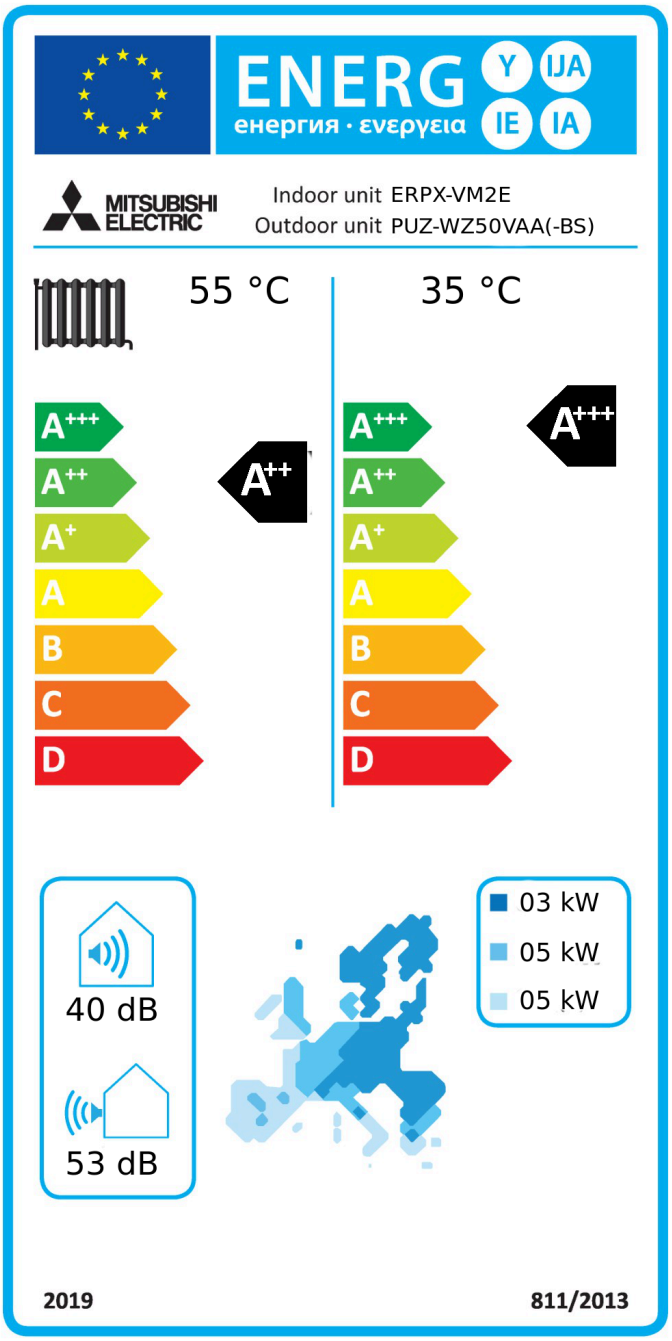
Heat Pump Package Calculator Results

Outdoor: PUZ-WZ50VAA(-BS) / Indoor: ERPX-VM2E

Energy Label



1. SPACE HEATER

1	Outdoor unit		**PUZ-WZ50VAA(-BS)**
2	Indoor unit		**ERPX-VM2E (Hydro box)**
For medium-temperature application			
3	Medium-temperature application		✓
6	Seasonal space heating energy efficiency class		**A++**
8	Rated heat output under average climate conditions	kW	5
11	Seasonal space heating energy efficiency under average climate conditions	%	138
9	For space heating, annual energy consumption under average climate conditions	kWh	2929
13	Sound power level L_{WA} indoor	dB	40
15	Rated heat output under colder climate conditions	kW	3
16	Rated heat output under warmer climate conditions	kW	5
21	Seasonal space heating energy efficiency under colder climate conditions	%	114
22	Seasonal space heating energy efficiency under warmer climate conditions	%	165
17	For space heating, annual energy consumption under colder climate conditions	kWh	2528
18	For space heating, annual energy consumption under warmer climate conditions	kWh	1586
25	Sound power level L_{WA} outdoor	dB	53
For low-temperature application			
4	Low-temperature application		✓
6	Seasonal space heating energy efficiency class		**A+++**
8	Rated heat output under average climate conditions	kW	5
11	Seasonal space heating energy efficiency under average climate conditions	%	182
9	For space heating, annual energy consumption under average climate conditions	kWh	2236
13	Sound power level L_{WA} indoor	dB	40
15	Rated heat output under colder climate conditions	kW	3
16	Rated heat output under warmer climate conditions	kW	5
21	Seasonal space heating energy efficiency under colder climate conditions	%	145
22	Seasonal space heating energy efficiency under warmer climate conditions	%	244
17	For space heating, annual energy consumption under colder climate conditions	kWh	2004
18	For space heating, annual energy consumption under warmer climate conditions	kWh	1082
25	Sound power level L_{WA} outdoor	dB	53

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-WZ50VAA(-BS)
	Indoor unit:	ERPX-VM2E
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
Rated heat output(*)	P_{rated}	5.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	4.4	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +2°C	P_{dh}	2.7	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = +12°C	P_{dh}	1.8	kW
Degradation co-efficient(**)	C_{dh}	0.95	
T_j = bivalent temperature	P_{dh}	4.4	kW
T_j = operation limit temperature(***)	P_{dh}	4.9	kW
Bivalent temperature	T_{biv}	-7	°C
Reference design conditions for space heating	$T_{designh}$	-10	°C
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0.015	kW
Thermostat-off mode	P_{TO}	0.015	kW
Standby mode	P_{SB}	0.015	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	40 / 53	dB
Annual energy consumption	Q_{HE}	2929	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	138	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.39	
T_j = +2°C	COP_d	3.22	
T_j = +7°C	COP_d	4.80	
T_j = +12°C	COP_d	6.54	
T_j = bivalent temperature	COP_d	2.39	
T_j = operation limit temperature(***)	COP_d	2.07	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	75	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2760	m³/h

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEM EUROPE LTD.

Nettlehill Road, Houston Industrial Estate, Livingston, EH54 5EQ, Scotland, U.K.

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



Kengo TAKAHASHI

Manager, Quality Assuarance Department

UNITED KINGDOM

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-WZ50VAA(-BS)
	Indoor unit:	ERPX-VM2E
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
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T_j = +2°C	P_{dh}	2.7	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = +12°C	P_{dh}	1.8	kW
Degradation co-efficient(**)	C_{dh}	0.95	
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T_j = operation limit temperature(***)	P_{dh}	4.9	kW
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Power consumption in modes other than active mode			
Off mode	P_{OFF}	0.015	kW
Thermostat-off mode	P_{TO}	0.015	kW
Standby mode	P_{SB}	0.015	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	40 / 53	dB
Annual energy consumption	Q_{HE}	2528	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	114	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.39	
T_j = +2°C	COP_d	3.22	
T_j = +7°C	COP_d	4.80	
T_j = +12°C	COP_d	6.54	
T_j = bivalent temperature	COP_d	2.39	
T_j = operation limit temperature(***)	COP_d	2.07	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	75	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2760	m³/h

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	Indoor unit:	ERPX-VM2E
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
Rated heat output(*)	P_{rated}	5.0	kW
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T_j = +2°C	P_{dh}	2.7	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = +12°C	P_{dh}	1.8	kW
Degradation co-efficient(**)	C_{dh}	0.95	
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T_j = operation limit temperature(***)	P_{dh}	4.9	kW
Bivalent temperature	T_{biv}	-7	°C
Reference design conditions for space heating	$T_{designh}$	-10	°C
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0.015	kW
Thermostat-off mode	P_{TO}	0.015	kW
Standby mode	P_{SB}	0.015	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	40 / 53	dB
Annual energy consumption	Q_{HE}	1586	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	165	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.39	
T_j = +2°C	COP_d	3.22	
T_j = +7°C	COP_d	4.80	
T_j = +12°C	COP_d	6.54	
T_j = bivalent temperature	COP_d	2.39	
T_j = operation limit temperature(***)	COP_d	2.07	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	75	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2760	m³/h

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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
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Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
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Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.95	
T_j = +12°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.93	
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Off mode	P_{OFF}	0.015	kW
Thermostat-off mode	P_{TO}	0.015	kW
Standby mode	P_{SB}	0.015	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	40 / 53	dB
Annual energy consumption	Q_{HE}	2236	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	182	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	3.02	
T_j = +2°C	COP_d	4.42	
T_j = +7°C	COP_d	6.08	
T_j = +12°C	COP_d	7.50	
T_j = bivalent temperature	COP_d	3.02	
T_j = operation limit temperature(***)	COP_d	2.76	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	75	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2760	m³/h

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Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
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Degradation co-efficient(**)	C_{dh}	0.95	
T_j = +12°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.93	
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T_j = operation limit temperature(***)	P_{dh}	4.9	kW
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Off mode	P_{OFF}	0.015	kW
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Standby mode	P_{SB}	0.015	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	40 / 53	dB
Annual energy consumption	Q_{HE}	2004	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	145	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	3.02	
T_j = +2°C	COP_d	4.42	
T_j = +7°C	COP_d	6.08	
T_j = +12°C	COP_d	7.50	
T_j = bivalent temperature	COP_d	3.02	
T_j = operation limit temperature(***)	COP_d	2.76	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	75	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2760	m³/h

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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(*)	P_{rated}	5.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	4.4	kW
Degradation co-efficient(**)	C_{dh}	0.99	
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Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.95	
T_j = +12°C	P_{dh}	1.7	kW
Degradation co-efficient(**)	C_{dh}	0.93	
T_j = bivalent temperature	P_{dh}	4.4	kW
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Off mode	P_{OFF}	0.015	kW
Thermostat-off mode	P_{TO}	0.015	kW
Standby mode	P_{SB}	0.015	kW
Crankcase heater mode	P_{CK}	0.000	kW
Other items			
Capacity control		variable	
Sound power level, indoors/outdoors	L_{WA}	40 / 53	dB
Annual energy consumption	Q_{HE}	1082	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	244	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	3.02	
T_j = +2°C	COP_d	4.42	
T_j = +7°C	COP_d	6.08	
T_j = +12°C	COP_d	7.50	
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T_j = operation limit temperature(***)	COP_d	2.76	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	75	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2760	m³/h

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