Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2						
		Indoor unit:		EHSE-***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	23.0	kW	Seasonal space heating energy efficiency	ηs	127	%			
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	Declared coefficient of performance or primary energy ratio for					
temperature 20 °C and outdoor temperature	Гј			part load at indoor temperature 20 °C and outdoo	or temperatu	re Tj	_			
Tj = - 7 °C	Pdh	20.3	kW	Tj = - 7 °C	COPd	2.10	-			
Degradation co-efficient (**)	Cdh	1.00	-							
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 2 °C	COPd	3.02	-			
Degradation co-efficient (**)	Cdh	1.00	-							
Tj = + 7 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	4.54	-			
Degradation co-efficient (**)	Cdh	0.99	-				•			
Tj = +12 °C	Pdh	13.7	kW	Tj = +12 °C	COPd	5.79	-			
Degradation co-efficient (**)	Cdh	0.99	-				•			
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	1.85	-			
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-			
							ı			
Bivalent temperature	Tbiv	-10	°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 acti	ve mode			Supplementary heater						
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW			
Thermostat-off mode	$P_TO$	0.022	kW							
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical				
Crankcase heater mode	Рск	0.000	kW							
Other items		•		•						
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h			
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				•			
Annual energy consumption	$Q_{HE}$	14615	kWh							
For heat pump combination heater:										
Declared load profile		-		Water heating energy efficiency	ηwh	-	%			
Daily electricity consumption	Qelec	-	kWh				•			
Annual electricity consumption	AEC	-	kWh							
Contact details										
MITSUBISHI ELECTRIC CORPORA				3-18-1, Oshika, Suruga-ku, Shiz	Joka 422-852	28, Japan				
The identification and signature of the person	n empowere	a to bind the	e supplier:	Tomovuki MIWA						

General Manager, Quality Assuarance Department

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	t:	PUHZ-SHW230YKA2				
		Indoor unit:		EHSE-***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	25.0	kW	Seasonal space heating energy efficiency	ηѕ	164	%	
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	nergy ratio fo	or		
temperature 20 °C and outdoor temperature	Гј			part load at indoor temperature 20 °C and outdo	or temperatur	е Тј	•	
Tj = - 7 °C	Pdh	22.1	kW	Tj = - 7 °C	COPd	3.40	-	
Degradation co-efficient (**)	Cdh	1.00	-					
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	3.80	-	
Degradation co-efficient (**)	Cdh	0.99	-					
Tj = + 7 °C	Pdh	12.0	kW	Tj = + 7 °C	COPd	5.32	-	
Degradation co-efficient (**)	Cdh	0.99	-					
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-	
Degradation co-efficient (**)	Cdh	0.99	-					
Tj = bivalent temperature	Pdh	25.0	kW	Tj = bivalent temperature	COPd	2.19	-	
Tj = operation limit temperature (***)	Pdh	25.0	kW	Tj = operation limit temperature (***)	COPd	2.19	-	
Bivalent temperature	Tbiv	-10	.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 act	ve mode	T		Supplementary heater		1	Г	
Off mode	$P_{OFF}$	0.022	kW	Rated heat output (*)	Psup	0.0	kW	
Thermostat-off mode	$P_{TO}$	0.022	kW					
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items								
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h	
Sound power level, indoors/outdoors	$L_WA$	45 / 75	dBA					
Annual energy consumption	$Q_{HE}$	12351	kWh					
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	ηwh	-	%	
Daily electricity consumption	Qelec	-	kWh					
Annual electricity consumption	AEC	-	kWh					
Contact details								
MITSUBISHI ELECTRIC CORPORA				3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852	28, Japan		
The identification and signature of the person	n empowere	a to bind the	e supplier;	Tomoyuki MIWA				
The signature is signed in the average clim	ate / mediu	ım-temperatı	ure section.	General Manager, Quality Assuarance Departme	ent			

he signature is signed in the average climate / medium-temperature section.

Shizuoka JAPAN

· 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2				
		Indoor unit:		EHSE-***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	23.0	kW	Seasonal space heating energy efficiency	ηs	123	%	
Declared capacity for heating for part load a	at indoor			Declared coefficient of performance or primary e	nergy ratio fo	or	l .	
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatui	re Tj		
Tj = - 7 °C	Pdh	13.9	kW	Tj = - 7 °C	COPd	3.40	_	
Degradation co-efficient (**)	Cdh	1.00	-				ı	
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 2 °C	COPd	3.20	_	
Degradation co-efficient (**)	Cdh	0.99	-				•	
Tj = + 7 °C	Pdh	11.6	kW	Tj = + 7 °C	COPd	4.90	-	
Degradation co-efficient (**)	Cdh	0.99	-					
Tj = +12 °C	Pdh	14.2	kW	Tj = +12 °C	COPd	6.15	-	
Degradation co-efficient (**)	Cdh	0.99	-				•	
Tj = bivalent temperature	Pdh	19.4	kW	Tj = bivalent temperature	COPd	1.52	-	
Tj = operation limit temperature (***)	Pdh	17.9	kW	Tj = operation limit temperature (***)	COPd	1.39	-	
Tj = -15 °C (if TOL < $-20$ °C)	Pdh	18.8	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-	
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 act	ive mode	-	-	Supplementary heater				
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	5.1	kW	
Thermostat-off mode	$P_{TO}$	0.022	kW			-	-	
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items								
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				-	
Annual energy consumption	$Q_{HE}$	17960	kWh					
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	ηwh	-	%	
Daily electricity consumption	Qelec	-	kWh				=	
Annual electricity consumption	AEC	-	kWh					
Contact details								
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852	28, Japan		
The identification and signature of the perso	n empowere	d to bind the	e supplier;	Tomovuki MIWA				
The simulation is singled in the success of the			un anatis :-	Tomoyuki MIWA	ant			

The signature is signed in the average climate / medium-temperature section. General Manager, Quality Assuarance Departn

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2				
		Indoor unit:		EHSE-***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	25.0	kW	Seasonal space heating energy efficiency	ηs	162	%	
Declared capacity for heating for part load a	at indoor	!		Declared coefficient of performance or primary e	nergy ratio fo	or	1	
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatur	re Tj		
Tj = - 7 °C	Pdh	15.1	kW	Tj = - 7 °C	COPd	5.00	-	
Degradation co-efficient (**)	Cdh	0.99	-					
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	4.00	-	
Degradation co-efficient (**)	Cdh	0.99	-				•	
Tj = + 7 °C	Pdh	12.2	kW	Tj = + 7 °C	COPd	5.56	-	
Degradation co-efficient (**)	Cdh	0.99	-				•	
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-	
Degradation co-efficient (**)	Cdh	0.99	-				•	
Tj = bivalent temperature	Pdh	21.1	kW	Tj = bivalent temperature	COPd	2.09	-	
Tj = operation limit temperature (***)	Pdh	17.7	kW	Tj = operation limit temperature (***)	COPd	1.52	] -	
Tj = $-15$ °C (if TOL < $-20$ °C)	Pdh	20.4	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-	
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 act	ive mode			Supplementary heater				
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	7.3	kW	
Thermostat-off mode	$P_{TO}$	0.022	kW					
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items		•						
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				•	
Annual energy consumption	$Q_{HE}$	14904	kWh					
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	ηwh	-	%	
Daily electricity consumption	Qelec	-	kWh				•	
Annual electricity consumption	AEC	-	kWh					
Contact details								
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shizi	Joka 422-852	28, Japan		
The identification and signature of the perso	n empowere	d to bind the	supplier;	Tomoyuki MIWA				
The signature is signed in the average clim	nate / mediu	m-temperatu	ire section.	General Manager, Quality Assuarance Departme	ent			

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2				
		Indoor unit:		EHSE-***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	22.8	kW	Seasonal space heating energy efficiency	ηs	149	%	
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	nergy ratio for	or		
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatu	ire Tj		
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-	
Degradation co-efficient (**)	Cdh	-	-				1	
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	1.66	-	
Degradation co-efficient (**)	Cdh	1.00	-				ı	
Tj = + 7 °C	Pdh	14.7	kW	Tj = + 7 °C	COPd	3.16	-	
Degradation co-efficient (**)	Cdh	1.00	-				I	
Tj = +12 °C	Pdh	13.6	kW	Tj = +12 °C	COPd	5.33	-	
Degradation co-efficient (**)	Cdh	0.99	-				1	
Tj = bivalent temperature	Pdh	22.8	kW	Tj = bivalent temperature	COPd	1.66	-	
Tj = operation limit temperature (***)	Pdh	22.8	kW	Tj = operation limit temperature (***)	COPd	1.66	-	
			ı				I	
Bivalent temperature	Tbiv	2	_ ℃	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 act	ive mode	'		Supplementary heater				
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW	
Thermostat-off mode	P <sub>TO</sub>	0.022	kW					
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items								
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				1	
Annual energy consumption	$Q_{HE}$	8037	kWh					
For heat pump combination heater:		'						
Declared load profile		-		Water heating energy efficiency	ηwh	-	%	
Daily electricity consumption	Qelec	-	kWh				ı	
Annual electricity consumption	AEC	-	kWh					
Contact details		•	,					
MITSUBISHI ELECTRIC CORPOR	ATION SHIZ	JOKA WORK	S	3-18-1, Oshika, Suruga-ku, Shizi	uoka 422-85	28, Japan		
The identification and signature of the perso	n empowere	d to bind the	e supplier;	Tomovuki MIMA				
The signature is signed in the average clim	nate / mediu	m-temperati	ire section	Tomoyuki MIWA  General Manager, Quality Assuarance Departme	ent			
	iate / mediu	temperati		Oli Laban	. •			

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2					
		Indoor unit:		EHSE-***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	ltem	Symbol	Value	Unit		
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	ηs	199	%		
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	nergy ratio fo	or			
temperature 20 °C and outdoor temperature	Τј			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	23.0	kW	Tj = + 2 °C	COPd	2.47	-		
Degradation co-efficient (**)	Cdh	1.00	-						
Tj = + 7 °C	Pdh	14.8	kW	Tj = + 7 °C	COPd	4.63	-		
Degradation co-efficient (**)	Cdh	0.99	-						
Tj = +12 °C	Pdh	14.3	kW	Tj = +12 °C	COPd	6.41	-		
Degradation co-efficient (**)	Cdh	0.99	-						
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	2.47	-		
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	2.47	-		
			•						
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 act	ive mode			Supplementary heater					
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW		
Thermostat-off mode	$P_{TO}$	0.022	kW			•			
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items		•							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h		
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA						
Annual energy consumption	$Q_{HE}$	6076	kWh						
For heat pump combination heater:									
Declared load profile		-		Water heating energy efficiency	ηwh	-	%		
Daily electricity consumption	Qelec	-	kWh						
Annual electricity consumption	AEC	-	kWh						
Contact details									
MITSUBISHI ELECTRIC CORPORA				3-18-1, Oshika, Suruga-ku, Shiz	Joka 422-85:	28, Japan			
The identification and signature of the person	n empowere	u to bind the	e supplier;	Tomoyuki MIWA					
The signature is signed in the average clim	ate / mediu	m-temperati	ure section.	General Manager, Quality Assuarance Departme	ent				
The signature is signed in the average climate / medium-temperature section.				Shizuoka JAPAN					

• 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

() For near pump space nearers and near pump combination nearers, the rated near output Frated is equal to the design load for near

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.

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	i:	PUHZ-SHW230YKA2					
		Indoor unit:		EHSE-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	23.0	kW	Seasonal space heating energy efficiency	ηѕ	127	%		
Declared capacity for heating for part load a	at indoor		-	Declared coefficient of performance or primary e	nergy ratio fo	or	-		
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoor temperature Tj					
Tj = - 7 °C	Pdh	20.3	kW	Tj = - 7 °C	COPd	2.10	-		
Degradation co-efficient (**)	Cdh	1.00	] -						
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 2 °C	COPd	3.02	-		
Degradation co-efficient (**)	Cdh	1.00	] -				ı		
Tj = + 7 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	4.54	-		
Degradation co-efficient (**)	Cdh	0.99	] -				ı		
Tj = +12 °C	Pdh	13.7	kW	Tj = +12 °C	COPd	5.79	_		
Degradation co-efficient (**)	Cdh	0.99	-						
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	1.85	_		
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-		
			1						
Bivalent temperature	Tbiv	-10	] °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 according to the consumption of th	tive mode		•	Supplementary heater		•			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW		
Thermostat-off mode	$P_{TO}$	0.022	kW						
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical			
Crankcase heater mode	$P_CK$	0.000	kW						
Other items			!						
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h		
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				•		
Annual energy consumption	$Q_{HE}$	14615	kWh						
For heat pump combination heater:		'							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%		
Daily electricity consumption	Qelec	-	kWh			-	•		
Annual electricity consumption	AEC	-	kWh						
Contact details		•	•						
MITSUBISHI ELECTRIC CORPOR	ATION SHIZ	JOKA WORK	S	3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-85	28, Japan			

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

Tomoyuki MIWA

General Manager, Quality Assuarance Department

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		EHSE-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	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	25.0	kW	Seasonal space heating energy efficiency	ηs	164	%
Declared capacity for heating for part load a	indoor	•	•	Declared coefficient of performance or primary e	nergy ratio fo	or	
temperature 20 °C and outdoor temperature	- j			part load at indoor temperature 20 °C and outdoo	or temperatui	re Tj	
Tj = - 7 °C	Pdh	22.1	kW	Tj = - 7 °C	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-				•
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	3.80	-
Degradation co-efficient (**)	Cdh	0.99	-				•
Tj = + 7 °C	Pdh	12.0	kW	Tj = + 7 °C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.99	-				•
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-
Degradation co-efficient (**)	Cdh	0.99	-				•
Tj = bivalent temperature	Pdh	25.0	kW	Tj = bivalent temperature	COPd	2.19	-
Tj = operation limit temperature (***)	Pdh	25.0	kW	Tj = operation limit temperature (***)	COPd	2.19	-
			•				•
Bivalent temperature	Tbiv	-10	ე აc	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 acti	ve mode	1		Supplementary heater			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW			ļ.	Į
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
Other items	-	ļ.					
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				J
Annual energy consumption	$Q_{HE}$	12351	kWh				
For heat pump combination heater:		1					
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				ı
Annual electricity consumption	AEC	-	kWh				
Contact details		1		l I			
MITSUBISHI ELECTRIC CORPORA	TION SHIZ	UOKA WORK	is	3-18-1, Oshika, Suruga-ku, Shizu	uoka 422-852	28, Japan	
The identification and signature of the persor	empowere	ed to bind the	e supplier;				
The circulature is signed in the course.	-4- / <sup>1</sup>	tour (		Tomoyuki MIWA  General Manager, Quality Assuarance Departme	ant		
The signature is signed in the average clim	ate / medit	ıııı-temperatt	ure section.	Contral Manager, Quality Assuarance Departing	211t		

Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

Shizuoka JAPAN

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

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

<sup>(\*)</sup> For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating

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

<sup>(\*\*\*)</sup> 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.

Symbol ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
ηs primary energy ratio f	Value				
primary energy ratio f		Unit			
	123	%			
and outdoor temperatu	for				
	part load at indoor temperature 20 °C and outdoor temperature Tj				
COPd	3.40	] -			
		1			
COPd	3.20	] -			
		1			
COPd	4.90	] -			
		1			
COPd	6.15	] -			
		1			
COPd	1.52	-			
*) COPd	1.39	-			
COPd	1.72	-			
TOL	-25	°C			
perature WTOL	60	°C			
Supplementary heater					
Psup	5.1	kW			
	Electrical				
-	8400	m³/h			
ηwh	-	%			
	528, Japan				
₃-ku, Shizuoka 422-85 					
		- 8400			

Shizuoka JAPAN

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2					
		Indoor unit:		EHSE-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	25.0	kW	Seasonal space heating energy efficiency	ηѕ	162	%		
Declared capacity for heating for part load a	at indoor			Declared coefficient of performance or primary e	nergy ratio fo	or			
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdo	or temperatui	е Тј	•		
Tj = - 7 °C	Pdh	15.1	kW	Tj = - 7 °C	COPd	5.00	-		
Degradation co-efficient (**)	Cdh	0.99	-				_		
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	4.00	-		
Degradation co-efficient (**)	Cdh	0.99	-				,		
Tj = + 7 °C	Pdh	12.2	kW	Tj = + 7 °C	COPd	5.56	-		
Degradation co-efficient (**)	Cdh	0.99	-						
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-		
Degradation co-efficient (**)	Cdh	0.99	-						
Tj = bivalent temperature	Pdh	21.1	kW	Tj = bivalent temperature	COPd	2.09	-		
Tj = operation limit temperature (***)	Pdh	17.7	kW	Tj = operation limit temperature (***)	COPd	1.52	-		
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	20.4	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-		
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 act	ive mode			Supplementary heater					
Off mode	$P_{OFF}$	0.022	kW	Rated heat output (*)	Psup	7.3	kW		
Thermostat-off mode	$P_{TO}$	0.022	kW						
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items									
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h		
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA						
Annual energy consumption	$Q_{HE}$	14904	kWh						
For heat pump combination heater:									
Declared load profile		-		Water heating energy efficiency	ηwh	-	%		
Daily electricity consumption	Qelec	-	kWh						
Annual electricity consumption	AEC	-	kWh						
Contact details		•							
MITSUBISHI ELECTRIC CORPOR	3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852	28, Japan						
The identification and signature of the perso	n empowered	d to bind the	e supplier;	Tomoyuki MIWA					

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

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

 $<sup>\</sup>cdot \ \, \text{Details and precautions on recycling and/or disposal at end-of-life can be found in the installation and or operation manuals.}$ 

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2					
		Indoor unit:		EHSE-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	ltem	Symbol	Value	Unit		
Rated heat output (*)	Prated	22.8	kW	Seasonal space heating energy efficiency	ηs	149	%		
Declared capacity for heating for part load a	t indoor	1		Declared coefficient of performance or primary e	nergy ratio fo	or			
temperature 20 °C and outdoor temperature	Гј			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	22.8	kW	Tj = + 2 °C	COPd	1.66	-		
Degradation co-efficient (**)	Cdh	1.00	-						
Tj = + 7 °C	Pdh	14.7	kW	Tj = + 7 °C	COPd	3.16	-		
Degradation co-efficient (**)	Cdh	1.00	-						
Tj = +12 °C	Pdh	13.6	kW	Tj = +12 °C	COPd	5.33	-		
Degradation co-efficient (**)	Cdh	0.99	-						
Tj = bivalent temperature	Pdh	22.8	kW	Tj = bivalent temperature	COPd	1.66	-		
Tj = operation limit temperature (***)	Pdh	22.8	kW	Tj = operation limit temperature (***)	COPd	1.66	-		
			J						
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 acti	ive mode		l	Supplementary heater					
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW		
Thermostat-off mode	P <sub>TO</sub>	0.022	kW						
Standby mode	P <sub>SB</sub>	0.022	kW	Type of energy input		Electrical			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items		1							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h		
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA						
Annual energy consumption	$Q_{HE}$	8037	kWh						
For heat pump combination heater:									
Declared load profile		-		Water heating energy efficiency	ηwh	-	%		
Daily electricity consumption	Qelec	-	kWh						
Annual electricity consumption	AEC	-	kWh						
Contact details		•							
MITSUBISHI ELECTRIC CORPORA	ATION SHIZI	JOKA WORK	S	3-18-1, Oshika, Suruga-ku, Shiz	Joka 422-85	28, Japan			
The identification and signature of the person	n empowere	d to bind the	e supplier;						
The signature is signed in the average alim	ate / modi::	m temperati	ire section	Tomoyuki MIWA  General Manager, Quality Assuarance Department	ent				
The signature is signed in the average climate / medium-temperature section.				General Manager, Quality Assuarance Department Shizuoka JAPAN					

<sup>·</sup> 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.

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	t:	PUHZ-SHW230YKA2				
		Indoor unit:		EHSE-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	23.0	kW	Seasonal space heating energy efficiency	ηs	199	%	
Declared capacity for heating for part load a	t indoor	ı	1	Declared coefficient of performance or primary e	nergy ratio fo	or		
temperature 20 °C and outdoor temperature	Τј			part load at indoor temperature 20 °C and outdoo	or temperatu	re Tj		
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	_	
Degradation co-efficient (**)	Cdh	-	-				l	
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	2.47	-	
Degradation co-efficient (**)	Cdh	1.00	-				l	
Tj = + 7 °C	Pdh	14.8	kW	Tj = + 7 °C	COPd	4.63	_	
Degradation co-efficient (**)	Cdh	0.99	-					
Tj = +12 °C	Pdh	14.3	kW	Tj = +12 °C	COPd	6.41	-	
Degradation co-efficient (**)	Cdh	0.99	-				_	
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	2.47	-	
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	2.47	-	
			1				l	
Bivalent temperature	Tbiv	2	] ℃	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 act	ive mode			Supplementary heater				
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW	
Thermostat-off mode	$P_{TO}$	0.022	kW			1		
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items								
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h	
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				ı	
Annual energy consumption	$Q_{HE}$	6076	kWh					
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	ηwh	-	%	
Daily electricity consumption	Qelec	-	kWh				ı	
Annual electricity consumption	AEC	-	kWh					
Contact details		•						
MITSUBISHI ELECTRIC CORPORA	ATION SHIZ	UOKA WORK	S	3-18-1, Oshika, Suruga-ku, Shizi	Joka 422-85	28, Japan		
The identification and signature of the person	n empowere	d to bind the	e supplier;	Towns and MINA				
The signature is signed in the average clim	iate / modin	ım_temporot:	ure section	Tomoyuki MIWA  General Manager, Quality Assuarance Departme	ent			
	iate / IIIEUlu	terriperall	ure section.	Oli I IADAN				

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-***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	23.0	kW	Seasonal space heating energy efficiency	ηs	128	%
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	nergy ratio fo	or	
temperature 20 °C and outdoor temperature	Гј			part load at indoor temperature 20 °C and outdoo	or temperatu	re Tj	
Tj = - 7 °C	Pdh	20.3	kW	Tj = - 7 °C	COPd	2.10	_
Degradation co-efficient (**)	Cdh	1.00	-				l
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 2 °C	COPd	3.04	_
Degradation co-efficient (**)	Cdh	1.00	-				ı
Tj = + 7 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	4.54	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	13.7	kW	Tj = +12 °C	COPd	5.79	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-
			•				
Bivalent temperature	Tbiv	-10	°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 acti	ve mode	•		Supplementary heater		•	
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW				
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	Рск	0.000	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				•
Annual energy consumption	$Q_{HE}$	14485	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				
Contact details							
MITSUBISHI ELECTRIC CORPORA				3-18-1, Oshika, Suruga-ku, Shizi	Joka 422-85	28, Japan	
The identification and signature of the persor	ı empowere	u to bind the	e supplier:				

Tomoyuki MIWA

General Manager, Quality Assuarance Department

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-***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	25.0	kW	Seasonal space heating energy efficiency	ηs	165	%
Declared capacity for heating for part load a	at indoor		!	Declared coefficient of performance or primary e	nergy ratio fc	or	1
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatui	re Tj	
Tj = - 7 °C	Pdh	22.1	kW	Tj = - 7 °C	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	3.80	-
Degradation co-efficient (**)	Cdh	0.99	-				•
Tj = + 7 °C	Pdh	12.0	kW	Tj = + 7 °C	COPd	5.32	-
Degradation co-efficient (**)	Cdh	0.99	-				•
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-
Degradation co-efficient (**)	Cdh	0.99	-				1
Tj = bivalent temperature	Pdh	25.0	kW	Tj = bivalent temperature	COPd	2.19	-
Tj = operation limit temperature (***)	Pdh	25.0	kW	Tj = operation limit temperature (***)	COPd	2.19	] -
			•				•
Bivalent temperature	Tbiv	-10	°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 act	ive mode		•	Supplementary heater		•	
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW				
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	$P_{CK}$	0.000	kW				
Other items		•					
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				•
Annual energy consumption	$Q_{HE}$	12270	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				•
Annual electricity consumption	AEC	-	kWh				
Contact details							_
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shiz	Joka 422-852	28, Japan	
The identification and signature of the perso	n empowere	d to bind the	e supplier;	Tomoyuki MIWA			
The signature is signed in the average clin	nate / mediu	m-temperati	ure section.	General Manager, Quality Assuarance Departme	ent		

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-***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	23.0	kW	Seasonal space heating energy efficiency	ηѕ	124	%
Declared capacity for heating for part load a	at indoor			Declared coefficient of performance or primary e	nergy ratio fc	or	
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatui	e Tj	
Tj = - 7 °C	Pdh	13.9	kW	Tj = - 7 °C	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-				1
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 2 °C	COPd	3.23	-
Degradation co-efficient (**)	Cdh	0.99	-				1
Tj = + 7 °C	Pdh	11.6	kW	Tj = + 7 °C	COPd	4.90	-
Degradation co-efficient (**)	Cdh	0.99	-				1
Tj = +12 °C	Pdh	14.2	kW	Tj = +12 °C	COPd	6.15	-
Degradation co-efficient (**)	Cdh	0.99	-				1
Tj = bivalent temperature	Pdh	19.4	kW	Tj = bivalent temperature	COPd	1.52	-
Tj = operation limit temperature (***)	Pdh	17.9	kW	Tj = operation limit temperature (***)	COPd	1.39	-
Tj = $-15$ °C (if TOL < $-20$ °C)	Pdh	18.8	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-
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 act	ive mode	-	-	Supplementary heater			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	5.1	kW
Thermostat-off mode	$P_{TO}$	0.022	kW			-	
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				
Annual energy consumption	$Q_{HE}$	17848	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				
Contact details							
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shiz	Joka 422-852 ————	28, Japan	
The identification and signature of the perso	n empowere	d to bind the	e supplier;	Tomoyuki MIWA			
The simulation is simulating the account of the			una nandin-	General Manager Quality Assuarance Departme	ant		

The signature is signed in the average climate / medium-temperature section.

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-***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	25.0	kW	Seasonal space heating energy efficiency	ηs	164	%
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	nergy ratio fo	or	
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatu	ıre Tj	
Tj = - 7 °C	Pdh	15.1	kW	Tj = - 7 °C	COPd	5.00	-
Degradation co-efficient (**)	Cdh	0.99	-				J
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	4.04	-
Degradation co-efficient (**)	Cdh	0.99	-				J
Tj = + 7 °C	Pdh	12.2	kW	Tj = + 7 °C	COPd	5.70	-
Degradation co-efficient (**)	Cdh	0.99	-				ı
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-
Degradation co-efficient (**)	Cdh	0.99	-				ı
Tj = bivalent temperature	Pdh	21.1	kW	Tj = bivalent temperature	COPd	2.09	-
Tj = operation limit temperature (***)	Pdh	17.7	kW	Tj = operation limit temperature (***)	COPd	1.52	-
Tj = $-15$ °C (if TOL < $-20$ °C)	Pdh	20.4	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-
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 act	ive mode	'		Supplementary heater		-	
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	7.3	kW
Thermostat-off mode	$P_{TO}$	0.022	kW				
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	$P_{CK}$	0.000	kW				
Other items		•					
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				·
Annual energy consumption	$Q_{HE}$	14764	kWh				
For heat pump combination heater:		•					
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				
Contact details					_	_	_
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shizo	Joka 422-85	28, Japan	
The identification and signature of the perso	n empowere	d to bind the	e supplier;	Tomovuki MIWA			
The signature is signed in the average clin	nate / mediu	m-temperati	ire section	Tomoyuki MIWA  General Manager, Quality Assuarance Departme	ent		
	/ modiu	tomporati		O			

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-***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	22.8	kW	Seasonal space heating energy efficiency	ηs	150	%
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary el	nergy ratio fo	or	
temperature 20 °C and outdoor temperature	Гј			part load at indoor temperature 20 °C and outdoo	or temperatu	re Tj	
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	_
Degradation co-efficient (**)	Cdh	-	-				I
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	1.66	-
Degradation co-efficient (**)	Cdh	1.00	-				ı
Tj = + 7 °C	Pdh	14.7	kW	Tj = + 7 °C	COPd	3.13	-
Degradation co-efficient (**)	Cdh	1.00	-				ı
Tj = +12 °C	Pdh	13.6	kW	Tj = +12 °C	COPd	5.33	_
Degradation co-efficient (**)	Cdh	0.99	-				ı
Tj = bivalent temperature	Pdh	22.8	kW	Tj = bivalent temperature	COPd	1.66	_
Tj = operation limit temperature (***)	Pdh	22.8	kW	Tj = operation limit temperature (***)	COPd	1.66	-
			1				ı
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 acti	ve mode			Supplementary heater			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW				
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	$P_{CK}$	0.000	kW				
Other items		1					
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				ı
Annual energy consumption	$Q_{HE}$	7975	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				ı
Annual electricity consumption	AEC	-	kWh				
Contact details		•					
MITSUBISHI ELECTRIC CORPORA	ATION SHIZ	JOKA WORK	S	3-18-1, Oshika, Suruga-ku, Shizu	uoka 422-85	28, Japan	
The identification and signature of the person	empowere	d to bind the	e supplier;	T			
The signature is signed in the average clim	ate / modi:	m temperati	ire section	Tomoyuki MIWA  General Manager, Quality Assuarance Departme	ent		
The signature is signed in the average clim	ate / IIIeulu	m-temperatt	are section.	Constantination, addity / tooldianoc Departine			

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-***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	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	ηs	202	%
Declared capacity for heating for part load at	indoor	•		Declared coefficient of performance or primary e	nergy ratio fo	or	
temperature 20 °C and outdoor temperature 7	j		_	part load at indoor temperature 20 °C and outdoor	or temperatur	re Tj	
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	2.47	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	14.8	kW	Tj = + 7 °C	COPd	4.58	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	14.3	kW	Tj = +12 °C	COPd	6.41	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	2.47	-
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	2.47	-
Bivalent temperature	Tbiv	2	] <sub>°C</sub>	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 acti	ve mode			Supplementary heater			
Off mode	$P_{OFF}$	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	P <sub>TO</sub>	0.022	kW				
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	P <sub>CK</sub>	0.000	kW		L		
Other items				T 5			
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h
Sound power level, indoors/outdoors	$L_{WA}$	45 / 75	dBA				
Annual energy consumption	Q <sub>HE</sub>	6009	kWh				
For heat pump combination heater:			ı			, , , , , , , , , , , , , , , , , , ,	
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				
Contact details  MITSUBISHI ELECTRIC CORPORA	TION SUI7	IUKA MUBA	'Q	3-18-1, Oshika, Suruga-ku, Shizi	uoka 422 95	08 Janan	
The identification and signature of the person				5-10-1, Osiiika, Suruya-ku, SIIIZi	JUNA 422-002	-o, Japan	
The signature is signed in the average clim	ate / modi::	m-temporati	ire section	Tomoyuki MIWA General Manager, Quality Assuarance Departme	ent		
	ate / IIIeulu	temperatt		Shizuoka JAPAN			

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

<sup>(\*)</sup> For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating

 $Pde signh, \ and \ the \ rated \ heat \ output \ of \ a \ supplementary \ heater \ Psup \ is \ equal \ to \ the \ supplementary \ capacity \ for \ heating \ sup(Tj).$ 

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-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	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	ηs	128	%
Declared capacity for heating for part load at	indoor			Declared coefficient of performance or primary e	nergy ratio fo	or	
temperature 20 °C and outdoor temperature 7	j			part load at indoor temperature 20 °C and outdo	or temperatui	re Tj	
Tj = - 7 °C	Pdh	20.3	kW	Tj = - 7 °C	COPd	2.10	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 2 °C	COPd	3.04	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	11.2	kW	Tj = + 7 °C	COPd	4.54	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	13.7	kW	Tj = +12 °C	COPd	5.79	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	1.85	-
Bivalent temperature	Tbiv	-10	°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 acti	ve mode			Supplementary heater		•	
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW				
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h
Sound power level, indoors/outdoors	$L_WA$	45 / 75	dBA				
Annual energy consumption	$Q_HE$	14485	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				
Contact details  MITSUBISHI ELECTRIC CORPORA	TION SHIZU	JOKA WORK	S	3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852	28, Japan	

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

Tomoyuki MIWA

General Manager, Quality Assuarance Department

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	t:	PUHZ-SHW230YKA2					
		Indoor unit:		ERSE-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	25.0	kW	Seasonal space heating energy efficiency	ηs	165	%		
Declared capacity for heating for part load a	t indoor	•		Declared coefficient of performance or primary e	nergy ratio fo	or			
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdo	or temperatui	e Tj			
Tj = - 7 °C	Pdh	22.1	kW	Tj = - 7 °C	COPd	3.40	-		
Degradation co-efficient (**)	Cdh	1.00	] -						
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	3.80	-		
Degradation co-efficient (**)	Cdh	0.99	] -						
Tj = + 7 °C	Pdh	12.0	kW	Tj = + 7 °C	COPd	5.32	-		
Degradation co-efficient (**)	Cdh	0.99	] -						
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-		
Degradation co-efficient (**)	Cdh	0.99	] -						
Tj = bivalent temperature	Pdh	25.0	kW	Tj = bivalent temperature	COPd	2.19	-		
Tj = operation limit temperature (***)	Pdh	25.0	kW	Tj = operation limit temperature (***)	COPd	2.19	-		
							,		
Bivalent temperature	Tbiv	-10	°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 act	ive mode			Supplementary heater					
Off mode	$P_{OFF}$	0.022	kW	Rated heat output (*)	Psup	0.0	kW		
Thermostat-off mode	$P_{TO}$	0.022	kW						
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items									
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h		
Sound power level, indoors/outdoors	$L_WA$	45 / 75	dBA						
Annual energy consumption	$Q_{HE}$	12270	kWh						
For heat pump combination heater:									
Declared load profile		-		Water heating energy efficiency	ηwh	-	%		
Daily electricity consumption	Qelec	-	kWh						
Annual electricity consumption	AEC	-	kWh						
Contact details			· 0						
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852 ———	28, Japan			
The identification and signature of the perso	ıı empowere	u to dind the	e supplier;	Tomoyuki MIWA					
The signature is signed in the average clim	nate / mediu	m-temperati	ure section.	General Manager, Quality Assuarance Departme	ent				

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

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2				
		Indoor unit:		ERSE-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	23.0	kW	Seasonal space heating energy efficiency	ηѕ	124	%	
Declared capacity for heating for part load a	at indoor			Declared coefficient of performance or primary e	nergy ratio fo	r		
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdo	or temperatur	e Tj		
Tj = - 7 °C	Pdh	13.9	kW	Tj = - 7 °C	COPd	3.40	-	
Degradation co-efficient (**)	Cdh	1.00	-		·			
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 2 °C	COPd	3.23	-	
Degradation co-efficient (**)	Cdh	0.99	-		•			
Tj = + 7 °C	Pdh	11.6	kW	Tj = + 7 °C	COPd	4.90	-	
Degradation co-efficient (**)	Cdh	0.99	-		•			
Tj = +12 °C	Pdh	14.2	kW	Tj = +12 °C	COPd	6.15	-	
Degradation co-efficient (**)	Cdh	0.99	-		'			
Tj = bivalent temperature	Pdh	19.4	kW	Tj = bivalent temperature	COPd	1.52	-	
Tj = operation limit temperature (***)	Pdh	17.9	kW	Tj = operation limit temperature (***)	COPd	1.39	-	
Tj = $-15$ °C (if TOL < $-20$ °C)	Pdh	18.8	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-	
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 act	tive mode			Supplementary heater				
Off mode	$P_{OFF}$	0.022	kW	Rated heat output (*)	Psup	5.1	kW	
Thermostat-off mode	$P_{TO}$	0.022	kW					
Standby mode	$P_{SB}$	0.022	kW	Type of energy input		Electrical		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items	_							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m³/h	
Sound power level, indoors/outdoors	$L_WA$	45 / 75	dBA					
Annual energy consumption	$Q_{HE}$	17848	kWh					
For heat pump combination heater:								
Declared load profile		-		Water heating energy efficiency	ηwh	-	%	
Daily electricity consumption	Qelec	-	kWh					
Annual electricity consumption	AEC	-	kWh					
Contact details								
MITSUBISHI ELECTRIC CORPOR				3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852 ———	28, Japan		
The identification and signature of the personal transfer is signed in the average clin	·			Tomoyuki MIWA General Manager, Quality Assuarance Departm	ent			

he signature is signed in the average climate / medium-temperature section

Shizuoka JAPAN

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- · 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
- $Pde signh, \ and \ the \ rated \ heat \ output \ of \ a \ supplementary \ heater \ Psup \ is \ equal \ to \ the \ supplementary \ capacity \ for \ heating \ sup(Tj).$
- (\*\*) 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-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	25.0	kW	Seasonal space heating energy efficiency	ηs	164	%
Declared capacity for heating for part load a	at indoor	!		Declared coefficient of performance or primary e	nergy ratio fc	or	
temperature 20 °C and outdoor temperature	Тj			part load at indoor temperature 20 °C and outdoo	or temperatui	e Tj	
Tj = - 7 °C	Pdh	15.1	kW	Tj = - 7 °C	COPd	5.00	-
Degradation co-efficient (**)	Cdh	0.99	-				ı
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	4.04	-
Degradation co-efficient (**)	Cdh	0.99	-				1
Tj = + 7 °C	Pdh	12.2	kW	Tj = + 7 °C	COPd	5.70	-
Degradation co-efficient (**)	Cdh	0.99	-				ı
Tj = +12 °C	Pdh	14.6	kW	Tj = +12 °C	COPd	6.68	-
Degradation co-efficient (**)	Cdh	0.99	-				ı
Tj = bivalent temperature	Pdh	21.1	kW	Tj = bivalent temperature	COPd	2.09	-
Tj = operation limit temperature (***)	Pdh	17.7	kW	Tj = operation limit temperature (***)	COPd	1.52	-
Tj = $-15$ °C (if TOL < $-20$ °C)	Pdh	20.4	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-
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 act	ive mode			Supplementary heater			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	7.3	kW
Thermostat-off mode	$P_{TO}$	0.022	kW			-	
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				
Annual energy consumption	$Q_{HE}$	14764	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				
Contact details							
MITSUBISHI ELECTRIC CORPOR.				3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-852 ———	28, Japan	
The identification and signature of the perso	n empowere	a to bind the	e supplier;	Tomoyuki MIWA			
The signature is signed in the average clim	nate / mediu	m-temperatu	ire section.	General Manager, Quality Assuarance Departme	ent		

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

<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	t:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-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	22.8	kW	Seasonal space heating energy efficiency	ηs	150	%
Declared capacity for heating for part load a	t indoor			Declared coefficient of performance or primary e	nergy ratio fo	or	
temperature 20 °C and outdoor temperature	Τј			part load at indoor temperature 20 °C and outdoo	or temperatu	ıre Tj	
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				1
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	1.66	-
Degradation co-efficient (**)	Cdh	1.00	-				1
Tj = + 7 °C	Pdh	14.7	kW	Tj = + 7 °C	COPd	3.13	-
Degradation co-efficient (**)	Cdh	1.00	-				1
Tj = +12 °C	Pdh	13.6	kW	Tj = +12 °C	COPd	5.33	-
Degradation co-efficient (**)	Cdh	0.99	-				1
Tj = bivalent temperature	Pdh	22.8	kW	Tj = bivalent temperature	COPd	1.66	-
Tj = operation limit temperature (***)	Pdh	22.8	kW	Tj = operation limit temperature (***)	COPd	1.66	-
			•				!
Bivalent temperature	Tbiv	2	_ ℃	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 act	ive mode	•		Supplementary heater			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW				
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	$P_{CK}$	0.000	kW				
Other items		•					
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				•
Annual energy consumption	$Q_{HE}$	7975	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh				•
Annual electricity consumption	AEC	-	kWh				
Contact details					_		
MITSUBISHI ELECTRIC CORPORA				3-18-1, Oshika, Suruga-ku, Shiz	uoka 422-85	28, Japan	
The identification and signature of the person	n empowere	d to bind the	e supplier;	Tomovuki MIWA			
The signature is signed in the average clim	ate / mediu	ım-temperatı	ure section	Tomoyuki MIWA  General Manager, Quality Assuarance Departme	ent		
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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.

<sup>(\*\*\*)</sup> 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.

Model(s):		Outdoor unit	:	PUHZ-SHW230YKA2			
		Indoor unit:		ERSE-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.			
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	ηs	202	%
Declared capacity for heating for part load at	indoor	•		Declared coefficient of performance or primary en	nergy ratio fo	or .	
temperature 20 °C and outdoor temperature T	- j			part load at indoor temperature 20 °C and outdoor	or temperatu	re Tj	
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	2.47	-
Degradation co-efficient (**)	Cdh	1.00	-				
Tj = + 7 °C	Pdh	14.8	kW	Tj = + 7 °C	COPd	4.58	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = +12 °C	Pdh	14.3	kW	Tj = +12 °C	COPd	6.41	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = bivalent temperature	Pdh	23.0	kW	Tj = bivalent temperature	COPd	2.47	-
Tj = operation limit temperature (***)	Pdh	23.0	kW	Tj = operation limit temperature (***)	COPd	2.47	-
			•				
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	ve mode	•		Supplementary heater			
Off mode	P <sub>OFF</sub>	0.022	kW	Rated heat output (*)	Psup	0.0	kW
Thermostat-off mode	$P_{TO}$	0.022	kW			'	
Standby mode	$P_SB$	0.022	kW	Type of energy input		Electrical	
Crankcase heater mode	$P_{CK}$	0.000	kW				
Other items		•					
Capacity control		variable		Rated air flow rate, outdoors	-	8400	m <sup>3</sup> /h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45 / 75	dBA				
Annual energy consumption	$Q_{HE}$	6009	kWh				
For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	ηwh	-	%
Daily electricity consumption	Qelec	-	kWh			-	
Annual electricity consumption	AEC	-	kWh				
Contact details							
MITSUBISHI ELECTRIC CORPORA				3-18-1, Oshika, Suruga-ku, Shizu	Joka 422-852	28, Japan	
The identification and signature of the persor	empowere	ea to bind the	e supplier;	Tomoyuki MIWA			
The signature is signed in the average clim	ate / mediu	ım-temperatı	ure section.	General Manager, Quality Assuarance Departme	ent		
				Shizuaka IADAN			

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<sup>(\*)</sup> 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).

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

<sup>(\*\*\*)</sup> 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.