

Circulating Fluid Temperature Controller

# Eldro-Chiller

Standard Type

Temperature stability  $\pm 0.5$  °C

Model	Cooling capacity [kW] (50 / 60 Hz)	Size (mm)	Weight	Set temperature range
PWN-100	8.0 / 9.0	L 450 x 721 x 1301	~ 130 kg	5°C to 35°C

- 3-phase 380 to 415 V AC (50/60 Hz)



**Series PWN-100**



# Eldro-Chiller Standard Type

## Series PWN-100

### Air-cooled 400 V Type



100	Cooling capacity 8.0 / 9.0 kW (50 / 60 Hz)
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Model		PWN-100-A-40		
Cooling method		Air-cooled refrigeration		
Refrigerant		R410A (HFC)		
Control method		PID control		
Ambient temperature [°C]		5 to 45		
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water	
	Set temperature range [°C]		5 to 35	
	Cooling capacity 50/60 Hz [kW]		8.0/9.0	
	Heating capacity 50/60 Hz [kW]		1.7/2.2	
	Temperature stability [°C]		±0.5	
	Pump capacity	Rated flow 50/60 Hz (Outlet) [l/min]		29/45
		Maximum flow rate 50/60 Hz [l/min]		55/68
		Maximum pump head [m]		50
	Minimum operating flow rate 50/60 Hz [l/min]		29/45	
	Tank capacity [L]		18	
	Circulating fluid outlet, circulating fluid return port		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)	
	Tank drain port		Rc 1/4 (Symbol F: G 1/4, Symbol N: NPT 1/4)	
Fluid contact material		Stainless steel, Copper (Heat exchanger brazing), Brass, Bronze, PTFE, FKM, EPDM, PVC, NBR, POM, PE, PP, Carbon, Ceramic		
Electrical system	Power supply		3-phase 380 to 415 V AC (50/60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)	
	Applicable earth leakage breaker (Standard)	Rated current [A]	20	
		Sensitivity of current [mA]	30	
	Rated operating current 50/60 Hz [A]		8.4/9.1	
	Rated power consumption 50/60 Hz [kW (kVA)]		4.4/5.6 (5.8/6.3)	
Noise level (Front 1 m/Height 1 m) [dB (A)]		70		
Weight (dry state) [kg]		Approx. 130		

# Eldro-Chiller Standard Type

## Series PWN-100

### Water-cooled 400 V Type



100	Cooling capacity 8.0 / 9.0 kW (50 / 60 Hz)
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Model		PWN-100-W-40		
Cooling method		Water-cooled refrigeration		
Refrigerant		R410A (HFC)		
Control method		PID control		
Ambient temperature [°C]		5 to 45		
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water	
	Set temperature range [°C]		5 to 35	
	Cooling capacity 50/60 Hz [kW]		9.0/10.5	
	Heating capacity 50/60 Hz [kW]		1.7/2.2	
	Temperature stability [°C]		±0.5	
	Pump capacity	Rated flow 50/60 Hz (Outlet) [l/min]		29/45
		Maximum flow rate 50/60 Hz [l/min]		55/68
		Maximum pump head [m]		50
	Minimum operating flow rate 50/60 Hz [l/min]		29/45	
	Tank capacity [L]		18	
	Circulating fluid outlet, circulating fluid return port		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)	
	Tank drain port		Rc 1/4 (Symbol F: G 1/4, Symbol N: NPT 1/4)	
Fluid contact material		Stainless steel, Copper (Heat exchanger brazing), Brass, Bronze, PTFE, FKM, EPDM, PVC, NBR, POM, PE, PP, Carbon, Ceramic		
Facility Water System	Temperature range [°C]		5 to 40	
	Pressure range [MPa]		0.3 to 0.5	
	Required flow 50/60 Hz [l/min]		25/25	
	Facility water pressure differential [MPa]		0.3 or more	
	Facility water inlet/outlet		Rc 1/2 (Symbol F: G 1/2, Symbol N: NPT 1/2)	
	Fluid contact material		Stainless steel, Copper (Heat exchanger brazing), Bronze, Brass PTFE, NBR, EPDM	
Electrical system	Power supply			
	3-phase 380 to 415 V AC (50/60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)			
	Applicable earth leakage breaker (Standard)	Rated current [A]		20
		Sensitivity of current [mA]		30
	Rated operating current 50/60 Hz [A]		6.4/6.7	
Rated power consumption 50/60 Hz [kW (kVA)]		3.4/4.2 (4.4/4.7)		
Noise level (Front 1 m/Height 1 m) [dB (A)]		65		
Weight (dry state) [kg]		Approx. 125		

Application Examples

**Laser beam machine/  
Laser welding machine**

Cooling of the laser oscillation part and power source



**Printing machine**

Temperature control of the roller



**Cleaning machine**

Temperature control of cleaning solution



**Arc welding machine**

Cooling of the torch



**Resistance welding machine  
(spot welding)**

Cooling of the welding head electrodes, transformers and transistors (thyristors)



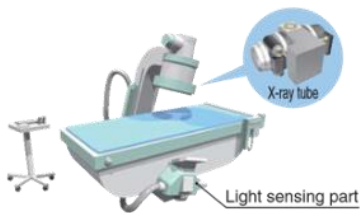
**High frequency induction heating equipment**

Cooling of the heating coils, high frequency power source and around inverters



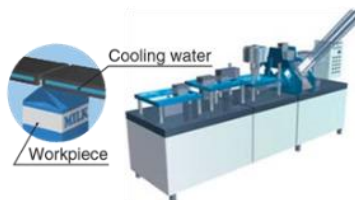
**X-ray (digital) instrument**

Temperature control of X-ray tube and X-ray light sensing part



**Packaging line  
(sealing of film and paper package)**

Cooling of workpieces for bonding



**MRI**



**Injection molding**



**Atomizing device  
(food and cosmetics)**

Temperature control of sample and device



**Crushing machine**

Cooling of the jacket



Application Examples

Application Examples	Heat source	Automotive	Light electrical appliance	Food	Machinery	Medical	Semiconductor
Arc welding machine	Torch	✓			✓		
Resistance welding machine	Tip	✓	✓		✓		
Laser welding machine	Oscillator	✓	✓		✓		✓
UV curing device	Lamp	✓	✓	✓		✓	
X-ray instrument			✓			✓	✓
Electronic microscope	Lens		✓			✓	✓
Laser marker	Oscillator	✓	✓	✓		✓	✓
Ultra sonic wave inspection machine		✓	✓		✓		
Atomizing device / Crushing equipment	Blade			✓			
Linear motor	Motor	✓			✓		
Packaging machines (food products)	Dies/Welded portions			✓			
Mold cooling	Mold	✓	✓	✓		✓	
Temperature control of adhesive and paint material	Paint material / Welding materials	✓	✓	✓			
Cooling of vacuum pump	Pump	✓					✓
Shrink fit machine	Workpiece	✓			✓		
Gas cylinder cabinet							✓
Concentrating equipment	Test liquid			✓		✓	
Reagent cooling equipment	Reagent			✓		✓	✓
Cleaning machine (hydrocarbon-based)	Cleaning tank	✓	✓		✓		
Printing machine	Roller		✓	✓	✓		✓
Chamber electrode	Electrode						
High frequency induction heating equipment	Power supply/Heating coil	✓			✓		



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

**eldrotec**  
 Hyotzer ST. 39 Kiryat Bialik P.O.B 1280  
 Phone: +972-4-6893080, Fax: +972-4-8734236  
 Email: info@eldrotec.com  
**www.eldrotec.com**

