Heat pump model	**Master Therm**	**AQ17I**

Heat pump type	Brine/Water
Supplementary heater	No
Heat pump combination heater	No

Reference heating season			**Average**	
Reference water temperature			**LOW, 35°C**	
Full load heating		**Prated [kW]**	**4,73**	
Seasonal efficiency		**η_S [%]**	**179**	**A+++**
Annual electricity consumption		**Q_{HE} [kWh]**	**2094**	
Average 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	4,36	4,03	0,900
B	2	2,77	4,58	0,900
C	7	1,71	5,24	0,900
D	12	1,11	5,24	0,915
TOL (E)	-10	4,73	3,97	0,900
Tbivalent (F)	-10	4,73	3,97	0,900

Reference heating season			**Average**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**4,02**	
Seasonal efficiency		**η_S [%]**	**133**	**A++**
Annual electricity consumption		**Q_{HE} [kWh]**	**2363**	
Average 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	3,71	2,79	0,900
B	2	2,28	3,46	0,900
C	7	1,43	4,08	0,900
D	12	1,03	4,19	0,927
TOL (E)	-10	4,02	2,64	0,900
Tbivalent (F)	-10	4,02	2,64	0,900

Reference heating season			**Warmer**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**4,73**	
Seasonal efficiency		**η_S [%]**	**182**	
Annual electricity consumption		**Q_{HE} [kWh]**	**1333**	
Warmer 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	4,73	3,97	0,900
C	7	3,37	4,34	0,977
D	12	1,50	5,39	0,935
TOL (E)	2	4,73	3,97	0,900
Tbivalent (F)	2	4,73	3,97	0,900

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Heat pump model	**Master Therm**	**AQ17I**

Reference heating season			**Warmer**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**4,02**	
Seasonal efficiency		**η_S [%]**	**131**	
Annual electricity consumption		**Q_{HE} [kWh]**	**1549**	
Warmer 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	4,02	2,64	0,900
C	7	2,66	3,07	0,900
D	12	1,23	4,08	0,900
TOL (E)	2	4,02	2,64	0,900
Tbivalent (F)	2	4,02	2,64	0,900

Reference heating season			**Colder**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**4,73**	
Seasonal efficiency		**η_S [%]**	**187**	
Annual electricity consumption		**Q_{HE} [kWh]**	**2396**	
Colder 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	2,89	4,54	0,900
B	2	1,85	5,24	0,900
C	7	1,20	5,39	0,900
D	12	1,11	5,24	0,915
TOL (E)	-22	4,73	3,97	0,900
Tbivalent (F)	-22	4,73	3,97	0,900
G	-15	3,98	4,17	0,900

Reference heating season			**Colder**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**4,02**	
Seasonal efficiency		**η_S [%]**	**138**	
Annual electricity consumption		**Q_{HE} [kWh]**	**2721**	
Colder 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	2,57	3,29	0,900
B	2	1,56	3,97	0,900
C	7	1,05	4,43	0,924
D	12	1,05	4,43	0,924
TOL (E)	-22	4,02	2,64	0,900
Tbivalent (F)	-22	4,02	2,64	0,900
G	-15	4,14	2,95	0,987

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Heat pump model	**Master Therm**	**AQ17I**

Power consumption in modes other than "active mode"		
Off mode	P_{OFF} [kW]	0,018
Thermostat off mode	P_{TO} [kW]	0,018
Standby mode	P_{SB} [kW]	0,018
Crankcaseheater mode	P_{CK} [kW]	-

Supplementary heater capacity	P_{sup} [kW]	-
Supplementary heater type	[-]	electricity

Capacity control		Variable
Sound power level Indoor	L_{WA} [dBA]	49
Sound power level Outdoor	L_{WA} [dBA]	-
Rated brine flow	[m^3/h]	0,67

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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Heat pump model	**Master Therm**	**AQ17I**

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	5	4
Space heating seasonal efficiency, Average climate	%	179	133
Space heating annual electricity consumption, Average cl.	kWh	2094	2363
Nominal heating capacity Pdesign, Colder climate	kW	5	4
Space heating seasonal efficiency, Colder climate	%	187	138
Space heating annual electricity consumption, Colder cl.	kWh	2396	2721
Nominal heating capacity Pdesign, Warmer climate	kW	5	4
Space heating seasonal efficiency, Warmer climate	%	182	131
Space heating annual electricity consumption, Warmer cl.	kWh	1333	1549
Sound power level Lwa	dBA	49	

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	%	181	135
Set Space heating energy efficiency class, Average climate	-	A+++	A++
Set Space heating seasonal efficiency, Colder climate	%	189	140
Set Space heating seasonal efficiency, Warmer climate	%	184	133

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	%	183	137
Set Space heating energy efficiency class, Average climate	-	A+++	A++
Set Space heating seasonal efficiency, Colder climate	%	191	142
Set Space heating seasonal efficiency, Warmer climate	%	186	135

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Heat pump model	**Master Therm**	**AQ22I**

Heat pump type	Brine/Water
Supplementary heater	Yes
Heat pump combination heater	No

Reference heating season			**Average**	
Reference water temperature			**LOW, 35°C**	
Full load heating		**Prated [kW]**	**6,73**	
Seasonal efficiency		**η_S [%]**	**177**	**A+++**
Annual electricity consumption		**Q_{HE} [kWh]**	**3011**	
Average 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	5,92	4,29	0,900
B	2	3,62	4,65	0,900
C	7	2,38	5,28	0,900
D	12	1,19	5,28	0,876
TOL (E)	-10	6,73	4,22	0,900
Tbivalent (F)	-10	6,73	4,22	0,900

Reference heating season			**Average**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**6,40**	
Seasonal efficiency		**η_S [%]**	**133**	**A++**
Annual electricity consumption		**Q_{HE} [kWh]**	**3749**	
Average 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	5,52	2,96	0,900
B	2	3,40	3,56	0,900
C	7	2,32	4,10	0,900
D	12	1,10	4,22	0,893
TOL (E)	-10	6,40	2,83	0,900
Tbivalent (F)	-10	6,40	2,83	0,900

Reference heating season			**Warmer**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**6,73**	
Seasonal efficiency		**η_S [%]**	**177**	
Annual electricity consumption		**Q_{HE} [kWh]**	**1945**	
Warmer 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	6,73	4,22	0,900
C	7	4,27	4,51	0,900
D	12	2,00	5,43	0,924
TOL (E)	2	6,73	4,22	0,900
Tbivalent (F)	2	6,73	4,22	0,900

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Heat pump model	**Master Therm**	**AQ22I**

Reference heating season			**Warmer**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**6,40**	
Seasonal efficiency		**η_S [%]**	**129**	
Annual electricity consumption		**Q_{HE} [kWh]**	**2498**	
Warmer 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	6,40	2,83	0,900
C	7	4,07	3,21	0,900
D	12	1,82	4,11	0,937
TOL (E)	2	6,40	2,83	0,900
Tbivalent (F)	2	6,40	2,83	0,900

Reference heating season			**Colder**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**6,78**	
Seasonal efficiency		**η_S [%]**	**186**	
Annual electricity consumption		**Q_{HE} [kWh]**	**3456**	
Colder 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	4,01	4,62	0,900
B	2	2,63	5,19	0,900
C	7	1,76	5,43	0,900
D	12	1,58	5,28	0,907
TOL (E)	-22	6,78	4,40	0,900
Tbivalent (F)	-22	6,78	4,40	0,900
G	-15	5,54	4,46	0,900

Reference heating season			**Colder**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**6,48**	
Seasonal efficiency		**η_S [%]**	**140**	
Annual electricity consumption		**Q_{HE} [kWh]**	**4320**	
Colder 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	3,85	3,42	0,900
B	2	2,44	3,99	0,900
C	7	1,64	4,46	0,900
D	12	1,49	4,46	0,925
TOL (E)	-22	6,48	3,03	0,900
Tbivalent (F)	-22	6,48	3,03	0,900
G	-15	5,37	3,13	0,900

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Heat pump model	**Master Therm**	**AQ22I**

Power consumption in modes other than "active mode"		
Off mode	P_{OFF} [kW]	0,028
Thermostat off mode	P_{TO} [kW]	0,018
Standby mode	P_{SB} [kW]	0,018
Crankcaseheater mode	P_{CK} [kW]	-

Supplementary heater capacity	P_{sup} [kW]	3-4 (4,5-6)
Supplementary heater type	[-]	electricity

Capacity control		Variable
Sound power level Indoor	L_{WA} [dBA]	48
Sound power level Outdoor	L_{WA} [dBA]	-
Rated brine flow	[m^3/h]	0,99

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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Heat pump model	**Master Therm**	**AQ22I**

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	7	6
Space heating seasonal efficiency, Average climate	%	177	133
Space heating annual electricity consumption, Average cl.	kWh	3011	3749

Nominal heating capacity Pdesign, Colder climate	kW	7	6
Space heating seasonal efficiency, Colder climate	%	186	140
Space heating annual electricity consumption, Colder cl.	kWh	3456	4320

Nominal heating capacity Pdesign, Warmer climate	kW	7	6
Space heating seasonal efficiency, Warmer climate	%	177	129
Space heating annual electricity consumption, Warmer cl.	kWh	1945	2498

Sound power level Lwa	dBA	48

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	135
Set Space heating energy efficiency class, Average climate	-	A+++	A++
Set Space heating seasonal efficiency, Colder climate	%	188	142
Set Space heating seasonal efficiency, Warmer climate	%	179	131

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	137
Set Space heating energy efficiency class, Average climate	-	A+++	A++
Set Space heating seasonal efficiency, Colder climate	%	190	144
Set Space heating seasonal efficiency, Warmer climate	%	181	133

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Heat pump model	**Master Therm**	**AQ26I**

Heat pump type	Brine/Water
Supplementary heater	Yes
Heat pump combination heater	No

Reference heating season			**Average**	
Reference water temperature			**LOW, 35°C**	
Full load heating		**Prated [kW]**	**8,98**	
Seasonal efficiency		**η_S [%]**	**191**	**A+++**
Annual electricity consumption		**Q_{HE} [kWh]**	**3721**	
Average 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	8,06	4,34	0,900
B	2	4,99	4,91	0,900
C	7	3,16	5,51	0,900
D	12	2,53	5,51	0,961
TOL (E)	-10	8,98	4,24	0,900
Tbivalent (F)	-10	8,98	4,24	0,900

Reference heating season			**Average**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**8,64**	
Seasonal efficiency		**η_S [%]**	**145**	**A++**
Annual electricity consumption		**Q_{HE} [kWh]**	**4666**	
Average 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	8,05	3,03	0,900
B	2	4,71	3,76	0,900
C	7	3,14	4,42	0,900
D	12	1,82	4,53	0,955
TOL (E)	-10	8,64	2,86	0,900
Tbivalent (F)	-10	8,64	2,86	0,900

Reference heating season			**Warmer**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**8,98**	
Seasonal efficiency		**η_S [%]**	**180**	
Annual electricity consumption		**Q_{HE} [kWh]**	**2556**	
Warmer 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	8,98	4,24	0,900
C	7	6,21	4,69	0,900
D	12	2,54	5,65	0,900
TOL (E)	2	8,98	4,24	0,900
Tbivalent (F)	2	8,98	4,24	0,900

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Heat pump model	**Master Therm**	**AQ26I**

Reference heating season			**Warmer**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**8,64**	
Seasonal efficiency		**η_S [%]**	**143**	
Annual electricity consumption		**Q_{HE} [kWh]**	**3058**	
Warmer 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	8,64	2,86	0,900
C	7	5,77	3,34	0,900
D	12	2,53	4,42	0,900
TOL (E)	2	8,64	2,86	0,900
Tbivalent (F)	2	8,64	2,86	0,900

Reference heating season			**Colder**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**8,98**	
Seasonal efficiency		**η_S [%]**	**199**	
Annual electricity consumption		**Q_{HE} [kWh]**	**4282**	
Colder 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	5,61	4,84	0,900
B	2	3,41	5,51	0,900
C	7	2,29	5,65	0,900
D	12	2,27	5,51	0,956
TOL (E)	-22	8,98	4,24	0,900
Tbivalent (F)	-22	8,98	4,24	0,900
G	-15	7,44	4,53	0,900

Reference heating season			**Colder**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**8,64**	
Seasonal efficiency		**η_S [%]**	**150**	
Annual electricity consumption		**Q_{HE} [kWh]**	**5379**	
Colder 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	5,86	3,56	0,989
B	2	3,36	4,32	0,900
C	7	2,21	4,76	0,900
D	12	2,21	4,76	0,961
TOL (E)	-22	8,64	2,86	0,900
Tbivalent (F)	-22	8,64	2,86	0,900
G	-15	7,58	3,19	0,900

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Heat pump model	**Master Therm**	**AQ26I**

Power consumption in modes other than "active mode"		
Off mode	P_{OFF} [kW]	0,018
Thermostat off mode	P_{TO} [kW]	0,018
Standby mode	P_{SB} [kW]	0,018
Crankcaseheater mode	P_{CK} [kW]	-

Supplementary heater capacity	P_{sup} [kW]	3-4(4,5-6)
Supplementary heater type	[-]	electricity

Capacity control		Variable
Sound power level Indoor	L_{WA} [dBA]	48
Sound power level Outdoor	L_{WA} [dBA]	-
Rated brine flow	[m^3/h]	1,73

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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Heat pump model	**Master Therm**	**AQ26I**

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	9	9
Space heating seasonal efficiency, Average climate	%	191	145
Space heating annual electricity consumption, Average cl.	kWh	3721	4666
Nominal heating capacity Pdesign, Colder climate	kW	9	9
Space heating seasonal efficiency, Colder climate	%	199	150
Space heating annual electricity consumption, Colder cl.	kWh	4282	5379
Nominal heating capacity Pdesign, Warmer climate	kW	9	9
Space heating seasonal efficiency, Warmer climate	%	180	143
Space heating annual electricity consumption, Warmer cl.	kWh	2556	3058
Sound power level Lwa	dBA	48	

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	%	193	147
Set Space heating energy efficiency class, Average climate	-	A+++	A++
Set Space heating seasonal efficiency, Colder climate	%	201	152
Set Space heating seasonal efficiency, Warmer climate	%	182	145

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	%	195	149
Set Space heating energy efficiency class, Average climate	-	A+++	A++
Set Space heating seasonal efficiency, Colder climate	%	203	154
Set Space heating seasonal efficiency, Warmer climate	%	184	147

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Heat pump model	**Master Therm**	**AQ37I**

Heat pump type	Brine/Water
Supplementary heater	Yes
Heat pump combination heater	No

Reference heating season			**Average**	
Reference water temperature			**LOW, 35°C**	
Full load heating		**Prated [kW]**	**15,27**	
Seasonal efficiency		**η_S [%]**	**197**	**A+++**
Annual electricity consumption		**Q_{HE} [kWh]**	**6144**	
Average 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	13,65	4,54	0,900
B	2	8,63	5,04	0,900
C	7	5,42	5,60	0,900
D	12	2,62	5,60	0,962
TOL (E)	-10	15,27	4,44	0,900
Tbivalent (F)	-10	15,27	4,44	0,900

Reference heating season			**Average**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**13,89**	
Seasonal efficiency		**η_S [%]**	**152**	**A+++**
Annual electricity consumption		**Q_{HE} [kWh]**	**7191**	
Average 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	12,35	3,16	0,900
B	2	8,17	3,92	0,900
C	7	5,00	4,59	0,900
D	12	2,52	4,70	0,966
TOL (E)	-10	13,89	3,00	0,900
Tbivalent (F)	-10	13,89	3,00	0,900

Reference heating season			**Warmer**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**15,27**	
Seasonal efficiency		**η_S [%]**	**193**	
Annual electricity consumption		**Q_{HE} [kWh]**	**4055**	
Warmer 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	15,27	4,44	0,900
C	7	10,33	4,82	0,900
D	12	4,39	5,73	0,900
TOL (E)	2	15,27	4,44	0,900
Tbivalent (F)	2	15,27	4,44	0,900

Master Therm tepelná čerpadla s.r.o.
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Heat pump model	**Master Therm**	**AQ37I**

Reference heating season			**Warmer**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**13,89**	
Seasonal efficiency		**η_S [%]**	**149**	
Annual electricity consumption		**Q_{HE} [kWh]**	**4734**	
Warmer 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
B	2	13,89	3,00	0,900
C	7	9,68	3,49	0,900
D	12	4,17	4,59	0,900
TOL (E)	2	13,89	3,00	0,900
Tbivalent (F)	2	13,89	3,00	0,900

Reference heating season			**Colder**	
Reference water temperature			**Low, 35°C**	
Full load heating		**Prated [kW]**	**15,27**	
Seasonal efficiency		**η_S [%]**	**204**	
Annual electricity consumption		**Q_{HE} [kWh]**	**7115**	
Colder 35°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	9,68	4,96	0,900
B	2	5,95	5,60	0,900
C	7	3,87	5,73	0,900
D	12	3,50	5,60	0,971
TOL (E)	-22	15,27	4,44	0,900
Tbivalent (F)	-22	15,27	4,44	0,900
G	-15	12,93	4,73	0,900

Reference heating season			**Colder**	
Reference water temperature			**High, 55°C**	
Full load heating		**Prated [kW]**	**13,99**	
Seasonal efficiency		**η_S [%]**	**157**	
Annual electricity consumption		**Q_{HE} [kWh]**	**8334**	
Colder 55°C	Outdoor heat exchanger	Declared capacity	COP at part load	Degradation Coefficient
	Outdoor air			
	Tj [°C]	Pdh [kW]	COPd (-)	Cdh (-)
A	-7	9,12	3,72	0,900
B	2	5,64	4,49	0,900
C	7	3,39	4,91	0,900
D	12	3,39	4,91	0,974
TOL (E)	-22	13,99	3,07	0,900
Tbivalent (F)	-22	13,99	3,07	0,900
G	-15	12,14	3,36	0,900

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Heat pump model	**Master Therm**	**AQ37I**

Power consumption in modes other than "active mode"		
Off mode	P_{OFF} [kW]	0,018
Thermostat off mode	P_{TO} [kW]	0,018
Standby mode	P_{SB} [kW]	0,018
Crankcaseheater mode	P_{CK} [kW]	-

Supplementary heater capacity	P_{sup} [kW]	7.5
Supplementary heater type	[-]	electricity

Capacity control		Variable
Sound power level Indoor	L_{WA} [dBA]	48
Sound power level Outdoor	L_{WA} [dBA]	-
Rated brine flow	[m^3/h]	2,42

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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Heat pump model	**Master Therm**	**AQ37I**

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	15	14
Space heating seasonal efficiency, Average climate	%	197	152
Space heating annual electricity consumption, Average cl.	kWh	6144	7191
Nominal heating capacity Pdesign, Colder climate	kW	15	14
Space heating seasonal efficiency, Colder climate	%	204	157
Space heating annual electricity consumption, Colder cl.	kWh	7115	8334
Nominal heating capacity Pdesign, Warmer climate	kW	15	14
Space heating seasonal efficiency, Warmer climate	%	193	149
Space heating annual electricity consumption, Warmer cl.	kWh	4055	4734
Sound power level Lwa	dBA	48	

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	%	199	154
Set Space heating energy efficiency class, Average climate	-	A+++	A+++
Set Space heating seasonal efficiency, Colder climate	%	206	159
Set Space heating seasonal efficiency, Warmer climate	%	195	151

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	%	201	156
Set Space heating energy efficiency class, Average climate	-	A+++	A+++
Set Space heating seasonal efficiency, Colder climate	%	208	161
Set Space heating seasonal efficiency, Warmer climate	%	197	153

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