

Circulating Fluid Temperature Controller

Eldro-Chiller

Inverter Type

Temperature stability ± 0.1 °C

- ❖ Circulating fluids types: Fluorinated fluids / Ethylene glycol aqueous solutions / Clean water, Deionized water
- ❖ Temperature range setting: -20 to 40°C / 20 to 90°C / -20 to 90°
- ❖ Cooling capacity: 1 kW / 2 kW / 4 kW / 8 kW / 10 kW to Max.15 kW
- ❖ Temperature stability: ± 0.1 °C



Series PWZ

Fluorinated Fluid Type Inverter Type

Cooling capacity

Symbol	Cooling capacity
001	1 kW
002	2 kW
004	4 kW
008	8 kW

Temperature range setting

Symbol	Temperature range setting	1 kW	2 kW	4 kW	8 kW
L	-20 to 40°C	√	√	√	√
H	20 to 90°C	√	√	√	√
W	-20 to 90°C	---	√	---	√

3-phase 200 V AC (50 Hz)
3-phase 200 to 230 V AC (60 Hz)

Specification

Model		PWZ001-L	PWZ002-L	PWZ004-L	PWZ008-L	PWZ001-H	PWZ002-H	PWZ004-H	PWZ008-H	PWZ002-W	PWZ008-W
Cooling method		Water-cooled refrigerator type									
Refrigerant		R404A (HFC)									
Control system		PID control									
Ambient temp./humidity		Temperature: 10 to 35°C, Humidity: 30 to 70%RH									
Circulating fluid system	Circulating fluid	GALDEN HT135				GALDEN HT200				-20 to 40°C: GALDEN HT135 -20 to 90°C: GALDEN HT200	
	Temp. range setting	-20 to 40				20 to 90				-20 to 90	
	Cooling capacity	1.0 (at -10°C)	2.0 (at -10°C)	4.0 (at -10°C)	8.0 (at -10°C)	1.0 (at 20°C)	2.0 (at 20°C)	4.0 (at 20°C)	8.0 (at 20°C)	2.0 (at 20°C)	8.0 (at 20°C)
	Heating capacity	2.8 (at -10°C)	3.2 (at -10°C)	3.6 (at -10°C)	5.9 (at -10°C)	2.3 (at 20°C)	2.6 (at 20°C)	2.8 (at 20°C)	3 (at 20°C)	2.3 (at 20°C)	3.3 (at 20°C)
	Temp. stability	±0.1									
	Pump capacity (50/60 Hz)	0.45/0.65 (at 20 L/min)			0.65/0.95 (at 30 L/min)	0.40/0.60 (at 20 L/min)		0.45/0.65 (at 20 L/min)			
	Rated flow	20			30	20					
	Main tank capacity	Approx. 15			Approx. 22	Approx. 12		Approx. 15			
	Sub-tank capacity	Approx. 16			Approx. 17	Approx. 15		Approx. 16			
	Port size	Rc 3/4									
Wetted parts material		Stainless steel, EPDM, Copper brazing (Heat exchanger), PPS, Silicon, Fluororesin									
Cooling water system	Temperature range	10 to 25									
	Pressure range	0.3 to 0.7									
	Required flow rate (50/60 Hz)	5/5	6/6	15/22	18/23	3/4	5/6	9/10	13/14	6/7	13/14
	Port size	Rc 1/2									
	Wetted parts material	Stainless steel, EPDM, Copper brazing (Heat exchanger), Silicon, Brass									
Electrical System	Power supply	3-phase 200 VAC 50 Hz, 3-phase 200 to 208 VAC 60 Hz Allowable voltage fluctuation ±10%									
	Breaker capacity	30			60	20		30			
	Rated current	20		25	46	14		23			
	Communications	Ethernet (TCP/IP) \ RS232 \ RS485									
Weight	170	175	275	145		170					

Series PWZ

Ethylene Glycol Type Inverter Type

Cooling capacity

Symbol	Cooling capacity
001	1 kW
002	2 kW
004	4 kW
008	8 kW

Temperature range setting

Symbol	Temperature range setting	1 kW	2 kW	4 kW	8 kW
L	-20 to 40°C	√	√	√	√
H	20 to 90°C	√	√	√	√
W	-20 to 90°C	---	√	---	√

3-phase 200 V AC (50 Hz)
3-phase 200 to 230 V AC (60 Hz)

Specification

Model		PWZ001-L1	PWZ002-L1	PWZ004-L1	PWZ008-L1	PWZ001-H1	PWZ002-H1	PWZ004-H1	PWZ008-H1	PWZ002-W1	PWZ008-W1
Cooling method		Water-cooled refrigerator type									
Refrigerant		R404A (HFC)									
Control system		PID control									
Ambient temp./humidity		Temperature: 10 to 35°C, Humidity: 30 to 70%RH									
Circulating fluid system	Circulating fluid	Ethylene glycol aqueous solution: 60%									
	Temp. range setting	-20 to 40				20 to 90				-20 to 90	
	Cooling capacity	1.0 (at -10°C)	2.0 (at -10°C)	4.0 (at -10°C)	8.0 (at -10°C)	1.0 (at 20°C)	2.0 (at 20°C)	4.0 (at 20°C)	8.0 (at 20°C)	2.0 (at 20°C)	8.0 (at 20°C)
	Heating capacity	2.5 (at -10°C)	2.9 (at -10°C)	3.4 (at -10°C)	6.1 (at -10°C)	1.8 (at 20°C)	2.1 (at 20°C)	2.5 (at 20°C)	3 (at 20°C)	2.2 (at 20°C)	3.3 (at 20°C)
	Temp. stability	±0.1									
	Pump capacity (50/60 Hz)	0.25/0.40 (at 20 L/min)				0.25/0.35 (at 20 L/min)		0.25/0.40 (at 20 L/min)			
	Rated flow	20									
	Main tank capacity	Approx. 15			Approx. 22	Approx. 12			Approx. 15		
	Sub-tank capacity	Approx. 16			Approx. 17	Approx. 15			Approx. 16		
	Port size	Rc 3/4									
Wetted parts material		Stainless steel, EPDM, Copper brazing (Heat exchanger), PPS, Silicon, Fluororesin									
Cooling water system	Temperature range	10 to 25									
	Pressure range	0.3 to 0.7									
	Required flow rate (50/60 Hz)	5/5	6/6	15/22	18/23	3/4	5/6	9/10	13/14	6/7	13/14
	Port size	Rc 1/2									
Wetted parts material		Stainless steel, EPDM, Copper brazing (Heat exchanger), Silicon, Brass									
Electrical System	Power supply	3-phase 200 VAC 50 Hz, 3-phase 200 to 208 VAC 60 Hz Allowable voltage fluctuation ±10%									
	Breaker capacity	30			60	20			30		
	Rated current	20		25	46	14			23		
	Communications	Ethernet (TCP/IP) \ RS232\ RS485									
Weight	[kg]	170		175	275	145			170		

Series PWZ

Clean water / Deionized Water Inverter Type

Cooling capacity

Symbol	Cooling capacity
001	1 kW
002	2 kW
004	4 kW
008	8 kW

Temperature range setting

Symbol	Temperature range setting	1 kW	2 kW	4 kW	8 kW
L	10 to 40°C	√	√	√	√

3-phase 200 V AC (50 Hz)
3-phase 200 to 230 V AC (60 Hz)

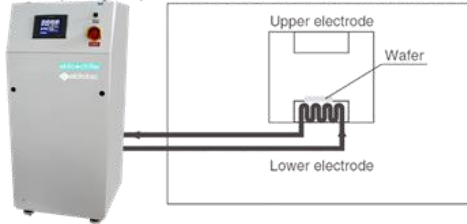
Specification

Model		PWZ001-L2	PWZ002-L2	PWZ004-L2	PWZ008-L2	
Cooling method		Water-cooled refrigerator type				
Refrigerant		R134A (HFC)				
Control system		PID control				
Ambient temp./humidity		Temperature: 10 to 35°C, Humidity: 30 to 70%RH				
Circulating fluid system	Circulating fluid		Clear Water, Deionized water			
	Temp. range setting	[°C]	10 to 40			
	Cooling capacity	[kW]	1.0 (at 20°C)	2.0 (at 20°C)	4.0 (at 20°C)	8.0 (at 20°C)
	Heating capacity	[kW]	0.9 (at 20°C)	0.98 (at 20°C)	1.15 (at 20°C)	1.25 (at 20°C)
	Temp. stability	[°C]	±0.1			
	Pump capacity (50/60 Hz)	[MPa]	0.25/0.38 (at 20 L/min)			
	Rated flow	[L/min]	20			
	Main tank capacity	[L]	Approx. 15			
	Sub-tank capacity	[L]	Approx. 16			
	Port size		Rc 3/4			
	Wetted parts material		Stainless steel, EPDM, Copper brazing (Heat exchanger), PPS, Silicon, Fluororesin			
Cooling water system	Temperature range	[°C]	10 to 25			
	Pressure range	[MPa]	0.3 to 0.7			
	Required flow rate (50/60 Hz)	[L/min]	5/5	6/6	15/22	18/23
	Port size		Rc 1/2			
	Wetted parts material		Stainless steel, EPDM, Copper brazing (Heat exchanger), Silicon, Brass			
Electrical System	Power supply		3-phase 200 VAC 50 Hz, 3-phase 200 to 208 VAC 60 Hz Allowable voltage fluctuation ±10%			
	Breaker capacity	[A]	30			
	Rated current	[A]	19			
	Communications		Ethernet (TCP/IP) \ RS232\ RS485			
Weight	[kg]	170				

Application Examples

Semiconductor

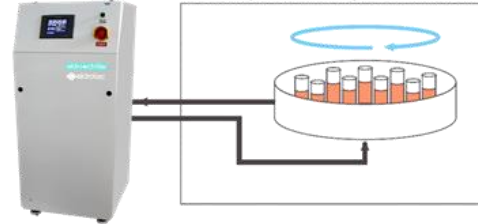
Example: Temperature control of a chamber electrode



- Etching equipment
- Spatter equipment
- Cleaning equipment
- Coating equipment
- Dicing equipment
- Tester, etc.

Medical

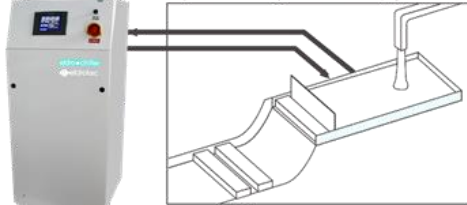
Example: Blood preservation



- X-ray instrument
- MRI
- Blood preservation equipment

Food

Example: Tofu (Bean curd) production

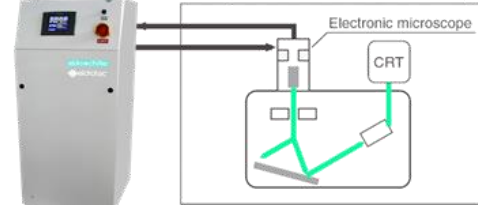


- Bottle-cleaning machine
- Tofu (Bean curd) production equipment
- Noodle-making machine, etc.

Water temperature control for forming tofu by mixing the boiled soybean milk and bittern

Diagnosis

Example: Electronic microscope

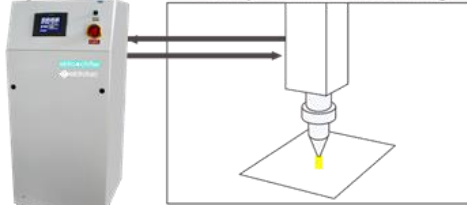


- Electron microscope
- X-ray diagnosis instrument
- Gas chromatography
- Sugar level diagnosis, etc.

Prevents the distortion caused by the heat generated by the electronic gun in an electronic microscope.

Machine tool

Example: Laser machining

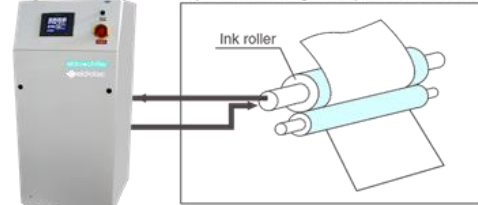


- Wire cutting
- Grinder
- Spot welding, etc.
- Plasma welding
- Laser machining

Temperature-controlling the laser generating tube enables the laser wavelength to be optimised, improving the accuracy of the machined cross sectional area.

Printing

Example: Printing temperature control

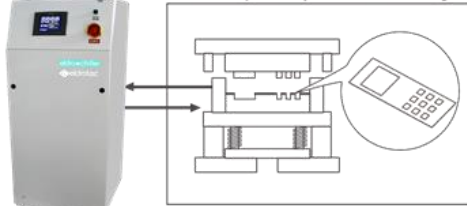


- Offset printing machine
- Automatic developing machine
- UV equipment, etc.

Temperature-controlling the ink roller enables to control the evaporation amount and viscosity of the ink and optimise the tint of colors.

Molding

Example: Injection molding



- Plastic molding
- Rubber molding
- Wire cable coating machine
- Injection molding, etc.

Temperature-controlling the mold results in improved product quality.



ISO-9001:2015
ISO-13485:2016
Comply to AS-9100
Comply to MIL-STD



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