

Fuel oil/gas boilers

PK 450



Assembly Instructions

1 Package list

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

■ Boilers supplied with an assembled body

Number of sections	8	9	10	11	12	13	14
Assembled boiler body - (contents depend upon model)	1	1	1	1	1	1	1

■ For boiler supplied with the boiler body in bulk

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 model)		1	1	1	1	1	1	1
Common accessories	1 Package	CS 20	CS 20	CS 20	CS 20	CS 20	CS 20	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		8	9	10	11	12	13	14
Casing (common parts)	Package MH1	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

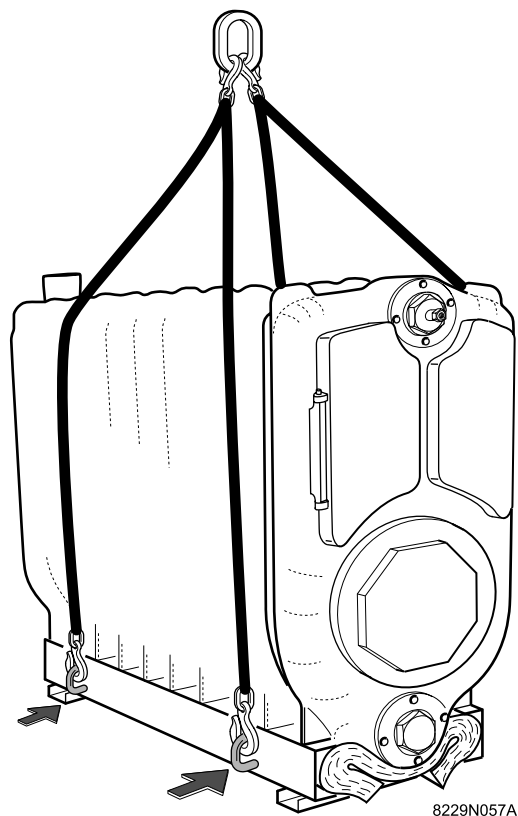
Number of sections		8	9	10	11	12	13	14
1 Package (Content depends upon country)		1	1	1	1	1	1	1

6. Control panel

All models can be equipped with one of the following control panels:

- Standard control panel: Package MG 1
- R control panel: Package MG 2

2 Manoeuvring the assembled boiler body




i To manoeuvre the assembled body, it is possible to use the four lifting rings located on the frame.




3 Mounting

■ Tools required

- 1 22 box spanner
- 1 Phillips screwdriver
- 1 hammer
- 1 putty gun
- 1 stanley knife
- 13 - 19 - 24 spanners
- 1 Allen spanner (12 mm spanner)
- Assembly tool: JDTE Plus

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

■ Symbols used

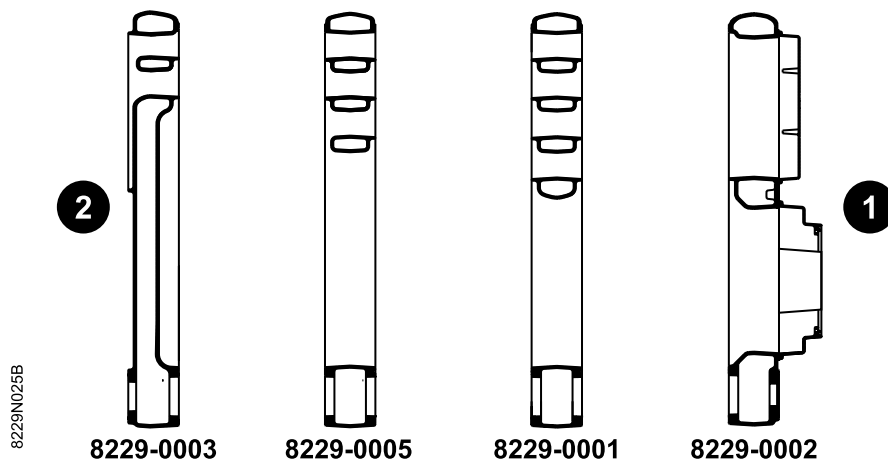
	Caution danger	Risk of injury and damage to equipment. Attention must be paid to the warnings on safety of persons and equipment.
	Specific information	Information must be kept in mind to maintain comfort.
	Reference	Refer to another manual or other pages in this instruction manual.

■ Boilers supplied with an assembled body

i 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.




① Front - ② Rear

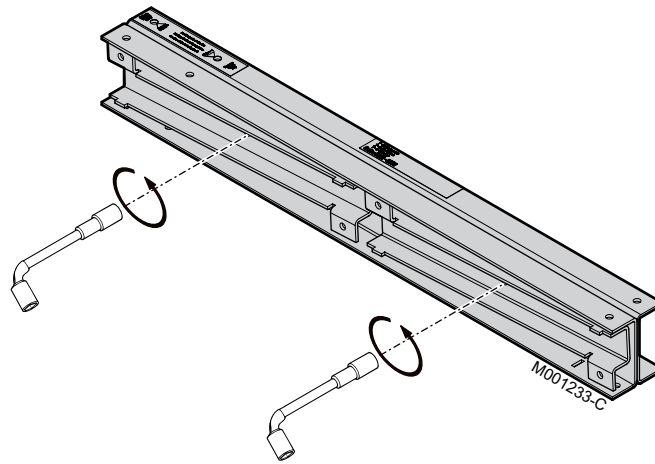
Boiler type	Rear section	Special intermediate section (1)	Normal intermediate section	Front section
PK 450-8	1	1	5	1
PK 450-9	1	1	6	1
PK 450-10	1	1	7	1
PK 450-11	1	1	8	1
PK 450-12	1	1	9	1
PK 450-13	1	1	10	1
PK 450-14	1	1	11	1

(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.

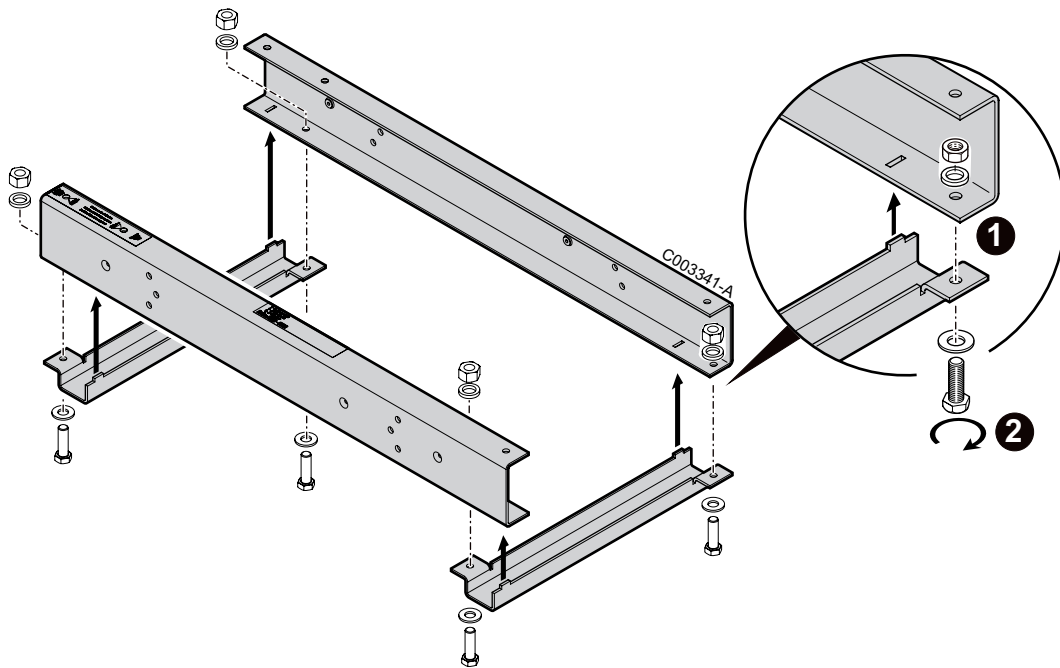
 See step 10: Assembling the sections.

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

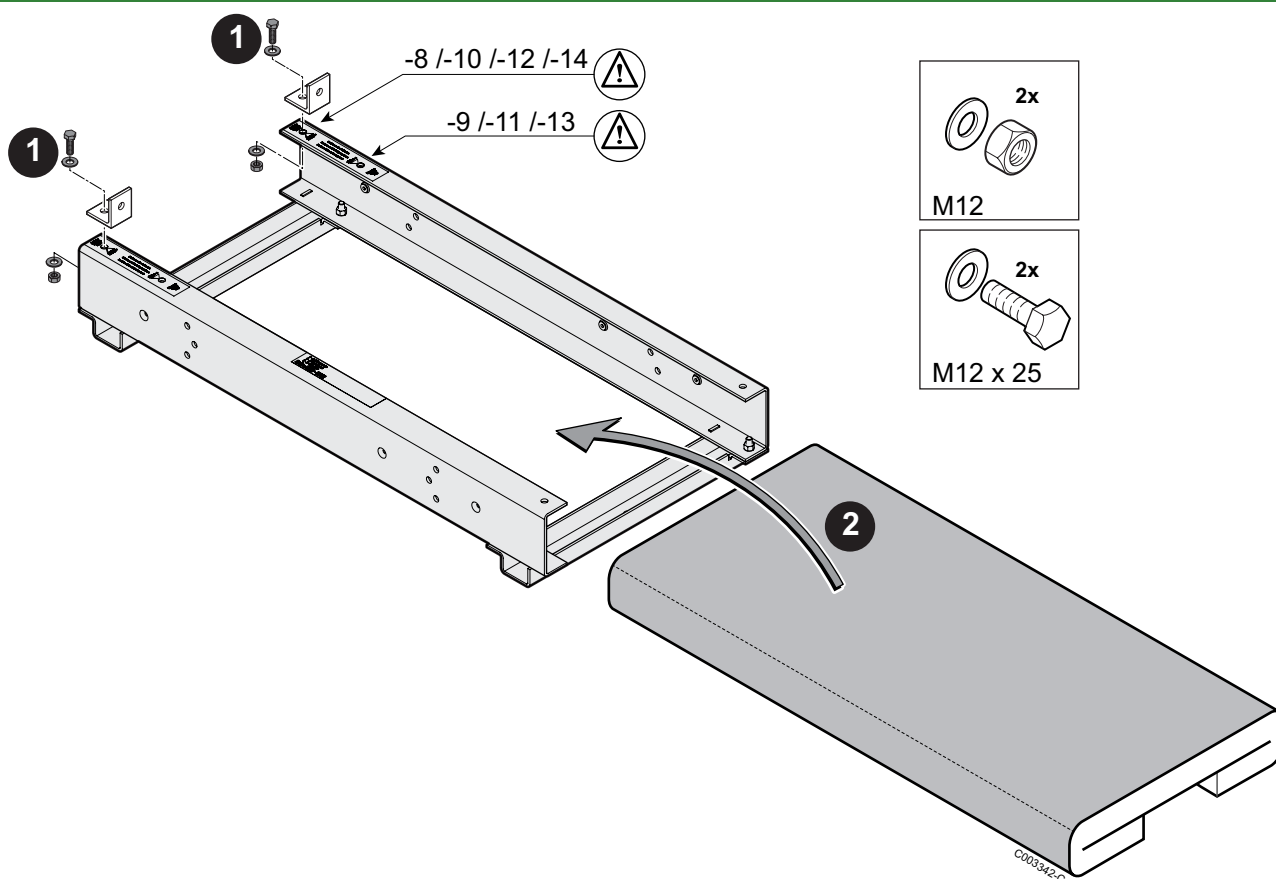
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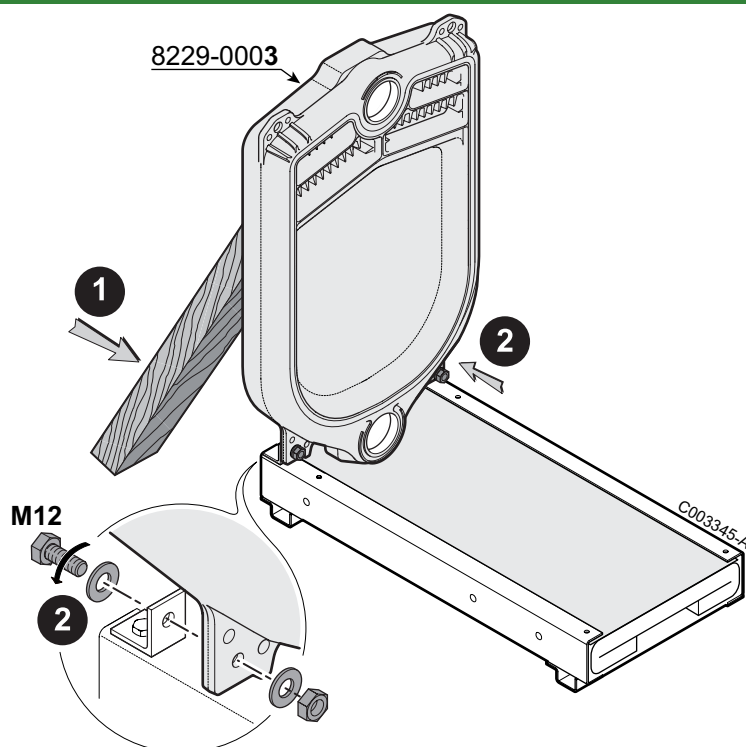


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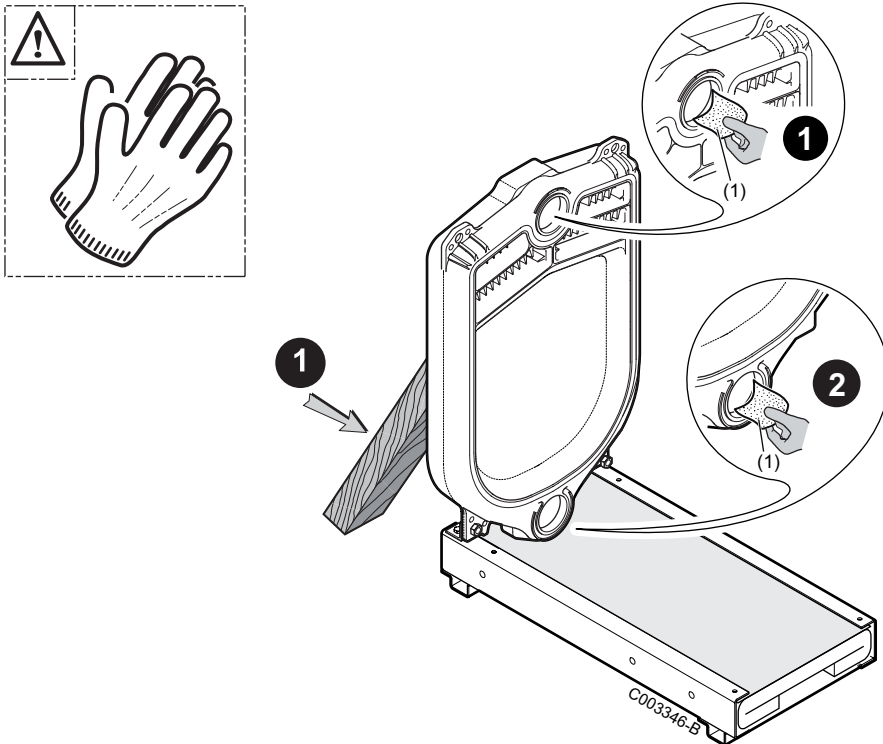


⚠ Use the holes corresponding to the number of the boiler's elements, following the indication on the frame.

4



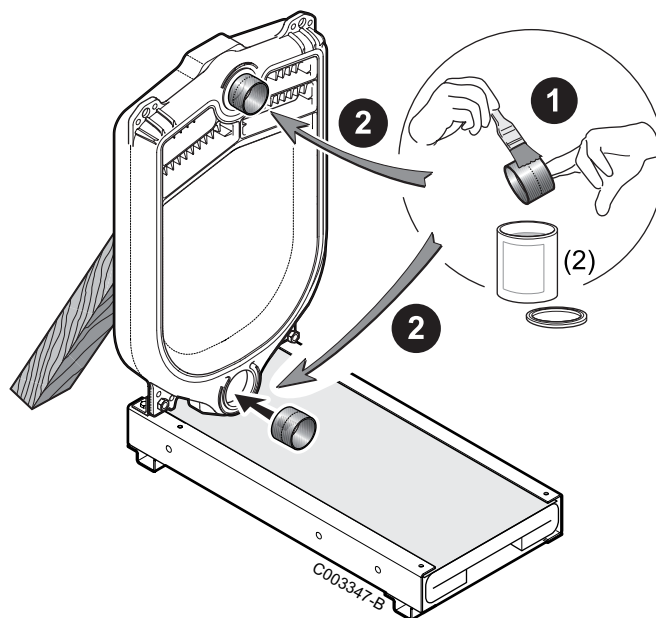
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(1) Sandpaper

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

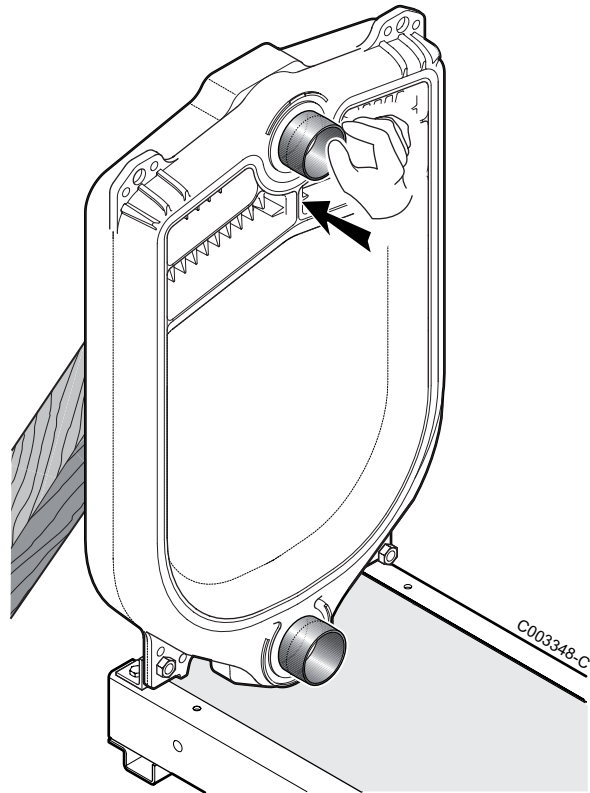
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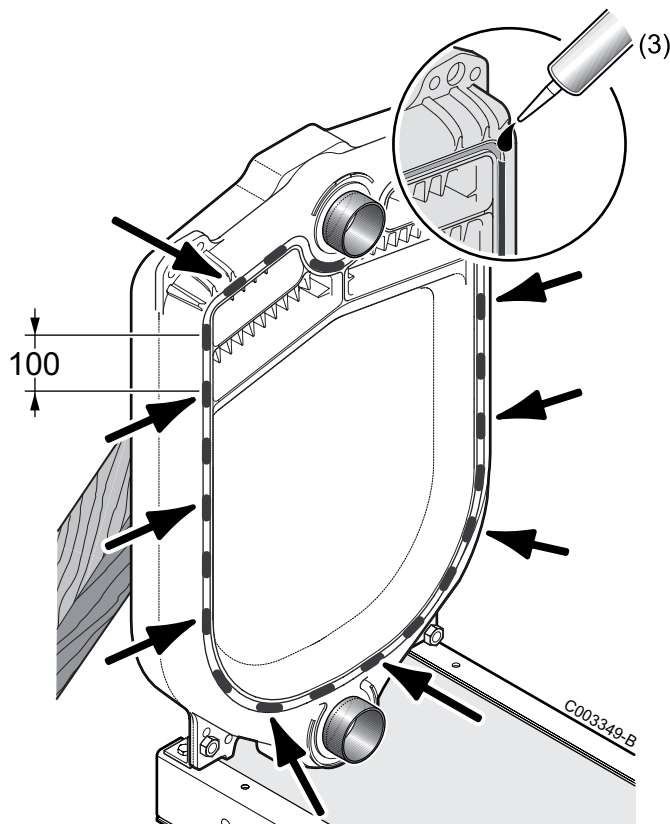
(2) Putty for nipple (Supplied)

! Clean the nipples and coat them with the product.

7

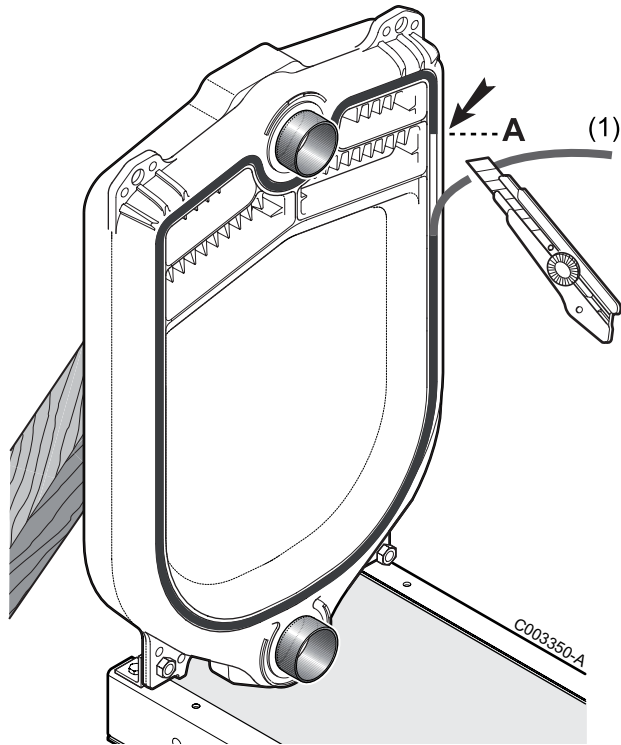


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(3) Silicon (supplied)

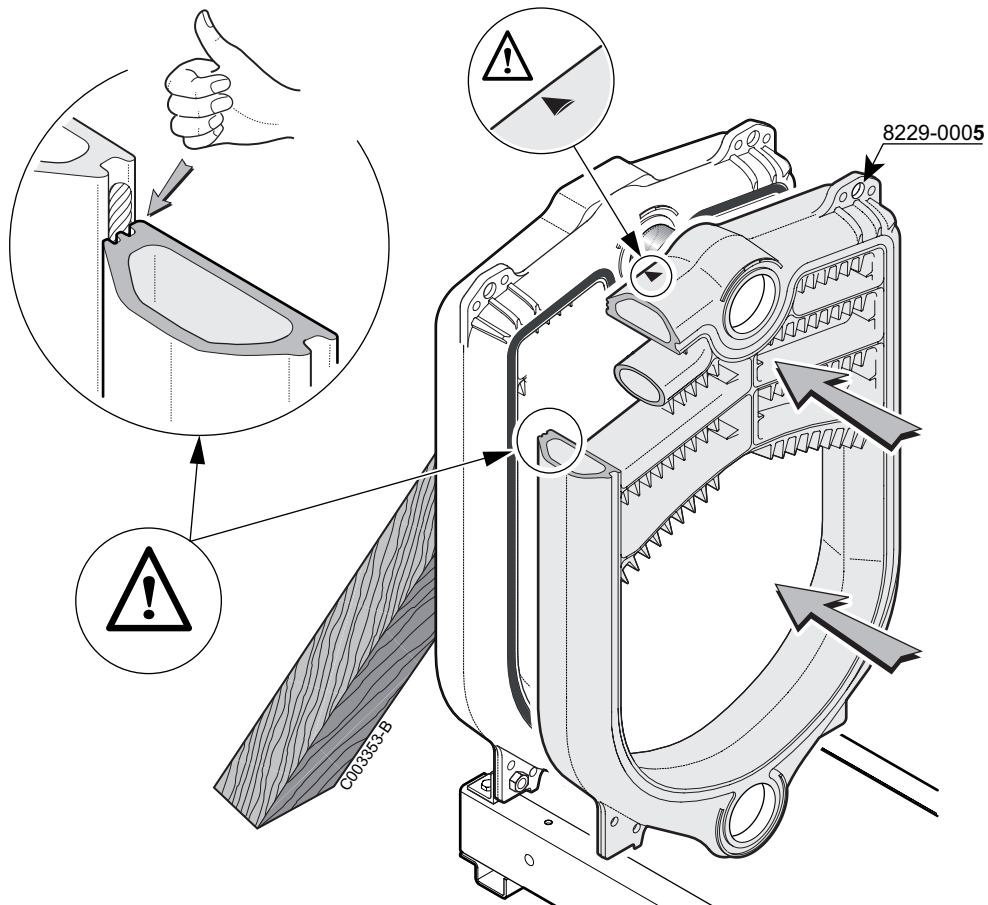
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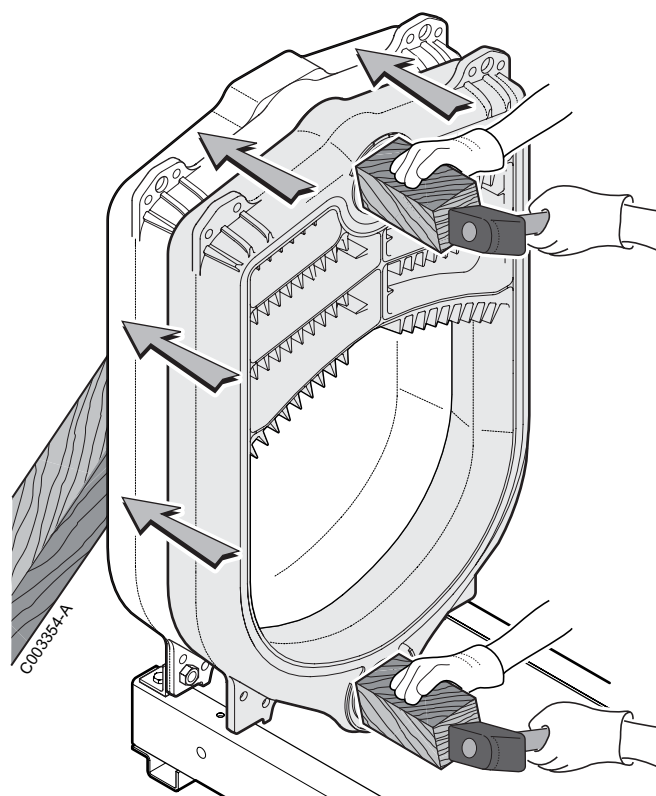
(1) Thermocord (Supplied)

⚠ 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.

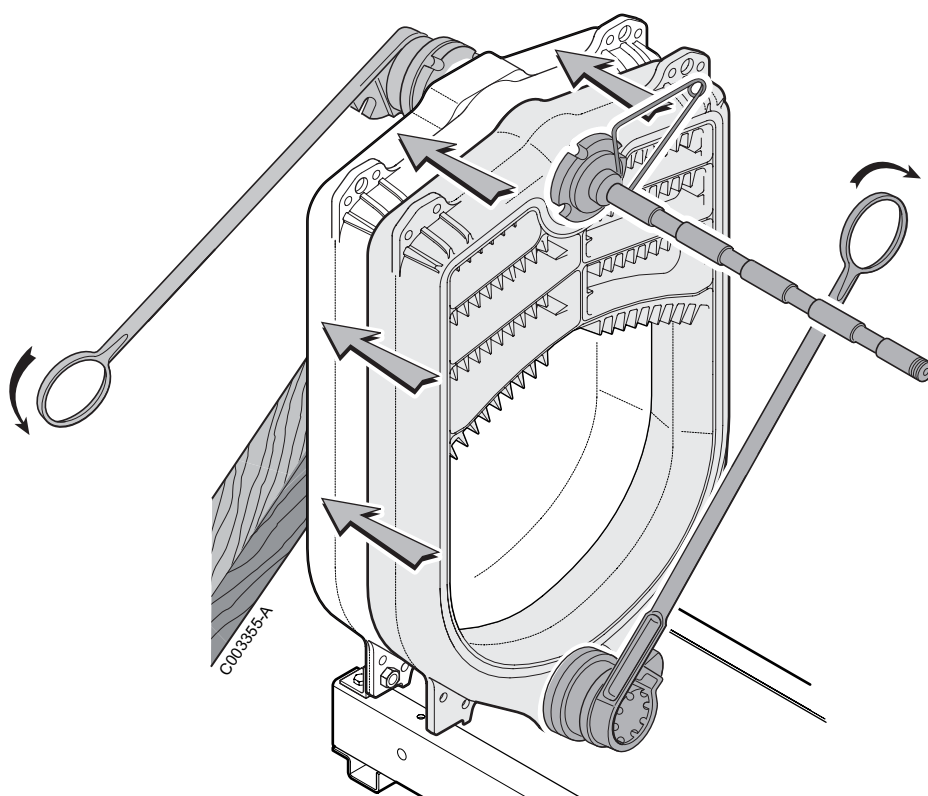
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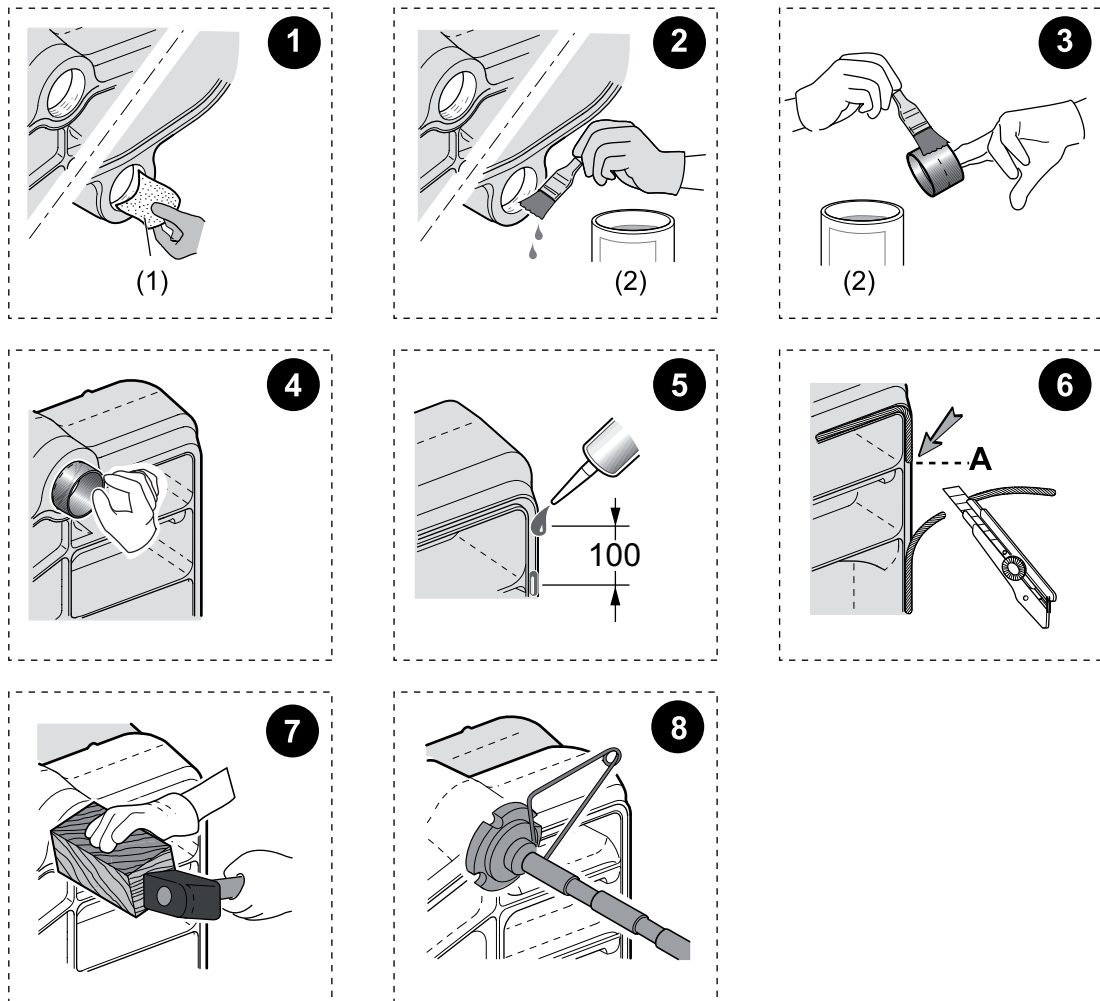
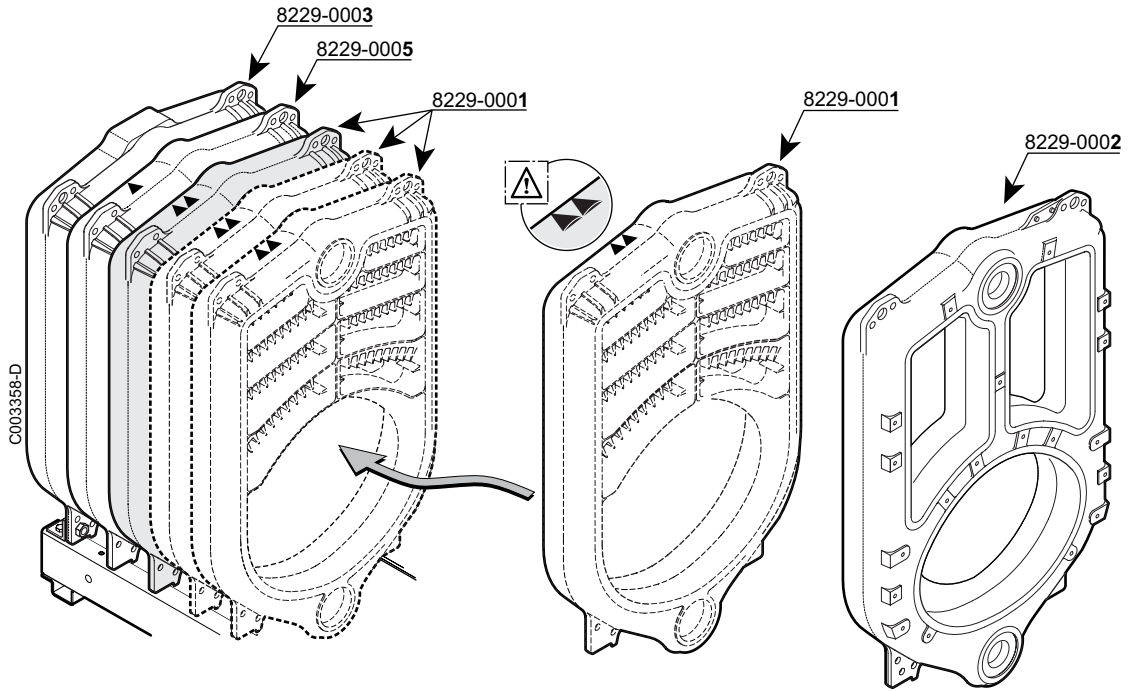
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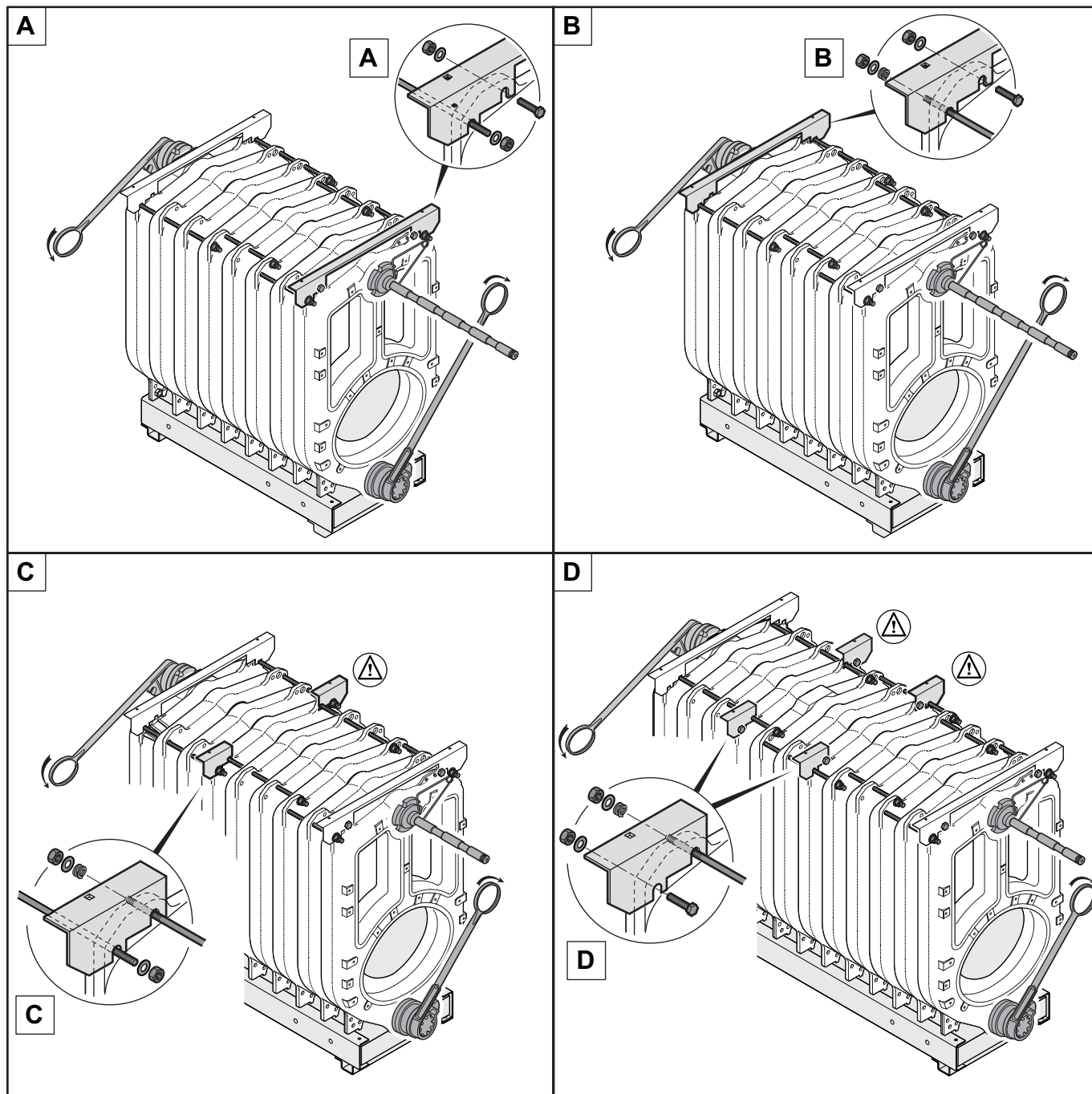
⚠ Caution: Do not overtighten. Correct tightening is achieved when the cast iron sections come into contact.



- (1) Sandpaper
- (2) Putty for nipple (Supplied)

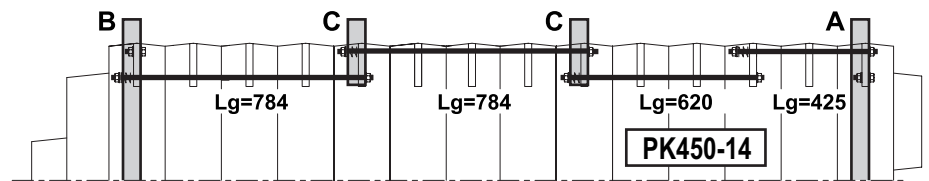
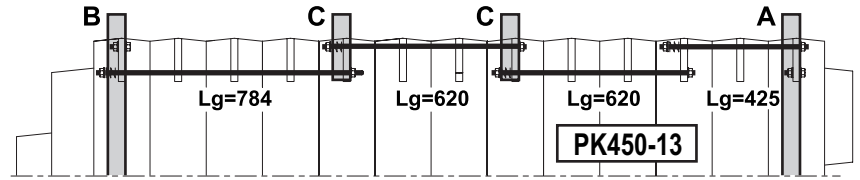
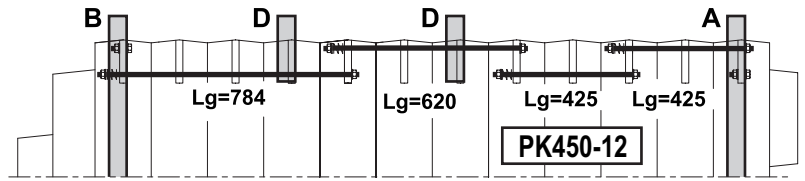
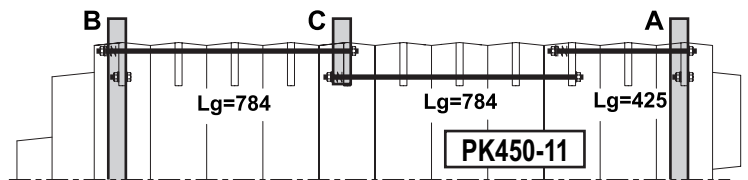
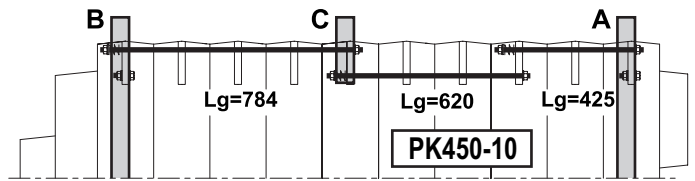
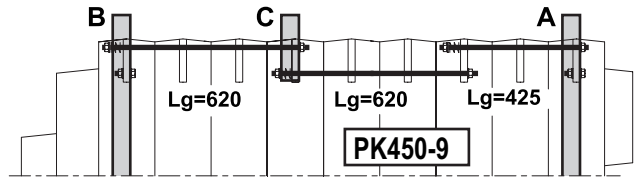
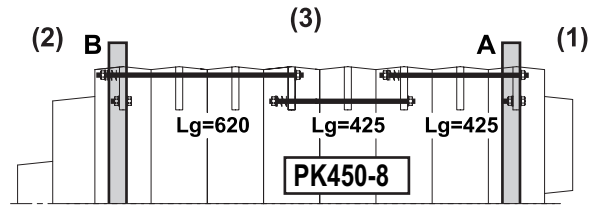
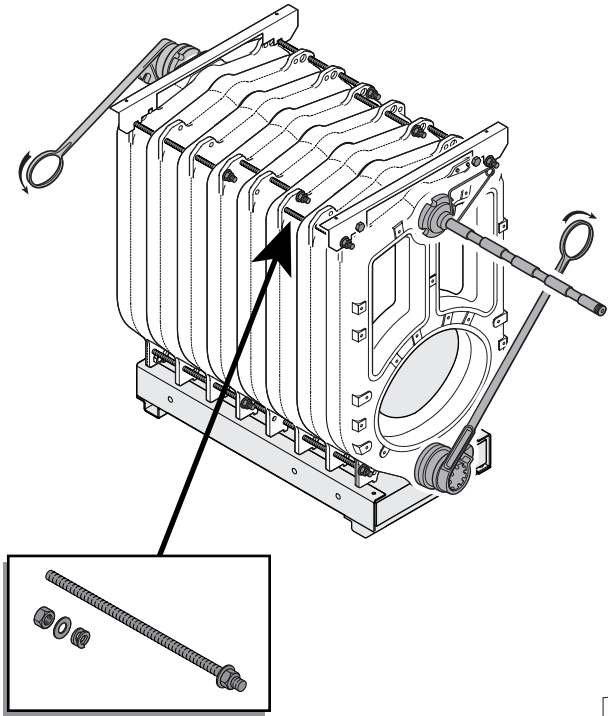
⚠ Caution: Do not overtighten. Correct tightening is achieved when the cast iron sections come into contact.

⚠ Clean the nipples and coat them with the product.



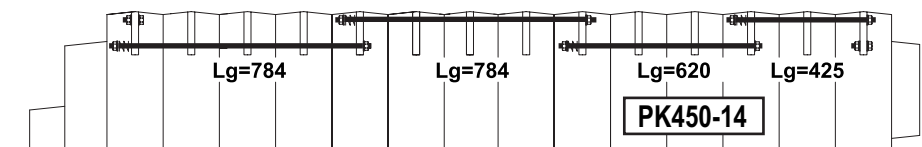
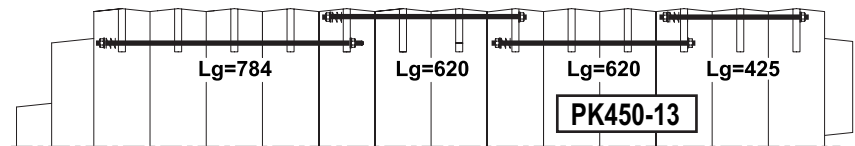
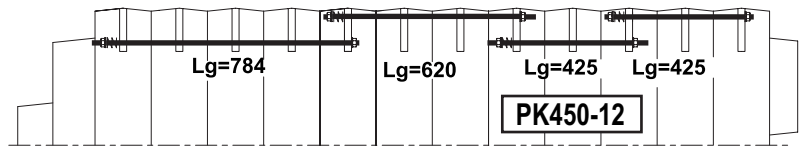
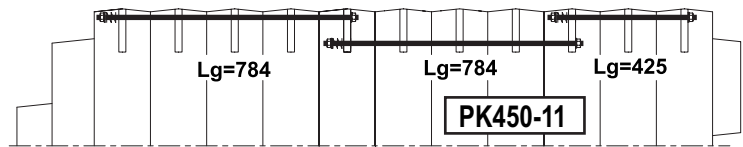
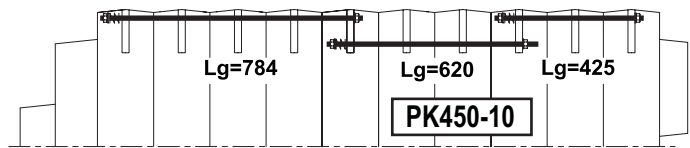
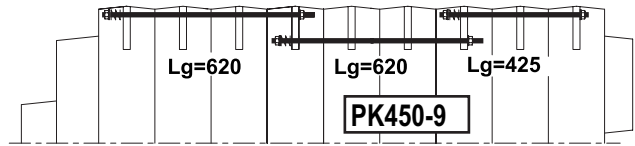
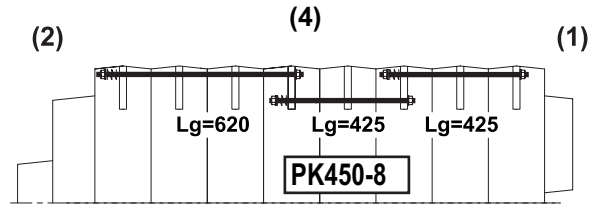
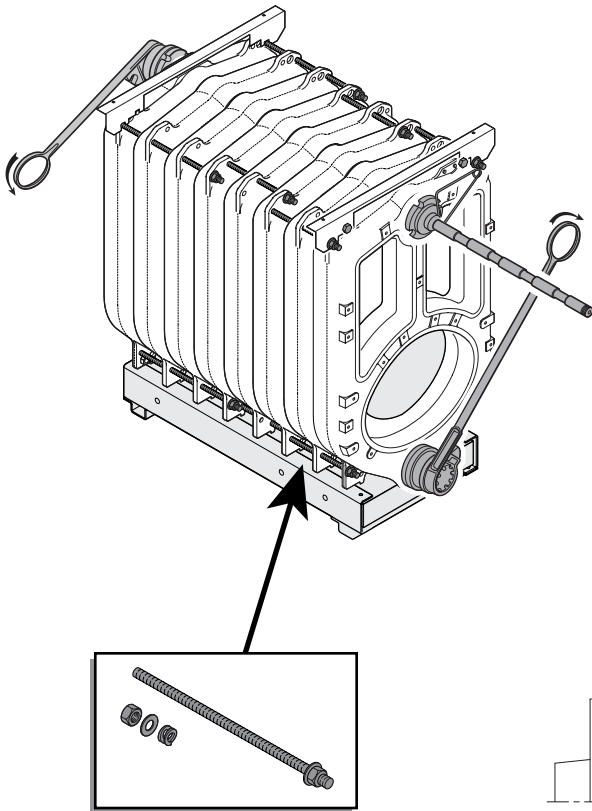
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- Fit the upper assembly rods (boiler body accessories) in the order shown in the (3) diagram (See following pages: Top view). Place the expansion spring and its washer on each rod at the rear. **Stop tightening the nuts when the free space between 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 MH1-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.



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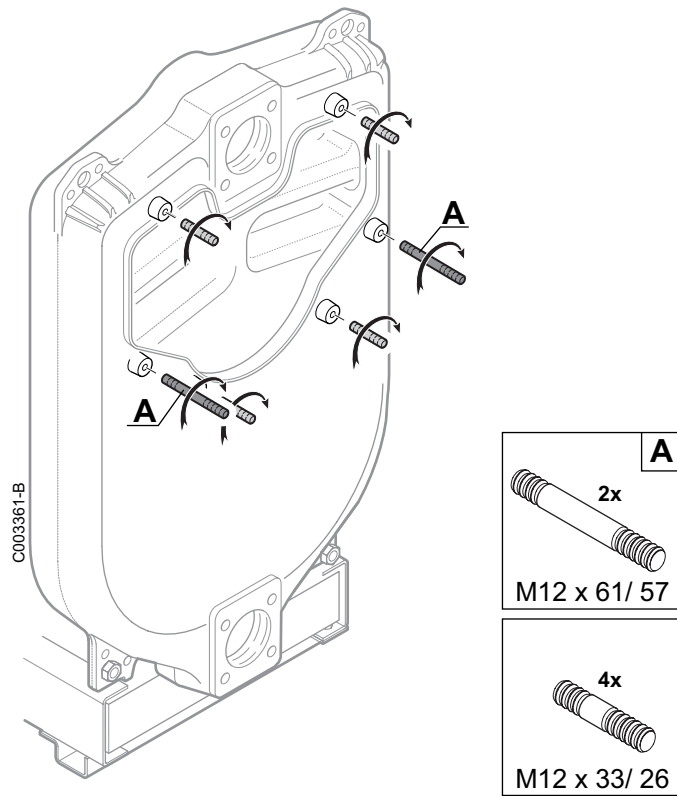
(1) Front - (2) Rear - (3) Top view - (4) Bottom view (See next page)



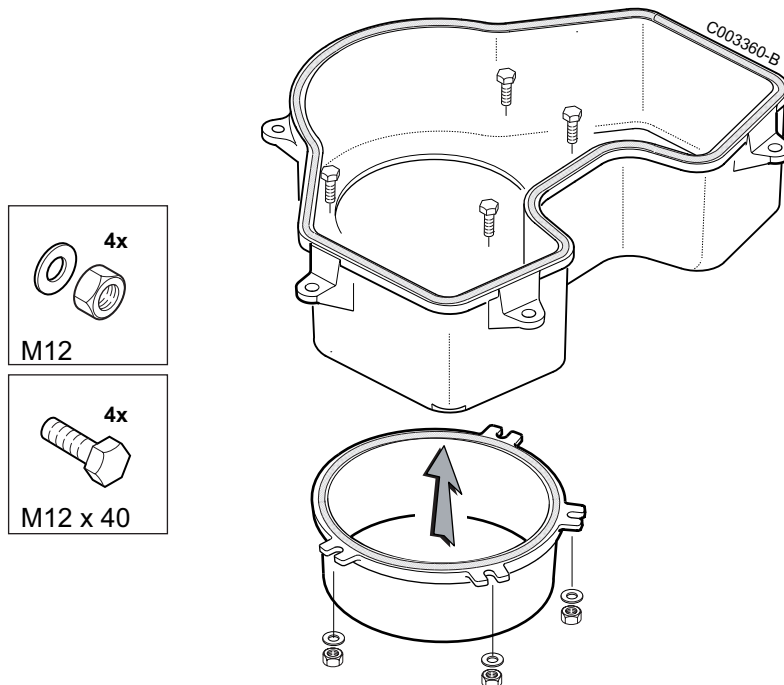
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(1) Front - (2) Rear - (3) Top view - (4) Bottom view

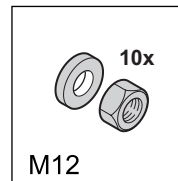
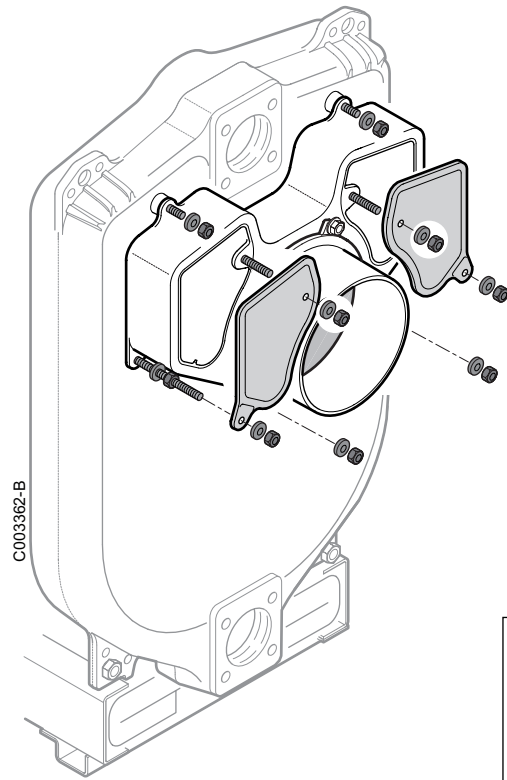
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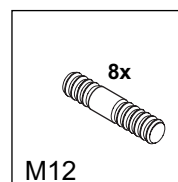
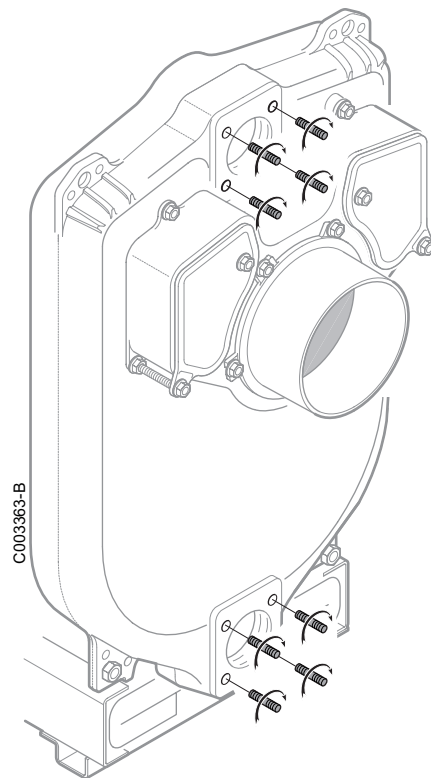
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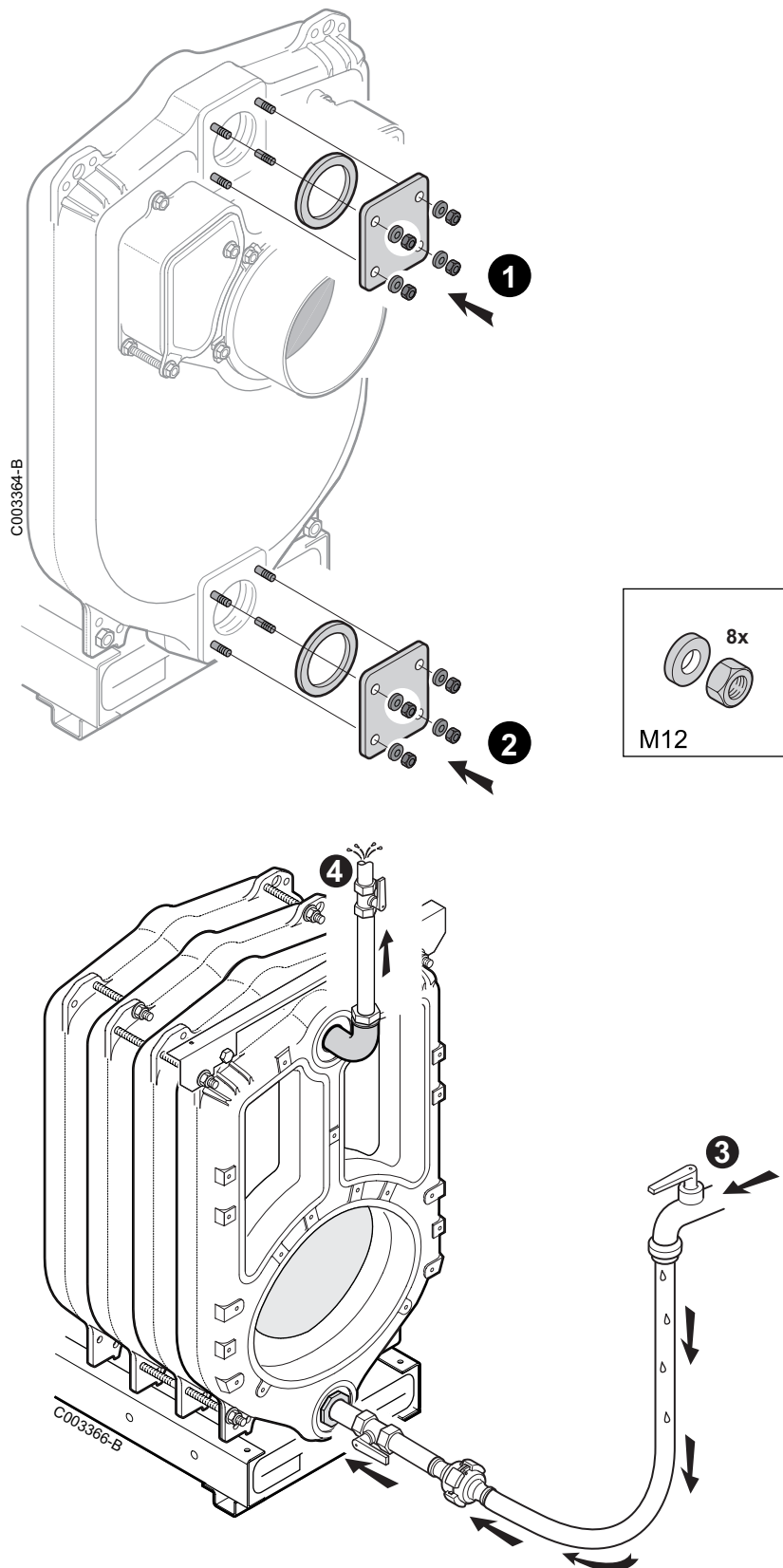
18



19 Hydraulic test

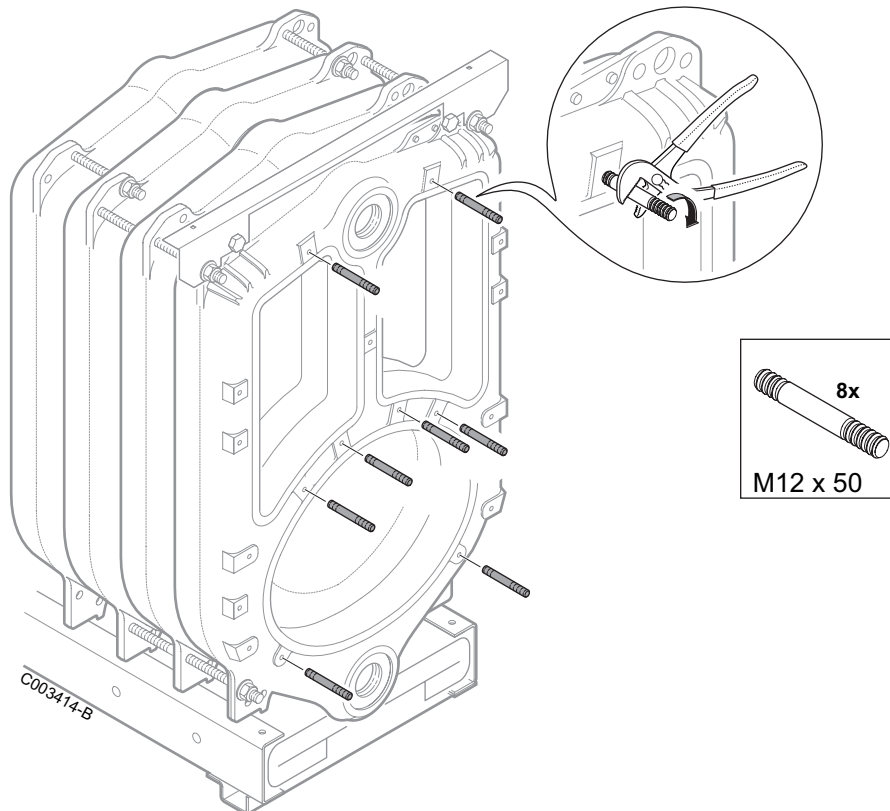
After assembling the boiler body, the installer must carry out a water tightness test at a pressure equal to 1.3 times the operating pressure (that is 7.8 bar mini) for 10 minutes at least.

The test must be done at room temperature.

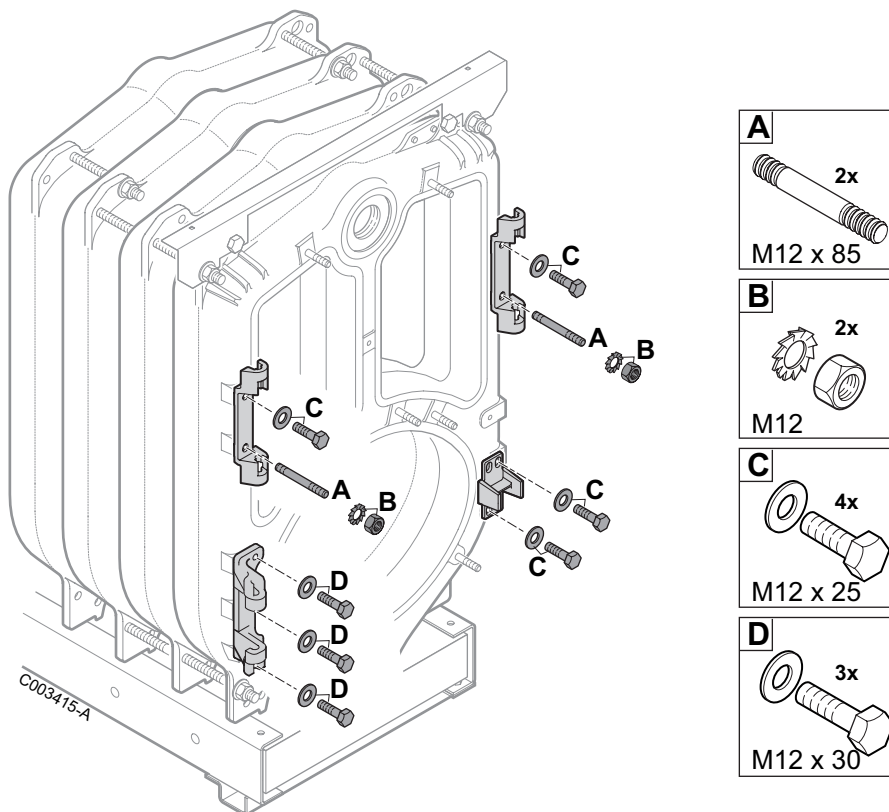


⚠ Ensure that all the air in the boiler is vented to avoid any bursting of the body.

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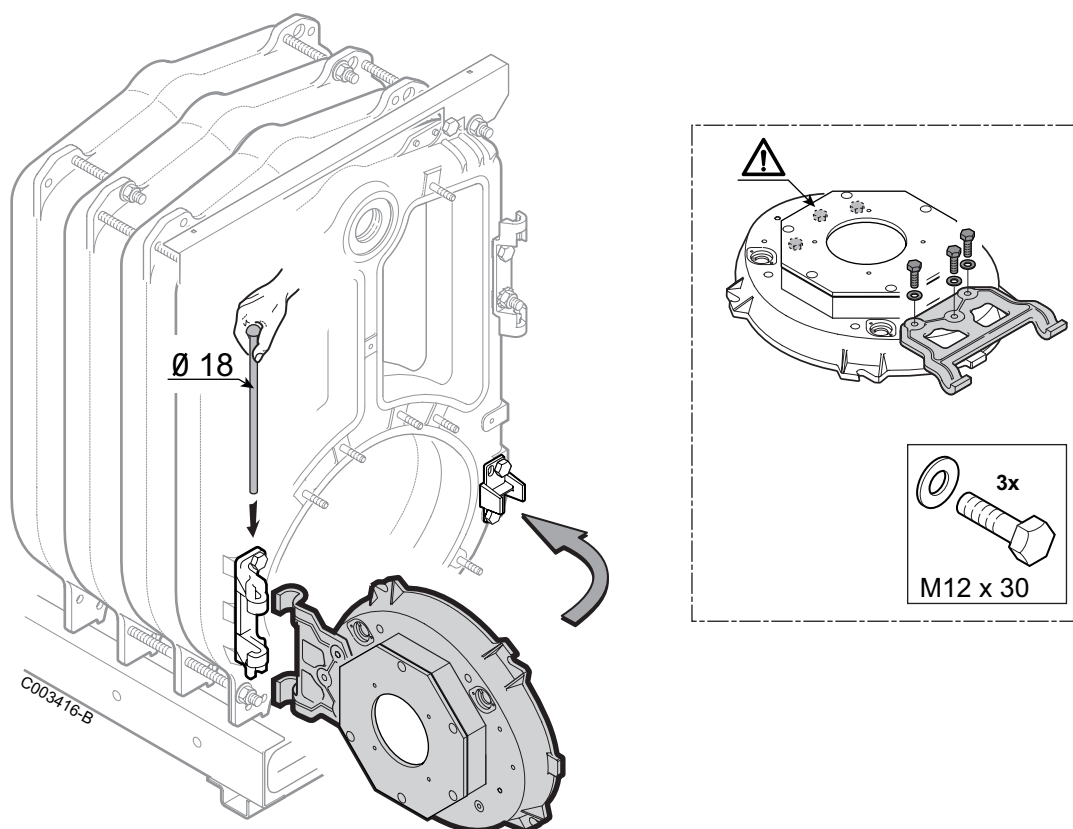


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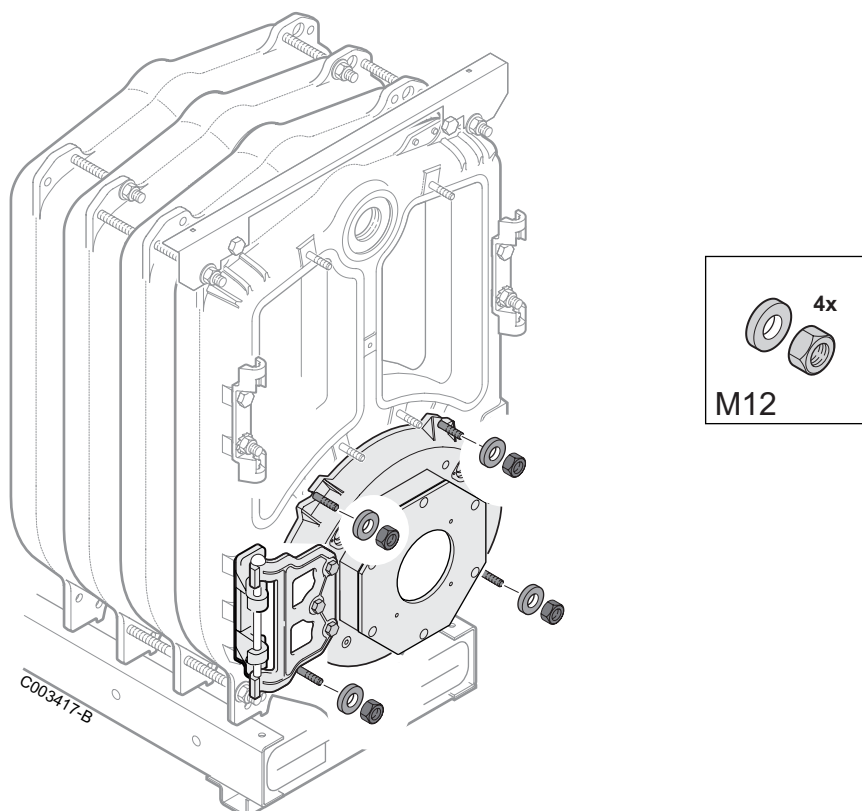
i Fit the hinge on the door of the combustion chamber (boiler body accessories package) to the left or right depending on which way you wish to open it.

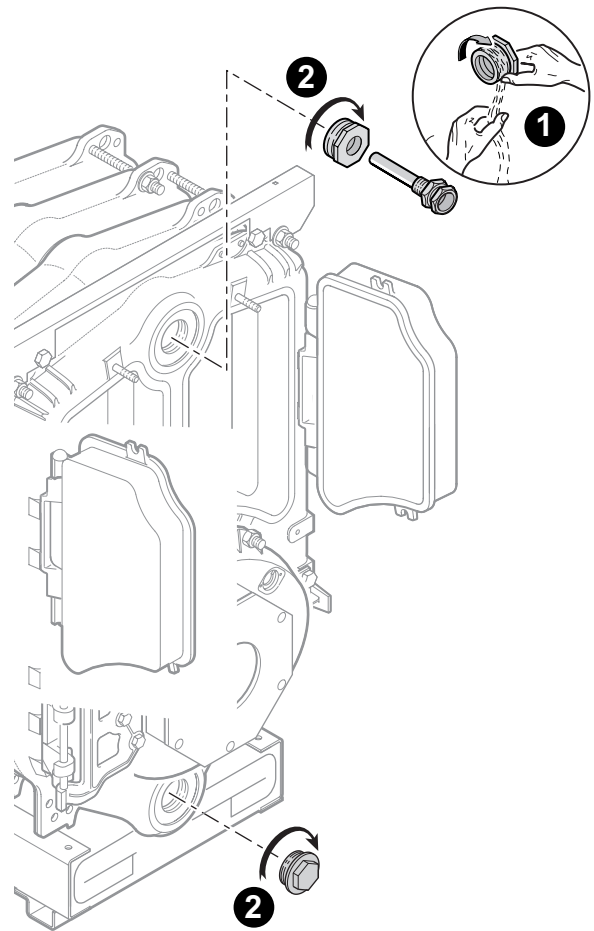
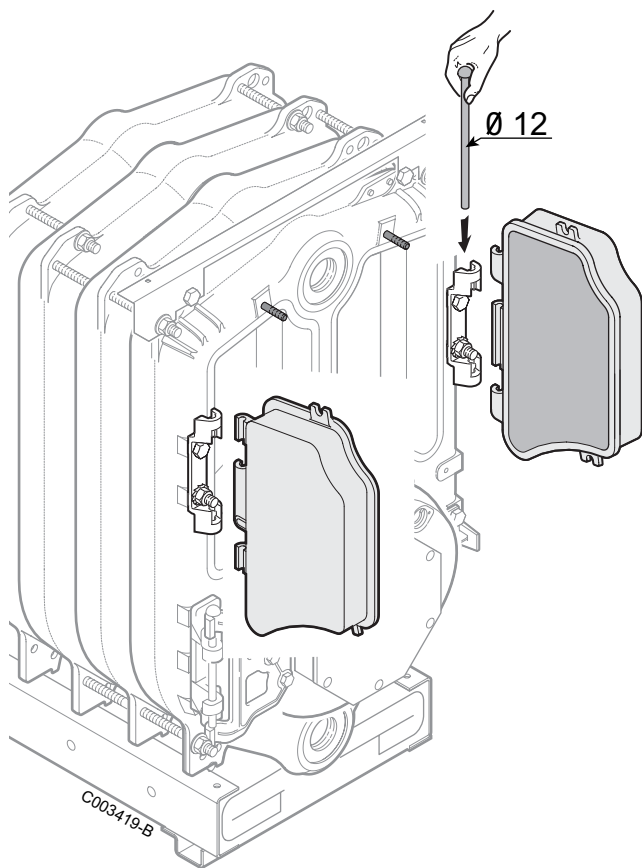
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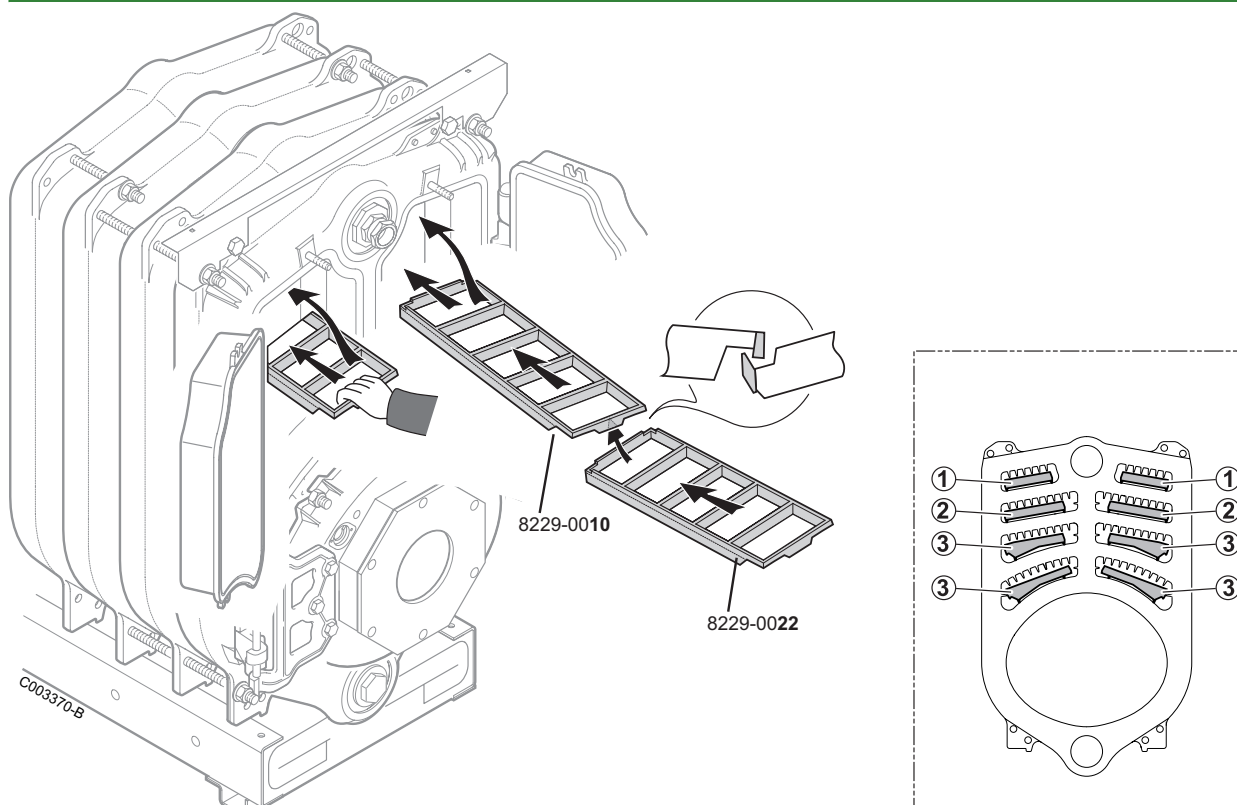


! Leave the 3 screws HM12x30 and the 3 washers L12 in place on the combustion chamber door on the side opposite to the added hinge.

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i The 8-figure part number of the baffle plate is cast in the metal. **!** Insert the baffle plates flush with the front element.

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

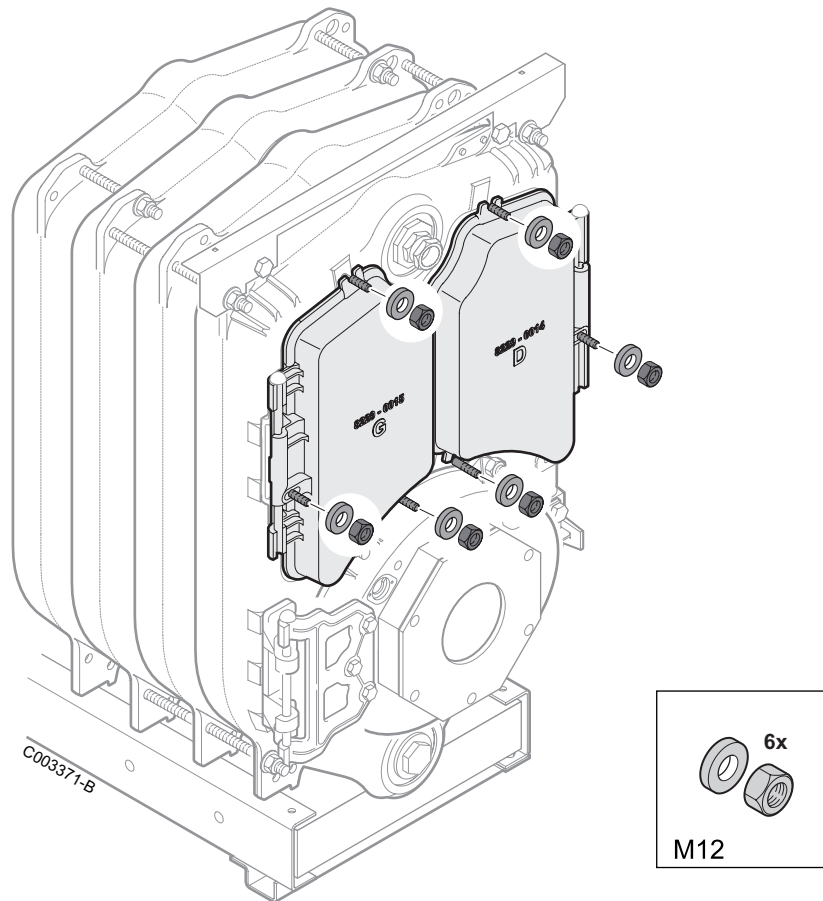
■ Boilers for following countries: France / Germany / Switzerland / Belgium / Spain / Luxemburg / Portugal / Austria / Czech Republic / Poland / Slovenia / Estonia / Serbia

Boiler		PK 450-8	PK 450-9 - PK 450-10	PK 450-11 - PK 450-12	PK 450-13 - PK 450-14
Upper flue ways	①	First 1 x 8229-0010 then 1 x 8229-0022	2 x 8229-0010	First 2 x 8229-0010 then 1 x 8229-0022	3 x 8229-0010
Central flue ways	②	First 1 x 8229-0011 then 1 x 8229-0023	2 x 8229-0011	First 2 x 8229-0011 then 1 x 8229-0023	3 x 8229-0011
Lower flue ways	③	First 1 x 8229-0012 then 1 x 8229-0024	2 x 8229-0012	First 2 x 8229-0012 then 1 x 8229-0024	3 x 8229-0012

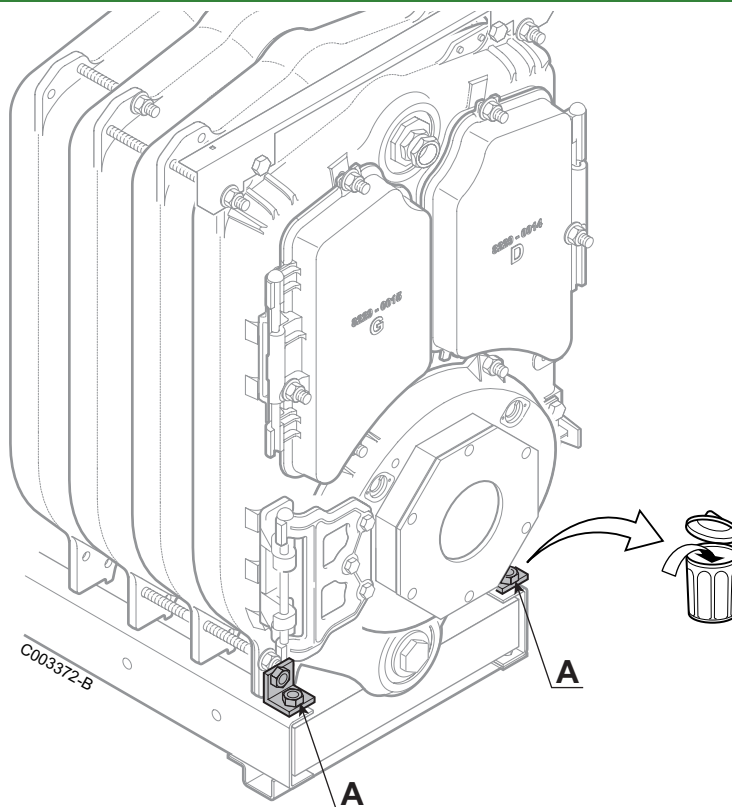
■ Russia / Bulgaria / China / Greece / Romania / Tunisia / Cyprus / Denmark / Sweden / Norway / Finland

Boiler		PK 450-8	PK 450-9 - PK 450-10	PK 450-11	PK 450-12	PK 450-13 - PK 450-14
Upper flue ways	①	First 1 x 8229-0010 then 1 x 8229-0022	2 x 8229-0010	First 2 x 8229-0010 then 1 x 8229-0022	First 2 x 8229-0010 then 1 x 8229-0022	3 x 8229-0010
Central flue ways	②	First 1 x 8229-0011 then 1 x 8229-0023	2 x 8229-0011	First 2 x 8229-0011 then 1 x 8229-0023	First 2 x 8229-0011 then 1 x 8229-0023	3 x 8229-0011
Lower flue ways	③	First 1 x 8229-0012 then 1 x 8229-0024	2 x 8229-0012	First 2 x 8229-0012 then 1 x 8229-0024	2 x 8229-0012	2 x 8229-0012

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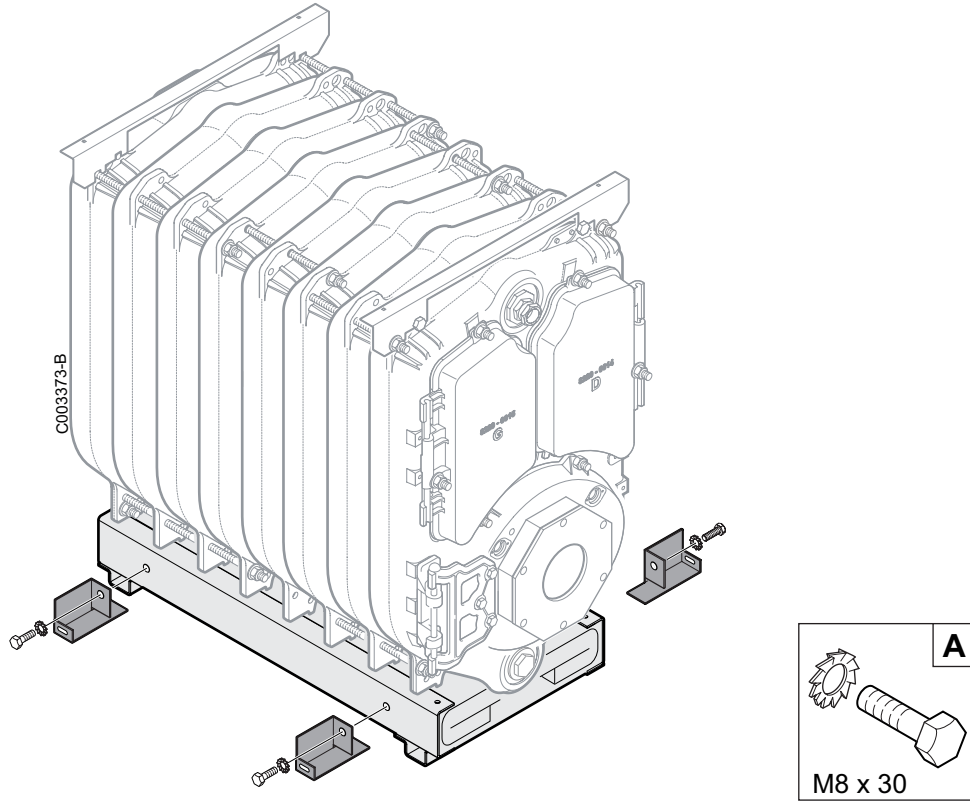


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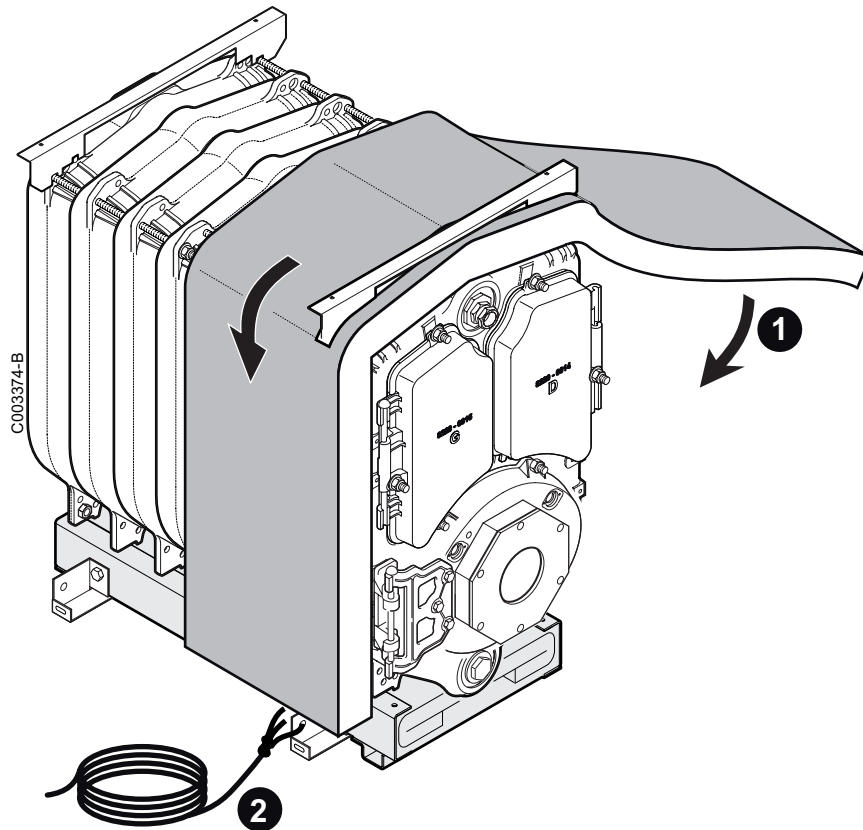
Boilers supplied with an assembled body: Unscrew the screws and remove the A brackets.

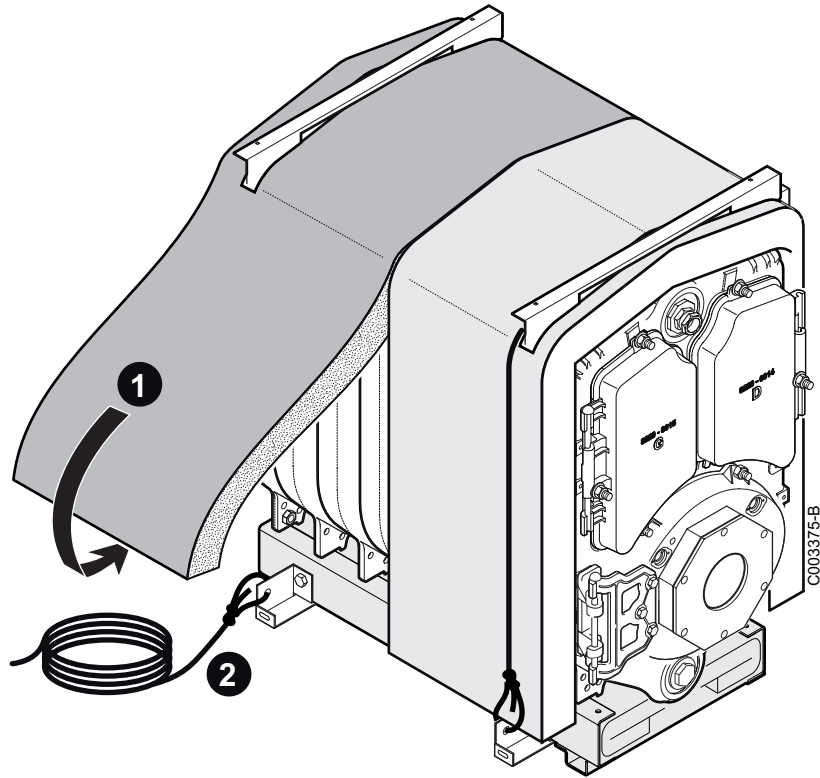
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A	PK450-8	x4
	PK450-9-10-11	x6
	PK450-12-13-14	x8

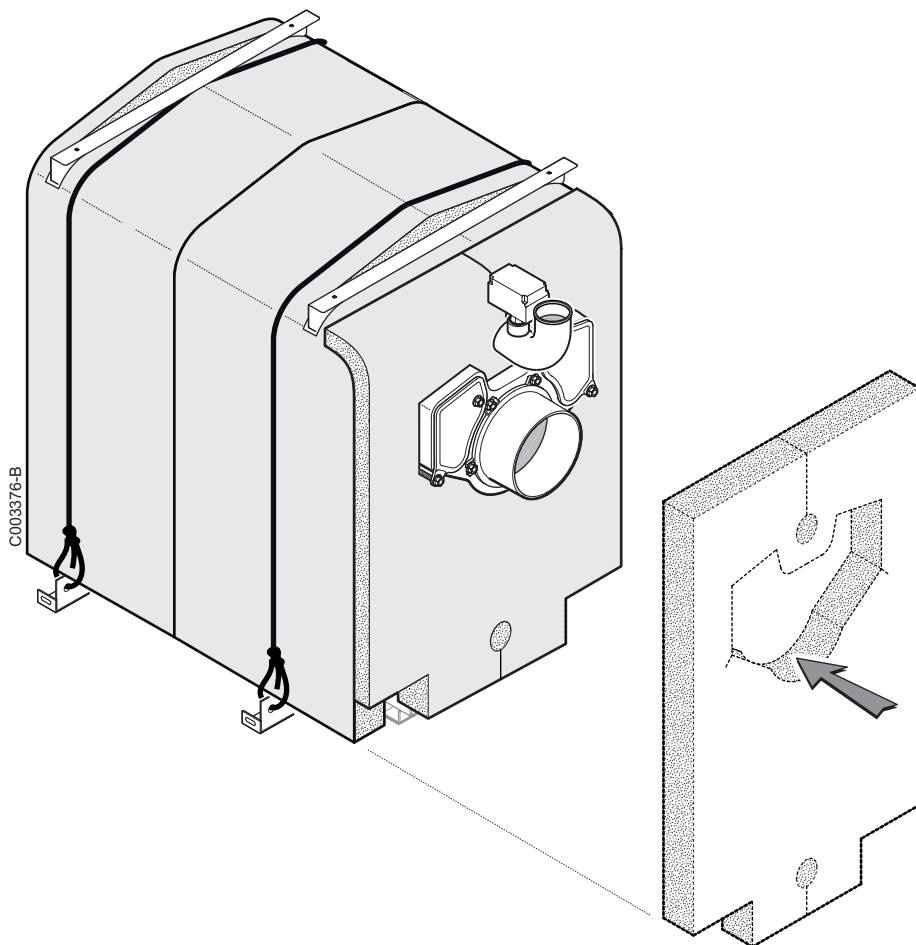
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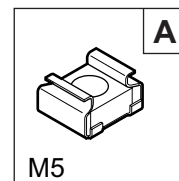
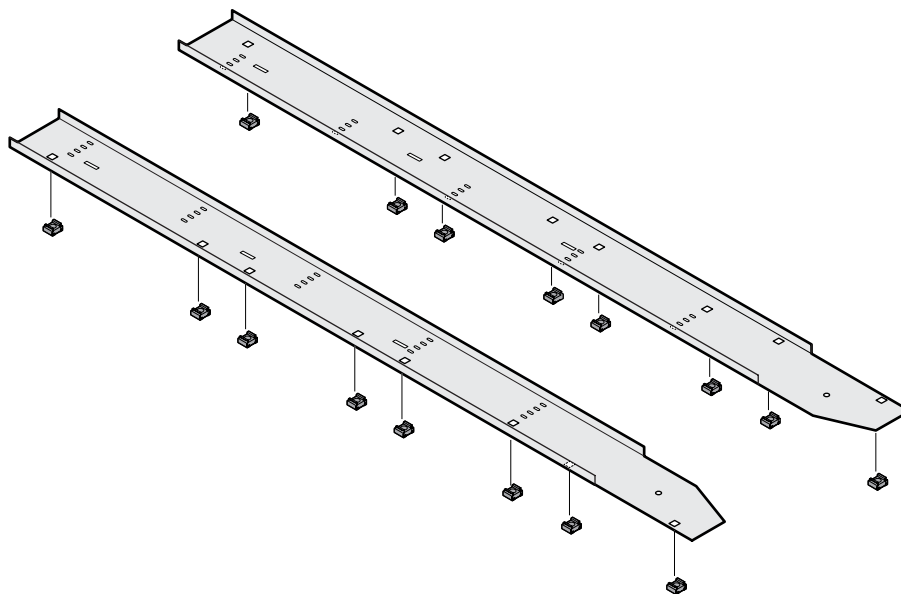


	Insulation width	PK450-8	PK450-9	PK450-10	PK450-11	PK450-12	PK450-13	PK450-14
Front section	500 mm (MH1)	1	1	1	1	1	1	1
Intermediate section	500 mm (MP4)	-	1	1	1	2	2	2
	600 mm (MP5)	-	1	-	-	1	-	-
	800 mm (MP2)	-	-	1	-	-	1	-
Rear section	900 mm (MP3)	1	-	-	1	-	-	1

Mounting of the rear insulation



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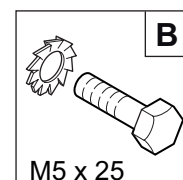
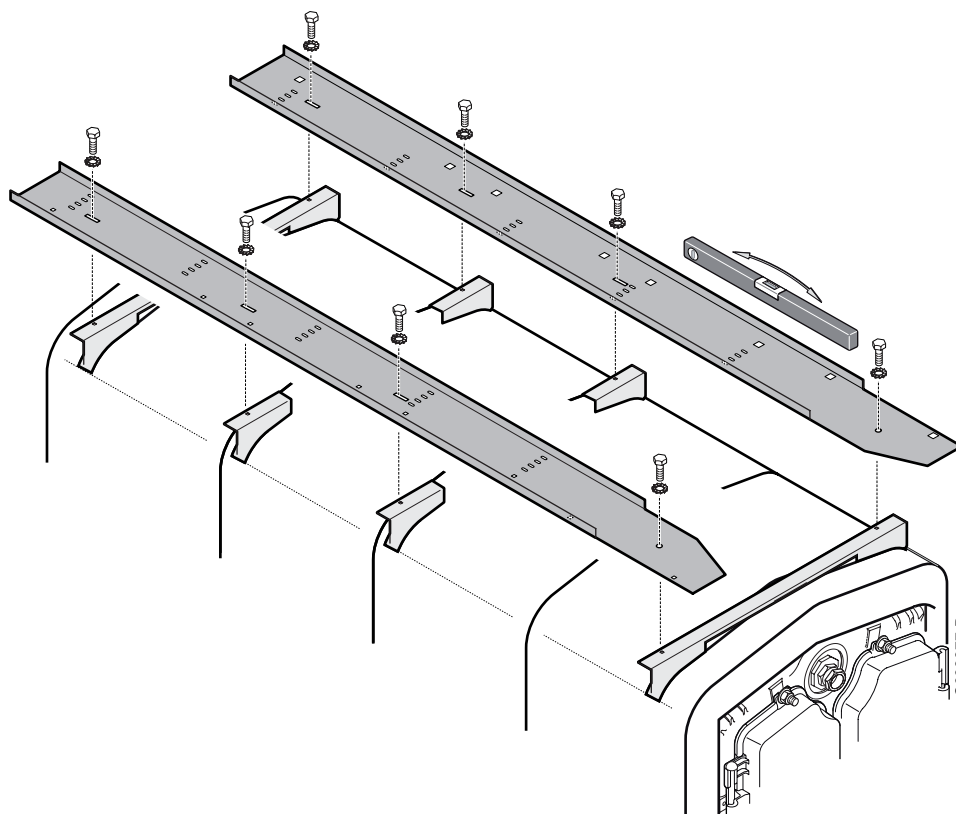


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Example with 12 elements.

A	PK 450-8	x8
	PK 450-9-10-11	x12
	PK 450-12-13-14	x16

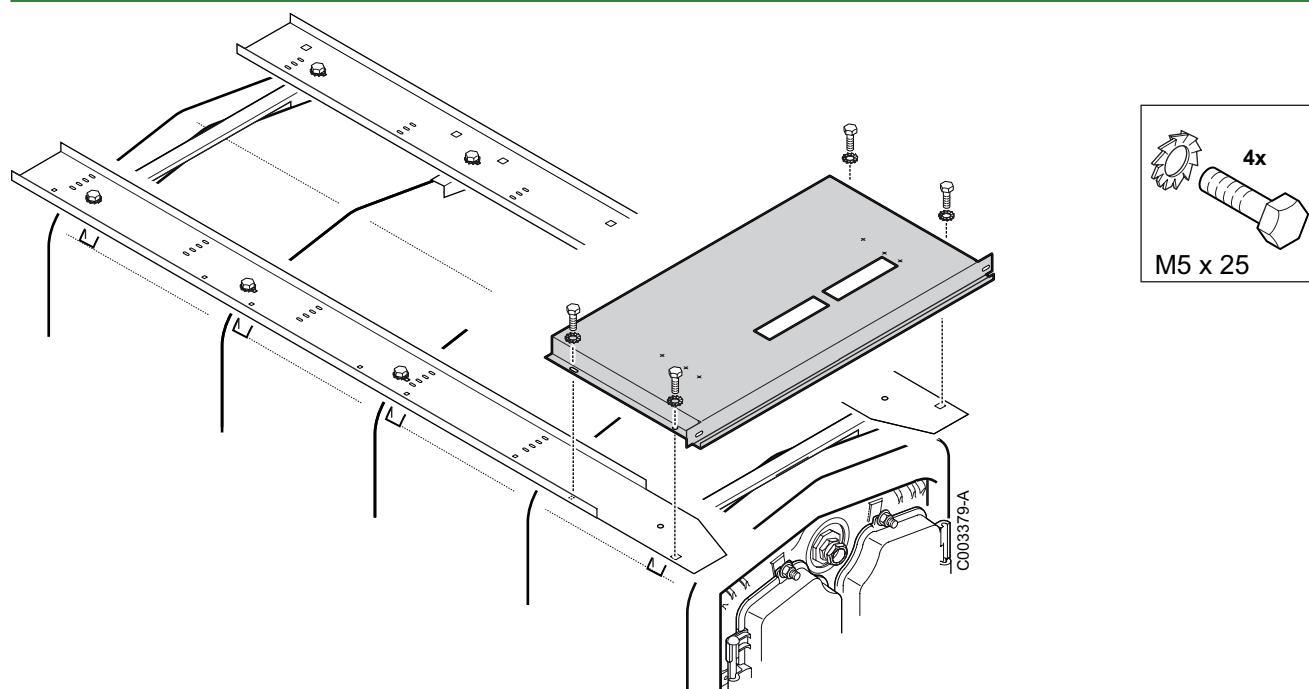
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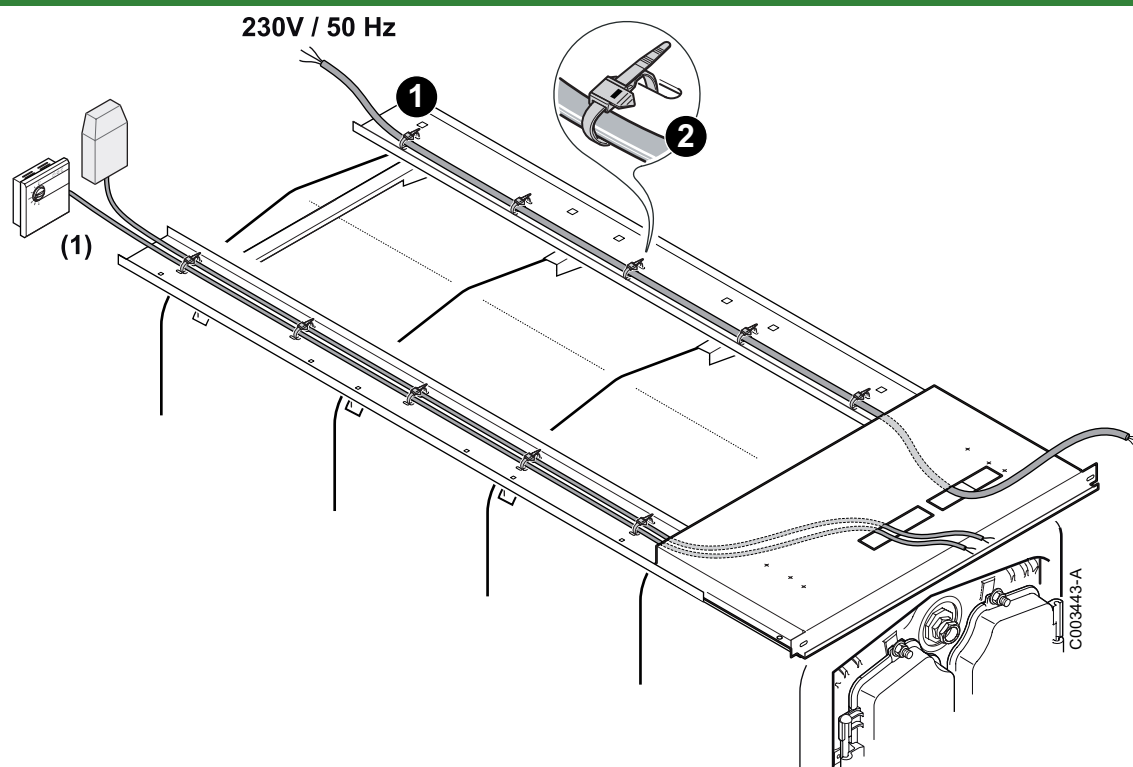
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B	PK 450-8	x4
	PK 450-9-10-11	x6
	PK 450-12-13-14	x8

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(1) Sensors

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

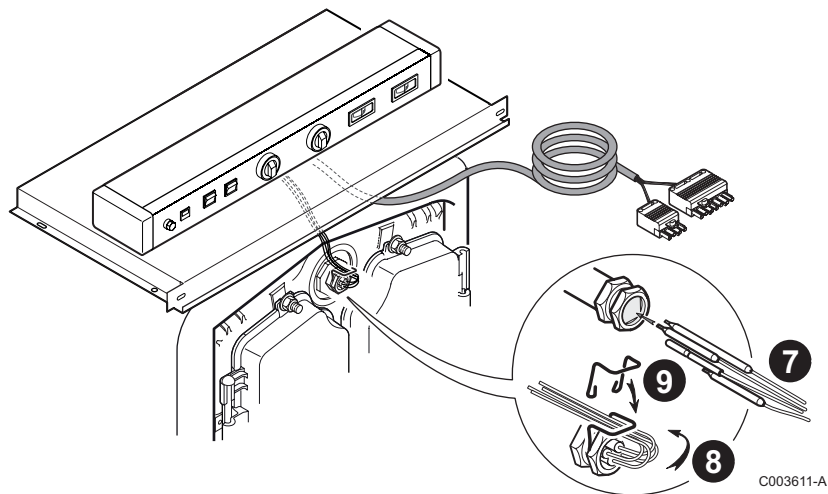
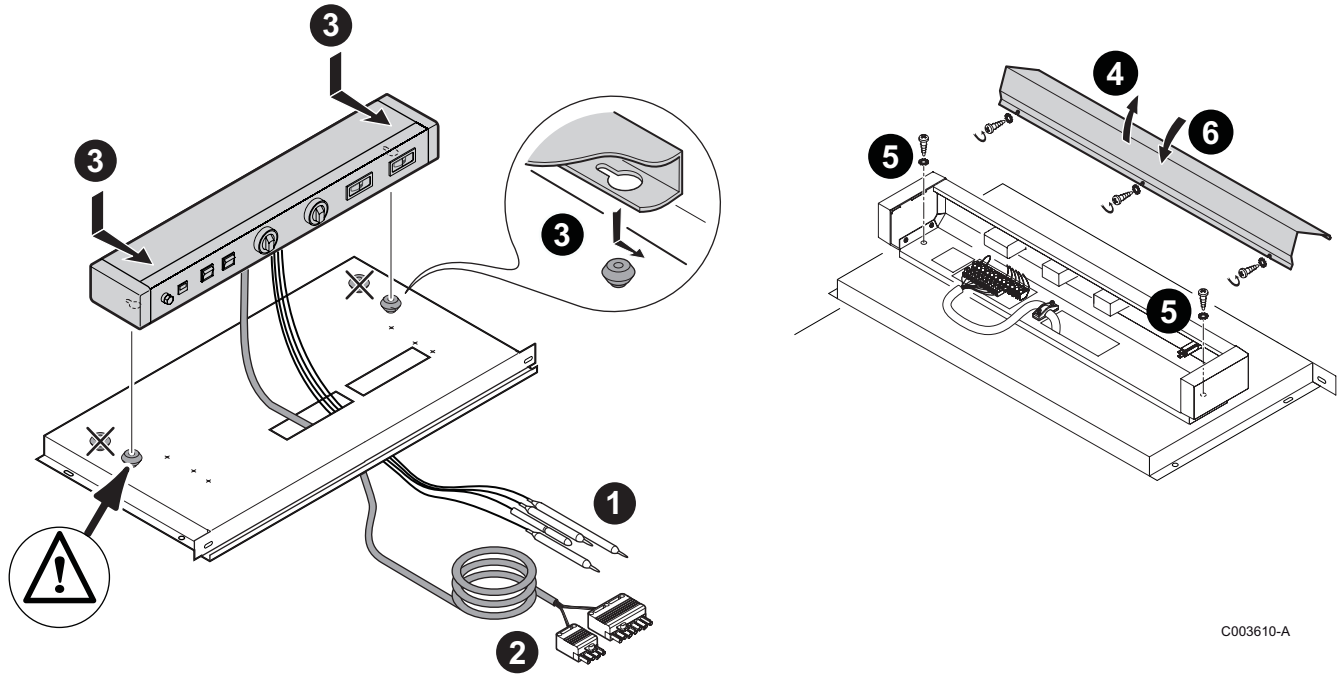
 Refer to the connection instructions supplied with the control panel..

 Connections must be made by a qualified technician.

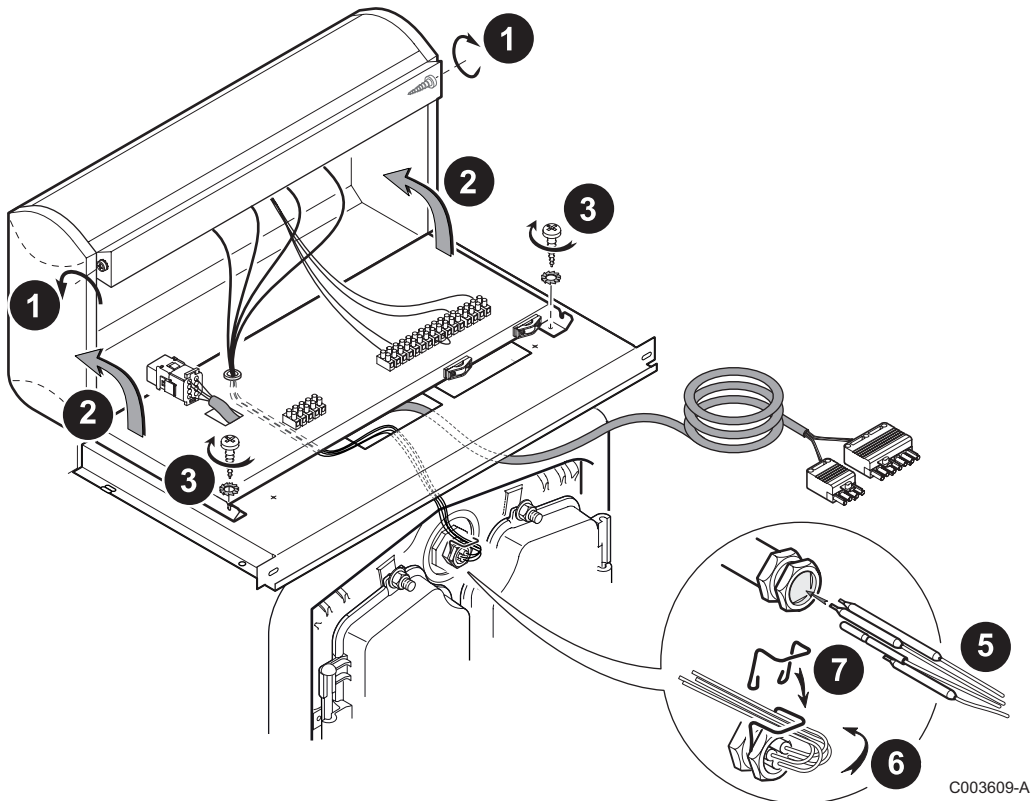
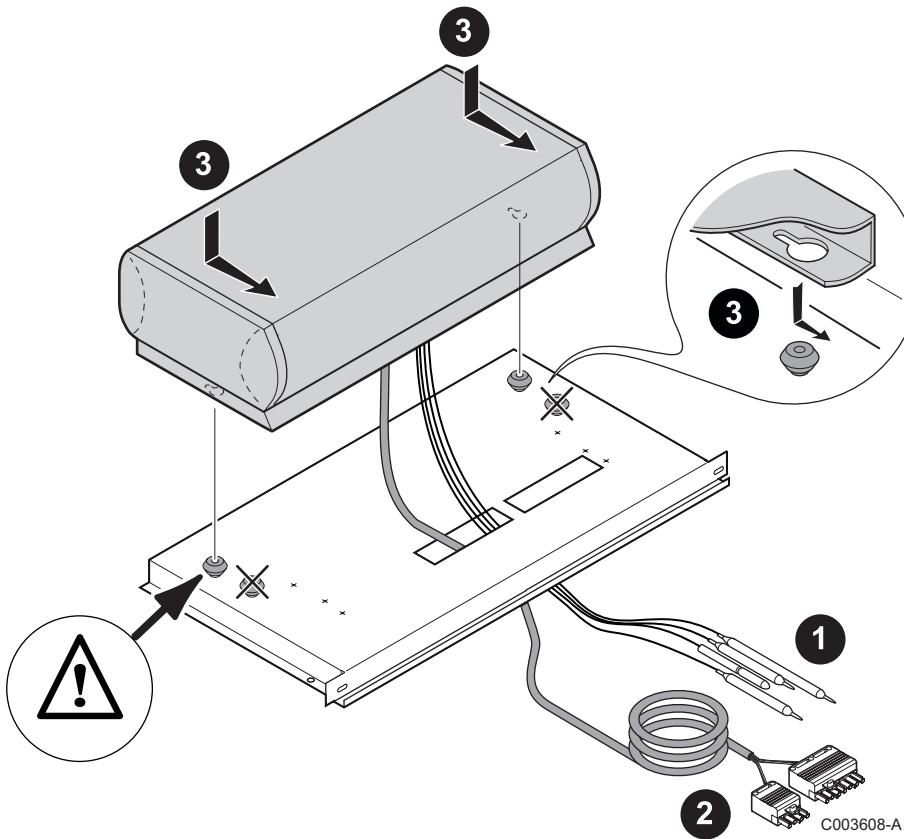
38 Control panel assembly

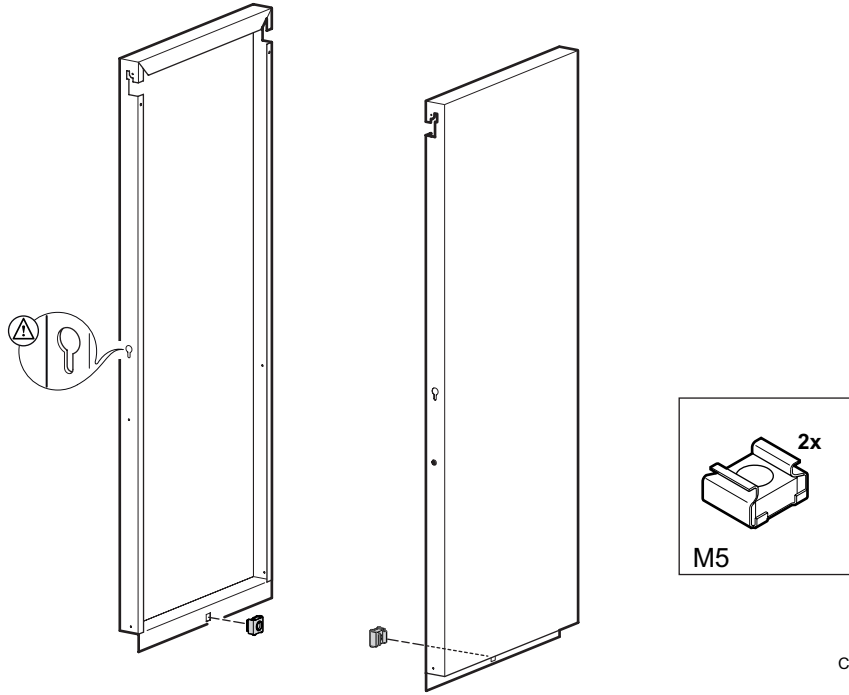
Control panel	package	Mounting
Standard control panel	MG 1	See below
R control panel	MG 2	See below

■ Standard control panel

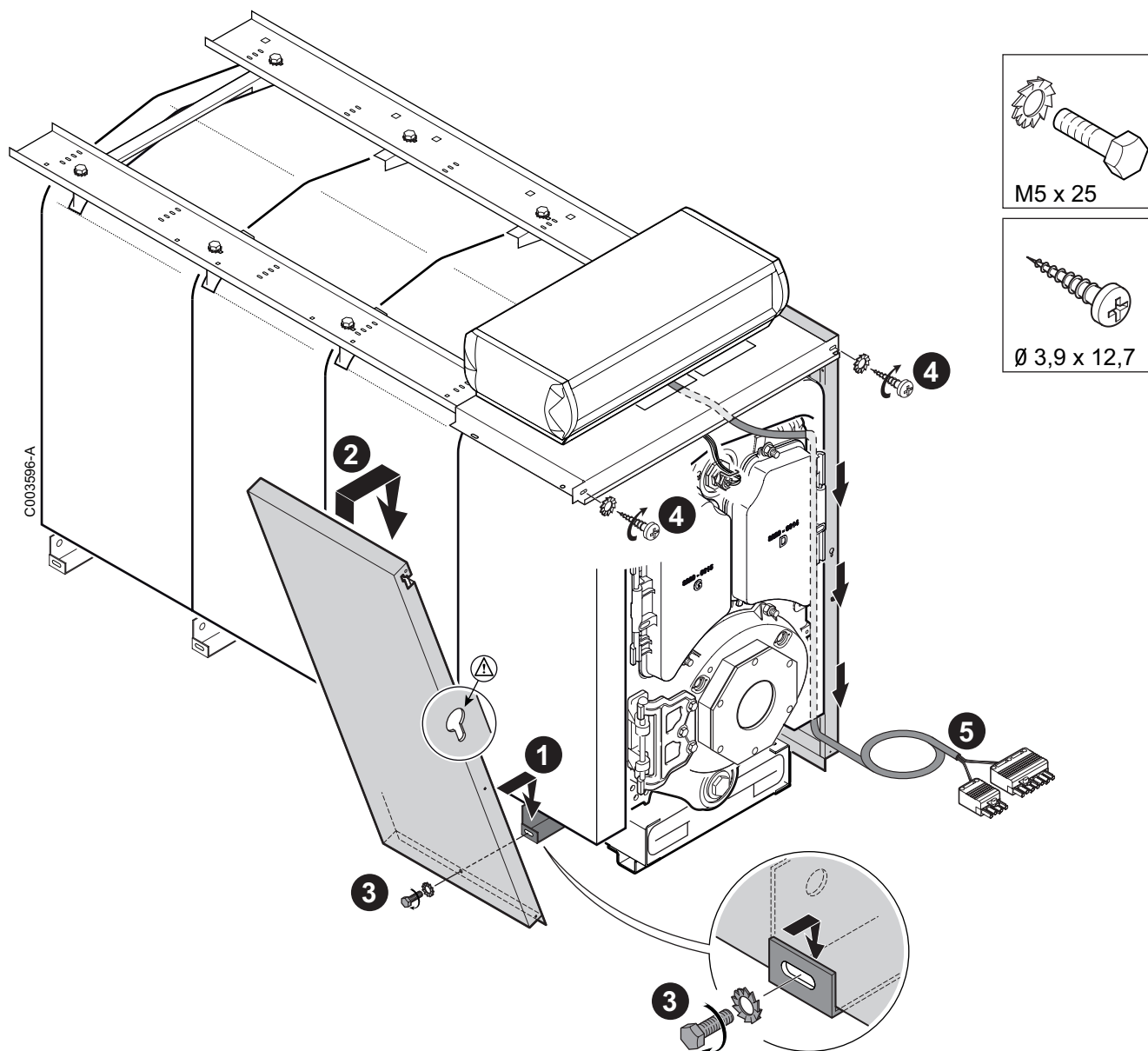


■ R control panel



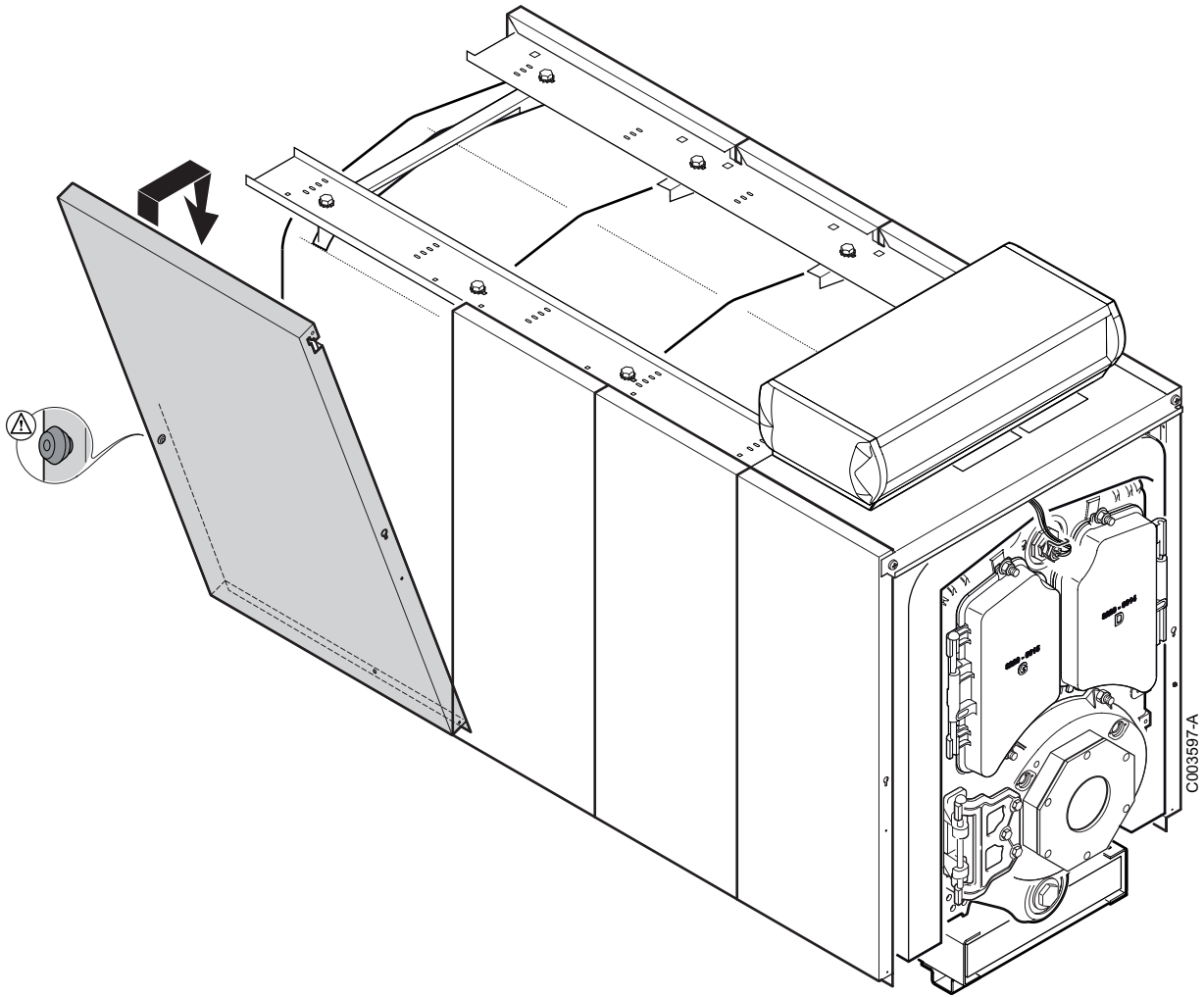


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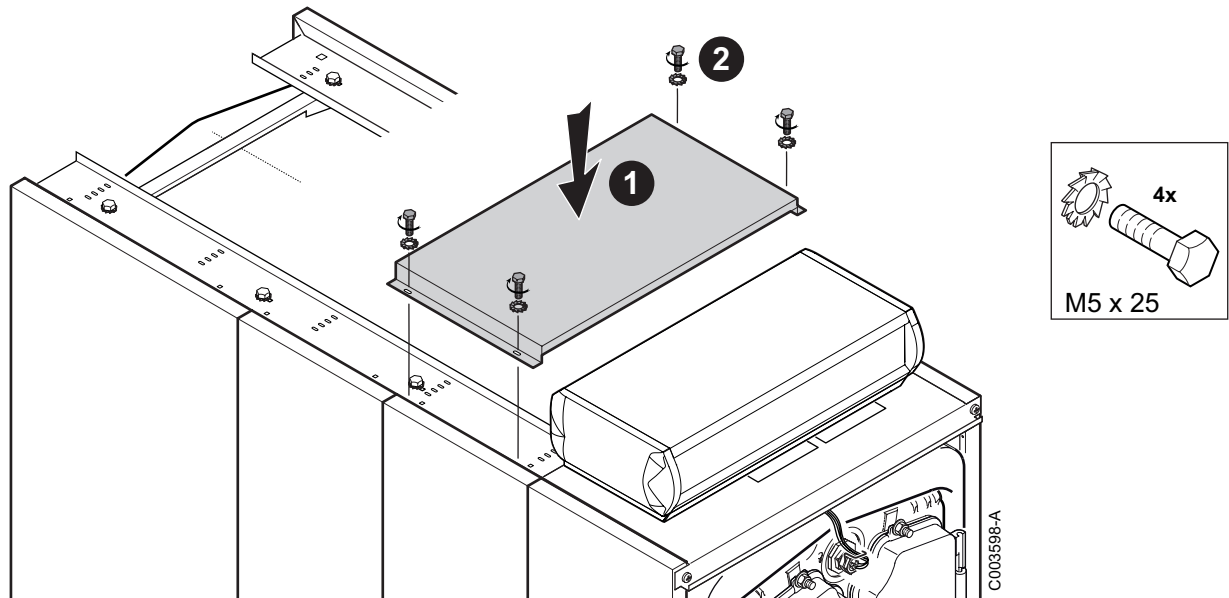


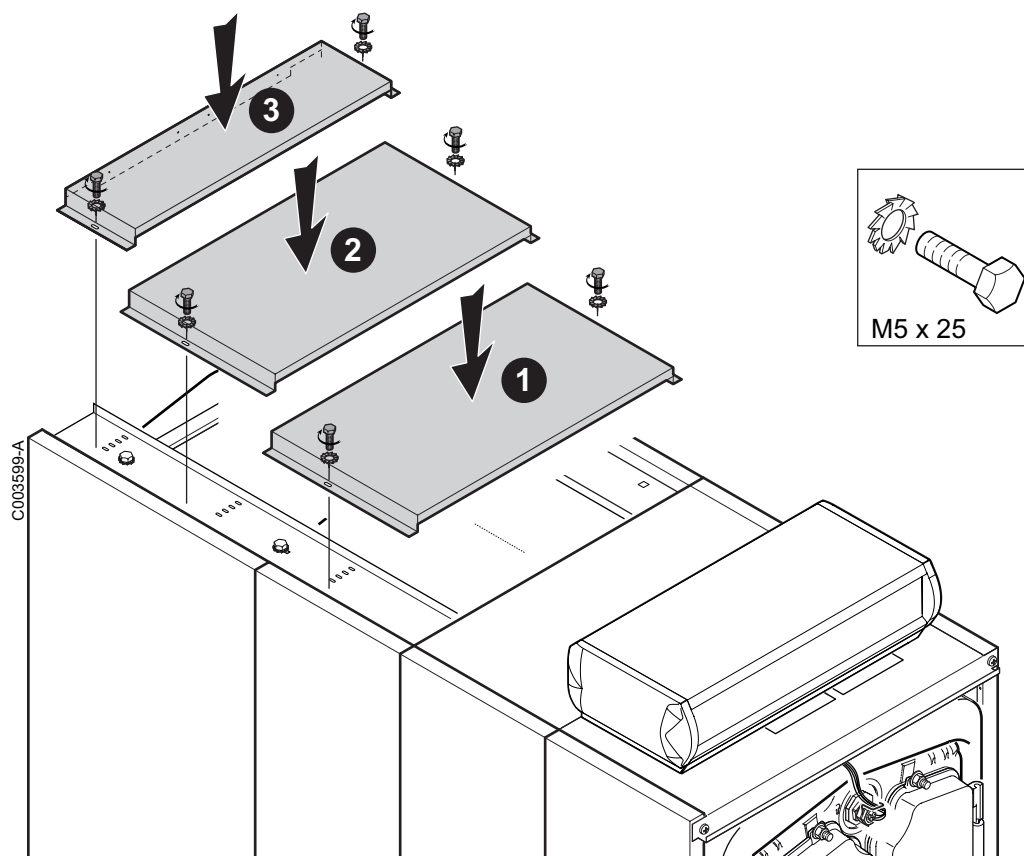
	Width of the panel	PK 450-8	PK 450-9	PK 450-10	PK 450-11	PK 450-12	PK 450-13	PK 450-14
Front section	520 mm (MH1)	1	1	1	1	1	1	1
	770 mm (MP2)	-	-	1	-	-	-	-
Intermediate section	930 mm (MP3)	1	-	-	1	-	-	-
	480 mm (MP4)	-	1	1	1	2	2	2
	610 mm (MP5)	-	1	-	-	-	-	-
Rear section	770 mm (MP2)	-	-	-	-	-	1	-
	930 mm (MP3)	-	-	-	-	-	-	1
	610 mm (MP5)	-	-	-	-	1	-	-

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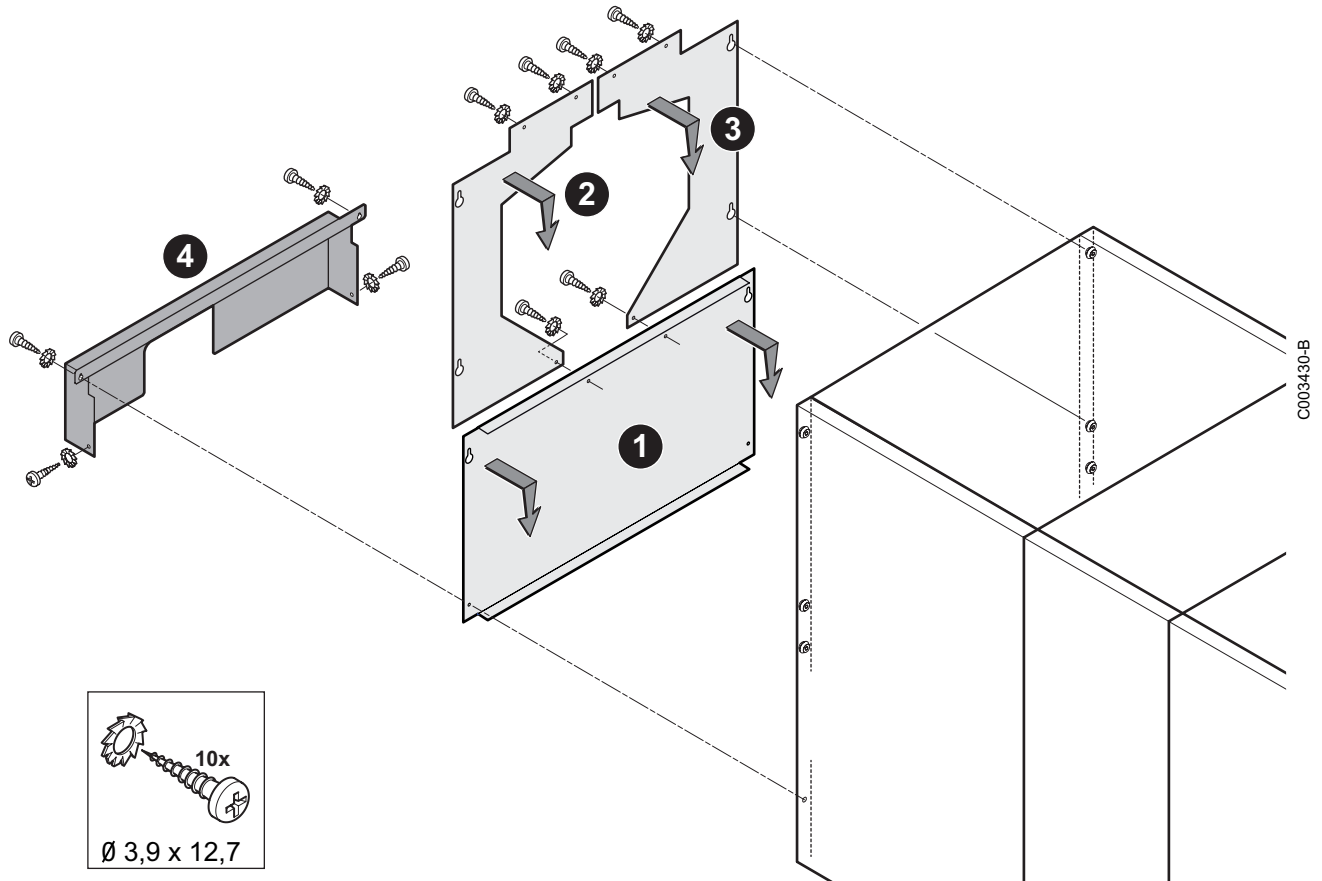
42



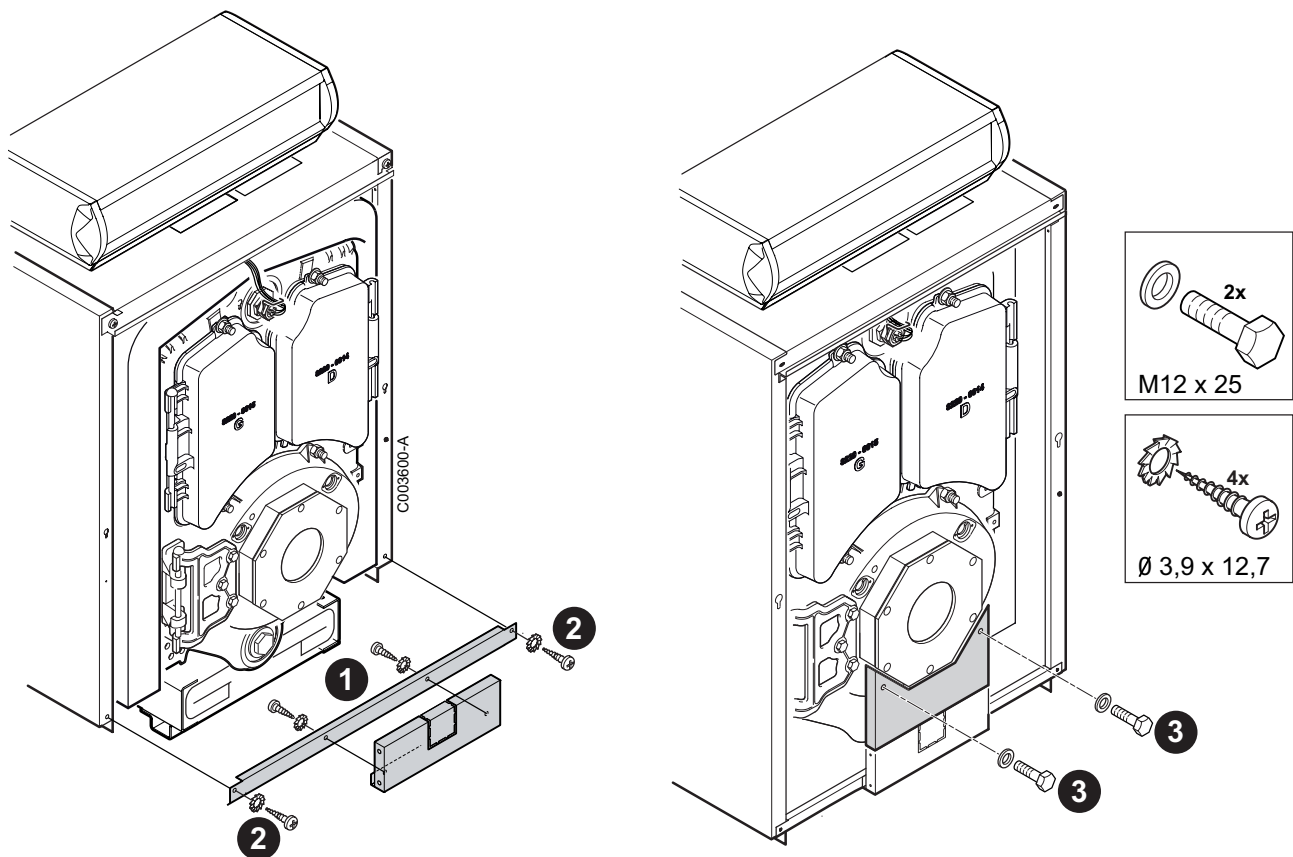


	Length of the upper panel	PK 450-8	PK 450-9	PK 450-10	PK 450-11	PK 450-12	PK 450-13	PK 450-14
Front cover	480 mm (MH1)	1	1	1	1	1	1	1
Intermediate cover	480 mm (MP4)	-	1	1	1	2	2	2
Rear cover	330 mm (MP2)	-	-	1	-	-	1	-
	490 mm (MP3)	1	-	-	1	-	-	1
	170 mm (MP5)	-	1	-	-	1	-	-

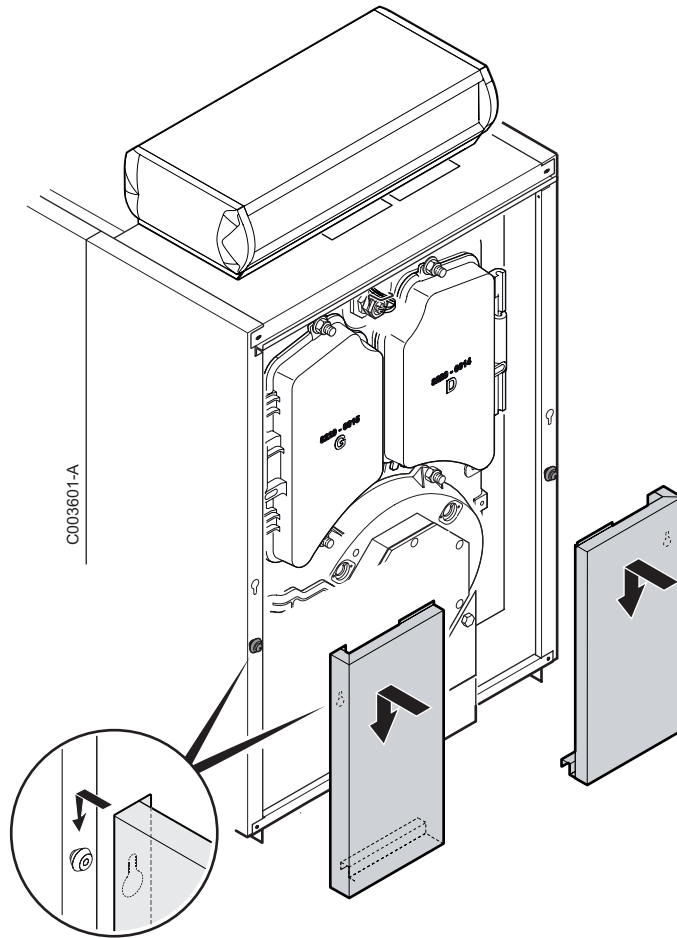
44



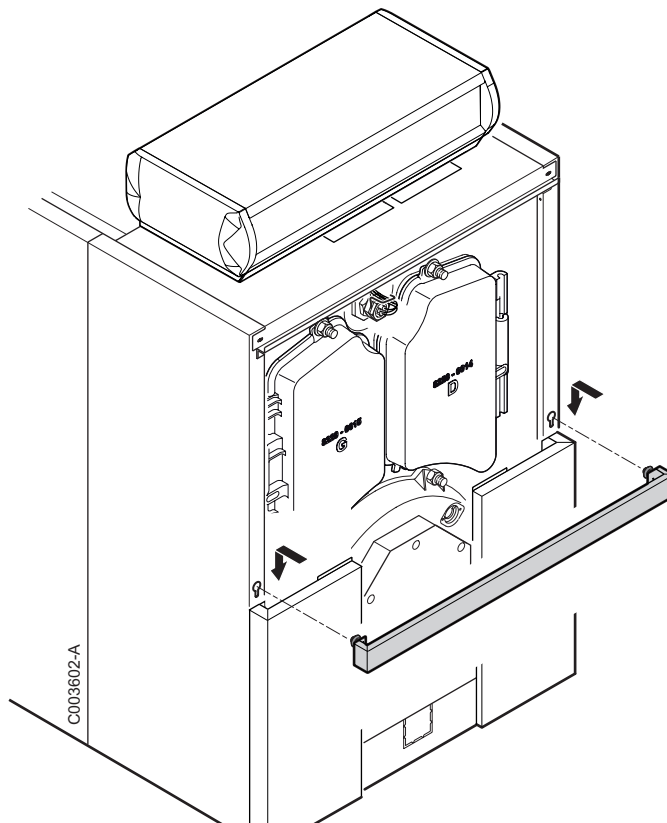
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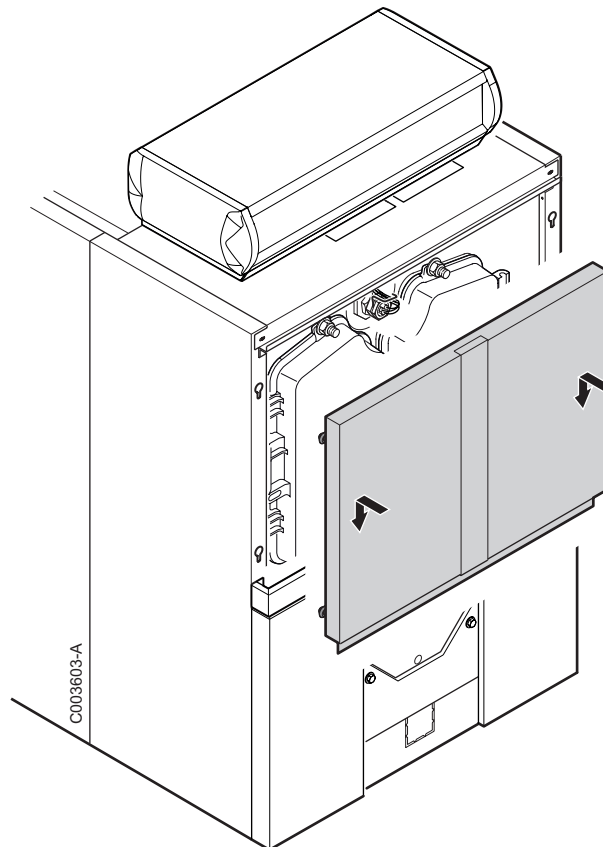


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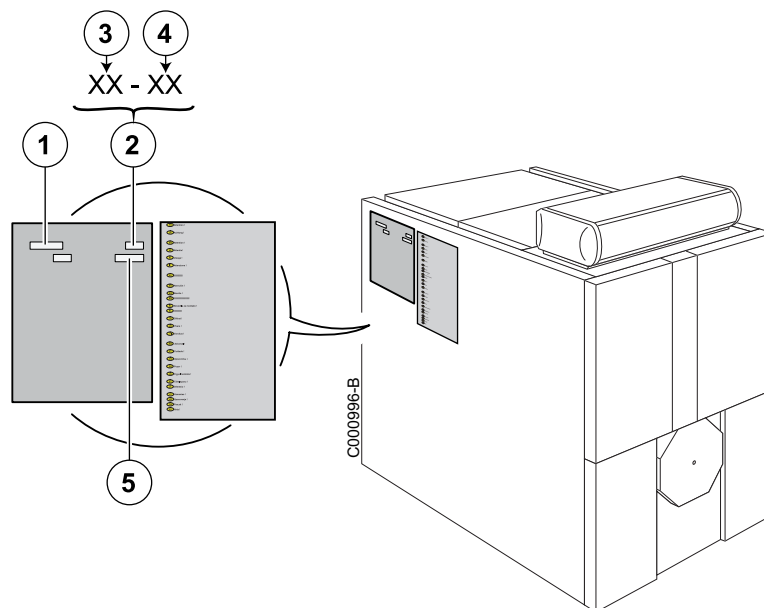


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4 Type plate



- ▶ Affix the rating plate supplied with the instructions, which corresponds to the country of destination.

- ① Boiler type
- ② Manufacturing date
- ③ Year of manufacture
- ④ Week of manufacture
- ⑤ Serial no. of the appliance

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16/03/2016



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