

H-UNI

Air Conditioning Unit



- ❖ integrated dehumidification, cooling, heating
- ❖ reversible heat pump
- ❖ high recuperation efficiency
- ❖ integrated system M&C
- ❖ easy installation „Plug & Play“

AIR CONDITIONING UNIT H-UNI

Usage and working conditions

Air conditioning units H-UNI are compact units for providing complex optimisation of air in one unit suitable for dehumidification in swimming pool areas and for energetically balanced installations where high efficiency heat plate exchanger and heat pump are used. Further they are suitable in places where it is necessary to cool space but it is not possible to place condensation unit outside, or for any other applications where easy assembly and quick putting into operation is important.

The units are produced in design suitable for indoors.

Structure

The H-UNI units are made of frameless sandwich panels.

The casing of the panel consists of two steel zinc plates with a thickness of 0.8 mm, peripherally connected by blind rivets. Outside cover of the unit is finished with paint RAL9002 - ivory.

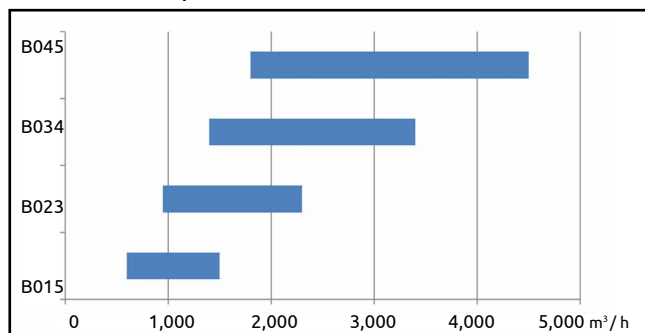
Inside the panel is mineral wool insulation with volumetric weight of 50 kg/m³, degree of flammability is A1. Thickness of the panel is 50 mm.

Strength of the casing is secured by special joints registered at The Industrial Property Office in a database of industrial designs.

Advantages of frameless structure

- excellent strength of the structure
- reduced loss of heat transmission through the unit casing
- clear interior of the unit
- easy installation and maintenance of units

Pic. 1 Air flow performance

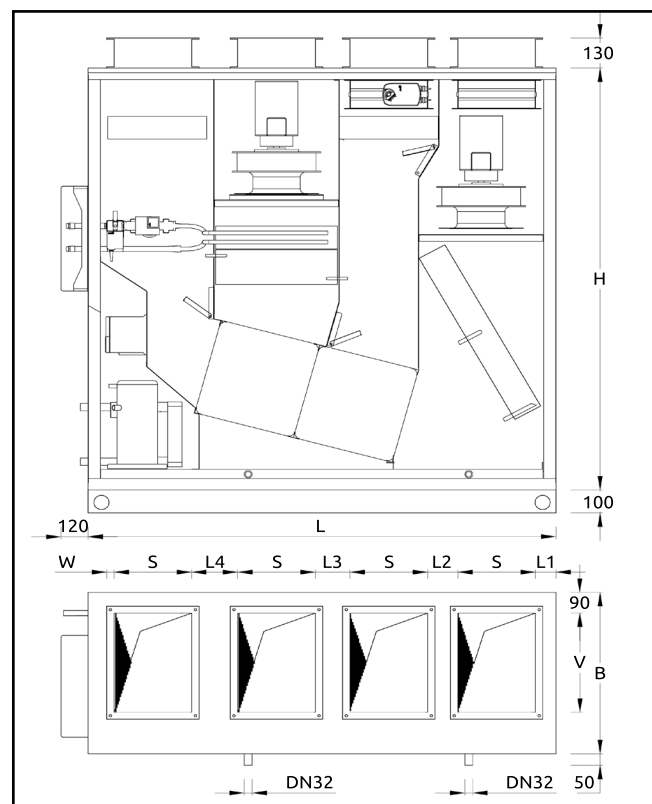


H-control system of measurement and regulation

The units are equipped with autonomous controlling system M&C H-Control. This system is easy to operate by PC and web browser. Further it is possible to control the unit with a remote control with LCD display or BAS system.

Control and action components are fitted, assembled, connected and tested during production. The system enables:

Pic. 2 Unit dimensions



Size [mm]	B015	B023	B034	B045
L	1,900	1,900	2,076	2,410
B	700	1,000	1,190	1,290
H	1,730	1,795	1,925	2,215
S	315	315	315	415
V	430	730	920	1,020
L1	84	84	84	134
L2	123	123	167	170
L3	141	141	185	176
L4	187	187	214	202
W	20	20	30	30

AIR CONDITIONING UNIT H-UNI

- smooth fan operation control
- water heating coil control and protection
- HR exchangers control and protection
- flaps control
- air filters clogging signalisation
- heat pump compressor, incl. reverse cycle, control

unit and are equipped with flexible connections with flanges for connection to pipeline.

Exchangers output pipes, all other fittings and service openings are placed on front and one side of the unit.

Access to fans, filters and frequency invertors is provided through removable panels.

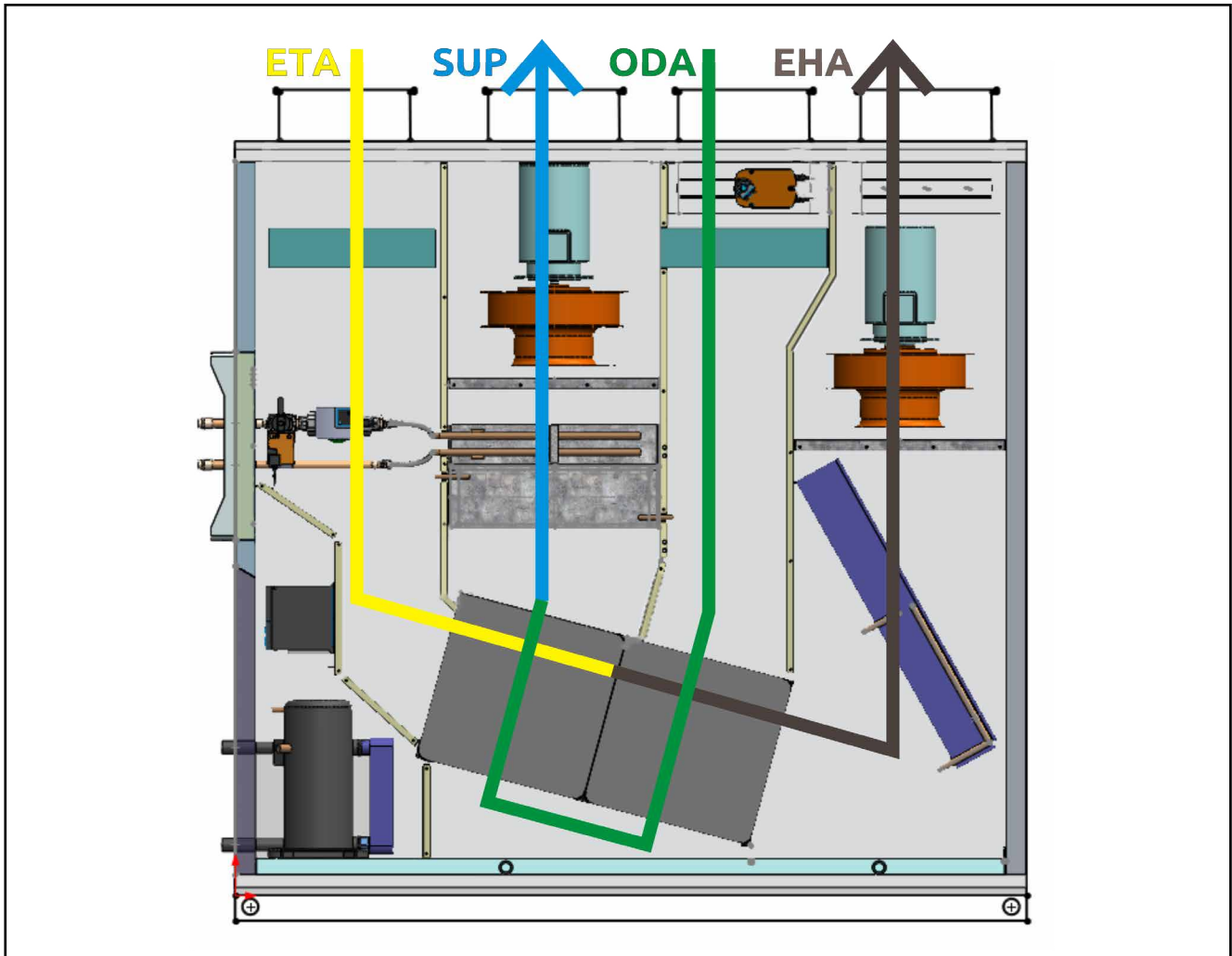
Description

Air conditioning units are manufactured as one complex unit. The units are designed for floor installation and are delivered with a base frame. Suction and discharge openings are placed on upper side of the

A free service area the size of B x 1.15 must be maintained in front of the unit. A free service area the size of 800 mm must be maintained in front of power switchboard situated on the side of the unit.

Unit size			B015	B023	B034	B045
Swimming pool area						
private swimming pool	[m ²]		50	76	115	160
swimming pool with a depth over 1.35 m	[m ²]		37	57	86	120
swimming pool with waves	[m ²]		21	32	48	67
Dehumidification						
with 30% of fresh air in compliance with VDI 2089/1			8.0	12.3	18.5	25.8
min. nominal air volume flow V	[m ³ /h]		600	950	1,400	1,800
air flow	[m ³ /h]		1,500	2,300	3,400	4,500
external pressure drop	[Pa]		300	300	300	300
filtration class according to EN 779			M5-F7	M5-F7	M5-F7	M5-F7
heat requirement for HVAC at 30% of fresh air -15 °C	[kW]		1.8	2.6	3.7	5.1
max. heating power of the heater at 20 °C	[kW]		12.0	18.4	27.2	36
water flow 70/50 °C	[l/s]		0.15	0.23	0.33	0.44
dP on water	[kPa]		4	6.2	7.6	8.5
connecting size of the heater			1/2"	1/2"	1/2"	3/4"
Efficiency of ZZT at 30 % of fresh air -15 °C	[%]		74	75	76	75
Ventilator intake	P	[kW]	0.75	1.1	1.1	1.5
Ventilator discharge	P	[kW]	0.75	1.1	1.1	1.5
Compressor	P	[kW]	1.57	2.37	3.35	4.81
Water condensator	P	[kW]	4.0	6.1	9.3	14.4
	flow		0.07	0.10	0.16	0.25
	dPw	[kPa]	0.2	0.5	1.1	2.6
Electricity connection	P	[kW]	4.0	7.0	9.0	11.0
U=3x400 V, 50 Hz	In	[A]	7.1	10.1	12.4	16.9
TN - S	protection	[A]	25	32	32	40
Wire cross section		[mm ²]	4	6	6	10
Weight incl. switchboard		[kg]	415	636	941	1,245

Pic. 3 Functional description of the unit



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