

HeatMaster®

HM

Assembling and installation instructions

HeatMaster® 201 Booster

HeatMaster® 200N (Gas) Booster



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WARNINGS

WHO SHOULD READ THESE INSTRUCTIONS

These instructions should be read by:

- the specifying engineer
- the installer
- the user
- the service engineer

SYMBOLS

The following symbols are used in this manual:



Essential instruction for the correct operation of the installation.



Essential instruction for the safety of persons and the environment.



Danger of electrocution.

APPLICABLE STANDARDS

The appliances carry the **CE** mark in accordance with the standards in force in the various countries (European Directives **92/42/EC** "Efficiency", **90/396/EC** "Gas appliances"). They also carry the "HR Top" label (Gas boilers).



RECOMMENDATIONS



- Please, carefully read this manual before installing and commissioning the boiler.
- It is prohibited to carry out any modifications to the inside of the appliance without the manufacturer's prior and written agreement.

- The product must be installed and serviced by trained engineers, in compliance with current standards.
- Any failure to follow instructions relating to tests and test procedures may result in personal injury or risks of pollution.
- To guarantee safe and correct operation of the appliance, it is important to have it serviced and maintained every year by an approved installer or maintenance company.
- In case of anomaly, please call your service engineer.
- Despite the strict quality standards imposed by ACV during the manufacture, inspection and transport of its appliances, you might notice some errors. Please report immediately any fault to your approved installer.
- The parts may only be replaced by genuine factory parts. You will find a list of the spare parts and their ACV reference number at the end of this document.

WARNINGS

This documentation is part of the information delivered with the appliance and must be given to the user and stored in a safe place!

An approved installer must carry out the assembly, commissioning, maintenance and repair of the system, in accordance with current standards in force.

ACV shall not accept any responsibility for damage caused by non-compliant location of the system or by use of the parts or connections not approved by ACV for this application.



The manufacturer reserves the right to change the technical characteristics and specification of its products without notice.



The availability of some versions and their accessories is market dependant..

DESCRIPTION

PACKING

The **HeatMaster® 200N / 201** Booster are delivered in several packing:

- Pack 1 : HeatMaster insulated body with control panel.
- Pack 2 : Complete jacket
- Pack 3 : Chimney reduction with horizontal exhaust and gasket.
- Pack 4 : Low temperature hydraulic kit including 4-ways valve, tubes and hydraulic components.
- Pack 5 : Motor and temperature sensor kit (to control the 4-ways valve).
- Pack 6 : Booster kit including the Booster, bracket and holder, tubes and hydraulic components for the heating and shunt loops.
- Pack 7 : Gas burner with insulation and gasket (only HeatMaster 201).

TECHNICAL CHARACTERISTICS

Heating Mode

HeatMaster® 201 Booster

- Input:	220,0 kW
- Output:	210,1 kW
- 100% load efficiency - 80/60 mode:	95,5%
- 100% load efficiency - 50/30 mode:	106,1%
- 30% load efficiency - return at 30°C:	107,9%

Hot water mode - set point 90°C

HeatMaster® 201 Booster

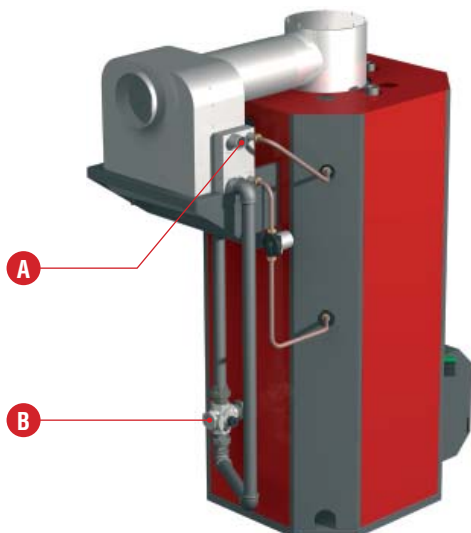
- Input:	240,0 kW
- Output:	225,0 kW
- Continuous flow rate at 40°C - cold water at 10°C:	6425 l/h

Pressure drops (Booster alone)

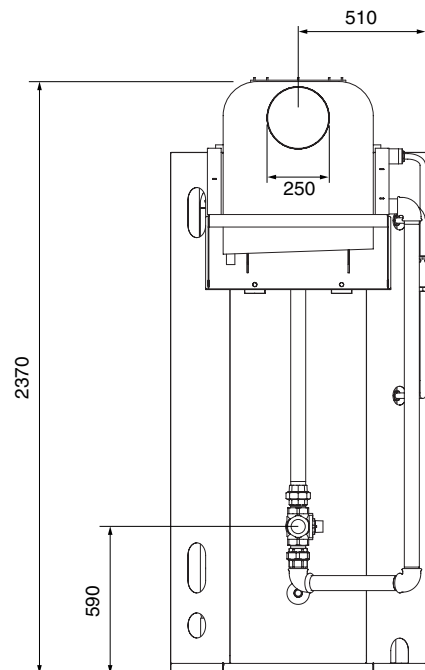
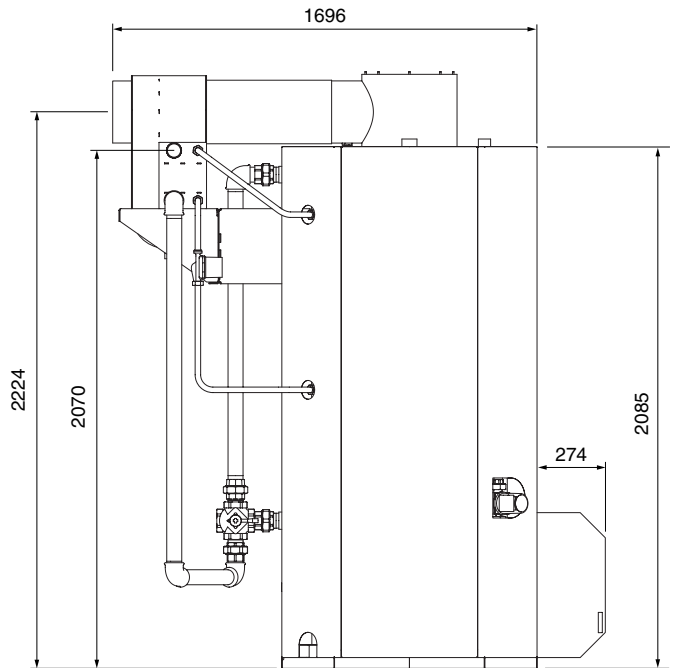
- Hydraulic ($\Delta T = 20$):	20 mbar
- Flue gas circuit:	0,3 mbar

HYDRAULIC CONNECTIONS

- A. Heating return $\varnothing 2''$ M
- B. Heating flow $\varnothing 2''$



DIMENSIONS



HeatMaster® 201: serial number > at 1000

Flow sensor (14)

- Mount the NTC6 sensor on the flow tube.
- Connect the sensor to the 15 and 16 terminals.

Heating pump (16)

Connect the heating pump on the terminal block: line voltage to 07, neutral to 08 and ground to 09.

Motor of the 4-ways valve (20)

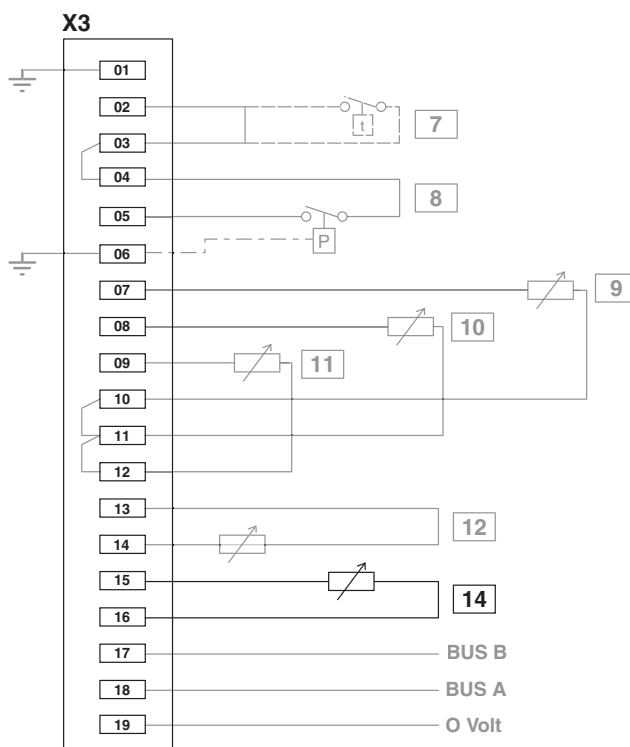
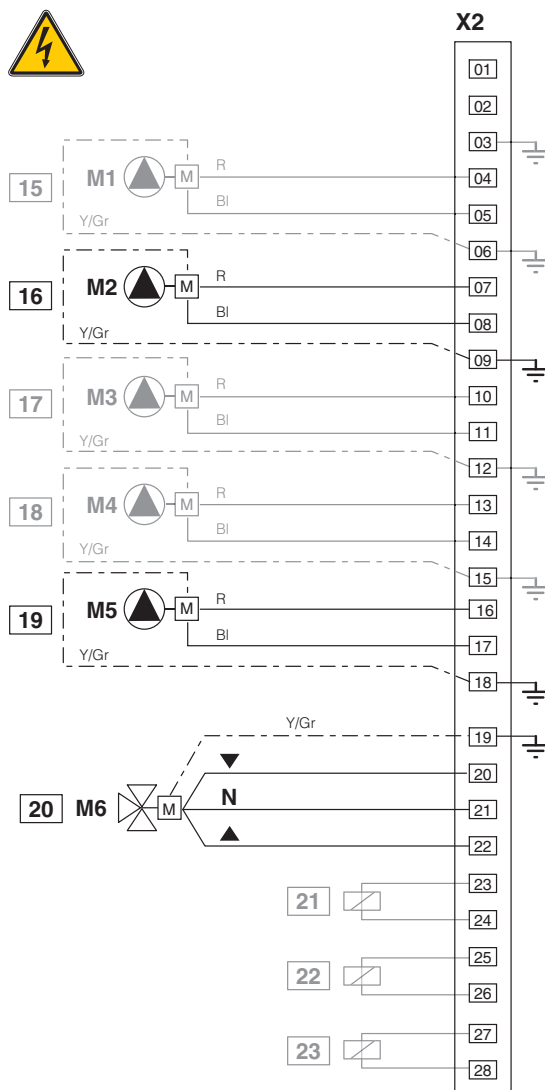
- Connect the ground to 19.
- Connect the brown wire to 20 (closing contact)
- Connect the blue wire to 21 (neutral)
- Connect the black wire to 22 (Opening contact)

Booster shunt pump (19)

- Connect the line connection of the Booster shunt pump to 16, the neutral to 17 and the ground to 18.

MCBA (pf5) parameter setting

- Parameter 45 (activate 2d heating circuit)
 - factory setting: 00 (no 2nd heating circuit)
 - DHW priority: 10
 - No DHW priority: 50
- Adjustment parameters heating curve 2nd circuit
 - 15: Tmax: factory setting 60°C
 - 16: Tmin: factory setting 30°C
 - 11: T_outside min: factory setting 00°C
 - 12: T_outside max: factory setting 20°C



HeatMaster® 201: serial number < at 1000

Flow sensor (14)

- Mount the NTC6 sensor on the flow tube.
- Connect the sensor to the 15 and 16 terminals.

Heating pump (16)

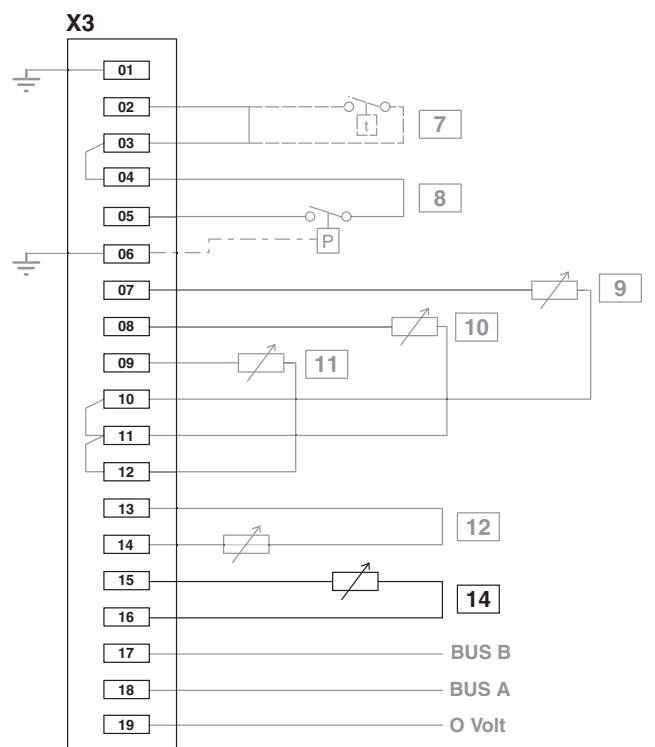
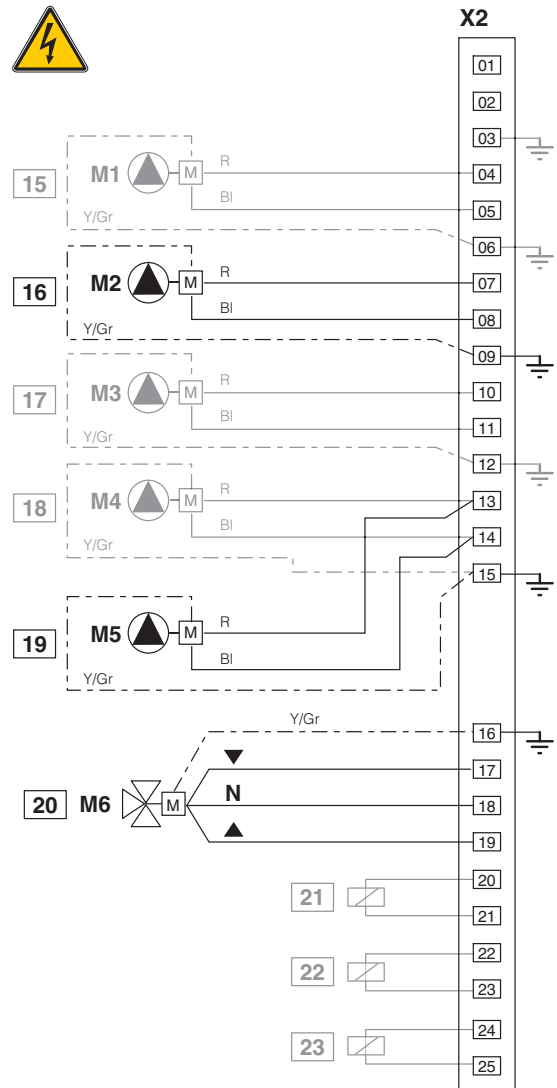
Connect the heating pump on the terminal block:
line voltage to 07, neutral to 08 and ground to 09.

Motor of the 4-ways valve (20)

- Connect the ground to 16.
- Connect the brown wire to 17 (closing contact)
- Connect the blue wire to 18 (neutral)
- Connect the black wire to 19 (Opening contact)

Booster shunt pump (19)

- Connect the line connection of the Booster shunt pump to 13, the neutral to 14 and the ground to 15.



ELECTRICAL CONNECTION

HeatMaster® 200N

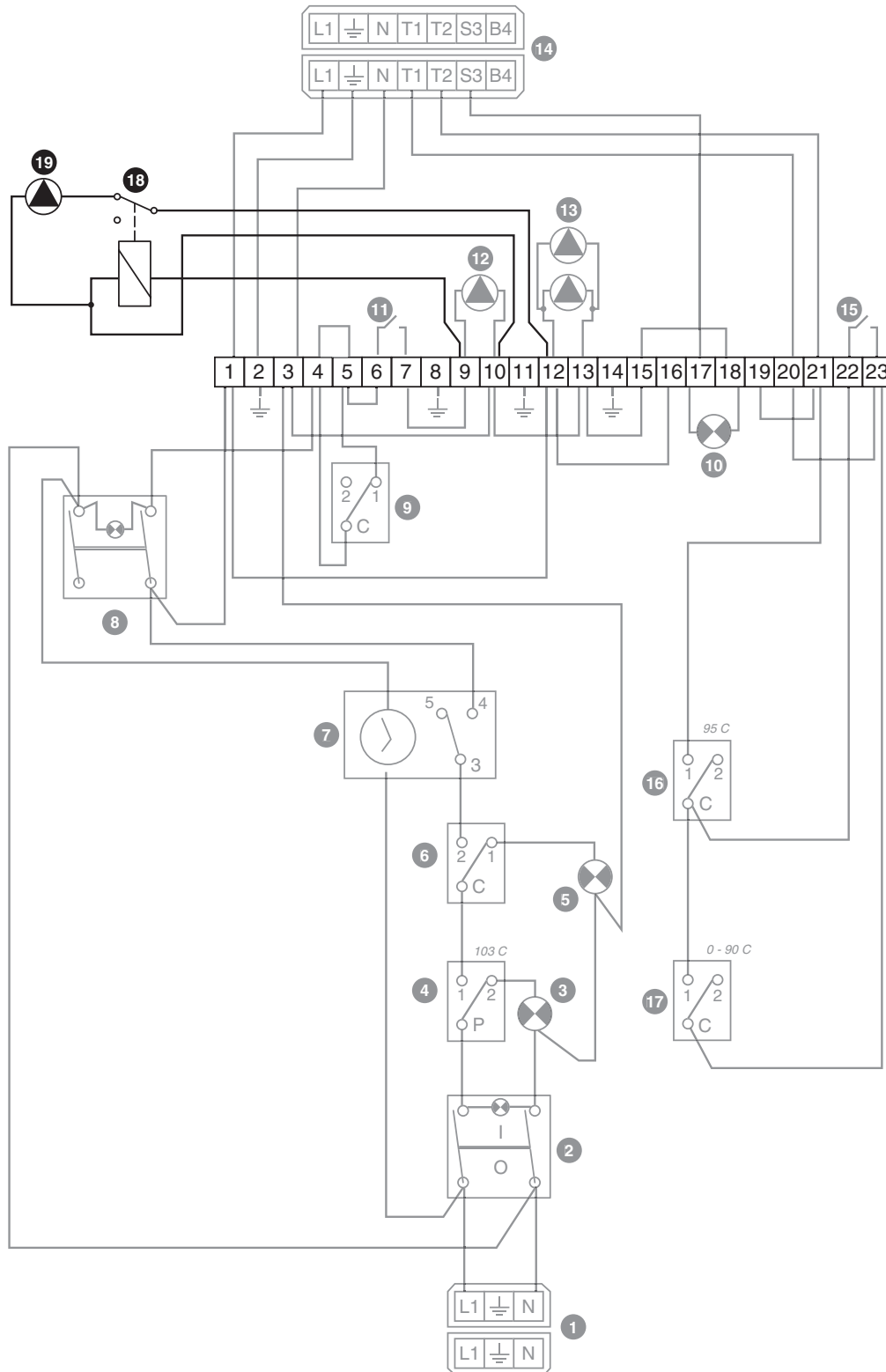
The terminals numbering refer to the control panel of the HeatMaster® 200N

- Connect terminals 9 and 10 to the solenoid of the reversing relay (18). *(optional)*
- Connect terminal 12 to the common of the relay (18).
- Connect the neutral of the Booster shunt pump (19) to terminal 10.
- Connect the hot line of the Booster shunt pump (19) to the "normally closed" terminal of the relay (18).



Base for relay and reversing relay

ACV code:
54428195 : base relay
54428220 : reversing relay



BOOSTER KIT ASSEMBLY



1. Replace the two plugs located on the T - of both expansion vessels to the right of the boiler by two 3/4" - 1" reducers.



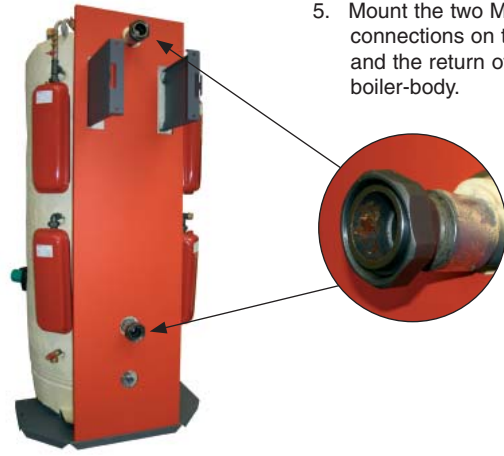
2. Fix the two Booster mounting legs on the brackets located on the back side of the HeatMaster with four M10 screws.



3. Punch the pre-cut parts from the rear panel

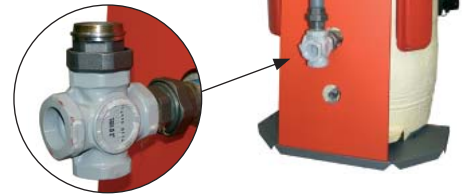


4. Put the rear panel in place.



5. Mount the two M-M union connections on the flow and the return of the boiler-body.

6. Mount a 90° elbow on the upper connexion and the 4-ways valve on the lower one. Mount the M-F union connexion on the 4-ways-valve; place the 2" tube between the 90° elbow and the 4-ways valve. This 2" tube must be perfectly vertical : if necessary, adjust the position of the 90° elbow and/or the 4-ways valve.



7. Fix the Booster holder on the mounting legs with four M10 bolts.



8. Place the Booster on its holder

BOOSTER KIT ASSEMBLY

9. - Place the back right side panel.
- Connect the the upper tube of the Booster shunt loop.



10. Mount a 90° elbow on the lower nipple of the Booster.



11. On this elbow, mount the 2" tube with the two right-hand threads.

Pay attention to the threads : one tube has a left-hand thread.



12. On this 2" tube, mount the left hand and right hand threaded coupling; screw it half-way to leave the adjustment.



13. Mount the second 2" tube with the left hand thread on the coupling. Leave some threads for later adjustment.



14. Mount the 90° elbow on the 2" tube.



15. Mount the third 2" tube with the 90° elbow and the union connexion.



16. Ensure that the union connection is aligned with the 4-ways valve.

BOOSTER KIT ASSEMBLY



17. Adjust the RH / LH coupling to mate the faces of union connection.



20. Mount the 6 studs on the flange and put the gasket in place.



21. Locate the flue collector hood and fit it together with the flue tube of the Booster. Fix the flue collector with the nuts.



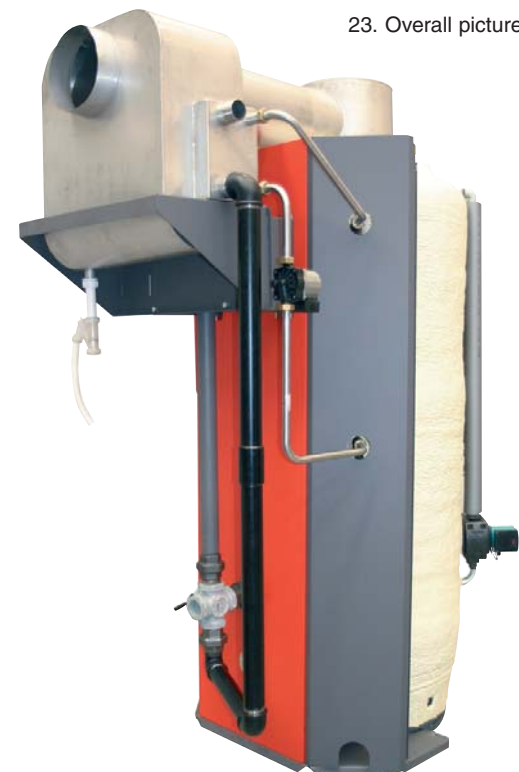
18. Tighten the union connexion.



22. Fit the condense trap on the Booster condense outlet.



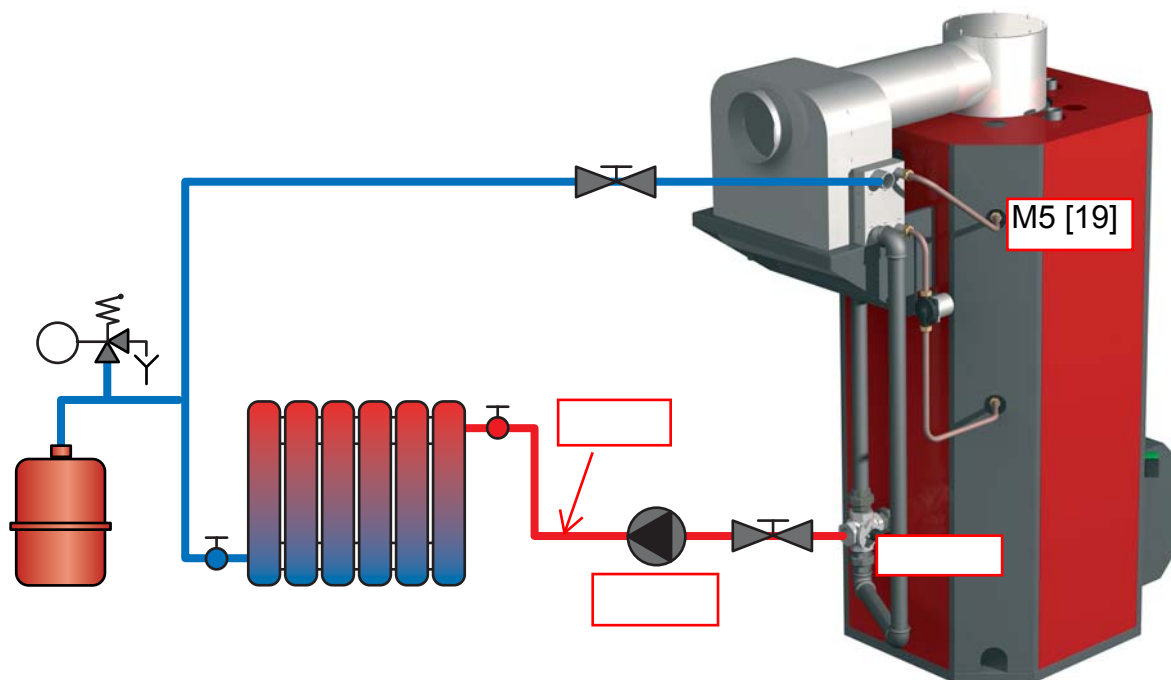
19. Connect the shunt pump with its upper and lower tube between the HeatMaster and the Booster.



23. Overall picture.

BOOSTER KIT ASSEMBLY

24. Hydraulic connexion of the heating system.



25. Electric connexion of the shunt pump (M5) : see pages 4, 5 and 6.

26. Commissioning of the system and control of the complete installation : see HeatMaster 200N / 201 technical manual.