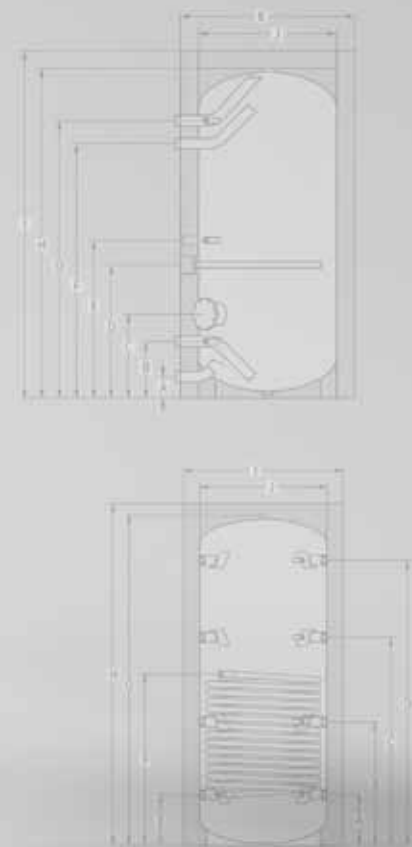




Technical documentation
Cylinder systems





Energy saving and environmental protection included

Cylinder systems

Stratification cylinder	BSP, BSP-SL, BSP-W, BSP-W-SL	Page 3
	Accessories	Page 3
	Combining options	Page 4
	Specification	Page 5
Buffer cylinder	BSH	Page 6
	Specification	Page 7
	SPU-2-W, SPU-2 500 up to 1500 litres	Page 8
	Specification	Page 9
	SPU-2 2000 up to 5000 litres	Page 10
	Specification	Page 11
	Solar heating station SLS, freshwater station FWS	Page 12
Specification	Page 13	
DHW primary cylinder	SEL	Page 14
	Specification	Page 15
	LS cylinder heating station	Page 16
	Specification	Page 17
Solar cylinder	SEM-1, SEM-2	Page 18
	Accessories	Page 18
	Specification	Page 19
Floorstanding cylinders	SE-2	Page 20
	Accessories	Page 20
	Specification	Page 21
Multi-cell cylinder	FMS	Page 22
	Specification	Page 23

For specific cylinder systems pls. see corresponding technical documentations.

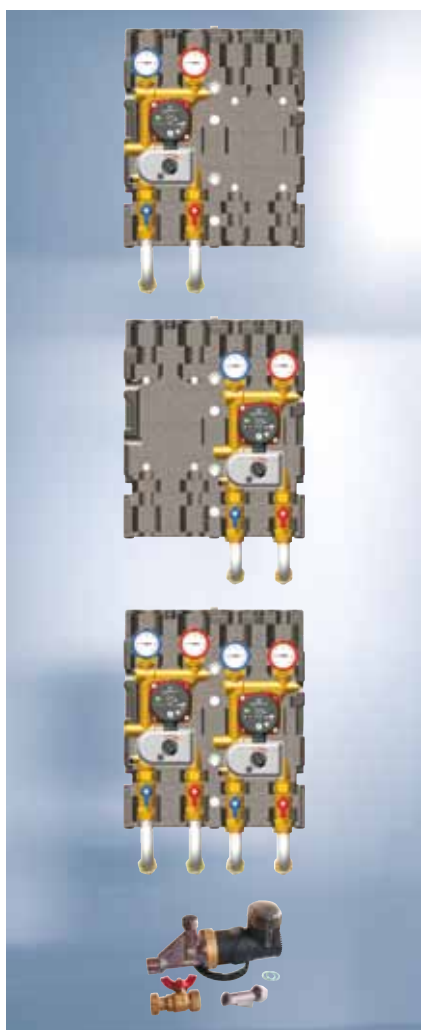
BSP stratification cylinder for „Wolf solar thermal systems“



Benefits of the BSP stratification cylinder from Wolf at a glance

- Space-saving steel stratification cylinder with quality certificate
- Hydraulic components, such as the freshwater module, 2 mixer circuits and solar pump assembly can be mounted on the cylinder itself or on the wall
- Stratification separators stabilise the temperature layers inside the cylinder and improve the solar yield significantly
- Highest possible solar yields, as the cylinder can be heated up to 95 °C without risk of scaling up or scalding
- Hygienic DHW heating with a powerful freshwater module
- Plug-in connections enable DHW circulation set to be retrofitted; control via time, thermostat or by opening a tap
- As option with 2 mixer circuit assemblies for high and low temperature circuits
- Single cylinder system for the lowest heat losses
- Affordable solution for central heating backup
- Removable thermal insulation for easier manoeuvring into the installation room
- 5 year warranty on the floorstanding cylinder,
2 year warranty on all electrical or moving parts

Accessories



Mixing circuit group BSP-MK 1 for low-temperature heating circuit

for direct mounting on the storage tank BSP / BSP-SL

consisting of:

High-efficiency pump DN15-50 (EEI < 0,23), self-regulating, fitted mixing valve motor (230 V/210 s), 3-way mixing valve DN20 kVS=4,0, 2 ball valves in each of the feed and return lines for servicing without buffer or draining the heating, integrated gravity brake to prevent incorrect circulation, overflow valve, bypass choke for adjusting a constant proportion of return flow, thermometer, connections flat-sealing, thermally insulated design shells of EPP.

Mixing circuit group BSP-MK 1 for high-temperature heating circuit

for direct mounting on the storage tank BSP / BSP-SL

consisting of:

High-efficiency pump DN15-50 (EEI < 0,23), self-regulating, fitted mixing valve motor (230 V/210 s), 3-way mixing valve DN20 kVS=4,0, 2 ball valves in each of the feed and return lines for servicing without buffer or draining the heating, integrated gravity brake to prevent incorrect circulation, overflow valve, bypass choke for adjusting a constant proportion of return flow, thermometer, connections flat-sealing, thermally insulated design shells of EPP.

BSP-MK 1 and 2 mixer circuit assemblies for low and high temperature circuits

for direct mounting on the storage tank BSP / BSP-SL

consisting of:

two high-efficiency pumps DN15-50 (EEI < 0,23), self-regulating, two fitted mixing valve motors (230 V/210 s), two 3-way mixing valves DN20 kVS=4,0, 2 ball valves in each of the feed and return lines for servicing without buffer or draining the heating, integrated gravity brakes to prevent incorrect circulation, overflow valves, bypass chokes for adjusting a constant proportion of return flow, thermometer, connections flat-sealing, thermally insulated design shells of EPP.

Circulation module BSP-ZP as extension to fresh water module

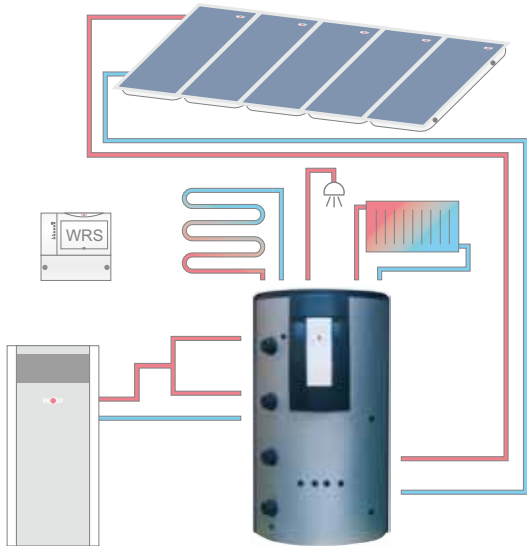
consisting of:

High-efficiency circulation pump, with thermostats switch-off and timer, ball valve and cam (Activation from drainage point or by means of integrated timer)

for combining with solar, biomass and oil/gas

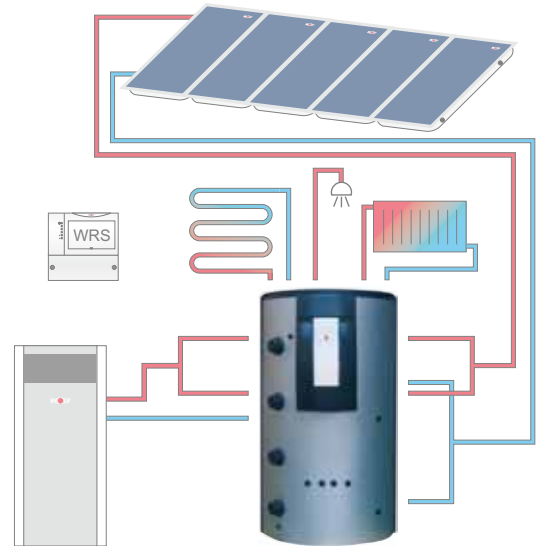
BSP 800/1000 litres

Stratification cylinder for DHW heating and central heating backup with removable thermal insulation and **one** internal smooth tube indirect coil



BSP-SL 1000 litres

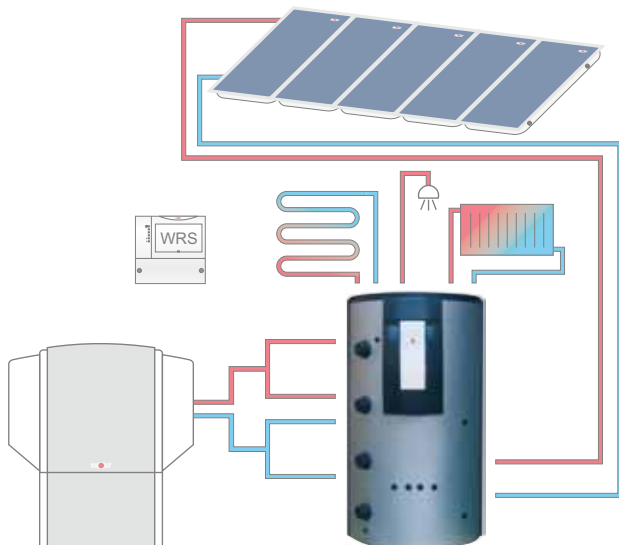
Stratification cylinder for DHW heating and central heating backup with removable thermal insulation and **two** internal smooth tube indirect coils



for combining with solar and heat pump

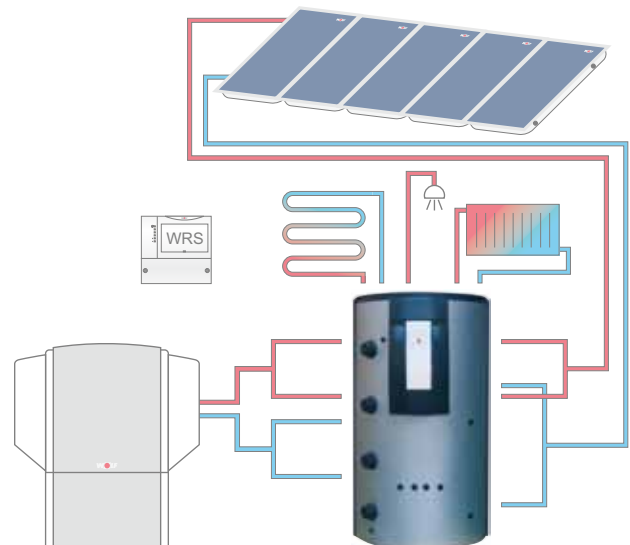
BSP-W 1000 litres

Stratification cylinder for DHW heating and central heating backup via Wolf heat pump with removable thermal insulation and **one** internal smooth tube indirect coil



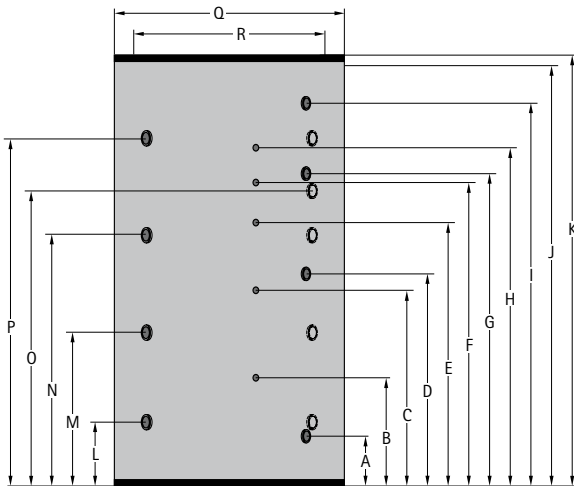
BSP-W-SL 1000 litres

Stratification cylinder for DHW heating and central heating backup via Wolf heat pump with removable thermal insulation and **two** internal smooth tube indirect coils



Specification

BSP / BSP-SL BSP-W / BSP-W-SL



TYPE		BSP-800	BSP-1000	BSP-SL1000	BSP-W1000	BSP-W-SL1000
Cylinder capacity	l	785	915	900	915	900
Solar return (lower indirect coil)	A mm	230	230	230	230	230
Solar sensor (lower indirect coil)	B mm	490	550	550	550	550
Changeover valve sensor	C mm	800	950	950	950	950
Solar flow (lower indirect coil)	D mm	910	1030	1030	1030	1030
Common sensor	E mm	1200	1350	1350	1350	1350
Common sensor	F mm	1350	1510	1510	1510	1510
Solar return (upper indirect coil)	G mm	-	-	1443	-	1443
Solar sensor (upper indirect coil)	H mm	-	-	1610	-	1610
Solar flow (upper indirect coil)	I mm	-	-	1780	-	1780
Overall height excl. thermal insulation	J mm	1755	2040	2040	2040	2040
Overall height incl. thermal insulation	K mm	1825	2110	2110	2110	2110
Connection	L mm	260	310	310	310	310
Connection	M mm	630	745	745	745	745
Connection	N mm	1030	1250	1250	1250	1250
Connection	O mm	-	1430	1430	1430	1430
Connection	P mm	1430	1710	1710	1710	1710
Diameter incl. thermal insulation	Q mm	1000	1000	1000	1000	1000
Diameter excl. thermal insulation	R mm	790	790	790	790	790
Height of unit when tilted, excl. thermal insulation	mm	1788	2068	2068	2068	2068
Solar flow/return	G	1	1	1	1	1
Connection	Rp	1½	1½	1½	1½	1½
Sensor (4 pce.), internal diameter (BSP-SL/BSP-W-SL 5 pce.)	mm	10	10	10	10	10
Solar indirect coil surface area, lower / upper coil	m ²	2,5 / -	3 / -	3 / 1,9	3 / -	3 / 1,9
Solar indirect coil content, lower / upper coil	l	16,5 / -	19,8 / -	19,8 / 11	19,8 / -	19,8 / 11
Max. operating pressure, cylinder	bar	3	3	3	3	3
Max. operating pressure, indirect coils	bar	6	6	6	6	6
Max. operating temperature, cylinder	°C	95	95	95	95	95
Weight	kg	171	194	215	194	215

Freshwater module		BSP-FW	BSP-FWL
DHW output * at 90 °C buffer/DHW temperature 43 °C	l/min	30	-
DHW output * at 50 °C buffer/DHW temperature 46 °C	l/min	-	10
Max. operating pressure, heating system	bar	3	3
Max. operating pressure, water	bar	10	10
Max. operating temperature	°C	95	95
Power consumption	W	95	95
Weight	kg	16	20
Electrical connection		230V / 50Hz	

* at factory-set thermostat adjustment 55°C

BSH buffer cylinder for "Wolf solar thermal systems"

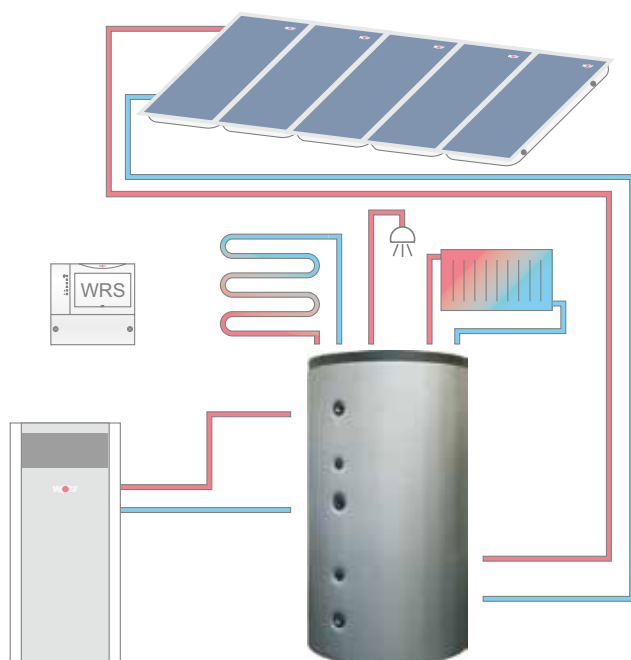


Benefits of the BSH buffer cylinder from Wolf at a glance

- Space-saving steel stratification cylinder with quality certificate
- Hygienic DHW heating according to the instantaneous water heater principle with stainless steel DHW indirect coil
- Single cylinder system for the lowest heat cool-down losses and space requirement
- Maintenance of temperature stratification inside the buffer cylinder through the use of a circulation lance (accessory)
- No DHW primary pump required
- Low scaling tendency, even up to 70 °C
- Higher solar yield through large solar indirect coils and the permanent cooling of the lower cylinder section during DHW heating
- Higher draw-off capacity available in the short-term through large water content inside the DHW indirect coil (48 – 80 litres, subject to cylinder size)
- Variable matching of the „standby section“ for DHW heating through different positions for the DHW sensor via the sensor strip
- Removable thermal insulation for easier manoeuvring into the installation room
- 5 year warranty on the floorstanding cylinder,
2 year warranty on all electrical or moving parts

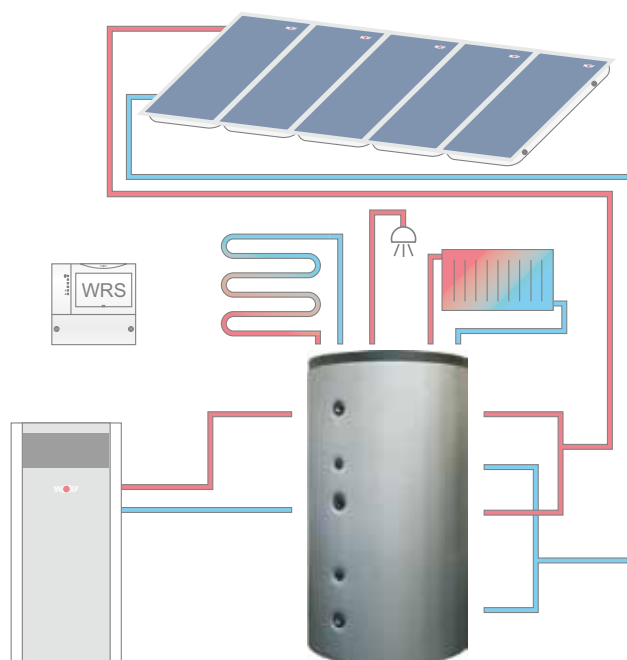
BSH 500 litres

Buffer cylinder with integral corrugated stainless steel pipe for DHW heating and central heating backup, with removable thermal insulation and **one** internal smooth tube indirect coil

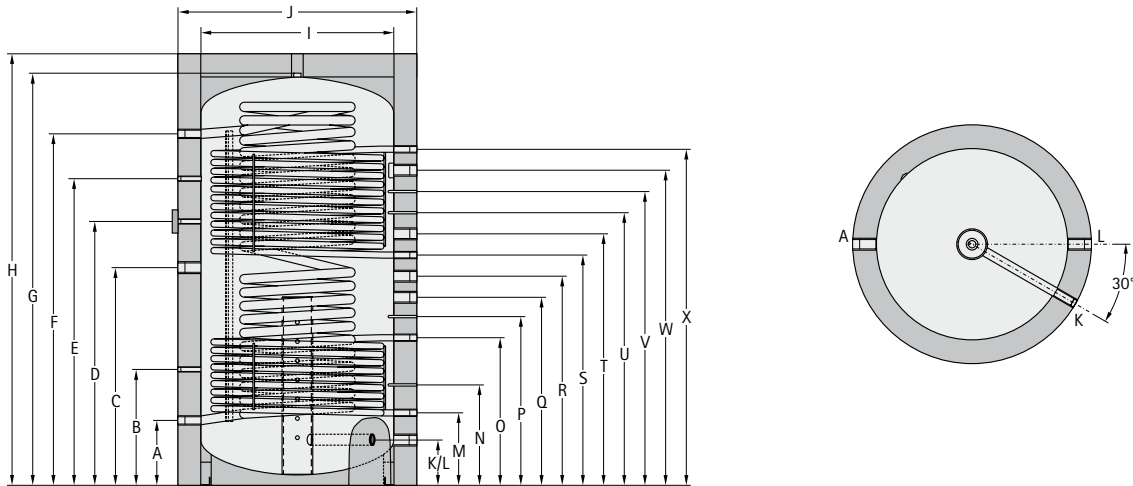


BSH 800 to 2000 litres

Buffer cylinder with integral corrugated stainless steel pipe for DHW heating and central heating backup, with removable thermal insulation and **two** internal smooth tube indirect coils



Specification BSH



TYPE	BSH	500	800	1000	1500	2000
Total cylinder capacity	l	495	800	900	1500	1965
DHW capacity	l	48	60	60	70	80
Continuous cylinder output ¹⁾	kW - l/h	24 - 594	38 - 940	50 - 1200	75 - 1848	100 - 2515
Output factor ¹⁾	Nl	2,1	4,3	5,4	6,5	7,6
Cold water connection (potable water)	A mm	240	270	270	335	350
Thermometer / sensor	B mm	440	570	580	600	750
Electric immersion heater	C mm	820	920	1130	1130	1210
Thermometer	D mm	1150	1290	1500	1500	1470
Thermometer / sensor	E mm	-	-	-	-	1730
DHW connection (potable water)	F mm	1420	1580	1760	1825	1950
Height excl. thermal insulation / vent	G mm	1650	1840	2020	2150	2290
Height incl. thermal insulation	H mm	1730	1940	2120	2250	2390
Diameter excl. thermal insulation	I mm	650	790	790	1000	1100
Diameter incl. thermal insulation	J mm	850	1030	1030	1240	1340
Stratification return / connection	K/L mm	150	170	170	235	250
Solar return, lower	M mm	280	310	310	375	390
Sensor well, solar cylinder sensor, lower	N mm	490	465	495	520	630
Solar flow, lower	O mm	700	670	730	765	870
Sensor well, buffer sensor	P mm	800	770	840	875	970
Connection	Q mm	910	870	950	975	1080
Connection	R mm	1020	980	1060	1085	1190
Solar return, top	S mm	-	1090	1210	1195	1300
Connection	T mm	-	-	-	1305	1410
Sensor well, cylinder sensor	U mm	1150	1190	1330	1415	1520
Sensor well, solar cylinder sensor, top	V mm	-	1290	1450	1525	1640
Connection	W mm	1400	1390	1520	1635	1760
Solar flow, top	X mm	-	1500	1680	1745	1870
Height of unit when tilted, excl. thermal insulation	mm	1750	1950	2125	2290	2450
Height when tilted, incl. thermal insulation	mm	1930	2200	2360	2575	2745
Solar flow / return; solar / vent	G (IG)	1"	1"	1"	1"	1"
Cold water / DHW connection	G (IG)	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
Thermometer / sensor	G (IG)	1/2"	1/2"	1/2"	1/2"	1/2"
Connection C, Q, R, T, W	G (IG)	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Stratification return / connection L	G (IG)	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Sensor well, internal diameter	mm	10	10	10	10	10
Solar indirect coil surface area, bottom / top	m ²	2,3 / -	3,0 / 2,0	3,0 / 3,0	3,0 / 3,5	5,5 / 4,2
Solar indirect coil content, bottom / top	l	9,8 / -	12,1 / 7,7	12,1 / 12,1	15,0 / 20,2	22,7 / 18,4
Indirect coil surface area, DHW	m ²	5,6	7,1	7,1	8,2	9,4
Max. operating pressure, DHW / solar	bar	10	10	10	10	10
Max. operating pressure, heating water	bar	3	3	3	3	3
Max. operating temperature	°C	95	95	95	95	95
Weight	kg	135	220	245	365	405

¹⁾ 10/45 °C (DHW temp.), 70 °C (buffer temp.)

SPU-2-W 500 to 1500 litre buffer cylinder

SPU-2 500 to 1500 litre buffer cylinder

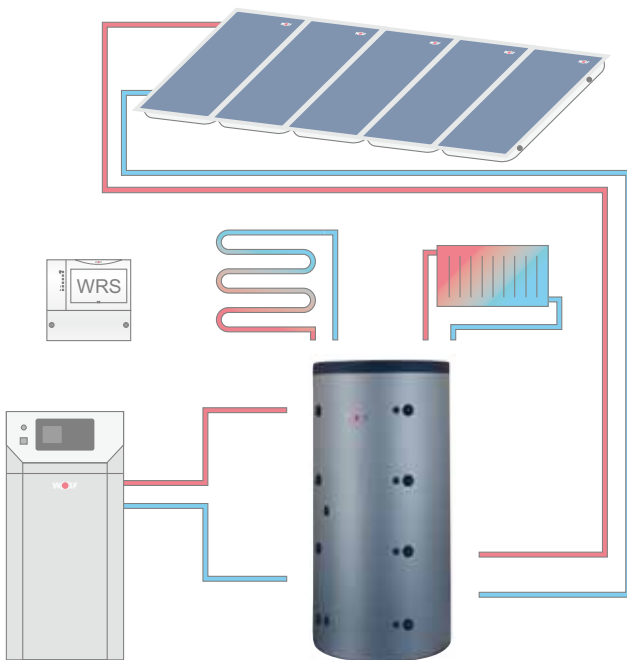


Benefits of the SPU-2W / SPU-2 buffer cylinders from Wolf at a glance

- Steel buffer cylinder with quality certificate with internal smooth tube indirect steel coil (type SPU-2 without indirect coil)
- Water capacity from 500 to 1500 litres
- Eight 1 1/2" connections and four 1/2" connections in the cylinder wall
- High grade thermal insulation with 100 mm thickness for low heat loss
- Removable thermal insulation for easier manoeuvring into the installation room
- 5 year warranty on the floorstanding cylinder,
2 year warranty on all electrical or moving parts

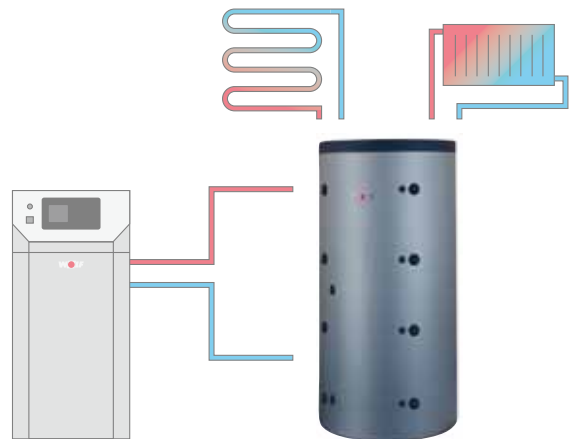
SPU-2W

Buffer cylinder for central heating backup with removable thermal insulation and **one** internal smooth tube indirect coil

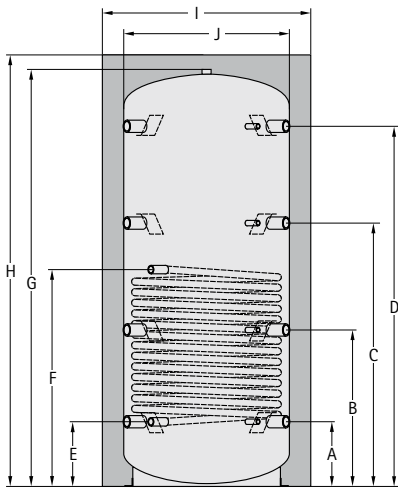


SPU-2

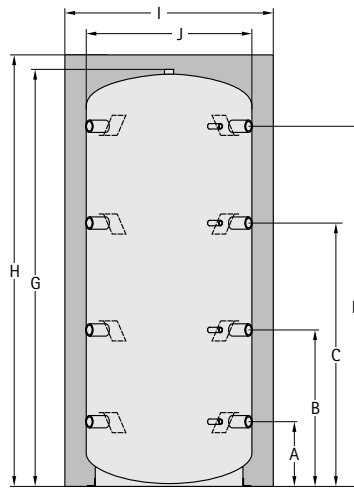
Buffer cylinder for central heating backup with removable thermal insulation



Specification SPU-2-W SPU-2



SPU-2-W

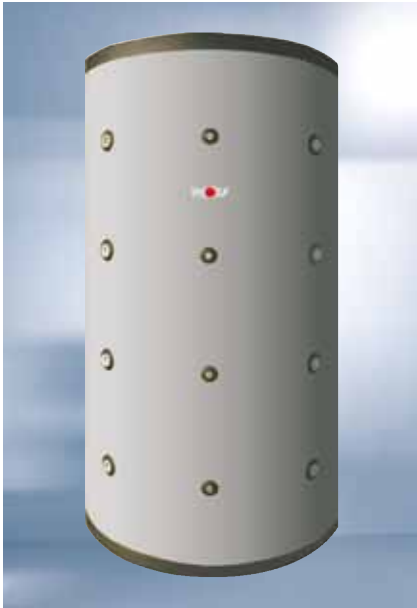


SPU-2

TYPE	SPU-2-W / SPU-2	500	800	1000	1500	
Cylinder capacity	SPU-2-W	l	480	780	960	1500
	SPU-2	l	490	795	980	1530
Connection / thermometer / sensor strip	A mm	220	260	310	380	
Connection / thermometer / sensor strip	B mm	620	630	745	825	
Connection / thermometer / sensor strip	C mm	1010	1030	1250	1350	
Connection / thermometer / sensor strip	D mm	1390	1430	1710	1760	
Indirect coil return *	E mm	220	260	310	375	
Indirect coil flow *	F mm	715	845	1030	1175	
Height excl. thermal insulation / vent	G mm	1640	1700	2050	2150	
Height incl. thermal insulation	H mm	1725	1785	2135	2235	
Diameter incl. thermal insulation	I mm	850	990	990	1200	
Diameter excl. thermal insulation	J mm	650	790	790	1000	
Height when tilted, incl. thermal insulation	mm	1910	2050	2360	2540	
Height of unit when tilted, excl. thermal insulation	mm	1670	1750	2090	2270	
Connections (8 pce.)	Rp	1½"	1½"	1½"	1½"	
Thermometer (4 pce.)	Rp	½"	½"	½"	½"	
Air vent valve	Rp	1½"	1½"	1½"	1½"	
Indirect coil connection *	Rp	1"	1"	1"	1"	
Indirect coil area *	m²	1,8	2,4	3	3,6	
Indirect coil content *	l	11	15	19	22	
Max. operating pressure primary * / secondary	bar	10/3	10/3	10/3	10/3	
Max. operating temperature primary * / secondary	°C	110/95	110/95	110/95	110/95	
Weight	SPU-2-W	kg	113	133	149	256
	SPU-2	kg	87	109	130	205

* Only for SPU-2-W

SPU-2 2000 to 5000 litre buffer cylinder

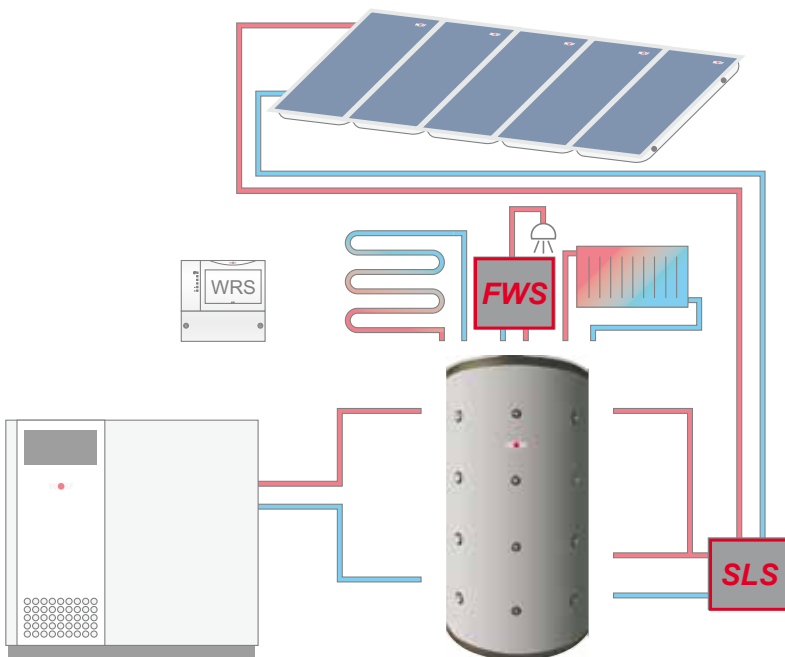


Benefits of the SPU-2 buffer cylinder from Wolf at a glance

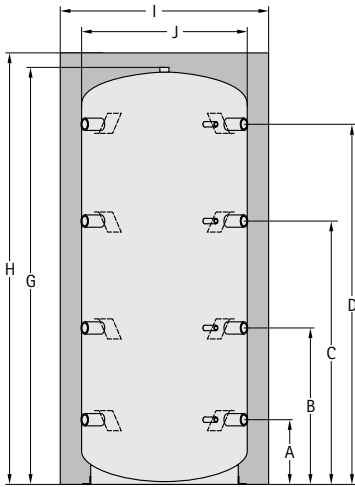
- Steel buffer cylinder with quality certificate
- Water capacity from 2000 to 5000 litres
- Eight 1 1/2" connections and four 1/2" connections in the cylinder wall
- High grade thermal insulation with 100 mm thickness for low heat loss
- Removable thermal insulation for easier manoeuvring into the installation room
- 5 year warranty on the floorstanding cylinder,
2 year warranty on all electrical or moving parts

SPU-2

Buffer cylinder for central heating backup
with removable thermal insulation



Specification SPU-2



TYP	SPU-2	2000	3000	4000	5000
Cylinder capacity	l	1950	2700	3950	4950
Connection / thermometer / sensor strip	A mm	395	435	490	510
Connection / thermometer / sensor strip	B mm	950	995	1050	1135
Connection / thermometer / sensor strip	C mm	1510	1555	1610	1760
Connection / thermometer / sensor strip	D mm	2070	2115	2170	2390
Height excl. thermal insulation / vent	G mm	2400	2480	2590	2830
Height incl. thermal insulation	H mm	2480	2560	2670	2910
Diameter incl. thermal insulation	I mm	1300	1450	1700	1800
Diameter excl. thermal insulation	J mm	1100	1250	1500	1600
Height when tilted, incl. thermal insulation	mm	2800	2950	3150	3400
Height of unit when tilted, excl. thermal insulation	mm	2550	2650	2850	3100
Connections (8 pce.)	Rp	2"	2"	2"	2"
Thermometer (4 pce.)	Rp	1/2"	1/2"	1/2"	1/2"
Air vent valve	Rp	1 1/4"	1 1/4"	1 1/4"	1 1/4"
Max. operating pressure	bar	3	3	3	3
Max. operating temperature	°C	95	95	95	95
Weight	kg	253	298	486	603

Accessories, SPU-2 2000 to 5000 litres



Solar heating station SLS

for heating a buffer cylinder externally

- Control unit „Station heating module SLM-10“
- Large plate heat exchanger
- Motorised 3-way mixer for energy-optimised stratification into the buffer cylinder
- Infinitely variable output matching with variable speed pumps
- With heat meter
- With solar taco setter to regulate the flow rate
- With bypass circuit on the solar side
- Fully wired, hydraulically piped and programmed
- Floorstanding, fully thermally insulated
- Optional integration into building management systems
- Incl. all necessary fittings and valves

SLS-25 (24 kW) up to 20 collectors

Dimensions: 1000 x 1400 x 500 mm (W x H x D)

SLS-50 (52 kW) up to 40 collectors

Dimensions: 1100 x 1500 x 500 mm (W x H x D)



Fresh water station FWS

for hygienic DHW heating with a buffer cylinder

- Control unit „Station heating module SLM-10“
- Large plate heat exchanger
- Infinitely variable output matching with variable speed pumps
- With integral DHW circulation
- Fully wired, hydraulically piped and programmed
- Floorstanding, fully thermally insulated
- Optional integration into building management systems
- Incl. all necessary fittings and valves

FWS-140 (140kW)

Constant DHW output 40 l/min ¹⁾ bzw. 58 l/min ²⁾

Dimensions: 830 x 1445 x 490mm (W x H x D)

FWS-350 (350kW)

Constant DHW output 100 l/min ¹⁾ bzw. 143 l/min ²⁾

Dimensions: 970 x 1615 x 615mm (W x H x D)

FWS-540 (540kW)

Constant DHW output 154 l/min ¹⁾ bzw. 221 l/min ²⁾

Dimensions: 1140 x 1745 x 560mm (W x H x D)

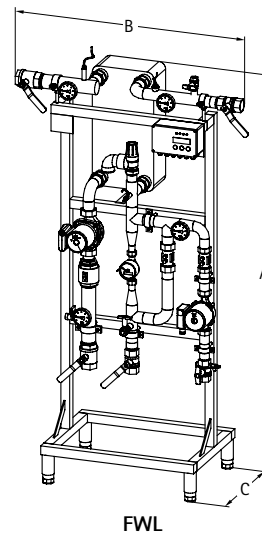
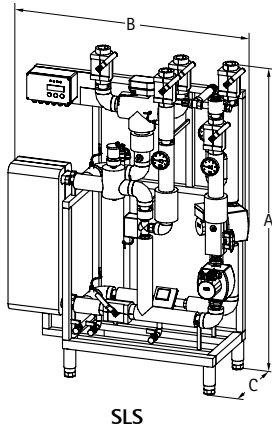
Constant DHW output at:

¹⁾ 70/25°C Buffer FL/RE - 10/60°C DHW

²⁾ 65/18°C Buffer FL/RE - 10/45°C DHW with admixture of cold water 10°C at draw-off point

SLS Solar heating station

FWS Fresh water station



TYPE	SLS	25	50
Nominal output	kW	25	52
Height	A mm	1740	1450
Width	B mm	600	1045
Length	C mm	350	420
Solar flow		R 3/4"	Rp 1"
Solar return		Rp 3/4"	R 1"
Buffer connections (top, middle, bottom)		Rp 3/4"	Rp 1"
Temperatures primary FL/RE / secondary FL/RE	°C	60/36 / 29/54	60/35 / 29/54
Flow rate primary (solar) / secondary (Heating)	m ³ /h	0,948 / 0,869	1,95 / 1,81
Pressure drop primary / secondary	mbar	200 / 160	270 / 240
Residual height of pump primary / secondary	mbar	360 / 300	370 / 180
max. perm. operating pressure primary / secondary	bar	6 / 3	10 / 3
max. perm. operating temperature primary / secondary	°C	120 (short-time 160) / 95	120 (short-time 160) / 95
Power consumption (max.)	W	1575	1575
Total weight (empty)	kg	40	70
Electricity supply		230V / 50Hz	230V / 50Hz

TYPE	FWS	140	350	540
Nominal output	kW	140	350	540
Height	A mm	1575	1745	1875
Width	B mm	830	970	1140
Length	C mm	490	615	560
Cold water / DHW connection	Rp	1"	1 1/4"	1 1/2"
Circulation	Rp	3/4"	1 1/4"	1 1/4"
Heating flow/return	Rp	1"	1 1/2"	2"
Temperatures primary FL/RE / secondary CW/HW	°C	70/25 / 10/60	70/25 / 10/60	70/25 / 10/60
Heating water capacity primary	m ³ /h	2,7	6,7	10,44
Permanent output secondary at 60°C	l/h	2400	6000	9300
Permanent output secondary at 45°C *	l/h	3480	8580	13260
Pressure drop primary / secondary	mbar	170 / 100	220 / 150	220 / 140
Residual height of pump primary	mbar	310	150	220
max. perm. operating pressure primary / secondary	bar	10 / 10	10 / 10	10 / 10
max. perm. operating temperature primary / secondary	°C	100 / 95	100 / 95	100 / 95
Power consumption (max.)	W	1575	1575	1575
Total weight (empty)	kg	60	75	90
Electricity supply		230V / 50Hz	230V / 50Hz	230V / 50Hz

* with admixture of cold water 10°C at draw-off point

SEL 500 to 1000 litre DHW primary cylinder

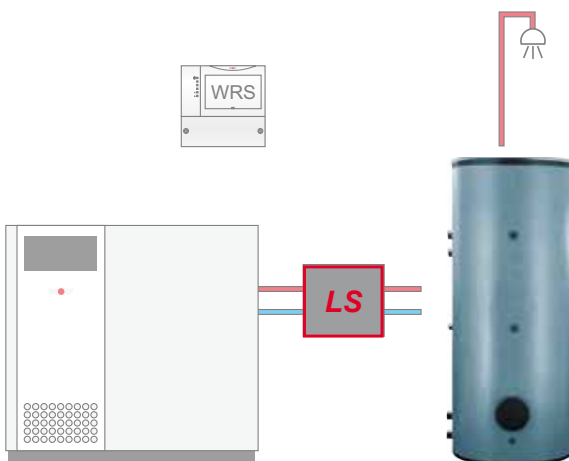


Benefits of the SEL DHW primary cylinder from Wolf at a glance

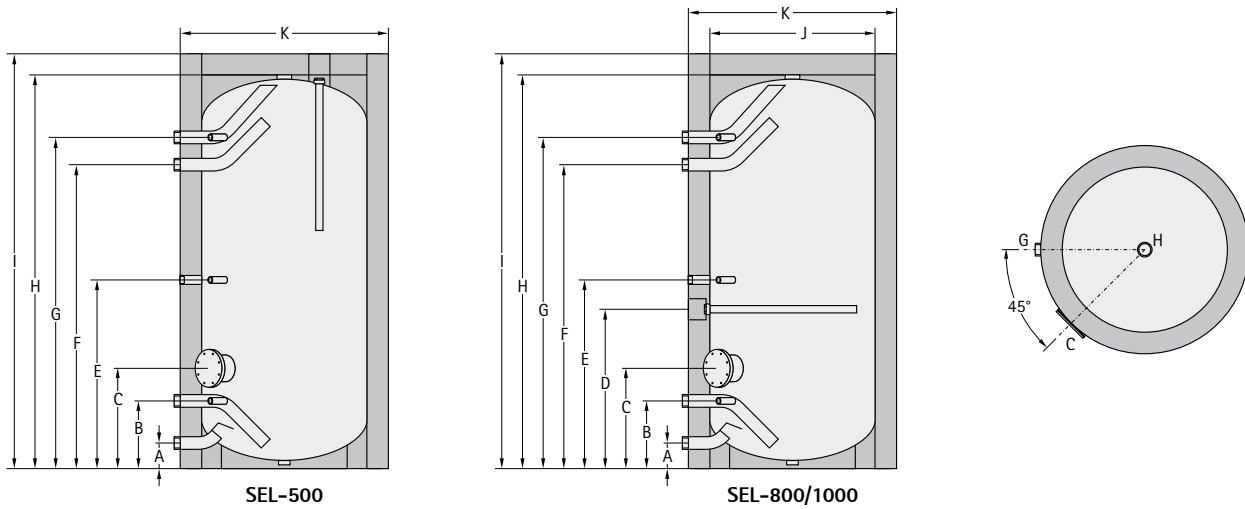
- Steel DHW primary cylinder with two-layer enamel coating
- Lateral DHW outlet
- Cold/hot water connections and 2 charging connections G(AG) 1 1/4" or 2" DHW circulation 1" female thread
Thermometer 1/2" female thread
2 control or test connections 1/2" female thread
- The interior of the cylinder is protected against corrosion by a two-layer enamel coating and a protective magnesium anode
- Low heat loss through high grade thermal insulation 100 mm
- Removable thermal insulation for easier transport into the installation room
- 5 year warranty on the floorstanding cylinder,
2 year warranty on all electrical or moving parts

SEL

DHW primary cylinder for external heating by cylinder heating station LS; steel with two-layer enamel coating



Specification SEL DHW primary cylinder



TYPE	SEL	500	800	1000
Cylinder capacity	l	500	800	965
Stand-by energy loss	kWh/24h	3,2	3,6	3,9
Cold water connection	A mm	85	122	122
Primary return / control connection	B mm	310	323	323
Flange	C mm	465	478	478
Anode	D mm	-	760	1106
DHW circulation / control connection	E mm	894	900	1246
Primary flow	F mm	1348	1450	1774
DHW connection / thermometer	G mm	1478	1580	1904
Height excl. thermal insulation / vent	H mm	-	1900	2250
Height incl. thermal insulation	I mm	1806	2000	2350
Diameter excl. thermal insulation	J mm	-	790	790
Diameter incl. thermal insulation	K mm	750	990	990
Height when tilted, incl. thermal insulation	mm	1910	2232	2550
Height of unit when tilted, excl. thermal insulation	mm	-	1960	2320
Internal flange diameter	mm	120	120	120
DHW / cold water connection	G (AG)	1¼"	2"	2"
Primary flow / return	G (AG)	1¼"	2"	2"
DHW Circulation	G (IG)	1"	1"	1"
Anode	G (IG)	1¼"	1¼"	1¼"
Control connection / thermometer	G (IG)	½"	½"	½"
Air vent valve	G (IG)	1¼"	2"	2"
Drain	G (IG)	1¼"	1¼"	1¼"
Max. operating pressure	bar	10	10	10
Max. operating temperature	°C	95	95	95
Weight	kg	184	200	270

Accessories, SEL 500 to 1000 litres



LS cylinder heating station

for external heating of the SEL DHW primary cylinder

- Control unit „Station heating module SLM-10“
- Large plate heat exchanger
- Infinitely variable output matching with variable speed pumps
- With taco setter to regulate the flow rate
- With integral DHW circulation
- Fully wired, hydraulically piped and programmed
- Floorstanding, fully thermally insulated
- Optional integration into building management systems
- Incl. all necessary fittings and valves

LS-140 (138kW)

Constant DHW output 39 l/min ¹⁾ bzw. 56 l/min ²⁾,
Dimensions: 1395 x 1210 x 500mm (W x H x D)

LS-210 (209kW)

Constant DHW output 60 l/min ¹⁾ bzw. 85 l/min ²⁾
Dimensions: 1605 x 1210 x 550mm (W x H x D)

LS-315 (315kW)

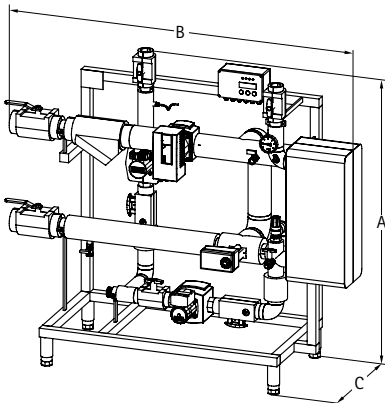
Constant DHW output 90 l/min ¹⁾ bzw. 128 l/min ²⁾
Dimensions: 1605 x 1210 x 550mm (W x H x D)

Continuous DHW output at:

¹⁾ 70/45°C boiler FL/RE - 10/60°C boiler flow/return

²⁾ 70/45°C boiler FL/RE - 10/45°C boiler flow/return

Specification LS cylinder heating station



TYPE	LS	140	210	315
Nominal output	kW	140	210	315
Height	A mm	1340	1340	1340
Width	B mm	1395	1605	1605
Length	C mm	500	550	550
Cylinder charging flow/return		Rp 1" / R 1"	Rp 1¼" / R 1¼"	Rp 1¼" / R 1¼"
Circulation	Rp	1"	1"	1"
Heating flow/return	Rp	1½"	2"	2"
Temperatures primary FL/RE / secondary FL/RE	°C	70/45 / 10/60	70/45 / 10/60	70/45 / 10/60
Heating water capacity primary	m³/h	4,89	7,2	10,80
Permanent output secondary at 60°C	l/h	2400	3600	5400
Permanent output secondary at 45°C *	l/h	3400	5100	7700
Pressure drop primary / secondary	mbar	250 / 70	350 / 70	400 / 120
Residual height of pump primary / secondary	mbar	200 / 390	550 / 320	550 / 460
max. permiss. operating pressure primary / secondary	bar	6 / 10	6 / 10	6 / 10
max. permiss. operating. temperature primary / secondary	°C	100 / 95	100 / 95	100 / 95
Elektrische Leistungsaufnahme (max)	W	1575	1575	1575
Total weight (empty)	kg	80	90	95
Electricity supply		230V / 50Hz	230V / 50Hz	230V / 50Hz

* with admixture of cold water 10°C at draw-off point

SEM-1 / SEM-2 Solar cylinder



Benefits of the SEM solar cylinder from Wolf at a glance

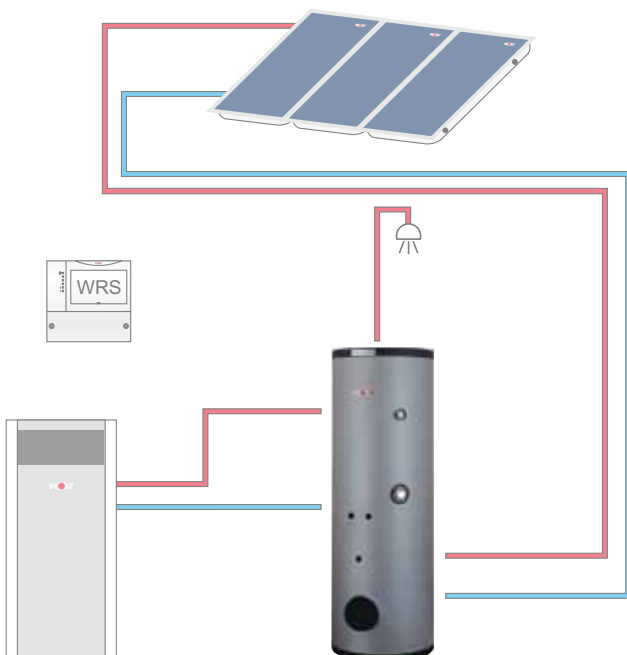
- Solar steel cylinder with quality certificate and two-layer enamel coating with two smooth tube internal indirect coils
- Solar pump assembly for optional fitting immediately on the SEM-2 solar cylinder
- High grade rigid PU foam or polyester fleece thermal insulation below the foil jacket of the cylinder for low thermal losses
- The interior of the cylinder and the indirect coils are protected against corrosion by two-layer enamel coating and a protective magnesium anode
- Large heat exchanger areas ensure a short heat-up time and a high constant DHW output
- Side flange for additional indirect coils and easy maintenance
- Connection for an electric immersion heater
- Optimised ratio between diameter and height for good temperature stratification
- 5 year warranty on the floorstanding cylinder, 2 year warranty on all electrical or moving parts

Accessories

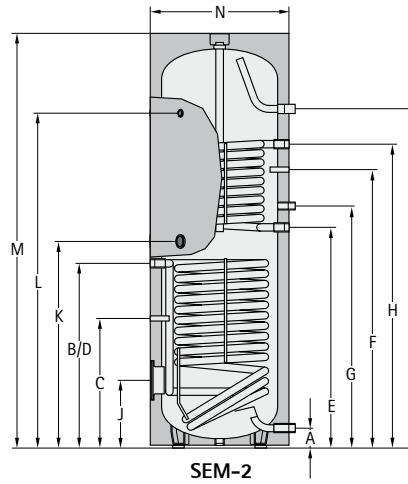
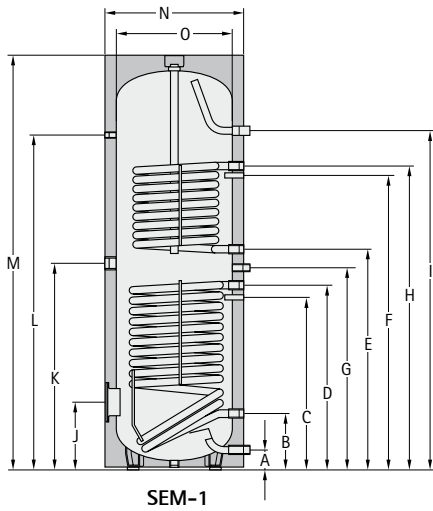
- Solar pump assembly
- Electric immersion heater 2 kW/230 V/50 Hz / 4.5 & 6 kW/400 V/50 Hz. Integral cylinder thermostat and high limit safety cut-out. Frost protection is assured. The cylinder water temperature can be adjusted either up to 60 °C or up to 80 °C.
- Primary pump 3/4" / 1"
- Thermometer
- External power anode
- Flexible pipe set

SEM-1 / SEM-2

Steel solar cylinder for DHW heating with two-layer enamel coating and 2 smooth tube internal indirect coils



Specification SEM-1 SEM-2



TYPE	SEM-1 SEM-2	- 300	- 400	500 -	750 -	1000 -
Cylinder capacity	l	285	385	500	750	935
Constant cylinder output 80/60-10/45°C (heating))	kW - l/h	20 - 490	20 - 490	20 - 490	50 - 1200	50 - 1200
Performance factor (heating)	NL ₆₀	2,3	4,8	6	13,5	18
Cold water connection	A mm	90	55	99	220	220
Solar return	B mm	815	874	305	345	345
Solar cylinder sensor	C mm	506	416	586	603	603
Solar flow	D mm	815	874	865	920	975
Central heating return	E mm	974	987	985	1025	1340
Cylinder sensor, heating	F mm	1154	1204	1160	1185	1500
DHW circulation	G mm	1077	1092	1195	1290	1605
Central heating flow	H mm	1334	1335	1335	1475	1790
DHW connection	I mm	1728	1586	1451	1590	1940
Flange (bottom)	J mm	324	275	335	384	384
Electric immersion heater	K mm	887	915	949	970	1145
Thermometer	L mm	1504	1416	1404	1460	1810
Overall height	M mm	1794	1651	1780	1830	2180
Diameter incl. thermal insulation	N mm	600	701	760	1000	1000
Diameter excl. thermal insulation	O mm	-	-	-	800	800
Height when tilted, incl. thermal insulation	mm	1898	1820	1935	2030	2350
Heating water (primary)	bar/°C	10/110	10/110	10/110	10/110	10/110
DHW (secondary)	bar/°C	10/95	10/95	10/95	10/95	10/95
Internal flange diameter	mm	110	110	114	114	114
Cold water connection	G (IG)	1" *	1" *	1"	1¼"	1¼"
Heating flow/return	G (IG)	1"	1"	1"	1¼"	1¼"
Solar flow/return	G (IG)	¾" **	¾" **	1"	1¼"	1¼"
DHW circulation	G (IG)	¾"	¾"	¾"	1"	1"
DHW connection	G (IG)	1" *	1" *	1"	1¼"	1¼"
Electric immersion heater	G (IG)	1½"	1½"	1½"	1½"	1½"
Thermometer	G (IG)	½"	½"	½"	½"	½"
Indirect coil surface area (heating)	m ²	0,95	0,95	0,95	1,5	1,5
Indirect coil surface area (solar)	m ²	1,30	1,8	1,8	2,1	2,4
Indirect coil content (heating)	l	6,6	7,0	6,1	9,15	9,15
Indirect coil content (solar)	l	9,0	12,8	11,5	13,5	14,5
Weight	kg	130	159	182	290	350

* R (male thread)

** G (male thread)

SE-2 Floorstanding cylinder



Benefits of the Wolf SE-2

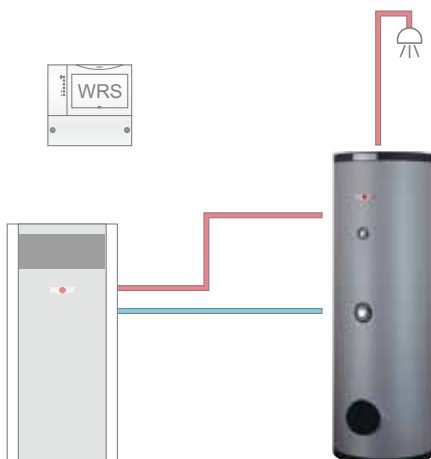
- Steel solar cylinder with quality certificate and two-layer enamel coating and one internal smooth tube indirect coil
- Inspection and cleaning apertures for easy maintenance
- High grade rigid PU foam thermal insulation below the foil jacket of the cylinder for low thermal losses
- The interior of the cylinder and the indirect coils are protected by a two-layer enamel coating and a protective magnesium anode (SE-2-750 with impressed current anode)
- Large indirect coil surface area for short heat-up times and a high constant DHW output
- Connection for an electric immersion heater
- Optimised ratio between diameter and height for good temperature stratification
- 5 year warranty on the floorstanding cylinder, 2 year warranty on all electrical or moving parts

Accessories

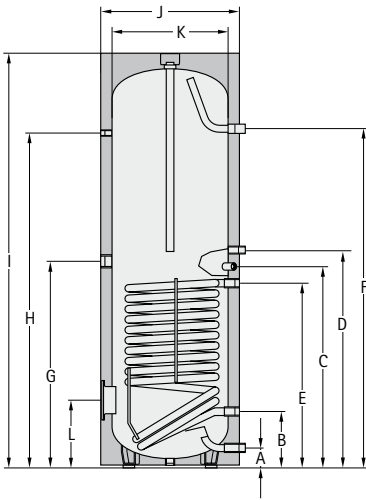
- Electric immersion heater 2 kW/230 V/50 Hz / 4.5 & 6 kW/400 V/50 Hz. Integral cylinder thermostat and high limit safety cut-out. Frost protection is assured. The cylinder water temperature can be adjusted either up to 60 °C or up to 80 °C.
- SP1 control unit for primary pumps
- Primary pump 3/4" / 1"
- Thermometer
- External power anode
- Flexible pipe set

SE-2

Floorstanding steel cylinder with two-layer enamel coating



Specification SE-2



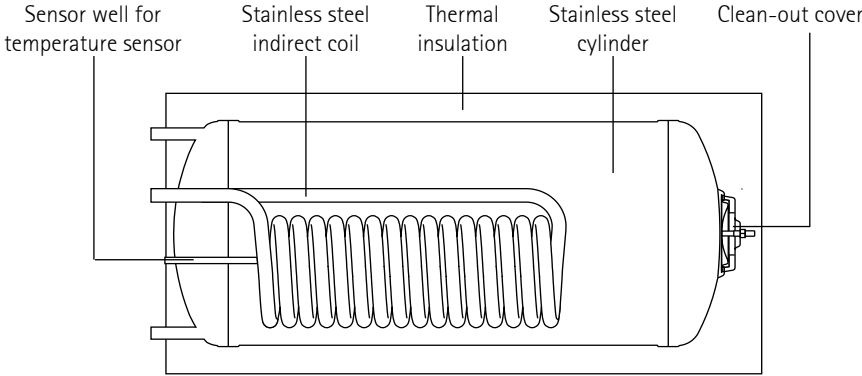
TYPE	SE-2	150	200	300	400	500	750
Cylinder capacity	l	145	195	285	380	485	750
Constant DHW cylinder rating 80/60-10/45°C	kW - l/h	20 - 700	28 - 700	40 - 1000	45 - 1100	53 - 1300	60 - 1500
Output factor	NL ₆₀	2,0	3,5	7,5	11	15	22
Cold water connection	A mm	90	90	85	85	85	220
Central heating return	B mm	255	255	263	320	370	345
Cylinder sensor, heating	C mm	585	720	898	960	1010	990
DHW circulation	D mm	665	800	983	1000	1095	1215
Central heating flow	E mm	515	650	818	880	930	885
DHW connection	F mm	930	1194	1523	1525	1500	1590
Electric immersion heater	G mm	550	685	983	1000	1045	945
Thermometer	H mm	760	1024	1507	1521	1498	1460
Overall height	I mm	996	1260	1755	1800	1806	1850
Diameter incl. thermal insulation	J mm	600	600	600	670	750	990
Diameter excl. thermal insulation	K mm	-	-	-	-	-	790
Flange (bottom)	L mm	325	325	305	345	370	384
Height when tilted, incl. thermal insulation	mm	1150	1350	1860	1925	1960	2075
Heating water (primary)	bar/°C	10/110	10/110	10/110	10/110	10/110	10/110
DHW (secondary)	bar/°C	10/95	10/95	10/95	10/95	10/95	10/95
Internal flange diameter	mm	110	110	120	120	120	114
Cold water connection	G (IG)	1"	1"	1"	1"	1"	1 1/4" *
Central heating return	G (IG)	1"	1"	1"	1"	1"	1 1/4"
DHW circulation	G (IG)	3/4"	3/4"	3/4"	3/4"	3/4"	1"
Central heating flow	G (IG)	1"	1"	1"	1"	1"	1 1/4"
DHW connection	G (IG)	1"	1"	1"	1"	1"	1 1/4" *
Electric immersion heater	G (IG)	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Thermometer	G (IG)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Indirect coil area	m ²	1,0	1,0	1,4	1,8	2,0	2,5
Indirect coil content	l	6,8	6,8	8,9	11,5	12,6	21,7
Weight	kg	53	65	115	145	160	260

FMS multi-cell cylinder bank

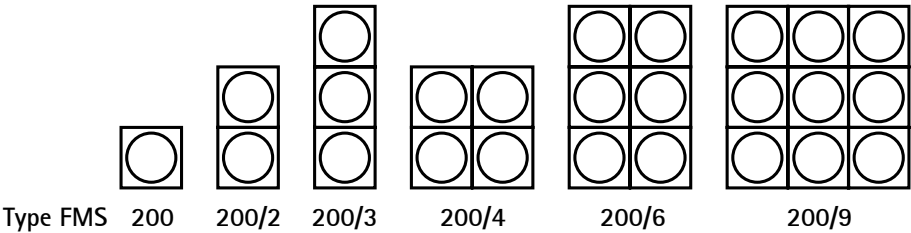


Benefits of the Wolf FMS

- Large water capacity on a small footprint
- Long service life through corrosion-resistant stainless steel
- Easy handling through modular construction
- Easy installation through plug-in casing
- Five year warranty



Product range



FMS multi-cell cylinder bank

TYPE	FMS	200	200/2	200/3	200/4	200/6	200/9
Cylinder capacity	l	200	400	600	800	1200	1800
Continuous cylinder output 90/70°C	l/h*	2015	4030	6045	8060	12090	18135
	kW	80,6	161	242	322	484	725
80/60°C	l/h*	1250	2500	3750	5000	7500	11250
	kW	50	100	150	200	300	450
70/50°C	l/h*	730	1460	2190	2920	4380	6570
	kW	29	58	87	116	174	261
55/50°C	l/h*	490	980	1470	1960	2940	4410
	kW	19,6	39	59	78	118	176
Output factor	NL ₆₀	5	15	32	50	90	190
Heating water flow rate at 80/60°C	m ³ /h	2,15	4,3	6,45	8,6	13	19,3
Heating water pressure drop	mbar	100	100	100	100	100	100
Dim. incl. casing	Length	mm	1240	1240	1240	1240	1240
	Width	mm	660	660	660	1350	1350
	Height	mm	625	1235	1845	1235	1845
Connections	DHW	(male)	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
	Cold water	(male)	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
	DHW circulation	(male)	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
	Heating water flow	(male)	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
	Heating water return	(male)	R 3/4"	R 3/4"	R 3/4"	R 3/4"	R 3/4"
Weight	kg	83	160	245	320	480	725
Max. operating temp.	DHW	°C	95	95	95	95	95
	Heating water	°C	110	110	110	110	110
Max. operating pressure	DHW	bar	10	10	10	10	10
	Heating water	bar	10	10	10	10	10

* At 10/45 °C cold water/DHW



The comprehensive equipment range from system supplier Wolf offers the ideal solution for commercial and industrial buildings, for new build and for modernisation projects alike. The range of Wolf control units fulfils every need where heating convenience is concerned. The products are easy to operate, energy-efficient and reliable. Photovoltaic and solar heating systems can be quickly integrated into existing systems. All Wolf products can be easily and rapidly commissioned and maintained.

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