

<b>Heat pump model</b>	<b>Master Therm</b>	<b>BA26I-1</b>
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Heat pump type	Air/Water
Supplementary heater	Yes
Heat pump combination heater	No

Reference heating season		<b>Average</b>		
Reference water temperature		<b>LOW, 35°C</b>		
Full load heating		<b>Prated [kW]</b>	<b>6.51</b>	
Seasonal efficiency		<b><math>\eta_s</math> [%]</b>	<b>168</b>	<b>A++</b>
Annual electricity consumption		<b><math>Q_{HE}</math> [kWh]</b>	<b>3139</b>	
<b>Average 35°C</b>	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	$T_j$ [°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		<b>Average</b>		
Reference water temperature		<b>High, 55°C</b>		
Full load heating		<b>Prated [kW]</b>	<b>6.33</b>	
Seasonal efficiency		<b><math>\eta_s</math> [%]</b>	<b>126</b>	<b>A++</b>
Annual electricity consumption		<b><math>Q_{HE}</math> [kWh]</b>	<b>4039</b>	
<b>Average 55°C</b>	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	$T_j$ [°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		<b>Warmer</b>		
Reference water temperature		<b>Low, 35°C</b>		
Full load heating		<b>Prated [kW]</b>	<b>7.67</b>	
Seasonal efficiency		<b><math>\eta_s</math> [%]</b>	<b>259</b>	
Annual electricity consumption		<b><math>Q_{HE}</math> [kWh]</b>	<b>1567</b>	
<b>Warmer 35°C</b>	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	$T_j$ [°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

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Reference heating season		<b>Warmer</b>		
Reference water temperature		<b>High, 55°C</b>		
Full load heating		<b>Prated [kW]</b>	<b>7.40</b>	
Seasonal efficiency		<b><math>\eta_s</math> [%]</b>	<b>177</b>	
Annual electricity consumption		<b><math>Q_{HE}</math> [kWh]</b>	<b>2199</b>	
<b>Warmer 55°C</b>	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	$T_j$ [°C]	Pd <sub>h</sub> [kW]	COP <sub>d</sub> (-)	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		<b>Colder</b>		
Reference water temperature		<b>Low, 35°C</b>		
Full load heating		<b>Prated [kW]</b>	<b>9.65</b>	
Seasonal efficiency		<b><math>\eta_s</math> [%]</b>	<b>132</b>	
Annual electricity consumption		<b><math>Q_{HE}</math> [kWh]</b>	<b>5987</b>	
<b>Colder 35°C</b>	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	$T_j$ [°C]	Pd <sub>h</sub> [kW]	COP <sub>d</sub> (-)	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		<b>Colder</b>		
Reference water temperature		<b>High, 55°C</b>		
Full load heating		<b>Prated [kW]</b>	<b>9.31</b>	
Seasonal efficiency		<b><math>\eta_s</math> [%]</b>	<b>107</b>	
Annual electricity consumption		<b><math>Q_{HE}</math> [kWh]</b>	<b>7116</b>	
<b>Colder 55°C</b>	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	$T_j$ [°C]	Pd <sub>h</sub> [kW]	COP <sub>d</sub> (-)	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

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Power consumption in modes other than "active mode"		
Off mode	$P_{OFF}$ [kW]	0.018
Thermostat off mode	$P_{TO}$ [kW]	0.017
Standby mode	$P_{SB}$ [kW]	0.018
Crankcaseheater mode	$P_{CK}$ [kW]	-

Supplementary heater capacity	$P_{SUP}$ [kW]	4.5(+4.5)
Supplementary heater type	[-]	electricity

Capacity control		Variable
Sound power level Indoor	$L_{WA}$ [dBA]	-
Sound power level Outdoor	$L_{WA}$ [dBA]	58
Rated airflow	[m <sup>3</sup> /h]	max. 3500

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		Low, 35°C	High, 55°C
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	58
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<b>Information sheet for energy efficiency Set with Temperature controller</b>			
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	%	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		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	%	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