

Fixed value control set DN25 “Regumat F-130“ “Regumat F-180“ “Regumat FR-180“

Installation and operating instructions for the specialised installer



Read installation and operating instructions in their entirety before installing the fixed value control set!

Installation, initial operation, operation and maintenance must only be carried out by qualified tradesmen!

The installation and operating instructions, as well as other valid documents must remain with the user of the system!

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Illustr. 1.1 “Regumat F-130“

1 General information

1.1 Information regarding installation and operating instructions

These installation and operating instructions serve the installer to install the fixed value control set professionally and to put it into operation.

Other valid documents – manuals of all system components as well as valid technical rules – must be observed.

1.2 Keeping of documents

These installation and operating instructions should be kept by the user of the system.

1.3 Copyright

The installation and operating instructions are copyrighted.

1.4 Symbol explanation

Safety guidelines are displayed by symbols. These guidelines are to be observed to avoid accidents, damage to property and malfunctions.

⚠ DANGER

DANGER indicates an imminent dangerous situation which will lead to death or serious injury if the safety guidelines are not observed.

⚠ WARNING

WARNING indicates a possible dangerous situation which may lead to death or serious injury if the safety guidelines are not observed.

⚠ PRECAUTION

PRECAUTION indicates a possible dangerous situation which may lead to minor or moderate injury if the safety guidelines are not observed.

ATTENTION

ATTENTION indicates a possible damage to property which may occur if the safety guidelines are not observed.

2 Safety notes

2.1 Correct use

Safety in operation is only guaranteed if the connection group "Regumat" is used correctly.

The fixed value control set allows to keep the flow temperature in surface heating systems at a constant level.

Any use of the valve outside of the above applications will be considered as non-compliant and misuse. Claims of any kind against the manufacturer and/or his authorised representatives due to damages caused by incorrect use cannot be accepted.

The observance of the installation and operating instructions is part of the compliance terms.

2.2 Possible dangers at the installation location and during transport

The case of an external fire has not been taken into consideration when constructing the fixed value control set.

WARNING

Heavy product assembly!

Risk of injury! Suitable transport and lifting devices are to be used. Wear suitable protective clothing (e.g. safety shoes) during installation and use safety devices. External components like handwheels or pressure test points must not be misused for the absorption of external forces, e.g. as connection point for lever tools etc.

Hot and cold surfaces!

Risk of injury! Only touch with safety gloves and inactivate installation before work commences.

Sharp edges!

Risk of injury! Only touch with safety gloves. Threads, bore holes and edges are sharp.

Small components!

Risk of ingestion! Store and install small components supplied with the fixed value control set out of reach of children.

Allergies!

Health hazard! Do not touch the fixed value control set and avoid any contact if allergies against the used materials are known..

2.3 Installation, initial operation, maintenance

Installation, initial operation, maintenance and repairs have to be carried out by authorised and qualified tradesmen.

(EN 5011 part 1 and VDE 1000 part 10 for work on the electrical installation).

3 Transport, storage and packaging

3.1 Transport inspection

Upon receipt check delivery for any damages caused during transit.

Any damage must be reported immediately upon receipt.

3.2 Packaging

Packaging material is to be disposed of environmentally friendly.

4 Technical data

4.1 Performance data

Nominal dimension	DN 25
Max. operating temperature for standard pumps	+110°C
Max. operating temperature for high-efficiency pumps with standard thermal insulation	+85°C
Max. operating temperature for high-efficiency pumps with universal thermal insulation	+95°C
Max. operating pressure	10 bar PN10
kvs value	2.2
Opening pressure check valve	20 mbar
Distance between pipe centres	125 mm
Connections	G 1½ male flat sealing

Fluids: Non-aggressive fluids (e.g. water and suitable water and glycol mixtures according to VDI 2035). Not suitable for steam, oily and aggressive fluids.

DANGER

Suitable measures (e.g. safety valves) have to be taken to ensure that the maximum operating pressures and maximum and minimum operating temperature are not exceeded or undercut.

4.2 Materials

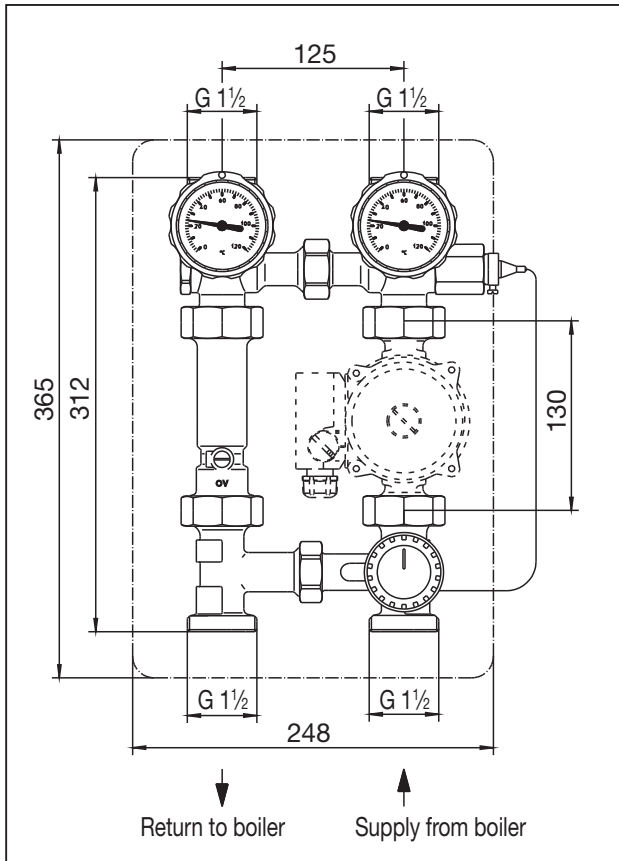
Ball valves:

Body and stem made of brass with double O-ring seal; balls made of brass, hard-chrome plated; PTFE seats; collar nuts made of brass

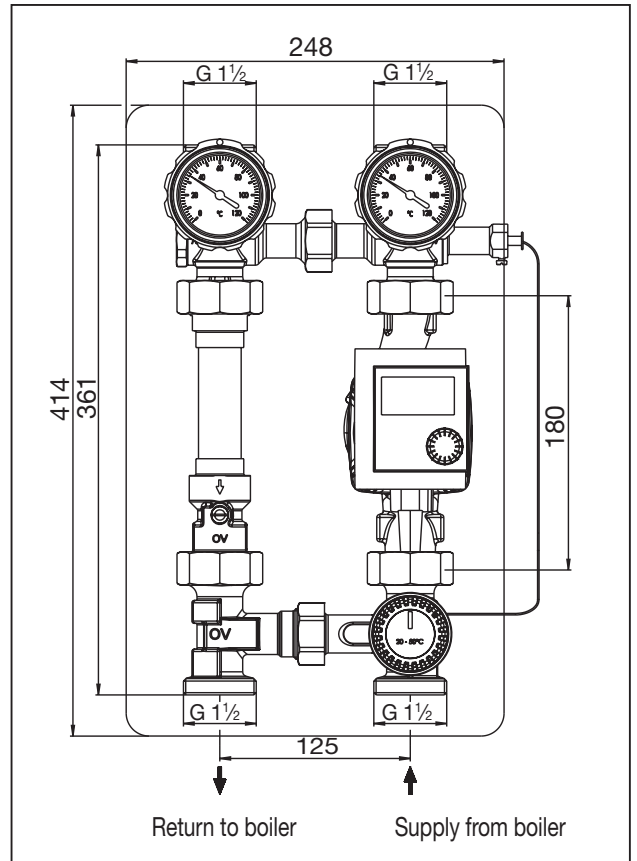
Pump:

"Regumat F-130/180"	cast iron
"Regumat FR-180"	bronze

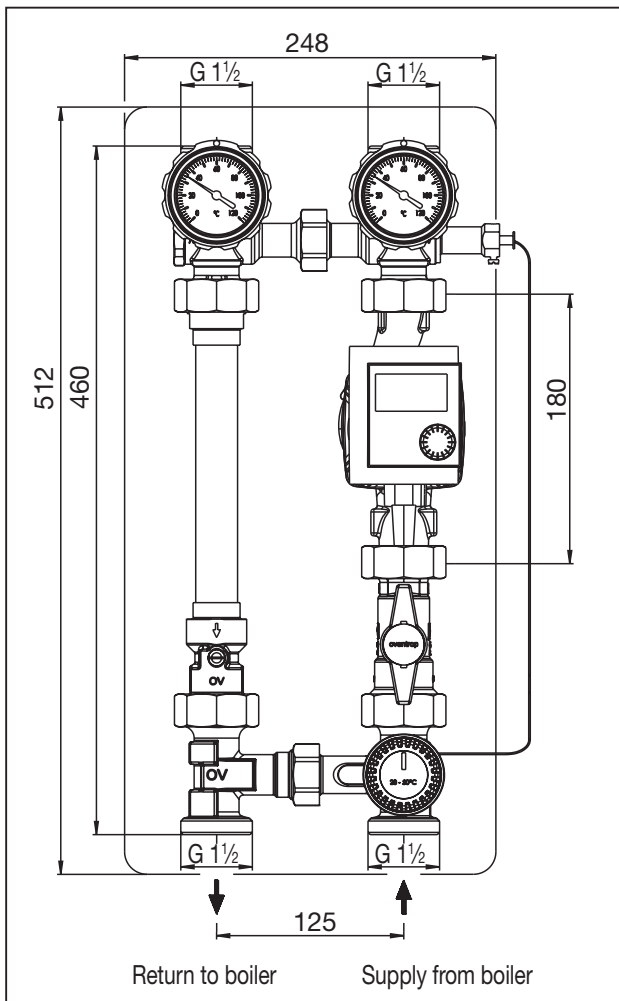
4.3 Dimensions/connection dimensions



Illustr. 4.1 Pump group "Regumat F-130"

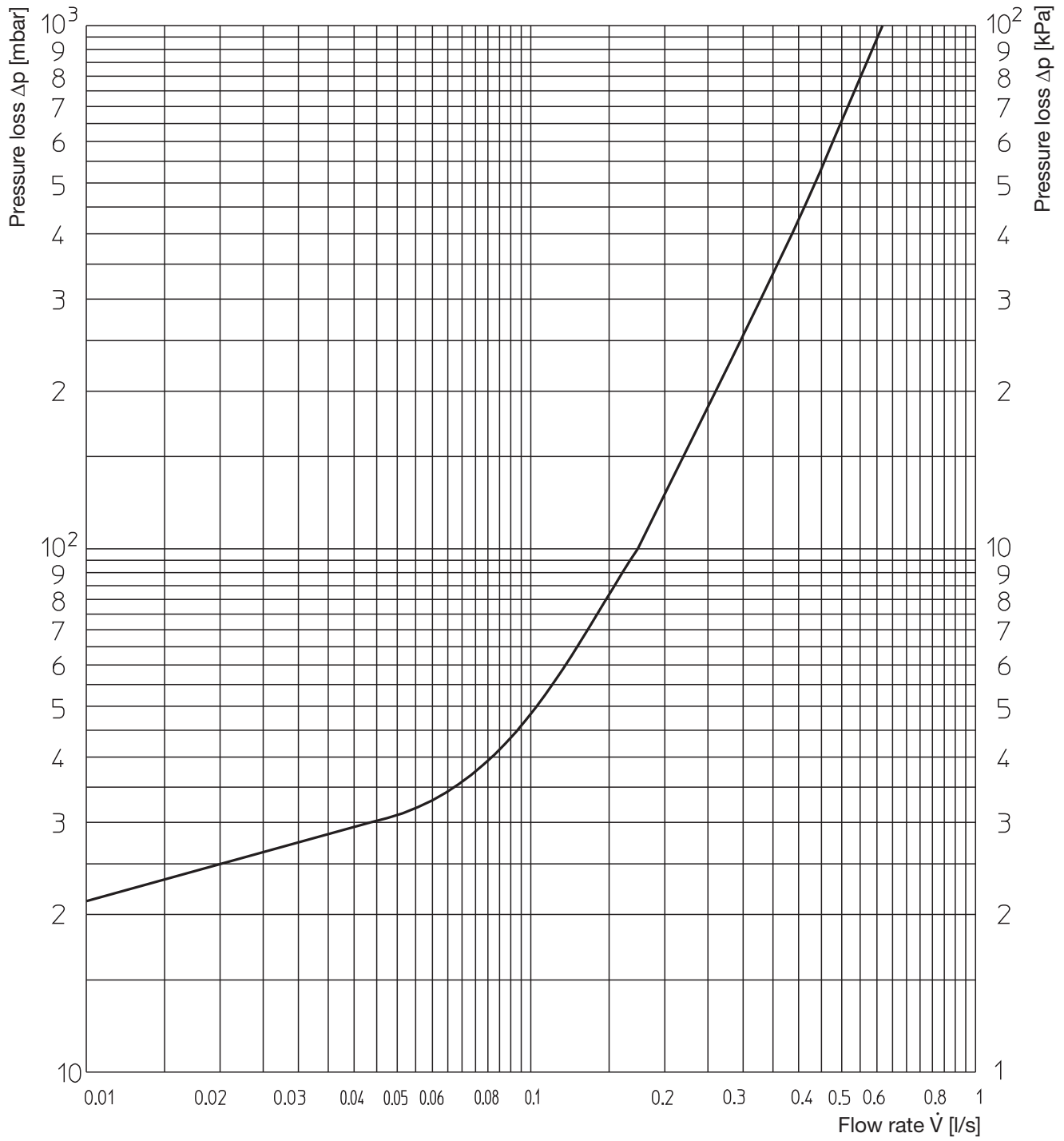


Illustr. 4.3 Pump group "Regumat FR-180"



Illustr. 4.2 Pump group "Regumat F-180"

4.4 Flow chart



5 Construction and function

5.1 Survey and functional description

“Regumat F-130“

The fixed value control set allows the flow temperature control and limitation in combined radiator/surface heating systems. Flow temperature is controlled with the help of a three-way mixing valve in combination with a temperature controller with immersion sensor. Control range: 20-50°C

“Regumat F-180“

Function identical to “Regumat F-130“ but pump length 180 mm and with pump ball valve at the pump inlet.

The pump ball valve serves the isolation when replacing the pump.

“Regumat FR-180“

Function identical to “Regumat F-130“ but with pump length 180 mm and bronze pump body to avoid the risk of corrosion in case of system related penetration of oxygen. For open vented systems.

5.2 Markings

CE-marking on the pump:



CE-marking

Indications on the body:

OV

Oventrop

5.3 Installation advice

⚠ WARNING

Before starting work, please make sure that the pipework all components have cooled down to ambient temperature and have been drained.

Before starting work, please ensure that all electric components (controllers, pumps etc.) are disconnected from power supply!

The station is supplied pre-assembled.

The product group is available with and without circulation pump.

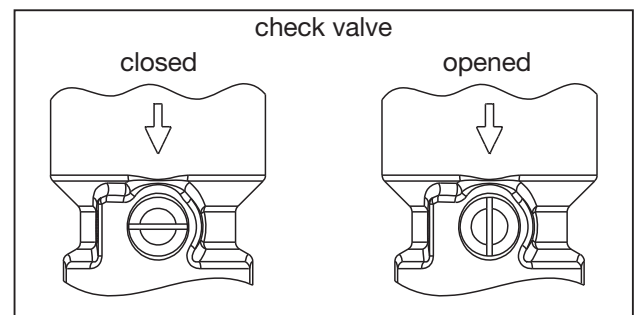
The individual components of the model without pump are supplied loosely connected. After installation of the pump, the connections have to be tightened with a torque of 45Nm.

Check connections for leaks.

The connection box of the pump must be in 9 o'clock position.

5.4 Check valve

The check valve prevents a gravity circulation of the heating water when the pump is switched off.



Illustr. 5.1 Check valve

The check valve is closed in operating position; passage is only possible in flow direction.

When putting the system into operation and during maintenance work (filling and flushing), the check valve must be opened.

If the check valve is opened, flow is possible in both directions.

During heating operation, the check valve must be set to operating position.

6 Installation and assembly

6.1 Installation

The pipework has to be flushed thoroughly before installing the fixed value control set. It can be installed in any position (horizontal, inclined or vertical, in ascending or descending sections) provided that the direction of flow set conforms to the arrow on the fixed value control set.

⚠ Warning advice under paragraph 2 (safety notes) must be observed!

⚠ PRECAUTION

- **Do not use any lubricant or oil when installing the valve as these may destroy the seals. If necessary, all dirt particles and lubricant or oil residues must be removed from the pipework by flushing the latter.**
- **When choosing the operating fluid, the latest technical development has to be considered (e.g. VDI 2035).**
- **Please protect against external forces (e.g. impacts, vibrations etc.).**

After installation, check all installation points for leaks.

6.2 Assembly

WARNING

Before starting work or opening electronic components, they must be disconnected from the power supply and be protected against restart!

1. Install the fixed value control set with due consideration of supply and return!
2. To mount the temperature controller, remove the screwed cap of the mixing valve. Screw the temperature controller onto the mixing valve (Tighten collar nut firmly without using excessive force!)
3. Insert sensor into the immersion socket and secure with the help of the screw.
4. Place coil of capillary inside the insulation.
5. Set temperature controller to the required temperature as described in the separate installation instructions.
6. Set the sensor for attachment to the supply pipe. Set temperature 5K above the nominal value of the temperature controller.
7. Carry out electric cabling according to the separate installation instructions.

6.3 Use of high-efficiency pumps

The product groups “Regumat” are suitable for the use with standard high-efficiency pumps.

ATTENTION

A modification of the thermal insulation is not permissible. The pump motor must not be covered.

The high-efficiency pumps are electronically controlled and offer different settings. The pump setting should be chosen depending on the application.

The following settings are recommended by the pump manufacturers:

Application underfloor heating

- Automatic setting (e.g. Grundfos “AUTO Adapt” function); alternatively
- Δp -v Differential pressure constant

7 Operation

7.1 Deaeration of the system

Before initial operation, the installation must be filled and bled with due consideration of the permissible operating pressures.

7.2 Correction factors for water and glycol mixtures

The correction factors of the antifreeze liquid manufacturers must be observed when setting the flow rate.

8 Accessories

The tailpipe sets for the connection to the pipework are to be ordered separately.

A bracket for fixing the pump group onto the wall is to be ordered separately.

The complete range of accessories can be found in the catalogue.

9 Maintenance

The fixed value control set is maintenance-free.

10 Warranty

Oventrops warranty conditions valid at the time of supply are applicable.