

Technical Data Sheet



Air



Ground



Water



Brine



Cooling



PV-ready



Modulation

Brine/Water Heat Pumps 8 - 20 kW



Heliotherm Premium Line Modulation

The innovative Brine/Water heat pump with modulation technology automatically adjusts to the single or multi-family home's heating requirements. Centralized to this Seasonal Performance accomplishment is the heat pump's intelligent control. The result is a high accent of indoor climate and maximum living comfort. In combination with a photovoltaic system, in connection to a wide range of buffer storage units and heat delivery systems and optional cooling virtually renders unlimited planning realisation for your heating system.

Premium Line Advantages

- Minimal operating costs due to a SCOP of up to 5.5 (climate „average“, temperature level 35° C)
- Quiet operation through acoustic decoupling and special insulation case design
- Simple operation and heat pump optimization by means of Remote Control
- Safe and almost maintenance-free operation is obtained through high grade components
- Heliotherm's registered twin-x technology® and patented dsi-technology®, for more use of the environment's free energy



Technical Data

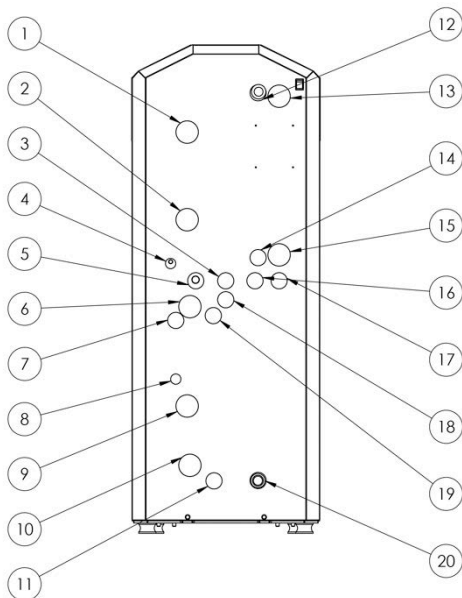
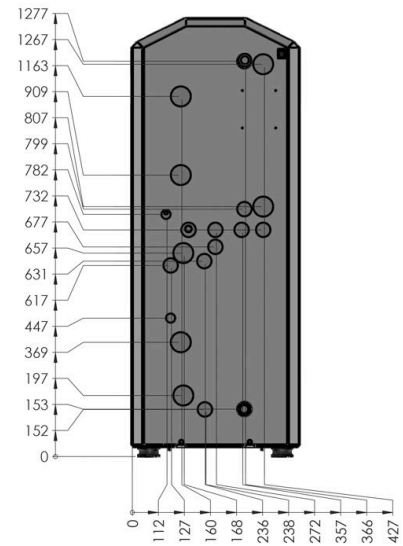
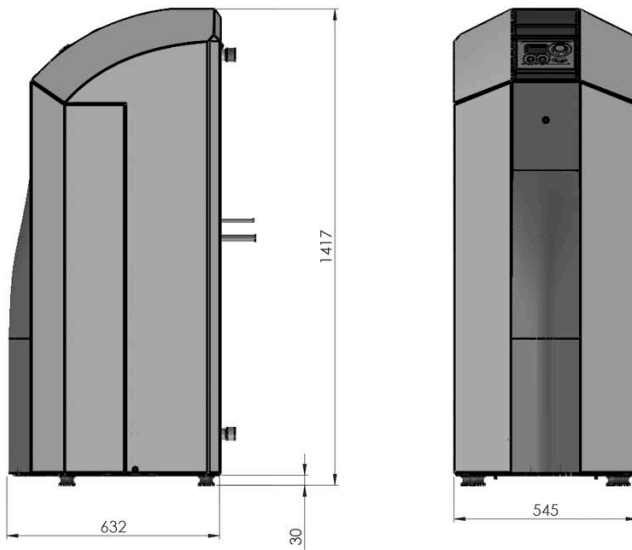
Type Premium Line Modulation		08S10W	12S16W	20S25W
Energy source (Primary cycle)				
Content	Liter	1,9	1,9	3
Volume flow (temperature difference 4 K)	m ³ /h	3,9	4,2	5,5
Pressure loss	mH ₂ O	2,6	2,8	3,9
Min. outlet temperature	°C	-4	-4	-4
Max. outlet temperature	°C	20	20	20
Heating water at 5 K temperature difference				
Content	Liter	2,5	2,5	3
Volume flow (temperature difference 5 K)	Liter/h	1,0 - 2,0	1,0 - 2,9	1,8 - 3,9
Pressure loss	mH ₂ O	1	1,6	2,1
Max. outlet temperature	°C	65	65	65
Electric values				
Nominal voltage			3/N/PE 400 V/50 Hz	
Max. nominal amperage	A	13	15	21
Starting current	A	14	19	21
Fuse protection - slow	A	3 x 16	3 x 16	3 x 20
Nominal control circuit			1/N/PE 230 V/50 Hz	
Protection control circuit	A	13	13	13
Protection class		1	1	1
Refrigerant cycle				
Working fluid		R-410A	R-410A	R-410A
Fill amount	kg	2,9	3,5	3,5
Compressor	Type	Scroll	Scroll	Scroll
Compressor speed	1/min	1.200 - 5.400	1.200 - 5.400	1.200 - 5.400
Oil amount	Liter	1,3	1,7	2,3
Dimensions				
Total length	mm	632	632	632
Total width	mm	545	545	545
Total height	mm	1.417	1.417	1.417
Total weight	kg	155	160	175
Permitted operating pressure	bar	10	10	10
Connections				
Heating water outlet and inlet	AG	5/4"	5/4"	2"
Brine outlet and inlet	AG	5/4"	5/4"	2"



Acoustic Technical Data acc. to EN 12102

Type Premium Line Modulation				
A-Assessed acoustic capacity - hum level in heating mode at B0(±3 K)/W55 (±1 K)		08S10W	12S16W	20S15W
Nominal heat output	dB(A)	47	47	50





HP08S10W-M-WEB
HP12S16W-M-WEB

- 19 ES Inlet
- 11 ES Outlet
- 20 Inlet heating
- 12 Outlet heating

HP20S25W-M-WEB

- 6 ES Inlet
- 10 ES Outlet
- 15 Inlet heating
- 13 Outlet heating



Performance Data HP08S10W-M-WEB

acc. to EN14825 (calculated values; errors reserved)

Seasonal room heating - Energy efficiency class A++

Full Load and Seasonal Performance Factor in heating mode

Climate zone	Outlet temperature level	P ^{designh} [kW]	Q _{HE} [kWh]	SCOP	η _s [%]
average (Strasbourg)	low (35°C)	8	2146	5,22	206
	average (45°C)	8	2593	4,32	170
	high (55°C)	8	3088	3,63	142
warmer (Athens)	low (35°C)	8	2163	5,18	204
	average (45°C)	8	2426	4,62	182
	high (55°C)	8	2859	3,92	154
colder (Helsinki)	low (35°C)	8	3240	5,19	204
	average (45°C)	8	3861	4,35	171
	high (55°C)	8	4618	3,64	143



Performance Data HP08S10W-M-WEB (Continued)

Partial loads and COPs for the reference heating period, „average“ (Strasbourg)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W24	15	1,24	5,49
	B0/W27	35	2,81	5,47
	B0/W30	54	4,35	5,14
	B0/W34	88	7,08	4,93
	B0/W35	100	8,48	4,93
average (45°C)	B0/W28	15	1,18	5,01
	B0/W33	35	2,79	4,43
	B0/W37	54	4,40	4,30
	B0/W43	88	7,15	3,99
	B0/W45	100	8,33	3,85
high (55°C)	B0/W30	15	1,24	4,37
	B0/W36	35	2,84	3,84
	B0/W42	54	4,39	3,67
	B0/W52	88	7,17	2,98
	B0/W55	100	8,34	2,86

Partial loads and COPs for the reference heating period, „warmer“ (Athens)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W26	29	2,30	5,33
	B0/W31	64	5,34	5,10
	B0/W35	100	8,48	4,93
average (45°C)	B0/W31	29	2,42	4,95
	B0/W39	64	5,34	4,41
	B0/W45	100	8,33	3,88
high (55°C)	B0/W34	29	2,32	4,45
	B0/W46	64	5,27	3,57
	B0/W55	100	8,34	2,86



Performance Data HP08S10W-M-WEB (Continued)

Partial loads and COPs for the reference heating period, „colder“ (Helsinki)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W24	11	1,09	4,99
	B0/W25	24	1,94	5,48
	B0/W27	37	2,98	5,29
	B0/W30	61	5,33	5,09
	B0/W35	100	8,48	4,93
average (45°C)	B0/W26	11	1,13	4,84
	B0/W30	24	1,90	4,78
	B0/W33	37	2,95	4,37
	B0/W38	61	5,34	4,25
	B0/W45	100	8,33	3,85
high (55°C)	B0/W28	11	1,18	4,59
	B0/W32	24	1,95	4,23
	B0/W37	37	2,99	3,80
	B0/W44	61	5,29	3,38
	B0/W55	100	8,34	2,86



Performance Data HP12S16W-M-WEB

acc. to EN14825 (calculated values; errors reserved)

Seasonal room heating - Energy efficiency class A++

Full Load and Seasonal Performance Factor in heating mode

Climate zone	Outlet temperature level	P_{desinh} [kW]	Q_{HE} [kWh]	SCOP	η_s [%]
average (Strasbourg)	low (35°C)	12,0	3159	4,79	210
	average (45°C)	12,0	3822	3,91	173
	high (55°C)	10,0	4499	3,19	146
warmer (Athens)	low (35°C)	12,0	3192	5,68	208
	average (45°C)	12,0	3696	4,75	179
	high (55°C)	12,0	4536	4,10	145
colder (Helsinki)	low (35°C)	12,0	4670	3,99	213
	average (45°C)	12,0	5940	3,34	167
	high (55°C)	12,0	6540	2,83	151



Performance Data HP12S16W-M-WEB (Continued)

Partial loads and COPs for the reference heating period, „average“ (Strasbourg)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W24	15	6,96	5,66
	B0/W27	35	7,20	5,64
	B0/W30	54	6,56	5,21
	B0/W34	88	10,66	5,04
	B0/W35	100	12,07	5,16
average (45°C)	B0/W28	15	7,05	4,89
	B0/W33	35	4,28	4,55
	B0/W37	54	6,53	4,41
	B0/W43	88	10,70	3,98
	B0/W45	100	12,05	3,82
high (55°C)	B0/W30	15	7,08	4,12
	B0/W36	35	4,24	4,09
	B0/W42	54	6,58	3,73
	B0/W52	88	10,61	3,12
	B0/W55	100	12,05	2,91

Partial loads and COPs for the reference heating period, „warmer“ (Athens)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W26	29	6,98	5,36
	B0/W31	64	7,71	5,21
	B0/W35	100	12,07	5,16
average (45°C)	B0/W31	29	7,07	4,74
	B0/W39	64	7,75	4,51
	B0/W45	100	12,05	3,82
high (55°C)	B0/W34	29	3,49	4,16
	B0/W46	64	7,73	3,36
	B0/W55	100	12,05	2,91



Performance Data WEB Premium Line 12 (Continued)

Partial loads and COPs for the reference heating period, „colder“ (Helsinki)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W24	11	6,98	5,20
	B0/W25	24	6,97	5,71
	B0/W27	37	4,58	5,51
	B0/W30	61	7,25	5,29
	B0/W35	100	12,07	5,16
average (45°C)	B0/W26	11	7,04	4,46
	B0/W30	24	7,07	4,54
	B0/W33	37	4,49	4,29
	B0/W38	61	7,34	4,16
	B0/W45	100	12,05	3,82
high (55°C)	B0/W28	11	7,06	4,69
	B0/W32	24	2,90	4,23
	B0/W37	37	4,49	4,07
	B0/W44	61	7,36	3,61
	B0/W55	100	12,05	2,91



Performance Data HP20S25W-M-WEB

acc. to EN14825 (calculated values; errors reserved)

Seasonal room heating - Energy efficiency class A++

Full Load and Seasonal Performance Factor in heating mode

Climate zone	Outlet temperature level	P _{desinh} [kW]	Q _{HE} [kWh]	SCOP	η _s [%]
average (Strasbourg)	low (35°C)	20	5053	5,54	219
	average (45°C)	20	6055	4,62	182
	high (55°C)	20	7069	3,96	155
warmer (Athens)	low (35°C)	20	5108	5,48	216
	average (45°C)	20	5894	4,75	187
	high (55°C)	20	6888	4,07	160
colder (Helsinki)	low (35°C)	20	7475	5,62	222
	average (45°C)	20	8913	4,71	185
	high (55°C)	20	10322	4,07	160



Performance Data HP20S25W-M-WEB (Continued)

Partial loads and COPs for the reference heating period, „average“ (Strasbourg)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W24	15	5,59	5,91
	B0/W27	35	7,56	5,77
	B0/W30	54	11,43	5,46
	B0/W34	88	17,74	5,22
	B0/W35	100	20,11	5,26
average (45°C)	B0/W28	15	5,44	5,25
	B0/W33	35	7,43	4,74
	B0/W37	54	11,30	4,59
	B0/W43	88	17,82	4,24
	B0/W45	100	20,19	4,06
high (55°C)	B0/W30	15	5,34	4,54
	B0/W36	35	7,41	4,29
	B0/W42	54	11,37	4,00
	B0/W52	88	17,60	3,19
	B0/W55	100	20,17	3,06

Partial loads and COPs for the reference heating period, „warmer“ (Athens)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W26	29	5,52	5,54
	B0/W31	64	13,20	5,46
	B0/W35	100	20,11	5,26
average (45°C)	B0/W31	29	5,31	5,00
	B0/W39	64	13,25	4,59
	B0/W45	100	20,19	4,06
high (55°C)	B0/W34	29	5,39	4,59
	B0/W46	64	13,29	3,72
	B0/W55	100	20,17	3,06



Performance Data HP20S25W-M-WEB (Continued)

Partial loads and COPs for the reference heating period, „colder“ (Helsinki)

Temperature level	Operating point	Partial load ratio [%]	Heating capacity P _{dh} [kW]	COP _d
low (35°C)	B0/W24	11	5,57	5,39
	B0/W25	24	5,55	5,94
	B0/W27	37	7,57	5,73
	B0/W30	61	12,97	5,51
	B0/W35	100	20,11	5,26
average (45°C)	B0/W26	11	5,50	5,10
	B0/W30	24	5,31	5,13
	B0/W33	37	7,54	4,77
	B0/W38	61	12,87	4,61
	B0/W45	100	20,19	4,06
high (55°C)	B0/W28	11	5,44	5,03
	B0/W32	24	5,26	4,59
	B0/W37	37	7,43	4,31
	B0/W44	61	12,68	3,79
	B0/W55	100	20,17	3,06

