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 T j				Declared coefficient of performance or primary energy ratio 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	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	-
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 active 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	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 / 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 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:

Tomoyuki MIWA
General Manager, Quality Assuarance 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.

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-****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
Rated heat output (*)	Prated	25.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	22.1	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 2 °C	Pdh	13.5	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 7 °C	Pdh	12.0	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.6	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	25.0	kW
Tj = operation limit temperature (***)	Pdh	25.0	kW
Bivalent temperature	Tbiv	-10	°C
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	
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		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	164	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	3.40	-
Tj = + 2 °C	COPd	3.80	-
Tj = + 7 °C	COPd	5.32	-
Tj = +12 °C	COPd	6.68	-
Tj = bivalent temperature	COPd	2.19	-
Tj = operation limit temperature (***)	COPd	2.19	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	0.0	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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
Rated heat output (*)	Prated	23.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	13.9	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 2 °C	Pdh	8.5	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 7 °C	Pdh	11.6	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	19.4	kW
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
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	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	17960	kWh
For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	123	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	3.40	-
Tj = + 2 °C	COPd	3.20	-
Tj = + 7 °C	COPd	4.90	-
Tj = +12 °C	COPd	6.15	-
Tj = bivalent temperature	COPd	1.52	-
Tj = operation limit temperature (***)	COPd	1.39	-
Tj = – 15 °C (if TOL < – 20 °C)	COPd	1.72	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	5.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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
Rated heat output (*)	Prated	25.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	15.1	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 2 °C	Pdh	9.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 7 °C	Pdh	12.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.6	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	21.1	kW
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
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	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	14904	kWh
For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	162	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	5.00	-
Tj = + 2 °C	COPd	4.00	-
Tj = + 7 °C	COPd	5.56	-
Tj = +12 °C	COPd	6.68	-
Tj = bivalent temperature	COPd	2.09	-
Tj = operation limit temperature (***)	COPd	1.52	-
Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.40	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	7.3	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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-****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 at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	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 / 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				

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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
Rated heat output (*)	Prated	23.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	-	kW
Degradation co-efficient (**)	Cdh	-	-
Tj = + 2 °C	Pdh	23.0	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 7 °C	Pdh	14.8	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.3	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	23.0	kW
Tj = operation limit temperature (***)	Pdh	23.0	kW
Bivalent temperature	Tbiv	2	°C
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	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	6076	kWh
For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	199	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	-	-
Tj = + 2 °C	COPd	2.47	-
Tj = + 7 °C	COPd	4.63	-
Tj = +12 °C	COPd	6.41	-
Tj = bivalent temperature	COPd	2.47	-
Tj = operation limit temperature (***)	COPd	2.47	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	0.0	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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 T j				Declared coefficient of performance or primary energy ratio 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	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	-
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 active 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	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 / 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				

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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		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 T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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 active 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	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 / 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 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;

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Tomoyuki MIWA
General Manager, Quality Assuarance 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.

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		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 at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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	3.20	-
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 active 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	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 / 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				

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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		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	25.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	15.1	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 2 °C	Pdh	9.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 7 °C	Pdh	12.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.6	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	21.1	kW
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
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	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	14904	kWh
For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	162	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	5.00	-
Tj = + 2 °C	COPd	4.00	-
Tj = + 7 °C	COPd	5.56	-
Tj = +12 °C	COPd	6.68	-
Tj = bivalent temperature	COPd	2.09	-
Tj = operation limit temperature (***)	COPd	1.52	-
Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.40	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	7.3	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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.

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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		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 T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	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	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	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 / 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				

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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.

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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		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	23.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	-	kW
Degradation co-efficient (**)	Cdh	-	-
Tj = + 2 °C	Pdh	23.0	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 7 °C	Pdh	14.8	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.3	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	23.0	kW
Tj = operation limit temperature (***)	Pdh	23.0	kW
Bivalent temperature	Tbiv	2	°C
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	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	6076	kWh
For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	199	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	-	-
Tj = + 2 °C	COPd	2.47	-
Tj = + 7 °C	COPd	4.63	-
Tj = +12 °C	COPd	6.41	-
Tj = bivalent temperature	COPd	2.47	-
Tj = operation limit temperature (***)	COPd	2.47	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	0.0	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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

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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 T j				Declared coefficient of performance or primary energy ratio 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	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 active 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	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 / 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				

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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		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 T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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 active 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	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 / 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				

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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	ηs	124	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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 active 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	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 / 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

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Tomoyuki MIWA
General Manager, Quality Assuarance 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.

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		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	25.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	15.1	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 2 °C	Pdh	9.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 7 °C	Pdh	12.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.6	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	21.1	kW
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
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	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	14764	kWh
For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	164	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	5.00	-
Tj = + 2 °C	COPd	4.04	-
Tj = + 7 °C	COPd	5.70	-
Tj = +12 °C	COPd	6.68	-
Tj = bivalent temperature	COPd	2.09	-
Tj = operation limit temperature (***)	COPd	1.52	-
Tj = – 15 °C (if TOL < – 20 °C)	COPd	2.40	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	7.3	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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 T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	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	3.13	-
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	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	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 / 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				

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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.

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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	ηs	202	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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 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	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 / 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				

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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.

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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
Rated heat output (*)	Prated	23.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	20.3	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 2 °C	Pdh	12.4	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 7 °C	Pdh	11.2	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	13.7	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	23.0	kW
Tj = operation limit temperature (***)	Pdh	23.0	kW
Bivalent temperature	Tbiv	-10	°C
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	
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		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	128	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	2.10	-
Tj = + 2 °C	COPd	3.04	-
Tj = + 7 °C	COPd	4.54	-
Tj = +12 °C	COPd	5.79	-
Tj = bivalent temperature	COPd	1.85	-
Tj = operation limit temperature (***)	COPd	1.85	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°C
Supplementary heater			
Rated heat output (*)	Psup	0.0	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors	-	8400	m^3/h
Water heating energy efficiency	ηwh	-	%

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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
Rated heat output (*)	Prated	25.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
Tj = - 7 °C	Pdh	22.1	kW
Degradation co-efficient (**)	Cdh	1.00	-
Tj = + 2 °C	Pdh	13.5	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = + 7 °C	Pdh	12.0	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = +12 °C	Pdh	14.6	kW
Degradation co-efficient (**)	Cdh	0.99	-
Tj = bivalent temperature	Pdh	25.0	kW
Tj = operation limit temperature (***)	Pdh	25.0	kW
Bivalent temperature	Tbiv	-10	°C
Reference design conditions for space heating	Tdesignh	-10	°C

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	165	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	COPd	3.40	-
Tj = + 2 °C	COPd	3.80	-
Tj = + 7 °C	COPd	5.32	-
Tj = +12 °C	COPd	6.68	-
Tj = bivalent temperature	COPd	2.19	-
Tj = operation limit temperature (***)	COPd	2.19	-
Operation limit temperature	TOL	-25	°C
Heating water operating limit temperature	WTOL	60	°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

Supplementary heater			
Rated heat output (*)	Psup	0.0	kW
Type of energy input		Electrical	

Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	45 / 75	dBA
Annual energy consumption	Q_{HE}	12270	kWh
Rated air flow rate, outdoors	-	8400	m^3/h

For heat pump combination heater:			
Declared load profile		-	
Daily electricity consumption	Qelec	-	kWh
Annual electricity consumption	AEC	-	kWh
Water heating energy efficiency	ηwh	-	%

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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	ηs	124	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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 active 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	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 / 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				

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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	ηs	164	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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	4.04	-
Degradation co-efficient (**)	Cdh	0.99	-				
Tj = + 7 °C	Pdh	12.2	kW	Tj = + 7 °C	COPd	5.70	-
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 active 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	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 / 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 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;

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

Tomoyuki MIWA
General Manager, Quality Assuarance 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.

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-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 at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 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	3.13	-
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	-
Bivalent temperature	Tbiv	2	°C	Operation limit temperature	TOL	-25	°C
Reference design conditions for space heating	Tdesignh	2	°C	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0.022	kW	Rated heat output (*)	Psup	0.0	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 / 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				

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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 T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = - 7 °C	Pdh	-	kW	Tj = - 7 °C	COPd	-	-
Degradation co-efficient (**)	Cdh	-	-				
Tj = + 2 °C	Pdh	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 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	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 / 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				

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