

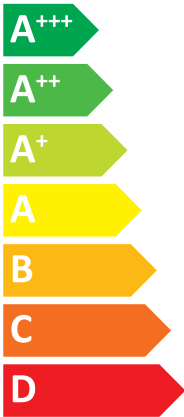


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Indoor unit E*ST20D-****D
Outdoor unit PUD-SHWM140VAA(-BS)



A++



A+



41 dB

62 dB



- 14 kW
- 14 kW
- 14 kW

2019

811/2013

BH79V003H61



PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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 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	COPd	3.15	-
Tj = +2 °C	Pdh	7.5	kW	Tj = +7 °C	COPd	4.96	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.90	-
Tj = +7 °C	Pdh	6.3	kW	Tj = bivalent temperature	COPd	1.80	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.80	-
Tj = +12 °C	Pdh	4.0	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	8421	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	136	%
Daily electricity consumption	Qelec	3.630	kWh				
Annual electricity consumption	AEC	799	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEM EUROPE LTD.

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

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



 Kengo TAKAHASHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

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

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating 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-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 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	COPd	4.30	-
Tj = +2 °C	Pdh	7.6	kW	Tj = +7 °C	COPd	6.27	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	9.00	-
Tj = +7 °C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.69	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.69	-
Tj = +12 °C	Pdh	5.4	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	6367	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	799	kWh				

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-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	2.63	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = + 2 °C	COP _d	3.30	-
T _j = + 2 °C	P _{dH}	5.2	kW	T _j = + 7 °C	COP _d	4.40	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	6.41	-
T _j = + 7 °C	P _{dH}	4.4	kW	T _j = bivalent temperature	COP _d	1.51	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.53	-
T _j = +12 °C	P _{dH}	5.0	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.51	-
Degradation co-efficient (**)	C _{dH}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{dH}	11.8	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dH}	10.7	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{dH}	12.0	kW	Rated heat output (*)	P _{sup}	3.3	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	11952	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	113	%
Daily electricity consumption	Q _{elec}	4.320	kWh				
Annual electricity consumption	AEC	950	kWh				

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

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-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	3.65	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = + 2 °C	COP _d	4.05	-
T _j = + 2 °C	P _{dH}	5.2	kW	T _j = + 7 °C	COP _d	5.15	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	7.39	-
T _j = + 7 °C	P _{dH}	4.6	kW	T _j = bivalent temperature	COP _d	2.03	-
Degradation co-efficient (**)	C _{dH}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.79	-
T _j = +12 °C	P _{dH}	5.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.07	-
Degradation co-efficient (**)	C _{dH}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{dH}	11.8	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dH}	10.7	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{dH}	12.0	kW	Rated heat output (*)	P _{sup}	3.3	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	9320	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	113	%
Daily electricity consumption	Q _{elec}	4.320	kWh				
Annual electricity consumption	AEC	950	kWh				

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

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-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	COP _d	1.95	-
T _j = + 2 °C	P _{dh}	14.0	kW	T _j = + 7 °C	COP _d	3.27	-
Degradation co-efficient (**)	C _{dh}	1.00	-	T _j = +12 °C	COP _d	5.50	-
T _j = + 7 °C	P _{dh}	8.8	kW	T _j = bivalent temperature	COP _d	1.95	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.95	-
T _j = +12 °C	P _{dh}	5.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dh}	0.99	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dh}	14.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dh}	14.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	4725	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	158	%
Daily electricity consumption	Q _{elec}	3.140	kWh				
Annual electricity consumption	AEC	691	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-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 Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = +2 °C	COPd	3.05	-
Tj = +2 °C	Pdh	14.0	kW	Tj = +7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	7.18	-
Tj = +7 °C	Pdh	9.0	kW	Tj = bivalent temperature	COPd	3.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.05	-
Tj = +12 °C	Pdh	5.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	3294	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	158	%
Daily electricity consumption	Qelec	3.140	kWh				
Annual electricity consumption	AEC	691	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-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	COP _d	3.15	-
T _j = +2 °C	P _{dH}	7.5	kW	T _j = +7 °C	COP _d	4.96	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	6.90	-
T _j = +7 °C	P _{dH}	6.3	kW	T _j = bivalent temperature	COP _d	1.80	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.80	-
T _j = +12 °C	P _{dH}	4.0	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dH}	0.97	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dH}	14.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dH}	14.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-10	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	8421	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	136	%
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	799	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-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 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	COPd	4.30	-
Tj = +2 °C	Pdh	7.6	kW	Tj = +7 °C	COPd	6.27	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	9.00	-
Tj = +7 °C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.69	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.69	-
Tj = +12 °C	Pdh	5.4	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items	Capacity control	variable	Rated air flow rate, outdoors	-	3000	m ³ /h
	Sound power level, indoors/outdoors	L _{WA} 41 / 62				
	Annual energy consumption	Q _{HE} 6367				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Qelec	3.630	kWh				
Annual electricity consumption	AEC	799	kWh				

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

The identification and signature of the person empowered to bind the supplier; Kengo TAKAHASHI
 The signature is signed in the average climate / medium-temperature section. Manager, Quality Assurance Department
 UNITED KINGDOM

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	2.63	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = +2 °C	COP _d	3.30	-
T _j = +2 °C	P _{dH}	5.2	kW	T _j = +7 °C	COP _d	4.40	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	6.41	-
T _j = +7 °C	P _{dH}	4.4	kW	T _j = bivalent temperature	COP _d	1.51	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.53	-
T _j = +12 °C	P _{dH}	5.0	kW	T _j = -15 °C (if TOL < -20 °C)	COP _d	1.51	-
Degradation co-efficient (**)	C _{dH}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{dH}	11.8	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dH}	10.7	kW	Supplementary heater			
T _j = -15 °C (if TOL < -20 °C)	P _{dH}	12.0	kW	Rated heat output (*)	P _{sup}	3.3	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	11952	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	113	%
Daily electricity consumption	Q _{elec}	4.320	kWh				
Annual electricity consumption	AEC	950	kWh				

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

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUD-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	3.65	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = + 2 °C	COP _d	4.05	-
T _j = + 2 °C	P _{dH}	5.2	kW	T _j = + 7 °C	COP _d	5.15	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	7.39	-
T _j = + 7 °C	P _{dH}	4.6	kW	T _j = bivalent temperature	COP _d	2.03	-
Degradation co-efficient (**)	C _{dH}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.79	-
T _j = +12 °C	P _{dH}	5.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.07	-
Degradation co-efficient (**)	C _{dH}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{dH}	11.8	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dH}	10.7	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{dH}	12.0	kW	Rated heat output (*)	P _{sup}	3.3	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	9320	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	113	%
Daily electricity consumption	Q _{elec}	4.320	kWh				
Annual electricity consumption	AEC	950	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	COPd	1.95	-
Tj = +2 °C	Pdh	14.0	kW	Tj = +7 °C	COPd	3.27	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.50	-
Tj = +7 °C	Pdh	8.8	kW	Tj = bivalent temperature	COPd	1.95	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.95	-
Tj = +12 °C	Pdh	5.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	4725	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	158	%
Daily electricity consumption	Qelec	3.140	kWh				
Annual electricity consumption	AEC	691	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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 Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	-	kW	Tj = -7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = +2 °C	COPd	3.05	-
Tj = +2 °C	Pdh	14.0	kW	Tj = +7 °C	COPd	5.15	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	7.18	-
Tj = +7 °C	Pdh	9.0	kW	Tj = bivalent temperature	COPd	3.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.05	-
Tj = +12 °C	Pdh	5.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	3294	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	158	%
Daily electricity consumption	Qelec	3.140	kWh				
Annual electricity consumption	AEC	691	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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 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	COPd	3.15	-
Tj = +2 °C	Pdh	7.5	kW	Tj = +7 °C	COPd	4.96	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.90	-
Tj = +7 °C	Pdh	6.3	kW	Tj = bivalent temperature	COPd	1.80	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.80	-
Tj = +12 °C	Pdh	4.0	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.97	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	3000	m ³ /h	
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	8421	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Qelec	3.630	kWh				
Annual electricity consumption	AEC	799	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	COPd	4.30	-
Tj = +2 °C	Pdh	7.6	kW	Tj = +7 °C	COPd	6.27	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	9.00	-
Tj = +7 °C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.69	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	2.69	-
Tj = +12 °C	Pdh	5.4	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	14.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	14.0	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	°C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	6367	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	L			η_{wh}	136	%	
Daily electricity consumption	Q _{elec}	3.630	kWh				
Annual electricity consumption	AEC	799	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-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	2.63	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = +2 °C	COP _d	3.30	-
T _j = +2 °C	P _{dH}	5.2	kW	T _j = +7 °C	COP _d	4.40	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = +12 °C	COP _d	6.41	-
T _j = +7 °C	P _{dH}	4.4	kW	T _j = bivalent temperature	COP _d	1.51	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.53	-
T _j = +12 °C	P _{dH}	5.0	kW	T _j = -15 °C (if TOL < -20 °C)	COP _d	1.51	-
Degradation co-efficient (**)	C _{dH}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{dH}	11.8	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dH}	10.7	kW	Supplementary heater			
T _j = -15 °C (if TOL < -20 °C)	P _{dH}	12.0	kW	Rated heat output (*)	P _{sup}	3.3	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C	Power consumption in modes other than active mode			
Off mode				P _{OFF}			
Thermostat-off mode				P _{TO}			
Standby mode				P _{SB}			
Crankcase heater mode				P _{CK}			

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	11952	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	113	%
Daily electricity consumption	Q _{elec}	4.320	kWh				
Annual electricity consumption	AEC	950	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEM EUROPE LTD.

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

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

Kengo TAKAHASHI

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.

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	3.65	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = + 2 °C	COP _d	4.05	-
T _j = + 2 °C	P _{dh}	5.2	kW	T _j = + 7 °C	COP _d	5.15	-
Degradation co-efficient (**)	C _{dh}	0.99	-	T _j = +12 °C	COP _d	7.39	-
T _j = + 7 °C	P _{dh}	4.6	kW	T _j = bivalent temperature	COP _d	2.03	-
Degradation co-efficient (**)	C _{dh}	0.98	-	T _j = operation limit temperature (***)	COP _d	1.79	-
T _j = +12 °C	P _{dh}	5.1	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.07	-
Degradation co-efficient (**)	C _{dh}	0.98	-	Operation limit temperature	TOL	-28	°C
T _j = bivalent temperature	P _{dh}	11.8	kW	Heating water operating limit temperature	WTOL	60	°C
T _j = operation limit temperature (***)	P _{dh}	10.7	kW	Supplementary heater			
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	12.0	kW	Rated heat output (*)	P _{sup}	3.3	kW
Bivalent temperature	T _{biv}	-16	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	9320	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	113	%
Daily electricity consumption	Q _{elec}	4.320	kWh				
Annual electricity consumption	AEC	950	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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 T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dH}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{dH}	-	-	T _j = + 2 °C	COP _d	1.95	-
T _j = + 2 °C	P _{dH}	14.0	kW	T _j = + 7 °C	COP _d	3.27	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = +12 °C	COP _d	5.50	-
T _j = + 7 °C	P _{dH}	8.8	kW	T _j = bivalent temperature	COP _d	1.95	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = operation limit temperature (***)	COP _d	1.95	-
T _j = +12 °C	P _{dH}	5.5	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dH}	0.99	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dH}	14.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dH}	14.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	4725	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	158	%
Daily electricity consumption	Q _{elec}	3.140	kWh				
Annual electricity consumption	AEC	691	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-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 T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dH}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{dH}	-	-	T _j = + 2 °C	COP _d	3.05	-
T _j = + 2 °C	P _{dH}	14.0	kW	T _j = + 7 °C	COP _d	5.15	-
Degradation co-efficient (**)	C _{dH}	1.00	-	T _j = +12 °C	COP _d	7.18	-
T _j = + 7 °C	P _{dH}	9.0	kW	T _j = bivalent temperature	COP _d	3.05	-
Degradation co-efficient (**)	C _{dH}	0.99	-	T _j = operation limit temperature (***)	COP _d	3.05	-
T _j = +12 °C	P _{dH}	5.1	kW	Operation limit temperature	TOL	-28	°C
Degradation co-efficient (**)	C _{dH}	0.98	-	Heating water operating limit temperature	WTOL	60	°C
T _j = bivalent temperature	P _{dH}	14.0	kW	Supplementary heater			
T _j = operation limit temperature (***)	P _{dH}	14.0	kW	Rated heat output (*)	P _{sup}	0.0	kW
Bivalent temperature	T _{biv}	2	°C	Type of energy input	Electrical		
Reference design conditions for space heating	T _{designh}	2	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.015	kW				
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	3000	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 62	dB				
Annual energy consumption	Q _{HE}	3294	kWh				

For heat pump combination heater:

Declared load profile	L			Water heating energy efficiency	η_{wh}	158	%
Daily electricity consumption	Q _{elec}	3.140	kWh				
Annual electricity consumption	AEC	691	kWh				

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