7.2 Technical data

Device		WPL-45-K1 HT	WPL-70-K1 HTT	WPL-90-K1 HTT
Version				
Heat source		External air		
Heat sink		Water[1)]		
Controller		TERMOTRONIC 3000 WEB		
Device placement		External		
Placement of the controller un.		Internal		
Compressor		1 x scroll	2 x scroll	2 x scroll
Defrosting		Passive (with ambient air) + Active (change of cooling cycle direction)		
Electric heater		/		
Soft start-up		Yes (optional)		
Circulation pump, secondary		/		
Capacity				
Heating		Heating power / electrical power / COP[2)]		
A7/W35	kW / kW / -	44,8 / 9,7 / 4,62	70,3 / 15,6 / 4,51	86,8 / 19,7 / 4,40
A2/W35	kW / kW /	38,3 / 9,3 / 4,13	60,5 / 15,0 / 4,02	74,1 / 18,8 / 3,94
A7/W55	kW / kW / -	40,9 / 13,2 / 3,10	64,5 / 21,4 / 3,01	79,3 / 26,7 / 2,97
A2/W55	kW / kW / -	33,8 / 12,3 / 2,74	53,6 / 20,1 / 2,67	65,6 / 25,0 / 2,62
A-10/W35	kW / kW / -	28,7 / 8,4 / 3,41	46,1 / 13,9 / 3,31	55,7 / 17,3 / 3,22
A-10/W55	kW / kW / -	26,8 / 11,2 / 2,39	44,1 / 18,1 / 2,43	54,0 / 22,7 / 2,38
Cooling		Cooling power / electrical power / EER[3)]		
A35/W12-7	kW / kW / -	33,6 / 11,5 / 2,92	52,8 / 18,9 / 2,79	66,0 / 23,8 / 2,77
Electrical data				
External and internal unit				
Max. electrical power	kW	17.6	27.9	34.5
Z_{max}[11)]	Ω	0.015		
External unit				
Rated voltage		3N~ 400 V; 50 Hz		
Max. operational current	A	28.6	47.6	56.6
Max. electrical power	kW	17.1	27.4	34.0
Current of blocked rotor (LRA)	A	127 / 149[10)]	127 / 149[10)]	127 / 149[10)]
Fuses[12)]	A	3 x 32	3 x 50	3 x 63
Electrical power cable[4*)]	mm^2	5 x 6	5 x 10	5 x 10
Internal unit[5)]				
Rated voltage		~ 230 V; 50 Hz		
Max. operational current	A	2.3	2.3	2.3
Max. electrical power	kW	0.5	0.5	0.5
Z_{max}[11)]	Ω	0.015		
Fuses	A	1 x C16	1 x C16	1 x C16
Electrical power cable[4)]	mm2	3 x 2.5	3 x 2.5	3 x 2.5
Cooling system				
Coolant - type		R407C		
Coolant - quantity	kg	32.7	58.0	61.0
Max. operational pressure	MPa	2.9		
Oil - type		POE (Emkarte RL 32 3MAF)		
Oil - quantity	l	4.14	8.00	8.28
Primary side (heat source) - air				
Nominal flow	m^3/h	10,400	20,200	20,800
Heating				
Range of operation - min. / max. air temperature	°C	-23 / 40		
Cooling				
Range of operation - min. / max. air temperature	°C	10 / 40		

Device		WPL-45-K1 HT	WPL-70-K1 HTT	WPL-90-K1 HTT
Secondary side (heat sink) - water[1)]				
Min. / Max. pressure in the system	MPa	0,05 / 0,3 (0,5 / 3 bar)		
Pipe connections		G 1.1/2" (ext. dev.)	G 2" (ext. dev.)	G 2" (ext. dev.)
Recommended main circulation pump[6)]	WILO	Stratos PARA 30/1-12	Stratos PARA 50/1-12	
Recommended dimensions of pipes leading to the device[7)]	DN	40	50	65
Heating				
Rated flow[6)]	m^3 / h	7.4	12.1	14.9
Pressure drop at rated flow	kPa	27	29	37
Range of operation - min. / max. water temperature	°C	25 / 63		
Cooling				
Range of operation - min. / max. water temperature	°C	7 / 25		
Dimensions and mass				
Dimensions (W x H x D)	mm	1773 x 2017 x 1361	2953 x 2017 x 1361	2953 x 2017 x 1361
Transport mass	kg	805	1325	1366
Net mass	kg	802	1315	1361
Noise				
Level of sound power	dB (A)	75	76	77
The level of sound pressure at a distance of 1 m	dB (A)	67	68	69
The level of sound pressure at a distance of 5 m	dB (A)	53	54	55
The level of sound pressure at a distance of 10 m	dB (A)	47	48	49
Communication				
Connection between ext. and inter. unit		FTP cable / LiYCY 4 x 0.75 mm^2		
Connection to BMS		MODBUS protocol (UTP cable – connection RJ45) – RS 485		
Connection to the internet[8)]		UTP 5e cable - connection RJ45 - Ethernet		
Miscellaneous				
Protection class				
External unit		IPX4		

1) A water solution of up to 35 % of propylene-glycol or ethylene-glycol can be used as secondary medium. Use of other substances is not permitted or the manufacturer of the device must be consulted prior to use. Requirements regarding water quality are listed in the installation manual in the chapter "Preparation of the Hydraulic System". The requirements must be taken into account!

2) COP (Coefficient of Performance) is a card for performance efficiency of the device, the heating number which is a quantity without unit. Computer-wise COP is the ratio between the energy gained - heat (in cooling it is heat taken away) and electrical energy needed for the functioning of the device.

3) EER (Energy Efficiency Ratio) is an abbreviation for the coefficient of the cooling energy efficiency. Mathematically EER is the ratio between the effective cooling power and effective electrical power in [kW].

4) With the cable we have taken into account laying B2 from the table A.52.4 – IEC 60364-5-52. The cable in the installation pipe is fixed to the wall. The dimensions of the electrical cables must always be checked or determined by the designing engineer of electrical installations.

4*) With the cable we have taken into account laying C from the table A.52.4 – IEC 60364-5-52. The cable in the installation pipe is fixed onto the wall. The dimensions of the electrical cables must always be checked or determined by the designing engineer of electrical installations.

5) Joint maximal load (circulation pumps, electronic valves ...) which can be connected to or powered by the internal unit, must not exceed 500 W. Higher consumers (i.e. pumps) should have their own supply.