WOLF

Technical documentation

Conventional gas fired boilers

CGU-2K

ErP-CONFORM

MADE IN GERMANY BY WOLF
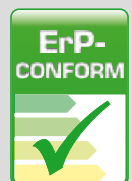
Conventional gas fired boilers

The advantages of the WOLF conventional gas fired boilers

- Tested according to the applicable EC directives
- Electronic ignition and monitoring
- Water-cooled, atmospheric premix burner for natural gas E, LL and LPG
- Wolf low NOx unit with Hydro Tec System designed for lowest emissions
- Control unit with eBUS capability for connection to Wolf digital control accessories
- Modulating controlled output in heating and DHW mode
- With modulating high-efficiency pump, three-way diverter valve and 10 l expansion vessel as standard
- Easy installation and operation
- Electronic output matching; no adjustment necessary at the gas combination valve
- High standard utilisation rate up to >94% (Hi) / 85% (Hs) for the best possible energy utilisation
- Emissions according to NOx class 5
- Powder-coated white RAL 9016 casing
- High energy efficiency and compact design
- Two-year warranty

* BM as accessory

CGU–2K–18, –24 conventional gas fired combi boiler for central heating and DHW

Conventional, open flue, gas fired combi boiler for low temperature heating and DHW preparation with integral DHW heat exchanger and electronic flue gas monitoring; tested in accordance with EC directives for connection to a chimney.

This boiler with natural draught is only intended for the connection in existing buildings on a flue system that is used by several apartments and derives the combustion residues from the room to the outside. It draws the combustion air directly from the room and is equipped with a flow assurance. Any other use of this boiler has to be avoided due to reduced efficiency - it would lead to higher energy consumption and higher operating costs.
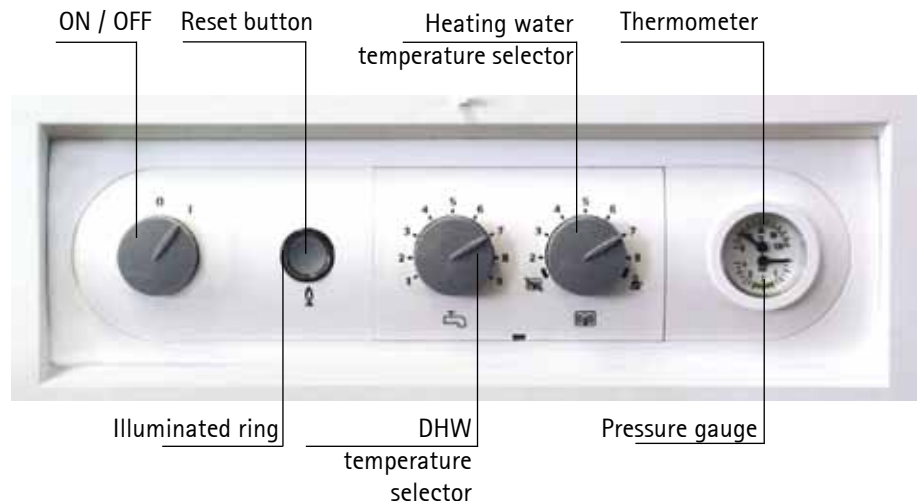
Dimensions / Specifications
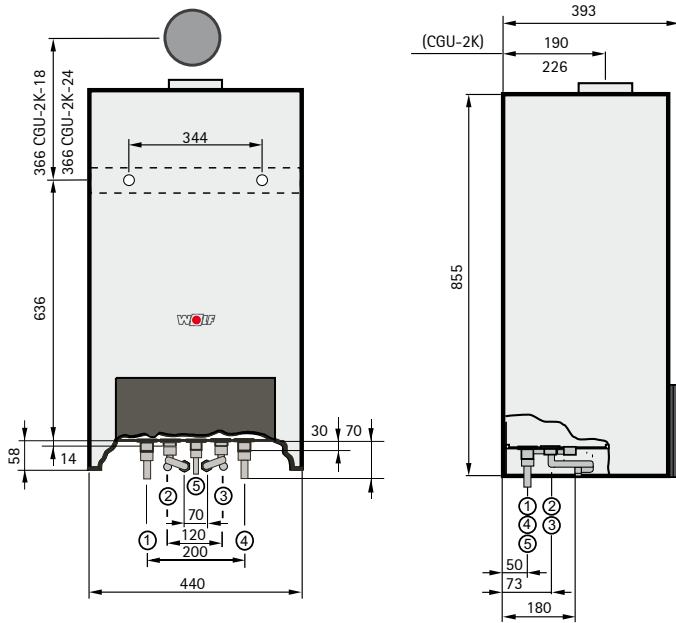
	1	Heating flow
	2	DHW
	3	Cold water
	4	Heating return
	5	Gas connection

Type		CGU-2K-18	CGU-2K-24
Energy efficiency class Space heating		C	C
Energy efficiency class Water heating		A	A
Output range	kW	8–18	10.9–24
Load range	kW	8.8–20.2	12.0–26.5
Standard efficiency at 75/60 °C (Hi/Hs)	%	94/85	92/83
Width	mm	440	
Height	mm	855	
Depth	mm	393	
Flue/wall clearance	mm	226	
Flue connection Ø	mm	110	130
Type of connection for balanced flue	type	B_{11BS}	
Gas category		II_{2ELL3P} (Germany) / II_{2H3P} (Austria)	
Gas connection, outside Ø	G	¾"	
Heating flow, outside Ø	G	¾"	
Heating return, outside Ø	G	¾"	
Cold water connection	G	¾"	
DHW connection	G	¾"	
Expansion vessel, nominal capacity	ltr.	10	
Expansion vessel, inlet pressure	bar	0.75	
Maximum draw-off temperature[2]	°C	55	
At a drawing rate of	l/min	2.7-5.8	2.7-7.7
Gas supply details:			
Natural gas E/H (H_i = 9.5 kWh/m³ = 34.0 MJ/ m³)	m³/h	2.1	2.8
Natural gas LL (H_i = 8.1 kWh/m³ = 29.2 MJ/ m³)	m³/h	2.3	3.1
LPG P (H_i = 12.9 kWh/kg = 46.3 MJ/kg)	kg/h	1.5	2.1
Gas supply pressure:			
Natural gas	mbar	20	
LPG P	mbar	50	
Max. overall pressure, heating	bar	3	
Required draught for the heat source	Pa	1.5	
Flue gas temperature[1]	°C	80/123	80/125
Flue gas flow rate	g/s	12.8/13.9	15.0/19.0
Total weight	kg	39	41
Fitted fuse (medium slow)	A	3.15	
Protection		IPX4D	
Electrical connection		230V/50 Hz	
Power consumption / standby	W	83/6	
CE ID		CE-0085BS0516	

[1] observe when connecting to a balanced flue chimney.

[2] referring to a cold water temperature of 10 °C

Standard control unit

ON / OFF   Reset button   Heating water temperature selector   Thermometer

Illuminated ring   DHW temperature selector   Pressure gauge

Illuminated indicator ring as status display

Display	Explanation
Flashing green	Standby (power supply ON; no heat demand)
Constant green	Heat demand: Pump running; burner OFF
Flashing yellow	Emissions test mode
Constant yellow	Burner ON; flame steady
Flashing red	Fault
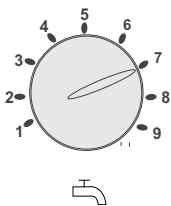
DHW temperature selector
Settings 1-9 correspond to a DHW temperature of 40-65 °C. Combined with a temperature controller for wall mounted gas fired boilers, the adjustment at the DHW temperature selector is disabled; instead the temperature is selected at the boiler temperature controller.
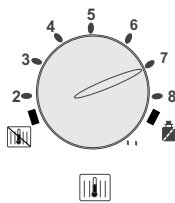
Heating water temperature selector
Settings 2-8 correspond to a heating water temperature of 20-75 °C. Combined with a temperature controller for wall mounted gas fired boilers, the adjustment at the heating water thermostat is disabled; instead the temperature is selected at the boiler temperature controller.

Setting

Winter mode (settings 2 to 8)
The circulation pump operates in heating mode.

Summer mode
Switch set to 🌡 circulation pump OFF (heating OFF); only DHW heating, frost protection, pump anti-seizing protection enabled, i.e. the circulation pump runs for approx. 30 s every 24 hours.

Emissions test mode
Turning the switch to position 🗲 lets the boiler operate at maximum 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 system water pressure are displayed.
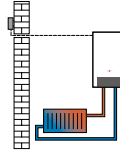
Control accessories

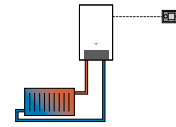**Standard control unit part of the standard delivery of the conventional gas fired boiler**

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

**BM programming module with wall mounting base (accessory) as remote control**

- Room temperature-dependent/weather-compensated temperature control
- Time programs for central and DHW heating
- LCD with background illumination
- Easy plain text guide through the menus
- Control by rotary selector with key function
- Four function keys for frequently used functions (heating, DHW, setback, help)
- Installation either inside the boiler control unit, or as a remote control in a wall mounting base
- Option for mixer module MM
- Only one programming unit required for multi-boiler systems
- Can be extended with mixer module MM (up to 7 mixer circuits)
- Fault diagnosis

Mixer module MM
- Extension module for regulating one mixer circuit
- Weather-compensated flow temperature control
- Easy configuration of the controller through selection of pre-defined system options
- BM programming module can be clipped into the boiler or extended as a remote control with wall mounting base
- Rast-5 connection technology
- Incl. flow temperature sensor
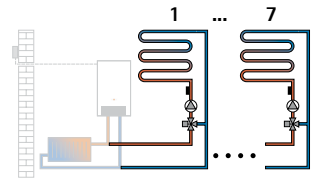
ART
- Analogue room temperature controller with day program for central and DHW heating
- Room temperature-dependent flow temperature
- Display for showing the room temperature, time and fault messages
- Room temperature-dependent frost protection
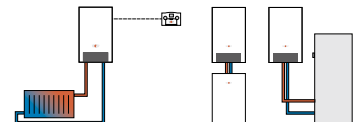
AWT
- Analogue weather-compensated temperature controller with day program for central and DHW heating
- Weather-compensated flow temperature
- Display for showing the room temperature, outside temperature, time and fault messages
- Room temperature hook-up
- Frost protection
- Automatic energy-saving appliance

Two-wire eBUS cable

5
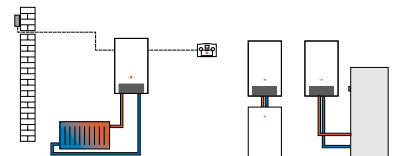
Control accessories

Two-wire eBUS cable

Radio clock (DCF77 signal) with outside temperature sensor
for automatic time setting.

Radio clock (DCF77 signal)
for automatic time setting.

Wireless outside temperature sensor
(only in conjunction with receiver
for wireless outside temperature sensor
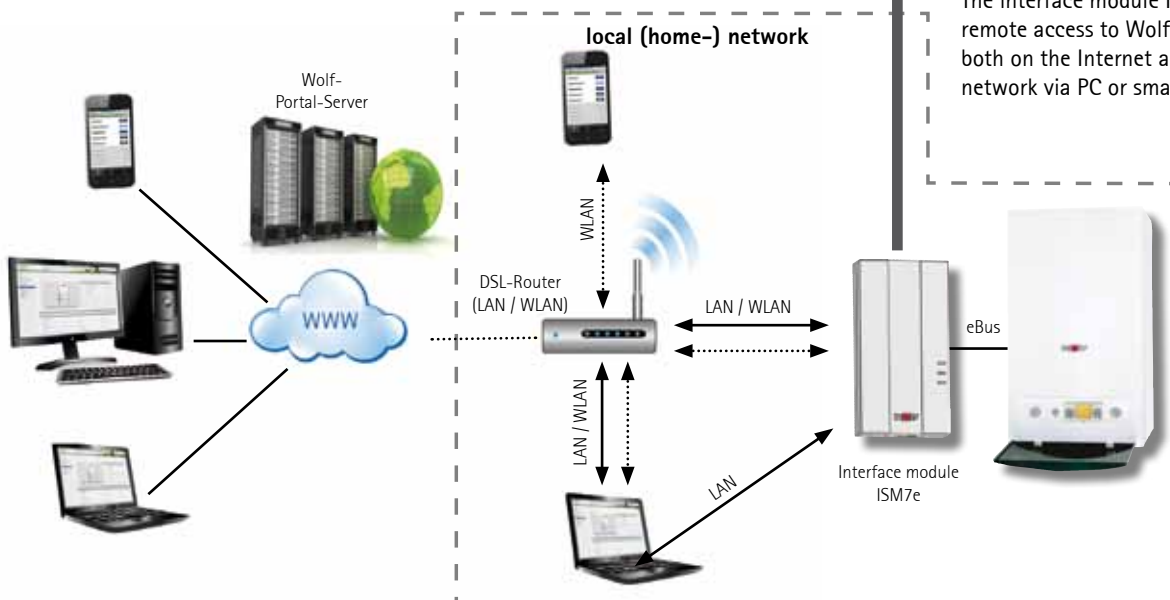and remote control, part no. 27 44 209)

**Wireless receiver for wireless outside temperature sensor
and wireless remote control**
incl. radio clock (DCF77 signal)

Wireless remote control
(only in conjunction with a receiver for wireless outside
temperature sensor and remote control) up to one wireless remote
control per heating circuit with mixer.

ISM7e
The interface module ISM7e allows
remote access to Wolf-heating systems
both on the Internet and in the local
network via PC or smartphone.

local (home-) network

Wolf-
Portal-Server

www

WLAN

DSL-Router
(LAN / WLAN)

LAN / WLAN

LAN / WLAN

eBus

LAN

Interface module
ISM7e

Conventional gas fired boilers

CGU–2K   Conventional gas fired boiler for central and DHW heating

Tested in accordance with EC directives and DIN EN 297, 483 and 625, and for heating systems according to DIN EN 1282 with flow temperatures up to 95 °C and 3 bar permissible operating pressure. Suitable for modulating operation down to room temperature; modulating output control. Flue gas monitoring with CGU-2K. Premix burner equipped and adjusted at the factory for natural gas E and LL. When ordering for LPG a conversion set is enclosed loose. CGU-2K for chimney connection for balanced flue operation.

Control with gas burner control unit, electronic ignition and ionisation flame monitor.

Powder-coated white RAL 9016 casing.

Control accessories	CGU-2K
BM programming module	•
Wall mounting base	•
Mixer module MM	•
Analogue room temperature-dependent controller with day program ART	•
Analogue weather-compensated controller AWT	•
Radio clock with outside temperature sensor	•
Radio clock for automatic time setting	•
Wireless receiver - required for wireless outside temperature sensor and wireless remote control	•
WRS - remote service system	•
Hydraulic accessories and gas supply accessories	
Gas ball valve (angle or straight-through version), chrome plated, with or without thermally activated shut-off valve	•
Drain set, safety valve with hose, hose retainer, siphon and rosette, transparent plastic	•
Accessories for installation on unfinished walls	
Panel for installation on unfinished walls	•
Angle maintenance valve G ¾", chrome plated	•
Angle maintenance valve G ¾" with connection R ½" for safety valve, chrome plated	•
DHW connector G ½", chrome plated	•
Cold water connector G ½", chrome plated	•
Accessories for installation on finished walls	
Connection set for installation on finished walls	•
Straight-through maintenance valve Rp ¾", chrome plated	•
Straight-through maintenance valve Rp ¾" with connection R ½" for safety valve, chrome plated	•
DHW connector R ½", chrome plated	•
Cold water connector R ½" with shut-off valve, chrome plated	•
Connection panel for installation on finished walls	•
Balanced flue accessories	
Aluminium balanced flue gas pipe Ø 110 mm	•
Aluminium balanced flue gas pipe Ø 130 mm	•

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. Solar heating systems can be quickly integrated into existing systems. All Wolf products can be easily and rapidly commissioned and maintained.

Wolf GmbH, PO Box 1380, D-84048 Mainburg, Tel.: +49 87 51 / 74-0, Fax: +49 87 51 / 74-1600, Internet: www.wolf-heiztechnik.de

Dealer address

The competence brand for energy saving systems