

Description/Overview

A modulating air to water heat pump in compact design for outdoor installation.

For heating and cooling in cascades of up to 16 individual units.

Consisting of

- Hermetically sealed rotary compressors with inverter control.
- A copper-soldered plate heat exchanger made of stainless steel with polypropylene insulation and frost protection heating.
- Multi-row fin evaporator with large surface area with hydrophilic coating.
- Speed-controlled axial fans.
- A supporting frame structure with powder coating RAL 9001, External cladding made of surface-coated steel sheet RAL 9001 and including sound-insulating cladding.

The refrigeration circuit includes:

- An electronic expansion valve.
- A 4-way valve for cooling and defrosting.
- High and low-pressure monitor.
- liquid collector, liquid separator,
- oil separator.

And is filled with R32 refrigerant.

The water circuit includes

- A flow monitor.
- Frost protection heating.
- Temperature sensors on the flow and the return.
- A drain valve.
- Hydraulic connections with Victaulic couplings.
- A Safety valve with a 6 bar maximum setting.

An Electrical box internally wired ready for connection and an external operator terminal with graphical display and function keys. This can be mounted on the unit or remotely.

Heat Output A2W35 22.4-53.3kW Cooling Capacity A35/W18 23.7-75.6kW.



Technical Data

Performance		
Energy Efficiency Class with control at 35°C	A++	35°C
Room Heating energy efficiency 35°C η_s	152	%
SCOP moderate climate at 35°C	3.87	SCOP
Heating		
Heat Output A2W35 ⁽¹⁾	53.3	kW
COP A2W35	3.5	12/07
	40.0	KVV
COF A-7W33	2.0	
Cooling		
Cooling Capacity A35W18 ⁽¹⁾	75.6	kW
EER A35W18	3.3	
Cooling Capacity A35W7	55	kW
EER A35W7	2.6	
Sound Power Levels		dB(A)
Standard	82	
Silent ⁽²⁾	74	
Super silent ⁽²⁾	71	
Hydraulic Data		
Maximum flow temperature	54	°C
Heating Flow Rate at ΔT 5K (A7W35)	2.96	l/s
Heating Flow Rate at $\Delta T 8 K (A7W35)$	1.83	l/s
Cooling Flow Rate at ΔT 4K (A35W7)	3.28	l/s
Cooling Flow Rate at ΔT 4K (A35W18)	4.5	l/s
Max On procedure for Heating	60	hor
Max Op pressure for freating	2"	Dai
Flow/Return Connections		
Fan	2x axial	
Nominal air quantity	24000	m³/h
Refrigerant	R32	
Circuits	1	
Compressor stages	Modulating	
Refrigerant fill quantity	14	kg
	4.0	1
Connections	3. /100/50	
Starting current	טלא~400/50 אח ג	Amns
Main current fuse	40.5	Ашрэ
Dimensions (H x W x D)	1320x 2280 x 1060	mm
Weight	530	ka

⁽¹⁾ In accordance with EN 14511

(2) Reduced heat outputs

Hoval

Belaria® fit (53)

(Dimensions in mm)



Rear (suction side)



Diagrams of areas of application

Heating Belaria® fit (53)





Side view

Flow heating DN 50 1

- 2 3 Return heating DN 50
- Electrical connection
- 4 Control module bracket 5
- Vibration dampers

Hot water Belaria® fit (53)



- Hoval
- Units are designed to be installed externally in fixed positions. They should be raised from the ground onto suitable plinths with the bearing points aligned and levelled (refer to O&M for details).
- Discharged condensation from the evaporator must be drained in such a way as to not cause harm or danger to people or property.
- Limit vibration transmissions using the anti-vibration feet supplied along with the flexible connection joints on the heating pipework. The spring vibration feet add to the height dimension indicated. Anti-vibration feet and flexible couplings are included in the scope of supply.
- Located to avoid obstacles to airflow, heat or pollution sources, stratification or recirculation of air supply by incorrect positioning.
- Refer to Technical Information Installation/Operation instructions prior to installation for necessary clearances around the units.
- Integration with heating/cooling systems requires a suitably sized thermal store (a Hoval EnerVal vessel).
- Option to include Hoval TopTronic E system control elements depending on the hydraulic arrangement. Refer to Hoval Technical.
- A water filter must be installed directly at the water inlet of the machine, the filter must have adequate mesh to prevent the entry of particles greater than 0.5mm. A simple Y strainer filter is included in the scope of the supply for the installer to fit in the return pipework to the heat pump.
- The unit must accommodate frost protection and be protected from freezing. This may require system separation and use of an anti-freeze solution.
- Installation to comply with all current regulations.

Electrical Connections

Electrical box: Connection terminals main supply, AC filter, phase sequence protection, surge voltage protection of the compressors, voltage-free contact for ON/OFF, voltage-free contact for summer/winter changeover, volt free fault signal.wired up ready to connect.

External operator terminal with graphical display and function keys. Control and monitiring of the modulating heat pumps, setting the heating and cooling curves, selection of opearting mode, standard, silent and super silient and display of the current operating parameters. The control terminal can be installed in any room.