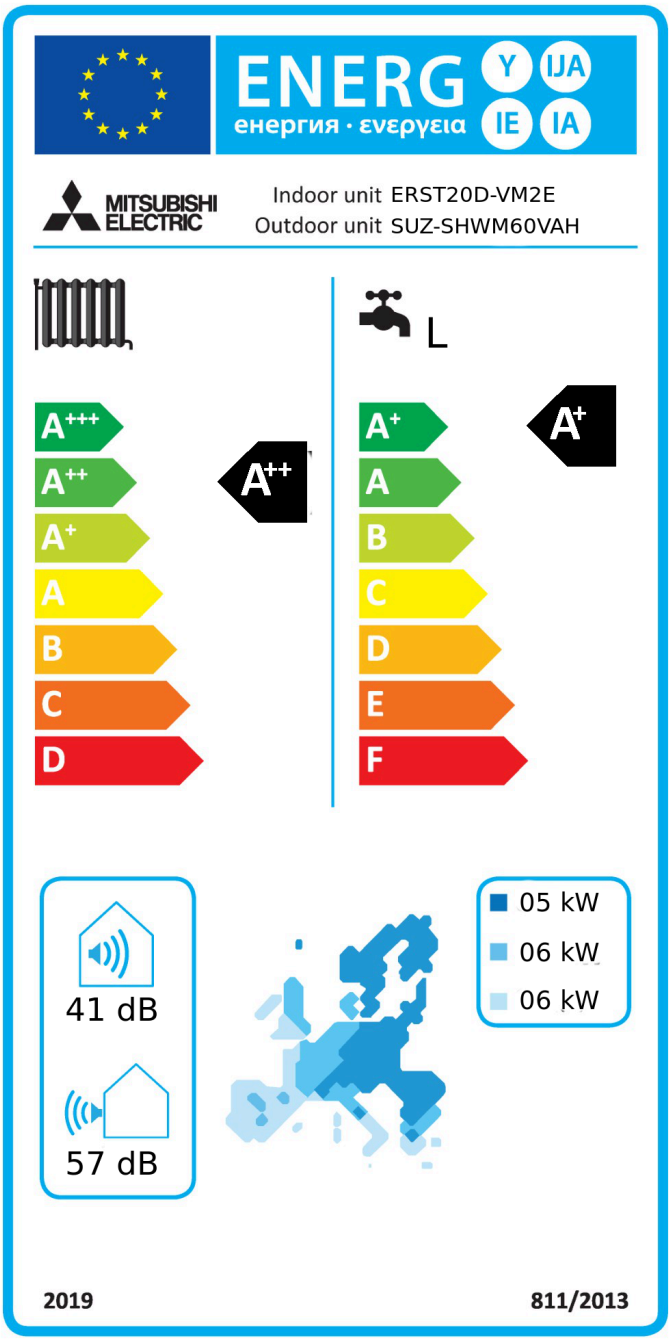
Heat Pump Package Calculator Results

Outdoor: SUZ-SHWM60VAH / Indoor: ERST20D-VM2E

Energy Label



1. SPACE HEATER

1	Outdoor unit		**SUZ-SHWM60VAH**
2	Indoor unit		**ERST20D-VM2E (Cylinder)**
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	3794
13	Sound power level L_{WA} indoor	dB	41
15	Rated heat output under colder climate conditions	kW	5.5
16	Rated heat output under warmer climate conditions	kW	6
21	Seasonal space heating energy efficiency under colder climate conditions	%	101
22	Seasonal space heating energy efficiency under warmer climate conditions	%	173
17	For space heating, annual energy consumption under colder climate conditions	kWh	5231
18	For space heating, annual energy consumption under warmer climate conditions	kWh	1818
25	Sound power level L_{WA} outdoor	dB	57
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	6.1
11	Seasonal space heating energy efficiency under average climate conditions	%	178
9	For space heating, annual energy consumption under average climate conditions	kWh	2783
13	Sound power level L_{WA} indoor	dB	41
15	Rated heat output under colder climate conditions	kW	5.5
16	Rated heat output under warmer climate conditions	kW	6
21	Seasonal space heating energy efficiency under colder climate conditions	%	148
22	Seasonal space heating energy efficiency under warmer climate conditions	%	241
17	For space heating, annual energy consumption under colder climate conditions	kWh	3583
18	For space heating, annual energy consumption under warmer climate conditions	kWh	1312
25	Sound power level L_{WA} outdoor	dB	57

2. COMBINATION HEATER

1	Outdoor unit		**SUZ-SHWM60VAH**
2	Indoor unit		**ERST20D-VM2E (Cylinder)**
For medium-temperature application			
3	Medium-temperature application		✓
5	Declared load profile		**L**
6	Seasonal space heating energy efficiency class		**A++**
7	Water heating energy efficiency class		**A+**
8	Rated heat output under average climate conditions	kW	6
9	For space heating, annual energy consumption under average climate conditions	kWh	3794
10	For water heating, annual electricity consumption under average climate conditions	kWh	723
11	Seasonal space heating energy efficiency under average climate conditions	%	128
12	Water heating energy efficiency under average climate conditions	%	148
13	Sound power level L_{WA} indoor	dB	41
14	Work only during off-peak hours		-
19	For water heating, annual energy consumption under colder climate conditions	kWh	875
20	For water heating, annual energy consumption under warmer climate conditions	kWh	632
25	Sound power level L_{WA} outdoor	dB	57
For low-temperature application			
4	Low-temperature application		✓
5	Declared load profile		**L**
6	Seasonal space heating energy efficiency class		**A+++**
7	Water heating energy efficiency class		**A+**
11	Seasonal space heating energy efficiency under average climate conditions	%	178
12	Water heating energy efficiency under average climate conditions	%	148
25	Sound power level L_{WA} outdoor	dB	57

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	SUZ-SHWM60VAH
	Indoor unit:	ERST20D-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:		yes
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}	1.00	
T_j = +2°C	P_{dh}	3.7	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	3.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = bivalent temperature	P_{dh}	5.3	kW
T_j = operation limit temperature(***)	P_{dh}	5.8	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 / 57	dB
Annual energy consumption	Q_{HE}	3794	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.290	kWh
Annual electricity consumption	AEC	723	kWh

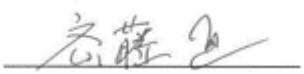
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	128	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	1.85	
T_j = +2°C	COP_d	3.13	
T_j = +7°C	COP_d	4.66	
T_j = +12°C	COP_d	6.53	
T_j = bivalent temperature	COP_d	1.85	
T_j = operation limit temperature(***)	COP_d	1.64	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2500	m³/h
Water heating energy efficiency	η_{wh}	148	%

Contact details

MITSUBISHI ELECTRIC CONSUMER PRODUCTS (THAILAND) CO., LTD.

700/406 moo 7, Tambon don hua roh, Amphur muang, chonburi 20000, Thailand

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



Tadashi SAITO

Manager, Quality Assuarance Department

THAILAND

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	SUZ-SHWM60VAH
	Indoor unit:	ERST20D-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:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	5.5	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}	1.00	
T_j = +2°C	P_{dh}	3.7	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	3.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = bivalent temperature	P_{dh}	5.3	kW
T_j = operation limit temperature(***)	P_{dh}	5.8	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 / 57	dB
Annual energy consumption	Q_{HE}	5231	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.980	kWh
Annual electricity consumption	AEC	875	kWh

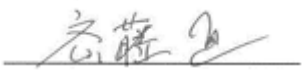
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	101	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	1.85	
T_j = +2°C	COP_d	3.13	
T_j = +7°C	COP_d	4.66	
T_j = +12°C	COP_d	6.53	
T_j = bivalent temperature	COP_d	1.85	
T_j = operation limit temperature(***)	COP_d	1.64	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2500	m³/h
Water heating energy efficiency	η_{wh}	121	%

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PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

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	Indoor unit:	ERST20D-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:		yes
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}	1.00	
T_j = +2°C	P_{dh}	3.7	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	3.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.9	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = bivalent temperature	P_{dh}	5.3	kW
T_j = operation limit temperature(***)	P_{dh}	5.8	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 / 57	dB
Annual energy consumption	Q_{HE}	1818	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	2.870	kWh
Annual electricity consumption	AEC	632	kWh

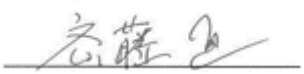
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	173	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	1.85	
T_j = +2°C	COP_d	3.13	
T_j = +7°C	COP_d	4.66	
T_j = +12°C	COP_d	6.53	
T_j = bivalent temperature	COP_d	1.85	
T_j = operation limit temperature(***)	COP_d	1.64	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2500	m³/h
Water heating energy efficiency	η_{wh}	171	%

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Model(s):	Outdoor unit:	SUZ-SHWM60VAH
	Indoor unit:	ERST20D-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:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	6.1	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}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	3.4	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	3.7	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.1	kW
T_j = operation limit temperature(***)	P_{dh}	6.1	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 / 57	dB
Annual energy consumption	Q_{HE}	2783	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.290	kWh
Annual electricity consumption	AEC	723	kWh

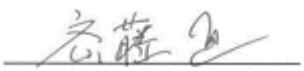
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	178	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.78	
T_j = +2°C	COP_d	4.43	
T_j = +7°C	COP_d	6.27	
T_j = +12°C	COP_d	7.11	
T_j = bivalent temperature	COP_d	2.26	
T_j = operation limit temperature(***)	COP_d	2.26	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2500	m³/h
Water heating energy efficiency	η_{wh}	148	%

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	Indoor unit:	ERST20D-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:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	5.5	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}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	3.4	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	3.7	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.1	kW
T_j = operation limit temperature(***)	P_{dh}	6.1	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 / 57	dB
Annual energy consumption	Q_{HE}	3583	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.980	kWh
Annual electricity consumption	AEC	875	kWh

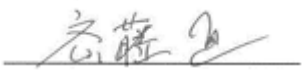
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	148	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.78	
T_j = +2°C	COP_d	4.43	
T_j = +7°C	COP_d	6.27	
T_j = +12°C	COP_d	7.11	
T_j = bivalent temperature	COP_d	2.26	
T_j = operation limit temperature(***)	COP_d	2.26	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2500	m³/h
Water heating energy efficiency	η_{wh}	121	%

Contact details

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THAILAND

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	SUZ-SHWM60VAH
	Indoor unit:	ERST20D-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:		yes
Parameters for		low-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}	5.4	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +2°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +7°C	P_{dh}	3.4	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = +12°C	P_{dh}	3.7	kW
Degradation co-efficient(**)	C_{dh}	0.97	
T_j = bivalent temperature	P_{dh}	6.1	kW
T_j = operation limit temperature(***)	P_{dh}	6.1	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 / 57	dB
Annual energy consumption	Q_{HE}	1312	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	2.870	kWh
Annual electricity consumption	AEC	632	kWh

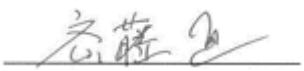
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	241	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.78	
T_j = +2°C	COP_d	4.43	
T_j = +7°C	COP_d	6.27	
T_j = +12°C	COP_d	7.11	
T_j = bivalent temperature	COP_d	2.26	
T_j = operation limit temperature(***)	COP_d	2.26	
Operation limit temperature	T_{OL}	-25	°C
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output(*)	P_{sup}	0.1	kW
Type of energy input		Electrical	
Rated air flow rate, outdoors		2500	m³/h
Water heating energy efficiency	η_{wh}	171	%

Contact details

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