

# For Cleanrooms And Precision Measurement Rooms

## Constant Temperature (Constant Humidity) Equipment **R** Series

### Models

#### Temperature Control Type

PAP20A-R

PAP40C-R

PAP80B-R

PAP120A-R



#### Temperature and Humidity Control Type

PAP20A-KR

PAP40C-KR

PAP80B-KR

PAP120A-KR



PAP20A-KR (temperature and humidity control type)

Air processing capacity **23~80m<sup>3</sup>/min**

Temperature control accuracy **±0.2°C**

Temperature setting range **18~30°C**

Humidity control accuracy **±2%**

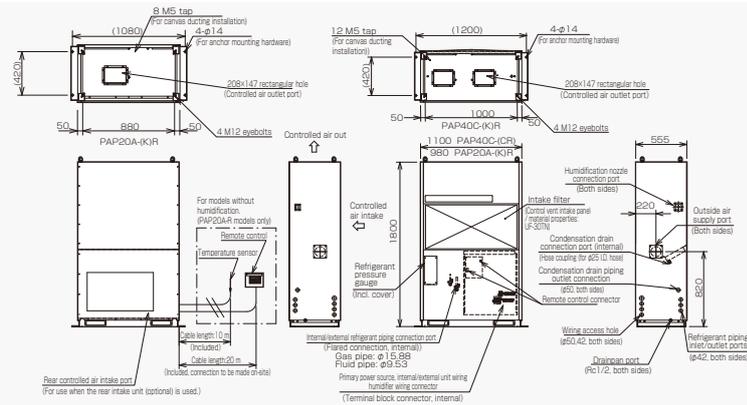
Humidity setting range **45~60%**

※ "Humidity control accuracy" and "Humidity setting range" specifications are for the following models only: PAP20A-KR, PAP40C-KR, PAP80B-KR.

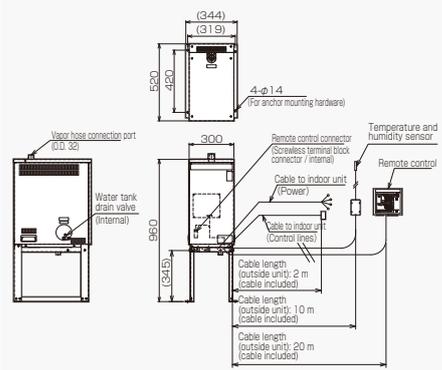
Model		PAP20A-R	PAP40C-R	PAP80B-R	PAP120A-R	PAP20A-KR	PAP40C-KR	PAP80B-KR	PAP120A-KR
Performance specifications	Possible setting range ※1	18 ~ 30 , -				18 ~ 30 , 45 ~ 60			
	Control accuracy ※2	± 0.2 , -				± 0.2 , ± 0.2			
	Cooling capacity (50/60Hz) ※3	8	12	25	38	8	12	25	38
	Heating capacity (50/60Hz) ※4	3	5	13	14.5	3	5	13	14.5
Environmental conditions	Indoor unit installation temperature conditions	5 ~ 35							
	Outdoor unit installation temperature conditions	- 5 ~ 43							
	Temperature gradient at intake	Within ± 2							
	Humidity gradient at intake	Within ± 5							
Outside dimensions	Indoor unit, outside dimensions (H × D × W) ※5	1800 × 555 × 980	1800 × 555 × 1100	1800 × 600 × 1500	1870 × 790 × 1900	1800 × 555 × 980	1800 × 555 × 1100	1800 × 600 × 1500	1870 × 790 × 1900
	Outdoor unit, outside dimensions (H × D × W) ※5	824 × 420 × 810	1160 × 420 × 810	1420 × 800 × 870	1420 × 800 × 870 × 2#	824 × 420 × 810	1160 × 420 × 810	1420 × 800 × 870	1420 × 800 × 870 × 2#
Mass	Indoor unit	(240)	(260)	(400)	(700)	(240)	(260)	(400)	(700)
	Outdoor unit	(65)	(80)	(130)	(130 × 2)	(65)	(80)	(130)	(130 × 2)
Power source	V(Hz)	Three-phase 200 ± 10% (50/60)							
Power specifications	Operating current (50/60 Hz) [when auxiliary heater is off] ※6	23 [18]	40 [31]	60 [42]	122 [93]	35 [30]	58 [49]	104 [86]	193 [165]
	power consumption (50/60 Hz) [when auxiliary heater is off] ※6	6.6 [4.8]	10.5 [7.5]	17 [11]	31.5 [22.5]	11 [9.2]	16.5 [13.5]	32 [26]	54 [45]
Blower fan	Power capacity	8	14	23	40	14	20	38	66
	Air flow (50/60Hz)	23	45	80	120	23	45	80	120
	Motor output (50/60Hz)	0.4		2.2	3.75	0.4	0.4	2.2	3.75
	External static pressure (50/60Hz) ※7	200		400		200		400	
Outdoor unit fan	Air flow (50/60Hz)	65	90	165	165 × 2	65	90	165	165 × 2
	Motor output (50/60Hz)	0.2	0.1 × 2	0.75	0.75 × 2	0.2	0.1 × 2	0.75	0.75 × 2
Refrigerant piping connections	Gas pipe	φ 15.88		φ 19.05	φ 25.4	φ 15.88		φ 19.05	φ 25.4
	Liquid pipe	φ 9.53		φ 12.70	φ 15.88	φ 9.53		φ 12.70	φ 15.88
Refrigerant piping	Max. length (one way)	30	50	75		30	50	75	
	Max. difference in height	10							
Refrigerant		R410A			R407C	R410A			R407C
Compressor output	kW	1.7	3.0	4.6	7.5	1.7	3.0	4.6	7.5
High pressure gas safety act classification		Not required							
Noise level	Indoor unit (50/60Hz)	68	69			68	69		
	Outdoor unit (50/60Hz)	59							
Humidifier	Water quality	Deionized water (electrical conductivity: 1 ~ 10 μ S/cm)							
	Outside dimensions (H × D × W)	—			960 × 520 × 300		960 × 520 × 300	960 × 590 × 500	960 × 790 × 550
	Humidification capacity ※8	—			5		8	20	30
	Mass	—			(35)		(35)	(60)	(90)

※ 1 The temperature and humidity control range noted does not necessarily indicate the actual controllable range possible. The range of control depends on the condition of the air supplied at the intake. ※ 2 When the intake air temperature and humidity, and outdoor ambient temperature are stable. Noted accuracy is based on measurement by the internal controller at a single air outlet point. ※ 3 When operating according to JIS B 8616. The displayed performance will be at least 80% when the intake air temperature of the outdoor unit is at least 35 °C. ※ 4 When operating according to JIS B 8616. The displayed performance will be at least 75% when the intake air temperature of the indoor unit is below 20 °C. The compressor will stop, and exclusive operation of the auxiliary heater may occur if the control air intake temperature drops to approx. 15 °C or lower. ※ 5 Outside dimensions do not include miscellaneous protrusions such as eyebolts, etc. ※ 6 Maximum value within the range of unit specifications. Starting current is equal to or less than the operating current. ※ 7 The noted external static pressure is when the controlled air is regulated at the outlet to produce the maximum rated processing air flow. ※ 8 The figure noted is when the equipment is operating at the highest level of humidification operating at the highest capacity of its normal operating range. ※ 9 Noise level can be decreased by installing a noise reducing duct.

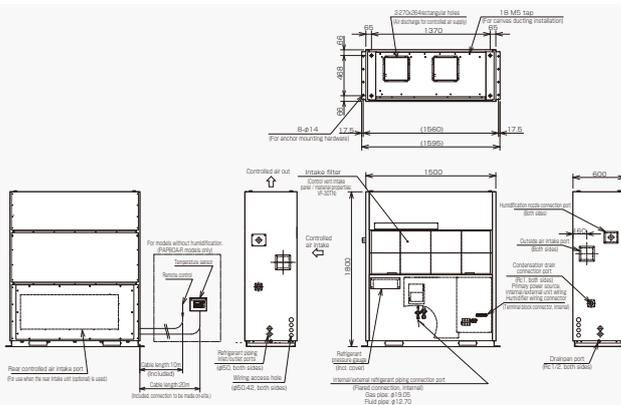
### Indoor unit [PAP20A-(K)R / PAP40C-(K)R]



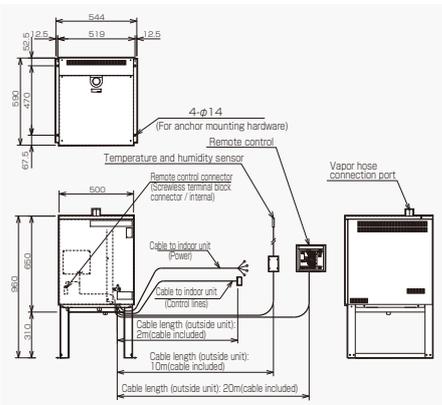
### Humidifier [PAP20A-KR / PAP40C-KR]



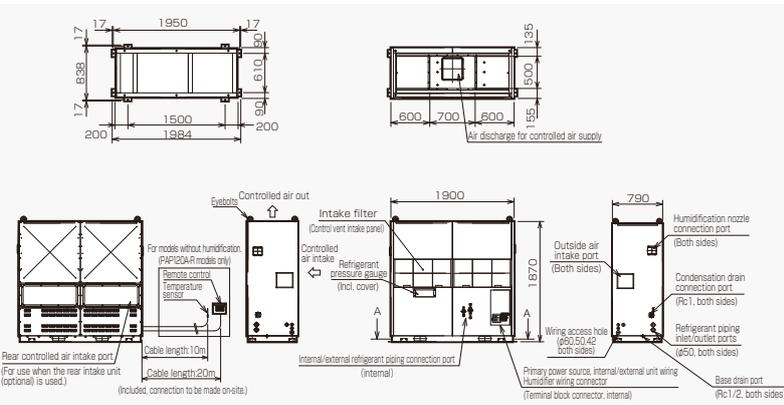
### Indoor unit [PAP80B-(K)R]



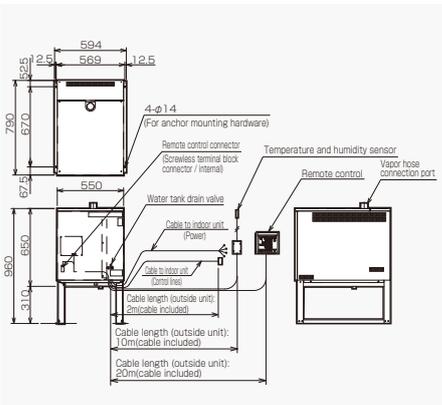
### Humidifier [PAP80B-(K)R]



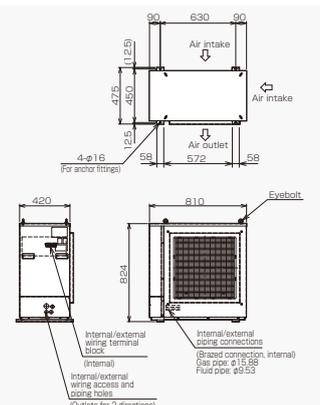
### Indoor unit [PAP120A-(K)R]



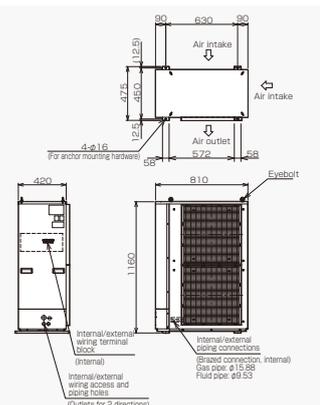
### Humidifier [PAP120A-(K)R]



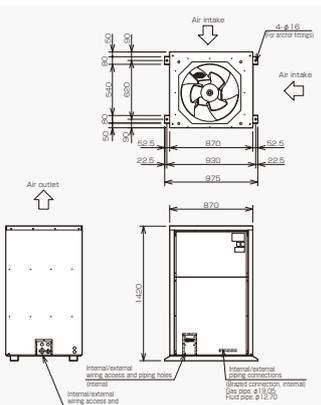
### Outside unit [PAP20A-(K)R]



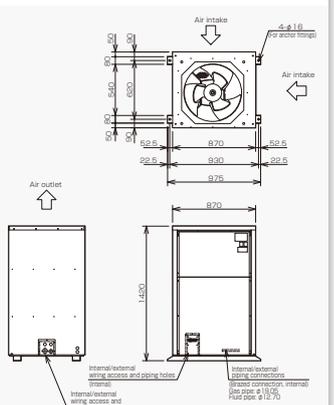
### Outside unit [PAP40C-(K)R]



### Outside unit [PAP80B-(K)R]



### Outside unit [PAP120A-(K)R]



- When installing the outdoor unit, have the air intake side facing the wall, and leave a space of at least 0.5 m.
- Refrigeration piping length: PAP20A-(K)R=30 m, PAP40C-(K)R=50 m, PAP80A-(K)R=75 m (all are 1-way)
- When there is a difference in height between the indoor and outdoor units: When the external unit is higher: 10 m. When the external unit is lower: 10 m.
- Cables and piping going between the indoor and outdoor units are not included.