Efficiency at its best

High-end heat pumps | EcoTouch



product
design award

2013

up to
COP 5,1

WATERKOTTE

EcoTouch is setting new benchmarks
Performance and design

The cleanest and most economic source of energy is heat which is stored underground, in the air and in the ground water. With the high-end heat pumps of WATERKOTTE you are able to utilise these renewable energy sources particularly cost-efficient and environmentally friendly. Create a comfortable home for you and your family with clean and natural heat.

WATERKOTTE is considered a pioneer in the industry and a particularly innovative manufacturer of heat pumps. Already in the early 70‘s WATERKOTTE put the first heat pump into operation. The regularly best performance values and decade-long running times prove our excellent development and product competence. WATERKOTTE manufactures heat pumps in reference class. Now we are setting new benchmarks with the EcoTouch series. Regardless whether you decide on heat from the underground, the air or the ground water, EcoTouch provides a highly efficient solution for any application. An award winning design, state of the art control technology via touch display and best COP values are the outstanding features of the new EcoTouch series.

The following pages introduce you to models of various performance classes and designs in a short portrait. Please contact our distribution partners or call us direct for more information. We appreciate your interest.





EcoTouch Ai1 Geo | Performance scope of 6 – 18 kW



product design award 2013

Ai1 stands for „All in one“. This heat pump system provides the perfect complete solution for single family dwellings. In winter the EcoTouch Ai1 Geo ensures warmth, in summer cooling and warm water all year round. It procures its heating energy from the ground. The touch display with the intuitive software Easy-Con allows easy control. The innovative vibration damper Silenter reduces the running noise to a minimum. With COP values of up to 5.1, the Ai1 is one of the most economic heat pumps worldwide. The Ai1 can be perfectly integrated into your living concept with its award winning design and minimal casing dimensions.



Features

- Coloured 4.3 inch touch display
- Integrated web interface for remote monitoring
- Intuitively operable control software Easy-Con
- Integrated hot water storage made from stainless steel with more than 200 l capacity
- Legionella control program
- Chlorine-free coolant R410A harmless to the ozone layer
- Torque regulated circulation pump of energy efficiency class A
- Integrated electrical heating unit 6 kW
- Capsulated thermo box with vibration damper Silenter
- Modular design for optimal transport and installation
- Easily serviceable arrangement of all technical components
- Rear installation of connections
- Equipment dimensions: (W/H/D) 600 x 1993 x 633 mm
- Reduced floor space of 0.38 m²

Optional accessories

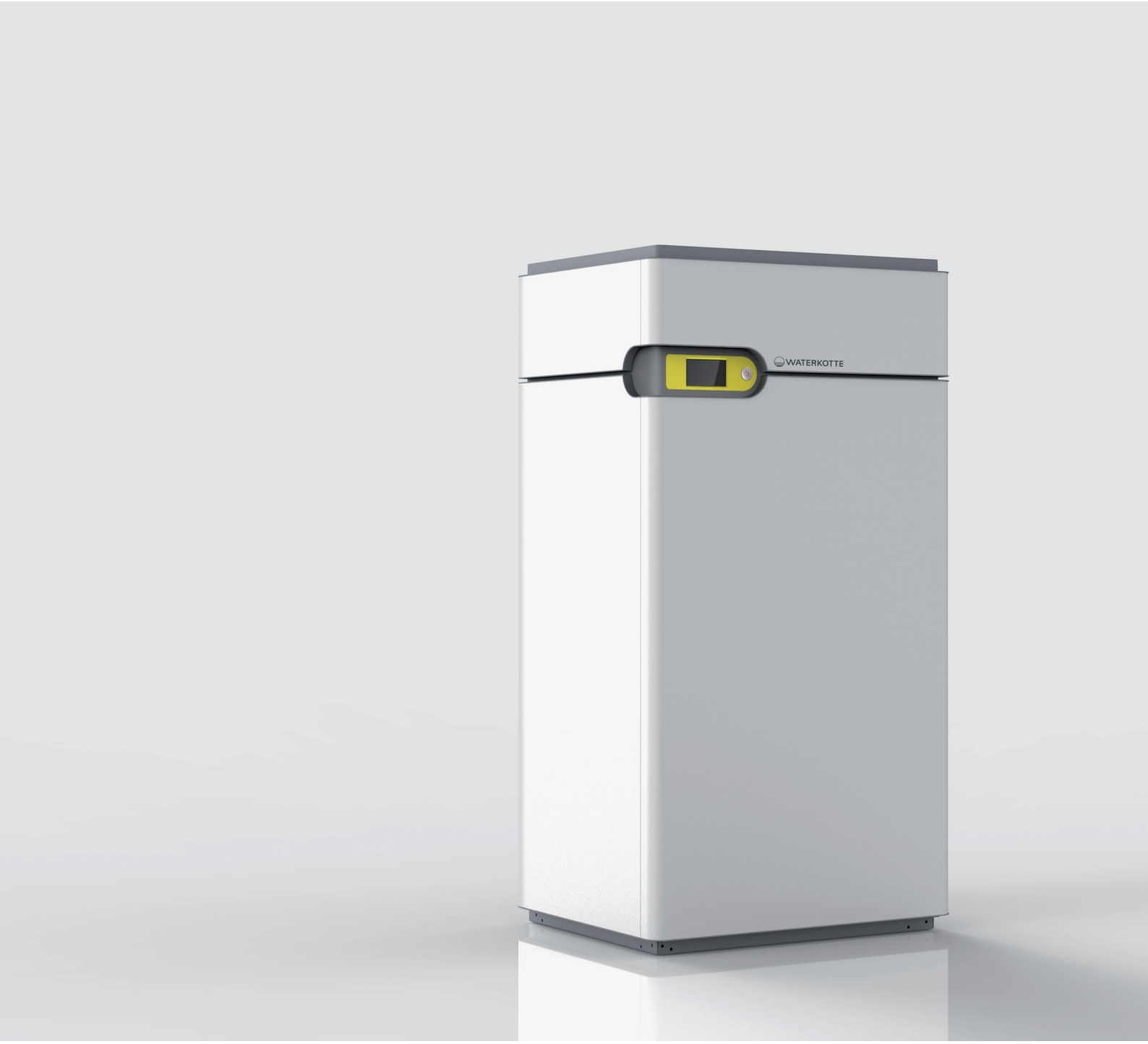
- Connection set
- Locked rotor current damping (400 V)
- Controller extension for:
    - Swimming pool heater
    - Thermal solar energy usage
    - Mixing valve circuits

Highlights

- Low operating costs due to COP values up to 5.1
- Touch display with Easy-Con software
- Smartphone control via Easy-Con Mobile
- Silenter vibration damper
- Award winning design
- Housing designs optional in high-gloss white or stainless steel optic

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EcoTouch DS 5027 Ai | Performance area of 6 – 26 kW



The series EcoTouch DS 5027 Ai was designed for buildings with a greater heating requirement. The energy necessary for the operation is efficiently obtained via ground probes or ground collectors. The new EcoTouch DS 5027 Ai is convincing with excellent COP values of over 5.0, an intelligent control system and a once again reduced noise emission. The touch display of the EcoTouch design series provides a striking highlight. In connection with the Easy-Con control software the operating comfort is lifted to a high standard. Mobile control is possible via the smartphone App Easy-Con Mobile. The compact construction and the attractive design allow an ideal integration of the heat pump in the structural environment.



Features

- Coloured 4.3 inch touch display
- Integrated web interface for remote monitoring
- Intuitively operable control software Easy-Con
- Drinking water heater, external storage provided on site
- Chlorine-free coolant R410A harmless to the ozone layer
- Torque regulated circulation pump of energy efficiency class A
- Integrated electrical heating unit 6 kW
- Easily serviceable arrangement of all technical components
- Rear installation of connections
- Equipment dimensions: (W/H/D) 750 x 1470 x 611 mm

Optional accessories

- Connection set
- Locked rotor current damping (400 V)
- Controller extension for:
    - Swimming pool heater
    - Thermal solar energy usage
    - Mixing valve circuits

Highlights

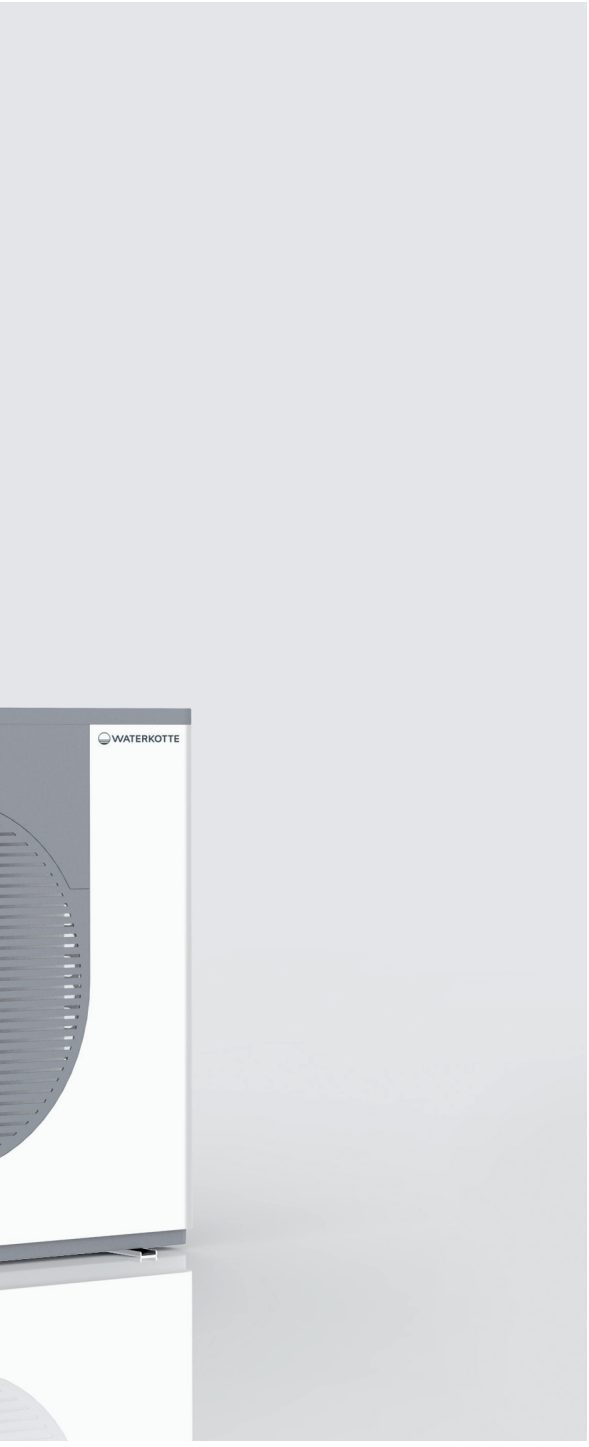
- Low operating costs due to COP values up to 5.03
- Touch display with Easy-Con software
- Smartphone control via Easy-Con Mobile
- Silenter vibration damper
- Trend-setting design

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EcoTouch Ai1 Air | Performance scope of 6 – 18 kW



The new EcoTouch Ai1 Air uses the air as heat source. The system offers a complete solution in split design for low power requirements. The indoor unit is equal to the Ai1 Geo (see page 4|5). The newly developed outdoor unit is extremely economical. The compression performance adapts perfectly to the heat requirement by way of inverter technology. Thus, optimal efficiency factors and low operating costs are achieved at any time. The outdoor unit displays an innovative design which complies with aesthetic demands as well as those for accident prevention and child safety. The extremely low noise emission is outstanding. The casing is particularly robust and designed to withstand adverse weather conditions.



Features interior unit

- Torque-regulated scroll compressor with inverter controller
- Otherwise analogue to EcoTouch Ai1 Geo

Features outdoor unit

- WATERKOTTE regulation for utmost efficiency
- Optimal defrosting
- Minimal noise emission due to torque regulation of ventilator
- Trend-setting housing design
- Reduced housing volume
- Equipment dimensions:
  (W/H/D) 1200 x 1044 x 500 mm
- Matt, white-grey finish

Optional accessories

- Connection set
- Locked rotor current damping (400 V)
- Controller extension for:
  - Swimming pool heater
  - Thermal solar energy usage
  - Mixing valve circuit

Highlights

- Optimal defrosting
- Minimal noise emission due to torque regulation of ventilator
- Trend-setting housing design
- Reduced housing volume
- Matt, white-grey finish

EcoTouch MB 7010 | Performance scope of 6 – 10 kW



The newly developed EcoTouch MB 7010 is designed for outdoor operation as a compact air heating pump. The mono-block design of the device is suitable for single family houses and buildings with a low energy requirement. The MB 7010 is extremely energy efficient due to infinitely adjustable performance adaptation, meaning inverter-regulated compressor technology. The double ventilators are furthermore optimised via the ESC Module (equaliser system controller). The housing in the elegant EcoTouch design is equipped with a special acoustic insulation. The noise emission was thus reduced to a minimum.



Features

- Monochrome semi-graphic display
- Intuitively operable control software
- Double vent with ESC-Module
- Chlorine-free coolant R410A harmless to the ozone layer
- Integrated electrical heating unit 6 kW
- Equipment dimensions:
  (W/H/D) 1211 x 1160 x 611 mm
- Reduced floor space of approx. 0.74 m²
- Matt, white-grey finish
- Weather resistant powder coating

Optional accessories

- Connection set
- WEB-interface for control and remote control
- Controller extension for:
  - Swimming pool heater
  - Thermal solar energy usage
  - Mixing valve circuits

Highlights

- Low operating costs due to COP values of at least 4.7 (A10/W35)
- Active cooling through reverse cycle
- Noise-reduced double vent

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Technical data

EcoTouch Ai1 Geo | Performance scope of 6 – 18 kW

Technical data Ai1 EcoTouch Geo		5006.5	5008.5	5010.5	5013.5
Heat source ground water					
Power consumption/output W10/W35	kW[1)]	1,3/8,1	1,6/10,5	2,1/14,1	2,8/18
Coefficient of performance (COP) at W10/W35 according to EN 14511		6,4	6,5	6,5	6,3
Ground water throughput	m³/h (Δt=3K)	2,0	2,6	3,4	4,4
Ground water throughput, minimum	m³/h (Δt=6K)	1,0	1,3	1,7	2,2
Heating water throughput	m³/h (Δt=5K)	1,4	1,8	2,4	3,1
Heat source ground (ground probes or ground absorbers)					
Power consumption/output B0/W35	kW[1)]	1,3/6,0	1,6/7,9	2,1/10,7	2,7/13,8
Coefficient of performance (COP) at B0/W35 according to EN 14511		4,7	4,9	5,1	5,0
Heat source throughput[2)]	m³/h (Δt=3K)	1,5	2,0	2,7	3,5
Heating water throughput	m³/h (Δt=5K)	1,0	1,4	1,8	2,4
Max. power consumption WQ pump	W		70		
Max. power consumption heating pump	W		70		
Operating limit			B-5/W60, B0/W65		
Compressor			Fully hermetic scroll		
Sound power	dB(A)	43	44	45	45

Electrical data for motor design 400 V / 3 AC / 50 Hz (design 230 V / 1AC /50 Hz)					
Starting current (non-reduced)	A	28 (60)	43 (83)	51,5 (108)	62 (130)
Starting current soft-start (option)[4)]	A	14 (45)	22 (45)	26 (45)	31 (45)
Max. operating current	A	4,8 (12,8)	6,2 (17,1)	7,4 (22,8)	9,7 (27,9)
On site main fuse, compressor (minimum requirement)		C16A (C20A)	C16A (C20A)	C16A (C25A)	C16A (C32A)
Max. operating current (electrical heating application)	A		8,7 (26,1)		
On site main fuse (electrical heating application)			B16A (B32A)		
On site control fuse			B10A		
Power electric immersion	kW		6		

Fill quantities, dimensions, weights, connections					
Total weight of equipment without storage fill	kg	240	246	263	265
Weight of dismounted storage module	kg	63	63	63	63
Connections: heat source and usage			G1¼“ M flat sealing		
Dimensions: W x H x D	mm		600 x 1993 x 633 (+35 connection)		
Hot water storage net content	l		204		
Connection hot water storage			G3/4“ F		

Subject to technical alterations.

[1)] The tolerances according to EN 12900 and EN 14511 apply for the above mentioned performance data. [2)] Fluid (70 % water + 30 % WATERKOTTE-anti-freeze concentrate).
[4)] Standard in the 1 x 230 V design.

EcoTouch DS 5027 Ai | Performance scope of 6 – 26 kW

DS 5027 Ai with R410A (NC and RC)		DS 5008.5Ai	DS 5010.5Ai	DS 5012.5Ai	DS 5014.5Ai	DS 5017.5Ai	DS 5020.5Ai	DS 5023.5Ai	DS 5027.5Ai
Heat source ground water									
Power consumption/ output W10/W35	kW[1]	1,2/8,0	1,5/9,8	1,9/12,3	2,1/13,9	2,6/18,0	3,1/19,9	3,7/23,1	4,2/26,3
Coefficient of performance[3]		6,50	6,80	6,68	6,89	6,96	6,38	6,14	6,00
Heating water throughput	m³/h (Δt=5K)	1,4	1,7	2,1	2,4	3,1	3,4	4,0	4,5
Ground water throughput	m³/h (Δt=3K)	1,9	2,4	3,0	3,4	4,3	4,8	5,6	6,3
Ground water throughput, minimum	m³/h	1,0	1,2	1,5	1,7	2,1	2,4	2,8	3,2
Operating limit					W10/W63				
Heat source ground (ground probes or ground absorbers)									
Power consumption output B0/W35	kW[1]	1,2/5,9	1,5/7,3	1,9/9,2	2,1/10,3	2,6/13,3	3,2/15,0	3,6/17,4	4,1/19,7
Coefficient of performance[3]		4,7	4,9	5,0	4,9	5,0	4,7	4,8	4,8
Heating water throughput	m³/h (Δt=5K)	1,0	1,2	1,6	1,8	2,3	2,6	3,0	3,4
Heat source throughput[2]	m³/h (Δt=3K)	1,5	1,8	2,3	2,6	3,4	3,7	4,4	4,9
Operating limit				B-5/W50	B0/W55	B5/W63	B10/W63		
Compressor					Fully hermetic scroll				
Electrical data 3 x 400 V, 50 Hz (design 1 x 230 V, 50 Hz)									
Starting current (non-reduced)	A	26 (58)	38 (67)	46 (98)	43 (128)	51,5 (115,5)	64	75	101
Starting current soft-start (option)[4]	A	13 (45)	19 (45)	23 (45)	22 (45)	26 (45)	32	38	51
Max. operating current	A	5,5 (16,0)	6,0 (16,0)	7,0 (22,0)	8,0 (26,0)	10,3 (31,0)	11,8	15,0	15,0
On site main fuse (compressor)	A	C 16 A (C 20 A)	C 16 A (C 20 A)	C 16 A (C 25 A)	C 16 A (C 32 A)	C 16 A (C 32 A)	C 16 A	C 20 A	C 20 A
On site control fuse	A	B 10 A	B 10 A	B 10 A	B 10 A	B 10 A	B 10 A	B 10 A	B 10 A
Electrical heating unit	kW				6				
Fill quantities, dimensions, weights, connections									
Weight of equipment	kg	163	155	161	163	172	178	178	183
Connections: heat source / usage					flat sealing R 1¼ “a / R 1¼ “a				
Dimensions W x H x D	mm				750 x 1470 x 611				

Subject to technical alterations.

[1] The tolerances according to EN 12900 and EN 14511 apply for the above mentioned performance data. [2] Fluid (70 % water + 30 % WATERKOTTE-anti-freeze concentrate).
[3] According to DIN EN 14511. [4] Standard in 1 x 230 V design.

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Effizienz made in Germany

Technical data

EcoTouch Ai1 Air | Performance scope of 6 – 18 kW

Technical data Ai1 EcoTouch Air Split		5016.5	5008.5
Heating capacity, controlled to (A-7/W35/A2/W35)	kW[1)]	15,1/19,1	in planning
Heating capacity at mono-energetic operation (A-7/W35)	kW	21,1	
Coefficient of performance (A2/W35) according to EN 14511 (regulated operation)			3,9
Cooling performance (A35/W7)		n.c.	
Heating water throughput (ΔT=5K) at 15,1 kW	m³/h	2,6	
Pressure drop condenser	mWS	n.c.	
Air volume flow	m³/h	4500	
Operating limit		A-20/W55; A-4/W65	
Compressor		Scroll-Inverter	Scroll-Inverter

Electrical data			
Electrical power supply (three-phase)	(V, Phase, Hz)	380-415, 3, 50	---
Electrical power supply (single-phase)	(V, Phase, Hz)	---	220-240, 1, 50
Max. operating current	A	n.c.	n.c.
On site control fuse	A	10	10
Electrical heating element	kW	6	6

Hot water storage			
Net content	l	204	204
Max. operating pressure	bar	10	10
Storage connections		G3/4“F	G3/4“F

Dimensions, weights, connections			
Weight outdoor/interior unit	kg	n.c.	n.c.
Sound level at 5 m distance (external module)*	dB(A)	n.c.	n.c.
Connections heater		G1¼“ M	G1¼“ M
Dimensions interior unit: W x H x D	mm	600 x 1993 x 633 (+35 Anschl.)	
Dimensions outdoor unit: W x H x D	mm	1200 x 1044 x 500	n.c.

Technical specifications tentative and subject to correction. The ultimate technical data shall be announced during the 3rd quarter of 2013.

[1)] The tolerances according to EN 12900 and EN 14511 apply for the above mentioned performance data..

EcoTouch MB 7010 | Performance scope of 6 – 10 kW

Technical data Ai1 EcoTouch Air Mono		5010.5	
Heating capacity, controlled to (A-7/W35; A2/W35)		kW[1)]	8,0/10,0
Heating capacity at mono-energetic operation (A-7/W35)	kW	14	
Coefficient of performance (A2/W35) according to EN 14511 (regulated operation)		3,8	
Cooling performance (A35/W7)		k.A.	
Heating water throughput (dT=5K) at 8,0 kW	m³/h	1,4	
Pressure drop condenser	mWS	k.A.	
Air volume flow	m³/h	3500	
Operating limit		A-15/W50; A-5/W55	
Compressor		Twin-rotary inverter	

Electrical data		
Electrical power supply (three-phase)	(V, Phase, Hz)	---
Electrical power supply (single-phase)	(V, Phase, Hz)	220-240, 1, 50
Max. operating current	A	n.c.
On site control fuse	A	10
Electrical heating element	kW	6

Dimensions, weights, connections		
Weight	kg	n.c.
Sound level at 5 m distance	dB(A)	43
Connections heater		G1¼“ M
Dimensions: W x H x D	mm	1211 x 1160 x 611

Technical specifications tentative and subject to correction. The ultimate technical data shall be announced during the 3rd quarter of 2013.

[1)] The tolerances according to EN 12900 and EN 14511 apply for the above mentioned performance data.

Visit us at the ISH from 12. – 16.03.2013

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