

Subtype MDV A Series 12 14 16kW with 240L tank

Certificate Holder	GD Midea Heating & Ventilating Equipment Co., Ltd.
Address	Penglai Industry Road
ZIP	528311
City	Beijiao, Shunde, Foshan
Country	CN
Certification Body	BRE Global Limited
Subtype title	MDV A Series 12 14 16kW with 240L tank
Registration number	041-K007-28
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.84 kg
Certification Date	13.11.2023
Testing basis	Heat Pump KEYMARK certification Scheme rules v08
Testing laboratory	Intertek Testing Services Shenzhen LTD. Guangzhou Branch, CN

Model AHPS-V12W/D2N8-B+AHBT-A160/240C**GN8-B**

Model name	AHPS-V12W/D2N8-B+AHBT-A160/240C****GN8-B
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	XL
Efficiency η_{DHW}	123 %
COP	3
Heating up time	1:38 h:min
Standby power input	34 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.24
Heating up time	2:06 h:min
Standby power input	36 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	153 %
COP	3.73
Heating up time	1:33 h:min
Standby power input	30 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.1 kW	12 kW
El input	2.44 kW	3.87 kW
COP	4.95	3.1

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	135 %
Prated	12 kW	11.58 kW
SCOP	4.81	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.61 kW	10.25 kW
COP Tj = -7°C	2.88	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	6.69 kW	6.52 kW
COP Tj = +2°C	4.65	3.44
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	4.44 kW	4.36 kW
COP Tj = +7°C	6.62	4.59
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.74 kW	3.3 kW
COP Tj = 12°C	8.47	6.05
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	10.61 kW	10.25 kW
COP Tj = Tbiv	2.88	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.75 kW	9.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.79
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	1.26 kW	2.5 kW
Annual energy consumption Qhe	5152 kWh	6927 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	160 %	118 %
Prated	11.38 kW	10.32 kW
SCOP	4.08	3.02
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.05 kW	6.63 kW
COP Tj = -7°C	3.48	2.63
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	4.68 kW	4.07 kW
COP Tj = +2°C	4.96	3.6
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.14 kW	2.78 kW
COP Tj = +7°C	6.1	4.54
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.57 kW	3.33 kW
COP Tj = 12°C	7.87	6.25
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	9.28 kW	8.42 kW
COP Tj = Tbiv	2.59	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.01 kW	4.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.13
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.37 kW	6.12 kW
Annual energy consumption Qhe	6870 kWh	8419 kWh
Pdh Tj = -15°C (if TOL	9.28	8.42
COP Tj = -15°C (if TOL	2.59	1.84
Cdh Tj = -15 °C	0.9	0.9
EN 12102-1 Warmer Climate		

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	256 %	174 %
Prated	11.11 kW	12.51 kW
SCOP	6.53	4.43
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.11 kW	12.08 kW
COP Tj = +2°C	3.59	2.31
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	7.14 kW	8.04 kW
COP Tj = +7°C	5.87	3.86
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.56 kW	3.75 kW
COP Tj = 12°C	7.94	5.7
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	7.14 kW	8.04 kW
COP Tj = Tbiv	5.87	3.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.11 kW	12.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.59	2.31
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0.44 kW
Annual energy consumption Qhe	2292 kWh	3776 kWh

Model AHPS-V12W/D2RN8-B+AHBT-A160/240C**GN8-B**

Model name	AHPS-V12W/D2RN8-B+AHBT-A160/240C****GN8-B
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	XL
Efficiency η_{DHW}	123 %
COP	3
Heating up time	1:38 h:min
Standby power input	34 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.24
Heating up time	2:06 h:min
Standby power input	36 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	153 %
COP	3.73
Heating up time	1:33 h:min
Standby power input	30 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.1 kW	12 kW
El input	2.44 kW	3.87 kW
COP	4.95	3.1

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	189 %	135 %
Prated	12 kW	11.58 kW
SCOP	4.81	3.45
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.61 kW	10.25 kW
COP Tj = -7°C	2.88	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	6.69 kW	6.52 kW
COP Tj = +2°C	4.65	3.44
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	4.44 kW	4.36 kW
COP Tj = +7°C	6.62	4.59
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.74 kW	3.3 kW
COP Tj = 12°C	8.47	6.05
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	10.61 kW	10.25 kW
COP Tj = Tbiv	2.88	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.75 kW	9.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.79
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	1.26 kW	2.5 kW
Annual energy consumption Qhe	5153 kWh	6928 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	118 %
Prated	11.38 kW	10.32 kW
SCOP	4.08	3.02
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.05 kW	6.63 kW
COP Tj = -7°C	3.48	2.63
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	4.68 kW	4.07 kW
COP Tj = +2°C	4.96	3.6
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.14 kW	2.78 kW
COP Tj = +7°C	6.1	4.54
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.57 kW	3.33 kW
COP Tj = 12°C	7.87	6.25
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	9.28 kW	8.42 kW
COP Tj = Tbiv	2.59	1.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.01 kW	4.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.98	1.13
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.37 kW	6.12 kW
Annual energy consumption Qhe	6871 kWh	8420 kWh
Pdh Tj = -15°C (if TOL	9.28	8.42
COP Tj = -15°C (if TOL	2.59	1.84
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	256 %	174 %
Prated	11.11 kW	12.51 kW
SCOP	6.53	4.42
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.11 kW	12.08 kW
COP Tj = +2°C	3.59	2.31
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	7.14 kW	8.04 kW
COP Tj = +7°C	5.87	3.86
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.56 kW	3.75 kW
COP Tj = 12°C	7.94	5.7
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	7.14 kW	8.04 kW
COP Tj = Tbiv	5.87	3.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.11 kW	12.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.59	2.31
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0.44 kW
Annual energy consumption Qhe	2296 kWh	3780 kWh

Model AHPS-V14W/D2N8-B+AHBT-A160/240C**GN8-B**

Model name	AHPS-V14W/D2N8-B+AHBT-A160/240C****GN8-B
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	XL
Efficiency η_{DHW}	123 %
COP	3
Heating up time	1:38 h:min
Standby power input	34 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.24
Heating up time	2:06 h:min
Standby power input	36 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	153 %
COP	3.73
Heating up time	1:33 h:min
Standby power input	30 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	14.5 kW	13.8 kW
El input	3.09 kW	4.6 kW
COP	4.7	3

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	136 %
Prated	13.73 kW	12.08 kW
SCOP	4.72	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.14 kW	10.69 kW
COP Tj = -7°C	2.79	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	7.95 kW	6.86 kW
COP Tj = +2°C	4.52	3.43
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	5.2 kW	4.64 kW
COP Tj = +7°C	6.68	4.66
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.76 kW	3.32 kW
COP Tj = 12°C	8.52	6.13
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	12.14 kW	10.69 kW
COP Tj = Tbiv	2.79	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.48 kW	9.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.76
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	2.23 kW	2.91 kW
Annual energy consumption Qhe	6012 kWh	7202 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	160 %	119 %
Prated	12.64 kW	10.97 kW
SCOP	4.07	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.97 kW	6.89 kW
COP Tj = -7°C	3.44	2.66
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	5.05 kW	4.32 kW
COP Tj = +2°C	4.92	3.66
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.16 kW	3.06 kW
COP Tj = +7°C	6.11	4.72
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.58 kW	3.33 kW
COP Tj = 12°C	7.82	6.25
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	10.31 kW	8.95 kW
COP Tj = Tbiv	2.53	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	4.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.92	1.13
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.07 kW	6.77 kW
Annual energy consumption Qhe	7667 kWh	8866 kWh
Pdh Tj = -15°C (if TOL	10.31	8.95
COP Tj = -15°C (if TOL	2.53	1.79
Cdh Tj = -15 °C	0.9	0.9
EN 12102-1 Warmer Climate		

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	260 %	177 %
P _{rated}	12.11 kW	13.74 kW
SCOP	6.63	4.49
T _{biv}	7 °C	7 °C
T _{OL}	2 °C	2 °C
P _{dh T_j} = +2°C	12.04 kW	13.05 kW
COP T _j = +2°C	3.44	2.2
Cd _h T _j = +2 °C	0.9	0.9
P _{dh T_j} = +7°C	7.78 kW	8.83 kW
COP T _j = +7°C	5.84	3.91
Cd _h T _j = +7 °C	0.9	0.9
P _{dh T_j} = 12°C	3.75 kW	4.09 kW
COP T _j = 12°C	8.25	5.9
Cd _h T _j = +12 °C	0.9	0.9
P _{dh T_j} = T _{biv}	7.78 kW	8.83 kW
COP T _j = T _{biv}	5.84	3.91
P _{dh T_j} = T _{OL} or P _{dh T_j} = T _{designh} if T _{OL} < T _{designh}	12.04 kW	13.05 kW
COP T _j = T _{OL} or COP T _j = T _{designh} if T _{OL} < T _{designh}	3.44	2.2
WT _{OL}	65 °C	65 °C
P _{off}	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.07 kW	0.69 kW
Annual energy consumption Q _{he}	2457 kWh	4088 kWh

Model AHPS-V14W/D2RN8-B+AHBT-A160/240C**GN8-B**

Model name	AHPS-V14W/D2RN8-B+AHBT-A160/240C****GN8-B
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	XL
Efficiency η_{DHW}	123 %
COP	3
Heating up time	1:38 h:min
Standby power input	34 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.24
Heating up time	2:06 h:min
Standby power input	36 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	153 %
COP	3.73
Heating up time	1:33 h:min
Standby power input	30 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	14.5 kW	13.8 kW
El input	3.09 kW	4.6 kW
COP	4.7	3

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	186 %	136 %
Prated	13.73 kW	12.08 kW
SCOP	4.72	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.14 kW	10.69 kW
COP Tj = -7°C	2.79	2.01
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	7.95 kW	6.86 kW
COP Tj = +2°C	4.52	3.43
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	5.2 kW	4.64 kW
COP Tj = +7°C	6.68	4.66
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.76 kW	3.32 kW
COP Tj = 12°C	8.52	6.13
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	12.14 kW	10.69 kW
COP Tj = Tbiv	2.79	2.01
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.48 kW	9.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.76
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	2.23 kW	2.91 kW
Annual energy consumption Qhe	6013 kWh	7203 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
η_s	160 %	119 %
Prated	12.64 kW	10.97 kW
SCOP	4.06	3.05
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.97 kW	6.89 kW
COP Tj = -7°C	3.44	2.66
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	5.05 kW	4.32 kW
COP Tj = +2°C	4.92	3.66
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.16 kW	3.06 kW
COP Tj = +7°C	6.11	4.72
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.58 kW	3.33 kW
COP Tj = 12°C	7.82	6.25
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	10.31 kW	8.95 kW
COP Tj = Tbiv	2.53	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	4.2 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.92	1.13
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.07 kW	6.77 kW
Annual energy consumption Qhe	7667 kWh	8867 kWh
Pdh Tj = -15°C (if TOL	10.31	8.95
COP Tj = -15°C (if TOL	2.53	1.79
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	260 %	176 %
Prated	12.11 kW	13.74 kW
SCOP	6.63	4.48
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.04 kW	13.05 kW
COP Tj = +2°C	3.44	2.2
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	7.78 kW	8.83 kW
COP Tj = +7°C	5.84	3.91
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.75 kW	4.09 kW
COP Tj = 12°C	8.25	5.9
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	7.78 kW	8.83 kW
COP Tj = Tbiv	5.84	3.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.04 kW	13.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.44	2.2
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.07 kW	0.69 kW
Annual energy consumption Qhe	2462 kWh	4092 kWh

Model AHPS-V16W/D2N8-B+AHBT-A160/240C**GN8-B**

Model name	AHPS-V16W/D2N8-B+AHBT-A160/240C****GN8-B
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	XL
Efficiency η_{DHW}	123 %
COP	3
Heating up time	1:38 h:min
Standby power input	34 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.24
Heating up time	2:06 h:min
Standby power input	36 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	153 %
COP	3.73
Heating up time	1:33 h:min
Standby power input	30 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	16 kW	16 kW
El input	3.56 kW	5.52 kW
COP	4.5	2.9

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	182 %	133 %
Prated	15.21 kW	13.02 kW
SCOP	4.62	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.45 kW	11.52 kW
COP Tj = -7°C	2.72	1.99
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	8.57 kW	7.18 kW
COP Tj = +2°C	4.41	3.34
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	5.7 kW	4.68 kW
COP Tj = +7°C	6.56	4.61
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.78 kW	3.32 kW
COP Tj = 12°C	8.51	6.07
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	13.45 kW	11.52 kW
COP Tj = Tbiv	2.72	1.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.52 kW	10.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.8
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	2.68 kW	2.67 kW
Annual energy consumption Qhe	6804 kWh	7895 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	158 %	122 %
Prated	13.76 kW	11.79 kW
SCOP	4.02	3.12
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.31 kW	7.64 kW
COP Tj = -7°C	3.37	2.65
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	5.27 kW	4.43 kW
COP Tj = +2°C	4.86	3.79
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.62 kW	2.98 kW
COP Tj = +7°C	6.49	4.81
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.35 kW	3.43 kW
COP Tj = 12°C	7.4	6.29
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	11.22 kW	9.62 kW
COP Tj = Tbiv	2.43	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.89 kW	5.22 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.23
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.87 kW	6.57 kW
Annual energy consumption Qhe	8431 kWh	9309 kWh
Pdh Tj = -15°C (if TOL	11.22	9.62
COP Tj = -15°C (if TOL	2.43	1.86
Cdh Tj = -15 °C	0.9	0.9
EN 12102-1 Warmer Climate		

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	249 %	176 %
P _{rated}	13.09 kW	13.78 kW
SCOP	6.33	4.48
T _{biv}	7 °C	7 °C
T _{OL}	2 °C	2 °C
P _{dh T_j} = +2°C	13.09 kW	13.38 kW
COP T _j = +2°C	3.35	2.29
Cd _h T _j = +2 °C	0.9	0.9
P _{dh T_j} = +7°C	8.42 kW	8.86 kW
COP T _j = +7°C	5.36	3.84
Cd _h T _j = +7 °C	0.9	0.9
P _{dh T_j} = 12°C	3.88 kW	4.06 kW
COP T _j = 12°C	8.11	5.86
Cd _h T _j = +12 °C	0.9	0.9
P _{dh T_j} = T _{biv}	8.42 kW	8.86 kW
COP T _j = T _{biv}	5.36	3.84
P _{dh T_j} = T _{OL} or P _{dh T_j} = T _{designh} if T _{OL} < T _{designh}	13.09 kW	13.38 kW
COP T _j = T _{OL} or COP T _j = T _{designh} if T _{OL} < T _{designh}	3.35	2.29
WT _{OL}	65 °C	65 °C
P _{off}	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0.4 kW
Annual energy consumption Q _{he}	2781 kWh	4112 kWh

Model AHPS-V16W/D2RN8-B+AHBT-A160/240C**GN8-B**

Model name	AHPS-V16W/D2RN8-B+AHBT-A160/240C****GN8-B
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 16147 | Average Climate**

Declared load profile	XL
Efficiency η_{DHW}	123 %
COP	3
Heating up time	1:38 h:min
Standby power input	34 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency η_{DHW}	92 %
COP	2.24
Heating up time	2:06 h:min
Standby power input	36 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 16147 | Warmer Climate

Declared load profile	XL
Efficiency η_{DHW}	153 %
COP	3.73
Heating up time	1:33 h:min
Standby power input	30 W
Reference hot water temperature	48.5 °C
Mixed water at 40°C	280 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	16 kW	16 kW
El input	3.56 kW	5.52 kW
COP	4.5	2.9

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	182 %	133 %
Prated	15.21 kW	13.02 kW
SCOP	4.62	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	13.45 kW	11.52 kW
COP Tj = -7°C	2.72	1.99
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	8.57 kW	7.18 kW
COP Tj = +2°C	4.41	3.34
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	5.7 kW	4.68 kW
COP Tj = +7°C	6.56	4.61
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.78 kW	3.32 kW
COP Tj = 12°C	8.51	6.07
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	13.45 kW	11.52 kW
COP Tj = Tbiv	2.72	1.99
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.52 kW	10.33 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.48	1.8
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	2.68 kW	2.67 kW
Annual energy consumption Qhe	6805 kWh	7896 kWh
EN 12102-1 Colder Climate		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)
EN 14825 Colder Climate		
	Low temperature	Medium temperature
ηs	158 %	122 %
Prated	13.76 kW	11.79 kW
SCOP	4.02	3.12
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.31 kW	7.64 kW
COP Tj = -7°C	3.37	2.65
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	5.27 kW	4.43 kW
COP Tj = +2°C	4.86	3.79
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.62 kW	2.98 kW
COP Tj = +7°C	6.49	4.81
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.35 kW	3.43 kW
COP Tj = 12°C	7.4	6.29
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	11.22 kW	9.62 kW
COP Tj = Tbiv	2.43	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.89 kW	5.22 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.23
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.87 kW	6.57 kW
Annual energy consumption Qhe	8431 kWh	9310 kWh
Pdh Tj = -15°C (if TOL	11.22	9.62
COP Tj = -15°C (if TOL	2.43	1.86
Cdh Tj = -15 °C	0.9	0.9
EN 12102-1 Warmer Climate		

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_S	248 %	176 %
Prated	13.09 kW	13.78 kW
SCOP	6.33	4.47
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.09 kW	13.38 kW
COP Tj = +2°C	3.35	2.29
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	8.42 kW	8.86 kW
COP Tj = +7°C	5.36	3.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	3.88 kW	4.06 kW
COP Tj = 12°C	8.11	5.86
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	8.42 kW	8.86 kW
COP Tj = Tbiv	5.36	3.84
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.09 kW	13.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.29
WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0.4 kW
Annual energy consumption Qhe	2786 kWh	4116 kWh