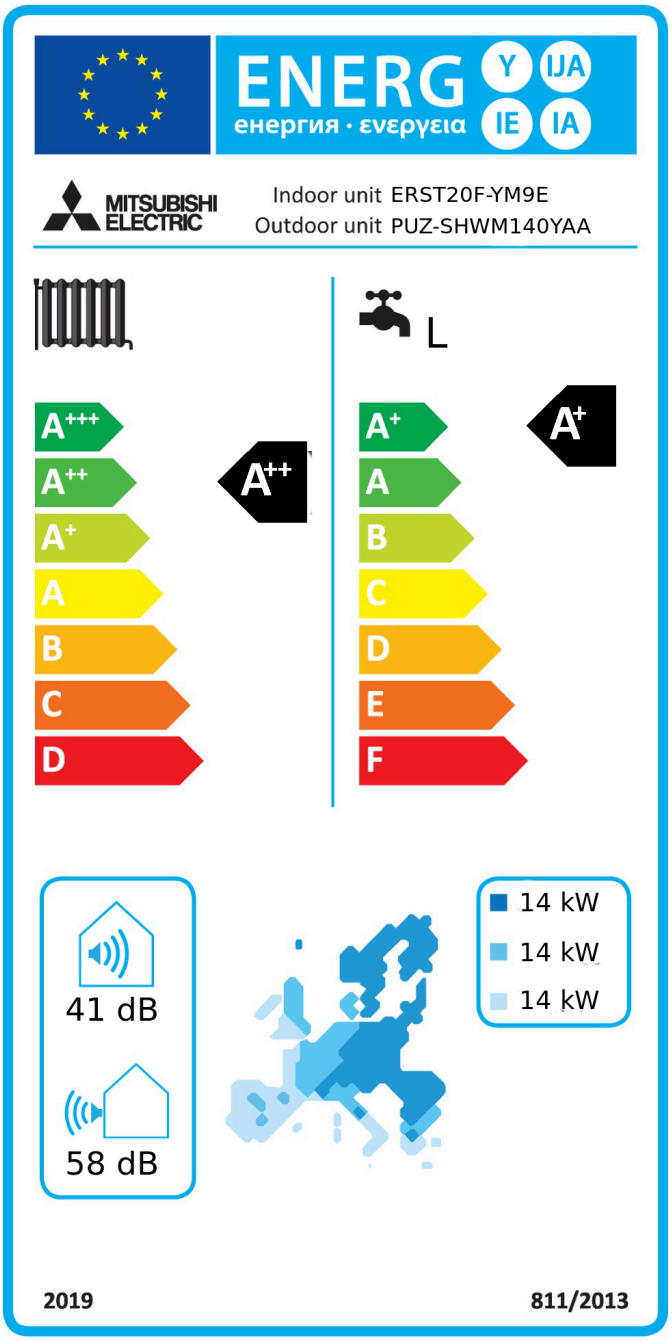
Heat Pump Package Calculator Results

Outdoor: PUZ-SHWM140YAA / Indoor: ERST20F-YM9E

Energy Label



1. SPACE HEATER

1	Outdoor unit		**PUZ-SHWM140YAA**
2	Indoor unit		**ERST20F-YM9E (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	14
11	Seasonal space heating energy efficiency under average climate conditions	%	142
9	For space heating, annual energy consumption under average climate conditions	kWh	7961
13	Sound power level L_{WA} indoor	dB	41
15	Rated heat output under colder climate conditions	kW	14
16	Rated heat output under warmer climate conditions	kW	14
21	Seasonal space heating energy efficiency under colder climate conditions	%	116
22	Seasonal space heating energy efficiency under warmer climate conditions	%	158
17	For space heating, annual energy consumption under colder climate conditions	kWh	11565
18	For space heating, annual energy consumption under warmer climate conditions	kWh	4659
25	Sound power level L_{WA} outdoor	dB	58
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	14
11	Seasonal space heating energy efficiency under average climate conditions	%	185
9	For space heating, annual energy consumption under average climate conditions	kWh	6167
13	Sound power level L_{WA} indoor	dB	41
15	Rated heat output under colder climate conditions	kW	14
16	Rated heat output under warmer climate conditions	kW	14
21	Seasonal space heating energy efficiency under colder climate conditions	%	154
22	Seasonal space heating energy efficiency under warmer climate conditions	%	230
17	For space heating, annual energy consumption under colder climate conditions	kWh	8805
18	For space heating, annual energy consumption under warmer climate conditions	kWh	3208
25	Sound power level L_{WA} outdoor	dB	58

2. COMBINATION HEATER

1	Outdoor unit		**PUZ-SHWM140YAA**
2	Indoor unit		**ERST20F-YM9E (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	14
9	For space heating, annual energy consumption under average climate conditions	kWh	7961
10	For water heating, annual electricity consumption under average climate conditions	kWh	836
11	Seasonal space heating energy efficiency under average climate conditions	%	142
12	Water heating energy efficiency under average climate conditions	%	131
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	924
20	For water heating, annual energy consumption under warmer climate conditions	kWh	733
25	Sound power level L_{WA} outdoor	dB	58
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	%	185
12	Water heating energy efficiency under average climate conditions	%	131
25	Sound power level L_{WA} outdoor	dB	58

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SHWM140YAA
	Indoor unit:	ERST20F-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:		yes
Parameters for		medium-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	14.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	12.4	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	7.5	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	6.3	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.9	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	14.0	kW
T_j = operation limit temperature(***)	P_{dh}	14.0	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}	0.022	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}	41 / 58	dB
Annual energy consumption	Q_{HE}	7961	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.800	kWh
Annual electricity consumption	AEC	836	kWh

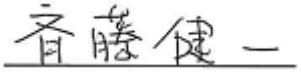
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	142	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.20	
T_j = +2°C	COP_d	3.49	
T_j = +7°C	COP_d	4.85	
T_j = +12°C	COP_d	6.61	
T_j = bivalent temperature	COP_d	1.92	
T_j = operation limit temperature(***)	COP_d	1.92	
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		2640	m³/h
For heat pump combination heater:			
Water heating energy efficiency	η_{wh}	131	%

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

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



Kenichi SAITO

Manager, Quality Assuarance Department

TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SHWM140YAA
	Indoor unit:	ERST20F-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:		yes
Parameters for		medium-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	14.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	12.4	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	7.5	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	6.3	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.9	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	14.0	kW
T_j = operation limit temperature(***)	P_{dh}	14.0	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}	0.022	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}	41 / 58	dB
Annual energy consumption	Q_{HE}	11565	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	4.200	kWh
Annual electricity consumption	AEC	924	kWh

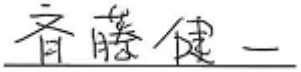
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	116	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.20	
T_j = +2°C	COP_d	3.49	
T_j = +7°C	COP_d	4.85	
T_j = +12°C	COP_d	6.61	
T_j = bivalent temperature	COP_d	1.92	
T_j = operation limit temperature(***)	COP_d	1.92	
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		2640	m³/h
For heat pump combination heater:			
Water heating energy efficiency	η_{wh}	118	%

Contact details

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

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TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SHWM140YAA
	Indoor unit:	ERST20F-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:		yes
Parameters for		medium-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	14.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	12.4	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	7.5	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	6.3	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	3.9	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	14.0	kW
T_j = operation limit temperature(***)	P_{dh}	14.0	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}	0.022	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}	41 / 58	dB
Annual energy consumption	Q_{HE}	4659	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.330	kWh
Annual electricity consumption	AEC	733	kWh

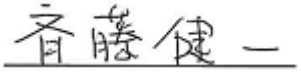
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	158	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	2.20	
T_j = +2°C	COP_d	3.49	
T_j = +7°C	COP_d	4.85	
T_j = +12°C	COP_d	6.61	
T_j = bivalent temperature	COP_d	1.92	
T_j = operation limit temperature(***)	COP_d	1.92	
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		2640	m³/h
For heat pump combination heater:			
Water heating energy efficiency	η_{wh}	150	%

Contact details

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TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SHWM140YAA
	Indoor unit:	ERST20F-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:		yes
Parameters for		low-temperature application.
Parameters for		average climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	14.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	12.4	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	7.5	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	6.4	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	14.0	kW
T_j = operation limit temperature(***)	P_{dh}	14.0	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}	0.022	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}	41 / 58	dB
Annual energy consumption	Q_{HE}	6167	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.800	kWh
Annual electricity consumption	AEC	836	kWh

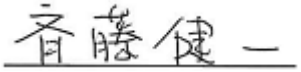
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	185	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	3.04	
T_j = +2°C	COP_d	4.59	
T_j = +7°C	COP_d	6.00	
T_j = +12°C	COP_d	7.19	
T_j = bivalent temperature	COP_d	2.55	
T_j = operation limit temperature(***)	COP_d	2.55	
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		2640	m³/h
Water heating energy efficiency	η_{wh}	131	%

Contact details

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TURKEY

PRODUCT INFORMATION / TECHNICAL DOCUMENTATION

Model(s):	Outdoor unit:	PUZ-SHWM140YAA
	Indoor unit:	ERST20F-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:		yes
Parameters for		low-temperature application.
Parameters for		colder climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	14.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	12.4	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	7.5	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	6.4	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	14.0	kW
T_j = operation limit temperature(***)	P_{dh}	14.0	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}	0.022	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}	41 / 58	dB
Annual energy consumption	Q_{HE}	8805	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	4.200	kWh
Annual electricity consumption	AEC	924	kWh

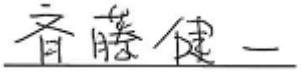
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	154	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	3.04	
T_j = +2°C	COP_d	4.59	
T_j = +7°C	COP_d	6.00	
T_j = +12°C	COP_d	7.19	
T_j = bivalent temperature	COP_d	2.55	
T_j = operation limit temperature(***)	COP_d	2.55	
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		2640	m³/h
Water heating energy efficiency	η_{wh}	118	%

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-SHWM140YAA
	Indoor unit:	ERST20F-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:		yes
Parameters for		low-temperature application.
Parameters for		warmer climate conditions.

Item	Symbol	Value	Unit
Rated heat output(*)	P_{rated}	14.0	kW
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	P_{dh}	12.4	kW
Degradation co-efficient(**)	C_{dh}	1.00	
T_j = +2°C	P_{dh}	7.5	kW
Degradation co-efficient(**)	C_{dh}	0.99	
T_j = +7°C	P_{dh}	6.4	kW
Degradation co-efficient(**)	C_{dh}	0.98	
T_j = +12°C	P_{dh}	4.1	kW
Degradation co-efficient(**)	C_{dh}	0.96	
T_j = bivalent temperature	P_{dh}	14.0	kW
T_j = operation limit temperature(***)	P_{dh}	14.0	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}	0.022	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}	41 / 58	dB
Annual energy consumption	Q_{HE}	3208	kWh
For heat pump combination heater:			
Declared load profile		L	
Daily electricity consumption	Q_{elec}	3.330	kWh
Annual electricity consumption	AEC	733	kWh

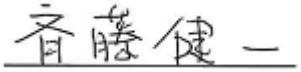
Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	230	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature T_j			
T_j = -7°C	COP_d	3.04	
T_j = +2°C	COP_d	4.59	
T_j = +7°C	COP_d	6.00	
T_j = +12°C	COP_d	7.19	
T_j = bivalent temperature	COP_d	2.55	
T_j = operation limit temperature(***)	COP_d	2.55	
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		2640	m³/h
For heat pump combination heater:			
Water heating energy efficiency	η_{wh}	150	%

Contact details

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