

Efficiency at its most beautiful

High-end heat pump | **Basic Line Air**



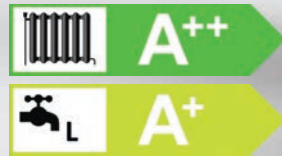
* Models 5011.5, 5015.5 at A7/W35, COP 4.5 at (A2/W35)



Basic Line Ai1 Air | Power range from 3 – 19 kW



INVERTER
TECHNOLOGIE by WATERKOTTE



A++ and A+: Energy-efficient combined system (incl. WWPRs II controller) heating W55 and DHW preparation. Variations within the series possible.

Perfectly matched modules

The air/water source heat pump has a split design with indoor and outdoor unit. Both modules are exactly matched to each other. As a result excellent performance figures are achieved.

Air-conditioner function included

The Basic Line Ai1 Air has high-quality features. Along with the heating function and supply of hot water, it also has a cooling module integrated. With the cooling function, the rooms in the building remain pleasantly cool.

Even quieter in the new version

The outdoor unit comprises a weather-resistant housing with special insulation. In the new device version, it was possible to significantly reduce the noise emission by a remarkable 11 dB (A)!

Robust and durable

The new outdoor unit achieves the highest efficiency figures: Even at outdoor temperatures of - 20 °C, flow temperatures of 58 °C are possible. High-quality components ensure reliable operation for decades.

Features, indoor unit

- Compact air source heat pump Basic
- Monochrome, semi-graphic, 8-line display
- 6 buttons and 3 indicator LEDs
- Intuitive BasicPro control software
- Hot water tank with 170-litre capacity
- Automatic Legionella protection circuit
- Integrated electrical heating element 6 kW
- Speed-controlled circulation pumps of efficiency class A
- Connections installed on rear
- Unit dimensions (H x W x D): 1743 x 600 x 650 mm

Features outdoor unit

- Special insulation for noise reduction
- Easy to service unit design
- Weather-resistant housing
- Speed-controlled fans
- Speed-controlled scroll / double rotary piston compressor
- Electronic expansion valve
- Defrosting process: Circulation reversal using 4-way valve
- Special pipe routing in the evaporator to avoid icing
- Active cooling due to reversible refrigerant circulation
- Liquid separator in the refrigerant circulation for maximum reliability
- Integrated vortex sensor to ensure the optimal water volume flow
- Unit dimensions (W x H x D): 900 x 580 x 340 mm / 900 x 860 x 340 mm / 900 x 1250 x 340 mm

Optional features

- Connection set
- Controller expansion for a mixer circuit
- WebInterface NetBase BN Web

Highlights

- High quality control unit
- Low operating costs due to COP values up to 5.1
- Low noise emission
- Graphic display of all operating situations including outdoor unit

Basic Line Split | Hydraulic station



A++ : Energy-efficient combined system (incl. WWPR II controller) heating W55. Variations within the series possible.

Diverse possibilities

The new outdoor unit is also available in combination with a flexible hydraulic station. As the control centre for your heating system, it permits the integration of other units, e.g., domestic hot water tank or PV module.

Ensuring supply of hot water

The features include a high-quality circulation pump and an electrical heating element. With an additional water tank the hydraulic station can safeguard the supply of hot water for your home.

Well equipped with software

You can connect one additional control loop. The necessary functions are already included in the software. Control is then via the high-quality LCD control panel.

Space-saving and efficient

With the hydraulic station you have maximum flexibility due to the small dimensions. In conjunction with the Basic Line Air outdoor unit and a hot water tank from the EcoStock series, your system is complete.

Features hydraulic station

- Basic Line Split control unit for indoor installation
- Max. mounting distance from the outdoor unit 30 m (20 m for model 7004.5)
- Max. height difference in relation to the outdoor unit 15 m (10 m for model 7004.5)
- Monochrome, semi-graphic, 8-line display
- Central power switch
- 6 convenient buttons
- 3 indicator LEDs for the display of the operating state
- Can be switched from heating to cooling
- Intuitive BasicPro control software
- Pre-programmed functions for additional units
- Speed-controlled circulation pump, efficiency class A
- Integrated electrical heating element 6 kW
- Combination fitting with safety valve
- Integrated filling pressure gauge
- Automatic air separator
- Docking features for up to 4 additional units:
 - PV module
 - Living area ventilation
 - Domestic hot water tank
 - Mixer circuit
- Compact, space-saving design
- Unit dimensions (W x H x D): 743 x 750 x 303 mm
- Housing trim with clips
- Wall mounting

Optional features

- WebInterface NetBase BN Web
- Three-way motor ball valve for hot water mode

Highlights

- High quality control technology
- Variable features
- Intuitive software
- Can be upgraded with Internet control

BasicPro software | Intuitive and logical



Mature, proven software

The user-friendly control software BasicPro was specially developed for ground and air/water source heat pumps in the Basic Line series. It is based on the standard software that has been in use and proven at WATERKOTTE for years.

Intuitive and user-friendly operation

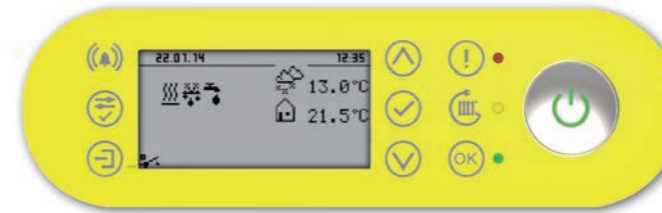
The individual menu steps are logically structured and make operation straightforward. You can access the individual main functions quickly and intuitively such that all settings are always visible at a glance.

Mobile control via Internet possible

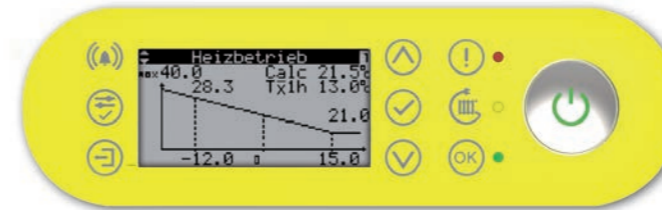
The heat pump can be configured using the modern display and weather-based control ensured for efficient heating and cooling. A web interface can be installed as an option. In this way you can also control your heat pump on the move.

Comprehensive measured data available

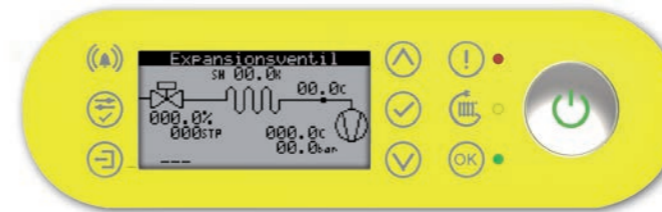
The units in the Basic Line series are equipped with extensive sensors. Measured data are acquired at the important stages in the refrigerant circulation and indicated on the display. Problems in the system are displayed in the alarm and information manager.



Main view with current operating state



Display of the heating characteristic



Indication of the parameters for the expansion valve

Features of the control unit

- Semi-graphic display
- White background lighting
- Central power switch
- Operation via 6 buttons
- 3 indicator LEDs
- Monochrome display of symbols
- WebInterface NetBase can be installed as an option

Software

- Established WATERKOTTE control logic
- Quick access to the main functions
- Intuitive user prompts
- Efficient, weather-based heating and cooling operation
- Buffer memory for saving configuration data

Ease of use

- Graphic display of the refrigerant circuit
- Continuous display of important measured values
- Hot water setting for the related system
- Individual timer programs
- Detailed display of information and alarms

Technical data | Basic Line Air

Basic Line Air with R410A		5004.5
Max. heat output (A7/W35)	kW	5.9
Power consumption	kW	1.5
Max. coefficient of performance (COP) at A7/W35, controlled (for heat output in kW)		4.7 (4.0)
Max. heat output (A2/W35)	kW	4.7
Power consumption	kW	1.4
Max. coefficient of performance (COP) at A2/W35, controlled (for heat output in kW)		3.6 (3.5)
Max. heat output (A-7/W35)	kW	3.7
Power consumption	kW	1.3
Max. coefficient of performance (COP) at A-7/W35, controlled (at heat output in kW)		2.8 (3.4)
Cooling capacity (A35/W7)	kW	3.8
Power consumption	kW	1.4
Coefficient of performance (COP) at A35/W7		2.8
Cooling capacity (A35/W18)	kW	5.0
Power consumption	kW	1.7
Coefficient of performance (COP) at A35/W18		3.0
Room heating energy efficiency ¹⁾ / domestic hot water production - energy efficiency load profile L		A+ / A
Energy efficiency class of the combined system ²⁾ room heating / DHW production load profile L		A++ / A
Heating water flow rate ($\Delta t=5K$)	m ³ /h	0.8
Air volume flow (maximum)	m ³ /h	2000
Operating limit, heating		A-20/W58; A45/W58
Operating limit, cooling		A45/W10; A10/W10
Refrigerant		R410A
Sound power level at A7/W35 (outdoor module) night mode	dB(A)	58
Sound power level at A7/W35 (outdoor module) day mode	dB(A)	60

Electrical data		
Electrical power supply	V, AC, Hz	220-240, 1, 50
Electric power supply electrical resistance heating, Power supply can be selected	V, AC, Hz	220-240, 1, 50 / 380-415, 3, 50
Max. operating current	A	13.5
Main fuse (provided by customer)		1polB16A
Control fuse (provided by customer)	A	1polB10A
Max. current consumption electrical resistance heating (230 V)	A	26.1
Max. current consumption electrical resistance heating (400 V)	A	8.7
Electrical resistance heating	kW	6
On site fuse protection electrical resistance heating (220 – 240 V)	A	B32A
On site fuse protection electrical resistance heating (380 – 415 V)	A	B16A

Dimensions, weights, connections		
Refrigerant filling	kg	1.40
Weight outdoor unit	kg	50
Weight indoor unit	kg	145
Storage tank capacity	l	170
Weight indoor unit hydraulic station	kg	39-40
Connection heating hydraulic station		1¼" a
Connections refrigerant lines (liquid side)		1/4" (6 mm)
Connections refrigerant lines (gas side)		1/2" (12 mm)
Dimensions outdoor unit W x H x D	mm	900 x 580 x 340
Dimensions indoor unit W x H x D	mm	600 x 1743 x 650
Dimensions hydraulic module W x H x D	mm	743 x 750 x 303

Subject to technical changes. Tolerances as per EN 12900, EN 14511 and EN 12102 apply.

¹⁾ Mean temperature application, average climatic conditions. ²⁾ On the combined system the WATERKOTTE WPRs controller class II was taken into account (without room temperature sensor).

	5008.5	5011.5	5011.5	5015.5
Max. heat output (A7/W35)	10.8	16.1	16.5	19.5
Power consumption	2.6	4.1	4.2	5.3
Max. coefficient of performance (COP) at A7/W35, controlled (for heat output in kW)	4.8 (7.3)	4.7 (9.3)	5.1 (4.7)	5.1 (4.7)
Max. heat output (A2/W35)	9.4	11.9	12.3	13.4
Power consumption	2.8	3.4	4.2	4.5
Max. coefficient of performance (COP) at A2/W35, controlled (for heat output in kW)	4.2 (3.6)	4.3 (7.8)	4.5 (7.1)	4.5 (7.1)
Max. heat output (A-7/W35)	7.2	9.5	8.9	13.3
Power consumption	2.6	3.5	4.0	5.1
Max. coefficient of performance (COP) at A-7/W35, controlled (at heat output in kW)	3.3 (5.3)	3.1 (6.3)	3.5 (6.3)	3.5 (6.3)
Cooling capacity (A35/W7)	6.6	9.1	10.8	11.8
Power consumption	2.4	3.7	4.2	5.5
Coefficient of performance (COP) at A35/W7	2.8	2.5	2.6	2.2
Cooling capacity (A35/W18)	8.0	12.6	12.8	14.2
Power consumption	2.3	4.2	3.5	4.2
Coefficient of performance (COP) at A35/W18	3.5	3.0	3.7	3.4
Room heating energy efficiency ¹⁾ / domestic hot water production - energy efficiency load profile L	A++ / A	A+ / A	A++ / A+	A+ / A
Energy efficiency class of the combined system ²⁾ room heating / DHW production load profile L	A++ / A	A+ / A	A++ / A	A+ / A
Heating water flow rate ($\Delta t=5K$)	1.6	2.1	2.1	2.3
Air volume flow (maximum)	2700	4210	4210	4500
Operating limit, heating	A-20/W58; A45/W58	A-15/W58; A45/W58	A-20/W58; A45/W58	A-20/W58; A45/W58
Operating limit, cooling			A45/W10; A10/W10	
Refrigerant			R410A	
Sound power level at A7/W35 (outdoor module) night mode	58	60	60	61
Sound power level at A7/W35 (outdoor module) day mode	62	62	61	65

Electrical data				
Electrical power supply	220-240, 1, 50	220-240, 1, 50	380-415, 3, 50	380-415, 3, 50
Electric power supply electrical resistance heating, Power supply can be selected		220-240, 1, 50 / 380-415, 3, 50		
Max. operating current	15.7	26.5	9.9	13.9
Main fuse (provided by customer)	1polB16A	1polB32A	3polB16A	3polB16A
Control fuse (provided by customer)			1polB10A	
Max. current consumption electrical resistance heating (230 V)			26.1	
Max. current consumption electrical resistance heating (400 V)			8.7	
Electrical resistance heating			6	
On site fuse protection electrical resistance heating (220 – 240 V)			B32A	
On site fuse protection electrical resistance heating (380 – 415 V)			B16A	

Dimensions, weights, connections				
Refrigerant filling	2.15	2.95	2.95	3.50
Weight outdoor unit	67	110	110	120
Weight indoor unit			145	
Storage tank capacity			170	
Weight indoor unit hydraulic station			39-40	
Connection heating hydraulic station			1¼" a	
Connections refrigerant lines (liquid side)			3/8" (10 mm)	
Connections refrigerant lines (gas side)			5/8" (16 mm)	
Dimensions outdoor unit W x H x D	900 x 860 x 340	900 x 1250 x 340	900 x 1250 x 340	900 x 1250 x 340
Dimensions indoor unit W x H x D			600 x 1743 x 650	
Dimensions hydraulic module W x H x D			743 x 750 x 303	

Subject to technical changes. Tolerances as per EN 12900 and EN 14511 apply.

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**WATERKOTTE GmbH**

Gewerkenstrasse 15
D-44628 Herne
Phone: +49 (0) 23 23 | 93 76 - 0
Fax: +49 (0) 23 23 | 93 76 - 99
Service Tel.: +49 23 23 | 93 76 - 350
info@waterkotte.de
www.waterkotte.de

WATERKOTTE Schweiz AG

Oberdorfstr. 37
CH-1735 Giffers
Phone: +41 (0) 26 684 82 40
Fax: +41 (0) 26 684 82 41
info@waterkotte.ch
www.waterkotte.ch

WATERKOTTE Austria GmbH

Carolinenstrasse 10
A-9073 Klagenfurt-Viktring
Phone: +43 (0) 463 29403-0
Fax: +43 (0) 463 29403-018
info@waterkotte.at
www.waterkotte.at