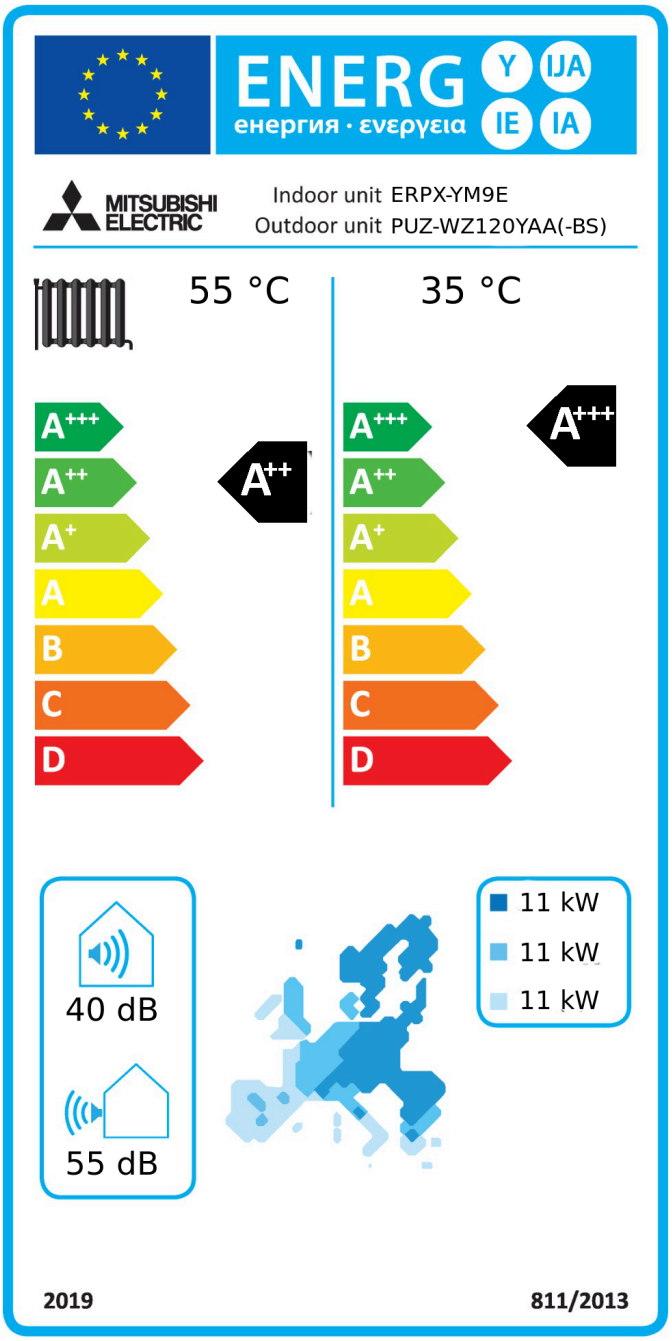
Heat Pump Package Calculator Results

Outdoor: PUZ-WZ120YAA(-BS) / Indoor: ERPX-YM9E

Energy Label



1. SPACE HEATER

1	Outdoor unit		**PUZ-WZ120YAA(-BS)**
2	Indoor unit		**ERPX-YM9E (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	11
11	Seasonal space heating energy efficiency under average climate conditions	%	142
9	For space heating, annual energy consumption under average climate conditions	kWh	6255
13	Sound power level L_{WA} indoor	dB	40
15	Rated heat output under colder climate conditions	kW	11
16	Rated heat output under warmer climate conditions	kW	11
21	Seasonal space heating energy efficiency under colder climate conditions	%	123
22	Seasonal space heating energy efficiency under warmer climate conditions	%	176
17	For space heating, annual energy consumption under colder climate conditions	kWh	8577
18	For space heating, annual energy consumption under warmer climate conditions	kWh	3281
25	Sound power level L_{WA} outdoor	dB	55
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	11
11	Seasonal space heating energy efficiency under average climate conditions	%	192
9	For space heating, annual energy consumption under average climate conditions	kWh	4667
13	Sound power level L_{WA} indoor	dB	40
15	Rated heat output under colder climate conditions	kW	11
16	Rated heat output under warmer climate conditions	kW	11
21	Seasonal space heating energy efficiency under colder climate conditions	%	161
22	Seasonal space heating energy efficiency under warmer climate conditions	%	233
17	For space heating, annual energy consumption under colder climate conditions	kWh	6609
18	For space heating, annual energy consumption under warmer climate conditions	kWh	2488
25	Sound power level L_{WA} outdoor	dB	55

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-WZ120YAA(-BS)
	Indoor unit:	ERPX-YM9E
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}	11.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	9.7	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	5.9	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	3.8	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	4.4	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	9.7	kW
T_j = operation limit temperature(***)	P_{dh}	10.9	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}	0.022	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}	40 / 55	dB
Annual energy consumption	Q_{HE}	6255	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	142	%
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	2.09	
T_j = +2°C	COP_d	3.51	
T_j = +7°C	COP_d	5.09	
T_j = +12°C	COP_d	6.30	
T_j = bivalent temperature	COP_d	2.09	
T_j = operation limit temperature(***)	COP_d	1.86	
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		3170	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-WZ120YAA(-BS)
	Indoor unit:	ERPX-YM9E
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(*)	P_{rated}	11.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	9.7	kW
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T_j = +2°C	P_{dh}	5.9	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	3.8	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	4.4	kW
Degradation co-efficient(**)	C_{dh}	0.97	
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T_j = operation limit temperature(***)	P_{dh}	10.9	kW
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Reference design conditions for space heating	$T_{designh}$	-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}	40 / 55	dB
Annual energy consumption	Q_{HE}	8577	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	123	%
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	2.09	
T_j = +2°C	COP_d	3.51	
T_j = +7°C	COP_d	5.09	
T_j = +12°C	COP_d	6.30	
T_j = bivalent temperature	COP_d	2.09	
T_j = operation limit temperature(***)	COP_d	1.86	
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		3170	m³/h

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	Indoor unit:	ERPX-YM9E
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}	11.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	9.7	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	5.9	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	3.8	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	4.4	kW
Degradation co-efficient(**)	C_{dh}	0.97	
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T_j = operation limit temperature(***)	P_{dh}	10.9	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}	0.022	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}	40 / 55	dB
Annual energy consumption	Q_{HE}	3281	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	176	%
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	2.09	
T_j = +2°C	COP_d	3.51	
T_j = +7°C	COP_d	5.09	
T_j = +12°C	COP_d	6.30	
T_j = bivalent temperature	COP_d	2.09	
T_j = operation limit temperature(***)	COP_d	1.86	
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		3170	m³/h

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	Indoor unit:	ERPX-YM9E
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(*)	P_{rated}	11.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	9.7	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +2°C	P_{dh}	5.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	4.2	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	4.2	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	9.7	kW
T_j = operation limit temperature(***)	P_{dh}	10.9	kW
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Reference design conditions for space heating	$T_{designh}$	-10	°C
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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}	40 / 55	dB
Annual energy consumption	Q_{HE}	4667	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	192	%
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	3.00	
T_j = +2°C	COP_d	4.73	
T_j = +7°C	COP_d	6.59	
T_j = +12°C	COP_d	7.66	
T_j = bivalent temperature	COP_d	3.00	
T_j = operation limit temperature(***)	COP_d	2.57	
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		3170	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}	0.98	
T_j = +7°C	P_{dh}	4.2	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	4.2	kW
Degradation co-efficient(**)	C_{dh}	0.96	
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T_j = operation limit temperature(***)	P_{dh}	10.9	kW
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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}	40 / 55	dB
Annual energy consumption	Q_{HE}	6609	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	161	%
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	3.00	
T_j = +2°C	COP_d	4.73	
T_j = +7°C	COP_d	6.59	
T_j = +12°C	COP_d	7.66	
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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		3170	m³/h

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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}	11.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	9.7	kW
Degradation co-efficient(**)	C_{dh}	0.99	
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Degradation co-efficient(**)	C_{dh}	0.98	
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Degradation co-efficient(**)	C_{dh}	0.97	
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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}	40 / 55	dB
Annual energy consumption	Q_{HE}	2488	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	233	%
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	3.00	
T_j = +2°C	COP_d	4.73	
T_j = +7°C	COP_d	6.59	
T_j = +12°C	COP_d	7.66	
T_j = bivalent temperature	COP_d	3.00	
T_j = operation limit temperature(***)	COP_d	2.57	
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		3170	m³/h

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