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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

### 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
$\eta_s$	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

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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

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Defrost test	passed
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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
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EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
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## Average Climate



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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 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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

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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 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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)
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### EN 14825

	Low temperature	Medium temperature
$\eta_s$	178 %	135 %
Prated	10 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
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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
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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		
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Heat output	8 kW	8 kW
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EN 14511-4	
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## Average Climate

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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

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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



<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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

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	Low temperature	Medium temperature
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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

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<b>EN 16147</b>	
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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)
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### EN 14825

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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 18 Mar 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

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	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
$\eta_s$	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 18 Mar 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

This information was generated by the HP KEYMARK database on 18 Mar 2022

### 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
$\eta_s$	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 18 Mar 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 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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



This information was generated by the HP KEYMARK database on 18 Mar 2022

### 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
$\eta_s$	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 18 Mar 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

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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
$\eta_s$	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 18 Mar 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
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## 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
$\eta_s$	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 18 Mar 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
$\eta_s$	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

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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

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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
$\eta_s$	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 18 Mar 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



This information was generated by the HP KEYMARK database on 18 Mar 2022

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	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