

This information was generated by the HP KEYMARK database on 22 Jun 2022

[Login](#)

Summary of	Ecodan Zubadan 10/12-200D AA	Reg. No.	037-0022-20
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)		
Subtype title	Ecodan Zubadan 10/12-200D 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*SD-*M*D

Configure model	
Model name	PUD-SHWM100VAA(-BS) + E*SD-*M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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 22 Jun 2022

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 kW	10 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.46	3.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4527 kWh	5938 kWh

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

Configure model	
Model name	PUD-SHWM100VAA(-BS) + E*SD-M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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 22 Jun 2022

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 kW	10 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.46	3.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4527 kWh	5938 kWh

Model: PUD-SHWM100VAA(-BS) + E*ST20D-*M*D

Configure model	
Model name	PUD-SHWM100VAA(-BS) + E*ST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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

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 kW	10 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.46	3.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4527 kWh	5938 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

Model: PUD-SHWM100VAA(-BS) + E*ST20D-M*D

Configure model	
Model name	PUD-SHWM100VAA(-BS) + E*ST20D-M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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

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 kW	10 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.46	3.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4527 kWh	5938 kWh

Domestic Hot Water (DHW)

Average Climate

This information was generated by the HP KEYMARK database on 22 Jun 2022

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

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

Configure model	
Model name	PUD-SHWM100YAA(-BS) + E*SD-*M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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

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 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.45	3.27
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4571 kWh	5975 kWh

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

Configure model	
Model name	PUD-SHWM100YAA(-BS) + E*SD-M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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

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 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.45	3.27
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4571 kWh	5975 kWh

Model: PUD-SHWM100YAA(-BS) + E*ST20D-*M*D

Configure model	
Model name	PUD-SHWM100YAA(-BS) + E*ST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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

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 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.45	3.27
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4571 kWh	5975 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

Model: PUD-SHWM100YAA(-BS) + E*ST20D-M*D

Configure model	
Model name	PUD-SHWM100YAA(-BS) + E*ST20D-M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
COP	5	2.6

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

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 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	5.7 kW	5.4 kW
COP Tj = +2°C	4.45	3.27
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.5 kW	3.6 kW
COP Tj = 12°C	7.89	7.06
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	10 kW	10 kW
COP Tj = Tbiv	2.92	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10 kW	10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
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 kW	0 kW
Annual energy consumption Qhe	4571 kWh	5975 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

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

Configure model	
Model name	PUD-SHWM120VAA(-BS) + E*SD-*M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.46	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.82
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5453 kWh	7170 kWh

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

Configure model	
Model name	PUD-SHWM120VAA(-BS) + E*SD-M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.46	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.82
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5453 kWh	7170 kWh

Model: PUD-SHWM120VAA(-BS) + E*ST20D-*M*D

Configure model	
Model name	PUD-SHWM120VAA(-BS) + E*ST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.46	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.82
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5453 kWh	7170 kWh

Domestic Hot Water (DHW)

Average Climate

This information was generated by the HP KEYMARK database on 22 Jun 2022

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

Model: PUD-SHWM120VAA(-BS) + E*ST20D-M*D

Configure model	
Model name	PUD-SHWM120VAA(-BS) + E*ST20D-M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.46	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.82
Cdh Tj = +7 °C	0.98	0.99

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.97	0.98
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5453 kWh	7170 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

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

Configure model	
Model name	PUD-SHWM120YAA(-BS) + E*SD-*M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.51	3.44
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.45	3.24
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.8
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5496 kWh	7213 kWh

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

Configure model	
Model name	PUD-SHWM120YAA(-BS) + E*SD-M*D
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.51	3.44
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.45	3.24
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.8
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5496 kWh	7213 kWh

Model: PUD-SHWM120YAA(-BS) + E*ST20D-*M*D

Configure model	
Model name	PUD-SHWM120YAA(-BS) + E*ST20D-*M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.51	3.44
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.45	3.24
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.8
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5496 kWh	7213 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l

Model: PUD-SHWM120YAA(-BS) + E*ST20D-M*D

Configure model	
Model name	PUD-SHWM120YAA(-BS) + E*ST20D-M*D
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
COP	4.8	2.65

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

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 kW	12 kW
SCOP	4.51	3.44
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	0.99	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.45	3.24
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.8
Cdh Tj = +7 °C	0.98	0.98

This information was generated by the HP KEYMARK database on 22 Jun 2022

Pdh Tj = 12°C	4.4 kW	4.3 kW
COP Tj = 12°C	8	6.94
Cdh Tj = +12 °C	0.96	0.96
Pdh Tj = Tbiv	12 kW	12 kW
COP Tj = Tbiv	2.77	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12 kW	12 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.87
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 kW	0 kW
Annual energy consumption Qhe	5496 kWh	7213 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency η_{DHW}	148 %
COP	3.49
Heating up time	01:47 h:min
Standby power input	36 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	278 l