

# Remeha

EN

Fuel oil/gas boilers

## P 520



### Assembly Instructions

# 1 Package list

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

## ■ Boiler body + Accessories

- Boilers supplied with an assembled body

Boiler P 520 - Number of sections	13	15	17	19	21	23	25
Assembled boiler body (contents depend upon model)	1	1	1	1	1	1	1
Cleaning tool kit (contents depend upon model)	1	1	1	1	1	1	1

- Boilers supplied with an unassembled body

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
Base frame (dimensions depend upon model)		1	1	1	1	1	1	1
Rear section		1	1	1	1	1	1	1
Normal intermediate section		8	10	12	14	15	17	19
Special intermediate section		3	3	3	3	4	4	4
Front section		1	1	1	1	1	1	1
Set of assembly rods + Cleaning tools (contents depend upon model)		1	1	1	1	1	1	1
Standard accessory kit (contents depend upon model)	1 package	FA 48	FA 50*	FA 52*	FA 54*	FA 56	FA 58	FA 60
Additional accessory kit (contents depend upon model)**	1 package	FA 67**	FA 69	FA 71	FA 73	FA 75	FA 77	FA 79
Plain furnace plate		1	1	1	1	1	1	1
Flue gas connection plate with opening	Ø 300							
	Ø 350							
	Ø 400	1	1	1	1			
Plain flue gas connection plate						1	1	1
Flue gas box		1	1	1	1	1	1	1
Distributing tube fitting*			*	*	*	1	1	1

\*The distributing tube fitting for P 520 boilers with 15 to 19 sections is included in the accessory package.

\*\*The diaphragm for P 520 , 13 and 14 section boilers is delivered in the additional accessory kit package.

## ■ Baffle plates

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
Baffle plates	package CM 22		1	1	1			
	package CM 23	1	1	1	1	2	2	2

## ■ Casing fittings

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
Casing fittings	package RC 2	1	1	1				
	package RC 3				1	1	1	1
	package MR 4		1	1	1			
	package MR 5	1				1	1	1
	package FA 10	2		2	1		2	1
	package FA 11		2	1	2	3	2	3

## ■ Casing, variable parts

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
	package FA 16				1	1	1	1
	package FA 18				1			
	package FA 20					1		
	package FA 22						1	
	package FA 23	1						
	package FA 24							1
	package FA 25		1					
	package FA 27			1				

## ■ Insulating material for body

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
Insulation	package FA 34	1						
	package FA 35		1					
	package FA 36			1				
	package FA 37				1			
	package FA 39					1		
	package FA 40						1	
	package FA 41							1

## ■ Control panel

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
Control panel	package RC 6	1	1	1	1	1	1	1

■ **Accessories - Available as an option**

Boiler P 520 - Number of sections		13	15	17	19	21	23	25
Furnace plate with hole Ø 165/ 186/ 210/ 240 or Ø 295		1	1	1	1	1	1	1
Connecting plate with Ø 300 opening or plain connecting plate or Plain connection plate		1	1	1	1	1	1	1
Set of anti-vibration studs	8208-7758	1	1					
	8208-7759			1	1			
	8208-7760					1	1	1

**i** Refer to the applicable price list for the other optional features (control units etc.) which may be used with these boilers.

## 2 Mounting

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

**i** Refer to the applicable price list for any optional features used.

### ■ Tools required

- 1 JD-TE or JD-TE Plus assembly tool
- 1 Flat screwdriver
- 1 "n°2 posidrive" screwdriver
- 1 10, 13, 17, 19 spanners
- 1 22 tubular box spanner
- 1 27 tubular box spanner
- 1 electric screwdriver + 1 "n°2 Philipps" screwdriver bit
- 1 Stanley knife
- Silicone filler (Supplied)

### ■ Boilers supplied with an assembled body

- Hydraulic test: See fig. 18
- Mounting: start assembly from figure 35

### ■ Mounting the boiler body:

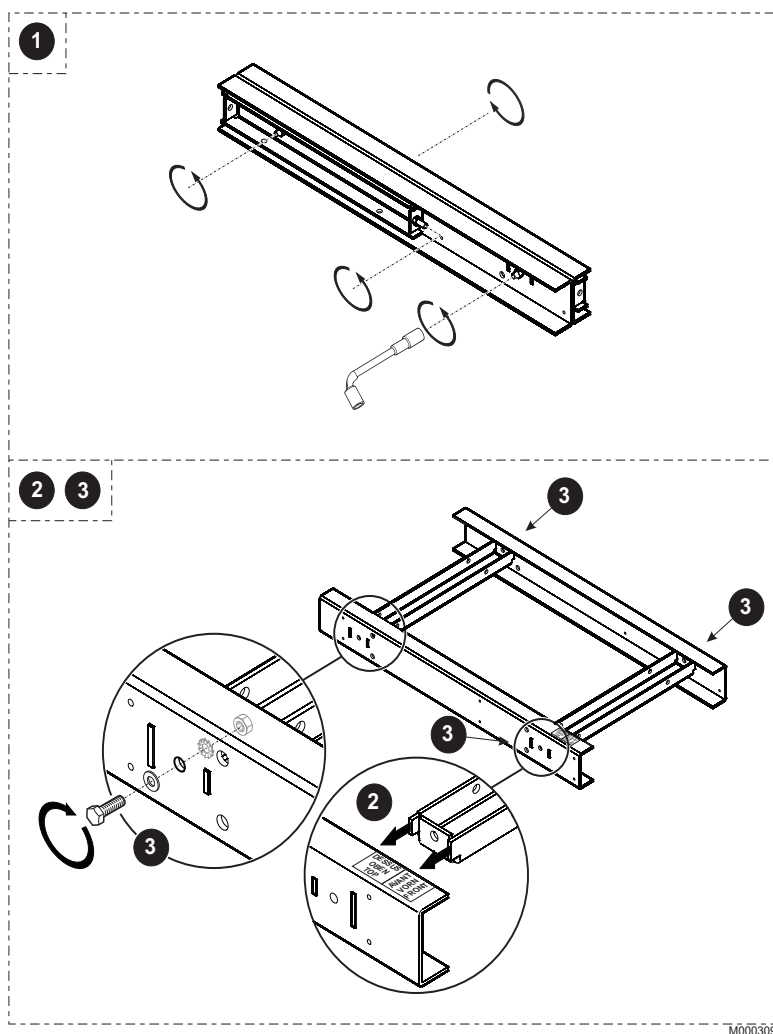
**i** Assemble the boiler body from the rear to the front:

- assemble the **rear** section,
- assemble **all** the normal **intermediate sections**,
- assemble **all** the special **intermediate sections**,
- assemble the **front** section.

**i** The number of sections of each type is provided in the table below

Section type				
	8228-0004	8228-0001	8228-0002	8228-0003
P 520-13	1	8	3	1
P 520-15	1	10	3	1
P 520-17	1	12	3	1
P 520-19	1	14	3	1
P 520-21	1	15	4	1
P 520-23	1	17	4	1
P 520-25	1	19	4	1

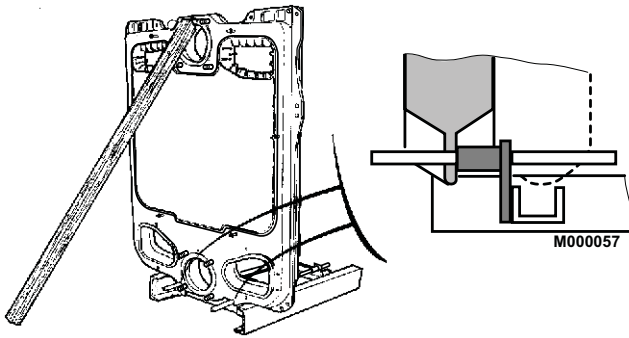
- ① Rear section
- ② Normal intermediate section
- ③ Special intermediate section
- ④ Front section



- ▶ **1** to **3**: Assembly of the base frame, delivered unassembled.
- ▶ Place the frame on the floor, taking care to note the TOP and FRONT positions.
- ▶ Fit the fastening brackets as shown, depending on the type of boiler (1 Screw Ø 12x40 - 19 spanner).

## 2

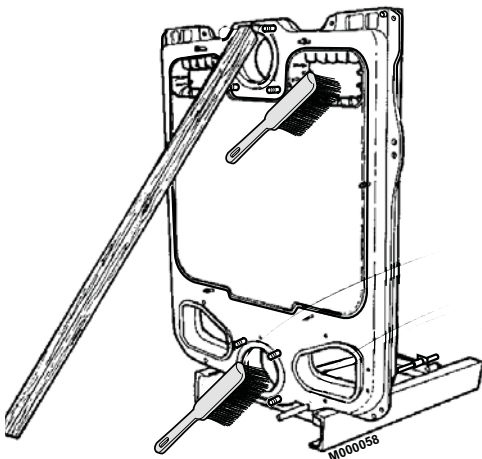
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- ▶ Establish the location of the frame on the basis of the opening direction of the furnace door and the length of the burner. Leave enough clearance at the rear of the boiler for water connections and the distributing tube.
- ▶ Fit the rear section on the frame, behind the fastening brackets (see detailed drawing) and prop it up.
- ▶ Insert the lower assembly rods in the holes of the rear section and the fastening brackets of the frame, in order to position the rear section correctly according to the frame

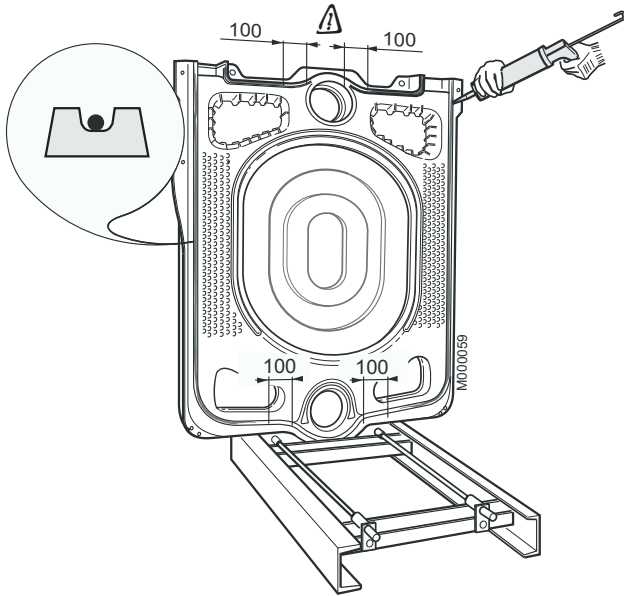
## 3

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- ▶ Clean all the openings in the section with a brush. Remove any deposit on the bottom of the section.

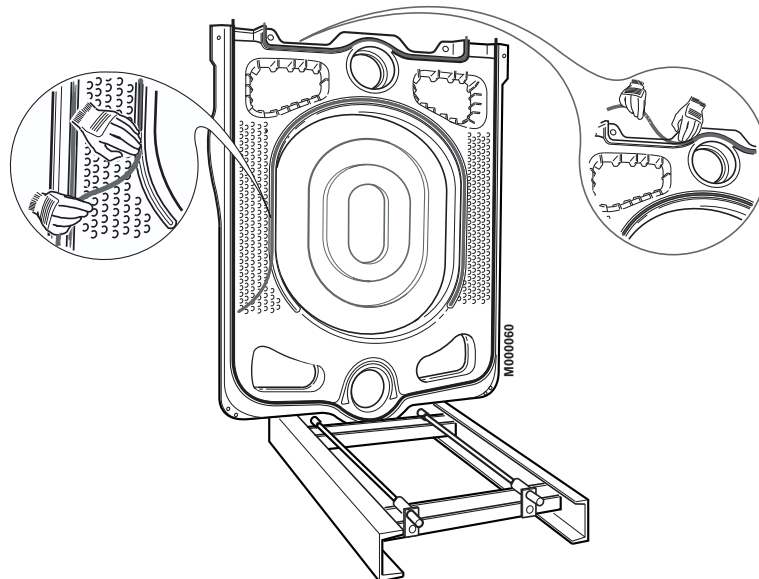
# 4



- ▶ Fill the bottom of the U groove (located on the periphery of the section) with a continuous bead of DOW CORNING silicon, diameter approximately  $\varnothing$  5 mm.

**⚠ Caution: silicon must not be applied 100 to either side of the connection (nipple assembly area).**


# 5

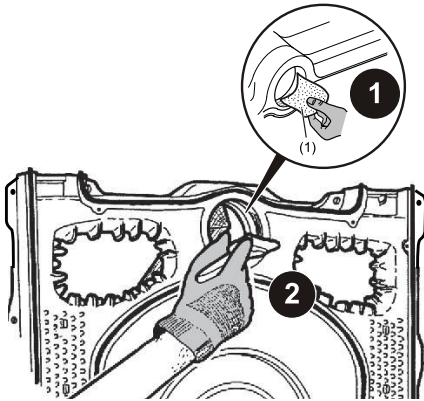


- ▶ Fit the  $\varnothing$  10.5 mm diameter thermocord into this U groove and into the groove which circles the furnace.

**⚠ Note: Do not pull on the seal while inserting it. Otherwise, you may stretch it and reduce its thickness.**

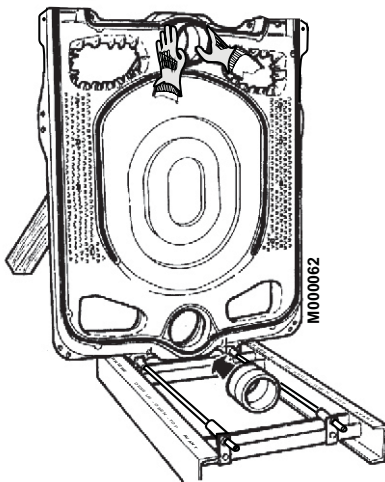


 Handle the nipples with gloves, there might be sharp edges.  
Clean the bores and nipples with diluent.

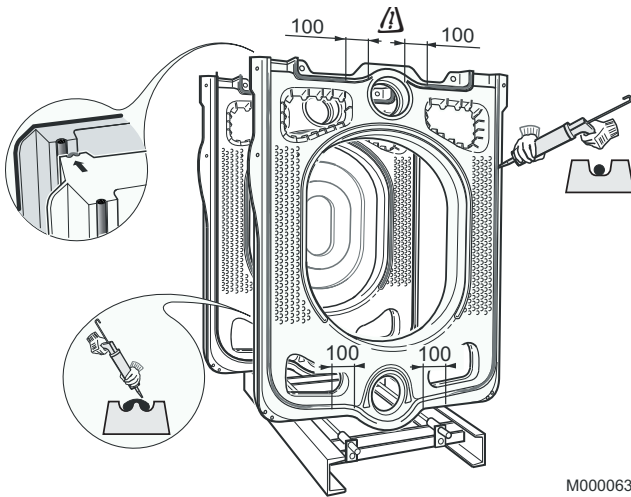


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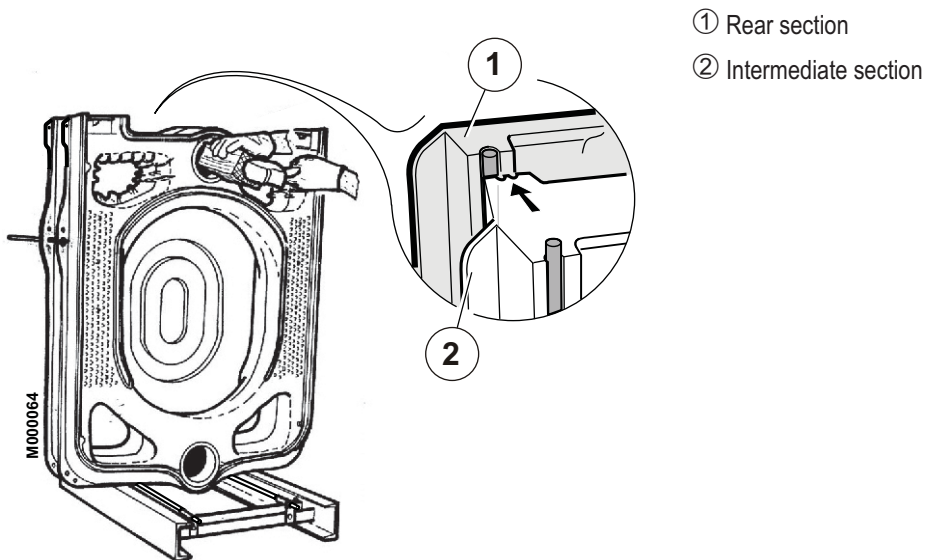
- ➊ Remove any traces of rustprotective paint so that the surface is perfectly smooth.
- ➋ Coat with the lubricant supplied with the sections.



- ▶ Gently push in the 2 nipples.

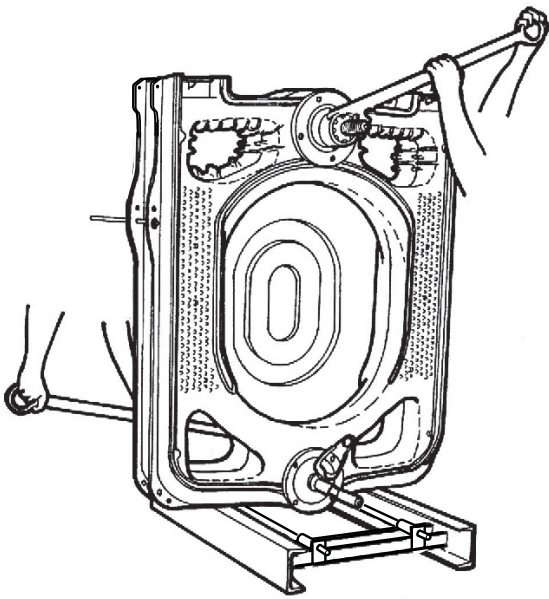


- ▶ Fill the bottom of the W groove opposite the U groove for the intermediary parts (located on the periphery of the section) with a continuous bead of DOW CORNING silicon, diameter approximately  $\varnothing$  5 mm.



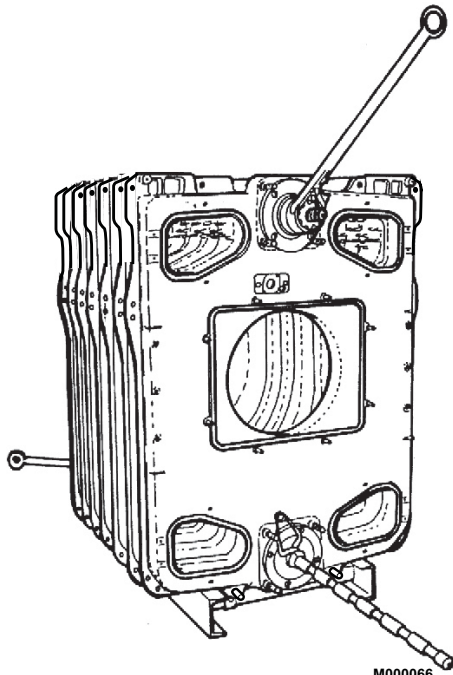
- ① Rear section
- ② Intermediate section

- ▶ Place the first normal intermediate section, making sure that it is turned in the right direction, i.e. with the flattening groove against the thermocord.
- ▶ For safety, insert a lateral assembly rod (supplied) in the holes of the 2 sections.
- ▶ Push the section gently and simultaneously on the 2 nipples of the rear section with a hammer and a piece of wood positioned in line with the bores.



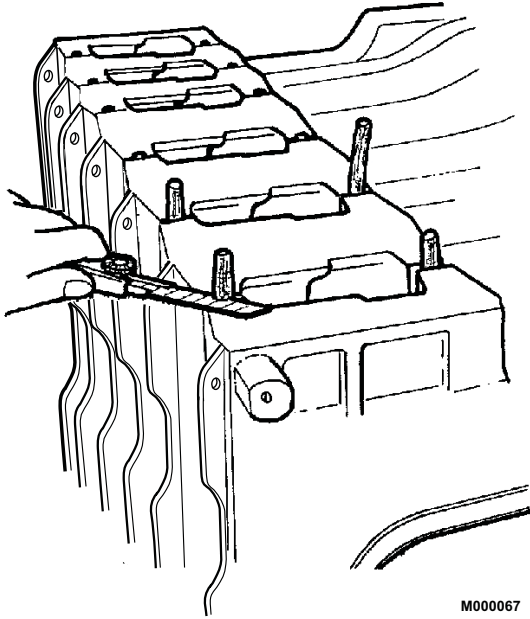
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- ▶ Put the assembly tool in position.  
Tighten gradually so as to bring together the upper and lower connections evenly and simultaneously.



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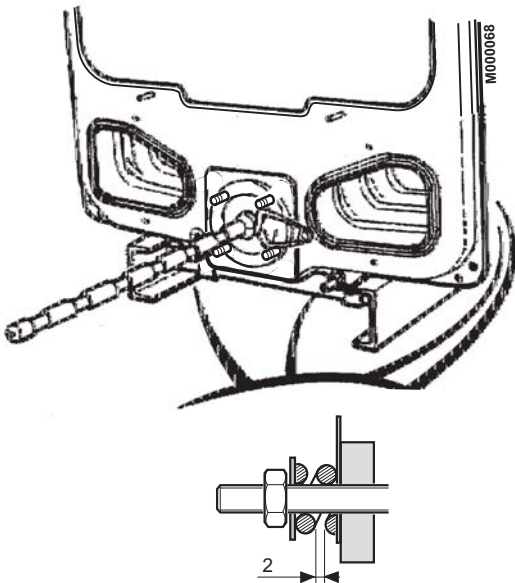
- ▶ Assemble the remaining intermediate sections one by one, to the procedure stated in figures 3, 4, 5, 6, 7, and 8.
- ▶ First assemble the normal intermediate sections, then the special ones.  
**Leave the assembly tool in place.**



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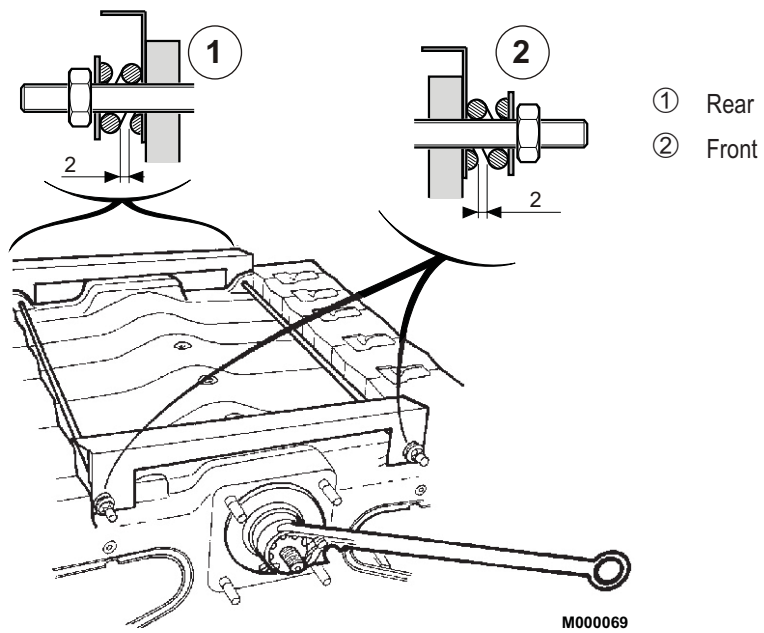
- ▶ Trim off any projecting ends of the thermocords the sweeping covers.

### 13 Fitting the upper and lower assembly rods



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- ▶ On the lower assembly rods, fit the following at each end in the given order : an expansion spring, a washer and a nut (the holes of the front lugs must be aligned with the holes of the frame brackets as the assembly rods are used to make the boiler body integral with the frame).
- ▶ Stop tightening as soon as the gap between the spring spires is equal to about 2 mm.



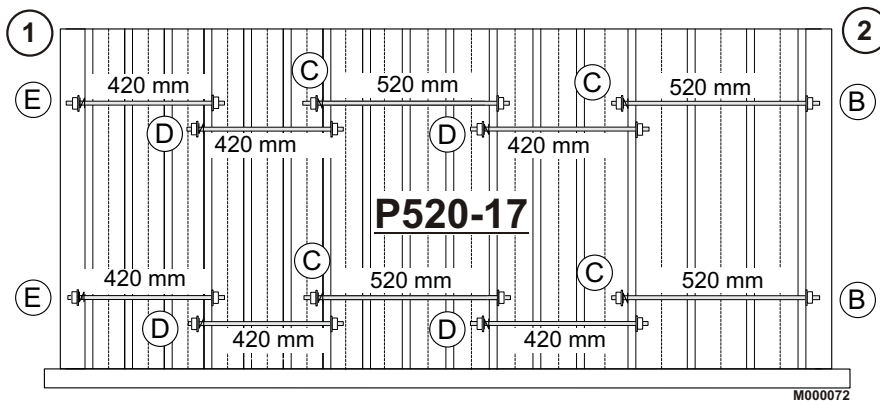
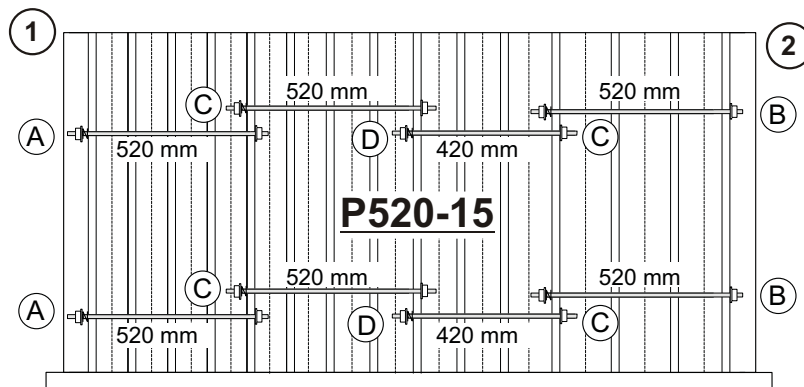
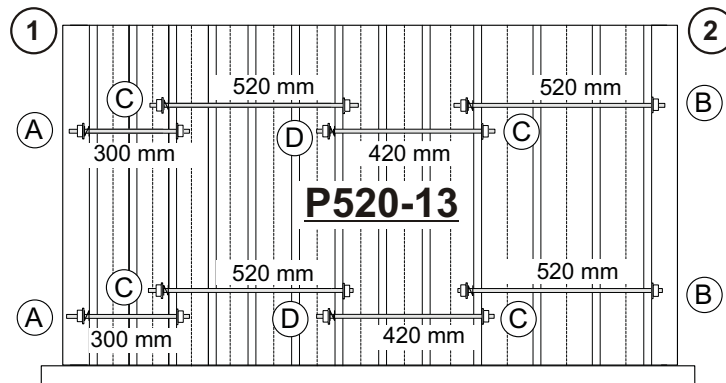
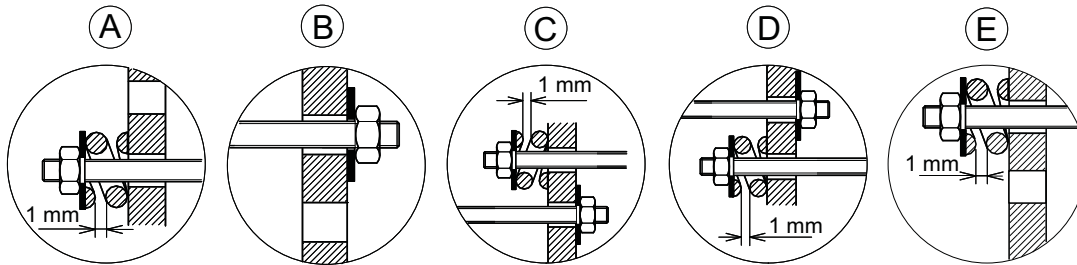
- ▶ Put in place the upper assembly rods in the two front and rear lugs.
- ▶ Mount the 2 crosspieces (supplied in package FA 5/6) with their bends turned backwards and fasten them to the rods with an expansion spring, 1 nut and 1 washer
- ▶ Remove the assembly tool.

# 15 Assembling the side assembly rods



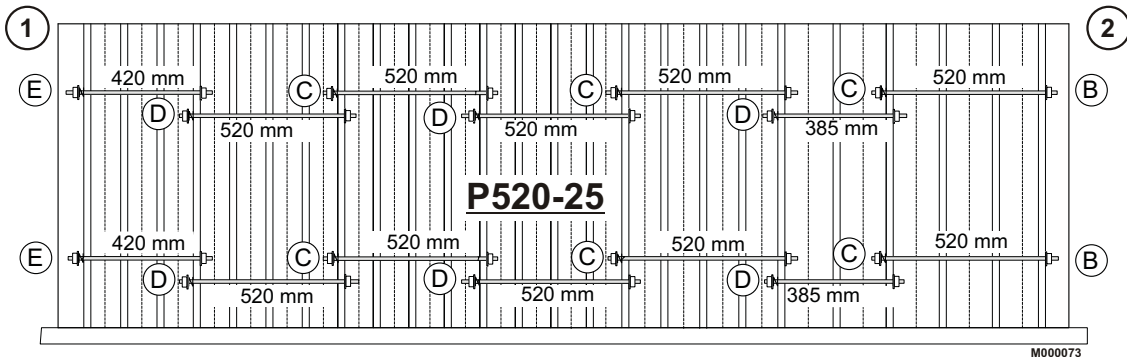
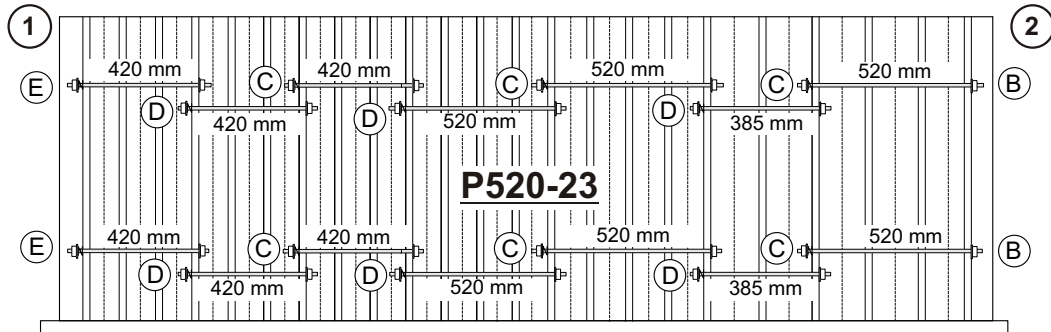
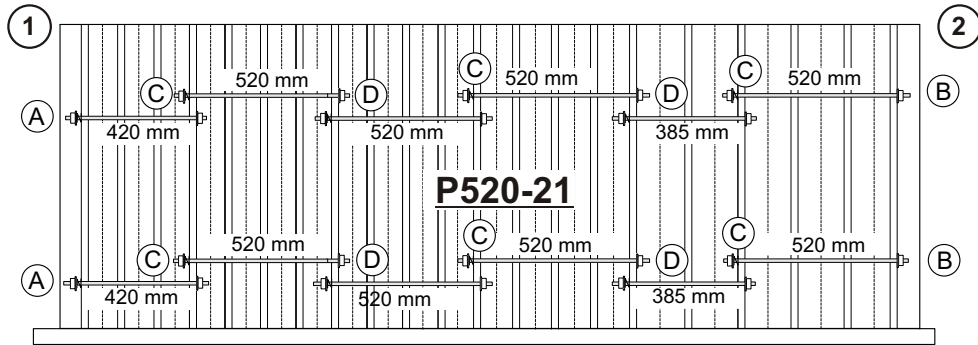
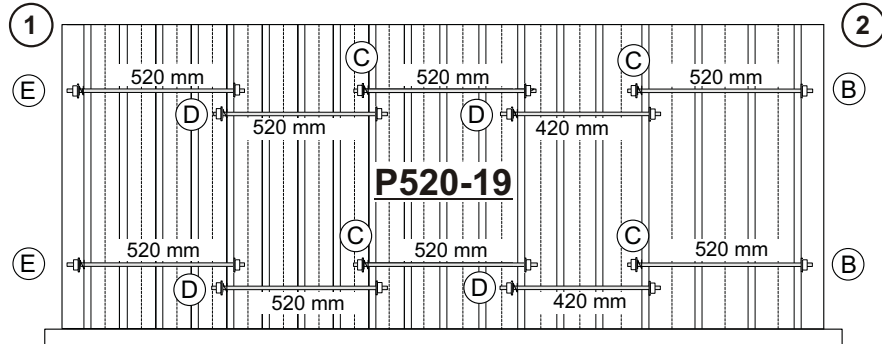
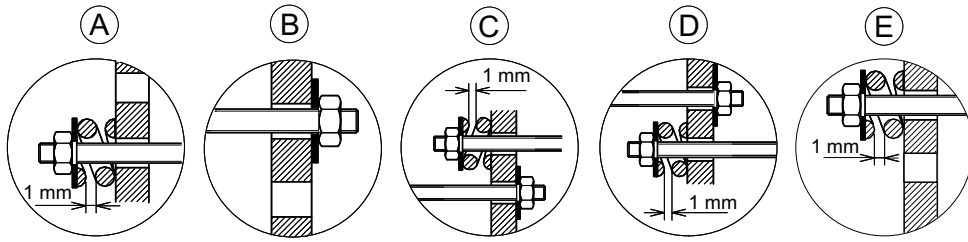
- The side assembly rods must be assembled from the rear to the front.
- The rods must be inserted in the holes stated in the diagrams (the lugs of the sections in which the assembly rods are to be inserted have 2 holes).

- Place the expansion spring and washer on the rear of each rod.
- Stop tightening the nuts as soon as the gap between the spires of the springs is about 1 mm.



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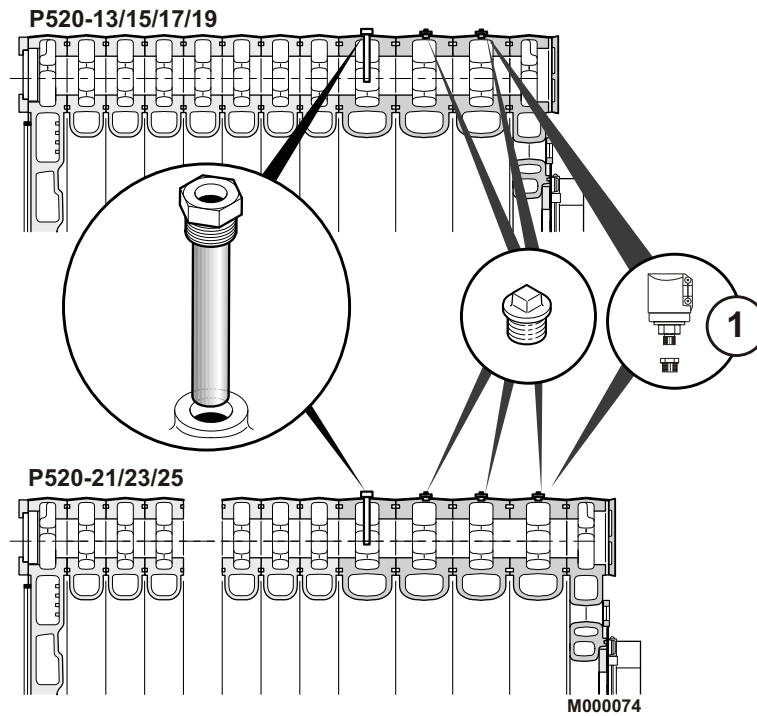
- ① Rear
- ② Front



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- ① Rear
- ② Front

## 16 Assembling the pocket and the plugs



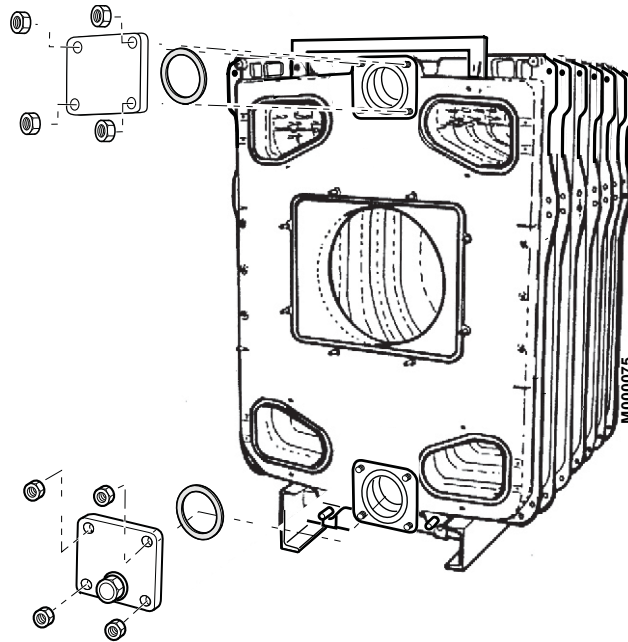
① Safety pressure sensitive switch

**⚠ Assembling the safety pressure sensitive switch only valid for the Netherlands !**

- ▶ Assemble the pocket for the thermostats and thermometer in:
  - the third special intermediate section - 150 mm wide, 1/2" hole for P 520-13 to P 520-19
  - or
  - the fourth special intermediate section - 150 mm wide, 1/2" hole for P 520-21 to P 520-25.
- ▶ Plug the 2 free 1/2" holes for P 520-13 to P 520-19 or the 3 free 1/2" holes for P 520-21 to P 520-25 in the special intermediate sections.



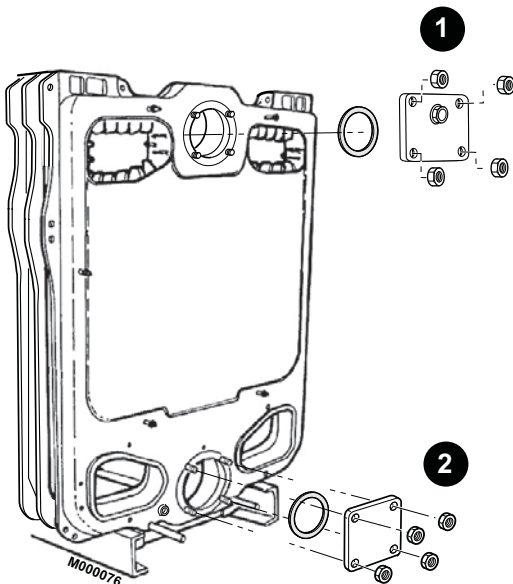
## 17 Fitting the upper and lower front flanges



- ▶ Fit the plain flange onto the upper connection of the front section (using 4 H 18 nuts), with the Ø 170x222 gasket in between (first soak the gasket in warm water).
- ▶ Fit the flange with the sludge removal hole onto the lower connection of the front section (hole in the lower part of the flange) using 4 H 18 nuts, with the gasket in between (soak in warm water first).

## 18 Hydraulic test

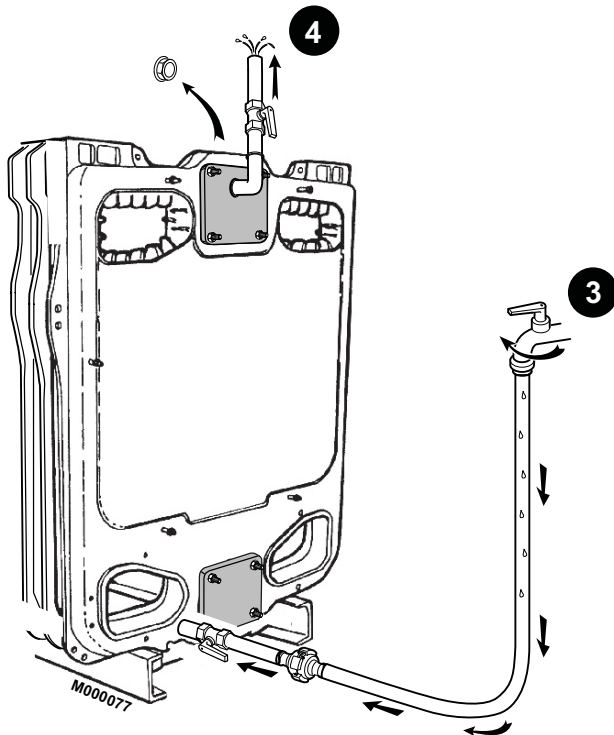
1.



**!** 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 9.75 bar mini) for 10 minutes at least.

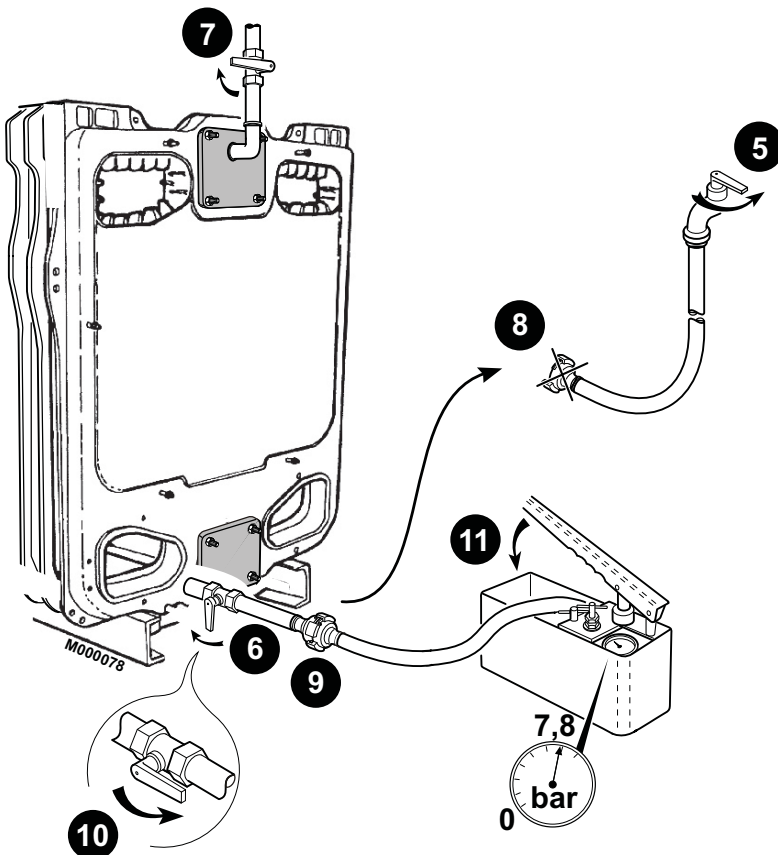
- 1 Fit a square flange with hole facing upwards onto the upper flange with outlet piece.
- 2 Fit a blind square flange onto the lower flange with return piece.

2.



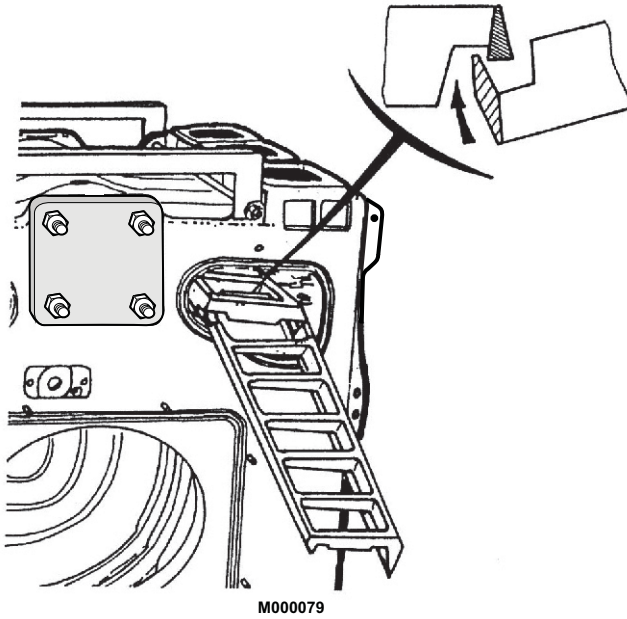
**!** Ensure that all the air in the boiler is vented to avoid any bursting of the body.

3.



- ▶ Maintain pressure for at least 10 minutes. Any drop in pressure indicates a leakage in the boiler body.
- ▶ After the tightness test, drain the boiler and remove all the parts used for the test.

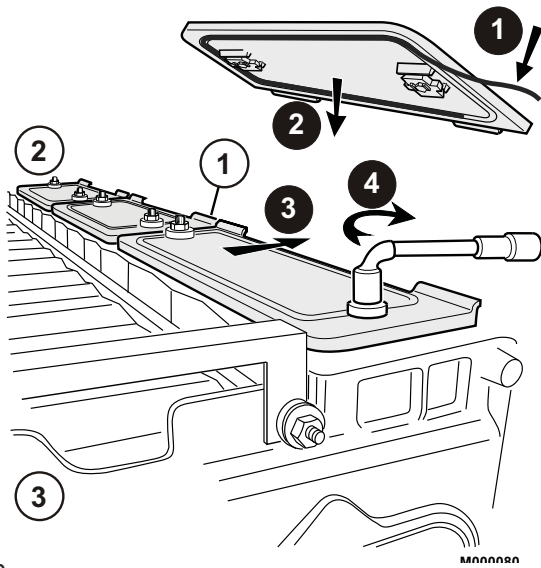
## 19 Assembling the baffle plates



Boiler P 520 - Number of sections	P 520-13	P 520-15 to 19	P 520-21 to 25
Total number of baffle	4	6	8
Package no.	CM 23	CM 22 + CM 23	2 x CM 23

- ▶ Put the baffle plates into place in the upper front flue ways, taking care to interlock them with each other before fitting them.

## 20 Assembling the sweeping covers



② Rear

③ Front

- Clean off the protective varnish on the ground surfaces with diluent.

- The covers are numbered from 1 to 4, and must be fitted with a thermocord ①. The length of the thermocord depends upon the cover and is given below.

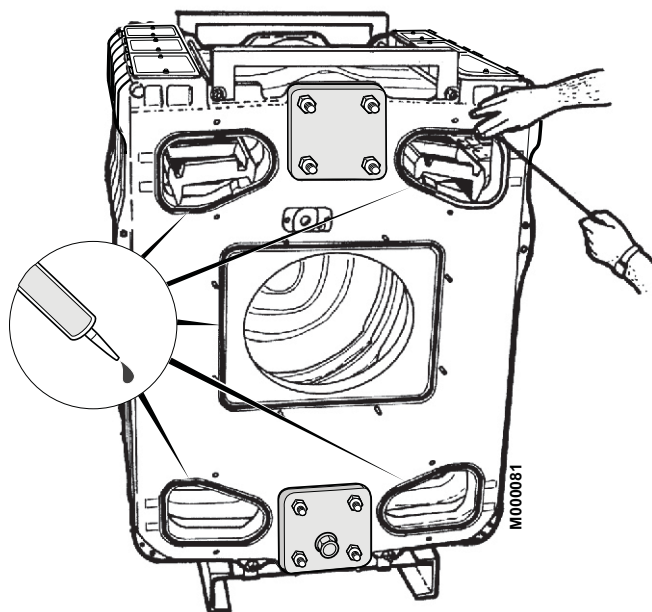
Type	Thermocord length
1	1335 mm
2	1110 mm
3	890 mm
4	665 mm

Place the 2 no. 1 sweeping covers (with the handles turned outward ①) on either side of the boiler starting from the front. Distribute the other covers evenly.

**i** Each cover is fitted with a system whereby it can only be mounted with the handles turned outward.

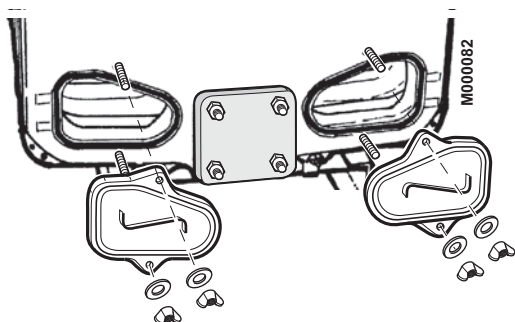
- Fit the two locks of each cover between the sections.
- Push the cover towards the outside of the boiler, to the closed position ③.
- Fasten the two brass nuts of each cover ④.

Cover model	No. 1	No. 2	No. 3	No. 4
Boiler type	← Number of sweeping covers per type →			
	Front			Rear
P 520-13	2	4		
P 520-15	2	4		2
P 520-17	2	6		
P 520-19	2	6		2
P 520-21	2	8		
P 520-23	2	6	4	
P 520-25	2	10		



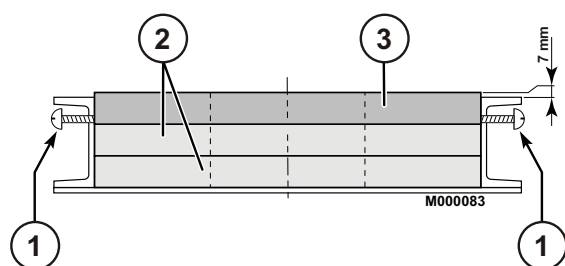
- ▶ Insert the thermocord in the sealing groove on each side and hold it in place with a few drops of silicone filler.

## 22 Putting in place the lower trap doors



- ▶ Insert the thermocord in the sealing groove of the 2 lower flue ways, on the rear and front of the boiler.
- ▶ Put the 4 trap doors on the lower flue ways and fasten with the wing nuts.

## 23 Burner door

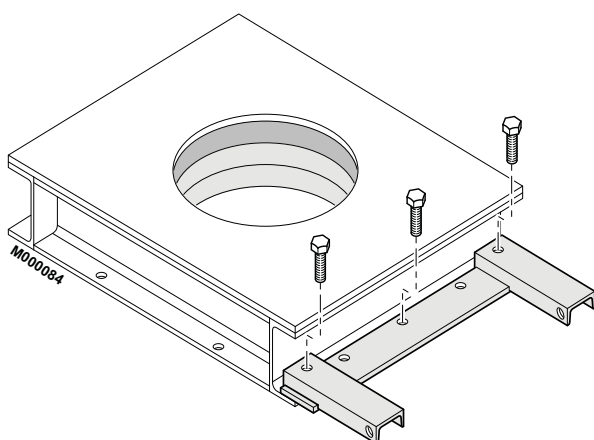


① 2 screws SIM 3.94x25.4

② Refractory felt

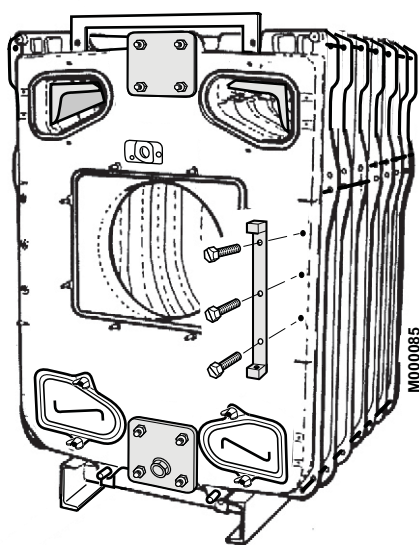
③ Rigid refractory plate

► Put the furnace door insulating material in place and retain it with the 4 screws SIM 3.94x25.4.



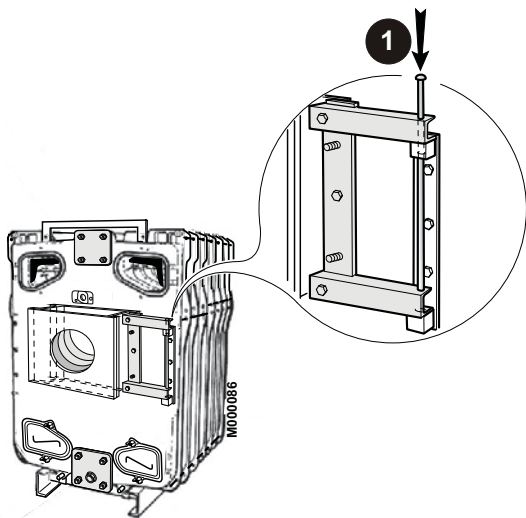
► Place the furnace door on the floor and fasten the articulation onto the door with 3 screws HM 12.

## 24 Installing the hinge of the furnace door

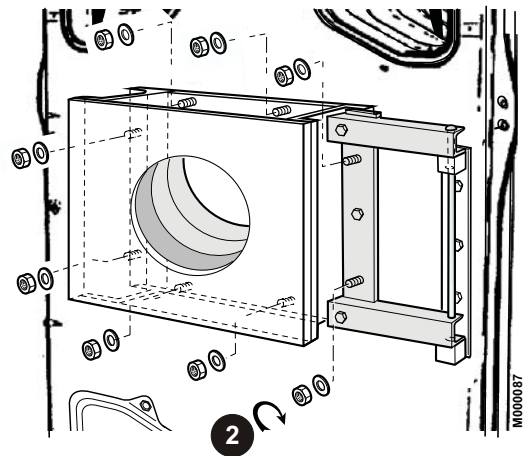


► Fix the furnace door hinge on the right or left-hand side of the front section by means of 3 screws HM 12x25.

## 25 Fitting the furnace door

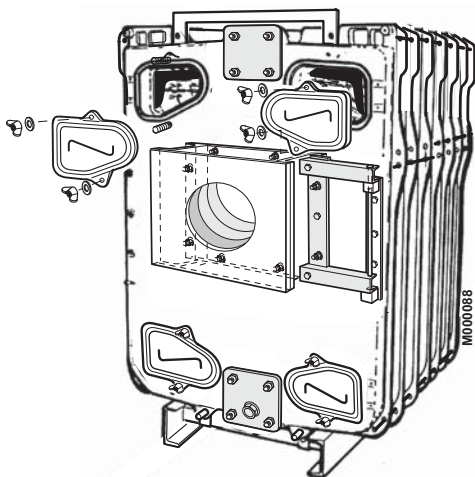


- ▶ Fit the door onto the hinge by inserting the pin.



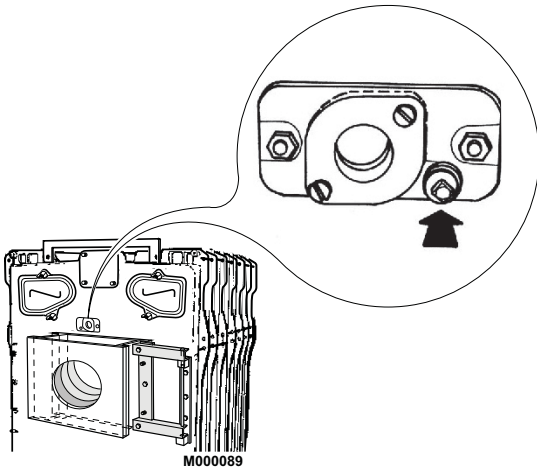
- ▶ Close the furnace door on the 8 studs and fasten with 8 washers and nuts.

## 26



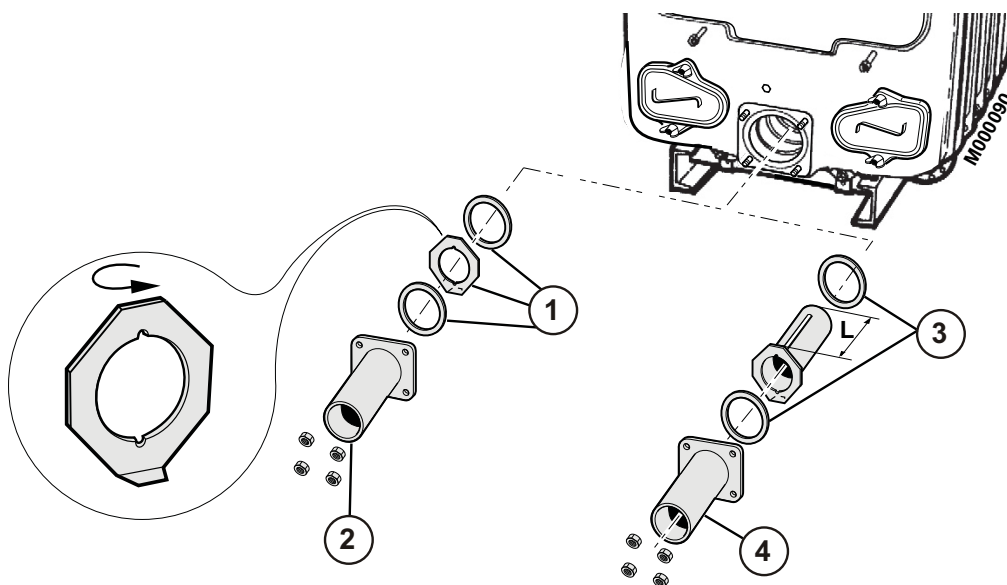
- ▶ Fit the 2 doors of the upper flue ways (wing nuts).

## 27 Flame inspection window



- ▶ The flame inspection window is fitted with a 1/4" tapped hole for ventilation (optional): if a ventilation system is used, connect the hole to the one provided for that purpose before the burner combustion head.

## 28 Assembling the return flange on boilers P 520-13 to P 520-25



- ① P 520-13: Package FA 67
- ② P 520-13: Package FA 48
- ③ P 520-15 to P 520-25: Package FA 69 to FA 79
- ④ P 520-15 to P 520-25: Package FA 50 to FA 60

### • P 520-13

Fit the water balancing diaphragm with the notches vertical onto the boiler return with a  $\text{Ø } 170 \times 222$  gasket in between (first soak the gasket in warm water).

Fit the heating return flange with a  $\text{Ø } 170 \times 222$  gasket in between and fix it with 4 nuts H 18.

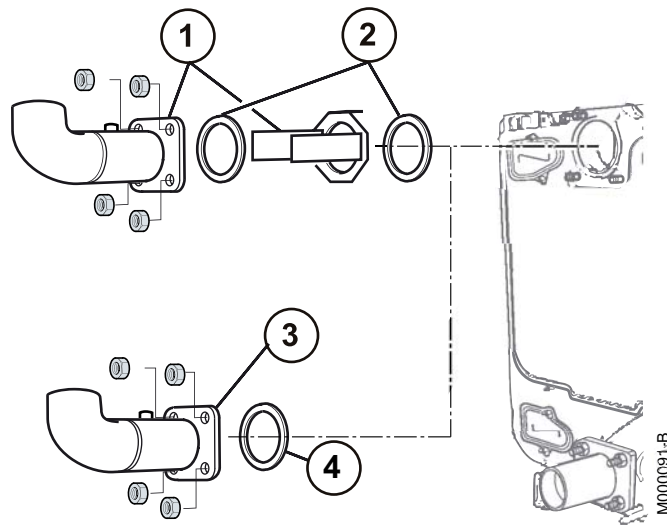


- **P 520-15 to P 520-25**

- ▶ Fit the water balancing tube onto the boiler return with a Ø 170x222 gasket in between (first soak the gasket in warm water).
- ▶ Fit the heating return flange with a Ø 170x222 gasket in between (first soak the gasket in warm water) and fix it with 4 nuts H 18.

Boiler type	Length mm
P 520-15	380
P 520-17 and P 520-19	600
P 520-21	880
P 520-23 and P 520-25	1210

## 29 Assembling the outlet flange on boilers P 520-13 to P 520-25



- ① P 520-13 to P 520-15: Package FA 42 to FA 50
- ② P 520-13 to P 520-15: Package FA 61 to FA 69
- ③ P 520-17 to P 520-25: Package FA 51 to FA 60
- ④ P 520-17 to P 520-25: Package FA 70 to FA 79

- **P 520-13 to P 520-15**

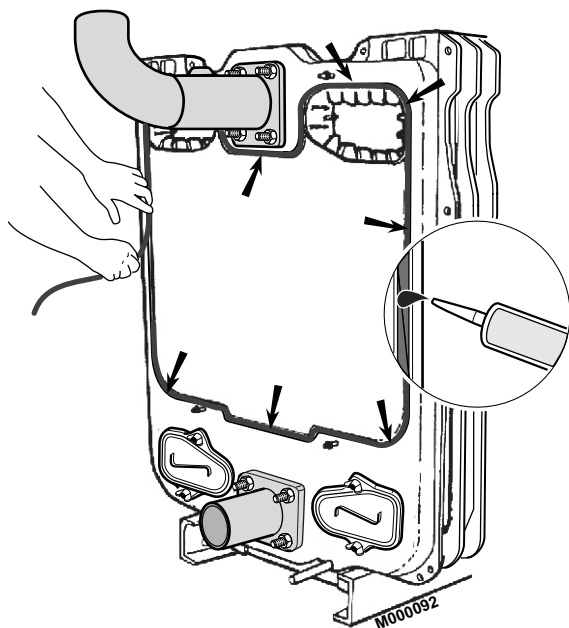
- ▶ Place the nozzle turned outside from the boiler with a Ø 170x222 gasket in between (first soak the seal in warm water).
- ▶ Assemble the flange with angled piece so that the angle is turned upward, with a Ø 170x222 gasket in between (first soak the gasket in warm water) and fasten with 4 nuts H 18.

- **P 520-17 to P 520-25**

- ▶ Assemble the flange with angled piece so that the angle is turned upward, with a Ø 170x222 gasket in between (first soak the gasket in warm water) and fasten with 4 nuts H 18.

## 30 Fitting the boiler outlet flange

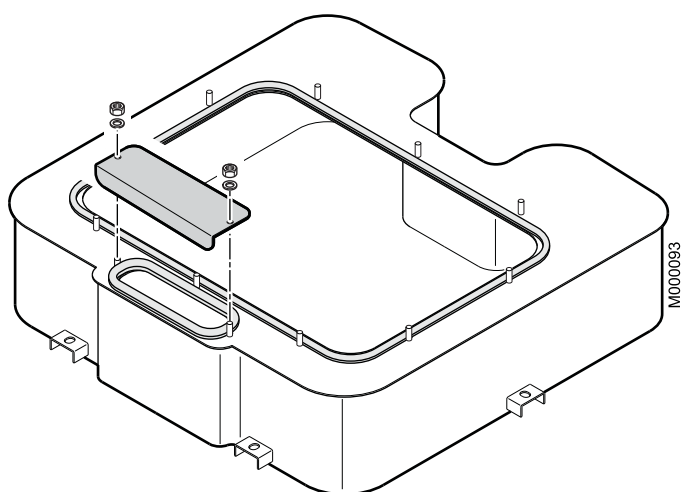
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- ▶ Carefully insert the  $\varnothing 15$  gasket in the groove of the rear section and hold it in place with a few drops of silicone.

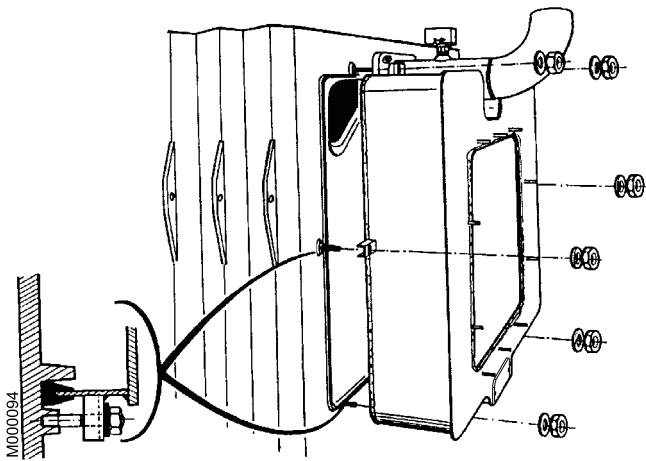
## 31

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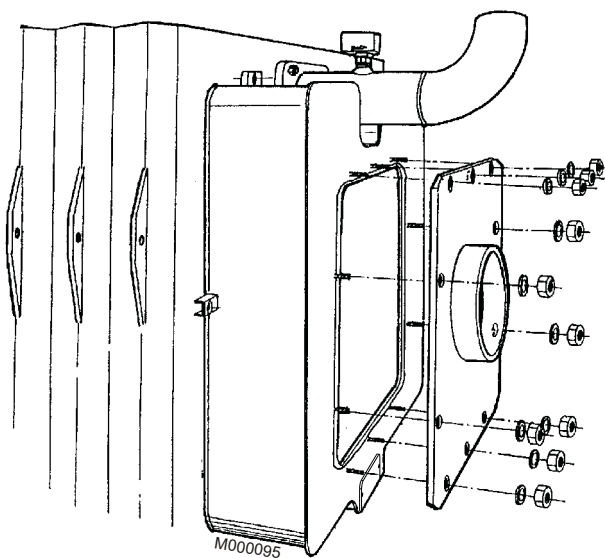


**i** Before assembling the flue gas box, grease all bolts, studs and screws with high-temperature grease (not supplied).

- ▶ Put the adhesive sheet gasket in place on the flue gas box.
- ▶ Put the sweeping cover in place and fasten with 2 nuts H 10 and  $\varnothing 10$  washers.

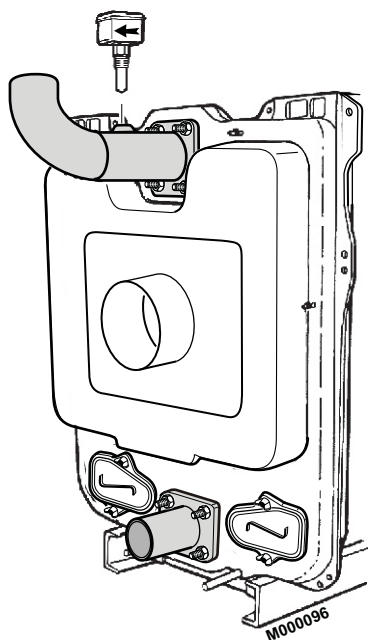


- ▶ The flue gas outlet is fastened to the rear by means of 6 studs, washers and Ø 12 nuts.



- ▶ First adapt the steel connecting plate to the chimney connection flue, then fasten that plate or the plate with a connecting piece with 10 nuts H10 and Ø10 washers.

## 34 Assembling the flow switch

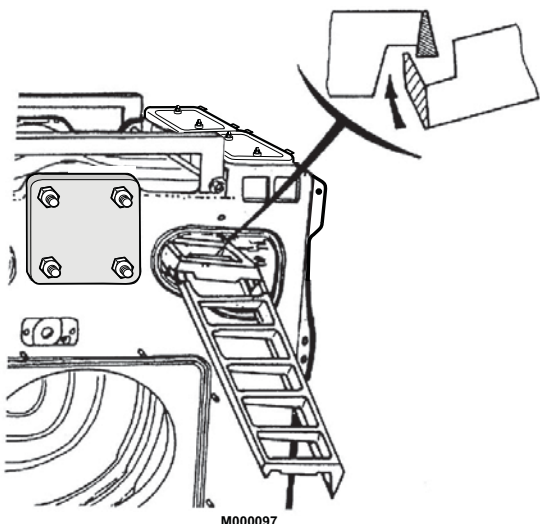


- ▶ Fasten the flow switch on the sleeve tube. The direction of the arrow head on the collet must be the same as the flowing out of the water in the tube.

Number of sections	Flow switch Code no.
13	8802-4743
15	8802-4746
17	8802-4738
19	8802-4753
21	8802-4755
23	8802-4757
25	8802-4759

## 35 Assembling the baffle plates

### Boilers supplied with an assembled body



**i** for boilers supplied with an assembled body only.

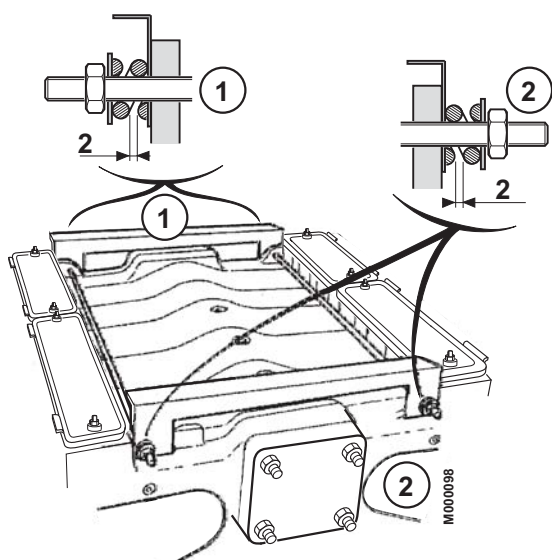
**!** Only NL: Mounting of the low-water safety pressure switch! (Refer to the leaflet "Mounting of the low-water safety pressure sensitive switch" delivered in the package)

- ▶ Put the baffle plates into place in the upper front flue ways, taking care to interlock them with each other before fitting them.

Boiler	P 520-13	P 520-15 to P 520-19	P 520-21 to P 520-25
Total number of baffle	4	6	8
Pack no.	CM 23	CM 22 + CM 23	2 x CM 23

## 36 Assembling the upper crosspieces - package RC2 or RC3

### Boilers supplied with an assembled body



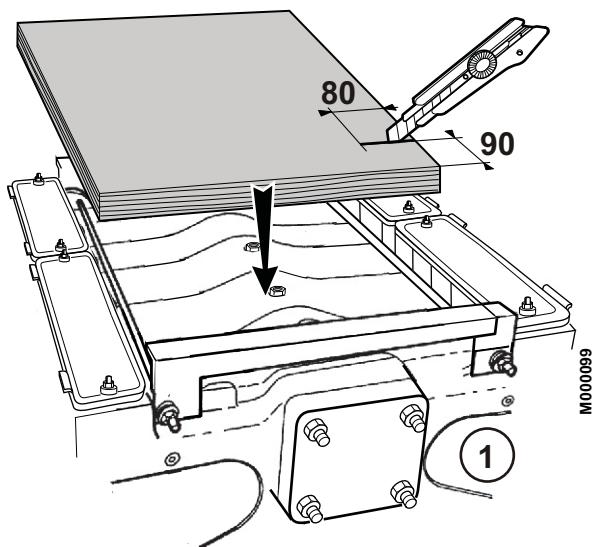
① Rear

② Front

**i** for boilers supplied with an assembled body only.

- ▶ Mount the 2 crosspieces and fasten them onto the rods with an expansion spring, 2 nut and 2 washer.

## 37 Assembling the top insulating material - 13 to 17 sections Package FA34 to FA41

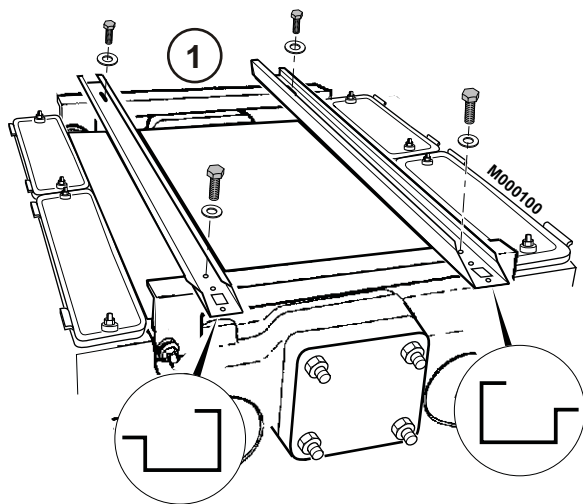


① Front

- Put in place the 600 mm wide (packages FA30 to FA36) top insulating material on the body of the boiler.

Number of sections	13	15	17
Length (mm)	1800	2100	2200

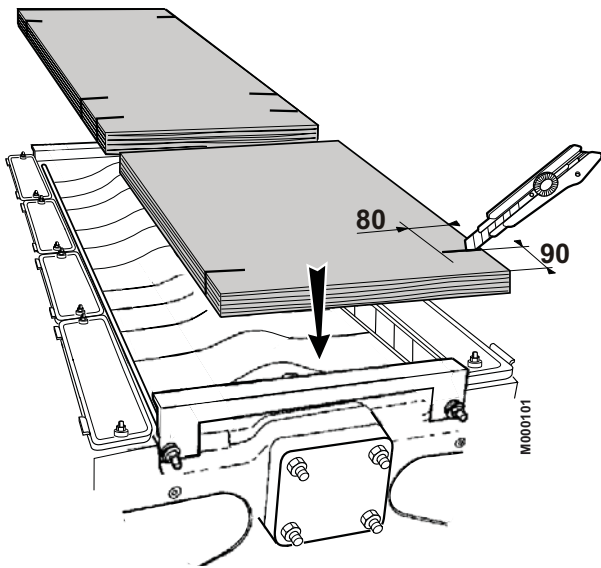
## 38 Assembling the cable channels - 13 to 17 sections Package FA23, FA25, FA27



① Rear

- ▶ Place the cable channels so that their bevelled end is to the front.
- ▶ Fasten with 2 screws H8 x 16 + L8 washers in the third hole starting from the front and opposite the special nut.
- ▶ Fasten at the rear with 2 screws H8 x 16 + L8 washers opposite the oblong holes and special nut.

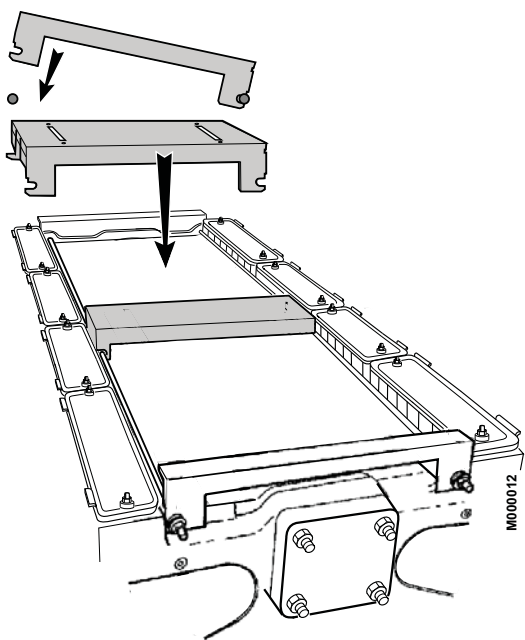
## 39 Assembling the top insulating material - 19 to 25 sections Package FA37, FA39, FA40, FA41



- ▶ Put in place the 2 pieces of insulating material (width 600 mm, packages FA37 to FA41) on the body of the boiler.
- ▶ Push the insulating material under the front and rear crosspieces.

Number of sections	19	21	23	25
Length (mm)	2 x 1200	2 x 1400	2 x 1500	2 x 1600

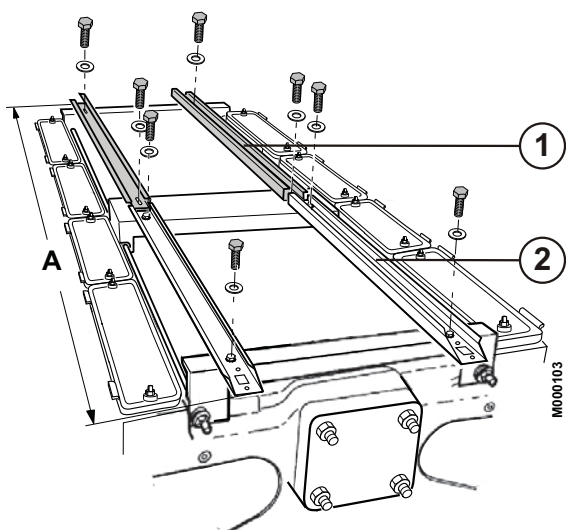
## 40 Assembling the intermediate piece - 19 to 25 sections Package RC3



- ▶ Assemble the intermediate piece on the assembly rods by fitting one slotted side onto one rod and using the flexibility of the other rod.

## 41 Assembling the cable channels - 19 to 25 sections

### Package FA16 and Package FA18, FA20, FA22, FA24



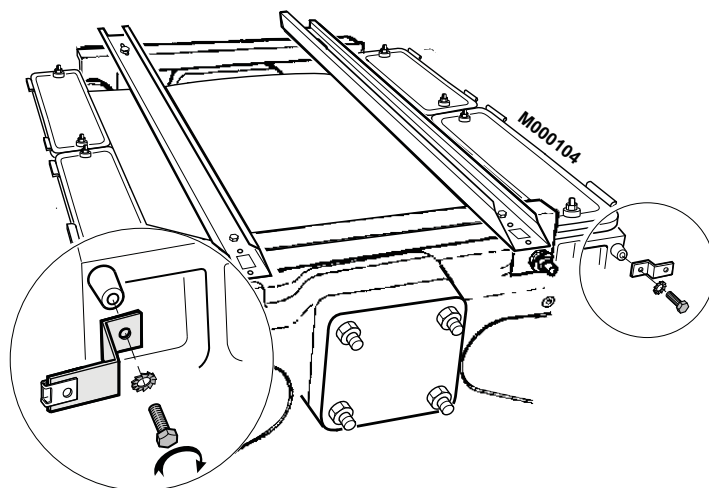
- ① Package FA16
- ② Package FA18, FA20, FA22, FA24

Number of sections	19	21	23	25
Length (mm)	2600	2910	3110	3310

- ▶ Place the cable channels so that their bevelled end is to the front.
- ▶ Fasten with 2 screws H8 x 16 + L8 washers in the third hole starting from the front and opposite the special nut.
- ▶ Fasten them to the intermediate piece and the rear crosspieces with 2 screws H8 x 16 and L8 washers.
- ▶ Align the 2 additional cable channels with the two others.
- ▶ Fasten them to the intermediate piece and the rear crosspieces with 4 screws (H8 x 16) and L8 washers.

## 42 Assembling the casing positioning brackets

### package RC2 or RC3



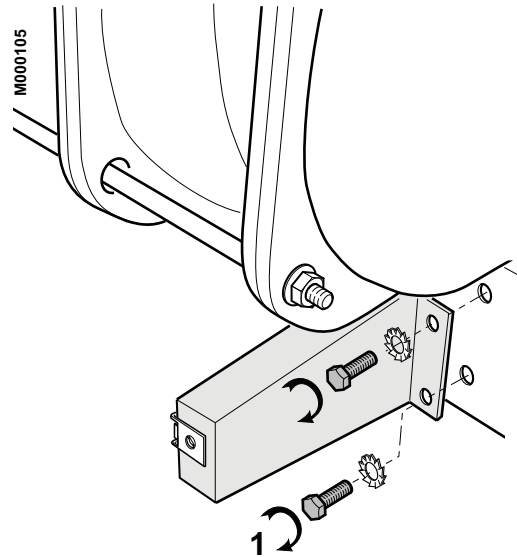
- ▶ Fasten the positioning brackets (package RC2 or RC3) onto the right and left-hand upper bosses of the front section with: 2 screws H8 x 16 + 2 serrated washers (13 mm spanner).



## 43 Assembling the lower rail support brackets package RC2 or RC3

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### ■ Example for a P 520-13



- ▶ Fasten the lower rail support brackets using H8 x 16 screws + Serrated washer.

**i** for the assembly direction, see the drawings below.

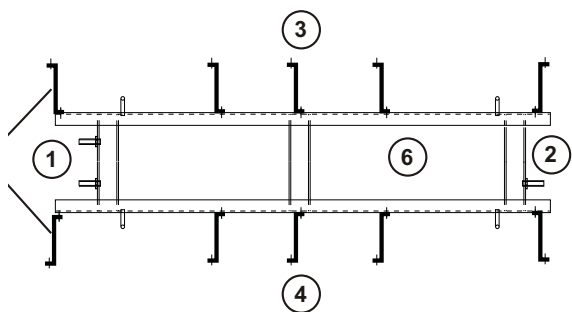
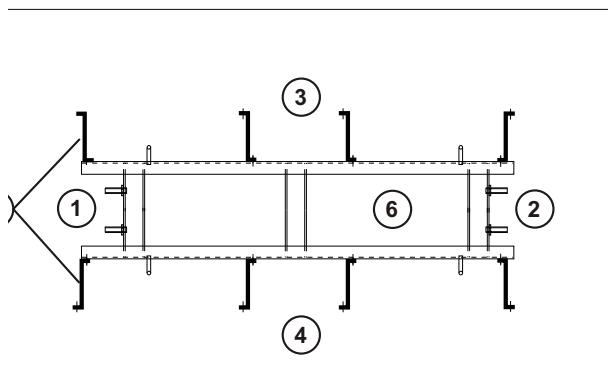
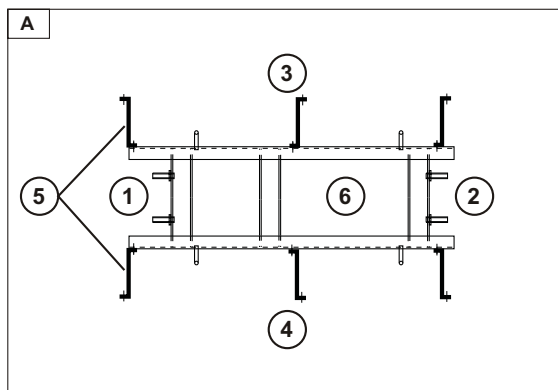
## ■ Assembly direction of lower rail support brackets

(seen from the top of the frame)

**A:** 13, 15 and 17 sections

**B:** 19 and 21 sections

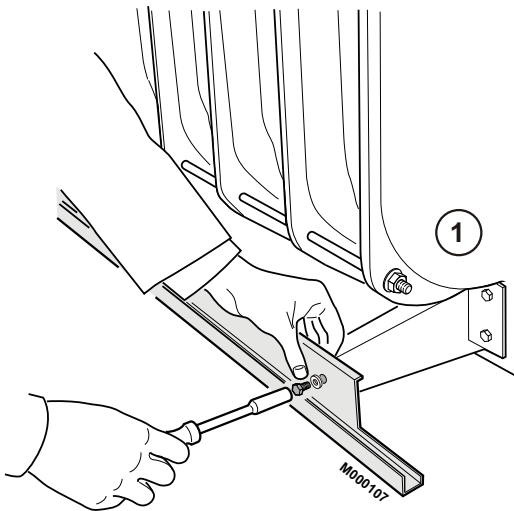
**C:** 23 and 25 sections



M00010c

- ① Rear
- ② Front
- ③ Right-hand side
- ④ Left-hand side
- ⑤ Rail support brackets
- ⑥ Base frame

**i Note:** 2 lower rail support brackets and 2 upper rail brackets are left unused with 19 and 21 sections.



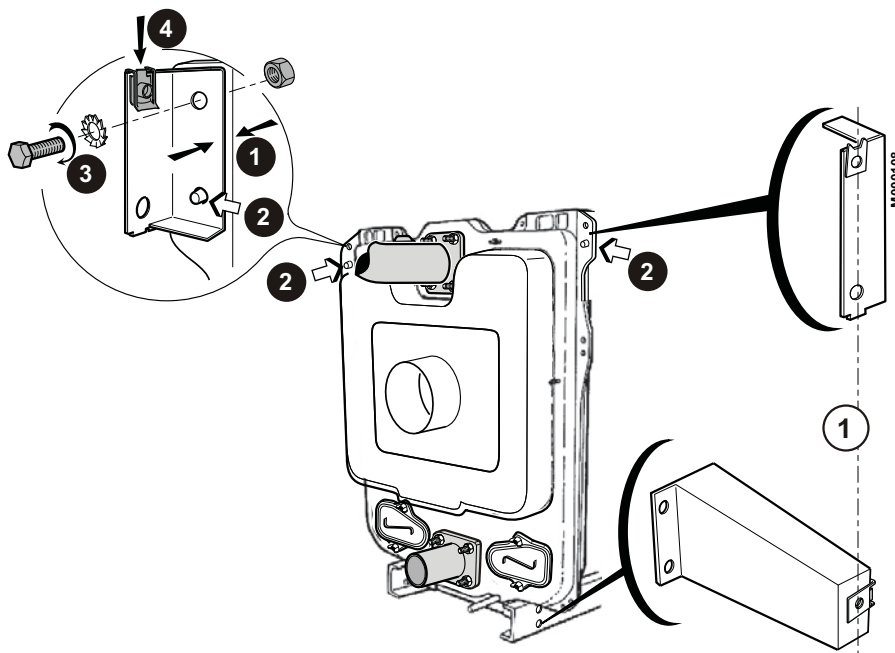
① Front

**i** see fig. 46

- ▶ Fasten the lower rail with H8 x 30 screws and L8 washers.
- ▶ The other rail support brackets are fastened opposite the holes provided on the lower rail.

**!** Length required while assembling the 2-piece rails (boilers with 19 to 25 sections), see fig. 47.

## 45 Assembling the fastening brackets of the upper and lower rails Package RC2 and RC3

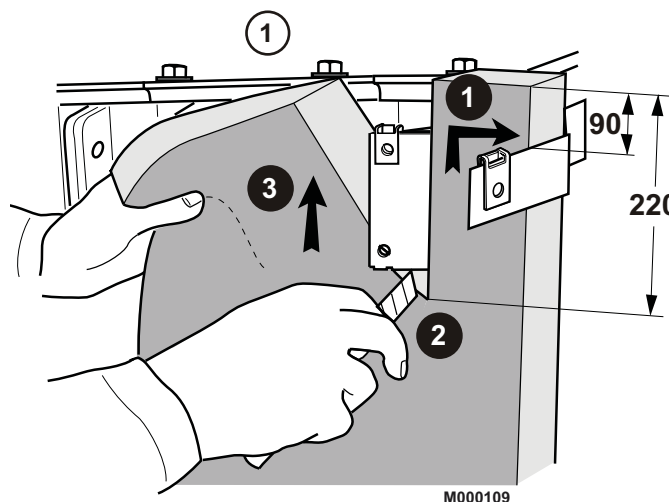


① Imperative alignment.

- ▶ Fix the fastening bracket of the upper rails (package RC2 or RC3) on the upper lug **1** (these brackets must be vertically aligned with the lower rail support brackets).
- ▶ Fit the bracket onto the stub **2**.
- ▶ Fasten with 1 screw H10 x 50 and serrated washers and H10 nuts **3**.
- ▶ Assemble 1 "Rapid" nut on the top of the bracket **4** with the tapped shaft on the inside.

## 46 Installing the insulating material - Package FA34 to FA41

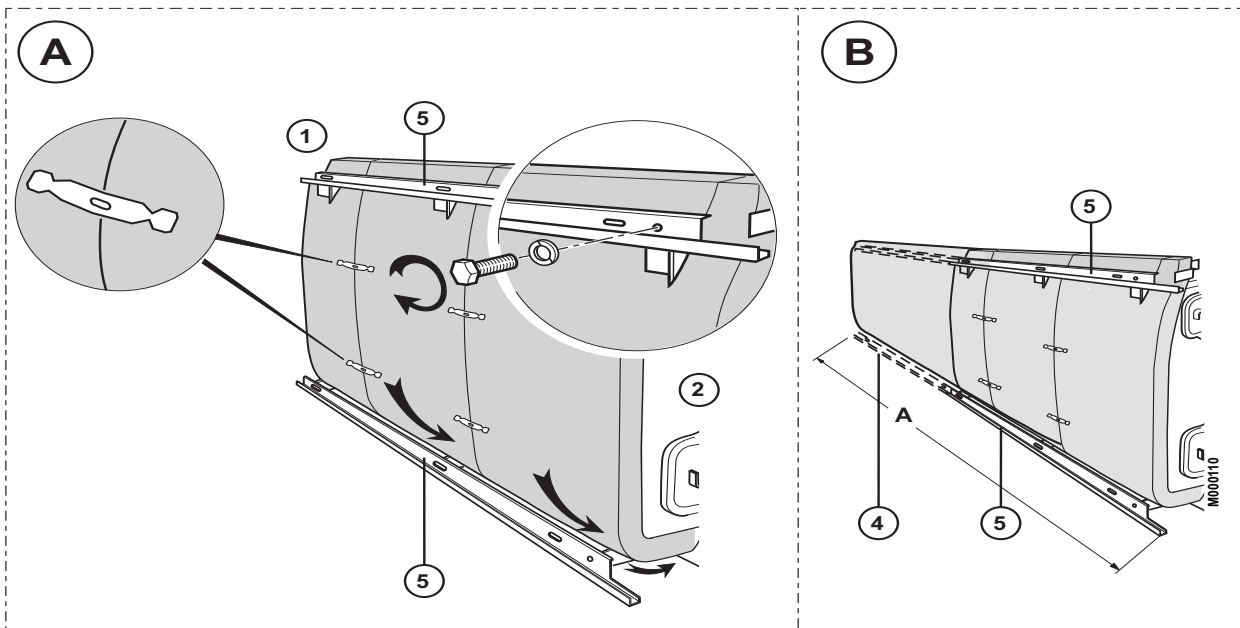
① Front



- ▶ Place the side insulating material against the positioning bracket ① and cut it so that it is flush with the upper lug on which the rail fastening bracket is fixed, along a 220 mm length ②.
- ▶ Push the insulating material in behind the lug and the rail fastening bracket ③.
- ▶ Distribute the insulating material evenly so that you have the same side insulating material on either side of the boiler.
- ▶ Cut the insulation similarly along the fastening brackets.

Boiler type	Side insulating material (mm)			
	Front			Rear
P 520-13	1200	600		
P 520-15	1200	400	400	
P 520-17	1200	400	600	
P 520-19	1200	1200		
P 520-21	1200	400	1200	
P 520-23	1200	600	1200	
P 520-25	1200	400	400	1200

■ Example with P 520-17



- ① Rear
- ② Front

■ 13 to 17 sections

- ▶ Fix the upper rail with H8 x 30 screws and L8 washers (the first hole from the front end of the rail must be opposite the first fastening bracket, and similarly with the other brackets).
- ▶ Push the insulating material behind the lower rail and underneath the boiler.
- ▶ Join the pieces of insulating material to each other with the clips.

Number of sections	package ③
13	FA 23
15	FA 25
17	FA 27

■ 19 to 25 sections:

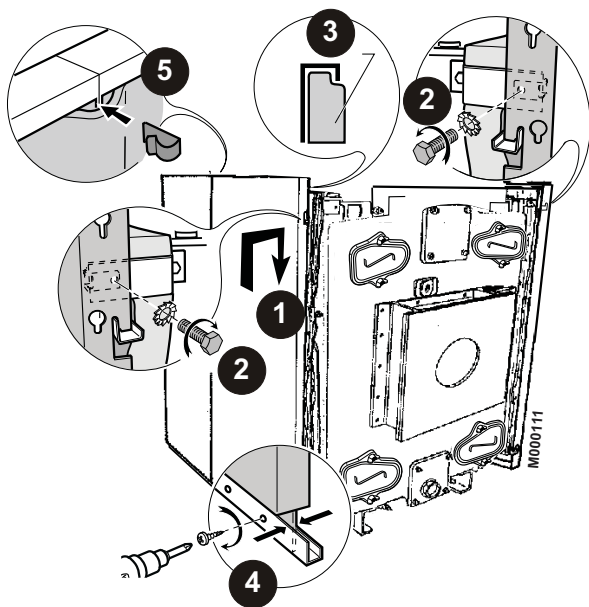
- ▶ Fix the upper rail with H8 x 30 screws and L8 washers (the first hole from the front end of the rail must be opposite the first fastening bracket, and similarly with the other brackets).
- ▶ Fix the additional upper and lower rails, making sure you comply with dimension A (see table below).
- ▶ Push the insulating material behind the lower rail and underneath the boiler.
- ▶ Join the pieces of insulating material to each other with the clips.

Number of sections	package ④	package ⑤
19	FA 16	FA 18
21	FA 16	FA 20
23	FA 16	FA 22
25	FA 16	FA 24

Number of sections	19	21	23	25
A (mm)	2615	2875	3075	3275

## 48 Assembling the side casing panels

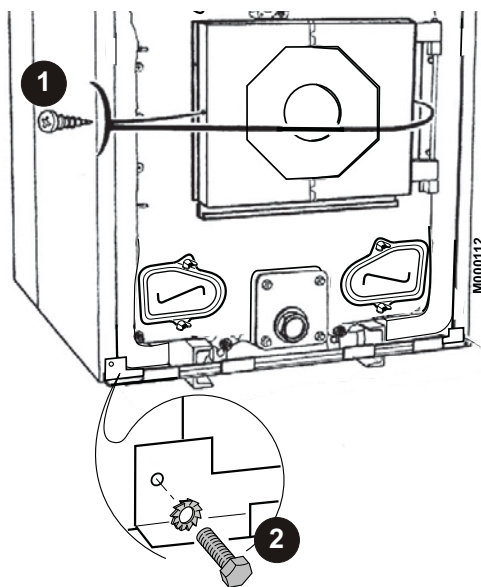
### Package FA142 to FA143 and FA10 to FA11



- ▶ First assemble the panels on the front using the assembly length table opposite and continue up to the rear section ①.
- ▶ Fix the front side panels to the positioning brackets with H8 x 16 screws and serrated washers ②.
- ▶ Push the insulating material into the top of the side panels ③ and fasten the panels to the lower rails by means of the self-drilling screws with the electric screwdriver (2 screws per panel) ④.
- ▶ Fasten the side panels to each other with the clips.

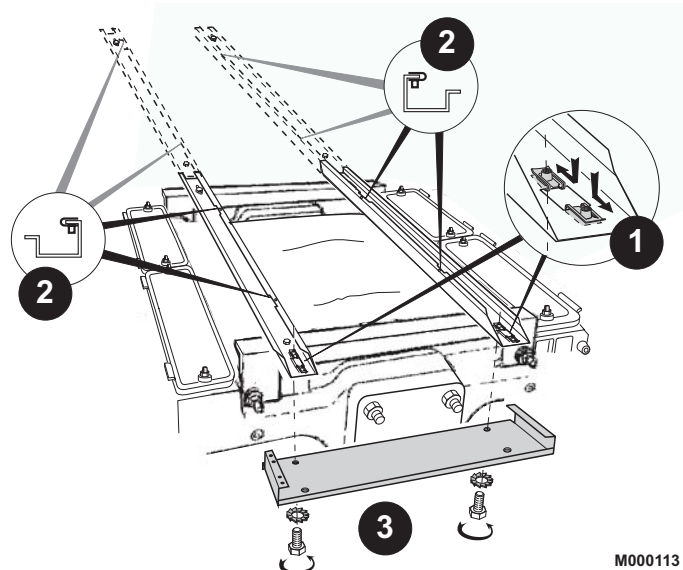
Boiler type	Side panels - Grey (mm)				
	Front (light grey)	→			Rear
P 520-13	1050	400	400		
P 520-15	940	600	600		
P 520-17	940	600	400	400	
P 520-19	940	600	600	400	
P 520-21	1050	600	600	600	
P 520-23	1050	600	600	400	400
P 520-25	1050	600	600	600	400
Panels	400 mm long panel in package FA10 600 mm long panel in package FA11 940 mm long panel in package MR4 1050 mm long panel in package MR5				

## 49 Assembling the furnace door and lower crosspiece panels package RC2 or RC3



- 1 Put the furnace door panel in place (package RC2 or RC3) and fasten with 2 tapping screws ( $\text{Ø } 3.94 \times 12.7$ ). The furnace door panel may be cut in 2 at the micro-joints.
- 2 Fix the casing support lower crosspiece (package RC2 or RC3) by means of 2 screws (H6 x 20) and 2 serrated washers.

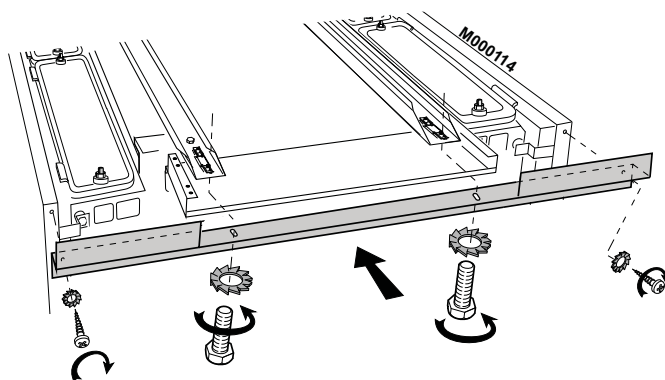
## 50 Assembling the control panel bracket (all control panels) package RC2 or RC3



- ▶ Fit the 4 "Rapid" nuts on the front of the cable channels.
- ▶ Fit the "Rapid" nuts in the slots **2**:  
4 "Rapid" nuts for 13 to 17 sections.  
8 "Rapid" nuts for 19 to 25 sections.
- ▶ Fix the control panel bracket (package RC2 or RC3) underneath the 2 cable channels by means of 2 screws (H8 x 16) and 2 serrated washers.

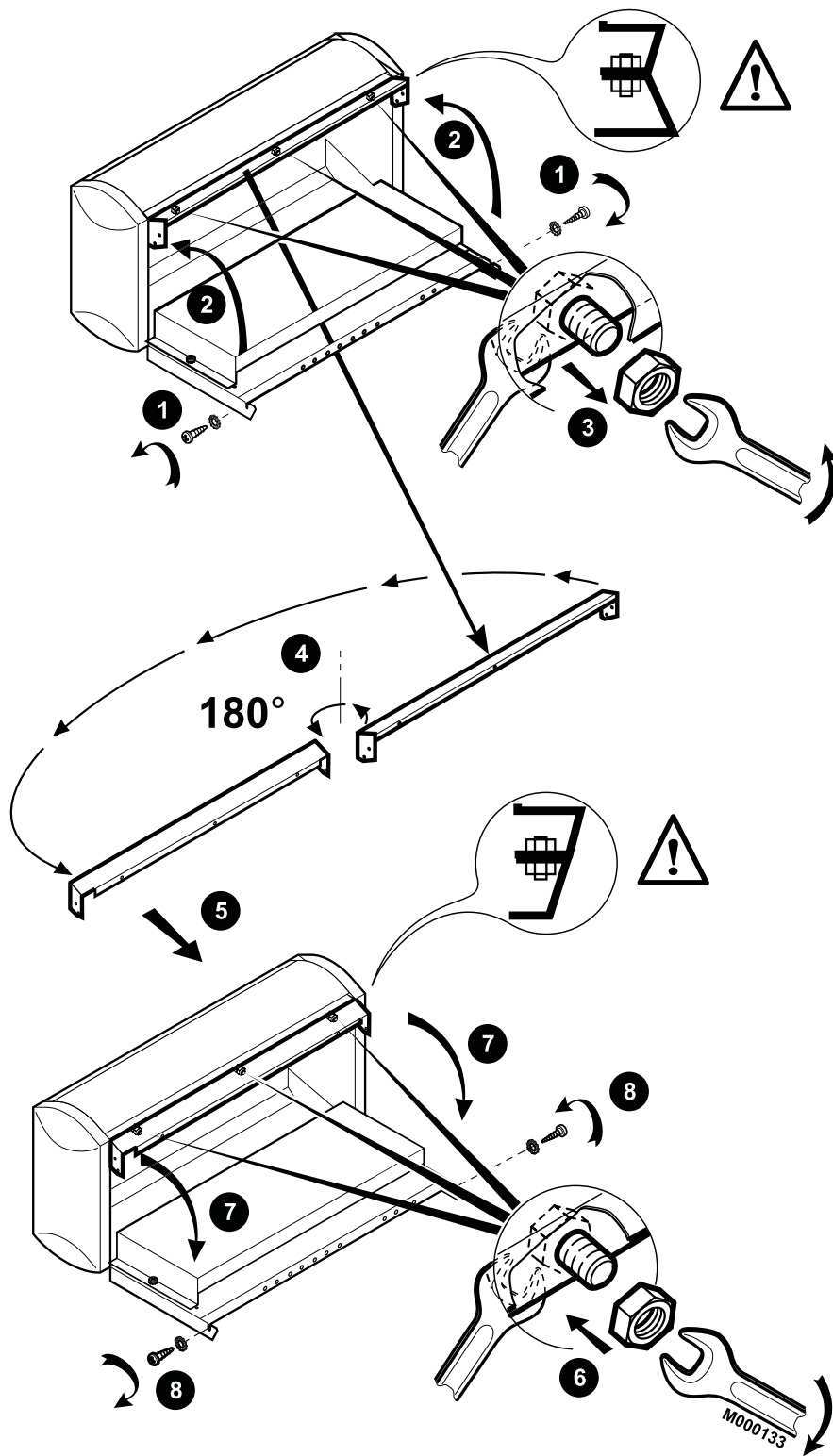
## 51 package RC2 or RC3

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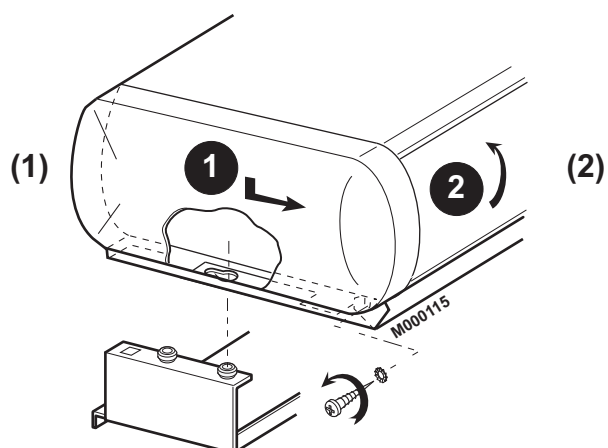


- ▶ Put the front crosspiece in place (package RC2 or RC3) and fasten with 2 screws (H8x16) and 2 tapping screws (Ø 3.94 x 12.7) + serrated washers.



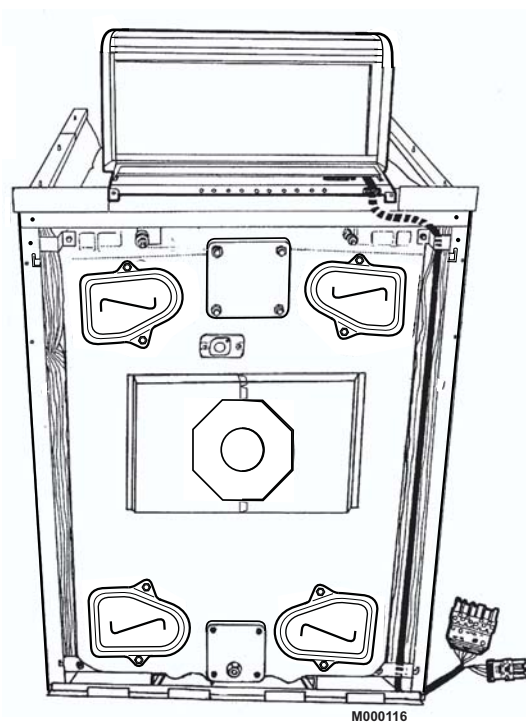


## 53 Control panel assembly



- ① Position the control panel on the front studs.
- ② Open the control panel (2 screws on the side).

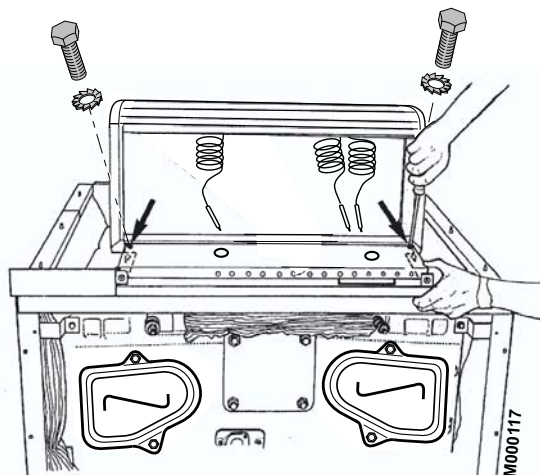
## 54 Burner cable



- ▶ Bring the **burner cable** behind the casing support and down to the burner between the side panel and insulating material.

## 55 Installing the bulbs

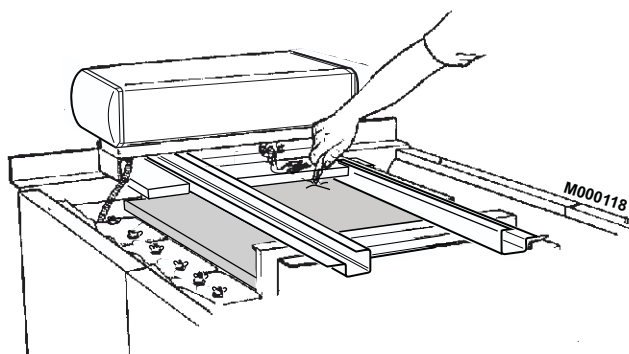
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- ▶ Fix the control panel to the rear of the control panel bracket using 2 screws (H Ø 4 x 40) and serrated washers.
- ▶ Carefully unroll the various bulbs and bring them out of the control panel through the opening in the bottom on the panel.

## 56

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- ▶ Cut out the top insulating material to free the boiler pocket. Then, insert the bulbs inside the pocket and maintain them with the spring.

**i** Only NL: Connect the safety pressure sensitive switch option.

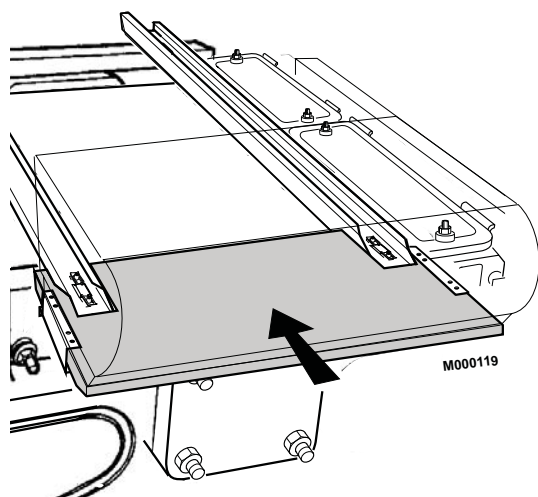
## 57

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

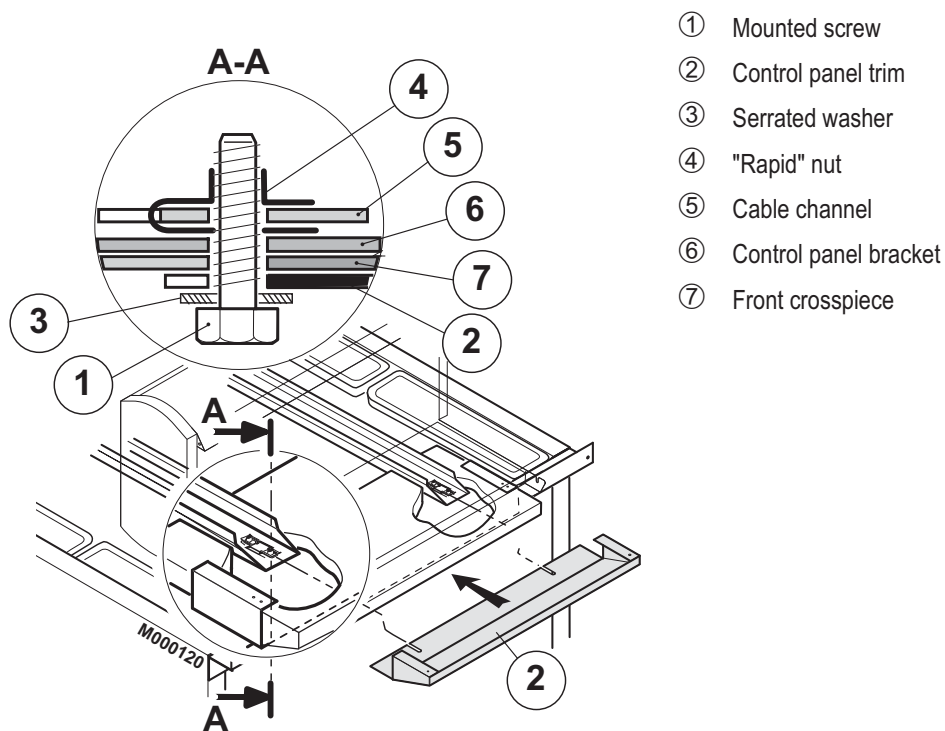
 See the "Electrical Connections" section of the instructions supplied with the control panel.

## 58 Installing the insulating material



- ▶ Put in place the insulating material as shown above.

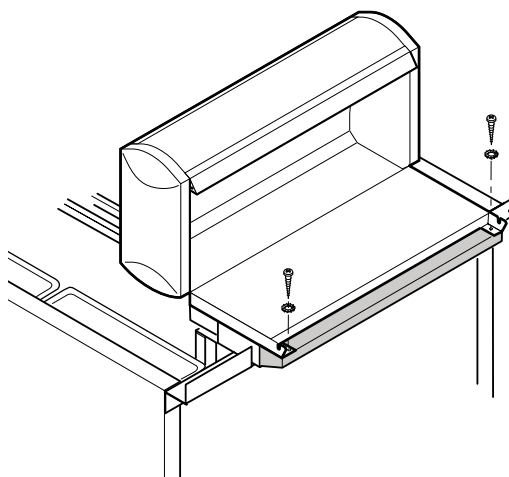
## 59 Section A-A: package RC2 or RC3



- ▶ Unfasten the screws ① (mounted in fig. 50).
- ▶ Slide the control panel trim ② along the screws ①.
- ▶ Fasten the screws ①.

## 60 package RC2 or RC3

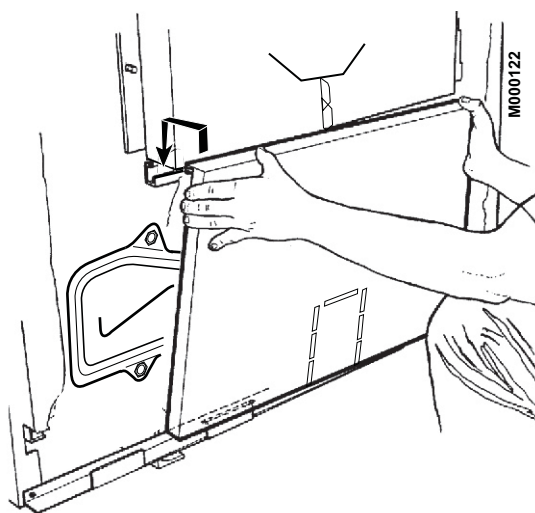
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- ▶ Fix the trim to the control panel using 2 tapping screws and serrated washers.

## 61 package RC2 or RC3

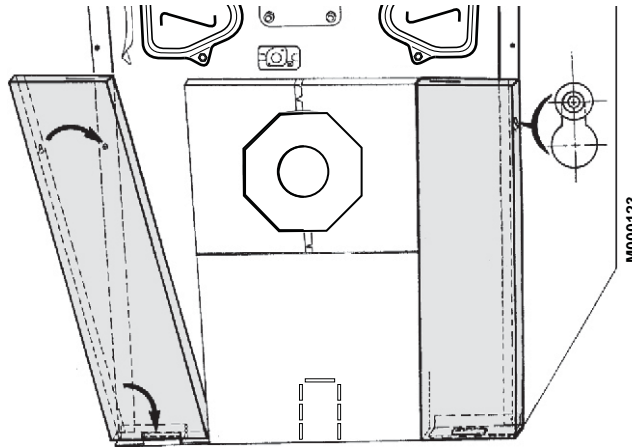
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- ▶ Place the insulating material in the lower central front panel (black cloth facing outward).
- ▶ Fit the lower central front panel (package RC2 or RC3) onto the lower front crosspiece and fix it to the furnace door panel.

## 62 package RC2 or RC3

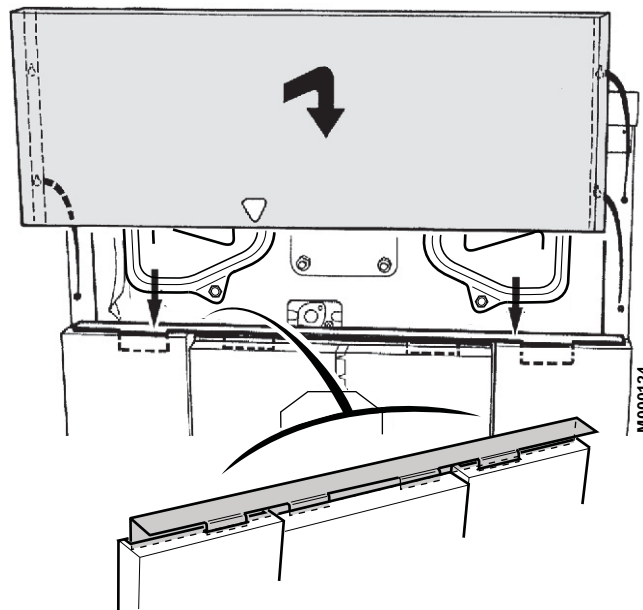
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- ▶ Fit the left and right-hand side front panels (package RC2 or RC3) onto the lower front crosspiece and fit them onto the studs of the side panels.

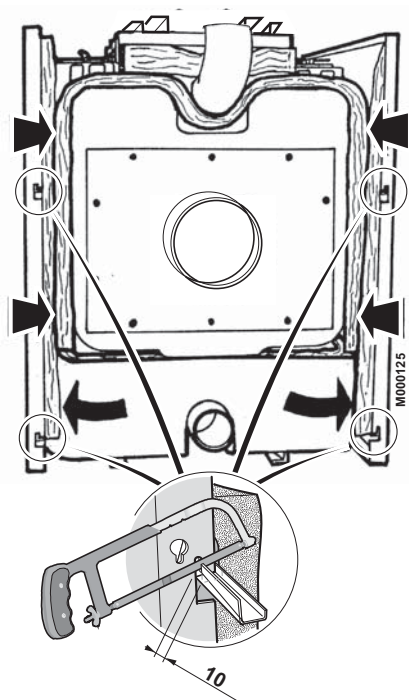
## 63 package RC2 or RC3

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- ▶ Place the retaining crosspiece (package RC2 or RC3) on the left and right-hand front panels, taking care to place the 2 central tabs behind the furnace door panel.
- ▶ Fit the upper front panel (package RC2 or RC3) onto the side panels via the 4 studs.

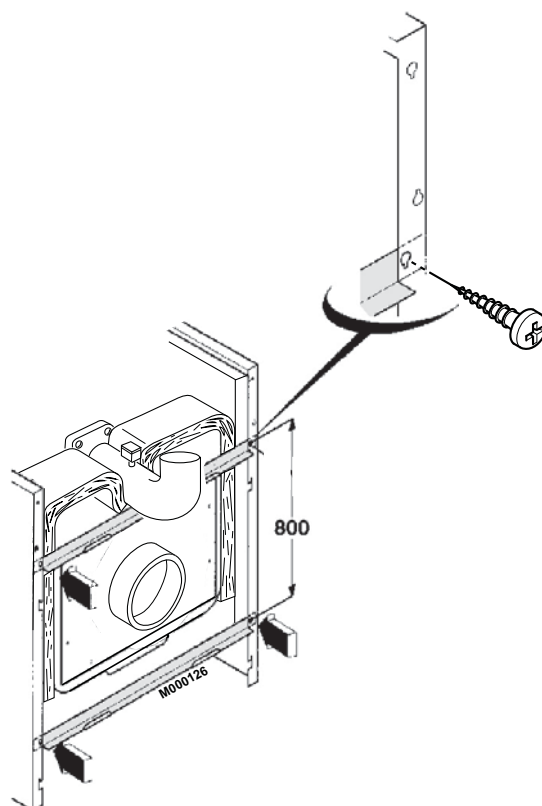
## 64 package RC2 or RC3



- ▶ Put in place the insulation of the flue gas box and the lower rear insulating material (package RC2 or RC3).

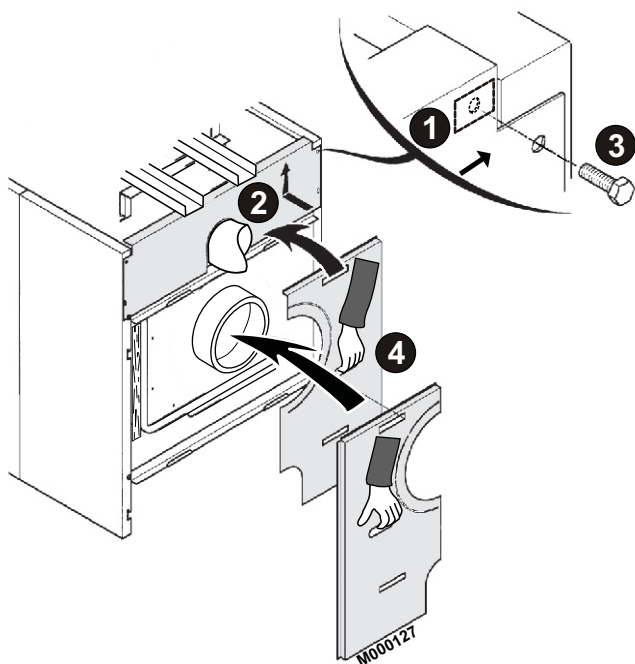
**!** If the side crosspieces overlap at the rear by more than 10 mm, we advise you to saw them off using a hacksaw.

## 65 package RC2 or RC3



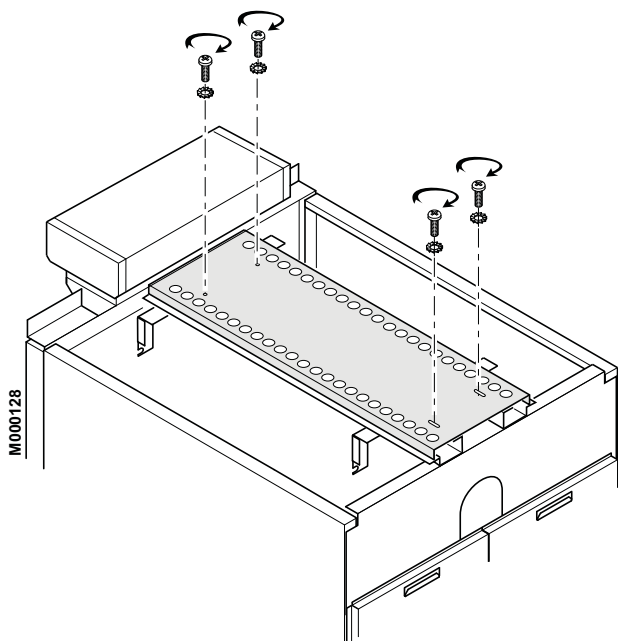
Put in place the 2 rear crosspieces (package RC2 or RC3) behind the bend of the rear side panels and fasten each crosspiece to the side panels using 2 screws ( $\varnothing$  3.94 x 12.7).

## 66 package RC2 or RC3



- ▶ Put the 2 clip-on nuts in place on the side panels **1**.
- ▶ Fit the upper rear panel (package RC2 or RC3) onto the studs and push it up **2**.
- ▶ Fasten with 2 screws (H8 x 16) and serrated washers **3**.
- ▶ Fit the 2 lower rear panels (package RC2 or RC3) onto the rear crosspieces **4**.

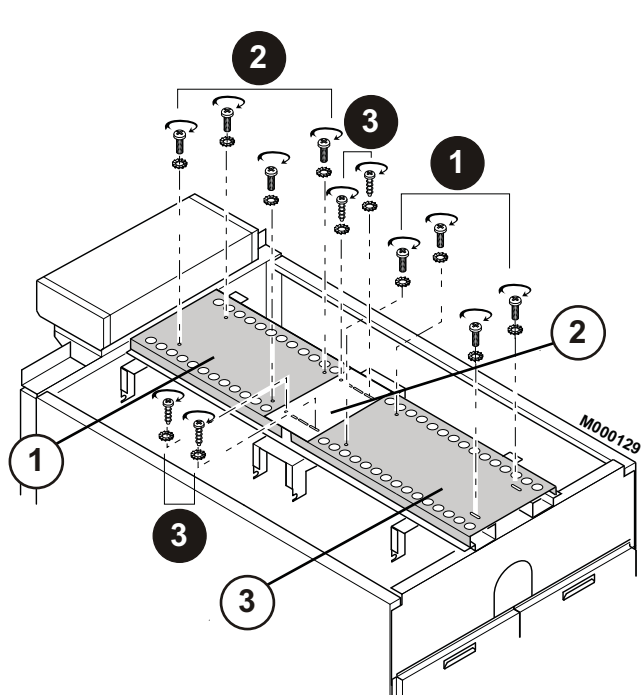
## 67 Assembling the central plate for 13 to 17 sections Package FA23, FA25, FA27



- ▶ Place the central plate on the cable channels with the round holes towards the front of the boiler.
- ▶ Fasten with H8 x 30 screws and serrated washers.



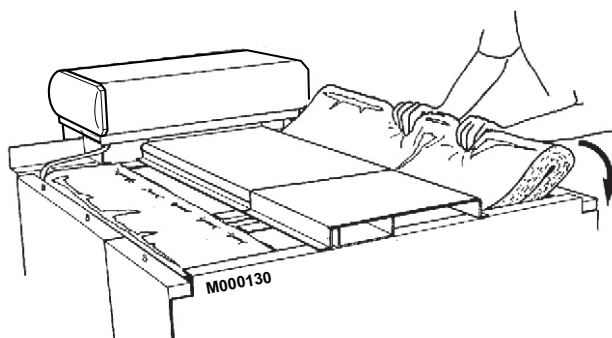
## 68 Assembling the central plate for 19 to 25 sections



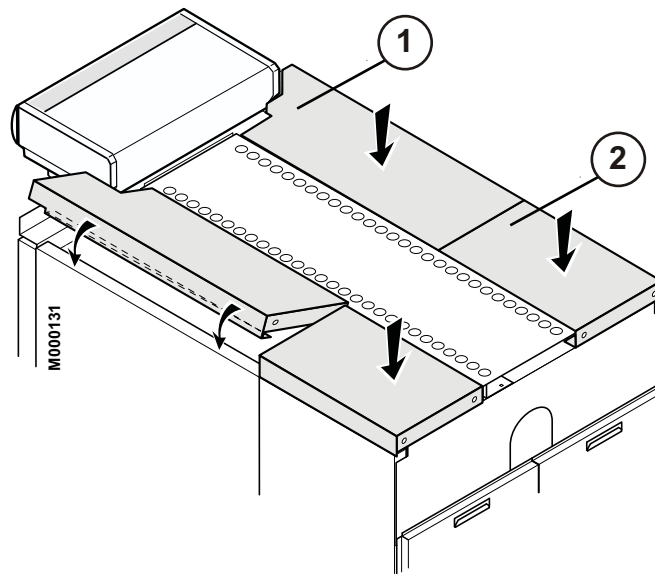
- ① Package FA18, FA20, FA22, FA24
- ② Package RC3
- ③ Package FA16

- ▶ Place the rear plate, which is 1200 mm long ①.
- ▶ Fasten with 2 screws (H8 x 30) and serrated washers.
- ▶ Place the front plate with the round holes towards the front of the boiler ②.
- ▶ Fasten with 4 screws (H8 x 30) and serrated washers.
- ▶ Fasten the joining plate ③ with the round holes towards the front of the boiler with 4 tapping screws and serrated washers.

## 69 Package FA34 to FA41



- ▶ Put in place the sweeping cover insulating material (packages FA34 to FA41):
  - P 520-13 to P 520-17: 2 pieces.
  - P 520-19 to P 520-25: 4 pieces.



① Package MR4 to MR5

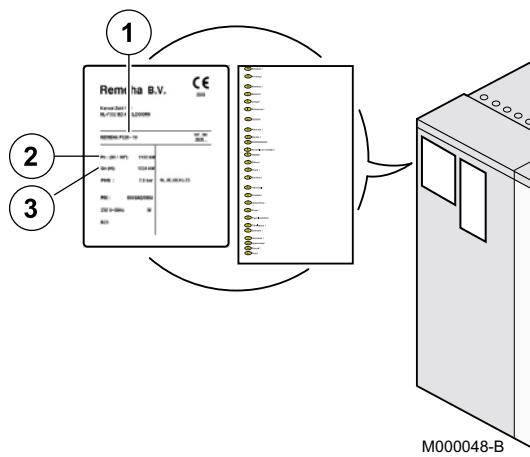
② Package FA10 to FA11

► Place the side covers (package FA7 to FA11, see table) from the front to rear. They have the same lengths as the side panels.

Boiler type	Central and boiler side covers (mm)				
	Front				Rear
P 520-13	1050	400	400		
P 520-15	940	600	600		
P 520-17	940	600	400	400	
P 520-19	940	600	600	400	
P 520-21	1050	600	600	600	
P 520-23	1050	600	600	400	400
P 520-25	1050	600	600	600	400
Cover packages	400 mm long panel in package FA10 600 mm long panel in package FA11 940 mm long panel in package MR4 1050 mm long panel in package MR5				

## 71 Data plate

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- ▶ Glue the rating plate and CE marking on the casing of the boiler in an easily visible location.

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