

PAP[®] Temperature And Humidity Control Type Air cooled

Models

PAP05A1-K
 PAP05A1-FK
 PAP10A1-K
 PAP10A1-FK
 PAP20A-K
 PAP20A-FK

Air processing capacity **3~20m³/min**

Temperature control accuracy **±0.1°C**

Temperature setting range **18~30°C**

Humidity control accuracy **±1%**

Humidity setting range **40~65% (75)^{※1}**



PAP10A1-K

<Special order model> For more information on special order models ▶ 21P

- Noise reducing intake duct ■ Circulation intake chamber
- Exhaust chamber ■ Humidity display included

Please contact ORION regarding custom built models of specifications outside the ranges listed herein.



Specifications

Model		PAP05A1-K	PAP05A1-FK	PAP10A1-K	PAP10A1-FK	PAP20A-K	PAP20A-FK
Performance specifications	Possible temperature and humidity setting range ^{※1}	18 ~ 30, 40 ~ 65 (75) °C,%					
	Temperature and humidity control accuracy ^{※2}	± 0.1, ± 1.0 °C,%					
	Cooling / heating output (50/60Hz)	2.3 / 2.6 kW		4.7 / 5.3 kW		9.4 / 10.5 kW	
	(Maximum cooling output)	(1.6) / (1.8) (kW)		(3.2) / (3.6) (kW)		(6.5) / (7.2) (kW)	
	Rated processing airflow	3 ~ 5 m ³ /min		7 ~ 10 m ³ /min		13 ~ 20 m ³ /min	
Environmental conditions	Maximum external static pressure(50/60Hz) ^{※3}	110 Pa	620 Pa	250 Pa	560 Pa	250 Pa	690 Pa
	Surrounding (intake air) temperature and humidity range	15 ~ 35, 30 ~ 70 °C,%					
	Temperature gradient at intake	Within ± 1 °C/h					
	Humidity gradient at intake	Within ± 5 %/h					
	Outside dimensions (H x D x W) ^{※4}	1589x800x650 mm	1810x800x650 mm	1798x940x664 mm	2203x940x664 mm	1863x1150x820 mm	2263x1150x820 mm
Mass	190 kg	215 kg	235 kg	280 kg	370 kg	445 kg	
Controlled air outlet port	φ 100 mm	φ 100 mm HEPA filter built in	φ 150 mm	φ 150 mm ^{※5} HEPA filter box included	φ 200 mm	φ 200 mm ^{※5} HEPA filter box included	
Humidification water	Water quality	Deionized water (electrical conductivity: 1 ~ 10 μ S/cm)					
	Maximum moisture output ^{※6}	2.5 kg/h		5.0 kg/h		10.0 kg/h	
	Supply temperature range	10 ~ 40 °C					
	Supply pressure range	0.1 ~ 0.5 MPa					
Humidification air	Connection port size	Rc 1/4					
	Maximum air consumption ^{※7}	23 NL/min		38 NL/min		80 NL/min	
	Supply temperature range	20 ~ 40 °C					
	Supply pressure range	0.40 ~ 0.93 MPa					
Power specifications	Connection port size	Rc 1/4					
	Power source ^{※8}	Three-phase 200 ± 10% (50/60) V(Hz)					
	Power consumption ^{※9}	1.6 kW		2.2 kW		4.5 kW	
	Electric current ^{※9}	6.6 A		8.0 A		16.0 A	
	Power capacity ^{※10}	2.3 kVA		2.8 kVA		5.6 kVA	
Noise level (50/60Hz) ^{※11}	66/68 dB	73/73 dB	70/70 dB	75/75 dB	72/72 dB	78/78 dB	
Operation control method	Heat pump balance control						
Refrigerant	R410A						
Compressor output	0.7 kW		1.7 kW		3.0 kW		

※ 1 The temperature and humidity control range noted does not necessarily indicate the actual controllable range possible. The actual controllable temperature and humidity ranges will depend on the temperature and humidity of the intake air. (Vapor humidification is used in the humidity setting range of 65 ~ 75%.) ※ 2 When the air temperature and humidity is stable at the air intake. Noted accuracy is based on measurement by the internal controller at a single air outlet point. ※ 3 The noted external static pressure is when the controlled air is regulated at the outlet to produce the maximum rated processing air flow. ※ 4 Height includes outlet port. ※ 5 The HEPA filter box is shipped in a separate package from the main unit and must be installed on-site. ※ 6 The figure noted is when the equipment is operating at the highest level of humidification. ※ 7 Supply compressed air that has been cleaned through filter and/or other processing. The cleanliness of the compressed air supply should match the air cleanliness standard of the target area to which the controlled air will be supplied. ※ 8 Source voltage phase unbalance should be less than ± 3%. ※ 9 Maximum value within the range of unit specifications. ※ 10 The figure noted is when the equipment is operating at the highest capacity of its normal operating range. ※ 11 Noise level can be decreased by installing a noise reducing duct.

PAP® Temperature And Humidity Control Type Water cooled

Models

- PAP05A1-KW Air processing capacity **3~40m³/min**
- PAP05A1-FKW Temperature control accuracy **±0.1°C**
- PAP10A1-KW Temperature setting range **18~30°C**
- PAP10A1-FKW Humidity control accuracy **±1%**
- PAP20A1-KW Humidity setting range **40~65% (75)※1**
- PAP20A1-FKW
- PAP40A-KW
- PAP40A-FKW



PAP10A1-KW

<Special order model> For more information on special order models ▶ 21P

- Noise reducing intake duct ■ Circulation intake chamber
- Exhaust chamber ■ Steam humidification method

Please contact ORION regarding custom built models of specifications outside the ranges listed herein.



Specifications

Model		PAP05A1-KW	PAP05A1-FKW	PAP10A1-KW	PAP10A1-FKW	PAP20A1-KW	PAP20A1-FKW	PAP40A-KW	PAP40A-FKW
Performance specifications	Possible temperature and humidity setting range※1	18 ~ 30, 40 ~ 65 (75)							
	Temperature and humidity control accuracy ※2	± 0.1, ± 1.0							
	Cooling / heating output (50/60Hz)	3.2/3.2		6.5/6.5		13.0/13.0		22.0/22.0	
	(Maximum cooling output)	(2.0)		(4.0)		(8.0)		(16.0)	
Rated processing airflow	m ³ /min	3 ~ 5		7 ~ 10		13 ~ 20		25 ~ 40	
	Maximum external static pressure ※3	110	620	200	560	250	690	300	1000
Environmental conditions	Surrounding (intake air) temperature and humidity range ※1	15 ~ 35 , 30 ~ 70							
	Temperature gradient at intake	Within ± 1							
	Humidity gradient at intake	Within ± 5							
	Cooling water temperature gradient	Within ±3							
Cooling water	Outside dimensions (H x D x W) ※4	1610x750x610	1830x750x610	1670x940x664	2076x940x664	1831x973x773	2209x973x773	1800x1300x1084	2323x1300x1084
	Mass	180	205	235	280	300	370	540	640
Humidification water	Controlled air outlet port	φ 100	φ 100 HEPA filter built in	φ 150	φ 150 HEPA filter box included	φ 200	φ 200 HEPA filter box included	□ 350	□ 350 HEPA filter box included
	Rate of supply ※6	1.0		1.5		2.2		3.0	
	Supply temperature range	15 ~ 32							
	Supply pressure	0.69 or less							
Humidification air	Inlet/outlet pressure difference	0.2 or greater							
	Connection port size	Rc 1/2		Rc 3/4		Rc 3/4		Rc 1	
	Water quality	Deionized water (electrical conductivity: 1 ~ 10 μ S/cm)							
	Maximum moisture output※7	2.5		5.0		10.0		20.0	
Power specifications	Supply temperature range	10 ~ 40							
	Supply pressure range	0.1 ~ 0.5							
	Connection port size	Rc 1/4							
	Maximum air consumption※8	23		38		80		200	
Operation specifications	Supply temperature range	20 ~ 40							
	Supply pressure range	0.40 ~ 0.93						0.45 ~ 0.93	
	Connection port size	Rc 1/4							
	Power source ※9	Three-phase 200 ± 10% (50/60)							
Refrigerant	Power consumption ※10	1.5		2.2		3.8		6.6	
	Electric current ※10	6.3		7.8		13.5		26.0	
Compressor output	Power capacity ※11	2.2		2.8		4.7		9.0	
	Noise level(50/60Hz) ※12	68/68	73/73	70/70	75/75	72/72	78/78	75/75	83/83
Operation control method		Heat pump balance control							
Refrigerant		R410A							
Compressor output		0.7		1.7		3.0			

※1 The temperature and humidity control ranges noted do not necessarily indicate the actual controllable ranges possible. The actual controllable temperature and humidity ranges will depend on the temperature and humidity of the intake air. (Vapor humidification is used in the humidity setting range of 65 ~ 75%) ※2 Values indicated are for when the intake air temperature and humidity, and supply water temperature and supply water flow rate are stable. Noted accuracy is based on measurement by the internal controller at a single air outlet point. ※3 The noted external static pressure is when the controlled air is regulated at the outlet to produce the maximum rated processing air flow. ※4 Height includes outlet port. ※5 The HEPA filter box is shipped in a separate package from the main unit and must be installed on-site. ※6 When processing at the maximum air flow and at the highest cooling capacity, the difference between the cooling water inlet and outlet ports is 6.5°C. ※7 The figure noted is when the equipment is operating at the highest level of humidification. ※8 Supply compressed air that has been cleaned through filter and/or other processing. The cleanliness of the compressed air supply should match the air cleanliness standard of the target area to which the controlled air will be supplied. ※9 Source voltage phase unbalance should be less than ±3%. ※10 Maximum value within the range of unit specifications. ※11 The figure noted is when the equipment is operating at the highest capacity of its normal operating range. ※12 The noise level may be lowered by installing noise-absorbing ducting.