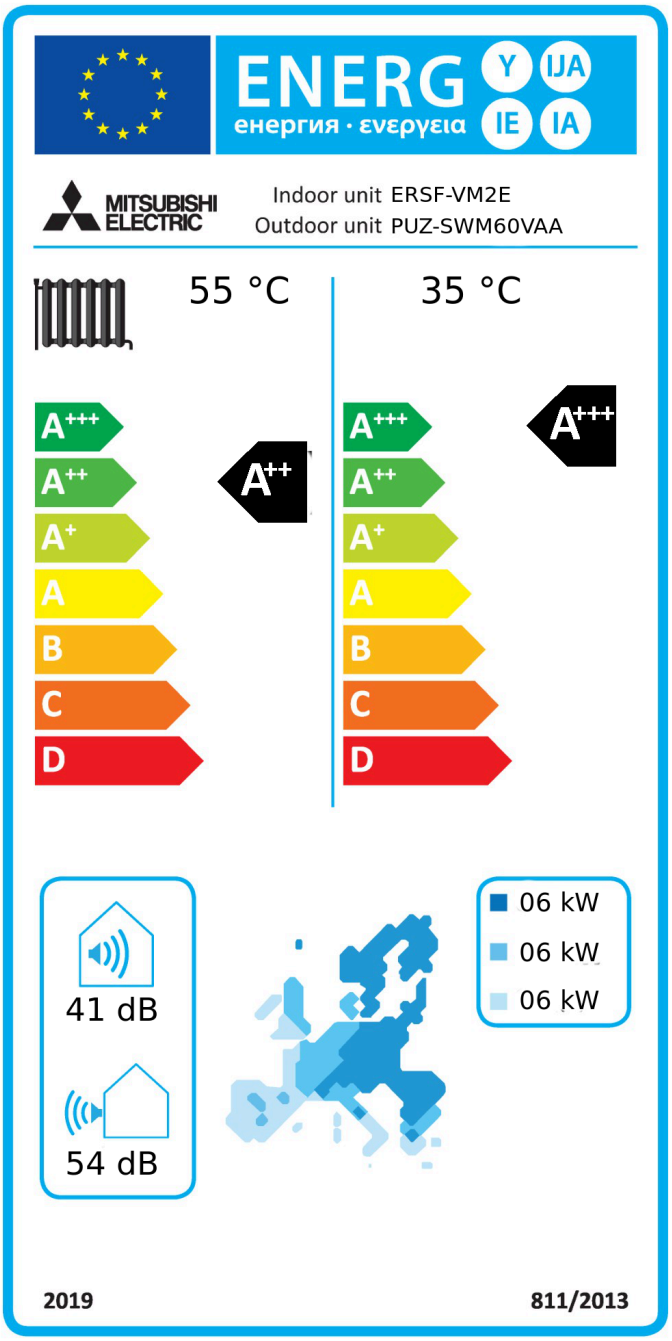
Heat Pump Package Calculator Results

Outdoor: PUZ-SWM60VAA / Indoor: ERSF-VM2E

Energy Label



1. SPACE HEATER

1	Outdoor unit		**PUZ-SWM60VAA**
2	Indoor unit		**ERSF-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	6
11	Seasonal space heating energy efficiency under average climate conditions	%	128
9	For space heating, annual energy consumption under average climate conditions	kWh	3772
13	Sound power level L_{WA} indoor	dB	41
15	Rated heat output under colder climate conditions	kW	6
16	Rated heat output under warmer climate conditions	kW	6
21	Seasonal space heating energy efficiency under colder climate conditions	%	112
22	Seasonal space heating energy efficiency under warmer climate conditions	%	156
17	For space heating, annual energy consumption under colder climate conditions	kWh	5128
18	For space heating, annual energy consumption under warmer climate conditions	kWh	2022
25	Sound power level L_{WA} outdoor	dB	54
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	6
11	Seasonal space heating energy efficiency under average climate conditions	%	185
9	For space heating, annual energy consumption under average climate conditions	kWh	2640
13	Sound power level L_{WA} indoor	dB	41
15	Rated heat output under colder climate conditions	kW	6
16	Rated heat output under warmer climate conditions	kW	6
21	Seasonal space heating energy efficiency under colder climate conditions	%	137
22	Seasonal space heating energy efficiency under warmer climate conditions	%	219
17	For space heating, annual energy consumption under colder climate conditions	kWh	4237
18	For space heating, annual energy consumption under warmer climate conditions	kWh	1447
25	Sound power level L_{WA} outdoor	dB	54

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SWM60VAA
	Indoor unit:	ERSF-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}	6.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	5.3	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +2°C	P_{dh}	4.4	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	2.7	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.0	kW
T_j = operation limit temperature(***)	P_{dh}	6.0	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}	41 / 54	dB
Annual energy consumption	Q_{HE}	3772	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	128	%
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	2.27	
T_j = +2°C	COP_d	3.20	
T_j = +7°C	COP_d	3.99	
T_j = +12°C	COP_d	5.58	
T_j = bivalent temperature	COP_d	1.99	
T_j = operation limit temperature(***)	COP_d	1.99	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	70	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2220	m³/h

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY

Manisa OSB 4.Kisim Kecilikoyosb Mah. Ahmet Nazif Zorlu Bulvari No;19 Yunusemre - Manisa, Turkey

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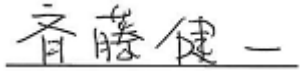

Kenichi SAITO

Manager, Quality Assuarance Department

TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SWM60VAA
	Indoor unit:	ERSF-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
Rated heat output(*)	P_{rated}	6.0	kW
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Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	2.7	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.0	kW
T_j = operation limit temperature(***)	P_{dh}	6.0	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}	41 / 54	dB
Annual energy consumption	Q_{HE}	5128	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	112	%
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	2.27	
T_j = +2°C	COP_d	3.20	
T_j = +7°C	COP_d	3.99	
T_j = +12°C	COP_d	5.58	
T_j = bivalent temperature	COP_d	1.99	
T_j = operation limit temperature(***)	COP_d	1.99	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	70	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2220	m³/h

Contact details

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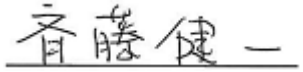

Kenichi SAITO

Manager, Quality Assuarance Department

TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SWM60VAA
	Indoor unit:	ERSF-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}	6.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	5.3	kW
Degradation co-efficient(**)	C_{dh}	0.99	
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Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	2.7	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.0	kW
T_j = operation limit temperature(***)	P_{dh}	6.0	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}	41 / 54	dB
Annual energy consumption	Q_{HE}	2022	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	156	%
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	2.27	
T_j = +2°C	COP_d	3.20	
T_j = +7°C	COP_d	3.99	
T_j = +12°C	COP_d	5.58	
T_j = bivalent temperature	COP_d	1.99	
T_j = operation limit temperature(***)	COP_d	1.99	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	70	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2220	m³/h

Contact details

MITSUBISHI ELECTRIC AIR CONDITIONING SYSTEMS MANUFACTURING TURKEY JOINT STOCK COMPANY

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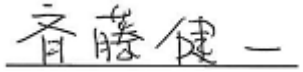

Kenichi SAITO

Manager, Quality Assuarance Department

TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SWM60VAA
	Indoor unit:	ERSF-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		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	6.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	5.4	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +2°C	P_{dh}	4.8	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	4.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.0	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.0	kW
T_j = operation limit temperature(***)	P_{dh}	6.0	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}	41 / 54	dB
Annual energy consumption	Q_{HE}	2640	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	185	%
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	3.38	
T_j = +2°C	COP_d	4.77	
T_j = +7°C	COP_d	5.61	
T_j = +12°C	COP_d	6.19	
T_j = bivalent temperature	COP_d	2.74	
T_j = operation limit temperature(***)	COP_d	2.74	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	70	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2220	m³/h

Contact details

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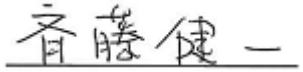

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	Indoor unit:	ERSF-VM2E
Air-to-water heat pump:		yes
Water-to-water heat pump:		no
Brine-to-water heat pump:		no
Low-temperature heat pump:		no
Equipped with a supplementary heater:		yes
Heat pump combination heater:		no
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
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Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	4.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.0	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.0	kW
T_j = operation limit temperature(***)	P_{dh}	6.0	kW
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Reference design conditions for space heating	$T_{designh}$	-10	°C
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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}	41 / 54	dB
Annual energy consumption	Q_{HE}	4237	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	137	%
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	3.38	
T_j = +2°C	COP_d	4.77	
T_j = +7°C	COP_d	5.61	
T_j = +12°C	COP_d	6.19	
T_j = bivalent temperature	COP_d	2.74	
T_j = operation limit temperature(***)	COP_d	2.74	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	70	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2220	m³/h

Contact details

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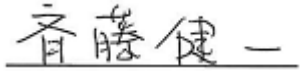

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TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SWM60VAA
	Indoor unit:	ERSF-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		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	6.0	kW
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Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	4.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.0	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.0	kW
T_j = operation limit temperature(***)	P_{dh}	6.0	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

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	219	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
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T_j = operation limit temperature(***)	COP_d	2.74	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	70	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	41 / 54	dB
Annual energy consumption	Q_{HE}	1447	kWh
Rated air flow rate, outdoors		2220	m³/h

Contact details

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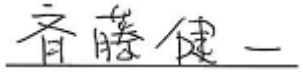

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