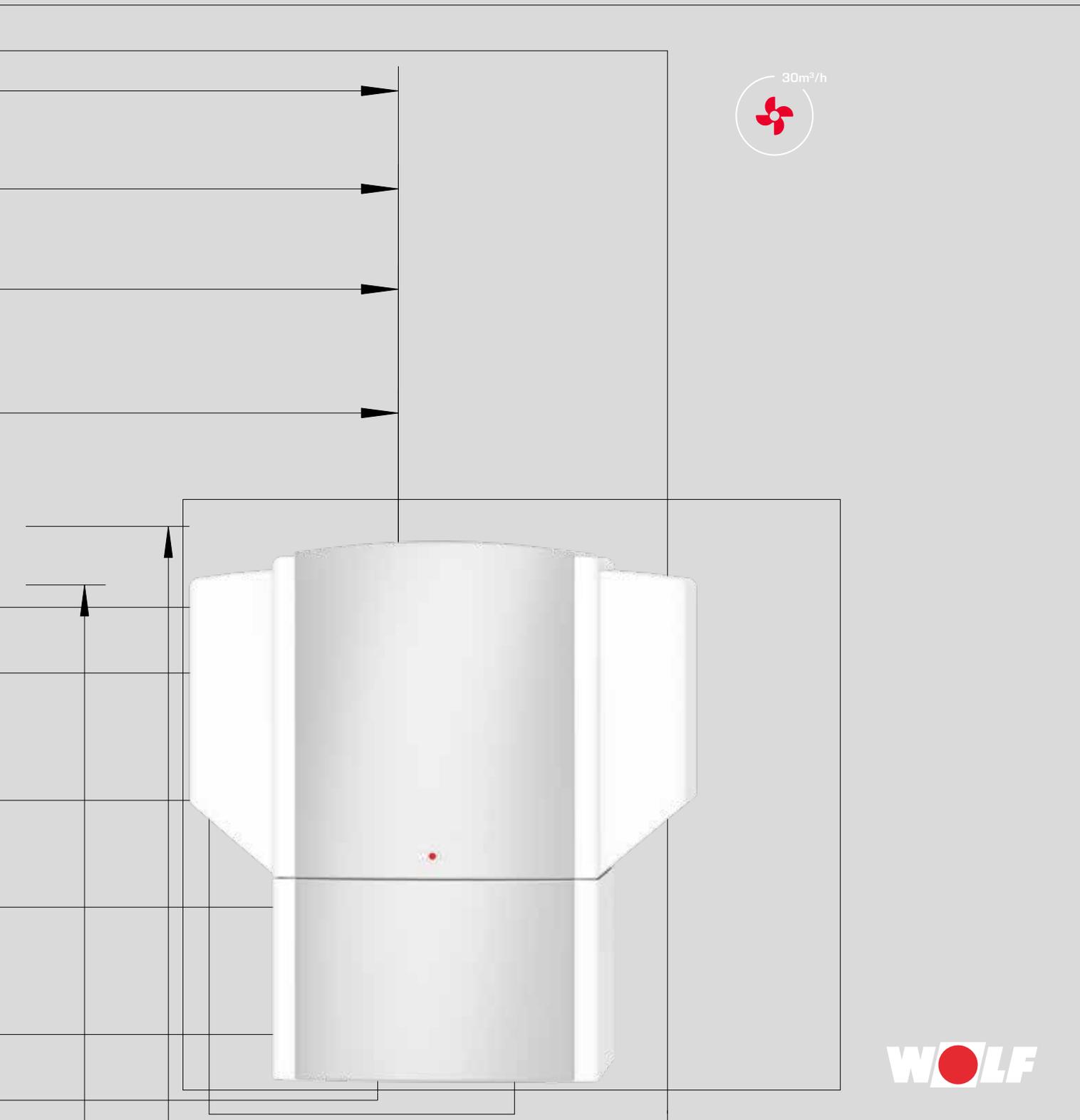
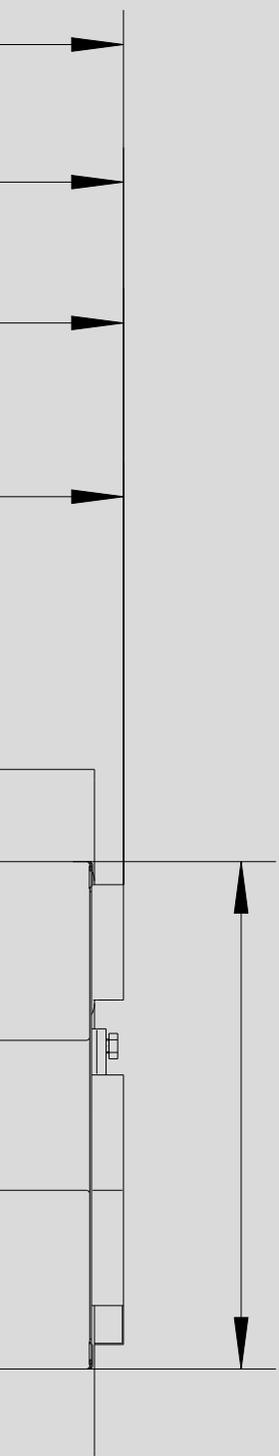


WOLF HIGH EFFICIENCY HEAT PUMPS

BWL-1-A / BWL-1-I AIR SOURCE / BWS-1 GROUND SOURCE (BRINE) / BWW-1 GROUND SOURCE (WATER)





THE EXTENSIVE EQUIPMENT RANGE

from system supplier WOLF offers the ideal solution for commercial and industrial buildings, new build and modernisation projects alike.

The range of WOLF control units can meet any requirement for heating convenience.

All equipment is easy to operate, highly energy efficient and reliable.

Solar thermal technology can be swiftly integrated into existing systems.

WOLF equipment is easy and quick to install and maintain.

HIGH EFFICIENCY HEAT PUMPS		04-05
AIR SOURCE HEAT PUMP		06
OUTDOOR INSTALLATION	BWL-1-A	06-08
INDOOR INSTALLATION	BWL-1-I	06-08
GROUND SOURCE HEAT PUMP (BRINE)	BWS-1	09-11
GROUND SOURCE HEAT PUMP (WATER)	BWW-1	12-14
STANDARD CONTROL UNITS		15
CONTROL ACCESSORIES		16
HEAT PUMP ACCESSORIES		17-23
CYLINDERS / BUFFER CYLINDERS	CEW-1-200	17
	CPM-1-70	18
	SEW-1-300 / 400	19
	SEM-1W-360	20
	SPU-1-200	21
COOLING MODULE	BKM	22
STANDARD DELIVERY / ACCESSORIES		23

A **WOLF high efficiency heat pump** enables you to make an active contribution towards reducing emissions, including CO₂

WOLF heat pumps are suitable for mono energetic operation to cover the entire heat demand of a building

Your valuable living space is not taken up by a boiler room and tank room or fuel store

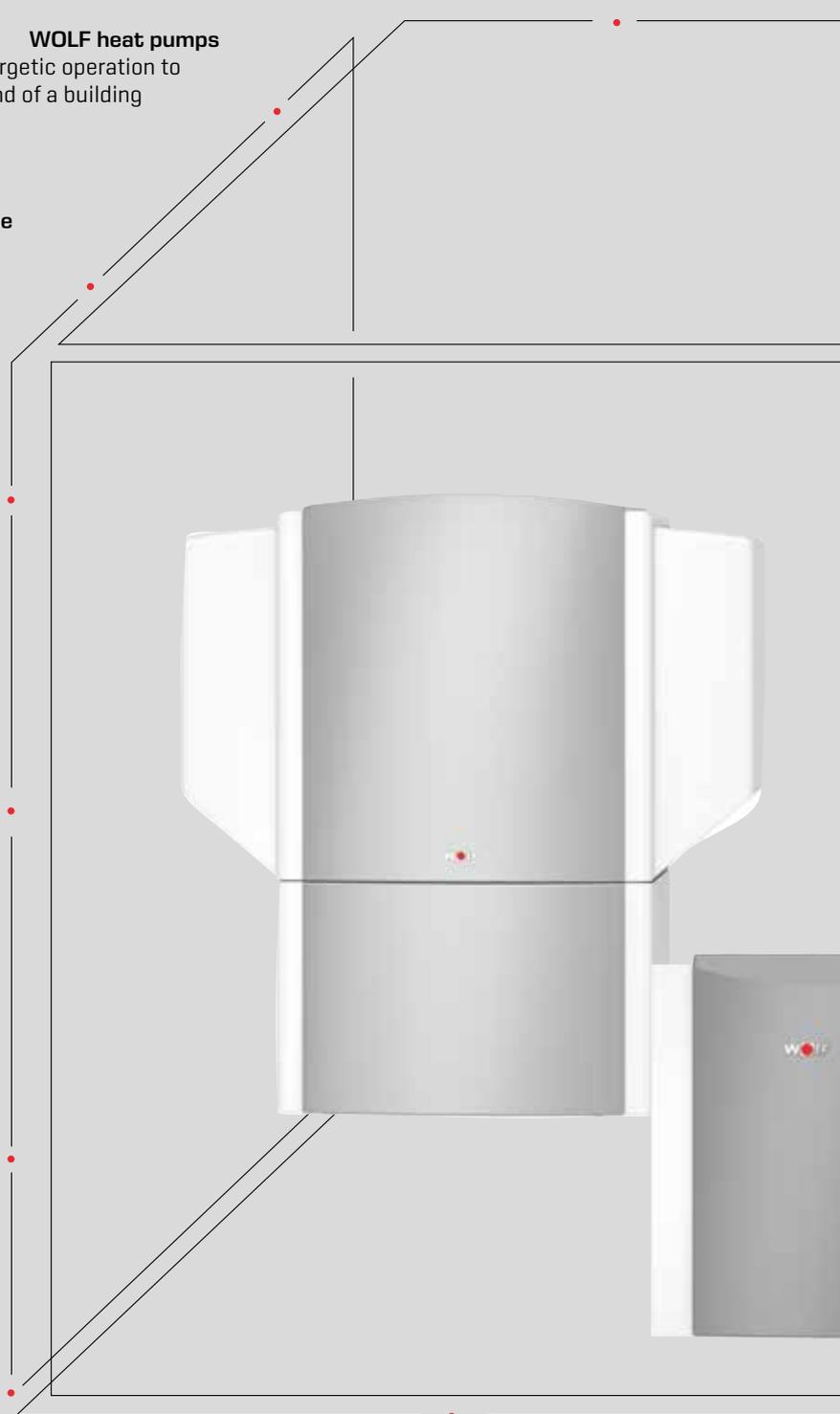
No chimney or flue system required

"Wolf Easy Connect System" with a fully wired connection from the heat pump to the WPM-1 heat pump manager incl. BM programming unit, 6 m long cable set in the standard delivery for BWL-1-I, available as an accessory for BWL-1-A; may be extended with the WRS WOLF control system for additional energy sources, e.g. solar

Extremely quiet operation thanks to a compressor with double vibration isolation, integral flexible corrugated stainless steel pipes and noise attenuating casing

Energy efficient DHW heating with optional ECO mode

Electronically controlled electric booster heater integrated, for demand-dependent heating backup



In WOLF high efficiency heat pumps, up to 80 % of the heating energy comes from free natural energy

Smart home capable
with internet interface
ISM7e / WOLF Link Pro

13

BENEFITS OF WOLF HIGH EFFICIENCY HEAT PUMPS UP TO 21 KW

BWL - 1 / BWS - 1 / BWW - 1

Cascadable up to 105 KW
Up to 5 heat pumps can
be combined using a KM cascade controller.

External increase
in the system temperature using
Smart Grid or photovoltaic system

Integral heat meter can be extended to
display SPF/DPF via electricity meter's
SO interface

HIGH EFFICIENCY AIR SOURCE HEAT PUMPS BWL-1

Air source heat pumps for outdoor or indoor installation with a heating output of 8, 10, 12 or 14 kW for heating water temperatures up to 63 °C and air temperatures from -25 °C to 40 °C

- Variable speed EC radial fan
- Convenient commissioning due to pre-configured hydraulic schemes in the WPM-1
- Very low power consumption in standby mode
- Discharge for indoor unit can be connected on the right or left, enabling corner installation
- Awarded the EHPA Quality Label for its comprehensive quality guarantee and highest level of environmental and consumer protection

Awarded



OUTDOOR INSTALLATION



INDOOR INSTALLATION



WPM-1 with BM



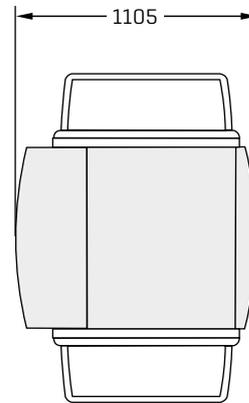
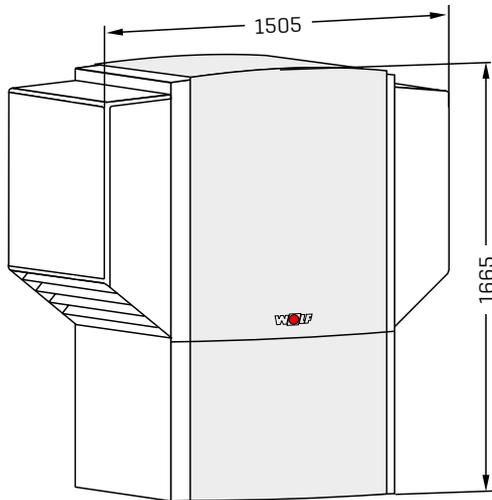
System scheme - outdoor installation



System scheme - indoor installation

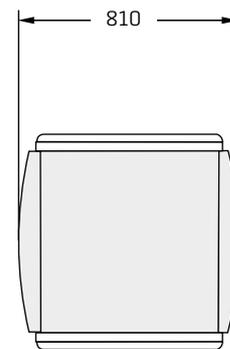
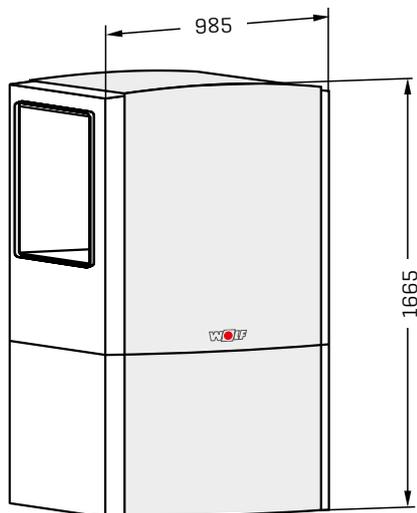
HIGH EFFICIENCY AIR SOURCE HEAT PUMPS
BWL-1-A / BWL-1-I
DIMENSIONS

BWL-1-A – outdoor installation



BWL-1-A – plan view

BWL-1-I – indoor installation



BWL-1-I – plan view

SPECIFICATION

	BWL-1	08-A	08-I	10-A	10-I	12-A	12-I	14-A	14-I
Energy efficiency class, central heating, low temperature		A ⁺⁺		A ⁺⁺		A ⁺⁺		A ⁺⁺	
Energy efficiency class, central heating, medium temperature		A ⁺		A ⁺		A ⁺		A ⁺	
Heating output / COP to EN 14511									
A2/W35	kW / -	8.4 / 3.8		9.6 / 3.7		11.7 / 3.7		13.5 / 3.6	
A7/W35	kW / -	8.7 / 4.5		9.8 / 4.4		11.9 / 4.3		13.6 / 4.2	
A7/W45	kW / -	10.4 / 3.7		11.7 / 3.6		14.4 / 3.5		13.0 / 3.3	
A10/W35	kW / -	9.9 / 4.7		11.1 / 4.6		13.8 / 4.5		13.7 / 4.5	
A-7/W35	kW / -	7.5 / 3.3		8.5 / 3.2		10.4 / 3.1		11.3 / 3.0	
Total height	mm	1665							
Total width	mm	1505	985	1505	985	1505	985	1505	985
Total depth	mm	1105	810	1105	810	1105	810	1105	810
Heating flow / heating return / connection	G (fem.)	1½"							
Unrestricted cross-section, air ducts	mm	-	550 x 550	-	550 x 550	-	550 x 550	-	550 x 550
Sound power level	dB(A)	56	50	56	50	58	52	61	55
Average sound pressure level of indoor unit at 1 m distance from heat pump (in the installation room)	dB(A)	-	46	-	46	-	48	-	50
Average sound pressure level of outdoor unit at 1 m distance from air connections (free space)	dB(A)	47	-	47	-	49	-	51	-
Average sound pressure level of outdoor unit at 5 m distance from air connections (free space)	dB(A)	33	-	33	-	35	-	37	-
Average sound pressure level of outdoor unit at 10 m distance from air connections (free space)	dB(A)	27	-	27	-	29	-	31	-
Maximum operating pressure, heating circuit	bar	3							
Operating limit temperatures, heating water	°C	+20 to +63							
Max. temperature of heating water at -7 °C outside temp.	°C	+55							
Operating limit temperatures, air	°C	-25 to +40							
Refrigerant type / GWP (hermetically sealed refrigerant circuit)	- / -	R407C / 1774		R407C / 1774		R407C / 1774		R407C / 1774	
Charge weight / CO ₂ q (hermetically sealed refrigerant circuit)	kg / t	3,4 / 6,03		4,4 / 7,81		4,5 / 7,98		5,1 / 9,05	
Maximum operating pressure, refrigerant circuit	bar	30		30		30		30	
Refrigerant oil		FV50S		FV50S		FV50S		FV50S	
Water flow rate: minimum [7 K] / nominal [5 K] / maximum [4 K] ¹⁾	l/min	23 / 31.7 / 40		25.5 / 35.0 / 44.6		30.9 / 43.3 / 54.2		35.6 / 48.3 / 62.3	
Heat pump pressure drop at nominal water flow rate	mbar	110		124		165		240	
Air flow rate at maximum external pressure at A2/W35 to EN 14511	m ³ /h	3200				3400		3800	
Maximum external pressure (adjustable)	Pa	-	20 - 50	-	20 - 50	-	20 - 50	-	20 - 50
Output, electric heater, 3 phases, 400 V	kW	1 to 6				1 to 8			
Maximum current drawn, electric heater	A	9.6				12.8			
Maximum power consumption / compressor current within application limits	kW / A	3.92 / 7.3		4.56 / 8.0		5.59 / 10.0		6.46 / 11.6	
Power consumption / current drawn / cos φ at A2/W35 to EN 14511	kW / A / -	2.21 / 4.5 / 0.71		2.59 / 4.7 / 0.80		3.16 / 5.9 / 0.77		3.75 / 6.9 / 0.78	
Starting current (soft start)	A	26		31		37		39	
Maximum number of compressor starts per hour	1/h	3				3			
Typical BWL-1 power consumption in standby LP (low power)	W	5.8				5.8			
IP rating	IP	IP24							
Weight ²⁾	kg	202	217	225	242	226	244	237	255
Electrical connection / fuse protection (omnipolar disconnection)		3~ PE / 400 V AC / 50 Hz / 10 A(C)				3~ PE / 400 V AC / 50 Hz / 16 A(C)			
Compressor		3~ PE / 400 V AC / 50 Hz / 10 A(B)				3~ PE / 400 V AC / 50 Hz / 16 A(B)			
Electric heater		3~ PE / 400 V AC / 50 Hz / 10 A(B)				3~ PE / 400 V AC / 50 Hz / 16 A(B)			
Control voltage		1~ NPE / 230 V AC / 50 Hz / 10 A(B)							

¹⁾ The flow rate should not fall below the nominal flow rate in order to ensure the heat pump operates with high energy efficiency.

²⁾ Additional casing covers for BWL-1-08 A / -10 A / -12 A / -14 A are supplied separately (weight: 37 kg).

The information provided in this table assumes a clean heat exchanger.

HIGH EFFICIENCY GROUND SOURCE HEAT PUMPS (BRINE)

BWS-1

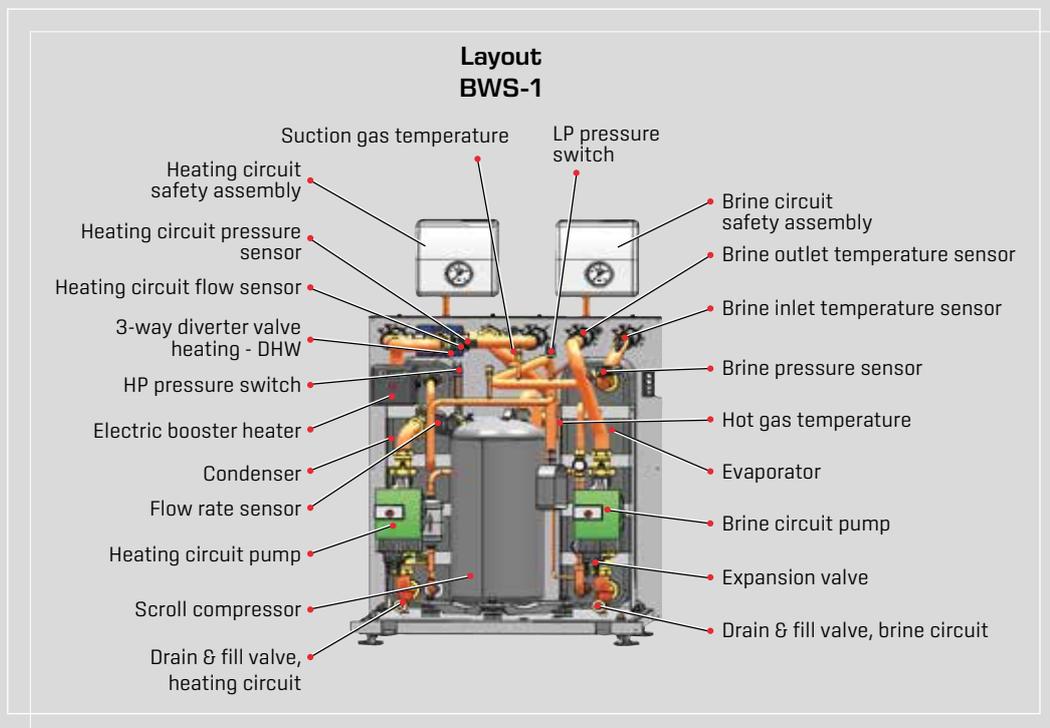
Ground source heat pumps (brine) for using natural energy through geothermal collectors or geothermal probes with a heating output of 6, 8, 10, 12 or 16 kW; for heating water temperatures up to 63 °C and a min. brine temperature of -5 °C

- Clear appliance layout; all essential components are accessible from the front
- Fitted with energy saving, high efficiency, A-rated pumps for heating circuit and brine circuit and 3-way diverter valve for DHW cylinder heating
- Can be combined with CEW-1-200 DHW cylinder to form a heating centre
- Safety assemblies for the heating and brine circuit
- Extension with BKM cooling module for passive cooling (option)
- Awarded the EHPA Quality Label for its comprehensive quality guarantee and highest level of environmental and consumer protection

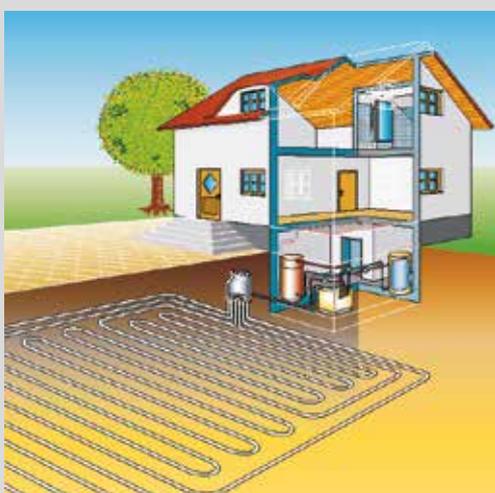
INDOOR INSTALLATION



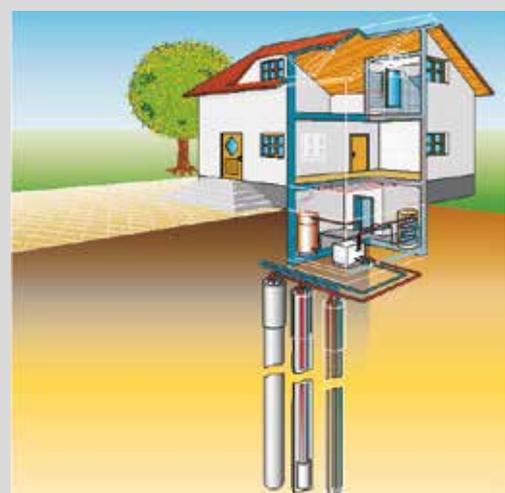
WPM-1 with BM



Awarded



System scheme - geothermal collector



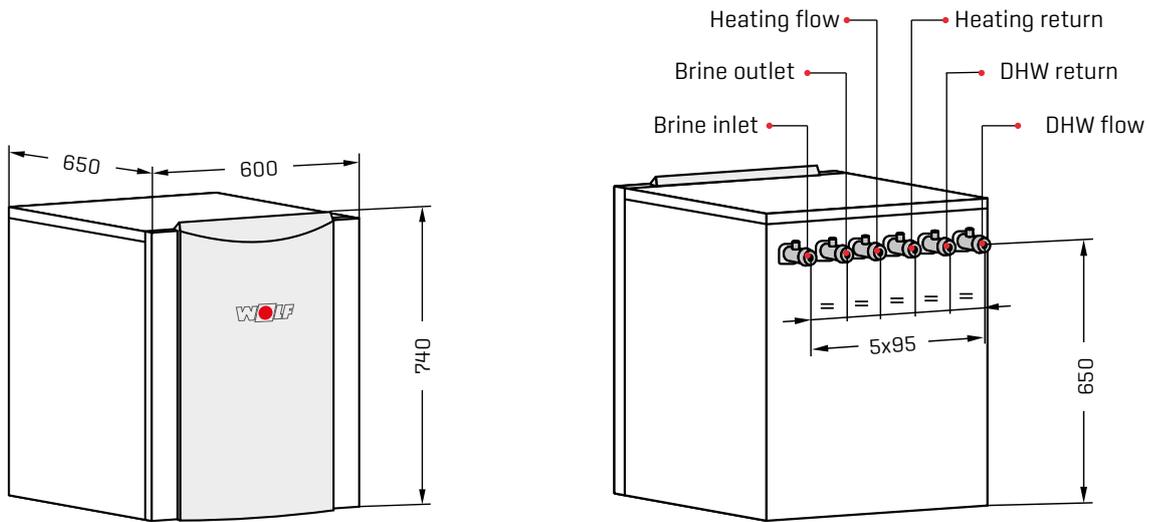
System scheme - geothermal probe

HIGH EFFICIENCY GROUND SOURCE HEAT PUMPS (BRINE)

BWS-1

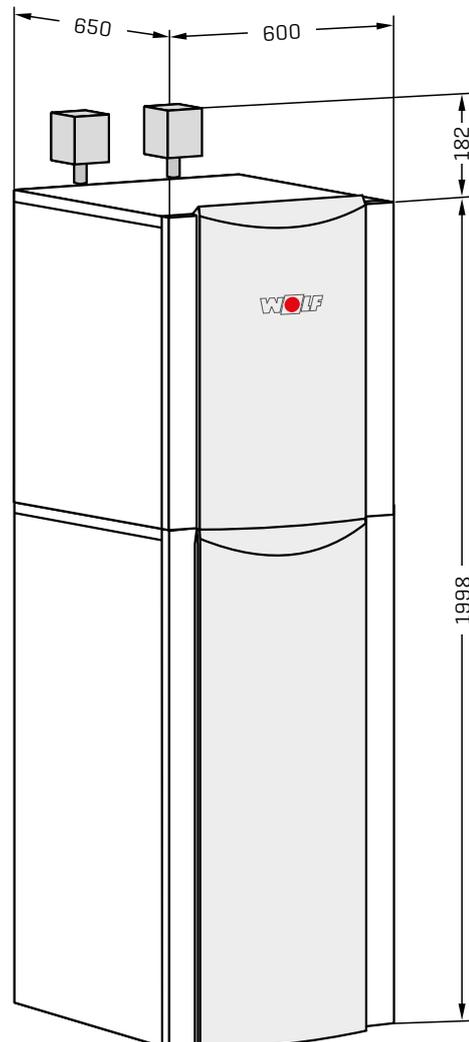
DIMENSIONS

BWS-1-06/08/10/12/16



BWS-1-06/08/10 HEATING CENTRE

WITH CEW-1-200 AND SAFETY ASSEMBLY



SPECIFICATION

BWS-1		06	08	10	12	16
Energy efficiency class, central heating, low temperature		A⁺⁺²⁾	A⁺⁺²⁾	A⁺⁺²⁾	A⁺⁺²⁾	A⁺⁺²⁾
Energy efficiency class, central heating, medium temperature		A⁺	A⁺	A⁺	A⁺	A⁺
Heating output / COP to EN 14511						
B0/W35	kW / -	5.9 / 4.7	8.4 / 4.7	10.8 / 4.7	12.0 / 4.7	16.8 / 4.6
B0/W55	kW / -	5.3 / 2.8	7.4 / 2.8	9.2 / 2.9	10.5 / 2.8	15.8 / 2.8
B5/W35	kW / -	6.9 / 5.3	9.7 / 5.4	12.3 / 5.4	13.8 / 5.3	19.9 / 5.3
B-5/W45	kW / -	4.8 / 3.1	6.8 / 3.2	8.6 / 3.1	9.7 / 3.1	14.7 / 3.2
Total height	mm	740				
Total width	mm	600				
Total depth	mm	650				
Heating flow/return, DHW flow/return, brine inlet/outlet	G (male)	1½"				
Sound power level	dB(A)	41	42	42	43	43
Average sound pressure level at 1 m distance from heat pump (inside the room)	dB(A)	39	40	40	41	41
Maximum operating pressure, heating / brine circuit	bar	3 / 3				
Operating limit temperatures, heating water	°C	+20 to +63				
Operating limit temperatures, brine	°C	-5 to +20				
Refrigerant type / GWP (hermetically sealed refrigerant circuit)	- / kg	R407C / 1774	R407C / 1774	R407C / 1774	R407C / 1774	R407C / 1774
Charge weight / CO ₂ q (hermetically sealed refrigerant circuit)	kg / t	1,8 / 3,19	2,0 / 3,55	2,25 / 3,99	2,8 / 4,97	3,1 / 5,50
Maximum operating pressure, refrigerant circuit	bar	30	30	30	30	30
Refrigerant oil		FV50S	FV50S	FV50S	FV50S	FV50S
Water flow rate: minimum [7 K] / nominal [5 K] / maximum [4 K] ¹⁾	l/min	12.1 / 16.6 / 21.6	17.2 / 24 / 30	22 / 30.8 / 38.3	24.6 / 34.1 / 43.3	34.4 / 48.3 / 60
Residual head at dT 5 K	mbar	580	510	450	480	440
3-way valve for DHW heating circuit		Integral				
High efficiency pump [EEI < 0.23], heating circuit		Wilo Yonos Para 25/7.5	Wilo Yonos Para 25/7.5	Wilo Yonos Para 25/7.5	Wilo Stratos Para 25/1-8	Wilo Stratos Para 25/1-8
Brine flow rate: minimum [5 K] / nominal [4 K] / maximum [3 K]	l/min	15 / 18.3 / 25	20 / 25.8 / 34.3	26.6 / 33.3 / 44.1	29.1 / 36.6 / 48.3	40.8 / 50.8 / 67.8
Residual head at dT 4 K (30 % brine / 0 °C)	mbar	480	440	410	550	440
Minimum brine concentration / frost protection down to	% / °C	25 / -13				
High efficiency pump [EEI < 0.23], brine circuit		Wilo Stratos Para 25/1-7	Wilo Stratos Para 25/1-7	Wilo Stratos Para 25/1-7	Wilo Stratos Para 25/1-8	Wilo Stratos Para 25/1-8
Output, electric heater, 3 phases, 400 V	kW	1 to 6				
Maximum current drawn, electric heater	A	9.6				
Maximum power consumption / compressor current within application limits	kW / A	2.28 / 4.20	3.2 / 5.8	3.85 / 7.0	4.71 / 8.4	6.53 / 11.7
Power consumption / current drawn / cos φ at B0/W35	kW / A / -	1.26 / 2.5 / 0.72	1.79 / 3.2 / 0.80	2.3 / 4.4 / 0.76	2.55 / 4.6 / 0.79	3.65 / 6.9 / 0.76
Power consumption of heating circuit pump at nominal flow rate	W	45	55	60	100	110
Power consumption of brine pump at nominal flow rate	W	55	60	65	110	120
Starting current, direct / soft start	A	27 / -	- / 21	- / 26	- / 31	- / 39
Max. no of compressor starts	1/h	3				
Typical BWS-1 power consumption in standby LP (low power)	W	5.8				
IP rating	IP	IP 20				
Weight	kg	141	145	149	169	174
Electrical connection / fuse protection (omnipolar disconnection)						
Compressor		3~ PE / 400 V AC / 50 Hz / 10 A(C)				3~ PE / 400 V AC / 50 Hz / 16 A(C)
Electric heater		3~ PE / 400 V AC / 50 Hz / 10 A(B)				
Control voltage		1~ NPE / 230 V AC / 50 Hz / 10 A(B)				

¹⁾ The flow rate should not fall below the nominal flow rate in order to ensure the heat pump operates with high energy efficiency.

²⁾ From September 2019 class A⁺⁺⁺.

The information provided in this table assumes a clean heat exchanger.

HIGH EFFICIENCY GROUND SOURCE HEAT PUMPS (WATER) BWW-1

Ground source heat pumps (water) for using natural energy through well water with a heating output of 7, 11, 13, 15 or 21 kW; for heating water temperatures up to 63 °C and a well water temperature of 7 - 22 °C

- Intermediate heat exchanger made from nickel-brazed stainless steel plates, with diffusion-proof insulation
- Clear appliance layout; all essential components are accessible from the front
- Fitted with energy saving, high efficiency, A-rated pumps for heating circuit and brine circuit and 3-way diverter valve for DHW cylinder heating
- Can be combined with CEW-1-200 DHW cylinder to form a heating centre
- Safety assemblies for heating circuit and brine circuit
Extension with BKM cooling module for passive cooling (option)



Awarded



BWM



WPM-1 with BM



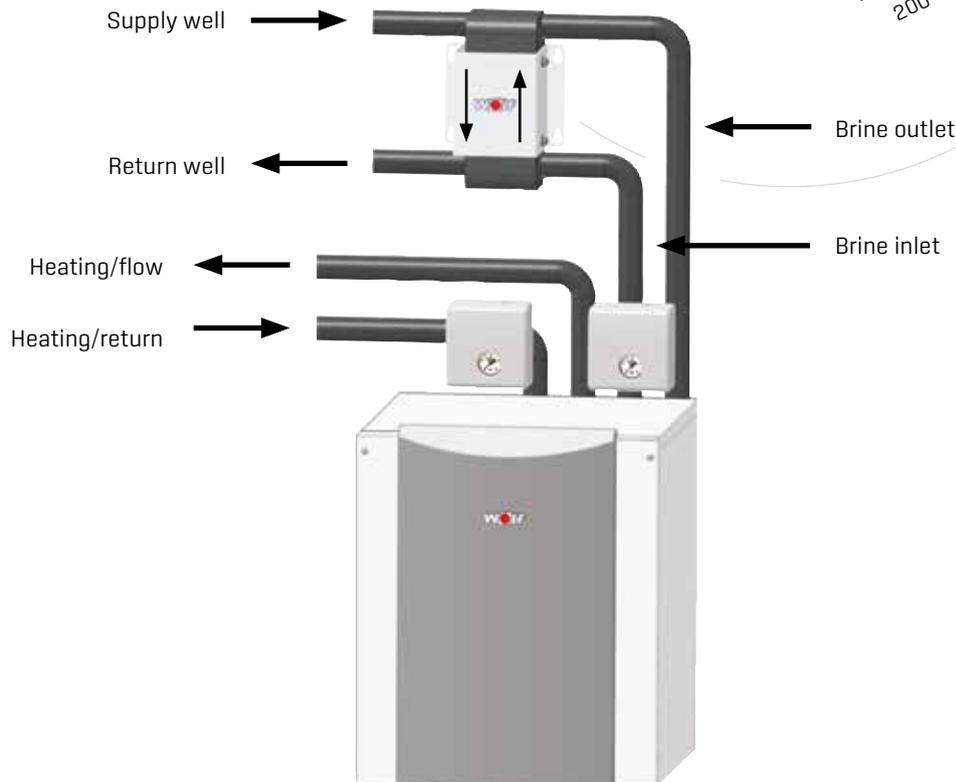
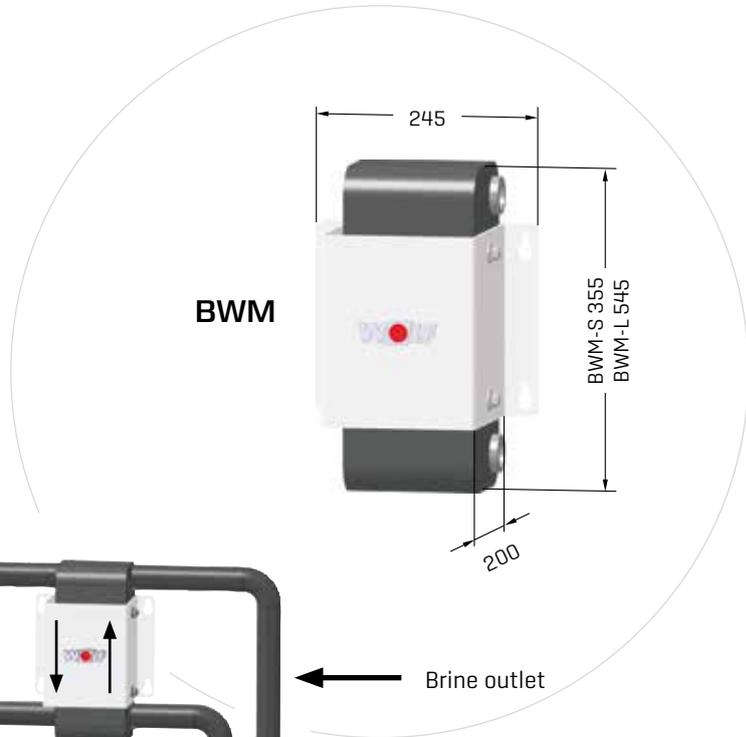
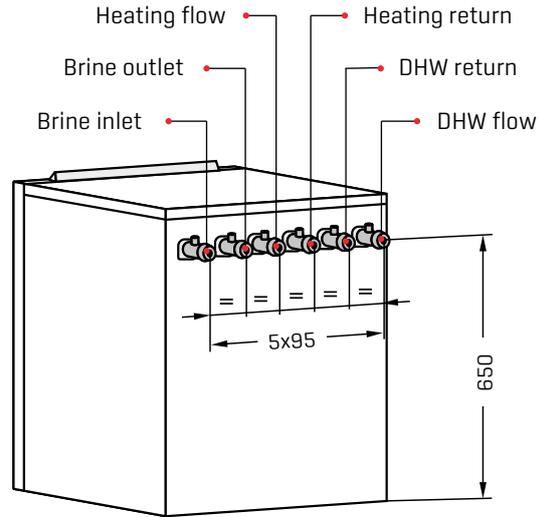
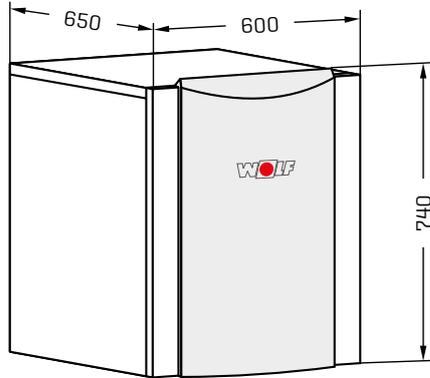
BWW-1

* W10/W35 to EN 14511



System diagram – supply and return wells

HIGH EFFICIENCY GROUND SOURCE HEAT PUMPS (WATER)
BWW-1
DIMENSIONS



SPECIFICATION

BWW-1		07	11	13	15	21
INCLUDES		BWS-1-06 + BWM-S	BWS-1-08 + BWM-S	BWS-1-10 + BWM-S	BWS-1-12 + BWM-L	BWS-1-16 + BWM-L
Energy efficiency class, central heating, low temperature						
Energy efficiency class, central heating, medium temperature						
Heating output / COP to EN 14511						
W10/W35	kW / -	7.1 / 5.4	10.5 / 5.6	13.3 / 5.6	15.0 / 5.5	20.8 / 5.5
W10/W45	kW / -	6.9 / 4.2	10.0 / 4.4	12.2 / 4.3	14.0 / 4.3	19.3 / 4.3
W10/W55	kW / -	6.2 / 3.2	9.3 / 3.3	11.5 / 3.2	13.5 / 3.3	17.0 / 3.3
BWS-1 total height	mm			740		
BWS-1 total width	mm			600		
BWS-1 total depth	mm			650		
BWM total height	mm	355			545	
BWM total width	mm			245		
BWM total depth	mm			200		
Heating flow/return, DHW flow/return, brine inlet/outlet on the BWS-1	G (male)			1½"		
Connections to the BWM	G (male)			1¼"		
Sound power level	dB(A)	41	42	42	43	43
Average sound pressure level at 1 m distance from heat pump (inside the room)	dB(A)	39	40	40	41	41
Max. operating pressure, heating / brine / well circuit	bar			3 / 3 / 3		
Operating limit temperatures, heating water	°C			+20 to +63		
Operating limit temperatures, well water	°C			+7 to +22		
Refrigerant type / GWP (hermetically sealed refrigerant circuit)	- / kg	R407C / 1774	R407C / 1774	R407C / 1774	R407C / 1774	R407C / 1774
Charge weight / CO ₂ q (hermetically sealed refrigerant circuit)		1,8 / 3,19	2,0 / 3,55	2,25 / 3,99	2,8 / 4,97	3,1 / 5,50
Maximum operating pressure, refrigerant circuit	bar	30	30	30	30	30
Refrigerant oil		FV50S	FV50S	FV50S	FV50S	FV50S
Brine volume in BWS-1 with BWM	litres	4.7	5.2	5.7	7.3	7.8
Heating water flow rate: minimum [? K] / nominal [5 K] / maximum [4 K] ¹⁾	l/min	14.6 / 20.3 / 25.4	21.4 / 30.1 / 37.6	27.3 / 38.1 / 47.6	30.7 / 43.0 / 53.7	42.6 / 59.6 / 74.5
Residual head at dT 5 K	mbar	530	430	340	420	150
3-way valve for DHW heating circuit		Integral	Integral	Integral	Integral	Integral
High efficiency pump (EEI < 0.23), heating circuit		Wilo Yonos Para 25/7.5	Wilo Yonos Para 25/7.5	Wilo Yonos Para 25/7.5	Wilo Stratos Para 25/1-8	Wilo Stratos Para 25/1-8
Residual head for brine circuit pipework (for flow rate in l/min)	mbar	160 [42]	200 [42]	210 [42]	140 [58]	140 [58]
Minimum brine concentration / frost protection down to	% / °C			25 / -13		
High efficiency pump (EEI < 0.23), brine circuit		Wilo Stratos Para 25/1-7	Wilo Stratos Para 25/1-7	Wilo Stratos Para 25/1-7	Wilo Stratos Para 25/1-8	Wilo Stratos Para 25/1-8
Nominal flow rate, well water, for dT 4 K	l/min	27	42	52	58	82
Well water pressure drop in the BWM at nominal flow rate	mbar	24	53	85	134	257
Output, electric heater, 3 phases, 400 V	kW			1 to 6		
Maximum current drawn, electric heater	A			9.6		
Maximum power consumption / compressor current within application limits	kW / A	2.89 / 4.2	3.2 / 5.8	3.85 / 7.0	4.71 / 8.4	6.53 / 11.7
Power consumption / current drawn / cos φ at W10/W35, excl. well pump	kW / A / -	1.35 / 2.5 / 0.75	1.85 / 3.2 / 0.81	2.3 / 4.4 / 0.76	2.64 / 4.7 / 0.79	3.79 / 7.0 / 0.81
Power consumption of heating circuit pump at nominal flow rate	W	45	55	60	100	110
Power consumption of brine pump at nominal flow rate	W	55	60	65	110	120
Starting current, direct / soft start	A	27 / -	- / 21	- / 26	- / 31	- / 39
Max. no of compressor starts	1/h			3		
Typical BWW-1 power consumption in standby LP (low power)	W			5.8		
IP rating	IP			IP 20		
Weight, BWW-1	kg	151	156	160	185	190
Electrical connection / fuse protection (omnipolar disconnection)						3~ PE / 400 V AC / 50 Hz / 10 A[C]
Compressor		3~ PE / 400 V AC / 50 Hz / 10 A[C]				3~ PE / 400 V AC / 50 Hz / 16 A[C]
Electric heater		3~ PE / 400 V AC / 50 Hz / 10 A[B]				
Control voltage		1~ NPE / 230 V AC / 50 Hz / 10 A[B]				

¹⁾ The flow rate should not fall below the nominal flow rate in order to ensure the heat pump operates with high energy efficiency.

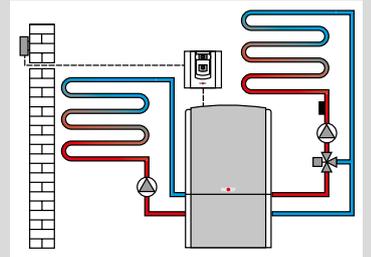
²⁾ From September 2019 class A++.

The information provided in this table assumes a clean heat exchanger.



WPM-1 heat pump manager with BM programming unit (incl. outside temperature sensor)

- Room temperature-dependent/weather-compensated temperature controller with time programs for central/DHW heating, for regulating one heating circuit, one circuit with mixer, and DHW heating
- Flexible wall mounting
- Fully wired connection from heat pump to WPM-1 with "Wolf Easy Connect System"
- The entire system can be disconnected from the power supply with a main switch in the WPM-1
- Easy commissioning due to pre-configured hydraulic schemes
- Heat meter display
- SPF [seasonal performance factor] display plus DPF [daily performance factor] display possible through connection of the pulse signal from the on-site electricity meter with SO interface
- Programmable input for DHW circulation remote control, CH/DHW block, external demand [ON/OFF, 0-10 V]
- Programmable output for DHW circulation pump [time control or pushbutton], alarm output, swimming pool heating pump
- Floating contact for activating a second heat generator
- Acoustic alarms
- eBus interface
- Connection option for Smart Grid or photovoltaic system

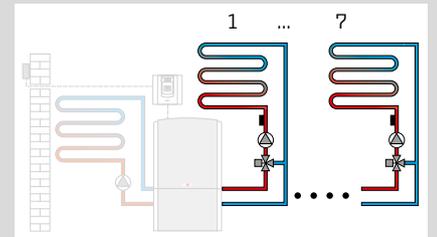


2-wire eBus connection



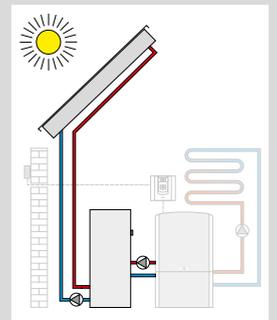
MM mixer module

- Extension module to control one circuit with mixer
- Weather-compensated flow temperature control
- Easy controller configuration by selecting one of the preset system versions
- BM programming unit can be attached to the appliance or fitted to a wall mounting base for use as a remote control
- Rast 5 connection technology
- Incl. flow temperature sensor



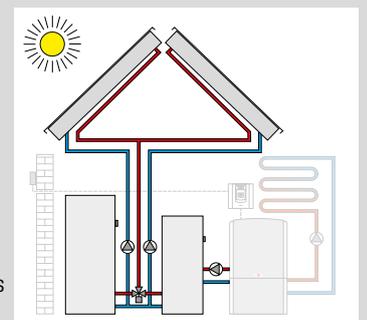
SM1-2 solar module

- Extension module to control one solar circuit incl. collector temperature sensor, cylinder temperature sensor and sensor wells
- In conjunction with WOLF heat generators, greater energy savings through intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar energy
- Heat metering with external heat meter
- Function check for flow rate and gravity brake
- Temperature differential control for one heat consumer
- Maximum cylinder temperature limit
- Display of the set and actual values on the BM-2 programming unit
- Integral hours run meter
- eBus interface with automatic energy management
- Rast 5 connection technology



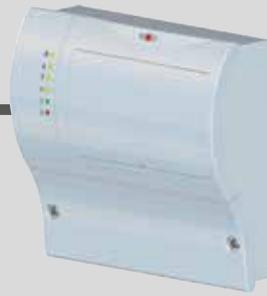
SM2-2 solar module

- Extension module to control one solar thermal system with up to 2 cylinders and 2 collector arrays, incl. 1 collector sensor and 1 cylinder sensor, each with sensor well
- Easy controller configuration by selecting one of the preset system versions
- In conjunction with WOLF heat generators, greater energy savings through intelligent cylinder reheating, i.e. blocking cylinder reheating when there is sufficient solar energy
- Heat metering with external heat meter for all configurations
- Selection of cylinder operating mode
- Display of the set and actual values on the BM-2 programming unit
- eBus interface with automatic energy management
- Rast 5 connection technology



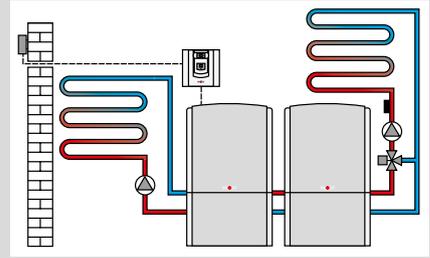
**HIGH EFFICIENCY HEAT PUMPS
BWL-1 / BWS-1 / BWW-1
CONTROL ACCESSORIES**

2-wire eBus connection



KM-WP cascade module

- Extension module to link up to five heat pumps, including electric booster heaters, in a cascade
- Extension module to link up to four heat pumps in a cascade, in combination with an additional heat generator (e.g. a CGB-2 or TOB)
- Optional automatic changeover to the additional heat generator for DHW heating
- Automatic changeover to the additional heat generator if the selected dual mode point is undershot
- Automatic changeover from heat pump to additional heat generator during power-OFF periods (when the power supply utility switches off the heat pump supply)



External wireless sensor

[Only in conjunction with receiver for external wireless sensor and remote control, part no. 27 44 209]



Wireless receiver for external wireless sensor and wireless remote control
Incl. radio clock [DCF77 signal]

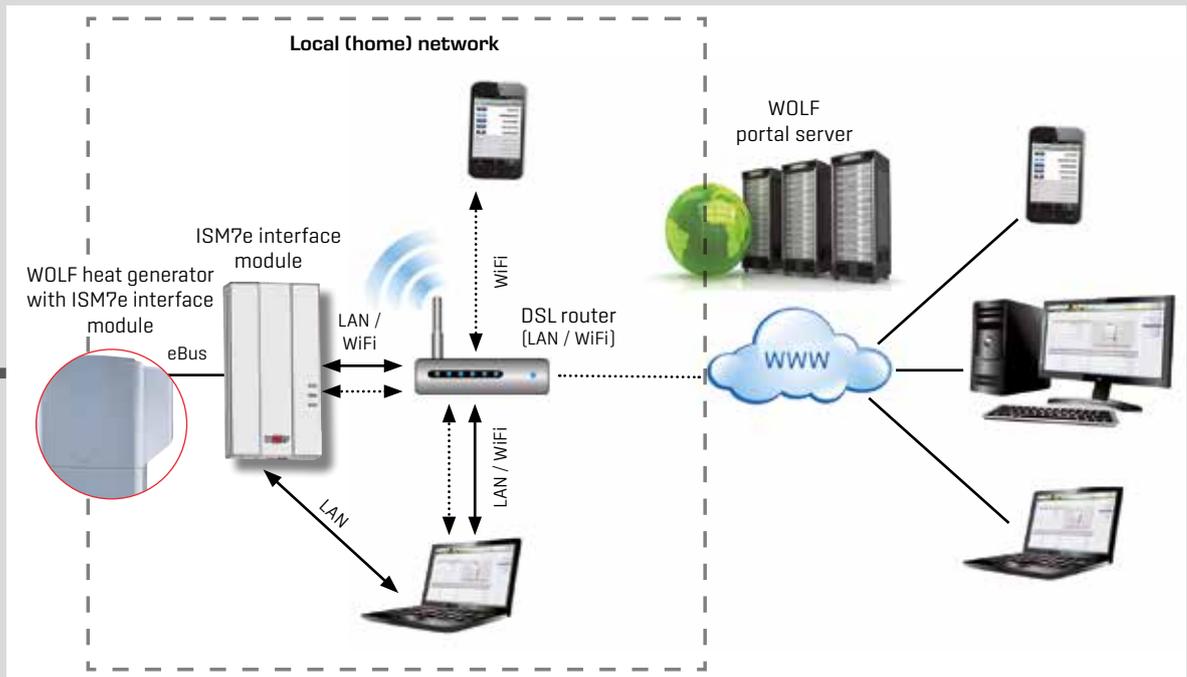


Wireless remote control

[Only in conjunction with receiver for external wireless sensor and remote control]
Max. one wireless remote control per circuit with mixer.

WOLF Link pro

LAN/WLAN interface module for accessing controls over the internet or a local network using a PC or smartphone.



Please refer to the pricelist for further accessories.

CEW-1-200 DHW CYLINDER

- Dimensions and design matched to the WOLF heat pump range
- Can be combined with BWS-1-06/08/10 or BWW-1-07/09 to form a heating centre, installed as a stack or side by side. Can be combined side by side with BWL-1-08/10
- Can be installed as a Hydrotower in combination with the CPM-1-70/7 buffer module
- Sacrificial anode accessible from the front; special enamel coating on the inside of the cylinder
- Rigid PUR foam thermal insulation for lowest radiation losses
- Highly efficient smooth tube indirect dual coil for convenient DHW heating



DHW CYLINDER **CEW-1** **200**

Cylinder energy efficiency class		C
Height	mm	1290
Width	mm	600
Depth	mm	650
Capacity	l	180
Operating pressure	bar	10
Indirect coil surface area	m ²	2.3
Heating connection	male	G 1½"
Weight	kg	147



BWS-1 and CEW-1-200 as heating centre, stacked



BWS-1 and CEW-1-200 side by side

HIGH EFFICIENCY HEAT PUMPS
BWL-1 / BWS-1 / BWW-1
ACCESSORIES

CPM-1-70 BUFFER MODULE

- Fully plumbed and wired as separating cylinder (functions like a low loss header) or series cylinder
- CPM-1-70/7 can be installed as a Hydrotower in combination with the CEW-1-200 DHW cylinder
- Rigid PUR foam thermal insulation for lowest radiation losses
- High efficiency A-rated heating circuit pump prefitted
- Safety assembly with thermal insulation
- 3-way valve for DHW heating prefitted
- 4 m connecting cable to the WPM-1 heat pump manager

CPM-1-70/7 (7 m pump) for BWL-1-08, BWL-1-10
 CPM-1-70/8 (8 m pump) for BWL-1-12



DHW CYLINDER	CEW-1	200
Cylinder energy efficiency class		B
Height	mm	740
Width	mm	600
Depth	mm	650
Capacity	l	70
Operating pressure	bar	3
Connections	male	G 1½"
Weight	kg	62



BWL-1-10-I with adjacent
 CPM-1-70/7 and CEW-1-200 Hydrotower



BWL-1-10-A with
 CPM-1-70/7 and CEW-1-200 Hydrotower

SEW-1 DHW CYLINDER

- SEW-1-300 for heat pumps with heating output of up to approximately 15 kW for a DHW draw-off rate of up to 367 litres at 40 °C
- SEW-1-400 for heat pumps with heating output of up to approximately 20 kW for a DHW draw-off rate of up to 482 litres at 40 °C
- Smooth tube indirect dual coil for short heat-up times and convenient DHW heating
- Highly effective rigid PUR foam thermal insulation below the foil jacket for low heat losses; colour: silver
- The interior of the cylinder is protected against corrosion by a special enamel coating and sacrificial magnesium anode
- Inspection and cleaning apertures for easy maintenance



DHW CYLINDER	SEW-1	300	400
Cylinder energy efficiency class		C	C
Cylinder capacity	l	288	375
Cold water connection	A mm	55	55
Heating return	B mm	222	222
Sensor well	C mm	656	791
DHW circulation	D mm	786	921
Heating flow	E mm	886	1156
DHW connection	F mm	1229	1586
Total height	G mm	1310	1660
Service flange	H mm	277	277
Diameter incl. thermal insulation	I mm	705	705
Primary heating water	bar / °C	10 / 110	10 / 110
Secondary DHW	bar / °C	10 / 95	10 / 95
Cold water connection	Rp	1¼"	1¼"
Heating return	fem.	1¼"	1¼"
DHW circulation	fem.	¾"	¾"
Heating flow	fem.	1¼"	1¼"
DHW connection	Rp	1¼"	1¼"
Indirect coil surface area	m ²	3.5	5.1
Indirect coil capacity	l	27	39
Weight	kg	134	185

HIGH EFFICIENCY HEAT PUMPS
BWL-1 / BWS-1 / BWW-1
ACCESSORIES

SEM-1W-360 SOLAR DHW CYLINDER
FOR ADDITIONAL CONNECTION OF SOLAR COLLECTORS

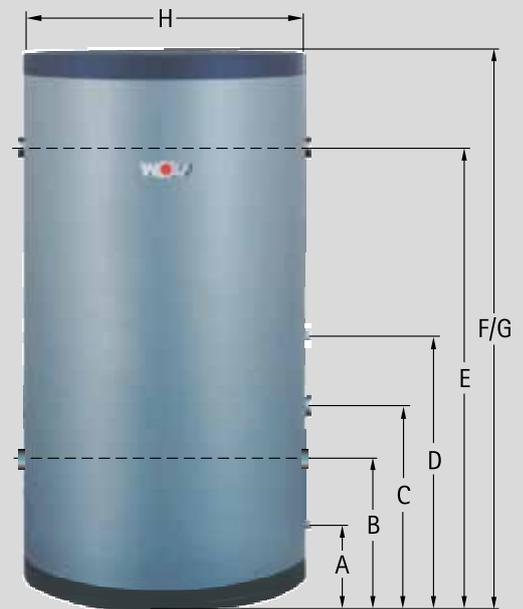
- Up to approx. 12 kW heating output; highly efficient smooth tube indirect dual coil for convenient DHW heating
- Additional dual coil for solar energy
- Highly effective rigid PUR foam thermal insulation below the foil jacket for low heat losses; colour: silver
- The interior of the cylinder is protected against corrosion by a special enamel coating and sacrificial magnesium anode
- Inspection and cleaning apertures for easy maintenance



SOLAR DHW CYLINDER	SEM-1W	360
Cylinder energy efficiency class		C
Cylinder capacity	l	360
Cold water connection	A mm	55
Return, heating / solar	B mm	606/221
Cylinder sensor, heating / solar	C mm	965/385
DHW circulation	D mm	860
Flow, heating / solar	E mm	1146/470
DHW connection	F mm	1526
Electric booster heater (opt.)	G mm	540
Thermometer connection	H mm	1400
Total height	I mm	1630
Diameter incl. insulation	J mm	705
Service flange	L mm	277
Primary heating water	bar / °C	10 / 110
Secondary DHW	bar / °C	10 / 95
Cold water connection	Rp	1¼"
Heating return	fem.	1¼"
DHW circulation	fem.	¾"
Heating flow	fem.	1¼"
DHW connection	Rp	1¼"
Indirect coil surface area, heating	m ²	3.2
Indirect coil surface area, solar	m ²	1.3
Indirect coil capacity, heating	l	27
Indirect coil capacity, solar	l	11
Weight	kg	182

SPU-1-200 BUFFER CYLINDER
FOR OPTIMISING HEAT PUMP RUNTIMES

- Steel buffer cylinder with 200 litre water capacity
- Operation as a separating cylinder or series cylinder for heating water
- Highly effective rigid PUR foam thermal insulation below the foil jacket for low heat losses; colour: silver
- Five 1½" connections [fem.] for heating water and electric booster heater
- Drain & fill valve and sensor well prefitted



BUFFER CYLINDER	SPU-1	200
Cylinder energy efficiency class		C
Cylinder capacity	l	200
Drain and fill connection	A mm	85
Heating water connection	B mm	256
Sensor well, sensor / thermostat	C mm	358
Electric booster heater [max. 6 kW]	D mm	460
Heating water connection	E mm	910
Air vent valve / safety valve	F mm	1140
Total height	G mm	1140
Diameter incl. thermal insulation	H mm	610
Max. operating pressure	bar	3
Max. operating temperature	°C	95
Heating water connection [4 pce]	fem.	1½"
Electric booster heater	fem.	1½"
Sensor / thermostat	fem.	½"
Drain & fill valve	fem.	½"
Air vent valve / safety valve	fem.	1"
Weight	kg	48

(Further cylinders can be found in the "Cylinder systems" document)

HIGH EFFICIENCY HEAT PUMPS
BWL-1 / BWS-1 / BWW-1
ACCESSORIES

BKM COOLING MODULE

- Pre-assembled unit for passive cooling with BWS-1-06/08/10/12/16 or BWW-1-07/11/13/15/21 ground source heat pumps
- Make use of cool underground temperatures in summer with geothermal probes or groundwater
- Most affordable and environmentally responsible way to cool, as no compressor operation is required
- High transfer rate due to large heat exchanger surface area



Rated cooling capacity at B5 / W20 (2.3 m³/h - 1.9 m³/h)	kW	19
Cooling capacity if heat/cooling source was sized for heating:		
With BWS-1-06	kW	approx. 2
With BWS-1-08	kW	approx. 3
With BWS-1-10	kW	approx. 3
With BWS-1-12	kW	approx. 4
With BWS-1-16	kW	approx. 5
Height	mm	401
Width	mm	498
Depth	mm	188
Weight	kg	16
Threaded connections:		
Heating inlet, male thread	G	1 1/4"
Heating outlet, male thread	G	1 1/4"
Brine inlet, female thread	Rp	1 1/4"
Brine outlet, female thread	Rp	1 1/4"
Max. permissible pressure, heating/cooling circuit	bar	3
Max. permissible pressure, brine circuit	bar	3
Pressure drop, heating/cooling circuit at 1.9 m ³ /h	mbar	43
Pressure drop, brine circuit in cooling mode at 2.3 m ³ /h	mbar	90
Pressure drop, brine circuit in heating mode at 2.3 m ³ /h	mbar	37
Permiss. temp. range, heating/cooling circuit	°C	3 - 110
Permiss. temp. range, brine circuit in cooling mode	°C	3 - 25
Permiss. temp. range, brine circuit in heating mode	°C	2 - 25
Power consumption	VA	0 - 5

Please note

The cooling module is not approved for use with geothermal collectors (horizontal surface collectors), as there is a risk of the ground drying out if the soil properties are unfavourable. This can result in contact to the collector becoming blocked.

HIGH EFFICIENCY HEAT PUMPS
BWL-1 / BWS-1 / BWW-1
STANDARD DELIVERY / ACCESSORIES

Standard delivery / accessories

	BWL-1-..A	BWL-1-..I	BWS-1	BWW-1
WPM-1 heat pump manager for wall mounting (always required)	○	○	○	○
BWM-1 intermediate heat exchanger				●
Controlled electric booster heater 6 kW (8 kW for BWL-1-14)	●	●	●	●
Rotating field and phase monitor	●	●	●	●
Electronically controlled soft start for compressor	●	●	● 8/10/12/16 kW	● 11/13/15/21 kW
Heat meter	●	●	●	●
CEW-1-200 DHW cylinder; capacity 180 litres up to 10 kW	○	○	○	○
CPM-1-70 buffer module with high efficiency heating circuit pumps, 3-way diverter valve for DHW heating, DHW assembly and safety assembly	○	○		
DHW diverter valve	○	○	●	●
High efficiency A-rated heating circuit pump	○	○	●	●
High efficiency A-rated brine circuit pump			●	●
Connection set for expansion vessel with cap valve for heating	○	○	○	○
Safety assembly, heating (safety valve, pressure gauge, automatic air vent valve)	○	○	●	●
Safety assembly, brine			●	●
Manual air vent valve, heating	●	●	●	●
Overflow valve, heating	○	○	○	○
Flexible connection set, heating	○	○	○	○
Flexible connection set, brine			○	
SEW-1-300 DHW cylinder, 300 litre capacity	○	○	○	○
SEW-1-400 DHW cylinder, 400 litre capacity	○	○	○	○
SEM-1W-360 solar DHW cylinder, 360 litre capacity	○	○	○	○
SPU-1-200 buffer cylinder, 200 litre capacity	○	○	○	○
SPU-2 buffer cylinder (500/800/1000/1500)	○	○	○	○
BSP-W1000 / BSP-W-SL1000 stratification buffer cylinder with freshwater module for solar DHW heating and central heating backup	○	○	○	○
Air duct (short or long)		○		
Air duct bend		○		
Air duct bezel		○		
Intake grille		○		
Grille		○		
Air duct sealing tape kit		○		
Power and control cables ("Wolf Easy Connect System")	○	●	●	●
Sensor for mixer, cylinder or buffer	○	○	○	○
Brine manifold			○	
Brine concentrate, 20 litres			○	
Brine concentrate, 3 litres				○
BKM cooling module			○	○

- Included in standard delivery
- Optional accessory

Dealer address

WOLF GMBH / P.O. BOX 1380 / D-84048 MAINBURG / TEL. +49.0.875174-0 / FAX +49.0.875174-1600 / www.WOLF.eu

