

#### <u>Login</u>

Summary of	Ecodan Zubadan 10/12-200D AA	Reg. No.	037-0022-20
Certificate Holder			
Name	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
СОР	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



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
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o 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
СОР	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



EN 12102-1		
	Low temperature	Medium temperature
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EN 14825		
	Low temperature	Medium temperature
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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
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o 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

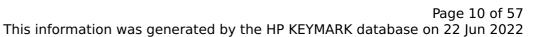
EN 14511-2		
	Low temperature	Medium temperature
Heat output	8 kW	8 kW
El input	1.6 kW	3.08 kW
СОР	5	2.6

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
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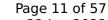
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	180 %	136 %
Prated	10 kW	10 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
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Cdh Tj = -7 °C	1	1
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
WTOL	60 °C	60 °C
Poff	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o 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)





EN 16147	
Declared load profile	L
Efficiency ηDHW	148 %
СОР	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



# 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

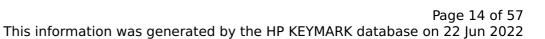
EN 14511-2			
Low temperature Medium temperature			
Heat output	8 kW	8 kW	
El input	1.6 kW	3.08 kW	
СОР	5	2.6	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed



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)

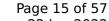
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	180 %	136 %
Prated	10 kW	10 kW
SCOP	4.56	3.48
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	8.9 kW	8.9 kW
COP Tj = -7°C	3.16	2.18
Cdh Tj = -7 °C	1	1
Pdh Tj = $+2^{\circ}$ C	5.7 kW	5.4 kW
COP Tj = +2°C	4.46	3.27
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	5.4 kW	5.2 kW
COP Tj = +7°C	5.63	4.81
Cdh Tj = +7 °C	0.98	0.99





Pdh Tj = 12°C	4.5 kW	3.6 kW
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Cdh Tj = +12 °C	0.97	0.97
Pdh Tj = Tbiv	10 kW	10 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	15 W	15 W
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o 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)





EN 16147	
Declared load profile	L
Efficiency ηDHW	148 %
СОР	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



# 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	
СОР	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



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
$\eta_{s}$	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



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
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o w	o 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
СОР	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



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
$\eta_{s}$	178 %	135 %
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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
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.92	1.91
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
РСК	o w	o 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

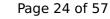
EN 14511-2			
Low temperature Medium temperature			
Heat output	8 kW	8 kW	
El input	1.6 kW	3.08 kW	
СОР	5	2.6	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	



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)

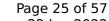
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	178 %	135 %
Prated	10 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
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WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	4571 kWh	5975 kWh

#### Domestic Hot Water (DHW)





EN 16147		
Declared load profile	L	
Efficiency ηDHW	148 %	
СОР	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	

# 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

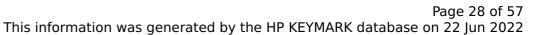
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8 kW	8 kW	
El input	1.6 kW	3.08 kW	
СОР	5	2.6	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	



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)

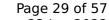
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	178 %	135 %
Prated	10 kW	10 kW
SCOP	4.52	3.46
Tbiv	-10 °C	-10 °C
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WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	4571 kWh	5975 kWh

Domestic Hot Water (DHW)





EN 16147		
Declared load profile	L	
Efficiency ηDHW	148 %	
СОР	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	



# 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
СОР	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



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



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
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o 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
СОР	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



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



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
СОР	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



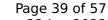
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

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 informational part and accordance on 22 jun 202			
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	
РТО	15 W	15 W	
PSB	15 W	15 W	
PCK	o w	o 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)





EN 16147	
Declared load profile	L
Efficiency ηDHW	148 %
СОР	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

# 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

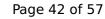
EN 14511-2		
	Low temperature	Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
СОР	4.8	2.65

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed



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)

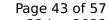
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	135 %
Prated	12 kW	12 kW
SCOP	4.55	3.46
Tbiv	-10 °C	-10 °C
TOL	-28 °C	-28 °C
Pdh Tj = -7°C	10.6 kW	10.6 kW
COP Tj = -7°C	2.85	2.14
Cdh Tj = -7 °C	1	1
Pdh Tj = +2°C	6.5 kW	6.5 kW
COP Tj = +2°C	4.46	3.24
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	5.6 kW	5.3 kW
COP Tj = +7°C	5.89	4.82
Cdh Tj = +7 °C	0.98	0.99





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
РТО	15 W	15 W
PSB	15 W	15 W
PCK	o w	o 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)





EN 16147	
Declared load profile	L
Efficiency ηDHW	148 %
СОР	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

# 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	
limate 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		Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
СОР	4.8	2.65

EN 14511-4	
Shutting off the heat transfer medium flow	naccod
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed



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
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o w	o 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

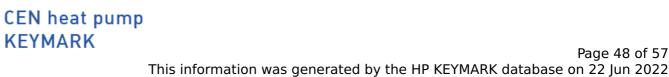
Configure model		
Model name PUD-SHWM120YAA(-BS) + E*SD-M*D		
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone n/a		
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

## Heating

EN 14511-2		
Low temperature Medium temperature		Medium temperature
Heat output	10 kW	10 kW
El input	2.08 kW	3.77 kW
СОР	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



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



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
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o 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
СОР	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



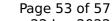
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

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



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
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o 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)





EN 16147	
Declared load profile	L
Efficiency ηDHW	148 %
СОР	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

# 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

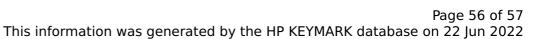
EN 14511-2				
	Low temperature	Medium temperature		
Heat output	10 kW	10 kW		
El input	2.08 kW	3.77 kW		
СОР	4.8	2.65		

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	



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)		

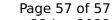
EN 14825				
	Low temperature	Medium temperature		
$\eta_{s}$	177 %	134 %		
Prated	12 kW	12 kW		
SCOP	4.51	3.44		
Tbiv	-10 °C	-10 °C		
TOL	-28 °C	-28 °C		
Pdh Tj = -7°C	10.6 kW	10.6 kW		
COP Tj = -7°C	2.85	2.14		
Cdh Tj = -7 °C	0.99	1		
Pdh Tj = +2°C	6.5 kW	6.5 kW		
COP Tj = +2°C	4.45	3.24		
Cdh Tj = +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		





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
РТО	22 W	22 W
PSB	22 W	22 W
PCK	o 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)





EN 16147		
Declared load profile	L	
Efficiency ηDHW	148 %	
СОР	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	