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Indoor unit E*ST20D-****D
Outdoor unit PUD-SHWM140VAA(-BS)



A++



A+



41 dB

62 dB



- 14 kW
- 14 kW
- 14 kW

2019

811/2013

BH79V003H61



Mitsubishi Electric Erp Directive Related Product Information: erp.mitsubishielectric.eu/erp

Table with columns for Outdoor unit, Indoor unit, and various performance metrics (kW, kWh, %). It is organized into sections for medium-temperature application and low-temperature application, with sub-sections for different indoor unit types (EHST, ERST, EHSD, ERSD).

Details and precautions on installation, maintenance and assembly can be found in the installation and/or operation manuals. This information is based on COMMISSION DELEGATED REGULATION (EU) No 813/2013.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	134	%
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}	12.4	kW	T _j = - 7 °C	COP _d	2.15	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	7.5	kW	T _j = + 2 °C	COP _d	3.15	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	6.3	kW	T _j = + 7 °C	COP _d	4.96	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	4.0	kW	T _j = +12 °C	COP _d	6.90	-
Degradation co-efficient (**)	C _{dh}	0.97	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	1.80	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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}	0.0	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	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	8315	kWh
Rated air flow rate, outdoors - 3000 m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.420	kWh
Annual electricity consumption	AEC	752	kWh
Water heating energy efficiency η_{wh} 145 %			

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

(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	179	%
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}	12.4	kW	T _j = - 7 °C	COP _d	2.76	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	7.6	kW	T _j = + 2 °C	COP _d	4.34	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.2	kW	T _j = + 7 °C	COP _d	6.27	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.4	kW	T _j = +12 °C	COP _d	9.00	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	2.69	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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}	0.0	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	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	6265	kWh
Rated air flow rate, outdoors			
		3000	m ³ /h

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.420	kWh
Annual electricity consumption	AEC	752	kWh
Water heating energy efficiency			
	η_{wh}	145	%

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

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	112	%
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}	8.5	kW	T _j = - 7 °C	COP _d	2.51	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 2 °C	COP _d	3.17	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	4.4	kW	T _j = + 7 °C	COP _d	4.31	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.0	kW	T _j = +12 °C	COP _d	6.41	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	11.8	kW	T _j = bivalent temperature	COP _d	1.51	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.51	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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 (*)	P _{sup}	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	11287	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	4.100	kWh
Annual electricity consumption	AEC	902	kWh
Water heating energy efficiency			
η_{wh}			
120			
%			

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

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	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 _{dh}	8.3	kW	T _j = - 7 °C	COP _d	3.59	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 2 °C	COP _d	3.91	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	4.6	kW	T _j = + 7 °C	COP _d	5.05	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.1	kW	T _j = +12 °C	COP _d	7.39	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	11.8	kW	T _j = bivalent temperature	COP _d	2.03	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.07	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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 (*)	P _{sup}	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	8726	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	4.100	kWh
Annual electricity consumption	AEC	902	kWh
Water heating energy efficiency			
η_{wh}			
120			
%			

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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	155	%
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	P _{dh}	14.0	kW	T _j = + 2 °C	COP _d	1.95	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	8.8	kW	T _j = + 7 °C	COP _d	3.24	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.5	kW	T _j = +12 °C	COP _d	5.50	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	1.95	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	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 (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	4667	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.080	kWh
Annual electricity consumption	AEC	678	kWh
Water heating energy efficiency			
η_{wh}			
161			
%			

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

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	224	%
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	P _{dh}	14.0	kW	T _j = + 2 °C	COP _d	3.05	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	9.0	kW	T _j = + 7 °C	COP _d	5.08	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.1	kW	T _j = +12 °C	COP _d	7.18	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	3.05	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	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 (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	3236	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.080	kWh
Annual electricity consumption	AEC	678	kWh
Water heating energy efficiency			
η_{wh}			
161			
%			

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(*) 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(T_j).

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

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	134	%
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}	12.4	kW	T _j = - 7 °C	COP _d	2.15	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	7.5	kW	T _j = + 2 °C	COP _d	3.15	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	6.3	kW	T _j = + 7 °C	COP _d	4.96	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	4.0	kW	T _j = +12 °C	COP _d	6.90	-
Degradation co-efficient (**)	C _{dh}	0.97	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	1.80	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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}	0.0	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	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	8315	kWh
Rated air flow rate, outdoors - 3000 m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.420	kWh
Annual electricity consumption	AEC	752	kWh
Water heating energy efficiency η_{wh} 145 %			

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(*) 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(T_j).

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

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	179	%
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}	12.4	kW	T _j = - 7 °C	COP _d	2.76	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	7.6	kW	T _j = + 2 °C	COP _d	4.34	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.2	kW	T _j = + 7 °C	COP _d	6.27	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.4	kW	T _j = +12 °C	COP _d	9.00	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	2.69	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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}	0.0	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	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)				
Annual energy consumption	Q _{HE}	6265	kWh				
For heat pump combination heater:				Water heating energy efficiency			
Declared load profile		L		η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	112	%
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}	8.5	kW	T _j = - 7 °C	COP _d	2.51	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 2 °C	COP _d	3.17	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	4.4	kW	T _j = + 7 °C	COP _d	4.31	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.0	kW	T _j = +12 °C	COP _d	6.41	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	11.8	kW	T _j = bivalent temperature	COP _d	1.51	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.51	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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 (*)	P _{sup}	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	11287	kWh
Rated air flow rate, outdoors - 3000 m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	4.100	kWh
Annual electricity consumption	AEC	902	kWh
Water heating energy efficiency η_{wh} 120 %			

Contact details
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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	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 _{dh}	8.3	kW	T _j = - 7 °C	COP _d	3.59	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 2 °C	COP _d	3.91	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	4.6	kW	T _j = + 7 °C	COP _d	5.05	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.1	kW	T _j = +12 °C	COP _d	7.39	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	11.8	kW	T _j = bivalent temperature	COP _d	2.03	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.07	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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 (*)	P _{sup}	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	8726	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	4.100	kWh
Annual electricity consumption	AEC	902	kWh
Water heating energy efficiency			
η_{wh}			
120			
%			

Contact details
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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	155	%
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	14.0	kW	Tj = + 2 °C	COPd	1.95	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	8.8	kW	Tj = + 7 °C	COPd	3.24	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	5.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.95	-
Tj = operation limit temperature	Pdh	9.6	kW	Tj = operation limit temperature	COPd	1.55	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°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 (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	4667	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.080	kWh
Annual electricity consumption	AEC	678	kWh
Water heating energy efficiency			
η_{wh}			
161			
%			

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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	224	%
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	P _{dh}	14.0	kW	T _j = + 2 °C	COP _d	3.05	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	9.0	kW	T _j = + 7 °C	COP _d	5.08	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.1	kW	T _j = +12 °C	COP _d	7.18	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	3.05	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	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 (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	3236	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.080	kWh
Annual electricity consumption	AEC	678	kWh
Water heating energy efficiency			
η_{wh}			
161			
%			

Contact details
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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	134	%
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}	12.4	kW	T _j = - 7 °C	COP _d	2.15	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	7.5	kW	T _j = + 2 °C	COP _d	3.15	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	6.3	kW	T _j = + 7 °C	COP _d	4.96	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	4.0	kW	T _j = +12 °C	COP _d	6.90	-
Degradation co-efficient (**)	C _{dh}	0.97	-				
T _j = bivalent temperature	P _{dh}	14.0	kW	T _j = bivalent temperature	COP _d	1.80	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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}	0.0	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	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)				
Annual energy consumption	Q _{HE}	8315	kWh				
For heat pump combination heater:				Water heating energy efficiency			
Declared load profile		L		η_{wh}	145	%	
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

Contact details
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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	179	%
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	12.4	kW	Tj = - 7 °C	COPd	2.76	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	7.6	kW	Tj = + 2 °C	COPd	4.34	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.2	kW	Tj = + 7 °C	COPd	6.27	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.4	kW	Tj = +12 °C	COPd	9.00	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	2.69	-
Tj = operation limit temperature	Pdh	9.6	kW	Tj = operation limit temperature	COPd	1.55	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-10	°C	Operation limit temperature	TOL	-28	°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}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	6265	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.420	kWh
Annual electricity consumption	AEC	752	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	112	%
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}	8.5	kW	T _j = - 7 °C	COP _d	2.51	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 2 °C	COP _d	3.17	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	4.4	kW	T _j = + 7 °C	COP _d	4.31	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.0	kW	T _j = +12 °C	COP _d	6.41	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	11.8	kW	T _j = bivalent temperature	COP _d	1.51	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.51	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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 (*)	P _{sup}	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)				
Annual energy consumption	Q _{HE}	11287	kWh				

For heat pump combination heater:							
Declared load profile		L		Water heating energy efficiency	η_{wh}	120	%
Daily electricity consumption	Q _{elec}	4.100	kWh				
Annual electricity consumption	AEC	902	kWh				

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

(*) 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.

Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	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 _{dh}	8.3	kW	T _j = - 7 °C	COP _d	3.59	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 2 °C	COP _d	3.91	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	4.6	kW	T _j = + 7 °C	COP _d	5.05	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.1	kW	T _j = +12 °C	COP _d	7.39	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	11.8	kW	T _j = bivalent temperature	COP _d	2.03	-
T _j = operation limit temperature	P _{dh}	9.6	kW	T _j = operation limit temperature	COP _d	1.55	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.07	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-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 (*)	P _{sup}	3.3	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items				Rated air flow rate, outdoors	-	3000	m ³ /h
Capacity control	variable						
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)				
Annual energy consumption	Q _{HE}	8726	kWh				

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	120	%
Declared load profile	L						
Daily electricity consumption	Q _{elec}	4.100	kWh				
Annual electricity consumption	AEC	902	kWh				

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Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	155	%
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	14.0	kW	Tj = + 2 °C	COPd	1.95	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	8.8	kW	Tj = + 7 °C	COPd	3.24	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	5.50	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.95	-
Tj = operation limit temperature	Pdh	9.6	kW	Tj = operation limit temperature	COPd	1.55	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°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 (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	4667	kWh
Rated air flow rate, outdoors - 3000 m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.080	kWh
Annual electricity consumption	AEC	678	kWh
Water heating energy efficiency η_{wh} 161 %			

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Model(s):	Outdoor unit:	PUD-SHWM140VAA(-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	14.0	kW	Seasonal space heating energy efficiency	η_s	224	%
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	14.0	kW	Tj = + 2 °C	COPd	3.05	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	9.0	kW	Tj = + 7 °C	COPd	5.08	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.18	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	3.05	-
Tj = operation limit temperature	Pdh	9.6	kW	Tj = operation limit temperature	COPd	1.55	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°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 (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB(A)
Annual energy consumption	Q _{HE}	3236	kWh
Rated air flow rate, outdoors			
-			
3000			
m ³ /h			

For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q _{elec}	3.080	kWh
Annual electricity consumption	AEC	678	kWh
Water heating energy efficiency			
η_{wh}			
161			
%			

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