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Technical parameters accor				
Heat pump model		Master Therm	BA60I-1	
Heat pump type			Air/Water	٦
Supplementary heater			Yes	
Heat pump combination heate	r		No	<u> </u>
Reference heating season			Average	7
Reference water temperature			LOW, 35°C	
Full load heating		Prated [kW]	22.57	
Seasonal efficiency		η _s [%]	177	A+++
Annual electricity consumption		Q _{HE} [kWh]	10351	
Average 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air	Dale IIAAA	COD4 ()	Calle ()
Λ	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
<u>А</u> В	-7 2	20.64	2.64	0.900
		12.68	4.21	0.900
C D	7 12	8.04 9.26	6.61	0.900 0.977
TOL (E)	-10	22.57	8.02 2.35	0.900
Tbivalent (F)	-10	22.57	2.35	0.900
i bivalent (F)	-10	22.31	2.33	0.900
Reference heating season			Average	
Reference water temperature			High, 55°C	
Full load heating		Prated [kW]	24.94	
Seasonal efficiency		η _s [%]	135	A++
Annual electricity consumption		Q _{HE} [kWh]	14980	
Average 55°C	Outdoor heat exchanger Outdoor air	Declared capacity	COP at part load	Degradation Coefficient
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	21.44	2.05	0.900
В	2	12.27	3.22	0.900
C	7	7.80	5.06	0.900
D	12	9.00	6.13	0.982
TOL (E)	-10	22.06	1.55	0.900
Tbivalent (F)	-7	22.06	1.55	0.900
D () ()				_
Reference heating season			Warmer	_
Reference water temperature		Desired Fland	Low, 35°C	_
Full load heating		Prated [kW]	30.53	
Seasonal efficiency Annual electricity consumption		η _s [%] Q _{HE} [kWh]	248 6503	=
	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
Warmer 35°C	Outdoor air			
warmer 35°C	Outdoor air	Pdh [kW]	COPd (-)	Cdh (-)
	Tj [°C]	Pdh [kW] 30.53	COPd (-) 3.18	Cdh (-) 0.900
Warmer 35°C	-	Pdh [kW] 30.53 20.32	COPd (-) 3.18 5.22	Cdh (-) 0.900 0.900

9.29

30.53

30.53

D TOL (E)

Tbivalent (F)

0.900

0.900

0.900

8.30

3.18

3.18

Heat pump model	Master Therm	BA60I-1

Reference heating season			Warmer	
Reference water temperature			High, 55°C	
Full load heating		Prated [kW]	30.47	
Seasonal efficiency		η _s [%]	173	
Annual electricity consumption		Q _{HE} [kWh]	9259	
Warmer 55°C	Outdoor heat exchanger Outdoor air	Declared capacity	COP at part load	Degradation Coefficient
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
В	2	30.47	2.27	0.900
С	7	20.53	3.57	0.900
D	12	8.97	5.93	0.900
TOL (E)	2	30.47	2.27	0.900
Tbivalent (F)	2	30.47	2.27	0.900

Reference heating season			Colder	
Reference water temperature			Low, 35°C	
Full load heating		Prated [kW]	32.27	
Seasonal efficiency		η _s [%]	141	
Annual electricity consumption	1	Q _{HE} [kWh]	22051	
Colder 35°C	Outdoor heat exchanger Outdoor air	Declared capacity	COP at part load	Degradation Coefficient
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
А	-7	19.53	2.79	0.900
В	2	12.78	4.49	0.900
С	7	8.07	6.82	0.900
D	12	9.26	8.02	0.977
TOL (E)	-22	20.47	2.24	0.900
Tbivalent (F)	-7	19.53	2.79	0.900
G	-15	22.66	2.41	0.900

Reference heating season			Colder	
Reference water temperature			High, 55°C	
Full load heating		Prated [kW]	31.21	
Seasonal efficiency		η _s [%]	116	
Annual electricity consumption	ı	Q _{HE} [kWh]	25783	
Colder 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
Α	-7	18.89	2.28	0.900
В	2	12.43	3.60	0.900
С	7	7.89	5.52	0.900
D	12	9.07	6.54	0.981
TOL (E)	-22	21.78	1.86	0.900
Tbivalent (F)	-7	18.89	2.28	0.900
G	-15	22.84	1.98	0.900

Heat pump model	Master Therm	BA60I-1
Power consumption in modes other than "active m	ode"	
Off mode	P _{OFF} [kW]	0.028
Thermostat off mode	P _{TO} [kW]	0.027
Standby mode	P _{SB} [kW]	0.028
Crankcaseheater mode	P _{CK} [kW]	-
Supplementary heater capacity	P _{sup} [kW]	7.5(+7.5)
Supplementary heater type	[-]	electricity
Capacity control		Variable
Sound power level Indoor	L _{WA} [dBA]	=
Sound power level Outdoor	L _{WA} [dBA]	66
Rated airflow	[m ³ /h]	max.8000
Temperature controller		•
Туре	Carel pCO5/pCO5+/uPC, Ma	aster Therm custom SW
Class	II	
Contribution	%	2.0

Temperature controller + Room Terminal				
Type Carel pCO5/pCO5+/uPC + pAD, Master Therm custom SW				
Class	VI			
Contribution	% 4.0			

Heat pump model	Master Therm	BA60I-1

Information sheet			
Temperature application		Low, 35°C	High, 55°C
Space heating energy efficiency class, Average climate	=	A+++	A++
Nominal heating capacity Pdesign, Average climate	kW	23	25
Space heating seasonal efficiency, Average climate	%	177	135
Space heating annual electricity consumption, Average cl.	kWh	10351	14980
Nominal heating capacity Pdesign, Colder climate	kW	32	31
Space heating seasonal efficiency, Colder climate	%	141	116
Space heating annual electricity consumption, Colder cl.	kWh	22051	25783
		•	T
Nominal heating capacity Pdesign, Warmer climate	kW	31	30
Space heating seasonal efficiency, Warmer climate	%	248	173
Space heating annual electricity consumption, Warmer cl.	kWh	6503	9259
			_
Sound power level Lwa Outdoor	dBA	66]

Information sheet for energy efficiency Set with Temperature controller					
Temperature application		Low, 35°C	High, 55°C		
Controller Carel pCO5/pCO5+/uPC, Class	-	II	II		
Controller Carel pCO5/pCO5+/uPC, Contribution	%	2.0	2.0		
Set Space heating seasonal efficiency, Average climate	%	179	137		
Set Space heating energy efficiency class, Average climate	-	A+++	A++		
Set Space heating seasonal efficiency, Colder climate	%	143	118		
Set Space heating seasonal efficiency, Warmer climate	%	250	175		

Information sheet for energy efficiency Set with Temperature controller + Room Terminal				
Temperature application		Low, 35°C	High, 55°C	
Controller Carel pCO5/pCO5+/uPC + pAD, Class	-	VI	VI	
Controller Carel pCO5/pCO5+/uPC, +pAD, Contribution	%	4.0	4.0	
Set Space heating seasonal efficiency, Average climate	%	181	139	
Set Space heating energy efficiency class, Average climate	-	A+++	A++	
Set Space heating seasonal efficiency, Colder climate	%	145	120	
Set Space heating seasonal efficiency, Warmer climate	%	252	177	