

## **DIE TEMPERATURE CONTROLLERS SERIES PRESSURIZED WATER**

# **CLIMAT PF - ZH**

### **Series PF PRESSURIZED WATER** *Up to 200 °C*

Pressurized water is the best fluid for heating transfer due to its characteristics of speed in thermal exchange and economic affordability. The limit of usage in the fluid state is raised up to 200 °C, thanks to heating systems with external electrical resistors not in contact with water. The management of the hydraulic circuit is assigned to a pneumatic valve system which grants maximum safety and reliability.

The software of management scans and processes all the values and the changes related to pressure, flow and temperature, automatically combining them into the best possible performance.



# CLIMAT PF - ZH

Pressurized water 160 - 180 - 200 °C



## DIE TEMPERATURE CONTROL BY PRESSURIZED WATER

- Pressurized water up to 200° C working temperature;
- Double zone of temperature, each zone completely independent;
- Hydraulic circuit stainless steel, diameter 18 mm;
- All hydraulic connections rust-free;
- Circulation pump type magnetic drive,
- Pressurization pump independent;
- Heating system type IHCS with external electrical resistors, not in touch with the fluid;
- Heating power, PID system;
- Solid State Relays of power, tri-phase;
- Cooling system by indirect exchange, model IHCS;

- Digital system for pressure control, accuracy of 0.1 bar;
- Working pressure with several steps, depending on temperature;
- Pneumatic system for purge of pressurized water;
- Expansion vase, with air cushion without membrane;
- Electronic temperature controller:  
**Single zone: PLC TD240, display 3.5" touch screen;**  
**Double zone: PLC TD700, Win CE, display 7" touch screen, 65.000 colors, Movicon**
- Double set point for each zone;
- Display of return temperature;
- Automatic pre-heating system;
- Planning timer day/week;
- System alarms and status display;
- Heavy frame, epoxy painting 3mm thick.

## THE ELECTRONIC CONTROL

- Adaptive system with INVERTER on the pumps, controlled by the temperature differential (patent);
- Pre-heating with automatic spinet remote-control on the press;
- Controlled auto-cooling at switch off;
- Differential control of the delta set-point;
- Differential control of the delta between delivery and return;
- Connection protocols for all brands of presses;
- Display of temperature trends and alarms history (log);
- Management of the third set-point on the external probe.



## THE HEATING SYSTEMS "Z" (IECI PATENTED)

External electrical resistors not in contact with the fluid, in the insulated chamber; immune from the quality of water and from limestone, with maintenance of the chemical-physical characteristics of the oil;



Available in "G" version with heating system by Methane Gas or LPG (Ieci patented)



Machine Code	CCPZ009
Max temperature °C	160 - 180 - 200
Electronic controller device	Single zone: PLC TD240, display 3.5" touch screen; Double zone: PLC TD700, Win CE, display 7" touch screen, 65.000 colors, Movicon
Fluid thermal vector circuit type	Pressurized water, hardness < 10°F
Thermal regulation zone	1 - 2, completely independent
System Operation	Independent pressurization, forced and controlled by pneumatic purge
Expansion vase	With compressed air cushion without membrane
Heating type	External resistors in insulated chamber (IHCS)
Heating power kW	15 - 24, per zone
Cooling type	Indirect, with direct function exchangeable
Heat exchanger	Stainless steel, IHCS (IECI Patented); Braze-welded plates on 3-way valve system
Cooling power kW	50 - 80 - 160 per single zone
Circulation pump	SPI-A , magnetic drive
Characteristics of the pump	60 l/min 6 bar 1,1 kW
Pressurization pump	Loading pump separated TP100 40 l/min 17 bar
Pressure control system	Digital, 0,1 bar accuracy
Frame	T4 - T1 - T60, with swiveling wheels
Frame and dimensions (w x d x h) mm	440x850x800 - 500x1250x1230 600x1250x1390
Weight (Kg)	210 - 290 - 350

OPTIONS AVAILABLE
Heating power increased up to 48 kW
Cooling power increased up to 320 kW
Different size pump up to 200 l/min, 9 bar
Cooling system with 3-way anti-calc device
External distributor with stainless steel multi-channel taps
Checking system of the set temp between the values of the range, with acoustic and visual alarm.
Control system of the delta temperature of delivery and return
Motorized water inlet valve
Die interface, various protocol, profibus, ethernet, profinet, datanet, device-net, etc.
Flexible hoses or fixed plants for connection to the die, tailored

Other optional features are available.

## CIRCULATION OF THE HEAT TRANSFER FLUID

- Optimal management of the pumps through the adaptive system with **INVERTER** (patent);
- Proportional three-way system with partitioning of exchangers;
- Pumps with magnetic coupling;
- Emptying system of the circuit with automatic input of air into the delivery;
- Pressurization by expansion vase with compressed air cushion, without membrane



## Web Site Driver



### The die thermoregulation

Die temperature control in die casting

Technology: The state of the art



### Technical focuses

Heating systems

Cooling systems

Fluid circulation

Electronic system



### Company evolution

Technological news

Fairs and events

Partnership



### Connection plants

Fixed and flexible stainless steel piping

Insulated pipes in protected and modular galvanized conduits

Manifolds with steel taps and accessories for fluid distribution



### Special applications

Technical solutions made for peculiar applications and for specific requests

Cooling solutions for oil presses



### Service

Planned maintenance and warranty extension

Renting service

Reparation overhaul and technical update for every brand

## Products



Thermoregulators  
**PF Series**  
OIL  
up to 350 °C



Thermoregulators  
**PF Series**  
WATER  
up to 200 °C



Thermoregulators  
**PD e MINI Series**  
WATER/OIL  
90°/150 °C



Thermorefrigerators  
**PD - PF Series**  
from  
5° to 160 °C



Chillers  
Refrigerators



Quenching  
Tanks

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