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Indoor unit E*ST20D-****D
Outdoor unit PUD-SWM120VAA(-BS)



A+++

A++

A+

A

B

C

D

A++

A+

A

B

C

D

E

F

A+



41 dB



60 dB



12 kW

12 kW

12 kW

2019

811/2013

BH79V003H04

COMBINATION HEATER		For medium-temperature application																									For low-temperature application																								
1	2	3	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25						
Outdoor unit	Indoor unit	Medium temperature application																									Low temperature application																								
		Declared load profile																									Declared load profile																								
		Seasonal space heating energy efficiency class																									Seasonal space heating energy efficiency class																								
Water heating energy efficiency class																									Water heating energy efficiency class																										
Retired heat output under average climate conditions																									Retired heat output under average climate conditions																										
For space heating, annual energy consumption under average climate conditions																									For space heating, annual energy consumption under average climate conditions																										
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Seasonal space heating energy efficiency under average climate conditions																									Seasonal space heating energy efficiency under average climate conditions																										
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Sound power level L _w , indoor																									Sound power level L _w , outdoor																										
Week only during off-peak hours																									Week only during off-peak hours																										
Retired heat output under outdoor climate conditions																									Retired heat output under outdoor climate conditions																										
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Seasonal space heating energy efficiency under outdoor climate conditions																									Seasonal space heating energy efficiency under outdoor climate conditions																										
Water heating energy efficiency under outdoor climate conditions																									Water heating energy efficiency under outdoor climate conditions																										
Sound power level L _w , outdoor																									Sound power level L _w , outdoor																										

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	129	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	1.94	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.10	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.73	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.94	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	1.94	-
Tj = operation limit temperature (***)	Pdh	10.2	kW	Tj = operation limit temperature (***)	COPd	1.88	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	1.8	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	7519	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	141	%
Daily electricity consumption	Q _{elec}	3.500	kWh				
Annual electricity consumption	AEC	770	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEM EUROPE LTD.

Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



 Kengo TAKAHASHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

• Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

• Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T design,h of the considered climate then the outdoor dry bulb temperature Tj is equal to T design,h.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	4.45	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.6	kW	Tj = + 7 °C	COPd	5.83	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.86	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	2.85	-
Tj = operation limit temperature (***)	Pdh	10.2	kW	Tj = operation limit temperature (***)	COPd	2.64	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	5512	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	141	%
Daily electricity consumption	Q _{elec}	3.500	kWh				
Annual electricity consumption	AEC	770	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	η_s	109	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dH}	7.3	kW	T _j = - 7 °C	COP _d	2.60	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = + 2 °C	COP _d	3.20	-
T _j = + 2 °C	P _{dH}	4.4	kW	T _j = + 7 °C	COP _d	4.65	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	6.90	-
T _j = + 7 °C	P _{dH}	3.8	kW	T _j = bivalent temperature	COP _d	1.45	-
Degradation co-efficient (**)	C _{dH}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.70	-
T _j = +12 °C	P _{dH}	4.4	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.42	-
Degradation co-efficient (**)	C _{dH}	0.98	-	Operation limit temperature	TOL	-25	°C
T _j = bivalent temperature	P _{dH}	9.2	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dH}	8.2	kW				
T _j = - 15 °C (if TOL < - 20 °C)	P _{dH}	8.7	kW				
Bivalent temperature	T _{biv}	-13	°C				
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	3.8	kW
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	10611	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	120	%
Daily electricity consumption	Q _{elec}	4.090	kWh				
Annual electricity consumption	AEC	900	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	140	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	3.90	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.20	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.24	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.98	-
Tj = operation limit temperature (***)	Pdh	8.7	kW	Tj = operation limit temperature (***)	COPd	1.71	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	10.3	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.03	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW		Electrical		
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB			
Annual energy consumption	Q _{HE}	8265	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	4.090	kWh			
Annual electricity consumption	AEC	900	kWh			

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	150	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	1.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.20	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature (***)	Pdh	12.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW	Electrical			
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	4188	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	ηwh	160	%
Daily electricity consumption	Qelec	3.110	kWh				
Annual electricity consumption	AEC	682	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	217	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.24	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	4.95	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.92	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.24	-
Tj = operation limit temperature (***)	Pdh	12.0	kW	Tj = operation limit temperature (***)	COPd	3.24	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW	Electrical			
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	2921	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	ηwh	160	%
Daily electricity consumption	Qelec	3.110	kWh				
Annual electricity consumption	AEC	682	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	129	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	1.94	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.10	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.73	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.94	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	1.94	-
Tj = operation limit temperature (***)	Pdh	10.2	kW	Tj = operation limit temperature (***)	COPd	1.88	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	7519	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	141	%
Daily electricity consumption	Q _{elec}	3.500	kWh				
Annual electricity consumption	AEC	770	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEM EUROPE LTD.

Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

The identification and signature of the person empowered to bind the supplier:



Kengo TAKAHASHI
Manager, Quality Assurance Department
UNITED KINGDOM

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	4.45	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.6	kW	Tj = + 7 °C	COPd	5.83	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.86	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	2.85	-
Tj = operation limit temperature (***)	Pdh	10.2	kW	Tj = operation limit temperature (***)	COPd	2.64	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	5512	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	141	%
Daily electricity consumption	Q _{elec}	3.500	kWh				
Annual electricity consumption	AEC	770	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	109	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	2.60	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	4.4	kW	Tj = + 2 °C	COPd	3.20	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	4.65	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.90	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	9.2	kW	Tj = bivalent temperature	COPd	1.45	-
Tj = operation limit temperature (***)	Pdh	8.2	kW	Tj = operation limit temperature (***)	COPd	1.70	-
Tj = − 15 °C (if TOL < − 20 °C)	Pdh	8.7	kW	Tj = − 15 °C (if TOL < − 20 °C)	COPd	1.42	-
Bivalent temperature	Tbiv	-13	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	3.8	kW
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB			
Annual energy consumption	Q _{HE}	10611	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	4.090	kWh			
Annual electricity consumption	AEC	900	kWh			

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	140	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	3.90	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.20	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.24	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.98	-
Tj = operation limit temperature (***)	Pdh	8.7	kW	Tj = operation limit temperature (***)	COPd	1.71	-
Tj = − 15 °C (if TOL < − 20 °C)	Pdh	10.3	kW	Tj = − 15 °C (if TOL < − 20 °C)	COPd	2.03	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB			
Annual energy consumption	Q _{HE}	8265	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	η _{wh}	120	%
Daily electricity consumption	Q _{elec}	4.090	kWh			
Annual electricity consumption	AEC	900	kWh			

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	150	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	1.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.20	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature (***)	Pdh	12.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW	Electrical			
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	4188	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	ηwh	160	%
Daily electricity consumption	Qelec	3.110	kWh				
Annual electricity consumption	AEC	682	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	EHST20D-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	217	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.24	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	4.95	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.92	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.24	-
Tj = operation limit temperature (***)	Pdh	12.0	kW	Tj = operation limit temperature (***)	COPd	3.24	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW	Electrical			
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	2921	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	ηwh	160	%
Daily electricity consumption	Qelec	3.110	kWh				
Annual electricity consumption	AEC	682	kWh				

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(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	ERST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	129	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	1.94	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.10	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.73	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.94	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	1.94	-
Tj = operation limit temperature (***)	Pdh	10.2	kW	Tj = operation limit temperature (***)	COPd	1.88	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	7519	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	141	%
Daily electricity consumption	Q _{elec}	3.500	kWh				
Annual electricity consumption	AEC	770	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	ERST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	4.45	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.6	kW	Tj = + 7 °C	COPd	5.83	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.86	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	2.85	-
Tj = operation limit temperature (***)	Pdh	10.2	kW	Tj = operation limit temperature (***)	COPd	2.64	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	5512	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	141	%
Daily electricity consumption	Q _{elec}	3.500	kWh				
Annual electricity consumption	AEC	770	kWh				

Contact details

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Kengo TAKAHASHI

The signature is signed in the average climate / medium-temperature section.

Manager, Quality Assurance Department

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• Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	ERST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	109	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	2.60	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	4.4	kW	Tj = + 2 °C	COPd	3.20	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	4.65	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.90	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	9.2	kW	Tj = bivalent temperature	COPd	1.45	-
Tj = operation limit temperature (***)	Pdh	8.2	kW	Tj = operation limit temperature (***)	COPd	1.70	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	8.7	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	1.42	-
Bivalent temperature	Tbiv	-13	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	3.8	kW
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items				Rated air flow rate, outdoors	-	2640	m ³ /h
Capacity control	variable						
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	10611	kWh				

For heat pump combination heater:				Water heating energy efficiency	η _{wh}	120	%
Declared load profile	L						
Daily electricity consumption	Qelec	4.090	kWh				
Annual electricity consumption	AEC	900	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	ERST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	140	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	3.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	3.90	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.20	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.24	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.98	-
Tj = operation limit temperature (***)	Pdh	8.7	kW	Tj = operation limit temperature (***)	COPd	1.71	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	10.3	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.03	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB			
Annual energy consumption	Q _{HE}	8265	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	4.090	kWh			
Annual electricity consumption	AEC	900	kWh			

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	ERST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	150	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	1.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.20	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature (***)	Pdh	12.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW	Electrical			
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items				
Capacity control	variable			Rated air flow rate, outdoors
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB	
Annual energy consumption	Q _{HE}	4188	kWh	

For heat pump combination heater:				
Declared load profile	L			Water heating energy efficiency
Daily electricity consumption	Qelec	3.110	kWh	
Annual electricity consumption	AEC	682	kWh	

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.
(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SWM120VAA(-BS)
	Indoor unit:	ERST20D-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	ηs	217	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.24	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	4.95	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.92	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.24	-
Tj = operation limit temperature (***)	Pdh	12.0	kW	Tj = operation limit temperature (***)	COPd	3.24	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW	Electrical			
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB				
Annual energy consumption	Q _{HE}	2921	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	ηwh	160	%
Daily electricity consumption	Qelec	3.110	kWh				
Annual electricity consumption	AEC	682	kWh				

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(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

(***) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

This information is based on EU regulation No 811/2013 and No 813/2013.