

VAHU Vertical Mini Air Handling Unit

Sizes: 5 sizes
Models: 2-pipe · 4-pipe
Rows: 5R · 5R+2
Cooling: 8.8 - 46.5 kW
Heating: 9.2 - 47.6 kW
Air Flow: 1286- 8186 m3/h



Download IOMs & Revits
SCAN QR CODE

Designed for vertical setups in **high-pressure environments**, this **hybrid AHU-fan coil unit** serves **niche applications** requiring top and down flow distribution and customizable temperature control.



BACK



TOP



FRONT



SIDE RIGHT + LEFT

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



Occidental Railspur

2024 · USA (Washington)
Business (Offices)

Retrofit
EC motor
4-pipe model



Hotel Qawra

2024 · Malta
Hospitality (Hotel Facilities)

Retrofit
EC motor
2-pipe model



Key Features & Components

-  **Unique double skin casing** that creates a thermal barrier for efficient cooling and heating.
-  **Top or down flow distribution options** to adapt to ducting layouts and specific air delivery needs.
-  **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 200 Pa / 0.8 in.wg. **Recommended: 150 Pa / 0.6 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 steel drain pan, thick PU insulation 25 mm (1"), manual air vent + water purge valve, G2 (MERV 4) filter & 25.4 mm (1") toolless filter rack.

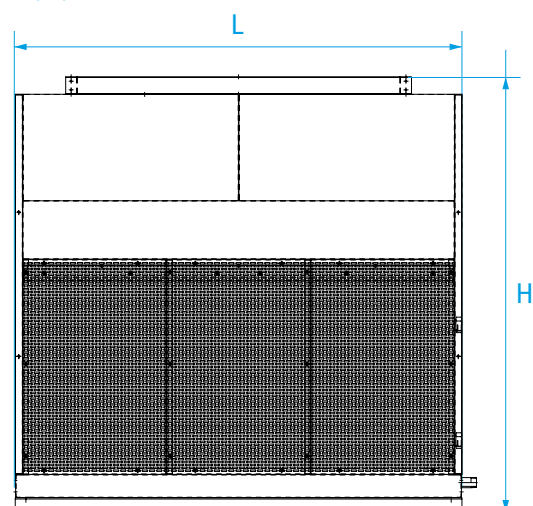
Optional Accessories

- **I-Type Controllers:** Wired Wallpad
- **Valves:** pre-assembled **HYDR+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
- **Integrated transformer:** converts from 230V-115V to 24V for valve and thermostat compatibility
- **Disconnect switch:** integrated in control box
- **Customization:** available upon request ¹

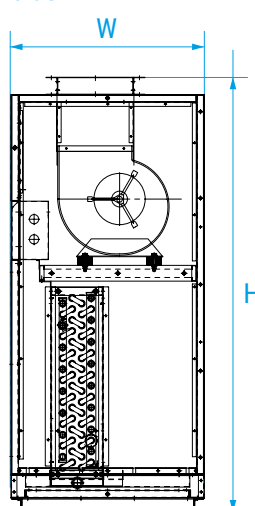
Dimensions, Weights & Drawings

VAHU SIZES*			200	300	400	600	800
Unit Dimensions	L	mm ["	850 [33 7/16]	1050 [41 5/16]	1250 [49 3/16]	1550 [61]	1880 [74]
	W		670 [26 3/8]	670 [26 3/8]	670 [26 3/8]	670 [26 3/8]	670 [26 3/8]
	H		1490 [58 11/16]	1490 [58 11/16]	1490 [58 11/16]	1490 [58 11/16]	1490 [58 11/16]
Net Weight		kg [lbs]	194 (428)	224 (494)	279 (615)	350 (772)	391 (862)

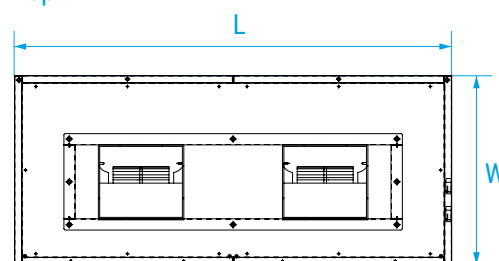
Front



Side



Top



(1) Minimum order quantities apply. (2) Tested between 25-35 bar with a max operating limit of 16-bar. (3) HYDR+ 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).

VAHU Vertical Mini Air Handling Unit

Technical Specifications

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

UNIT GENERAL SPECS	VAHU-5R-[SIZE]-V-EC			200	300	400	600	800	
	Configuration			2-pipe					
	Number of Fan Blowers			1			2		
	Power Supply (V/Ph/Hz)			208-240/1/50-60					
	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	2222	3160	4093	6321	8186	
		M		1912	2703	3495	5407	6990	
		L		1361	1916	2475	3833	4950	
	External Static Pressure	H	Pa	120					
		M							
		L							
COOLING	Total Cooling Capacity	H	kW	13.5	19.0	24.2	35.4	46.5	
		M		12.0	16.9	21.4	31.3	41.0	
		L		9.3	12.9	16.3	23.9	31.3	
	Sensible Cooling Capacity	H	kW	9.4	13.3	17.0	25.0	32.7	
		M		8.3	11.7	14.8	21.9	28.5	
		L		6.3	8.8	11.2	16.5	21.5	
HEATING	Total Heating Capacity	H	kW	13.6	19.2	24.7	36.6	47.6	
		M		12.1	17.0	21.8	32.5	42.1	
		L		9.3	13.0	16.7	24.8	32.1	
	Recommended Electric Heater Capacity		kW	4.5	6.0	7.5	9.0	9.0	
SOUND *	Pressure Level (Outlet)		dBA	73/77/73	78/82/78	80/84/80	81/85/81	83/87/82	
	Pressure Level (Inlet + Radiated)			70/74/70	75/79/75	77/81/77	78/82/78	80/84/79	
	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	412	850	1015	1700	2030	
		M		375	650	850	1300	1530	
		L		320	350	500	700	1000	
	Running Current ² (H)			A	3.6	7.4	8.8	14.8	17.7
HYDRONIC	Cooling Water Flow Rate	H	L/h	2306	3262	4154	6065	7968	
		M		2053	2889	3668	5372	7035	
		L		1587	2205	2800	4101	5371	
	Cooling Pressure Drop	H	kPa	54.0	64.9	38.0	38.3	73.6	
		M		43.8	52.1	30.4	30.8	58.8	
		L		27.5	32.1	18.7	18.9	36.2	
	Heating Water Flow Rate	H	L/h	2323	3291	4234	6282	8166	
		M		2068	2915	3739	5564	7210	
		L		1598	2225	2854	4247	5505	
	Heating Pressure Drop	H	kPa	39.8	47.9	28.5	29.5	56.1	
		M		32.3	38.5	22.8	23.8	44.9	
		L		20.3	23.7	14.0	14.6	27.6	
	Water Content			L	5.1	6.8	8.5	10.3	12.8

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

UNIT GENERAL SPECS	VAHU-5R+2-[SIZE]-P-EC			200	300	400	600	800	
	Configuration			4-pipe					
	Number of Fan Blowers			1			2		
	Power Supply (V/Ph/Hz)			208-240/1/50-60					
	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	1999	3000	3942	6000	7884	
		M		1773	2603	3400	5206	6801	
		L		1286	1862	2424	3724	4847	
	External Static Pressure	H	Pa	120					
		M							
		L							
COOLING	Total Cooling Capacity	H	kW	12.3	18.2	23.5	33.9	45.1	
		M		11.3	16.4	21.0	30.6	40.3	
		L		8.8	12.6	16.1	23.3	30.9	
	Sensible Cooling Capacity	H	kW	8.6	12.7	16.5	23.9	31.7	
		M		7.8	11.4	14.5	21.3	28.0	
		L		6.0	8.6	11.0	16.1	21.2	
HEATING	Total Heating Capacity	H	kW	12.9	21.4	24.8	35.5	46.5	
		M		11.8	19.3	22.2	32.0	41.5	
		L		9.2	14.7	17.0	24.5	31.9	
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	412	850	1015	1700	2030	
		M		375	650	850	1300	1530	
		L		320	350	500	700	1000	
	Running Current ² (H)			A	3.6	7.4	8.8	14.8	17.7
HYDRONIC	Cooling Water Flow Rate	H	L/h	2117	3122	4033	5805	7736	
		M		1943	2818	3604	5240	6913	
		L		1513	2152	2765	4001	5304	
	Cooling Pressure Drop	H	kPa	46.3	59.9	36.1	35.4	69.7	
		M		39.7	49.9	29.5	29.4	57.0	
		L		25.3	30.7	18.3	18.1	35.4	
	Heating Water Flow Rate	H	L/h	1103	1832	2124	3041	3981	
		M		1013	1654	1898	2745	3558	
		L		789	1263	1456	2095	2730	
	Heating Pressure Drop	H	kPa	8.6	21.3	39.1	38.6	74.8	
		M		7.4	17.7	32.0	32.1	61.1	
		L		4.7	10.9	19.8	19.8	37.9	
	Water Content (Cooling)			L	5.1	6.8	8.5	10.3	12.8
	Water Content (Heating)				2.1	2.7	3.4	4.1	5.1

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.