

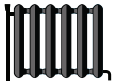


**ENERG**  
енергия · ενεργεια

Y IJA  
IE IA

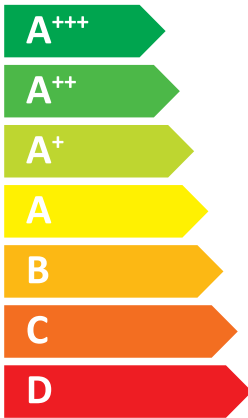


Indoor unit E\*SD-\*\*\*\*D  
Outdoor unit PUD-SHWM120VAA(-BS)



55 °C

35 °C



A<sup>++</sup>

A<sup>+++</sup>

**41** dB

**60** dB

■ 12	■ 12
■ <b>12</b>	■ <b>12</b>
■ 12	■ 12
kW	kW

2019

811/2013

BH79V004H08



Table with 5 columns: English, Russian, English, Russian, English. The table lists various energy-related terms and their translations across multiple rows, covering categories like energy, electricity, and power generation.

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-****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:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10.6	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2.14	-
Degradation co-efficient (**)	C <sub>dh</sub>	1.00	-				
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6.5	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	3.25	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	5.3	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	4.82	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = +12 °C	P <sub>dh</sub>	4.3	kW	T <sub>j</sub> = +12 °C	COP <sub>d</sub>	6.94	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.98	-				
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	12.0	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	1.87	-
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	9.2	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.56	-
T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	P <sub>dh</sub>	-	kW	T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T <sub>designh</sub>	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7068	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-****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:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10.6	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2.85	-
Degradation co-efficient (**)	C <sub>dh</sub>	1.00	-				
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6.5	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	4.51	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	5.6	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	5.89	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.98	-				
T <sub>j</sub> = +12 °C	P <sub>dh</sub>	4.4	kW	T <sub>j</sub> = +12 °C	COP <sub>d</sub>	8.00	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.97	-				
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	12.0	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.77	-
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	9.2	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.56	-
T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	P <sub>dh</sub>	-	kW	T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T <sub>designh</sub>	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	5354	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-****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:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	115	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	4.4	kW	Tj = + 2 °C	COPd	3.19	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	4.58	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.88	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.52	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	9563	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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



Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-****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:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.34	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.43	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	2.10	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.15	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7333	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-****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:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	2.03	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.35	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.59	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW	Type of energy input	Electrical		
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items

Capacity control		variable		Rated air flow rate, outdoors	-	2640	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)				
Annual energy consumption	Q <sub>HE</sub>	3901	kWh				

For heat pump combination heater:

Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh				
Annual electricity consumption	AEC	-	kWh				

Contact details

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

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

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



Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-****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:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	231	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	5.17	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.46	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.30	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	2688	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-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:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.25	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.82	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.94	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.87	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7068	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-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:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10.6	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2.85	-
Degradation co-efficient (**)	C <sub>dh</sub>	1.00	-				
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6.5	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	4.51	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	5.6	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	5.89	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.98	-				
T <sub>j</sub> = +12 °C	P <sub>dh</sub>	4.4	kW	T <sub>j</sub> = +12 °C	COP <sub>d</sub>	8.00	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.97	-				
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	12.0	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.77	-
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	9.2	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.56	-
T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	P <sub>dh</sub>	-	kW	T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T <sub>designh</sub>	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	2640	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)				
Annual energy consumption	Q <sub>HE</sub>	5354	kWh				

For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh				
Annual electricity consumption	AEC	-	kWh				

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-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:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	115	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	4.4	kW	Tj = + 2 °C	COPd	3.19	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	4.58	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.88	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.52	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	9563	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-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:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.34	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.43	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	2.10	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.15	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7333	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-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:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	2.03	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.35	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.59	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	3901	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHSD-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:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	231	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	5.17	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.46	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.30	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	2688	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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



Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-****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:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.25	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.82	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.94	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.87	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7068	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-****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:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	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	10.6	kW	Tj = - 7 °C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	4.51	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.6	kW	Tj = + 7 °C	COPd	5.89	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	8.00	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.77	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	5354	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-****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:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	115	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	4.4	kW	Tj = + 2 °C	COPd	3.19	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	4.58	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.88	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.52	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	9563	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-****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:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	7.3	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	3.67	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	4.5	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	4.02	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	3.9	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	5.34	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.98	-				
T <sub>j</sub> = +12 °C	P <sub>dh</sub>	5.5	kW	T <sub>j</sub> = +12 °C	COP <sub>d</sub>	7.43	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.98	-				
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10.1	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.10	-
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	9.2	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.56	-
T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	P <sub>dh</sub>	10.2	kW	T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	COP <sub>d</sub>	2.15	-
Bivalent temperature	T <sub>biv</sub>	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T <sub>designh</sub>	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items				Rated air flow rate, outdoors	-	2640	m <sup>3</sup> /h
Capacity control	variable						
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)				
Annual energy consumption	Q <sub>HE</sub>	7333	kWh				

For heat pump combination heater:				Water heating energy efficiency	$\eta_{wh}$	-	%
Declared load profile	-						
Daily electricity consumption	Q <sub>elec</sub>	-	kWh				
Annual electricity consumption	AEC	-	kWh				

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-****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:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	2.03	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.35	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.59	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	3901	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-****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:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	231	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	5.17	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.46	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.30	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	2688	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-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:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	10.6	kW	Tj = - 7 °C	COPd	2.14	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.25	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.82	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.94	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.87	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7068	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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



Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-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:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	P <sub>dh</sub>	10.6	kW	T <sub>j</sub> = - 7 °C	COP <sub>d</sub>	2.85	-
Degradation co-efficient (**)	C <sub>dh</sub>	1.00	-				
T <sub>j</sub> = + 2 °C	P <sub>dh</sub>	6.5	kW	T <sub>j</sub> = + 2 °C	COP <sub>d</sub>	4.51	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.99	-				
T <sub>j</sub> = + 7 °C	P <sub>dh</sub>	5.6	kW	T <sub>j</sub> = + 7 °C	COP <sub>d</sub>	5.89	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.98	-				
T <sub>j</sub> = +12 °C	P <sub>dh</sub>	4.4	kW	T <sub>j</sub> = +12 °C	COP <sub>d</sub>	8.00	-
Degradation co-efficient (**)	C <sub>dh</sub>	0.97	-				
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	12.0	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.77	-
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	9.2	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.56	-
T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	P <sub>dh</sub>	-	kW	T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	COP <sub>d</sub>	-	-
Bivalent temperature	T <sub>biv</sub>	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T <sub>designh</sub>	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	2640	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)				
Annual energy consumption	Q <sub>HE</sub>	5354	kWh				

For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh				
Annual electricity consumption	AEC	-	kWh				

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-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:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	115	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	2.56	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	4.4	kW	Tj = + 2 °C	COPd	3.19	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.8	kW	Tj = + 7 °C	COPd	4.58	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.88	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.52	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.52	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	9563	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-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:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	7.3	kW	Tj = - 7 °C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	4.02	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.34	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.43	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	2.10	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.15	-
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 <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	2.4	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	7333	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-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:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	2.03	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.35	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.59	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.03	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	3901	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERSD-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:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.0	kW	Seasonal space heating energy efficiency	$\eta_s$	231	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	12.0	kW	Tj = + 2 °C	COPd	3.30	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	5.17	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.46	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.30	-
Tj = operation limit temperature	Pdh	9.2	kW	Tj = operation limit temperature	COPd	1.56	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.015	kW	Rated heat output (*)	P <sub>sup</sub>	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.015	kW				
Standby mode	P <sub>SB</sub>	0.015	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
				Type of energy input	Electrical		

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 60	dB(A)
Annual energy consumption	Q <sub>HE</sub>	2688	kWh
Rated air flow rate, outdoors			
-			
2640			
m <sup>3</sup> /h			

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency			
$\eta_{wh}$			
-			
%			

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

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

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