ES M40 R290 + ES NordFlex Controller

Technical parameters for heat pumps for space heating and combined heat pump heaters

Model(-s):	ES M40 R290 + ES NordFlex Controller
Air-to-water heat pump:	Yes
Water-Water heat pump:	No
Brine-to-water heat pump:	No
Low temperature heat pump:	No
Equipped with an additional heater:	No
Combined heater with heat pump:	No
Average climate	
Low temperature application	

Item	Badge	Value	Unit	Item	Badge	Value	Unit
Rated heat output (*)	P_{rated}	28,6	kW	Seasonal space heating energy efficiency	η s	192	%
Heating capacity declared for partial load at internal temperature 20 °C and ambient temperature T				Heating capacity declared for partial load at internal temperature 20 °C and ambient temperature T			
T j - 7 °C	P_{dh}	25,3	kW	T j - 7 °C	COP_d	2,94	-
T j + 2 °C	P_{dh}	16,0	kW	T j + 2 °C	COP_d	4,97	-
T j + 7 °C	P_{dh}	12,3	kW	T j + 7 °C	COP_d	6,26	-
T j + 12 °C	P_{dh}	15,3	kW	T j + 12 °C	COP_d	9,08	-
T j ' bivalent temperature	P_{dh}	25,3	kW	T j ' bivalent temperature	COP_d	2,94	-
T J = Limit working temperature	P_{dh}	23,6	kW	T J = Limit working temperature	COP_d	2,60	-
For air-to-water heat pumps: T j = – 15 °c (If TOL < – 20 °C)	P_{dh}	N/A	kW	For air-to-water heat pumps: T j = – 15 °c (If TOL < – 20 °C)	COP_d	N/A	-
Bivalent temperature	T biv	-7	°C	For air-to-water heat pumps: limit operating temperature	TOL	-10	°C

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Heating cycle interval capacity	P_{cych}	N/A	kW	Cycle interval efficiency	COP_{cyc}	N.A.	-
Degradation coefficient (* *)	Cdh	0,9	-	Limit working temperature for water heating	WTOL	75	°C
Energy consumption in modes that do not include the mode of active operation				Additional heater			
Exclusion status	P_{OFF}	0,016	kW	Rated heat output (* *)	P_{SUP}	5,0	kW
Thermostat exclusion status	P_{TO}	0,029	kW	Type of energy brought	Electric		
Standby	P_{SB}	0,016	kW				
Case heater mode	P_{CK}	0,071	kW				
Capacity management	Variable			For air-to-water heat pumps: rated airflow rate, external	-	12500	m^3/h
Sound power level, internal/external	L_{wa}	N.A./60	dB	For heat pumps water/ brine-water: nominal flow rate of brine or water, external heat exchanger	-	N/A	m^3/h
Annual energy consumption	Q_{HE}	12166	kWh				
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(*) For heat pumps for space heating and combined heat pump heaters, the rated heat output is Prated equal to the nominal load for heating PDESIGNH, and the rated heat output of the additional Psup heater is equal to the additional heating capacity SUP (i.e.).
(* *) If the CDH is not determined by measurement, the default degradation coefficient is Cdh = 0.9.

Technical parameters for heat pumps for space heating and combined heat pump heaters

Model(-s):	ES M40 R290 + ES NordFlex Controller
Air-to-water heat pump:	Yes
Water-Water heat pump:	No
Brine-to-water heat pump:	No
Low temperature heat pump:	No
Equipped with an additional heater:	No
Combined heater with heat pump:	No
Average climate	
Medium temperature application	

Item	Badge	Value	Unit	Item	Badge	Value	Unit
Rated heat output (*)	P_{rated}	28,1	kW	Seasonal space heating energy efficiency	η s	146	%
Heating capacity declared for partial load at internal temperature 20 °C and ambient temperature T				Heating capacity declared for partial load at internal temperature 20 °C and ambient temperature T			
T j - 7 °C	P_{dh}	24,9	kW	T j - 7 °C	COP_d	2,20	-
T j + 2 °C	P_{dh}	15,1	kW	T j + 2 °C	COP_d	3,83	-
T j + 7 °C	P_{dh}	11,6	kW	T j + 7 °C	COP_d	4,83	-
T j + 12 °C	P_{dh}	14,9	kW	T j + 12 °C	COP_d	6,18	-
T j ' bivalent temperature	P_{dh}	24,9	kW	T j ' bivalent temperature	COP_d	2,20	-
T J = Limit working temperature	P_{dh}	23,3	kW	T J = Limit working temperature	COP_d	1,90	-
For air-to-water heat pumps: T j = – 15 °c (If TOL < – 20 °C)	P_{dh}	N/A	kW	For air-to-water heat pumps: T j = – 15 °c (If TOL < – 20 °C)	COP_d	N/A	-
Bivalent temperature	T biv	-7	°C	For air-to-water heat pumps: limit operating temperature	TOL	-10	°C
Heating cycle interval capacity	P_{cych}	N/A	kW	Cycle interval efficiency	COP_{cyc}	N.A.	-

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Degradation coefficient (* *)	Cdh	0,9	-	Limit working temperature for water heating	WTOL	75	°C
Energy consumption in modes that do not include the mode of active operation				Additional heater			
Exclusion status	P_{OFF}	0,016	kW	Rated heat output (* *)	P_{SUP}	4,7	kW
Thermostat exclusion status	P_{TO}	0,029	kW	Type of energy brought	Electric		
Standby	P_{SB}	0,016	kW				
Case heater mode	P_{CK}	0,071	kW				
Capacity management	Variable			For air-to-water heat pumps: rated airflow rate, external	-	12500	m^3/h
Sound power level, internal/external	L_{wa}	N.A./62	dB	For heat pumps water/ brine-water: nominal flow rate of brine or water, external heat exchanger	-	N/A	m^3/h
Annual energy consumption	Q_{HE}	15641	kWh				
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(*) For heat pumps for space heating and combined heat pump heaters, the rated heat output is Prated equal to the nominal load for heating PDESIGNH, and the rated heat output of the additional Psup heater is equal to the additional heating capacity SUP (i.e.).
(* *) If the CDH is not determined by measurement, the default degradation coefficient is Cdh = 0.9.

Please find the HP KEYMARK certificate for this unit by going here: https://keymark.eu/en/products/heatpumps/certified-products.