

This information was generated by the HP KEYMARK database on 17 Dec 2020

Summary of	Ecodan Zubadan 10/12-300D AA	Reg. No.	037-0027-20
Certificate Holder			
Name	Mitsubishi Electric Air Conditioning Systems Europe LTD		
Address	Nettlehill Road, Houston Industrial Estate	Zip	EH54 5EQ
City	Livingston	Country	United Kingdom
Certification Body	SZU - Strojirensky zkusebni ustav (Engineering Test Institute, Public Enterprise)		
Name of testing laboratory	Heat Pump Test Center WPZ		
Subtype title	Ecodan Zubadan 10/12-300D AA		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass Of Refrigerant	1.7 kg		
Certification Date	06.10.2020		
Testing basis	HP Keymark scheme rules rev. no. 6		

Model: PUD-SHWM100VAA(-BS) + E*ST30D-M*D

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.00 kW	8.00 kW
El input	1.60 kW	3.08 kW
COP	5.00	2.60
Indoor water flow rate	1.37 m ³ /h	0.86 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	180 %	136 %
Prated	10.00 kW	10.00 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.90 kW	8.90 kW
COP Tj = -7°C	3.16	2.18
Cdh	1.00	1.00
Pdh Tj = +2°C	5.70 kW	5.40 kW
COP Tj = +2°C	4.52	3.29
Cdh	0.99	0.99
Pdh Tj = +7°C	5.40 kW	5.20 kW
COP Tj = +7°C	5.63	4.81
Cdh	0.98	0.99

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.50 kW	3.60 kW
COP Tj = 12°C	7.89	7.06
Cdh	0.97	0.97
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4430 kWh	5836 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	235 %	136 %
Prated	10.00 kW	10.00 kW
SCOP	5.95	4.14
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	10.00 kW	10.00 kW
COP Tj = +2°C	3.45	2.05
Cdh	1.00	1.00
Pdh Tj = +7°C	6.40 kW	6.40 kW
COP Tj = +7°C	5.42	3.48
Cdh	0.99	0.99
Pdh Tj = 12°C	4.40 kW	4.20 kW
COP Tj = 12°C	7.46	5.68
Cdh	0.98	0.98
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	3.45	2.05
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C

This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2191 kWh	3169 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	121 %
COP	2.93
Heating up time	2:25 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	145 %
COP	3.49
Heating up time	2:38 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM100VAA(-BS) + E*ST30D-*M*D

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.00 kW	8.00 kW
El input	1.60 kW	3.08 kW
COP	5.00	2.60
Indoor water flow rate	1.37 m ³ /h	0.86 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	180 %	136 %
Prated	10.00 kW	10.00 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.90 kW	8.90 kW
COP Tj = -7°C	3.16	2.18
Cdh	1.00	1.00
Pdh Tj = +2°C	5.70 kW	5.40 kW
COP Tj = +2°C	4.52	3.29
Cdh	0.99	0.99
Pdh Tj = +7°C	5.40 kW	5.20 kW
COP Tj = +7°C	5.63	4.81
Cdh	0.98	0.99

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.50 kW	3.60 kW
COP Tj = 12°C	7.89	7.06
Cdh	0.97	0.97
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4430 kWh	5836 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	235 %	136 %
Prated	10.00 kW	10.00 kW
SCOP	5.95	4.14
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	10.00 kW	10.00 kW
COP Tj = +2°C	3.45	2.05
Cdh	1.00	1.00
Pdh Tj = +7°C	6.40 kW	6.40 kW
COP Tj = +7°C	5.42	3.48
Cdh	0.99	0.99
Pdh Tj = 12°C	4.40 kW	4.20 kW
COP Tj = 12°C	7.46	5.68
Cdh	0.98	0.98
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	3.45	2.05
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C

This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2191 kWh	3169 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	121 %
COP	2.93
Heating up time	2:25 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	145 %
COP	3.49
Heating up time	2:38 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM100YAA(-BS) + E*ST30D-M*D

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.00 kW	8.00 kW
El input	1.60 kW	3.08 kW
COP	5.00	2.60
Indoor water flow rate	1.37 m ³ /h	0.86 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	178 %	135 %
Prated	10.00 kW	10.00 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.90 kW	8.90 kW
COP Tj = -7°C	3.16	2.18
Cdh	0.99	1.00
Pdh Tj = +2°C	5.70 kW	5.40 kW
COP Tj = +2°C	4.52	3.29
Cdh	0.98	0.99
Pdh Tj = +7°C	5.40 kW	5.20 kW
COP Tj = +7°C	5.63	4.81
Cdh	0.98	0.98

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.50 kW	3.60 kW
COP Tj = 12°C	7.89	7.06
Cdh	0.96	0.96
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4430 kWh	5836 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	232 %	135 %
Prated	10.00 kW	10.00 kW
SCOP	5.88	4.11
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	10.00 kW	10.00 kW
COP Tj = +2°C	3.45	2.05
Cdh	0.99	1.00
Pdh Tj = +7°C	6.40 kW	6.40 kW
COP Tj = +7°C	5.42	3.48
Cdh	0.98	0.99
Pdh Tj = 12°C	4.40 kW	4.20 kW
COP Tj = 12°C	7.46	5.68
Cdh	0.96	0.97
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	3.45	2.05
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C

This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2191 kWh	3169 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	121 %
COP	2.93
Heating up time	2:25 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	145 %
COP	3.49
Heating up time	2:38 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM100YAA(-BS) + E*ST30D-*M*D

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.00 kW	8.00 kW
El input	1.60 kW	3.08 kW
COP	5.00	2.60
Indoor water flow rate	1.37 m ³ /h	0.86 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	178 %	135 %
Prated	10.00 kW	10.00 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.90 kW	8.90 kW
COP Tj = -7°C	3.16	2.18
Cdh	0.99	1.00
Pdh Tj = +2°C	5.70 kW	5.40 kW
COP Tj = +2°C	4.52	3.29
Cdh	0.98	0.99
Pdh Tj = +7°C	5.40 kW	5.20 kW
COP Tj = +7°C	5.63	4.81
Cdh	0.98	0.98

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.50 kW	3.60 kW
COP Tj = 12°C	7.89	7.06
Cdh	0.96	0.96
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4430 kWh	5836 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	232 %	135 %
Prated	10.00 kW	10.00 kW
SCOP	5.88	4.11
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	10.00 kW	10.00 kW
COP Tj = +2°C	3.45	2.05
Cdh	0.99	1.00
Pdh Tj = +7°C	6.40 kW	6.40 kW
COP Tj = +7°C	5.42	3.48
Cdh	0.98	0.99
Pdh Tj = 12°C	4.40 kW	4.20 kW
COP Tj = 12°C	7.46	5.68
Cdh	0.96	0.97
Pdh Tj = Tbiv	10.00 kW	10.00 kW
COP Tj = Tbiv	3.45	2.05
Pdh Tj = TOL	7.70 kW	7.70 kW
COP Tj = TOL	1.57	1.57
WTOL	60 °C	60 °C

This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2191 kWh	3169 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	121 %
COP	2.93
Heating up time	2:25 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	145 %
COP	3.49
Heating up time	2:38 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM120VAA(-BS) + E*ST30D-M*D

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	10.00 kW	10.00 kW
El input	2.08 kW	3.77 kW
COP	4.80	2.65
Indoor water flow rate	1.72 m ³ /h	1.07 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	179 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.60 kW	10.60 kW
COP Tj = -7°C	2.85	2.14
Cdh	1.00	1.00
Pdh Tj = +2°C	6.50 kW	6.50 kW
COP Tj = +2°C	4.51	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	5.60 kW	5.30 kW
COP Tj = +7°C	5.89	4.82
Cdh	0.98	0.99

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.40 kW	4.30 kW
COP Tj = 12°C	8.00	6.94
Cdh	0.97	0.98
Pdh Tj = Tbiv	12.00 kW	12.00 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL	9.20 kW	9.20 kW
COP Tj = TOL	1.56	1.56
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5354 kWh	7068 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	231 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	5.84	4.05
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	12.00 kW	12.00 kW
COP Tj = +2°C	3.30	2.03
Cdh	1.00	1.00
Pdh Tj = +7°C	7.70 kW	7.70 kW
COP Tj = +7°C	5.17	3.35
Cdh	0.99	0.99
Pdh Tj = 12°C	4.40 kW	5.20 kW
COP Tj = 12°C	7.46	5.59
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.00 kW	12.00 kW
COP Tj = Tbiv	3.30	2.03
Pdh Tj = TOL	9.20 kW	9.20 kW
COP Tj = TOL	1.56	1.56
WTOL	60 °C	60 °C

This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2688 kWh	3901 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	121 %
COP	2.93
Heating up time	2:25 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	145 %
COP	3.49
Heating up time	2:38 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM120VAA(-BS) + E*ST30D-*M*D

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	10.00 kW	10.00 kW
El input	2.08 kW	3.77 kW
COP	4.80	2.65
Indoor water flow rate	1.72 m ³ /h	1.07 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	179 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.60 kW	10.60 kW
COP Tj = -7°C	2.85	2.14
Cdh	1.00	1.00
Pdh Tj = +2°C	6.50 kW	6.50 kW
COP Tj = +2°C	4.51	3.25
Cdh	0.99	0.99
Pdh Tj = +7°C	5.60 kW	5.30 kW
COP Tj = +7°C	5.89	4.82
Cdh	0.98	0.99

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.40 kW	4.30 kW
COP Tj = 12°C	8.00	6.94
Cdh	0.97	0.98
Pdh Tj = Tbiv	12.00 kW	12.00 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL	9.20 kW	9.20 kW
COP Tj = TOL	1.56	1.56
WTOL	60 °C	60 °C
Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5354 kWh	7068 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	231 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	5.84	4.05
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	12.00 kW	12.00 kW
COP Tj = +2°C	3.30	2.03
Cdh	1.00	1.00
Pdh Tj = +7°C	7.70 kW	7.70 kW
COP Tj = +7°C	5.17	3.35
Cdh	0.99	0.99
Pdh Tj = 12°C	4.40 kW	5.20 kW
COP Tj = 12°C	7.46	5.59
Cdh	0.98	0.98
Pdh Tj = Tbiv	12.00 kW	12.00 kW
COP Tj = Tbiv	3.30	2.03
Pdh Tj = TOL	9.20 kW	9.20 kW
COP Tj = TOL	1.56	1.56
WTOL	60 °C	60 °C

This information was generated by the HP KEYMARK database on 17 Dec 2020

Poff	15 W	15 W
PTO	15 W	15 W
PSB	15 W	15 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2688 kWh	3901 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	121 %
COP	2.93
Heating up time	2:25 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Warmer Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency η_{DHW}	145 %
COP	3.49
Heating up time	2:38 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	417 l

Model: PUD-SHWM120YAA(-BS) + E*ST30D-M*D

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	10.00 kW	10.00 kW
El input	2.08 kW	3.77 kW
COP	4.80	2.65
Indoor water flow rate	1.72 m ³ /h	1.07 m ³ /h

EN 14511-4

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

Average Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	177 %	134 %
Prated	12.00 kW	12.00 kW
SCOP	4.51	3.44
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.60 kW	10.60 kW
COP Tj = -7°C	2.85	2.14
Cdh	0.99	1.00
Pdh Tj = +2°C	6.50 kW	6.50 kW
COP Tj = +2°C	4.51	3.25
Cdh	0.98	0.99
Pdh Tj = +7°C	5.60 kW	5.30 kW
COP Tj = +7°C	5.89	4.82
Cdh	0.98	0.98

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = 12°C	4.40 kW	4.30 kW
COP Tj = 12°C	8.00	6.94
Cdh	0.96	0.96
Pdh Tj = Tbiv	12.00 kW	12.00 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL	9.20 kW	9.20 kW
COP Tj = TOL	1.56	1.56
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5354 kWh	7068 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	229 %	134 %
Prated	12.00 kW	12.00 kW
SCOP	5.79	4.03
Tbiv	2 °C	2 °C
TOL	-28 °C	-28 °C
Pdh Tj = +2°C	12.00 kW	12.00 kW
COP Tj = +2°C	3.30	2.03
Cdh	0.99	1.00
Pdh Tj = +7°C	7.70 kW	7.70 kW
COP Tj = +7°C	5.17	3.35
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Pdh Tj = 12°C	4.40 kW	5.20 kW
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Poff	22 W	22 W
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PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	2688 kWh	3901 kWh

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Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
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