# NXR4i Assembly Instructions



Working towards a cleaner future



heating specialists

## 1 Package list

**1** Refer to the applicable product list for any optional features used.

Package list: Before starting to assemble the boiler, refer to the table below to check if you have received all the packages required.

### 1. Boiler body + Accessories

| Number of sections                        |                   | 8     | 9     | 10    | 11    | 12    | 13    | 14    |
|---|-------------------|-------|-------|-------|-------|-------|-------|-------|
| Rear section                              | Package 8229-0003 | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Special intermediate section              | Package 8229-0005 | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Normal intermediate section               | Package 8229-0001 | 5     | 6     | 7     | 8     | 9     | 10    | 11    |
| Front section                             | Package 8229-0002 | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Accessories (contents depend upon mod     | lel)              | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| Common accessories                        | 1 Package         | CS 20 |
| Lower insulation, boiler body             | 1 Package         | CS 51 | CS 53 | CS 53 | CS 55 | CS 55 | CS 57 | CS 57 |
| Base frame - dimensions depend upon model |                   | 1     | 1     | 1     | 1     | 1     | 1     | 1     |

## 2. Baffle plates

| Number of sections |           | 8     | 9     | 10    | 11    | 12    | 13    | 14    |
|--------------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| Baffles            | 1 Package | CS 30 | CS 31 | CS 31 | CS 32 | CS 32 | CS 33 | CS 33 |

## 3. Casing

| Number of sections     | Number of sections |   | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------|--------------------|---|---|----|----|----|----|----|
| Casing (common parts)  | Package MP133      | 1 | 1 | 1  | 1  | 1  | 1  | 1  |
| Casing, variable parts | Package MP2        | - | - | 1  | -  | -  | 1  | -  |
|                        | Package MP3        | 1 | - | -  | 1  | -  | -  | 1  |
|                        | Package MP4        | - | 1 | 1  | 1  | 2  | 2  | 2  |
|                        | Package MP5        | - | 1 | -  | -  | 1  | -  | -  |

## 4. Cable channel

| Number of sections | 8         | 9     | 10    | 11    | 12    | 13    | 14    |       |
|--------------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| Cable channel      | 1 Package | CS 41 | CS 42 | CS 43 | CS 44 | CS 45 | CS 46 | CS 47 |

## 5. Technical documents

| Number of sections                       | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|--|---|---|----|----|----|----|----|
| 1 Package (Content depends upon country) | 1 | 1 | 1  | 1  | 1  | 1  | 1  |

## 6. Control panel

All models can be equiped with one of the following control panels: KSF ISR or KSF CE control panel.

## 2 Mounting

## Tools required

- 1 22 box spanner

- 1 Phillips screwdriver
- 1 hammer
- 1 putty gun
- 1 stanley knife
- 13 19 24 spanners
- 1 Allen key (12 mm spanner)
- Assembly tool: JDTE Plus

## Symbols used

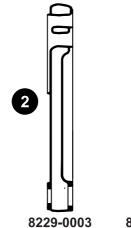
#### Risk of injury and damage to equipment. Attention must be paid to the warnings on $\land$ Caution danger safety of persons and equipment. i Specific information Information must be kept in mind to maintain comfort. Reference Refer to another manual or other pages in this instruction manual.

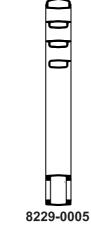
## Warning: Assemble the boiler in the order given by the numbers of each figure, in compliance with all the instructions.

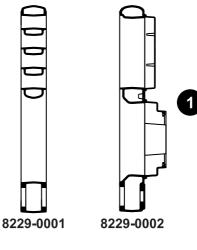
Boilers supplied with an assembled body

start assembly with stage 19: Hydraulic test.

- For boiler supplied with the boiler body in bulk
  - i Mounting: Assembly of the elements is carried out from back to front, as illustrated below.







Front - 2 Rear

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| Boiler type | Rear section | Special intermediate section (1) | Normal intermediate section | Front section |
|-------------|--------------|----------------------------------|-----------------------------|---------------|
| NXR4i-8     | 1            | 1                                | 5                           | 1             |
| NXR4i-9     | 1            | 1                                | 6                           | 1             |
| NXR4i-10    | 1            | 1                                | 7                           | 1             |
| NXR4i-11    | 1            | 1                                | 8                           | 1             |
| NXR4i-12    | 1            | 1                                | 9                           | 1             |
| NXR4i-13    | 1            | 1                                | 10                          | 1             |
| NXR4i-14    | 1            | 1                                | 11                          | 1             |

(1) Special intermediate section in front of rear section. The shape of the intermediate element is particular: the slot includes one triangle instead of two.

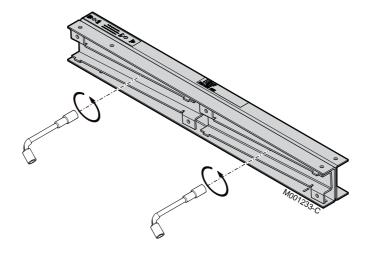
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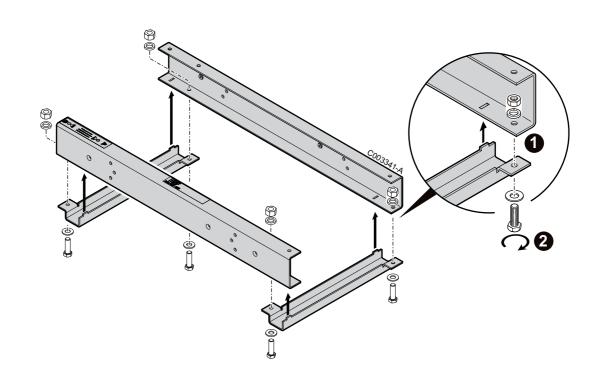
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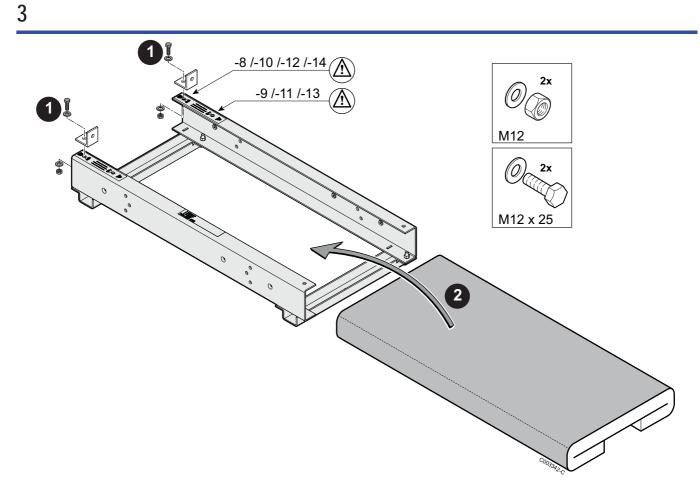
See step 10: Assembling the sections.

8229N025B

Ensure that no residue remains between the various elements ; use if necessary a magnetic rod.

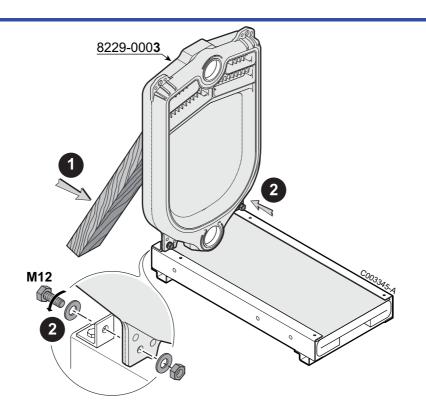


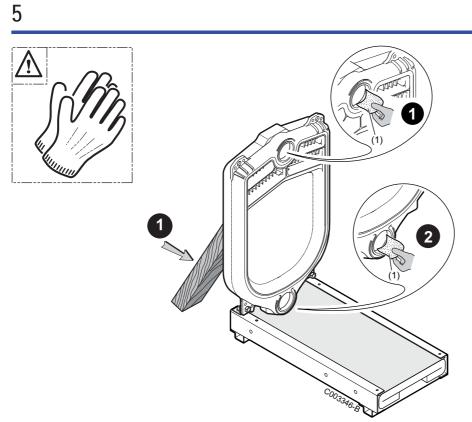




Use the holes corresponding to the number of the boiler's elements, following the indication on the frame.



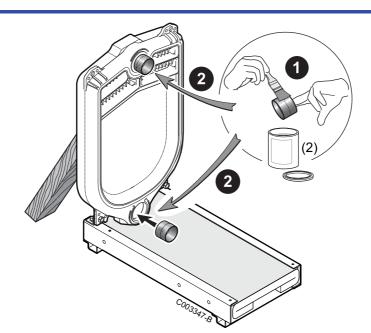




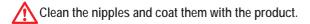
#### (1) Sandpaper

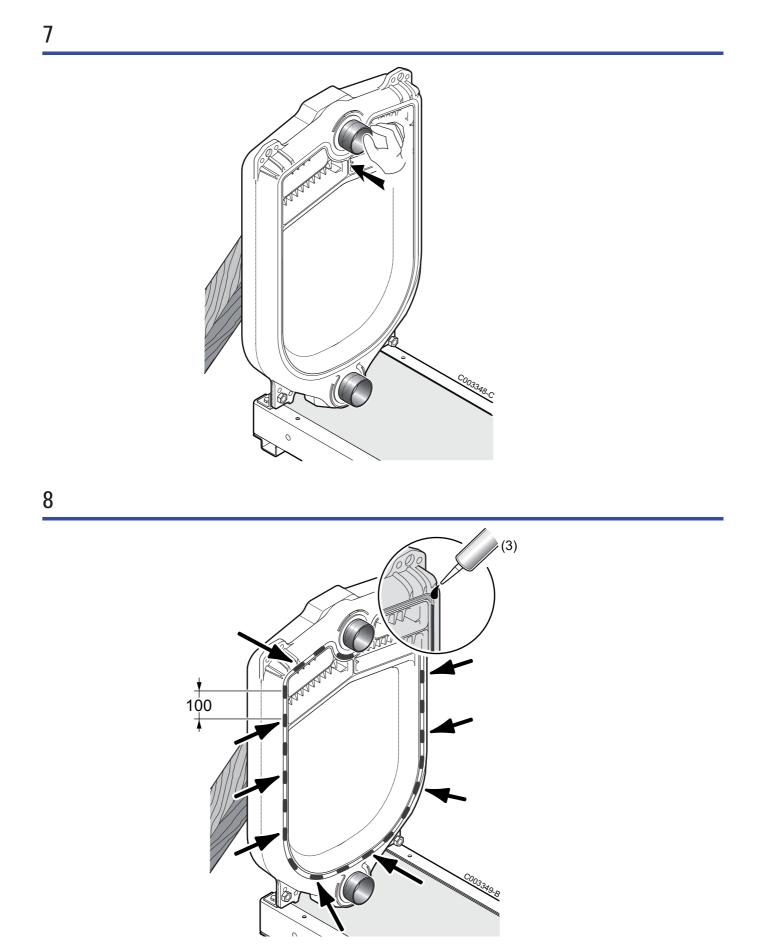
Handle the nipples with gloves, there might be sharp edges.

## 6

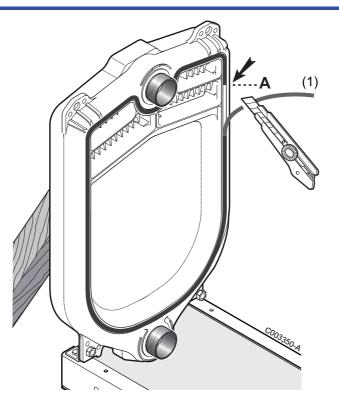


(2) Putty for nipple (Supplied)



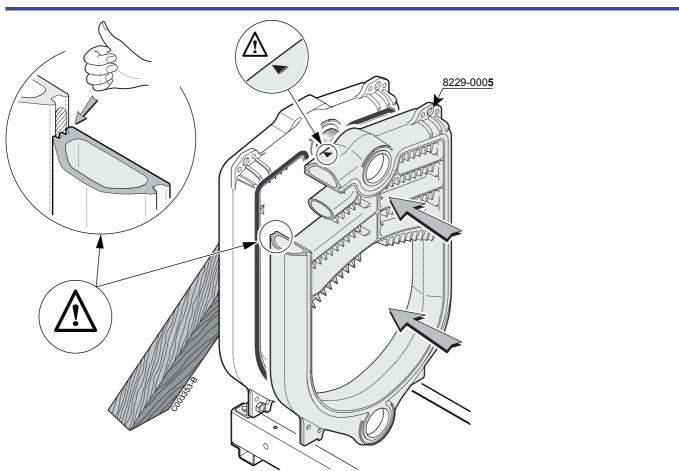


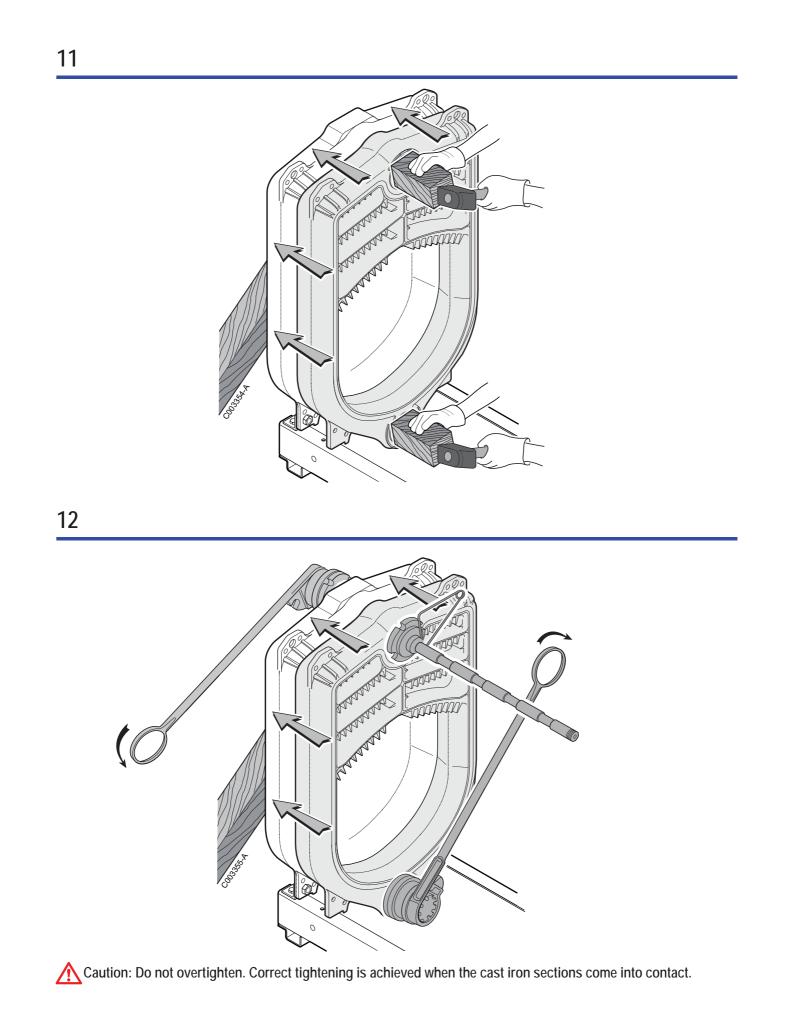
(3) Silicon (supplied)

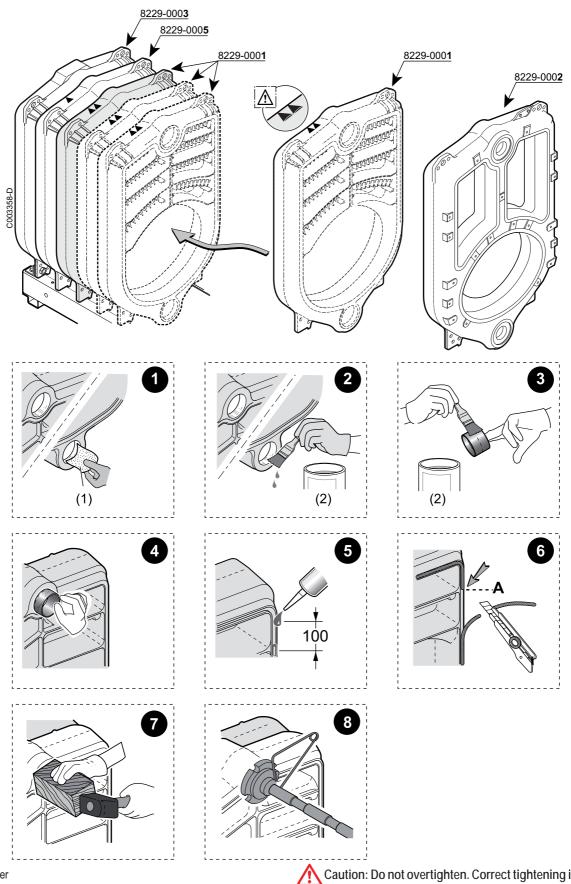


#### (1) Thermocord (Supplied)

Do not pull on the seal while inserting it. Otherwise, you may stretch it and reduce its thickness. You must not make the junction point with the thermocord in the lower part of the section.

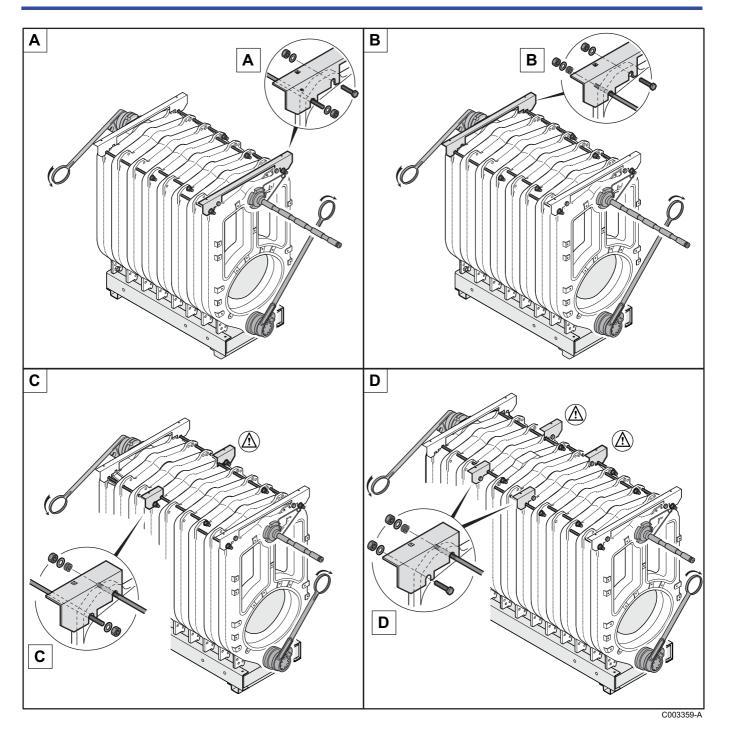




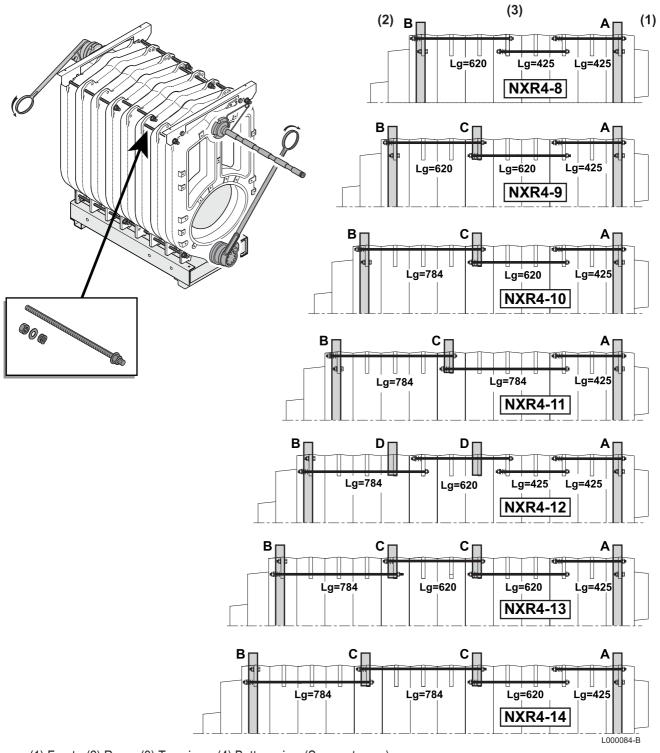


Caution: Do not overtighten. Correct tightening is achieved when the cast iron sections come into contact.

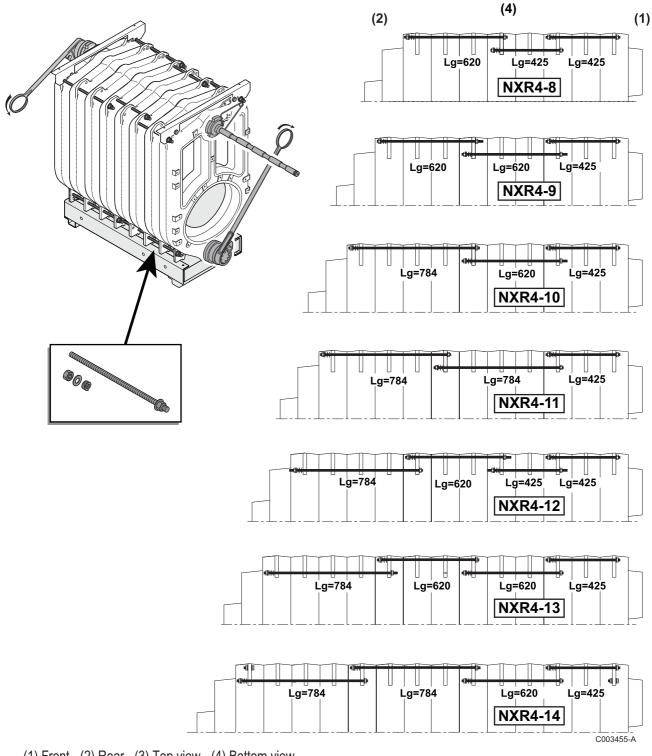
Clean the nipples and coat them with the product.



- Fit the upper assembly rods (boiler body accessories) in the order shown in the (3) diagram (See following pages: Top view). Place the expansion spring and its washer on each rod at the rear. Stop tightening the nuts when the free space between the threads is around 2 mm.
- Fit the upper casing supports (package MP4) as per the details C-D and the upper cross-bars (package MP133-MP2-MP3-MP5) with the assembly rods (boiler body accessories package) as per the details A-B.
- Fit the lower assembly rods in the order shown in the (4) diagram (See following pages: Bottom view).
- Remove the assembly tool.

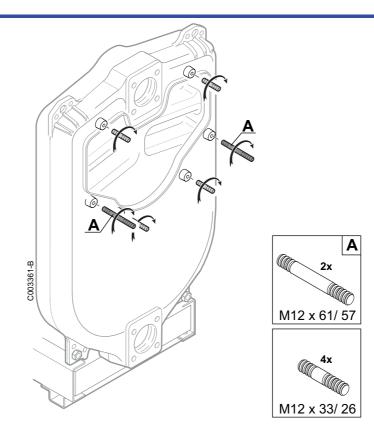


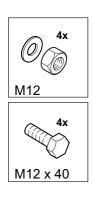
(1) Front - (2) Rear - (3) Top view - (4) Bottom view (See next page)

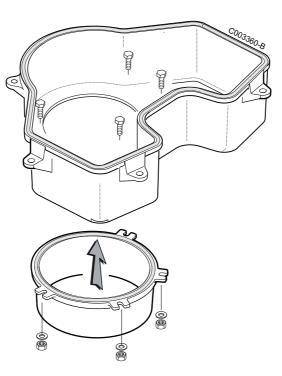


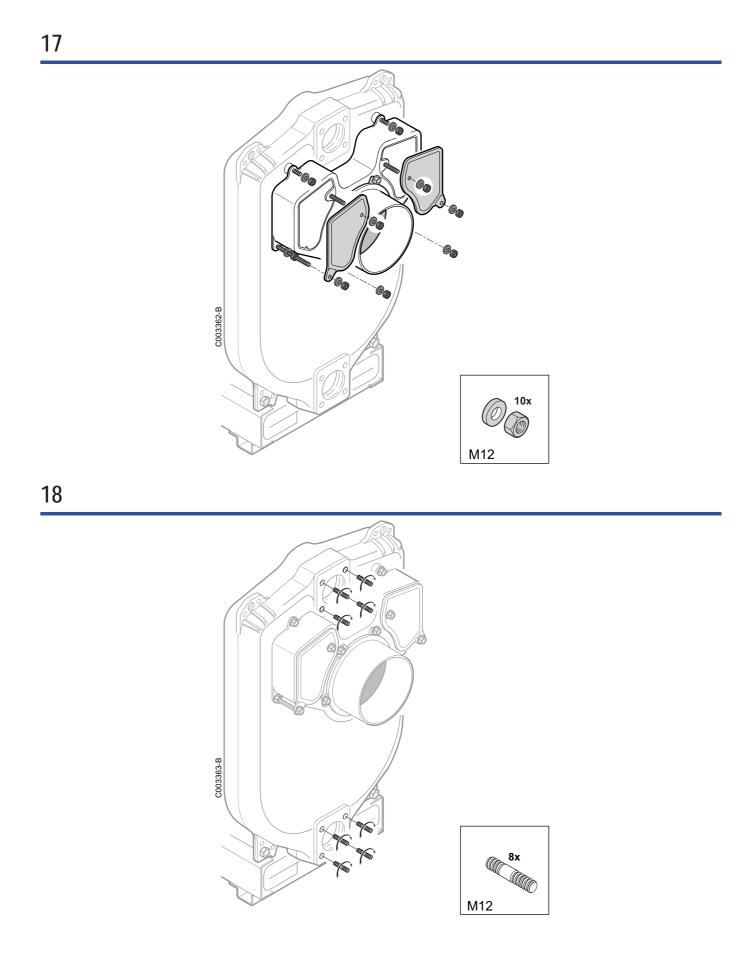
(1) Front - (2) Rear - (3) Top view - (4) Bottom view







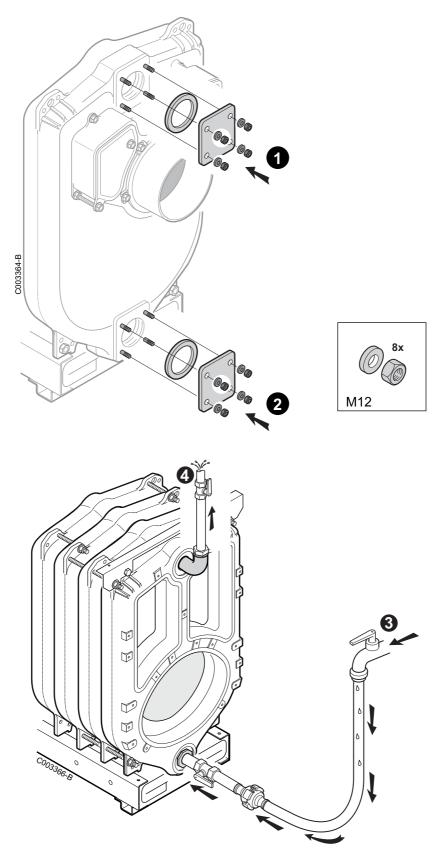




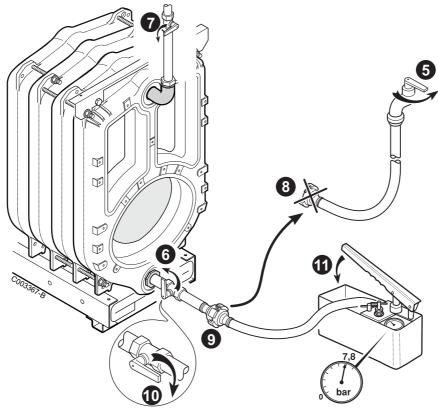
## 19 Hydraulic test

After assembling the boiler body, the installer must carry out a water tightness test at a pressure equal to 1.3 times the operating pressure (that is 7.8 bar mini) for 10 minutes at least.

The test must be done at room temperature.



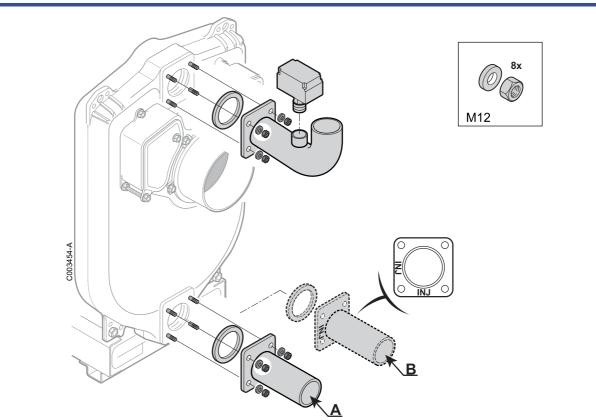
Ensure that all the air in the boiler is vented to avoid any bursting of the body.



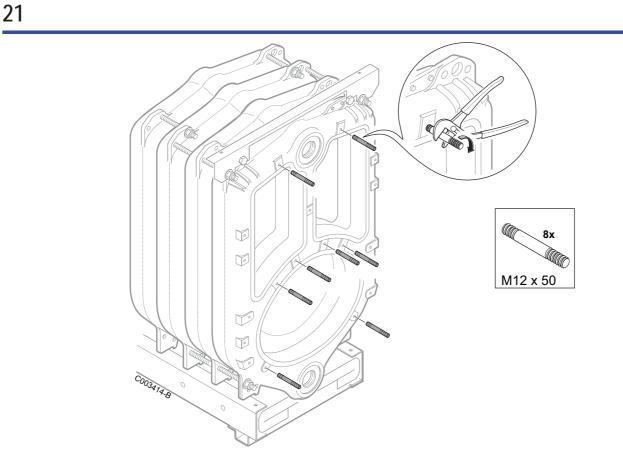
Maintain pressure for at least 10 minutes. Any drop in pressure indicates a leakage in the boiler body.

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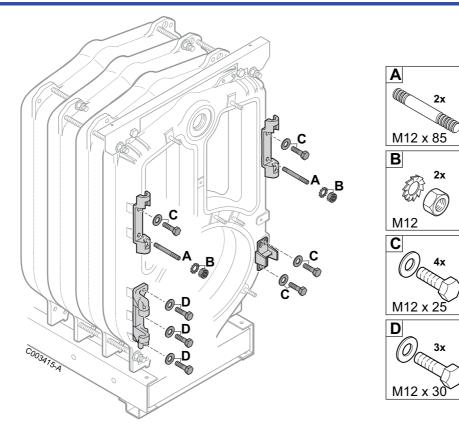
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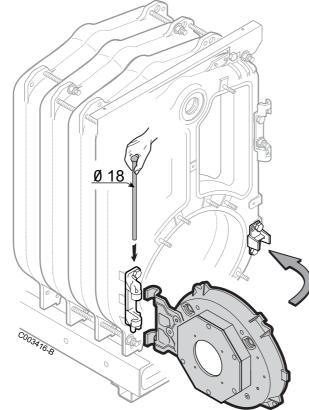
# A: For NXR4i 8 to 10. B: For NXR4i 11 to 14, the return collector is replaced by a collector with water distributor (marked "INJ").

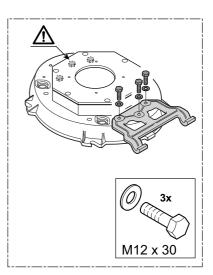






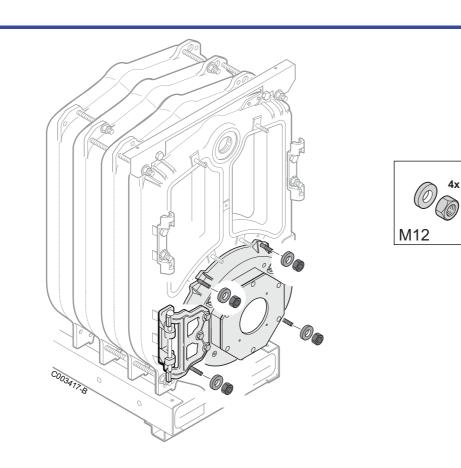
Fit the hinge on the door of the combustion chamber (boiler body accessories package) to the left or right depending on which way you wish to open it.

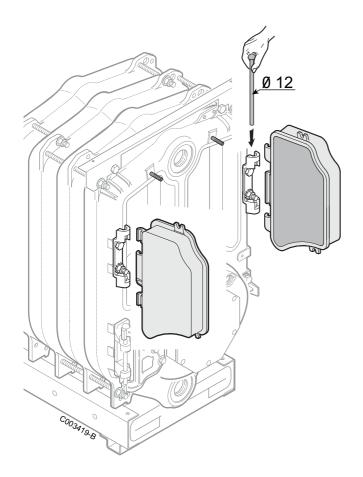


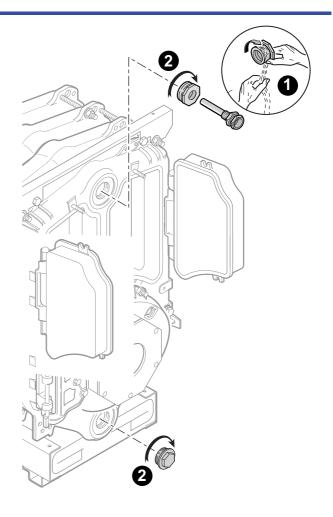


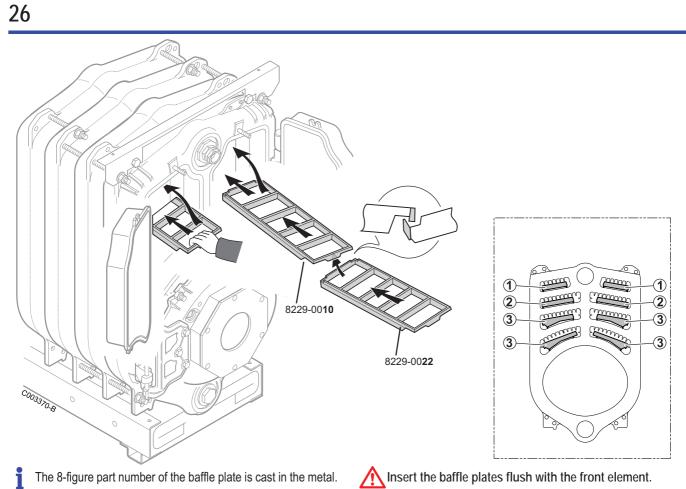
Leave the 3 screws HM12x30 and the 3 washers L12 in place on the combustion chamber door on the side opposite to the added hinge.

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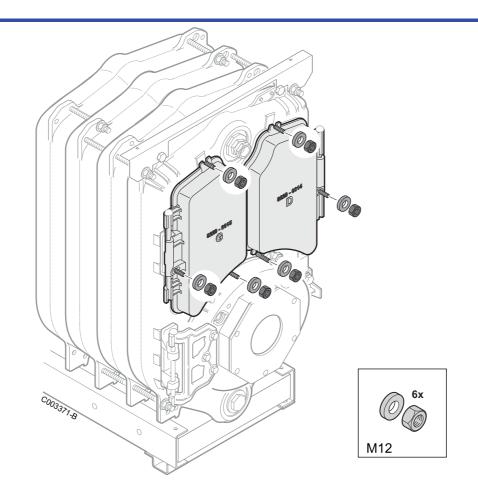


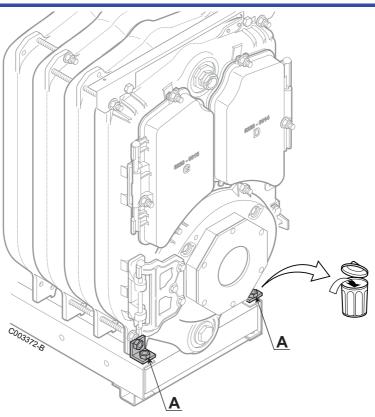




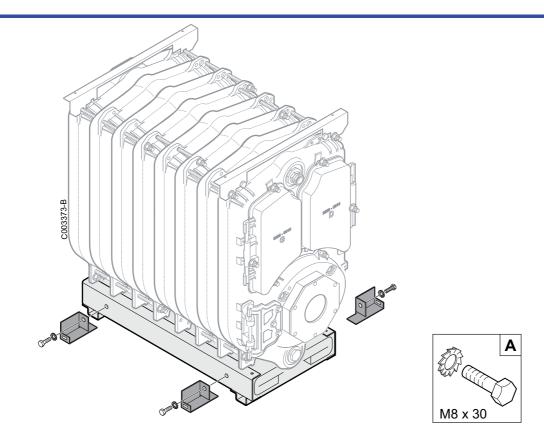
References of the baffle plates per flue way according to the boiler type

| Boiler               | Boiler NXR4i-8 |   | NXR4i-9 - NXR4i-10 | NXR4i-11                                  | NXR4i-12                                  | NXR4i-13 - NXR4i-14 |
|----------------------|----------------|---|--------------------|---|---|---------------------|
| Upper flue<br>ways   | 1              | First 1 x 8229-0010 then<br>1 x 8229-0022 | 2 x 8229-0010      | First 2 x 8229-0010 then<br>1 x 8229-0022 | First 2 x 8229-0010 then<br>1 x 8229-0022 | 3 x 8229-0010       |
| Central flue<br>ways | 2              | First 1 x 8229-0011 then<br>1 x 8229-0023 | 2 x 8229-0011      | First 2 x 8229-0011 then<br>1 x 8229-0023 | First 2 x 8229-0011 then<br>1 x 8229-0023 | 3 x 8229-0011       |
| Lower flue<br>ways   | 3              | First 1 x 8229-0012 then<br>1 x 8229-0024 | 2 x 8229-0012      | First 2 x 8229-0012 then<br>1 x 8229-0024 | 2 x 8229-0012                             | 2 x 8229-0012       |

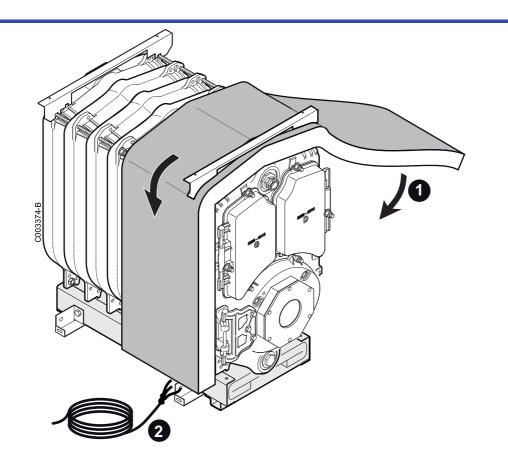


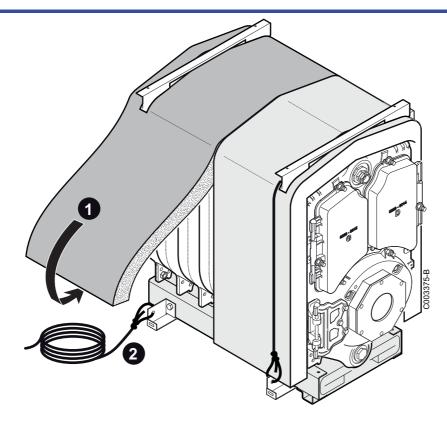


Boilers supplied with an assembled body: Unscrew the screws and remove the A brackets.



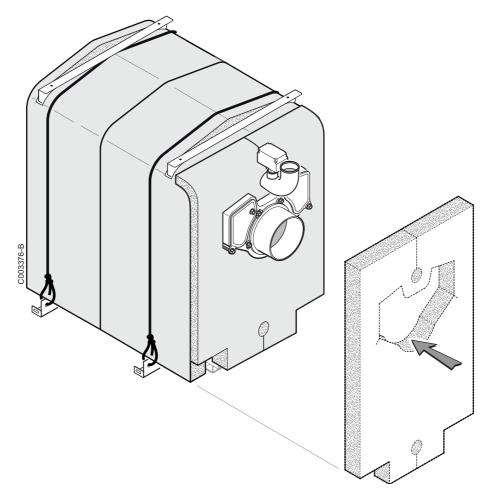
|   | NXR4-8        | x4 |
|---|---------------|----|
| А | NXR4-9-10-11  | x6 |
|   | NXR4-12-13-14 | x8 |

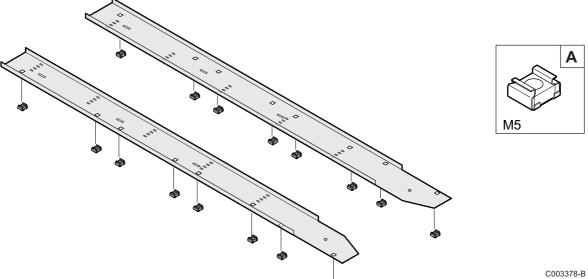




|                      | Insulation width | NXR4i-8 | NXR4i-9 | NXR4i-10 | NXR4i-11 | NXR4i-12 | NXR4i-13 | NXR4i-14 |
|----------------------|------------------|---------|---------|----------|----------|----------|----------|----------|
| Front section        | 500 mm (MP133)   | 1       | 1       | 1        | 1        | 1        | 1        | 1        |
|                      | 500 mm (MP4)     | -       | 1       | 1        | 1        | 2        | 2        | 2        |
| Intermediate section | 600 mm (MP5)     | -       | 1       | -        | -        | 1        | -        | -        |
|                      | 800 mm (MP2)     | -       | -       | 1        | -        | -        | 1        | -        |
| Rear section         | 900 mm (MP3)     | 1       | -       | -        | 1        | -        | -        | 1        |

Mounting of the rear insulation

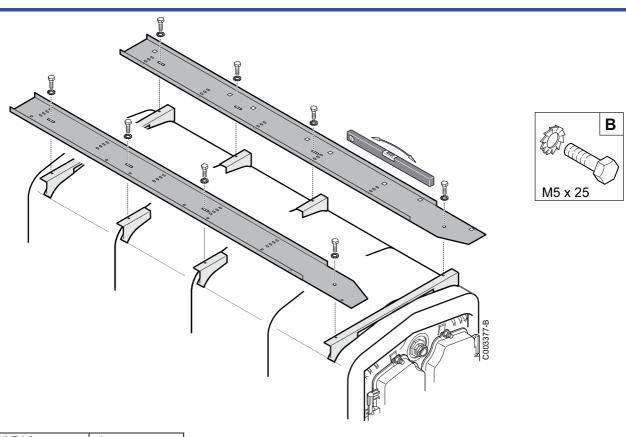




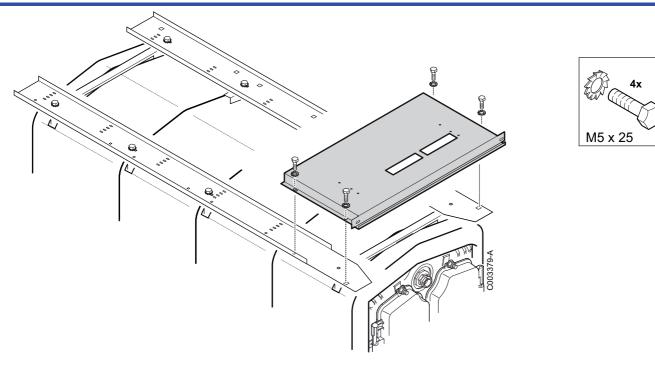
Example with 12 elements.

|   | NXR4-8        | x8  |
|---|---------------|-----|
| А | NXR4-9-10-11  | x12 |
|   | NXR4-12-13-14 | x16 |

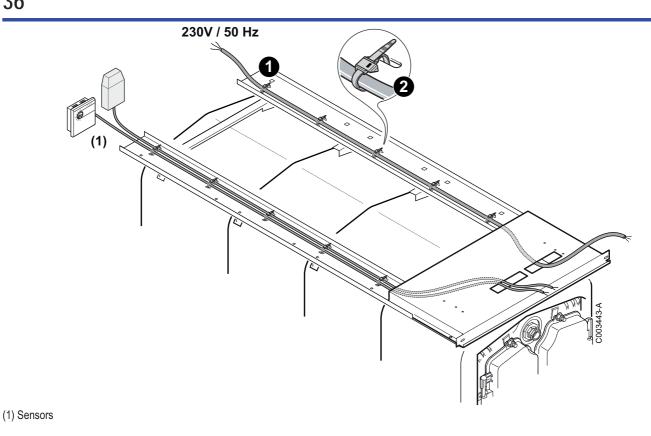




|   | NXR4-8        | x4 |
|---|---------------|----|
| В | NXR4-9-10-11  | x6 |
|   | NXR4-12-13-14 | x8 |



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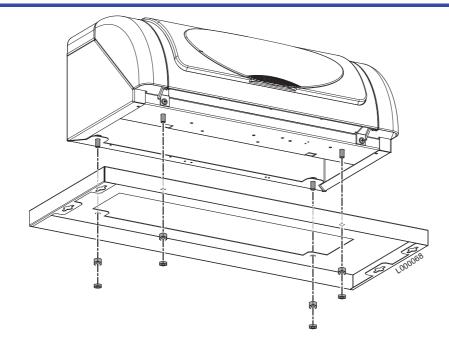


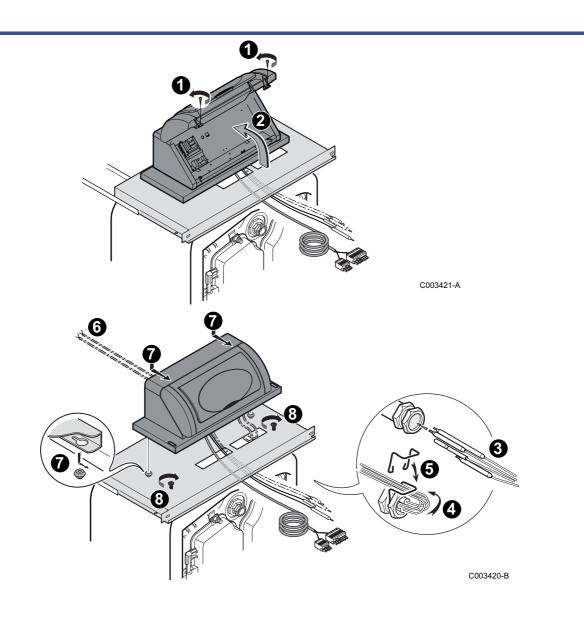
## 37

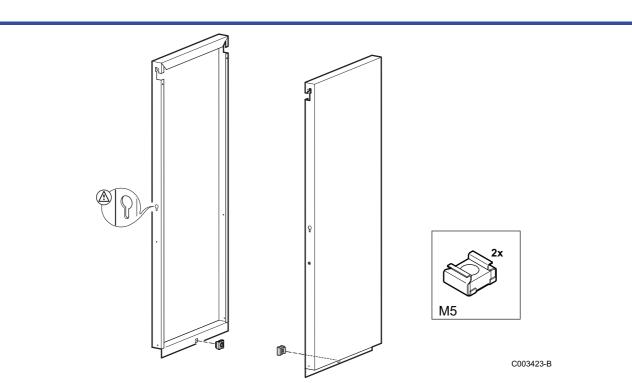
Electrical connection: All connections are made with the terminal boxes designed for that purpose on the back of the boiler's command board.

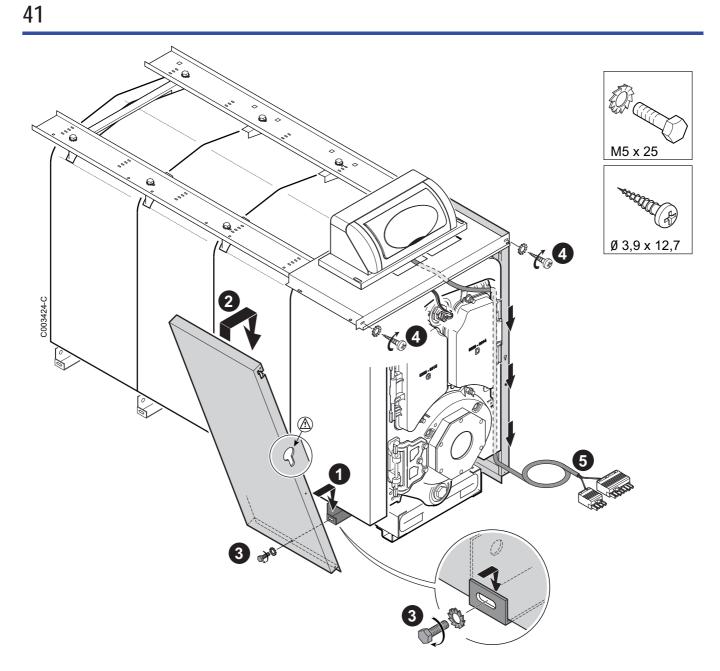
Connections must be made by a qualified technician.

Refer to the connection instructions supplied with the control panel..

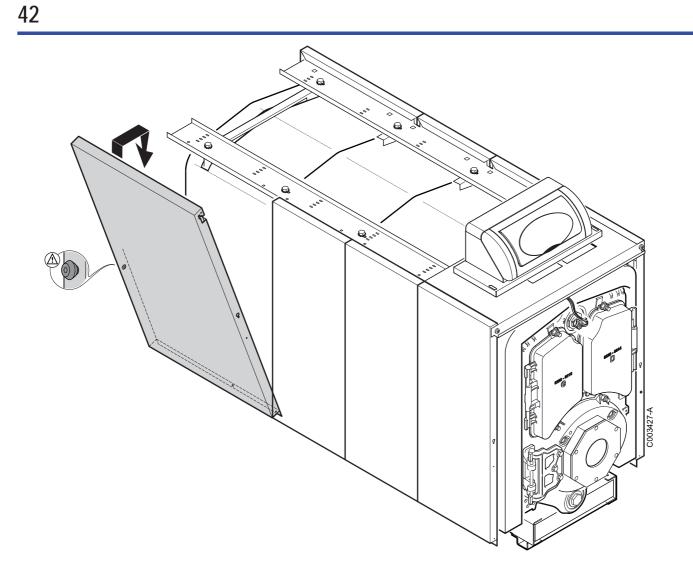


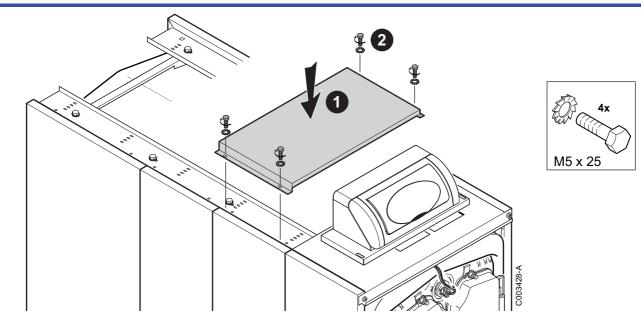


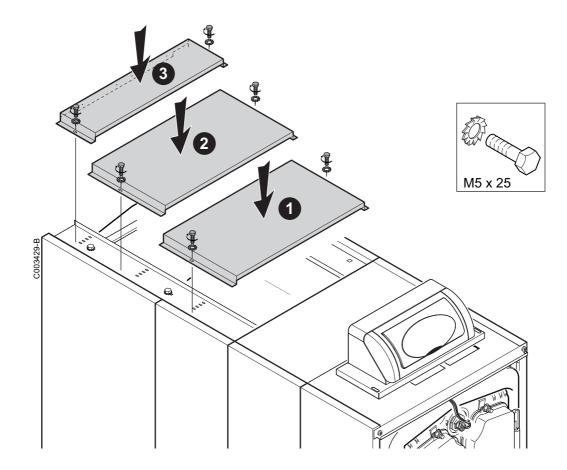




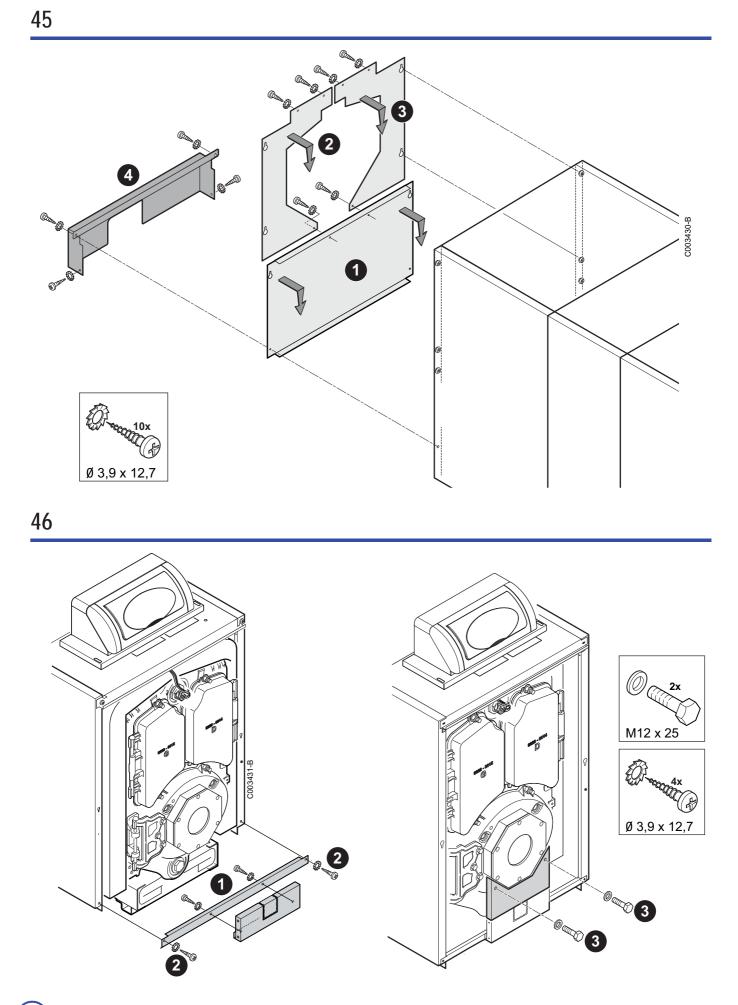
|                      | Width of the panel | NXR4i-8 | NXR4i-9 | NXR4i-10 | NXR4i-11 | NXR4i-12 | NXR4i-13 | NXR4i-14 |
|----------------------|--------------------|---------|---------|----------|----------|----------|----------|----------|
| Front section        | 520 mm (MP133)     | 1       | 1       | 1        | 1        | 1        | 1        | 1        |
|                      | 770 mm (MP2)       | -       | -       | 1        | -        | -        | -        | -        |
| Intermediate section | 930 mm (MP3)       | 1       | -       | -        | 1        | -        | -        | -        |
| Intermediate Section | 480 mm (MP4)       | -       | 1       | 1        | 1        | 2        | 2        | 2        |
|                      | 610 mm (MP5)       | -       | 1       | -        | -        | -        | -        | -        |
|                      | 770 mm (MP2)       | -       | -       | -        | -        | -        | 1        | -        |
| Rear section         | 930 mm (MP3)       | -       | -       | -        | -        | -        | -        | 1        |
|                      | 610 mm (MP5)       | -       | -       | -        | -        | 1        | -        | -        |

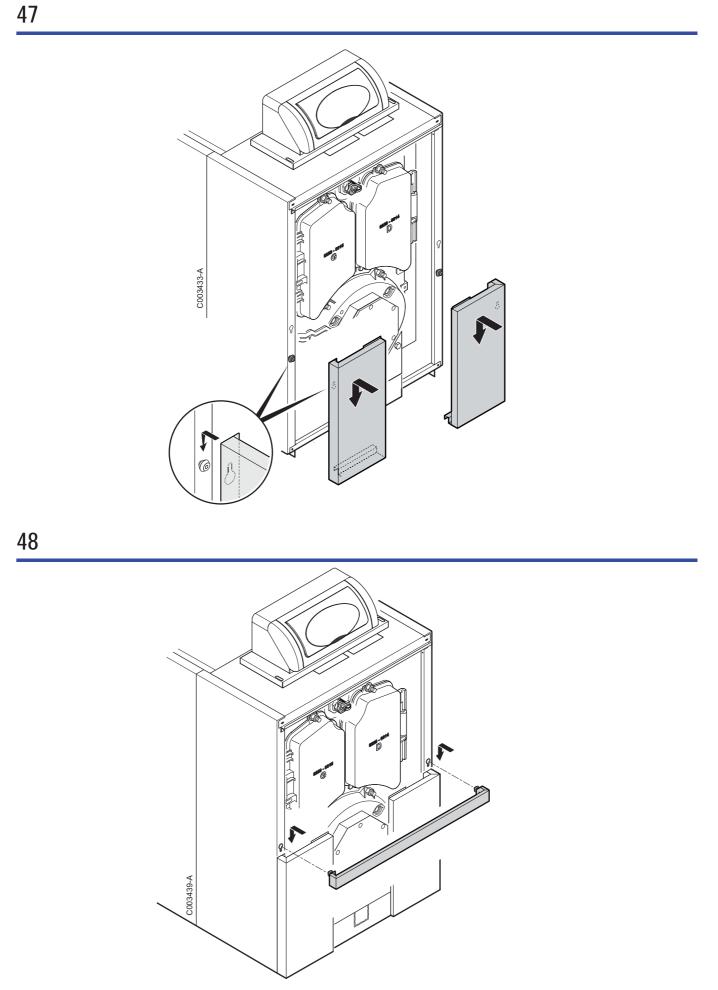


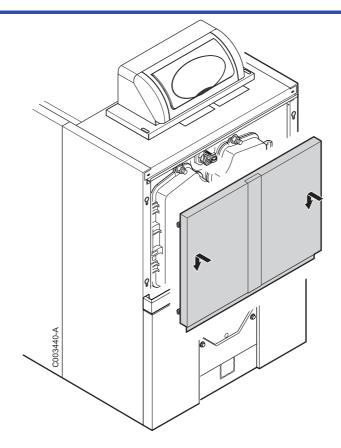




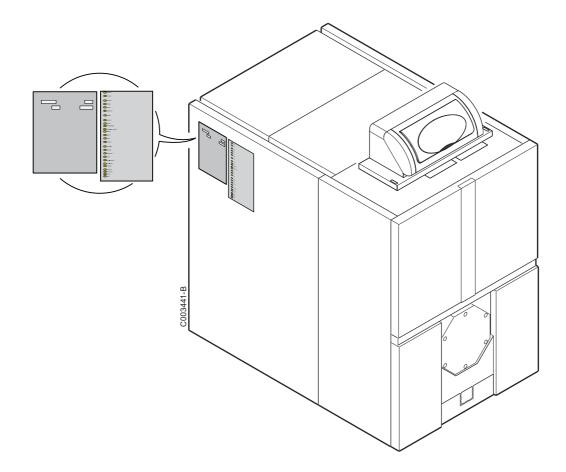
|                    | Length of the upper panel | NXR4i-8 | NXR4i-9 | NXR4i-10 | NXR4i-11 | NXR4i-12 | NXR4i-13 | NXR4i-14 |
|--------------------|---------------------------|---------|---------|----------|----------|----------|----------|----------|
| Front cover        | 480 mm (MP133)            | 1       | 1       | 1        | 1        | 1        | 1        | 1        |
| Intermediate cover | 480 mm (MP4)              | -       | 1       | 1        | 1        | 2        | 2        | 2        |
| Rear cover         | 330 mm (MP2)              | -       | -       | 1        | -        | -        | 1        | -        |
|                    | 490 mm (MP3)              | 1       | -       | -        | 1        | -        | -        | 1        |
|                    | 170 mm (MP5)              | -       | 1       | -        | -        | 1        | -        | -        |







## 3 Data plate



• Affix the rating plate and the warning label supplied with the instructions, and corresponding to the country of destination.

#### **Commercial sales** technical & service enquiries

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#### **Spares**

Potterton Commercial spares are available nationwide through the interpart network of approved stockists. Alternatively please contact:-

#### Interpart

**Brooks House** Coventry Road Warwick CV34 4LL

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## **Applications & Installations**

Our experienced technical support team are available to offer advice on any aspect of heating system design and boiler installation.

Please contact: 0845 070 1057

#### **Commercial service offices**

Our service organisation covers the whole of the UK to look after your needs for all Potterton Commercial products.

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- Burner and boiler replacement
- Oil/gas conversions
- Water treatment and descaling
- Packaged units

All descriptions and illustrations contained within this leaflet have been carefully prepared, but we reserve the right to make changes and improvements in our products which may affect the accuracy of the information in this leaflet.

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