

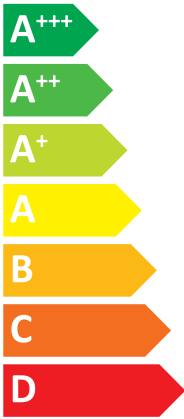
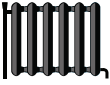


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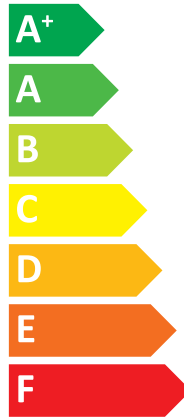
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Indoor unit E*ST30D-****D
Outdoor unit PUD-SWM120VAA(-BS)



A++



A



41 dB

60 dB



- 12 kW
- 12 kW
- 12 kW

2019

811/2013

BH79V003K19



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	Spanish	French	German	Italian	Spanish
Energy	Energia	Energía	Energie	Energie	Energia	Energía
Power	Poderes	Poderes	Puissance	Potenza	Potenza	Potencia
Water	Água	Agua	Eau	Wasser	Acqua	Agua
Oil	Petróleo	Petróleo	Pétrole	Öl	Petrolio	Petróleo
Coal	Carvão	Carbón	Charbon	Kohle	Carbone	Carbón
Natural Gas	Gás Natural	Gas Natural	Gaz naturel	Erdgas	Gas naturale	Gas natural
Renewable Energy	Energia Renovável	Energía renovable	Énergie renouvelable	Erneuerbare Energien	Energie rinnovabile	Energía renovable
Solar Energy	Energia Solar	Energía solar	Énergie solaire	Solarenergie	Energie solare	Energía solar
Wind Energy	Energia Eólica	Energía eólica	Énergie éolienne	Windenergie	Energie eolica	Energía eólica
Hydro Energy	Energia Hidráulica	Energía hidráulica	Énergie hydraulique	Wasserkraft	Energie idraulica	Energía hidráulica
Geothermal Energy	Energia Geotérmica	Energía geotérmica	Énergie géothermique	Geothermie	Energie geotermica	Energía geotérmica
Bioenergy	Energia Biomassa	Energía biomasa	Énergie biomasse	Bioenergie	Energie biomassa	Energía biomasa
Nuclear Energy	Energia Nuclear	Energía nuclear	Énergie nucléaire	Kernenergie	Energie nucleare	Energía nuclear
Energy Efficiency	Eficiência Energética	Eficiencia energética	Efficacité énergétique	Energieeffizienz	Efficienza energetica	Eficiencia energética
Energy Conservation	Conservação de Energia	Conservación de energía	Économie d'énergie	Energieerhaltung	Conservazione dell'energia	Conservación de energía
Energy Storage	Armazenamento de Energia	Almacenamiento de energía	Stockage d'énergie	Energiespeicherung	Conservazione dell'energia	Almacenamiento de energía
Energy Production	Produção de Energia	Producción de energía	Production d'énergie	Energieerzeugung	Produzione di energia	Producción de energía
Energy Distribution	Distribuição de Energia	Distribución de energía	Distribution d'énergie	Energieverteilung	Distribuzione di energia	Distribución de energía
Energy Demand	Demanda de Energia	Demanda de energía	Demande d'énergie	Energiebedarf	Domanda di energia	Demanda de energía
Energy Policy	Política Energética	Política energética	Politique énergétique	Energiepolitik	Politica energetica	Política energética
Energy Security	Segurança Energética	Seguridad energética	Sécurité énergétique	Energiesicherheit	Securezza energetica	Seguridad energética
Energy Transition	Transição Energética	Transición energética	Transition énergétique	Energiewende	Transizione energetica	Transición energética
Energy Investment	Investimento em Energia	Inversión en energía	Investissement énergétique	Energieinvestition	Investimento in energia	Inversión en energía
Energy Research	Pesquisa em Energia	Investigación en energía	Recherche énergétique	Energieforschung	Ricerca in energia	Investigación en energía
Energy Innovation	Inovação em Energia	Innovación en energía	Innovation énergétique	Energieinnovation	Innovazione in energia	Innovación en energía
Energy Market	Mercado de Energia	Mercado de energía	Marché de l'énergie	Energiemarkt	Mercato dell'energia	Mercado de energía
Energy Prices	Preços de Energia	Precios de energía	Prix de l'énergie	Energiepreise	Prezzi dell'energia	Precios de energía
Energy Subsidies	Subsídios de Energia	Subsidios de energía	Subvention énergétique	Energieförderung	Sussidi all'energia	Subsidios de energía
Energy Taxation	Imposto de Energia	Impuesto de energía	Taxe énergétique	Energiebesteuerung	Imposta all'energia	Impuesto de energía
Energy Regulation	Regulação de Energia	Regulación de energía	Régulation énergétique	Energiegesetzgebung	Regolazione dell'energia	Regulación de energía
Energy Legislation	Legislação de Energia	Leyes de energía	Législation énergétique	Energiegesetz	Legge sull'energia	Leyes de energía
Energy Standards	Normas de Energia	Normas de energía	Normes énergétiques	Energiestandards	Norme energetiche	Normas de energía
Energy Certification	Certificação de Energia	Certificación de energía	Certification énergétique	Energiezertifizierung	Certificazione energetica	Certificación de energía
Energy Audits	Auditorias de Energia	Auditorías de energía	Audit énergétique	Energieaudit	Audit energetico	Auditorías de energía
Energy Labels	Rotulagem de Energia	Etiquetado de energía	Étiquette énergétique	Energieetikette	Etichetta energetica	Etiquetado de energía
Energy Monitoring	Monitorização de Energia	Monitorización de energía	Surveillance énergétique	Energieüberwachung	Monitoraggio energetico	Monitorización de energía
Energy Forecasting	Previsão de Energia	Predicción de energía	Prévision énergétique	Energieprognose	Previsione energetica	Predicción de energía
Energy Modeling	Modelagem de Energia	Modelización de energía	Modélisation énergétique	Energiemodellierung	Modellazione energetica	Modelización de energía
Energy Simulation	Simulação de Energia	Simulación de energía	Simulation énergétique	Energie-Simulation	Simulazione energetica	Simulación de energía
Energy Optimization	Otimização de Energia	Optimización de energía	Optimisation énergétique	Energieoptimierung	Ottimizzazione energetica	Optimización de energía
Energy Efficiency Programs	Programas de Eficiência Energética	Programas de eficiencia energética	Programmes d'efficacité énergétique	Energieeffizienzprogramme	Programmi di efficienza energetica	Programas de eficiencia energética
Energy Conservation Programs	Programas de Conservação de Energia	Programas de conservación de energía	Programmes d'économie d'énergie	Energieerhaltungsprogramme	Programmi di conservazione dell'energia	Programas de conservación de energía
Energy Storage Programs	Programas de Armazenamento de Energia	Programas de almacenamiento de energía	Programmes de stockage d'énergie	Energiespeicherprogramme	Programmi di conservazione dell'energia	Programas de almacenamiento de energía
Energy Production Programs	Programas de Produção de Energia	Programas de producción de energía	Programmes de production d'énergie	Energieerzeugungsprogramme	Programmi di produzione di energia	Programas de producción de energía
Energy Distribution Programs	Programas de Distribuição de Energia	Programas de distribución de energía	Programmes de distribution d'énergie	Energieverteilungsprogramme	Programmi di distribuzione di energia	Programas de distribución de energía
Energy Demand Programs	Programas de Demanda de Energia	Programas de demanda de energía	Programmes de demande d'énergie	Energiebedarfsprogramme	Programmi di domanda di energia	Programas de demanda de energía
Energy Policy Programs	Programas de Política Energética	Programas de política energética	Programmes de politique énergétique	Energiepolitikprogramme	Programmi di politica energetica	Programas de política energética
Energy Security Programs	Programas de Segurança Energética	Programas de seguridad energética	Programmes de sécurité énergétique	Energiesicherheitsprogramme	Programmi di sicurezza energetica	Programas de seguridad energética
Energy Transition Programs	Programas de Transição Energética	Programas de transición energética	Programmes de transition énergétique	Energiewendeprogramme	Programmi di transizione energetica	Programas de transición energética
Energy Investment Programs	Programas de Investimento em Energia	Programas de inversión en energía	Programmes d'investissement énergétique	Energieinvestitionsprogramme	Programmi di investimento in energia	Programas de inversión en energía
Energy Research Programs	Programas de Pesquisa em Energia	Programas de investigación en energía	Programmes de recherche énergétique	Energieforschungsprogramme	Programmi di ricerca in energia	Programas de investigación en energía
Energy Innovation Programs	Programas de Inovação em Energia	Programas de innovación en energía	Programmes d'innovation énergétique	Energieinnovationsprogramme	Programmi di innovazione in energia	Programas de innovación en energía
Energy Market Programs	Programas de Mercado de Energia	Programas de mercado de energía	Programmes de marché de l'énergie	Energiemarktprogramme	Programmi di mercato dell'energia	Programas de mercado de energía
Energy Prices Programs	Programas de Preços de Energia	Programas de precios de energía	Programmes de prix de l'énergie	Energiepreisprogramme	Programmi di prezzi dell'energia	Programas de precios de energía
Energy Subsidies Programs	Programas de Subsídios de Energia	Programas de subsidios de energía	Programmes de subvention énergétique	Energieförderungsprogramme	Programmi di sussidi all'energia	Programas de subsidios de energía
Energy Taxation Programs	Programas de Imposto de Energia	Programas de impuestos de energía	Programmes de taxe énergétique	Energiebesteuerungsprogramme	Programmi di imposta all'energia	Programas de impuestos de energía
Energy Regulation Programs	Programas de Regulação de Energia	Programas de regulación de energía	Programmes de régulation énergétique	Energiegesetzgebungsprogramme	Programmi di regolazione dell'energia	Programas de regulación de energía
Energy Legislation Programs	Programas de Legislação de Energia	Programas de leyes de energía	Programmes de législation énergétique	Energiegesetzgebungsprogramme	Programmi di legge sull'energia	Programas de leyes de energía
Energy Standards Programs	Programas de Normas de Energia	Programas de normas de energía	Programmes de normes énergétiques	Energiestandardprogramme	Programmi di norme energetiche	Programas de normas de energía
Energy Certification Programs	Programas de Certificação de Energia	Programas de certificación de energía	Programmes de certification énergétique	Energiezertifizierungsprogramme	Programmi di certificazione energetica	Programas de certificación de energía
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Energy Labels Programs	Programas de Rotulagem de Energia	Programas de etiquetado de energía	Programmes de étiquette énergétique	Energieetikettenprogramme	Programmi di etichetta energetica	Programas de etiquetado de energía
Energy Monitoring Programs	Programas de Monitorização de Energia	Programas de monitorización de energía	Programmes de surveillance énergétique	Energieüberwachungsprogramme	Programmi di monitoraggio energetico	Programas de monitorización de energía
Energy Forecasting Programs	Programas de Previsão de Energia	Programas de predicción de energía	Programmes de prévision énergétique	Energieprognoseprogramme	Programmi di previsione energetica	Programas de predicción de energía
Energy Modeling Programs	Programas de Modelagem de Energia	Programas de modelización de energía	Programmes de modélisation énergétique	Energiemodellierungsprogramme	Programmi di modellazione energetica	Programas de modelización de energía
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Model(s):	Outdoor unit:	PUD-SWM120VAA(-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	129	%
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	1.94	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	6.5	kW	T _j = + 2 °C	COP _d	3.13	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.3	kW	T _j = + 7 °C	COP _d	4.73	-
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}	10.6	kW	T _j = bivalent temperature	COP _d	1.94	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
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}	-7	°C	Operation limit temperature	TOL	-25	°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}	1.8	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}	7377	kWh				

For heat pump combination heater:				Water heating energy efficiency	η_{wh}	121	%
Declared load profile	XL						
Daily electricity consumption	Q _{elec}	6.500	kWh				
Annual electricity consumption	AEC	1431	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(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-SWM120VAA(-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	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	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	5.83	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.86	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	2.85	-
Tj = operation limit temperature	Pdh	8.1	kW	Tj = operation limit temperature	COPd	1.58	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°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}	1.8	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}	5371	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-SWM120VAA(-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	109	%
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	2.43	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	4.4	kW	T _j = + 2 °C	COP _d	3.03	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.8	kW	T _j = + 7 °C	COP _d	4.42	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	6.67	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	8.6	kW	T _j = bivalent temperature	COP _d	1.28	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	8.7	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.25	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-25	°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}	3.8	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}	9994	kWh				

For heat pump combination heater:				Water heating energy efficiency			
Declared load profile		XL		η_{wh}	102	%	
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-SWM120VAA(-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	140	%
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	3.46	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	4.5	kW	T _j = + 2 °C	COP _d	3.81	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.9	kW	T _j = + 7 °C	COP _d	5.13	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.5	kW	T _j = +12 °C	COP _d	7.24	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	10.1	kW	T _j = bivalent temperature	COP _d	1.98	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	10.3	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.03	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-25	°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}	3.3	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}	7717	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-SWM120VAA(-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	150	%
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	1.85	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	7.7	kW	T _j = + 7 °C	COP _d	3.17	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.2	kW	T _j = +12 °C	COP _d	5.31	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	1.85	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
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	-25	°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}	4128	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(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-SWM120VAA(-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	217	%
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	3.24	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	7.7	kW	T _j = + 7 °C	COP _d	4.90	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
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}	12.0	kW	T _j = bivalent temperature	COP _d	3.24	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
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	-25	°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}	2864	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(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-SWM120VAA(-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	129	%
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	1.94	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	6.5	kW	T _j = + 2 °C	COP _d	3.13	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	5.3	kW	T _j = + 7 °C	COP _d	4.73	-
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}	10.6	kW	T _j = bivalent temperature	COP _d	1.94	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
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}	-7	°C	Operation limit temperature	TOL	-25	°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}	1.8	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		Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB(A)				
Annual energy consumption	Q _{HE}	7377	kWh				

For heat pump combination heater:							
Declared load profile		XL		Water heating energy efficiency	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-SWM120VAA(-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	177	%
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	5.83	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	7.86	-
Degradation co-efficient (**)	C _{dh}	0.97	-				
T _j = bivalent temperature	P _{dh}	10.6	kW	T _j = bivalent temperature	COP _d	2.85	-
T _j = operation limit temperature	P _{dh}	8.1	kW	T _j = operation limit temperature	COP _d	1.58	-
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}	-7	°C	Operation limit temperature	TOL	-25	°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}	1.8	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}	5371	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-SWM120VAA(-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	109	%
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	2.43	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	4.4	kW	T _j = + 2 °C	COP _d	3.03	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.8	kW	T _j = + 7 °C	COP _d	4.42	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	6.67	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	8.6	kW	T _j = bivalent temperature	COP _d	1.28	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	8.7	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.25	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-25	°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}	3.8	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}	9994	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-SWM120VAA(-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	140	%
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	3.46	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 2 °C	P _{dh}	4.5	kW	T _j = + 2 °C	COP _d	3.81	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.9	kW	T _j = + 7 °C	COP _d	5.13	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	5.5	kW	T _j = +12 °C	COP _d	7.24	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	10.1	kW	T _j = bivalent temperature	COP _d	1.98	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	10.3	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	2.03	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-25	°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}	3.3	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}	7717	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-SWM120VAA(-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	150	%
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	1.85	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	7.7	kW	T _j = + 7 °C	COP _d	3.17	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = +12 °C	P _{dh}	5.2	kW	T _j = +12 °C	COP _d	5.31	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = bivalent temperature	P _{dh}	12.0	kW	T _j = bivalent temperature	COP _d	1.85	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
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	-25	°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}	4128	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-SWM120VAA(-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	217	%
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	3.24	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 7 °C	P _{dh}	7.7	kW	T _j = + 7 °C	COP _d	4.90	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
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}	12.0	kW	T _j = bivalent temperature	COP _d	3.24	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
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	-25	°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}	2864	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-SWM120VAA(-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	129	%
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	1.94	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	6.5	kW	Tj = + 2 °C	COPd	3.13	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	5.3	kW	Tj = + 7 °C	COPd	4.73	-
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	10.6	kW	Tj = bivalent temperature	COPd	1.94	-
Tj = operation limit temperature	Pdh	8.0	kW	Tj = operation limit temperature	COPd	1.57	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°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}	1.8	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}	7377	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-SWM120VAA(-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	177	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	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	5.83	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	7.86	-
Degradation co-efficient (**)	Cdh	0.97	-				
Tj = bivalent temperature	Pdh	10.6	kW	Tj = bivalent temperature	COPd	2.85	-
Tj = operation limit temperature	Pdh	8.1	kW	Tj = operation limit temperature	COPd	1.58	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	-	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	Operation limit temperature	TOL	-25	°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}	1.8	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}	5371	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-SWM120VAA(-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	109	%
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	2.43	-
Degradation co-efficient (**)	C _{dh}	1.00	-				
T _j = + 2 °C	P _{dh}	4.4	kW	T _j = + 2 °C	COP _d	3.03	-
Degradation co-efficient (**)	C _{dh}	0.99	-				
T _j = + 7 °C	P _{dh}	3.8	kW	T _j = + 7 °C	COP _d	4.42	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = +12 °C	P _{dh}	4.4	kW	T _j = +12 °C	COP _d	6.67	-
Degradation co-efficient (**)	C _{dh}	0.98	-				
T _j = bivalent temperature	P _{dh}	8.6	kW	T _j = bivalent temperature	COP _d	1.28	-
T _j = operation limit temperature	P _{dh}	8.0	kW	T _j = operation limit temperature	COP _d	1.57	-
T _j = - 15 °C (if TOL < - 20 °C)	P _{dh}	8.7	kW	T _j = - 15 °C (if TOL < - 20 °C)	COP _d	1.25	-
Bivalent temperature	T _{biv}	-16	°C	Operation limit temperature	TOL	-25	°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}	3.8	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}	9994	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-SWM120VAA(-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	140	%
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	3.46	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 2 °C	Pdh	4.5	kW	Tj = + 2 °C	COPd	3.81	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	3.9	kW	Tj = + 7 °C	COPd	5.13	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = +12 °C	Pdh	5.5	kW	Tj = +12 °C	COPd	7.24	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	10.1	kW	Tj = bivalent temperature	COPd	1.98	-
Tj = operation limit temperature	Pdh	8.0	kW	Tj = operation limit temperature	COPd	1.57	-
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	10.3	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.03	-
Bivalent temperature	Tbiv	-16	°C	Operation limit temperature	TOL	-25	°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}	3.3	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}	7717	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-SWM120VAA(-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	150	%
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	1.85	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	3.17	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	5.2	kW	Tj = +12 °C	COPd	5.31	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature	Pdh	8.0	kW	Tj = operation limit temperature	COPd	1.57	-
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	-25	°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}	4128	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-SWM120VAA(-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	217	%
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	3.24	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	7.7	kW	Tj = + 7 °C	COPd	4.90	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	4.4	kW	Tj = +12 °C	COPd	6.88	-
Degradation co-efficient (**)	Cdh	0.98	-				
Tj = bivalent temperature	Pdh	12.0	kW	Tj = bivalent temperature	COPd	3.24	-
Tj = operation limit temperature	Pdh	8.0	kW	Tj = operation limit temperature	COPd	1.57	-
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	-25	°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		Rated air flow rate, outdoors	-	2640	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	41 / 60	dB(A)				
Annual energy consumption	Q _{HE}	2864	kWh				

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

Contact details
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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.