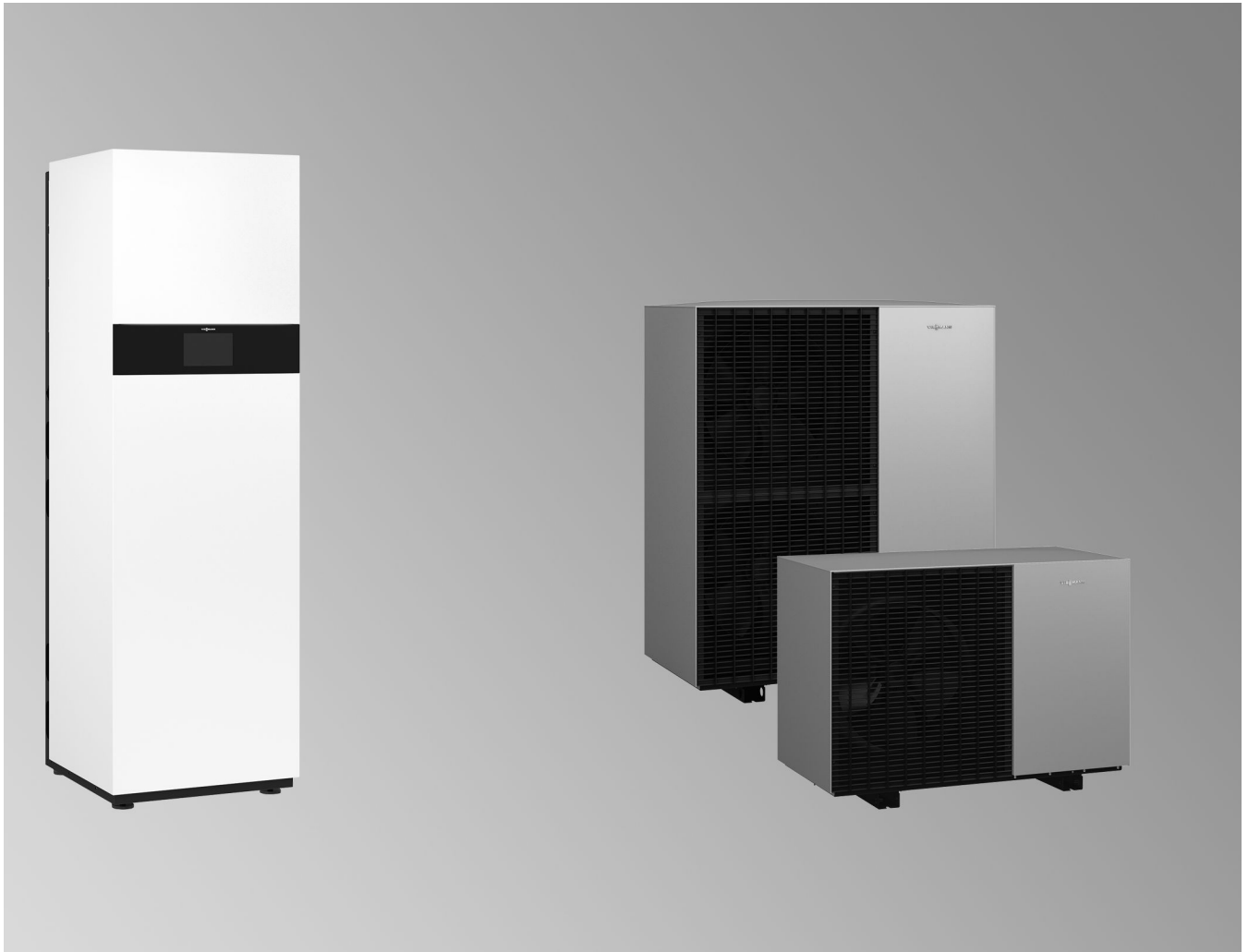


Datasheet

For part no. and prices: see pricelist



VITOCAL 151-A

Type AWOT(-M)-E-AC/AWOT(-M)-E-AC-AF 151.A

Compact air/water heat pump with electric drive in monoblock design with outdoor and indoor unit

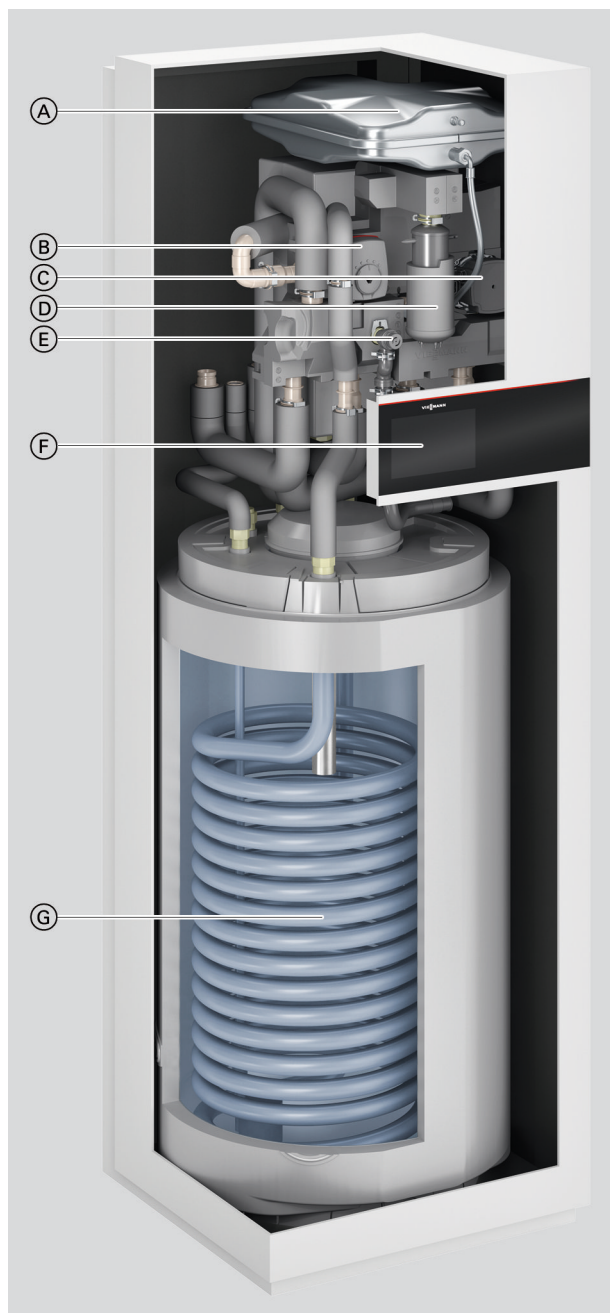
- For room heating, room cooling and DHW heating in heating systems
- Indoor unit with control unit, integral 190 l DHW cylinder, instantaneous heating water heater, integral buffer cylinder, expansion vessel, safety assembly

Type AWOT(-M)-E-AC/AWOT(-M)-E-AC-AF 151.A SP

Equipment level as above, with central 230 V~ power supply on the indoor unit

Benefits

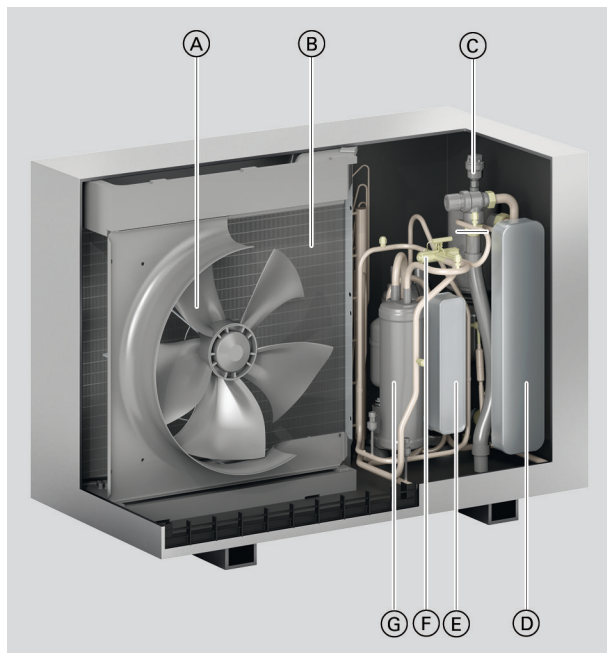
Indoor unit



- Ⓐ Expansion vessel
- Ⓑ 4/3-way valve
- Ⓒ Secondary pump (high efficiency circulation pump)
- Ⓓ Instantaneous heating water heater
- Ⓔ Safety valve
- Ⓕ Heat pump control unit
- Ⓖ 190 l DHW cylinder

Benefits (cont.)

Outdoor unit with 1 fan, 230 V~



- (A) Power saving variable speed EC fan
- (B) Coated evaporator with corrugated fins for higher efficiency
- (C) Safety valve
- (D) Condenser
- (E) Suction gas cooler inverter
- (F) 4-way diverter valve
- (G) Hermetically sealed twin rotary compressor with output-dependent control

Heat pump allocation

- Type AWOT-M-E-AC 151.A04 to A08
- Type AWOT-M-E-AC-AF 151.A04 to A08

- Type AWOT-M-E-AC 151.A04 SP to A08 SP
- Type AWOT-M-E-AC-AF 151.A04 SP to A08 SP

Outdoor unit with 2 fans, 230 V~ and 400 V~



- (A) Power saving variable speed EC fan
- (B) Coated evaporator with corrugated fins for higher efficiency
- (C) Safety valve
- (D) Condenser
- (E) Inverter
- (F) Suction gas cooler inverter
- (G) 4-way diverter valve
- (H) Hermetically sealed twin rotary compressor with output-dependent control

Benefits (cont.)

Assignment of heat pumps with 230 V~ outdoor unit

- Type AWOT-M-E-AC 151.A10 to A16
- Type AWOT-M-E-AC-AF 151.A10 to A16
- Type AWOT-M-E-AC 151.A10 SP to A16 SP
- Type AWOT-M-E-AC-AF 151.A10 SP to A16 SP

Assignment of heat pumps with 400 V~ outdoor unit

- Type AWOT-E-AC 151.A10 to A16
- Type AWOT-E-AC-AF 151.A10 to A16

Benefits

- Integral 190 l DHW cylinder
- Low running costs thanks to high COP (coefficient of performance) to EN 14511: Up to 5.0 at A7/W35
- Output control and DC inverter for high efficiency in partial load operation
- Maximum flow temperature of up to 70 °C at an outside temperature of –10 °C enables use in both new build and modernisation projects.
- Self-optimising control of the flow rate via Viessmann Hydro Auto-Control
- Environmentally responsible, natural refrigerant R290 with a particularly low GWP of 0.02 (GWP = Global Warming Potential)
- Convenient reversible design for heating and cooling
- Quiet operation thanks to Advanced Acoustic Design (AAD)
- Internet-enabled thanks to integrated WiFi
- Operation, optimisation, maintenance and service via ViCare app and ViGuide
- Guided commissioning
- Individual room control with components from ViCare Smart Climate

Delivered condition

Indoor unit

- Integral steel DHW cylinder with Ceraprotect enamel coating, protected from corrosion by a protective magnesium anode, with thermal insulation
- Integral 4/3-way valve for room heating/DHW heating/bypass
- Integral high efficiency circulation pump for the secondary circuit or heating/cooling circuit 1
- Integral instantaneous heating water heater
- Integral 16 l buffer cylinder
- Integral safety valve and digital pressure gauge
- Weather-compensated heat pump control unit with outside temperature sensor

- Flow rate capturing
- 10 l diaphragm expansion vessel
- Types ... **SP**
Central 230 V~ power supply with line protection

Outdoor unit

- Inverter-controlled compressor, 4-way diverter valve, electronic expansion valve, evaporator, condenser, EC fan
- Factory-filled with refrigerant R290
- Heating water filter upstream of condenser
- Transport aid
- Type AWOT(-M)-E-AC-**AF**:
With integral electric ribbon heater for the condensate pan

Type overview

Type			Rated voltage			Central indoor unit power supply	
							
AWOT-E-AC 151.A	1	1 to 4	230 V~	400 V~/230 V~	400 V~	—	
AWOT-M-E-AC 151.A	1	1 to 4	230 V~	400 V~/230 V~	230 V~	—	
AWOT-M-E-AC 151.A SP	1	1 to 4	230 V~	230 V~	230 V~	X	
AWOT-E-AC-AF 151.A	1	1 to 4	230 V~	400 V~/230 V~	400 V~	—	
AWOT-M-E-AC-AF 151.A	1	1 to 4	230 V~	400 V~/230 V~	230 V~	—	
AWOT-M-E-AC-AF 151.A SP	1	1 to 4	230 V~	230 V~	230 V~	X	

-  Integral heating/cooling circuits
-  Heating/cooling circuits via buffer cylinder
-  Control unit/PCB, indoor unit
-  Outdoor unit
-  Instantaneous heating water heater

-  Electric ribbon heater for condensate pan
- X Available
-  Accessories
-  Integral

Specification

Specification

Heat pumps with 230 V~ outdoor unit

Type AWOT-M-E-AC/AWOT-M-E-AC-AF	151.A	04	06	08	10	13	16
Heating performance data to EN 14511 (A2/W35)							
Rated heating output	kW	2.5	3.1	4.0	5.8	6.7	7.6
Fan speed	rpm	376	401	447			
Power consumption	kW	0.66	0.82	1.08	1.41	1.76	2.00
Coefficient of performance ϵ in heating mode (COP)		3.8	3.8	3.7	4.1	3.8	3.8
Output control	kW	1.8 to 4.5	1.8 to 6.0	1.8 to 6.8	2.2 to 11.0	2.6 to 12.3	3.0 to 13.7
Heating performance data to EN 14511 (A7/W35, 5 K spread)							
Rated heating output	kW	4.0	4.8	5.6	7.3	8.1	9.1
Fan speed	rpm	412	443	482	430	440	450
Air flow rate	m³/h	1813	1954	2125	4045	4188	4331
Power consumption	kW	0.80	0.98	1.19	1.46	1.62	1.86
Coefficient of performance ϵ in heating mode (COP)		5.0	4.9	4.7	5.0	5.0	4.9
Output control	kW	2.1 to 4.0	2.1 to 6.0	2.1 to 8.0	2.6 to 12.0	3.0 to 13.4	3.3 to 14.9
Heating performance data to EN 14511 (A-7/W35)							
Rated heating output	kW	3.8	5.6	6.5	9.7	11.1	12.4
Power consumption	kW	1.27	2.00	2.41	3.23	3.87	4.39
Coefficient of performance ϵ in heating mode (COP)		3.0	2.8	2.7	3.0	2.87	2.82
Heating performance data to EN 14511 (A-7/W55)							
Rated heating output	kW	3.5	5.2	6.2	9.2	10.6	11.8
Power consumption	kW	1.63	2.46	3.06	4.79	5.12	5.28
Coefficient of performance ϵ in heating mode (COP)		2.2	2.1	2.0	1.9	2.1	2.2
Heating performance data to Commission Regulation (EU) No. 813/2013 (average climatic conditions)							
Low temperature application (W35)							
– Energy efficiency η_s	%	176	180	175	190	178	178
– Rated heating output P_{rated}	kW	4.0	5.5	6.5	9.8	12.4	13.67
– Seasonal coefficient of performance (SCOP)		4.5	4.6	4.4	4.825	4.525	4.525
Medium temperature application (W55)							
– Energy efficiency η_s	%	127	141	137	145	141	141
– Rated heating output P_{rated}	kW	3.8	5.1	6.2	9.37	12.1	13.37
– Seasonal coefficient of performance (SCOP)		3.3	3.6	3.5	3.7	3.6	3.6
– DHW heating energy efficiency η_{wh}	%	110	110	110	123	123	123
Energy efficiency class to Commission Regulation (EU) No. 813/2013							
Heating, average climatic conditions							
– Low temperature application (W35) (D→A+++)		A+++	A+++	A+++	A+++	A+++	A+++
– Medium temperature application (W55) (D→A+++)		A++	A++	A++	A++	A++	A++
DHW heating, draw-off profile (XL) (F→A*)		A	A	A	A*	A*	A*
Cooling performance data to EN 14511 (A35/W7)							
Rated cooling capacity	kW	2.6	3.0	3.4	3.9	5.6	6.3
Fan speed	rpm				550	550	550
Power consumption	kW	0.90	1.03	1.17	1.18	1.65	1.85
Coefficient of performance in cooling mode (EER)		2.9	2.9	2.9	3.3	3.4	3.4
Output control	kW	1.8 to 4.0	1.8 to 4.8	1.8 to 5.0	3.9 to 7.2	4.2 to 8.0	4.5 to 8.7
Cooling performance data average climatic conditions (A35/W7)							
Rated cooling capacity P_{rated}	kW	3.0	3.6	4.4	6.9	8.11	8.93
Seasonal cooling energy efficiency ratio (SEER)		3.8	3.9	4.0	3.6	3.8	4.1

Specification (cont.)

Type AWOT-M-E-AC/AWOT-M-E-AC-AF	151.A	04	06	08	10	13	16
Cooling performance data to EN 14511 (A35/W18)							
Rated cooling capacity	kW	4.0	5.0	6.0	9.6	11.0	13.2
Fan speed	rpm	—	—	—	550	550	550
Power consumption	kW	0.85	1.14	1.54	2.18	2.75	3.62
Coefficient of performance in cooling mode (EER)		4.7	4.4	3.9	4.4	4.0	3.7
Output control	kW	3.2 to 4.0	3.2 to 5.5	3.2 to 6.7	6.3 to 14.4	6.6 to 15.7	6.9 to 17.0
Cooling performance data average climatic conditions (A35/W18)							
Rated cooling capacity P _{rated}	kW	4.6	5.6	6.9	9.81	11.51	13.32
Seasonal cooling energy efficiency ratio (SEER)		4.5	4.7	4.9	7.2	6.7	6.3
Air intake temperature							
Cooling mode							
– Min.	°C	15	15	15	15	15	15
– Max.	°C	45	45	45	45	45	45
Heating mode							
– Min.	°C	–20	–20	–20	–20	–20	–20
– Max.	°C	40	40	40	40	40	40
Heating water (secondary circuit)							
Capacity excl. expansion vessel	l	18	18	18	18	18	18
Heat pump circuit minimum flow rate (defrosting)	l/h	1000	1000	1000	1000	1000	1000
Max. flow temperature	°C	70	70	70	70	70	70
Outdoor unit electrical values							
Rated voltage, compressor		1/N/PE 230 V~/50 Hz					
Max. operating current, compressor	A	15	15.5	16	20	23	25
Cos φ		0.99	0.99	0.99	0.99	0.99	0.99
Compressor starting current, inverter controlled	A	< 10	< 10	< 10	< 10	< 10	< 10
Starting current, compressor with stalled armature	A	< 10	< 10	< 10	< 10	< 10	< 10
Fuse protection	A	B16A	B16A	B16A	B25A	B25A	B25A
IP rating		IPX4	IPX4	IPX4	IPX4	IPX4	IPX4
Indoor unit electrical values							
PCB		230 V~/50 Hz or 400 V~/50 Hz					
– Rated voltage		1 x B16A					
– Power supply fuse protection		T 6.3 A H (slow)/250 V~					
– Internal fuse protection							
Instantaneous heating water heater							
– Heating output							
Max.	kW	8					
Stage 1	kW	2.4					
Stage 2	kW	2.4					
Stage 3	kW	3.2					
– Fuse rating, power supply 230 V~		3 x B16A, 1-pole					
– Fuse rating, power supply 400 V~		1 x B16A, 3-pole					
– Power supply fuse protection		3 x B16A					
Max. power consumption							
Outdoor unit							
– Fan	W	140	140	140	2 x 140	2 x 140	2 x 140
– Total	kW	2.3	3.6	3.7	4.55	5.4	5.4
Indoor unit							
– Integral secondary pump/heating circuit pump, heating/cooling circuit 1 (PWM)	W	63	63	63	63	63	63
– Energy efficiency index EEI of the circulation pumps		≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2
– Control unit/PCB	W	5	5	5	5	5	5
– Max. connected load, function components 230 V~	W	1000	1000	1000	1000	1000	1000



Specification (cont.)

Type AWOT-M-E-AC/AWOT-M-E-AC-AF	151.A	04	06	08	10	13	16
Mobile data transfer							
WiFi							
– Transfer standard					IEEE 802.11 b/g/n		
– Frequency band	MHz				2400 to 2483.5		
– Max. transmission power	dBm				+15		
Low power radio							
– Transfer standard					IEEE 802.15.4		
– Frequency band	MHz				2400 to 2483.5		
– Max. transmission power	dBm				+6		
Refrigerant circuit							
Refrigerant		R290	R290	R290	R290	R290	R290
– Safety group		A3	A3	A3	A3	A3	A3
– Charge weight	kg	1.2	1.2	1.2	2	2	2
– Global warming potential (GWP)* ¹		0.02	0.02	0.02	0.02	0.02	0.02
– CO ₂ equivalent	t	0.000024	0.000024	0.000024	0.00004	0.00004	0.00004
Compressor (hermetically sealed)	Type				Twin rotary		
– Oil in compressor	Type	HAF68	HAF68	HAF68	HAF68	HAF68	HAF68
– Oil volume in compressor	l	0.840	0.840	0.840	1.150	1.150	1.150
		±0.020	±0.020	±0.020	±0.020	±0.020	±0.020
Permissible operating pressure							
– High pressure side	bar	30.3	30.3	30.3	30.3	30.3	30.3
	MPa	3.03	3.03	3.03	3.03	3.03	3.03
– Low pressure side	bar	30.3	30.3	30.3	30.3	30.3	30.3
	MPa	3.03	3.03	3.03	3.03	3.03	3.03
Integral DHW cylinder							
Capacity	l	190	190	190	190	190	190
Max. draw-off volume at mixed water temperature 40 °C (V40)	l	260	260	260	260	260	260
Reference DHW temperature θ _{WH}	°C	53.7	53.5	53.5	52.1	52.1	53.7
Max. DHW temperature	°C	68	68	68	68	68	68
Outdoor unit dimensions							
Total length	mm	600	600	600	600	600	600
Total width	mm	1144	1144	1144	1144	1144	1144
Total height	mm	841	841	841	1382	1382	1382
Indoor unit dimensions							
Total length	mm	597	597	597	597	597	597
Total width	mm	600	600	600	600	600	600
Total height	mm	1900	1900	1900	1900	1900	1900
Total weight							
– Empty	kg	170	170	170	170	170	170
– With filled buffer cylinder	kg	386	386	386	386	386	386
Outdoor unit	kg	162	162	162	191	191	191
Permissible operating pressure, secondary side							
Heating water	bar	3	3	3	3	3	3
	MPa	0.3	0.3	0.3	0.3	0.3	0.3
DHW	bar	10	10	10	10	10	10
	MPa	1.0	1.0	1.0	1.0	1.0	1.0
Connections with connection pipes supplied							
Heating water flow/return, heating circuits or heating water buffer cylinder	mm	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0
Heating water flow/return, DHW cylinder	mm	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0
Outdoor unit heating water flow/return	mm	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0
Length of connection line, indoor — outdoor unit (e.g. Quattro connection line)							
	m	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sound power of the outdoor unit at rated heating output							
Total sound power level measurement with reference to DIN EN 12102-1:2023 and DIN EN ISO 3744:2011 in ErP point C to DIN EN 14825 with operating conditions A7/W55							
– ErP	dB(A)	51	51	51	53	54	55
– Max.	dB(A)	56	58	59	61	61	66
– Low-noise mode (stage 2)	dB(A)	52	52	52	54	54	59

*¹ Based on the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Specification (cont.)

Heat pumps with 230 V~ outdoor unit and indoor unit with central power supply

Type AWOT-M-E-AC/AWOT-M-E-AC-AF	151.A	04 SP	06 SP	08 SP	10 SP	13 SP	16 SP
Heating performance data to EN 14511 (A2/W35)							
Rated heating output	kW	2.5	3.1	4.0	5.8	6.7	7.6
Fan speed	rpm	376	401	447			
Power consumption	kW	0.66	0.82	1.08	1.41	1.76	2.00
Coefficient of performance ϵ in heating mode (COP)		3.8	3.8	3.7	4.1	3.8	3.8
Output control	kW	1.8 to 4.5	1.8 to 6.0	1.8 to 6.8	2.2 to 11.0	2.6 to 12.3	3.0 to 13.7
Heating performance data to EN 14511 (A7/W35, 5 K spread)							
Rated heating output	kW	4.0	4.8	5.6	7.3	8.1	9.1
Fan speed	rpm	412	443	482	430	440	450
Air flow rate	m³/h	1813	1954	2125	4045	4188	4331
Power consumption	kW	0.80	0.98	1.19	1.46	1.62	1.86
Coefficient of performance ϵ in heating mode (COP)		5.0	4.9	4.7	5.0	5.0	4.9
Output control	kW	2.1 to 4.0	2.1 to 6.0	2.1 to 8.0	2.6 to 12.0	3.0 to 13.4	3.3 to 14.9
Heating performance data to EN 14511 (A-7/W35)							
Rated heating output	kW	3.8	5.6	6.5	9.7	11.1	12.4
Power consumption	kW	1.27	2.00	2.41	3.23	3.87	4.39
Coefficient of performance ϵ in heating mode (COP)		3.0	2.8	2.7	3.0	2.87	2.82
Heating performance data to EN 14511 (A-7/W55)							
Rated heating output	kW	3.5	5.2	6.2	9.2	10.6	11.8
Power consumption	kW	1.63	2.46	3.06	4.79	5.12	5.28
Coefficient of performance ϵ in heating mode (COP)		2.2	2.1	2.0	1.9	2.1	2.2
Heating performance data to Commission Regulation (EU) No. 813/2013 (average climatic conditions)							
Low temperature application (W35)							
– Energy efficiency η_s	%	176	180	175	190	178	178
– Rated heating output P_{rated}	kW	4.0	5.5	6.5	9.8	12.4	13.67
– Seasonal coefficient of performance (SCOP)		4.5	4.6	4.4	4.825	4.525	4.525
Medium temperature application (W55)							
– Energy efficiency η_s	%	127	141	137	145	141	141
– Rated heating output P_{rated}	kW	3.8	5.1	6.2	9.37	12.1	13.37
– Seasonal coefficient of performance (SCOP)		3.3	3.6	3.5	3.7	3.6	3.6
– DHW heating energy efficiency η_{wh}	%	110	110	110	123	123	123
Energy efficiency class to Commission Regulation (EU) No. 813/2013							
Heating, average climatic conditions							
– Low temperature application (W35) (D→A ⁺⁺⁺)		A ⁺⁺⁺	A ⁺⁺⁺	A ⁺⁺⁺	A ⁺⁺⁺	A ⁺⁺⁺	A ⁺⁺⁺
– Medium temperature application (W55) (D→A ⁺⁺⁺)		A ⁺⁺	A ⁺⁺	A ⁺⁺	A ⁺⁺⁺	A ⁺⁺	A ⁺⁺
DHW heating, draw-off profile (XL) (F→A ⁺)		A	A	A	A ⁺	A ⁺	A ⁺
Cooling performance data to EN 14511 (A35/W7)							
Rated cooling capacity	kW	2.6	3.0	3.4	3.9	5.6	6.3
Fan speed	rpm				550	550	550
Power consumption	kW	0.90	1.03	1.17	1.18	1.65	1.85
Coefficient of performance in cooling mode (EER)		2.9	2.9	2.9	3.3	3.4	3.4
Output control	kW	1.8 to 4.0	1.8 to 4.8	1.8 to 5.0	3.9 to 7.2	4.2 to 8.0	4.5 to 8.7
Cooling performance data average climatic conditions (A35/W7)							
Rated cooling capacity P_{rated}	kW	3.0	3.6	4.4	6.9	8.11	8.93
Seasonal cooling energy efficiency ratio (SEER)		3.8	3.9	4.0	3.6	3.8	4.1



Specification (cont.)

Type AWOT-M-E-AC/AWOT-M-E-AC-AF	151.A	04 SP	06 SP	08 SP	10 SP	13 SP	16 SP
Cooling performance data to EN 14511 (A35/W18)							
Rated cooling capacity	kW	4.0	5.0	6.0	9.6	11.0	13.2
Fan speed	rpm	—	—	—	550	550	550
Power consumption	kW	0.85	1.14	1.54	2.18	2.75	3.62
Coefficient of performance in cooling mode (EER)		4.7	4.4	3.9	4.4	4.0	3.7
Output control	kW	3.2 to 4.0	3.2 to 5.5	3.2 to 6.7	6.3 to 14.4	6.6 to 15.7	6.9 to 17.0
Cooling performance data average climatic conditions (A35/W18)							
Rated cooling capacity P _{rated}	kW	4.6	5.6	6.9	9.81	11.51	13.32
Seasonal cooling energy efficiency ratio (SEER)		4.5	4.7	4.9	7.2	6.7	6.3
Air intake temperature							
Cooling mode							
– Min.	°C	15	15	15	15	15	15
– Max.	°C	45	45	45	45	45	45
Heating mode							
– Min.	°C	–20	–20	–20	–20	–20	–20
– Max.	°C	40	40	40	40	40	40
Heating water (secondary circuit)							
Capacity excl. expansion vessel	l	18	18	18	18	18	18
Heat pump circuit minimum flow rate	l/h	1000	1000	1000	1000	1000	1000
Max. flow temperature	°C	70	70	70	70	70	70
Outdoor unit electrical values							
Rated voltage, compressor		1/N/PE 230 V~/50 Hz					
Max. operating current, compressor	A	15	15.5	16	20	23	25
Cos φ		0.99	0.99	0.99	0.99	0.99	0.99
Compressor starting current, inverter controlled	A	< 10	< 10	< 10	< 10	< 10	< 10
Starting current, compressor with stalled armature	A	< 10	< 10	< 10	< 10	< 10	< 10
Fuse protection	A	B16A	B16A	B16A	B25A	B25A	B25A
IP rating		IPX4	IPX4	IPX4	IPX4	IPX4	IPX4
Indoor unit electrical values							
PCB		1/N/PE 230 V~/50 Hz					
– Rated voltage		T 6.3 A H (slow)/250 V~					
– Internal fuse protection							
Instantaneous heating water heater							
– Heating output	kW	5					
Power supply, indoor unit		1/N/PE 230 V~/50 Hz					
– Rated voltage		1 x B32A, 1-pole					
– Power supply fuse protection							
Max. power consumption							
Outdoor unit							
– Fan	W	140	140	140	2 x 140	2 x 140	2 x 140
– Total	kW	2.3	3.6	3.7	4.55	5.4	5.4
Indoor unit							
– Integral secondary pump/heating circuit pump, heating/cooling circuit 1 (PWM)	W	63	63	63	63	63	63
– Energy efficiency index EEI of the circulation pumps		≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2
– Control unit/PCB	W	5	5	5	5	5	5
– Max. connected load, function components 230 V~	W	1000	1000	1000	1000	1000	1000
Mobile data transfer							
WiFi							
– Transfer standard		IEEE 802.11 b/g/n					
– Frequency band	MHz	2400 to 2483.5					
– Max. transmission power	dBm	+15					
Low power radio							
– Transfer standard		IEEE 802.15.4					
– Frequency band	MHz	2400 to 2483.5					
– Max. transmission power	dBm	+6					

Specification (cont.)

Type AWOT-M-E-AC/AWOT-M-E-AC-AF	151.A	04 SP	06 SP	08 SP	10 SP	13 SP	16 SP
Refrigerant circuit							
Refrigerant		R290	R290	R290	R290	R290	R290
– Safety group		A3	A3	A3	A3	A3	A3
– Charge weight	kg	1.2	1.2	1.2	2	2	2
– Global warming potential (GWP)*2		0.02	0.02	0.02	0.02	0.02	0.02
– CO ₂ equivalent	t	0.000024	0.000024	0.000024	0.00004	0.00004	0.00004
Compressor (hermetically sealed)	Type	Twin rotary					
– Oil in compressor	Type	HAF68	HAF68	HAF68	HAF68	HAF68	HAF68
– Oil volume in compressor	l	0.840	0.840	0.840	1.150	1.150	1.150
		±0.020	±0.020	±0.020	±0.020	±0.020	±0.020
Permissible operating pressure							
– High pressure side	bar	30.3	30.3	30.3	30.3	30.3	30.3
	MPa	3.03	3.03	3.03	3.03	3.03	3.03
– Low pressure side	bar	30.3	30.3	30.3	30.3	30.3	30.3
	MPa	3.03	3.03	3.03	3.03	3.03	3.03
Integral DHW cylinder							
Capacity	l	190	190	190	190	190	190
Max. draw-off volume at mixed water temperature 40 °C (V40)	l	260	260	260	260	260	260
Reference DHW temperature θ _{WH}	°C	53.7	53.5	53.5	52.1	52.1	53.7
Max. DHW temperature	°C	68	68	68	68	68	68
Outdoor unit dimensions							
Total length	mm	600	600	600	600	600	600
Total width	mm	1144	1144	1144	1144	1144	1144
Total height	mm	841	841	841	1382	1382	1382
Indoor unit dimensions							
Total length	mm	597	597	597	597	597	597
Total width	mm	600	600	600	600	600	600
Total height	mm	1900	1900	1900	1900	1900	1900
Total weight							
– Empty	kg	170	170	170	170	170	170
– With filled buffer cylinder	kg	386	386	386	386	386	386
Outdoor unit	kg	162	162	162	191	191	191
Permissible operating pressure, secondary side							
Heating water	bar	3	3	3	3	3	3
	MPa	0.3	0.3	0.3	0.3	0.3	0.3
DHW	bar	10	10	10	10	10	10
	MPa	1.0	1.0	1.0	1.0	1.0	1.0
Connections with connection pipes supplied							
Heating water flow/return, heating circuits or heating water buffer cylinder	mm	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0
Heating water flow/return, DHW cylinder	mm	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0
Outdoor unit heating water flow/return	mm	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0
Length of connection line, indoor — outdoor unit (e.g. Quattro connection line)							
	m	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20
Sound power of the outdoor unit at rated heating output							
Total sound power level measurement with reference to DIN EN 12102-1:2023 and DIN EN ISO 3744:2011 in ErP point C to DIN EN 14825 with operating conditions A7/W55							
– ErP	dB(A)	51	51	51	53	54	55
– Max.	dB(A)	56	58	59	61	61	66
– Low-noise mode (stage 2)	dB(A)	52	52	52	54	54	59

Heat pumps with 400 V~ outdoor unit

Type AWOT-E-AC/AWOT-E-AC-AF	151.A	10	13	16
Heating performance data to EN 14511 (A2/W35)				
Rated heating output	kW	5.8	6.7	7.6
Power consumption	kW	1.41	1.76	2.00
Coefficient of performance ε in heating mode (COP)		4.1	3.8	3.8
Output control	kW	2.2 to 11.0	2.6 to 12.3	3.0 to 13.7

*2 Based on the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Specification (cont.)

Type AWOT-E-AC/AWOT-E-AC-AF	151.A	10	13	16
Heating performance data to EN 14511 (A7/W35, 5 K spread)				
Rated heating output	kW	7.3	8.1	9.1
Fan speed	rpm	430	440	567
Air flow rate	m³/h	4045	4188	5393
Power consumption	kW	1.46	1.65	1.86
Coefficient of performance ϵ in heating mode (COP)		5.0	4.9	4.9
Output control	kW	2.6 to 12.0	3.0 to 13.4	3.3 to 14.9
Heating performance data to EN 14511 (A-7/W35)				
Rated heating output	kW	9.7	11.1	12.4
Power consumption	kW	3.23	3.96	4.4
Coefficient of performance ϵ in heating mode (COP)		3.0	2.8	2.8
Heating performance data to EN 14511 (A-7/W55)				
Rated heating output	kW	9.2	10.6	11.8
Power consumption	kW	4.79	5.12	5.28
Coefficient of performance ϵ in heating mode (COP)		1.9	2.1	2.2
Heating performance data to Commission Regulation (EU) No. 813/2013 (average climatic conditions)				
Low temperature application (W35)				
– Energy efficiency η_s	%	190	178	178
– Rated heating output P_{rated}	kW	9.8	12.4	13.67
– Seasonal coefficient of performance (SCOP)		4.825	4.525	4.525
Medium temperature application (W55)				
– Energy efficiency η_s	%	145	141	141
– Rated heating output P_{rated}	kW	9.37	12.1	13.37
– Seasonal coefficient of performance (SCOP)		3.7	3.6	3.6
– DHW heating energy efficiency η_{wh}	%	123	123	123
Energy efficiency class to Commission Regulation (EU) No. 813/2013				
Heating, average climatic conditions				
– Low temperature application (W35) (D→A+++)		A+++	A+++	A+++
– Medium temperature application (W55) (D→A+++)		A++	A++	A++
DHW heating, draw-off profile (XL) (F→A+)		A+	A+	A+
Cooling performance data to EN 14511 (A35/W7)				
Rated cooling capacity	kW	3.90	5.60	6.3
Fan speed	rpm	550	550	550
Power consumption	kW	1.18	1.65	1.85
Coefficient of performance in cooling mode (EER)		3.30	3.40	3.40
Output control	kW	3.9 to 7.2	4.2 to 8.0	4.5 to 8.7
Cooling performance data average climatic conditions (A35/W7)				
Rated cooling capacity P_{rated}	kW	6.90	8.11	8.93
Seasonal cooling energy efficiency ratio (SEER)		3.60	3.80	4.10
Cooling performance data to EN 14511 (A35/W18)				
Rated cooling capacity	kW	9.50	11.20	13.30
Power consumption	kW	2.10	2.70	3.60
Coefficient of performance in cooling mode (EER)		4.50	4.10	3.70
Output control	kW	6.5 to 13.4	6.8 to 14.7	7.1 to 16.0
Cooling performance data average climatic conditions (A35/W18)				
Rated cooling capacity P_{rated}	kW	9.81	11.51	13.32
Seasonal cooling energy efficiency ratio (SEER)		7.20	6.70	6.30
Air intake temperature				
Cooling mode				
– Min.	°C	15	15	15
– Max.	°C	45	45	45
Heating mode				
– Min.	°C	-20	-20	-20
– Max.	°C	40	40	40
Heating water (secondary circuit)				
Capacity excl. expansion vessel	l	10	10	10
Heat pump circuit minimum flow rate (defrosting)	l/h	1000	1000	1000
Max. flow temperature	°C	70	70	70

Specification (cont.)

Type AWOT-E-AC/AWOT-E-AC-AF	151.A	10	13	16
Outdoor unit electrical values				
Rated voltage, compressor		3/N/PE 400 V~/50 Hz		
Max. operating current, compressor	A	12	12	12
Cos φ		0.96	0.96	0.96
Compressor starting current, inverter controlled	A	< 10	< 10	< 10
Starting current, compressor with stalled armature	A	< 10	< 10	< 10
Fuse protection		B16A	B16A	B16A
IP rating		IPX4	IPX4	IPX4
Indoor unit electrical values				
PCB		1/N/PE 230 V~/50 Hz		
– Rated voltage		1 x B16A	1 x B16A	1 x B16A
– Power supply fuse protection		T 6.3 A H (slow)/250 V~		
– Internal fuse protection		3/N/PE 400 V~/50 Hz		
Instantaneous heating water heater				
– Rated voltage				
– Heating output				
Max.	kW	8	8	8
Stage 1	kW	2.4	2.4	2.4
Stage 2	kW	2.4	2.4	2.4
Stage 3	kW	3.2	3.2	3.2
– Power supply fuse protection		3 x B16A	3 x B16A	3 x B16A
Max. power consumption				
Outdoor unit				
– Fan	W	2 x 140	2 x 140	2 x 140
– Total	kW	4.8	5.4	5.4
Indoor unit				
– Integral secondary pump/heating circuit pump, heating/cooling circuit 1 (PWM)	W	60	60	60
– Energy efficiency index EEI of the circulation pumps		≤ 0.2	≤ 0.2	≤ 0.2
– Control unit/PCB	W	5	5	5
– Max. connected load, function components 230 V~	W	1000	1000	1000
Mobile data transfer				
WiFi				
– Transfer standard		IEEE 802.11 b/g/n	IEEE 802.11 b/g/n	IEEE 802.11 b/g/n
– Frequency band	MHz	2400 to 2483.5	2400 to 2483.5	2400 to 2483.5
– Max. transmission power	dBm	+15	+15	+15
Low power radio				
– Transfer standard		IEEE 802.15.4	IEEE 802.15.4	IEEE 802.15.4
– Frequency band	MHz	2400 to 2483.5	2400 to 2483.5	2400 to 2483.5
– Max. transmission power	dBm	+6	+6	+6
Refrigerant circuit				
Refrigerant		R290	R290	R290
– Safety group		A3	A3	A3
– Charge weight	kg	2	2	2
– Global warming potential (GWP)* ³		0.02	0.02	0.02
– CO ₂ equivalent	t	0.00004	0.00004	0.00004
Compressor (hermetically sealed)	Type	Twin rotary	Twin rotary	Twin rotary
– Oil in compressor	Type	HAF68	HAF68	HAF68
– Oil volume in compressor	l	1.150 ±0.020	1.150 ±0.020	1.150 ±0.020
Permissible operating pressure				
– High pressure side	bar	30.3	30.3	30.3
	MPa	3.03	3.03	3.03
– Low pressure side	bar	30.3	30.3	30.3
	MPa	3.03	3.03	3.03
Integral DHW cylinder				
Capacity	l	190	190	190
Max. draw-off volume at mixed water temperature 40 °C (V40)	l	260	260	260
Reference DHW temperature θ'WH	°C	52.1	52.1	53.7
Max. DHW temperature	°C	68	68	68
Outdoor unit dimensions				
Total length	mm	600	600	600
Total width	mm	1144	1144	1144
Total height	mm	1382	1382	1382
Indoor unit dimensions				
Total length	mm	597	597	597
Total width	mm	600	600	600
Total height	mm	1900	1900	1900

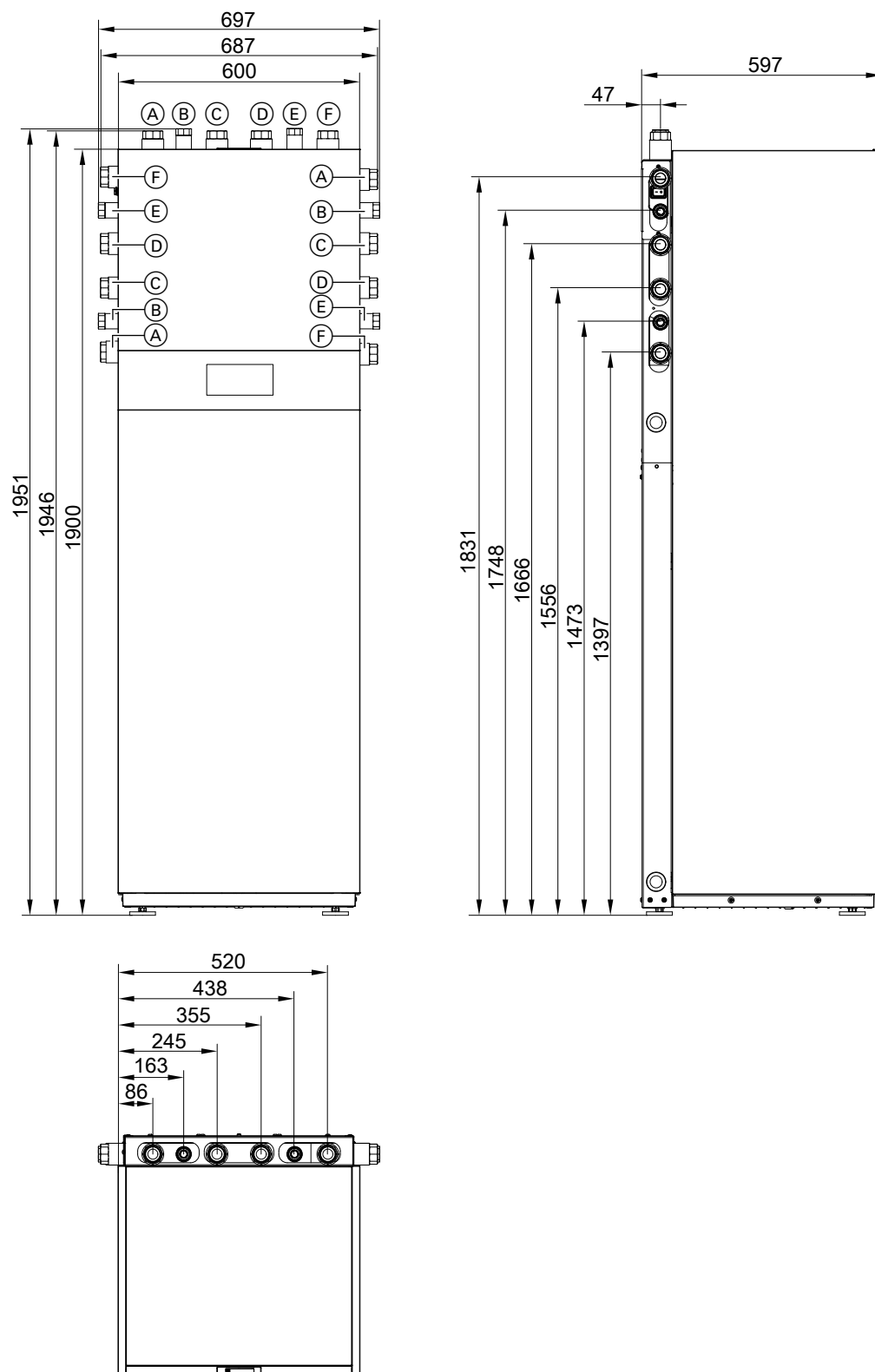
*³ Based on the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Specification (cont.)

Type AWOT-E-AC/AWOT-E-AC-AF	151.A	10	13	16
Total weight				
Indoor unit with 1 integrated heating/cooling circuit				
– Empty	kg	170	170	170
– With filled buffer cylinder	kg	386	386	386
Outdoor unit	kg	197	197	197
Permissible operating pressure, secondary side				
Heating water	bar	3	3	3
	MPa	0.3	0.3	0.3
DHW	bar	10	10	10
	MPa	1.0	1.0	1.0
Connections with connection pipes supplied				
Heating water flow/return, heating circuits or heating water buffer cylinder	mm	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0
Heating water flow/return, DHW cylinder	mm	Cu 22 x 1.0	Cu 22 x 1.0	Cu 22 x 1.0
Outdoor unit heating water flow/return	mm	Cu 28 x 1.0	Cu 28 x 1.0	Cu 28 x 1.0
Length of connection line, indoor — outdoor unit (e.g. Quattro connection line)	m	5 to 20	5 to 20	5 to 20
Sound power of the outdoor unit at rated heating output				
Total sound power level measurement with reference to DIN EN 12102-1:2023 and DIN EN ISO 3744:2011 in ErP point C to DIN EN 14825 with operating conditions A7/W55				
– ErP	dB(A)	53	54	55
– Max.	dB(A)	61	61	66
– Low-noise mode	dB(A)	54	54	59

Specification (cont.)

Dimensions of indoor unit



- (A) Secondary circuit flow (heating/cooling circuit 1/external buffer cylinder), connection Cu 28 x 1.0 mm
- (B) Cold water, connection Cu 22 x 1.0 mm
- (C) Heating water **from** outdoor unit, connection Cu 28 x 1.0 mm

- (D) Heating water **to** outdoor unit, connection Cu 28 x 1.0 mm
- (E) DHW, connection Cu 22 x 1.0 mm
- (F) Secondary circuit return (heating/cooling circuit 1/external buffer cylinder), connection Cu 28 x 1.0 mm

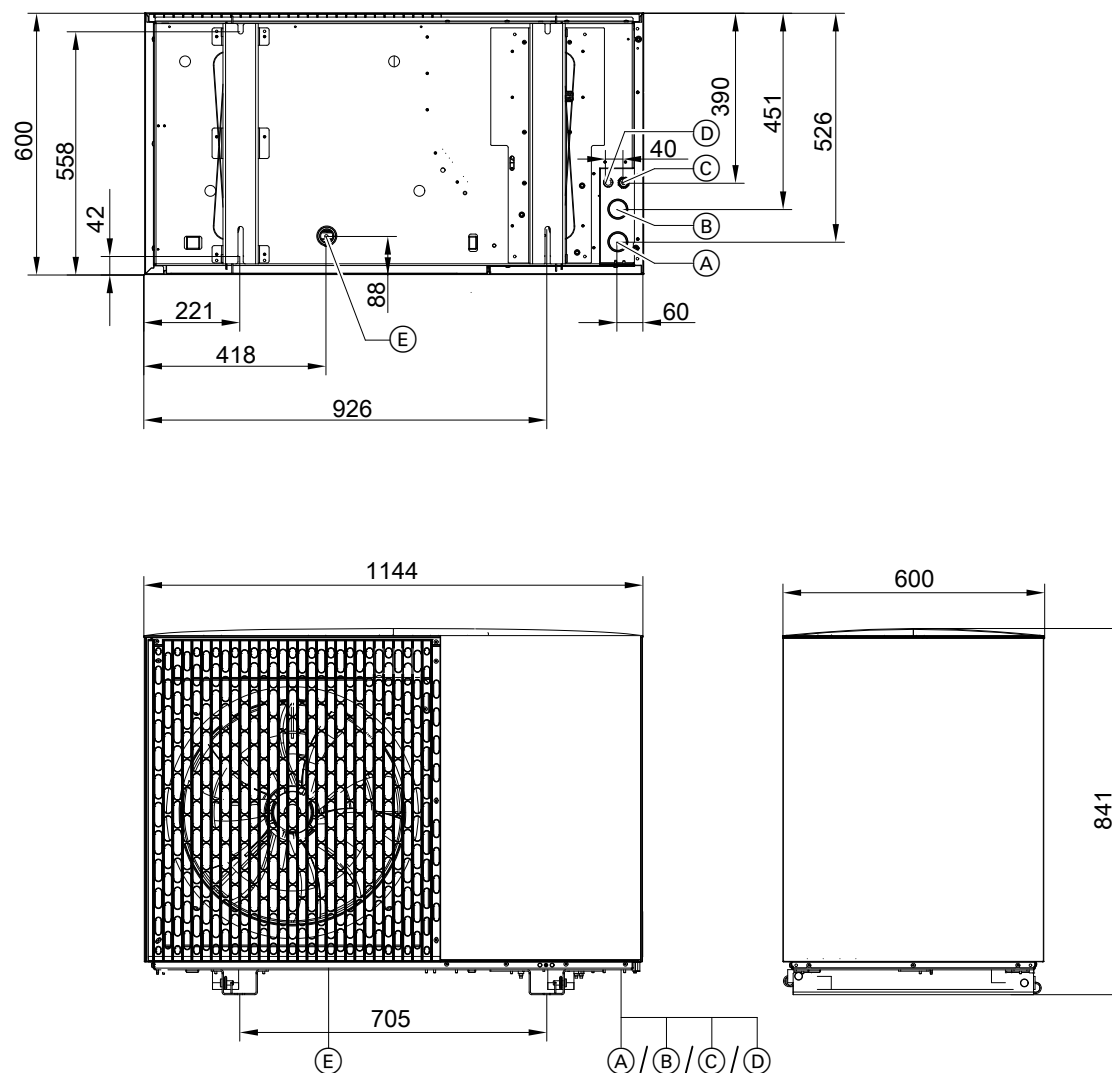
Specification (cont.)

Dimensions of outdoor unit with 1 fan, 230 V~

Heat pump allocation

- Type AWOT-M-E-AC 151.A04 to A08
- Type AWOT-M-E-AC-AF 151.A04 to A08

- Type AWOT-M-E-AC 151.A04 SP to A08 SP
- Type AWOT-M-E-AC-AF 151.A04 SP to A08 SP



- | | |
|--|---|
| (A) Heating water to indoor unit (heating water outlet): Plug-in connection for Cu 28 x 1.0 mm | (C) Power cable |
| (B) Heating water from indoor unit (heating water inlet): Plug-in connection for Cu 28 x 1.0 mm | (D) CAN bus communication cable (accessories) |
| | (E) Condensate drain |

Dimensions of outdoor unit with 2 fans, 230 V~ and 400 V~

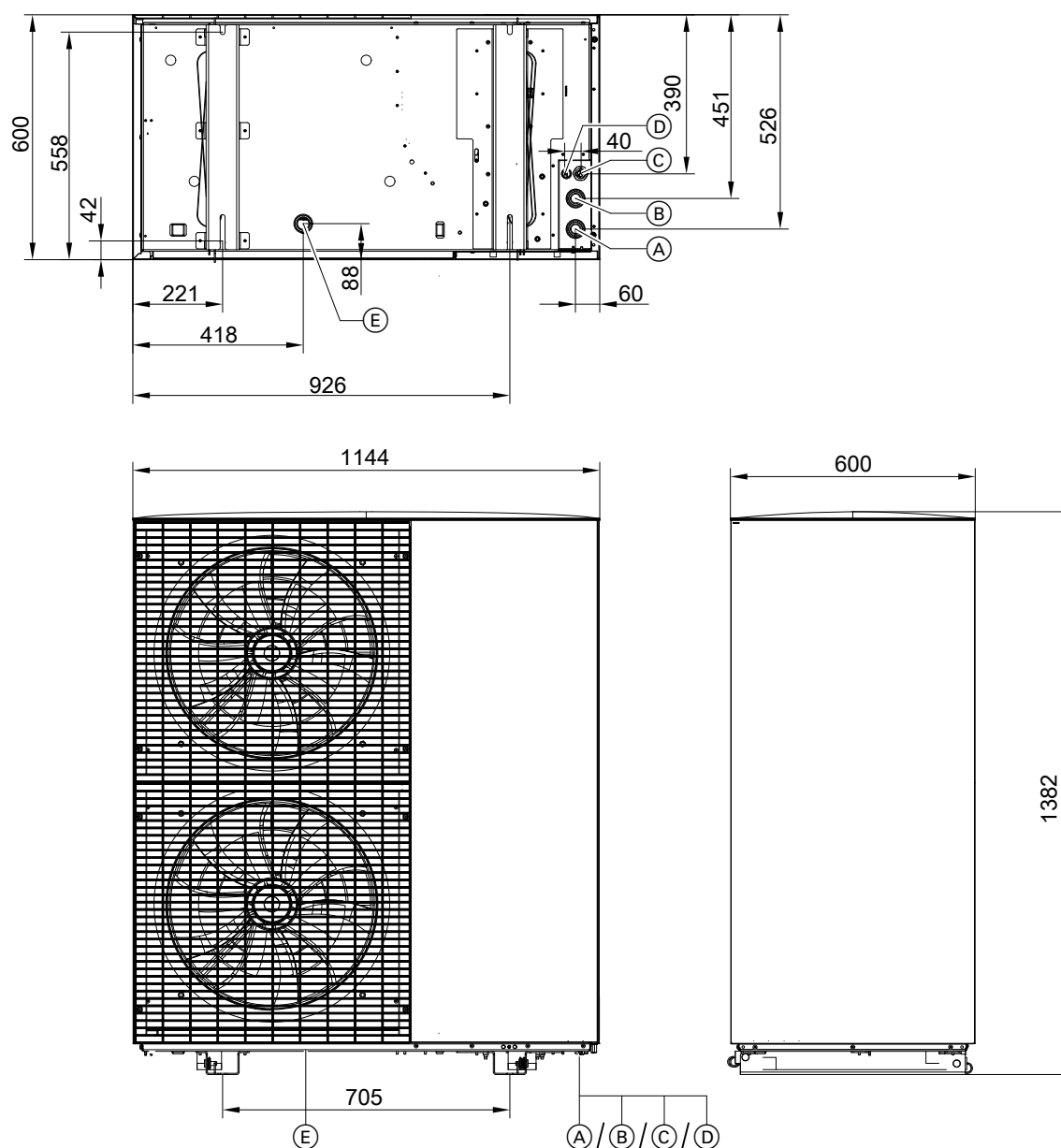
Assignment of heat pumps with 230 V~ outdoor unit

- Type AWOT-M-E-AC 151.A10 to A16
- Type AWOT-M-E-AC-AF 151.A10 to A16
- Type AWOT-M-E-AC 151.A10 SP to A16 SP
- Type AWOT-M-E-AC-AF 151.A10 SP to A16 SP

Assignment of heat pumps with 400 V~ outdoor unit

- Type AWOT-E-AC 151.A10 to A16
- Type AWOT-E-AC-AF 151.A10 to A16

Specification (cont.)



- (A) Heating water **to** indoor unit (heating water outlet): Plug-in connection for Cu 28 x 1.0 mm
 (B) Heating water **from** indoor unit (heating water inlet): Plug-in connection for Cu 28 x 1.0 mm

- (C) Power cable
 (D) CAN bus communication cable (accessories)
 (E) Condensate drain

Subject to technical modifications.

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