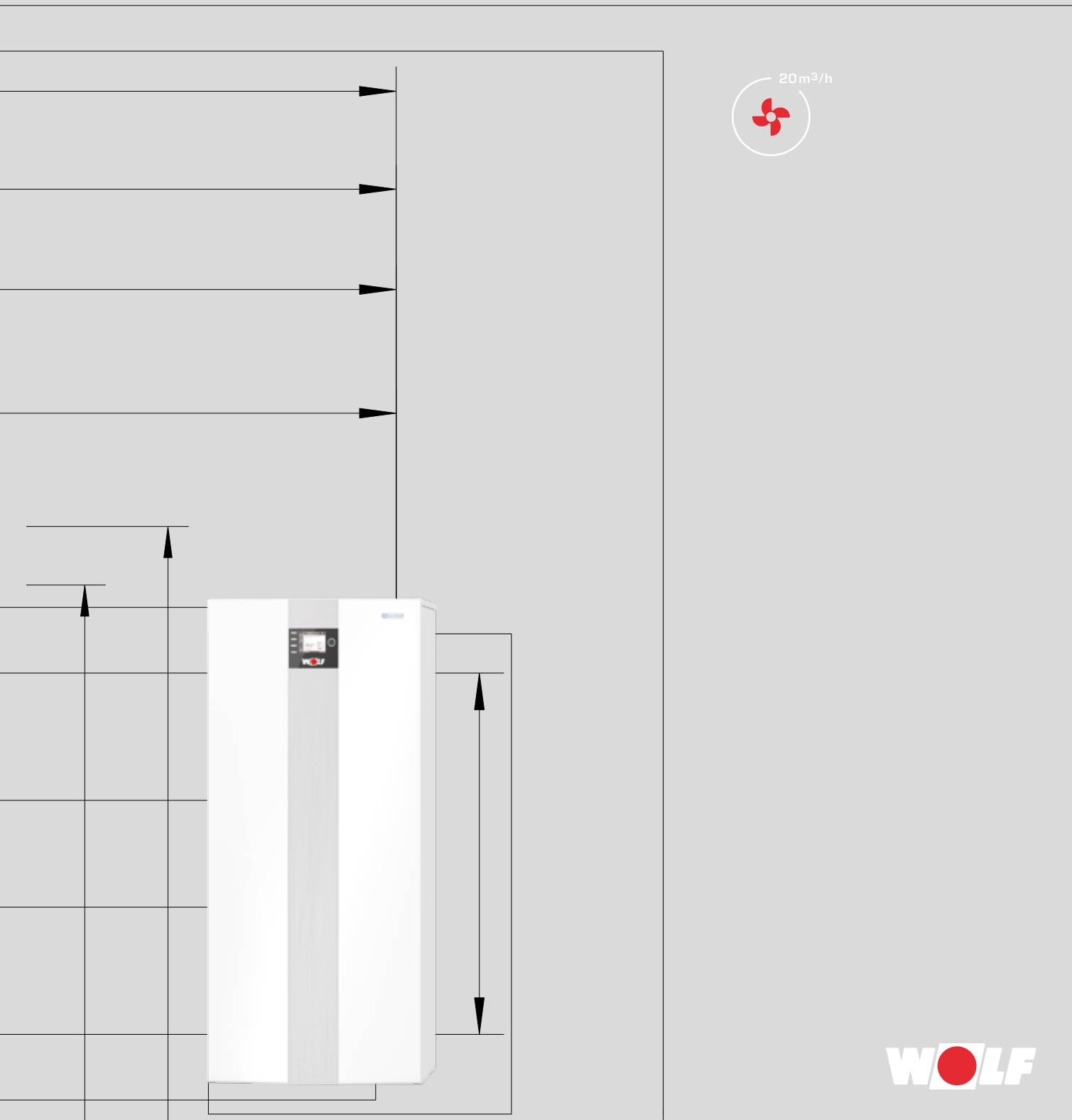
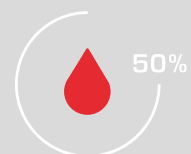
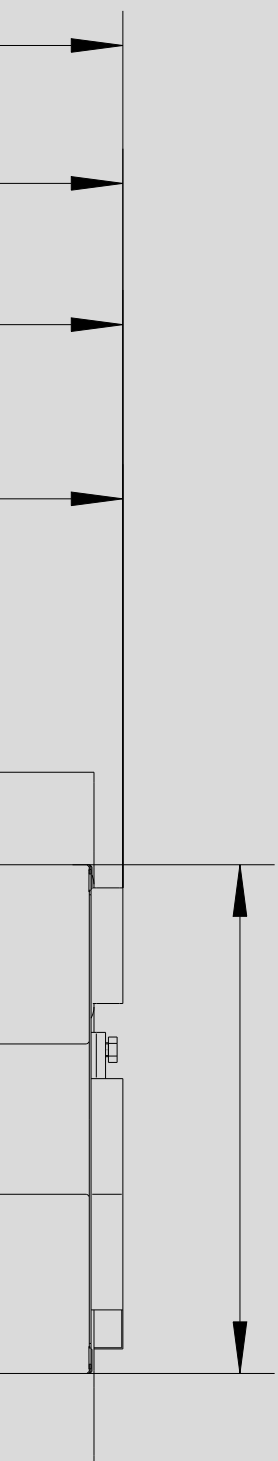


TECHNICAL DOCUMENTATION

WOLF FLOORSTANDING OIL CONDENSING BOILERS

TOB / TOB-TS / COB / COB-TS





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 systems can be swiftly integrated into existing systems.

WOLF equipment is easy and quick to install and maintain.

OIL CONDENSING BOILERS	4-5
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Energy efficiency class A for central heating and as combi boiler TOB-TS / COB-TS for DHW heating

Extremely clean and efficient combustion with complete condensation of the flue gases, and high standard seasonal efficiency [to DIN] up to 105 % [H_i] / 99 % [H_s] for the best possible energy efficiency

Low power demand

Suitable for low sulphur and standard fuel oil EL + bio-oil B10

High quality heat exchanger made from robust aluminium/silicon alloy; long service life, low maintenance



Fully assembled and encased, packed on a pallet for simple transport and easy handling

Communication

via smartphone, laptop or PC

9

BENEFITS OF WOLF OIL CONDENSING BOILERS

TOB / TOB-TS

COB / COB-TS

Control unit comes fully wired and may be used for various individual heating system applications

Can be positioned directly against a wall, therefore low space requirement; no side clearances required; convenient access to all components from the front; easy operation and maintenance



OIL CONDENSING BOILER TOB - 18

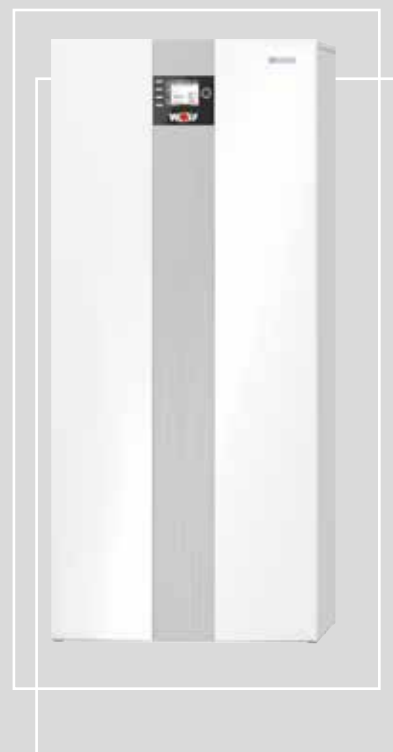
FOR CENTRAL HEATING; CAN BE COMBINED WITH A FLOORSTANDING DHW CYLINDER, E.G. SEM-1 / SEM-2

- **New WOLF control system WRS 2**
options to set and control via smartphone or PC
- **Modulating blue flame burner** for open flue and balanced flue operation

MODULATION RANGE

for flow / return 50 / 30 °C

TOB - 18	from 6.6 to 18.6 kW
----------	---------------------



OIL CONDENSING BOILER TOB - 18/TS FOR CENTRAL HEATING WITH DHW STRATIFICATION CYLINDER MADE FROM ENAMELLED STEEL

- **Convenient DHW heating**, cylinder capacity 160 l; comparable to a 200 l DHW cylinder with internal indirect coil
- **"DHW turbo"** with a new routing and distribution system for hot and cold water inside the DHW stratification cylinder ensures a smooth radial water distribution
- **Hot water always available** - even after filling a bath
- **Big savings on operating costs** through efficient DHW heating and innovative insulation technology
- **Use of condensing technology during cylinder heating** for maximum energy efficiency
- **Compact design** condensing boiler and DHW stratification cylinder, fully wired, with all hydraulics ready to connect for minimal assembly and installation costs



MODULATION RANGE

for flow / return 50 / 30 °C

TOB - 18-TS	from 6.6 to 18.6 kW
-------------	---------------------

DHW OUTPUT

l/10 min

270 litres

OIL CONDENSING BOILER TOB - 18/TS
FOR CENTRAL HEATING
WITH DHW STRATIFICATION CYLINDER
MADE FROM ENAMELLED STEEL



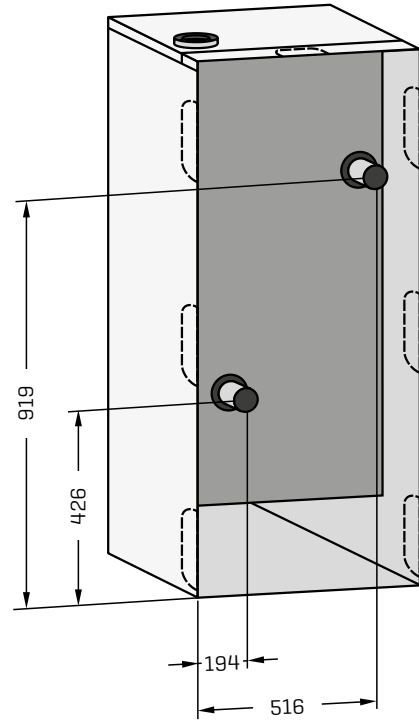
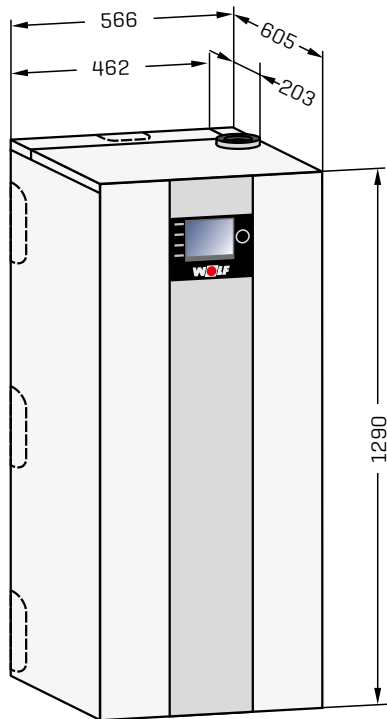
SPECIFICATION

		TOB-18	TOB-18/TS
Energy efficiency class, central heating		A	A
Energy efficiency class, DHW heating		-	A
Min./max. rated heating output at 80/60 °C	kW		6.3 / 17.7
Min./max. rated heating output at 50/30 °C	kW		6.6 / 18.6
Min./max. rated input	kW		6.4 / 18.1
Min./max. oil throughput	kg/h		0.53 / 1.52
Nominal capacity / equivalent nominal capacity of the TS cylinder	l	-	160 / 200
TS continuous cylinder output	l/h	-	440
TS output factor	N _{LE0}	-	4
DHW output	l/10 min	-	270
Standby heat loss TS	kWh/24 h	-	1.47
Height	A mm		1290
Width	B mm	566	1132
Depth	C mm		605
Heating return	D mm		426
Heating return	E mm		194
Heating flow	F mm		919
Heating flow	G mm		516
Air/flue pipe connection	H mm		462
Air/flue pipe connection	I mm		203
Air/flue pipe diameter	mm		80/125
Air/flue gas duct		B23p, B33p, C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)	
Heating flow/return outside Ø	G		1½"
Drain connection			1"
Fuel oil to DIN 51603-1/6		Standard fuel oil EL, low sulphur fuel oil EL or biofuel oil B10	
Nozzle *		Steinen-Wolf 0.25 / 60° full cone	
Fuel oil filter		Opticlean 5 - 20 µm	
Min./max. pump pressure	bar		3.5 / 23
Maximum negative pressure in oil line	bar		0.3
Flow temperature, factory setting	°C		75
Max. flow temperature	°C		70
Heating water pressure drop (at Δt = 20 K / 10 K)	mbar		7 / 20
Max. permissible boiler pressure	mbar		3
Water capacity of the heat exchanger	l		7.5
Standard seasonal efficiency [to DIN] at 40/30 °C (net cv/gross cv)	%		105 / 99
Standard seasonal efficiency [to DIN] at 75/60 °C (net cv/gross cv)	%		102 / 97
Efficiency at rated load at 80/60 °C (net cv / gross cv)	%		98 / 92
Efficiency at 30 % partial load and TR = 30 °C (net cv/gross cv)	%		105 / 99
Boiler standby loss qB at 70 °C (EnEV)	%		0.75
Max. rated heat input			
Flue gas mass flow rate	g/s		7.02
Flue gas temperature 50/30 - 80/60 °C	°C		44 - 61
Available fan draught	Pa		70
Min. lowest heat input			
Flue gas mass flow rate	g/s		2.44
Flue gas temperature 50/30 - 80/60 °C	°C		32 - 50
Available fan draught	Pa		20
Max. amount of condensate at 40/30 °C	l/h		1.4
Condensate pH value			approx. 3
Boiler weight	kg		92
Cylinder weight	kg	-	76
IP rating	IP		IP 20
Integral fuse (medium time lag)	A		4
Power consumption, partial load/full load	W		23 / 101
Power consumption on standby	W		3
Electrical connection		1 ~ NPE / 230 VAC / 50 Hz / 10 A / B	
CE designation		CE-0085C00305	

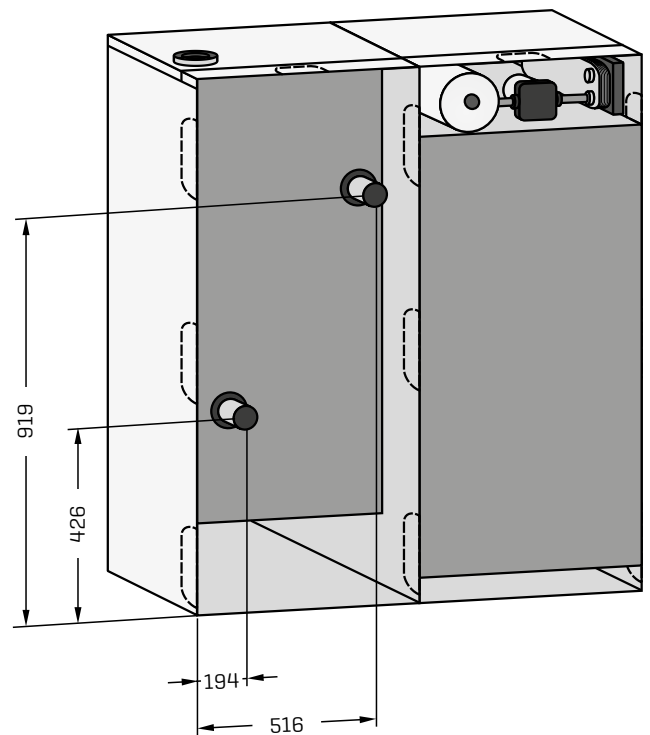
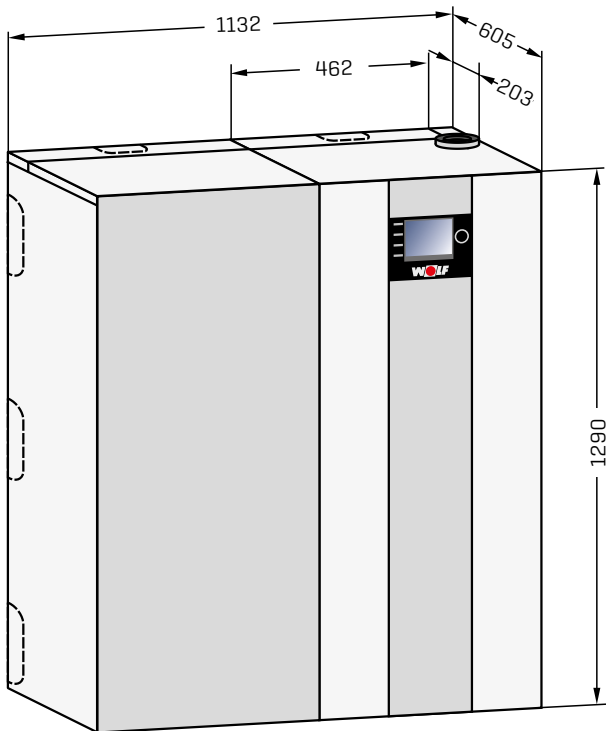
* These nozzles comply with the emission requirements of the standard and ensure reliable operation. No other nozzles are permissible!

DIMENSIONS
+ CONNECTION DIMENSIONS
TOB / TOB-TS

TOB



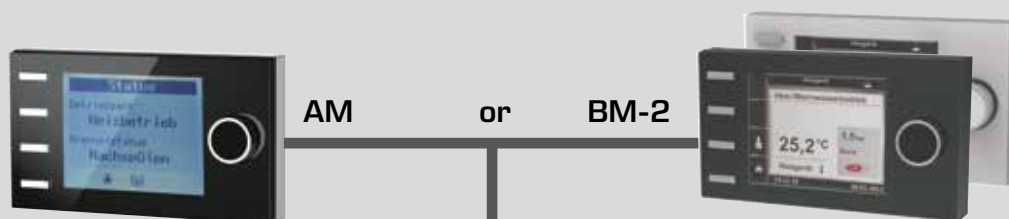
TOB-TS



OIL CONDENSING BOILERS TOB / TOB-TS

STANDARD CONTROL UNIT

The operation of a TOB / TOB-TS oil condensing boiler requires either an AM display module or a BM-2 programming unit.



The AM functions solely as a display module for the heat generator. Appliance-specific parameters and values can be programmed and displayed.

AM display module

- Display module for the heat generator
- Only required if BM-2 is used as a remote control or in a cascade circuit
- Operated by rotary selector with pushbutton function
- 4 quick start keys for frequently used functions
- Backlit LCD
- AM is always inside the heat generator

BM-2 programming unit in black and white; weather-compensated flow temperature

- Time programs for heating, DHW and DHW circulation
- 3.5" colour display
- Easy user prompts via plain text display
- Operated by rotary selector with pushbutton function
- 4 function keys for frequently used functions
- microSD card slot for software update
- Installation either inside the boiler control unit or in wall mounting base as a remote control
- Only one programming unit required for multi boiler systems
- Can be extended with MM-2 mixer module (up to 7 heating circuits with mixer)
- BM-2 can also be used as a remote control for the CWL Excellent ventilation unit (one programming unit for heating and ventilation)



AM display module or BM-2 programming unit an essential requirement

2-wire eBUS connection



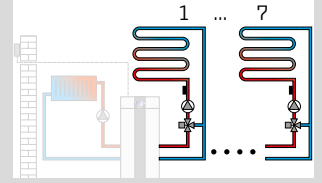
BM-2 programming unit in black or white
(if BM-2 is inside the heat generator, max. 6 additional remote controls are possible)

2-wire eBUS connection



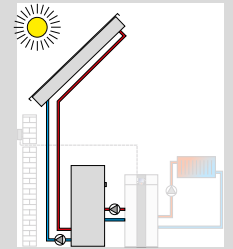
MM-2 mixer module

- 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-2 programming unit with wall mounting base can be extended to serve as a remote control
- Rast 5 connection technology



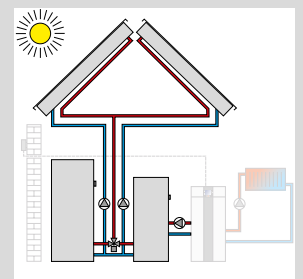
SM1-2 solar module

- 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
- Indication of set and actual values on the BM-2 programming unit
- Integral hours run meter
- eBUS interface with automatic energy management
- Rast 5 connection technology



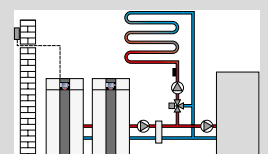
SM2-2 solar module

- 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
- Indication of set and actual values on the BM-2 programming unit
- eBUS interface with automatic energy management
- Rast 5 connection technology



KM-2 cascade module

- Extension module to control systems with a low loss header or cascade operation
- Suitable for gas condensing boilers [5 appliances]
- Easy controller configuration by selecting one of the preset system versions
- Switching of one heating circuit with mixer
- BM-2 programming unit slots into wall mounting base and can be extended to serve as a remote control
- 0-10 V input for BMS systems; 230 V fault message output
- eBUS interface with automatic energy management
- Rast 5 connection technology



OIL CONDENSING BOILERS TOB / TOB-TS

CONTROL ACCESSORIES

2-wire eBUS connection



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.



AFB analogue remote control

- Simple WRS remote control for heating circuits and circuits with mixer
- Each heating circuit can be operated separately with a remote control
- Integral room temperature sensor
- Temperature and program selection via rotary selector
- Only in conjunction with BM-2 programming unit



ISM 6 LON interface module

For communication between the control unit and the building management system using LON standard network variables



ISM8i Ethernet interface module

Interface module with disclosed TCP/IP protocol for system-independent integration of Wolf heating appliances and ventilation units.



KNX interface set

Interface kit for integration of Wolf heat generators into a KNX network

Comprising:

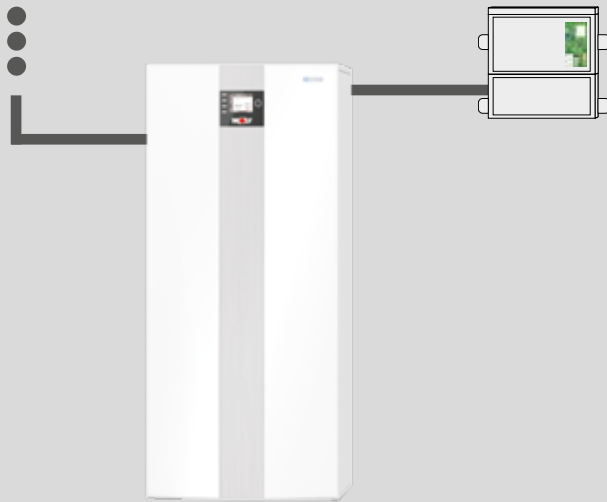
Interface module ISM8i, KNX-IP-BAOS module

Installation and operating instructions, network cable



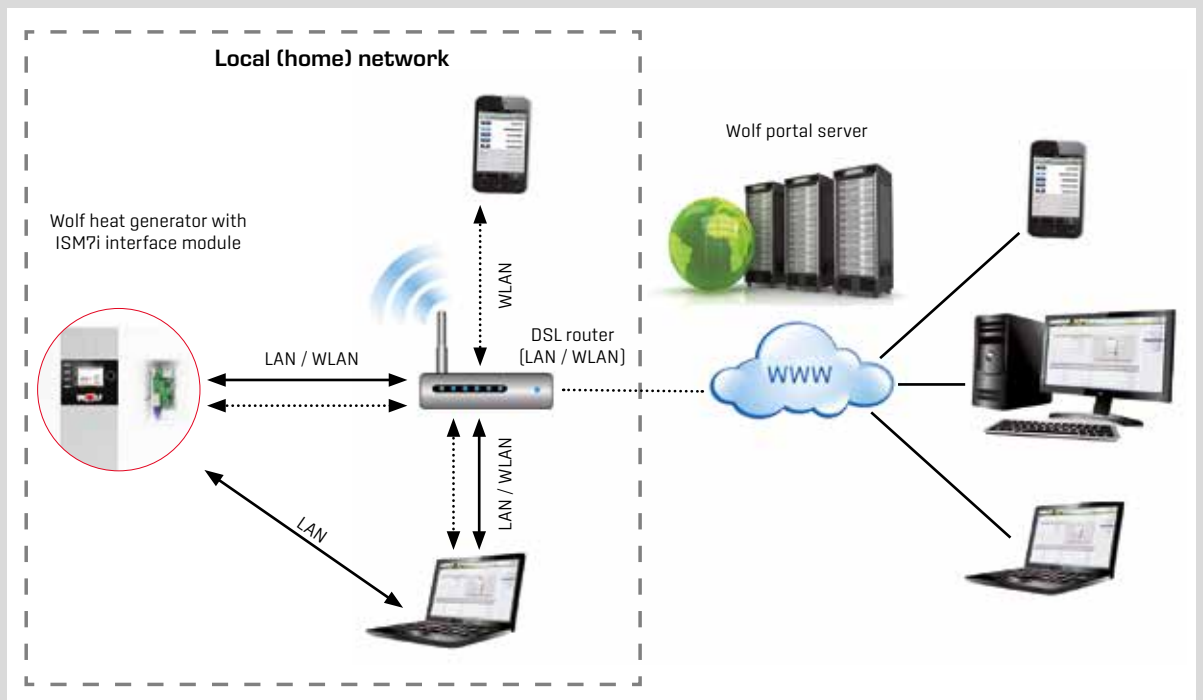
I/O module

Extension module for 2 programmable inputs and outputs



ISM7i interface module

LAN / WLAN interface for accessing the control unit via the internet or a local network. Operation via IOS, Android or Wolf portal. Installed into the junction box of the oil condensing boiler.

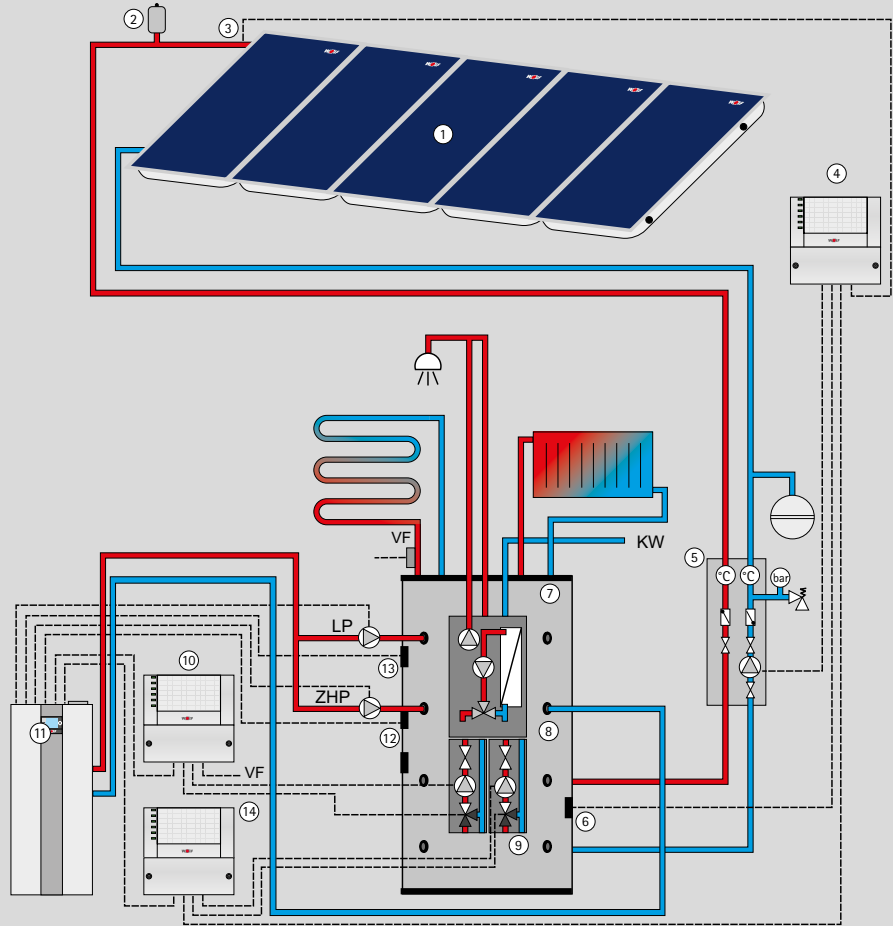


VERSIONS

WOLF SOLAR HEATING - CENTRAL HEATING & DHW HEATING

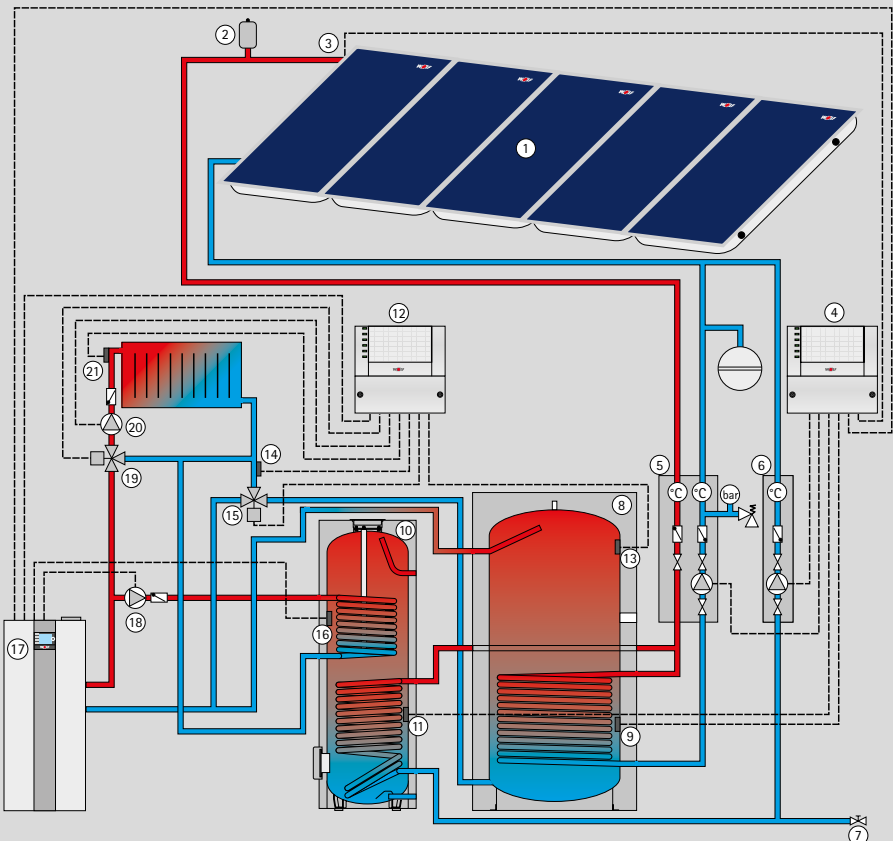
Solar DHW heating and central heating backup with BSP stratification buffer cylinder

- 1 Collector array
- 2 Air vent trap
- 3 Collector sensor
- 4 SM1-2 solar module
- 5 Pump/fitting assembly 5
- 6 Solar control cylinder sensor
- 7 BSP stratification buffer cylinder
- 8 Freshwater module for DHW heating
- 9 Heating circuit assembly, mixer circuit assembly
- 10 MM-2 mixer module
- 11 TOB oil condensing boiler with BM-2 programming unit
- 12 Common sensor
- 13 Cylinder sensor
- 14 MM-2 mixer module



Solar DHW heating and central heating backup with SEM-1 / SEM-2 solar DHW cylinder and SPU-2-W buffer cylinder

- 1 Collector array
- 2 Air vent trap
- 3 Collector sensor
- 4 SM2-2 solar module
- 5 Pump/fitting assembly
- 6 Pump/fitting assembly extension
- 7 Drain & fill valve
- 8 SPU-2-W buffer cylinder
- 9 Solar circuit cylinder sensor (buffer cylinder)
- 10 SEM-1 / SEM-2 solar DHW cylinder
- 11 Solar circuit cylinder sensor (DHW)
- 12 MM-2 mixer module (config. 4)
- 13 Buffer cylinder sensor (PF)
- 14 Return temperature sensor (RLF)
- 15 3-way changeover valve
- 16 Cylinder sensor, central heating
- 17 TOB oil condensing boiler with BM-2 programming unit
- 18 Cylinder primary pump, central heating
- 19 Mixer motor
- 20 Mixer circuit pump (MKP)
- 21 Mixer circuit flow sensor (VF)



COB / COB-TS	
DESCRIPTION	16
SPECIFICATION	17-18
STANDARD CONTROL UNIT	19
CONTROL ACCESSORIES	20-22
COMMON COMPONENTS	
INSTALLATION ACCESSORIES	23
AIR / FLUE GAS ROUTING	24-25
VERSIONS	26

COB OIL CONDENSING BOILER

FOR CENTRAL HEATING; CAN BE COMBINED WITH A FLOORSTANDING DHW CYLINDER, E.G. SEM-1 / SEM-2

- **WRS control system**
options to set and control via smartphone or PC
- **Two-stage blue flame burner** for open flue and balanced flue operation

RATED HEATING OUTPUT

for flow / return 50 / 30 °C stage 1 / 2

COB - 15	from 9.5 to 15.1 kW
COB - 20	from 13.9 to 20.0 kW
COB - 29	from 19.6 to 29.6 kW
COB - 40	from 26.8 to 40.0 kW



COB-TS OIL CONDENSING BOILER

FOR CENTRAL HEATING

WITH DHW STRATIFICATION CYLINDER

MADE FROM ENAMELLED STEEL

- **Convenient DHW heating**, cylinder capacity 160 l; comparable to a 200-260 l DHW cylinder with indirect coil
- **"DHW turbo"** with a new routing and distribution system for hot and cold water inside the DHW stratification cylinder ensures a smooth radial water distribution
- **Hot water always available** - even after filling a bath
- **Big savings on operating costs** through efficient DHW heating and innovative insulation technology
- **Use of condensing technology during cylinder heating** for maximum energy efficiency
- **Compact design** condensing boiler and DHW stratification cylinder, fully wired, with all hydraulics ready to connect for minimal assembly and installation costs

MODULATION RANGE
for flow / return 50 / 30 °C

DHW OUTPUT
l/10 min

COB - 15/TS	from 9.5 to 15.1 kW	250 litres
COB - 20/TS	from 13.9 to 20.0 kW	280 litres
COB - 29/TS	from 19.6 to 29.6 kW	300 litres

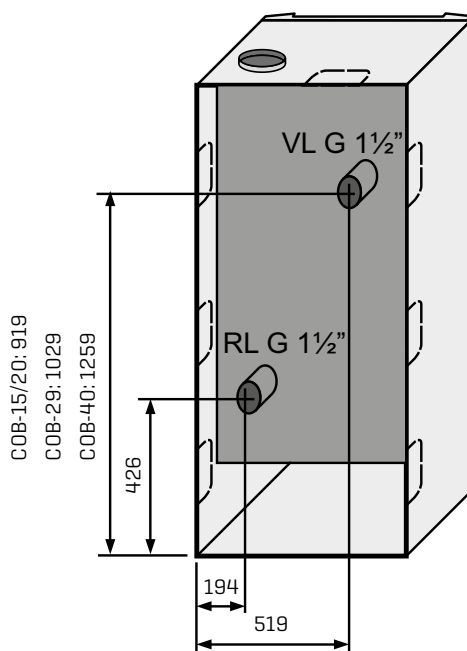
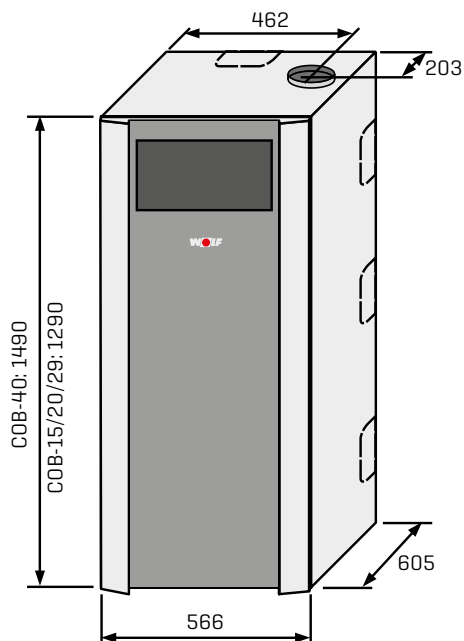


TYPE	COB	COB-TS			
		15	20	29	40
Energy efficiency class, central heating		A	A	A	A
Energy efficiency class, DHW heating		A	A	A	-
Rated heating output at 80/60 °C, stage 1/2	kW	9.0 / 14.4	13.1 / 19.0	18.5 / 28.2	25.3 / 38.0
Rated heating output at 50/30 °C, stage 1/2	kW	9.5 / 15.1	13.9 / 20.0	19.6 / 29.6	26.8 / 40.0
Rated load, stage 1/2	kW	9.2 / 14.7	13.5 / 19.6	19.0 / 29.0	26.0 / 38.8
Oil throughput, stage 1/2	kg/h	0.86 / 1.38	1.15 / 1.66	1.60 / 2.45	2.44 / 3.64
Rated capacity TS (equivalent)*	l	160 [200]	160 [240]	160 [260]	-
Continuous cylinder output TS*	kW/l/h	15 / 370	20 / 490	29 / 710	-
Output factor TS*	N _{LE0}	3.5	4.5	5.0	-
DHW output TS*	l/10 min	250	280	300	-
Standby input TS*	kWh/24 h		1.47		-
Max. permissible cold water supply pressure TS*	bar		10		-
Minimum anode current, sacrificial magnesium anode*	mA		> 0.3		-
External diameter, heating flow	G	1½"			
External diameter, heating return	G	1½"			
Drain connection		1"			
Oil connection, flow/return hoses	G	3/8"			
Cold water supply*	G	3/4"			-
DHW connection*	G	3/4"			-
DHW circulation connection*	G	3/4"			-
Balanced flue connection	mm	80/125			110/160
Air / flue gas routing	Type	B23, B33, C33(x), C43(x), C53(x), C63(x), C83(x), C93(x)			
Fuel oil to DIN 51603-1/6		Standard fuel oil EL, low sulphur fuel oil EL or biofuel oil B10			
Nozzle		Danfoss 0.30 / 80° S	Danfoss 0.40 / 80° S LE	Danfoss 0.55 / 80° S LE	Danfoss 0.55 / 80° S LE
Fuel oil filter		Siku max. 40 mm			
Pump pressure, stage 1/2	bar	5.0 ± 0.5/12.0 ± 1.0	8.5 ± 1.0/16.8 ± 2.5	8.5 ± 1.0/16.8 ± 2.5	11.0 ± 1.0/23.5 ± 2.5
Maximum negative pressure in oil line	bar	-0.3			
Flow temperature, factory setting	°C	80			
Max. flow temperature	°C	90			
Heating water pressure drop at ΔT=20 K / 10 K	mbar	3.6 / 12	6 / 21	17 / 55	54 / 205
Max. permissible boiler pressure	bar	3			
Water capacity of the heat exchanger	l	7.5		9.0	11.5
Standard seasonal efficiency [to DIN] at 40/30 °C (H _i / H _s)	%		105 / 99		104 / 98
Standard seasonal efficiency [to DIN] at 75/60 °C (H _i / H _s)	%	100 / 95	101 / 96	101 / 96	98 / 93
Efficiency at rated load at 80/60 °C (H _i / H _s)	%	97 / 91	97 / 92	97 / 91	98 / 92
Efficiency at 30 % partial load and TR=30 °C (H _i / H _s)	%		103 / 97		103 / 98
Boiler standby loss q _B at 70 °C [EnEV]	%	0.75		0.55	0.45
Flue gas mass flow rate, stage 2	g/s	6.45	9.06	13.33	17.51
Flue gas temperature 50/30 - 80/60 °C, stage 2	°C	40 - 63	49 - 69	55 - 76	56 - 83
Available fan draught, stage 2	Pa	65		105	150
Flue gas mass flow rate, stage 1	g/s	4.04	6.28	9.05	10.91
Flue gas temperature 50/30 - 80/60 °C, stage 1	°C	35 - 55	40 - 61	40 - 64	43 - 68
Available fan draught, stage 1	Pa	32	45	55	72
Amount of condensate at 40/30 °C	l/h	1.2	1.6	2.2	2.8
Condensate pH value		approx. 3			
Boiler weight	kg	92		99	122
Cylinder weight*	kg		76		-
Electrical connection	V-/Hz	230/50			
Integral fuse (medium time lag)	A	5			
Power consumption, stage 1 / stage 2	W	86/128	99/139	129/178	126/205
IP rating		IP 20			
CE designation		CE-0085BS0326			

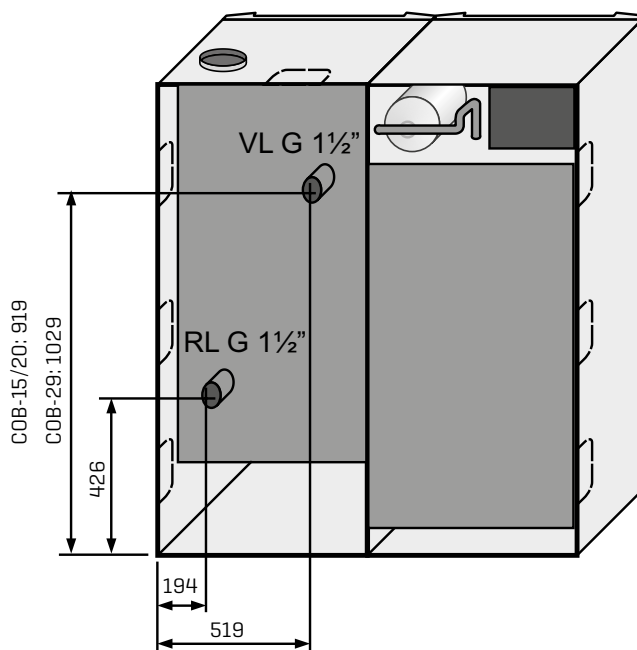
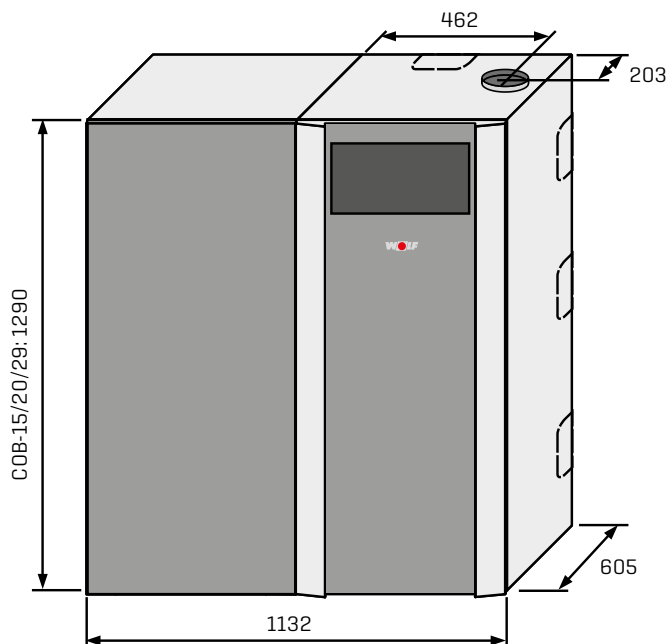
* Only for appliances with TS cylinder

**DIMENSIONS +
CONNECTION DIMENSIONS
COB / COB-TS**

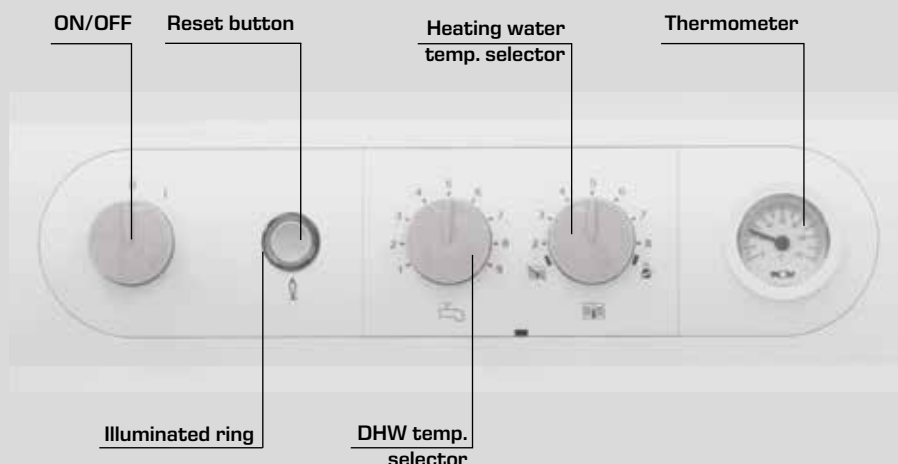
COB-15 / COB-20 / COB-29 / COB-40



COB-15/TS / COB-20/TS / COB-29/TS



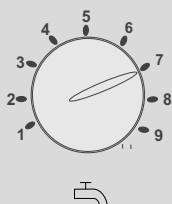
COB / COB-TS OIL CONDENSING BOILER STANDARD CONTROL UNIT



ILLUMINATED RING FOR STATUS DISPLAY

DISPLAY	MEANING
Flashing green	Standby (mains power supply ON; no heat demand)
Constant green light	Heat demand: pump running, burner OFF
Flashing yellow	Emissions test mode
Constant yellow light	Burner ON; flame steady
Flashing red	Fault

SETTING



DHW TEMPERATURE SELECTOR

The settings 1-9 correspond to a cylinder temperature of 15-65 °C. In combination with an external temperature controller the adjustment at the DHW temperature selector is without effect, the setting is then made at the external temperature controller.



HEATING WATER TEMPERATURE SELECTOR

The setting range 2-8 corresponds to a heating water temperature of 20-75 °C. In combination with an external temperature controller the adjustment at the heating water temperature selector is without effect, the setting is then made at the external temperature controller.




WINTER OPERATION (position 2 to 8)

The circulation pump operates in heating mode.




SUMMER MODE

Switch is set to  circulation pump OFF [heating OFF]; only DHW heating, frost protection and pump anti-seizing function are enabled, i.e. the circulation pump runs for approx. 30 s every 24 hours.



EMISSIONS TEST MODE

Turning the switch to position  lets the appliance operate at maximum heating output. The illuminated signal ring flashes yellow for 15 minutes or until the maximum flow temperature has been exceeded.



THERMOMETER/PRESSURE GAUGE

The heating water temperature and the heating system water pressure are displayed.

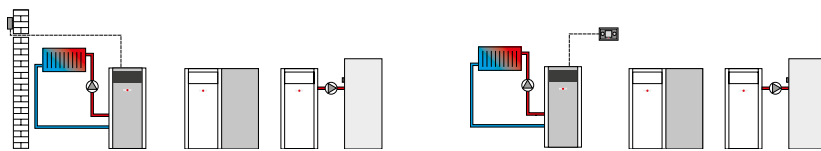
COB / COB-TS OIL CONDENSING BOILER CONTROL ACCESSORIES



The standard control unit is part of the oil condensing boiler standard delivery

BM programming unit (incl. outside temperature sensor) as weather-compensated temperature controller

BM programming unit with wall mounting base (accessories) as room temperature controller



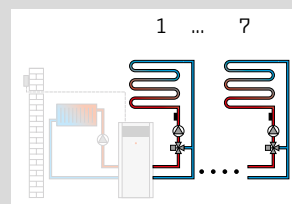
- Time programs for DHW and central heating
- Backlit LCD
- Easy user prompts via plain text display
- Control by rotary selector with pushbutton function
- 4 function keys for frequently used functions (heating, DHW, setback, info)
- Installation either inside the boiler control unit or in wall mounting base as a remote control
- Option for MM mixer module
- Only one programming unit required for multi boiler systems
- Can be extended with MM mixer module (up to 7 heating circuits with mixer)

2-wire eBUS connection



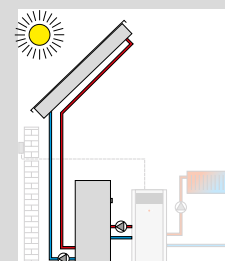
MM mixer module

- 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 with wall mounting base can be extended to serve 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 programming unit
- Integral hours run meter
- eBUS interface with automatic energy management
- Rast 5 connection technology

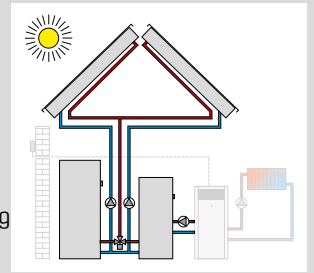


2-wire eBUS connection



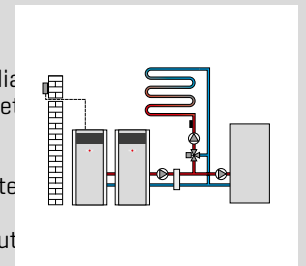
SM2-2 solar module

- 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 programming unit
- eBUS interface with automatic energy management
- Rast 5 connection technology



KM cascade module

- Extension module for controlling systems with a low loss header or cascade operation
- Can be used for oil condensing boiler control units (4 applications)
- Easy controller configuration by selecting one of the preset system versions
- Switching of one heating circuit with mixer
- BM programming unit with wall mounting base can be extended to serve as a remote control
- 0-10 V input for BMS systems; 230 V fault message output
- eBUS interface with automatic energy management
- Rast 5 connection technology



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.



AFB analogue remote control

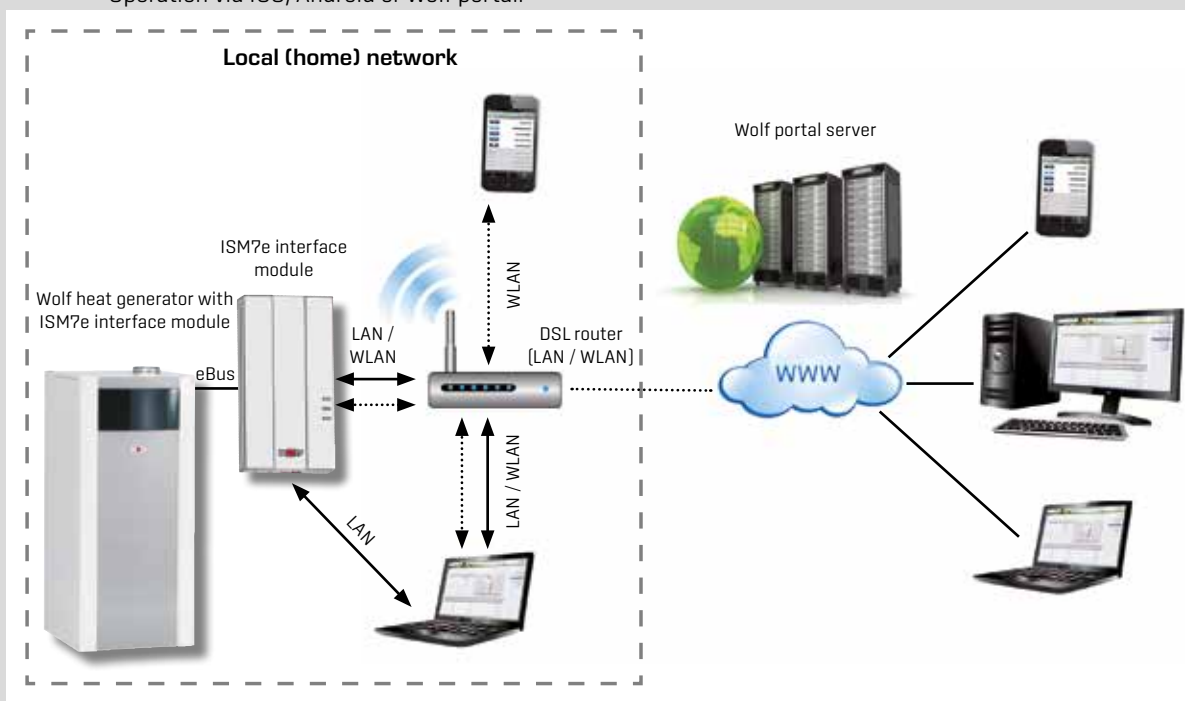
- Simple WRS remote control for heating circuits and circuits with mixer
- Each heating circuit can be operated separately with a remote control
- Integral room temperature sensor
- Temperature and program selection via rotary selector
- Only in conjunction with BM-2 programming unit

COB / COB-TS OIL CONDENSING BOILER CONTROL ACCESSORIES



ISM7e interface module

LAN / WLAN interface for accessing the control unit via the internet or a local network.
Operation via IOS, Android or Wolf portal.



TOB / TOB-TS / COB / COB-TS OIL CONDENSING BOILERS INSTALLATION ACCESSORIES

We recommend making the connection to the heating system with the following parts from the Wolf accessories range.



Connection kit for COB / TOB standing against the wall

Comprising:

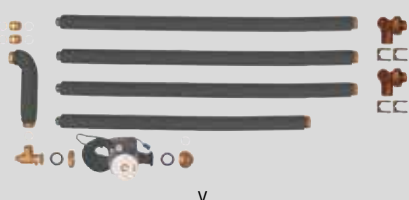
- 2 cross pieces, each with one connection
- 2 hose clips
- 1 corrugated stainless steel pipes 1", length 1300 mm
- 1 corrugated stainless steel pipes 1", length 800 mm
- 1 silicone grease tube



Connection kit for COB / TOB with TS standing against the wall

Comprising:

- 2 cross pieces, each with 2 connections
- 4 hose clips
- 3 corrugated stainless steel pipes 1", length 1300 mm
- 1 corrugated stainless steel pipes 1", length 800 mm
- 2 corrugated stainless steel pipes 3/4", length 800 mm
- 1 silicone grease tube
- 1 trimming set 3/4"



Connection kit for COB / TOB standing against the wall, for cylinders SE-2 up to 750 l, SEM-1 up to 750 l or SEM-2 up to 400 l

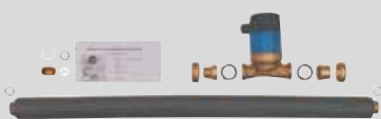
- 2 cross pieces, each with 2 connections
- 3 corrugated stainless steel pipes 1", length 1300 mm
- 1 corrugated stainless steel pipes 1", length 800 mm
- 4 hose clips
- 1 pipe bend
- 1 silicone grease tube
- 6 flat gaskets 1"
- 2 flat gaskets 1 1/2" EPDM
- 1 UPS pump 25-60
- 1 adaptor fitting G1 1/2" (fem.) to G1" (male)
- 2 twin connectors G1" (male) - G1"
- 1 elbow with air vent



TS accessory set for cold water

Comprising:

- 1 expansion vessel, 8 l
- 1 cold water connection pipe to the expansion vessel
- 2 twin connectors 3/4"
- 1 trimming set 3/4"



TS DHW circulation pump accessory set

Comprising:

- 1 DHW circulation pump
- 1 corrugated stainless steel pipe 3/4"
- 1 trimming set 3/4"



Pipe assembly

Comprising:

- 1 circulation pump
- 2 thermometers in flow and return
- 2 ball valves in flow and return
- incl. / excl. mixer
- with manifold for 2 or 3 pipe assemblies



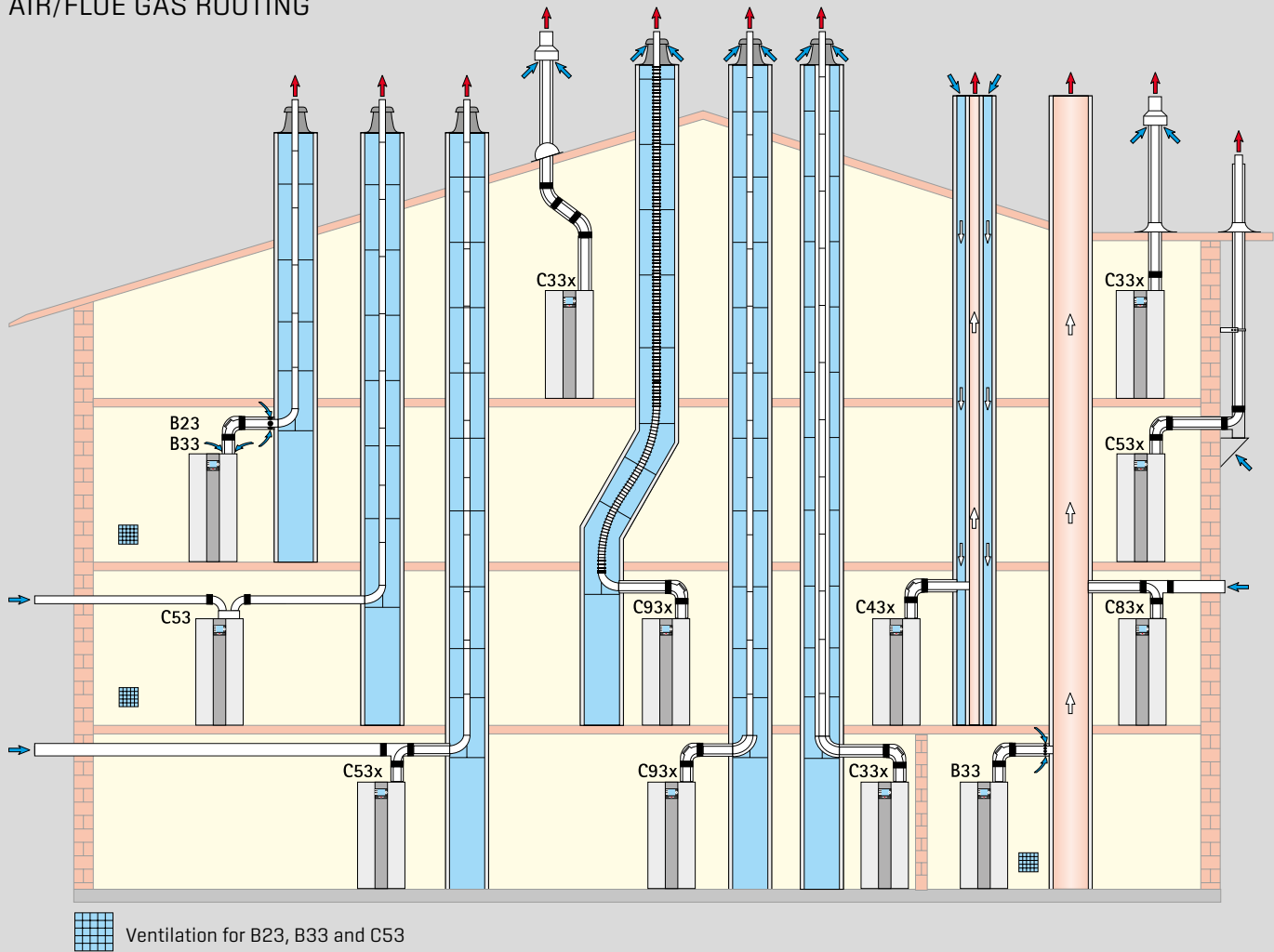
COB / TOB safety assembly

Additional accessories:

neutralisation, condensate removal pump, wall retainer kit for pipe assembly.
See also "Heating systems" pricelist.

TOB / TOB-TS / COB / COB-TS OIL CONDENSING BOILERS

AIR/FLUE GAS ROUTING

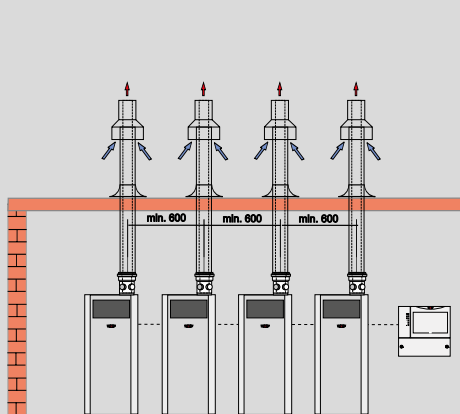


Connection types

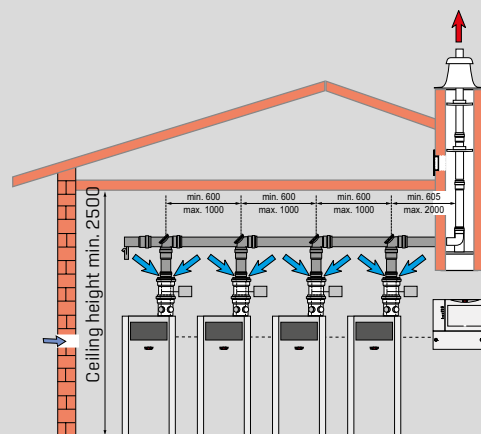
Appliance type <small>1, 2)</small>	Operating mode		Can be connected to				
	Open flue	Balanced flue	Moisture-resistant chimney	Balanced flue chimney	Air/flue gas duct	Certified balanced flue	Moisture-resistant flue
B23, B33, C33x, C43x, C53, C53x, C63x, C83x, C93x	Yes	Yes	B23, B33, C83x	C43x	C33x, C53x, C93x	C63x	B23, B33, C53x

¹⁾ Mark "x" indicates that all components of the flue are surrounded by combustion air and meet higher requirements for gas tightness.

²⁾ For types B23 and B33, the combustion air is drawn from the installation room (open flue combustion equipment).
For type C, the combustion air is drawn through a sealed system from the outside (balanced flue combustion equipment).



COB-29/40 cascade operation with separate vertical concentric air/flue gas duct, type C33x.



COB-29/40 cascade operation with common flue

TOB / TOB-TS / COB / COB-TS OIL CONDENSING BOILERS AIR/FLUE GAS ROUTING

Condensing boiler versions		Maximum length ¹⁾					
		TOB-18	COB-15	COB-20	COB-29	COB-40	
B23	Flue in a duct and combustion air directly via the appliance (open flue)	DN 60	18	20	-	-	-
		DN 80	30	30	30	30	-
		DN 110	-	-	-	-	30
B33	Flue in a duct with horizontal, concentric supply line (open flue)	DN 60	16	18	-	-	-
		DN 80	30	30	30	30	-
		DN 110	-	-	-	-	30
B 33	Connection to a moisture-resistant flue gas chimney with a horizontal concentric connection pipe (open flue)	Calculation to EN 13384 (balanced flue chimney manufacturer)					
C33x	Vertical concentric roof outlet through a pitched or flat roof, vertical concentric balanced flue for installation in a duct, (balanced flue)	DN 60/110	9	9	-	-	-
		DN 80/125	24	24	22	18	-
		DN 110/160	-	-	-	-	14
C43x	Connection to a moisture-resistant balanced flue chimney, maximum pipe length from centre of boiler bend to connection 3 m (room sealed)	Calculation to EN 13384 (balanced flue chimney manufacturer)					
C53	Connection to the flue in a shaft and supply air pipe through an external wall (balanced flue, supply air pipe 4 m, 1x bend 87°)	DN 80/125	30	30	30	30	-
		DN 110/160	-	-	-	-	30
C53x	Connection to a flue on an external wall (room sealed/balanced flue)	DN 80/125	30	30	30	30	-
		DN 110/160	-	-	-	-	30
C53x	Connection to the flue in a shaft and supply air through an external wall (balanced flue, supply air pipe 4 m, 1x bend 87°)	DN 80/125	30	30	30	30	-
		DN 110/160	-	-	-	-	30
C83x	Concentric connection to moisture-resistant flue gas chimney and combustion air through external wall (room sealed/balanced flue)	Calculation to EN 13384 (balanced flue chimney manufacturer)					
C93x	Vertical flue for installation in a shaft, with minimum dimensions rigid or flexible with horizontal concentric connection pipe DN 60/110, vertical DN 60	Rigid DN 60	12	13	-	-	-
		Flexible DN 60	8	9	-	-	-
C93x	Vertical flue for installation in a shaft, with minimum dimensions rigid or flexible with horizontal concentric connection pipe DN 80/125, vertical DN 80 or DN 83	Rigid DN 80	25	29	24	21	-
		Flexible DN 83	24	27	21	17	-
C93x	Vertical flue for installation in a shaft, with minimum dimensions rigid or flexible with horizontal concentric connection pipe DN 110/160, vertical DN 110	Rigid DN 110	-	-	-	-	22
		Flexible	-	-	-	-	2)

¹⁾ Available fan draught: TOB-18: 20-70 Pa / COB-15: 32-65 Pa / COB-20: 45-65 Pa / COB-29: 55-105 Pa / COB-40: 70-150 Pa
[The maximum length corresponds to the total length from the appliance to the flue terminal].

²⁾ For flexible vertical flue for shaft installation with horizontal concentric connection pipe calculate the max. length to EN 13384 (balanced flue chimney manufacturer).

Note: Systems C33x and C83x are also suitable for installation in garages.

The calculation was made taking the pressure conditions into account (geodetic height: 325 m).

Where necessary, adapt the installation examples to the relevant building regulations and requirements in your country/region. Any questions relating to the installation, particularly regarding the provision of inspection components and ventilation apertures (ventilation generally required above 50 kW output) should be raised with your local flue gas inspector prior to installation.

The specified lengths refer to concentric balanced flues and standard flues, and apply to original Wolf components only.

Calculating the length of the air/flue gas routing

The calculated length of the balanced flue or standard flue is derived from the straight pipe length and the length equivalent of any pipe bends.

Example:

Length of straight balanced flue pipe = 1.5 m

87° bend = 2.0 m

2 x 45° bends = 2 x 1.2 m

L = 1.5 m + 1 x 2.0 m + 2 x 1.2 m

L = 5.9 m

Balanced flue systems DN 60/100, DN 80/125 and DN 110/160 are certified as systems together with Wolf oil condensing boilers.

The following balanced flues or standard flues with CE-0036-CPD-9169003 certification may be used:

- flue DN 60, DN 80, DN 110, DN 125 and DN 160
- concentric balanced flue DN 60/100, DN 80/125 and DN 110/160
- concentric balanced flue (on an external wall) DN 80/125
- flexible flue DN 60, DN 83 and DN 110

Wolf accessories are supplied with the necessary ID labels.

Please also observe the installation information supplied with the accessories.

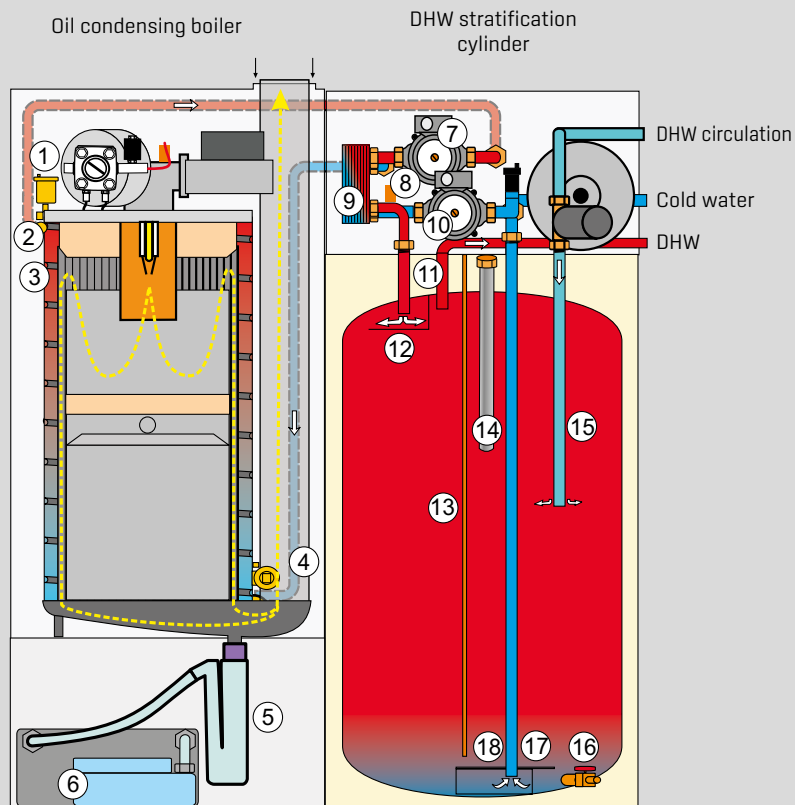
Bend	Type	Calculated length [m]
30°	Single wall	0.4
45°	Single wall	0.6
87°	Single wall	1.0
30°	Concentric	0.7
45°	Concentric	1.2
87°	Concentric	2.0

VERSIONS

CENTRAL HEATING - DHW HEATING TOB / TOB-TS / COB / COB-TS

Oil condensing boiler with DHW stratification cylinder

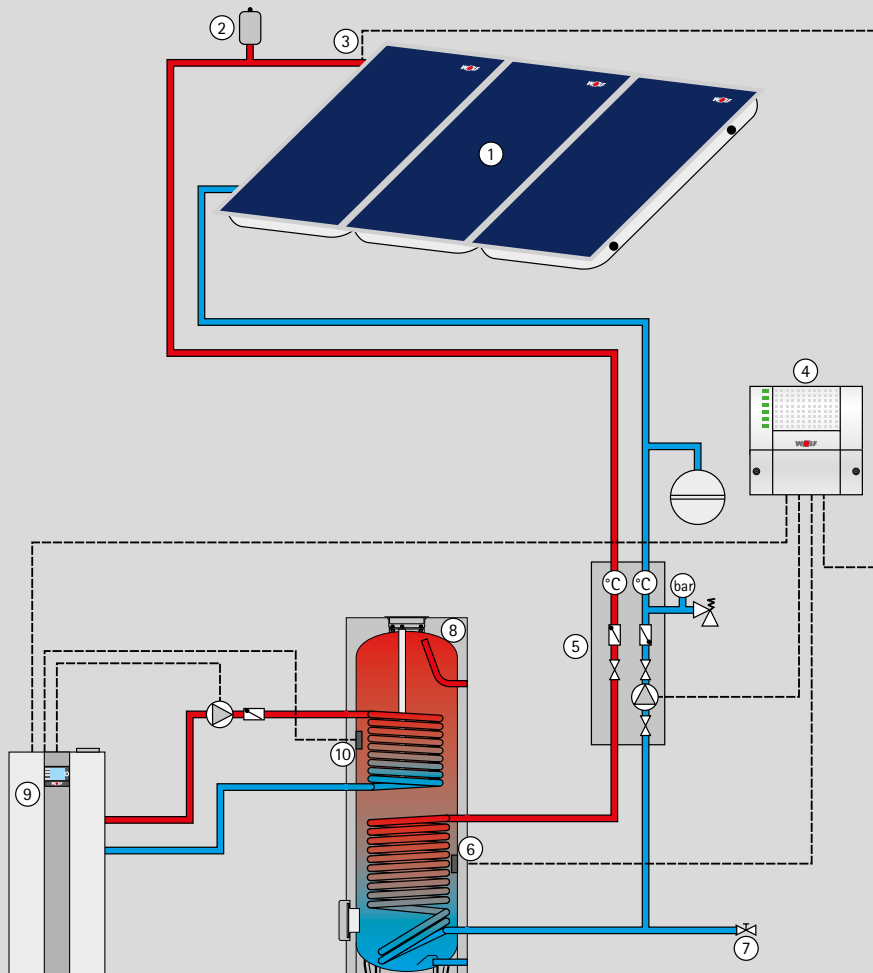
- 1 Automatic air vent valve (in standard delivery)
- 2 High limit safety cut-out
- 3 Flow temperature sensor
- 4 Flue gas temperature sensor
- 5 Trap
- 6 Condensate pump with neutralising system
- 7 Cylinder primary pump
- 8 Cylinder heating sensor
- 9 Plate heat exchanger in the cylinder
- 10 Stratification pump, controlled
- 11 Hot water draw-off for cylinder heating
- 12 Cylinder heating from above with deflector and divider
- 13 Sensor well for cylinder temperature sensor
- 14 Sacrificial magnesium anode
- 15 DHW circulation line
- 16 Boiler drain outlet (in standard delivery)
- 17 Cold water supply with control and distribution device
- 18 Cold water draw-off for cylinder heating

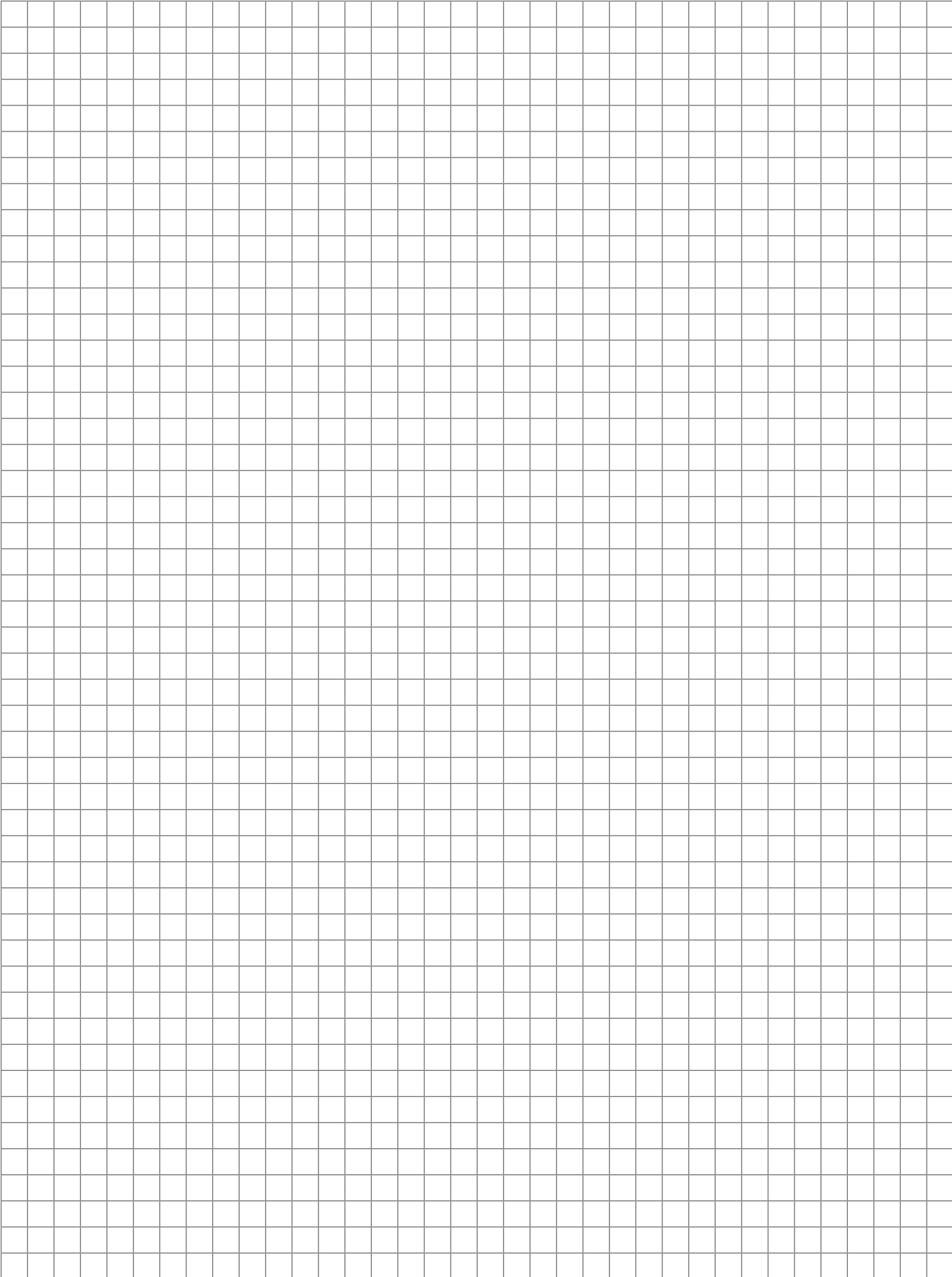


WOLF SOLAR HEATING - CENTRAL HEATING & DHW HEATING TOB / COB

TOB / COB with SEM-1 / SEM-2 DHW solar cylinder and a collector array

- 1 Collector array
- 2 Air vent trap
- 3 Collector sensor
- 4 SM1-2 solar module
- 5 Solar pump assembly 10
- 6 Solar control cylinder sensor
- 7 Drain & fill valve
- 8 SEM-1 / SEM-2 solar DHW cylinder
- 9 TOB oil condensing boiler with BM-2 programming unit
- 9 COB oil condensing boiler with BM programming unit
- 10 Cylinder sensor, heating





Dealer address

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