



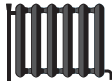
# ENERG

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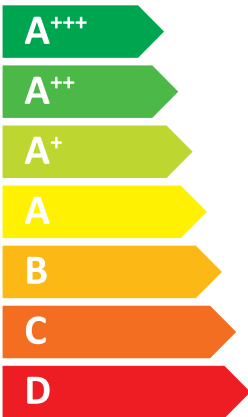
Indoor unit  
Outdoor unit

E\*SD-\*\*\*\*D  
PUZ-SHWM120YAA



55 °C

35 °C



**A++**

**A+++**

**41** dB

**58** dB

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

2019

811/2013

DG79V342H16

1. SPACE HEATER

Table with columns for Outdoor unit, Indoor unit, and performance metrics for medium-temperature and low-temperature applications. Includes rows for models like PUZ-SWM60VAA, PUZ-SWM80VAA, etc.

2. COMBINATION HEATER

Large table with columns for Outdoor unit, Indoor unit, and performance metrics for medium-temperature and low-temperature applications. Includes rows for models like PUZ-SWM60VAA, PUZ-SWM80VAA, etc.



English	Deutsch	Français	Italiano	Espanol
Nederlands	Svenska	Dansk	Português	Ελληνικά
suomi	Čeština	Български	Polski	Ελληνικά
Outdoor unit	Außengerät	unité extérieure	unità esterna	unidad exterior
1	Utomhusenhet	Utenlands enhed	ipodivizija zvezgotzra	Εξωτερική μονάδα
Ulkokeskusyks	Vonkumõhuk	Внешний тепло	unità interna	unidad interior
2	Indoor unit	Unité intérieure	intake interior	Εσωτερική μονάδα
Sisäyksyks	Indoorseinheit	Внутренний тепло	jednica wewnątrzna	Εσωτερική μονάδα
3	Medium-temperature application	l'application à moyenne température	le applicazon a media temperatura	la aplicación de media temperatura
3	middletemperature-toerassing	middletemperatuurtoerassing	a applicazon a media temperatura	la aplicación de media temperatura
keskälämpötilan sovellus	středněteplotní aplikace	среднетемпературное применение	zasobovanie v strednici teploty	la aplicación de baja temperatura
4	Low-temperature application	Niedertemperaturanwendung	l'application à basse température	la aplicación de baja temperatura
4	laidetemperatuur-toerassing	laidetemperatuurtoerassing	aplicazon a baixa temperatura	la aplicación de baja temperatura
madaltemperatuurilise sovelluse	hõiketeraotoni rakendus	низотемпературный применение	zasobovanie v niskoti teploty	la aplicación de baja temperatura
5	Devised lead profile	Audgeroetete lastprofiil	Profil de scutire declivă	Perfil de carga declinado
5	Sprægtøret særdelsprofil	Deklametava žarštevno profiil	Profil de scutire orizontală	Perfil de carga horizontal
5	Ilmoitetty kiertosäädösprofiili	Deklametava žarštevno profiil	Profil de scutire orizontală	Perfil de carga horizontal
6	Seasonal space heating energy efficiency class	la classe d'efficacité énergétique saisonnière	la classe d'efficacité énergétique saisonnière	la clase de eficiencia energética estacional
6	de seizoenruimteverwarming energie-efficiëntieklasse	de seizoenruimteverwarming energie-efficiëntieklasse	la classe d'efficacité énergétique saisonnière	la clase de eficiencia energética estacional
6	Ilmailmaväestön energiatehokkuusluokka	Ilmailmaväestön energiatehokkuusluokka	la classe d'efficacité énergétique saisonnière	la clase de eficiencia energética estacional
7	Water heating energy efficiency class	la classe de l'efficacité énergétique	la classe d'efficacité énergétique	la clase de eficiencia energética
7	de energie-efficiëntieklasse voor waterverwarming	de energie-efficiëntieklasse voor waterverwarming	la classe d'efficacité énergétique	la clase de eficiencia energética
7	vedelämmityksen energiatehokkuusluokka	vedelämmityksen energiatehokkuusluokka	la classe d'efficacité énergétique	la clase de eficiencia energética
8	Rated lead output under average climate conditions	l'ita en moyenne dans des conditions climatiques moyennes	la puissance nominale dans les conditions climatiques moyennes	la potencia nominal en condiciones climáticas medias
8	de nominale warmteafvoer (onder gemiddelde klimaatomstandigheden)	de nominale warmteafvoer (onder gemiddelde klimaatomstandigheden)	la puissance nominale dans les conditions climatiques moyennes	la potencia nominal en condiciones climáticas medias
8	Ilmalämmitysohje (keskimääräisissä ilmastoo-olosuhteissa)	Ilmalämmitysohje (keskimääräisissä ilmastoo-olosuhteissa)	la puissance nominale dans les conditions climatiques moyennes	la potencia nominal en condiciones climáticas medias
9	For space heating, annual energy consumption under average climate conditions	pour le chauffage de l'eau, la consommation annuelle d'électricité (dans les conditions climatiques moyennes)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
9	Ilmailmaväestön vuotuinen energiankulutus (keskimääräisissä ilmastoo-olosuhteissa)	Ilmailmaväestön vuotuinen energiankulutus (keskimääräisissä ilmastoo-olosuhteissa)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
10	For water heating, annual electricity consumption under average climate conditions	pour le chauffage de l'eau, la consommation annuelle d'électricité (dans les conditions climatiques moyennes)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
10	voor waterverwarming, het jaarlijkse elektriciteitsverbruik (onder gemiddelde klimaatomstandigheden)	voor waterverwarming, het jaarlijkse elektriciteitsverbruik (onder gemiddelde klimaatomstandigheden)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
10	vedelämmityksessä vuotuinen sähkökulu (keskimääräisissä ilmastoo-olosuhteissa)	vedelämmityksessä vuotuinen sähkökulu (keskimääräisissä ilmastoo-olosuhteissa)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
11	Seasonal space heating energy efficiency under average climate conditions	la efficacité énergétique saisonnière	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
11	de seizoenruimteverwarming energie-efficiëntie voor gemiddelde klimaatomstandigheden	de seizoenruimteverwarming energie-efficiëntie voor gemiddelde klimaatomstandigheden	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
11	Ilmailmaväestön energiatehokkuus (keskimääräisissä ilmastoo-olosuhteissa)	Ilmailmaväestön energiatehokkuus (keskimääräisissä ilmastoo-olosuhteissa)	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
12	Water heating energy efficiency under average climate conditions	la efficacité énergétique	la efficacité énergétique	la eficiencia energética
12	de energie-efficiëntie voor waterverwarming (onder gemiddelde klimaatomstandigheden)	de energie-efficiëntie voor waterverwarming (onder gemiddelde klimaatomstandigheden)	la efficacité énergétique	la eficiencia energética
12	vedelämmityksen energiatehokkuus (keskimääräisissä ilmastoo-olosuhteissa)	vedelämmityksen energiatehokkuus (keskimääräisissä ilmastoo-olosuhteissa)	la efficacité énergétique	la eficiencia energética
13	Sound power level L <sub>WA, indoor</sub>	der Schalleistungspegel L <sub>WA, in Gebäuden</sub>	le niveau de puissance acoustique L <sub>WA, à l'intérieur</sub>	el nivel de potencia acústica L <sub>WA, en interiores</sub>
13	het geluidsemissiepotentieel L <sub>WA, binnen</sub>	het geluidsemissiepotentieel L <sub>WA, binnen</sub>	le niveau de puissance acoustique L <sub>WA, à l'intérieur</sub>	el nivel de potencia acústica L <sub>WA, en interiores</sub>
13	ääniteho L <sub>WA, sisällä</sub>	ääniteho L <sub>WA, sisällä</sub>	le niveau de puissance acoustique L <sub>WA, à l'intérieur</sub>	el nivel de potencia acústica L <sub>WA, en interiores</sub>
14	Wetken uitstroomd in de dalen	hidradna akustičko ukupno L <sub>WA, ve vlnitnom prostoru</sub>	l'impédance acoustique L <sub>WA, au plafond</sub>	impedancia acústica L <sub>WA, en techos</sub>
14	Wetken uitstroomd in de dalen	hidradna akustičko ukupno L <sub>WA, ve vlnitnom prostoru</sub>	l'impédance acoustique L <sub>WA, au plafond</sub>	impedancia acústica L <sub>WA, en techos</sub>
14	koristaman alustaan kulkuturvapölyn ulkoruokailu	koristaman alustaan kulkuturvapölyn ulkoruokailu	l'impédance acoustique L <sub>WA, au plafond</sub>	impedancia acústica L <sub>WA, en techos</sub>
15	Rated lead output under colder climate conditions	provoza poduze tamo spruku	travaux en vue de la puissance nominale	trabajo en vista de la potencia nominal
15	de nominale warmteafvoer, onder kouder klimaatomstandigheden	de nominale warmteafvoer, onder kouder klimaatomstandigheden	travaux en vue de la puissance nominale	trabajo en vista de la potencia nominal
15	Ilmalämmitysohje (kylmissä ilmastoo-olosuhteissa)	Ilmalämmitysohje (kylmissä ilmastoo-olosuhteissa)	travaux en vue de la puissance nominale	trabajo en vista de la potencia nominal
16	Rated lead output under warmer climate conditions	Normaalilämpötilassa vuotuinen energiankulutus (keskimääräisissä ilmastoo-olosuhteissa)	la puissance nominale dans les conditions climatiques moyennes	la potencia nominal en condiciones climáticas medias
16	de nominale warmteafvoer, onder warmere klimaatomstandigheden	de nominale warmteafvoer, onder warmere klimaatomstandigheden	la puissance nominale dans les conditions climatiques moyennes	la potencia nominal en condiciones climáticas medias
16	Ilmalämmitysohje (lämpimässä ilmastoo-olosuhteissa)	Ilmalämmitysohje (lämpimässä ilmastoo-olosuhteissa)	la puissance nominale dans les conditions climatiques moyennes	la potencia nominal en condiciones climáticas medias
17	For space heating, annual energy consumption under colder climate conditions	pour le chauffage de l'eau, la consommation annuelle d'électricité (dans les conditions climatiques moyennes)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
17	voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder koudere klimaatomstandigheden	voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder koudere klimaatomstandigheden	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
17	vedelämmityksessä vuotuinen energiankulutus kylmissä ilmastoo-olosuhteissa	vedelämmityksessä vuotuinen energiankulutus kylmissä ilmastoo-olosuhteissa	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
18	For space heating, annual energy consumption under warmer climate conditions	pour le chauffage de l'eau, la consommation annuelle d'électricité (dans les conditions climatiques moyennes)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
18	voor ruimteverwarming, het jaarlijkse elektriciteitsverbruik onder warmere klimaatomstandigheden	voor ruimteverwarming, het jaarlijkse elektriciteitsverbruik onder warmere klimaatomstandigheden	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
18	Ilmalämmityksessä vuotuinen energiankulutus lämpimässä ilmastoo-olosuhteissa	Ilmalämmityksessä vuotuinen energiankulutus lämpimässä ilmastoo-olosuhteissa	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
19	For water heating, annual energy consumption under colder climate conditions	pour le chauffage de l'eau, la consommation annuelle d'électricité (dans les conditions climatiques moyennes)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
19	voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder koudere klimaatomstandigheden	voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder koudere klimaatomstandigheden	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
19	vedelämmityksessä vuotuinen sähkökulu kylmissä ilmastoo-olosuhteissa	vedelämmityksessä vuotuinen sähkökulu kylmissä ilmastoo-olosuhteissa	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
20	For water heating, annual energy consumption under warmer climate conditions	pour le chauffage de l'eau, la consommation annuelle d'électricité (dans les conditions climatiques moyennes)	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
20	voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder warmere klimaatomstandigheden	voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder warmere klimaatomstandigheden	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
20	vedelämmityksessä vuotuinen sähkökulu lämpimässä ilmastoo-olosuhteissa	vedelämmityksessä vuotuinen sähkökulu lämpimässä ilmastoo-olosuhteissa	para o aquecimento de água, o consumo anual de electricidade em condições climáticas médias	para calefacción espacial, el consumo anual de electricidad en condiciones climáticas medias
21	Seasonal space heating energy efficiency under colder climate conditions	la efficacité énergétique saisonnière	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
21	de seizoenruimteverwarming energie-efficiëntie voor koudere klimaatomstandigheden	de seizoenruimteverwarming energie-efficiëntie voor koudere klimaatomstandigheden	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
21	Ilmalämmityksessä vuotuinen energiankulutus kylmissä ilmastoo-olosuhteissa	Ilmalämmityksessä vuotuinen energiankulutus kylmissä ilmastoo-olosuhteissa	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
22	Seasonal space heating energy efficiency under warmer climate conditions	la efficacité énergétique saisonnière	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
22	de seizoenruimteverwarming energie-efficiëntie voor warmere klimaatomstandigheden	de seizoenruimteverwarming energie-efficiëntie voor warmere klimaatomstandigheden	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
22	Ilmalämmityksessä vuotuinen energiankulutus lämpimässä ilmastoo-olosuhteissa	Ilmalämmityksessä vuotuinen energiankulutus lämpimässä ilmastoo-olosuhteissa	la efficacité énergétique saisonnière	la eficiencia energética en condiciones climáticas medias
23	Water heating energy efficiency under colder climate conditions	la efficacité énergétique	la efficacité énergétique	la eficiencia energética
23	de energie-efficiëntie voor waterverwarming onder koudere klimaatomstandigheden	de energie-efficiëntie voor waterverwarming onder koudere klimaatomstandigheden	la efficacité énergétique	la eficiencia energética
23	vedelämmityksen energiatehokkuus kylmissä ilmastoo-olosuhteissa	vedelämmityksen energiatehokkuus kylmissä ilmastoo-olosuhteissa	la efficacité énergétique	la eficiencia energética
24	Water heating energy efficiency under warmer climate conditions	la efficacité énergétique	la efficacité énergétique	la eficiencia energética
24	de energie-efficiëntie voor waterverwarming onder warmere klimaatomstandigheden	de energie-efficiëntie voor waterverwarming onder warmere klimaatomstandigheden	la efficacité énergétique	la eficiencia energética
24	vedelämmityksen energiatehokkuus lämpimässä ilmastoo-olosuhteissa	vedelämmityksen energiatehokkuus lämpimässä ilmastoo-olosuhteissa	la efficacité énergétique	la eficiencia energética
25	Sound power level L <sub>WA, outdoor</sub>	der Schalleistungspegel L <sub>WA, im Freien</sub>	le niveau de puissance acoustique L <sub>WA, à l'extérieur</sub>	el nivel de potencia acústica L <sub>WA, en exteriores</sub>
25	het geluidsemissiepotentieel L <sub>WA, buiten</sub>	het geluidsemissiepotentieel L <sub>WA, buiten</sub>	le niveau de puissance acoustique L <sub>WA, à l'extérieur</sub>	el nivel de potencia acústica L <sub>WA, en exteriores</sub>
25	ääniteho L <sub>WA, ulkona</sub>	ääniteho L <sub>WA, ulkona</sub>	le niveau de puissance acoustique L <sub>WA, à l'extérieur</sub>	el nivel de potencia acústica L <sub>WA, en exteriores</sub>

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	136	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 ° C	COPd	3.36	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	4.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	6.32	-
Tj = + 7 ° C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	1.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.78	-
Tj = +12 ° C	Pdh	3.8	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7204	kWh				

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

Contact details  
 MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY  
 Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvarı No:19 Yunusemre - Manisa, Turkey

The identification and signature of the person empowered to bind the supplier:  
  
 Kenichi SAITO  
 Manager, Quality Assurance Department  
 TURKEY

· Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.  
 · Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.  
 (\*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).  
 (\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.  
 (\*\*\*) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	178	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.53	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	6.04	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.02	-
Tj = + 7 ° C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.43	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	2.43	-
Tj = +12 ° C	Pdh	4.0	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C	Power consumption in modes other than active mode			
Off mode				P <sub>OFF</sub>			
Thermostat-off mode				P <sub>TO</sub>			
Standby mode				P <sub>SB</sub>			
Crankcase heater mode				P <sub>CK</sub>			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58		dBA			
Annual energy consumption	Q <sub>HE</sub>	5516		kWh			

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

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY      Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvari No:19 Yunusemre - Manisa, Turkey

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Kenichi SAITO

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TURKEY

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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.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	117	%
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	2.70	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	3.50	-
Tj = + 2 ° C	Pdh	4.4	kW	Tj = + 7 ° C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	7.00	-
Tj = + 7 ° C	Pdh	3.8	kW	Tj = bivalent temperature	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.54	-
Tj = +12 ° C	Pdh	4.4	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.2	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.9	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	9927	kWh				

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

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	149	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	7.3	kW	Tj = - 7 ° C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.30	-
Tj = + 2 ° C	Pdh	4.5	kW	Tj = + 7 ° C	COPd	5.38	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	8.02	-
Tj = + 7 ° C	Pdh	3.9	kW	Tj = bivalent temperature	COPd	2.08	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.56	-
Tj = +12 ° C	Pdh	4.6	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	2.04	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.7	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.4	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7868	kWh				

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

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



**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	2.05	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	3.42	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 ° C	COPd	5.65	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	2.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.05	-
Tj = +12 ° C	Pdh	5.2	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	3995	kWh				

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

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



**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	228	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	3.30	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.46	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.30	-
Tj = +12 ° C	Pdh	4.4	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58		dBA			
Annual energy consumption	Q <sub>HE</sub>	2793		kWh			

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

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	137	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 ° C	COPd	3.36	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	4.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	6.32	-
Tj = + 7 ° C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	1.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.78	-
Tj = +12 ° C	Pdh	3.8	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7123	kWh				

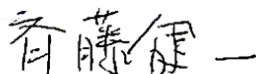
For heat pump combination heater:				Water heating energy efficiency			
Declared load profile	-			$\eta_{wh}$	-	%	
Daily electricity consumption	Q <sub>elec</sub>	-	kWh				
Annual electricity consumption	AEC	-	kWh				

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	181	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.53	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	6.04	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.02	-
Tj = + 7 ° C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.43	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	2.43	-
Tj = +12 ° C	Pdh	4.0	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C	Power consumption in modes other than active mode			
Power consumption in modes other than active mode				Off mode			
Off mode	P <sub>OFF</sub>	0.022	kW	Thermostat-off mode	P <sub>TO</sub>	0.022	kW
Thermostat-off mode	P <sub>TO</sub>	0.022	kW	Standby mode	P <sub>SB</sub>	0.022	kW
Standby mode	P <sub>SB</sub>	0.022	kW	Crankcase heater mode	P <sub>CK</sub>	0.000	kW
Crankcase heater mode	P <sub>CK</sub>	0.000	kW	Other items			
Capacity control				Rated air flow rate, outdoors			
variable				-			
Sound power level, indoors/outdoors				2640			
L <sub>WA</sub>				m <sup>3</sup> /h			
41 / 58							
Annual energy consumption							
Q <sub>HE</sub>							
5435							
kWh							
For heat pump combination heater:							
Declared load profile				Water heating energy efficiency			
-				$\eta_{wh}$			
Daily electricity consumption				-			
Q <sub>elec</sub>							
-							
Annual electricity consumption							
AEC							
-							
kWh							

Other items							
Capacity control				Rated air flow rate, outdoors			
variable				-			
Sound power level, indoors/outdoors				2640			
L <sub>WA</sub>				m <sup>3</sup> /h			
41 / 58							
Annual energy consumption							
Q <sub>HE</sub>							
5435							
kWh							

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

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	118	%
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	2.70	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	3.50	-
Tj = + 2 ° C	Pdh	4.4	kW	Tj = + 7 ° C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	7.00	-
Tj = + 7 ° C	Pdh	3.8	kW	Tj = bivalent temperature	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.54	-
Tj = +12 ° C	Pdh	4.4	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.2	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.9	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	9878	kWh				

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

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY      Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvarı No:19 Yunusemre - Manisa, Turkey

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

Kenichi SAITO

The signature is signed in the average climate / medium-temperature section.      Manager, Quality Assurance Department

TURKEY

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

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

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

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	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	7.3	kW	Tj = - 7 ° C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.30	-
Tj = + 2 ° C	Pdh	4.5	kW	Tj = + 7 ° C	COPd	5.38	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	8.02	-
Tj = + 7 ° C	Pdh	3.9	kW	Tj = bivalent temperature	COPd	2.08	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.56	-
Tj = +12 ° C	Pdh	4.6	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	2.04	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.7	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.4	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7819	kWh				

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

Contact details

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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



**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	163	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	2.05	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	3.42	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 ° C	COPd	5.65	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	2.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.05	-
Tj = +12 ° C	Pdh	5.2	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	3898	kWh				

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

Contact details

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-****D
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	237	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	3.30	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.46	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.30	-
Tj = +12 ° C	Pdh	4.4	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	2696	kWh				

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

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

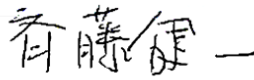
Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	136	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 ° C	COPd	3.36	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	4.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	6.32	-
Tj = + 7 ° C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	1.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.78	-
Tj = +12 ° C	Pdh	3.8	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7204	kWh				

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

Contact details  
 MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY  
 Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvarı No:19 Yunusemre - Manisa, Turkey

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 Kenichi SAITO  
 Manager, Quality Assurance Department  
 TURKEY

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	178	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.53	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	6.04	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.02	-
Tj = + 7 ° C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.43	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	2.43	-
Tj = +12 ° C	Pdh	4.0	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C	Power consumption in modes other than active mode			
Off mode				P <sub>OFF</sub>			
Thermostat-off mode				P <sub>TO</sub>			
Standby mode				P <sub>SB</sub>			
Crankcase heater mode				P <sub>CK</sub>			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58		dBA			
Annual energy consumption	Q <sub>HE</sub>	5516		kWh			

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

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	117	%
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	2.70	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	3.50	-
Tj = + 2 ° C	Pdh	4.4	kW	Tj = + 7 ° C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	7.00	-
Tj = + 7 ° C	Pdh	3.8	kW	Tj = bivalent temperature	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.54	-
Tj = +12 ° C	Pdh	4.4	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.2	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.9	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	9927	kWh				

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

**Contact details**  
 MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY      Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvarı No:19 Yunusemre - Manisa, Turkey

The identification and signature of the person empowered to bind the supplier;  
 Kenichi SAITO  
 Manager, Quality Assurance Department  
 TURKEY

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 (\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.  
 (\*\*\*) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.



**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	149	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	7.3	kW	Tj = - 7 ° C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.30	-
Tj = + 2 ° C	Pdh	4.5	kW	Tj = + 7 ° C	COPd	5.38	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	8.02	-
Tj = + 7 ° C	Pdh	3.9	kW	Tj = bivalent temperature	COPd	2.08	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.56	-
Tj = +12 ° C	Pdh	4.6	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	2.04	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.7	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.4	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7868	kWh				

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

Contact details

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	2.05	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	3.42	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 ° C	COPd	5.65	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	2.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.05	-
Tj = +12 ° C	Pdh	5.2	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	3995	kWh				

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

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 (\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.  
 (\*\*\*) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	EHSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	228	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	3.30	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.46	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.30	-
Tj = +12 ° C	Pdh	4.4	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	2793	kWh				

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

Contact details

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

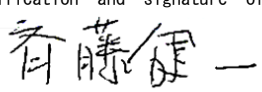
Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	137	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.13	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 ° C	COPd	3.36	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	4.75	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	6.32	-
Tj = + 7 ° C	Pdh	5.0	kW	Tj = bivalent temperature	COPd	1.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = operation limit temperature (***)	COPd	1.78	-
Tj = +12 ° C	Pdh	3.8	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7123	kWh				

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

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	181	%
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	10.7	kW	Tj = - 7 ° C	COPd	2.85	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.53	-
Tj = + 2 ° C	Pdh	6.5	kW	Tj = + 7 ° C	COPd	6.04	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.02	-
Tj = + 7 ° C	Pdh	5.2	kW	Tj = bivalent temperature	COPd	2.43	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	2.43	-
Tj = +12 ° C	Pdh	4.0	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	-10	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-10	° C	Power consumption in modes other than active mode			
Off mode				P <sub>OFF</sub>			
Thermostat-off mode				P <sub>TO</sub>			
Standby mode				P <sub>SB</sub>			
Crankcase heater mode				P <sub>CK</sub>			

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58		dBA			
Annual energy consumption	Q <sub>HE</sub>	5435		kWh			

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

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



**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	118	%
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	2.70	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	3.50	-
Tj = + 2 ° C	Pdh	4.4	kW	Tj = + 7 ° C	COPd	4.78	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	7.00	-
Tj = + 7 ° C	Pdh	3.8	kW	Tj = bivalent temperature	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.54	-
Tj = +12 ° C	Pdh	4.4	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	1.55	-
Degradation co-efficient (**)	Cdh	0.97	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.2	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.9	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	9878	kWh				

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

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	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	7.3	kW	Tj = - 7 ° C	COPd	3.67	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 2 ° C	COPd	4.30	-
Tj = + 2 ° C	Pdh	4.5	kW	Tj = + 7 ° C	COPd	5.38	-
Degradation co-efficient (**)	Cdh	0.98	-	Tj = +12 ° C	COPd	8.02	-
Tj = + 7 ° C	Pdh	3.9	kW	Tj = bivalent temperature	COPd	2.08	-
Degradation co-efficient (**)	Cdh	0.97	-	Tj = operation limit temperature (***)	COPd	1.56	-
Tj = +12 ° C	Pdh	4.6	kW	Tj = - 15 ° C (if TOL < - 20 ° C)	COPd	2.04	-
Degradation co-efficient (**)	Cdh	0.96	-	Operation limit temperature	TOL	-30	° C
Tj = bivalent temperature	Pdh	10.2	kW	Heating water operating limit temperature	WTOL	60	° C
Tj = operation limit temperature (***)	Pdh	8.7	kW	Supplementary heater			
Tj = - 15 ° C (if TOL < - 20 ° C)	Pdh	9.9	kW	Rated heat output (*)	Psup	3.4	kW
Bivalent temperature	Tbiv	-16	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	-22	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	7819	kWh				

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

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY      Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvarı No:19 Yunusemre - Manisa, Turkey

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

Kenichi SAITO

The signature is signed in the average climate / medium-temperature section.      Manager, Quality Assurance Department

TURKEY

- Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.
  - Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.
- (\*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
- (\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.
- (\*\*\*) If the declared TOL is lower than the T designh of the considered climate then the outdoor dry bulb temperature Tj is equal to T designh.

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	163	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	2.05	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	3.42	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 ° C	COPd	5.65	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	2.05	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.05	-
Tj = +12 ° C	Pdh	5.2	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.98	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	3898	kWh				

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

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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

**PRODUCT INFORMATION / TECHNICAL DOCUMENTATION**

Model(s):	Outdoor unit:	PUZ-SHWM120YAA
	Indoor unit:	ERSD-MED
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		no
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12.1	kW	Seasonal space heating energy efficiency	$\eta_s$	237	%
Declared capacity for heating for part load at indoor temperature 20 ° C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 ° C and outdoor temperature Tj			
Tj = - 7 ° C	Pdh	-	kW	Tj = - 7 ° C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = + 2 ° C	COPd	3.30	-
Tj = + 2 ° C	Pdh	12.1	kW	Tj = + 7 ° C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 ° C	COPd	7.46	-
Tj = + 7 ° C	Pdh	7.7	kW	Tj = bivalent temperature	COPd	3.30	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	3.30	-
Tj = +12 ° C	Pdh	4.4	kW	Operation limit temperature	TOL	-30	° C
Degradation co-efficient (**)	Cdh	0.96	-	Heating water operating limit temperature	WTOL	60	° C
Tj = bivalent temperature	Pdh	12.1	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	12.1	kW	Rated heat output (*)	Psup	0.0	kW
Bivalent temperature	Tbiv	2	° C	Type of energy input	Electrical		
Reference design conditions for space heating	Tdesignh	2	° C				
Power consumption in modes other than active mode							
Off mode	P <sub>OFF</sub>	0.022	kW				
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	P <sub>SB</sub>	0.022	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				

Other items				Rated air flow rate, outdoors			
Capacity control	variable			-	2640	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	41 / 58	dBA				
Annual energy consumption	Q <sub>HE</sub>	2696	kWh				

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

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(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

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