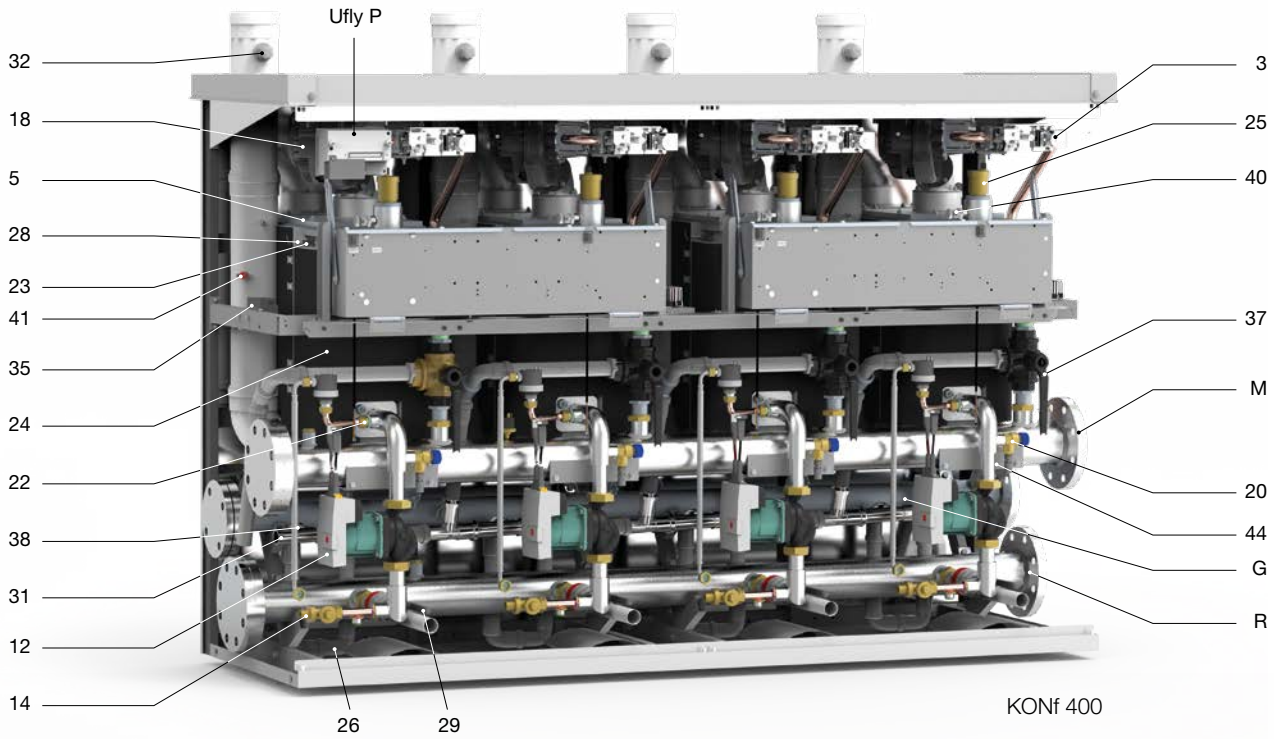
KONf 200-400

KONf 400

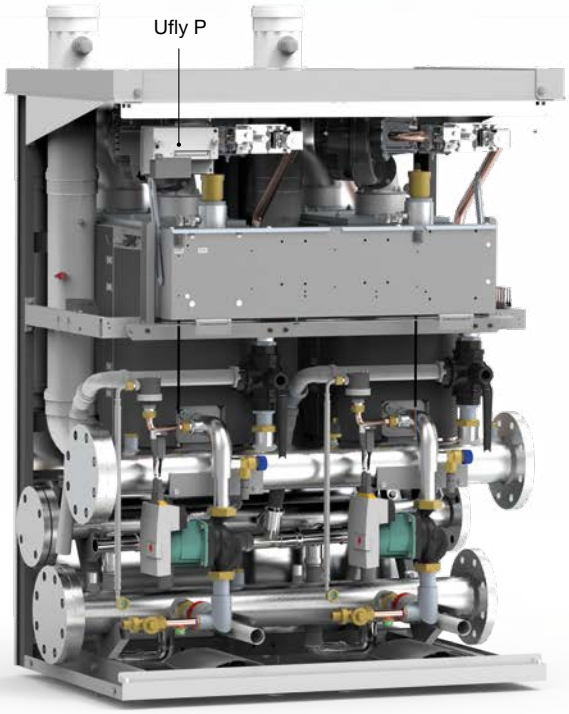
KONf 200

FLOOR STANDING, MODULATING CONDENSING BOILER WITH LOW NO_x PREMIX BURNER - FOR INDOOR & OUTDOOR INSTALLATION		
OUTPUT RANGE	from 200 to 400 kW	
WORKING TEMPERATURE	no limit on the return temperature	
SUPPLY	Natural Gas or LPG	
MODELS	KONf 200	KONf 400
SEASONAL EFFICIENCY	**A**	
low water content - Heat exchanger in Aluminium / Silicium / Magnesium - IPX5D (for Outdoor installation)		

MAIN COMPONENTS



KONf 400



KONf 200

3 Gas valve
5 Burner
12 Modulating Pump
14 Boiler drain valve
18 Modulating Fan
20 Safety valve
22 Return temperature sensor
23 Flue gas collector safety thermostat
24 Aluminium Heat Exchanger/Capacitor
25 Vent valve
26 Condensation drain trap
28 Ignition electrode
29 Return shut-off (3 Way) valve
31 Condensation drain trap
32 Outlet flue inspection
35 Ignition transformer
37 Flow shut-off (3 Way) valve
38 Gas pressure switch
40 Manual Vent valve
41 Smoke Thermostat
44 Differential pressure switch

G Gas inle DN50
M Heating system flow DN80
R Heating system return DN80

PRODUCT PLUS VALUES

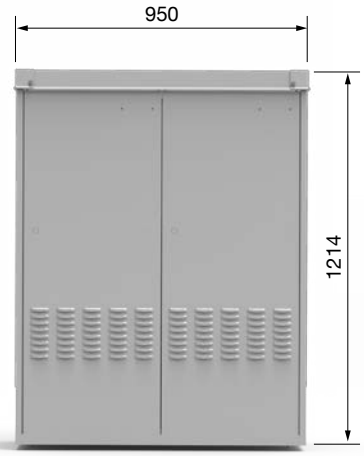
- Special containing cabinet for outdoor installation
- Hydraulic connection flanges between more units, DN 80
- Three way valve for hydraulic interception on the flow and outlet in atmosphere
- Two way valve for hydraulic interception on the return with Flow-stop
- Gas connection flange between more units, DN 50
- Smokes evacuation duct 100 mm dia. with analysis sampling nipple
- Cabinets front door with airing slots
- Minimum feeding gas pressure: 15 mbar
- Maximum allowable pressure at the chimney base: 150 Pa
- Maximum allowable temperature: 100°C
- Maximum working temperature: 90°C
- Modulation ratio 1:10 (mod. 200 kW), 1:20 (mod. 400 kW)
- Two or four primary heat exchangers in Al/Si/Mg alloy, according to the model, entirely irrigated, ultracompact with high water circulation
- Digital electronic regulator Ufly P with function of: thermo-regulator and cascade controller and manager
- Additional functions: diagnosis of operational parameters and errors, antifreeze, technical services, post-circulation and digital errors indication
- BCM 2.0: with 0-10 Volt connection port for external control of the boiler temperature modulation
- Very low polluting emissions, Low NOx, class 6 according to EN 15502-1
- High efficiency modulating pumps (2x or 4x, according to the model) standard supplied
- Minimum gas pressure switch
- Minimum water pressure switch (2x or 4x, according to the model)
- Safety level switch on condensate drain (2x or 4x, according to the model)
- Isolation Protection IP X5D
- Blind flange

Options:
- Empty cabinet for housing of the additional safety devices
- Multifunction module SHC for zones management
- N. 3 additional control sensors (possibility of management up to a maximum of 4 SHC cards)
- Additional safety devices kit (Kit INAIL)

DIMENSIONS

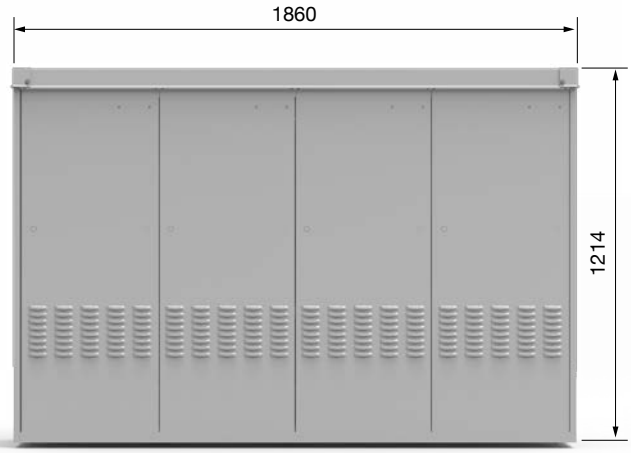
KONf 200

FRONT VIEW



SIDE VIEW

KONf 400



TECHNICAL DATA

ELECTRICAL, HYDRAULIC, INSTALLATION DIAGRAMS AND CONTROLLERS can be unloaded from the web site www.unical.eu at the page of the product

		KONf 200	KONf 400
Appliance category		II_{2H3P}	II_{2H3P}
Modulation Ratio		1:10	1:20
Nominal Heat Input on P.C.I. Qn	kW	199	398
Minimum Heat Input on P.C.I. Qmin	kW	20	20
Nominal Output (Tr 60 / Tm 80 °C) Pn	kW	195	391
Minimum Output (Tr 60 / Tm 80 °C) Pn min	kW	19.1	19.21
Nominal Output (Tr 30 / Tm 50 °C) Pcond	kW	206	413
Minimum Output (Tr 30 / Tm 50 °C) Pcond min	kW	21.2	21.2
Efficiency at max. output (Tr 60 / Tm 80°C)	%	97.9	97.8
Efficiency at min. output (Tr 60 / Tm 80°C)	%	95.6	95.6
Efficiency at max. output (Tr 30 / Tm 50°C)	%	104	104
Efficiency at min. output (Tr 30 / Tm 50°C)	%	106	106
Efficiency at 30% output (Tr 30°C)	%	108.9	108
Combustion efficiency with nominal load	%	98.02	98.26
Combustion efficiency with minimum load	%	98.2	98.2
Heat loss at casing with burner in operation (Qmin)	%	2.6	2.56
Heat loss at casing with burner in operation (Qn)	%	0.14	0.05
Flue gas temperature tf-ta (min)(*)	°C	34	34.5
Flue gas temperature tf-ta (max)(*)	°C	40	35.6
Maximum allowable temperature	°C	100	100
Maximum operating temperature	°C	85	85
Flue gas mass flow rate (min)	kg/h	34.31	34.31
Flue gas mass flow rate (max)	kg/h	319.57	639.14
Excess λ air	%	23	23
Flue losses with burner in operation (min)	%	1.8	1.8
Flue losses with burner in operation (max)	%	2.0	1.74
Minimum heating circuit pressure	bar	0.5	0.5
Maximum heating circuit pressure	bar	6	6
Water content	l	22	44
Gas Consumption Natural (20 mbar) gas G 20 a Qn	m^3/h	21.04	42.1
Gas Consumption Natural gas (20 mbar) G 20 a Qmin	m^3/h	2.11	2.11
Gas Consumption G25 (supply pressure 25 mbar) Qn	m^3/h	24.5	49
Gas Consumption G25 (supply pressure 25 mbar) Qmin	m^3/h	2.46	2.46
Gas Consumption G31 (supply pressure 37/50 mbar) Qn	kg/h	15.5	31.0
Gas Consumption G31 (supply pressure 37/50 mbar) Qmin	kg/h	1.55	1.55
Max. available pressure at the chimney base	Pa	150	150
Condensate production max	kg/h	12.8	26.0
Emissions			
CO at Minimum Heat Input with 0% of O_2	mg/kWh	153	156
NO_x at Nominal Heat Input with 0% of O_2	mg/kWh	68	70
NO_x Class		6	6
Electrical Data			
Voltage/Frequency electric power supply	V/Hz	230/50	230/50
Fuse on main supply	A (R)	4	4
Insulation degree	IP	X5D	X5D

Room Temperature = 20°C - I dati presenti sono rilevati secondo UNI EN 15502-1

(*) Temperature detected with appliance operation flow rate 80°C / ret. 60°C

Seasonal space heating energy 2009/125 CEE (<=400kW) η_s - see ErP table

Stand-by heat loss ΔT 30°C - P_{stby} - see ErP table

Consumption in stand-by - P_{sb} - see ErP table

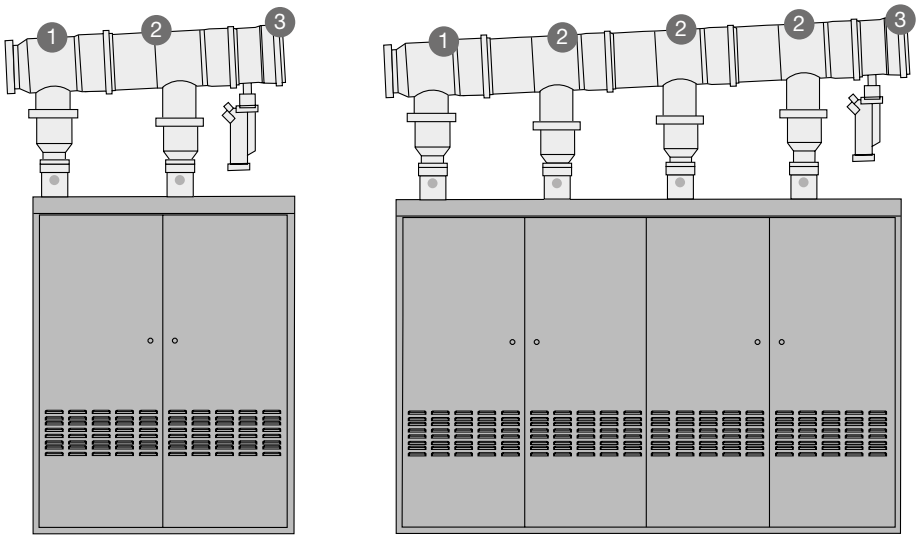
DATA ACCORDING TO ErP DIRECTIVE

ELECTRICAL, HYDRAULIC, INSTALLATION DIAGRAMS AND CONTROLLERS can be unloaded from the web site www.unical.eu at the page of the product

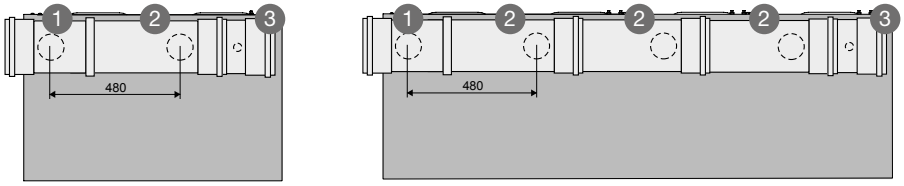
			KONf 200	KONf 400
NOMINAL HEAT OUTPUT	P_n	kW	195	388
SEASONAL SPACE HEATING ENERGY EFFICIENCY	η_s	%	93	92
SEASONAL EFFICIENCY CLASS IN HEATING MODE			**A**	**A**
FOR CH ONLY AND COMBINATION BOILERS: USEFUL HEAT OUTPUT				
USEFUL HEAT OUTPUT in high temperature regime (Tr 60 °C / Tm 80 °C)	P_4	kW	195	391
USEFUL EFFICIENCY AT NOM. HEAT OUTPUT in high-temperature regime (Tr 60°C / Tm 80°C)	η_4	%	88.2	88.5
USEFUL HEAT OUTPUT AT 30% OF NOM. HEAT OUTPUT in low-temperature regime (Tr 30°C)	P_1	kW	65.0	129.0
USEFUL EFFICIENCY AT 30% OF NOM. HEAT OUTPUT in low-temperature regime (Tr 30 °C)	η_1	%	98.1	97.3
RANGE-RATED BOILER: YES / NO			NO	NO
AUXILIARY ELECTRICITY CONSUMPTION				
AT FULL LOAD	el_{max}	kW	0.580	1.160
AT PART LOAD	el_{min}	kW	0.156	0.156
IN STAND-BY MODE	P_{SB}	kW	0.025	0.032
OTHER ITEMS				
STAND-BY HEAT LOSS	P_{stby}	kW	0.962	0.924
EMISSIONS OF NITROGEN OXIDES rif. PCI (PCS)	NO_x	mg/kWh	46 (41)	46 (41)
ANNUAL ELECTRICITY CONSUMPTION	Q_{HE}	GJ	606	1220

SMOKE EVACUATION ACCESSORIES (Ø 200)

FRONTAL VIEW



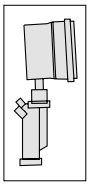
VIEW FROM ABOVE



1 **SINGLE FLUE MANIFOLD**

2 **FLUE DUCT EXTENSION W/BOILER CONNECTION**

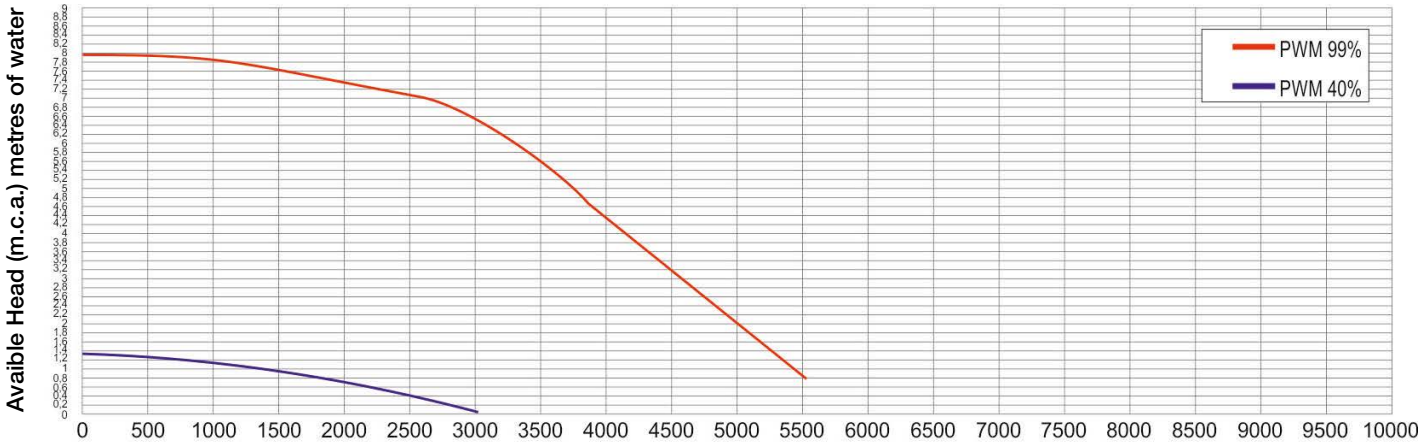
3 **SIPHON**



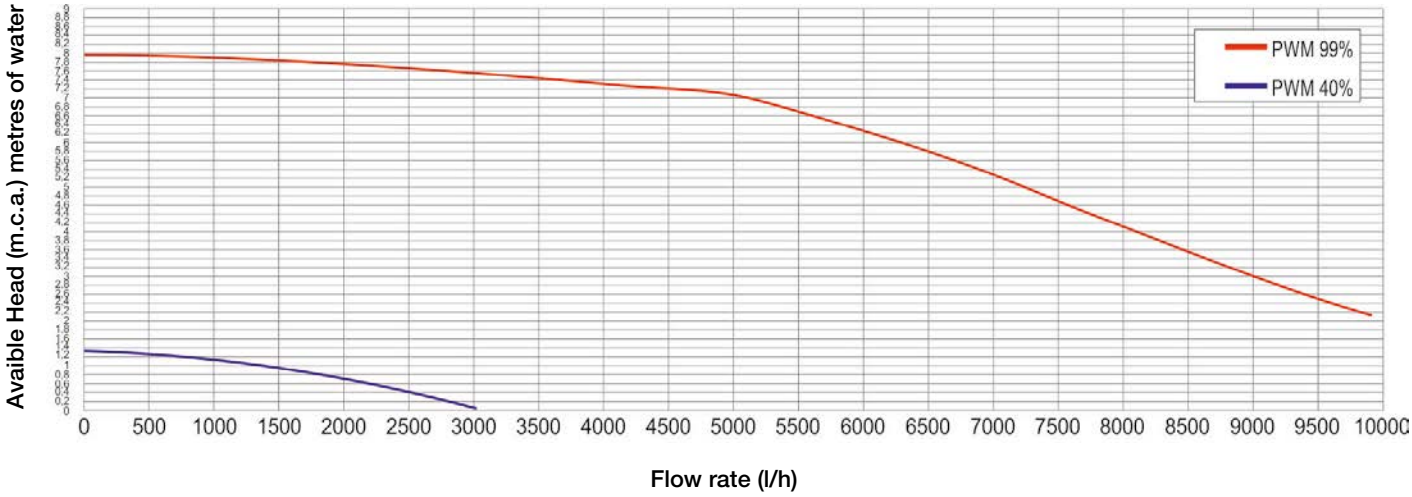
FLUE DUCT EXTENSION

DIAGRAM OF FLOW RATE/PRESSURE AVAILABLE FOR INSTALLATION

n. 1 Circulator Qnom n. 1 Circulator Qmin



n. 2 Circulator Qnom n. 1 Circulator Qmin



		KONf 200	KONf 400
Power supply	kW	199	398
Max flow rate demanded l/h (Δt 15 K)	l/h	11400	22818
Nominal flow rate request (Δt 20 K)	l/h	8860	17110
Power supply in condensation (50/30)	kW	210	420
Max flow rate demanded l/h (Δt 15 K)	l/h	12040	24080
Nominal flow rate request (Δt 20 K)	l/h	9030	18060

The Δt between supply and return boiler must never be less than 15 °K.

NOTE: The use of a mixing header fitted between the boiler circuit and the system circuit is always advisable.
It becomes INDISPENSABLE if the system requires flow rates superior to the maximum permitted boiler flow rates, which is to say lower than 15K.

Ufly P

New and powerful interface for the simplified management of professional boilers

Ufly P can be inserted in the control panel, equipped with backlit TFT touch screen Display.
The thermoregulation functions allow the hourly weekly scheduling up to a maximum of 12 heating circuits completely independent and of a Domestic Hot Water storage tank (by means of optional SHC cards).

Time programming

- 3 time slots within the day with a different temperature that can be associated with each one of them.
- Storing up to 5 daily programs for the heating and up to 3 daily programs for Domestic Hot Water.
- Weekly programming: up to 3 programs for the heating and as many for the Domestic Hot Water; with association to a daily program.
- Additional functions: holiday, absence, extension of operating hours, automatic, summer, continuous heating, reduced, antifreeze, heating curves, installation status info, chimney sweeper function.
- Anti-legionella function.

Ufly P checks the **BMM** (Burner Module Manager) for the management of the single thermal element. The regulation of the heating zones and, more generally, of all types of loads, is done through **optional multifunction cards**, called **SHC** (Slave Heating Controller) for the circuits CH, DHW and the auxiliary resources (timed relays, solar accumulators).

Telemanagement

Alternatively, there are available 2 different communication protocols: **eBUS** and **Modbus**, intended for connection to different control devices.

- Acquisition of operational information of all the connected devices
- Parameters Setting / Changing of each module
- Diagnostic management: alarm Acquisition and Reset
- Gateway: allows the conversion of the Modbus / eBUS protocol to access all resources connected to the local eBUS

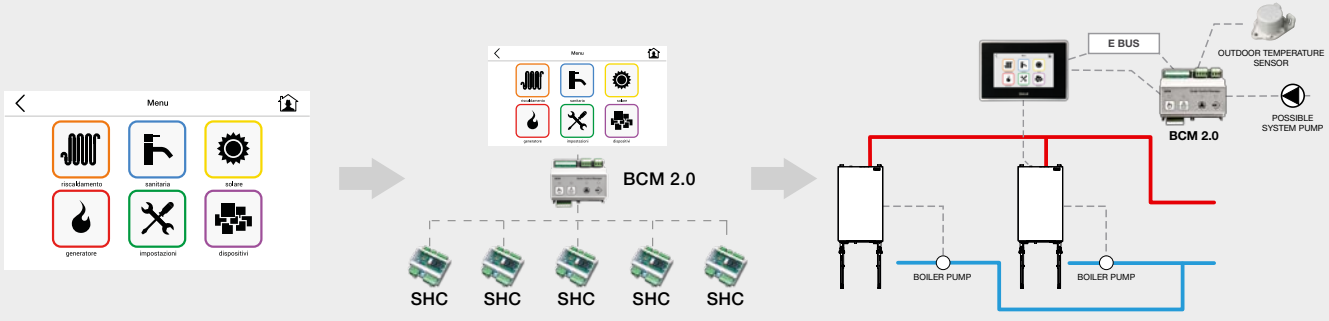
Included: Outdoor temperature sensor

Mounted: Flow temperature sensor, return temperature sensor.

Ufly P/Thermoregulation
dialogue window

SHC or Multifunction card
installation manager

BCM 2.0
cascade manager card (up to 8 units)



KIT CONTROL PANEL Ufly P

Can be used for single boilers.

Composed by:

- Viewer / Programmer Ufly P
- Outdoor temperature sensor

Standard supplied for:

- ALKON 140 EXT
- KONf 200-400
- MODULEX EXT
- MULTIINOX 116
- MULTIINOX 250÷1000
- SPK 150÷1000

Optional for:

- ALKON 50 C
- ALKON 70 C
- KONf 115
- KON 115

Ufly P

Outdoor temp. sensor

KIT CONTROL MANAGER Ufly P

Required to manage systems with up to 8 battery boilers.

Composed by:

- Viewer / Programmer Ufly P
- Cascade manager card BCM 2.0
- Power pack 24 V
- Outdoor temperature sensor
- D.H.W. temperature sensor

Optional for cascade /tele-management of:

- ALKON 50 C / 70 C
- ALKON 140 EXT
- KONf 115 / KON 115
- MULTIINOX 250÷1000
- MULTIINOX 116
- SPK 150÷1000

Ufly P

BCM 2.0

Power Pack

Outdoor temp. sensor

D.H.W. temp. sensor

GATEWAY P

Ufly P is also an APP to conventionally manage, from your device (tablet and smartphone), via WIFI / LAN, programming, remote control and real-time notifications of any blockages or anomalies of the boiler, which can be connected **via "Gateway P"** (optional).

GATEWAY P: Remote control management for the Professional Unical Boilers.

Main functions

- LAN or WIFI connection
- APP for smart phone and tablet
- Remote managements of the heating circuits time program
- Alarm notification on the mobile device
- Visualisation of the status of boiler
- Series of free Software tool for monitoring and setting
- eBUS, Modbus RTU, connection
- 230/24 V power adapter for the other device installed (ex. SHC multifunctional module)

APP Ufly

Ufly APP allows the Unical heating system to be controlled remotely from smartphone or tablet. It allows you to programme and control your heating system from a distance by connecting the system to the home network and thanks to the pairing system integrated to the APP and UFLY P you can create a perpetual connection between your devices and the boilers.

Details of the main functions of the Ufly APP:

- **HEATING and DOMESTIC HOT WATER**
  Daily and Weekly Programming the heating system circuits and domestic hot water
- **BOILER**
  You can check the status of the boiler by verifying whether it is activated for the heating system or for the domestic hot water system, in addition to other useful information related to the system.
- **SOLAR**
  You can view the status of the solar heating system, if installed, and turn it on or off.
- **ERROR STATUS**
  You can view the history of the errors generated by the system and RESET the system which will resolve the problem directly by simply restarting the system itself in the case of critical errors.
- **NOTIFICATIONS**
  If a problem occurs in the system, you will be immediately notified with a push notification and, if the failure is not immediately resolved by RESETTING, you can contact the Technical Assistance and report the displayed error.

The APP is available in the following languages: Italian, English, Spanish, French, Russian, Polish, Turkish and Romanian.

Scarica su App Store
DISPONIBILE SU Google Play