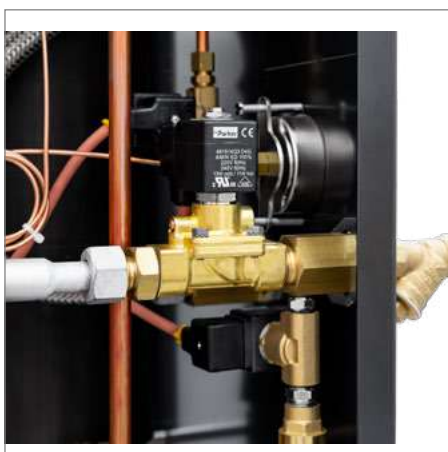


Compounds

| | |
|---------------------------|---|
| Process fluid | Pressurized water |
| Cooling mode | Indirect or direct |
| Electrical feeding | 380/3/60, 400/3/50, 380/3/60, 460/3/60 (V, Ph, Hz) |
| Main options | 2 or 4 ways manifolds, additional filters, communication interface (Current loop or Modbus RTU) and acoustic alarm. |



Anti-corrosive kit is available to avoid any risk of galvanic corrosion with the consequent risk of damages and contaminants release



The refilling of the process water can be done from the cooling water circuit or from a dedicate line



The tubular heaters are realised with Incoloy 800 to guarantee an high corrosive resistance

| | Max temperature | Heating power (kW) | Cooling power (kW) | Heat exchanger |
|------------------|-----------------|--------------------|--|----------------|
| EMP112 | 140°C | 12 | 100 coil ($\Delta T = 110^{\circ}\text{C}$) 125 Plates ($\Delta T = 110^{\circ}\text{C}$) | Coil or Plate |
| EMP118 | | 18 | | |
| EMP124 | | 24 | | |
| EMP112 ID | 90°C | 12 | 170 direct ($\Delta T = 70^{\circ}\text{C}$) | Direct |
| EMP118 ID | | 18 | | |
| EMP124 ID | | 24 | | |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible | Model compatibility |
|-----------------|---------------------------|----------|-----------------|------------|-------------------------------|
| Pump P8 | 40 | 60 | 0.75 | Yes | EMP 112-124 EMP 112-124 ID |
| Pump P9 | 60 | 60 | 0.75 | Yes | |
| Pump P12 | 100 | 60 | 1.5 | Yes | |
| Pump P14 | 160 | 31 | 1.5 | No | |

Easytherm

ETP / ETP-HT



PRESSURISED TEMPERATURE CONTROLLER

up to 180 °C

Easytherm is the new mould temperature control unit characterized by user-friendliness, flexibility and reliability, for injection and blow moulding and extrusion processes.

A new interior and exterior layout, redesigned ergonomic control, coupled with high-end components, characterise a versatile machine that guarantees reliability and long term performances. Easytherm operates at temperatures up to 180 °C HT. Maximum reliability is assured thanks to technologies such as magnetic driven pumps or Flow Through Heaters.

The large 4.3" TFT high contrast display is tilted to ensure easy reading. Navigation in the sub menus is managed via a convenient knob.

Easytherm is already set up for use in Industry 4.0 environments with a wide range of communication protocols, including OPC-UA platform and is Winfactory 4.0 ready.



Precise and effective thanks to cutting edge thermal elements and advanced controller



Easy to use thanks to TFT 4,3" display, frontal status led and intuitive controls



Robust because of the use best in class components and technologies (e.g. magnetic driven pump)



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Compounds

Process fluid Pressurised water

Cooling mode Indirect

Electrical feeding 380/3/60, 400/3/50, 380/3/60, 440/3/60, 460/3/60 (V, Ph, Hz)

Main options Flow meter for process water, pressure gauge, application to manage a mould temperature probe or a thermocouple, quick mould discharge, remote connection for enable and alarm, 2 or 4 ways manifolds, additional filters, communication interface (Current loop, Ethernet, RS485, Profinet, Profibus, Device-net, Ethernet IP, Powerlink), process water loading line separate from the cooling circuit, sludge remover filter.



Easytherm has an ergonomic design with an integrated handlebar and a clear display to keep the important information always on display



The FTH (Flow Through Heater) avoids any risk of corrosion and failure of the heating elements and maximize heat transfer



Easytherm is one of the most small unit on the market: all the high flow rate models even in HT version share the same compact chassis

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / $\Delta T = 130^{\circ}\text{C}$ | Heat exchanger |
|----------|---------------|--------------------|---|----------------|
| ETP06 | 140 | 6 | 82 | Plate type |
| ETP12 | | 12 | | |
| ETP06-HT | 180 | 6 | | |
| ETP12-HT | | 12 | | |

| | Maximum flow rate (l/min) | Pump type | Head (m) | Load power (kW) | Reversible | Model compatibility |
|----------|---------------------------|--------------------|----------|-----------------|------------|------------------------------|
| Pump P8 | 40 | Mechanical sealing | 60 | 0.75 | Yes | ETP06 ETP12 |
| Pump P9 | 60 | | 60 | 0.75 | Yes | |
| Pump P10 | 60 | Magnetic drive | 60 | 1 | Yes | ETP06-ETP12 / ETP06-ETP12 HT |
| Pump P11 | 30 | | 50 | 0.5 | No | ETP06-HT |

Easytherm

ETP 112-136 | ETP 112-136HT



HIGH CAPACITY WATER TEMPERATURE CONTROLLER

up to 180 °C

The ETP100 mould temperature series uses pressurized water as a process fluid.

The ETP100 series is manufactured using components with the highest level of quality and reliability.

The machine can be configured with different heating and cooling power and with the process pump that provides the right combination of flow rate and pressure.

Easytherm HT series can operate at temperature up to 180°C. Maximum reliability is assured thanks to technologies such as magnetic driven pumps and materials resistant to high working temperatures.

The most important settings are immediately available thanks to the high contrast coloured display; the led integrated in the central knob changes its colour to clearly show the machine status. The new control also includes a wide range of communication interface, including the OPC-UA.



Suitable for a wide range of heating power, water flow rate and pressure



Highest standard of quality and reliability



Intuitive control with a wide range of communication interfaces



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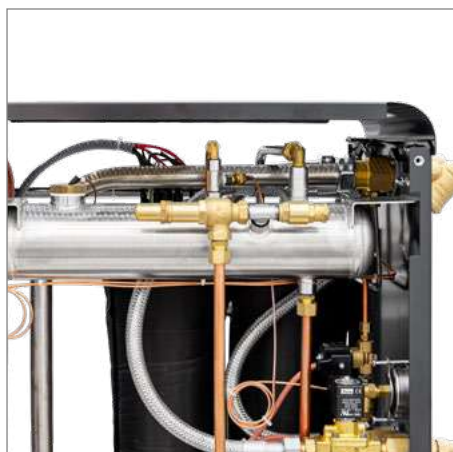


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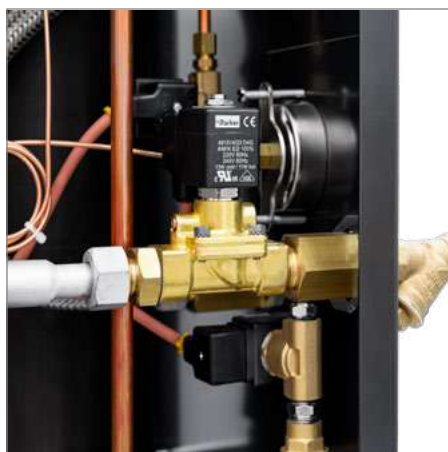


Compounds

| | |
|---------------------------|---|
| Process fluid | Pressurized water |
| Cooling mode | Indirect |
| Electrical feeding | 380/3/60, 400/3/50, 380/3/60, 460/3/60 (V, Ph, Hz) |
| Main options | Pressure transducer (flow rate calculation), application to manage a mould temperature probe or a thermocouple, quick mould discharge, remote connection for enable and alarm, 2 or 4 ways manifolds, additional filters, communication interface (Current loop, Ethernet, RS485, Profinet, Profibus, Device-net, Ethernet IP, Powerlink), dedicate refilling line for process water, anti-corrosive kit. |



Anti-corrosive kit is available to avoid any risk of galvanic corrosion with the consequent risk of damages and contaminants release



The refilling of the process water can be done from the cooling water circuit or from a dedicate line



The tubular heaters are realised with Incoloy 800 to guarantee an high corrosive resistance

| ETP | 112 | 118 | 124 | 136 | 112 HT | 118 HT | 124 HT | 136 HT |
|-----------------------------|--------------------------|-----|-----|-----|--------|--------|--------|--------|
| Max temp (°C) | 140 | | | | 180 | | | |
| Heating power (kW) | 12 | 18 | 24 | 36 | 12 | 18 | 24 | 36 |
| Cooling power (kW)/DT 110°C | 100- Coil 125- Plates | | | | | | | |
| Heat exchanger | Coil or Plates | | | | | | | |

| Pump type | P8 | P9 | P12 | P14 | P15 | P9M | P13M | P16M |
|---------------------------|------------|------|-----|-----|-----|----------------------------|--------------|------|
| Maximum flow rate (l/min) | 40 | 60 | 100 | 160 | 280 | 60 | 150 | 200 |
| Head (m) | 60 | 60 | 60 | 31 | 50 | 60 | 50 | 65 |
| Load power (kW) | 0.75 | 0.75 | 1.5 | 1.5 | 4 | 1 | 2.8 | 4 |
| Reversible | yes | yes | yes | no | no | yes | yes | yes |
| Model compatibility | ETP112-136 | | | | | ETP112-136 ETP112-136HT | ETP112-136HT | |

Easytherm

EBW-EMW



OPEN SYSTEM TEMPERATURE CONTROLLER

up to 90 °C

Easytherm is the new mould temperature control unit characterized by user-friendliness, flexibility and reliability, for injection and blow moulding and extrusion processes.

A new interior and exterior layout, coupled with high-end components, characterise a versatile machine that guarantees reliability and long term performance. Easytherm EBW - EMW operates at temperatures up to 90°C.



Precise and effective thanks to cutting edge thermal elements



Easy to use thanks the practical controller



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Compounds

| | |
|---------------------------|--|
| Process fluid | Water / open system |
| Cooling mode | Indirect |
| Electrical feeding | 380/3/60, 400/3/50, 440/3/60, 460/3/60 (V, Ph, Hz) |
| Main options | 2 or 4 ways manifold, additional water filter, acoustic alarm, reversible running mode, sludge remover filter. Only for EMW: pressure switch to detect water flow, communication interface (Current Loop). |



Moulded tank without welding and with corrosion-proof stainless steel construction; bolted cover for easy access and maintenance



The level of water is monitored by a highly reliable sensor, derived from the automotive industry



Peripheral submerged pump inserted inside the coil heat exchanger to maximize the efficiency of the cooling phase

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / DT=70°C | Heat exchanger |
|--------------|---------------|--------------------|------------------------------|----------------|
| EBW09 | 90 | 9 | 21 | Coil |
| EBW12 | | 12 | | |
| EMW09 | | 9 | | |
| EMW12 | | 12 | | |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible | Model compatibility |
|----------------|---------------------------|----------|-----------------|------------|----------------------------------|
| Pump P6 | 60 | 35 | 0.5 | Yes | EBW09 EBW12 EMW09 EMW12 |
| Pump P7 | 70 | 60 | 1 | Yes | |

Easytherm

EMW 112-124



OPEN SYSTEM TEMPERATURE CONTROLLER

up to 90 °C

Easytherm EMW100 is the new mould temperature control unit characterized by user-friendliness, flexibility, reliability and pump capacity up to 200 l/min for injection, blow moulding and extrusion processes.

A new interior and exterior layout, coupled with high-end components, characterise a versatile machine that guarantees reliability and long term performance. Easytherm operates at temperatures up to 90°C.



Suitable for a wide range of water flow rate and pressure



Easy to use thanks the practical controller



Highest standards of quality and reliability



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Compounds

| | |
|---------------------------|---|
| Process fluid | Water / open system |
| Cooling mode | Indirect |
| Electrical feeding | 380/3/60, 400/3/50, 440/3/60, 460/3/60 (V, Ph, Hz) |
| Main options | 2 or 4 ways manifold, additional water filter, acoustic alarm, reversible running mode, pressure switch to detect water flow, communication interface (Current Loop or Modbus RTU). |



Internal tank made in AISI304 stainless steel in order to increase corrosion resistant



Different pump types available to meet customer requirements

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / $\Delta T=70^{\circ}\text{C}$ | Heat exchanger |
|---------------|---------------|--------------------|--|-------------------|
| EMW112 | 90 | 9 | 65 coil 90 Plates | Coil or Plates |
| EMW118 | | 12 | | |
| EMW124 | | 18 | | |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible | Model compatibility |
|-----------------|---------------------------|----------|-----------------|------------|-------------------------------|
| Pump P8 | 40 | 60 | 0.75 | Yes | EMW 112 EMW 118 EMW 124 |
| Pump P9 | 60 | 60 | 0.75 | Yes | |
| Pump P12 | 100 | 60 | 1.5 | Yes | |
| Pump P14 | 160 | 30 | 1.5 | No | |

Easytherm

ETW



OPEN SYSTEM TEMPERATURE CONTROLLER

up to 90 °C

Easytherm is the new mould temperature control unit characterized by user-friendliness, flexibility and reliability, for injection and blow moulding and extrusion processes.

A new interior and exterior layout, redesigned ergonomic control, coupled with high-end components, characterise a versatile machine that guarantees reliability and long term performances. Easytherm ETW operates at temperatures up to 90 °C.

The large 4.3" TFT high contrast display is tilted to ensure easy reading. Navigation in the sub menus is managed via a convenient knob.

Easytherm is already set up for use in Industry 4.0 environments with a wide range of communication protocols, including OPC-UA platform and is Winfactory 4.0 ready.



Precise and effective thanks to cutting edge thermal elements and advanced controller



Easy to use thanks to TFT 4,3" display, frontal status led and intuitive controls



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Compounds

Process fluid Water / open system

Cooling mode Indirect

Electrical feeding 380/3/60, 400/3/50, 440/3/60, 460/3/60 (V, Ph, Hz)

Main options Flow meter for process water, pressure gauge, application to manage a mould temperature probe or a thermocouple, quick mould discharge, remote connection for enable and alarm, 2 or 4 ways manifolds, additional filters, communication interface (Current loop, Ethernet, RS485, Profinet, Profibus, Device-net, Ethernet IP, Power-link), process water loading line separate from the cooling circuit, sludge remover filter.



The Easytherm ETW series has an innovative control, with a central knob: its integrated led can immediately shows the machine status



The flow meter (option) keeps under control the process water flow rate and detects leakage in the circuit



Heating element made from highly corrosion resistant alloy (Incoloy825), easily removable for cleaning or maintenance

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / DT=80°C | Heat exchanger |
|--------------|---------------|--------------------|------------------------------|----------------|
| ETW09 | 90 | 9 | 45 | Plate |
| ETW12 | | 12 | | |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible | Model compatibility |
|----------------|---------------------------|----------|-----------------|------------|---------------------|
| Pump P6 | 60 | 35 | 0.5 | Yes | ETW09 ETW12 |
| Pump P7 | 70 | 60 | 1 | Yes | |

Easytherm

ETW 112-136



HIGH CAPACITY WATER TEMPERATURE CONTROLLER

up to 90 °C

The ETW100 mould temperature series uses water as process fluid with an open system configuration.

The ETW100 series is manufactured using components with the highest level of quality and reliability.

The machine can be configured with different heating and cooling power and with the process pump that provides the right combination of flow rate and pressure.

The most important settings are immediately available thanks to the high contrast coloured display; the led integrated in the central knob changes its colour to clearly show the machine status. The new control also includes a wide range of communication interface, including the OPC-UA.



Suitable for a wide range of heating power and water flow rate and pressure



Highest standard of quality and reliability



Intuitive control with a wide range of communication interfaces



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Compounds

Process fluid Water

Cooling mode Indirect

Electrical feeding 380/3/60, 400/3/50, 380/3/60, 460/3/60 (V, Ph, Hz)

Main options Pressure transducer (flow rate calculation), application to manage a mould temperature probe or a thermocouple, quick mould discharge, remote connection for enable and alarm, 2 or 4 ways manifolds, additional filters, communication interface (Current loop, Ethernet, RS485, Profinet, Profibus, Device-net, Ethernet IP, Powerlink), dedicate refilling line for process water, anti-corrosive kit.



The focus during the design has been on maximizing reliability and machine lifespan, with the minimum maintenance



In case of multiple-zones mould, Easytherm TCUs can be connected to one another via RS485, Current Loop or Ethernet



The direct access to the main and most common functions is through six capacitive short cuts touch buttons

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / $\Delta T = 70^{\circ}\text{C}$ | Heat exchanger |
|---------------|---------------|--------------------|--|------------------|
| ETW112 | 90 | 12 | 65 coil 90 plates | Coil or Plate |
| ETW118 | | 18 | | |
| ETW124 | | 24 | | |
| ETW136 | | 36 | | |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible | Model compatibility |
|-----------------|---------------------------|----------|-----------------|------------|--------------------------------------|
| Pump P8 | 40 | 60 | 0.75 | Yes | ETW112 ETW118 ETW124 ETW136 |
| Pump P9 | 60 | 60 | 0.75 | Yes | |
| Pump P12 | 100 | 60 | 1.5 | Yes | |
| Pump P14 | 160 | 31 | 1.5 | No | |

Easytherm

EMO



OIL TEMPERATURE CONTROLLER

up to 150 °C

Easytherm is the new mould temperature control unit characterized by user-friendliness, flexibility and reliability, for injection and blow moulding and extrusion processes.

A new interior and exterior layout, coupled with high-end components, characterise a versatile machine that guarantees reliability and long term performance. Easytherm operates at temperatures up to 90°C.

EMO 06 uses diathermic oil to reach temperatures up to 150 °C.



Precise and effective thanks to cutting edge thermal elements



Easy to use thanks the practical controller



Robust because of the use best in class components



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Compounds

| | |
|---------------------------|---|
| Process fluid | Oil |
| Cooling mode | Indirect |
| Electrical feeding | 380/3/60, 400/3/50, 440/3/60, 460/3/60 (V, Ph, Hz) |
| Main options | 2 or 4 ways manifold, additional water filter, acoustic alarm, reversible running mode, pressure switch to detect oil flow, communication interface (Current Loop or Modbus RTU). |



Moulded tank without welding and with corrosion-proof stainless steel construction; bolted cover for easy access and maintenance



Peripheral submerged pump inserted inside the coil heat exchanger to maximize the efficiency of the cooling phase

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / DT=130°C | Heat exchanger |
|---------------|---------------|--------------------|-------------------------------|----------------|
| EMO 06 | 150 | 6 | 13 | Coil |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible |
|----------------|---------------------------|----------|-----------------|------------|
| Pump P6 | 60 | 35 | 0.5 | Opt |
| Pump P7 | 70 | 60 | 1 | Opt |

Easytherm

ETO / ETO HT 112-136



HIGH CAPACITY OIL TEMPERATURE CONTROLLER

up to 250 °C

The ETO100 mould temperature series uses diathermic oil to reach temperatures up to 250°C.

The ETO100 series is manufactured using components with the highest level of quality and reliability.

The machine can be configured with different heating and cooling power and with the process pump that provides the right combination of flow rate and pressure.

The most important information are immediately available thanks to the high contrast coloured display; the led integrated in the central knob changes its colour to clearly show the machine status. The new control includes also a wide range of communication interface, including the OPC-UA.



Suitable for a wide running range of heating power and oil flow rate



Highest standard of quality and reliability



High process temperatures without increasing of running pressure



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Pipes, Profiles,
Cables



Fibres &
Strapping



Recycling



Compounds

Process fluid Oil

Cooling mode Indirect

Electrical feeding 380/3/60, 400/3/50, 380/3/60, 460/3/60 (V, Ph, Hz)

Main options Pressure transducer (flow rate calculation), application to manage a mould temperature probe or a thermocouple, quick mould discharge, remote connection for enable and alarm, 2 or 4 ways manifolds, additional filters, communication interface (Current loop, Ethernet, RS485, Profinet, Profibus, Device-net, Ethernet IP, Powerlink).

| | Max temp (°C) | Heating power (kW) | Cooling power (kW) / $\Delta T = 140^{\circ}\text{C}$ | Heat exchanger |
|----------|---------------|--------------------|---|------------------|
| ETO112 | 160 | 12 | 46 coil 125 plates | Coil or Plate |
| ETO118 | | 18 | | |
| ETO124 | | 24 | | |
| ETO136 | | 36 | | |
| ETO112HT | 250 | 12 | 46 coil | Coil |
| ETO118HT | | 18 | | |
| ETO124HT | | 24 | | |
| ETO136HT | | 36 | | |

| | Maximum flow rate (l/min) | Head (m) | Load power (kW) | Reversible | Model compatibility |
|----------|---------------------------|----------|-------------------------|------------|--|
| Pump P8 | 40 | 60 | 0.75 | Yes | ETO112 ETO118 ETO124 ETO136 |
| Pump P9 | 60 | 60 | 0.75 | Yes | |
| Pump P12 | 100 | 60 | 1.5 | Yes | |
| Pump P14 | 160 | 31 | 1.5 | No | |
| Pump P15 | 280 | 50 | 4 | No | |
| Pump 9M | 60 | 60 | 1 | Yes | ETO112HT ETO118HT ETO124HT ETO136HT |
| Pump 13M | 150 | 50 | 2.8 (50Hz) - 3.5 (60Hz) | Yes | |
| Pump 16M | 200 | 65 | 4 (50Hz) - 4.5 (60Hz) | Yes | |

Easytherm Flow

ETP 112-136 | ETP-F 112-124ID



TEMPERATURE CONTROLLER WITH HIGH FLOW RATE AND HEAD

up to 140°C, 300 l/m or
130 m head

The ETP-F series is designed to meet market needs where high-water flow rates and very precise mold temperature control are required. The temperature controller employs highly reliable components and advanced control to manage and monitor temperature, flow rate, and pressure. The multiprotocol board allows precise interfacing with the injection molding machine.

With the ETP-F series it is possible to equip a specific series of multistage pumps capable of reaching very high flow rates, up to 300 l/min or heads up to 130 meters.

The pump is natively controlled by an inverter that interacts with the HMI of the temperature controller allowing the operator to take action quickly during the molding process. The inverter also allows the pump speed to be set according to the needs of the process ensuring optimal work and containing energy consumption.

In the field, ETP-F allows without any particular setting an important reduction of cycle time and a faster start-up of the mold up to 20 %.

Considering the result in terms of high efficiency achievement ETP-F series allows a fast payback of the investment.

ETP-F series offers a wide range of solutions in terms of pump performance, heat exchangers such as, coil, plate system, and direct injection for high cool efficiency.



Time reduction in process
start-up



Reduction of molding cycle time



Fast payback of investment



PET Preforms
& Bottles



Rigid
Packaging



Automotive
components



Technical
parts



Medical
solutions



Thermoforming
& Technical Sheets



Flexible Film



Pipes, Profiles,
Cables



Fibres &
Strapping



Recycling

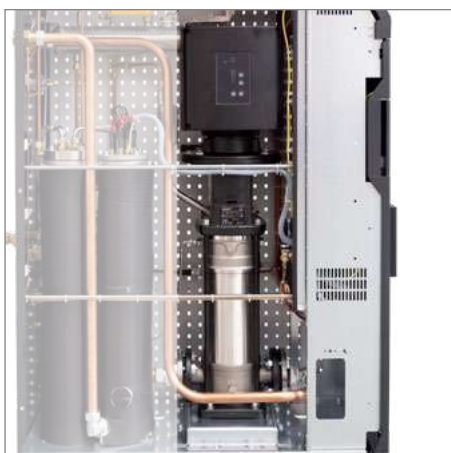


Compounds

Process fluid Water

Cooling mode Indirect or direct

Main options Flow sensor for temperature till 120 °C, multiprotocol communication interface (current loop, Ethernet, RS485, Profinet, Profibus, Device-net, Ethernet IP, Powerlink).



Multi-stage pump for a high process efficiency.



Insulation made of special material conferrable in standard waste in case of replacement.



Top version HMI drives the operator on setting parameters and through an easy and immediate status check of the system.

| | Max temperature | Heating power (kW) | Head exchanger | Pumps | Flow sensor |
|-----------------------------|-----------------|--------------------|------------------|---------------------|------------------------|
| ETP-F112-118-124-136 | 140 | 12-18-24-36 | Coil/plate | P59HT-P106HT-P107HT | OPTIONAL ((MWT: 120°C) |
| ETP-F 112-118-124 ID | 90 | 12-18-24 | Direct injection | P59-P106-P107 | OPTIONAL |

MWT: max working temperature

| Max T=90°C | Type | Max flow rate l/min | Max head (m) |
|-------------|-------------------------------|---------------------|--------------|
| P107 | Multi-stage pump in Cast iron | 300 | 130 |
| P106 | | 260 | 110 |
| P59 | | 160 | 100 |

| Max T=140°C | Type | Max flow rate l/min | Max head (m) |
|---------------|----------------------------------|---------------------|--------------|
| P107HT | Multi-stage pump Stainless steel | 300 | 130 |
| P106HT | | 260 | 110 |
| P59HT | | 160 | 100 |

Thermovan

Mould temperature controllers

TW – TO – TP series

Benefits:

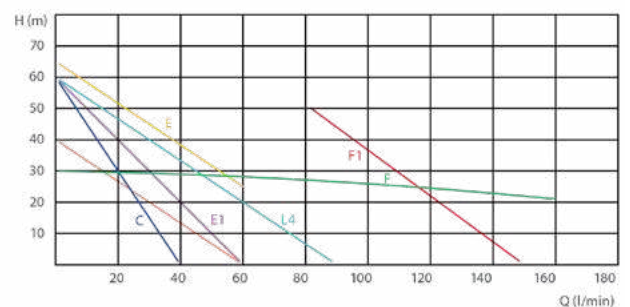
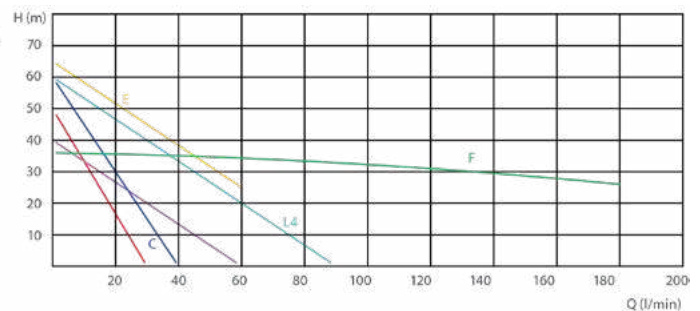
- High and constant productivity
- Optimisation of the running costs
- Immediate and optimal usage of the unit
- Constant process control
- Continuous operation and long life
- No maintenance cost for the heaters' control
- Short production stops

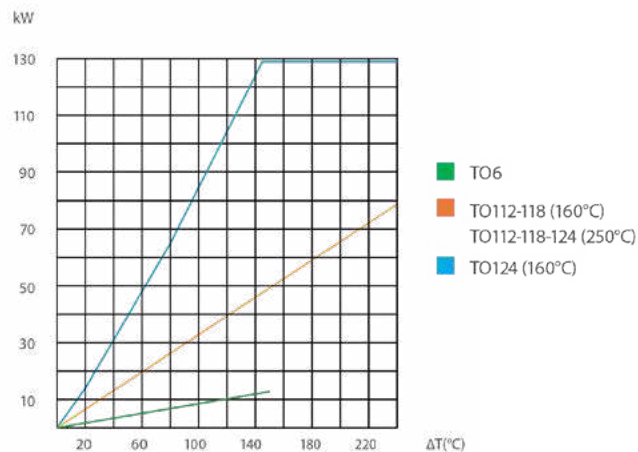
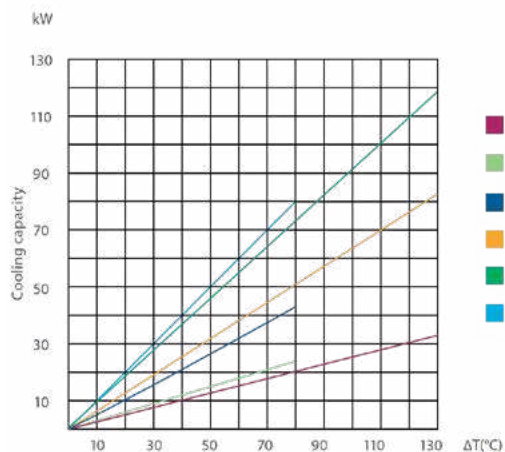


Wf Winfactory 4.0
4.0 R E A D Y

The TW, TO and TP series of Piovan mould temperature controllers has been designed to maintain at a constant temperature the mould cavities, the hydraulic oil of the injection moulding machines, the extruder screws, the calibration heads, the cylinders and calenders of thermoforming lines. Water, oil and pressurised water models operate in a wide range of temperatures, from 20°C up to 250°C.

- TP 6-12, TP 6 ID, TW/TP 112-118-124 pump "C"
- TW9-12
- TP6-12 (160°C)
- TW/TP112-118-124 pump "L4"
- TW/TP112-118-124 pump "E"
- TW/TP112-118-124 pump "F"
- TO6
- TO112- pump "C"
- TO112- pump "L4"
- TO112- pump "E"
- TO112-118-124 - pump "F"
- TO112 - 250°C - pump "E1"
- TO112-118-124 - 250°C - pump "F1"





| TECHNICAL DATA | | TO6 | TW9 | TW12 | TP6 | TP12 | TP6 160°C | TP12 160°C | TP6ID |
|-----------------------|-------|-------------|-------|------|-------------------|------|-----------|------------|--------|
| Max. temperature | °C | 160 | 90 | | 140 | | 160 | | 90 |
| Operating fluid | | oil | water | | pressurised water | | | | water |
| Heating power | kW | 6 | 9 | 12 | 6 | 12 | 6 | 12 | 6 |
| Cooling type | | indirect | | | | | | | direct |
| Pump power | kW | 0.75 | | | | | 0.5 | | 0.75 |
| Max. pump flow rate | l/min | 60 | | | 40 | | 30 | | 40 |
| Max. pump pressure | m | 40 | | | 60 | | 50 | | 60 |
| Connections - process | | 1/2" F | | | | | | | |
| Connections - cooling | | 1/2" F | | | | | | | |
| Dimensions (LxWxH) | mm | 250x686x678 | | | | | | | |
| Weight | kg | 55 | | | 60 | | | | |

Version: 230-400/3/50; 220-380-460/3/60 - The pump reverse mode is not available for the TP6ID unit.

| TECHNICAL DATA | | TW112 | TW118 | TW124 | TP112 | TP118 | TP124 | TO112 | TO118 | TO124 | TO112 250°C | TO118 250°C | TO124 250°C | |
|--------------------------|-------|--------------|-------|-------|--------------|-------|-------|-------|-------|-------|----------------|----------------|----------------|--|
| Max. temperature | °C | 90 | | | 140/90* | | | 160 | | | 250 | | | |
| Operating fluid | | water | | | press. water | | | oil | | | | | | |
| Heating power | kW | 12 | 18 | 24 | 12 | 18 | 24 | 12 | 18 | 24 | 12 | 18 | 24 | |
| PUMP C | kW | 0.75 | | | 0.75 | | | 0.75 | | | | | | |
| Max. flow rate | l/min | 40 | | | 40 | | | 40 | | | | | | |
| Max. pressure | m | 60 | | | 60 | | | 60 | | | | | | |
| Pump E | kW | 1.5 | | | 1.5 | | | 1.5 | | | | | | |
| Max. flow rate | l/min | 60 | | | 60 | | | 60 | | | | | | |
| Max. pressure | | 65 | | | 65 | | | 65 | | | | | | |
| Pump L4 | kW | 1.5 | | | 1.5 | | | 1.5 | | | | | | |
| Max. flow rate | l/min | 90 | | | 90 | | | 90 | | | | | | |
| Max. pressure | m | 60 | | | 60 | | | 60 | | | | | | |
| Pump F | kW | 1.5 | | | 1.5 | | | 1.5 | | | | | | |
| Max. flow rate | l/min | 180 | | | 180 | | | 160 | | | | | | |
| Max. pressure | m | 35 | | | 35 | | | 30 | | | | | | |
| Pump E1 | kW | | | | | | | | | | 1 | | | |
| Max. flow rarte | l/min | | | | | | | | | | 60 | | | |
| Max. pressure | m | | | | | | | | | | 60 | | | |
| Pump F | kW | | | | | | | | | | 2.8 | | | |
| Max. flow rate | l/min | | | | | | | | | | 150 | | | |
| Max. pressure | m | | | | | | | | | | 50 | | | |
| Connections - process | | 1°F | | | | | | | | | | | | |
| Connections - cooling | | 1/2°F | | | | | | | | | | | | |
| Dimensions (LxWxH) | | 400x867x1000 | | | | | | | | | | | | |
| Weight | kg | 120 | | | | | | | | | | | | |

Version: 230-400/3/50; 220-380-460/3/60 - The pump reverse mode is not available for the F pump. * Temperature for ID (Direct Injection) models

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