



## GENERAL CATALOGUE 2024

EN









Nova Florida is a Fondital brand, Fondital is the first manufacturer of die-cast aluminium radiators worldwide as well as the international leader in heating systems. This is the result of the focus on sustainable innovation in R&D, production renewal related to study of the products, the constant development and training of human resources and the attention to well-being of its employees.

Fondital establishes with its clients strategic partnerships that go beyond a simple supplier-client relationship, but are based on information sharing and customer orientation, maintaining focus on environmental sustainability.





## VISION

We want to be an innovative company in the production of efficient and sustainable products, creating strong partnerships with our stakeholders, enhancing our local roots to be a global reference.



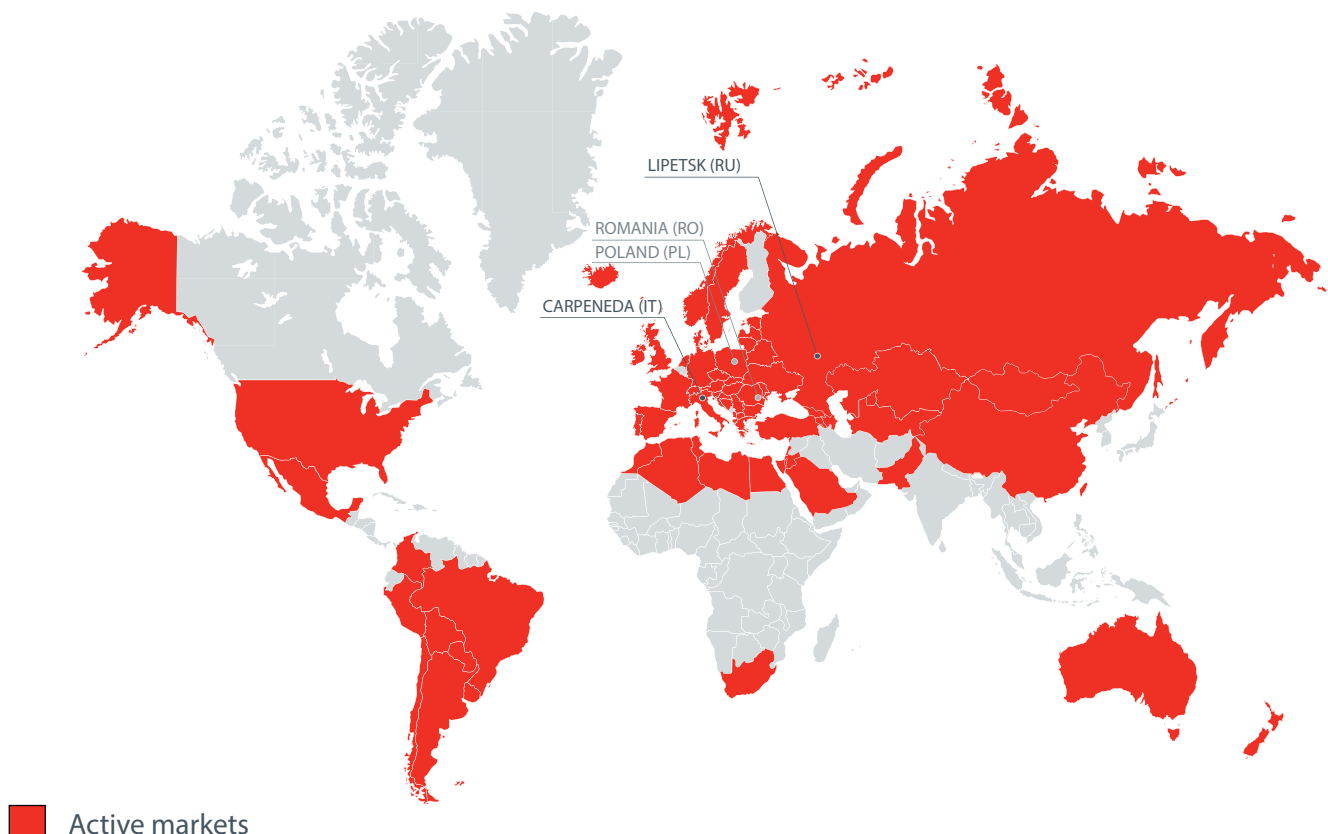
## MISSION

Our mission is to produce heating systems and structural castings for the automotive sector, manufacturing high-quality products using the latest industrial technologies. We are committed to operating efficiently, minimising our energy consumption and promoting sustainable processes that respect the environment. We also want to be a centre of expertise and added value for the territory in which we operate.

## FONDITAL WORLDWIDE

Fondital is market leader internationally. Multilingual staff and representation offices assure a constant presence on the global market, as evidence of its customer oriented vision. Fondital is constantly growing, thanks to its ability to interpret customer needs and

changes, and to the ability to constantly adapt its supply to the new end market needs with process and product innovations.



Active markets

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## STANDARD BOILERS

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## FLUE FITTINGS AND ACCESSORIES

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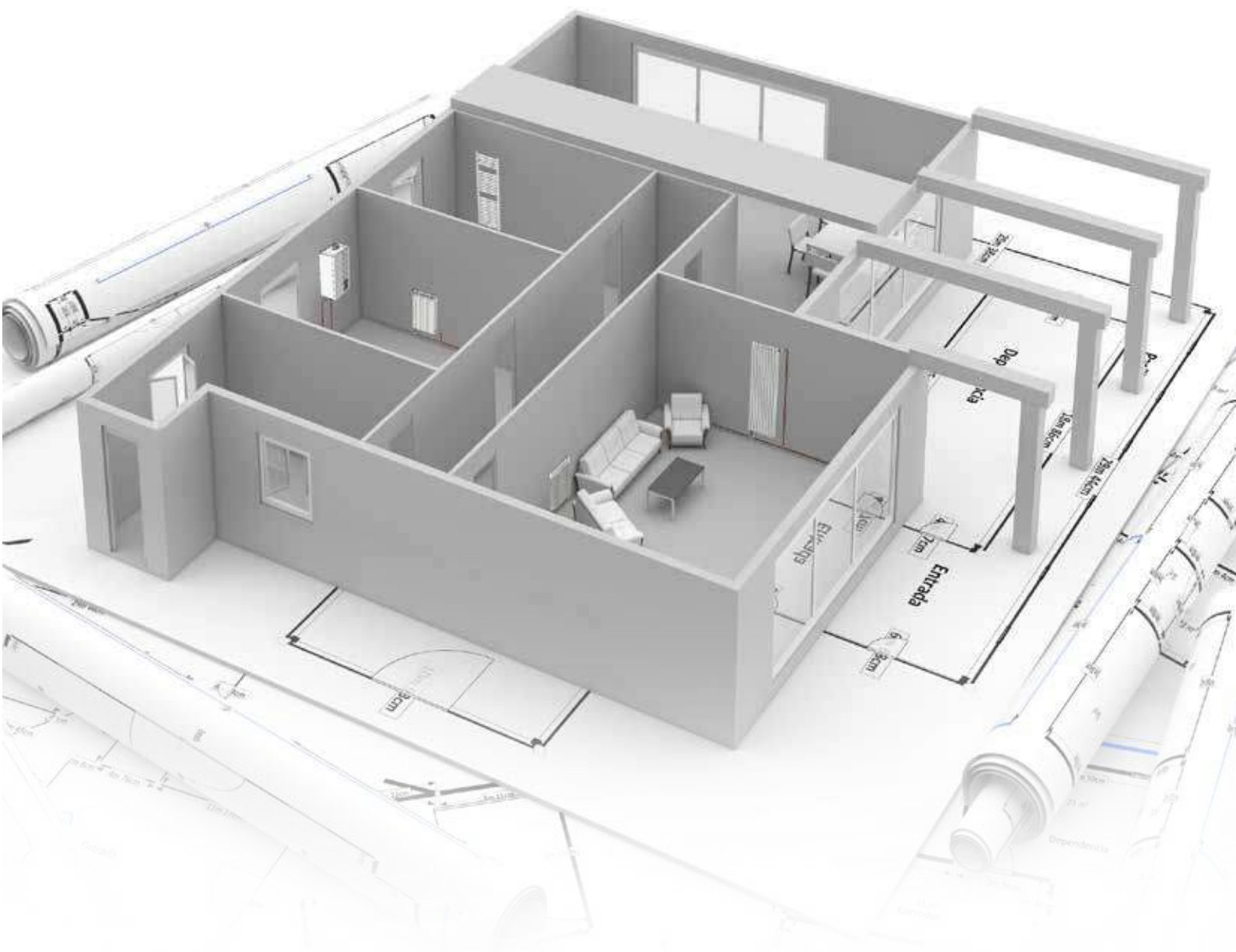
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# FONDITAL AND BIM:

## INNOVATION IN PROJECT DESIGN

Fondital products full range has been added to BIMobject, the world's largest platform of BIM content.

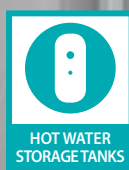
Therefore, you can download the product files and insert them into the desired project by directly accessing all the specific and detailed information for each prototype.



**bimobject**®

Download the Fondital products from [www.bimobject.com/en/fondital](http://www.bimobject.com/en/fondital)

# PRODUCT RANGE



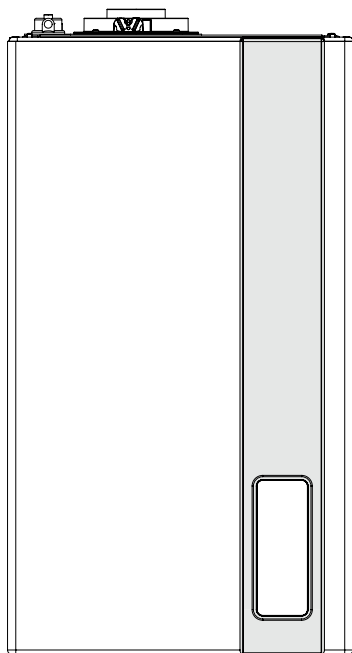


# BOILERS

## CODE OF THE PRODUCT



## EXAMPLE



### ORION KC

WALL-HUNG CONDENSING BOILER WITH  
INSTANT PRODUCTION OF DHW

**K** = CONDENSING

**C** = COMBI BOILER WITH INSTANT DHW  
PRODUCTION

## KEY

|           |                                             |            |                                                                              |
|-----------|---------------------------------------------|------------|------------------------------------------------------------------------------|
| <b>K</b>  | CONDENSING                                  | <b>RB</b>  | CH ONLY PLUS 3-WAY VALVE FOR HOT<br>WATER STORAGE TANK                       |
| <b>C</b>  | COMBI BOILER WITH INSTANT DHW<br>PRODUCTION | <b>S</b>   | WITH HYDRAULIC UNIT AND<br>ELECTRONICS FOR MANAGING A SOLAR<br>THERMAL PLANT |
| <b>B</b>  | INTEGRATED HOT WATER STORAGE TANK           | <b>TN</b>  | NATURAL DRAUGHT                                                              |
| <b>R</b>  | CH ONLY                                     | <b>TFS</b> | FORCED DRAUGHT                                                               |
| <b>AF</b> | BI-THERMAL HEAT EXCHANGER                   | <b>IN</b>  | BUILT-IN INSTALLATION                                                        |

| MODEL          | CONDENSING | STANDARD | BOILER BODY | CENTRAL HEATING | INSTANTANEOUS<br>DHW PRODUCTION | INTEGRATED<br>STORAGE TANK | REMOTE STORAGE<br>TANK | SOLAR EASY | WALL-HUNG | FLOOR-STANDING | CASCADE-TYPE<br>INSTALLATION | < 35 KW | > 35 KW |
|----------------|------------|----------|-------------|-----------------|---------------------------------|----------------------------|------------------------|------------|-----------|----------------|------------------------------|---------|---------|
| ORION KC       | ●          |          |             |                 | ●                               |                            |                        | ●          | ●         |                |                              | ●       |         |
| ORION KR       | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| ORION KRB      | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| ORION KB       | ●          |          |             |                 |                                 | ●                          |                        | ●          | ●         |                |                              | ●       |         |
| VIRGO KC       | ●          |          |             |                 | ●                               |                            |                        | ●          | ●         |                |                              | ●       |         |
| VIRGO KR       | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| VIRGO KRB      | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| DELFI NEXT KC  | ●          |          |             |                 | ●                               |                            |                        | ●          | ●         |                |                              | ●       |         |
| DELFI NEXT KR  | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| DELFI NEXT KRB | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| DELFI KC       | ●          |          |             |                 | ●                               |                            |                        | ●          | ●         |                |                              | ●       |         |
| DELFI KR       | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| DELFI KRB      | ●          |          |             | ●               |                                 |                            | ●                      | ●          | ●         |                |                              | ●       |         |
| LEO KC         | ●          |          |             |                 | ●                               |                            |                        |            | ●         |                |                              | ●       |         |
| PHOENIX KRB    | ●          |          |             |                 |                                 | ●                          |                        |            |           | ●              |                              | ●       |         |
| VIRGO PRO CTN  |            | ●        |             |                 | ●                               |                            |                        | ●          | ●         |                |                              | ●       |         |
| DELFI PRO CTN  |            | ●        |             |                 | ●                               |                            |                        |            | ●         |                |                              | ●       |         |



## SYMBOLS



**CONDENSING**  
Condensing boiler



**STANDARD**  
Standard boiler



**OUTDOOR INSTALLATION**  
Boiler that can be installed outdoors, in a partially protected place



**INDOOR INSTALLATION**  
Indoor wall-hung boiler



**BUILT-IN INSTALLATION**  
Boiler to be installed in a suitable flush-mounting unit



**FLOOR-STANDING INSTALLATION**  
Indoor floor-standing boiler



**CASCADE-TYPE INSTALLATION**  
Boiler that can be installed in cascade-type connection



**PLATE EXCHANGER**  
Plate DHW exchanger



**26-PLATE HEAT EXCHANGER**  
26-plate DHW heat exchanger



**ALUMINIUM PRIMARY EXCHANGER**  
Aluminium primary exchanger



**STAINLESS STEEL PRIMARY EXCHANGER**  
Stainless steel heat exchanger



**Primary copper heat exchanger**  
Primary copper heat exchanger



**OUTDOOR DHW hot water storage tank**  
Boiler preset for connection to a remote hot water storage tank



**INTEGRATED DHW hot water storage tank**  
Boiler with hot water storage tank



**MODULATION RATIO 1:9**  
Modulation range of heat output in CH and DHW modes



**MODULATION RATIO 1:10**  
Modulation range of heat output in CH up to 1:10

**SOLAR EASY**

Boiler that can be combined with natural or forced circulation solar systems

**EASY TO CONTROL**

Multilingual menu with detailed access to parameters

**FREEZE PROTECTION**

Boiler self-protection system

**REDUCED SIZE**

Reduced overall dimensions

**ELECTRONIC IGNITION**

Boiler equipped with electronic flame ignition board

**LOW NOx**

Low NOx emission boiler - class 6

**ENERGETIC SAVING**

Product with high energy efficiency

**TOP COMFORT DHW\*\*\***

High-performance boiler for DHW

**FRONT DOOR FOR ACCESS**

Front access for easy maintenance

**COMFORT FUNCTION**

Control for activating DHW comfort function

**HIGH-EFFICIENCY CIRCULATING PUMP**

High efficiency circulating pump for optimised consumption and performance

**MODULATING PUMP**

High efficiency modulating pump to optimize energy consumption and performance

**MADE IN ITALY**

Manufactured in Italy

**IOT - APP**

Control of the home heating system via Smartphone and possibility for the TAC to control all the parameters of the boiler and of the heating system via the home router (with the optional Spot thermostat and MySpot app)





# CONDENSING BOILERS

## WALL-HUNG BOILERS <35KW

|                |         |
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| DELFI NEXT KC  | page 28 |
| DELFI NEXT KR  | page 30 |
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| DELFI KC       | page 34 |
| DELFI KR       | page 36 |
| DELFI KRB      | page 38 |
| LEO KC         | page 40 |

## FLOOR-STANDING BOILERS <35KW

|             |         |
|-------------|---------|
| PHOENIX KRB | page 42 |
|-------------|---------|

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

|                                                |         |
|------------------------------------------------|---------|
| Technical specifications of condensing boilers | page 44 |
|------------------------------------------------|---------|



# ORION KC

WALL-HUNG CONDENSING BOILER WITH INSTANTANEOUS PRODUCTION OF DHW  
CAN BE MATCHED TO OUTDOOR INSTALLATION KIT



Available in the following models:



- ▶ Ambient temperature probe supplied as standard
- ▶ Modulation ratio: 1:9
- ▶ Condensation also in DHW operation thanks to the thermally insulated 26-plate DHW heat exchanger
- ▶ Management of one heating zone with ambient temperature probe and two zones with zone kit
- ▶ Double filling system: automatic and manual
- ▶ High domestic hot water production, more power during DHW operation (18 - 28 - 30 - 35 kW)
- ▶ Controls to manage two different types of solar thermal systems fitted as standard
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ Heating expansion vessel - 10 litres
- ▶ Thermoregulation with external probe (optional)
- ▶ Sanitary comfort function: ★★★
- ▶ High-efficiency modulating circulation pump with built-in air purging device



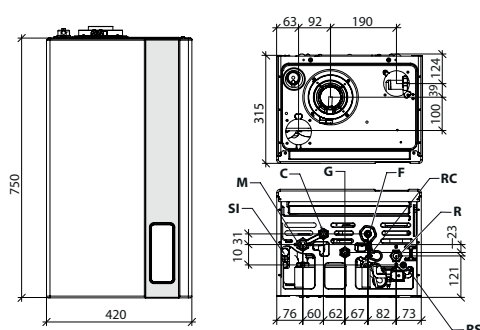
## TOUCH SCREEN INTERFACE

- ▶ Modulation thermostat with ambient probe
- ▶ Day/night temperature level selection
- ▶ Weekly programming
- ▶ Timer and ambient temperature setting
- ▶ DHW "comfort" function enabling: ★★★

**The TOUCH SCREEN interface of ORION KC combined with the ambient temperature probe supplied is a class V temperature control system.**

| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| KC 12 | NATURAL GAS | KOTXX2KC12 | 12,0            | 18,0           |                         | M           | 420x750x315 | 35,5         |
|       | PROPANE     | KOTXX6KC12 |                 |                |                         |             |             |              |
| KC 24 | NATURAL GAS | KOTXX2KC24 | 23,7            | 27,3           |                         | XL          | 420x750x315 | 38,0         |
|       | PROPANE     | KOTXX6KC24 |                 |                |                         |             |             |              |
| KC 28 | NATURAL GAS | KOTXX2KC28 | 26,4            | 30,4           |                         | XL          | 420x750x315 | 39,0         |
|       | PROPANE     | KOTXX6KC28 |                 |                |                         |             |             |              |
| KC 32 | NATURAL GAS | KOTXX2KC32 | 30,4            | 34,5           |                         | XXL         | 420x750x315 | 40,5         |
|       | PROPANE     | KOTXX6KC32 |                 |                |                         |             |             |              |

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



SI Condensate drain  
M CH system flow (3/4")  
C DHW outlet (1 1/2")  
G Gas inlet (1/2")

F Cold water inlet (1/2")  
RC Filler tap  
R CH system return (3/4")  
RS Discharge tap

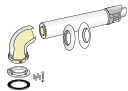
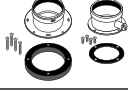




| Technical data                                                                                  | um    | KC 12   | KC 24   | KC 28   | KC 32   |
|-------------------------------------------------------------------------------------------------|-------|---------|---------|---------|---------|
| Rated output (Pn)                                                                               | kW    | 12      | 23      | 26      | 29      |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )                                      | %     | 90      | 92      | 92      | 93      |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) (Boiler + ambient temperature probe) | %     | 93      | 95      | 95      | 96      |
| Water heating energy efficiency ( $\eta_{wh}$ )                                                 | %     | 78 (**) | 85 (**) | 84 (**) | 87 (**) |
| Nominal heat input (Qn)                                                                         | kW    | 12,0    | 23,7    | 26,4    | 30,4    |
| Nominal heat output (80-60°C) (Pn)                                                              | kW    | 11,7    | 23,0    | 25,5    | 29,4    |
| Heat output (50-30°C)                                                                           | kW    | 12,6    | 25,0    | 28,0    | 32,3    |
| Reduced heat input (Qr)                                                                         | kW    | 2,0     | 3,0     | 3,3     | 4,2     |
| Useful efficiency at nominal input (80-60°C)                                                    | %     | 97,1    | 96,8    | 96,7    | 96,8    |
| Useful efficiency at nominal input (50-30°C)                                                    | %     | 105,1   | 105,6   | 106,0   | 106,2   |
| Useful efficiency at 30% (30°C return)                                                          | %     | 106,0   | 107,4   | 107,4   | 108,3   |
| Heating expansion vessel capacity                                                               | l     | 10      | 10      | 10      | 10      |
| DHW nominal heat input                                                                          | kW    | 18,0    | 27,3    | 30,4    | 34,5    |
| Specific DHW flow $\Delta T=30K$                                                                | l/min | 8,8     | 13,4    | 15,5    | 16,2    |
| NOx emission class                                                                              | -     | 6       | 6       | 6       | 6       |
| Electric protection rating                                                                      | IP    | IPX5D   | IPX5D   | IPX5D   | IPX5D   |

(\*\*) with comfort function disabled.

For other technical specifications, see from page 44 - Maximum length of flue gas venting, see page 70

| Item                                                                                | Description                                            | Code       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|------------|
|     | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |
|    | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |
|   | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |
|   | Splitter kit Ø80+80                                    | 0KITSDOP08 |
|  | Electrical kit for zone management with external probe | 0KITZONE05 |
|  | External probe (60x45x31 mm)                           | 0SONDAES01 |

| Item                                                                               | Description                       | Code       |
|------------------------------------------------------------------------------------|-----------------------------------|------------|
|   | Kit for connection to solar plant | 0KITSOLC07 |
|   | Tap kit with filter KC-KRB-CT-RBT | 0KITRUBI05 |
|  | Magnetic dirt separator filter    | 0AFILDEF00 |

For other accessories, see from page 69

#### Accessories supplied as standard

| Item                                                                                | Description               |
|-------------------------------------------------------------------------------------|---------------------------|
|  | Ambient temperature probe |

**ORION KC** supplied with ambient temperature probe has a room heating seasonal efficiency of:  
94% for model 12; 95% for model 24; 95% for model 28; 96% for model 32



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                                                                      |            |       |       |       |       |
|------------------------------------------------------------|--------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|
| Regulation device                                          |                                                                                      | Code       | KC 12 | KC 24 | KC 28 | KC 32 |
| <b>Option 1</b>                                            | Boiler + external probe (ambient temperature probe is not supplied)                  | 0SONDAES01 | 92%   | 94%   | 94%   | 95%   |
| <b>Option 2</b>                                            | Boiler + external probe (ambient temperature probe is supplied)                      | 0SONDAES01 | 94%   | 96%   | 96%   | 97%   |
| <b>Option 3</b>                                            | Boiler + remote control (ambient temperature probe is not supplied)                  | 0CREMOTO04 | 93%   | 95%   | 95%   | 96%   |
| <b>Option 4</b>                                            | Boiler + remote control + external probe (ambient temperature probe is not supplied) | 0CREMOTO04 | 94%   | 96%   | 96%   | 97%   |
|                                                            |                                                                                      | 0SONDAES01 | 94%   | 96%   | 96%   | 97%   |

# ORION KR

WALL-HUNG CONDENSING BOILER CH ONLY

CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL) WITH  
EXTERNAL 3-WAY VALVE (OPTIONAL)



- ▶ Ambient temperature probe supplied as standard
- ▶ Modulation ratio: 1:9
- ▶ Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal
- ▶ Management of one heating zone with ambient temperature probe and two zones with zone kit
- ▶ Standard management of one type of solar thermal system
- ▶ External hot water storage tank heating setting (optional)
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ Heating expansion vessel - 10 litres
- ▶ Thermoregulation with external probe (optional)
- ▶ Automatic by-pass
- ▶ High-efficiency modulating circulation pump with built-in air purging device



## TOUCH SCREEN INTERFACE

- ▶ Modulation thermostat with ambient probe
- ▶ Day/night temperature level selection
- ▶ Weekly programming
- ▶ Timer and ambient temperature setting
- ▶ Heater DHW "comfort" function enabling

Available in the following models:

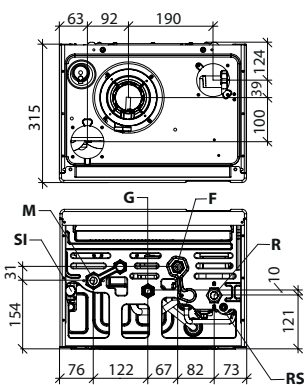
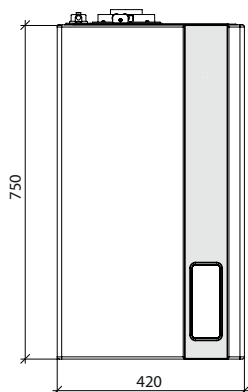


**The TOUCH SCREEN interface of ORION KR combined with the ambient temperature probe supplied is a class V temperature control system.**

| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D<br>mm | Gross weight<br>kg |
|-------|-------------|------------|-----------------|----------------|-------------------------|-----------------|--------------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW |                         |                 |                    |
| KR 12 | NATURAL GAS | KOTXX2KR12 | 12,0            | 18,0 (*)       | A                       | 420x750x315     | 34,0               |
|       | PROPANE     | KOTXX6KR12 |                 |                |                         |                 |                    |
| KR 24 | NATURAL GAS | KOTXX2KR24 | 23,7            | 27,3 (*)       | A                       | 420x750x315     | 35,5               |
|       | PROPANE     | KOTXX6KR24 |                 |                |                         |                 |                    |
| KR 28 | NATURAL GAS | KOTXX2KR28 | 26,4            | 30,4 (*)       | A                       | 420x750x315     | 37,0               |
|       | PROPANE     | KOTXX6KR28 |                 |                |                         |                 |                    |
| KR 32 | NATURAL GAS | KOTXX2KR32 | 30,4            | 34,5 (*)       | A                       | 420x750x315     | 38,5               |
|       | PROPANE     | KOTXX6KR32 |                 |                |                         |                 |                    |

(\*) with optional hot water storage tank.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



SI Condensate drain  
M CH system flow (3/4")  
G Gas inlet (1/2")

F Cold water inlet (1/2")  
R CH system return (3/4")  
RS Discharge tap



| Technical data                                                                                  | um | KR 12    | KR 24    | KR 28    | KR 32    |
|-------------------------------------------------------------------------------------------------|----|----------|----------|----------|----------|
| Rated output (Pn)                                                                               | kW | 12       | 23       | 26       | 29       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )                                      | %  | 90       | 92       | 92       | 93       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) (Boiler + ambient temperature probe) | %  | 93       | 95       | 95       | 96       |
| Nominal heat input (Qn)                                                                         | kW | 12,0     | 23,7     | 26,4     | 30,4     |
| Nominal heat output (80-60°C) (Pn)                                                              | kW | 11,7     | 23,0     | 25,5     | 29,4     |
| Heat output (50-30°C)                                                                           | kW | 12,6     | 25,0     | 28,0     | 32,3     |
| Reduced heat input (Qr)                                                                         | kW | 2,0      | 3,0      | 3,3      | 4,2      |
| Useful efficiency at nominal input (80-60°C)                                                    | %  | 97,1     | 96,8     | 96,7     | 96,8     |
| Useful efficiency at nominal input (50-30°C)                                                    | %  | 105,1    | 105,6    | 106,0    | 106,2    |
| Useful efficiency at 30% (30°C return)                                                          | %  | 106,0    | 107,4    | 107,4    | 108,3    |
| Heating expansion vessel capacity                                                               | l  | 10       | 10       | 10       | 10       |
| DHW nominal heat input                                                                          | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) | 34,5 (*) |
| NOx emission class                                                                              | -  | 6        | 6        | 6        | 6        |
| Electric protection rating                                                                      | IP | IPX5D    | IPX5D    | IPX5D    | IPX5D    |

(\*) with optional hot water storage tank.

For other technical specifications, see from page 45 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       | Item                                    | Description                            | Code       |
|------|--------------------------------------------------------|------------|-----------------------------------------|----------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |                                         | External probe (60x45x31 mm)           | 0SONDAES01 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |                                         | Tap kit with filter KR-KB-RT           | 0KITRUBI04 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |                                         | Magnetic dirt separator filter         | 0AFILDEF00 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |                                         | Coax. adapter kit D.60/100 to D.80/125 | 0KITADCO00 |
|      | hot water storage tank temperature probe 3m            | 0KITSOND00 | For other accessories, see from page 69 |                                        |            |
|      | Electrical kit for zone management with external probe | 0KITZONE05 | <b>Accessories supplied as standard</b> |                                        |            |
|      |                                                        |            |                                         | Ambient temperature probe              |            |

**ORION KR** supplied with ambient temperature probe has a room heating seasonal efficiency of:  
93% for model 12; 95% for model 24; 95% for model 28; 96% for model 32



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                                                                      |            |       |       |       |       |
|------------------------------------------------------------|--------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|
| Regulation device                                          |                                                                                      | Code       | KR 12 | KR 24 | KR 28 | KR 32 |
| <b>Option 1</b>                                            | Boiler + external probe (ambient temperature probe is not supplied)                  | 0SONDAES01 | 92%   | 94%   | 94%   | 95%   |
| <b>Option 2</b>                                            | Boiler + external probe (ambient temperature probe is supplied)                      | 0SONDAES01 | 94%   | 96%   | 96%   | 97%   |
| <b>Option 3</b>                                            | Boiler + remote control (ambient temperature probe is not supplied)                  | 0CREMOTO04 | 93%   | 95%   | 95%   | 96%   |
| <b>Option 4</b>                                            | Boiler + remote control + external probe (ambient temperature probe is not supplied) | 0CREMOTO04 | 94%   | 96%   | 96%   | 97%   |
|                                                            |                                                                                      | 0SONDAES01 | 94%   | 96%   | 96%   | 97%   |

# ORION KRB

WALL-HUNG CONDENSING BOILER, CH ONLY, WITH INTEGRATED 3-WAY VALVE CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL)



Available in the following models:



- ▶ Ambient temperature probe supplied as standard
- ▶ Temperature probe for water tank supplied as standard
- ▶ Modulation ratio: 1:9
- ▶ Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal
- ▶ Management of one heating zone with ambient temperature probe and two zones with zone kit
- ▶ Standard management of one type of solar thermal system
- ▶ Integrated 3-way deviating valve
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ Thermoregulation with external probe (optional)
- ▶ Heating expansion vessel - 10 litres
- ▶ High-efficiency modulating circulation pump with built-in air purging device
- ▶ Anti-legionella function for hot water storage tank
- ▶ External hot water storage tank heating setting (optional)



## TOUCH SCREEN INTERFACE

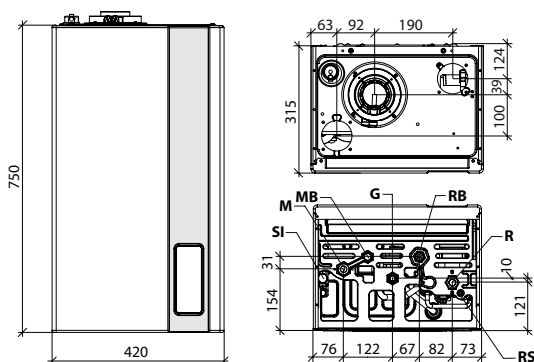
- ▶ Modulation thermostat with ambient probe
- ▶ Day/night temperature level selection
- ▶ Weekly programming
- ▶ Timer and ambient temperature setting
- ▶ Heater DHW "comfort" function enabling

**The TOUCH SCREEN interface of ORION KRB combined with the ambient temperature probe supplied is a class V temperature control system.**

| Model  | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D   | Gross weight |
|--------|-------------|------------|-----------------|----------------|-------------------------|-------------|--------------|
|        |             |            | Nominal (Qn) kW | Nominal DHW kW |                         | mm          | kg           |
| KRB 12 | NATURAL GAS | KOTXX2KU12 | 12,0            | 18,0 (*)       | A                       | 420x750x315 | 36,5         |
|        | PROPANE     | KOTXX6KU12 |                 |                |                         |             |              |
| KRB 24 | NATURAL GAS | KOTXX2KU24 | 23,7            | 27,3 (*)       | A                       | 420x750x315 | 37,0         |
|        | PROPANE     | KOTXX6KU24 |                 |                |                         |             |              |
| KRB 28 | NATURAL GAS | KOTXX2KU28 | 26,4            | 30,4 (*)       | A                       | 420x750x315 | 38,5         |
|        | PROPANE     | KOTXX6KU28 |                 |                |                         |             |              |
| KRB 32 | NATURAL GAS | KOTXX2KU32 | 30,4            | 34,5 (*)       | A                       | 420x750x315 | 40,0         |
|        | PROPANE     | KOTXX6KU32 |                 |                |                         |             |              |

(\*) with optional hot water storage tank.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



**SI** Condensate drain  
**M** CH system flow (3/4")  
**MB** Flow for hot water storage tank (1/2")  
**G** Gas inlet (1/2")

**RB** Return from hot water storage tank (1/2")  
**R** CH system return (3/4")  
**RS** Discharge tap



| Technical data                                                                                  | um | KRB 12   | KRB 24   | KRB 28   | KRB 32   |
|-------------------------------------------------------------------------------------------------|----|----------|----------|----------|----------|
| Rated output (Pn)                                                                               | kW | 12       | 23       | 26       | 29       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )                                      | %  | 90       | 92       | 92       | 93       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) (Boiler + ambient temperature probe) | %  | 93       | 95       | 95       | 96       |
| Nominal heat input (Qn)                                                                         | kW | 12,0     | 23,7     | 26,4     | 30,4     |
| Nominal heat output (80-60°C) (Pn)                                                              | kW | 11,7     | 23,0     | 25,5     | 29,4     |
| Heat output (50-30°C)                                                                           | kW | 12,6     | 25,0     | 28,0     | 32,3     |
| Reduced heat input (Qr)                                                                         | kW | 2,0      | 3,0      | 3,3      | 4,2      |
| Useful efficiency at nominal input (80-60°C)                                                    | %  | 97,1     | 96,8     | 96,7     | 96,8     |
| Useful efficiency at nominal input (50-30°C)                                                    | %  | 105,1    | 105,6    | 106,0    | 106,2    |
| Useful efficiency at 30% (30°C return)                                                          | %  | 106,0    | 107,4    | 107,4    | 108,3    |
| Heating expansion vessel capacity                                                               | l  | 10       | 10       | 10       | 10       |
| DHW nominal heat input                                                                          | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) | 34,5 (*) |
| NOx emission class                                                                              | -  | 6        | 6        | 6        | 6        |
| Electric protection rating                                                                      | IP | IPX5D    | IPX5D    | IPX5D    | IPX5D    |

(\*) with optional hot water storage tank.

For other technical specifications, see from page 46 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       |
|------|--------------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |
|      | External probe (60x45x31 mm)                           | 0SONDAES01 |

| Item | Description                            | Code       |
|------|----------------------------------------|------------|
|      | Tap kit with filter KC-KRB-CT-RBT      | 0KITRUBI05 |
|      | Coax. adapter kit D.60/100 to D.80/125 | 0KITADCO00 |

For other accessories, see from page 69

#### Accessories supplied as standard

| Item | Description                                 |
|------|---------------------------------------------|
|      | Ambient temperature probe                   |
|      | hot water storage tank temperature probe 3m |

**ORION KRB** supplied with ambient temperature probe has a room heating seasonal efficiency of: 93% for model 12; 95% for model 24; 95% for model 28; 96% for model 32



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                                                                      |            |        |        |        |        |
|------------------------------------------------------------|--------------------------------------------------------------------------------------|------------|--------|--------|--------|--------|
| Regulation device                                          |                                                                                      | Code       | KRB 12 | KRB 24 | KRB 28 | KRB 32 |
| Option 1                                                   | Boiler + external probe (ambient temperature probe is not supplied)                  | 0SONDAES01 | 92%    | 94%    | 94%    | 95%    |
| Option 2                                                   | Boiler + external probe (ambient temperature probe is supplied)                      | 0SONDAES01 | 94%    | 96%    | 96%    | 97%    |
| Option 3                                                   | Boiler + remote control (ambient temperature probe is not supplied)                  | 0CREMOTO04 | 93%    | 95%    | 95%    | 96%    |
| Option 4                                                   | Boiler + remote control + external probe (ambient temperature probe is not supplied) | 0CREMOTO04 | 94%    | 96%    | 96%    | 97%    |
|                                                            |                                                                                      | 0SONDAES01 | 94%    | 96%    | 96%    | 97%    |

# ORION KB

WALL-HUNG CONDENSING BOILER WITH AN INTEGRATED WATER TANK FOR THE PRODUCTION OF DHW



Available in the following models:



- ▶ Ambient temperature probe supplied as standard
- ▶ Modulation ratio: 1:9
- ▶ Thermally-insulated 45-litre stainless steel hot water storage tank
- ▶ hot water storage tank heating setting
- ▶ Management of one heating zone with ambient temperature probe and two zones with zone kit
- ▶ Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal
- ▶ Heating expansion vessel - 10 litres
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ Thermoregulation with external probe (optional)
- ▶ Anti-legionella function for hot water storage tank
- ▶ Prearranged for connection to a recirculation system
- ▶ High-efficiency modulating circulation pump with built-in air purging device
- ▶ Automatic by-pass



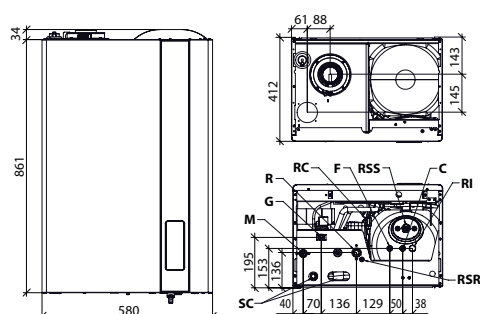
## TOUCH SCREEN INTERFACE

- ▶ Modulation thermostat with ambient probe
- ▶ Day/night temperature level selection
- ▶ Weekly programming
- ▶ Timer and ambient temperature setting
- ▶ Heater DHW "comfort" function enabling

**The TOUCH SCREEN interface ORION KB combined with the ambient temperature probe supplied is a class V adjustment system.**

| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| KB 24 | NATURAL GAS | KOTXX2KB24 | 23,7            | 27,3           |                         |             | 580x861x412 | 74,0         |
|       | PROPANE     | KOTXX6KB24 |                 |                |                         |             |             |              |
| KB 32 | NATURAL GAS | KOTXX2KB32 | 30,4            | 34,5           |                         |             | 580x861x412 | 79,0         |
|       | PROPANE     | KOTXX6KB32 |                 |                |                         |             |             |              |

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



**M** CH system flow (3/4")  
**G** Gas inlet (1/2")  
**R** CH system return (3/4")  
**RC** Filler tap  
**F** Cold water inlet (1/2")

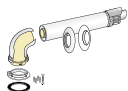
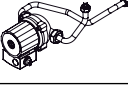
**RSS** DHW drain cock  
**C** DHW outlet (1 1/2")  
**RI** Recirculation inlet (1/2")  
**RSR** CH discharge tap  
**SC** Condensate drain and safety valves





| Technical data                                                                                  | um    | KB 24 | KB 32 |
|-------------------------------------------------------------------------------------------------|-------|-------|-------|
| Rated output (Pn)                                                                               | kW    | 23    | 29    |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )                                      | %     | 92    | 93    |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) (Boiler + ambient temperature probe) | %     | 95    | 96    |
| Water heating energy efficiency ( $\eta_{wh}$ )                                                 | %     | 82    | 80    |
| Nominal heat input (Qn)                                                                         | kW    | 23,7  | 30,4  |
| Nominal heat output (80-60°C) (Pn)                                                              | kW    | 23,0  | 29,4  |
| Heat output (50-30°C)                                                                           | kW    | 25,0  | 32,3  |
| Reduced heat input (Qr)                                                                         | kW    | 3,0   | 4,2   |
| Useful efficiency at nominal input (80-60°C)                                                    | %     | 96,8  | 96,2  |
| Useful efficiency at nominal input (50-30°C)                                                    | %     | 105,6 | 106,2 |
| Useful efficiency at 30% (30°C return)                                                          | %     | 107,4 | 108,3 |
| Heating expansion vessel capacity                                                               | l     | 10    | 10    |
| DHW nominal heat input                                                                          | kW    | 27,3  | 34,5  |
| Specific DHW flow $\Delta T=30K$                                                                | l/min | 16,2  | 19,5  |
| NOx emission class                                                                              | -     | 6     | 6     |
| Electric protection rating                                                                      | IP    | IPX4D | IPX4D |

For other technical specifications, see from page 47 - Maximum length of flue gas venting, see page 70

| Item                                                                                | Description                                            | Code       | Item                                                                              | Description                    | Code       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|------------|-----------------------------------------------------------------------------------|--------------------------------|------------|
|     | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |  | Tap kit with filter KR-KB-RT   | 0KITRUBI04 |
|    | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |  | Magnetic dirt separator filter | 0AFILDEF00 |
|    | Splitter kit Ø80+80                                    | 0KITSOP08  | For other accessories, see from page 69                                           |                                |            |
|  | Electrical kit for zone management with external probe | 0KITZONE05 |                                                                                   |                                |            |
|  | External probe (60x45x31 mm)                           | 0SONDAES01 |                                                                                   |                                |            |
|   | Recirculation kit                                      | 0KRICIRC02 |                                                                                   |                                |            |

#### Accessories supplied as standard

| Item                                                                                | Description               |
|-------------------------------------------------------------------------------------|---------------------------|
|  | Ambient temperature probe |

**ORION KB** supplied with ambient temperature probe has a room heating seasonal efficiency of:  
95% for model 24; 96% for model 32



## How to increase energy efficiency? Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                                                                      |                   |       |       |
|------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------|-------|-------|
| Regulation device                                          |                                                                                      | Code              | KB 24 | KB 32 |
| <b>Option 1</b>                                            | Boiler + external probe (ambient temperature probe is not supplied)                  | <b>0SONDAES01</b> | 94%   | 95%   |
| <b>Option 2</b>                                            | Boiler + external probe (ambient temperature probe is supplied)                      | <b>0SONDAES01</b> | 96%   | 97%   |
| <b>Option 3</b>                                            | Boiler + remote control (ambient temperature probe is not supplied)                  | <b>0CREMOTO04</b> | 95%   | 96%   |
| <b>Option 4</b>                                            | Boiler + remote control + external probe (ambient temperature probe is not supplied) | <b>0CREMOTO04</b> | 96%   | 97%   |
|                                                            |                                                                                      | <b>0SONDAES01</b> | 96%   | 97%   |

# VIRGO KC

WALL-HUNG CONDENSING BOILER WITH INSTANTANEOUS PRODUCTION OF DHW



- ▶ **Modulation ratio: 1:9**
- ▶ **High-efficiency modulating circulation pump with built-in air purging device**
- ▶ **Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal**
- ▶ **Controls to manage two different types of solar thermal systems fitted as standard**
- ▶ **High domestic hot water production, more power during DHW operation (18 - 28 - 30 - 35 kW)**
- ▶ **Stainless steel 26-plate DHW heat exchanger**
- ▶ **Heating expansion vessel - 10 litres**
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ Freeze protection function for heating and hot water storage tank
- ▶ Thermoregulation with external probe (optional)
- ▶ Automatic by-pass



## TOUCH SCREEN INTERFACE

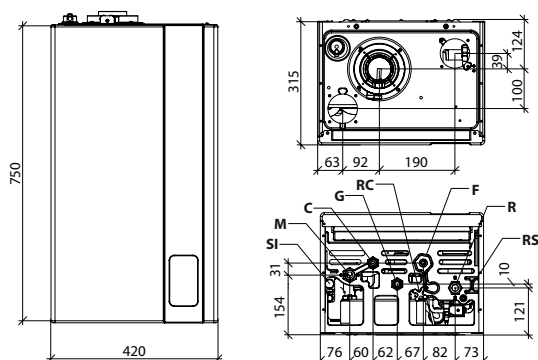
- ▶ DHW and heating temperature setting
- ▶ Operating mode setting
- ▶ Solar thermal systems status display

Available in the following models:



| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| KC 12 | NATURAL GAS | KVOXX2KC12 | 12,0            | 18,0           |                         | M           | 420x750x315 | 36,5         |
|       | PROPANE     | KVOXX6KC12 |                 |                |                         |             |             |              |
| KC 24 | NATURAL GAS | KVOXX2KC24 | 23,7            | 27,3           |                         | XL          | 420x750x315 | 37,5         |
|       | PROPANE     | KVOXX6KC24 |                 |                |                         |             |             |              |
| KC 28 | NATURAL GAS | KVOXX2KC28 | 26,4            | 30,4           |                         | XL          | 420x750x315 | 39,0         |
|       | PROPANE     | KVOXX6KC28 |                 |                |                         |             |             |              |
| KC 32 | NATURAL GAS | KVOXX2KC32 | 30,4            | 34,5           |                         | XXL         | 420x750x315 | 40,5         |
|       | PROPANE     | KVOXX6KC32 |                 |                |                         |             |             |              |

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



- SI Trap inspection cap
- M CH system flow (3/4")
- C DHW outlet (1 1/2")
- G Gas inlet (1/2")

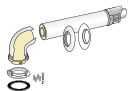
- RC Filler tap
- F Cold water inlet (1/2")
- R CH system return (3/4")
- RS Discharge tap





| Technical data                                             | um    | KC 12 | KC 24 | KC 28 | KC 32 |
|------------------------------------------------------------|-------|-------|-------|-------|-------|
| Rated output (Pn)                                          | kW    | 12    | 23    | 26    | 29    |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 90    | 92    | 92    | 93    |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 77    | 85    | 86    | 87    |
| Nominal heat input (Qn)                                    | kW    | 12,0  | 23,7  | 26,4  | 30,4  |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 11,7  | 23,0  | 25,5  | 29,4  |
| Heat output (50-30°C)                                      | kW    | 12,6  | 25,0  | 28,0  | 32,3  |
| Reduced heat input (Qr)                                    | kW    | 2,0   | 3,0   | 3,3   | 4,2   |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,1  | 96,8  | 96,7  | 96,8  |
| Useful efficiency at nominal input (50-30°C)               | %     | 105,1 | 105,6 | 106,0 | 106,2 |
| Useful efficiency at 30% (30°C return)                     | %     | 106,0 | 107,4 | 107,4 | 108,3 |
| Heating expansion vessel capacity                          | l     | 10    | 10    | 10    | 10    |
| DHW nominal heat input                                     | kW    | 18,0  | 27,3  | 30,4  | 34,5  |
| Specific DHW flow $\Delta T=30K$                           | l/min | 8,8   | 13,4  | 15,5  | 16,2  |
| NOx emission class                                         | -     | 6     | 6     | 6     | 6     |
| Electric protection rating                                 | IP    | IPX5D | IPX5D | IPX5D | IPX5D |

For other technical specifications, see from page 48 - Maximum length of flue gas venting, see page 70

| Item                                                                                | Description                                            | Code       | Item                                                                                | Description                                     | Code       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|------------|-------------------------------------------------------------------------------------|-------------------------------------------------|------------|
|     | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |    | External probe (60x45x31 mm)                    | 0SONDAES01 |
|    | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |    | Magnetic dirt separator filter                  | 0AFILDEF00 |
|   | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |   | Kit for connection to solar plant               | 0KITSOLC07 |
|  | Splitter kit Ø80+80                                    | 0KITSDOP08 |  | Tap kit with filter KC-KRB-CT-RBT               | 0KITRUBI05 |
|  | Electrical kit for zone management with external probe | 0KITZONE05 |  | Electric kit for complex solar plant management | 0KITSOLC08 |

For other accessories, see from page 69



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |       |       |       |       |
|------------------------------------------------------------|-----------------------------------------|------------|-------|-------|-------|-------|
| Regulation device                                          |                                         | Code       | KC 12 | KC 24 | KC 28 | KC 32 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 92%   | 94%   | 94%   | 95%   |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 93%   | 95%   | 95%   | 96%   |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 94%   | 96%   | 96%   | 97%   |
|                                                            |                                         | 0CREMOTO04 |       |       |       |       |

# VIRGO KR

WALL-HUNG CONDENSING BOILER CH ONLY

CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL) WITH  
EXTERNAL 3-WAY VALVE (OPTIONAL)



- ▶ **Modulation ratio: 1:9**
- ▶ **High-efficiency modulating circulation pump with built-in air purging device**
- ▶ **Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal**
- ▶ **Standard management of one type of solar thermal system**
- ▶ **Heating expansion vessel - 10 litres**
  - ) Thermosetting polymer-covered stainless steel heat exchanger
  - ) Anti-legionella function for hot water storage tank
  - ) Automatic by-pass
  - ) Thermoregulation with external probe (optional)



## TOUCH SCREEN INTERFACE

- ▶ DHW and heating temperature setting
- ▶ Operating mode setting
- ▶ Solar thermal systems status display

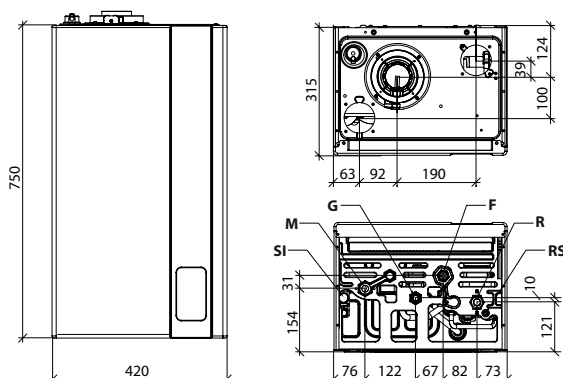
Available in the following models:



| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D   | Gross weight |
|-------|-------------|------------|-----------------|----------------|-------------------------|-------------|--------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW |                         | mm          | kg           |
| KR 12 | NATURAL GAS | KVOXX2KR12 | 12,0            | 18,0 (*)       | A                       | 420x750x315 | 34,0         |
|       | PROPANE     | KVOXX6KR12 |                 |                |                         |             |              |
| KR 24 | NATURAL GAS | KVOXX2KR24 | 23,7            | 27,3 (*)       | A                       | 420x750x315 | 36,0         |
|       | PROPANE     | KVOXX6KR24 |                 |                |                         |             |              |
| KR 28 | NATURAL GAS | KVOXX2KR28 | 26,4            | 30,4 (*)       | A                       | 420x750x315 | 37,5         |
|       | PROPANE     | KVOXX6KR28 |                 |                |                         |             |              |
| KR 32 | NATURAL GAS | KVOXX2KR32 | 30,4            | 34,5 (*)       | A                       | 420x750x315 | 39,0         |
|       | PROPANE     | KVOXX6KR32 |                 |                |                         |             |              |

(\*) with optional hot water storage tank.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



SI Trap inspection cap  
M CH system flow (3/4")  
G Gas inlet (1/2")

F Cold water inlet (1/2")  
R CH system return (3/4")  
RS Discharge tap



| Technical data                                             | um | KR 12    | KR 24    | KR 28    | KR 32    |
|------------------------------------------------------------|----|----------|----------|----------|----------|
| Rated output (Pn)                                          | kW | 12       | 23       | 26       | 29       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %  | 90       | 92       | 92       | 93       |
| Nominal heat input (Qn)                                    | kW | 12,0     | 23,7     | 26,4     | 30,4     |
| Nominal heat output (80-60°C) (Pn)                         | kW | 11,7     | 23,0     | 25,5     | 29,4     |
| Heat output (50-30°C)                                      | kW | 12,6     | 25,0     | 28,0     | 32,3     |
| Reduced heat input (Qr)                                    | kW | 2,0      | 3,0      | 3,3      | 4,2      |
| Useful efficiency at nominal input (80-60°C)               | %  | 97,1     | 96,8     | 96,7     | 96,8     |
| Useful efficiency at nominal input (50-30°C)               | %  | 105,1    | 105,6    | 106,0    | 106,2    |
| Useful efficiency at 30% (30°C return)                     | %  | 106,0    | 107,4    | 107,4    | 108,3    |
| Heating expansion vessel capacity                          | l  | 10       | 10       | 10       | 10       |
| DHW nominal heat input                                     | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) | 34,5 (*) |
| NOx emission class                                         | -  | 6        | 6        | 6        | 6        |
| Electric protection rating                                 | IP | IPX5D    | IPX5D    | IPX5D    | IPX5D    |

(\*) with optional hot water storage tank.

For other technical specifications, see from page 49 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       | Item | Description                                     | Code       |
|------|--------------------------------------------------------|------------|------|-------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |      | External probe (60x45x31 mm)                    | 0SONDAES01 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |      | hot water storage tank temperature probe 3m     | 0KITSOND00 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |      | Magnetic dirt separator filter                  | 0AFILDEF00 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |      | Tap kit with filter KR-KB-RT                    | 0KITRUBI04 |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |      | Electric kit for complex solar plant management | 0KITSOLC08 |

For other accessories, see from page 69



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |       |       |       |       |
|------------------------------------------------------------|-----------------------------------------|------------|-------|-------|-------|-------|
| Regulation device                                          |                                         | Code       | KR 12 | KR 24 | KR 28 | KR 32 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 92%   | 94%   | 94%   | 95%   |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 93%   | 95%   | 95%   | 96%   |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 94%   | 96%   | 96%   | 97%   |
|                                                            |                                         | 0CREMOTO04 |       |       |       |       |

# VIRGO KRB

WALL-HUNG CONDENSING BOILER, CH ONLY, WITH INTEGRATED 3-WAY VALVE CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL)



- ▶ **Modulation ratio: 1:9**
- ▶ **Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal**
- ▶ **High-efficiency modulating circulation pump with built-in air purging device**
- ▶ **Standard management of one type of solar thermal system**
- ▶ **Thermoregulation with external probe (optional)**
- ▶ **Integrated 3-way deviating valve**
- ▶ **Heating expansion vessel - 10 litres**
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ CH water flow rate electronic control
- ▶ Freeze protection function for heating and hot water storage tank
- ▶ Automatic by-pass



## TOUCH SCREEN INTERFACE

- ▶ DHW and heating temperature setting
- ▶ Operating mode setting
- ▶ Solar thermal systems status display

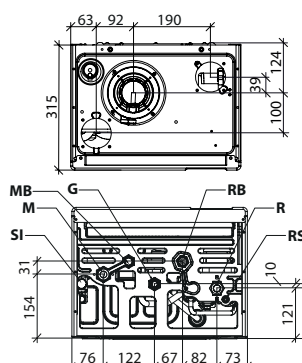
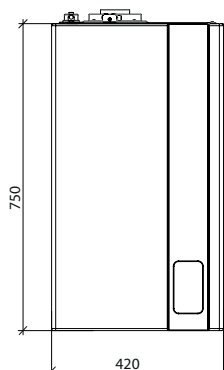
Available in the following models:



| Model  | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D<br>mm | Gross weight<br>kg |
|--------|-------------|------------|-----------------|----------------|-------------------------|-----------------|--------------------|
|        |             |            | Nominal (Qn) kW | Nominal DHW kW |                         |                 |                    |
| KRB 12 | NATURAL GAS | KVOXX2KU12 | 12,0            | 18,0 (*)       | A                       | 420x750x315     | 35,5               |
|        | PROPANE     | KVOXX6KU12 |                 |                |                         |                 |                    |
| KRB 24 | NATURAL GAS | KVOXX2KU24 | 23,7            | 27,3 (*)       | A                       | 420x750x315     | 37,0               |
|        | PROPANE     | KVOXX6KU24 |                 |                |                         |                 |                    |
| KRB 28 | NATURAL GAS | KVOXX2KU28 | 26,4            | 30,4 (*)       | A                       | 420x750x315     | 38,0               |
|        | PROPANE     | KVOXX6KU28 |                 |                |                         |                 |                    |
| KRB 32 | NATURAL GAS | KVOXX2KU32 | 30,4            | 34,5 (*)       | A                       | 420x750x315     | 39,0               |
|        | PROPANE     | KVOXX6KU32 |                 |                |                         |                 |                    |

(\*) with optional hot water storage tank.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



- SI** Trap inspection cap
- M** CH system flow (3/4")
- MB** Secondary flow to hot water storage tank (1/2")
- G** Gas inlet (1/2")

- RB** Secondary return from hot water storage tank (1/2")
- R** CH system return (3/4")
- RS** Discharge tap



| Technical data                                             | um | KRB 12   | KRB 24   | KRB 28   | KRB 32   |
|------------------------------------------------------------|----|----------|----------|----------|----------|
| Rated output (Pn)                                          | kW | 12       | 23       | 26       | 29       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %  | 90       | 92       | 92       | 93       |
| Nominal heat input (Qn)                                    | kW | 12,0     | 23,7     | 26,4     | 30,4     |
| Nominal heat output (80-60°C) (Pn)                         | kW | 11,7     | 23,0     | 25,5     | 29,4     |
| Heat output (50-30°C)                                      | kW | 12,6     | 25,0     | 28,0     | 32,3     |
| Reduced heat input (Qr)                                    | kW | 2,0      | 3,0      | 3,3      | 4,2      |
| Useful efficiency at nominal input (80-60°C)               | %  | 97,1     | 96,8     | 96,7     | 96,8     |
| Useful efficiency at nominal input (50-30°C)               | %  | 105,1    | 105,6    | 106,0    | 106,2    |
| Useful efficiency at 30% (30°C return)                     | %  | 106,0    | 107,4    | 107,4    | 108,3    |
| Heating expansion vessel capacity                          | l  | 10       | 10       | 10       | 10       |
| DHW nominal heat input                                     | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) | 34,5 (*) |
| NOx emission class                                         | -  | 6        | 6        | 6        | 6        |
| Electric protection rating                                 | IP | IPX5D    | IPX5D    | IPX5D    | IPX5D    |

(\*) with optional hot water storage tank.

For other technical specifications, see from page 50 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       | Item                                    | Description                                 | Code       |
|------|--------------------------------------------------------|------------|-----------------------------------------|---------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |                                         | Tap kit with filter KC-KRB-CT-RBT           | OKITRUBI05 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |                                         | Magnetic dirt separator filter              | 0AFILDEF00 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |                                         | Temperature probe for solar plants          | PSPTMILL00 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 | For other accessories, see from page 69 |                                             |            |
|      | External probe (60x45x31 mm)                           | 0SONDAES01 | <b>Accessories supplied as standard</b> |                                             |            |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |                                         | hot water storage tank temperature probe 3m |            |



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |        |        |        |        |
|------------------------------------------------------------|-----------------------------------------|------------|--------|--------|--------|--------|
| Regulation device                                          |                                         | Code       | KRB 12 | KRB 24 | KRB 28 | KRB 32 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 92%    | 94%    | 94%    | 95%    |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 93%    | 95%    | 95%    | 96%    |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 94%    | 96%    | 96%    | 97%    |
|                                                            |                                         | 0CREMOTO04 |        |        |        |        |

# DELFI NEXT KC

WALL-HUNG CONDENSING BOILER WITH INSTANTANEOUS PRODUCTION OF DHW



- ▶ **CeramiXSteel combustion unit:**
- ▶ **HIGH DURABILITY EXCHANGER:** thanks to the all-stainless steel single coil and large passage section, it avoids clogging and guarantees high performance over time
- ▶ **CERAMIC QUALITY:** high-performance ceramic burner allowing a wider modulation range
- ▶ **ADVANCED ELECTRONICS:** intuitive and functional with large colour display
- ▶ **EASY INSTALLATION:** simple and practical fixing and maintenance
- ▶ **ALTERNATIVE SOURCES CONFIGURATION:** through an intelligent algorithm it acts as a control unit for alternative energy sources
- ▶ **SMART CONNECTION:** can be connected to bms (integrated Modbus) and IOT building automation systems
- ▶ **COMBINED COMFORT:** thanks to the room temperature probe, the functioning is adapted to the room temperature without the use of a thermostat
- ▶ **CUSTOMIZABLE OPERATING:** weekly programmable
- ▶ **SOLAR PRO FUNCTION:** enables the management of a solar thermal system
- ▶ **HIGH ELECTRICAL INSULATION:** thanks to the IPX5D electrical insulation rating it can be installed outdoors in partially protected locations
- ▶ **HIGH EFFICIENCY:** thanks to the 1:9 modulation ratio, high performance is guaranteed



## USER INTERFACE

- ▶ Day/night temperature level selection
- ▶ Timer and ambient temperature setting

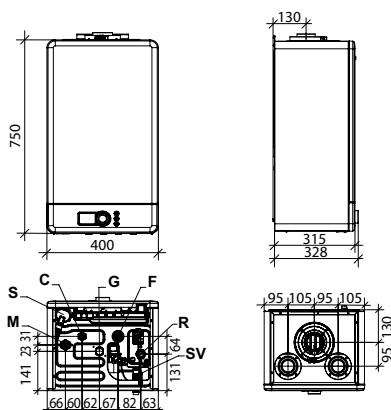
Available in the following models:



| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| KC 26 | NATURAL GAS | KDGXX2KC26 | 23,7            | 27,3           | A                       | A XL        | 400x750x315 | 30,5         |
|       | PROPANE     | KDGXX6KC26 |                 |                |                         |             |             |              |
| KC 30 | NATURAL GAS | KDGXX2KC30 | 26,7            | 30,4           | A                       | A XL        | 400x750x315 | 32,5         |
|       | PROPANE     | KDGXX6KC30 |                 |                |                         |             |             |              |
| KC 35 | NATURAL GAS | KDGXX2KC35 | 30,4            | 34,5           | A                       | A XL        | 400x750x315 | 33,0         |
|       | PROPANE     | KDGXX6KC35 |                 |                |                         |             |             |              |

Included in the price: Paper installation template, aspiration closing plugs.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



- |           |                          |          |                         |
|-----------|--------------------------|----------|-------------------------|
| <b>S</b>  | Trap inspection cap      | <b>G</b> | Gas inlet (3/4")        |
| <b>M</b>  | CH system flow (3/4")    | <b>F</b> | Cold water inlet (1/2") |
| <b>C</b>  | DHW outlet (1 1/2")      | <b>R</b> | CH system return (3/4") |
| <b>SV</b> | 3-bar safety valve drain |          |                         |





| Technical data                                             | um    | KC 26 | KC 30 | KC 35 |
|------------------------------------------------------------|-------|-------|-------|-------|
| Rated output (Pn)                                          | kW    | 23    | 26    | 30    |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 92    | 92    | 91    |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 84    | 84    | 85    |
| Nominal heat input (Qn)                                    | kW    | 23,7  | 26,7  | 30,4  |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 23,1  | 26,0  | 29,6  |
| Heat output (50-30°C)                                      | kW    | 25,0  | 28,1  | 32,2  |
| Reduced heat input (Qr)                                    | kW    | 3,0   | 3,3   | 4,2   |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,3  | 97,3  | 97,3  |
| Useful efficiency at nominal input (50-30°C)               | %     | 105,5 | 105,4 | 105,9 |
| Useful efficiency at 30% (30°C return)                     | %     | 108,4 | 108,0 | 107,8 |
| Heating expansion vessel capacity                          | l     | 9     | 9     | 9     |
| DHW nominal heat input                                     | kW    | 27,3  | 30,4  | 34,5  |
| Specific DHW flow $\Delta T=30K$                           | l/min | 13,4  | 15,0  | 17,3  |
| NOx emission class                                         | -     | 6     | 6     | 6     |
| Electric protection rating                                 | IP    | IPX5D | IPX5D | IPX5D |

For other technical specifications, see from page 51 - Maximum length of flue gas venting, see page 70

| Item | Description                                | Code        | Item | Description                                         | Code       |
|------|--------------------------------------------|-------------|------|-----------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm           | 0CONDASP00  |      | External probe (60x45x31 mm)                        | 0SONDAES01 |
|      | Remote control, ErP V class (118x85x32 mm) | 0CREMOTO04  |      | Basic solar kit                                     | 0KITSOLC09 |
|      | Coaxial fitting kit Ø60/100                | 0KITATCO00  |      | Basic hydraulic kit Next boilers                    | 0KITIDBA30 |
|      | Splitter kit Ø80+80                        | 0KITSODOP08 |      | Covering pipes and boiler taps Next (*)             | 0COPETUB08 |
|      | Magnetic dirt separator filter             | 0AFILDEF00  |      | NTC probe kit for 10k beta 3977 circuit breaker (*) | 0KITSOND01 |
|      | Ambient temperature probe                  | 0KITSAMB00  |      | PT 1000 probe kit with ring connection (*)          | 0KITSOPT00 |

For other accessories, see from page 69

(\*) Items normally not in stock, minimum stock availability time 8 weeks.



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                                  |            |       |       |       |
|------------------------------------------------------------|--------------------------------------------------|------------|-------|-------|-------|
| Regulation device                                          |                                                  | Code       | KC 26 | KC 30 | KC 35 |
| Option 1                                                   | Boiler + external probe                          | 0SONDAES01 | 94%   | 94%   | 93%   |
| Option 2                                                   | Boiler + room temperature probe                  | 0KITSAMB00 | 95%   | 95%   | 94%   |
| Option 3                                                   | Boiler + external probe + room temperature probe | 0KITSAMB00 | 96%   | 96%   | 95%   |
|                                                            |                                                  | 0SONDAES01 |       |       |       |
| Option 4                                                   | Boiler + remote control                          | 0CREMOTO04 | 95%   | 95%   | 94%   |
| Option 5                                                   | Boiler+ remote control + external probe          | 0CREMOTO04 | 96%   | 96%   | 95%   |

# DELFI NEXT KR

WALL-HUNG CONDENSING BOILER CH ONLY  
CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK  
(OPTIONAL) WITH EXTERNAL 3-WAY VALVE (OPTIONAL)

Energy label A



- ▮ **CeramiXSteel combustion unit:**
- ▮ **HIGH DURABILITY EXCHANGER:** thanks to the all-stainless steel single coil and large passage section, it avoids clogging and guarantees high performance over time
- ▮ **CERAMIC QUALITY:** high-performance ceramic burner allowing a wider modulation range
- ▮ **ADVANCED ELECTRONICS:** intuitive and functional with large colour display
- ▮ **EASY INSTALLATION:** simple and practical fixing and maintenance
- ▮ **ALTERNATIVE SOURCES CONFIGURATION:** through an intelligent algorithm it acts as a control unit for alternative energy sources
- ▮ **SMART CONNECTION:** can be connected to bms (integrated Modbus) and IOT building automation systems
- ▮ **COMBINED COMFORT:** thanks to the room temperature probe, the functioning is adapted to the room temperature without the use of a thermostat
- ▮ **SOLAR PRO FUNCTION:** enables the management of a solar thermal system
- ▮ **HIGH ELECTRICAL INSULATION:** thanks to the IPX5D electrical insulation rating it can be installed outdoors in partially protected locations
- ▮ **HIGH EFFICIENCY:** thanks to the 1:9 modulation ratio, high performance is guaranteed
- ▮ **CUSTOMIZABLE OPERATING:** weekly programmable

Available in the following models:

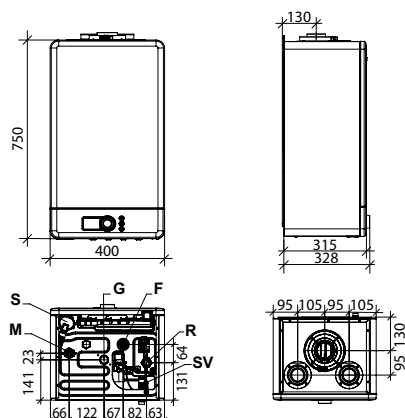


| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D<br>mm | Gross weight<br>kg |
|-------|-------------|------------|-----------------|----------------|-------------------------|-----------------|--------------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW |                         |                 |                    |
| KR 12 | NATURAL GAS | KDGXX2KR12 | 12,0            | 18,0 (*)       | A                       | 400x750x315     | 29,5               |
|       | PROPANE     | KDGXX6KR12 |                 |                |                         |                 |                    |
| KR 24 | NATURAL GAS | KDGXX2KR24 | 23,7            | 27,3 (*)       | A                       | 400x750x315     | 29,5               |
|       | PROPANE     | KDGXX6KR24 |                 |                |                         |                 |                    |
| KR 28 | NATURAL GAS | KDGXX2KR28 | 26,7            | 30,4 (*)       | A                       | 400x750x315     | 31,5               |
|       | PROPANE     | KDGXX6KR28 |                 |                |                         |                 |                    |
| KR 32 | NATURAL GAS | KDGXX2KR32 | 30,4            | 34,5 (*)       | A                       | 400x750x315     | 32,0               |
|       | PROPANE     | KDGXX6KR32 |                 |                |                         |                 |                    |

(\*) with optional hot water storage tank.

Included in the price: Paper installation template, aspiration closing plugs.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



**S** Trap inspection cap  
**M** CH system flow (3/4")  
**SV** 3-bar safety valve drain

**G** Gas inlet (3/4")  
**F** Cold water inlet (1/2")  
**R** CH system return (3/4")





| Technical data                                             | um | KR 12    | KR 24    | KR 28    | KR 32    |
|------------------------------------------------------------|----|----------|----------|----------|----------|
| Rated output (Pn)                                          | kW | 12       | 23       | 26       | 30       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %  | 92       | 92       | 92       | 91       |
| Nominal heat input (Qn)                                    | kW | 12,0     | 23,7     | 26,7     | 30,4     |
| Nominal heat output (80-60°C) (Pn)                         | kW | 11,8     | 23,1     | 26,0     | 29,6     |
| Heat output (50-30°C)                                      | kW | 12,9     | 25,0     | 28,1     | 32,2     |
| Reduced heat input (Qr)                                    | kW | 2,0      | 3,0      | 3,3      | 4,2      |
| Useful efficiency at nominal input (80-60°C)               | %  | 98,0     | 97,3     | 97,3     | 97,3     |
| Useful efficiency at nominal input (50-30°C)               | %  | 107,5    | 105,5    | 105,4    | 105,9    |
| Useful efficiency at 30% (30°C return)                     | %  | 108,3    | 108,4    | 108,0    | 107,8    |
| Heating expansion vessel capacity                          | l  | 9        | 9        | 9        | 9        |
| DHW nominal heat input                                     | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) | 34,5 (*) |
| NOx emission class                                         | -  | 6        | 6        | 6        | 6        |
| Electric protection rating                                 | IP | IPX5D    | IPX5D    | IPX5D    | IPX5D    |

For other technical specifications, see from page 52 - Maximum length of flue gas venting, see page 70

(\*) with optional hot water storage tank.

| Item | Description                                | Code       | Item                                    | Description                                         | Code       |
|------|--------------------------------------------|------------|-----------------------------------------|-----------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm           | 0CONDASP00 |                                         | External probe (60x45x31 mm)                        | 0SONDAES01 |
|      | Remote control, ErP V class (118x85x32 mm) | 0CREMOTO04 |                                         | Basic hydraulic kit Next boilers                    | 0KITIDBA30 |
|      | Coaxial fitting kit Ø60/100                | 0KITATCO00 |                                         | Covering pipes and boiler taps Next (*)             | 0COPETUB08 |
|      | Splitter kit Ø80+80                        | 0KITSDOP08 |                                         | NTC probe kit for 10k beta 3977 circuit breaker (*) | 0KITSOND01 |
|      | Magnetic dirt separator filter             | 0AFILDEF00 |                                         | PT 1000 probe kit with ring connection (*)          | 0KITSOPT00 |
|      | Ambient temperature probe                  | 0KITSAMB00 | For other accessories, see from page 69 |                                                     |            |

(\*) Items normally not in stock, minimum stock availability time 8 weeks.



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                                  |            |       |       |       |       |
|------------------------------------------------------------|--------------------------------------------------|------------|-------|-------|-------|-------|
| Regulation device                                          |                                                  | Code       | KR 12 | KR 24 | KR 28 | KR 32 |
| Option 1                                                   | Boiler + external probe                          | 0SONDAES01 | 94%   | 94%   | 94%   | 93%   |
| Option 2                                                   | Boiler + room temperature probe                  | 0KITSAMB00 | 95%   | 95%   | 95%   | 94%   |
| Option 3                                                   | Boiler + external probe + room temperature probe | 0KITSAMB00 | 96%   | 96%   | 96%   | 95%   |
|                                                            |                                                  | 0SONDAES01 |       |       |       |       |
| Option 4                                                   | Boiler + remote control                          | 0CREMOTO04 | 95%   | 95%   | 95%   | 94%   |
| Option 5                                                   | Boiler+ remote control + external probe          | 0CREMOTO04 | 96%   | 96%   | 96%   | 95%   |

# DELFI NEXT KRB

WALL-HUNG CONDENSING BOILER, CH ONLY, WITH INTEGRATED 3-WAY VALVE  
CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL)

Energy efficiency class **A**



- ▮ **CeramiXSteel combustion unit:**
- ▮ **HIGH DURABILITY EXCHANGER:** thanks to the all-stainless steel single coil and large passage section, it avoids clogging and guarantees high performance over time
- ▮ **CERAMIC QUALITY:** high-performance ceramic burner allowing a wider modulation range
- ▮ **ADVANCED ELECTRONICS:** intuitive and functional with large colour display
- ▮ **EASY INSTALLATION:** simple and practical fixing and maintenance
- ▮ **ALTERNATIVE SOURCES CONFIGURATION:** through an intelligent algorithm it acts as a control unit for alternative energy sources
- ▮ **SMART CONNECTION:** can be connected to bms (integrated Modbus) and IOT building automation systems
- ▮ **COMBINED COMFORT:** thanks to the room temperature probe, the functioning is adapted to the room temperature without the use of a thermostat
- ▮ **SOLAR PRO FUNCTION:** enables the management of a solar thermal system
- ▮ **HIGH ELECTRICAL INSULATION:** thanks to the IPX5D electrical insulation rating it can be installed outdoors in partially protected locations
- ▮ **HIGH EFFICIENCY:** thanks to the 1:9 modulation ratio, high performance is guaranteed
- ▮ **CUSTOMIZABLE OPERATING:** weekly programmable



## USER INTERFACE

- ▮ Day/night temperature level selection
- ▮ Timer and ambient temperature setting

Available in the following models:

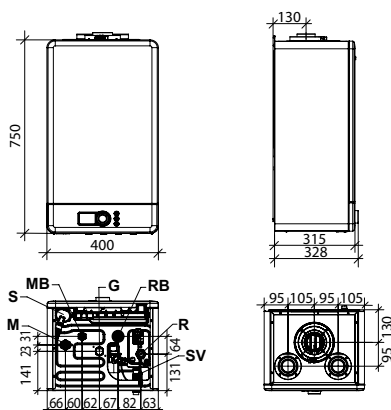


| Model         | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D<br>mm | Gross weight<br>kg |
|---------------|-------------|------------|-----------------|----------------|-------------------------|-----------------|--------------------|
|               |             |            | Nominal (Qn) kW | Nominal DHW kW |                         |                 |                    |
| <b>KRB 12</b> | NATURAL GAS | KDGXX2KU12 | 12,0            | 18,0 (*)       | <b>A</b>                | 400x750x315     | 29,5               |
|               | PROPANE     | KDGXX6KU12 |                 |                |                         |                 |                    |
| <b>KRB 24</b> | NATURAL GAS | KDGXX2KU24 | 23,7            | 27,3 (*)       | <b>A</b>                | 400x750x315     | 29,5               |
|               | PROPANE     | KDGXX6KU24 |                 |                |                         |                 |                    |
| <b>KRB 28</b> | NATURAL GAS | KDGXX2KU28 | 26,7            | 30,4 (*)       | <b>A</b>                | 400x750x315     | 31,5               |
|               | PROPANE     | KDGXX6KU28 |                 |                |                         |                 |                    |
| <b>KRB 32</b> | NATURAL GAS | KDGXX2KU32 | 30,4            | 34,5 (*)       | <b>A</b>                | 400x750x315     | 32,0               |
|               | PROPANE     | KDGXX6KU32 |                 |                |                         |                 |                    |

(\*) with optional hot water storage tank.

**Included in the price:** Paper installation template, aspiration closing plugs.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



- |           |                                       |           |                                                     |
|-----------|---------------------------------------|-----------|-----------------------------------------------------|
| <b>S</b>  | Trap inspection cap                   | <b>G</b>  | Gas inlet (3/4")                                    |
| <b>M</b>  | CH system flow (3/4")                 | <b>RB</b> | Secondary return from hot water storage tank (1/2") |
| <b>MB</b> | Secondary flow to storage tank (1/2") | <b>R</b>  | CH system return (3/4")                             |
| <b>SV</b> | 3-bar safety valve drain              |           |                                                     |

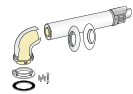
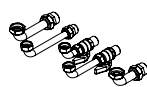
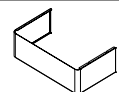




| Technical data                                     | um | KRB 12   | KRB 24   | KRB 28   | KRB 32   |
|----------------------------------------------------|----|----------|----------|----------|----------|
| Rated output (Pn)                                  | kW | 12       | 23       | 26       | 30       |
| Seasonal energy efficiency of ambient heating (ηs) | %  | 92       | 92       | 92       | 91       |
| Nominal heat input (Qn)                            | kW | 12,0     | 23,7     | 26,7     | 30,4     |
| Nominal heat output (80-60°C) (Pn)                 | kW | 11,8     | 23,1     | 26,0     | 29,6     |
| Heat output (50-30°C)                              | kW | 12,9     | 25,0     | 28,1     | 32,2     |
| Reduced heat input (Qr)                            | kW | 2,0      | 3,0      | 3,3      | 4,2      |
| Useful efficiency at nominal input (80-60°C)       | %  | 98,0     | 97,3     | 97,3     | 97,3     |
| Useful efficiency at nominal input (50-30°C)       | %  | 107,5    | 105,5    | 105,4    | 105,9    |
| Useful efficiency at 30% (30°C return)             | %  | 108,3    | 108,4    | 108,0    | 107,8    |
| Heating expansion vessel capacity                  | l  | 9        | 9        | 9        | 9        |
| DHW nominal heat input                             | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) | 34,5 (*) |
| NOx emission class                                 | -  | 6        | 6        | 6        | 6        |
| Electric protection rating                         | IP | IPX5D    | IPX5D    | IPX5D    | IPX5D    |

For other technical specifications, see from page 53 - Maximum length of flue gas venting, see page 70

(\*) with optional hot water storage tank.

| Item                                                                               | Description                                | Code       | Item                                                                                | Description                                         | Code       |
|------------------------------------------------------------------------------------|--------------------------------------------|------------|-------------------------------------------------------------------------------------|-----------------------------------------------------|------------|
|    | Coaxial kit Ø 60/100 length 75cm           | 0CONDASP00 |    | Basic hydraulic kit Next boilers                    | 0KITIDBA30 |
|    | Remote control, ErP V class (118x85x32 mm) | 0CREMOTO04 |    | Covering pipes and boiler taps Next (*)             | 0COPETUB08 |
|    | Coaxial fitting kit Ø60/100                | 0KITATCO00 |    | NTC probe kit for 10k beta 3977 circuit breaker (*) | 0KITSOND01 |
|   | Splitter kit Ø80+80                        | 0KITSDOP08 |   | PT 1000 probe kit with ring connection (*)          | 0KITSOPT00 |
|  | Magnetic dirt separator filter             | 0AFILDEF00 | For other accessories, see from page 69                                             |                                                     |            |
|  | Ambient temperature probe                  | 0KITSAMB00 |                                                                                     |                                                     |            |
|  | External probe (60x45x31 mm)               | 0SONDAES01 | <b>Accessories supplied as standard</b>                                             |                                                     |            |
|                                                                                    |                                            |            |  | hot water storage tank temperature probe 3m         |            |

(\*) Items normally not in stock, minimum stock availability time 8 weeks.



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating (ηs) |                                                  |            |        |        |        |        |
|----------------------------------------------------|--------------------------------------------------|------------|--------|--------|--------|--------|
| Regulation device                                  |                                                  | Code       | KRB 12 | KRB 24 | KRB 28 | KRB 32 |
| <b>Option 1</b>                                    | Boiler + external probe                          | 0SONDAES01 | 94%    | 94%    | 94%    | 93%    |
| <b>Option 2</b>                                    | Boiler + room temperature probe                  | 0KITSAMB00 | 95%    | 95%    | 95%    | 94%    |
| <b>Option 3</b>                                    | Boiler + external probe + room temperature probe | 0KITSAMB00 | 96%    | 96%    | 96%    | 95%    |
|                                                    |                                                  | 0SONDAES01 |        |        |        |        |
| <b>Option 4</b>                                    | Boiler + remote control                          | 0CREMOTO04 | 95%    | 95%    | 95%    | 94%    |
| <b>Option 5</b>                                    | Boiler+ remote control + external probe          | 0CREMOTO04 | 96%    | 96%    | 96%    | 95%    |

# DELFI KC

WALL-HUNG CONDENSING BOILER WITH INSTANTANEOUS PRODUCTION OF DHW



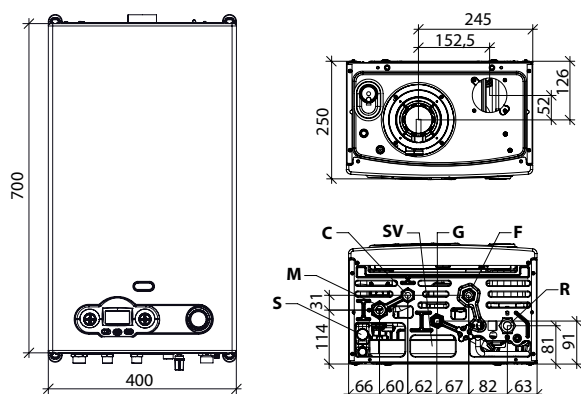
- **High domestic hot water production, more power during DHW operation (18 - 28 - 30 kW)**
- **Modulation ratio: 1:9**
- **Multifunction relay for connection to systems with zone valves or to external pump management or to remote alarm signal**
- **Heating expansion vessel - 9 litres**
- **High-efficiency modulating circulation pump with built-in air purging device**
- **Compact dimension, only 250 mm deep**
- ) Management of 2 different kinds of solar thermal system (with additional kit)
- ) Thermoregulation with external probe (optional)
- ) Thermosetting polymer-covered stainless steel heat exchanger
- ) Prearrangement for connection to Remote Control (optional, supplied by the manufacturer)
- ) Programmable parameters to adapt the boiler to the installation and alerts history
- ) Automatic by-pass

Available in the following models:



| Model | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|       |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| KC 12 | NATURAL GAS | KDLXX2KC12 | 12,0            | 18,0           | A                       | A M         | 400x700x250 | 30,5         |
|       | PROPANE     | KDLXX6KC12 |                 |                |                         |             |             |              |
| KC 24 | NATURAL GAS | KDLXX2KC24 | 23,7            | 27,3           | A                       | A XL        | 400x700x250 | 32,0         |
|       | PROPANE     | KDLXX6KC24 |                 |                |                         |             |             |              |
| KC 28 | NATURAL GAS | KDLXX2KC28 | 26,4            | 30,4           | A                       | A XL        | 400x700x250 | 33,5         |
|       | PROPANE     | KDLXX6KC28 |                 |                |                         |             |             |              |

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



**S** Trap inspection cap  
**M** CH system flow (3/4")  
**C** DHW outlet (1 1/2")  
**SV** 3-bar safety valve drain

**G** Gas inlet (1/2")  
**F** Cold water inlet (1/2")  
**R** CH system return (3/4")

| Technical data                                             | um    | KC 12 | KC 24 | KC 28 |
|------------------------------------------------------------|-------|-------|-------|-------|
| Rated output (Pn)                                          | kW    | 12    | 23    | 26    |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 90    | 92    | 92    |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 78    | 84    | 80    |
| Nominal heat input (Qn)                                    | kW    | 12,0  | 23,7  | 26,4  |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 11,7  | 22,8  | 25,5  |
| Heat output (50-30°C)                                      | kW    | 12,6  | 24,9  | 28,0  |
| Reduced heat input (Qr)                                    | kW    | 2,0   | 3,0   | 3,3   |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,1  | 96,3  | 96,7  |
| Useful efficiency at nominal input (50-30°C)               | %     | 105,1 | 105,1 | 105,9 |
| Useful efficiency at 30% (30°C return)                     | %     | 106,0 | 107,2 | 107,5 |
| Heating expansion vessel capacity                          | l     | 9     | 9     | 9     |
| DHW nominal heat input                                     | kW    | 18,0  | 27,3  | 30,4  |
| Specific DHW flow $\Delta T=30K$                           | l/min | 8,6   | 13,4  | 15,0  |
| NOx emission class                                         | -     | 6     | 6     | 6     |
| Electric protection rating                                 | IP    | IPX4D | IPX4D | IPX4D |

For other technical specifications, see from page 54 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       | Item                                    | Description                                                                                                                | Code       |
|------|--------------------------------------------------------|------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |                                         | Magnetic dirt separator filter                                                                                             | 0AFILDEF00 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |                                         | Kit for connection to solar plant                                                                                          | 0KITSOLC07 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |                                         | Tap kit with filter KC-KRB-CT-RBT                                                                                          | 0KITRUBI05 |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |                                         | Coax. adapter kit D.60/100 to D.80/125                                                                                     | 0KITADCO00 |
|      | External probe (60x45x31 mm)                           | 0SONDAES01 |                                         | Compact wall pipe cover<br>- Height 110 mm<br>- Width 400 mm<br>- Depth (upper part) 194 mm<br>- Depth (lower part) 165 mm | 0COPETUB00 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 | For other accessories, see from page 69 |                                                                                                                            |            |
|      | Electric kit for complex solar plant management        | 0KITSOLC08 |                                         |                                                                                                                            |            |



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |       |       |       |
|------------------------------------------------------------|-----------------------------------------|------------|-------|-------|-------|
| Regulation device                                          |                                         | Code       | KC 12 | KC 24 | KC 28 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 92%   | 94%   | 94%   |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 93%   | 95%   | 95%   |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 94%   | 96%   | 96%   |
|                                                            |                                         | 0CREMOTO04 |       |       |       |

# DELFI KR

WALL-HUNG CONDENSING BOILER CH ONLY

CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL) WITH  
EXTERNAL 3-WAY VALVE (OPTIONAL)



- ▶ **Multifunction relay for connection to systems with zone valves or to external pump management or to remote alarm signal**
- ▶ **Modulation ratio: 1:9**
- ▶ **Heating expansion vessel - 9 litres**
- ▶ **High-efficiency modulating circulation pump with built-in air purging device**
- ▶ **Compact dimension, only 250 mm deep**
- ) Freeze protection function for heating and hot water storage tank
- ) Thermoregulation with external probe (optional)
- ) Thermosetting polymer-covered stainless steel heat exchanger
- ) Prearrangement for connection to Remote Control (optional, supplied by the manufacturer)
- ) Programmable parameters to adapt the boiler to the installation and alerts history
- ) Automatic by-pass

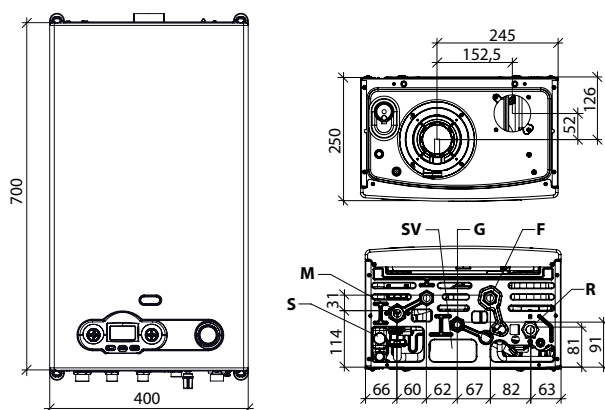
Available in the following models:



| Model | Gas type    | Code       | Heat input                      |                | Energy efficiency class | W x H x D<br>mm | Gross weight<br>kg |
|-------|-------------|------------|---------------------------------|----------------|-------------------------|-----------------|--------------------|
|       |             |            | Nominal (Q <sub>n</sub> )<br>kW | Nominal DHW kW |                         |                 |                    |
| KR 12 | NATURAL GAS | KDLXX2KR12 | 12,0                            | 18,0 (*)       | A                       | 400x700x250     | 29,5               |
|       | PROPANE     | KDLXX6KR12 |                                 |                |                         |                 |                    |
| KR 24 | NATURAL GAS | KDLXX2KR24 | 23,7                            | 27,3 (*)       | A                       | 400x700x250     | 32,0               |
|       | PROPANE     | KDLXX6KR24 |                                 |                |                         |                 |                    |
| KR 28 | NATURAL GAS | KDLXX2KR28 | 26,4                            | 30,4 (*)       | A                       | 400x700x250     | 31,0               |
|       | PROPANE     | KDLXX6KR28 |                                 |                |                         |                 |                    |

(\*) with optional hot water storage tank.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



**S** Trap inspection cap  
**M** CH system flow (3/4")  
**SV** 3-bar safety valve drain

**G** Gas inlet (1/2")  
**F** Cold water inlet (1/2")  
**R** CH system return (3/4")



| Technical data                                             | um | KR 12    | KR 24    | KR 28    |
|------------------------------------------------------------|----|----------|----------|----------|
| Rated output (Pn)                                          | kW | 12       | 23       | 26       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %  | 90       | 92       | 92       |
| Nominal heat input (Qn)                                    | kW | 12,0     | 23,7     | 26,4     |
| Nominal heat output (80-60°C) (Pn)                         | kW | 11,7     | 22,8     | 25,5     |
| Heat output (50-30°C)                                      | kW | 12,6     | 24,9     | 28,0     |
| Reduced heat input (Qr)                                    | kW | 2,0      | 3,0      | 3,3      |
| Useful efficiency at nominal input (80-60°C)               | %  | 97,1     | 96,3     | 96,7     |
| Useful efficiency at nominal input (50-30°C)               | %  | 105,1    | 105,1    | 105,9    |
| Useful efficiency at 30% (30°C return)                     | %  | 106,0    | 107,2    | 107,5    |
| Heating expansion vessel capacity                          | l  | 9        | 9        | 9        |
| DHW nominal heat input                                     | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) |
| NOx emission class                                         | -  | 6        | 6        | 6        |
| Electric protection rating                                 | IP | IPX4D    | IPX4D    | IPX4D    |

(\*) with optional hot water storage tank.

For other technical specifications, see from page 55 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       |
|------|--------------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |
|      | Tap kit with filter KR-KB-RT                           | 0KITRUBI04 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |
|      | External probe (60x45x31 mm)                           | 0SONDAES01 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |

| Item | Description                                                                                                                | Code       |
|------|----------------------------------------------------------------------------------------------------------------------------|------------|
|      | Coax. adapter kit D.60/100 to D.80/125                                                                                     | 0KITADCO00 |
|      | hot water storage tank temperature probe 3m                                                                                | 0KITSOND00 |
|      | Magnetic dirt separator filter                                                                                             | 0AFILDEF00 |
|      | Compact wall pipe cover<br>- Height 110 mm<br>- Width 400 mm<br>- Depth (upper part) 194 mm<br>- Depth (lower part) 165 mm | 0COPETUB00 |
|      | Starting flange kit for condensing boilers                                                                                 | 0KITFLAN00 |

For other accessories, see from page 69



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |       |       |       |
|------------------------------------------------------------|-----------------------------------------|------------|-------|-------|-------|
| Regulation device                                          |                                         | Code       | KR 12 | KR 24 | KR 28 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 92%   | 94%   | 94%   |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 93%   | 95%   | 95%   |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 94%   | 96%   | 96%   |
|                                                            |                                         | 0CREMOTO04 |       |       |       |

# DELFI KRB

WALL-HUNG CONDENSING BOILER, CH ONLY, WITH INTEGRATED 3-WAY VALVE  
CONNECTION TO AN EXTERNAL HOT WATER STORAGE TANK (OPTIONAL)



Available in the following models:

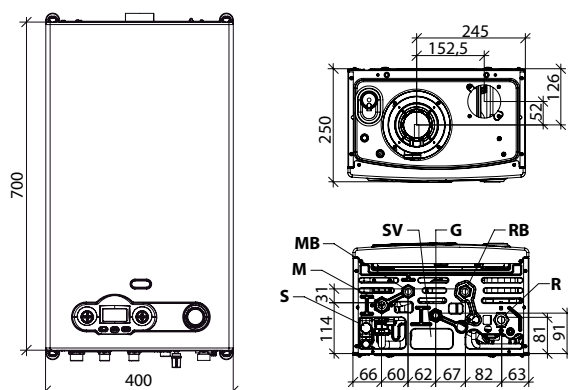


- ▶ **Multifunction relay for connection to systems with zone valves or to external pump management or to remote alarm signal**
- ▶ **Modulation ratio: 1:9**
- ▶ **Heating expansion vessel - 9 litres**
- ▶ **Integrated 3-way deviating valve**
- ▶ **High-efficiency modulating circulation pump with built-in air purging device**
- ▶ **Compact dimension, only 250 mm deep**
- ▶ Freeze protection function for heating and hot water storage tank
- ▶ Thermoregulation with external probe (optional)
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ Prearrangement for connection to Remote Control (optional, supplied by the manufacturer)
- ▶ Programmable parameters to adapt the boiler to the installation and alerts history
- ▶ Automatic by-pass

| Model         | Gas type    | Code       | Heat input      |                | Energy efficiency class | W x H x D   | Gross weight |
|---------------|-------------|------------|-----------------|----------------|-------------------------|-------------|--------------|
|               |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | mm          | kg           |
| <b>KRB 12</b> | NATURAL GAS | KDLXX2KU12 | 12,0            | 18,0 (*)       | <b>A</b>                | 400x700x250 | 29,5         |
|               | PROPANE     | KDLXX6KU12 |                 |                |                         |             |              |
| <b>KRB 24</b> | NATURAL GAS | KDLXX2KU24 | 23,7            | 27,3 (*)       | <b>A</b>                | 400x700x250 | 31,0         |
|               | PROPANE     | KDLXX6KU24 |                 |                |                         |             |              |
| <b>KRB 28</b> | NATURAL GAS | KDLXX2KU28 | 26,4            | 30,4 (*)       | <b>A</b>                | 400x700x250 | 32,5         |
|               | PROPANE     | KDLXX6KU28 |                 |                |                         |             |              |

(\*) with optional hot water storage tank.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



- |           |                                                 |           |                                                     |
|-----------|-------------------------------------------------|-----------|-----------------------------------------------------|
| <b>S</b>  | Trap inspection cap                             | <b>G</b>  | Gas inlet (1/2")                                    |
| <b>M</b>  | CH system flow (3/4")                           | <b>RB</b> | Secondary return from hot water storage tank (1/2") |
| <b>MB</b> | Secondary flow to hot water storage tank (1/2") | <b>R</b>  | CH system return (3/4")                             |
| <b>SV</b> | 3-bar safety valve drain                        |           |                                                     |



| Technical data                                             | um | KRB 12   | KRB 24   | KRB 28   |
|------------------------------------------------------------|----|----------|----------|----------|
| Rated output (Pn)                                          | kW | 12       | 23       | 26       |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %  | 90       | 92       | 92       |
| Nominal heat input (Qn)                                    | kW | 12,0     | 23,7     | 26,4     |
| Nominal heat output (80-60°C) (Pn)                         | kW | 11,7     | 22,8     | 25,5     |
| Heat output (50-30°C)                                      | kW | 12,6     | 24,9     | 28,0     |
| Reduced heat input (Qr)                                    | kW | 2,0      | 3,0      | 3,3      |
| Useful efficiency at nominal input (80-60°C)               | %  | 97,1     | 96,3     | 96,7     |
| Useful efficiency at nominal input (50-30°C)               | %  | 105,1    | 105,1    | 105,9    |
| Useful efficiency at 30% (30°C return)                     | %  | 106,0    | 107,2    | 107,5    |
| Heating expansion vessel capacity                          | l  | 9        | 9        | 9        |
| DHW nominal heat input                                     | kW | 18,0 (*) | 27,3 (*) | 30,4 (*) |
| NOx emission class                                         | -  | 6        | 6        | 6        |
| Electric protection rating                                 | IP | IPX4D    | IPX4D    | IPX4D    |

(\*) with optional hot water storage tank.

For other technical specifications, see from page 56 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       |
|------|--------------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |
|      | Tap kit with filter KC-KRB-CT-RBT                      | 0KITRUBI05 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |
|      | External probe (60x45x31 mm)                           | 0SONDAES01 |
|      | Coaxial fitting kit Ø60/100                            | 0KITATCO00 |

| Item | Description                                                                                                                | Code       |
|------|----------------------------------------------------------------------------------------------------------------------------|------------|
|      | Coax. adapter kit D.60/100 to D.80/125                                                                                     | 0KITADCO00 |
|      | Magnetic dirt separator filter                                                                                             | 0AFILDEF00 |
|      | Electric kit for complex solar plant management                                                                            | 0KITSOLC08 |
|      | Compact wall pipe cover<br>- Height 110 mm<br>- Width 400 mm<br>- Depth (upper part) 194 mm<br>- Depth (lower part) 165 mm | 0COPETUB00 |

For other accessories, see from page 69

#### Accessories supplied as standard

| Item | Description                                 |
|------|---------------------------------------------|
|      | hot water storage tank temperature probe 3m |



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |        |        |        |
|------------------------------------------------------------|-----------------------------------------|------------|--------|--------|--------|
| Regulation device                                          |                                         | Code       | KRB 12 | KRB 24 | KRB 28 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 92%    | 94%    | 94%    |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 93%    | 95%    | 95%    |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 94%    | 96%    | 96%    |
|                                                            |                                         | 0CREMOTO04 |        |        |        |

# LEO KC

WALL-HUNG CONDENSING BOILER WITH INSTANTANEOUS PRODUCTION OF DHW



- ▶ **High efficiency stainless steel heat exchanger with single coil and wide passage section**
- ▶ **Heating expansion vessel - 9 litres**
- ▶ **Compact dimension, only 250 mm deep**
- ▶ **Easy to install in pre-existing plants thanks to: central flue vent, wall fixing bracket and double hole for split suction**
- ▶ **Thermoregulation with external probe (optional)**
- ▶ **Backlit LCD user interface with diagnostics**
- ) Modulation ratio: 1:5
- ) Fully pre-mixed burner
- ) High-efficiency circulation pump with built-in air purging device
- ) Programmable parameters to adapt the boiler to the installation and alerts history
- ) Stainless steel plate DHW heat exchanger
- ) Automatic by-pass

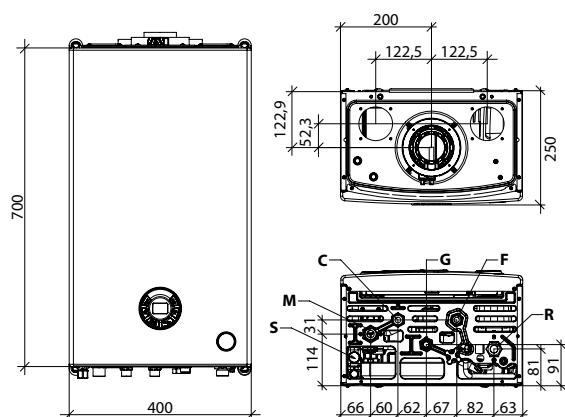
Available in the following models:

24

| Model | Gas type    | Code      | Heat input                   |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------|-------------|-----------|------------------------------|----------------|-------------------------|-------------|-------------|--------------|
|       |             |           | Nominal (Q <sub>n</sub> ) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| KC 24 | NATURAL GAS | KLFX2KC24 | 20,0                         | 24,0           |                         | XL          | 400x700x250 | 29,0         |
|       | PROPANE     | KLFX6KC24 |                              |                |                         |             |             |              |

*Included in the price:* Paper installation template, aspiration closing plugs.

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



**S** Condensate drain  
**M** CH system flow (3/4")  
**C** DHW outlet (1 1/2")

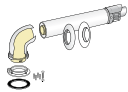
**G** Gas inlet (1/2")  
**F** Cold water inlet (1/2")  
**R** CH system return (3/4")

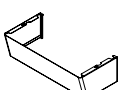




| Technical data                                             | um    | KC 24 |
|------------------------------------------------------------|-------|-------|
| Rated output (Pn)                                          | kW    | 19    |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 92    |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 84    |
| Nominal heat input (Qn)                                    | kW    | 20,0  |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 19,4  |
| Heat output (50-30°C)                                      | kW    | 21,2  |
| Reduced heat input (Qr)                                    | kW    | 5,0   |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,1  |
| Useful efficiency at nominal input (50-30°C)               | %     | 106,1 |
| Useful efficiency at 30% (30°C return)                     | %     | 108,1 |
| Heating expansion vessel capacity                          | l     | 9     |
| DHW nominal heat input                                     | kW    | 24,0  |
| Specific DHW flow $\Delta T=30K$                           | l/min | 12,0  |
| NOx emission class                                         | -     | 6     |
| Electric protection rating                                 | IP    | IPX4D |

For other technical specifications, see from page 57 - Maximum length of flue gas venting, see page 70

| Item                                                                                | Description                                | Code        |
|-------------------------------------------------------------------------------------|--------------------------------------------|-------------|
|     | Coaxial kit Ø 60/100 length 75cm           | 0CONDASP00  |
|    | Remote control, ErP V class (118x85x32 mm) | 0CREMOTO04  |
|    | Ambient temperature probe                  | 0KITSAMB00  |
|  | Coaxial fitting kit Ø60/100                | 0KITATCO00  |
|   | Splitter kit Ø80+80                        | 0KITSADOP08 |
|  | External probe (60x45x31 mm)               | 0SONDAES01  |

| Item                                                                                | Description                                                                                                                | Code       |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------|
|    | Magnetic dirt separator filter                                                                                             | 0AFILDEF00 |
|    | Compact wall pipe cover<br>- Height 110 mm<br>- Width 400 mm<br>- Depth (upper part) 194 mm<br>- Depth (lower part) 165 mm | 0COPETUB00 |
|   | Tap kit with filter KC-KRB-CT-RBT                                                                                          | 0KITRUBI05 |
|  | Coax. adapter kit D.60/100 to D.80/125                                                                                     | 0KITADCO00 |

For other accessories, see from page 69



## How to increase energy efficiency? Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |       |
|------------------------------------------------------------|-----------------------------------------|------------|-------|
| Regulation device                                          |                                         | Code       | KC 24 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 94%   |
| Option 2                                                   | Boiler + room temperature probe         | 0KITSAMB00 | 94%   |
| Option 3                                                   | Boiler + remote control                 | 0CREMOTO04 | 95%   |
| Option 4                                                   | Boiler+ remote control + external probe | 0CREMOTO04 | 96%   |
|                                                            |                                         | 0SONDAES01 |       |

# PHOENIX KRB

FLOOR-STANDING CONDENSING BOILER WITH AN INTEGRATED SINGLE COIL WATER TANK FOR THE PRODUCTION OF DHW



Available in the following models:



- ▶ **130-litre water heater with single coil**
- ▶ **Available in the KRB version with one direct zone, in the KRB-V version with one direct and one mixed integrated zones, and in the KRB-Z version with one direct and two mixed integrated zones**
- ▶ **Ambient temperature probe supplied as standard**
- ▶ **Modulation ratio: 1:9**
- ▶ **Hydraulic connections on the sides**
- ▶ **Front door for immediate access to boiler**
- ▶ Thermoregulation with external probe (optional)
- ▶ Thermosetting polymer-covered stainless steel heat exchanger
- ▶ 5-litre DHW expansion vessel

| Model    | Gas type    | Code       | Heat input                   |                | Energy efficiency class |             | W x H x D    | Gross weight |
|----------|-------------|------------|------------------------------|----------------|-------------------------|-------------|--------------|--------------|
|          |             |            | Nominal (Q <sub>n</sub> ) kW | Nominal DHW kW | Room heating            | Heating DHW | mm           | kg           |
| KRB 12   | NATURAL GAS | KPAXX2KU12 | 12,0                         | 18,0           |                         |             | 600x1857x642 | 189,0        |
|          | PROPANE     | KPAXX6KU12 |                              |                |                         |             |              |              |
| KRB 24   | NATURAL GAS | KPAXX2KU24 | 23,7                         | 27,3           |                         |             | 600x1857x643 | 190,0        |
|          | PROPANE     | KPAXX6KU24 |                              |                |                         |             |              |              |
| KRB 28   | NATURAL GAS | KPAXX2KU28 | 26,4                         | 30,4           |                         |             | 600x1857x644 | 192,0        |
|          | PROPANE     | KPAXX6KU28 |                              |                |                         |             |              |              |
| KRB 32   | NATURAL GAS | KPAXX2KU32 | 30,4                         | 34,5           |                         |             | 600x1857x645 | 193,0        |
|          | PROPANE     | KPAXX6KU32 |                              |                |                         |             |              |              |
| KRB V 12 | NATURAL GAS | KPAXX2KV12 | 12,0                         | 18,0           |                         |             | 600x1857x642 | 201,00       |
|          | PROPANE     | KPAXX6KV12 |                              |                |                         |             |              |              |
| KRB V 24 | NATURAL GAS | KPAXX2KV24 | 23,7                         | 27,3           |                         |             | 600x1857x643 | 203,00       |
|          | PROPANE     | KPAXX6KV24 |                              |                |                         |             |              |              |
| KRB V 28 | NATURAL GAS | KPAXX2KV28 | 26,4                         | 30,4           |                         |             | 600x1857x644 | 204,00       |
|          | PROPANE     | KPAXX6KV28 |                              |                |                         |             |              |              |
| KRB V 32 | NATURAL GAS | KPAXX2KV32 | 30,4                         | 34,5           |                         |             | 600x1857x645 | 205,00       |
|          | PROPANE     | KPAXX6KV32 |                              |                |                         |             |              |              |
| KRB Z 12 | NATURAL GAS | KPAXX2KZ12 | 12,0                         | 18,0           |                         |             | 600x1857x642 | 204,00       |
|          | PROPANE     | KPAXX6KZ12 |                              |                |                         |             |              |              |
| KRB Z 24 | NATURAL GAS | KPAXX2KZ24 | 23,7                         | 27,3           |                         |             | 600x1857x643 | 205,00       |
|          | PROPANE     | KPAXX6KZ24 |                              |                |                         |             |              |              |
| KRB Z 28 | NATURAL GAS | KPAXX2KZ28 | 26,4                         | 30,4           |                         |             | 600x1857x644 | 207,00       |
|          | PROPANE     | KPAXX6KZ28 |                              |                |                         |             |              |              |
| KRB Z 32 | NATURAL GAS | KPAXX2KZ32 | 30,4                         | 34,5           |                         |             | 600x1857x645 | 208,00       |
|          | PROPANE     | KPAXX6KZ32 |                              |                |                         |             |              |              |



## TOUCH SCREEN INTERFACE

- ▶ Modulation thermostat with ambient probe
- ▶ Day/night temperature level selection
- ▶ Weekly programming
- ▶ Timer and ambient temperature setting
- ▶ Heater DHW "comfort" function enabling

**The TOUCH SCREEN interface of PHOENIX KRB combined with the ambient temperature probe supplied is a class V temperature control system.**



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating (η <sub>s</sub> ) |                                                                                      |            |        |        |        |        |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------|------------|--------|--------|--------|--------|
| Regulation device                                               |                                                                                      | Code       | KRB 12 | KRB 24 | KRB 28 | KRB 32 |
| Option 1                                                        | Boiler + external probe (ambient temperature probe is not supplied)                  | 0SONDAES01 | 92%    | 93%    | 93%    | 94%    |
| Option 2                                                        | Boiler + external probe (ambient temperature probe is supplied)                      | 0SONDAES01 | 94%    | 95%    | 95%    | 96%    |
| Option 3                                                        | Boiler + remote control (ambient temperature probe is not supplied)                  | 0CREMOTO04 | 93%    | 94%    | 94%    | 95%    |
| Option 4                                                        | Boiler + remote control + external probe (ambient temperature probe is not supplied) | 0CREMOTO04 | 94%    | 95%    | 95%    | 96%    |
|                                                                 |                                                                                      | 0SONDAES01 | 94%    | 95%    | 95%    | 96%    |

| Technical data                                                                                  | um    | KRB 12 | KRB 24 | KRB 28 | KRB 32 |
|-------------------------------------------------------------------------------------------------|-------|--------|--------|--------|--------|
| Rated output (Pn)                                                                               | kW    | 12     | 23     | 25     | 29     |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )                                      | %     | 90     | 91     | 91     | 92     |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) (Boiler + ambient temperature probe) | %     | 93     | 94     | 94     | 95     |
| Water heating energy efficiency ( $\eta_{wh}$ )                                                 | %     | 83     | 80     | 82     | 81     |
| Nominal heat input (Qn)                                                                         | kW    | 12,0   | 23,7   | 26,4   | 30,4   |
| Nominal heat output (80-60°C) (Pn)                                                              | kW    | 11,6   | 22,9   | 25,4   | 29,4   |
| Heat output (50-30°C)                                                                           | kW    | 12,6   | 24,9   | 27,9   | 32,3   |
| Reduced heat input (Qr)                                                                         | kW    | 2,0    | 3,0    | 3,3    | 4,2    |
| Useful efficiency at nominal input (80-60°C)                                                    | %     | 97,1   | 96,7   | 96,4   | 96,8   |
| Useful efficiency at nominal input (50-30°C)                                                    | %     | 105,1  | 105,1  | 105,5  | 106,2  |
| Useful efficiency at 30% (30°C return)                                                          | %     | 106,0  | 106,5  | 107,0  | 108,3  |
| Heating expansion vessel capacity                                                               | l     | 10     | 10     | 10     | 10     |
| DHW nominal heat input                                                                          | kW    | 18,0   | 27,3   | 30,4   | 34,5   |
| Specific DHW flow $\Delta T=30K$                                                                | l/min | 19,5   | 22     | 22,5   | 23,4   |
| NOx emission class                                                                              | -     | 6      | 6      | 6      | 6      |
| Electric protection rating                                                                      | IP    | IPX5D  | IPX5D  | IPX5D  | IPX5D  |

For other technical specifications, see from page 58 - Maximum length of flue gas venting, see page 70

| Item | Description                                            | Code       |
|------|--------------------------------------------------------|------------|
|      | Coaxial kit Ø 60/100 length 75cm                       | 0CONDASP00 |
|      | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |
|      | Splitter kit Ø80+80                                    | 0KITSDOP08 |
|      | External probe (60x45x31 mm)                           | 0SONDAES01 |
|      | Electrical kit for zone management with external probe | 0KITZONE05 |

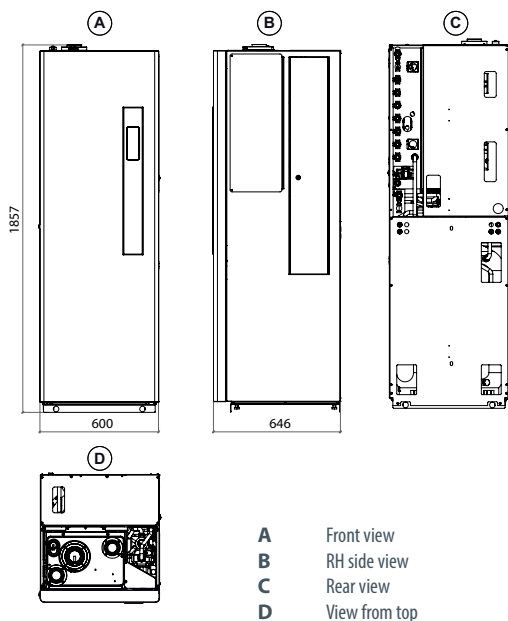
| Item | Description                      | Code       |
|------|----------------------------------|------------|
|      | Giava recirculation optional kit | 0KRICIRC00 |

For other accessories, see from page 69

#### Accessories supplied as standard

| Item | Description               |
|------|---------------------------|
|      | Ambient temperature probe |

#### DIMENSIONS AND CONNECTION CENTRE DISTANCES



## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um    | Orion                                                                       | Orion                                                                       | Orion                                                                       | Orion                                                                       |
|------------------------------------------------------------|-------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -     | KC 12                                                                       | KC 24                                                                       | KC 28                                                                       | KC 32                                                                       |
| Type                                                       | -     | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW    | 12                                                                          | 23                                                                          | 26                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 90                                                                          | 92                                                                          | 92                                                                          | 93                                                                          |
| Seasonal energy efficiency class of ambient heating        | -     | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Stated load profile                                        | -     | M                                                                           | XL                                                                          | XL                                                                          | XXL                                                                         |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 78 (**)                                                                     | 85 (**)                                                                     | 84 (**)                                                                     | 87 (**)                                                                     |
| Energy efficiency class of water heating                   | -     | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW    | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                    | kW    | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 11,7                                                                        | 23,0                                                                        | 25,5                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW    | 1,8                                                                         | 2,6                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                      | kW    | 12,6                                                                        | 25,0                                                                        | 28,0                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                              | kW    | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,1                                                                        | 96,8                                                                        | 96,7                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %     | 105,1                                                                       | 105,6                                                                       | 106,0                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                     | %     | 106,0                                                                       | 107,4                                                                       | 107,4                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                 | bar   | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C    | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C    | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l     | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW nominal heat input                                     | kW    | 18,0                                                                        | 27,3                                                                        | 30,4                                                                        | 34,5                                                                        |
| DHW minimum heat input                                     | kW    | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| DHW nominal heat output ( $\Delta T$ 30°C)                 | kW    | 18,6                                                                        | 27,4                                                                        | 29,2                                                                        | 33,4                                                                        |
| DHW circuit working pressure (min-max)                     | bar   | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     |
| Specific DHW flow $\Delta T=30K$                           | l/min | 8,8                                                                         | 13,4                                                                        | 15,5                                                                        | 16,2                                                                        |
| Qualification of domestic hot water                        | -     | ***                                                                         | ***                                                                         | ***                                                                         | ***                                                                         |
| DHW temperature range                                      | °C    | 35-57                                                                       | 35-57                                                                       | 35-57                                                                       | 35-57                                                                       |
| DHW maximum working temperature                            | °C    | 62                                                                          | 62                                                                          | 62                                                                          | 62                                                                          |
| NOx emission class                                         | -     | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %     | 0,40                                                                        | 0,44                                                                        | 1,04                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                           | %     | 0,53                                                                        | 0,21                                                                        | 0,20                                                                        | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %     | 2,50                                                                        | 2,72                                                                        | 2,26                                                                        | 2,33                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C    | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s   | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %     | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %     | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz  | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W     | 88                                                                          | 97                                                                          | 101                                                                         | 106                                                                         |
| Circulation pump power input                               | W     | 50                                                                          | 50                                                                          | 50                                                                          | 50                                                                          |
| Electric protection rating                                 | IP    | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm    | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*\*) with comfort function disabled.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um   | Orion                                                                       | Orion                                                                       | Orion                                                                       | Orion                                                                       |
|------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -    | KR 12                                                                       | KR 24                                                                       | KR 28                                                                       | KR 32                                                                       |
| Type                                                       | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW   | 12                                                                          | 23                                                                          | 26                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %    | 90                                                                          | 92                                                                          | 92                                                                          | 93                                                                          |
| Seasonal energy efficiency class of ambient heating        | -    | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW   | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                    | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW   | 11,7                                                                        | 23,0                                                                        | 25,5                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW   | 1,8                                                                         | 2,6                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                      | kW   | 12,6                                                                        | 25,0                                                                        | 28,0                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                              | kW   | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %    | 97,1                                                                        | 96,8                                                                        | 96,7                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %    | 105,1                                                                       | 105,6                                                                       | 106,0                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                     | %    | 106,0                                                                       | 107,4                                                                       | 107,4                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                 | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C   | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW nominal heat input                                     | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    | 34,5 (*)                                                                    |
| DHW minimum heat input                                     | kW   | 2,0 (*)                                                                     | 3,0 (*)                                                                     | 3,3 (*)                                                                     | 4,2 (*)                                                                     |
| DHW temperature range                                      | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                            | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                         | -    | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %    | 0,40                                                                        | 0,44                                                                        | 1,04                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                           | %    | 0,53                                                                        | 0,21                                                                        | 0,20                                                                        | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %    | 2,50                                                                        | 2,72                                                                        | 2,26                                                                        | 2,33                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C   | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s  | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %    | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W    | 88                                                                          | 97                                                                          | 101                                                                         | 106                                                                         |
| Circulation pump power input                               | W    | 50                                                                          | 50                                                                          | 50                                                                          | 50                                                                          |
| Electric protection rating                                 | IP   | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm   | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um   | Orion                                                                       | Orion                                                                       | Orion                                                                       | Orion                                                                       |
|------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -    | KRB 12                                                                      | KRB 24                                                                      | KRB 28                                                                      | KRB 32                                                                      |
| Type                                                       | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW   | 12                                                                          | 23                                                                          | 26                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %    | 90                                                                          | 92                                                                          | 92                                                                          | 93                                                                          |
| Seasonal energy efficiency class of ambient heating        | -    | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW   | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                    | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW   | 11,7                                                                        | 23,0                                                                        | 25,5                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW   | 1,8                                                                         | 2,6                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                      | kW   | 12,6                                                                        | 25,0                                                                        | 28,0                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                              | kW   | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %    | 97,1                                                                        | 96,8                                                                        | 96,7                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %    | 105,1                                                                       | 105,6                                                                       | 106,0                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                     | %    | 106,0                                                                       | 107,4                                                                       | 107,4                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                 | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C   | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW nominal heat input                                     | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    | 34,5 (*)                                                                    |
| DHW minimum heat input                                     | kW   | 2,0 (*)                                                                     | 3,0 (*)                                                                     | 3,3 (*)                                                                     | 4,2 (*)                                                                     |
| DHW temperature range                                      | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                            | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                         | -    | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %    | 0,40                                                                        | 0,44                                                                        | 1,04                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                           | %    | 0,53                                                                        | 0,21                                                                        | 0,20                                                                        | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %    | 2,50                                                                        | 2,72                                                                        | 2,26                                                                        | 2,33                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C   | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s  | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %    | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W    | 88                                                                          | 97                                                                          | 101                                                                         | 106                                                                         |
| Circulation pump power input                               | W    | 50                                                                          | 50                                                                          | 50                                                                          | 50                                                                          |
| Electric protection rating                                 | IP   | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm   | 80+80                                                                       | 80+80                                                                       | 80+80                                                                       | 80+80                                                                       |
|                                                            |      | 60+60                                                                       | 60+60                                                                       | 60+60                                                                       | 60+60                                                                       |
|                                                            |      | 100/60                                                                      | 100/60                                                                      | 100/60                                                                      | 100/60                                                                      |
|                                                            |      | 125/80                                                                      | 125/80                                                                      | 125/80                                                                      | 125/80                                                                      |

(\*) with optional hot water storage tank.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um    | Orion                                                                  | Orion                                                                  |
|------------------------------------------------------------|-------|------------------------------------------------------------------------|------------------------------------------------------------------------|
| Model                                                      | -     | KB 24                                                                  | KB 32                                                                  |
| Type                                                       | -     | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93 | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93 |
| Rated output (Pn)                                          | kW    | 23                                                                     | 29                                                                     |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 92                                                                     | 93                                                                     |
| Seasonal energy efficiency class of ambient heating        | -     | A                                                                      | A                                                                      |
| Stated load profile                                        | -     | XL                                                                     | XL                                                                     |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 82                                                                     | 80                                                                     |
| Energy efficiency class of water heating                   | -     | A                                                                      | A                                                                      |
| Nominal heat input (Qn)                                    | kW    | 23,7                                                                   | 30,4                                                                   |
| Reduced heat input (Qr)                                    | kW    | 3,0                                                                    | 4,2                                                                    |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 23,0                                                                   | 29,4                                                                   |
| Reduced heat output (80-60°C) (Pr)                         | kW    | 2,6                                                                    | 3,9                                                                    |
| Heat output (50-30°C)                                      | kW    | 25,0                                                                   | 32,3                                                                   |
| Reduced heat output (50-30°C)                              | kW    | 3,2                                                                    | 4,4                                                                    |
| Useful efficiency at nominal input (80-60°C)               | %     | 96,8                                                                   | 96,2                                                                   |
| Useful efficiency at nominal input (50-30°C)               | %     | 105,6                                                                  | 106,2                                                                  |
| Useful efficiency at 30% (30°C return)                     | %     | 107,4                                                                  | 108,3                                                                  |
| Heating circuit working pressure (min-max)                 | bar   | 0,5-3,0                                                                | 0,5-3,0                                                                |
| CH temperature setting range                               | °C    | 20-78                                                                  | 20-78                                                                  |
| CH maximum working temperature                             | °C    | 83                                                                     | 83                                                                     |
| Heating expansion vessel capacity                          | l     | 10                                                                     | 10                                                                     |
| DHW nominal heat input                                     | kW    | 27,3                                                                   | 34,5                                                                   |
| DHW minimum heat input                                     | kW    | 3,0                                                                    | 4,2                                                                    |
| DHW nominal heat output ( $\Delta T$ 30°C)                 | kW    | 26,8                                                                   | 33,4                                                                   |
| DHW circuit working pressure (min-max)                     | bar   | 0,5-6,0                                                                | 0,5-6,0                                                                |
| Specific DHW flow $\Delta T=30K$                           | l/min | 16,2                                                                   | 19,5                                                                   |
| Qualification of domestic hot water                        | -     | ***                                                                    | ***                                                                    |
| DHW temperature range                                      | °C    | 35-65                                                                  | 35-65                                                                  |
| DHW maximum working temperature                            | °C    | 65                                                                     | 65                                                                     |
| NOx emission class                                         | -     | 6                                                                      | 6                                                                      |
| Casing heat loss with burner on at nominal heat input      | %     | 0,44                                                                   | 0,87                                                                   |
| Casing heat loss with burner off                           | %     | 0,21                                                                   | 0,19                                                                   |
| Chimney heat loss with burner on at nominal heat input     | %     | 2,72                                                                   | 2,33                                                                   |
| Air-flue $\Delta T$ at nominal heat input                  | °C    | 61                                                                     | 60                                                                     |
| Flue gas flow at nominal heat input                        | g/s   | 12,43                                                                  | 15,81                                                                  |
| CO2 at nominal heat input of heating (Natural gas)         | %     | 9                                                                      | 9                                                                      |
| CO2 at nominal heat input of heating (Propane)             | %     | 10                                                                     | 10                                                                     |
| Power supply voltage/frequency                             | V/Hz  | 230/50                                                                 | 230/50                                                                 |
| Maximum power consumption                                  | W     | 97                                                                     | 106                                                                    |
| Circulation pump power input                               | W     | 50                                                                     | 50                                                                     |
| Electric protection rating                                 | IP    | IPX4D                                                                  | IPX4D                                                                  |
| Air intake/flue gas vent pipe diameter                     | mm    | 80+80<br>60+60<br>100/60<br>125/80                                     | 80+80<br>60+60<br>100/60<br>125/80                                     |

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um    | Virgo                                                                       | Virgo                                                                       | Virgo                                                                       | Virgo                                                                       |
|------------------------------------------------------------|-------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -     | KC 12                                                                       | KC 24                                                                       | KC 28                                                                       | KC 32                                                                       |
| Type                                                       | -     | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW    | 12                                                                          | 23                                                                          | 26                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 90                                                                          | 92                                                                          | 92                                                                          | 93                                                                          |
| Seasonal energy efficiency class of ambient heating        | -     | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Stated load profile                                        | -     | M                                                                           | XL                                                                          | XL                                                                          | XXL                                                                         |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 77                                                                          | 85                                                                          | 86                                                                          | 87                                                                          |
| Energy efficiency class of water heating                   | -     | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW    | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                    | kW    | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 11,7                                                                        | 23,0                                                                        | 25,5                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW    | 1,8                                                                         | 2,6                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                      | kW    | 12,6                                                                        | 25,0                                                                        | 28,0                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                              | kW    | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,1                                                                        | 96,8                                                                        | 96,7                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %     | 105,1                                                                       | 105,6                                                                       | 106,0                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                     | %     | 106,0                                                                       | 107,4                                                                       | 107,4                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                 | bar   | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C    | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C    | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l     | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW nominal heat input                                     | kW    | 18,0                                                                        | 27,3                                                                        | 30,4                                                                        | 34,5                                                                        |
| DHW minimum heat input                                     | kW    | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| DHW nominal heat output ( $\Delta T$ 30°C)                 | kW    | 18,6                                                                        | 27,4                                                                        | 29,2                                                                        | 33,4                                                                        |
| DHW circuit working pressure (min-max)                     | bar   | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     |
| Specific DHW flow $\Delta T=30K$                           | l/min | 8,8                                                                         | 13,4                                                                        | 15,5                                                                        | 16,2                                                                        |
| Qualification of domestic hot water                        | -     | **                                                                          | **                                                                          | **                                                                          | **                                                                          |
| DHW temperature range                                      | °C    | 35-57                                                                       | 35-57                                                                       | 35-57                                                                       | 35-57                                                                       |
| DHW maximum working temperature                            | °C    | 62                                                                          | 62                                                                          | 62                                                                          | 62                                                                          |
| NOx emission class                                         | -     | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %     | 0,40                                                                        | 0,44                                                                        | 1,04                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                           | %     | 0,53                                                                        | 0,21                                                                        | 0,20                                                                        | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %     | 2,50                                                                        | 2,72                                                                        | 2,26                                                                        | 2,33                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C    | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s   | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %     | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %     | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz  | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W     | 81                                                                          | 90                                                                          | 94                                                                          | 106                                                                         |
| Circulation pump power input                               | W     | 43                                                                          | 43                                                                          | 43                                                                          | 50                                                                          |
| Electric protection rating                                 | IP    | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm    | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um   | Virgo                                                                       | Virgo                                                                       | Virgo                                                                       | Virgo                                                                       |
|------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -    | KR 12                                                                       | KR 24                                                                       | KR 28                                                                       | KR 32                                                                       |
| Type                                                       | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW   | 12                                                                          | 23                                                                          | 26                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %    | 90                                                                          | 92                                                                          | 92                                                                          | 93                                                                          |
| Seasonal energy efficiency class of ambient heating        | -    | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW   | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                    | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW   | 11,7                                                                        | 23,0                                                                        | 25,5                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW   | 1,8                                                                         | 2,6                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                      | kW   | 12,6                                                                        | 25,0                                                                        | 28,0                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                              | kW   | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %    | 97,1                                                                        | 96,8                                                                        | 96,7                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %    | 105,1                                                                       | 105,6                                                                       | 106,0                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                     | %    | 106,0                                                                       | 107,4                                                                       | 107,4                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                 | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C   | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW nominal heat input                                     | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    | 34,5 (*)                                                                    |
| DHW minimum heat input                                     | kW   | 2,0 (*)                                                                     | 3,0 (*)                                                                     | 3,3 (*)                                                                     | 4,2 (*)                                                                     |
| DHW temperature range                                      | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                            | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                         | -    | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %    | 0,40                                                                        | 0,44                                                                        | 1,04                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                           | %    | 0,53                                                                        | 0,21                                                                        | 0,20                                                                        | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %    | 2,50                                                                        | 2,72                                                                        | 2,26                                                                        | 2,33                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C   | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s  | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %    | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W    | 81                                                                          | 90                                                                          | 94                                                                          | 106                                                                         |
| Circulation pump power input                               | W    | 43                                                                          | 43                                                                          | 43                                                                          | 50                                                                          |
| Electric protection rating                                 | IP   | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm   | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um   | Virgo                                                                       | Virgo                                                                       | Virgo                                                                       | Virgo                                                                       |
|------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -    | KRB 12                                                                      | KRB 24                                                                      | KRB 28                                                                      | KRB 32                                                                      |
| Type                                                       | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW   | 12                                                                          | 23                                                                          | 26                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %    | 90                                                                          | 92                                                                          | 92                                                                          | 93                                                                          |
| Seasonal energy efficiency class of ambient heating        | -    | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW   | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                    | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW   | 11,7                                                                        | 23,0                                                                        | 25,5                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW   | 1,8                                                                         | 2,6                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                      | kW   | 12,6                                                                        | 25,0                                                                        | 28,0                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                              | kW   | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %    | 97,1                                                                        | 96,8                                                                        | 96,7                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %    | 105,1                                                                       | 105,6                                                                       | 106,0                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                     | %    | 106,0                                                                       | 107,4                                                                       | 107,4                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                 | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C   | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW nominal heat input                                     | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    | 34,5 (*)                                                                    |
| DHW minimum heat input                                     | kW   | 2,0 (*)                                                                     | 3,0 (*)                                                                     | 3,3 (*)                                                                     | 4,2 (*)                                                                     |
| DHW temperature range                                      | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                            | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                         | -    | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %    | 0,40                                                                        | 0,44                                                                        | 1,04                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                           | %    | 0,53                                                                        | 0,21                                                                        | 0,20                                                                        | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %    | 2,50                                                                        | 2,72                                                                        | 2,26                                                                        | 2,33                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C   | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s  | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %    | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %    | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W    | 81                                                                          | 90                                                                          | 94                                                                          | 106                                                                         |
| Circulation pump power input                               | W    | 43                                                                          | 43                                                                          | 43                                                                          | 50                                                                          |
| Electric protection rating                                 | IP   | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm   | 80+80                                                                       | 80+80                                                                       | 80+80                                                                       | 80+80                                                                       |
|                                                            |      | 60+60                                                                       | 60+60                                                                       | 60+60                                                                       | 60+60                                                                       |
|                                                            |      | 100/60                                                                      | 100/60                                                                      | 100/60                                                                      | 100/60                                                                      |
|                                                            |      | 125/80                                                                      | 125/80                                                                      | 125/80                                                                      | 125/80                                                                      |

(\*) with optional hot water storage tank.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                                  | um    | Delfis Next                                                                 | Delfis Next                                                                 | Delfis Next                                                                 |
|-----------------------------------------------------------------|-------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                           | -     | KC 26                                                                       | KC 30                                                                       | KC 35                                                                       |
| Type                                                            | -     | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                               | kW    | 23                                                                          | 26                                                                          | 30                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )      | %     | 92                                                                          | 92                                                                          | 91                                                                          |
| Seasonal energy efficiency class of ambient heating             | -     | A                                                                           | A                                                                           | A                                                                           |
| Stated load profile                                             | -     | XL                                                                          | XL                                                                          | XL                                                                          |
| Water heating energy efficiency ( $\eta_{wh}$ )                 | %     | 84                                                                          | 84                                                                          | 85                                                                          |
| Energy efficiency class of water heating                        | -     | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                         | kW    | 23,7                                                                        | 26,7                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                         | kW    | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat flow rate with 20%H2NG mixture (Qn(20%H2))         | kW    | 22,4                                                                        | 25,3                                                                        | 28,8                                                                        |
| Minimum low heat flow rate with 20%H2NG mixture                 | kW    | 2,8                                                                         | 3,1                                                                         | 4,0                                                                         |
| Nominal heat output (80-60°C) (Pn)                              | kW    | 23,1                                                                        | 26,0                                                                        | 29,6                                                                        |
| Reduced heat output (80-60°C) (Pr)                              | kW    | 2,8                                                                         | 3,1                                                                         | 3,8                                                                         |
| Heat output (50-30°C)                                           | kW    | 25,0                                                                        | 28,1                                                                        | 32,2                                                                        |
| Reduced heat output (50-30°C)                                   | kW    | 3,3                                                                         | 3,4                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)                    | %     | 97,3                                                                        | 97,3                                                                        | 97,3                                                                        |
| Useful efficiency at nominal input (50-30°C)                    | %     | 105,5                                                                       | 105,4                                                                       | 105,9                                                                       |
| Useful efficiency at 30% (30°C return)                          | %     | 108,4                                                                       | 108,0                                                                       | 107,8                                                                       |
| Heating circuit working pressure (min-max)                      | bar   | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                                    | °C    | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                                  | °C    | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                               | l     | 9                                                                           | 9                                                                           | 9                                                                           |
| DHW nominal heat input                                          | kW    | 27,3                                                                        | 30,4                                                                        | 34,5                                                                        |
| DHW minimum heat input                                          | kW    | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat flow rate in DHW with 20%H2NG mixture (Qnw(20%H2)) | kW    | 25,9                                                                        | 28,8                                                                        | 32,7                                                                        |
| Minimum heat flow rate in DHW with 20%H2NG mixture              | kW    | 2,8                                                                         | 3,1                                                                         | 4,0                                                                         |
| DHW nominal heat output ( $\Delta T$ 30°C)                      | kW    | 26,6                                                                        | 29,6                                                                        | 33,6                                                                        |
| DHW circuit working pressure (min-max)                          | bar   | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     |
| Specific DHW flow $\Delta T=30K$                                | l/min | 13,4                                                                        | 15,0                                                                        | 17,3                                                                        |
| Qualification of domestic hot water                             | -     | **                                                                          | **                                                                          | **                                                                          |
| DHW temperature range                                           | °C    | 35-57                                                                       | 35-57                                                                       | 35-57                                                                       |
| DHW maximum working temperature                                 | °C    | 62                                                                          | 62                                                                          | 62                                                                          |
| NOx emission class                                              | -     | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input           | %     | 0,33                                                                        | 0,55                                                                        | 0,43                                                                        |
| Casing heat loss with burner off                                | %     | 0,21                                                                        | 0,23                                                                        | 0,21                                                                        |
| Chimney heat loss with burner on at nominal heat input          | %     | 2,66                                                                        | 2,66                                                                        | 2,74                                                                        |
| Air-flue $\Delta T$ at nominal heat input                       | °C    | 54                                                                          | 55                                                                          | 55                                                                          |
| Flue gas flow at nominal heat input                             | g/s   | 12,2                                                                        | 13,5                                                                        | 15,4                                                                        |
| CO2 at nominal heat input of heating (Natural gas)              | %     | 9,3                                                                         | 9,3                                                                         | 9,3                                                                         |
| CO2 at nominal heat input of heating (Propane)                  | %     | 10,6                                                                        | 10,6                                                                        | 10,6                                                                        |
| Power supply voltage/frequency                                  | V/Hz  | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                       | W     | 103                                                                         | 108                                                                         | 118                                                                         |
| Circulation pump power input                                    | W     | 43                                                                          | 43                                                                          | 50                                                                          |
| Electric protection rating                                      | IP    | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                          | mm    | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*) with comfort function disabled.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                                  | um   | Delfis Next                                                                 | Delfis Next                                                                 | Delfis Next                                                                 | Delfis Next                                                                 |
|-----------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                           | -    | KR 12                                                                       | KR 24                                                                       | KR 28                                                                       | KR 32                                                                       |
| Type                                                            | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                               | kW   | 12                                                                          | 23                                                                          | 26                                                                          | 30                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )      | %    | 92                                                                          | 92                                                                          | 92                                                                          | 91                                                                          |
| Seasonal energy efficiency class of ambient heating             | -    | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                         | kW   | 12,0                                                                        | 23,7                                                                        | 26,7                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                         | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat flow rate with 20%H2NG mixture (Qn(20%H2))         | kW   | 11,4                                                                        | 22,4                                                                        | 25,3                                                                        | 28,8                                                                        |
| Minimum low heat flow rate with 20%H2NG mixture                 | kW   | 1,9                                                                         | 2,8                                                                         | 3,1                                                                         | 4,0                                                                         |
| Nominal heat output (80-60°C) (Pn)                              | kW   | 11,8                                                                        | 23,1                                                                        | 26,0                                                                        | 29,6                                                                        |
| Reduced heat output (80-60°C) (Pr)                              | kW   | 1,8                                                                         | 2,8                                                                         | 3,1                                                                         | 3,8                                                                         |
| Heat output (50-30°C)                                           | kW   | 12,9                                                                        | 25,0                                                                        | 28,1                                                                        | 32,2                                                                        |
| Reduced heat output (50-30°C)                                   | kW   | 2,1                                                                         | 3,3                                                                         | 3,4                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)                    | %    | 98,0                                                                        | 97,3                                                                        | 97,3                                                                        | 97,3                                                                        |
| Useful efficiency at nominal input (50-30°C)                    | %    | 107,5                                                                       | 105,5                                                                       | 105,4                                                                       | 105,9                                                                       |
| Useful efficiency at 30% (30°C return)                          | %    | 108,3                                                                       | 108,4                                                                       | 108,0                                                                       | 107,8                                                                       |
| Heating circuit working pressure (min-max)                      | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                                    | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                                  | °C   | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                               | l    | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| DHW nominal heat input                                          | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    | 34,5 (*)                                                                    |
| DHW minimum heat input                                          | kW   | 2,0 (*)                                                                     | 2,0 (*)                                                                     | 3,3 (*)                                                                     | 4,2 (*)                                                                     |
| Nominal heat flow rate in DHW with 20%H2NG mixture (Qnw(20%H2)) | kW   | 17,0                                                                        | 25,9                                                                        | 28,8                                                                        | 32,7                                                                        |
| Minimum heat flow rate in DHW with 20%H2NG mixture              | kW   | 1,9                                                                         | 2,8                                                                         | 3,1                                                                         | 4,0                                                                         |
| DHW temperature range                                           | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                                 | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                              | -    | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input           | %    | 0,00                                                                        | 0,33                                                                        | 0,55                                                                        | 0,43                                                                        |
| Casing heat loss with burner off                                | %    | 0,42                                                                        | 0,21                                                                        | 0,23                                                                        | 0,21                                                                        |
| Chimney heat loss with burner on at nominal heat input          | %    | 1,99                                                                        | 2,66                                                                        | 2,66                                                                        | 2,74                                                                        |
| Air-flue $\Delta T$ at nominal heat input                       | °C   | 47,0                                                                        | 54                                                                          | 55                                                                          | 55                                                                          |
| Flue gas flow at nominal heat input                             | g/s  | 8,0                                                                         | 12,2                                                                        | 13,5                                                                        | 15,4                                                                        |
| CO2 at nominal heat input of heating (Natural gas)              | %    | 9,3                                                                         | 9,3                                                                         | 9,3                                                                         | 9,3                                                                         |
| CO2 at nominal heat input of heating (Propane)                  | %    | 10,2                                                                        | 10,6                                                                        | 10,6                                                                        | 10,6                                                                        |
| Power supply voltage/frequency                                  | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                       | W    | 96                                                                          | 103                                                                         | 108                                                                         | 118                                                                         |
| Circulation pump power input                                    | W    | 43                                                                          | 43                                                                          | 43                                                                          | 50                                                                          |
| Electric protection rating                                      | IP   | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                          | mm   | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*) with comfort function disabled.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                                  | um   | Antea Next                                                                  | Antea Next                                                                  | Antea Next                                                                  | Antea Next                                                                  |
|-----------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                           | -    | KRB 12                                                                      | KRB 24                                                                      | KRB 28                                                                      | KRB 32                                                                      |
| Type                                                            | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                               | kW   | 12                                                                          | 23                                                                          | 26                                                                          | 30                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ )      | %    | 92                                                                          | 92                                                                          | 92                                                                          | 91                                                                          |
| Seasonal energy efficiency class of ambient heating             | -    | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                         | kW   | 12,0                                                                        | 23,7                                                                        | 26,7                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                         | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat flow rate with 20%H2NG mixture (Qn(20%H2))         | kW   | 11,4                                                                        | 22,4                                                                        | 25,3                                                                        | 28,8                                                                        |
| Minimum low heat flow rate with 20%H2NG mixture                 | kW   | 1,9                                                                         | 2,8                                                                         | 3,1                                                                         | 4,0                                                                         |
| Nominal heat output (80-60°C) (Pn)                              | kW   | 11,8                                                                        | 23,1                                                                        | 26,0                                                                        | 29,6                                                                        |
| Reduced heat output (80-60°C) (Pr)                              | kW   | 1,8                                                                         | 2,8                                                                         | 3,1                                                                         | 3,8                                                                         |
| Heat output (50-30°C)                                           | kW   | 12,9                                                                        | 25,0                                                                        | 28,1                                                                        | 32,2                                                                        |
| Reduced heat output (50-30°C)                                   | kW   | 2,1                                                                         | 3,3                                                                         | 3,4                                                                         | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)                    | %    | 98,0                                                                        | 97,3                                                                        | 97,3                                                                        | 97,3                                                                        |
| Useful efficiency at nominal input (50-30°C)                    | %    | 107,5                                                                       | 105,5                                                                       | 105,4                                                                       | 105,9                                                                       |
| Useful efficiency at 30% (30°C return)                          | %    | 108,3                                                                       | 108,4                                                                       | 108,0                                                                       | 107,8                                                                       |
| Heating circuit working pressure (min-max)                      | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                                    | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                                  | °C   | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                               | l    | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| DHW nominal heat input                                          | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    | 34,5 (*)                                                                    |
| DHW minimum heat input                                          | kW   | 2,0 (*)                                                                     | 2,0 (*)                                                                     | 3,3 (*)                                                                     | 4,2 (*)                                                                     |
| Nominal heat flow rate in DHW with 20%H2NG mixture (Qnw(20%H2)) | kW   | 17,0                                                                        | 25,9                                                                        | 28,8                                                                        | 32,7                                                                        |
| Minimum heat flow rate in DHW with 20%H2NG mixture              | kW   | 1,9                                                                         | 2,8                                                                         | 3,1                                                                         | 4,0                                                                         |
| DHW temperature range                                           | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                                 | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                              | -    | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input           | %    | 0,00                                                                        | 0,33                                                                        | 0,55                                                                        | 0,43                                                                        |
| Casing heat loss with burner off                                | %    | 0,42                                                                        | 0,21                                                                        | 0,23                                                                        | 0,21                                                                        |
| Chimney heat loss with burner on at nominal heat input          | %    | 1,99                                                                        | 2,66                                                                        | 2,66                                                                        | 2,74                                                                        |
| Air-flue $\Delta T$ at nominal heat input                       | °C   | 47,0                                                                        | 54                                                                          | 55                                                                          | 55                                                                          |
| Flue gas flow at nominal heat input                             | g/s  | 8,0                                                                         | 12,2                                                                        | 13,5                                                                        | 15,4                                                                        |
| CO2 at nominal heat input of heating (Natural gas)              | %    | 9,3                                                                         | 9,3                                                                         | 9,3                                                                         | 9,3                                                                         |
| CO2 at nominal heat input of heating (Propane)                  | %    | 10,2                                                                        | 10,6                                                                        | 10,6                                                                        | 10,6                                                                        |
| Power supply voltage/frequency                                  | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                       | W    | 96                                                                          | 103                                                                         | 108                                                                         | 118                                                                         |
| Circulation pump power input                                    | W    | 43                                                                          | 43                                                                          | 43                                                                          | 50                                                                          |
| Electric protection rating                                      | IP   | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                          | mm   | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*) with comfort function disabled.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                         | um    | Delfis                                                                                                              | Delfis                                                                                                              | Delfis                                                                                                              |
|--------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Model                                                  | -     | KC 12                                                                                                               | KC 24                                                                                                               | KC 28                                                                                                               |
| Type                                                   | -     | B23-B23P-<br>B33-C13-<br>C33-C43-<br>C53-C63-<br>C83-C13X-<br>C33X-<br>C43X-<br>C53X-<br>C63X-<br>C83X-C93-<br>C93X | B23-B23P-<br>B33-C13-<br>C33-C43-<br>C53-C63-<br>C83-C13X-<br>C33X-<br>C43X-<br>C53X-<br>C63X-<br>C83X-C93-<br>C93X | B23-B23P-<br>B33-C13-<br>C33-C43-<br>C53-C63-<br>C83-C13X-<br>C33X-<br>C43X-<br>C53X-<br>C63X-<br>C83X-C93-<br>C93X |
| Rated output (Pn)                                      | kW    | 12                                                                                                                  | 23                                                                                                                  | 26                                                                                                                  |
| Seasonal energy efficiency of ambient heating (ηs)     | %     | 90                                                                                                                  | 92                                                                                                                  | 92                                                                                                                  |
| Seasonal energy efficiency class of ambient heating    | -     | A                                                                                                                   | A                                                                                                                   | A                                                                                                                   |
| Stated load profile                                    | -     | M                                                                                                                   | XL                                                                                                                  | XL                                                                                                                  |
| Water heating energy efficiency (ηwh)                  | %     | 78                                                                                                                  | 84                                                                                                                  | 80                                                                                                                  |
| Energy efficiency class of water heating               | -     | A                                                                                                                   | A                                                                                                                   | A                                                                                                                   |
| Nominal heat input (Qn)                                | kW    | 12,0                                                                                                                | 23,7                                                                                                                | 26,4                                                                                                                |
| Reduced heat input (Qr)                                | kW    | 2,0                                                                                                                 | 3,0                                                                                                                 | 3,3                                                                                                                 |
| Nominal heat output (80-60°C) (Pn)                     | kW    | 11,7                                                                                                                | 22,8                                                                                                                | 25,5                                                                                                                |
| Reduced heat output (80-60°C) (Pr)                     | kW    | 1,8                                                                                                                 | 2,8                                                                                                                 | 3,1                                                                                                                 |
| Heat output (50-30°C)                                  | kW    | 12,6                                                                                                                | 24,9                                                                                                                | 28,0                                                                                                                |
| Reduced heat output (50-30°C)                          | kW    | 2,1                                                                                                                 | 3,2                                                                                                                 | 3,5                                                                                                                 |
| Useful efficiency at nominal input (80-60°C)           | %     | 97,1                                                                                                                | 96,3                                                                                                                | 96,7                                                                                                                |
| Useful efficiency at nominal input (50-30°C)           | %     | 105,1                                                                                                               | 105,1                                                                                                               | 105,9                                                                                                               |
| Useful efficiency at 30% (30°C return)                 | %     | 106,0                                                                                                               | 107,2                                                                                                               | 107,5                                                                                                               |
| Heating circuit working pressure (min-max)             | bar   | 0,5-3,0                                                                                                             | 0,5-3,0                                                                                                             | 0,5-3,0                                                                                                             |
| CH temperature setting range                           | °C    | 20-78                                                                                                               | 20-78                                                                                                               | 20-78                                                                                                               |
| CH maximum working temperature                         | °C    | 83                                                                                                                  | 83                                                                                                                  | 83                                                                                                                  |
| Heating expansion vessel capacity                      | l     | 9                                                                                                                   | 9                                                                                                                   | 9                                                                                                                   |
| DHW nominal heat input                                 | kW    | 18,0                                                                                                                | 27,3                                                                                                                | 30,4                                                                                                                |
| DHW minimum heat input                                 | kW    | 2,0                                                                                                                 | 3,0                                                                                                                 | 3,3                                                                                                                 |
| DHW nominal heat output (ΔT 30°C)                      | kW    | 18,4                                                                                                                | 27,4                                                                                                                | 29,2                                                                                                                |
| DHW circuit working pressure (min-max)                 | bar   | 0,5-6,0                                                                                                             | 0,5-6,0                                                                                                             | 0,5-6,0                                                                                                             |
| Specific DHW flow ΔT=30K                               | l/min | 8,6                                                                                                                 | 13,4                                                                                                                | 15,0                                                                                                                |
| Qualification of domestic hot water                    | -     | **                                                                                                                  | **                                                                                                                  | **                                                                                                                  |
| DHW temperature range                                  | °C    | 35-57                                                                                                               | 35-57                                                                                                               | 35-57                                                                                                               |
| DHW maximum working temperature                        | °C    | 62                                                                                                                  | 62                                                                                                                  | 62                                                                                                                  |
| NOx emission class                                     | -     | 6                                                                                                                   | 6                                                                                                                   | 6                                                                                                                   |
| Casing heat loss with burner on at nominal heat input  | %     | 0,26                                                                                                                | 1,28                                                                                                                | 1,11                                                                                                                |
| Casing heat loss with burner off                       | %     | 0,55                                                                                                                | 0,26                                                                                                                | 0,27                                                                                                                |
| Chimney heat loss with burner on at nominal heat input | %     | 2,64                                                                                                                | 2,45                                                                                                                | 2,19                                                                                                                |
| Air-flue ΔT at nominal heat input                      | °C    | 57,9                                                                                                                | 61                                                                                                                  | 60                                                                                                                  |
| Flue gas flow at nominal heat input                    | g/s   | 8,25                                                                                                                | 12,43                                                                                                               | 13,93                                                                                                               |
| CO2 at nominal heat input of heating (Natural gas)     | %     | 9                                                                                                                   | 9                                                                                                                   | 9                                                                                                                   |
| CO2 at nominal heat input of heating (Propane)         | %     | 10                                                                                                                  | 10                                                                                                                  | 10                                                                                                                  |
| Power supply voltage/frequency                         | V/Hz  | 230/50                                                                                                              | 230/50                                                                                                              | 230/50                                                                                                              |
| Maximum power consumption                              | W     | 81                                                                                                                  | 90                                                                                                                  | 94                                                                                                                  |
| Circulation pump power input                           | W     | 43                                                                                                                  | 43                                                                                                                  | 43                                                                                                                  |
| Electric protection rating                             | IP    | IPX4D                                                                                                               | IPX4D                                                                                                               | IPX4D                                                                                                               |
| Air intake/flue gas vent pipe diameter                 | mm    | 80+80<br>60+60<br>100/60<br>125/80                                                                                  | 80+80<br>60+60<br>100/60<br>125/80                                                                                  | 80+80<br>60+60<br>100/60<br>125/80                                                                                  |

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um   | Delfis                                                                      | Delfis                                                                      | Delfis                                                                      |
|------------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                      | -    | KR 12                                                                       | KR 24                                                                       | KR 28                                                                       |
| Type                                                       | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                          | kW   | 12                                                                          | 23                                                                          | 26                                                                          |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %    | 90                                                                          | 92                                                                          | 92                                                                          |
| Seasonal energy efficiency class of ambient heating        | -    | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                    | kW   | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        |
| Reduced heat input (Qr)                                    | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         |
| Nominal heat output (80-60°C) (Pn)                         | kW   | 11,7                                                                        | 22,8                                                                        | 25,5                                                                        |
| Reduced heat output (80-60°C) (Pr)                         | kW   | 1,8                                                                         | 2,8                                                                         | 3,1                                                                         |
| Heat output (50-30°C)                                      | kW   | 12,6                                                                        | 24,9                                                                        | 28,0                                                                        |
| Reduced heat output (50-30°C)                              | kW   | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         |
| Useful efficiency at nominal input (80-60°C)               | %    | 97,1                                                                        | 96,3                                                                        | 96,7                                                                        |
| Useful efficiency at nominal input (50-30°C)               | %    | 105,1                                                                       | 105,1                                                                       | 105,9                                                                       |
| Useful efficiency at 30% (30°C return)                     | %    | 106,0                                                                       | 107,2                                                                       | 107,5                                                                       |
| Heating circuit working pressure (min-max)                 | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                               | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                             | °C   | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                          | l    | 9                                                                           | 9                                                                           | 9                                                                           |
| DHW nominal heat input                                     | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    |
| DHW minimum heat input                                     | kW   | 2,0 (*)                                                                     | 3,0 (*)                                                                     | 3,3 (*)                                                                     |
| DHW temperature range                                      | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                            | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                         | -    | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input      | %    | 0,26                                                                        | 1,28                                                                        | 1,11                                                                        |
| Casing heat loss with burner off                           | %    | 0,55                                                                        | 0,26                                                                        | 0,27                                                                        |
| Chimney heat loss with burner on at nominal heat input     | %    | 2,64                                                                        | 2,45                                                                        | 2,19                                                                        |
| Air-flue $\Delta T$ at nominal heat input                  | °C   | 57,9                                                                        | 61                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                        | g/s  | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       |
| CO2 at nominal heat input of heating (Natural gas)         | %    | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)             | %    | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                             | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                  | W    | 81                                                                          | 90                                                                          | 94                                                                          |
| Circulation pump power input                               | W    | 43                                                                          | 43                                                                          | 43                                                                          |
| Electric protection rating                                 | IP   | IPX4D                                                                       | IPX4D                                                                       | IPX4D                                                                       |
| Air intake/flue gas vent pipe diameter                     | mm   | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                         | um   | Delfis                                                                      | Delfis                                                                      | Delfis                                                                      |
|--------------------------------------------------------|------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                  | -    | KRB 12                                                                      | KRB 24                                                                      | KRB 28                                                                      |
| Type                                                   | -    | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                      | kW   | 12                                                                          | 23                                                                          | 26                                                                          |
| Seasonal energy efficiency of ambient heating (ηs)     | %    | 90                                                                          | 92                                                                          | 92                                                                          |
| Seasonal energy efficiency class of ambient heating    | -    | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                | kW   | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        |
| Reduced heat input (Qr)                                | kW   | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         |
| Nominal heat output (80-60°C) (Pn)                     | kW   | 11,7                                                                        | 22,8                                                                        | 25,5                                                                        |
| Reduced heat output (80-60°C) (Pr)                     | kW   | 1,8                                                                         | 2,8                                                                         | 3,1                                                                         |
| Heat output (50-30°C)                                  | kW   | 12,6                                                                        | 24,9                                                                        | 28,0                                                                        |
| Reduced heat output (50-30°C)                          | kW   | 2,1                                                                         | 3,2                                                                         | 3,5                                                                         |
| Useful efficiency at nominal input (80-60°C)           | %    | 97,1                                                                        | 96,3                                                                        | 96,7                                                                        |
| Useful efficiency at nominal input (50-30°C)           | %    | 105,1                                                                       | 105,1                                                                       | 105,9                                                                       |
| Useful efficiency at 30% (30°C return)                 | %    | 106,0                                                                       | 107,2                                                                       | 107,5                                                                       |
| Heating circuit working pressure (min-max)             | bar  | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                           | °C   | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                         | °C   | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                      | l    | 9                                                                           | 9                                                                           | 9                                                                           |
| DHW nominal heat input                                 | kW   | 18,0 (*)                                                                    | 27,3 (*)                                                                    | 30,4 (*)                                                                    |
| DHW minimum heat input                                 | kW   | 2,0 (*)                                                                     | 3,0 (*)                                                                     | 3,3 (*)                                                                     |
| DHW temperature range                                  | °C   | 35-65 (***)                                                                 | 35-65 (***)                                                                 | 35-65 (***)                                                                 |
| DHW maximum working temperature                        | °C   | 65 (***)                                                                    | 65 (***)                                                                    | 65 (***)                                                                    |
| NOx emission class                                     | -    | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input  | %    | 0,26                                                                        | 1,28                                                                        | 1,11                                                                        |
| Casing heat loss with burner off                       | %    | 0,55                                                                        | 0,26                                                                        | 0,27                                                                        |
| Chimney heat loss with burner on at nominal heat input | %    | 2,64                                                                        | 2,45                                                                        | 2,19                                                                        |
| Air-flue ΔT at nominal heat input                      | °C   | 57,9                                                                        | 61                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                    | g/s  | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       |
| CO2 at nominal heat input of heating (Natural gas)     | %    | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)         | %    | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                         | V/Hz | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                              | W    | 81                                                                          | 90                                                                          | 94                                                                          |
| Circulation pump power input                           | W    | 43                                                                          | 43                                                                          | 43                                                                          |
| Electric protection rating                             | IP   | IPX4D                                                                       | IPX4D                                                                       | IPX4D                                                                       |
| Air intake/flue gas vent pipe diameter                 | mm   | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |

(\*) with optional hot water storage tank.

(\*\*\*) with hot water storage tank probe connected.

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                             | um    | Leo                                                                |
|------------------------------------------------------------|-------|--------------------------------------------------------------------|
| Model                                                      | -     | KC 24                                                              |
| Type                                                       | -     | B23-B23P-B33-C13-C13X-C33-C33X-C43-C43X-C53-C53X-C63-C63X-C83-C83X |
| Rated output (Pn)                                          | kW    | 19                                                                 |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 92                                                                 |
| Seasonal energy efficiency class of ambient heating        | -     | A                                                                  |
| Stated load profile                                        | -     | XL                                                                 |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 84                                                                 |
| Energy efficiency class of water heating                   | -     | A                                                                  |
| Nominal heat input (Qn)                                    | kW    | 20,0                                                               |
| Reduced heat input (Qr)                                    | kW    | 5,0                                                                |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 19,4                                                               |
| Reduced heat output (80-60°C) (Pr)                         | kW    | 4,8                                                                |
| Heat output (50-30°C)                                      | kW    | 21,2                                                               |
| Reduced heat output (50-30°C)                              | kW    | 5,4                                                                |
| Useful efficiency at nominal input (80-60°C)               | %     | 97,1                                                               |
| Useful efficiency at nominal input (50-30°C)               | %     | 106,1                                                              |
| Useful efficiency at 30% (30°C return)                     | %     | 108,1                                                              |
| Heating circuit working pressure (min-max)                 | bar   | 0,5-3,0                                                            |
| CH temperature setting range                               | °C    | 20-78                                                              |
| CH maximum working temperature                             | °C    | 83                                                                 |
| Heating expansion vessel capacity                          | l     | 9                                                                  |
| DHW nominal heat input                                     | kW    | 24,0                                                               |
| DHW minimum heat input                                     | kW    | 5,0                                                                |
| DHW nominal heat output ( $\Delta T$ 30°C)                 | kW    | 23,3                                                               |
| DHW circuit working pressure (min-max)                     | bar   | 0,5-6,0                                                            |
| Specific DHW flow $\Delta T=30K$                           | l/min | 12,0                                                               |
| Qualification of domestic hot water                        | -     | **                                                                 |
| DHW temperature range                                      | °C    | 35-57                                                              |
| DHW maximum working temperature                            | °C    | 62                                                                 |
| NOx emission class                                         | -     | 6                                                                  |
| Casing heat loss with burner on at nominal heat input      | %     | 0,16                                                               |
| Casing heat loss with burner off                           | %     | 0,38                                                               |
| Chimney heat loss with burner on at nominal heat input     | %     | 2,79                                                               |
| Air-flue $\Delta T$ at nominal heat input                  | °C    | 73,3                                                               |
| Flue gas flow at nominal heat input                        | g/s   | 11,0                                                               |
| CO2 at nominal heat input of heating (Natural gas)         | %     | 9,0 $\pm$ 0,3                                                      |
| CO2 at nominal heat input of heating (Propane)             | %     | 10,0 $\pm$ 0,3                                                     |
| Power supply voltage/frequency                             | V/Hz  | 230/50                                                             |
| Maximum power consumption                                  | W     | 104                                                                |
| Circulation pump power input                               | W     | 43                                                                 |
| Electric protection rating                                 | IP    | IPX4D                                                              |
| Air intake/flue gas vent pipe diameter                     | mm    | 80+80<br>60+60<br>100/60<br>125/80                                 |

## TECHNICAL SPECIFICATIONS OF CONDENSING BOILERS

| Technical data                                               | um    | Phoenix                                                                     | Phoenix                                                                     | Phoenix                                                                     | Phoenix                                                                     |
|--------------------------------------------------------------|-------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Model                                                        | -     | KRB 12                                                                      | KRB 24                                                                      | KRB 28                                                                      | KRB 32                                                                      |
| Type                                                         | -     | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X | B23-B23P-B33-C13-C33-C43-C53-C63-C83-C13X-C33X-C43X-C53X-C63X-C83X-C93-C93X |
| Rated output (Pn)                                            | kW    | 12                                                                          | 23                                                                          | 25                                                                          | 29                                                                          |
| Seasonal energy efficiency of ambient heating (ηs)           | %     | 90                                                                          | 91                                                                          | 91                                                                          | 92                                                                          |
| Seasonal energy efficiency of ambient heating (ηs) V version | %     | 90                                                                          | 91                                                                          | 91                                                                          | 91                                                                          |
| Seasonal energy efficiency of ambient heating (ηs) Z version | %     | 90                                                                          | 91                                                                          | 91                                                                          | 91                                                                          |
| Seasonal energy efficiency class of ambient heating          | -     | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Stated load profile                                          | -     | XL                                                                          | XL                                                                          | XL                                                                          | XL                                                                          |
| Water heating energy efficiency (ηwh)                        | %     | 83                                                                          | 80                                                                          | 82                                                                          | 81                                                                          |
| Water heating energy efficiency (ηwh) V version              | %     | 83                                                                          | 80                                                                          | 82                                                                          | 81                                                                          |
| Water heating energy efficiency (ηwh) Z version              | %     | 83                                                                          | 80                                                                          | 82                                                                          | 80                                                                          |
| Energy efficiency class of water heating                     | -     | A                                                                           | A                                                                           | A                                                                           | A                                                                           |
| Nominal heat input (Qn)                                      | kW    | 12,0                                                                        | 23,7                                                                        | 26,4                                                                        | 30,4                                                                        |
| Reduced heat input (Qr)                                      | kW    | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| Nominal heat output (80-60°C) (Pn)                           | kW    | 11,6                                                                        | 22,9                                                                        | 25,4                                                                        | 29,4                                                                        |
| Reduced heat output (80-60°C) (Pr)                           | kW    | 1,8                                                                         | 2,7                                                                         | 3,0                                                                         | 3,9                                                                         |
| Heat output (50-30°C)                                        | kW    | 12,6                                                                        | 24,9                                                                        | 27,9                                                                        | 32,3                                                                        |
| Reduced heat output (50-30°C)                                | kW    | 2,1                                                                         | 3,22                                                                        | 3,58                                                                        | 4,4                                                                         |
| Useful efficiency at nominal input (80-60°C)                 | %     | 97,1                                                                        | 96,7                                                                        | 96,4                                                                        | 96,8                                                                        |
| Useful efficiency at nominal input (50-30°C)                 | %     | 105,1                                                                       | 105,1                                                                       | 105,5                                                                       | 106,2                                                                       |
| Useful efficiency at 30% (30°C return)                       | %     | 106,0                                                                       | 106,5                                                                       | 107,0                                                                       | 108,3                                                                       |
| Heating circuit working pressure (min-max)                   | bar   | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     | 0,5-3,0                                                                     |
| CH temperature setting range                                 | °C    | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       | 20-78                                                                       |
| CH maximum working temperature                               | °C    | 83                                                                          | 83                                                                          | 83                                                                          | 83                                                                          |
| Heating expansion vessel capacity                            | l     | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| DHW expansion vessel capacity                                | l     | 5                                                                           | 5                                                                           | 5                                                                           | 5                                                                           |
| DHW nominal heat input                                       | kW    | 18,0                                                                        | 27,3                                                                        | 30,4                                                                        | 34,5                                                                        |
| DHW minimum heat input                                       | kW    | 2,0                                                                         | 3,0                                                                         | 3,3                                                                         | 4,2                                                                         |
| DHW nominal heat output (ΔT 30°C)                            | kW    | 17,5                                                                        | 26,8                                                                        | 29,3                                                                        | 33,4                                                                        |
| DHW circuit working pressure (min-max)                       | bar   | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     | 0,5-6,0                                                                     |
| Specific DHW flow ΔT=30K                                     | l/min | 19,5                                                                        | 22                                                                          | 22,5                                                                        | 23,4                                                                        |
| Qualification of domestic hot water                          | -     | ***                                                                         | ***                                                                         | ***                                                                         | ***                                                                         |
| DHW temperature range                                        | °C    | 35-65                                                                       | 35-65                                                                       | 35-65                                                                       | 35-65                                                                       |
| DHW maximum working temperature                              | °C    | 65                                                                          | 65                                                                          | 65                                                                          | 65                                                                          |
| NOx emission class                                           | -     | 6                                                                           | 6                                                                           | 6                                                                           | 6                                                                           |
| Casing heat loss with burner on at nominal heat input        | %     | 0,40                                                                        | 0,61                                                                        | 1,13                                                                        | 0,87                                                                        |
| Casing heat loss with burner off                             | %     | 0,53                                                                        | 0,21                                                                        | 0,2                                                                         | 0,19                                                                        |
| Chimney heat loss with burner on at nominal heat input       | %     | 2,50                                                                        | 2,69                                                                        | 2,47                                                                        | 2,33                                                                        |
| Air-flue ΔT at nominal heat input                            | °C    | 57,9                                                                        | 61                                                                          | 60                                                                          | 60                                                                          |
| Flue gas flow at nominal heat input                          | g/s   | 8,25                                                                        | 12,43                                                                       | 13,93                                                                       | 15,81                                                                       |
| CO2 at nominal heat input of heating (Natural gas)           | %     | 9                                                                           | 9                                                                           | 9                                                                           | 9                                                                           |
| CO2 at nominal heat input of heating (Propane)               | %     | 10                                                                          | 10                                                                          | 10                                                                          | 10                                                                          |
| Power supply voltage/frequency                               | V/Hz  | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      | 230/50                                                                      |
| Maximum power consumption                                    | W     | 88                                                                          | 97                                                                          | 101                                                                         | 106                                                                         |
| Maximum power absorption - version V                         | W     | 176                                                                         | 185                                                                         | 189                                                                         | 194                                                                         |
| Maximum power absorption - version Z                         | W     | 224                                                                         | 233                                                                         | 237                                                                         | 242                                                                         |
| Circulation pump power input                                 | W     | 50                                                                          | 50                                                                          | 50                                                                          | 50                                                                          |
| Power absorption of circulation pumps in the V version       | W     | 245                                                                         | 245                                                                         | 245                                                                         | 245                                                                         |
| Power absorption of circulation pumps in the Z version       | W     | 343                                                                         | 343                                                                         | 343                                                                         | 343                                                                         |
| Electric protection rating                                   | IP    | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       | IPX5D                                                                       |
| Air intake/flue gas vent pipe diameter                       | mm    | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          | 80+80<br>60+60<br>100/60<br>125/80                                          |







# STANDARD BOILERS

## **WALL-HUNG BOILERS <35KW**

VIRGO PRO CTN

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DELFI PRO CTN

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## **TECHNICAL SPECIFICATIONS OF STANDARD BOILERS**

Technical specifications of standard boilers

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# VIRGO PRO CTN

WALL-HUNG GAS BOILER WITH OPEN CHAMBER AND NATURAL DRAUGHT WITH INSTANT DHW PRODUCTION AND LOW NOX EMISSIONS



- ▶ **Water-cooled hyper-stoichiometric atmospheric gas burner with low NOx emissions**
- ▶ **Controls to manage two different types of solar thermal systems fitted as standard**
- ▶ **Thermoregulation with external probe (optional)**
- ▶ **Multifunction relay for connection to systems with zone valves or to solar plant or to remote alarm signal**
- ▶ **Stainless steel 26-plate DHW heat exchanger**
  - ) Mono-thermal primary heat exchanger
  - ) Programmable parameters to adapt the boiler to the installation and alerts history
  - ) Heating expansion vessel - 7 litres
  - ) Automatic by-pass
  - ) High-efficiency circulation pump with built-in air purging device



**TOUCH SCREEN INTERFACE**

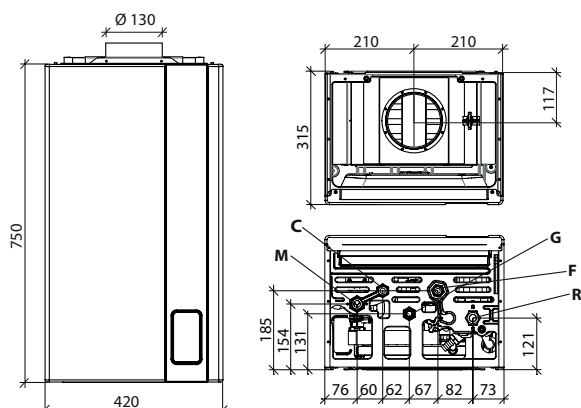
- ▶ *DHW and heating temperature setting*
- ▶ *Operating mode setting*
- ▶ *Solar thermal systems status display*

Available in the following models:



| Model      | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|------------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|            |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| PRO CTN 24 | NATURAL GAS | KVNXX2CN24 | 25,5            | 25,5           |                         | XL          | 420x750x315 | 35,5         |
|            | PROPANE     | KVNXX6CN24 |                 |                |                         |             |             |              |
| PRO CTN 28 | NATURAL GAS | KVNXX2CN28 | 29,5            | 29,5           |                         | XL          | 420x750x315 | 36,0         |
|            | PROPANE     | KVNXX6CN28 |                 |                |                         |             |             |              |

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



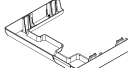
**M** CH system flow (3/4")  
**C** DHW outlet (1 1/2")  
**G** Gas inlet (1/2")

**F** Cold water inlet (1/2")  
**R** CH system return (3/4")



| Technical data                                             | um    | PRO CTN 24 | PRO CTN 28 |
|------------------------------------------------------------|-------|------------|------------|
| Rated output (Pn)                                          | kW    | 23         | 27         |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 80         | 79         |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 76         | 74         |
| Nominal heat input (Qn)                                    | kW    | 25,5       | 29,5       |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 23,4       | 26,9       |
| Reduced heat input (Qr)                                    | kW    | 10,0       | 12,5       |
| Useful efficiency at nominal input (80-60°C)               | %     | 91,7       | 91,1       |
| Useful efficiency at 30% (47°C return)                     | %     | 93,9       | 93,2       |
| Heating expansion vessel capacity                          | l     | 7          | 7          |
| DHW nominal heat input                                     | kW    | 25,5       | 29,5       |
| Specific DHW flow $\Delta T=30K$                           | l/min | 11,3       | 12,5       |
| NOx emission class                                         | -     | 6          | 6          |
| Electric protection rating                                 | IP    | X5D        | X5D        |

For other technical specifications, see from page 66 - Maximum length of flue gas venting, see page 70

| Item                                                                                | Description                                            | Code       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|------------|
|    | Remote control, ErP V class (118x85x32 mm)             | 0CREMOTO04 |
|     | Pipes and taps low plastic cover                       | 0COPETUB03 |
|   | Flow - return cold water 90° taps kit                  | 0KITIDBA11 |
|  | Electrical kit for zone management with external probe | 0KITZONE05 |

| Item                                                                                | Description                        | Code       |
|-------------------------------------------------------------------------------------|------------------------------------|------------|
|    | Temperature probe for solar plants | PSPTMILL00 |
|   | Magnetic dirt separator filter     | 0AFILDEF00 |
|  | Kit for connection to solar plant  | 0KITSOLC07 |

For other accessories, see from page 69



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |            |            |
|------------------------------------------------------------|-----------------------------------------|------------|------------|------------|
| Regulation device                                          |                                         | Code       | PRO CTN 24 | PRO CTN 28 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 79%        | 78%        |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 80%        | 79%        |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 81%        | 80%        |
|                                                            |                                         | 0CREMOTO04 |            |            |

# DELFI PRO CTN

WALL-HUNG GAS BOILER WITH OPEN CHAMBER AND NATURAL DRAUGHT WITH INSTANT DHW PRODUCTION AND LOW NOX EMISSIONS



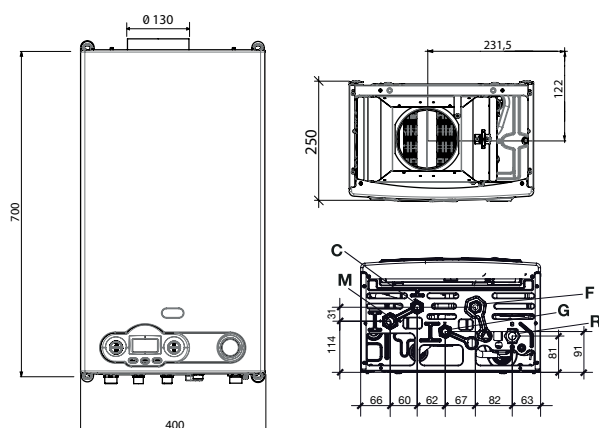
- ▶ **Water-cooled hyper-stoichiometric atmospheric gas burner with low NOx emissions**
- ▶ **Compact dimension, only 250 mm deep**
- ▶ **LCD user interface with diagnostics**
- ▶ **Thermoregulation with external probe (optional)**
- ▶ **High-efficiency circulation pump with built-in air purging device**
- ▶ Mono-thermal primary heat exchanger
- ▶ Heating expansion vessel - 7 litres
- ▶ Multifunction relay for connection to systems with zone valves or to external pump management or to remote alarm signal
- ▶ Stainless steel plate DHW heat exchanger
- ▶ Hydraulic unit in composite material
- ▶ Prearrangement for connection to Remote Control (optional, supplied by the manufacturer)
- ▶ Automatic by-pass

Available in the following models:

24

| Model             | Gas type    | Code       | Heat input      |                | Energy efficiency class |             | W x H x D   | Gross weight |
|-------------------|-------------|------------|-----------------|----------------|-------------------------|-------------|-------------|--------------|
|                   |             |            | Nominal (Qn) kW | Nominal DHW kW | Room heating            | Heating DHW | mm          | kg           |
| <b>PRO CTN 24</b> | NATURAL GAS | KDHXX2CN24 | 24,5            | 24,5           | <b>C</b>                | <b>B</b> XL | 400x700x250 | 25,5         |
|                   | PROPANE     | KDHXX6CN24 |                 |                |                         |             |             |              |

## DIMENSIONS AND CONNECTION CENTRE DISTANCES



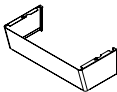
**M** CH system flow (3/4")  
**C** DHW outlet (1 1/2")  
**G** Gas inlet (1/2")

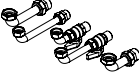
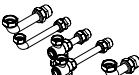
**F** Cold water inlet (1/2")  
**R** CH system return (3/4")



| Technical data                                             | um    | PRO CTN 24 |
|------------------------------------------------------------|-------|------------|
| Rated output (Pn)                                          | kW    | 22         |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 80         |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 77         |
| Nominal heat input (Qn)                                    | kW    | 24,5       |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 22,3       |
| Reduced heat input (Qr)                                    | kW    | 12,0       |
| Useful efficiency at nominal input (80-60°C)               | %     | 91,2       |
| Useful efficiency at 30% (47°C return)                     | %     | 93,2       |
| Heating expansion vessel capacity                          | l     | 7          |
| DHW nominal heat input                                     | kW    | 24,5       |
| Specific DHW flow $\Delta T=30K$                           | l/min | 9,3        |
| NOx emission class                                         | -     | 6          |
| Electric protection rating                                 | IP    | X4D        |

For other technical specifications, see from page 67 - Maximum length of flue gas venting, see page 70

| Item                                                                                | Description                                                                                                                | Code       |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------|
|     | Compact wall pipe cover<br>- Height 110 mm<br>- Width 400 mm<br>- Depth (upper part) 194 mm<br>- Depth (lower part) 165 mm | 0COPETUB00 |
|    | Remote control, ErP V class (118x85x32 mm)                                                                                 | 0CREMOTO04 |
|   | Electrical kit for zone management with external probe                                                                     | 0KITZONE05 |
|  | External probe (60x45x31 mm)                                                                                               | 0SONDAES01 |
|   | Magnetic dirt separator filter                                                                                             | 0AFILDEF00 |

| Item                                                                                | Description                           | Code       |
|-------------------------------------------------------------------------------------|---------------------------------------|------------|
|    | Basic hydraulic kit                   | 0KITIDBA29 |
|    | Flow - return cold water 90° taps kit | 0KITIDBA11 |
|   | Plus hydr. kit for basic compact unit | 0KITIDBA14 |
|  | Kit for connection to solar plant     | 0KITSOLC07 |

For other accessories, see from page 69



## How to increase energy efficiency?

Discover the most suitable solution

| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) |                                         |            |            |
|------------------------------------------------------------|-----------------------------------------|------------|------------|
| Regulation device                                          |                                         | Code       | PRO CTN 24 |
| Option 1                                                   | Boiler + external probe                 | 0SONDAES01 | 78%        |
| Option 2                                                   | Boiler + remote control                 | 0CREMOTO04 | 79%        |
| Option 3                                                   | Boiler+ remote control + external probe | 0SONDAES01 | 80%        |
|                                                            |                                         | 0CREMOTO04 |            |

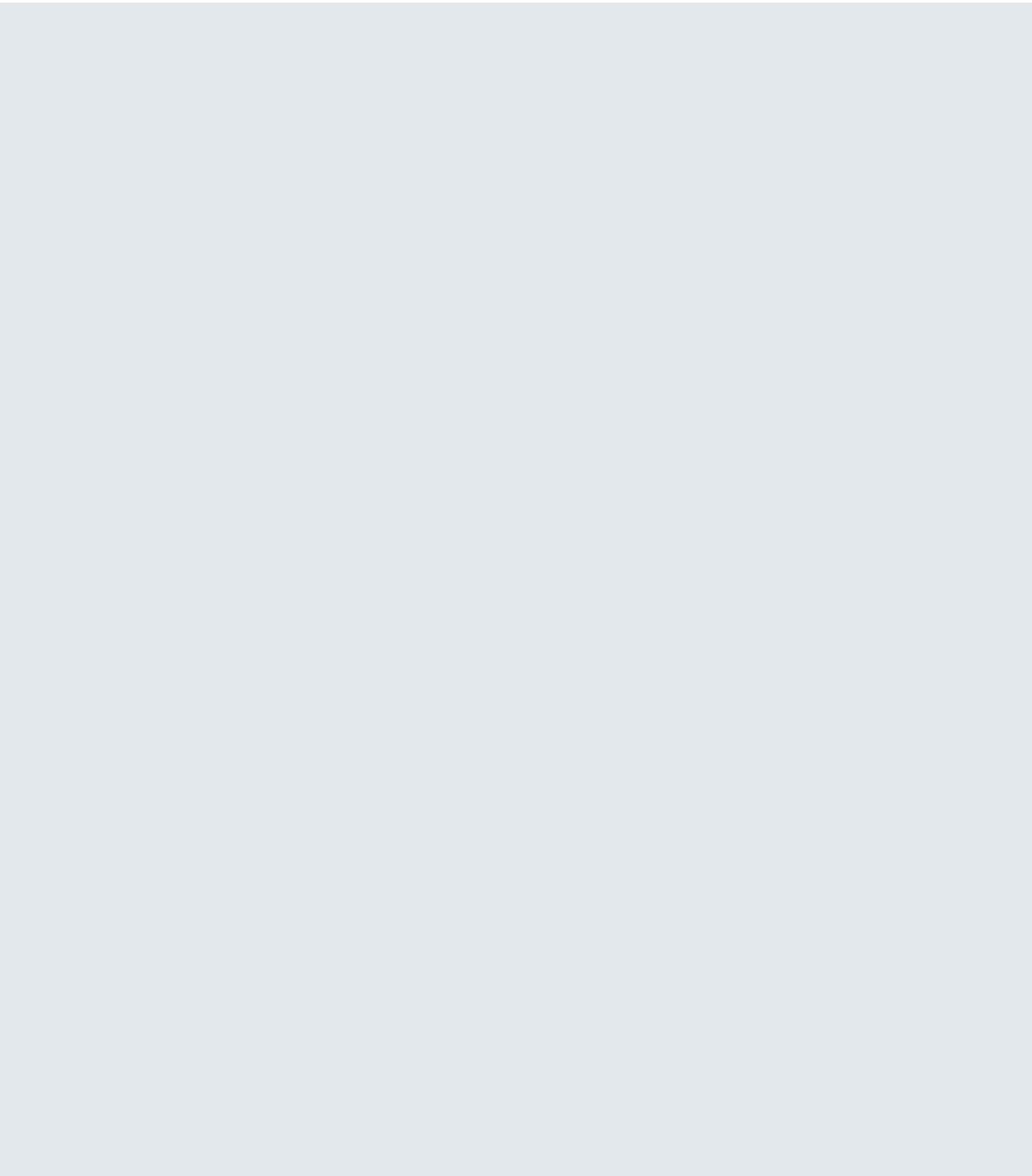
## TECHNICAL SPECIFICATIONS OF STANDARD BOILERS

| Technical data                                             | um    | Virgo      | Virgo      |
|------------------------------------------------------------|-------|------------|------------|
| Model                                                      | -     | PRO CTN 24 | PRO CTN 28 |
| Type                                                       | -     | B11BS      | B11BS      |
| Rated output (Pn)                                          | kW    | 23         | 27         |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 80         | 79         |
| Seasonal energy efficiency class of ambient heating        | -     | C          | C          |
| Stated load profile                                        | -     | XL         | XL         |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 76         | 74         |
| Energy efficiency class of water heating                   | -     | B          | B          |
| Nominal heat input (Qn)                                    | kW    | 25,5       | 29,5       |
| Reduced heat input (Qr)                                    | kW    | 10,0       | 12,5       |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 23,4       | 26,9       |
| Reduced heat output (80-60°C) (Pr)                         | kW    | 8,8        | 11,2       |
| Useful efficiency at nominal input (80-60°C)               | %     | 91,7       | 91,1       |
| Useful efficiency at 30% (47°C return)                     | %     | 93,9       | 93,2       |
| Heating circuit working pressure (min-max)                 | bar   | 0,5-3,0    | 0,5-3,0    |
| CH temperature setting range                               | °C    | 35-78      | 35-78      |
| CH maximum working temperature                             | °C    | 83         | 83         |
| Heating expansion vessel capacity                          | l     | 7          | 7          |
| DHW nominal heat input                                     | kW    | 25,5       | 29,5       |
| DHW minimum heat input                                     | kW    | 10,0       | 12,5       |
| DHW nominal heat output ( $\Delta T$ 30°C)                 | kW    | 23,4       | 26,9       |
| DHW minimum heat output ( $\Delta T$ 30°C)                 | kW    | 8,8        | 11,2       |
| DHW circuit working pressure (min-max)                     | bar   | 0,5-6,0    | 0,5-6,0    |
| Specific DHW flow $\Delta T=30K$                           | l/min | 11,3       | 12,5       |
| DHW temperature range                                      | °C    | 35-57      | 35-57      |
| DHW maximum working temperature                            | °C    | 62         | 62         |
| NOx emission class                                         | -     | 6          | 6          |
| Casing heat loss with burner on at nominal heat input      | %     | 2,15       | 2,51       |
| Casing heat loss with burner off                           | %     | 0,69       | 0,65       |
| Chimney heat loss with burner on at nominal heat input     | %     | 6,19       | 6,44       |
| Air-flue $\Delta T$ at nominal heat input                  | °C    | 86         | 93         |
| Flue gas flow at nominal heat input                        | g/s   | 18,9       | 20,1       |
| CO2 at nominal heat input of heating (Natural gas)         | %     | 5,3        | 5,8        |
| CO2 at nominal heat input of heating (Propane)             | %     | 6,6        | 6,0        |
| Power supply voltage/frequency                             | V/Hz  | 230/50     | 230/50     |
| Maximum power consumption                                  | W     | 57         | 56         |
| Circulation pump power input                               | W     | 41         | 41         |
| Electric protection rating                                 | IP    | X5D        | X5D        |
| Flue gas discharge pipes diameter                          | mm    | 130        | 130        |

## TECHNICAL SPECIFICATIONS OF STANDARD BOILERS

| Technical data                                             | um    | Delfis     |
|------------------------------------------------------------|-------|------------|
| Model                                                      | -     | PRO CTN 24 |
| Type                                                       | -     | B11BS      |
| Rated output (Pn)                                          | kW    | 22         |
| Seasonal energy efficiency of ambient heating ( $\eta_s$ ) | %     | 80         |
| Seasonal energy efficiency class of ambient heating        | -     | C          |
| Stated load profile                                        | -     | XL         |
| Water heating energy efficiency ( $\eta_{wh}$ )            | %     | 77         |
| Energy efficiency class of water heating                   | -     | B          |
| Nominal heat input (Qn)                                    | kW    | 24,5       |
| Reduced heat input (Qr)                                    | kW    | 12,0       |
| Nominal heat output (80-60°C) (Pn)                         | kW    | 22,3       |
| Reduced heat output (80-60°C) (Pr)                         | kW    | 10,8       |
| Useful efficiency at nominal input (80-60°C)               | %     | 91,2       |
| Useful efficiency at 30% (47°C return)                     | %     | 93,2       |
| Useful efficiency at reduced flow rate (80-60°C)           | %     | 90,1       |
| Heating circuit working pressure (min-max)                 | bar   | 0,5-3,0    |
| CH temperature setting range                               | °C    | 35-78      |
| CH maximum working temperature                             | °C    | 83         |
| Heating expansion vessel capacity                          | l     | 7          |
| DHW nominal heat input                                     | kW    | 24,5       |
| DHW minimum heat input                                     | kW    | 12,0       |
| DHW nominal heat output ( $\Delta T$ 30°C)                 | kW    | 22,3       |
| DHW minimum heat output ( $\Delta T$ 30°C)                 | kW    | 10,8       |
| DHW circuit working pressure (min-max)                     | bar   | 0,5-6,0    |
| Specific DHW flow $\Delta T=30K$                           | l/min | 9,3        |
| DHW temperature range                                      | °C    | 35-57      |
| DHW maximum working temperature                            | °C    | 62         |
| NOx emission class                                         | -     | 6          |
| Casing heat loss with burner on at nominal heat input      | %     | 2,97       |
| Casing heat loss with burner off                           | %     | 0,62       |
| Chimney heat loss with burner on at nominal heat input     | %     | 5,83       |
| Air-flue $\Delta T$ at nominal heat input                  | °C    | 82         |
| Flue gas flow at nominal heat input                        | g/s   | 16,7       |
| CO2 at nominal heat input of heating (Natural gas)         | %     | 5,8        |
| CO2 at nominal heat input of heating (Propane)             | %     | 6,6        |
| Power supply voltage/frequency                             | V/Hz  | 230/50     |
| Maximum power consumption                                  | W     | 57         |
| Circulation pump power input                               | W     | 41         |
| Electric protection rating                                 | IP    | X4D        |
| Flue gas discharge pipes diameter                          | mm    | 130        |







# FLUE FITTINGS AND ACCESSORIES

## FLUE FITTINGS

|                                                          |         |
|----------------------------------------------------------|---------|
| Discharge for condensing boilers type B23                | page 70 |
| Discharge for condensing boilers type C13                | page 72 |
| Discharge for condensing boilers type C33                | page 73 |
| Discharge for condensing boilers type C53                | page 76 |
| Discharge for standard boilers Type B22                  | page 78 |
| Discharge for standard boilers Type C12                  | page 79 |
| Discharge for standard boilers Type C32                  | page 80 |
| Discharge for standard boilers Type C52                  | page 82 |
| Concentric flue fittings for condensing boilers Ø 60/100 | page 83 |
| Concentric flue fittings for condensing boilers Ø 80/125 | page 83 |
| Split flue fittings for condensing boilers Ø 50          | page 84 |
| Split flue fittings for condensing boilers Ø 60          | page 85 |
| Split flue fittings for condensing boilers Ø 80          | page 86 |

## ACCESSORIES

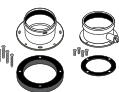
|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Thermoregulation and electronic                                   | page 87 |
| Outdoor installation partially protected and optional accessories | page 89 |
| Hydraulic                                                         | page 90 |



# DISCHARGE FOR CONDENSING BOILERS TYPE B23

INTAKE AND VENT PIPES Ø 80

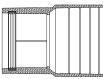
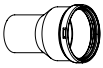
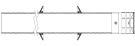


| No. | Item                                                                                | Description                              | Code       |
|-----|-------------------------------------------------------------------------------------|------------------------------------------|------------|
| 09  |    | Splitter kit Ø80+80                      | 0KITSDOP08 |
| 10  |    | Extension M/F Ø80 L=1 m                  | 0PROLUNG00 |
| 11  |    | Extension M/F Ø80 L=0.5 m                | 0PROLUNG01 |
| 13  |    | 90° elbow M/F Ø80                        | 0CURVAXX02 |
| 15  |    | Suction opening Ø80                      | 0GRIGASP01 |
| 16  |    | Flue vent chimney Ø80 H=138cm            | 0CAMISCA00 |
| 18  |   | Flue vent terminal Ø80 L=1m              | 0TERMSCA00 |
| 37  |  | Tile for tilted roof (flue output)       | 0TEGTEIN00 |
| 43  |  | Wall rosette in silicone, ID Ø80 OD Ø170 | 0ROSPASI00 |

# DISCHARGE FOR CONDENSING BOILERS TYPE B23

INTAKE AND VENT PIPES Ø 80-60



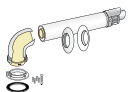
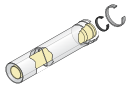
| No. | Item                                                                                | Description                        | Code       |
|-----|-------------------------------------------------------------------------------------|------------------------------------|------------|
| 09  |    | Splitter kit Ø80+80                | 0KITSDOP08 |
| 13  |    | 90° elbow M/F Ø80                  | 0CURVAXX02 |
| 15  |    | Suction opening Ø80                | 0GRIGASP01 |
| 16  |    | Flue vent chimney Ø80 H=138cm      | 0CAMISCA00 |
| 24  |    | Adapter Ø80/60                     | 0RIDUZIO19 |
| 25  |    | Adapter M/F Ø 60-80 M/F            | 0RIDUZIO10 |
| 28  |   | 90° elbow Ø60                      | 0CURVAXX16 |
| 30  |  | Extension M/F Ø60 L=1m             | 0PROLUNG16 |
| 32  |  | Extension M/F Ø60 L=0.5 m          | 0PROLUNG18 |
| 36  |  | Flue vent terminal Ø60 L=1m        | 0TERMSCA01 |
| 37  |  | Tile for tilted roof (flue output) | 0TEGTEIN00 |



# DISCHARGE FOR CONDENSING BOILERS TYPE C13

INTAKE AND VENT PIPES Ø 60/100

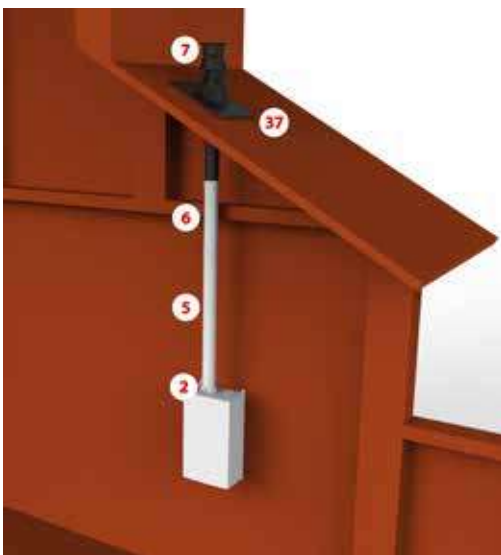
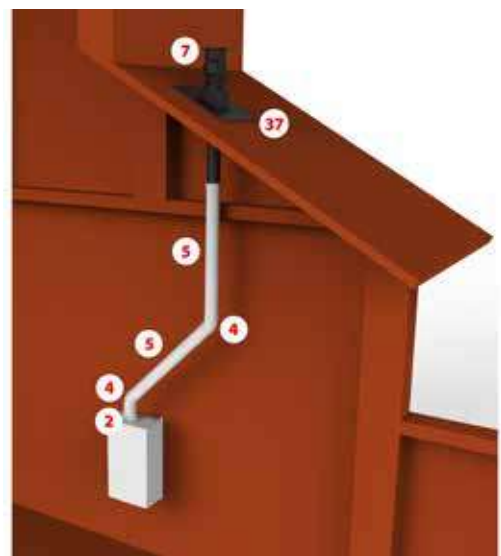
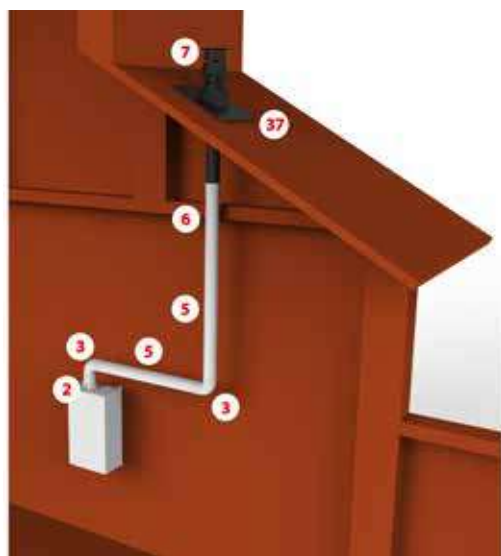


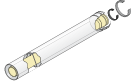
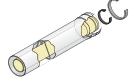
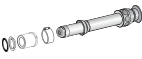
| No. | Item                                                                              | Description                          | Code       |
|-----|-----------------------------------------------------------------------------------|--------------------------------------|------------|
| 01  |  | Coaxial kit Ø 60/100 length 75cm     | 0CONDASP00 |
| 02  |  | Coaxial fitting kit Ø60/100          | 0KITATCO00 |
| 03  |  | 90° elbow M/F coaxial Ø60/100        | 0CURVAXX05 |
| 05  |  | Coaxial extension M/F Ø60/100 L=1 m  | 0PROLUNG02 |
| 06  |  | Coaxial extension M/F Ø60/100 L=0.5m | 0PROLUNG03 |



# DISCHARGE FOR CONDENSING BOILERS TYPE C33

INTAKE AND VENT PIPES Ø 60/100



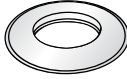
| No. | Item                                                                               | Description                          | Code       |
|-----|------------------------------------------------------------------------------------|--------------------------------------|------------|
| 02  |   | Coaxial fitting kit Ø60/100          | 0KITATCO00 |
| 03  |   | 90° elbow M/F coaxial Ø60/100        | 0CURVAXX05 |
| 04  |   | 45° elbow M/F coaxial Ø60/100        | 0CURVAXX04 |
| 05  |   | Coaxial extension M/F Ø60/100 L=1m   | 0PROLUNG02 |
| 06  |   | Coaxial extension M/F Ø60/100 L=0.5m | 0PROLUNG03 |
| 07  |   | Coaxial flue kit Ø60/100             | 0KCAMASP00 |
| 37  |  | Tile for tilted roof (flue output)   | 0TEGTEIN00 |



# DISCHARGE FOR CONDENSING BOILERS TYPE C33

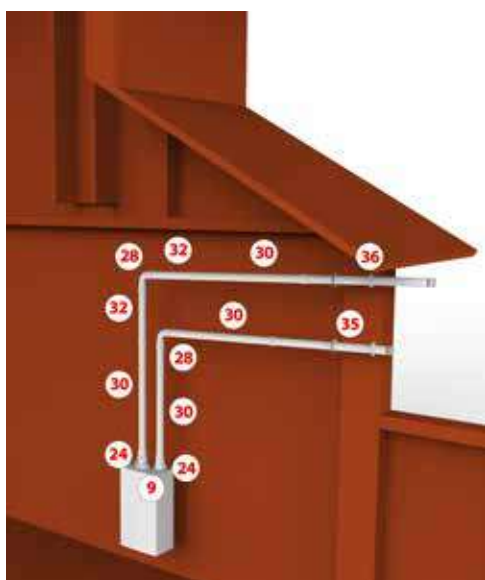
INTAKE AND VENT PIPES Ø 80



| No. | Item                                                                                | Description                                                 | Code        |
|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------|
| 09  |    | Splitter kit Ø80+80                                         | 0KITSDOP08  |
| 10  |    | Extension M/F Ø80 L=1 m                                     | 0PROLUNG00  |
| 11  |    | Extension M/F Ø80 L=0.5 m                                   | 0PROLUNG01  |
| 13  |    | 90° elbow M/F Ø80                                           | 0CURVAXX02  |
| 15  |    | Suction opening Ø80                                         | 0GRIGASP01  |
| 17  |    | Flue gas intake/vent chimney Ø80+80 H=138.4cm               | 0CAMIASP00  |
| 18  |   | Flue vent terminal Ø80 L=1m                                 | 0TERMSCA00  |
| 19  |  | Tee kit for visual inspection and collecting condensate Ø80 | 0KITTRACT00 |
| 23  |  | Tee M/M/F Ø80                                               | 0RACCORT00  |
| 37  |  | Tile for tilted roof (flue output)                          | 0TEGTEIN00  |
| 43  |  | Wall rosette in silicone, ID Ø80 OD Ø170                    | 0ROSPASI00  |

# DISCHARGE FOR CONDENSING BOILERS TYPE C33

INTAKE AND VENT PIPES Ø 60



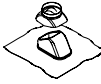
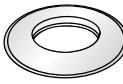
| No. | Item | Description                                   | Code       |
|-----|------|-----------------------------------------------|------------|
| 09  |      | Splitter kit Ø80+80                           | 0KITSDOP08 |
| 17  |      | Flue gas intake/vent chimney Ø80+80 H=138.4cm | 0CAMIASP00 |
| 24  |      | Adapter Ø80/60                                | 0RIDUZIO19 |
| 25  |      | Adapter M/F Ø 60-80 M/F                       | 0RIDUZIO10 |
| 28  |      | 90° elbow Ø60                                 | 0CURVAXX16 |
| 30  |      | Extension M/F Ø60 L=1m                        | 0PROLUNG16 |
| 31  |      | Extension M/F Ø60 L=2 m                       | 0PROLUNG17 |
| 32  |      | Extension M/F Ø60 L=0.5 m                     | 0PROLUNG18 |
| 33  |      | Tee M/M/F Ø60                                 | 0RACCORT06 |
| 34  |      | Condensate drain Ø60                          | 0SCARCON03 |
| 35  |      | Air intake terminal Ø60 L=1m                  | 0TERMASP01 |
| 36  |      | Flue vent terminal Ø60 L=1m                   | 0TERMSCA01 |
| 37  |      | Tile for tilted roof (flue output)            | 0TEGTEIN00 |



# DISCHARGE FOR CONDENSING BOILERS TYPE C53

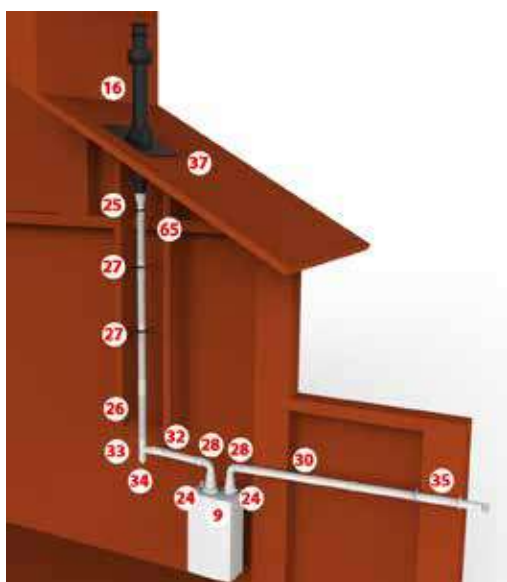
INTAKE AND VENT PIPES Ø 80

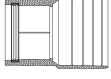
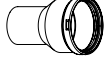
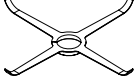
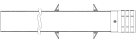
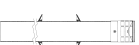


| No. | Item                                                                                | Description                                                 | Code       |
|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------|------------|
| 09  |    | Splitter kit Ø80+80                                         | 0KITSDOP08 |
| 10  |    | Extension M/F Ø80 L=1 m                                     | 0PROLUNG00 |
| 11  |    | Extension M/F Ø80 L=0.5 m                                   | 0PROLUNG01 |
| 13  |    | 90° elbow M/F Ø80                                           | 0CURVAXX02 |
| 15  |    | Suction opening Ø80                                         | 0GRIGASP01 |
| 16  |    | Flue vent chimney Ø80 H=138cm                               | 0CAMISCA00 |
| 18  |   | Flue vent terminal Ø80 L=1m                                 | 0TERMSCA00 |
| 19  |  | Tee kit for visual inspection and collecting condensate Ø80 | 0KITRACT00 |
| 20  |  | Kit of adapters for flexible hose Ø80 (included gaskets)    | 0KADAFLE00 |
| 22  |  | Centring element for flexible hose Ø80                      | 0CENTFLE00 |
| 23  |  | Tee M/M/F Ø80                                               | 0RACCORT00 |
| 37  |  | Tile for tilted roof (flue output)                          | 0TEGTEIN00 |
| 43  |  | Wall rosette in silicone, ID Ø80 OD Ø170                    | 0ROSPASI00 |
| 66  |  | Flexible pipe M/F Ø80 (20m roll)                            | 0TUBOFLE06 |

# DISCHARGE FOR CONDENSING BOILERS TYPE C53

INTAKE AND VENT PIPES Ø 60



| No. | Item                                                                                | Description                            | Code       |
|-----|-------------------------------------------------------------------------------------|----------------------------------------|------------|
| 09  |    | Splitter kit Ø80+80                    | 0KITSDOP08 |
| 16  |    | Flue vent chimney Ø80 H=138cm          | 0CAMISCA00 |
| 24  |    | Adapter Ø80/60                         | 0RIDUZIO19 |
| 25  |    | Adapter M/F Ø 60-80 M/F                | 0RIDUZIO10 |
| 26  |    | Kit of adapters for flexible hose Ø60  | 0KADAFLE01 |
| 27  |    | Centring element for flexible hose Ø60 | 0CENTFLE02 |
| 28  |   | 90° elbow Ø60                          | 0CURVAXX16 |
| 30  |  | Extension M/F Ø60 L=1m                 | 0PROLUNG16 |
| 31  |  | Extension M/F Ø60 L=2 m                | 0PROLUNG17 |
| 32  |  | Extension M/F Ø60 L=0.5 m              | 0PROLUNG18 |
| 33  |  | Tee M/M/F Ø60                          | 0RACCORT06 |
| 34  |  | Condensate drain Ø60                   | 0SCARCON03 |
| 35  |  | Air intake terminal Ø60 L=1m           | 0TERMASP01 |
| 36  |  | Flue vent terminal Ø60 L=1m            | 0TERMSCA01 |
| 37  |  | Tile for tilted roof (flue output)     | 0TEGTEIN00 |
| 65  |  | Flexible pipe M/F Ø60 (20m roll)       | 0TUBOFLE07 |



# DISCHARGE FOR STANDARD BOILERS TYPE B22

INTAKE AND VENT PIPES Ø 80

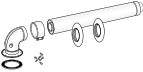
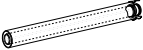
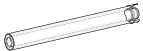


| No. | Item                                                                                | Description                                                   | Code       |
|-----|-------------------------------------------------------------------------------------|---------------------------------------------------------------|------------|
| 15  |    | Suction opening Ø80                                           | 0GRIGASP01 |
| 37  |    | Tile for tilted roof (flue output)                            | 0TEGTEIN00 |
| 38  |    | Extension Ø80 L= 1m                                           | 0CONDOTT00 |
| 39  |    | Ø80 pipe L= 0.5m (for TFS boilers)                            | 0CONDOTT01 |
| 40A |    | Elbow 90° Ø80 broad beam                                      | 0CURRALA00 |
| 40B |    | 90° elbow with inspection Ø80 narrow radius (for TFS boilers) | 0CURVAXX03 |
| 43  |   | Wall rosette in silicone, ID Ø80 OD Ø170                      | 0ROSPASI00 |
| 84  |  | Upwind terminal Ø80 stainless steel                           | 0TERCOIN00 |
| 86  |  | Horizontal chimney terminal D80                               | 0TESTCAM00 |
| 153 |  | Coaxial flue kit                                              | 0SDOPPIA13 |

# DISCHARGE FOR STANDARD BOILERS TYPE C12

INTAKE AND VENT PIPES Ø 60/100



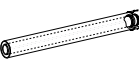
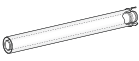
| No. | Item                                                                              | Description                                           | Code       |
|-----|-----------------------------------------------------------------------------------|-------------------------------------------------------|------------|
| 140 |  | Coaxial kit D60/100 L=1m (for boiler TFS)             | 0KITCONC00 |
| 147 |  | Concentric pipe length 1m D60/100 (for TFS boilers)   | 0TUBCOLU00 |
| 148 |  | Concentric pipe length 0.5m D60/100 (for TFS boilers) | 0TUBCOLU01 |



# DISCHARGE FOR STANDARD BOILERS TYPE C32

INTAKE AND VENT PIPES Ø 60/100

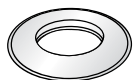


| No. | Item                                                                              | Description                                           | Code       |
|-----|-----------------------------------------------------------------------------------|-------------------------------------------------------|------------|
| 37  |  | Tile for tilted roof (flue output)                    | 0TEGTEIN00 |
| 78  |  | Elbow 90° coaxial Ø100/60 (for boilers TFS)           | 0CURVCON00 |
| 79  |  | Elbow 45° coaxial Ø100/60 (for boilers TFS)           | 0CURVCON01 |
| 147 |  | Concentric pipe length 1m D60/100 (for TFS boilers)   | 0TUBCOLU00 |
| 148 |  | Concentric pipe length 0.5m D60/100 (for TFS boilers) | 0TUBCOLU01 |
| 151 |  | Coaxial roof chimney Ø100/60 (for TFS boilers)        | 0SCATECO00 |

# DISCHARGE FOR STANDARD BOILERS TYPE C32

INTAKE AND VENT PIPES Ø 80



| No. | Item                                                                                | Description                                                   | Code       |
|-----|-------------------------------------------------------------------------------------|---------------------------------------------------------------|------------|
| 15  |    | Suction opening Ø80                                           | 0GRIGASP01 |
| 37  |    | Tile for tilted roof (flue output)                            | 0TEGTEIN00 |
| 38  |    | Extension Ø80 L= 1m                                           | 0CONDOTT00 |
| 39  |    | Ø80 pipe L= 0.5m (for TFS boilers)                            | 0CONDOTT01 |
| 40A |    | Elbow 90° Ø80 broad beam                                      | 0CURRALA00 |
| 40B |    | 90° elbow with inspection Ø80 narrow radius (for TFS boilers) | 0CURVAXX03 |
| 43  |   | Wall rosette in silicone, ID Ø80 OD Ø170                      | 0ROSPASI00 |
| 84  |  | Upwind terminal Ø80 stainless steel                           | 0TERCOIN00 |
| 149 |  | Chimney for splitted pipes Ø80/80 (for boilers TFS)           | 0CAMCOSD00 |
| 153 |  | Coaxial flue kit                                              | 0SDOPPIA13 |



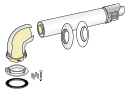
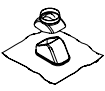
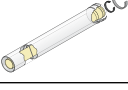
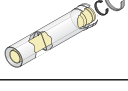
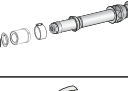
# DISCHARGE FOR STANDARD BOILERS TYPE C52

INTAKE AND VENT PIPES Ø 80

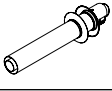
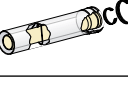


| No. | Item                                                                                | Description                                                            | Code       |
|-----|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------|
| 15  |    | Suction opening Ø80                                                    | 0GRIGASP01 |
| 37  |    | Tile for tilted roof (flue output)                                     | 0TEGTEIN00 |
| 38  |    | Extension Ø80 L= 1m                                                    | 0CONDOTT00 |
| 39  |    | Ø80 pipe L= 0.5m (for TFS boilers)                                     | 0CONDOTT01 |
| 40A |    | Elbow 90° Ø80 broad beam                                               | 0CURRALA00 |
| 40B |    | 90° elbow with inspection Ø80 narrow radius (for TFS boilers)          | 0CURVAXX03 |
| 43  |   | Wall rosette in silicone, ID Ø80 OD Ø170                               | 0ROSPASI00 |
| 84  |  | Upwind terminal Ø80 stainless steel                                    | 0TERCOIN00 |
| 86  |  | Horizontal chimney terminal D80                                        | 0TESTCAM00 |
| 88  |  | Vertical stub pipe with condensate trap Ø80 L=0.135m (for TFS boilers) | 0TRONVER00 |
| 153 |  | Coaxial flue kit                                                       | 0SDOPPIA13 |

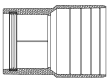
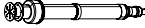
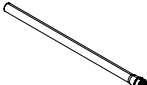
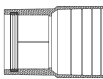
# CONCENTRIC FLUE FITTINGS FOR CONDENSING BOILERS Ø 60/100

| Item                                                                                | Description                          | Code       | Item                                                                               | Description                                | Code       |
|-------------------------------------------------------------------------------------|--------------------------------------|------------|------------------------------------------------------------------------------------|--------------------------------------------|------------|
|     | Coaxial kit Ø 60/100 length 75cm     | 0CONDASP00 |   | Tile for tilted roof (flue output)         | 0TEGTEIN00 |
|    | Coaxial fitting kit Ø60/100          | 0KITATCO00 |   | Sealing collar kit D 100                   | 0KCOLLBL00 |
|    | 90° elbow M/F coaxial Ø60/100        | 0CURVAXX05 |   | Concentric terminal 60/100                 | 0TERMCON01 |
|    | 45° elbow M/F coaxial Ø60/100        | 0CURVAXX04 |   | Starting flange kit for condensing boilers | 0KITFLAN00 |
|     | Coaxial extension M/F Ø60/100 L=1m   | 0PROLUNG02 |   | Ducting plate kit Ø60/100                  | 0PIASINT02 |
|     | Coaxial extension M/F Ø60/100 L=0.5m | 0PROLUNG03 |   | 30° elbow M/F coaxial Ø60/100              | 0CURVAXX31 |
|    | Coaxial flue kit Ø60/100             | 0KCAMASP00 |  | 15° elbow M/F coaxial Ø60/100              | 0CURVAXX32 |
|  | Elbow 90° and flange kit Ø60/100     | 0KCURFLA00 |                                                                                    |                                            |            |

# CONCENTRIC FLUE FITTINGS FOR CONDENSING BOILERS Ø 80/125

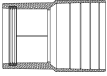
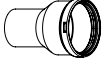
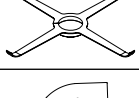
| Item                                                                                | Description                              | Code       | Item                                                                                | Description                                                     | Code       |
|-------------------------------------------------------------------------------------|------------------------------------------|------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------|
|  | Coax. adapter kit D.60/100 to D.80/125   | 0KITADCO00 |  | Coaxial M-F 45° elbow D. 80/125                                 | 0CURVAXX06 |
|  | Intake/condensate drain kit              | 0KITASCA00 |  | Coaxial M-F 90° elbow D. 80/125                                 | 0CURVAXX07 |
|  | 80/125 straight intake/vent tailpipe kit | 0KITASCA01 |  | 90° elbow for visual inspection D. 80/125                       | 0CURVISP05 |
|  | Coaxial flue + flange kit                | 0KITCACO00 |  | Extension for visual inspection d80/125                         | 0TUBISPV05 |
|  | 80/125 flue kit                          | 0KITCACO01 |  | Coaxial flue gases starting kit 125/80 (for boiler ITACA CH KR) | 0ATTCOFL01 |
|   | Coax. extension D.80/125 L=1m            | 0PROLUNG04 |  | 80/125 pipework plate kit                                       | 0PIASINT01 |
|   | Coax. extension D.80/125 L=0.5m          | 0PROLUNG05 |  | Sealing collar kit D 125                                        | 0KCOLLBL01 |

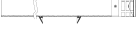
# SPLIT FLUE FITTINGS FOR CONDENSING BOILERS Ø 50

| Item                                                                               | Description                        | Code       | Item                                                                               | Description                                                                        | Code       |
|------------------------------------------------------------------------------------|------------------------------------|------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------|
|   | Adapter M/F Ø80/50                 | 0RIDUZIO32 |   | Condensate drain Ø50 (*)                                                           | 0SCARCON05 |
|   | Extention M/F Ø50 L=1m (*)         | 0PROLUNG32 |   | Vertical flue vent terminal Ø50 H=145cm (*)                                        | 0TERMTET02 |
|   | 90° elbow Ø50 (*)                  | 0CURVAXX33 |   | Flexible pipe M/F Ø50 (20m roll) (*)                                               | 0TUBOFLE08 |
|   | 45° elbow Ø50 (*)                  | 0CURVAXX34 |   | Kit of adapters for flexible hose Ø50 (*)                                          | 0KADAFLE02 |
|   | Air intake terminal Ø50 L=1m (*)   | 0TERMASP02 |   | Centring element for flexible hose Ø50 (*)                                         | 0CENTFLE03 |
|   | Flue vent terminal Ø50 L=0,36m (*) | 0TERMSCA04 |   | Vertical terminal for flexible hose Ø50 with flue cover (C9 type installation) (*) | 0TERMTET03 |
|  | Tee M/M/F Ø50 (*)                  | 0KITRACT06 |  | Adapter Ø60/50 M-F (C9 type installation) (*)                                      | 0RIDUZIO33 |

(\*) Items normally not in stock, minimum stock availability time 8 weeks.

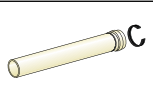
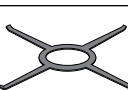
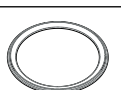
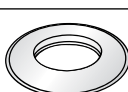
# SPLIT FLUE FITTINGS FOR CONDENSING BOILERS Ø 60

| Item                                                                                | Description                            | Code       |
|-------------------------------------------------------------------------------------|----------------------------------------|------------|
|    | Adapter Ø80/60                         | 0RIDUZIO19 |
|    | Adapter M/F Ø 60-80 M/F                | 0RIDUZIO10 |
|     | Flexible pipe M/F Ø60 (20m roll)       | 0TUBOFLE07 |
|    | Kit of adapters for flexible hose Ø60  | 0KADAFLE01 |
|     | Centring element for flexible hose Ø60 | 0CENTFLE02 |
|    | 90° elbow Ø60                          | 0CURVAXX16 |
|   | 45° elbow Ø60                          | 0CURVAXX17 |
|  | Extension M/F Ø60 L=1m                 | 0PROLUNG16 |

| Item                                                                               | Description                                                                        | Code       |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------|
|   | Extension M/F Ø60 L=2 m                                                            | 0PROLUNG17 |
|   | Extension M/F Ø60 L=0.5 m                                                          | 0PROLUNG18 |
|   | Tee M/M/F Ø60                                                                      | 0RACCORT06 |
|   | Condensate drain Ø60                                                               | 0SCARCON03 |
|   | Air intake terminal Ø60 L=1m                                                       | 0TERMASP01 |
|   | Flue vent terminal Ø60 L=1m                                                        | 0TERMSCA01 |
|  | Vertical terminal for flexible hose Ø60 with flue cover (C9 type installation) (*) | 0TERMTET04 |

(\*) Items normally not in stock, minimum stock availability time 8 weeks.

# SPLIT FLUE FITTINGS FOR CONDENSING BOILERS Ø 80

| Item                                                                                | Description                                                 | Code       | Item                                                                                | Description                                                                        | Code       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------|
|    | Splitter kit Ø80+80                                         | 0KITSDOP08 |    | Suction opening in AISI316 Stainless steel Ø80 H=30mm (for TFS boilers)            | 0GRIASIN00 |
|    | Telescopic extension M/F Ø80 (0.34-0.45m)                   | 0PROLTEL01 |    | Flanged flue gas starter fitting D 80 (for boiler ITACA CH KR)                     | 0PARTFUM01 |
|    | 45° elbow M/F Ø80                                           | 0CURVAXX01 |    | Air intake stub pipe + inspection (for boiler ITACA CH KR)                         | 0TRONASP00 |
|    | Suction opening Ø80                                         | 0GRIGASP01 |    | Split starting kit 80 (for boiler ITACA CH KR)                                     | 0KITSDOP06 |
|    | Flue vent chimney Ø80 H=138cm                               | 0CAMISCA00 |    | Extension M/F Ø80 L=1 m                                                            | 0PROLUNG00 |
|    | Flue gas intake/vent chimney Ø80+80 H=138.4cm               | 0CAMIASP00 |    | Extension M/F Ø80 L=0.5 m                                                          | 0PROLUNG01 |
|   | Tee kit for visual inspection and collecting condensate Ø80 | 0KITRACT00 |   | 90° elbow M/F Ø80                                                                  | 0CURVAXX02 |
|  | Flexible pipe M/F Ø80 (20m roll)                            | 0TUBOFLE06 |  | Flue vent terminal Ø80 L=1m                                                        | 0TERMSCA00 |
|  | Kit of adapters for flexible hose Ø80 (included gaskets)    | 0KADAFLE00 |  | Vertical terminal for flexible hose Ø80 with flue cover (C9 type installation) (*) | 0TERMTET05 |
|  | Centring element for flexible hose Ø80                      | 0CENTFLE00 |  | Double lip seal Ø80 for condensation                                               | 0GUADOLA04 |
|  | Tee M/M/F Ø80                                               | 0RACCORT00 |  | Seal for flexible hose Ø80 (10pcs) (included in 0KADAFLE00)                        | 0GUAFLEX00 |
|  | Wall rosette in silicone, ID Ø80 OD Ø170                    | 0ROSPASI00 |                                                                                     |                                                                                    |            |

(\*) Items normally not in stock, minimum stock availability time 8 weeks.

# ACCESSORIES

## THERMOREGULATION AND ELECTRONIC

| Item                                                                                | Description                                                     | DEL F I S K C | DEL F I S K R | DEL F I S K R B | DEL F I S N E X T K C | DEL F I S N E X T K R | DEL F I S N E X T K R B | V I R G O K C | V I R G O K R | V I R G O K R B | P H O E N I X K R B | O R I O N K C | O R I O N K R | O R I O N K R B | O R I O N K B | L E O K C | DEL F I S P R O C T N | V I R G O P R O C T N | Code       |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------|---------------|-----------------|-----------------------|-----------------------|-------------------------|---------------|---------------|-----------------|---------------------|---------------|---------------|-----------------|---------------|-----------|-----------------------|-----------------------|------------|
|    | Remote control, ErP V class (118x85x32 mm)                      | ●             | ●             | ●               | ●                     | ●                     | ●                       | ●             | ●             | ●               | ●                   | ●             | ●             | ●               | ●             | ●         | ●                     | ●                     | 0CREMOTO04 |
|    | Antifreeze heating element kit                                  | ●             | ●             | ●               | ●                     | ●                     | ●                       | ●             | ●             | ●               |                     | ●             | ●             | ●               | ●             | ●         | ●                     | ●                     | 0KANTIGE00 |
|     | Ambient temperature probe                                       |               |               |                 | ●                     | ●                     | ●                       |               |               |                 | ●                   | ●             | ●             | ●               | ●             | ●         |                       |                       | 0KITSAMB00 |
|    | Surge arrester kit                                              | ●             | ●             | ●               | ●                     | ●                     | ●                       | ●             | ●             | ●               | ●                   | ●             | ●             | ●               | ●             | ●         | ●                     | ●                     | 0KITSCAR00 |
|    | Electric kit for complex solar plant management                 | ●             | ●             | ●               |                       |                       |                         | ●             | ●             | ●               | ●                   | ●             | ●             | ●               | ●             |           | ●                     | ●                     | 0KITSOLC08 |
|  | hot water storage tank temperature probe 3m                     |               | ●             | ●               |                       | ●                     | ●                       |               | ●             | ●               |                     |               | ●             | ●               |               |           |                       |                       | 0KITSOND00 |
|  | Electrical kit for zone management with external probe          | ●             | ●             | ●               |                       |                       |                         | ●             | ●             | ●               | ●                   | ●             | ●             | ●               | ●             |           | ●                     | ●                     | 0KITZONE05 |
|  | External probe (60x45x31 mm)                                    | ●             | ●             | ●               | ●                     | ●                     | ●                       | ●             | ●             | ●               | ●                   | ●             | ●             | ●               | ●             | ●         | ●                     | ●                     | 0SONDAES01 |
|  | Electromechanical ambient thermostat, ErP I class (71x71x40 mm) | ●             | ●             | ●               | ●                     | ●                     | ●                       | ●             | ●             | ●               | ●                   | ●             | ●             | ●               | ●             | ●         | ●                     | ●                     | 0TERAMEL00 |

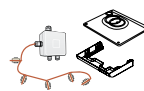
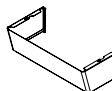
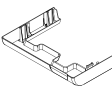
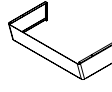
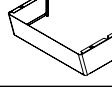
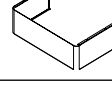
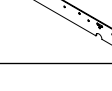
# ACCESSORIES

## THERMOREGULATION AND ELECTRONIC

| Item                                                                              | Description                                         | DELFI KC | DELFI KR | DELFI KRB | DELFI NEXT KC | DELFI NEXT KR | DELFI NEXT KRB | VIRGO KC | VIRGO KR | VIRGO KRB | PHOENIX KRB | ORION KC | ORION KR | ORION KRB | ORION KB | LEO KC | DELFI PRO CTN | VIRGO PRO CTN | Code       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------|----------|----------|-----------|---------------|---------------|----------------|----------|----------|-----------|-------------|----------|----------|-----------|----------|--------|---------------|---------------|------------|
|  | Master slave connection kit 45-150kw                |          |          |           |               |               |                |          |          |           |             |          |          |           |          |        |               |               | 0KITCASC00 |
|  | Kit Modbus Itaca CH                                 |          |          |           |               |               |                |          |          |           |             |          |          |           |          |        |               |               | 0KMODBUS00 |
|  | NTC probe kit for 10k beta 3977 circuit breaker (*) |          |          |           | ●             | ●             | ●              |          |          |           |             |          |          |           |          |        |               |               | 0KITSOND01 |
|  | PT 1000 probe kit with ring connection (*)          |          |          |           | ●             | ●             | ●              |          |          |           |             |          |          |           |          |        |               |               | 0KITSOPT00 |

# ACCESSORIES

## OUTDOOR INSTALLATION PARTIALLY PROTECTED AND OPTIONAL ACCESSORIES

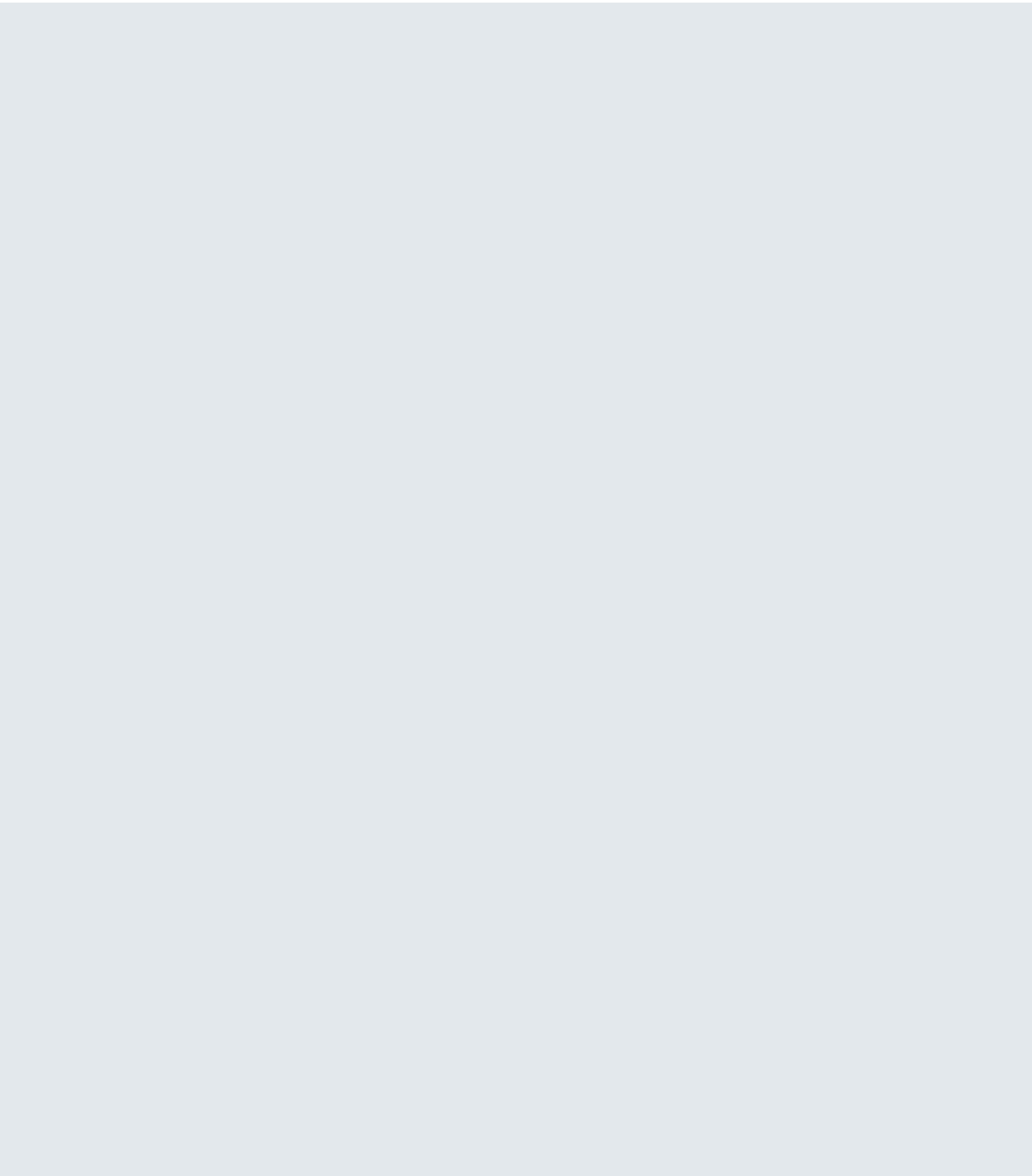
| Item                                                                                | Description                                                                                                                | DELFI KC | DELFI KR | DELFI KRB | DELFI NEXT KC | DELFI NEXT KR | DELFI NEXT KRB | VIRGO KC | VIRGO KR | VIRGO KRB | ORION KC | ORION KR | ORION KRB | ORION KB | LEO KC | DELFI PRO CTN | VIRGO PRO CTN | Code       |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------|----------|-----------|---------------|---------------|----------------|----------|----------|-----------|----------|----------|-----------|----------|--------|---------------|---------------|------------|
|    | Coaxial air intake/flue gas venting connection for B23 type installations                                                  |          |          |           |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          |        |               |               | 0ATTCOVE06 |
|     | Outdoor cover kit with antifreeze protection kit                                                                           |          |          |           |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          |        |               |               | 0KITCOPE01 |
|    | Outdoor cover kit                                                                                                          |          |          |           |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          |        |               |               | 0KITCOPE02 |
|     | Compact wall pipe cover<br>- Height 110 mm<br>- Width 400 mm<br>- Depth (upper part) 194 mm<br>- Depth (lower part) 165 mm | ●        | ●        | ●         |               |               |                |          |          |           |          |          |           |          |        | ●             | ●             | 0COPETUB00 |
|    | Pipes and taps low plastic cover                                                                                           |          |          |           |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          |        |               | ●             | 0COPETUB03 |
|   | Pipes and taps cover                                                                                                       |          |          |           |               |               |                |          |          |           |          |          |           | ●        |        |               |               | 0COPETUB05 |
|   | Pipes and taps high metal cover                                                                                            |          |          |           |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          |        |               | ●             | 0COPETUB07 |
|   | Covering pipes and boiler taps Next (*)                                                                                    |          |          |           | ●             | ●             | ●              |          |          |           |          |          |           |          |        |               |               | 0COPETUB08 |
|  | Basic compact install. metal template                                                                                      | ●        | ●        | ●         |               |               |                |          |          |           |          |          |           |          |        | ●             |               | 0DIMMECO10 |
|  | Metal fixing template                                                                                                      |          |          |           |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          |        |               | ●             | 0DIMMECO11 |
|  | Wall spacing kit                                                                                                           | ●        | ●        | ●         |               |               |                | ●        | ●        | ●         | ●        | ●        | ●         |          | ●      | ●             | ●             | 0DISTANZ00 |
|  | Frame for built-in installation (only for standard and V versions)                                                         |          |          |           |               |               |                |          |          |           |          |          |           |          |        |               |               | 0TELAINC06 |
|  | Frame for built-in installation (only for Z version)                                                                       |          |          |           |               |               |                |          |          |           |          |          |           |          |        |               |               | 0TELAINC08 |
|   | Wall mounting bracket for compact boiler                                                                                   | ●        | ●        | ●         |               |               |                |          |          |           |          |          |           |          |        | ●             |               | 0KSTASOS00 |

# ACCESSORIES

## HYDRAULIC

| Item                                                                                | Description                                                                                                                          | DELFI KC | DELFI KR | DELFI KRB | DELFI NEXT KC | DELFI NEXT KR | DELFI NEXT KRB | VIRGO KC | VIRGO KR | VIRGO KRB | PHOENIX KRB | ORION KC | ORION KR | ORION KRB | ORION KB | LEO KC | DELFI PRO CTN | VIRGO PRO CTN | Code       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-----------|---------------|---------------|----------------|----------|----------|-----------|-------------|----------|----------|-----------|----------|--------|---------------|---------------|------------|
|    | Magnetic dirt separator filter                                                                                                       | ●        | ●        | ●         | ●             | ●             | ●              | ●        | ●        | ●         | ●           | ●        | ●        | ●         | ●        | ●      | ●             | ●             | 0AFILDEF00 |
|    | Flow - return cold water 90° taps kit                                                                                                |          |          |           |               |               |                |          |          |           |             |          |          |           |          |        | ●             | ●             | 0KITIDBA11 |
|    | Tap kit with filter KR-KB-RT                                                                                                         |          | ●        |           |               | ●             |                |          | ●        |           |             |          | ●        |           | ●        |        |               |               | 0KITRUBI04 |
|    | Tap kit with filter KC-KRB-CT-RBT                                                                                                    | ●        |          | ●         | ●             |               | ●              | ●        |          | ●         |             | ●        |          | ●         |          | ●      | ●             | ●             | 0KITRUBI05 |
|    | Giava recirculation optional kit                                                                                                     |          |          |           |               |               |                |          |          |           | ●           |          |          |           |          |        |               |               | 0KRICIRC00 |
|   | Filter refill Pmax 350kW<br>- QTY 1 for Outputs up to 350 kW<br>- QTY 2 for Outputs up to 700 kW<br>- QTY 3 for Outputs up to 900 kW |          |          |           |               |               |                |          |          |           |             |          |          |           |          |        |               |               | 0RICAFIL01 |
|  | Basic solar kit                                                                                                                      | ●        |          |           | ●             |               |                | ●        |          |           |             | ●        |          |           |          | ●      | ●             | ●             | 0KITSOLC09 |
|  | Gas and water cock kit                                                                                                               | ●        | ●        | ●         |               |               |                | ●        | ●        | ●         |             | ●        | ●        | ●         | ●        | ●      | ●             | ●             | 0KITRUBI01 |
|  | Boiler hydraulic kit                                                                                                                 | ●        |          |           |               |               |                | ●        |          |           |             | ●        |          |           |          | ●      | ●             | ●             | 0KITIDBA22 |
|  | Ext. heat. kit for ALTAIR RTN E - ALTAIR RTN PVE - ALTAIR RTFS E - DRAGO DUAL                                                        |          |          |           |               |               |                |          |          |           |             |          |          |           |          |        |               |               | 0KITPOVA03 |
|  | Basic hydraulic kit Next boilers                                                                                                     |          |          |           | ●             | ●             | ●              |          |          |           |             |          |          |           |          |        |               |               | 0KITIDBA30 |







# SOLAR THERMAL PRODUCTS

## COLLECTORS

|                                  |         |
|----------------------------------|---------|
| Solar collectors HWF 20 - HWF 26 | page 94 |
|----------------------------------|---------|

## SYSTEMS

|                      |         |
|----------------------|---------|
| Sulpack Evo          | page 95 |
| Sulpack Pro          | page 96 |
| Sulpack Easy         | page 97 |
| Sulpack Natural Plus | page 98 |

## ACCESSORIES

|                                        |          |
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| Solar pump group rs1, only return      | page 100 |
| Solar pump group mrs3, flow and return | page 100 |
| Circulation pumps                      | page 101 |
| Additional tanks                       | page 101 |
| Expansion vessels                      | page 101 |
| Accessories for tanks                  | page 102 |
| Thermostatic mixing valve              | page 102 |
| Three-way deviating valve              | page 103 |
| Concentrated solar protection liquid   | page 103 |
| Pipes for solar plants                 | page 104 |
| Fitting for solar plants               | page 104 |
| Solar kit for combination boilers      | page 105 |
| Temperature probe                      | page 105 |
| SG2 solar control unit                 | page 106 |
| SG3 solar control unit                 | page 106 |



# SOLAR COLLECTORS HWF 20 - HWF 26

SOLAR THERMAL FLAT-PLATE COLLECTORS FOR INSTALLATION ON FLAT ROOF AND PITCHED-ROOF (PARALLEL OR IN-ROOF INSTALLATION)

HWF 20 included in the GSE "Solar thermal catalogue"



- ▶ **High-efficiency aluminium absorber**
- ▶ **Copper piping**
- ▶ **Laser welding**
- ▶ **Aluminium tank-frame**
- ▶ **Rock wool insulation with a thickness of 40 mm**
- ▶ Tempered clear glass with low iron content
- ▶ Possibility to connect up to 8 collectors in series
- ▶ Suitable for installation in the vertical direction, with the short side on top

| Data                                  | um                                 | HWF 20       | HWF 26       |
|---------------------------------------|------------------------------------|--------------|--------------|
| Total gross surface                   | m <sup>2</sup>                     | 2,06         | 2,62         |
| Absorber surface                      | m <sup>2</sup>                     | 1,93         | 2,47         |
| Absorbance                            | %                                  | 95           | 95           |
| Emission                              | %                                  | 5            | 5            |
| Glass transmittancy                   | %                                  | 91           | 91           |
| Liquid content                        | litres                             | 0,9          | 1,14         |
| Maximum operating pressure            | bar                                | 10           | 10           |
| Net weight                            | kg                                 | 32,2         | 39,3         |
| Stagnation temperature                | °C                                 | 201          | 201          |
| Opening surface                       | m <sup>2</sup>                     | 1,93         | 2,47         |
| $\eta_0$                              | -                                  | 0,75         | 0,75         |
| $\alpha_1$                            | W/(m <sup>2</sup> K)               | 3,17         | 3,17         |
| $\alpha_2$                            | W/(m <sup>2</sup> K <sup>2</sup> ) | 0,012        | 0,012        |
| IAM (K 50°)                           | -                                  | 0,95         | 0,95         |
| External dimensions HC 25 (W x H x D) | mm                                 | 2022x1019x90 | 2022x1295x90 |
| Code                                  | -                                  | PSHWF20000   | PSHWF26000   |

Package includes: collectors.

| Description                                                                         | Code       | Description                                                                         | Code       |
|-------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|------------|
| Viton seals (10 pieces) (*)                                                         | PSGUAHWF00 | HWF 20 single collector in-roof installation kit                                    | PSKITCOP08 |
| Collector connection kit                                                            | PSKITHWF00 | HWF 20 supplementary collector in-roof installation kit                             | PSKITCOP09 |
| Joining kit for two collectors                                                      | PSKITHWF01 | HWF 20 single collector in-roof installation kit                                    | PSKITCOP10 |
| HWF 20 single collector fixing kit, for installation on the roof                    | PSKMHWF206 | HWF 20 supplementary collector in-roof installation kit                             | PSKITCOP11 |
| HWF 20 single collector fixing kit, brackets for roofs with wood-blocks             | PSKMHWF207 | HWF 26 single collector fixing kit, for installation on the roof                    | PSKMVL2506 |
| HWF 20 single collector fixing kit, brackets for roofs without wood-blocks          | PSKMHWF208 | HWF 26 single collector fixing kit, brackets for roofs with wood-blocks             | PSKMVL2507 |
| HWF 20 single collector fixing kit, installation on roof with an inclination of 35° | PSKMHWF209 | HWF 26 single collector fixing kit, brackets for roofs without wood-blocks          | PSKMVL2508 |
| Single collector fixing kit HWF 20, for sheet metal roofing                         | PSKMHWF210 | HWF 26 single collector fixing kit, installation on roof with an inclination of 35° | PSKMVL2509 |
| Single collector fixing kit HWF 26, for sheet metal roofing                         | PSKMVL2510 |                                                                                     |            |

(\*) Product available while stocks last

# SULPACK EVO

SOLAR KIT FOR FORCED CIRCUIT WITH HEAT INTEGRATION IN THE HOT WATER STORAGE TANK



- ▶ **Solar collectors**
- ▶ **High thermal insulation glazed hot water storage tank**
- ▶ **Two-way hydraulic unit with high efficiency solar pump, factory assembled**
- ▶ **Hydraulic and safety accessories**
  - ) ES solar expansion vessel
  - ) Hose with bracket for tanks
  - ) Thermostatic mixing valve
  - ) Propylene glycol for solar plants
  - ) Sealing gaskets

The solar kit can be combined with wall-hung pre-mixed condensing boilers for sole heating. This solar kit requires you to position the hot water storage tank inside the building, preferably close to the heat power plant. By means of appropriate temperature probes which regulate its operation, a pump enables circulation of the liquid in the solar circuit.

| Technical data                                 | um   | HWF 20 - 200   | PLUS HWF 20 - 200 | HWF 20 - 300   | HWF 26 - 200   | HWF 26 - 300   |
|------------------------------------------------|------|----------------|-------------------|----------------|----------------|----------------|
| Orientation                                    | -    | Vertical       |                   |                |                |                |
| Collectors                                     | num. | 1              | 2                 | 2              | 1              | 2              |
| Model                                          | -    | HWF 20         |                   |                | HWF 26         |                |
| hot water storage tank                         | -    | WHPS BZ 200 DS | WHPS BZ 200 DS    | WHPS BZ 300 DS | WHPS BZ 200 DS | WHPS BZ 300 DS |
| hot water storage tank energy efficiency class | -    | <b>B</b> ➔     | <b>B</b> ➔        | <b>B</b> ➔     | <b>B</b> ➔     | <b>B</b> ➔     |
| Usable tank volume [Vu]                        | l    | 196            | 196               | 273            | 196            | 273            |
| Tank dispersion [S]                            | W    | 51             | 51                | 63             | 51             | 63             |
| Back up vol. [Vbu]                             | l    | 67             | 67                | 85             | 67             | 85             |
| Solar unit                                     | -    | 2 ways         |                   |                |                |                |
| Qnonsol (M)                                    | kWh  | 855            | 632               | 681            | 749            | 673            |
| Qnonsol (L)                                    | kWh  | 1851           | 1231              | 1245           | 1640           | 1058           |
| Qnonsol (XL)                                   | kWh  | 3331           | 2445              | 2431           | 3055           | 2079           |
| Qnonsol (XXL)                                  | kWh  | 4472           | 3469              | 3443           | 4169           | 3011           |
| Solar pump consumption [solpump]               | W    | 45             |                   |                |                |                |
| Qaux                                           | W    | 91             |                   |                |                |                |
| Standby consumption [solsb]                    | W    | 0,08           |                   |                |                |                |
| Expansion vessel                               | -    | ES 18          |                   |                |                |                |
| Propylene glycol to be mixed                   | kg   | 10             |                   |                |                |                |
| Code                                           | -    | PSPACKEV05     | PSPACKEV07        | PSPACKEV06     | PSPACKEV08     | PSPACKEV09     |

The solar kits do not include the retainers for roof installation, to be chosen among the systems specified for the different types of collectors, connection pipes and temperature probes. The solar control unit, if necessary, must be chosen among those indicated in the solar accessories in case you do not use a Nova Florida boiler set to manage the solar system.



# SULPACK PRO

SOLAR KIT FOR FORCED CIRCUIT WITH HEAT INTEGRATION IN THE HOT WATER STORAGE TANK



- **Solar collectors**
- **Glazed hot water storage tank**
- **Two-way hydraulic unit with high-efficiency solar pump**
- **Hydraulic and safety accessories**

- ) ES solar expansion vessel
- ) RS additional solar tank
- ) Hose with bracket for tanks
- ) Thermostatic mixing valve
- ) Propylene glycol for solar plants
- ) Sealing gaskets

The solar kit can be combined with wall-hung pre-mixed condensing boilers for sole heating. This solar kit requires you to position the hot water storage tank inside the building, preferably close to the heat power plant. By means of appropriate temperature probes which regulate its operation, a pump enables circulation of the liquid in the solar circuit.

| Technical data                                 | um   | HWF 20 - 200       | HWF 20 - 300       | HWF 20 - 500       | HWF 26 - 200       | HWF 26 - 300       | HWF 26 - 500       |
|------------------------------------------------|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Orientation                                    | -    | Vertical           |                    |                    |                    |                    |                    |
| Collectors                                     | num. | 1                  | 2                  | 3                  | 1                  | 2                  | 3                  |
| Model                                          | -    | HWF 20             |                    |                    | HWF 26             |                    |                    |
| hot water storage tank                         | -    | WHPS BNF<br>200 DS | WHPS BNF<br>300 DS | WHPS BNF<br>500 DS | WHPS BNF<br>200 DS | WHPS BNF<br>300 DS | WHPS BNF<br>500 DS |
| hot water storage tank energy efficiency class | -    | C                  | C                  | C                  | C                  | C                  | C                  |
| Usable tank volume [Vu]                        | l    | 196                | 273                | 475                | 196                | 273                | 475                |
| Tank dispersion [S]                            | W    | 67                 | 85                 | 112                | 67                 | 85                 | 112                |
| Back up vol. [Vbu]                             | l    | 67                 | 85                 | 130                | 67                 | 85                 | 130                |
| Solar unit                                     | -    | 2 ways             |                    |                    |                    |                    |                    |
| Qnonsol (M)                                    | kWh  | 940                | 827                | 972                | 844                | 820                | 974                |
| Qnonsol (L)                                    | kWh  | 1916               | 1370               | 1188               | 1714               | 1193               | 1150               |
| Qnonsol (XL)                                   | kWh  | 3383               | 2531               | 1990               | 3114               | 2192               | 1691               |
| Qnonsol (XXL)                                  | kWh  | 4518               | 3531               | 2804               | 4220               | 3111               | 2374               |
| Solar pump consumption [solpump]               | W    | 45                 |                    |                    |                    |                    |                    |
| Qaux                                           | W    | 91                 |                    |                    |                    |                    |                    |
| Standby consumption [solsb]                    | W    | 0,08               |                    |                    |                    |                    |                    |
| Expansion vessel                               | -    | ES 12              | ES 18              | ES 25              | ES12               | ES 18              | ES 25              |
| Additional tank                                | -    | RS 5               | RS 5               | RS 8               | RS5                | RS5                | RS 8               |
| Propylene glycol to be mixed                   | kg   | 10                 |                    |                    |                    |                    |                    |
| Code                                           | -    | PSPACKEX06         | PSPACKEX07         | PSPACKEX08         | PSPACKEX09         | PSPACKEX10         | PSPACKEX11         |

The solar kits do not include the retainers for roof installation, to be chosen among the systems specified for the different types of collectors, connection pipes and temperature probes. The solar control unit, if necessary, must be chosen among those indicated in the solar accessories in case you do not use a Nova Florida boiler set to manage the solar system.

# SULPACK EASY

SOLAR KIT FOR FORCED CIRCUIT WITHOUT HEAT INTEGRATION IN THE HOT WATER STORAGE TANK



- **Solar collectors**
- **Glazed hot water storage tank**
- **One-way hydraulic unit with high efficiency solar pump**
- **Hydraulic and safety accessories**

- ) Sealing gaskets
- ) ES solar expansion vessel
- ) Hoses with brackets for tanks
- ) Thermostatic mixing valve
- ) Propylene glycol for solar plants

The solar kit can be combined to wall-hung combination boilers with instantaneous production of domestic hot water, using the solar kit for instantaneous boilers. The solar kit do not include the retainers for roof installation, to be chosen among the systems specified for the different types of collectors and connection pipes.

| Technical data                                 | -    | HWF 20 - 200       | HWF 20 - 300       | HWF 20 - 500       | HWF 26 - 200       | HWF 26 - 300       | HWF 26 - 500       |
|------------------------------------------------|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Orientation                                    | -    | Vertical           |                    |                    |                    |                    |                    |
| Collectors                                     | num. | 1                  | 2                  | 3                  | 1                  | 2                  | 3                  |
| Model                                          | -    | HWF 20             |                    |                    | HWF 26             |                    |                    |
| hot water storage tank                         | -    | WHPS BNF<br>200 SS | WHPS BNF<br>300 SS | WHPS BNF<br>500 SS | WHPS BNF<br>200 SS | WHPS BNF<br>300 SS | WHPS BNF<br>500 SS |
| hot water storage tank energy efficiency class | -    | C                  | C                  | C                  | C                  | C                  | C                  |
| Usable tank volume [Vu]                        | l    | 196                | 273                | 475                | 196                | 273                | 475                |
| Tank dispersion [S]                            | W    | 67                 | 85                 | 112                | 67                 | 85                 | 112                |
| Solar unit                                     | -    | 1 way              |                    |                    |                    |                    |                    |
| Qnonsol (M)                                    | kWh  | 849                | 778                | 930                | 772                | 774                | 932                |
| Qnonsol (L)                                    | kWh  | 1775               | 1277               | 1132               | 1591               | 1119               | 1099               |
| Qnonsol (XL)                                   | kWh  | 3212               | 2391               | 1884               | 2956               | 2072               | 1607               |
| Qnonsol (XXL)                                  | kWh  | 4335               | 3368               | 2668               | 4048               | 2966               | 2261               |
| Solar pump consumption [solpump]               | W    | 45                 |                    |                    |                    |                    |                    |
| Qaux                                           | W    | 91                 |                    |                    |                    |                    |                    |
| Standby consumption [solsb]                    | W    | 0,08               |                    |                    |                    |                    |                    |
| Expansion vessel                               | -    | ES 12              | ES 18              | ES 25              | ES 12              | ES 18              | ES 25              |
| Propylene glycol to be mixed                   | kg   | 10                 |                    |                    |                    |                    |                    |
| Code                                           | -    | PSPACKEY06         | PSPACKEY07         | PSPACKEY08         | PSPACKEY19         | PSPACKEY20         | PSPACKEY21         |

The solar kits do not include the retainers for roof installation, to be chosen among the systems specified for the different types of collectors, connection pipes and temperature probes. The solar control unit, if necessary, must be chosen among those indicated in the solar accessories in case you do not use a Nova Florida boiler set to manage the solar system (for combination boilers only).



The Solar Kit for instant boilers allows you to bypass the boiler if water temperature from the solar tank is higher than 48 °C. It includes one unit integrating both a thermostatic deviating valve and an adjustable thermostatic mixing valve.

If you order the solar kit for boiler, when ordering a SULPACK EASY KIT, the mixing valve will not be supplied and will automatically be eliminated from the cost of the kit.

For solar kits for combination boilers, refer to page 105

# SULPACK NATURAL PLUS

## SULPACK NATURAL PLUS



- **Solar collectors**
- **Glazed hot water storage tank**
- **Fastening system for tilted roof**
- **Hydraulic connection accessories**
- **1500W auxiliary electric resistance supplied as standard, adjustable by means of a thermostat**
- › Heat transfer fluid circuit safety valve
- › Double magnesium anode
- › Domestic cold water input check and safety valve

The Sulpack Natural Plus system can be combined to Fondital combination boilers with instantaneous production of domestic hot water, using the solar kit for instantaneous boilers. The Solar Kit allows you to bypass the boiler if water temperature from the solar tank is higher than 48 °C.

| Technical data                                    | um       | 150                                                                                   | 200                                                                                   | 300                                                                                   |
|---------------------------------------------------|----------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Collectors                                        | num.     | 1                                                                                     | 1                                                                                     | 2                                                                                     |
| Gross surface (single collector)                  | m²       | 2,11                                                                                  |                                                                                       |                                                                                       |
| Liquid content (single collector)                 | litres   | 1,4                                                                                   |                                                                                       |                                                                                       |
| Collector structure material                      | -        | aluminium                                                                             |                                                                                       |                                                                                       |
| Glass                                             | type     | low-iron                                                                              |                                                                                       |                                                                                       |
| Thickness                                         | mm       | 3,2                                                                                   |                                                                                       |                                                                                       |
| Insulation                                        | type     | mineral wool                                                                          |                                                                                       |                                                                                       |
| Insulation thickness                              | mm       | 40                                                                                    |                                                                                       |                                                                                       |
| Size (W x L x H) (single collector)               | mm       | 1036x2037x90                                                                          |                                                                                       |                                                                                       |
| Overall empty weight (single collector)           | kg       | 42                                                                                    |                                                                                       |                                                                                       |
| Opening surface (single collector)                | m²       | 1,92                                                                                  |                                                                                       |                                                                                       |
| η0                                                | -        | 0,702                                                                                 |                                                                                       |                                                                                       |
| α1                                                | W/(m²K)  | 3,930                                                                                 |                                                                                       |                                                                                       |
| α2                                                | W/(m²K²) | 0,007                                                                                 |                                                                                       |                                                                                       |
| IAM                                               | -        | 0,91                                                                                  |                                                                                       |                                                                                       |
| Absorber                                          |          |                                                                                       |                                                                                       |                                                                                       |
| Surface (single collector)                        | m²       | 1,91                                                                                  |                                                                                       |                                                                                       |
| Material                                          | type     | aluminium                                                                             |                                                                                       |                                                                                       |
| Finishing                                         | type     | selective                                                                             |                                                                                       |                                                                                       |
| Tank                                              |          |                                                                                       |                                                                                       |                                                                                       |
| hot water storage tank energy efficiency class    | -        |  |  |  |
| Dissipation S                                     | W        | 68                                                                                    | 72                                                                                    | 97                                                                                    |
| Hot water storage                                 | litres   | 152                                                                                   | 198                                                                                   | 282                                                                                   |
| Heat exchanger                                    | -        | jacket                                                                                | jacket                                                                                | jacket                                                                                |
| Heat transfer fluid capacity                      | litres   | 8,5                                                                                   | 12                                                                                    | 18,8                                                                                  |
| Insulation thickness                              | mm       | 50                                                                                    | 50                                                                                    | 50                                                                                    |
| Maximum operating pressure                        | bar      | 6                                                                                     | 6                                                                                     | 6                                                                                     |
| Internal finishing                                | type     | enamelling                                                                            | enamelling                                                                            | enamelling                                                                            |
| Corrosion protection                              | type     | Anodic (double anode - Mg)                                                            |                                                                                       |                                                                                       |
| Empty weight                                      | kg       | 72                                                                                    | 88                                                                                    | 110                                                                                   |
| Electric resistance (as standard)                 | W        | 1500                                                                                  | 1500                                                                                  | 1500                                                                                  |
| Connections                                       | -        | G 3/4                                                                                 | G 3/4                                                                                 | G 3/4                                                                                 |
| Total amount of heat transfer fluid in the system | litres   | 11                                                                                    | 14,5                                                                                  | 22,5                                                                                  |
| Code                                              | -        | PSPACTER09                                                                            | PSPACTER10                                                                            | PSPACTER11                                                                            |

| Description                                | Code       |
|--------------------------------------------|------------|
| Supplementary kit for flat roofs, mod. 150 | PSKITPAC03 |
| Supplementary kit for flat roofs, mod. 200 | PSKITPAC04 |

| Description                                            | Code       |
|--------------------------------------------------------|------------|
| Supplementary kit for flat roofs, mod. 300             | PSKITPAC05 |
| Sulpack natural plus pressure-temperature safety valve | PSVALSIC00 |

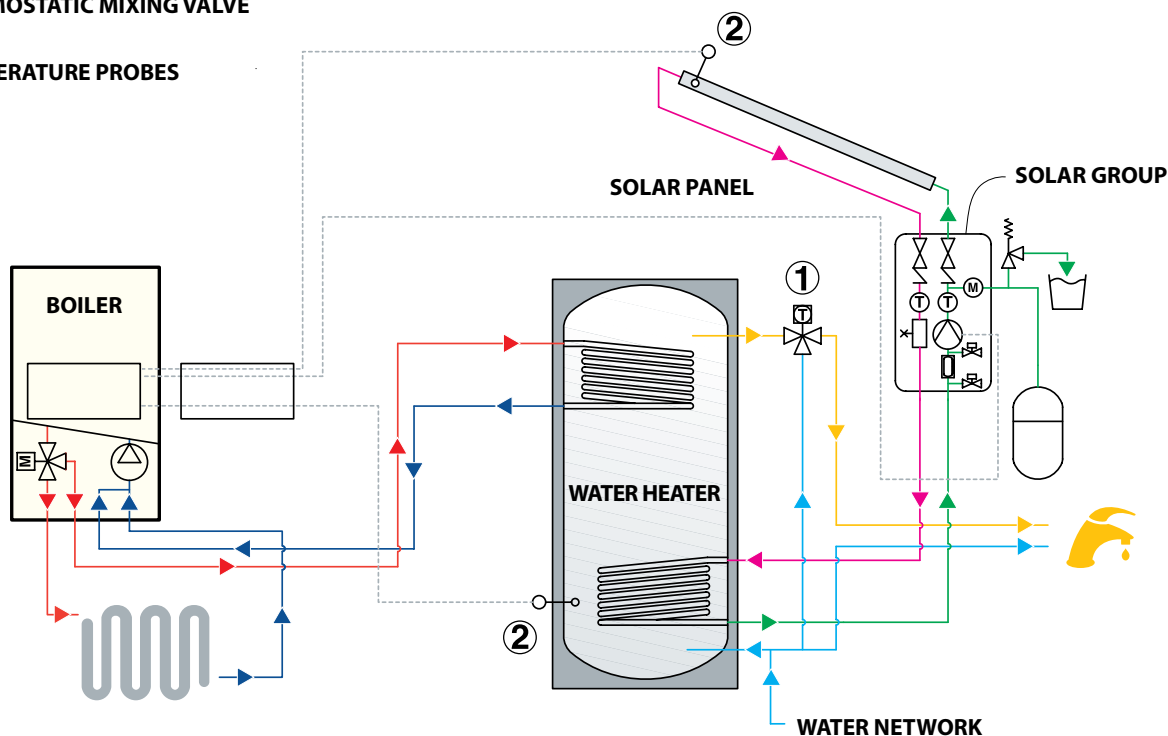
It can be combined with the following models: ORION KC - VIRGO KC - DELFIS KC - DELFIS PRO CTN - VIRGO PRO CTN

## EXAMPLES

### Connection to a boiler with integrated deviating valve **Sulpack Pro / Sulpack Evo**

① THERMOSTATIC MIXING VALVE

② TEMPERATURE PROBES

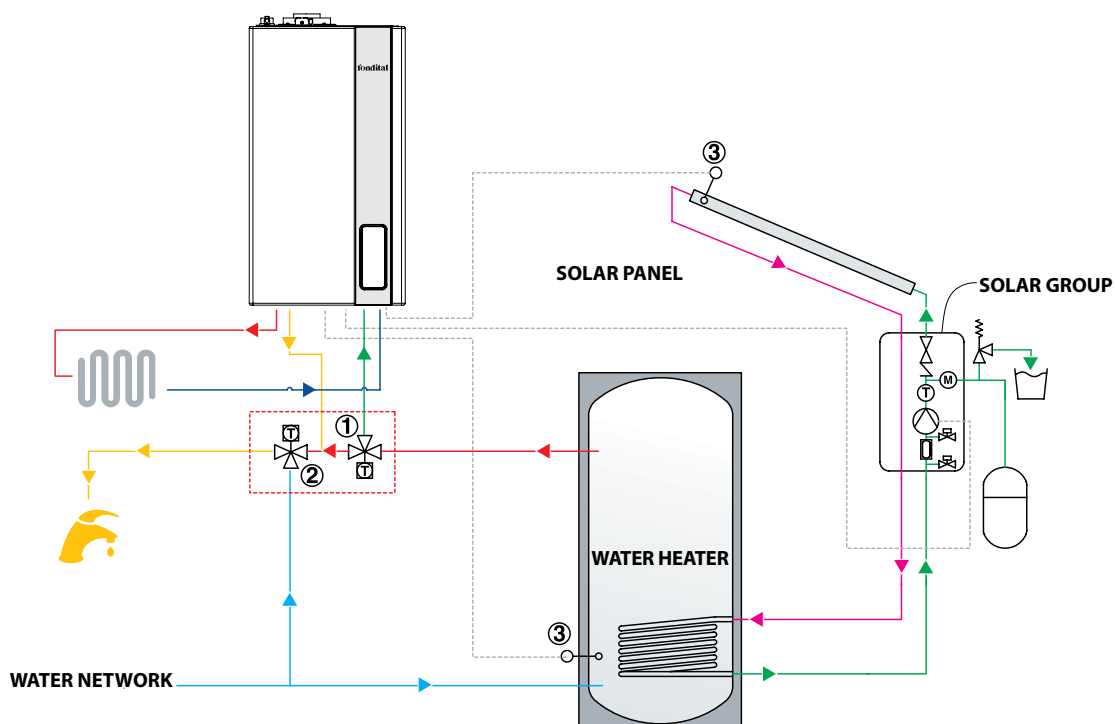


### Connection to combination instantaneous boiler **Sulpack Easy**

① THERMOSTATIC DIVERTER VALVE

② THERMOSTATIC MIXING VALVE

③ TEMPERATURE PROBES



## ACCESSORIES

# SOLAR PUMP GROUP RS1, ONLY RETURN



Flow regulator with 0.5 to 15 l/min flow meter with integrated loading system

- ) Ball tap with built-in return thermometer and check valve
- ) Insulation in black EPP
- ) High efficiency solar circulation pump
- ) Solar safety valve calibrated at 6 bar
- ) Pressure gauge with 10 bar scale
- ) Expansion tank connection G 3/4
- ) Wall-mounted, steel bracket included

### SOLAR UNIT RS1

|                      |            |          |
|----------------------|------------|----------|
| Flow rate adjustment | l/min.     | 0,5 ÷ 15 |
| Max. head            | m          | 7,5      |
| Max. power           | w          | 45       |
| Code                 | PSGRUP0014 |          |

# SOLAR PUMP GROUP MRS3, FLOW AND RETURN



Flow regulator with 0.5 to 15 l/min flow meter with integrated loading system

- ) Built-in degasser with manual bleed valve
- ) Ball taps with built-in flow and return thermometers and check valve
- ) Insulation in black EPP
- ) High efficiency solar circulation pump
- ) Solar safety valve calibrated at 6 bar
- ) Pressure gauge with 10 bar scale
- ) Expansion tank connection G 3/4
- ) Wall-mounted, steel bracket included

### SOLAR UNIT MRS3

|                      |            |          |
|----------------------|------------|----------|
| Flow rate adjustment | l/min.     | 0,5 ÷ 15 |
| Max. head            | m          | 7,5      |
| Max. power           | w          | 45       |
| Code                 | PSGRUP0015 |          |

# CIRCULATION PUMPS

High-efficiency circulation pumps for solar plants



| SOLAR CIRCULATION PUMP C6          |            |     |
|------------------------------------|------------|-----|
| Maximum head                       | m          | 5,4 |
| Max. power                         | w          | 49  |
| Fan                                | num.       | 3   |
| Fittings                           | -          | 41  |
| Maximum ambient temperature        | °C         | 60  |
| Maximum temperature of solar fluid | °C         | 110 |
| Code                               | PSCIRCOLA7 |     |

# ADDITIONAL TANKS

Diaphragm-free tank with tank protection feature  
Colour White



| ADDITIONAL TANKS |        | RS 5       | RS 8       | RS 12      |
|------------------|--------|------------|------------|------------|
| Capacity         | litres | 5          | 8          | 12         |
| Diameter         | mm     | 160        | 200        | 270        |
| Height           | mm     | 270        | 280        | 264        |
| Fitting          | -      | 2 x G ¾ M  |            |            |
| Max. pressure    | bar    | 10         |            |            |
| Code             |        | PSVASO0009 | PSVASO0010 | PSVASO0011 |



# EXPANSION VESSELS

Diaphragm for solar fluid for T max 100 °C.  
Colour White



| EXPANSION VESSELS |        | ES 12      | ES 18      | ES 25      | ES 35      | ES 50      | ES 80      | ES 100     | ES 200     |
|-------------------|--------|------------|------------|------------|------------|------------|------------|------------|------------|
| Capacity          | litres | 12         | 18         | 25         | 35         | 50         | 80         | 105        | 200        |
| Diameter          | mm     | 270        | 270        | 300        | 380        | 380        | 450        | 500        | 600        |
| Height            | mm     | 264        | 350        | 392        | 377        | 525        | 608        | 665        | 812        |
| Fitting           | -      | G ¾        |            |            |            |            | G 1        |            |            |
| Max. pressure     | bar    | 10         |            |            |            |            |            |            |            |
| Preload           | bar    | 2,5        |            |            |            |            |            |            |            |
| Code              |        | PSVASO0001 | PSVASO0002 | PSVASO0003 | PSVASO0004 | PSVASO0005 | PSVASO0006 | PSVASO0007 | PSVASO0008 |

# ACCESSORIES FOR TANKS



| Item                                                                              | Description                                                                                                                                                                    | Code       |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|  | STES 5 - 25: Universal mounting bracket for expansion vessels and additional tanks up to a capacity of 25 litres.                                                              | PSVASO0012 |
|  | STES 5 - 18: Wall mounting bracket with clamp for additional tanks and expansion vessels up to a capacity of 18 litres                                                         | PSVASO0014 |
|  | STES 35 - 50: Quick wall-mounting bracket for expansion vessels up to a capacity between 35 and 50 litres.                                                                     | PSVASO0015 |
|  | FLEX 600: Hose for solar tanks, 600 mm long.                                                                                                                                   | PSVASO0016 |
|  | STES 12 - 50 w/valve: Wall mounting bracket with double shut-off fitting for expansion vessels up to a capacity of 50 litres. Allows tank control without emptying the system. | PSVASO0017 |

## THERMOSTATIC MIXING VALVE



- ) Bronze external body
- ) Internal parts in special anti-scale plastic
- ) Automatic shut-off if no mixing cold water is available

| THERMOSTATIC MIXING VALVE     |            |         |
|-------------------------------|------------|---------|
| Fittings                      | -          | G 1 M   |
| Temperature range             | °C         | 35 - 50 |
| Maximum operating temperature | °C         | 100     |
| Maximum flow rate             | l/h        | 1500    |
| Code                          | PSVALMIX00 |         |

## THERMOSTATIC MIXING VALVE



- ) Brass external body
- ) Automatic shut-off if no mixing cold water is available

| THERMOSTATIC MIXING VALVE     |            |         |
|-------------------------------|------------|---------|
| Fittings                      | -          | G 3/4 M |
| Temperature range             | °C         | 30 - 60 |
| Maximum operating temperature | °C         | 85      |
| Maximum flow rate             | l/h        | 1000    |
| Code                          | PSVALMIX01 |         |

# THREE-WAY DEVIATING VALVE

Three-way deviating valve for solar plants with 3-wire auxiliary contact



| THREE-WAY DEVIATING VALVE     |            |       |
|-------------------------------|------------|-------|
| Fittings                      | -          | G ¾ M |
| Maximum operating temperature | °C         | 160   |
| Code                          | PSVALDEV01 |       |

# CONCENTRATED SOLAR PROTECTION LIQUID



Concentrated monopropylene glycol-based antifreeze fluid, to be diluted in water



| CONCENTRATED SOLAR PROTECTION LIQUID          |            |    |     |     |     |
|-----------------------------------------------|------------|----|-----|-----|-----|
| Quantity                                      | kg         | 10 | 10  | 10  | 10  |
| Percentage of protection liquid in the system | %          | 20 | 25  | 30  | 45  |
| Minimum temperature                           | °C         | -8 | -12 | -15 | -28 |
| Code                                          | PSPROSOL04 |    |     |     |     |

# PIPES FOR SOLAR PLANTS



Splittable double flexible pipe system in AISI 316 L stainless steel with insulation coating in EPDM closed cell foam

- ) External protection case in black polyethylene
- ) Silicone cable for two-wire collector probe (maximum operating temperature in continuous duty: 280°C)
- ) Maximum resistance to temperature values of 175°C for short periods
- ) It includes 4 swivel nut connectors, 4 seals, 4 O-rings
- ) Hose flaring is made using a steel washer and a brass nipple, which are included in the kit

|                                                |    | Stainless steel<br>Tuboflex 12/20 (*) | Stainless steel<br>Tuboflex 12/25 (*) | Stainless steel<br>Tuboflex 16/20 (*) | Stainless steel<br>Tuboflex 16/25 (*) |
|------------------------------------------------|----|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Diameter                                       | mm | 12                                    | 12                                    | 146                                   | 16                                    |
| Length                                         | m  | 20                                    | 25                                    | 20                                    | 25                                    |
| Insulation thickness                           | mm | 13                                    |                                       |                                       |                                       |
| Maximum working temperature in continuous duty | °C | 125                                   |                                       |                                       |                                       |
| Code                                           |    | PSTUBI0015                            | PSTUBI0016                            | PSTUBI0017                            | PSTUBI0018                            |

(\*) Product available while stocks last

# FITTING FOR SOLAR PLANTS



- ) The FITTING KIT includes 4 swivel nut connectors, 4 seals, 4 O-rings.
- ) Hose flaring is made using a steel washer and a brass nipple, which are included in the kit
- ) The NIPPLE KIT includes brass nipples in 3-piece package

| FITTINGS FOR SOLAR PLANTS | Fitting kit for<br>Tuboflex SS 12 (*) | Fitting kit for<br>Tuboflex SS 16 (*) | Nipple kit G ½ for<br>Tuboflex SS 12 (*) | Nipple kit G ¾ for<br>Tuboflex SS 16 (*) |
|---------------------------|---------------------------------------|---------------------------------------|------------------------------------------|------------------------------------------|
| Code                      | PSTUBI0019                            | PSTUBI0020                            | PSTUBI0021                               | PSTUBI0022                               |

(\*) Product available while stocks last

# SOLAR KIT FOR COMBINATION BOILERS



OKITSOLC07

Solar kit for combination instantaneous boilers; it can be combined with the boilers listed below for connection to the solar plants featuring forced circuit and natural circulation, with heat not integrated in the water heater SULPACK EASY and SULPACK NATURAL. The kit allows you to bypass the boiler if water temperature from the solar tank is higher than 48 °C and to adjust the maximum temperature of water delivered at the users/use points. Mixer valve adjustment interval: 30 - 56°C. Limit temperature for flow stop in case of lack of cold water: 60°C. Minimum working pressure: 0.5 bar. Optimum working pressure: 1 - 10 bar.

Consisting of:

- ) One thermostatic deviating valve and one mixing valve
- ) Connection pipes
- ) Shut-off cocks:

| ORION KC   VIRGO KC   DELFIS KC   VIRGO PRO CTN   DELFIS PRO CTN |                  |  |
|------------------------------------------------------------------|------------------|--|
| System connection                                                | Rear connections |  |
| Code                                                             | OKITSOLC07       |  |

# TEMPERATURE PROBE



PT 1000 temperature probe for solar plants, suitable for all models of solar control unit  
Heat paste supplied



| SOLAR PROBE   |            |     |
|---------------|------------|-----|
| Bulb diameter | mm         | 6   |
| Cable length  | mm         | 2,5 |
| Code          | PSPTMILL00 |     |

# SG2 SOLAR CONTROL UNIT



Control unit for managing 9 types of solar circuits.

- ) Load of a twin-coil hot water storage tank with heat being integrated from the boiler
- ) Management of a combined hot water storage tank
- ) Possibility to have two arrays of collectors
- ) Pre-set for thermal discharge
- ) Five probe inputs
- ) Two relay outputs
- ) Two adjustable temperature differentials
- ) Hysteresis settings
- ) One pulse input for heat metering
- ) Pump anti-seize function
- ) Possibility to control circulation pumps in PWM or 0-10V
- ) Wide LCD display showing system layout and probe current temperatures
- ) Charts showing the trend of the probe temperature reading in time
- ) Can be set for 10 types of systems

# SG3 SOLAR CONTROL UNIT



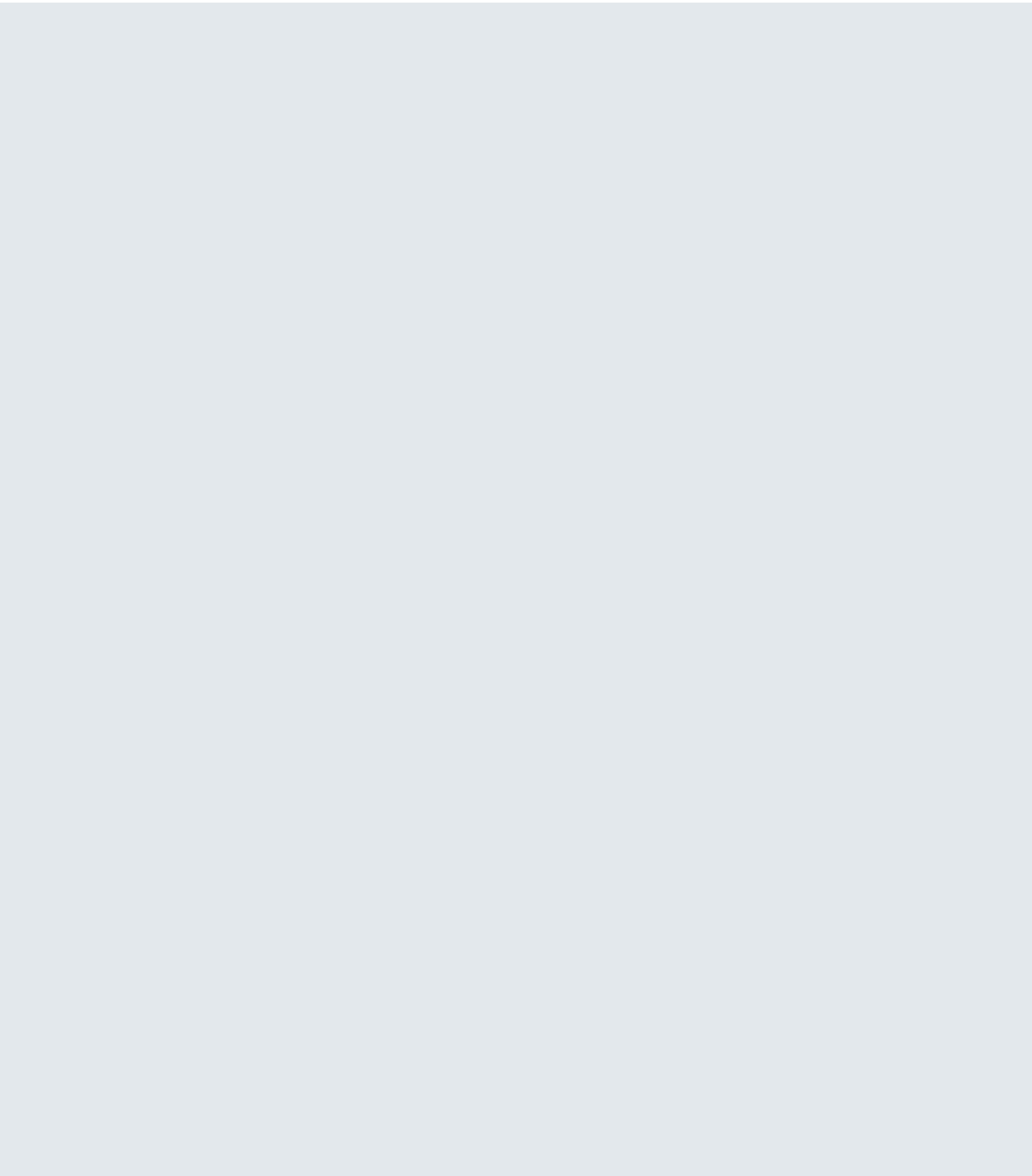
Control unit for managing 12 types of solar circuits.

- ) Load of a twin-coil hot water storage tank with heat being integrated from the boiler
- ) Management of two hot water storage tanks in cascade-type connection
- ) Management of a combined hot water storage tank
- ) Possibility to have two arrays of collectors
- ) Pre-set for thermal discharge
- ) Five probe inputs
- ) Two relay outputs
- ) One output for modulating solar pump
- ) Two adjustable temperature differentials
- ) Hysteresis settings
- ) One pulse input for heat metering
- ) Pump anti-seize function
- ) Collector protection function
- ) Function for hot water storage tank thermal discharge during the night with collector
- ) Heating pump post-circulation function
- ) Wide LCD display showing system layout and probe current temperatures
- ) Charts showing the trend of the probe temperature reading in time
- ) Can be set for 13 types of systems

| SOLAR ELECTRONIC CONTROL UNITS | SG2        | SG3                            |
|--------------------------------|------------|--------------------------------|
| Code                           | PSCENSO004 | PSCENSO005 (while stocks last) |

The supply includes collector probe and hot water storage tank probe (both PT 1000) as well as the wall-mounting base.







# HOT WATER STORAGE TANKS

## HOT WATER STORAGE TANKS

|                         |          |
|-------------------------|----------|
| WHPS BNF SS 200 - 500   | page 110 |
| WHPS BNF DS 200 - 500   | page 111 |
| WHPS BNF SS E 200 - 500 | page 112 |
| WHPS BNF DS E 200 - 500 | page 114 |
| WHPS BA SS              | page 116 |
| WHPS BZ DS              | page 117 |
| WHPS PU S               | page 118 |
| WHPS BA DS              | page 119 |



# WHPS BNF SS

SOLAR HOT WATER STORAGE TANK WITH SINGLE COIL



- ▶ **High efficiency and low operating costs**
- ▶ **Can be integrated with solar systems**
- ▶ **Fast storage with supply of abundant and continuous water**
  - ) Insulation in stiff expanded polyurethane, CFC and HCFC free
  - ) External case in white skai
  - ) Magnesium protection anode
  - ) DHW thermometer
  - ) DHW recirculation
  - ) Presetting for auxiliary resistor (thread G 1 1/2)



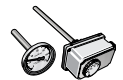
Available in the following capacities (l):

from 200 to 500

WHPS BNF SS is a hot water storage tank that can be combined with boilers for CH only, to produce domestic hot water, in porcelain-glass steel with single coil.

| Model             | Code       | Dissipation S | Hot water storage | Energy efficiency class                                                                   | Overall height | Outer diameter | Gross weight |
|-------------------|------------|---------------|-------------------|-------------------------------------------------------------------------------------------|----------------|----------------|--------------|
|                   |            | W             | litres            |                                                                                           | mm             | mm             | kg           |
| <b>BNF 200 SS</b> | PSBOLLV061 | 67            | 196               | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1215           | 600            | 90           |
| <b>BNF 300 SS</b> | PSBOLLV062 | 85            | 273               | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1615           | 600            | 115          |
| <b>BNF 500 SS</b> | PSBOLLV063 | 112           | 475               | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1705           | 750            | 155          |

| Model                       |                | BNF 200 SS | BNF 300 SS | BNF 500 SS |
|-----------------------------|----------------|------------|------------|------------|
| Nominal volume              | litres         | 200        | 300        | 500        |
| Maximum working pressure    | bar            | 10         |            |            |
| Maximum working temperature | °C             | 95         |            |            |
| Coil area                   | m <sup>2</sup> | 0,7        | 1,2        | 1,8        |
| Coil power (ΔT 35 K)        | kW             | 19         | 29         | 43         |
| Tilting height              | mm             | 1340       | 1735       | 1820       |
| Insulation thickness        | mm             | 50         | 50         | 50         |

| Item                                                                                | Description                                          | Code       |
|-------------------------------------------------------------------------------------|------------------------------------------------------|------------|
|  | Single electrode electronic anode - 200/300/500/1000 | 0ANOELET01 |
|  | Thermostat and thermometer kit                       | 0KTERMTE00 |

| Item                                                                                | Description                                             | Code       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|------------|
|  | 3 kW heating element kit<br>390 mm-long heating element | DKRESELE02 |

# WHPS BNF DS

SOLAR HOT WATER STORAGE TANK WITH DOUBLE COIL



- **Easy installation**
- **High efficiency and low operating costs**
- **Can be integrated with solar systems**
- **Fast storage with supply of abundant and continuous water**
  - ) Insulation in stiff expanded polyurethane, CFC and HCFC free
  - ) External case in white skai
  - ) Magnesium protection anode
  - ) DHW thermometer
  - ) DHW recirculation
  - ) Presetting for auxiliary resistor (thread G 1 1/2)



Available in the following capacities (l):

from 200 to 500

WHPS BNF DS is a hot water storage tank that can be combined with boilers for CH only, to produce domestic hot water, in porcelain-glass steel with double coil.

| Model             | Code       | Dissipation S | Hot water storage | Backup volume | Energy efficiency class                                                                   | Overall height | Outer diameter | Gross weight |
|-------------------|------------|---------------|-------------------|---------------|-------------------------------------------------------------------------------------------|----------------|----------------|--------------|
|                   |            | W             | litres            | Vbu           |                                                                                           | mm             | mm             | kg           |
| <b>BNF 200 DS</b> | PSBOLLV064 | 67            | 196               | 67            | <span style="background-color: yellow; border: 1px solid black; padding: 0 5px;">C</span> | 1215           | 600            | 95           |
| <b>BNF 300 DS</b> | PSBOLLV065 | 85            | 273               | 85            | <span style="background-color: yellow; border: 1px solid black; padding: 0 5px;">C</span> | 1615           | 600            | 130          |
| <b>BNF 500 DS</b> | PSBOLLV066 | 112           | 475               | 130           | <span style="background-color: yellow; border: 1px solid black; padding: 0 5px;">C</span> | 1705           | 750            | 170          |

| Model                       |                | BNF 200 DS | BNF 300 DS | BNF 500 DS |
|-----------------------------|----------------|------------|------------|------------|
| Nominal volume              | litres         | 200        | 300        | 500        |
| Maximum working pressure    | bar            | 10         |            |            |
| Maximum working temperature | °C             | 95         |            |            |
| Auxiliary coil area         | m <sup>2</sup> | 0,5        | 0,8        | 0,9        |
| Solar coil area             | m <sup>2</sup> | 0,7        | 1,2        | 1,8        |
| Coil power (ΔT 35 K)        | kW             | 12         | 19         | 23         |
| Solar coil power (ΔT 35 K)  | kW             | 19         | 29         | 43         |
| Tilting height              | mm             | 1340       | 1735       | 1820       |
| Insulation thickness        | mm             | 50         | 50         | 50         |

| Item | Description                                          | Code       |
|------|------------------------------------------------------|------------|
|      | Single electrode electronic anode - 200/300/500/1000 | 0ANOELET01 |
|      | Thermostat and thermometer kit                       | 0KTERMTE00 |

| Item | Description                                             | Code       |
|------|---------------------------------------------------------|------------|
|      | 3 kW heating element kit<br>390 mm-long heating element | DKRESELE02 |

# WHPS BNF SS E

GLASS-PORCELAIN STEEL SINGLE-COIL BOILER COMBINABLE WITH HEATING-ONLY BOILERS FOR DOMESTIC HOT WATER PRODUCTION



- ▶ **High efficiency and low operating costs**
- ▶ **Can be integrated with solar systems**
- ▶ **Fast storage with supply of abundant and continuous water**
- ▶ **Thermometer and holders for probe included in the supply**
- ▶ **Magnesium protection anode**
- ▶ **DHW recirculation**
- ▶ **Electric auxiliary heating element set-up**
- ) Insulation in stiff expanded polyurethane, CFC and HCFC free
- ) Glass-porcelain interior
- ) Grey stiff polystyrene external case

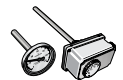


Available in the following capacities (l):

from 200 to 500

| Model                    | Code       | Dissipation S | Hot water storage | Energy efficiency class | Overall height | Outer diameter | Gross weight |
|--------------------------|------------|---------------|-------------------|-------------------------|----------------|----------------|--------------|
|                          |            | W             | litres            |                         | mm             | mm             | kg           |
| <b>WHPS BNF 200 SS E</b> | PSBOLLV071 | 57            | 189               | <b>B</b>                | 1170           | 600            | 54           |
| <b>WHPS BNF 300 SS E</b> | PSBOLLV072 | 67            | 273               | <b>B</b>                | 1659           | 650            | 77           |
| <b>WHPS BNF 500 SS E</b> | PSBOLLV073 | 108           | 484               | <b>C</b>                | 1710           | 750            | 112          |

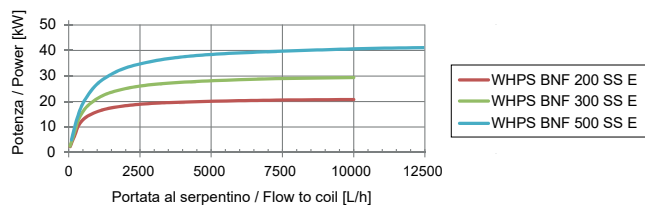
| Model                       |                | BNF 200 SS E | BNF 300 SS E | BNF 500 SS E |
|-----------------------------|----------------|--------------|--------------|--------------|
| Nominal volume              | litres         | 200          | 300          | 500          |
| Maximum working pressure    | bar            | 10           |              |              |
| Maximum working temperature | °C             | 95           |              |              |
| Coil area                   | m <sup>2</sup> | 0,7          | 1,05         | 1,45         |
| Coil power (ΔT 35 K)        | kW             | See graphs   |              |              |
| Tilting height              | mm             | 1320         | 1790         | 1870         |
| Insulation thickness        | mm             | 50           | 75           | 50           |

| Item                                                                                | Description                                          | Code       |
|-------------------------------------------------------------------------------------|------------------------------------------------------|------------|
|  | Single electrode electronic anode - 200/300/500/1000 | 0ANOELET01 |
|  | Thermostat and thermometer kit                       | 0KTERMTE00 |

| Item                                                                                | Description                                             | Code       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|------------|
|  | 3 kW heating element kit<br>390 mm-long heating element | DKRESELE02 |

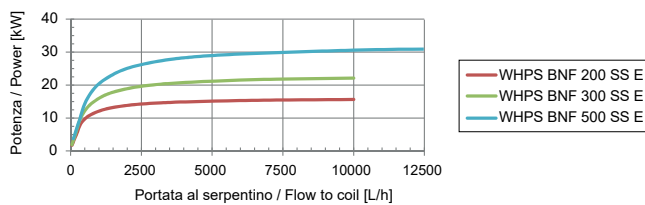
### Potenza scambiata / Exch. power

$T_{in,coil} = 80\text{ °C}$ ;  $T_{serb,in} = 10\text{ °C}$ ,  $T_{serb,out} = 45\text{ °C}$



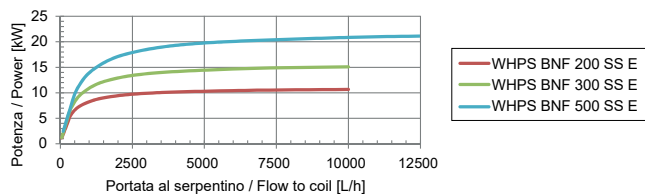
### Potenza scambiata / Exch. power

$T_{in,coil} = 70\text{ °C}$ ;  $T_{serb,in} = 10\text{ °C}$ ,  $T_{serb,out} = 45\text{ °C}$



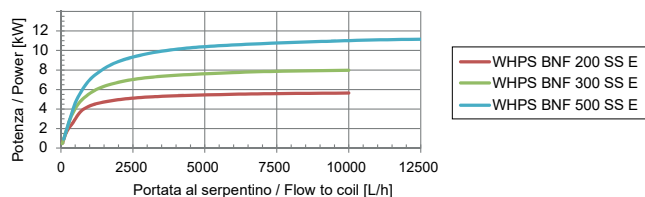
### Potenza scambiata / Exch. power

$T_{in,coil} = 60\text{ °C}$ ;  $T_{serb,in} = 10\text{ °C}$ ,  $T_{serb,out} = 45\text{ °C}$

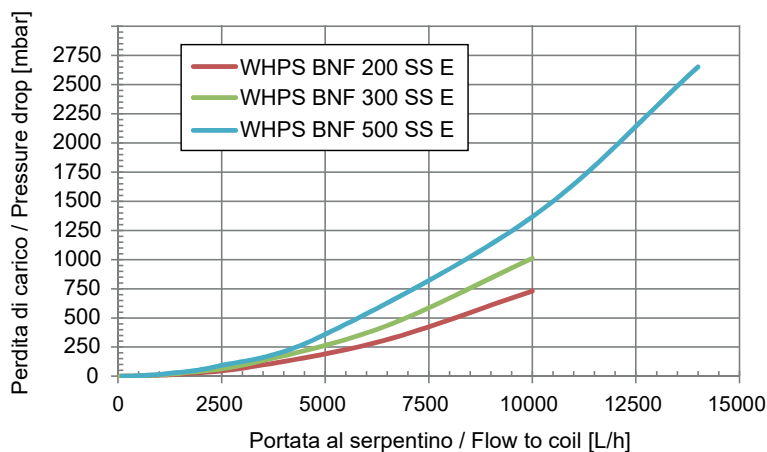


### Potenza scambiata / Exch. power

$T_{in,coil} = 50\text{ °C}$ ;  $T_{serb,in} = 10\text{ °C}$ ,  $T_{serb,out} = 45\text{ °C}$



### Perdite di carico sul serpentino / Coil pressure drop



# WHPS BNF DS E

GLASS-PORCELAIN STEEL DOUBLE-COIL BOILER COMBINABLE WITH HEATING-ONLY BOILERS FOR DOMESTIC HOT WATER PRODUCTION



- ▶ **High efficiency and low operating costs**
- ▶ **Can be integrated with solar systems**
- ▶ **Fast storage with supply of abundant and continuous water**
- ▶ **Thermometer and holders for probe included in the supply**
- ▶ **Magnesium protection anode**
- ▶ **DHW recirculation**
- ▶ **Electric auxiliary heating element set-up**
- ) Insulation in stiff expanded polyurethane, CFC and HCFC free
- ) Glass-porcelain interior
- ) Grey stiff polystyrene external case
- ) Easy installation

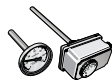


Available in the following capacities (l):

from 200 to 500

| Model                    | Code       | Dissipation S | Hot water storage | Backup volume | Energy efficiency class | Overall height | Outer diameter | Gross weight |
|--------------------------|------------|---------------|-------------------|---------------|-------------------------|----------------|----------------|--------------|
|                          |            | W             | litres            | Vbu           |                         | mm             | mm             | kg           |
| <b>WHPS BNF 200 DS E</b> | PSBOLLV074 | 57            | 184               | 96            | <b>B</b>                | 1170           | 600            | 63           |
| <b>WHPS BNF 300 DS E</b> | PSBOLLV075 | 67            | 267               | 118           | <b>B</b>                | 1659           | 650            | 94           |
| <b>WHPS BNF 500 DS E</b> | PSBOLLV076 | 108           | 474               | 211           | <b>C</b>                | 1710           | 750            | 141          |

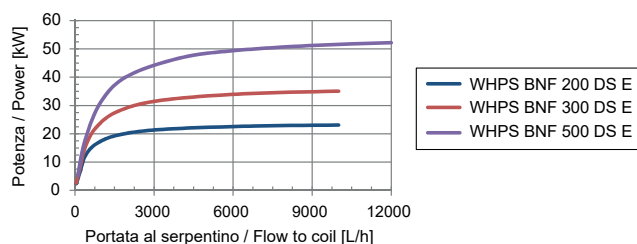
| Model                       |                | BNF 200 DS E | BNF 300 DS E | BNF 500 DS E |
|-----------------------------|----------------|--------------|--------------|--------------|
| Nominal volume              | litres         | 200          | 300          | 500          |
| Maximum working pressure    | bar            | 10           |              |              |
| Maximum working temperature | °C             | 95           |              |              |
| Auxiliary coil area         | m <sup>2</sup> | 0,6          | 0,75         | 0,9          |
| Solar coil area             | m <sup>2</sup> | 0,8          | 1,2          | 1,8          |
| Coil power (ΔT 35 K)        | kW             | See graphs   |              |              |
| Solar coil power (ΔT 35 K)  | kW             |              |              |              |
| Tilting height              | mm             | 1320         | 1790         | 1870         |
| Insulation thickness        | mm             | 50           | 75           | 50           |

| Item                                                                                | Description                                          | Code       |
|-------------------------------------------------------------------------------------|------------------------------------------------------|------------|
|  | Single electrode electronic anode - 200/300/500/1000 | 0ANOELET01 |
|  | Thermostat and thermometer kit                       | 0KTERMTE00 |

| Item                                                                                | Description                                             | Code       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------|------------|
|  | 3 kW heating element kit<br>390 mm-long heating element | DKRESELE02 |

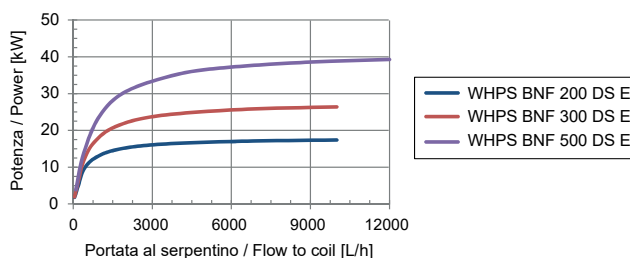
### Potenza scambiata, scamb. solare Exch. power, solar coil

$T_{in,coil} = 80\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



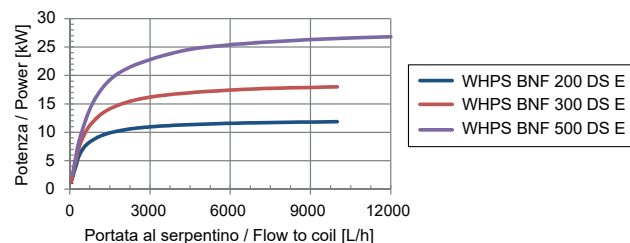
### Potenza scambiata, scamb. solare Exch. power, solar coil

$T_{in,coil} = 70\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



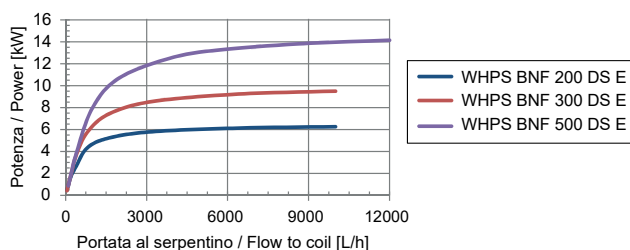
### Potenza scambiata, scamb. solare Exch. power, solar coil

$T_{in,coil} = 60\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



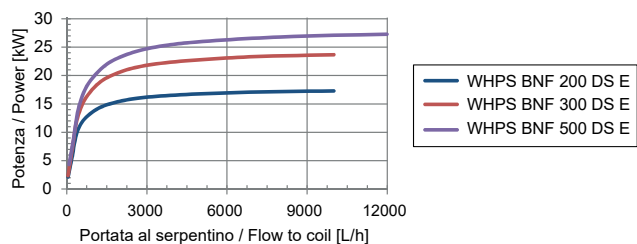
### Potenza scambiata, scamb. solare Exch. power, solar coil

$T_{in,coil} = 50\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



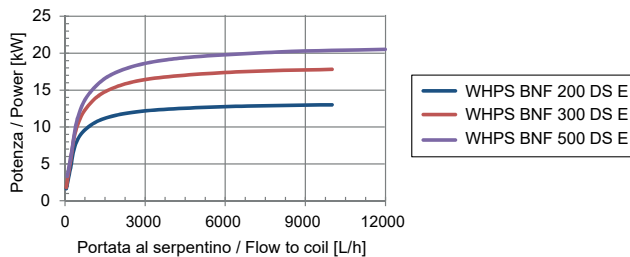
### Potenza scambiata, scamb.integr. Exch. power, integr.coil

$T_{in,coil} = 80\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



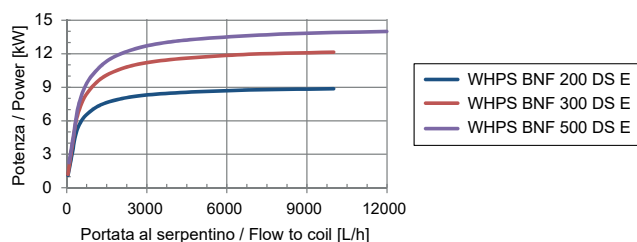
### Potenza scambiata, scamb.integr. Exch. power, integr.coil

$T_{in,coil} = 70\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



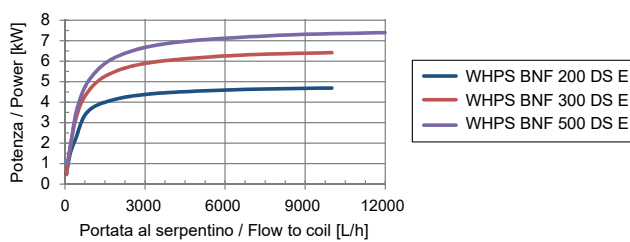
### Potenza scambiata, scamb.integr. Exch. power, integr.coil

$T_{in,coil} = 60\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$

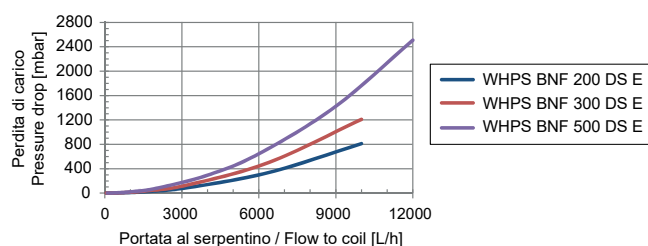


### Potenza scambiata, scamb.integr. Exch. power, integr.coil

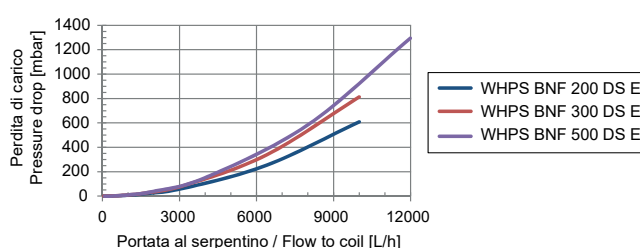
$T_{in,coil} = 50\text{ }^{\circ}\text{C}$ ;  $T_{serb,in} = 10\text{ }^{\circ}\text{C}$ ,  $T_{serb,out} = 45\text{ }^{\circ}\text{C}$



### Perdite di carico sul serp. solare Solar coil press. drop



### Perdite di carico sul serp. integr. Integr. coil press. drop



# WHPS BA SS

HOT WATER STORAGE TANK THAT CAN BE COMBINED WITH HEATING-ONLY BOILERS FOR THE PRODUCTION OF DOMESTIC HOT WATER, IN PORCELAIN-GLASS STEEL WITH SINGLE COIL



- **Inspection flange**
- **High efficiency and low operating costs**
- **Fast storage with supply of abundant and continuous water**
- **Can be integrated with solar systems**
  - ) Insulation in soft expanded polyurethane, CFC and HCFC free
  - ) External case in white skai
  - ) Magnesium protection anode for up to 1000 litre capacity
  - ) Protection electrodes with electronic device for 1500 and 2000 litre capacity
  - ) Front inspection flange
  - ) DHW recirculation
  - ) Presetting for auxiliary resistor (thread G 1 1/2)
  - ) Optional kit with flange and heating element for 200 - 300 - 500 models

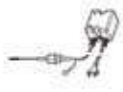
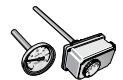
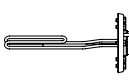


Available in the following capacities (l):

from 200 to 2000

| Model                | Code       | Dissipation S | Hot water storage | Energy efficiency class                                                                   | Overall height | Outer diameter | Gross weight |
|----------------------|------------|---------------|-------------------|-------------------------------------------------------------------------------------------|----------------|----------------|--------------|
|                      |            | W             | litres            |                                                                                           | mm             | mm             | kg           |
| <b>BA 200 SS</b>     | PSBOLLV054 | 67            | 196               | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1215           | 600            | 90           |
| <b>BA 300 SS</b>     | PSBOLLV055 | 85            | 273               | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1615           | 600            | 115          |
| <b>BA 500 SS</b>     | PSBOLLV056 | 112           | 475               | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1705           | 750            | 155          |
| <b>BA 1000 SS AE</b> | PSBOLLV069 | 142           | 930               | complying with Regulation 814/2013                                                        | 2205           | 990            | 245          |
| <b>BA 2000 SS AE</b> | PSBOLLV070 | 186           | 1950              | complying with Regulation 814/2013                                                        | 2470           | 1300           | 410          |

| Model                       |                | BA 200 SS | BA 300 SS | BA 500 SS | BA 1000 SS AE | BA 2000 SS AE |
|-----------------------------|----------------|-----------|-----------|-----------|---------------|---------------|
| Nominal volume              | litres         | 200       | 300       | 500       | 1000          | 2000          |
| Maximum working pressure    | bar            | 10        |           |           |               |               |
| Maximum working temperature | °C             | 95        |           |           |               |               |
| Coil area                   | m <sup>2</sup> | 1,5       | 1,8       | 2,2       | 3,5           | 4,3           |
| Coil power (ΔT 35 K)        | kW             | 36        | 44        | 55        | 88            | 112           |
| Tilting height              | mm             | 1375      | 1735      | 1900      | 2250          | 2580          |
| Insulation thickness        | mm             | 50        | 50        | 50        | 100           | 100           |

| Item                                                                                | Description                                          | Code       | Item                                                                                | Description                                                            | Code       |
|-------------------------------------------------------------------------------------|------------------------------------------------------|------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------|
|  | Single electrode electronic anode - 200/300/500/1000 | 0ANOELET01 |  | 3 kW heating element kit<br>390 mm-long heating element                | DKRESELE02 |
|  | Thermostat and thermometer kit                       | OKTERMTE00 |  | Resistor with flange and single-phase power supply - 200/300/500 - 3kW | PSRESELE13 |

# WHPS BZ DS

SOLAR HOT WATER STORAGE TANK WITH INTEGRATED SOLAR GROUP



- **Inspection flange**
- **Thicker 70 mm insulation**
- **Fast storage with supply of abundant and continuous water**
- **Can be integrated with solar systems**
  - ) Insulation in stiff expanded polyurethane, CFC and HCFC free
  - ) External case in white skai
  - ) Magnesium protection anode for up to 1000 litre capacity
  - ) Front inspection flange
  - ) DHW recirculation
  - ) Presetting for auxiliary resistor (thread G 1 1/2)



Available in the following capacities (l):

from 200 to 300

WHPS BZ DS is a hot water storage tank that can be combined with boilers for CH only, to produce domestic hot water, in porcelain-glass steel with double coil with integrated high-efficiency solar hydraulic unit.

| Model            | Code       | Dissipation S | Hot water storage | Backup volume | Circulation pump power | Energy efficiency class | Overall height | Outer diameter | Gross weight |
|------------------|------------|---------------|-------------------|---------------|------------------------|-------------------------|----------------|----------------|--------------|
|                  |            | W             | litres            | Vbu           | W                      |                         | mm             | mm             | kg           |
| <b>BZ 200 DS</b> | AVBZ0MD200 | 51            | 196               | 67            | 45                     | <b>B</b>                | 1215           | 640            | 88           |
| <b>BZ 300 DS</b> | AVBZ0MD300 | 63            | 273               | 85            | 45                     | <b>B</b>                | 1615           | 640            | 117          |

| Model                       |        | BZ 200 DS | BZ 300 DS |
|-----------------------------|--------|-----------|-----------|
| Nominal volume              | litres | 200       | 300       |
| Maximum working pressure    | bar    | 10        |           |
| Maximum working temperature | °C     | 95        |           |
| Auxiliary coil area         | m2     | 0,7       | 0,9       |
| Solar coil area             | m2     | 1         | 1,1       |
| Coil power (ΔT 35 K)        | kW     | 17        | 22        |
| Solar coil power (ΔT 35 K)  | kW     | 24        | 26        |
| Tilting height              | mm     | 1335      | 1725      |
| Insulation thickness        | mm     | 70        | 70        |

| Item | Description                                          | Code       |
|------|------------------------------------------------------|------------|
|      | Single electrode electronic anode - 200/300/500/1000 | OANOLET01  |
|      | Thermostat and thermometer kit                       | OKTERMTE00 |

| Item | Description                                                            | Code       |
|------|------------------------------------------------------------------------|------------|
|      | 3 kW heating element kit 390 mm-long heating element                   | DKRESELE02 |
|      | Resistor with flange and single-phase power supply - 200/300/500 - 3kW | PSRESELE13 |

# WHPS PU S

SINGLE-COIL STEEL PUFFER FOR HEATING SYSTEMS, WITH OUTER COATING IN WHITE SKAI



- **Easy installation**
- **High efficiency and low operating costs**
- **Can be integrated with solar systems**
  - ) Insulation in soft expanded polyurethane, CFC and HCFC free
  - ) External case in white skai
  - ) Control probes and heating circuit connections



Available in the following capacities (l):



| Model            | Code       | Total volume | Overall height | Outer diameter | Net weight |
|------------------|------------|--------------|----------------|----------------|------------|
|                  |            | litres       | mm             | mm             | kg         |
| <b>PU 2000 S</b> | PSBOLLV015 | 2000         | 2195           | 1400           | 330,00     |
| <b>PU 3000 S</b> | PSBOLLV016 | 3000         | 2750           | 1450           | 430,00     |

| Model                       |  |                | PU 2000 S | PU 3000 S |
|-----------------------------|--|----------------|-----------|-----------|
| Nominal volume              |  | litres         | 2000      | 3000      |
| Maximum working pressure    |  | bar            | 10        |           |
| Maximum working temperature |  | °C             | 95        |           |
| Coil area                   |  | m <sup>2</sup> | 4,2       | 4,2       |
| Coil power (80/60)          |  | kW             | 120       | 120       |
| Tilting height              |  | mm             | 2710      | 2985      |
| Insulation thickness        |  | mm             | 100       | 100       |

PRODUCT AVAILABLE WHILE STOCKS LAST

# WHPS BA DS

HOT WATER STORAGE TANK THAT CAN BE COMBINED WITH HEATING-ONLY BOILERS FOR THE PRODUCTION OF DOMESTIC HOT WATER, IN PORCELAIN-GLASS STEEL WITH DOUBLE COIL



- **Inspection flange**
- **High efficiency and low operating costs**
- **Fast storage with supply of abundant and continuous water**
- **Can be integrated with solar systems**
  - ) Insulation in soft expanded polyurethane, CFC and HCFC free
  - ) External case in white skai
  - ) Magnesium protection anode for up to 1000 litre capacity
  - ) Protection electrodes with electronic device for 1500 and 2000 litre capacity
  - ) Front inspection flange
  - ) DHW recirculation
  - ) Three holders for temperature probes (standard for models 200 - 300 - 500), other models are preset for two holders (G 1/2 fitting)
  - ) Ready for resistor with G 1 1/2 fitting for 1000 - 2000 models
  - ) Optional kit with flange and heating element for 200 - 300 - 500 models

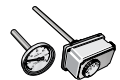


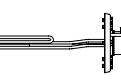
Available in the following capacities (l):

from 200 to 2000

| Model                | Code       | Dissipation S | Hot water storage | Backup volume | Energy efficiency class                                                                   | Overall height | Outer diameter | Gross weight |
|----------------------|------------|---------------|-------------------|---------------|-------------------------------------------------------------------------------------------|----------------|----------------|--------------|
|                      |            | W             | litres            | Vbu           |                                                                                           | mm             | mm             | kg           |
| <b>BA 200 DS</b>     | PSBOLLV050 | 67            | 196               | 67            | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1215           | 600            | 95           |
| <b>BA 300 DS</b>     | PSBOLLV051 | 85            | 273               | 85            | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1615           | 600            | 130          |
| <b>BA 500 DS</b>     | PSBOLLV052 | 112           | 475               | 130           | <span style="background-color: yellow; border: 1px solid black; padding: 0 2px;">C</span> | 1705           | 750            | 170          |
| <b>BA 1000 DS AE</b> | PSBOLLV067 | 142           | 930               | 350           | complying with Regulation 814/2013                                                        | 2205           | 990            | 265          |
| <b>BA 2000 DS AE</b> | PSBOLLV068 | 186           | 1950              | 840           | complying with Regulation 814/2013                                                        | 2470           | 1300           | 480          |

| Model                       |                | BA 200 DS | BA 300 DS | BA 500 DS | BA 1000 DS AE | BA 2000 DS AE |
|-----------------------------|----------------|-----------|-----------|-----------|---------------|---------------|
| Nominal volume              | litres         | 200       | 300       | 500       | 1000          | 2000          |
| Maximum working pressure    | bar            | 10        |           |           |               |               |
| Maximum working temperature | °C             | 95        |           |           |               |               |
| Auxiliary coil area         | m <sup>2</sup> | 0,5       | 1,1       | 1,3       | 1,6           | 2,8           |
| Solar coil area             | m <sup>2</sup> | 1,5       | 1,8       | 2,2       | 3             | 4,6           |
| Coil power (ΔT 35 K)        | kW             | 12        | 26        | 33        | 40            | 73            |
| Solar coil power (ΔT 35 K)  | kW             | 36        | 44        | 55        | 75            | 120           |
| Tilting height              | mm             | 1375      | 1735      | 1900      | 2250          | 2580          |
| Insulation thickness        | mm             | 50        | 50        | 50        | 100           | 100           |

| Item                                                                               | Description                                          | Code       |
|------------------------------------------------------------------------------------|------------------------------------------------------|------------|
|  | Single electrode electronic anode - 200/300/500/1000 | OANOLET01  |
|  | Thermostat and thermometer kit                       | OKTERMTE00 |

| Item                                                                                | Description                                                            | Code       |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------|
|  | 3 kW heating element kit 390 mm-long heating element                   | DKRESELE02 |
|  | Resistor with flange and single-phase power supply - 200/300/500 - 3kW | PSRESELE13 |





The manufacturer reserves the right to make any modifications deemed necessary without prior notification.

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COMPANY WITH  
MANAGEMENT SYSTEM  
CERTIFIED BY DNV  
ISO 9001 • ISO 14001  
ISO 45001 • ISO 50001