

Heat pump model	Master Therm	BA26ISC-1
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Heat pump type	Air/Water
Supplementary heater	Yes
Heat pump combination heater	Yes

Reference heating season	Average	SCOP		
Reference water temperature	LOW, 35°C	4.29		
Full load heating	Prated [kW]	6.51		
Seasonal efficiency	$\eta_s$ [%]	168		
Annual electricity consumption	$Q_{HE}$ [kWh]	3139		
Average 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	5.76	2.59	0.900
B	2	3.72	3.91	0.900
C	7	2.42	6.53	0.900
D	12	2.74	7.21	0.951
TOL (E)	-10	5.88	2.52	0.900
Tbivalent (F)	-7	5.76	2.59	0.900

Reference heating season	Average	SCOP		
Reference water temperature	High, 55°C	3.24		
Full load heating	Prated [kW]	6.33		
Seasonal efficiency	$\eta_s$ [%]	126		
Annual electricity consumption	$Q_{HE}$ [kWh]	4039		
Average 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	5.60	1.94	0.900
B	2	3.50	3.02	0.900
C	7	2.33	4.69	0.900
D	12	2.78	5.55	0.963
TOL (E)	-10	5.66	1.82	0.900
Tbivalent (F)	-7	5.60	1.94	0.900

Reference heating season	Warmer			
Reference water temperature	Low, 35°C			
Full load heating	Prated [kW]			
Seasonal efficiency	$\eta_s$ [%]			
Annual electricity consumption	$Q_{HE}$ [kWh]			
Warmer 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	7.67	3.41	0.900
C	7	5.10	5.85	0.900
D	12	2.52	8.10	0.944
TOL (E)	2	7.67	3.41	0.900
Tbivalent (F)	2	7.67	3.41	0.900

Heat pump model		Master Therm		BA26ISC-1		
Reference heating season				Warmer		
Reference water temperature				High, 55°C		
Full load heating		Prated [kW]	7.40			
Seasonal efficiency		η <sub>s</sub> [%]	177			
Annual electricity consumption		Q <sub>HE</sub> [kWh]	2199			
Warmer 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient		
	Outdoor air					
	T <sub>j</sub> [°C]	Pdh [kW]	COPd (-)	Cdh (-)		
B	2	7.40	2.21	0.900		
C	7	5.17	3.71	0.900		
D	12	2.46	6.09	0.957		
TOL (E)	2	7.40	2.21	0.900		
Tbivalent (F)	2	7.40	2.21	0.900		
Reference heating season	Colder					
Reference water temperature	Low, 35°C					
Full load heating		Prated [kW]	9.65			
Seasonal efficiency		η <sub>s</sub> [%]	132			
Annual electricity consumption		Q <sub>HE</sub> [kWh]	5987			
Colder 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient		
	Outdoor air					
	T <sub>j</sub> [°C]	Pdh [kW]	COPd (-)	Cdh (-)		
A	-7	5.84	2.70	0.900		
B	2	3.54	4.55	0.900		
C	7	2.97	6.82	0.960		
D	12	3.45	7.50	0.959		
TOL (E)	-22	4.16	2.08	0.900		
Tbivalent (F)	-7	5.84	2.70	0.900		
G	-15	4.81	2.32	0.900		
Reference heating season	Colder					
Reference water temperature	High, 55°C					
Full load heating		Prated [kW]	9.31			
Seasonal efficiency		η <sub>s</sub> [%]	107			
Annual electricity consumption		Q <sub>HE</sub> [kWh]	7116			
Colder 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient		
	Outdoor air					
	T <sub>j</sub> [°C]	Pdh [kW]	COPd (-)	Cdh (-)		
A	-7	5.63	2.17	0.900		
B	2	3.69	3.58	0.900		
C	7	2.86	5.58	0.966		
D	12	3.33	6.22	0.965		
TOL (E)	-22	3.53	1.42	0.900		
Tbivalent (F)	-7	5.63	2.17	0.900		
G	-15	4.34	1.71	0.900		

Heat pump model	Master Therm	BA26ISC-1
Power consumption in modes other than "active mode"		
Off mode	P <sub>OFF</sub> [kW]	0.018
Thermostat off mode	P <sub>TO</sub> [kW]	0.017
Standby mode	P <sub>SB</sub> [kW]	0.018
Crankcaseheater mode	P <sub>CK</sub> [kW]	-
Supplementary heater capacity		
Supplementary heater capacity	P <sub>sup</sub> [kW]	6
Supplementary heater type	[-]	electricity
Capacity control		
Sound power level Indoor	L <sub>WA</sub> [dBA]	48
Sound power level Outdoor	L <sub>WA</sub> [dBA]	55
Rated airflow	[m <sup>3</sup> /h]	max. 3500
Declared load profile / Tapping cycle		L
Daily electricity consumption	Q <sub>elec</sub> [kWh]	3.129
Water heating energy efficiency	η <sub>wh</sub> [%]	90
Temperature controller		
Type	Carel pCO5/pCO5+/uPC, Master 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

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<b>Information sheet</b>			
Temperature application		<b>Low, 35°C</b>	<b>High, 55°C</b>
Space heating energy efficiency class, Average climate	-	A++	A++
Nominal heating capacity Pdesign, Average climate	kW	7	6
Space heating seasonal efficiency, Average climate	%	168	126
Space heating annual electricity consumption, Average cl.	kWh	3139	4039
Nominal heating capacity Pdesign, Colder climate	kW	10	9
Space heating seasonal efficiency, Colder climate	%	132	107
Space heating annual electricity consumption, Colder cl.	kWh	5987	7116
Nominal heating capacity Pdesign, Warmer climate	kW	8	7
Space heating seasonal efficiency, Warmer climate	%	259	177
Space heating annual electricity consumption, Warmer cl.	kWh	1567	2199
Sound power level Lwa Outdoor	dBA	55	

<b>Information sheet for energy efficiency Set with Temperature controller</b>			
Temperature application		<b>Low, 35°C</b>	<b>High, 55°C</b>
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	%	170	128
Set Space heating energy efficiency class, Average climate	-	A++	A++
Set Space heating seasonal efficiency, Colder climate	%	134	109
Set Space heating seasonal efficiency, Warmer climate	%	261	179

<b>Information sheet for energy efficiency Set with Temperature controller + Room Terminal</b>			
Temperature application		<b>Low, 35°C</b>	<b>High, 55°C</b>
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	%	172	130
Set Space heating energy efficiency class, Average climate	-	A++	A++
Set Space heating seasonal efficiency, Colder climate	%	136	111
Set Space heating seasonal efficiency, Warmer climate	%	263	181