




## Circulating Fluid Temperature Controller

# Eldro-Chiller

## Inverter Type

Temperature stability  $\pm 0.1$  °C

	Model	Cooling method	Cooling capacity [kW] (50 / 60 Hz)	Power Supply		Set temperature range	Temperature stability
				# -20	# -40		
Compact type	 PWNH-100-A	Air-cooled refrigeration	9.5			5°C to 40°C	$\pm 0.1$ °C
	PWNH-100-W	Water-cooled refrigeration	11				
Large type	 PWNH-110-A	Air-cooled refrigeration	10.5	3-phase 200 V AC (50 Hz)	3-phase 380 to 415 V AC (50 / 60 Hz)	5°C to 35°C	
	PWNH-160-A		15.7				
	PWNH-210-A		20.5				
	PWNH-260-A		25				
	PWNH-300-A		28				
	 PWNH-110-W	Water-cooled refrigeration	11.5	3-phase 200 to 230 V AC (60 Hz)			
	PWNH-160-W		15.7				
	PWNH-210-W		20.5				
PWNH-260-W	24						

- 3-phase 380 to 415 V AC (50/60 Hz)
- 3-phase 200 V AC (50Hz)
- 3-phase 200 to 230 V AC (60 Hz)

**Series PWNH-100/300**



Eldro-Chiller **Inverter Type****Compact Type****Series PWNH****Air-cooled 200 V Type****PWNH-100**

100 9.5 kW

20 3-phase 200 V AC (50 Hz)  
3-phase 200 to 230 V AC (60 Hz)

Model		PWNH-100-A-20		
Cooling method		Air-cooled refrigeration		
Refrigerant		R410A (HFC)		
Control method		PID control		
Ambient temperature / humidity		[°C %] 5 to 45 / 30to 70%		
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water	
	Set temperature range		[°C] 5 to 40	
	Cooling capacity		[kW] 9.5	
	Heating capacity		[kW] 2.5	
	Temperature stability		[°C] ±0.1	
	Pump capacity	Rated flow (Outlet)		[l/min] 45 (0.5 Mpa)
		Maximum flow rate		[l/min] 60
		Maximum pump head		[m] 50
	Settable pressure range		[MPa] 0.1 to 0.5	
	Minimum operating flow rate		[l/min] 20	
	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, Carbon, PTFE, FKM, EPDM, PVC, NBR, POM, PE, PP, Carbon, Ceramic		
Electrical system	Power supply		3-phase 200 V AC (50 Hz), 3-phase 200 to 230 V AC (60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)	
	Applicable earth leakage breaker (Standard)	Rated current	[A] 30	
		Sensitivity of current	[mA] 30	
	Rated operating current		[A] 15	
	Rated power consumption		[kW (kVA)] 4.6 (5.2)	
Noise level (Front 1 m/Height 1 m)		[dB (A)] 66		
Weight (dry state)		[kg] Approx. 130		

Eldro-Chiller **Inverter Type****Compact Type****Series PWNH****Water-cooled 200 V Type****PWNH-100**

100 11 kW

20 3-phase 200 V AC (50 Hz)  
3-phase 200 to 230 V AC (60 Hz)

Model		PWNH-100-W-20		
Cooling method		Water-cooled refrigeration		
Refrigerant		R410A (HFC)		
Control method		PID control		
Ambient temperature / humidity		[°C %] 5 to 45 / 30to 70%		
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water	
	Set temperature range		[°C] 5 to 40	
	Cooling capacity		[kW] 11	
	Heating capacity		[kW] 2.5	
	Temperature stability		[°C] ±0.1	
	Pump capacity	Rated flow (Outlet)		[l/min] 45 (0.5 Mpa)
		Maximum flow rate		[l/min] 60
		Maximum pump head		[m] 50
	Settable pressure range		[MPa] 0.1 to 0.5	
	Minimum operating flow rate		[l/min] 20	
	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, Carbon, 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		[l/min] 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 200 V AC (50 Hz), 3-phase 200 to 230 V AC (60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)	
	Applicable earth leakage breaker (Standard)	Rated current	[A] 30	
		Sensitivity of current	[mA] 30	
	Rated operating current		[A] 12	
Rated power consumption		[kW (kVA)] 3.8 (4.0)		
Noise level (Front 1 m/Height 1 m)		[dB (A)] 65		
Weight (dry state)		[kg] Approx. 125		

Eldro-Chiller **Inverter Type****Compact Type****Series PWNH****Air-cooled 400 V Type****PWNH-100**

100 9.5 kW

40 3-phase 380 to 415 V AC (50 /60 Hz)



Model		PWNH-100-A-40		
Cooling method		Air-cooled refrigeration		
Refrigerant		R410A (HFC)		
Control method		PID control		
Ambient temperature / humidity		[°C %] 5 to 45 / 30to 70%		
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water	
	Set temperature range		[°C] 5 to 40	
	Cooling capacity		[kW] 9.5	
	Heating capacity		[kW] 2.5	
	Temperature stability		[°C] ±0.1	
	Pump capacity	Rated flow (Outlet)		[l/min] 45 (0.5 Mpa)
		Maximum flow rate		[l/min] 60
		Maximum pump head		[m] 50
	Settable pressure range		[MPa] 0.1 to 0.5	
	Minimum operating flow rate		[l/min] 20	
	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		Metal	Stainless steel, Copper (Heat exchanger brazing), Brass (Pump, Y-strainer), Carbon, SiC	
		Resin	PE, PVC, POM, PTFE, NBR, EPDM, FKM	
Electrical system	Power supply		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		[A] 8	
Rated power consumption		[kW (kVA)] 5.0 (5.5)		
Noise level (Front 1 m/Height 1 m)		[dB (A)] 65		
Weight (dry state)		[kg] Approx. 125		

Eldro-Chiller **Inverter Type****Compact Type****Series PWNH****Water-cooled 400 V Type****PWNH-100**

100 11 kW

40 3-phase 380 to 415 V AC (50 /60 Hz)



Model		PWNH-100-W-40		
Cooling method		Air-cooled refrigeration		
Refrigerant		R410A (HFC)		
Control method		PID control		
Ambient temperature / Altitude		[°C %] Temperature 5 to 45, Altitude less than 3000 m		
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water	
	Set temperature range		[°C] 5 to 40	
	Cooling capacity		[kW] 11	
	Heating capacity		[kW] 2.5	
	Temperature stability		[°C] ±0.1	
	Pump capacity	Rated flow (Outlet)		[l/min] 45 (0.5 Mpa)
		Maximum flow rate		[l/min] 60
		Maximum pump head		[m] 50
	Settable pressure range		[MPa] 0.1 to 0.5	
	Minimum operating flow rate		[l/min] 20	
	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		Metal	Stainless steel, Copper (Heat exchanger brazing), Brass (Y-strainer), Carbon, Ceramic	
		Resin	PTFE, FKM, EPDM, PVC, NBR, POM, PE	
Facility Water System	Temperature range		[°C] 5 to 40	
	Pressure range		[MPa] 0.3 to 0.5	
	Required flow		[l/min] 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		Metal	Stainless steel, Copper (Heat exchanger brazing), Bronze, Brass
Resin			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		[A] 6.8	
	Rated power consumption		[kW (kVA)] 4.0 (4.7)	
Noise level (Front 1 m/Height 1 m)		[dB (A)] 65		
Weight (dry state)		[kg] Approx. 125		

Eldro-Chiller **Inverter Type****Large Type****Series PWNH****Air-cooled 200 V Type****PWNH-110/300**

110	10.5 kW
160	15.7 kW
210	20.5 kW
260	25 kW
300	28 kW

20	3-phase 200 V AC (50 Hz) 3-phase 200 to 230 V AC (60 Hz)
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Model		PWNH-110-A-20	PWNH-160-A-20	PWNH-210-A-20	PWNH-260-A-20	PWNH-300-A-20	
Cooling method		Air-cooled refrigeration					
Refrigerant		R410A (HFC)					
Control method		PID control					
Ambient temperature / Altitude [°C %]		temperature -20 to 45 Altitude less than 3000 m					
Circulating fluid system	Circulating fluid	Tap water, 15 % ethylene glycol aqueous solution, Deionised water					
	Set temperature range [°C]	5 to 35					
	Cooling capacity [kW]	10.5	15.7	20.5	25	28	
	Heating capacity [kW]	2.5	3	5.5	7.5		
	Temperature stability [°C]	±0.1					
	Pump capacity	Rated flow (Outlet) [l/min]	45 (0.43 Mpa)	45 (0.45 Mpa)		125 (0.5 Mpa)	
		Maximum flow rate [l/min]	120	130		180	
		Maximum pump head [m]	50		80		
	Settable pressure range [MPa]	0.1 to 0.5			0.1 to 0.8		
	Minimum operating flow rate [l/min]	20	25		40		
	Tank capacity [L]	25	42		60		
	Circulating fluid outlet, circulating fluid return port		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)				
	Tank drain port		Rc 3/4 (Symbol F: G 3/4, Symbol N: NPT 3/4)				
	Automatic fluid fill system (Standard)	Supply side pressure range Mpa	0.2 to 0.5				
		Supply side fluid temperature °C	5 to 35				
		Automatic fluid fill port	Rc 1/2 (Symbol F: G 1/2, Symbol N: NPT 1/2)				
Overflow port		Rc 1 (Symbol F: G1, Symbol N: NPT 1)					
Fluid contact material	Metal	Stainless steel, Copper (Heat exchanger brazing), Brass (Y-strainer)					
	Resin	PTFE, PU, FKM, EPDM, PVC, NBR, POM, PE, NR					
Electrical system	Power supply	3-phase 200 V AC (50 Hz), 3-phase 200 to 230 V AC (60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)					
	Rated operating current [A]	14	17	25	34	36	
	Rated power consumption [kW (kVA)]	4.5 (4.9)	5.8 (6)	8.4 (8.7)	10.4 (11.6)	11.1 (12.2)	
Noise level (Front 1 m/Height 1 m) [dB (A)]		67				70	
Waterproof specification		IPX4					
Weight (dry state) [kg]		Approx. 180	Approx. 210		Approx. 275		

Eldro-Chiller **Inverter Type****Large Type****Series PWNH****Water-cooled 200 V Type****PWNH-110/260**

110	11.5 kW
160	15.7 kW
210	20.5 kW
260	25 kW

20	3-phase 200 V AC (50 Hz) 3-phase 200 to 230 V AC (60 Hz)
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Model		PWNH-110-W-20	PWNH-160-W-20	PWNH-210-W-20	PWNH-260-W-20	
Cooling method		Water-cooled ref rigeration				
Refrigerant		R410A (HFC)				
Control method		PID control				
Ambient temperature / Altitude		[°C %] temperature 2 to 45 Altitude less then 3000 m				
Circulating fluid system	Circulating fluid		Tap water, 15 % ethylene glycol aqueous solution, Deionised water			
	Set temperature range		[°C] 5 to 35			
	Cooling capacity		11.5	15.7	20.5	24
	Heating capacity		2.5	3.5	4	7.2
	Temperature stability		[°C] ±0.1			
	Pump capacity	Rated flow (Outlet)		45 (0.43 Mpa)	45 (0.45 Mpa)	
		Maximum flow rate		120	130	
		Maximum pump head		50		
	Settable pressure range		[MPa] 0.1 to 0.5			
	Minimum operating flow rate		[l/min] 25			
	Tank capacity		[L] 42			
	Circulating fluid outlet, circulating fluid return port		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)			
	Tank drain port		Rc 3/4 (Symbol F: G 3/4, Symbol N: NPT 3/4)			
	Automatic fluid fill system (Standard)	Supply side pressure range		Mpa 0.2 to 0.5		
		Supplieside fluid temperature		°C 5 to 35		
		Automatic fluid fill port		Rc 1/2 (Symbol F: G 1/2, Symbol N: NPT 1/2)		
		Overflow port		Rc 1 (Symbol F: G1, Symbol N: NPT 1)		
Fluid contact material		Metal	Stainless steel, Copper (Heat exchanger brazing), Brass (Y-strainer)			
		Resin	PTFE, PU, FKM, EPDM, PVC, NBR, POM, PE, NR			
Facility Water system	Supply side pressure range		[MPa] 0.3 to 0.5			
	Supply side temperature range		[°C] 5 to 40			
	Required flow		25	30	50	55
	Facility water pressure differential		[MPa] 0.3 or more			
	Facility water inlet/outlet		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)			
	Fluid contact material		Metal	Stainless steel, Copper (Heat exchanger brazing), Brass, Bronze		
Resin			PTFE, EPDM, NBR			
Electrical system	Power supply		3-phase 200 V AC (50 Hz), 3-phase 200 to 230 V AC (60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)			
	Rated operating current		14	17	21	25
	Rated power consumption		4.2 (4.7)	5.3 (5.8)	6.6 (7.0)	8.0 (8.4)
Noise level (Front 1 m/Height 1 m)		[dB (A)] 61				
Waterproof specification		IPX4				
Weight (dry state)		Approx. 150	Approx. 180			

Eldro-Chiller **Inverter Type****Large Type****Series PWNH****Air-cooled 400 V Type****PWNH-110/300**

110	10.5 kW
160	15.7 kW
210	20.5 kW
260	25 kW
300	28 kW

40	3-phase 380 to 415 V AC (50 / 60 Hz)
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Model		PWNH-110-A-40	PWNH-160-A-40	PWNH-210-A-40	PWNH-260-A-40	PWNH-300-A-40	
Cooling method		Air-cooled refrigeration					
Refrigerant		R410A (HFC)					
Control method		PID control					
Ambient temperature / Altitude		temperature -20 to 45 Altitude less than 3000 m					
Circulating fluid system	Circulating fluid	Tap water, 15 % ethylene glycol aqueous solution, Deionised water					
	Set temperature range	5 to 35					
	Cooling capacity	10.5	15.7	20.5	25	28	
	Heating capacity	2.5	3	5.5	7.5		
	Temperature stability	±0.1					
	Pump capacity	Rated flow (Outlet)	45 (0.43 Mpa)	45 (0.45 Mpa)		125 (0.5 Mpa)	
		Maximum flow rate	120	130		180	
		Maximum pump head	50		80		
	Settable pressure range	0.1 to 0.5			0.1 to 0.8		
	Minimum operating flow rate	20	25		40		
	Tank capacity	25	42		60		
	Circulating fluid outlet, circulating fluid return port		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)				
	Tank drain port		Rc 3/4 (Symbol F: G 3/4, Symbol N: NPT 3/4)				
	Automatic fluid fill system (Standard)	Supply side pressure range	0.2 to 0.5				
		Supply side fluid temperature	5 to 35				
Automatic fluid fill port		Rc 1/2 (Symbol F: G 1/2, Symbol N: NPT 1/2)					
Overflow port		Rc 1 (Symbol F: G1, Symbol N: NPT 1)					
Fluid contact material	Metal	Stainless steel, Copper (Heat exchanger brazing), Brass (Y-strainer)					
	Resin	PTFE, PU, FKM, EPDM, PVC, NBR, POM, PE, NR					
Electrical system	Power supply		3-phase 380 to 415 V AC (50/ 60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)				
	Earth leakage breaker	Rated current	20	30			
		Sensitivity of leak current	30				
	Rated operating current		7.4	9.3	12.8	16	18
	Rated power consumption		4.5 (4.9)	5.8 (6)	8.4 (8.7)	10.4 (11.6)	11.1 (12.2)
Noise level (Front 1 m/Height 1 m)		67					
Waterproof specification		IPX4					
Weight (dry state)		Approx. 180	Approx. 210		Approx. 275		



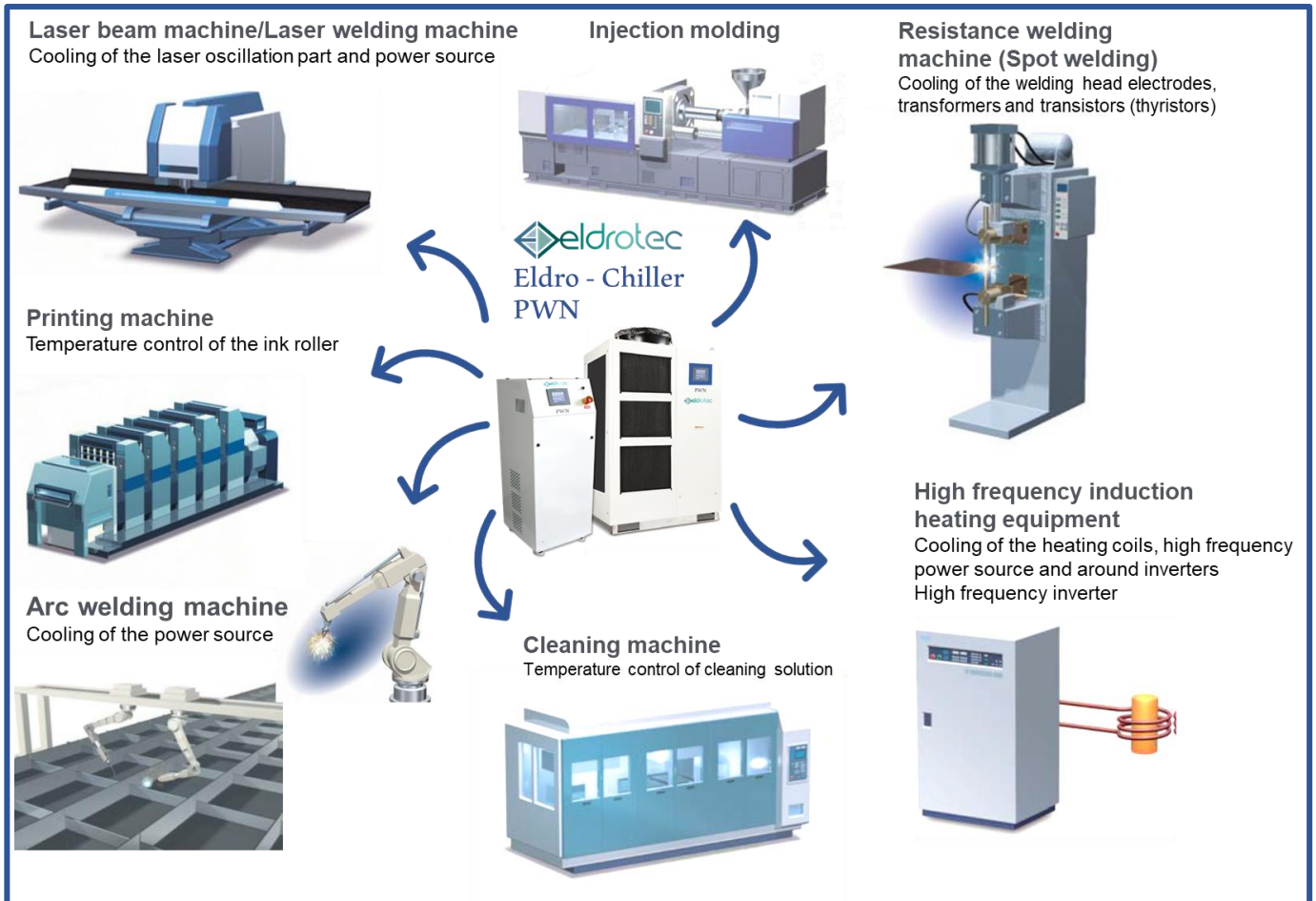
Eldro-Chiller **Inverter Type****Large Type****Series PWNH****Water-cooled 400 V Type****PWNH-110/260**

110	11.5 kW
160	15.7 kW
210	20.5 kW
260	25 kW

40	3-phase 380 to 415 V AC (50 / 60 Hz)
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Model		PWNH-110-W-40	PWNH-160-W-40	PWNH-210-W-40	PWNH-260-W-40	
Cooling method		Water-cooled refrigeration				
Refrigerant		R410A (HFC)				
Control method		PID control				
Ambient temperature / Altitude		temperature -2 to 45 Altitude less than 3000 m				
Circulating fluid system	Circulating fluid	Tap water, 15 % ethylene glycol aqueous solution, Deionised water				
	Set temperature range	5 to 35				
	Cooling capacity	11.5	15.7	20.5	24	
	Heating capacity	2.5	3.5	4	7.2	
	Temperature stability	±0.1				
	Pump capacity	Rated flow (Outlet)	45 (0.43 Mpa)	45 (0.45 Mpa)		
		Maximum flow rate	120	130		
		Maximum pump head	50			
	Settable pressure range	0.1 to 0.5				
	Minimum operating flow rate	20	25			
	Tank capacity	25	42			
	Circulating fluid outlet, circulating fluid return port		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)			
	Tank drain port		Rc 3/4 (Symbol F: G 3/4, Symbol N: NPT 3/4)			
	Automatic fluid fill system (Standard)	Supply side pressure range	0.2 to 0.5			
		Supply side fluid temperature	5 to 35			
Automatic fluid fill port		Rc 1/2 (Symbol F: G 1/2, Symbol N: NPT 1/2)				
Overflow port		Rc 1 (Symbol F: G1, Symbol N: NPT 1)				
Fluid contact material		Metal	Stainless steel, Copper (Heat exchanger brazing), Brass (Y-strainer)			
		Resin	PTFE, PU, FKM, EPDM, PVC, NBR, POM, PE, NR			
Facility Water system	Supply side pressure range	0.3 to 0.5				
	Supply side temperature range	5 to 40				
	Required flow	25	30	50	55	
	Facility water pressure differential	0.3 or more				
	Facility water inlet/outlet		Rc 1 (Symbol F: G 1, Symbol N: NPT 1)			
Fluid contact material		Metal	Stainless steel, Copper (Heat exchanger brazing), Brass, Bronze			
		Resin	PTFE, EPDM, NBR			
Electrical system	Power supply		3-phase 380 to 415 V AC (50/ 60 Hz) Allowable voltage range ±10 % (No continuous voltage fluctuation)			
	Earth leakage breaker	Rated current	20	30		
		Sensitivity of leak current	30			
	Rated operating current		7.4	8.8	10.6	12.8
Rated power consumption		4.4 (4.9)	5.3 (6.1)	6.6 (7.4)	8.2 (8.9)	
Noise level (Front 1 m/Height 1 m)		60				
Waterproof specification		IPX4				
Weight (dry state)		Approx. 150	Approx. 180			

Application Examples



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



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