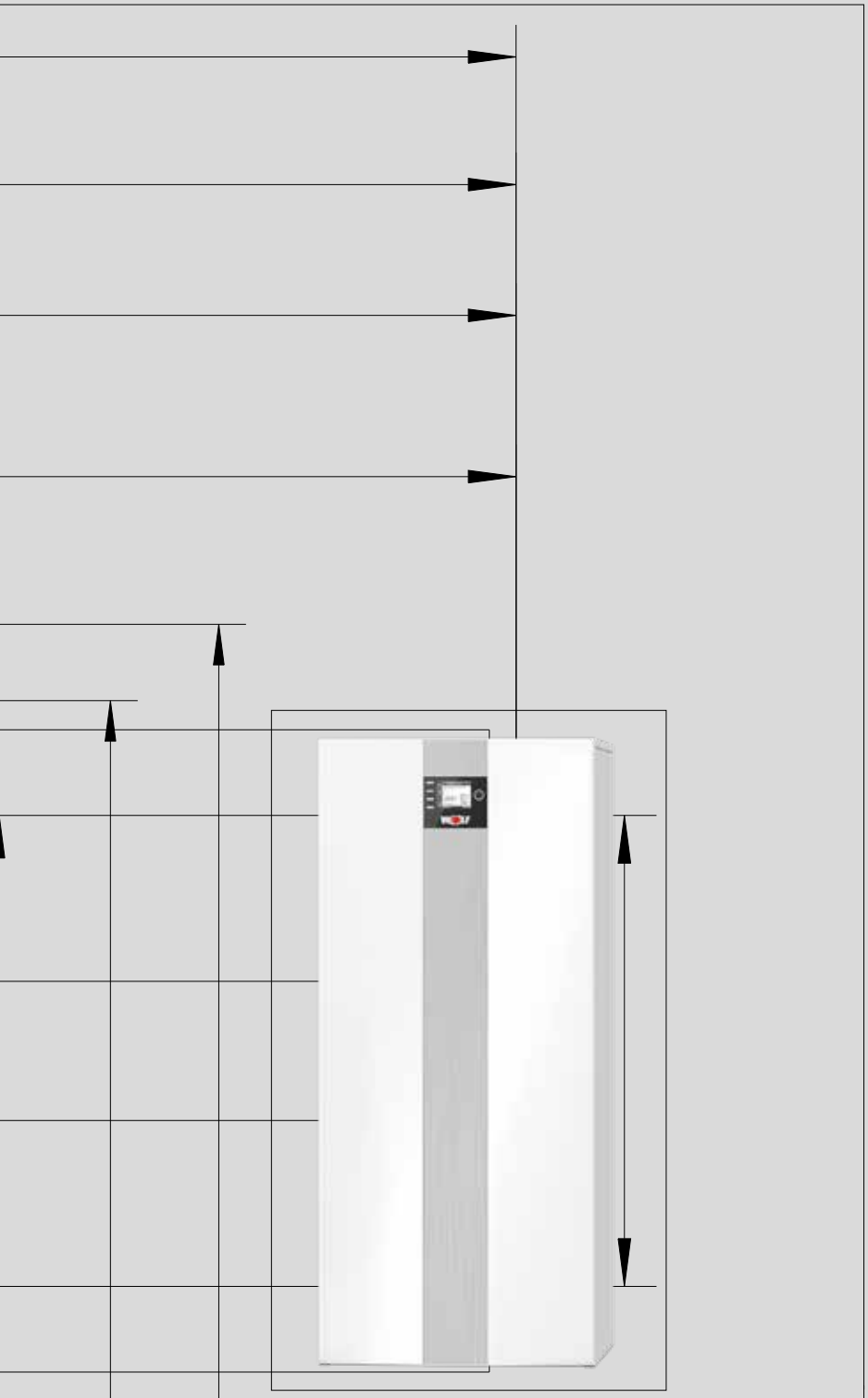
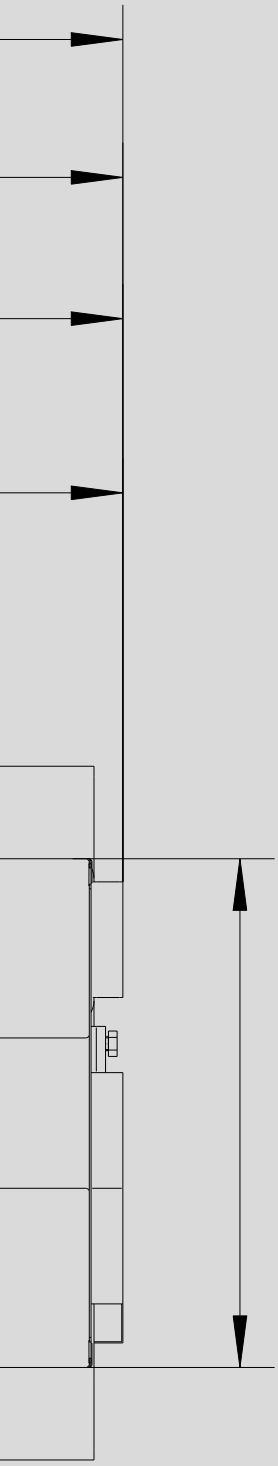
WOLF
OIL CONDENSING
BOILER

TOB / TOB-TS /
COB-2 / COB-2-TS





THE EXTENSIVE
PRODUCT RANGE

from system supplier WOLF offers the ideal solution for commercial and industrial buildings, new builds 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.

Tried and tested combustion principle: pressure vaporisation
in the modulating **TOB** and the two-stage **COB-2**

Extremely easy to service:
With "integrated workbench"
Everything accessible from the front
Can be inspected from the top

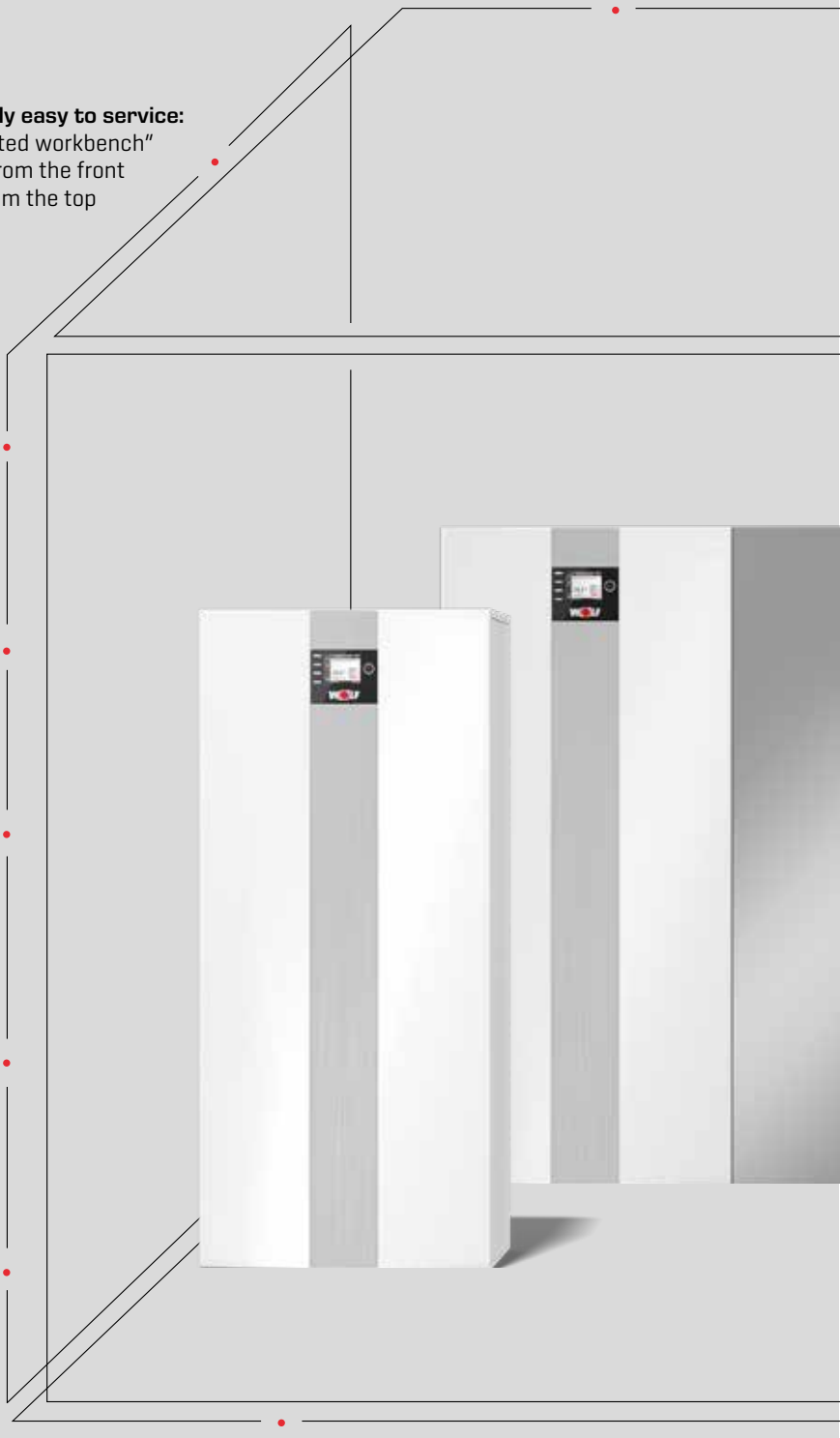
Save oil and electricity:
No need for electric oil preheating!
Energy efficiency class A (central heating)
Standard seasonal efficiency (to DIN) net cv
up to 105 %

Particularly light:
Easy to transport and handle

Neutralisation system can be integrated
and space is also available for the
condensate lifting pump

Compact refrigerator-style format
Corner installation possible
Takes up just 0.34 m² of floor space
Suitable for almost every installation location

Individual system solutions
with compact **TS stratification cylinder**



Easy to combine with CWL-T-300 mechanical ventilation unit
for a central building services station

Smart home capable:
WOLF Link home internet interface can be integrated for communication via smartphone, PC, etc.

Durable components, such as:
Low maintenance Al-Si heat exchanger
Extremely robust ceramic flame tube

15

BENEFITS OF WOLF OIL CONDENSING BOILERS

TOB / TOB-TS
COB-2 / COB-2-TS

Cascadable
up to 160 kW

Hybrid-capable
Ready to be intelligently combined with WOLF heat pumps

Universal fuel use
Suitable for bio-oil, standard fuel oil and low sulphur fuel oil

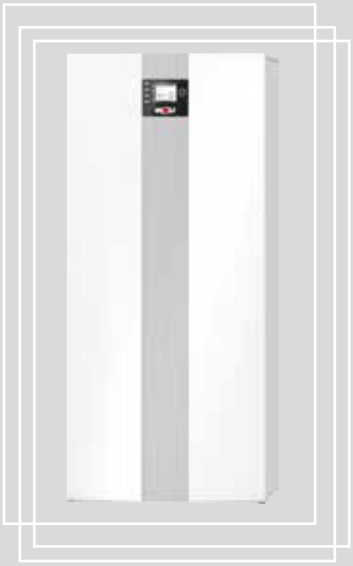
Extremely quiet
due to integrated exhaust gas silencer,
ErP Directive sound power level only 53 dB(A) (15 kW)

Easy to commission and intuitive to use
New WRS-2 control system
BM-2 control unit and **IBN assistant** can be integrated
Spread control for TOB

TOB / COB-2

OIL CONDENSING BOILER FOR HEATING

Can be combined with floorstanding cylinder, e.g. SEM-1 / SEM-2, in order to use an additional heat source, e.g. solar collectors



- **New WOLF control system WRS 2**
  options to set and control via smartphone or PC

- **TOB with modulating blue flame burner**
  1 boiler type with modulation range for flow / return 50 / 30°C

BOILER TYPE	MODULATION RANGE
TOB-18	6.6 kW to 18.6 kW

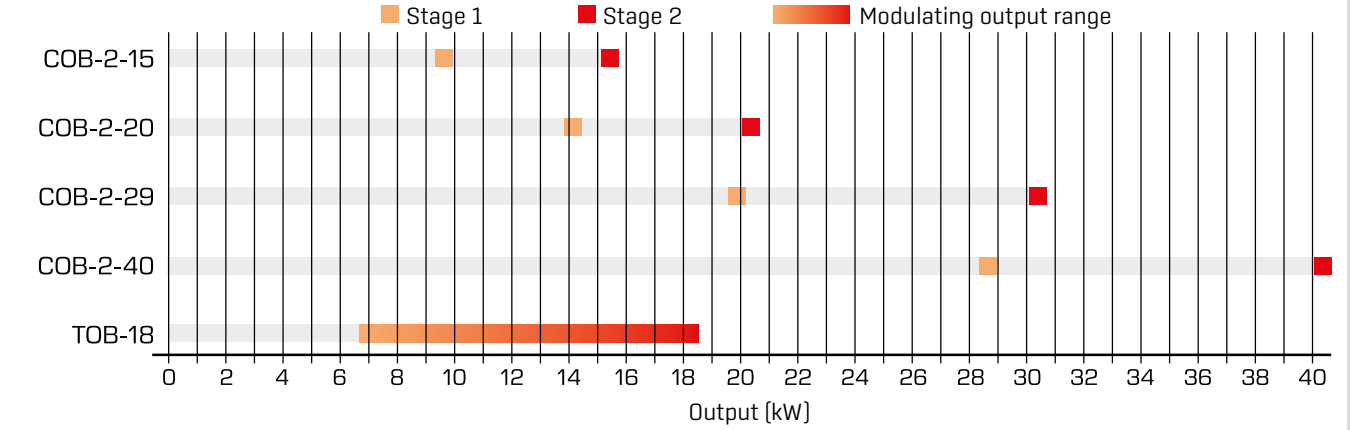
for open flue and room sealed operation

- **COB-2 with two-stage blue flame burner**
  4 boiler types with rated heating output for flow / return 50 / 30°C

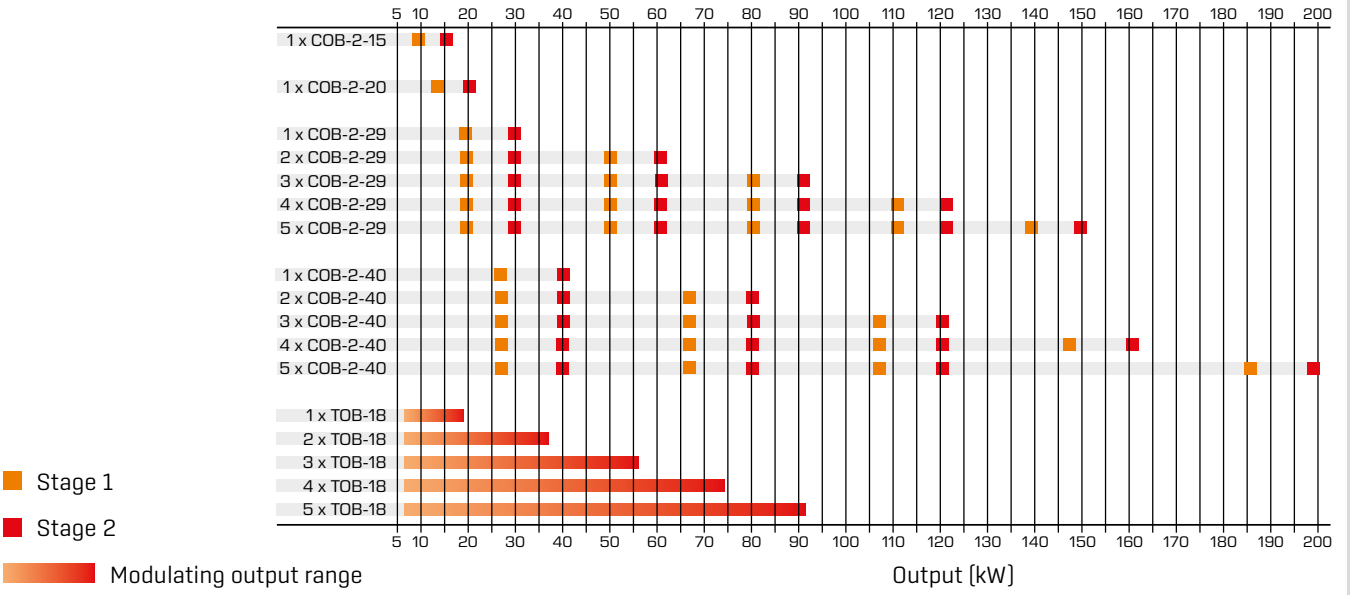
BOILER TYPE	STAGE 1	STAGE 2
COB-2-15	9.6 kW	15.4 kW
COB-2-20	14.1 kW	20.4 kW
COB-2-29	19.9 kW	30.4 kW
COB-2-40	28.7 kW	40.4 kW

for open flue and room sealed operation

OUTPUT RANGES
COB-2 / TOB



OUTPUT RANGES
COB-2 / TOB IN CASCADE MODE



TOB-TS / COB-2-TS

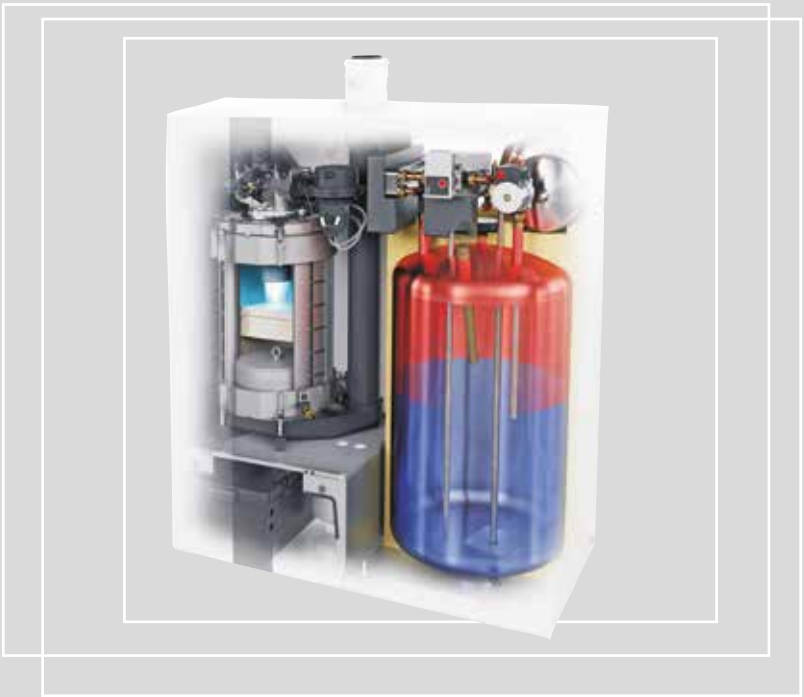
OIL CONDENSING BOILER FOR HEATING
with TS stratification cylinder

- **Compact design** condensing boiler and TS stratification cylinder, fully wired, with all hydraulics ready to connect for minimal assembly and installation costs
- **Expansion vessel and circulation pump** can be integrated
- **Enamelled steel cylinder** for hygienic DHW heating and long service life
- **Convenient DHW heating**, cylinder capacity 160 l; comparable to a 200 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 ensure a calm, radial water distribution for excellent DHW performance (patented)
- **Hot wate**r 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

BOILER TYPE	DHW OUTPUT TS stratification cylinder
TOB-18	270 litres / 10 min
COB-2-15	250 litres / 10 min
COB-2-20	280 litres / 10 min
COB-2-29	300 litres / 10 min

TOB-TS

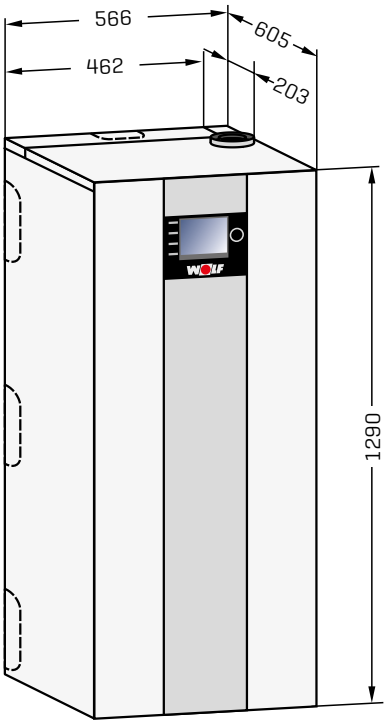
OIL CONDENSING BOILER FOR HEATING
with TS stratification cylinder

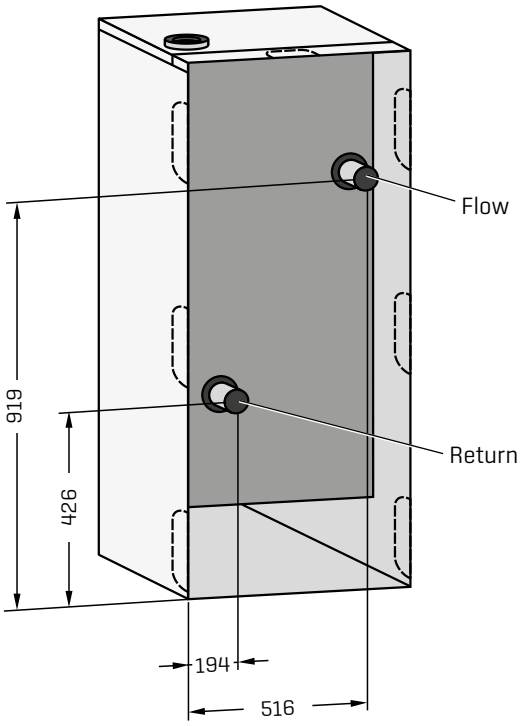


SPECIFICATION		TOB	18		-
		TOB-TS	-		18
Energy efficiency class, central heating			A		A
Energy efficiency class, DHW heating			-		A
Min./max. rated heating output at 80/60 °C	kW		6.3 / 17.7		
Min./max. rated heating output at 50/30 °C	kW		6.6 / 18.6		
Min./max. rated input	kW		6.4 / 18.1		
Min./max. oil throughput	kg/h		0.53 / 1.52		
Nominal capacity / equivalent nominal capacity of the cylinder	L		-		160 / 200
Continuous cylinder output	L/h		-		440
Output factor	N_{L60}		-		4
DHW output	L/10min		-		270
Standby heat loss	kWh/24 h		-		1.47
Air / flue pipe diameter	mm		80/125		
Air / flue gas routing			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		80		
Max. flow temperature	°C		90		
Heating water pressure drop (at Δt = 20 K / 10 K)	mbar		7 / 20		
Overall positive pressure, heating	bar / MPa		3 / 0,3		
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		
Appliance 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		
Appliance weight	kg		92		
Cylinder weight	kg		-		76
IP rating	IP		IP20		
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-0085CO0305		

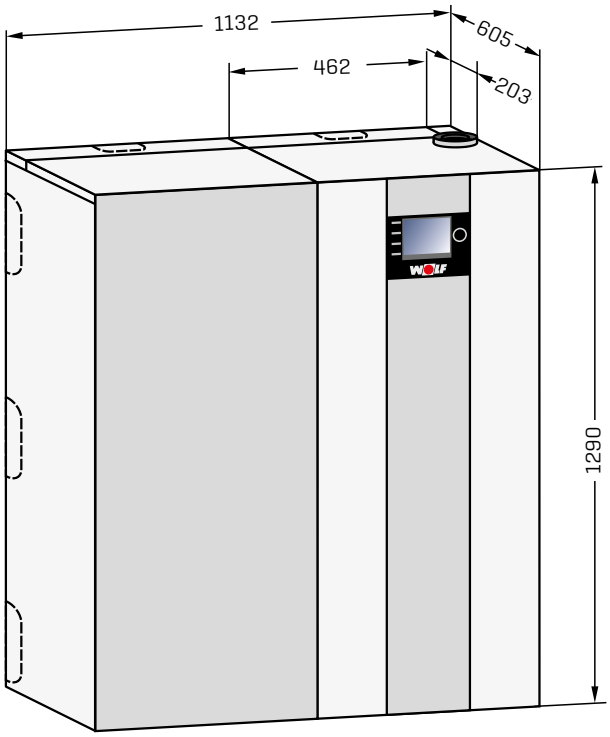
* This nozzle enables the emission requirements to be met in accordance with the standard and guarantees reliable operation. No other nozzles are permissible!

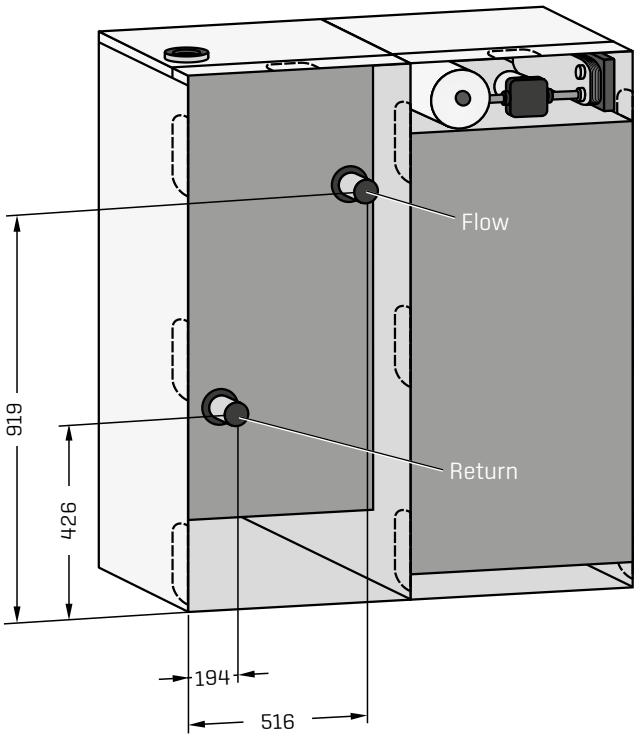
TOB


566
605
462
203
1290


Flow
Return
919
426
194
516

TOB-TS

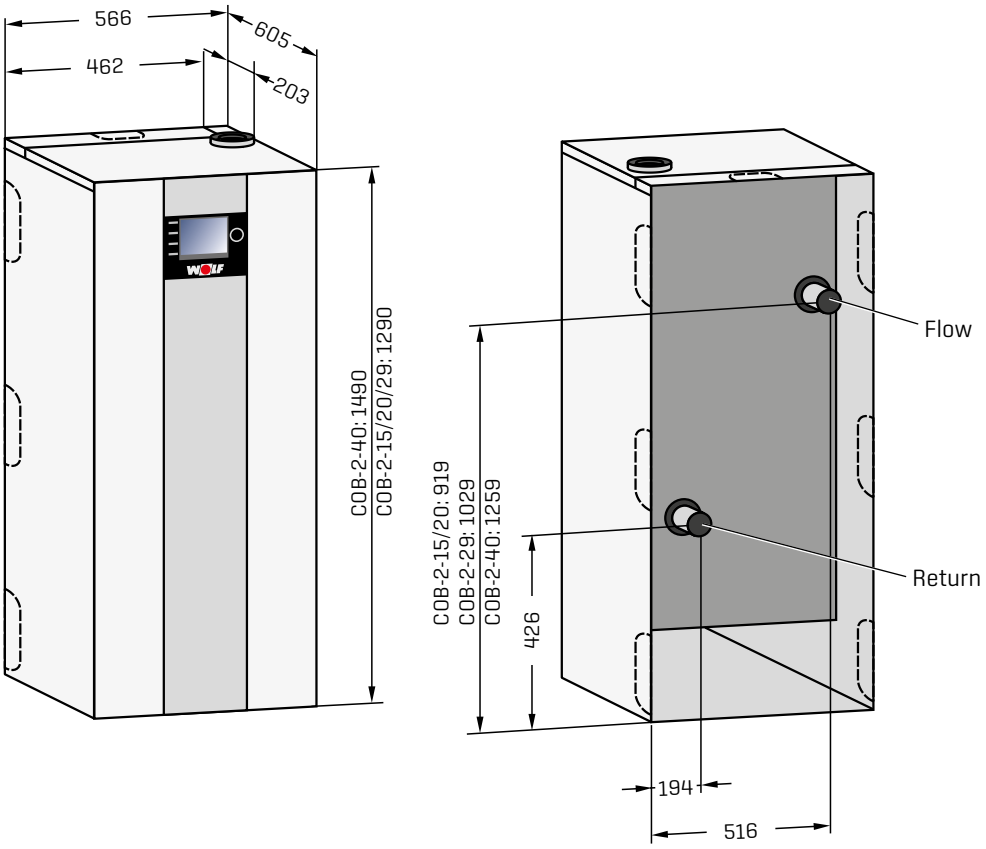

1132
605
462
203
1290


Flow
Return
919
426
194
516

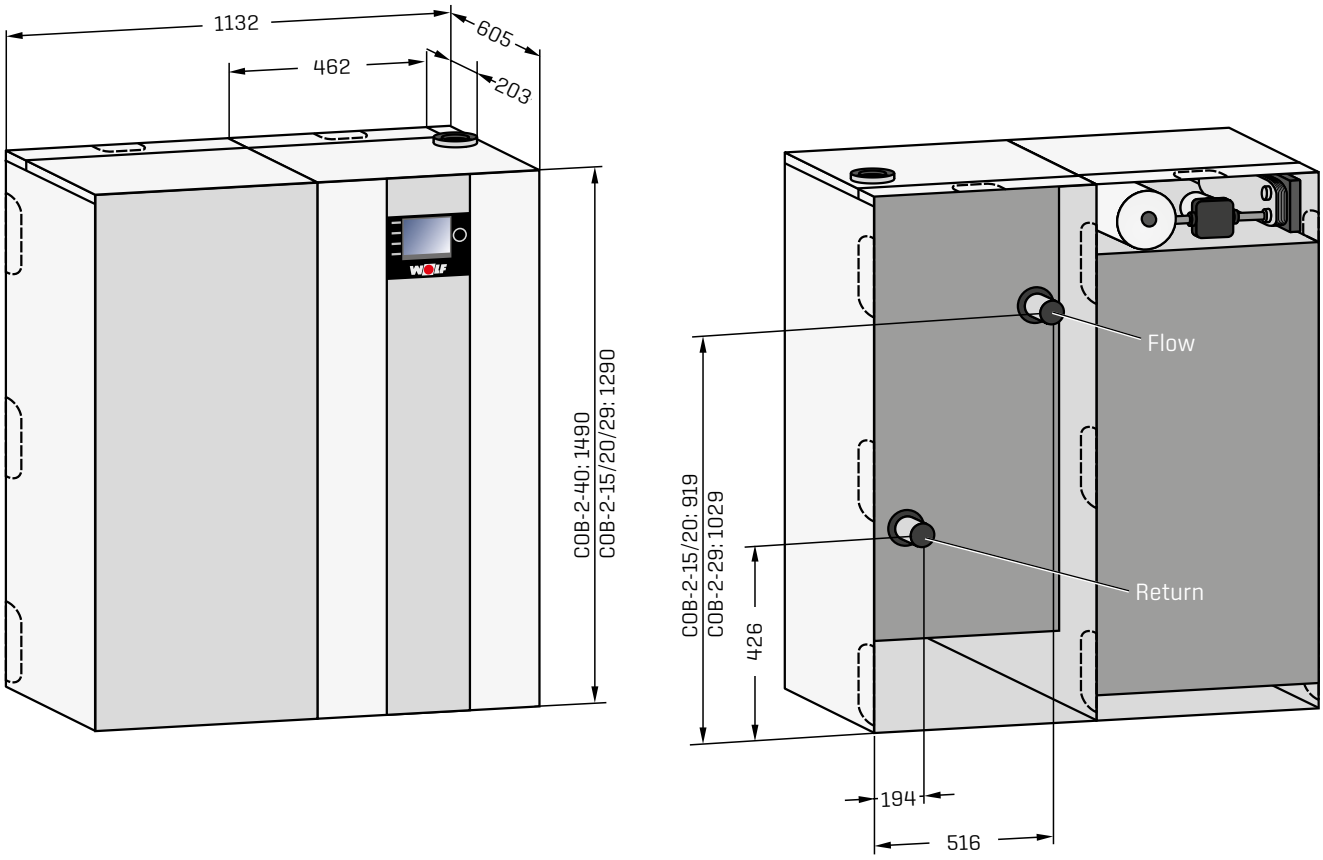
SPECIFICATION		COB-2	15	20	29	40
		COB-2-TS	15	20	29	-
Energy efficiency class, central heating			A	A	A	A
Energy efficiency class, DHW heating			A	A	A	-
Rated heating output at 80/60 °C, stage 1/2	kW		9.2 / 14.7	13.4 / 19.5	18.9 / 28.8	27.4 / 38.5
Rated heating output at 50/30 °C, stage 1/2	kW		9.6 / 15.4	14.1 / 20.4	19.9 / 30.4	28.7 / 40.4
Rated load, stage 1/2	kW		9.2 / 14.7	13.5 / 19.6	19.0 / 29.0	27.5 / 38.7
Oil throughput, stage 1/2	kg/h		0.78 / 1.24	1.14 / 1.65	1.60 / 2.44	2.32 / 3.26
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_{L60}		3.5	4.5	5.0	-
DHW output TS*	L/10min		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		⅜"			
Cold water supply*	G		¾"			-
DHW connection*	G		¾"			-
DHW circulation connection*	G		¾"			-
Air / flue pipe 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	0.35 / 60° S	0.45 / 80° S	0.55 / 80° S
Fuel oil filter			Siku max. 40 µm			
Pump pressure stage 1/2	bar		5 / 13.5	8.5 / 17	9.8 / 24	14 / 25
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
Overall positive pressure, heating	bar / MPa		3 / 0,3			
Water capacity of the heat exchanger	L		7.5		9.0	11.5
Standard seasonal efficiency (to DIN) at 40/30 °C (net cv / gross cv)	%		105 / 99			104 / 98
Standard seasonal efficiency (to DIN) at 75/60 °C (net cv / gross cv)	%		100 / 95	101 / 96	101 / 96	98 / 93
Efficiency at rated load at 80/60 °C (net cv / gross cv)	%		99.7 / 94.1	99.5 / 93.9	99.6 / 94.0	99.5 / 93.9
Efficiency at 30 % partial load, TR=30 °C (net cv / gross cv)	%		104.7 / 98.8	104.1 / 98.2	104.7 / 98.8	104.3 / 98.4
Boiler standby loss qB 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
TS cylinder* weight	kg		76			-
Electrical connection	V~/Hz		230/50			
Integral fuse (medium time lag)	A		4			
Electr. power consumption, stage 1 / stage 2	W		88 / 128	92 / 128	111 / 176	127 / 209
IP rating			IP20			
CE designation			CE-0085CT0160			

* Only for oil condensing boilers with TS cylinder

COB-2-15 / COB-2-20 / COB-2-29 / COB-2-40



COB-2-15-TS / COB-2-20-TS / COB-2-29-TS



STANDARD CONTROL UNITS

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

AM **or** **BM-2**

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 screen
- 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
- Simple 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 heat generator control unit or as a remote control in a wall mounting base
- Only one programming unit required for multi circuit systems
- Can be extended with MM-2 mixer module (up to 7 mixing circuits)
- BM-2 can also be used as a remote control for the CWL Excellent ventilation unit (one programming unit for heating and ventilation)

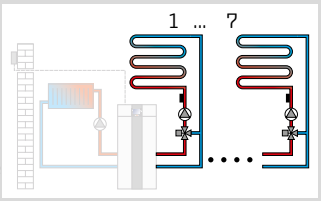
AM display module or BM-2 programming unit an essential requirement

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)

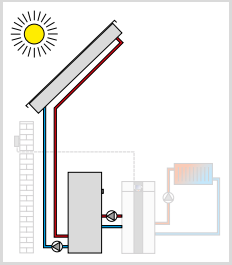
2-wire eBus connection

MM-2 mixer module



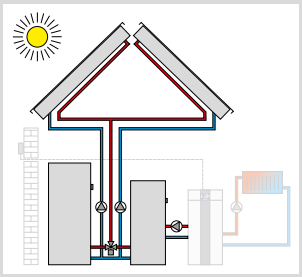
- Extension module to control one mixing circuit
- Weather-compensated flow temperature control
- Easy controller configuration by selecting one of the preset system versions
- BM-2 programming unit with wall mounting base can be extended to serve as a remote control
- Rast 5 connection technology
- Incl. flow temperature sensor

Solar module SM1-2



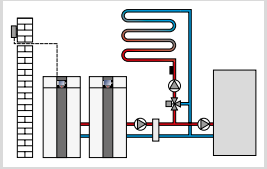
- Extension module to control one solar circuit incl. collector temperature sensor, cylinder temperature sensor and sensor wells
- High energy savings due to intelligent cylinder reheating (in conjunction with WOLF heat generators), i.e. cylinder reheating blocked when solar yield is sufficient
- Heat 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
- Integrated operating hours meter
- eBus interface with automatic energy management
- Rast 5 connection technology

Solar module SM2-2



- 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
- High energy savings due to intelligent cylinder reheating (in conjunction with WOLF heat generators), i.e. cylinder reheating blocked when solar yield is sufficient
- 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

KM-2 cascade module



- Extension module to control systems with a low loss header or cascade operation
- Can be used for up to 5 heat generators
- Easy controller configuration by selecting one of the preset system versions
- Control of one mixing circuit
- 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; fault message output 230 V
- eBus interface with automatic energy management
- Rast 5 connection technology

CONTROL ACCESSORIES
TOB / TOB-TS / COB-2 / COB-2-TS

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 mixing circuit.

RM-2 room module
4 in 1: Automatic detection of the function based on the system components:
- Room temperature controller with 1-day / 7-day program
- Remote control for mechanical ventilation unit CWL Excellent / CWL 2 (simultaneous with room temperature control)
- Remote control of all heating or mixing circuits (with BM/BM-2 in the system)
- Remote control for up to 7 individual heating circuits with multiple RM-2 units (with BM/BM-2 in the system)

- Illuminated touchscreen
- Integrated room temperature sensor
- Connection via eBus interface
- Many functions: Holiday mode, fault messages, temperature displays, etc.
- Compatible with WOLF Smartset

AFB analogue remote control
- Simple WRS remote control for heating circuits and mixing circuits
- Each heating circuit can be operated separately with a remote control
- Integrated 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 open TCP/IP protocol for system-independent integration of WOLF heating appliances and ventilation units.

2-wire eBus connection

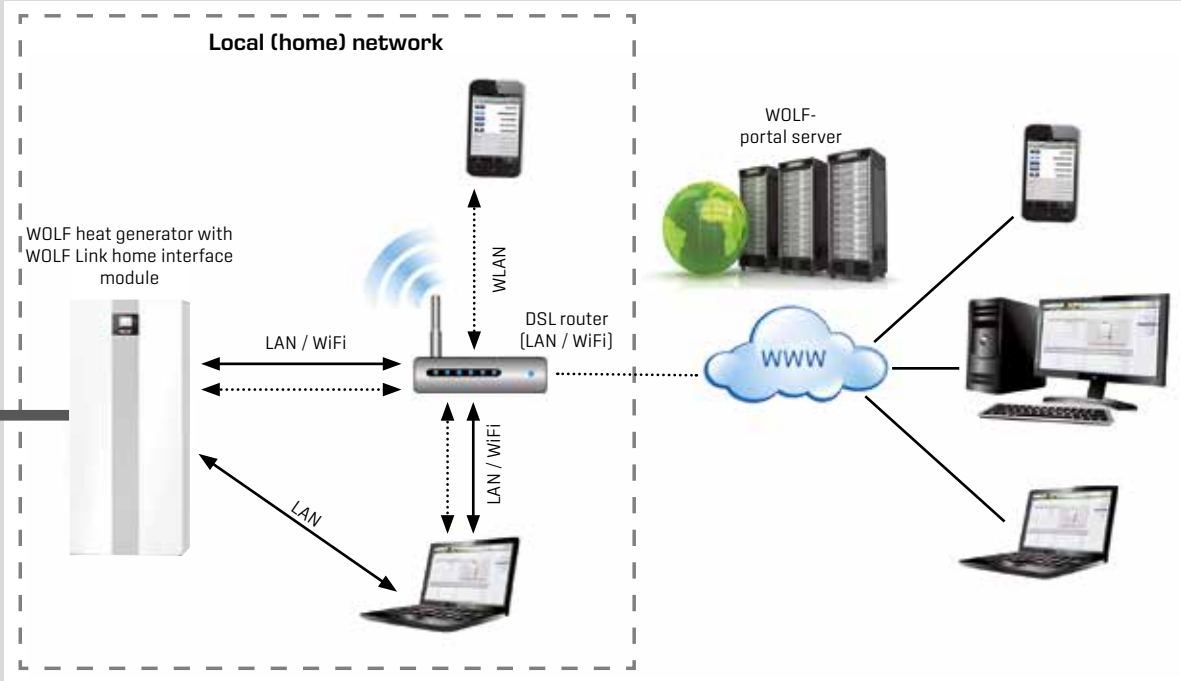
KNX interface kit
Interface set for integration of WOLF heat generators into a KNX network

Consisting of:
Interface module ISM8i, KNX-IP-BAOS module,
installation/operating instructions, network cable

I/O module
Extension module for 2 programmable inputs and outputs

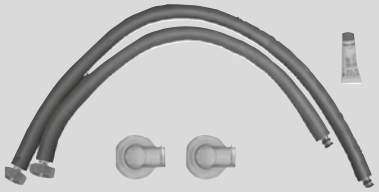
WOLF LINK HOME

LAN / WiFi interface for accessing the control unit via the internet or a local network. Operation via iOS, Android or the WOLF portal. Installation in the appliance control unit.



INSTALLATION ACCESSORIES
TOB / TOB-TS / COB-2 / COB-2-TS

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



Connection kit for COB-2 / TOB standing against the wall
Consisting of:

2 Cross pieces, each with one connection
2 Clips
1 Corrugated stainless steel pipe 1", length 1300 mm
1 Corrugated stainless steel pipe 1", length 800 mm
1 Silicone grease tube

Connection kit for COB-2 / TOB with TS standing against the wall
Consisting of:

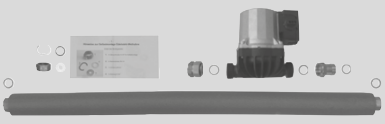
2 Cross pieces, each with two connections
4 Installation clips
3 Corrugated stainless steel pipes 1", length 1300 mm
1 Corrugated stainless steel pipe 1", length 800 mm
2 corrugated stainless steel pipes ¾", length 800 mm
1 Silicone grease tube
1 Trimming set ¾"
1 Trimming set 1"

Connection kit for COB-2 / 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 two connections
3 Corrugated stainless steel pipes 1", length 1300 mm
1 Corrugated stainless steel pipe 1", length 800 mm
4 Clips
1 Silicone grease tube
1 Pipe bend
1 High efficiency pump DN25-60 (EEI<0.23)
6 Flat gaskets 1"
2 Double nipples G1" (male) - G1"
2 Flat gaskets 1½" EPDM
1 Elbow with air vent valve
1 Adaptor fitting G1½" (fem.) to G1" (male)

DHW expansion vessel kit for TS

Consisting of:
1 Expansion vessel, 8 l (4 bar pre-charge pressure, 10 bar operating pressure)
1 Cold water connection pipe to the expansion vessel
2 Double nipples ¾"
1 Trimming set ¾"



TS DHW circulation pump set

Consisting of:
1 DHW circulation pump 3 stage
1 Corrugated stainless steel pipe ¾"
1 Trimming set ¾"

Pipe assembly

Consisting of:
1 Circulation pump
2 Thermometers in flow and return
2 Ball valves in flow and return
- With / without mixer
- With manifold for 2 or 3 pipe assemblies

Safety assembly for pipe assembly COB-2 / TOB

1 Safety valve with 3 bar response pressure
1 Pressure gauge
2 BDF valves in both flow and return

NEUTRALISING BOX

incl. granulate filling and mounting accessories

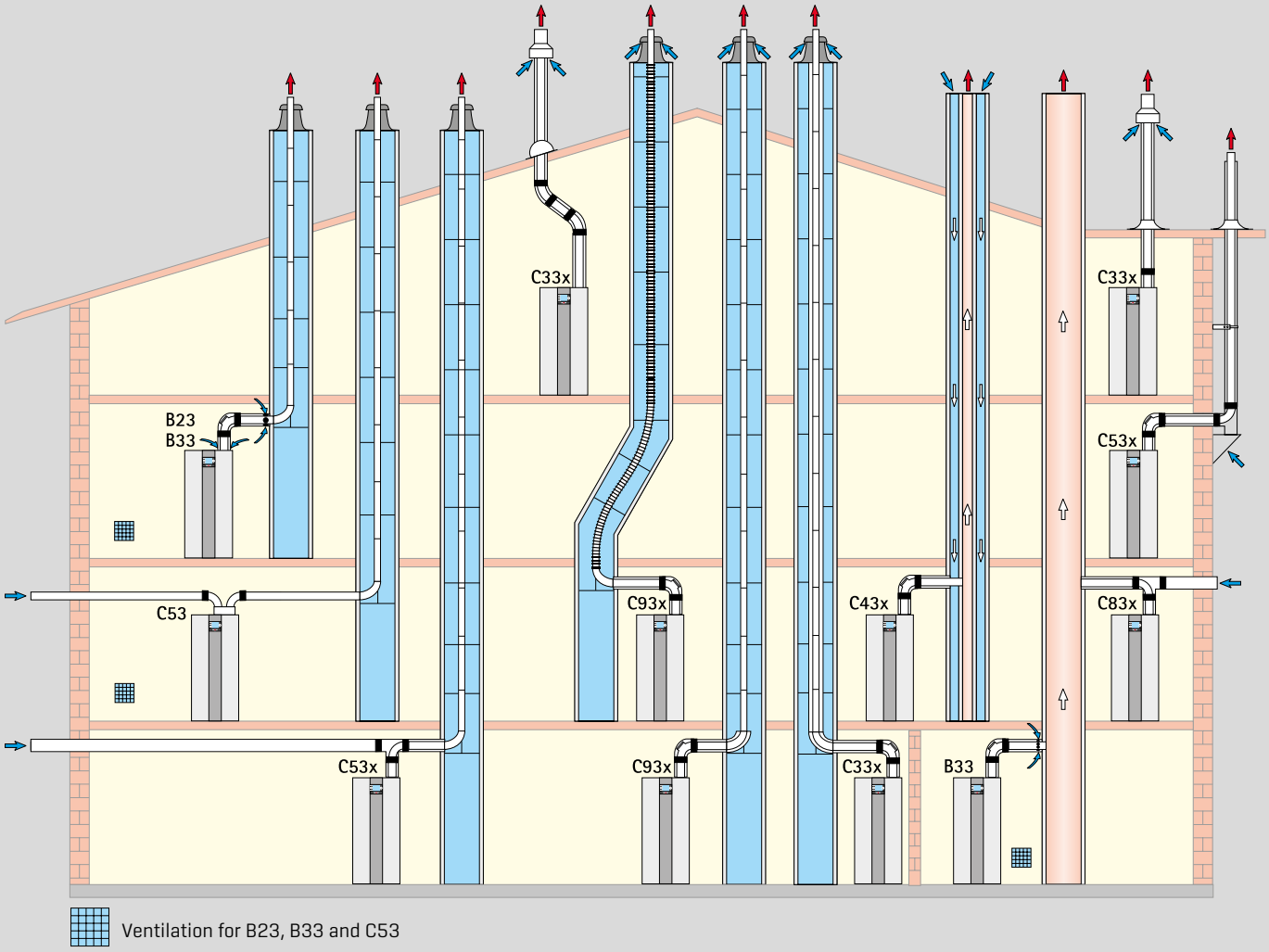
CONDENSATE PUMP
with potential-free alarm output

Fully wired for COB / TOB for installation in neutralising box
Consisting of:
Condensate pump with potential-free alarm output,
PVC hose, 10 mm (6 m long),
Non-return valve

ADDITIONAL ACCESSORIES

Wall retainer kit for pipe assembly, back panel casing
See also "Heating systems" pricelist

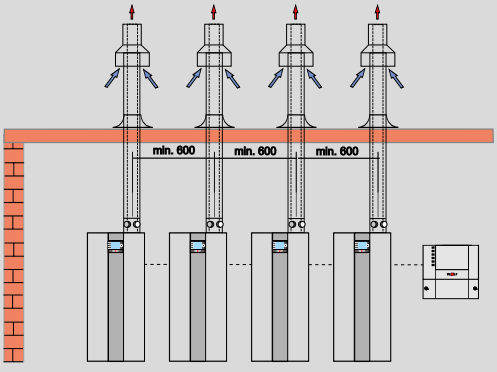
OIL CONDENSING BOILER AIR / FLUE GAS ROUTING
TOB / TOB-TS / COB-2 / COB-2-TS



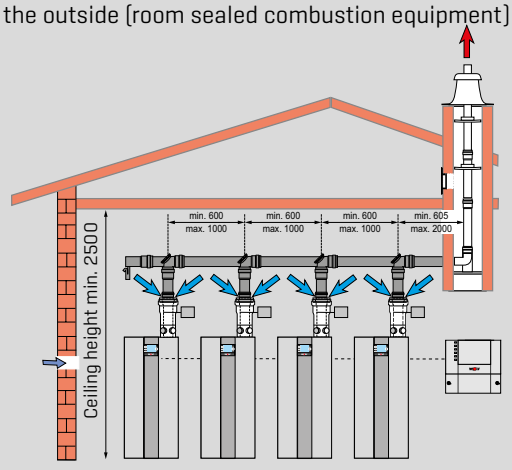
Connection types

Appliance type[1, 2]	Operation		Can be connected to				
	Open flue	Room sealed	Moisture-resistant chimney	Balanced flue chimney	Balanced flue	Certified balanced flue	Moisture-resistant flue
B23, B33, C33x, C43x, C53, C53x, C63x, C83x, C93x	Yes	Yes	B23p, B33, C83x	C43x	C33x, C53x, C93x	C63x	B23, B33p, C53x

[1] An "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 (room sealed combustion equipment)



Cascade control with separate, vertical, concentric balanced flue, type C33x.



Cascade control with header

Type	Oil condensing boiler models		Maximum length [1] [m]				
		TOB	**18**	**-**	**-**	**-**	**-**
		COB-2	**-**	**15**	**20**	**29**	**40**
B23	Flue in a shaft and combustion air directly via appliance (open flue)	DN 60	18	20	-	-	-
		DN 80	30	30	30	30	-
		DN 110	-	-	-	-	30
B33	Flue in a shaft with horizontal, concentric connecting pipe (open flue)	DN 60	16	18	-	-	-
		DN 80	30	30	30	30	-
		DN 110	-	-	-		30
B33p	Connection to a moisture-resistant flue gas chimney with a horizontal concentric connection pipe (open flue)		Calculation to EN 13384 (balanced flue manufacturer)				
C33x	Vertical concentric roof outlet through pitched or flat roof, vertical concentric balanced flue for installation in a shaft (room sealed)	DN60/110	9	9	-	-	-
		DN 80/125	24	24	22	18	-
		DN110/160	-	-	-	-	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 manufacturer)				
C53	Connection to the flue in a shaft and supply air pipe through an external wall (room sealed, supply air pipe 4 m, 1x bend 87°)	DN 80/125	30	30	30	30	-
		DN110/160	-	-	-	-	30
C53x	Connection to a flue on an external wall (room sealed)	DN 80/125	30	30	30	30	-
		DN110/160	-	-	-	-	30
C53x	Connection to the flue in a shaft and supply air through an external wall (room sealed, supply air pipe 4 m, 1x bend 87°)	DN 80/125	30	30	30	30	-
		DN110/160	-	-	-	-	30
C83x	Concentric connection to moisture-resistant flue gas chimney and combustion air through external wall (room sealed)		Calculation to EN 13384 (balanced flue 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 DN 110	-	-	-	-	22

[1] Available fan draught: TOB-18: 20-70 Pa / COB-2-15: 32-65 Pa / COB-2-20: 45-65 Pa / COB-2-29: 55-105 Pa / COB-2-40: 70-150 Pa (maximum length corresponds to the total length from the heat generator to the flue terminal)

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.

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) DN80/125
- Flexible flue DN 60, DN 83 and DN 110

WOLF accessories are supplied with the necessary identification labels.

Please also observe the installation information supplied with the accessories.

Calculating the air / flue gas routing length

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 = 5.5 m
87° bend = 2.0 m
2 x 45° bend = 2 x 1.2 m
L = 5.5 m + 1 x 2.0 m + 2 x 1.2 m
L = 9.9 m

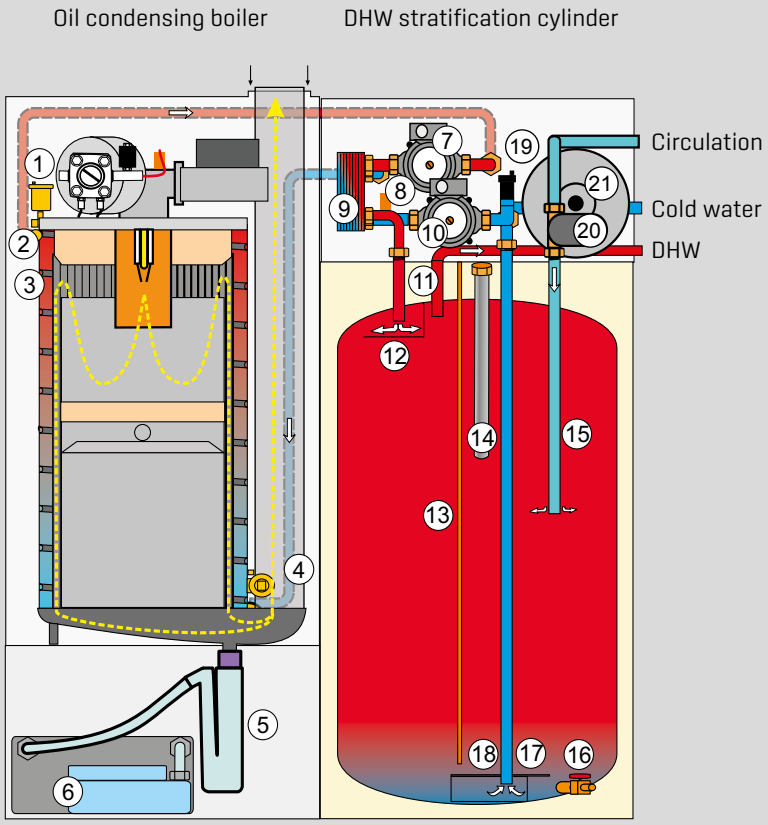
Bend	Type	Calculated length [m]
30°	Single wall	0.4
45°	Single wall	0.6
87°	Single wall	1.0
30°	Concentric	0.7
45°	Concentric	1.2
87°	Concentric	2.0

SYSTEM SOLUTION
TOB / TOB-TS / COB-2 / COB-2-TS

HEATING - DHW HEATING

Oil condensing boiler with DHW stratification cylinder

1 Auto. 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 (accessory)
7 Cylinder charging 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 Protective magnesium anode
15 DHW circulation line
16 Appliance drain (in standard delivery)
17 Cold water supply with control and distribution appliance
18 Cold water draw-off for cylinder heating
19 Air separator
20 DHW circulation pump (accessory)
21 Diaphragm expansion vessel (accessory)



HEATING - VENTILATION - (DHW HEATING) OIL CONDENSING BOILER + CWL-T-300

Oil condensing boiler CWL-T-300

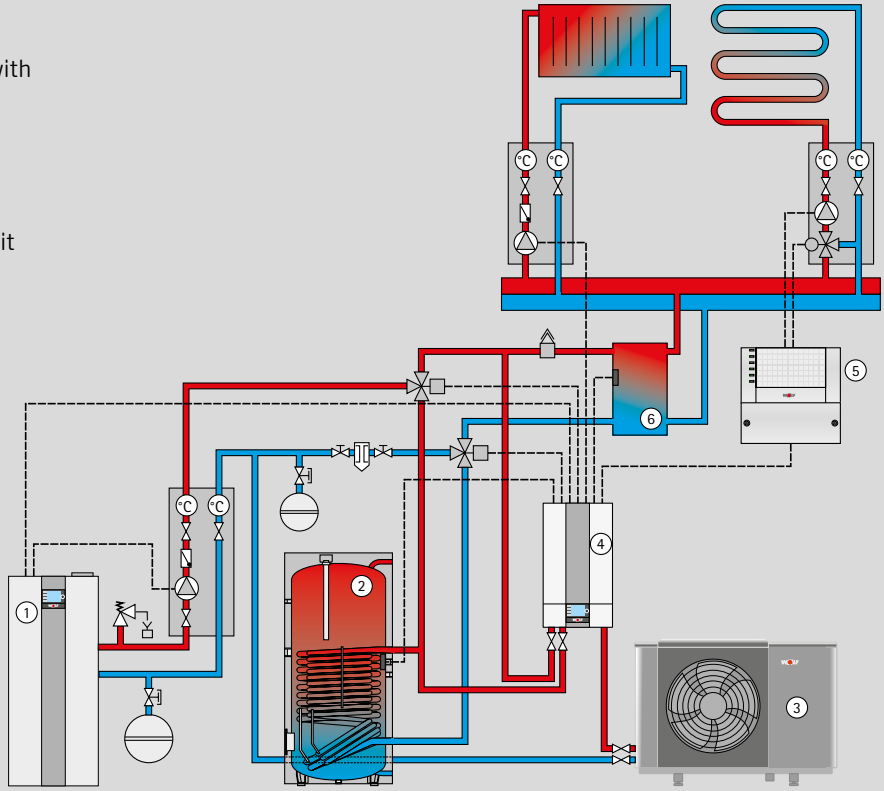
TYPE	CWL-T	300
Air flow rate at 150 Pa	m^3/h	300
Heat recovery	%	93
Height	mm	1287.5
Width	mm	475
Depth	mm	585
Duct connection diameter	mm	160
Filter category		ISO Coarse 60% (G4) (ePM1 50% (F7) as accessory)
Power factor	Cos φ	0.32 - 0.43
Power consumption	W	10 - 164
Power consumption (without preheating coil)	W	86 (at 225 m^3/h and 100 Pa)
Weight	kg	54
IP rating	IP	20
Electrical connection		230 V / 50 Hz

Oil condensing boilers with a CWL-T-300 ventilation unit combine perfectly with a TS stratification cylinder.

WOLF HYBRID + SYSTEM FOR DETACHED HOUSES

TOB/COB-2 with CHA Monoblock

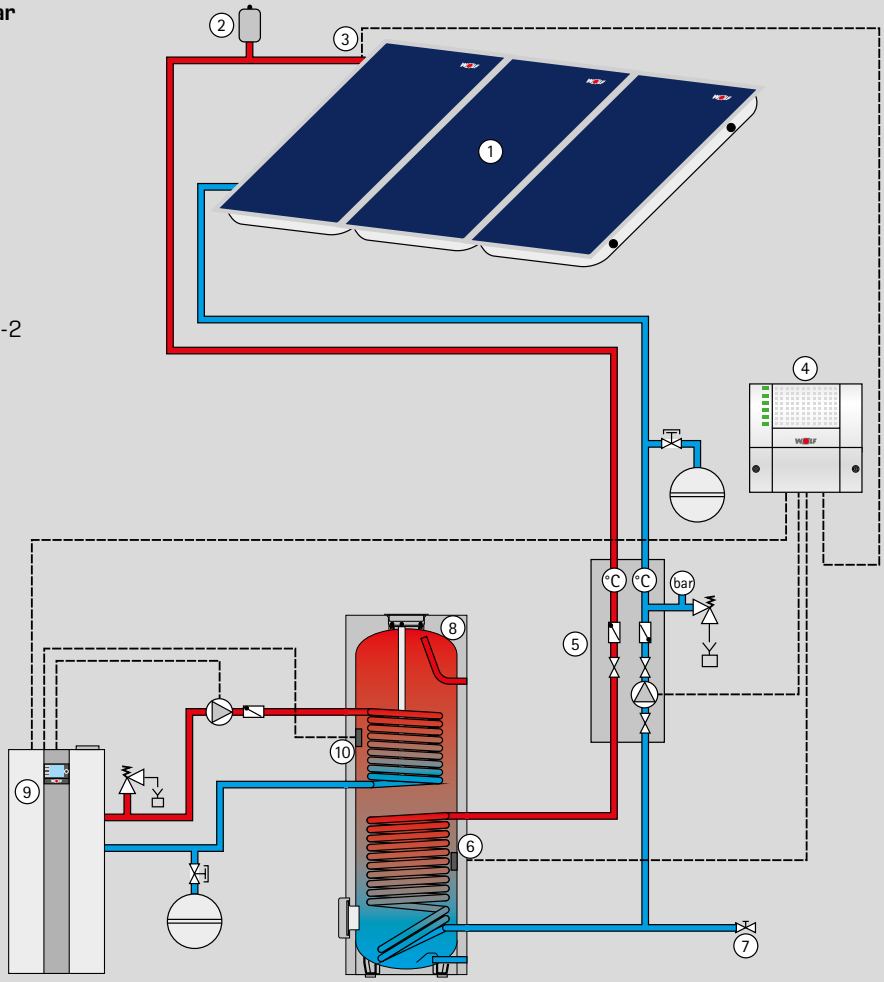
1 TOB / COB-2-15/20 oil condensing boiler with AM display module
2 DHW cylinder SEW-1
3 CHA Monoblock air/water heat pump Outdoor module
4 CHA Monoblock air/water heat pump Indoor module with BM-2 programming unit
5 MM-2 mixer module
6 Buffer cylinder



WOLF SOLAR HEATING – CENTRAL HEATING & DHW HEATING

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

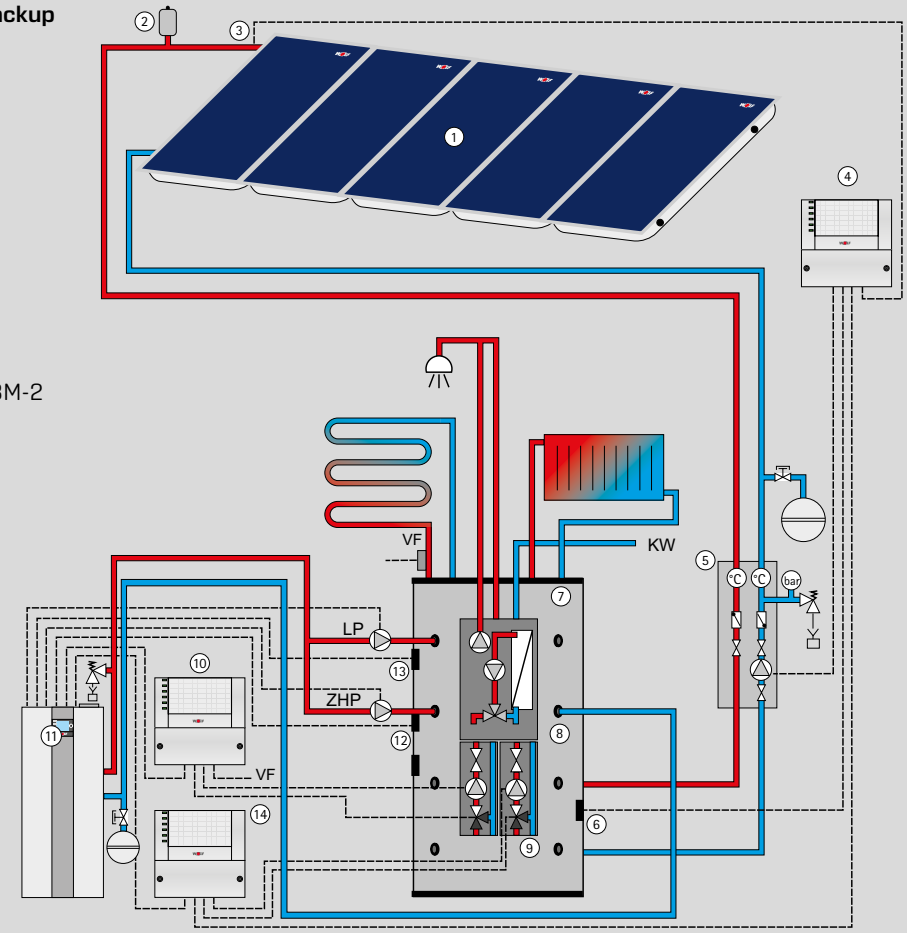
1 Collector array
2 Air vent trap
3 Collector sensor
4 Solar module SM1-2
5 Solar pump assembly 10
6 Cylinder sensor, solar control module
7 Drain & fill valve
8 SEM-1 / SEM-2 DHW solar cylinder
9 TOB / COB-2 oil condensing boiler with BM-2 programming unit
10 Heating cylinder sensor



WOLF SOLAR HEATING – CENTRAL HEATING & DHW HEATING

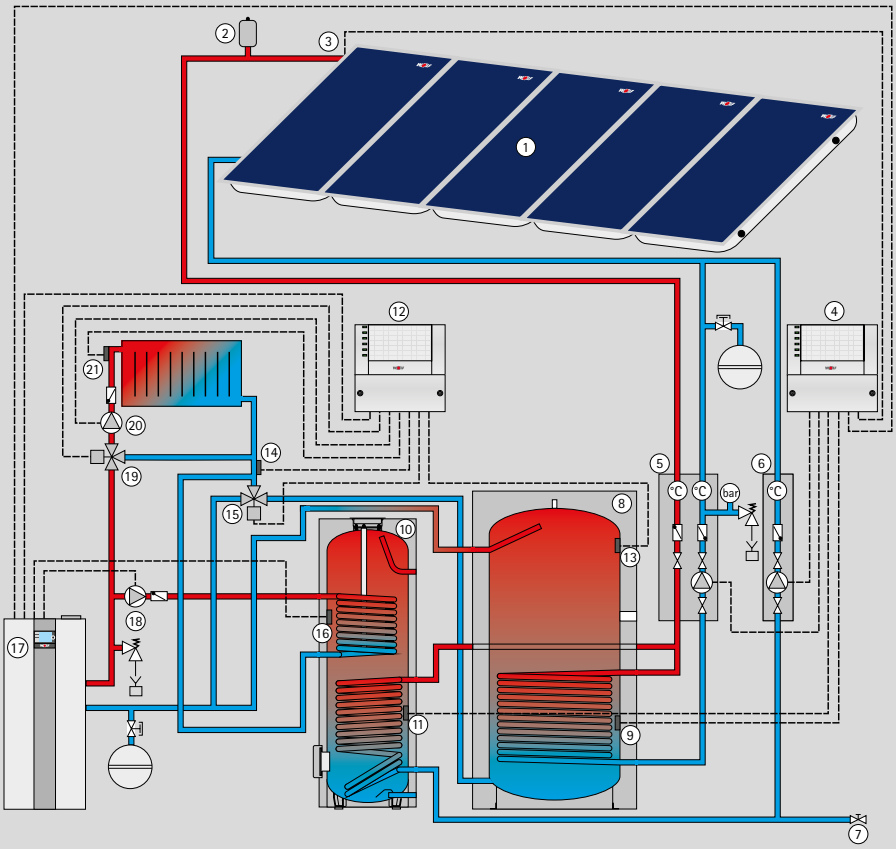
Solar DHW heating and central heating backup with BSP stratification buffer cylinder

1 Collector array
2 Air vent trap
3 Collector sensor
4 Solar module SM1-2
5 Pump/fitting assembly 5
6 Cylinder sensor, solar control module
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 / COB-2 oil condensing boiler with BM-2 programming unit
12 Common sensor
13 Cylinder sensor
14 MM-2 mixer module



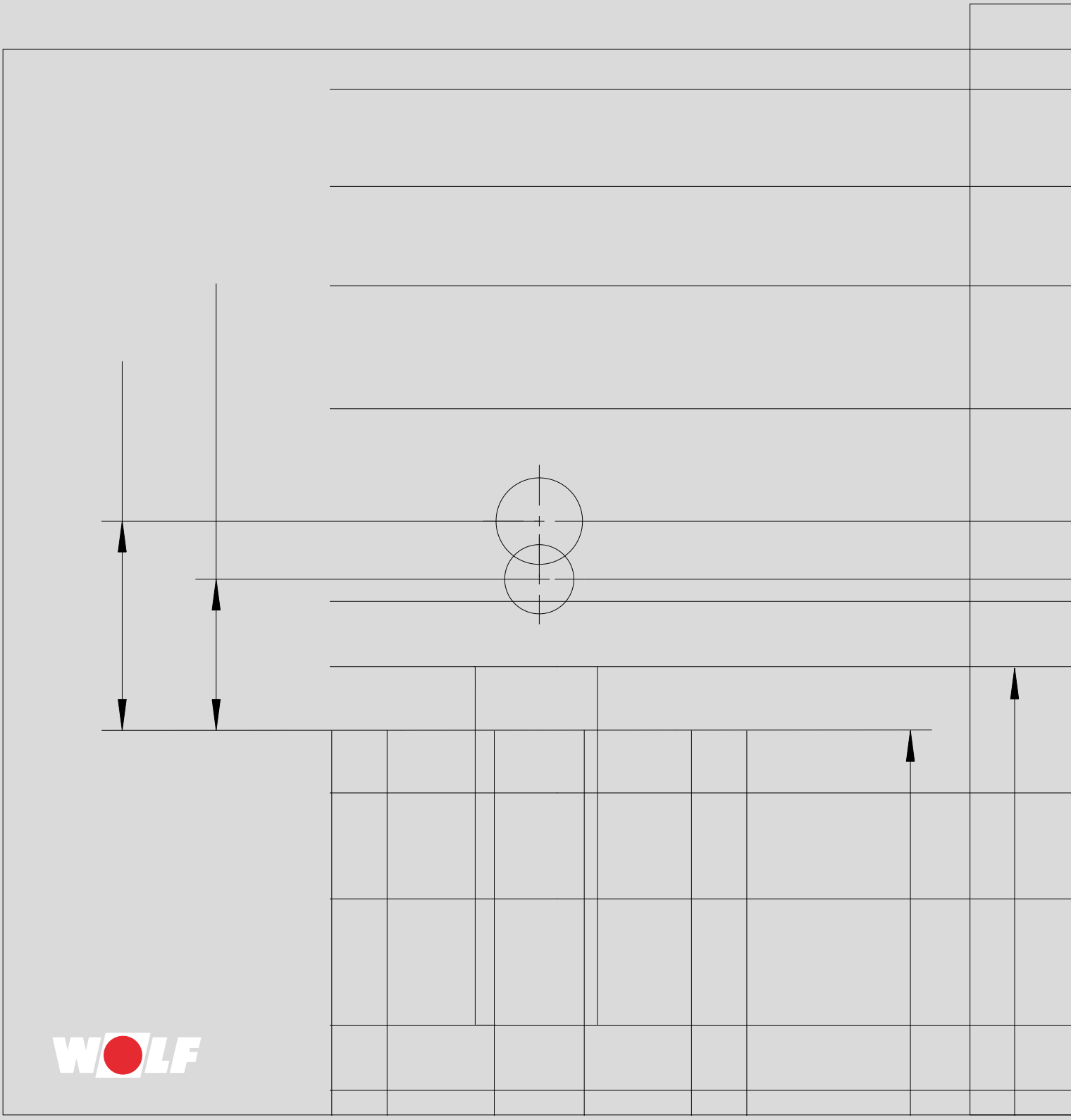
Solar DHW heating and central heating backup with SEM-1 / SEM-2 DHW solar cylinder and SPU-2-W buffer cylinder

1 Collector array
2 Air vent trap
3 Collector sensor
4 Solar module SM2-2
5 Pump/fitting assembly
6 Pump/fitting assembly extension
7 Drain & fill valve
8 Buffer cylinder SPU-2-W
9 Solar circuit cylinder sensor (buffer cylinder)
10 SEM-1 / SEM-2 DHW solar 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 Heating cylinder sensor
17 TOB / COB-2 oil condensing boiler with BM-2 programming unit
18 Cylinder primary pump, central heating
19 Mixer motor
20 Mixing circuit pump MKP
21 Flow sensor; mixer circuit VF



Dealer address:

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



Art.-Nr. 4801470 <GB> 2020/02