

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM140YAA(-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	ηs	134	%
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	2.15	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 2 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	6.3	kW	Tj = + 7 °C	COPd	4.96	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.0	kW	Tj = +12 °C	COPd	6.90	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.80	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	1.80	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	8455	kWh				

For heat pump combination heater:

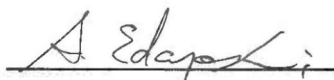
Declared load profile	L			Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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.

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	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	ηs	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	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	4.30	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.2	kW	Tj = + 7 °C	COPd	6.20	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	5.4	kW	Tj = +12 °C	COPd	9.00	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	2.69	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	2.69	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	6416	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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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-SHWM140YAA(-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	ηs	112	%
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	8.5	kW	Tj = - 7 °C	COPd	2.63	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	4.4	kW	Tj = + 7 °C	COPd	4.40	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.0	kW	Tj = +12 °C	COPd	6.41	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.8	kW	Tj = bivalent temperature	COPd	1.51	-
Tj = operation limit temperature (***)	Pdh	10.7	kW	Tj = operation limit temperature (***)	COPd	1.53	-
Tj = − 15 °C (if TOL < − 20 °C)	Pdh	12.0	kW	Tj = − 15 °C (if TOL < − 20 °C)	COPd	1.51	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	11977	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	η_{wh}	120	%
Daily electricity consumption	Qelec	4.100	kWh			
Annual electricity consumption	AEC	902	kWh			

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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.

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	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	144	%
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	8.3	kW	Tj = - 7 °C	COPd	3.65	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	4.6	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.39	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.8	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature (***)	Pdh	10.7	kW	Tj = operation limit temperature (***)	COPd	1.79	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	12.0	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.07	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	9372	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	η_{wh}	120	%
Daily electricity consumption	Qelec	4.100	kWh			
Annual electricity consumption	AEC	902	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-SHWM140YAA(-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	ηs	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	3.29	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	5.52	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.95	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	1.95	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	4746	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

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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-SHWM140YAA(-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	223	%
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	5.18	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.23	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	3.05	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	3.05	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	3316	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM140YAA(-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.

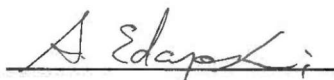
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Rated heat output (*)	Prated	14.0	kW	Seasonal space heating energy efficiency	ηs	134	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	12.4	kW	Tj = - 7 °C	COPd	2.15	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 2 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	6.3	kW	Tj = + 7 °C	COPd	4.96	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.0	kW	Tj = +12 °C	COPd	6.90	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.80	-
Tj = operation limit temperature (****)	Pdh	14.0	kW	Tj = operation limit temperature (****)	COPd	1.80	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW		Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	8455	kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	ηwh	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	kWh				

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM140YAA(-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	ηs	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	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	4.30	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.2	kW	Tj = + 7 °C	COPd	6.20	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	5.4	kW	Tj = +12 °C	COPd	9.00	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	2.69	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	2.69	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	6416	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Qelec	3.420	kWh				
Annual electricity consumption	AEC	752	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-SHWM140YAA(-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 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	8.5	kW	Tj = - 7 °C	COPd	2.63	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	4.4	kW	Tj = + 7 °C	COPd	4.40	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.0	kW	Tj = +12 °C	COPd	6.41	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.8	kW	Tj = bivalent temperature	COPd	1.51	-
Tj = operation limit temperature (***)	Pdh	10.7	kW	Tj = operation limit temperature (***)	COPd	1.53	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	12.0	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	1.51	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	11977	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			

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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-SHWM140YAA(-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	144	%
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	8.3	kW	Tj = - 7 °C	COPd	3.65	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	4.6	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.39	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.8	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature (***)	Pdh	10.7	kW	Tj = operation limit temperature (***)	COPd	1.79	-
Tj = − 15 °C (if TOL < − 20 °C)	Pdh	12.0	kW	Tj = − 15 °C (if TOL < − 20 °C)	COPd	2.07	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	9372	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			

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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-SHWM140YAA(-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	3.29	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	5.52	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.95	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	1.95	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	4746	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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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-SHWM140YAA(-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	223	%
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	5.18	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.23	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	3.05	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	3.05	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	3316	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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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-SHWM140YAA(-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	ηs	134	%
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	2.15	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 2 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	6.3	kW	Tj = + 7 °C	COPd	4.96	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.0	kW	Tj = +12 °C	COPd	6.90	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.80	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	1.80	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	8455	kWh			

For heat pump combination heater:

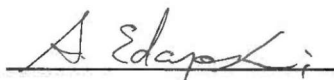
Declared load profile	L		Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Q _{elec}	3.420	kWh			
Annual electricity consumption	AEC	752	kWh			

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-SHWM140YAA(-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	ηs	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	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	4.30	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.2	kW	Tj = + 7 °C	COPd	6.20	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	5.4	kW	Tj = +12 °C	COPd	9.00	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	2.69	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	2.69	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	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	dBA				
Annual energy consumption	Q _{HE}	6416	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	145	%
Daily electricity consumption	Q _{elec}	3.420	kWh				
Annual electricity consumption	AEC	752	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-SHWM140YAA(-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 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	8.5	kW	Tj = - 7 °C	COPd	2.63	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	4.4	kW	Tj = + 7 °C	COPd	4.40	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.0	kW	Tj = +12 °C	COPd	6.41	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.8	kW	Tj = bivalent temperature	COPd	1.51	-
Tj = operation limit temperature (***)	Pdh	10.7	kW	Tj = operation limit temperature (***)	COPd	1.53	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	12.0	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	1.51	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	11977	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	η_{wh}	120	%
Daily electricity consumption	Qelec	4.100	kWh			
Annual electricity consumption	AEC	902	kWh			

Contact details

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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

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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-SHWM140YAA(-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	144	%
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	8.3	kW	Tj = - 7 °C	COPd	3.65	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.2	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	4.6	kW	Tj = + 7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.39	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.8	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature (***)	Pdh	10.7	kW	Tj = operation limit temperature (***)	COPd	1.79	-
Tj = − 15 °C (if TOL < − 20 °C)	Pdh	12.0	kW	Tj = − 15 °C (if TOL < − 20 °C)	COPd	2.07	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.3	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable		Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA			
Annual energy consumption	Q _{HE}	9372	kWh			

For heat pump combination heater:

Declared load profile	L		Water heating energy efficiency	η_{wh}	120	%
Daily electricity consumption	Qelec	4.100	kWh			
Annual electricity consumption	AEC	902	kWh			

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM140YAA(-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	3.29	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	5.52	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	1.95	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	1.95	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	4746	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-SHWM140YAA(-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	223	%
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	5.18	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.1	kW	Tj = +12 °C	COPd	7.23	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	14.0	kW	Tj = bivalent temperature	COPd	3.05	-
Tj = operation limit temperature (***)	Pdh	14.0	kW	Tj = operation limit temperature (***)	COPd	3.05	-
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}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m³/h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dBA				
Annual energy consumption	Q _{HE}	3316	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	161	%
Daily electricity consumption	Qelec	3.080	kWh				
Annual electricity consumption	AEC	678	kWh				

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