2.3 DEVICE TECHNICAL DATA

TECHNICAL DATA Product code		S1-3S WHS1-3S-1789	S2-3S WHS2-3S-1790	S3-3S WHS3-3S-1791	S4-3S WHS4-3S-1787
Nominal heating capacity [kW] *	III STAGE	14,7	23,4	36,9	50,1
	II STAGE	13,1	16,0	20,8	38,5
	I STAGE	11,3	14,0	17,8	27,5
Heating capacity range [kW]**		1,57 – 19,5	2,1-30,8	2,92-48,8	4,17-66,2
Maximum airflow [m3/h]	III STAGE	1400	2000	1800	3350
	II STAGE	1150	1100	850	2250
	I STAGE	900	900	700	1400
Maximum horizontal range [m]		10	13	11	18
Number of rows [pcs.]		1	2	3	2
Capacity of water [dm³]		0,5	1,3	1,9	2
Maximum temperature of working fluid[°C]		120	120	120	120
Maximum working pressure [Mpa]		1,6	1,6	1,6	1,6
Connection diameter [″]		3/4	3/4	3/4	3/4
Power supply [V] / Frequency [Hz]		230/50	230/50	230/50	230/50
Rated motor current [A]	III STAGE	0,40	0,58	0,58	0,84
	II STAGE	0,30	0,30	0,30	0,65
	I STAGE	0,25	0,20	0,20	0,54
Motor speed [rpm]	III STAGE	1350	1400	1400	1400
	II STAGE	1150	1000	1000	1050
	I STAGE	900	680	680	750
Motor power [W]	III STAGE	85	125	125	190
	II STAGE	65	75	75	150
	I STAGE	55	45	45	120
Protection degree IP [-]		54	54	54	54
Net weight [kg]		15	21	23	27
Noise [dB]***	III STAGE	51	54	53	56
	II STAGE	45	48	47	50
	I STAGE	43	46	45	48

** for parameters 90/70°C and 0°C inlet*

*** max. 120/90°C, 0°C inlet, III stage // min. 40/30°C, 20°C inlet, I stage*

**** measurement at a distance of 5 m from the device*

Parameters	S1-3S-3 stage 1400 m³/h				
Supply/return water temperature[°C]	120/90				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	19,5	18,3	17,1	16,0	14,8
Dry bulb air outlet temperature[°C]	38,7	42,0	45,2	48,4	51,6
Water flow [m³/h]	0,57	0,54	0,51	0,47	0,44
Pressure drop in the heat exchanger [kPa]	12	11	10	9	7

Parameters	S1-3S-3 stage 1400 m³/h				
Supply/return water temperature[°C]	90/70				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	14,7	13,6	12,5	11,4	10,3
Dry bulb air outlet temperature[°C]	29,3	32,5	35,7	38,8	42,0
Water flow [m³/h]	0,65	0,6	0,55	0,5	0,45
Pressure drop in the heat exchanger [kPa]	16	14	12	10	8

Parameters	S1-3S-3 stage 1400 m³/h				
Supply/return water temperature[°C]	80/60				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	12,6	11,5	10,4	9,35	8,3
Dry bulb air outlet temperature[°C]	25,1	28,3	31,5	34,6	37,7
Water flow [m³/h]	0,55	0,51	0,46	0,41	0,36
Pressure drop in the heat exchanger [kPa]	12	10	9	7	6

Parameters	S1-3S-3 stage 1400 m3/h				
Supply/return water temperature[°C]	70/50				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	10,5	9,42	8,35	7,3	6,28
Dry bulb air outlet temperature[°C]	20,9	24,1	27,2	30,3	33,4
Water flow [m³/h]	0,46	0,41	0,37	0,32	0,27
Pressure drop in the heat exchanger [kPa]	9	7	6	5	4

Parameters	S1-3S-3 stage 1400 m3/h				
Supply/return water temperature[°C]	50/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	6,23	5,2	4,18	3,18	2,19
Dry bulb air outlet temperature[°C]	12,4	15,5	18,6	21,7	24,7
Water flow [m³/h]	0,27	0,23	0,18	0,14	0,1
Pressure drop in the heat exchanger [kPa]	4	3	2	1	1

Parameters	S1-3S-3 stage 1400 m3/h				
Supply/return water temperature[°C]	40/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	6,02	4,98	3,97	2,98	2,01
Dry bulb air outlet temperature[°C]	12,0	15,1	18,2	21,3	24,3
Water flow [m³/h]	0,52	0,43	0,34	0,26	0,17
Pressure drop in the heat exchanger [kPa]	12	9	6	3	2

Parameters	S2-3S-3 stage 2000 m3/h				
Supply/return water temperature[°C]	120/90				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	30,8	29,0	27,1	25,3	23,6
Dry bulb air outlet temperature[°C]	42,9	46,0	49,1	52,2	55,2
Water flow [m³/h]	0,91	0,86	0,8	0,75	0,7
Pressure drop in the heat exchanger [kPa]	7	6	6	5	4

Parameters	S2-3S-3 stage 2000 m3/h				
Supply/return water temperature[°C]	90/70				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	23,4	21,6	19,8	18,1	16,5
Dry bulb air outlet temperature[°C]	32,5	35,6	38,6	41,6	44,6
Water flow [m³/h]	1,03	0,95	0,87	0,8	0,73
Pressure drop in the heat exchanger [kPa]	9	8	7	6	5

Parameters	S2-3S-3 stage 2000 m3/h				
Supply/return water temperature[°C]	80/60				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	20,1	18,4	16,7	15,0	13,4
Dry bulb air outlet temperature[°C]	28,0	31,0	34,0	37,0	39,9
Water flow [m³/h]	0,88	0,81	0,73	0,66	0,59
Pressure drop in the heat exchanger [kPa]	7	6	5	4	3

Parameters	S2-3S-3 stage 2000 m3/h				
Supply/return water temperature[°C]	70/50				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	16,9	15,2	13,5	11,8	10,2
Dry bulb air outlet temperature[°C]	23,4	26,5	29,4	32,4	35,3
Water flow [m³/h]	0,74	0,66	0,59	0,52	0,45
Pressure drop in the heat exchanger [kPa]	5	4	4	3	2

Parameters	S2-3S-3 stage2000 m3/h				
Supply/return water temperature[°C]	50/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	10,3	8,63	7,02	5,44	3,84
Dry bulb air outlet temperature[°C]	14,3	17,2	20,1	23,0	25,7
Water flow [m³/h]	0,45	0,37	0,3	0,24	0,17
Pressure drop in the heat exchanger [kPa]	2	2	1	1	0

Parameters	S2-3S-3 stage 2000 m3/h				
Supply/return water temperature[°C]	40/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	9,69	8,07	6,48	4,92	3,39
Dry bulb air outlet temperature[°C]	13,5	16,4	19,3	22,2	25,1
Water flow [m³/h]	0,84	0,7	0,56	0,43	0,29
Pressure drop in the heat exchanger [kPa]	7	5	4	2	1

Parameters	S3-3S-3 stage 1800 m3/h				
Supply/return water temperature[°C]	120/90				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	48,8	45,8	42,9	40,1	37,4
Dry bulb air outlet temperature[°C]	75,4	77,1	78,8	80,4	82,0
Water flow [m³/h]	1,44	1,35	1,27	1,18	1,1
Pressure drop in the heat exchanger [kPa]	15	13	12	11	9

Parameters	S3-3S-3 stage 1800 m3/h				
Supply/return water temperature[°C]	90/70				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	36,9	34,1	31,3	28,7	26,1
Dry bulb air outlet temperature[°C]	57,0	58,6	60,2	61,8	63,3
Water flow [m³/h]	1,63	1,5	1,38	1,26	1,15
Pressure drop in the heat exchanger [kPa]	19	17	14	12	10

Parameters	S3-3S-3 stage 1800 m3/h				
Supply/return water temperature[°C]	80/60				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	32,0	29,2	26,6	24,0	21,4
Dry bulb air outlet temperature[°C]	49,4	51,0	52,6	54,1	55,5
Water flow [m³/h]	1,4	1,28	1,17	1,05	0,94
Pressure drop in the heat exchanger [kPa]	15	13	11	9	7

Parameters	S3-3S-3 stage 1800 m3/h				
Supply/return water temperature[°C]	70/50				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	27,0	24,4	21,7	19,2	16,7
Dry bulb air outlet temperature[°C]	41,8	43,4	44,8	46,3	47,7
Water flow [m³/h]	1,18	1,07	0,95	0,84	0,73
Pressure drop in the heat exchanger [kPa]	11	9	8	6	5

Parameters	S3-3S-3 stage 1800 m3/h				
Supply/return water temperature[°C]	50/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	17,0	14,4	11,9	9,37	6,82
Dry bulb air outlet temperature[°C]	26,3	27,7	29,0	30,3	31,3
Water flow [m³/h]	0,74	0,63	0,52	0,41	0,3
Pressure drop in the heat exchanger [kPa]	5	4	3	2	1

Parameters	S3-3S-3 stage 1800 m3/h				
Supply/return water temperature[°C]	40/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	15,5	13,0	10,5	8,13	5,73
Dry bulb air outlet temperature[°C]	24,0	25,5	26,9	28,3	29,5
Water flow [m³/h]	1,35	1,13	0,91	0,7	0,5
Pressure drop in the heat exchanger [kPa]	16	11	8	5	3

Parameters	S4-3S-3 stage 3350 m3/h				
Supply/return water temperature[°C]	120/90				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	66,2	62,1	58,2	54,4	50,6
Dry bulb air outlet temperature[°C]	55,0	57,6	60,1	62,6	65,1
Water flow [m³/h]	1,96	1,84	1,72	1,61	1,49
Pressure drop in the heat exchanger [kPa]	17	15	13	12	10

Parameters	S4-3S-3 stage 3350 m3/h				
Supply/return water temperature[°C]	90/70				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	50,1	46,2	42,5	38,8	35,2
Dry bulb air outlet temperature[°C]	41,6	44,1	46,6	49,0	51,4
Water flow [m³/h]	2,21	2,04	1,87	1,71	1,55
Pressure drop in the heat exchanger [kPa]	22	19	16	13	11

Parameters	S4-3S-3 stage 3350 m3/h				
Supply/return water temperature[°C]	80/60				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	43,1	39,4	35,7	32,1	28,6
Dry bulb air outlet temperature[°C]	35,8	38,3	40,7	43,1	45,5
Water flow [m³/h]	1,9	1,73	1,57	1,41	1,26
Pressure drop in the heat exchanger [kPa]	17	14	12	10	8

Parameters	S4-3S-3 stage 3350 m3/h				
Supply/return water temperature[°C]	70/50				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	36,2	32,5	28,9	25,4	21,9
Dry bulb air outlet temperature[°C]	30,0	32,4	34,9	37,2	39,5
Water flow [m³/h]	1,58	1,42	1,26	1,11	0,96
Pressure drop in the heat exchanger [kPa]	12	10	8	6	5

Parameters	S4-3S-3 stage 3350 m3/h				
Supply/return water temperature[°C]	50/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	22,0	18,5	15,0	11,6	8,19
Dry bulb air outlet temperature[°C]	18,3	20,6	22,9	25,2	27,3
Water flow [m³/h]	0,95	0,8	0,65	0,5	0,36
Pressure drop in the heat exchanger [kPa]	5	4	2	2	1

Parameters	S4-3S-3 stage 3350 m3/h				
Supply/return water temperature[°C]	40/30				
Dry bulb air inlet temperature [°C]	0	5	10	15	20
Heating capacity [kW]	20,7	17,2	13,9	10,5	7,24
Dry bulb air outlet temperature[°C]	17,2	19,6	21,9	24,2	26,4
Water flow [m³/h]	1,8	1,49	1,2	0,91	0,63
Pressure drop in the heat exchanger [kPa]	16	12	8	5	2