





PRODUCT FICHE

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

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

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

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1. SPACE HEATER

1	2	For medium-temperature application															For low-temperature application											
		Medium-temperature application															Low-temperature application											
Outdoor unit	Indoor unit	3	6	8	11	9	13	15	16	21	22	17	18	25	4	6	8	11	9	13	15	16	21	22	17	18	25	
		Seasonal space heating energy efficiency class	Rated heat output under average climate conditions	kW	%	kWh	dB	kW	kW	%	%	kWh	kWh	dB	Sound power level L _{WA} indoor	Seasonal space heating energy efficiency class	Rated heat output under average climate conditions	kW	%	kWh	dB	kW	%	For space heating, annual energy consumption under warmer climate conditions	Sound power level L _{WA} outdoor	Sound power level L _{WA} indoor	Seasonal space heating energy efficiency class	Rated heat output under average climate conditions
PUHZ-SHW230YKA2	EHSE-***C	✓	A++	23	127	14615	45	23	23	123	149	17960	8037	73	✓	A++	25	164	12351	45	25	23	162	199	14904	6076	73	
	ERSE-***C	✓	A++	23	128	14485	45	23	23	124	150	17848	7975	73	✓	A++	25	165	12270	45	25	23	164	202	14764	6009	73	
	EHSE-***D	✓	A++	23	127	14615	45	23	23	123	149	17960	8037	73	✓	A++	25	164	12351	45	25	23	162	199	14904	6076	73	
	ERSE-***D	✓	A++	23	128	14485	45	23	23	124	150	17848	7975	73	✓	A++	25	165	12270	45	25	23	164	202	14764	6009	73	

English	Deutsch	Français	Italiano	Español
Nederlands	Svenska	Dansk	Português	Ελληνικά
suomi	Čeština	Bulgarski	Polski	-
1	Outdoor unit buitenunit Ulkyksikkö	Außengerät Utomhusenhet Venkovní jednotka	unità esteriore unità esterna jednostka zewnętrzna	unidad exterior Εξωτερική μονάδα
2	Indoor unit binnenunit Sisäyksikkö	Innengerät Inomhusenhet Vnitřní jednotka	unità intérieure unidade interior jednostka wewnętrzna	unidad interior Εσωτερική μονάδα
3	Medium-temperature application middentemperatur-toepassing keskilämpötilan sovellus	Mitteltemperaturanwendung mediumtemperaturapplikation středněteplotní aplikace	l'application à moyenne température middeltemperaturanvendelsen среднотемпературного приложения	la aplicación a media temperatura η εφαρμογή σε μέση θερμοκρασία
4	Low-temperature application lage temperatuur-toepassing matalänämpötilan sovellus	Niedertemperaturanwendung lägetemperaturapplikation nízkotepelní aplikace	l'application à basse température lavtemperaturanvendelsen низкотемпературни приложения	la aplicación de baja temperatura η εφαρμογή σε χαμηλή θερμοκρασία
5	Declared load profile Opggegeven capaciteitsprofiel Ilmoitettu kuormitusprofiili	Angegebenes Lastprofil Deklarerad belastningsprofil Deklarovaný záťezový profil	Profil de soutirage déclaré Angivet forbrugsprofil Обявен товаров профил	Perfil de carga declarado Δηλωμένο τροφιλό φόρτου -
6	Seasonal space heating energy efficiency class de seisoensgebonden energie-efficiëntieklassen voor ruimteverwarming tilalämmityskseen kausittainen energiatehokkuusuokka	die Klasse für die Jahreszeitbedingte Raumheizungs-Energieeffizienz säsongerelaterade energieeffektivitetsklass vid rumsuppvärming trída sezonní energetické účinnosti vytápění	la classe d'efficacité énergétique saisonnière, pour le chauffage des locaux klassen för årsvarningsgrad ved rumopvarmning классъ на сезонната отоплителна енергийна ефективност	la clase de eficiencia energética estacional de calefacción η τάξη ενεργειακής απόδοσης της εποχιακής θέρμανσης χώρου
7	Water heating energy efficiency class de energie-efficiëntieklassen voor waterverwarming vedenlämmityksen energiatehokkuusuokka	die Klasse für die Warmwasserbereitungs-Energieeffizienz energieeffektivitetsklass vid vattenuppvärming trída energetické účinnosti ohřevu vody	la classe d'efficacité énergétique, pour le chauffage de l'eau klassen für årsvarningsgrad ved vandopvarmning классъ на енергийната ефективност при подгряване на вода	la clase de eficiencia energética del caldeo de agua η τάξη ενεργειακής απόδοσης θέρμανσης νερού
8	Rated heat output under average climate conditions de nominale warmteafgifte(onder gemiddelde klimaatomstandigheden) nimellislämpöteho(keskimääriäissä ilmasto-olosuhteissa)	die Wärmeneleistung bei durchschnittlichen Klimaverhältnissen Den nominella värmeeffekten(under genomsnittliga klimatförhållanden) jmenovitý tepelný výkon(záprůměrných klimatických podmínek)	la puissance thermique nominale dans les conditions climatiques moyennes den nominelle nyttoeffekt(under gennemsnitlige klimaforhold) номиналната топлинна мощност(при средни климатични условия)	la potencia calorífica nominal(en condiciones climáticas medias) η ονομαστική θερμική ισχύς(υπό μέσες κλιματικές συνθήκες)
9	For space heating, annual energy consumption under average climate conditions voor ruimteverwarming, het jaarlijkse energieverbruik(onder gemiddelde klimaatomstandigheden) tilalämmitykseen vuotuinen energiankulutus(keskimääriäissä ilmasto-olosuhteissa)	für die Raumheizung, den jährlichen Energieverbrauch bei durchschnittlichen Klimaverhältnissen Für rumsuppvärming, årlig energiförbrukning(vid genomsnittliga klimatförhållanden) pro vytápění – roční spotřeba energie za průměrných klimatických podmínek	pour le chauffage des locaux, la consommation annuelle d'énergie(dans les conditions climatiques moyennes) for rumopvarming det årlige energiforbrug(under gennemsnitlige klimaforhold) за отопление, годишното потребление на енергия(при средни климатични условия)	per il riscaldamento d'ambiente, il consumo annuo di energia(en condiciones climáticas medias) για τη θέρμανση χώρου, η επίσησια κατανάλωση ενέργειας(υπό μέσες κλιματικές συνθήκες)
10	For water heating, annual electricity consumption under average climate conditions voor waterverwarming, het jaarlijkse elektriciteitsverbruik(onder gemiddelde klimaatomstandigheden) vedenlämmitykseen vuotuinen sähkökulutus(keskimääriäissä ilmasto-olosuhteissa)	für die Warmwasserbereitung, den jährlichen Stromverbrauch bei durchschnittlichen Klimaverhältnissen Für vattenuppvärming, årlig elforbrukning(vid genomsnittliga klimatförhållanden) pro ohřev vody – roční spotřeba elektrické energie za průměrných klimatických podmínek	pour le chauffage de l'eau, la consommation annuelle d'électricité(dans les conditions climatiques moyennes) for vandopvarmning det årlige elforbrug(under gennemsnitlige klimaforhold) за подгряване на вода, годишното потребление(при средни климатични условия)	per il riscaldamento dell'acqua, il consumo annuo di energia(en condiciones climáticas medias) για τη θέρμανση νερού, η επίσησια κατανάλωση ηλεκτρικής ενέργειας(υπό μέσες κλιματικές συνθήκες)
11	Seasonal space heating energy efficiency under average climate conditions de seisoensgebonden energie-efficiëntie voor ruimteverwarming(onder gemiddelde klimaatomstandigheden) tilalämmitykseen kausittainen energiatehokkuus(keskimääriäissä ilmasto-olosuhteissa)	die Jahreszeitbedingte Raumheizungs-Energieeffizienz bei durchschnittlichen Klimaverhältnissen Säsongerelaterade energieeffektivitetsgrad för rumsuppvärming(vid genomsnittliga klimatförhållanden) sezonní energetická účinnost vytápění za průměrných klimatických podmínek	l'efficacité énergétique saisonnière pour le chauffage des locaux(dans les conditions climatiques moyennes) årsvarningsgraden ved rumopvarmning(under gennemsnitlige klimaforhold) сезонната енергийна ефективност при отопление(при средни климатични условия)	la eficiencia energética estacional de calefacción(en condiciones climáticas medias) η ενεργειακή απόδοση της εποχιακής θέρμανσης χώρου(υπό μέσες κλιματικές συνθήκες)
12	Water heating energy efficiency under average climate conditions de energie-efficiëntie voor waterverwarming(onder gemiddelde klimaatomstandigheden) vedenlämmityksen energiatehokkuus(keskimääriäissä ilmasto-olosuhteissa)	die Warmwasserbereitungs-Energieeffizienz bei durchschnittlichen Klimaverhältnissen Energieeffektivitet vid vattenuppvärming(vid genomsnittliga klimatförhållanden) energetická účinnost ohřevu vody za průměrných klimatických podmínek	l'efficacité énergétique pour le chauffage de l'eau(dans les conditions climatiques moyennes) energiessiffliteten ved vandopvarmning(under gennemsnitlige klimaforhold) енергийната ефективност при подгряване на вода(при средни климатични условия)	la eficiencia energética del caldeo de agua(en condiciones climáticas medias) η ενεργειακή απόδοση θέρμανσης νερού(υπό μέσες κλιματικές συνθήκες)
13	Sound power level L _{WA} indoor het geluidsvormgenisniveau L _{WA} binnen ääniyhötaso L _{WA} sisällä	der Schallleistungspiegel L _{WA} in Gebäuden Ljudeffektivnivå L _{WA} i inomhus hladina akustického výkonu L _{WA} ve vnitřním prostoru	le niveau de puissance acoustique L _{WA} à l'intérieur lydeffektivniveauet L _{WA} i inde níhovota na zvukovata možnosti L _{WA} na zakrito	il livello di potenza sonora L _{WA} all'interno η στάθμη ηχητικής ισχύος L _{WA} εσωτερικού χώρου poziom mocy akustycznej L _{WA} w pomieszczeniu
14	Work only during off-peak hours werken uitsluitend in de daluren toimimaan ainoastaan kulutushuippujen ulkopuolella	dass ein ausschließlicher Betrieb des Kombiheizgerätes zu Schwachlastzeiten fungere uden over spidsbelastningsperioder provocație pură mimo řípku	fonctionner qu'en heures creuses de funcionar únicamente fora das horas de pico pracować jedynie w godzinach poza szczytowym obciążeniem	funcionar solamente durante las horas de baja demanda λειτουργία μόνο εκτός των ωρών αιχμής
15	Rated heat output under colder climate conditions de nominale warmteafgifte, onder koudere klimaatomstandigheden nimellislämpöteho, kylmissä ilmasto-olosuhteissa	die Wärmeneleistung bei kälteren Klimaverhältnissen Nominell avgiven värmeeffekt vid kallare klimatförhållanden jmenovitý tepelný výkon za chladnejších klimatických podmínek	la puissance thermique nominale, dans les conditions climatiques plus froides la potencia termica nominal, en condiciones climáticas más frías la potencia calorífica nominal en condiciones climáticas más frías	la potencia calorífica nominal en condiciones climáticas más frías η ονομαστική θερμική ισχύς υπό ψυχρότερες κλιματικές συνθήκες
16	Rated heat output under warmer climate conditions de nominale warmteafgifte, onder warmere klimaatomstandigheden nimellislämpöteho, lämpimissä ilmasto-olosuhteissa	die Wärmeneleistung bei wärmeren Klimaverhältnissen Nominell avgiven värmeeffekt vid varmare klimatförhållanden jmenovitý tepelný výkon za teplzejších klimatických podmínek	la puissance thermique nominale, dans les conditions climatiques plus chaudes la potencia termica nominal, en condiciones climáticas más cálidas la potencia calorífica nominal en condiciones climáticas más cálidas	la potencia calorífica nominal en condiciones climáticas más cálidas η ονομαστική θερμική ισχύς υπό θερμότερες κλιματικές συνθήκες
17	For space heating, annual energy consumption under colder climate conditions voor ruimteverwarming, het jaarlijkse energieverbruik onder koudere klimaatomstandigheden tilalämmitykseen vuotuinen energiankulutus kylmissä ilmasto-olosuhteissa	für die Raumheizung, der jährliche Energieverbrauch bei kälteren Klimaverhältnissen Für rumsuppvärming, årlig energiförbrukning under kallare klimaforhold pro vytápění – roční spotřeba energie za chladnejší klimatických podmínek	pour le chauffage des locaux, la consommation annuelle d'énergie, dans les conditions climatiques plus froides for rumopvarming det årlige energiforbrug under koldere klimaforhold за отопление, годишното потребление на енергия при по-студени климатични условия	per il riscaldamento d'ambiente, il consumo annuo di energia, in condizioni climatiche più fredde για τη θέρμανση χώρου, η επίσησια κατανάλωση ενέργειας υπό ψυχρότερες κλιματικές συνθήκες
18	For space heating, annual energy consumption under warmer climate conditions voor ruimteverwarming, het jaarlijkse energieverbruik onder warmere klimaatomstandigheden tilalämmitykseen vuotuinen energiankulutus lämpimissä ilmasto-olosuhteissa	für die Raumheizung, der jährliche Energieverbrauch bei wärmeren Klimaverhältnissen Für vattenuppvärming, årlig energiförbrukning under varmare klimatförhållanden pro vytápění – roční spotřeba energie za teplzejších klimatických podmínek	pour le chauffage des locaux, la consommation annuelle d'énergie, dans les conditions climatiques plus chaudes for rumopvarming det årlige energiforbrug under varmere klimaforhold за отопление, годишното потребление на енергия при по-топли климатични условия	per il riscaldamento d'ambiente, il consumo annuo di energia, in condizioni climatiche più calde για θέρμανση χώρου, η επίσησια κατανάλωση ενέργειας υπό ψυχρότερες κλιματικές συνθήκες
19	For water heating, annual energy consumption under colder climate conditions voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder koudere klimaatomstandigheden vedenlämmitykseen vuotuinen sähkökulutus kylmissä ilmasto-olosuhteissa	für die Warmwasserbereitung, der jährliche Stromverbrauch bei kälteren Klimaverhältnissen Für vattenuppvärming, årlig elforbrukning under kallare klimaforhold pro ohřev vody – roční spotřeba elektrické energie za chladnejší klimatických podmínek	pour le chauffage de l'eau, la consommation annuelle d'électricité, dans les conditions climatiques plus froides for vandopvarmning det årlige elforbrug under koldere klimaforhold за подгряване на вода, годишното потребление на електроенергия при по-студени климатични условия	per il riscaldamento dell'acqua, il consumo annuo di energia, in condizioni climatiche più fredde για θέρμανση νερού, η επίσησια κατανάλωση ηλεκτρικής ενέργειας υπό ψυχρότερες κλιματικές συνθήκες
20	For water heating, annual energy consumption under warmer climate conditions voor waterverwarming, het jaarlijkse elektriciteitsverbruik onder warmere klimaatomstandigheden vedenlämmitykseen vuotuinen sähkökulutus lämpimissä ilmasto-olosuhteissa	für die Warmwasserbereitung, der jährliche Stromverbrauch bei wärmeren Klimaverhältnissen Für vattenuppvärming, årlig elforbrukning under varmare klimatförhållanden pro ohřev vody – roční spotřeba elektrické energie za teplzejších klimatických podmínek	pour le chauffage de l'eau, la consommation annuelle d'électricité, dans les conditions climatiques plus chaudes for vandopvarmning det årlige elforbrug under varmere klimaforhold за подгряване на вода, годишното потребление на електроенергия при по-топли климатични условия	per il riscaldamento dell'acqua, il consumo annuo di energia, in condizioni climatiche più calde για θέρμανση νερού, η επίσησια κατανάλωση ηλεκτρικής ενέργειας υπό θερμότερες κλιματικές συνθήκες
21	Seasonal space heating energy efficiency under colder climate conditions de seisoensgebonden energie-efficiëntie voor ruimteverwarming onder koudere klimaatomstandigheden tilalämmitykseen kausittainen energiatehokkuus kylmissä ilmasto-olosuhteissa	die Jahreszeitbedingte Raumheizungs-Energieeffizienz bei kälteren Klimaverhältnissen Säsongerelaterade energieeffektivitetsgrad för rumsuppvärming under kallare klimatförhållanden sezonní energetická účinnost vytápění za chladnejších klimatických podmínek	l'efficacité énergétique saisonnière pour le chauffage des locaux, dans les conditions climatiques plus froides årsvarningsgraden ved rumopvarmning under koldere klimaforhold сезонната енергийна ефективност при отопление при по-студени климатични условия	la eficiencia energética estacional de calefacción en condiciones climáticas más frías η ενεργειακή απόδοση της εποχιακής θέρμανσης χώρου υπό ψυχρότερες κλιματικές συνθήκες
22	Seasonal space heating energy efficiency under warmer climate conditions de seisoensgebonden energie-efficiëntie voor ruimteverwarming onder warmere klimaatomstandigheden tilalämmitykseen kausittainen energiatehokkuus lämpimissä ilmasto-olosuhteissa	die Jahreszeitbedingte Raumheizungs-Energieeffizienz bei wärmeren Klimaverhältnissen Säsongerelaterade energieeffektivitetsgrad för varmare klimatförhållanden sezonní energetická účinnost vytápění za teplzejších klimatických podmínek	l'efficacité énergétique saisonnière pour le chauffage des locaux, dans les conditions climatiques plus chaudes årsvarningsgraden ved rumopvarmning under varmere klimaforhold сезонната енергийна ефективност при отопление при по-топли климатични условия	la eficiencia energética estacional de calefacción en condiciones climáticas más cálidas η ενεργειακή απόδοση της εποχιακής θέρμανσης χώρου υπό ψυχρότερες κλιματικές συνθήκες
23	Water heating energy efficiency under colder climate conditions de energie-efficiëntie voor waterverwarming onder koudere klimaatomstandigheden vedenlämmityksen energiatehokkuus kylmissä ilmasto-olosuhteissa	für die Warmwasserbereitung, der jährliche Stromverbrauch bei kälteren Klimaverhältnissen Für vattenuppvärming, årlig elforbrukning under kallare klimaforhold energetická účinnost ohřevu vody za chladnejších klimatických podmínek	pour le chauffage de l'eau, dans les conditions climatiques plus froides energiessiffliteten ved vandopvarmning under koldere klimaforhold енергийната ефективност при подгряване на вода при по-студени климатични условия	la eficiencia energética de caldeo de agua en condiciones climáticas más frías η ενεργειακή απόδοση της θέρμανσης νερού υπό ψυχρότερες κλιματικές συνθήκες
24	Water heating energy efficiency under warmer climate conditions de energie-efficiëntie voor waterverwarming onder warmere klimaatomstandigheden vedenlämmityksen energiatehokkuus lämpimissä ilmasto-olosuhteissa	für die Warmwasserbereitung, der jährliche Stromverbrauch bei wärmeren Klimaverhältnissen Für vattenuppvärming, årlig elforbrukning under varmare klimatförhållanden energetická účinnost ohřevu vody za teplzejších klimatických podmínek	pour le chauffage de l'eau, dans les conditions climatiques plus chaudes energiessiffliteten ved vandopvarmning under varmere klimaforhold енергийната ефективност при подгряване на вода при по-топли климатични условия	la eficiencia energética de caldeo de agua en condiciones climáticas más cálidas η ενεργειακή απόδοση της θέρμανσης νερού υπό ψυχρότερες κλιματικές συνθήκες
25	Sound power level L _{WA} outdoor het geluidsvormgenisniveau L _{WA} buiten ääniyhötaso L _{WA} ulkona	der Schallleistungspiegel L _{WA} im Freien Ljudeffektivnivå L _{WA} i utomhus bladina akustického výkonu L _{WA} ve venkovním prostoru	le niveau de puissance acoustique L _{WA} à l'extérieur O nível de potência sonora L _{WA} no exterior níhovota na zvukovata možnosti L _{WA} na zewnatrz	el nivel de potencia acústica L _{WA} en exteriores η στάθμη ηχητικής ισχύος L _{WA} εξωτερικού χώρου poziom mocy akustycznej L _{WA} na zewnatrz

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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 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	COPd	3.02	-			
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 7 °C	COPd	4.54	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.79	-			
Tj = + 7 °C	Pdh	11.2	kW	Tj = bivalent temperature	COPd	1.85	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.85	-			
Tj = +12 °C	Pdh	13.7	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	23.0	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	23.0	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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 CORPORATION SHIZUOKA WORKS

3-18-1, Oshika, Suruga-ku, Shizuoka 422-8528, Japan

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

Takahiro YAMAUCHI

General Manager, Quality Assurance Department

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.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	average 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 at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	22.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	3.40	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = - 7 °C	COPd	3.80	-			
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	5.32	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-			
Tj = + 7 °C	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.19	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.19	-			
Tj = +12 °C	Pdh	14.6	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	25.0	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	25.0	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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

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Takahiro YAMAUCHI

General Manager, Quality Assurance Department

Shizuoka JAPAN

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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:	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	η_s	123	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	13.9	kW	Tj = - 7 °C	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.20	-
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 7 °C	COPd	4.90	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.15	-
Tj = + 7 °C	Pdh	11.6	kW	Tj = bivalent temperature	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.39	-
Tj = +12 °C	Pdh	14.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	19.4	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.9	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	18.8	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	5.1	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input		Electrical	
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors		-	8400 m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	17960	kWh				

For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	η_s	162	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	15.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	5.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = - 7 °C	COPd	4.00	-
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-
Tj = + 7 °C	Pdh	12.2	kW	Tj = bivalent temperature	COPd	2.09	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.52	-
Tj = +12 °C	Pdh	14.6	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	21.1	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.7	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	20.4	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Supplementary heater			
Thermostat-off mode	P _{TO}	0.022	kW	Rated heat output (*)	Psup	7.3	kW
Standby mode	P _{SB}	0.022	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	14904	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	η_s	149	%			
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	1.66	-			
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	3.16	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	5.33	-			
Tj = + 7 °C	Pdh	14.7	kW	Tj = bivalent temperature	COPd	1.66	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = operation limit temperature (***)	COPd	1.66	-			
Tj = +12 °C	Pdh	13.6	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	22.8	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	22.8	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	8037	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	Item	Symbol	Value	Unit			
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	η_s	199	%			
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	2.47	-			
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	4.63	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	6.41	-			
Tj = + 7 °C	Pdh	14.8	kW	Tj = +12 °C	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = bivalent temperature	COPd	2.47	-			
Tj = +12 °C	Pdh	14.3	kW	Tj = operation limit temperature (***)	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C			
Tj = bivalent temperature	Pdh	23.0	kW	Heating water operating limit temperature	WTOL	60	°C			
Tj = operation limit temperature (***)	Pdh	23.0	kW	Supplementary heater						
Bivalent temperature	Tbiv	2	°C	Rated heat output (*)	Psup	0.0	kW			
Reference design conditions for space heating	Tdesignh	2	°C	Type of energy input	Electrical					
Power consumption in modes other than active mode										
Off mode	P _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	6076	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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.

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	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 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	COPd	3.02	-
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 7 °C	COPd	4.54	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.79	-
Tj = + 7 °C	Pdh	11.2	kW	Tj = bivalent temperature	COPd	1.85	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.85	-
Tj = +12 °C	Pdh	13.7	kW	Operation limit temperature	TOL	-25	°C
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	23.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	23.0	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 _{OFF}	0.022	kW				
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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				

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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:	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	Item	Symbol	Value	Unit			
Rated heat output (*)	Prated	25.0	kW	Seasonal space heating energy efficiency	η_s	164	%			
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	22.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	3.40	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = - 7 °C	COPd	3.80	-			
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	5.32	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-			
Tj = + 7 °C	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.19	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.19	-			
Tj = +12 °C	Pdh	14.6	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	25.0	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	25.0	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	12351	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	colder climate conditions.		

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	η_s	123	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	13.9	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = - 7 °C	COPd	3.20	-
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 2 °C	COPd	4.90	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.15	-
Tj = + 7 °C	Pdh	11.6	kW	Tj = bivalent temperature	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.39	-
Tj = +12 °C	Pdh	14.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	19.4	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.9	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	18.8	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Supplementary heater			
Thermostat-off mode	P _{TO}	0.022	kW	Rated heat output (*)	Psup	5.1	kW
Standby mode	P _{SB}	0.022	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				Electrical

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	17960	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				

Contact details

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Takahiro YAMAUCHI

General Manager, Quality Assurance Department

Shizuoka JAPAN

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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:	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	η_s	162	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	15.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	5.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = - 7 °C	COPd	4.00	-
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	5.56	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-
Tj = + 7 °C	Pdh	12.2	kW	Tj = bivalent temperature	COPd	2.09	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.52	-
Tj = +12 °C	Pdh	14.6	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	21.1	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.7	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	20.4	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Supplementary heater			
Thermostat-off mode	P _{TO}	0.022	kW	Rated heat output (*)	Psup	7.3	kW
Standby mode	P _{SB}	0.022	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				Electrical

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	14904	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	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 at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	1.66	-
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	3.16	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	5.33	-
Tj = + 7 °C	Pdh	14.7	kW	Tj = bivalent temperature	COPd	1.66	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = operation limit temperature (***)	COPd	1.66	-
Tj = +12 °C	Pdh	13.6	kW	Operation limit temperature	TOL	-25	°C
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	22.8	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	22.8	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 _{OFF}	0.022	kW				
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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				

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

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUHZ-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 at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-		Tj = - 7 °C	COPd	2.47	-			
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	4.63	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	6.41	-			
Tj = + 7 °C	Pdh	14.8	kW	Tj = +12 °C	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = bivalent temperature	COPd	2.47	-			
Tj = +12 °C	Pdh	14.3	kW	Tj = operation limit temperature (***)	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C			
Tj = bivalent temperature	Pdh	23.0	kW	Heating water operating limit temperature	WTOL	60	°C			
Tj = operation limit temperature (***)	Pdh	23.0	kW	Supplementary heater						
Bivalent temperature	Tbiv	2	°C	Rated heat output (*)	Psup	0.0	kW			
Reference design conditions for space heating	Tdesignh	2	°C	Type of energy input	Electrical					
Power consumption in modes other than active mode										
Off mode	P _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							
Other items										
Capacity control	variable			Rated air flow rate, outdoors	-					
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB		8400					
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							

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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:	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 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	COPd	3.04	-			
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 7 °C	COPd	4.54	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.79	-			
Tj = + 7 °C	Pdh	11.2	kW	Tj = bivalent temperature	COPd	1.85	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.85	-			
Tj = +12 °C	Pdh	13.7	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	23.0	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	23.0	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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				

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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:	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 at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	22.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	3.40	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = - 7 °C	COPd	3.80	-			
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	5.32	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-			
Tj = + 7 °C	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.19	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.19	-			
Tj = +12 °C	Pdh	14.6	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	25.0	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	25.0	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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				

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

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

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	η_s	124	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	13.9	kW	Tj = - 7 °C	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 7 °C	COPd	4.90	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.15	-
Tj = + 7 °C	Pdh	11.6	kW	Tj = bivalent temperature	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.39	-
Tj = +12 °C	Pdh	14.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	19.4	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.9	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	18.8	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	5.1	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input		Electrical	
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors		-	8400 m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	17848	kWh				

For heat pump combination heater:							
Declared load profile		-		Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	η_s	164	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	15.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	5.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = - 7 °C	COPd	4.04	-
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	5.70	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-
Tj = + 7 °C	Pdh	12.2	kW	Tj = bivalent temperature	COPd	2.09	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.52	-
Tj = +12 °C	Pdh	14.6	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	21.1	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.7	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	20.4	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Supplementary heater			
Thermostat-off mode	P _{TO}	0.022	kW	Rated heat output (*)	Psup	7.3	kW
Standby mode	P _{SB}	0.022	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	14764	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				

Contact details

MITSUBISHI ELECTRIC CORPORATION SHIZUOKA WORKS

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Takahiro YAMAUCHI

General Manager, Quality Assurance Department

Shizuoka JAPAN

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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:	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 at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	1.66	-			
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	3.13	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	5.33	-			
Tj = + 7 °C	Pdh	14.7	kW	Tj = +12 °C	COPd	1.66	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = bivalent temperature	COPd	1.66	-			
Tj = +12 °C	Pdh	13.6	kW	Tj = operation limit temperature (***)	COPd	1.66	-			
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C			
Tj = bivalent temperature	Pdh	22.8	kW	Heating water operating limit temperature	WTOL	60	°C			
Tj = operation limit temperature (***)	Pdh	22.8	kW	Supplementary heater						
Bivalent temperature	Tbiv	2	°C	Rated heat output (*)	Psup	0.0	kW			
Reference design conditions for space heating	Tdesignh	2	°C	Type of energy input	Electrical					
Power consumption in modes other than active mode										
Off mode	P _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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				

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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:	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	Item	Symbol	Value	Unit			
Rated heat output (*)	Prated	23.0	kW	Seasonal space heating energy efficiency	η_s	202	%			
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	2.47	-			
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	4.58	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	6.41	-			
Tj = + 7 °C	Pdh	14.8	kW	Tj = +12 °C	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = bivalent temperature	COPd	2.47	-			
Tj = +12 °C	Pdh	14.3	kW	Tj = operation limit temperature (***)	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C			
Tj = bivalent temperature	Pdh	23.0	kW	Heating water operating limit temperature	WTOL	60	°C			
Tj = operation limit temperature (***)	Pdh	23.0	kW	Supplementary heater						
Bivalent temperature	Tbiv	2	°C	Rated heat output (*)	Psup	0.0	kW			
Reference design conditions for space heating	Tdesignh	2	°C	Type of energy input	Electrical					
Power consumption in modes other than active mode										
Off mode	P _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							
Other items										
Capacity control	variable			Rated air flow rate, outdoors	-					
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB		8400					
Annual energy consumption	Q _{HE}	6009	kWh							
For heat pump combination heater:										
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%			
Daily electricity consumption	Qelec	-	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:	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	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 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	COPd	3.04	-
Tj = + 2 °C	Pdh	12.4	kW	Tj = + 7 °C	COPd	4.54	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = +12 °C	COPd	5.79	-
Tj = + 7 °C	Pdh	11.2	kW	Tj = bivalent temperature	COPd	1.85	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.85	-
Tj = +12 °C	Pdh	13.7	kW	Operation limit temperature	TOL	-25	°C
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C
Tj = bivalent temperature	Pdh	23.0	kW	Supplementary heater			
Tj = operation limit temperature (***)	Pdh	23.0	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 _{OFF}	0.022	kW				
Thermostat-off mode	P _{TO}	0.022	kW				
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
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				

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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:	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	η_s	165	%			
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	22.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	3.40	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = - 7 °C	COPd	3.80	-			
Tj = + 2 °C	Pdh	13.5	kW	Tj = + 2 °C	COPd	5.32	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-			
Tj = + 7 °C	Pdh	12.0	kW	Tj = bivalent temperature	COPd	2.19	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	2.19	-			
Tj = +12 °C	Pdh	14.6	kW	Operation limit temperature	TOL	-25	°C			
Degradation co-efficient (**)	Cdh	0.99	-	Heating water operating limit temperature	WTOL	60	°C			
Tj = bivalent temperature	Pdh	25.0	kW	Supplementary heater						
Tj = operation limit temperature (***)	Pdh	25.0	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 _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	12270	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	η_s	124	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	13.9	kW	Tj = - 7 °C	COPd	3.40	-
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 2 °C	COPd	3.23	-
Tj = + 2 °C	Pdh	8.5	kW	Tj = + 7 °C	COPd	4.90	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = +12 °C	COPd	6.15	-
Tj = + 7 °C	Pdh	11.6	kW	Tj = bivalent temperature	COPd	1.52	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.39	-
Tj = +12 °C	Pdh	14.2	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	1.72	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	19.4	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.9	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	18.8	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Rated heat output (*)	Psup	5.1	kW
Thermostat-off mode	P _{TO}	0.022	kW	Type of energy input		Electrical	
Standby mode	P _{SB}	0.022	kW				
Crankcase heater mode	P _{CK}	0.000	kW				

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	17848	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	η_s	164	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj							
Tj = - 7 °C	Pdh	15.1	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	5.00	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = - 7 °C	COPd	4.04	-
Tj = + 2 °C	Pdh	9.2	kW	Tj = + 2 °C	COPd	5.70	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = + 7 °C	COPd	6.68	-
Tj = + 7 °C	Pdh	12.2	kW	Tj = bivalent temperature	COPd	2.09	-
Degradation co-efficient (**)	Cdh	0.99	-	Tj = operation limit temperature (***)	COPd	1.52	-
Tj = +12 °C	Pdh	14.6	kW	Tj = - 15 °C (if TOL < - 20 °C)	COPd	2.40	-
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C
Tj = bivalent temperature	Pdh	21.1	kW	Heating water operating limit temperature	WTOL	60	°C
Tj = operation limit temperature (***)	Pdh	17.7	kW				
Tj = - 15 °C (if TOL < - 20 °C)	Pdh	20.4	kW				
Bivalent temperature	Tbiv	-16	°C				
Reference design conditions for space heating	Tdesignh	-22	°C				
Power consumption in modes other than active mode							
Off mode	P _{OFF}	0.022	kW	Supplementary heater			
Thermostat-off mode	P _{TO}	0.022	kW	Rated heat output (*)	Psup	7.3	kW
Standby mode	P _{SB}	0.022	kW	Type of energy input			
Crankcase heater mode	P _{CK}	0.000	kW				Electrical

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	14764	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	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:	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	η_s	150	%			
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	1.66	-			
Tj = + 2 °C	Pdh	22.8	kW	Tj = + 2 °C	COPd	3.13	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	5.33	-			
Tj = + 7 °C	Pdh	14.7	kW	Tj = +12 °C	COPd	1.66	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = bivalent temperature	COPd	1.66	-			
Tj = +12 °C	Pdh	13.6	kW	Tj = operation limit temperature (***)	COPd	1.66	-			
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C			
Tj = bivalent temperature	Pdh	22.8	kW	Heating water operating limit temperature	WTOL	60	°C			
Tj = operation limit temperature (***)	Pdh	22.8	kW	Supplementary heater						
Bivalent temperature	Tbiv	2	°C	Rated heat output (*)	Psup	0.0	kW			
Reference design conditions for space heating	Tdesignh	2	°C	Type of energy input	Electrical					
Power consumption in modes other than active mode										
Off mode	P _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							

Other items

Capacity control	variable			Rated air flow rate, outdoors	-	8400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB				
Annual energy consumption	Q _{HE}	7975	kWh				

For heat pump combination heater:

Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh				
Annual electricity consumption	AEC	-	kWh				

Contact details

MITSUBISHI ELECTRIC CORPORATION SHIZUOKA WORKS

3-18-1, Oshika, Suruga-ku, Shizuoka 422-8528, Japan

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

Takahiro YAMAUCHI

General Manager, Quality Assurance Department

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.

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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.		

Item	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 temperature 20 °C and outdoor temperature Tj										
Tj = - 7 °C	Pdh	-	kW	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	COPd	-	-			
Degradation co-efficient (**)	Cdh	-	-	Tj = - 7 °C	COPd	2.47	-			
Tj = + 2 °C	Pdh	23.0	kW	Tj = + 2 °C	COPd	4.58	-			
Degradation co-efficient (**)	Cdh	1.00	-	Tj = + 7 °C	COPd	6.41	-			
Tj = + 7 °C	Pdh	14.8	kW	Tj = +12 °C	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Tj = bivalent temperature	COPd	2.47	-			
Tj = +12 °C	Pdh	14.3	kW	Tj = operation limit temperature (***)	COPd	2.47	-			
Degradation co-efficient (**)	Cdh	0.99	-	Operation limit temperature	TOL	-25	°C			
Tj = bivalent temperature	Pdh	23.0	kW	Heating water operating limit temperature	WTOL	60	°C			
Tj = operation limit temperature (***)	Pdh	23.0	kW	Supplementary heater						
Bivalent temperature	Tbiv	2	°C	Rated heat output (*)	Psup	0.0	kW			
Reference design conditions for space heating	Tdesignh	2	°C	Type of energy input	Electrical					
Power consumption in modes other than active mode										
Off mode	P _{OFF}	0.022	kW							
Thermostat-off mode	P _{TO}	0.022	kW							
Standby mode	P _{SB}	0.022	kW							
Crankcase heater mode	P _{CK}	0.000	kW							
Other items										
Capacity control	variable			Rated air flow rate, outdoors	-					
Sound power level, indoors/outdoors	L _{WA}	45 / 73	dB		8400					
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				

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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.