

VALUEBOX



PLUG
&
PLAY

RELIABLE IN
OPERATION

CLIMATE &
ENVIRONMENTALLY
FRIENDLY

HEATING
AND
COOLING
AT THE SAME
TIME

ENERGY
EFFICIENT

AIR-WATER HEAT PUMP WITH OR WITHOUT CHILLER FUNCTION

- Heat pumps with or without chiller function
- Capacities from 200-700 kW per unit
- Possible to run in parallel up to 5 MW
- Reliable operation down to -20°C ambient
- High COP at high supply temperature
- Up to 95°C water supply temperature
- Up to 60°C water return temperature
- Natural refrigerant CO₂
- Fully assembled and factory tested
- Delivered as one unit

ADVANSOR
a DOVER company



- Delivery of cooling *and* heating at the same time*
- User friendly touch screen
- Integrated defrost control
- Precharged with CO₂ and oil
- Enclosure
- Adjustable fans speed for lower noise
- Factory programmed and tested
- Fins protected by mesh - no fence needed
- One frame
- Water pump and control for cooling and heating*
- Multiple evaporators for high heating output
- Fits on a truck

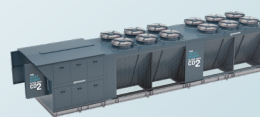
*Only for ValueBox Combi

2 X 4 FANS

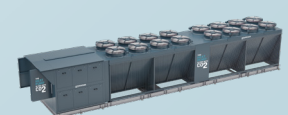
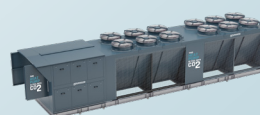
2 X 6 FANS

2 X 8 FANS

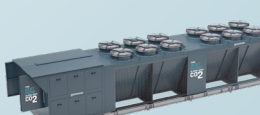
VALUEBOX 250



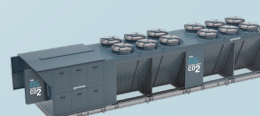
VALUEBOX 400



VALUEBOX 500



VALUEBOX 600



STANDARD EQUIPMENT FOR VALUEBOX HEAT PUMP AND VALUEBOX COMBI

EASY INSTALLATION

- Precharged with max. 12 kg of CO₂ for commissioning
- Precharged with oil for start up
- Water supply pump
- Injection valves, sensors and all necessary equipment for installation
- All necessary safety equipment
- Lockable doors to components
- Evaporator fins protected by mesh (can be placed in public areas without any additional fence)

OUTDOOR INSTALLATION

- Enclosure for outdoor installation
- Galvanized base frame
- Highly efficient evaporators

SUSTAINABILITY

- Natural refrigerant - F-gas compliant

MONITORING

- Advansor control system
- Preprogrammed and integrated controller system
- Touch screen for monitoring and operation
- Remote access incl. alarm handling via web server

ENERGY EFFICIENCY

- Defrost control with hot gas
- Highly efficient heat exchangers
- Insulation on hot side
- Ejector technology
- Variable speed drive on all compressors
- EC fans

STANDARD EQUIPMENT FOR VALUEBOX COMBI ONLY

- Electronic expansion valve
- Flow switch
- Water pump on chiller side
- Flow meter

We recommend using glycol mixture for antifreeze protection.

DIMENSIONS

Length (mm) 8,700 - 13,500

Height (mm) 2,580

Width (mm) 2,350

Dry weight (kg) 9,500 - 13,400

Operational weight (kg) 9,700 - 13,750

ISO 9001:2015 CERTIFIED

Extensive factory tests to ensure fast commission on both pressure and electrical installations. Documentation and manuals that meet EN standard requirements.

ISO 50001:2018 certified

CE marked according to EU regulation PED 2014/68/EU

VALUEBOX HEAT PUMP

	VALUEBOX 250	VALUEBOX 400	VALUEBOX 500	VALUEBOX 600
Maximum heating capacity	306 kW	430kW	523 kW	717 kW
Heating COP*	2.8	2.89	3.0	2.99
Heating SCOP**	3.24	3.3	3.42	3.35
No. of compressors	3	3	3	4
Compressor capacity control	15-100%	15-100%	15-100%	10-100%
Water supply temperature	up to +95°C	up to +95°C	up to +95°C	up to +95°C
Water inlet temperature	25-60°C	25-60°C	25-60°C	25-60°C
Connections water side	DN 65	DN 65	DN 65	DN 65
Available external static pressure from water pump	12 metres	12 metres	12 metres	12 metres
Min/max ambient operating temperature	-20°C / +45°C	-20°C / +45°C	-20°C / +45°C	-20°C / +45°C
Communication protocol	Modbus TCP & RTU	Modbus TCP & RTU	Modbus TCP & RTU	Modbus TCP & RTU
Electrical supply [V/Ph/Hz]	400 / 3+N+PE / 50	400 / 3+N+PE / 50	400 / 3+N+PE / 50	400 / 3+N+PE / 50
Electrical main switch connections	4x2//35-240mm ² Cu/Al	4x2//35-240mm ² Cu/Al	4x2//35-240mm ² Cu/Al	4x2//35-240mm ² Cu/Al
Electrical main switch type	Switch disconnecter 400A	Switch disconnecter 400A	Switch disconnecter 630A	Switch disconnecter 630A
Max current	197 Amp	308 Amp	334 Amp	430 Amp
CosPhi	0.95	0.95	0.95	0.95
CO ₂ refrigerant charge (R744)	200 kg	250 kg	300 kg	350 kg
IP class	IP44	IP44	IP44	IP44
Maximum sound pressure level at 10 meters	56.4 dB(A)	58.4 dB(A)	58.4 dB(A)	58.4 dB(A)

*Conditions: +40°C water inlet temp. / +80°C water outlet temp., 7 °C ambient temp., Δt = 7,5

**Location: Karup, DK

VALUEBOX COMBI

	VALUEBOX 250	VALUEBOX 400	VALUEBOX 500	VALUEBOX 600
Maximum heating capacity	311 kW	311 kW	437 kW	654 kW
Maximum cooling capacity	308 kW	329 kW	401 kW	365 kW
Heating COP*	2.69	2.59	3.69	2.68
Cooling COP**	2.82	2.94	2.60	1.91
No. of compressors	3	3	3	4
Compressor capacity control	15-100%	15-100%	15-100%	10-100%
Hot water supply temperature	up to +95°C	up to +95°C	up to +95°C	up to +95°C
Hot water inlet temperature	25-60°C	25-60°C	25-60°C	25-60°C
Cold water supply temperature	0-20°C	0-20°C	0-20°C	0-20°C
Cold water inlet temperature	5-20°C	5-20°C	5-20°C	5-20°C
Connections water side Hot / cold	DN 65 / DN 80	DN 65 / DN 80	DN 65 / DN 80	DN 65 / DN 80
Available external static pressure from water pump	12 metres	12 metres	12 metres	12 metres
Min/max ambient operating temperature	-20°C / +45°C	-20°C / +45°C	-20°C / +45°C	-20°C / +45°C
Communication protocol	Modbus TCP & RTU	Modbus TCP & RTU	Modbus TCP & RTU	Modbus TCP & RTU
Electrical supply [V/Ph/Hz]	400 / 3+N+PE / 50	400 / 3+N+PE / 50	400 / 3+N+PE / 50	400 / 3+N+PE / 50
Electrical main switch connections	4x2//35-240mm ² Cu/Al	4x2//35-240mm ² Cu/Al	4x2//35-240mm ² Cu/Al	4x2//35-240mm ² Cu/Al
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Maximum sound pressure level at 10 meters	56.4 dB(A)	58.4 dB(A)	58.4 dB(A)	58.4 dB(A)

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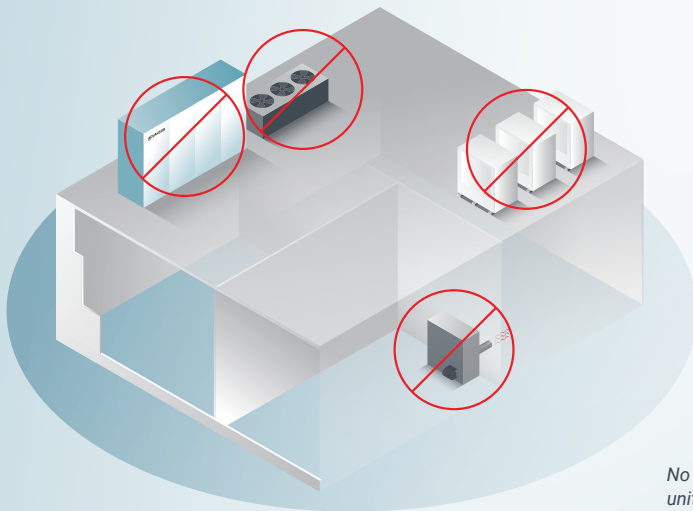
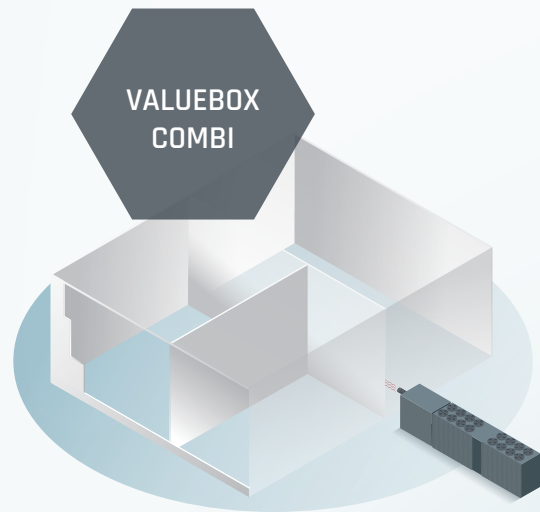
**Location: Karup, DK

PLUG & PLAY FEWER UNITS TO INSTALL

ValueBox is delivered as one single unit on a frame including evaporators, water pump and easy access to components. Connect water, electricity, and charge CO₂, and ValueBox is up and running.

The fins are protected by a mesh, so you do not need a fence around the unit. The product is evacuated and pre-charged with 12 kg CO₂.

Fully assembled and factory tested.

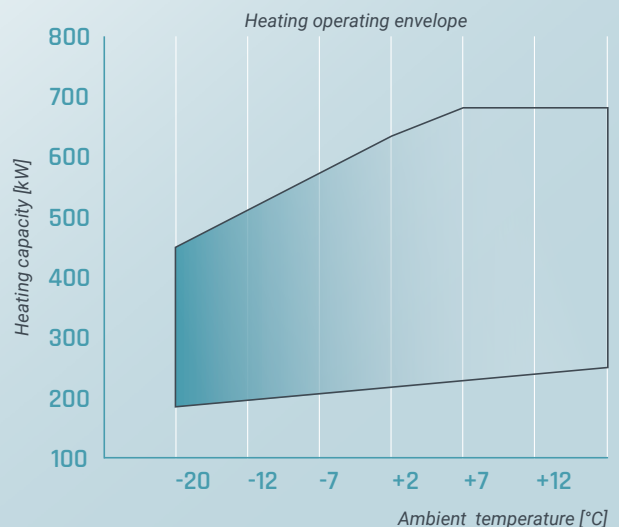


No fossil fuel burner, refrigeration rack, AC units or machine room needed

FOR BUILDINGS & INDUSTRY

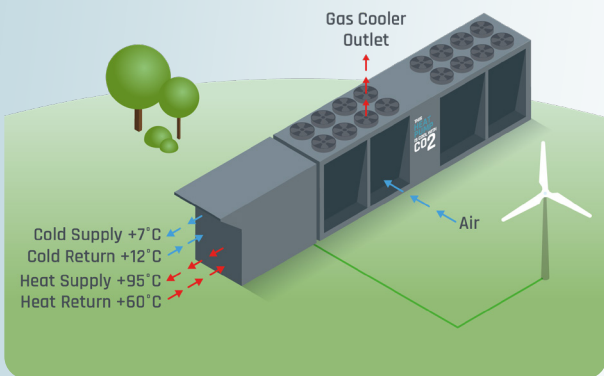
The ValueBox can be used for almost any industrial and commercial application such as food & beverage processing, commercial buildings, and district heating.

The ValueBox can also operate in parallel, thereby multiplying capacity.



SPRING

30% Heating - 70% Cooling



HEATING AND COOLING AT THE SAME TIME

ValueBox Combi delivers both heating and cooling at the same time. Thereby you will need less units to install and maintain:

- No fossil fuel boiler
- No refrigeration rack
- No AC units

The unit is installed outside saving space inside, and it can be used for both new build and retro fit as it can easily be connected to the existing pipe system.

A temperature profile up to 95°C water supply temperature and up to 60°C water return temperature makes it ideal for old build mass.

ENERGY EFFICIENT

The ValueBox is designed for optimal energy efficiency with the advanced control, highly efficient heat exchangers, and adaptive water pump.

With permanent magnet motors in both compressors and pump and the adaptive capacity control, it minimises energy consumption and respond effectively to energy changes.

The ValueBox ensures a fast and efficient defrosting with hot gas and supply heating while defrosting.

The advanced evaporator design ensures better superheat control and thereby less need for defrost.

The ValueBox Combi will provide an even higher COP when recovering cooling. The integrated AC in the ValueBox Combi increases the COP on the chiller by utilising the excess heat making the system far more efficient than a standalone system.

EXAMPLE COMBINED COP

HEATING NEEDED: 500 KW
ELECTRICITY NEEDED: 170 KW
COP: 2,9

When recovering the excess cooling you will get:

COOLING FOR FREE: 400 KW
COP COMBINED: 5,9

Contact Advansor for a calculation for your specific project.

HEATING COP

COP @ -2°C ambient temperature (ValueBox 600 with 6/8 fans)

Water inlet temperature (°C)	45	2.34	2.34	2.34	2.34	2.34	2.34	2.34	2.30	2.30
	42.5	2.44	2.48	2.48	2.48	2.48	2.48	2.48	2.45	2.45
	40	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.58	2.58
	37.5	2.65	2.63	2.63	2.63	2.63	2.63	2.63	2.70	2.70
	35	2.80	2.76	2.74	2.74	2.74	2.74	2.74	2.80	2.80
		55	60	65	70	75	80	85	90	95

Water outlet temperature (°C)

HIGH CAPACITY EVEN IN LOW AMBIENT

The ValueBox is designed for capacities from 250-700 kW and to operate efficiently also in low ambient temperatures.

The ValueBox can operate in parallel thereby multiplying capacity.

	VB COMBI 250	VB COMBI 400	VB COMBI 500	VB COMBI 600
MAX. HEATING CAPACITY	311 kW	311 kW	437 kW	654 kW
MAX. COOLING CAPACITY	308 kW	329 kW	401 kW	365 kW
HEATING COP*	2,69	2,59	2,69	2,68
COOLING COP*	2,82	2,94	2,60	1,91
COMBINED COP*	5,56	5,56	5,43	4,71

*Conditions: +40°C water inlet temp.,
+80°C water outlet temp.,
7 °C ambient temp., $\Delta t = 7,5$

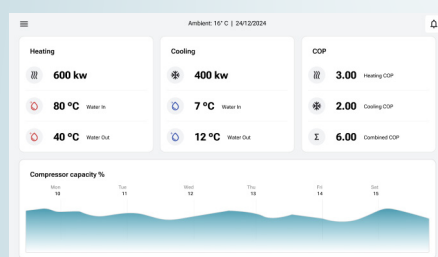
Location: Karup, DK

RELIABLE IN OPERATION

The ValueBox is fully factory built, and pressure tested. It is designed with high quality components providing a long lifetime.

The fast power-up ensures delivery of heating when needed, and the water pump ensures stable water outlet temperature, and the redundant components in parallel ensures a continued operation.

USER FRIENDLY INTERFACE



The user interface of the HMI provides a great overview of the running condition and an easy-to-use menu.

From the menu on the left side, there is easy access to settings, running parameters, and history trend.

WE'RE COOL WITH CO₂

CLIMATE AND ENVIRONMENTALLY FRIENDLY

The product is based only on the refrigerant CO₂ as it does not affect the ozone layer, does not contribute to global warming, it does not contain PFAS, it is non-toxic and non-flammable.

CO₂ is a natural refrigerant and F-gas compliant, so you will get a future-proof solution.