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Indoor unit E*ST17/20D-****D
Outdoor unit PUD-SHWM80VAA(-BS)



A++



A+



41 dB

56 dB



- 08 kW
- 08 kW
- 08 kW

2019

811/2013

BH79V003H06



1. SPACE HEATER		For medium-temperature application															For low-temperature application														
Outdoor unit	Indoor unit	3	6	8	11	9	13	15	16	21	22	17	18	25	4	6	8	11	9	13	15	16	21	22	17	18	25				
		Medium-temperature application															Low-temperature application														
		Seasonal space heating energy efficiency class															Seasonal space heating energy efficiency class														
		Rated heat output under average climate conditions															Rated 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														
		Sound power level L _{WA} , indoor															Sound power level L _{WA} , indoor														
		Rated heat output under warmer climate conditions															Rated heat output under warmer climate conditions														
		For space heating, annual energy consumption under warmer climate conditions															For space heating, annual energy consumption under warmer climate conditions														
		Sound power level L _{WA} , outdoor															Sound power level L _{WA} , outdoor														
PUD-SWM60VAA(-BS)	EHSD****	✓	A++	6	130	3722	41	6	6	109	148	5284	2120	55	✓	A+++	6	175	2780	41	6	6	133	205	4347	1543	55				
	ERSD****	✓	A++	6	130	3722	41	6	6	109	148	5284	2120	55	✓	A+++	6	175	2780	41	6	6	133	205	4347	1543	55				

2. COMBINATION HEATER		For medium-temperature application															For low-temperature application																												
Outdoor unit	Indoor unit	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
		Medium-temperature application															Low-temperature application																												
		Decided load profile															Decided load profile																												
		Seasonal space heating energy efficiency class															Seasonal space heating energy efficiency class																												
		Water heating energy efficiency class															Water heating energy efficiency class																												
		Rated heat output under average climate conditions															Rated 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																												
		For water heating, annual energy consumption under average climate conditions															For water heating, annual energy consumption under average climate conditions																												
		Sound power level L _{WA} , indoor															Sound power level L _{WA} , indoor																												
		Work only during off-peak hours															Work only during off-peak hours																												
		Rated heat output under warmer climate conditions															Rated heat output under warmer climate conditions																												
		For space heating, annual energy consumption under warmer climate conditions															For space heating, annual energy consumption under warmer climate conditions																												
		For water heating, annual energy consumption under warmer climate conditions															For water heating, annual energy consumption under warmer climate conditions																												
		Sound power level L _{WA} , outdoor															Sound power level L _{WA} , outdoor																												
PUD-SWM60VAA(-BS)	EHST17D****	✓	L	A++	A+	6	3722	798	130	136	41	-	6	6	5284	2120	968	709	109	148	112	154	55	✓	L	A+++	A+	6	2780	798	175	136	41	-	6	6	4347	1543	968	709	133	205	112	154	55
	ERST17D****	✓	L	A++	A+	6	3722	798	130	136	41	-	6	6	5284	2120	968	709	109	148	112	154	55	✓	L	A+++	A+	6	2780	798	175	136	41	-	6	6	4347	1543	968	709	133	205	112	154	55

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-BS)
	Indoor unit:	EHST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	135	%
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	7.1	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	4.3	kW	Tj = + 7 °C	COPd	4.91	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.05	-
Tj = + 7 °C	Pdh	5.3	kW	Tj = bivalent temperature	COPd	1.97	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.97	-
Tj = +12 °C	Pdh	3.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	4793	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	798	kWh				

Contact details: MITSUBISHI ELECTRIC AIR CODITIONING 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:



Atsushi EDAYOSHI
 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 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-SHWM80VAA(-BS)
	Indoor unit:	EHST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	181	%
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	7.1	kW	Tj = - 7 °C	COPd	3.11	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.43	-
Tj = + 2 °C	Pdh	4.7	kW	Tj = + 7 °C	COPd	6.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	8.21	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.09	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	3.09	-
Tj = +12 °C	Pdh	3.2	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	3597	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	798	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-SHWM80VAA(-BS)
	Indoor unit:	EHST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	114	%
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 _{d,h}	4.9	kW	T _j = - 7 °C	COP _d	2.69	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	3.30	-
T _j = + 2 °C	P _{d,h}	3.5	kW	T _j = + 7 °C	COP _d	4.78	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	6.74	-
T _j = + 7 °C	P _{d,h}	4.3	kW	T _j = bivalent temperature	COP _d	1.51	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.46	-
T _j = +12 °C	P _{d,h}	3.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.52	-
Degradation co-efficient (**)	C _{d,h}	0.97	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	6.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	6.8	kW	Rated heat output (*)	P _{sup}	2.0	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	6768	kWh				

For heat pump combination heater:							
Declared load profile				Water heating energy efficiency			
L				η_{wh}	112	%	
Daily electricity consumption	Q _{elec}	4.400	kWh				
Annual electricity consumption	AEC	968	kWh				

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-BS)
	Indoor unit:	EHST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	145	%
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 _{d,h}	4.8	kW	T _j = - 7 °C	COP _d	3.48	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	4.04	-
T _j = + 2 °C	P _{d,h}	3.8	kW	T _j = + 7 °C	COP _d	5.56	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = +12 °C	COP _d	7.56	-
T _j = + 7 °C	P _{d,h}	4.5	kW	T _j = bivalent temperature	COP _d	2.23	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.82	-
T _j = +12 °C	P _{d,h}	3.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.30	-
Degradation co-efficient (**)	C _{d,h}	0.96	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	6.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	6.8	kW	Rated heat output (*)	P _{sup}	2.0	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	5347	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	112	%	
Daily electricity consumption	Q _{elec}	4.400	kWh				
Annual electricity consumption	AEC	968	kWh				

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-BS)
	Indoor unit:	EHST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	166	%
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	COPd	1.88	-
Tj = + 2 °C	Pdh	8.0	kW	Tj = + 7 °C	COPd	3.58	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	6.08	-
Tj = + 7 °C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	1.88	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.88	-
Tj = +12 °C	Pdh	4.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	2534	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	154	%	
Daily electricity consumption	Q _{elec}	3.220	kWh				
Annual electricity consumption	AEC	709	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-SHWM80VAA(-BS)
	Indoor unit:	EHST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	225	%
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	COPd	3.75	-
Tj = + 2 °C	Pdh	8.0	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.40	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.75	-
Tj = +12 °C	Pdh	4.7	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	1876	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	154	%	
Daily electricity consumption	Q _{elec}	3.220	kWh				
Annual electricity consumption	AEC	709	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-SHWM80VAA(-BS)
	Indoor unit:	ERST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	135	%
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	7.1	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	4.3	kW	Tj = + 7 °C	COPd	4.91	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.05	-
Tj = + 7 °C	Pdh	5.3	kW	Tj = bivalent temperature	COPd	1.97	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.97	-
Tj = +12 °C	Pdh	3.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	4793	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	798	kWh				

Contact details: MITSUBISHI ELECTRIC AIR CODITIONING 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:



Atsushi EDAYOSHI
 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.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-BS)
	Indoor unit:	ERST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	181	%
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	7.1	kW	Tj = - 7 °C	COPd	3.11	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.43	-
Tj = + 2 °C	Pdh	4.7	kW	Tj = + 7 °C	COPd	6.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	8.21	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.09	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	3.09	-
Tj = +12 °C	Pdh	3.2	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	3597	kWh				

For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	η_{wh}	136	%
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	798	kWh				

Contact details

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Manager, Quality Assurance Department

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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-SHWM80VAA(-BS)
	Indoor unit:	ERST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	114	%
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	4.9	kW	Tj = - 7 °C	COPd	2.69	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	3.30	-
Tj = + 2 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.74	-
Tj = + 7 °C	Pdh	4.3	kW	Tj = bivalent temperature	COPd	1.51	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.46	-
Tj = +12 °C	Pdh	3.1	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	6.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	6.8	kW	Rated heat output (*)	Psup	2.0	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	6768	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	112	%	
Daily electricity consumption	Q _{elec}	4.400	kWh				
Annual electricity consumption	AEC	968	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-SHWM80VAA(-BS)
	Indoor unit:	ERST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	145	%
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	4.8	kW	Tj = - 7 °C	COPd	3.48	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.04	-
Tj = + 2 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 °C	COPd	7.56	-
Tj = + 7 °C	Pdh	4.5	kW	Tj = bivalent temperature	COPd	2.23	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.82	-
Tj = +12 °C	Pdh	3.1	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.30	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	6.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	6.8	kW	Rated heat output (*)	Psup	2.0	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	5347	kWh				

For heat pump combination heater:				Declared load profile			
Declared load profile	L			Water heating energy efficiency	η_{wh}	112	%
Daily electricity consumption	Q _{elec}	4.400	kWh				
Annual electricity consumption	AEC	968	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-SHWM80VAA(-BS)
	Indoor unit:	ERST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	166	%
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 _d _h	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _d _h	-	-	T _j = + 2 °C	COP _d	1.88	-
T _j = + 2 °C	P _d _h	8.0	kW	T _j = + 7 °C	COP _d	3.58	-
Degradation co-efficient (**)	C _d _h	1.00	-	T _j = +12 °C	COP _d	6.08	-
T _j = + 7 °C	P _d _h	5.2	kW	T _j = bivalent temperature	COP _d	1.88	-
Degradation co-efficient (**)	C _d _h	0.99	-	T _j = operation limit temperature (***)	COP _d	1.88	-
T _j = +12 °C	P _d _h	4.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _d _h	0.98	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _d _h	8.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _d _h	8.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	2534	kWh				

For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	η_{wh}	154	%
Daily electricity consumption	Q _{elec}	3.220	kWh				
Annual electricity consumption	AEC	709	kWh				

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Manager, Quality Assurance Department

UNITED KINGDOM

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-BS)
	Indoor unit:	ERST17D-****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	8.0	kW	Seasonal space heating energy efficiency	η_s	225	%
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	COPd	3.75	-
Tj = + 2 °C	Pdh	8.0	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.40	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.75	-
Tj = +12 °C	Pdh	4.7	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	1876	kWh				

For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	η_{wh}	154	%
Daily electricity consumption	Q _{elec}	3.220	kWh				
Annual electricity consumption	AEC	709	kWh				

Contact details	MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.	Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.
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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-SHWM80VAA(-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.

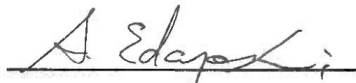
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8.0	kW	Seasonal space heating energy efficiency	η_s	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.1	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	4.3	kW	Tj = + 7 °C	COPd	4.91	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.05	-
Tj = + 7 °C	Pdh	5.3	kW	Tj = bivalent temperature	COPd	1.97	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.97	-
Tj = +12 °C	Pdh	3.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	4793	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	148	%	
Daily electricity consumption	Q _{elec}	3.340	kWh				
Annual electricity consumption	AEC	736	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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	181	%
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	7.1	kW	Tj = - 7 °C	COPd	3.11	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.43	-
Tj = + 2 °C	Pdh	4.7	kW	Tj = + 7 °C	COPd	6.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	8.21	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.09	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	3.09	-
Tj = +12 °C	Pdh	3.2	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	3597	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	148	%	
Daily electricity consumption	Q _{elec}	3.340	kWh				
Annual electricity consumption	AEC	736	kWh				

Contact details
 MITSUBISHI ELECTRIC AIR CODITIONING 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;
 Atsushi EDAYOSHI
 The signature is signed in the average climate / medium-temperature section.
 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.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	114	%
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	4.9	kW	Tj = - 7 °C	COPd	2.69	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	3.30	-
Tj = + 2 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.74	-
Tj = + 7 °C	Pdh	4.3	kW	Tj = bivalent temperature	COPd	1.51	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.46	-
Tj = +12 °C	Pdh	3.1	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	6.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	6.8	kW	Rated heat output (*)	Psup	2.0	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	6768	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	145	%
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	4.8	kW	Tj = - 7 °C	COPd	3.48	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.04	-
Tj = + 2 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 °C	COPd	7.56	-
Tj = + 7 °C	Pdh	4.5	kW	Tj = bivalent temperature	COPd	2.23	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.82	-
Tj = +12 °C	Pdh	3.1	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.30	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	6.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	6.8	kW	Rated heat output (*)	Psup	2.0	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	5347	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	166	%
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 _{d,h}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{d,h}	-	-	T _j = + 2 °C	COP _d	1.88	-
T _j = + 2 °C	P _{d,h}	8.0	kW	T _j = + 7 °C	COP _d	3.58	-
Degradation co-efficient (**)	C _{d,h}	1.00	-	T _j = +12 °C	COP _d	6.08	-
T _j = + 7 °C	P _{d,h}	5.2	kW	T _j = bivalent temperature	COP _d	1.88	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.88	-
T _j = +12 °C	P _{d,h}	4.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{d,h}	0.98	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{d,h}	8.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{d,h}	8.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	2534	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	162	%	
Daily electricity consumption	Q _{elec}	3.070	kWh				
Annual electricity consumption	AEC	675	kWh				

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	225	%
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}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{dh}	-	-	T _j = + 2 °C	COP _d	3.75	-
T _j = + 2 °C	P _{dh}	8.0	kW	T _j = + 7 °C	COP _d	5.15	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = +12 °C	COP _d	7.40	-
T _j = + 7 °C	P _{dh}	5.1	kW	T _j = bivalent temperature	COP _d	3.75	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = operation limit temperature (***)	COP _d	3.75	-
T _j = +12 °C	P _{dh}	4.7	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dh}	0.98	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dh}	8.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dh}	8.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	1876	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	162	%	
Daily electricity consumption	Q _{elec}	3.070	kWh				
Annual electricity consumption	AEC	675	kWh				

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(**) If C_{dh} is not determined by measurement then the default degradation coefficient is C_{dh} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	135	%
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	7.1	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	4.3	kW	Tj = + 7 °C	COPd	4.91	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.05	-
Tj = + 7 °C	Pdh	5.3	kW	Tj = bivalent temperature	COPd	1.97	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.97	-
Tj = +12 °C	Pdh	3.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	4793	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	148	%	
Daily electricity consumption	Q _{elec}	3.340	kWh				
Annual electricity consumption	AEC	736	kWh				

Contact details: MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD. Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

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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.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	181	%
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	7.1	kW	Tj = - 7 °C	COPd	3.11	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.43	-
Tj = + 2 °C	Pdh	4.7	kW	Tj = + 7 °C	COPd	6.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	8.21	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.09	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	3.09	-
Tj = +12 °C	Pdh	3.2	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	3597	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	148	%	
Daily electricity consumption	Q _{elec}	3.340	kWh				
Annual electricity consumption	AEC	736	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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	114	%
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	4.9	kW	Tj = - 7 °C	COPd	2.69	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	3.30	-
Tj = + 2 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.74	-
Tj = + 7 °C	Pdh	4.3	kW	Tj = bivalent temperature	COPd	1.51	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.46	-
Tj = +12 °C	Pdh	3.1	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	6.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	6.8	kW	Rated heat output (*)	Psup	2.0	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors	-	2220	m ³ /h
Capacity control	variable						
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	6768	kWh				

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

Contact details	MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.	Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.
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The identification and signature of the person empowered to bind the supplier;

Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

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

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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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	145	%
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 _{d,h}	4.8	kW	T _j = - 7 °C	COP _d	3.48	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	4.04	-
T _j = + 2 °C	P _{d,h}	3.8	kW	T _j = + 7 °C	COP _d	5.56	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = +12 °C	COP _d	7.56	-
T _j = + 7 °C	P _{d,h}	4.5	kW	T _j = bivalent temperature	COP _d	2.23	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.82	-
T _j = +12 °C	P _{d,h}	3.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.30	-
Degradation co-efficient (**)	C _{d,h}	0.96	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	6.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	6.8	kW	Rated heat output (*)	P _{sup}	2.0	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	5347	kWh				

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

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	166	%
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 _{d,h}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{d,h}	-	-	T _j = + 2 °C	COP _d	1.88	-
T _j = + 2 °C	P _{d,h}	8.0	kW	T _j = + 7 °C	COP _d	3.58	-
Degradation co-efficient (**)	C _{d,h}	1.00	-	T _j = +12 °C	COP _d	6.08	-
T _j = + 7 °C	P _{d,h}	5.2	kW	T _j = bivalent temperature	COP _d	1.88	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.88	-
T _j = +12 °C	P _{d,h}	4.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{d,h}	0.98	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{d,h}	8.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{d,h}	8.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	2534	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	162	%	
Daily electricity consumption	Q _{elec}	3.070	kWh				
Annual electricity consumption	AEC	675	kWh				

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

(***) If the declared TOL is lower than the T_{designh} of the considered climate then the outdoor dry bulb temperature T_j is equal to T_{designh}.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	225	%
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	COPd	3.75	-
Tj = + 2 °C	Pdh	8.0	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.40	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.75	-
Tj = +12 °C	Pdh	4.7	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2220	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	1876	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	162	%	
Daily electricity consumption	Q _{elec}	3.070	kWh				
Annual electricity consumption	AEC	675	kWh				

Contact details

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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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	135	%
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	7.1	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	4.3	kW	Tj = + 7 °C	COPd	4.91	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.05	-
Tj = + 7 °C	Pdh	5.3	kW	Tj = bivalent temperature	COPd	1.97	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.97	-
Tj = +12 °C	Pdh	3.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	4793	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	148	%	
Daily electricity consumption	Q _{elec}	3.340	kWh				
Annual electricity consumption	AEC	736	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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	181	%
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}	7.1	kW	T _j = - 7 °C	COP _d	3.11	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = + 2 °C	COP _d	4.43	-
T _j = + 2 °C	P _{dh}	4.7	kW	T _j = + 7 °C	COP _d	6.00	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = +12 °C	COP _d	8.21	-
T _j = + 7 °C	P _{dh}	5.1	kW	T _j = bivalent temperature	COP _d	3.09	-
Degradation co-efficient (**)	C _{dh}	0.98	-	T _j = operation limit temperature (***)	COP _d	3.09	-
T _j = +12 °C	P _{dh}	3.2	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dh}	0.96	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dh}	8.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dh}	8.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-10	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			
Capacity control				Rated air flow rate, outdoors			
variable				-			
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA	2220			
Annual energy consumption	Q _{HE}	3597	kWh	m ³ /h			

For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	η_{wh}	148	%
Daily electricity consumption	Q _{elec}	3.340	kWh				
Annual electricity consumption	AEC	736	kWh				

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(**) If C_{dh} is not determined by measurement then the default degradation coefficient is C_{dh} = 0,9.

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	114	%
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 _{d,h}	4.9	kW	T _j = - 7 °C	COP _d	2.69	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = + 2 °C	COP _d	3.30	-
T _j = + 2 °C	P _{d,h}	3.5	kW	T _j = + 7 °C	COP _d	4.78	-
Degradation co-efficient (**)	C _{d,h}	0.99	-	T _j = +12 °C	COP _d	6.74	-
T _j = + 7 °C	P _{d,h}	4.3	kW	T _j = bivalent temperature	COP _d	1.51	-
Degradation co-efficient (**)	C _{d,h}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.46	-
T _j = +12 °C	P _{d,h}	3.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.52	-
Degradation co-efficient (**)	C _{d,h}	0.97	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{d,h}	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{d,h}	6.0	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{d,h}	6.8	kW	Rated heat output (*)	P _{sup}	2.0	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P _{OFF}	0.015	kW	Thermostat-off mode	P _{TO}	0.015	kW
Thermostat-off mode	P _{TO}	0.015	kW	Standby mode	P _{SB}	0.015	kW
Standby mode	P _{SB}	0.015	kW	Crankcase heater mode	P _{CK}	0.000	kW
Crankcase heater mode	P _{CK}	0.000	kW	Other items			

Capacity control	variable			Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA				
Annual energy consumption	Q _{HE}	6768	kWh				

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

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(**) If C_{d,h} is not determined by measurement then the default degradation coefficient is C_{d,h} = 0,9.

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	145	%
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	4.8	kW	Tj = - 7 °C	COPd	3.48	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 °C	COPd	4.04	-
Tj = + 2 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 °C	COPd	7.56	-
Tj = + 7 °C	Pdh	4.5	kW	Tj = bivalent temperature	COPd	2.23	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.82	-
Tj = +12 °C	Pdh	3.1	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.30	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-28	°C
Tj = bivalent temperature	Pdh	6.7	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	6.0	kW	Supplementary heater			
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	6.8	kW	Rated heat output (*)	Psup	2.0	kW
Bivalent temperature	Tbiv	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	°C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Rated air flow rate, outdoors			
Off mode	P _{OFF}	0.015	kW			2220	m ³ /h
Thermostat-off mode	P _{TO}	0.015	kW	Capacity control			
Standby mode	P _{SB}	0.015	kW	variable			
Crankcase heater mode	P _{CK}	0.000	kW	Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA
Other items				Annual energy consumption	Q _{HE}	5347	kWh

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

Contact details
 MITSUBISHI ELECTRIC AIR CODITIONING 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;
 Atsushi EDAYOSHI
 The signature is signed in the average climate / medium-temperature section.
 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.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	166	%
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	COPd	1.88	-
Tj = + 2 °C	Pdh	8.0	kW	Tj = + 7 °C	COPd	3.58	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	6.08	-
Tj = + 7 °C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	1.88	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.88	-
Tj = +12 °C	Pdh	4.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items	Capacity control	variable	Rated air flow rate, outdoors	-	2220	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 56	dBA			
Annual energy consumption	Q _{HE}	2534	kWh			

For heat pump combination heater:						
Declared load profile	L			Water heating energy efficiency	η_{wh}	162 %
Daily electricity consumption	Q _{elec}	3.070	kWh			
Annual electricity consumption	AEC	675	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-SHWM80VAA(-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	8.0	kW	Seasonal space heating energy efficiency	η_s	225	%
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	COPd	3.75	-
Tj = + 2 °C	Pdh	8.0	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	7.40	-
Tj = + 7 °C	Pdh	5.1	kW	Tj = bivalent temperature	COPd	3.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.75	-
Tj = +12 °C	Pdh	4.7	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	8.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	8.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items	Capacity control	variable	Rated air flow rate, outdoors	-	2220	m ³ /h
	Sound power level, indoors/outdoors	L _{WA}	41 / 56	dB(A)		
	Annual energy consumption	Q _{HE}	1876	kWh		

For heat pump combination heater:						
Declared load profile	L			Water heating energy efficiency	η_{wh}	162 %
Daily electricity consumption	Q _{elec}	3.070	kWh			
Annual electricity consumption	AEC	675	kWh			

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