

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-****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.

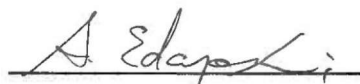
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.7	kW	Seasonal space heating energy efficiency	ηs	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	11.2	kW	Tj = - 7 °C	COPd	2.12	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.8	kW	Tj = + 2 °C	COPd	3.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	4.7	kW	Tj = + 7 °C	COPd	4.79	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.3	kW	Tj = +12 °C	COPd	6.12	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	11.2	kW	Tj = bivalent temperature	COPd	2.12	-
Tj = operation limit temperature (***)	Pdh	10.9	kW	Tj = operation limit temperature (***)	COPd	2.03	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	7621	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	6.580	kWh				
Annual electricity consumption	AEC	1448	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.

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

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



 Atsushi EDAYOSHI
 Manager, Quality Assurance Department
 UNITED KINGDOM

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

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

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

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

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

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

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	Indoor unit:	EHST30C-****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	13.9	kW	Seasonal space heating energy efficiency	ηs	169	%
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	12.3	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 2 °C	COPd	4.06	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.0	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.6	kW	Tj = +12 °C	COPd	7.45	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	12.3	kW	Tj = bivalent temperature	COPd	3.15	-
Tj = operation limit temperature (***)	Pdh	11.8	kW	Tj = operation limit temperature (***)	COPd	2.90	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	2.1	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	6667	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	6.580	kWh				
Annual electricity consumption	AEC	1448	kWh				

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

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

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Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-****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	10.7	kW	Seasonal space heating energy efficiency	ηs	122	%
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	6.5	kW	Tj = - 7 °C	COPd	3.00	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.9	kW	Tj = + 2 °C	COPd	3.35	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.50	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.28	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	1.86	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	1.63	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	8.7	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	1.98	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.7	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8427	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	93	%
Daily electricity consumption	Qelec	8.430	kWh				
Annual electricity consumption	AEC	1855	kWh				

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

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

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	Indoor unit:	EHST30C-****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	13.9	kW	Seasonal space heating energy efficiency	ηs	163	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.4	kW	Tj = - 7 °C	COPd	4.22	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.1	kW	Tj = + 2 °C	COPd	4.38	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.6	kW	Tj = + 7 °C	COPd	5.38	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	7.00	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	11.7	kW	Tj = bivalent temperature	COPd	2.62	-
Tj = operation limit temperature (***)	Pdh	10.4	kW	Tj = operation limit temperature (***)	COPd	2.01	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	11.3	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.80	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.5	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8244	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	93	%
Daily electricity consumption	Qelec	8.430	kWh				
Annual electricity consumption	AEC	1855	kWh				

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-****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	11.2	kW	Seasonal space heating energy efficiency	ηs	157	%
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	11.2	kW	Tj = + 2 °C	COPd	2.29	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.2	kW	Tj = + 7 °C	COPd	3.46	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.1	kW	Tj = +12 °C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.2	kW	Tj = bivalent temperature	COPd	2.29	-
Tj = operation limit temperature (***)	Pdh	11.2	kW	Tj = operation limit temperature (***)	COPd	2.29	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	3745	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	127	%
Daily electricity consumption	Qelec	6.220	kWh				
Annual electricity consumption	AEC	1368	kWh				

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

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

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Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-****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	11.2	kW	Seasonal space heating energy efficiency	ηs	216	%
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	11.2	kW	Tj = + 2 °C	COPd	3.22	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	7.2	kW	Tj = + 7 °C	COPd	5.27	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	6.75	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	11.2	kW	Tj = bivalent temperature	COPd	3.22	-
Tj = operation limit temperature (***)	Pdh	11.2	kW	Tj = operation limit temperature (***)	COPd	3.22	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2700	m³/h	
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	2732	kWh				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency	η_{wh}	127	%
Daily electricity consumption	Q _{elec}	6.220	kWh				
Annual electricity consumption	AEC	1368	kWh				

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

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

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-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	12.7	kW	Seasonal space heating energy efficiency	ηs	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	11.2	kW	Tj = - 7 °C	COPd	2.12	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.8	kW	Tj = + 2 °C	COPd	3.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	4.7	kW	Tj = + 7 °C	COPd	4.79	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.3	kW	Tj = +12 °C	COPd	6.12	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	11.2	kW	Tj = bivalent temperature	COPd	2.12	-
Tj = operation limit temperature (***)	Pdh	10.9	kW	Tj = operation limit temperature (***)	COPd	2.03	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.8	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	7621	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	6.580	kWh				
Annual electricity consumption	AEC	1448	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:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-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	13.9	kW	Seasonal space heating energy efficiency	ηs	169	%
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	12.3	kW	Tj = - 7 °C	COPd	3.15	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	7.5	kW	Tj = + 2 °C	COPd	4.06	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.0	kW	Tj = + 7 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.6	kW	Tj = +12 °C	COPd	7.45	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	12.3	kW	Tj = bivalent temperature	COPd	3.15	-
Tj = operation limit temperature (***)	Pdh	11.8	kW	Tj = operation limit temperature (***)	COPd	2.90	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	2.1	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	6667	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	120	%
Daily electricity consumption	Qelec	6.580	kWh				
Annual electricity consumption	AEC	1448	kWh				

Contact details

MITSUBISHI ELECTRIC AIR CODITIONING SYSTEM EUROPE LTD.

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Atsushi EDAYOSHI

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Manager, Quality Assurance Department

UNITED KINGDOM

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-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	10.7	kW	Seasonal space heating energy efficiency	ηs	122	%
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	6.5	kW	Tj = - 7 °C	COPd	3.00	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	3.9	kW	Tj = + 2 °C	COPd	3.35	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.5	kW	Tj = + 7 °C	COPd	4.50	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.2	kW	Tj = +12 °C	COPd	6.28	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	9.0	kW	Tj = bivalent temperature	COPd	1.86	-
Tj = operation limit temperature (***)	Pdh	9.0	kW	Tj = operation limit temperature (***)	COPd	1.63	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	8.7	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	1.98	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	1.7	kW
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW	Type of energy input	Electrical		
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8427	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	93	%
Daily electricity consumption	Qelec	8.430	kWh				
Annual electricity consumption	AEC	1855	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 T_j 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:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-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	13.9	kW	Seasonal space heating energy efficiency	ηs	163	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	8.4	kW	Tj = - 7 °C	COPd	4.22	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	5.1	kW	Tj = + 2 °C	COPd	4.38	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = + 7 °C	Pdh	3.6	kW	Tj = + 7 °C	COPd	5.38	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = +12 °C	Pdh	4.3	kW	Tj = +12 °C	COPd	7.00	-
Degradation co-efficient (**)	Cdh	0.96	-				
Tj = bivalent temperature	Pdh	11.7	kW	Tj = bivalent temperature	COPd	2.62	-
Tj = operation limit temperature (***)	Pdh	10.4	kW	Tj = operation limit temperature (***)	COPd	2.01	-
Tj = – 15 °C (if TOL < – 20 °C)	Pdh	11.3	kW	Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.80	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	Tdesignh	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	3.5	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m³/h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	8244	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	ηwh	93	%
Daily electricity consumption	Qelec	8.430	kWh				
Annual electricity consumption	AEC	1855	kWh				

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-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	11.2	kW	Seasonal space heating energy efficiency	η_s	157	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{d,h}	-	-				
T _j = + 2 °C	P _{d,h}	11.2	kW	T _j = + 2 °C	COP _d	2.29	-
Degradation co-efficient (**)	C _{d,h}	1.00	-				
T _j = + 7 °C	P _{d,h}	7.2	kW	T _j = + 7 °C	COP _d	3.46	-
Degradation co-efficient (**)	C _{d,h}	0.99	-				
T _j = +12 °C	P _{d,h}	4.1	kW	T _j = +12 °C	COP _d	5.32	-
Degradation co-efficient (**)	C _{d,h}	0.97	-				
T _j = bivalent temperature	P _{d,h}	11.2	kW	T _j = bivalent temperature	COP _d	2.29	-
T _j = operation limit temperature (***)	P _{d,h}	11.2	kW	T _j = operation limit temperature (***)	COP _d	2.29	-
Bivalent temperature	T _{biv}	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	3745	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	η_{wh}	127	%
Daily electricity consumption	Q _{elec}	6.220	kWh				
Annual electricity consumption	AEC	1368	kWh				

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Model(s):	Outdoor unit:	PUHZ-SHW112YAA(-BS)
	Indoor unit:	EHST30C-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	11.2	kW	Seasonal space heating energy efficiency	η_s	216	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{d,h}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{d,h}	-	-				
T _j = + 2 °C	P _{d,h}	11.2	kW	T _j = + 2 °C	COP _d	3.22	-
Degradation co-efficient (**)	C _{d,h}	0.99	-				
T _j = + 7 °C	P _{d,h}	7.2	kW	T _j = + 7 °C	COP _d	5.27	-
Degradation co-efficient (**)	C _{d,h}	0.98	-				
T _j = +12 °C	P _{d,h}	4.3	kW	T _j = +12 °C	COP _d	6.75	-
Degradation co-efficient (**)	C _{d,h}	0.97	-				
T _j = bivalent temperature	P _{d,h}	11.2	kW	T _j = bivalent temperature	COP _d	3.22	-
T _j = operation limit temperature (***)	P _{d,h}	11.2	kW	T _j = operation limit temperature (***)	COP _d	3.22	-
Bivalent temperature	T _{biv}	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control	variable			Rated air flow rate, outdoors	-	2700	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	40 / 60	dBA				
Annual energy consumption	Q _{HE}	2732	kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	η_{wh}	127	%
Daily electricity consumption	Q _{elec}	6.220	kWh				
Annual electricity consumption	AEC	1368	kWh				

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