

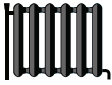


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Indoor unit E*ST30D-****D
Outdoor unit PUD-SHWM120VAA(-BS)



A++



A



41 dB

60 dB



- 12 kW
- 12 kW
- 12 kW

2019

811/2013

BH79V003K21



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

Table with columns for Outdoor unit, Indoor unit, and various performance metrics (kW, kWh, %). Rows are categorized by product type (e.g., PU-D-SHWM100VAA) and application (e.g., For medium-temperature application, For low-temperature application).

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

English	Portuguese	Dutch	French	Italian	Spanish
Energy	Energia	Energie	Energie	Energia	Energía
Power	Potência	Stroom	Potência	Potenza	Potencia
Water	Água	Water	Eau	Acqua	Agua
Oil	Petróleo	olie	Pétrole	Petrolio	Petróleo
Coal	Carvão	Steenkool	Charbon	Carbone	Carbón
Natural Gas	Gás natural	Natuurgas	Gaz naturel	Gas naturale	Gas natural
Renewable Energy	Energia renovável	hernieuwbare energie	Energie renouvelable	Energia rinnovabile	Energía renovable
Solar Energy	Energia solar	Zonnepanelen	Energie solaire	Energia solare	Energía solar
Wind Energy	Energia eólica	Windmol	Energie éolienne	Energia eolica	Energía eólica
Hydro Energy	Energia hídrica	Waterkracht	Energie hydraulique	Energia idroelettrica	Energía hídrica
Geothermal Energy	Energia geotérmica	Warmtebron	Energie géothermique	Energia geotermica	Energía geotérmica
Biomass Energy	Energia biomassa	Biomassa	Energie biomasse	Energia biomassa	Energía biomassa
Nuclear Energy	Energia nuclear	Kernenergie	Energie nucléaire	Energia nucleare	Energía nuclear
Fossil Fuels	Combustíveis fósseis	fossiele brandstoffen	Energie fossile	Energia fossile	Energía fósil
Smart Grid	Rede inteligente	Slimme netten	Réseau intelligent	Smart grid	Red inteligente
Energy Storage	Armazenamento de energia	Energieopslag	Stockage d'énergie	Energy storage	Almacenamiento de energía
Energy Efficiency	Eficiência energética	Energiebesparing	Efficacité énergétique	Energieeffizienz	Eficiencia energética
Energy Security	Segurança energética	Energiezekerheid	Sécurité énergétique	Energia sicura	Seguridad energética
Energy Transition	Transição energética	Energietransitie	Transition énergétique	Energia in transizione	Transición energética
Energy Policy	Política energética	Energiebeleid	Politique énergétique	Energia politica	Política energética
Energy Market	Mercado energético	Energiehandel	Marché de l'énergie	Energia mercato	Mercado energético
Energy Investment	Investimento em energia	Energieinvestering	Investissement énergétique	Energia investimento	Inversión en energía
Energy Innovation	Inovação em energia	Energieinnovatie	Innovation énergétique	Energia innovazione	Innovación en energía
Energy Research	Pesquisa em energia	Energieonderzoek	Recherche énergétique	Energia ricerca	Investigación en energía
Energy Development	Desenvolvimento de energia	Energieontwikkeling	Développement énergétique	Energia sviluppo	Desarrollo de energía
Energy Production	Produção de energia	Energieproductie	Production énergétique	Energia produzione	Producción de energía
Energy Distribution	Distribuição de energia	Energieverdeling	Distribution énergétique	Energia distribuzione	Distribución de energía
Energy Consumption	Consumo de energia	Energieverbruik	Consommation énergétique	Energia consumo	Consumo de energía
Energy Demand	Demanda por energia	Energiebehoefte	Demande énergétique	Energia domanda	Demanda por energía
Energy Supply	Oferta de energia	Energieaanbod	Offre énergétique	Energia offerta	Oferta de energía
Energy Infrastructure	Infraestrutura energética	Energieinfrastructuur	Infrastructure énergétique	Energia infrastruttura	Infraestructura energética
Energy Regulation	Regulação energética	Energiebeheer	Régulation énergétique	Energia regolazione	Regulación energética
Energy Legislation	Legislação energética	Energiewetgeving	Législation énergétique	Energia legislazione	Legislación energética
Energy Standards	Normas energéticas	Energiestandaarden	Normes énergétiques	Energia norme	Normas energéticas
Energy Certification	Certificação energética	Energiecertificaten	Certification énergétique	Energia certificazione	Certificación energética
Energy Auditing	Auditoria energética	Energieaudit	Audit énergétique	Energia audit	Auditoría energética
Energy Modeling	Modelagem energética	Energie-modellering	Modélisation énergétique	Energia modellazione	Modelado de energía
Energy Simulation	Simulação energética	Energie-simulatie	Simulation énergétique	Energia simulazione	Simulación de energía
Energy Forecasting	Predição energética	Energievoorspelling	Prévision énergétique	Energia previsioni	Predicción de energía
Energy Risk Management	Gestão de riscos energéticos	Energie-risicomanagement	Gestion des risques énergétiques	Energia gestione dei rischi	Gestión de riesgos energéticos
Energy Policy Analysis	Análise de políticas energéticas	Energiebeleid-analyse	Analyse de politiques énergétiques	Energia analisi delle politiche	Análisis de políticas energéticas
Energy Market Analysis	Análise de mercado energético	Energie-marketanalyse	Analyse de marchés énergétiques	Energia analisi del mercato	Análisis de mercado energético
Energy Investment Analysis	Análise de investimento energético	Energie-investeringanalyse	Analyse d'investissement énergétique	Energia analisi degli investimenti	Análisis de inversión energética
Energy Innovation Analysis	Análise de inovação energética	Energie-innovatieanalyse	Analyse d'innovation énergétique	Energia analisi dell'innovazione	Análisis de innovación energética
Energy Research Analysis	Análise de pesquisa energética	Energie-onderzoekanalyse	Analyse de recherche énergétique	Energia analisi della ricerca	Análisis de investigación energética
Energy Development Analysis	Análise de desenvolvimento energético	Energie-ontwikkelingsanalyse	Analyse de développement énergétique	Energia analisi dello sviluppo	Análisis de desarrollo energético
Energy Production Analysis	Análise de produção energética	Energie-productieanalyse	Analyse de production énergétique	Energia analisi della produzione	Análisis de producción energética
Energy Distribution Analysis	Análise de distribuição energética	Energie-verdelingsanalyse	Analyse de distribution énergétique	Energia analisi della distribuzione	Análisis de distribución energética
Energy Consumption Analysis	Análise de consumo energético	Energie-verbruikanalyse	Analyse de consommation énergétique	Energia analisi del consumo	Análisis de consumo energético
Energy Demand Analysis	Análise de demanda energética	Energie-behoefteanalyse	Analyse de demande énergétique	Energia analisi della domanda	Análisis de demanda energética
Energy Supply Analysis	Análise de oferta energética	Energie-aanbodanalyse	Analyse de offre énergétique	Energia analisi dell'offerta	Análisis de oferta energética
Energy Infrastructure Analysis	Análise de infraestrutura energética	Energie-infrastructuuranalyse	Analyse d'infrastructure énergétique	Energia analisi dell'infrastruttura	Análisis de infraestructura energética
Energy Regulation Analysis	Análise de regulação energética	Energie-beheeranalyse	Analyse de régulation énergétique	Energia analisi della regolazione	Análisis de regulación energética
Energy Legislation Analysis	Análise de legislação energética	Energie-wetgevinganalyse	Analyse de législation énergétique	Energia analisi della legislazione	Análisis de legislación energética
Energy Standards Analysis	Análise de normas energéticas	Energie-standaardenanalyse	Analyse de normes énergétiques	Energia analisi delle norme	Análisis de normas energéticas
Energy Certification Analysis	Análise de certificação energética	Energie-certificatenanalyse	Analyse de certification énergétique	Energia analisi della certificazione	Análisis de certificación energética
Energy Auditing Analysis	Análise de auditoria energética	Energie-auditanalyse	Analyse de audit énergétique	Energia analisi dell'audit	Análisis de auditoría energética
Energy Modeling Analysis	Análise de modelagem energética	Energie-modelleringanalyse	Analyse de modélisation énergétique	Energia analisi della modellazione	Análisis de modelado de energía
Energy Simulation Analysis	Análise de simulação energética	Energie-simulatieanalyse	Analyse de simulation énergétique	Energia analisi della simulazione	Análisis de simulación de energía
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Energy Risk Management Analysis	Análise de gestão de riscos energéticos	Energie-risicomanagementanalyse	Analyse de gestion des risques énergétiques	Energia analisi della gestione dei rischi	Análisis de gestión de riesgos energéticos
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Energy Risk Management Analysis	Análise de gestão de riscos energéticos	Energie-risicomanagementanalyse	Analyse de gestion des risques énergétiques	Energia analisi della gestione dei rischi	Análisis de gestión de riesgos energéticos

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	10.6	kW	T _j = - 7 °C	COP _d	2.14	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	6.5	kW	T _j = + 2 °C	COP _d	3.25	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.3	kW	T _j = + 7 °C	COP _d	4.82	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	4.3	kW	T _j = +12 °C	COP _d	6.94	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	1.87	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	6.500	kWh
Annual electricity consumption	AEC	1431	kWh
Water heating energy efficiency			
η_{wh}			
121			
%			

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:	EHST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	10.6	kW	T _j = - 7 °C	COP _d	2.85	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	6.5	kW	T _j = + 2 °C	COP _d	4.51	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.6	kW	T _j = + 7 °C	COP _d	5.89	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	8.00	-
Degradation co-efficient (**)	C _{dh}	0.97	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	2.77	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	6.500	kWh
Annual electricity consumption	AEC	1431	kWh
Water heating energy efficiency			
η_{wh}			
121			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	2.4	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	7.730	kWh
Annual electricity consumption	AEC	1700	kWh
Water heating energy efficiency			
η_{wh}			
102			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	7.3	kW	T _j = - 7 °C	COP _d	3.67	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	4.5	kW	T _j = + 2 °C	COP _d	4.02	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.9	kW	T _j = + 7 °C	COP _d	5.34	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.5	kW	T _j = +12 °C	COP _d	7.43	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	10.1	kW	T _j = bivalent temperature	COP _d	2.10	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	10.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.15	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	2.4	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	102	%
Declared load profile	XL						
Daily electricity consumption	Q _{elec}	7.730	kWh				
Annual electricity consumption	AEC	1700	kWh				

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(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	5.470	kWh
Annual electricity consumption	AEC	1203	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	5.470	kWh
Annual electricity consumption	AEC	1203	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-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	12.0	kW	Seasonal space heating energy efficiency	η_s	135	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	10.6	kW	T _j = - 7 °C	COP _d	2.14	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	6.5	kW	T _j = + 2 °C	COP _d	3.25	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.3	kW	T _j = + 7 °C	COP _d	4.82	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	4.3	kW	T _j = +12 °C	COP _d	6.94	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	1.87	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile		XL		η_{wh}	121	%	
Daily electricity consumption	Q _{elec}	6.500	kWh				
Annual electricity consumption	AEC	1431	kWh				

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-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	12.0	kW	Seasonal space heating energy efficiency	η_s	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	6.500	kWh
Annual electricity consumption	AEC	1431	kWh
Water heating energy efficiency			
η_{wh}			
121			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	2.4	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	7.730	kWh
Annual electricity consumption	AEC	1700	kWh
Water heating energy efficiency			
η_{wh}			
102			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-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	12.0	kW	Seasonal space heating energy efficiency	η_s	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	7.3	kW	T _j = - 7 °C	COP _d	3.67	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	4.5	kW	T _j = + 2 °C	COP _d	4.02	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.9	kW	T _j = + 7 °C	COP _d	5.34	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.5	kW	T _j = +12 °C	COP _d	7.43	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	10.1	kW	T _j = bivalent temperature	COP _d	2.10	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	10.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.15	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	2.4	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	102	%
Declared load profile	XL						
Daily electricity consumption	Q _{elec}	7.730	kWh				
Annual electricity consumption	AEC	1700	kWh				

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	5.470	kWh
Annual electricity consumption	AEC	1203	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	EHST30D-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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	5.470	kWh
Annual electricity consumption	AEC	1203	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	6.500	kWh
Annual electricity consumption	AEC	1431	kWh
Water heating energy efficiency			
η_{wh}			
121			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	179	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	10.6	kW	T _j = - 7 °C	COP _d	2.85	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	6.5	kW	T _j = + 2 °C	COP _d	4.51	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.6	kW	T _j = + 7 °C	COP _d	5.89	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	8.00	-
Degradation co-efficient (**)	C _{dh}	0.97	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	2.77	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-10	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	6.500	kWh
Annual electricity consumption	AEC	1431	kWh
Water heating energy efficiency η_{wh} 121 %			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	115	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	7.3	kW	T _j = - 7 °C	COP _d	2.56	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	4.4	kW	T _j = + 2 °C	COP _d	3.19	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.8	kW	T _j = + 7 °C	COP _d	4.58	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	6.88	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	10.1	kW	T _j = bivalent temperature	COP _d	1.52	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	10.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.52	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	2.4	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	102	%
Declared load profile	XL						
Daily electricity consumption	Q _{elec}	7.730	kWh				
Annual electricity consumption	AEC	1700	kWh				

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	7.3	kW	T _j = - 7 °C	COP _d	3.67	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	4.5	kW	T _j = + 2 °C	COP _d	4.02	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.9	kW	T _j = + 7 °C	COP _d	5.34	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.5	kW	T _j = +12 °C	COP _d	7.43	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	10.1	kW	T _j = bivalent temperature	COP _d	2.10	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	10.2	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.15	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	-22	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	2.4	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	7.730	kWh
Annual electricity consumption	AEC	1700	kWh
Water heating energy efficiency			
η_{wh}			
102			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_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 _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	5.470	kWh
Annual electricity consumption	AEC	1203	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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

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

Model(s):	Outdoor unit:	PUD-SHWM120VAA(-BS)
	Indoor unit:	ERST30D-****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	12.0	kW	Seasonal space heating energy efficiency	η_s	231	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	P _{dh}	-	kW	T _j = - 7 °C	COP _d	-	-
Degradation co-efficient (**)	C _{dh}	-	-				
T _j = + 2 °C	P _{dh}	12.0	kW	T _j = + 2 °C	COP _d	3.30	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	7.7	kW	T _j = + 7 °C	COP _d	5.17	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	7.46	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	3.30	-
T _j = operation limit temperature	P _{dh}	9.2	kW	T _j = operation limit temperature	COP _d	1.56	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	-	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	-	-
Bivalent temperature	T _{biv}	2	°C	Operation limit temperature	TOL	-28	°C
Reference design conditions for space heating	T _{designh}	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (*)	P _{sup}	0.0	kW
Thermostat-off mode	P _{TO}	0.015	kW				
Standby mode	P _{SB}	0.015	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
				Type of energy input	Electrical		

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

For heat pump combination heater:			
Declared load profile		XL	
Daily electricity consumption	Q _{elec}	5.470	kWh
Annual electricity consumption	AEC	1203	kWh
Water heating energy efficiency			
η_{wh}			
145			
%			

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

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