

Appendix I Test results

Table 4.	Heating mode(Medium temperature application):						P	
Model	AH25DCR-XXX							
Product type	Air to Water	Heating season	<input checked="" type="checkbox"/>	Average	<input type="checkbox"/>	Warmer	<input type="checkbox"/>	Colder
1. Test conditions:								
Condition	Part Load Ratio in %				Outdoor heat exchanger	Indoor heat exchanger		
	Formula	A	W	C	Inlet dry (wet) bulb temperature °C	Inlet/outlet water temperatures (°C)		
A	$(-7-16)/(T_{designh-16})$	88	N/A	N/A	-7(-8)	a / 52		
B	$(+2-16)/(T_{designh-16})$	54	N/A	N/A	2(1)	a / 42		
C	$(+7-16)/(T_{designh-16})$	35	N/A	N/A	7(6)	a / 36		
D	$(+12-16)/(T_{designh-16})$	15	N/A	N/A	12(11)	a / 30		
E	$(TOL-16)/(T_{designh-16})$				TOL	a / 55.3		
F	$(T_{bivalent-16})/(T_{designh-16})$				Tbiv	a / 52		
G	$(-15-16)/(T_{designh-16})$	N/A	N/A	N/A	-15	N/A		
Remark: a) With the water flow rate as determined at the standard rating conditions given in EN14511-2 at 47/55 conditions.								
2. Tested data/correction data(Average):								
General test conditions/ Part-Load	Unit	A(-7)/W52 (88%)	A2/W42 (54%)	A7/W36 (35%)	A12/W30 (15%)	A(-10)/W55.3 (100%)	A(-7)/W52 (88%)	
	--	A	B	C	D	E	F	
Data collection period	hh: min:sec	2:00:00	2:00:00	1:00:00	1:00:00	3:00:00	2:00:00	
The heat pump defrosts	--	No	No	No	No	No	No	
Complete Cycles	--	0	0	0	0	0	0	
Barometric pressure	kPa	101.02	101.02	101.02	101.02	101.02	101.02	
Voltage	V	397.0	400.3	400.5	400.7	400.1	397.0	
Current input of the unit	A	9.43	5.49	4.35	3.62	10.16	9.43	
Power input of the unit	kW	6.020	3.495	2.764	2.277	6.838	6.020	
Test conditions indoor unit								
Inlet Water temperature, DB	°C	46.97	37.85	31.41	24.32	51.11	46.97	
Outlet Water temperature, DB	°C	51.31*	41.99	36.04	30.05	54.95*	51.31*	

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Test conditions outdoor unit							
Air inlet temperature, DB	°C	-7.05	1.98	6.90	12.01	-9.71	-7.05
Air inlet temperature, WB	°C	-7.69	1.30	5.96	11.01	-10.71	-7.69
Summary of the results							
Total heating capacity	kW	12.723	11.229	12.560	15.529	10.672	12.723
Effective power input	kW	6.079	3.554	2.824	2.337	6.897	6.079
Coefficient of performance (COP)	--	2.09	3.16	4.45	6.65	1.55	2.09
Compressor frequency	Hz	70	40	35	35	70	70
Water flow	m ³ /h	2.32	2.32	2.32	2.32	2.32	2.32
Remark: 1. * In part condition, outlet temperature data is recorded by a full average complete cycle's data. 2. At the standard rating conditions given in EN 14511-2 at ambient temp dry bulb 7°C/wet bulb 6°C and inlet outlet water temp 47°C/55°C conditions: heating capacity is 21632.3W, COP is 2.82W/W.							
3.Calculation/conclusion for SCOP(Average):							
Tdesignh(°C)	-10	Tbiv(°C)		-7			
Pdesignh(kW)	14.383	TOL(°C)		-10			
Test result A, B, C, D, E, F conditions:							
Condition	Part load	Measured capacity	COP at measured capacity	Cdh	CR	COP at part load	
E	14.383	10.672	1.55	0.00	1.00	1.55	
F	12.723	12.723	2.09	0.00	1.00	2.09	
A	12.723	12.723	2.09	0.00	1.00	2.09	
B	7.745	11.229	3.16	0.99	0.69	3.14	
C	4.979	12.560	4.45	0.99	0.40	4.38	
D	2.213	15.529	6.65	0.99	0.14	6.27	
CR: part load divided by capacity;							