

HAHU-B Horizontal Mini Air Handling Unit

Sizes: 5 sizes
Models: 2-pipe · 4-pipe
Rows: 5R · 5R+2 · 6R · 6R+2
Cooling: 6.9 - 47.1 kW
Heating: 7.1 - 48.5 kW
Air Flow: 1319 - 8257 m3/h

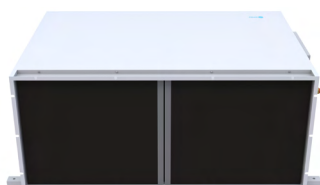


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Model shown: HAHU-B Horizontal AHU · size 800 · Agricultural application

Designed for horizontal setups in **high-pressure environments**, this **hybrid AHU-fan coil unit** serves **niche applications** requiring customizable airflow and temperature control.



BACK



FRONT



SIDE

Project Applications & References



Government: Post Offices · Courthouses · Town Halls · Embassies · Prisons · Military & Emergency Spaces



Healthcare: Hospitals · Clinics · Nursing Homes · Treatment Centers · Laboratories · Morgues



Commercial: Supermarkets · Stores · Shopping Malls · Gyms/Sports Facilities · Museums/Theaters · Airports



Industrial: Factories · Plants · Data Centers · Warehouses/Distribution Centers · Agricultural



Taranaki Hospital

2023 · New Zealand
Healthcare (Hospital)

New construction
EC motor
4-pipe model



Office HQ

2025 · Costa Rica
Business (Large Office Headquarters)

Retrofit
EC motor
PCGH-3R & PDWA combination



Key Features & Components

-  **Unique double skin casing** that creates a thermal barrier for efficient cooling and heating.
-  **Access to components from bottom** with a lift down panel for easy maintenance.
-  **Airflow-diverting ductwork** and VAV boxes mean customizable temperatures across different zones.
-  **Ideal for low temperature heat sources like solar thermal collectors and heat pumps.**
-  **Multiple rows available (2- and 4-pipe):** More rows and coil surface area **improves heat exchange and latent capacity** for better efficiency and humidity control.

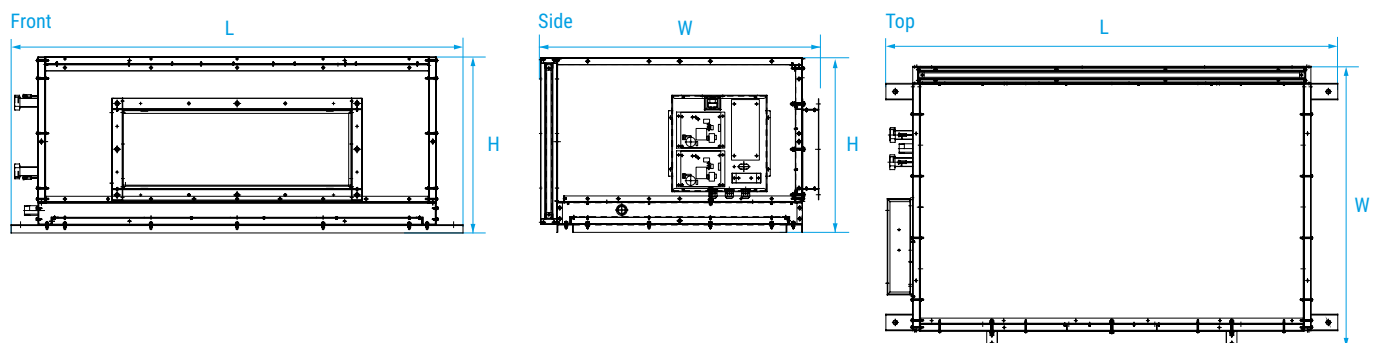
-  For high external static pressures up to 400 Pa / 1.60 in.wg. **Recommended: 250 Pa / 1 in.wg.**
-  4-pipe model for **simultaneous heating and cooling** throughout the year.
-  Energy-efficient 0-10 VDC EC motor (**up to 30% energy savings** compared to AC motors).
-  **Copper tubes/headers**, mechanically expanded into corrugated aluminum fins tested up to 35-bar ².
-  **Ready to install package:** Internal painted steel drain pan, thick 25 mm (1") NBR insulation, manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

Optional Accessories

- I-Type Controllers:** Wired Wallpad
- Valves:** pre-assembled **HYDR-C+VALVE KIT** ³
- Drain pan:** stainless steel
- Electric heater:** up to 9 kW
- Filter:** G4 (MERV 8) or F8 (MERV 14)
- Air:** Supply/return plenum, damper, diffuser & manual louver
- Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- Disconnect switch:** integrated in control box
- Customization:** available upon request ¹

Dimensions, Weights & Drawings

HAHU-B SIZES*			200	300	400	600	800
Unit Dimensions	L	mm ["]	1280 [50 3/8]	1480 [58 1/4]	1680 [66 1/8]	1930 [76]	2130 [83 7/8]
	W		1120 [44 1/8]	1120 [44 1/8]	1120 [44 1/8]	1120 [44 1/8]	1190 [46 7/8]
	H		640 [25 3/16]	640 [25 3/16]	640 [25 3/16]	754 [29 11/16]	754 [29 11/16]
Net Weight	kg [lbs]	187 [412]	203 [448]	214 [472]	269 [593]	333 [734]	



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDR-C+ VALVE KIT includes 2/3-way body valve, on-off/modulating actuator (24V or 110-240V), BSPT or NPT connectors, connection piping kit, 2x shut-off valves, strainer and manual balancing valve. (*) Indicated dimensions approximate within 5 mm or 1/16". Weights approximate within 1 kg (2.2 lbs). Based on 5R configuration. For other row configuration dimensions/weights, please contact us.

HAHU-B Horizontal Mini Air Handling Unit

Technical Specifications

Hydronic Horizontal Mini AHU, 5R, 2-pipe with **EC Motor**

For other row configuration technical data, please contact us at hello@polaraircs.com.

UNIT GENERAL SPECS	HAHU-5R-[SIZE]-V-EC			200B	300B	400B	600B	800B
	Configuration			2-pipe				
	Number of Fan Blowers			1			2	1
	Power Supply (V/Ph/Hz)			208-240/1/50-60				380-460/3/50-60
	Water Connections	Type		BSPT (Threaded Female)				
		In/Out	mm ["]	31.75 [1 1/4]				
	Condensate Drainage			mm ["]	25.4 [1]			
AIR	Total Air Flow	H	m3/h	2114	2959	4235	6021	8257
		M		1939	2406	3610	4990	7558
		L		1372	1703	2553	3532	5340
	External Static Pressure	H	Pa	250				
		M						
		L						
COOLING	Total Cooling Capacity	H	kW	12.9	18.3	24.6	35.8	47.1
		M		12.1	15.6	21.8	31.0	44.0
		L		9.3	11.9	16.6	23.6	33.5
	Sensible Cooling Capacity	H	kW	9.0	12.6	17.3	25.1	33.2
		M		8.4	10.7	15.2	21.4	30.9
		L		6.4	8.0	11.5	16.1	23.1
HEATING	Total Heating Capacity	H	kW	13.1	18.4	25.2	36.5	48.5
		M		12.3	15.7	22.4	31.5	45.3
		L		9.4	12.0	17.1	24.0	33.5
	Recommended Electric Heater Capacity		kW	4.5	6.0	7.5	9.0	9.0
SOUND *	Pressure Level (Outlet)		dBA	73/68/64	78/73/69	80/75/71	81/76/72	83/78/73
	Pressure Level (Inlet + Radiated)			70/65/61	75/70/66	77/72/68	78/73/69	80/75/70
	Power Level (Outlet)			82/77/73	87/82/78	89/84/80	90/85/81	92/87/82
	Power Level (Inlet + Radiated)			79/74/70	84/79/75	86/81/77	87/82/78	89/84/79
ELECTRICAL	Power Input ¹	H	W	445	551	800	1400	2580
		M		321	369	578	1011	1864
		L		111	127	200	350	645
	Running Current ² (H)		A	2.1	2.5	5.1	6.5	3.9
HYDRONIC	Cooling Water Flow Rate	H	L/h	2218	3130	4212	6136	8076
		M		2075	2674	3731	5306	7549
		L		1591	2037	2848	4039	5743
	Cooling Pressure Drop	H	kPa	27.8	58.5	31.3	45.4	44
		M		24.6	44.1	25.1	35	39
		L		15.3	27	15.5	21.4	23.8
	Heating Water Flow Rate	H	L/h	2245	3152	4327	6250	8307
		M		2101	2692	3833	5405	7765
		L		1611	2052	2926	4115	5907
	Heating Pressure Drop	H	kPa	20.5	43	23.7	34	33.6
		M		18.1	32.3	19	26.2	29.8
		L		11.3	19.8	11.7	16	34.5
	Water Content		L	7.4	9.1	10.9	12.6	15.2

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB

Inlet/Outlet water temperature: 7°C/12°C

Heating mode (2-pipe): Return Air Temperature 20°C

Inlet/Outlet water temperature: 45°C/40°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low..

Technical Specifications

Hydronic Horizontal Mini AHU, 5R+2, 4-pipe with EC Motor

For other row configuration technical data, please contact us at hello@polarairs.com.

UNIT GENERAL SPECS	HAHU-5R+2-[SIZE]-P-EC			200B	300B	400B	600B	800B	
	Configuration			4-pipe					
	Number of Fan Blowers			1			2	1	
	Power Supply (V/Ph/Hz)			208-240/1/50-60				380-460/3/50-60	
	Water Connections	Type		BSPT (Threaded Female)					
		In/Out	mm ["]	Cooling: 31.75 [1 1/4] · Heating: 25.4 [1]					
	Condensate Drainage			mm ["]	25.4 [1]				
AIR	Total Air Flow	H	m3/h	2019	2800	4082	5704	8111	
		M		1874	2309	3512	4793	7457	
		L		1336	1650	2500	3424	5285	
	External Static Pressure	H	Pa	250					
		M							
		L							
COOLING	Total Cooling Capacity	H	kW	12.5	17.4	23.9	34.2	46.4	
		M		11.8	15.2	21.4	30.1	43.4	
		L		9.1	11.6	16.4	23.0	33.5	
	Sensible Cooling Capacity	H	kW	8.7	12.1	16.8	24.1	32.7	
		M		8.2	10.3	14.9	20.8	30.4	
		L		6.2	7.8	11.3	15.7	23.1	
HEATING	Total Heating Capacity	H	kW	13.4	18.1	25.2	35.9	48.3	
		M		12.7	15.8	22.6	31.6	45.1	
		L		9.7	12.0	17.3	24.1	34.9	
SOUND *	Pressure Level (Outlet)		dBA	73/68/64	78/73/69	80/75/71	81/76/72	83/78/73	
	Pressure Level (Inlet + Radiated)			70/65/61	75/70/66	77/72/68	78/73/69	80/75/70	
	Power Level (Outlet)			82/77/73	87/82/78	89/84/80	90/85/81	92/87/82	
	Power Level (Inlet + Radiated)			79/74/70	84/79/75	86/81/77	87/82/78	89/84/79	
ELECTRICAL	Power Input ¹	H	W	445	551	800	1400	2580	
		M		321	369	578	1011	1864	
		L		111	127	200	350	645	
	Running Current ² (H)			A	2.1	2.5	5.1	6.5	3.91
HYDRONIC	Cooling Water Flow Rate	H	L/h	2139	2989	4091	5863	7959	
		M		2028	2598	3671	5163	7432	
		L		1555	1983	2813	3934	5743	
	Cooling Pressure Drop	H	kPa	26.0	53.9	29.7	41.9	42.9	
		M		23.6	41.9	24.4	33.3	37.9	
		L		14.6	25.7	15.1	20.4	23.8	
	Heating Water Flow Rate	H	L/h	1147	1555	2160	3074	4142	
		M		1087	1352	1938	2706	3868	
		L		834	1032	1485	2062	2989	
	Heating Pressure Drop	H	kPa	15.2	31.3	17.3	45.6	27.8	
		M		13.9	24.3	14.2	36.3	24.6	
		L		8.6	14.9	8.8	22.2	15.5	
	Water Content (Cooling)			L	7.4	9.1	10.9	12.6	15.2
	Water Content (Heating)				3.7	4.5	5.5	6.3	7.6

Eurovent Certita Testing Conditions:

Cooling mode: Return Air Temperature 27°C DB/19°C WB Inlet/Outlet water temperature: 7°C/12°C

Heating mode (4-pipe): Return Air Temperature 20°C Inlet/Outlet water temperature: 65°C/55°C

For non-standard conditions (i.e. high ΔT) please refer to PASELECT Software. (E) Specifications follow Eurovent test data (according to EN 1397:2021) for the year of publication. Please visit www.eurovent-certification.com for further information.

(1) Rated power input includes fan motor and PCB. (2) Data on apparent electrical current. (*) Sound pressure level measured at 1m distance in a reverberation test room with a minimum volume at 200m³. Sound power level performed and tested according to EN 16583:2022. Range: H=High, M=Medium, L=Low..