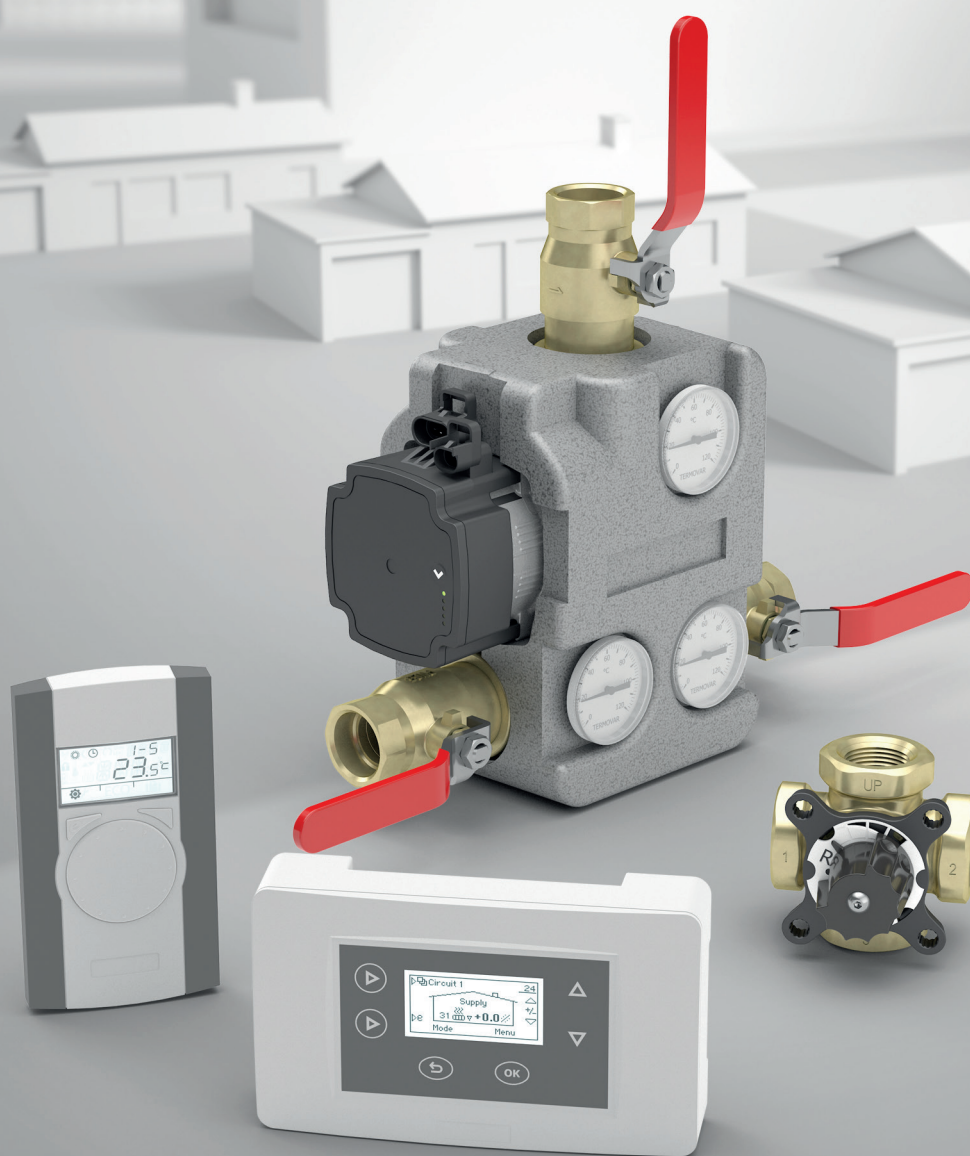


**VEXVE**

Smart temperature control solutions





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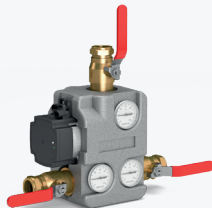
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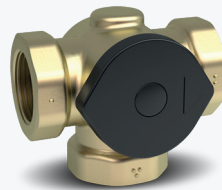
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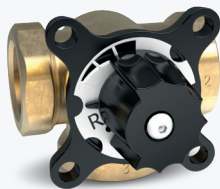
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# Vexve

Vexve's smart control solutions are designed to deliver maximum comfort, while offering savings in both energy consumption and the cost of installation.

Vexve is a leading expert on heating controllers and mixing valves. The company has deep roots in the industry, having operated under the name Hanatuote for 50 years prior to joining the Vexve group in 2009.

Vexve is dedicated to continually developing innovative, user-friendly products employing the very latest technologies. Vexve also actively pursues universal energy saving objectives and the increased use of biofuels, striving to continuously to meet these requirements in its products. Our control automation products utilize wireless data transfer, making Vexve devices easy and trouble-free to install while ensuring each heating circuit functions smoothly and independently throughout the entire heating period.

All Vexve's business operations are ISO 9001 and ISO 14001 certified. As a responsible company, we operate in accordance with the ISO 26000 standard.





# Vexve AM20-W

## Smart wireless heating controller

Vexve's patented room temperature control allows users to enjoy very stable room temperatures, without the trouble of selecting heating curves or other difficult settings. Simply select desired room temperature and relax.

A stable room temperature also allows some extra savings in heating costs, because the stable temperature decreases the unpleasant effect of draughts while allowing a lower temperature setting without losing the comfortable feeling.

Because an outdoor sensor is not needed and the room unit is wireless, there is also a significant saving in installation costs when installing the heating controller. This makes the AM20-W the perfect option for retrofit installations and also for improving existing heating systems with more precise wireless room control. AM20-W is also a reliable choice for new buildings and heating systems.

### Solution

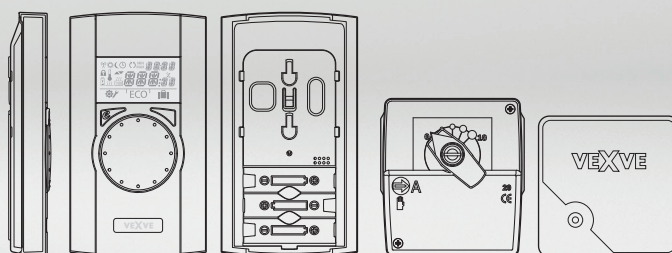
- Room temperature control for hydronic heating systems:
  - Floor heating systems
  - Radiator heating systems
  - Industrial applications
- Installation in:
  - Single family houses
  - Industrial buildings
- Heat sources
  - District heating substations
  - Bioenergy and solar hybrid systems
  - Boilers
  - Heat pumps

### Delivery

- Wireless room unit
- Antenna
- Actuator
- Supply sensor
- Power adapter

### Main features

- Easy & fast to install and use
- Plug & play with fast connectors
- Low voltage installation, no electrician needed
- Easy start up wizard
- EN1264-4 Floor drying program
- Room temp info
- Supply temp info
- Set point info
- Valve position info (%)
- Week programmer
- Eco 8 h saving temp
- Eco 30 d saving temp
- Min/max supply temp setting
- Constant temp control 0–90°C
- Freeze protection
- 4-point installation to mixing valve
- Adapter for M30 x 1,5 (2,5–4 or 5,5 mm stroke)



# Vexve AM40

## Heating and cooling controller

Vexve developed the AM40 heating controller to meet the growing demands in hydronic underfloor heating. The AM40 HC controller is perfect selection for hydronic underfloor heating; combining heating and cooling in the same user friendly interface with automatic or manual switchover from heating to cooling. There is also an option to use Modulation  $\Delta T$ ,

this function enables modulating the supply water temperature according to changes in return water temperature, preventing overloading of heavy floor structures, thus saving energy. The Controller is developed for the OEM-market and producers of hydronic underfloor heating systems, but it is also the perfect solution for retrofit and maintenance.

### Solution

- Outdoor temperature control for hydronic underfloor heating and cooling system
  - Floor heating systems
  - Floor cooling systems
  - Separate roof or wall cooling panels
- Installation in
  - Single family houses
  - Industrial buildings
- Heat and refrigeration sources
  - District heating substations
  - Bioenergy and solar hybrid systems
  - Boilers
  - Heat pumps
  - Other refrigeration sources with exchangers

### Delivery

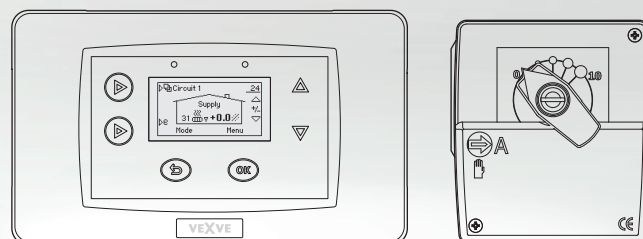
Fully customizable according needs of customers, AM40 can be delivered with or without:

- Supply sensor
- Return sensor
- Outdoor sensor
- Actuators/actuator cables
- Power adapter
- Wireless room units and antenna
- Other accessories

All cable lengths and even programming of controller can be customized according needs of customers to guarantee fast and easy installation.

### Main features

- Easy & Fast to install and use
- Plug & Play with fast connectors
- DIN-rail, wall or panel mounting
- Low voltage installation, no electrician needed for basic installation
- Easy start up wizard from clear LCD screen
- EN1264-4 Floor drying program
- Display of all temperatures, valve positions and relay status for easy and fast diagnostics
- Extensive week programmer
- Programmable extra sensor input
- Programmable 230VAC relay output with many functions
- Wireless antenna connection
- External I/O connection for future extensions
- Can operate two different independent circuits
- Eco 8h saving temp / Eco 30d saving temp
- Min/max supply temp setting (freeze protection)
- Ready applications for heating and cooling
- Modulation  $\Delta T$  for all heating schemes
- Constant temp control 0–90°C
- Possibility to add wireless room units and other accessories
- 4-point installation to mixing valve
- Adapter for M30 x 1,5 (2,5–4 or 5,5 mm stroke)





# Vexve AM45

## District heating unit controller

Vexve's latest development is a district heating controller with flow meter controlled domestic hot water production and return flow modulating heating control for two heat circuits. The

controller is developed for the OEM-market and manufacturers of district heating units but is also the perfect solution for retrofits.

### Solution

- District heating substations in single- and multi-family houses and in apartment houses

### Delivery

- Factory pre-mounted AM45 District Heating unit control system
- Fully customizable according needs of customers, can be delivered with or without:
  - Sensors with RJ-connector to AM45
  - Valves, different Kv-values
  - Actuators, different speeds and torques
  - Actuator Cables with RJ-connector to AM45
  - Pump Cables with connectors to specified pumps
  - Flowmeter with RJ-connector to AM45
- All cable lengths, pump connector, etc., and even programming of controller can be customized according needs of customers to guarantee fast and easy installation.

### Main features

- Patent pending flow meter controlled domestic hot water production, with smart self-learning control
- Leakage alarm for domestic hot water
- Display of current and cumulative consumption of domestic hot water
- Return temperature modulation for heating circuit
- District heating return temperature control
- Valve flushing and pump service operation
- Manual operating of all actuators and pumps for easy and fast testing after assembly
- No need for extra wiring, connection boxes or switches for pumps
- Display of all temperatures and valve positions and pumps status for easy and fast diagnostics
- Possibility to add wireless room units



# Vexve AM10

## Heating controller

AM10 is a simple and compact outdoor reset control for hydronic radiator and underfloor heating applications. The controller adjusts the supply water temperature according changes in outdoor temperature. The Vexve AM10 includes settings for minimum and maximum temperature of the supply

water and a freeze protection feature. The Vexve AM10 is delivered factory wired to minimize installation problems in the field. The quick and easy do-it-yourself installation saves on installation charges.

### Solution

- Outdoor reset control for hydronic heating system
  - Floor heating systems
  - Radiator heating systems
  - Industrial applications
- Installation in
  - Single-family houses
  - Apartment houses
  - Industrial buildings
- Heat sources
  - District heating substations
  - Bioenergy and solar hybrid systems
  - Boilers
  - Heat pumps

### Main features

- Easy to install, start up and use “do-it-yourself”
- Plug & play with fast connectors
- Low voltage installation, no electrician needed
- Easy heat curve setting
- Min supply water setting 15–35°C
- Max supply water setting 40–90°C
- Room sensor setting 12–27°C
- Remote control setting –9 to +6°C
- Freeze protection
- 4-point installation to mixing valve
- Adapter for M30 x 1,5 (2,5–4 or 5,5 mm stroke)

### Delivery

- Actuator with built-in control
- Supply sensor 1 m
- Outdoor sensor 15 m
- Power adapter
- Room sensor (option)
- Remote control (option)





# Vexve AMCTS

## Constant temperature control

Vexve AMCTS is compact electronic constant temperature controllers for hydronic radiator and underfloor heating applications, as well as industrial applications like bioloading. The supply water temperature can be selected steplessly from 10°C to 80°C. AMCTS is easy to mount on new as well as

existing valves. The main supply and the sensors have plug-in connections to minimize installation problems in the field. The simple and quick do-it-yourself installation saves on installation charges.

### Solution

- Constant temperature control for hydronic heating system
  - Floor heating systems
  - Radiator heating systems
  - Industrial applications
- Installation in
  - Single family houses
  - Apartment houses
  - Industrial buildings
- Heat sources
  - District heating substations
  - Bioenergy and solar hybrid systems
  - Boilers

### Main features

- Easy to install, start up and use
- Plug & play with fast connectors
- Low voltage installation, no electrician needed
- Constant control 10–80°C
- Freeze protection
- 4-point installation to mixing valve
- Adapter for M30 x 1,5 (2,5–4 or 5,5 mm stroke)

### Delivery

- Actuator with built-in control
- Supply sensor 1 m
- Power adapter



# Vexve Termovar

## Loading unit

The Termovar loading unit is a factory assembled, pre-insulated, automatic thermally operated loading unit for solid fuel boiler/storage tank installations, where heating and domestic hot water are taken from the storage tank. The Termovar loading unit ensures a minimum return water temperature to the solid

fuel boiler, which increases boiler efficiency, prevents tarring and considerably prolongs the lifetime of the solid fuel boiler. Termovar eliminates the risk of destructive thermal shock caused by surges of cold return water. Therefore Termovar is a vital part of a solid fuel installation with storage tank.

### Solution

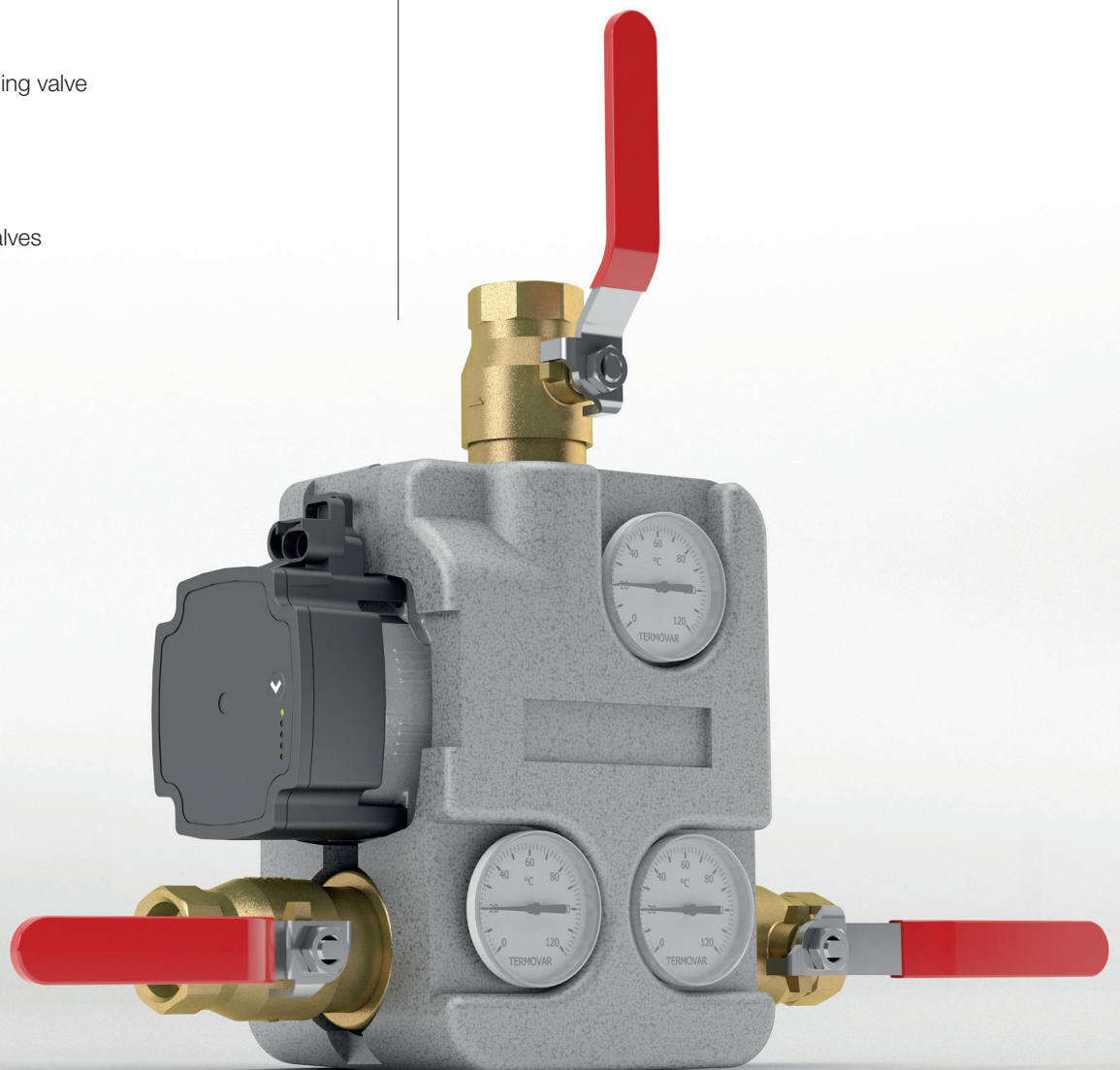
- Thermally operated loading unit for solid fuel boilers up to 65 kW or 100 kW
- Installation in
  - Single family houses
  - Industrial buildings
- Heat sources
  - Solid fuel boiler
  - Pellet boiler
  - Pellet/wood stove hydronic systems

### Delivery

- Thermally operated loading valve
- Backflow preventer
- Circulation pump
- Three thermometers
- Three high flow union valves
- Insulation EPS

### Main features

- Easy to install, start up and use
- Easy to maintain
- Automatic self-circulation
- Constant loading temperature to storage tank
- High return temperature to boiler
- Ready for right- or left-hand installation
- Thermometers for loading information
- Grundfos UPM3 Auto L 50 or Grundfos UPM3 Auto L 70 High efficiency pump





# Vexve ALV and ADV

## Loading valves

The ALV loading valve is an automatic thermally operated loading valve for solid fuel boiler/storage tank installations, where heating and domestic hot water are taken from the tank. ALV ensures a minimum return water temperature in the heating boiler, which increases the efficiency, prevents tarring and considerably prolongs the lifetime of the solid fuel boiler. ALV eliminates the risk of destructive thermal shock to both steel and cast iron boilers. The ALV thermally operated loading valve produces more effective combustion and is therefore a vital part of a solid fuel installation with a storage tank.

ADV thermic 3-way by-pass valves are designed to change the direction of flow in hydronic heating applications. ADV is an automatic valve operated by a self-contained thermostatic element. ADV works without additional energy. ADV by-pass valves have a great range of applications. For example in a solar system ADV ensures optimum temperature layering of in the storage tank.

ALV and ADV valves may be selected with 45°C, 55°C, 61°C, 72°C or 80°C fixed opening temperatures. The valves can be easily operated while the system is pressurized to fix installation position (left or right).

### Solution

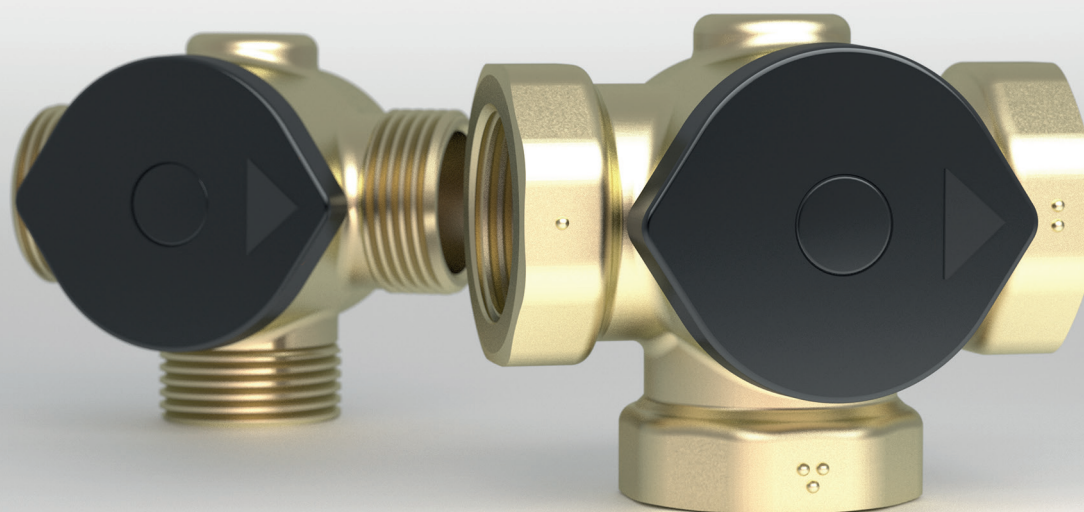
- Minimum temperature control of return water
  - Solid fuel boilers
  - Pellet boilers
  - Pellet/wood stoves hydronic systems
- Diverting water flow at certain temperature
  - Bio energy systems
  - Solar energy systems
  - Industrial applications

### Main features

- Easy to install
- Change installation position (left or right) while the system is pressurized
- During air draining valve can be operated to enable air draining from all outlets
- ALV/ADV DN 40 can be used with connector system to build pump group Vexve ACG
- Easy to maintain and change thermic element

### Delivery

- Female threads DN 20–32
- Male threads DN 25–40



# Vexve ACG

## Loading group

The Vexve ACG loading group is a factory assembled, automatic thermally operated loading group for solid fuel boiler/storage tank installations, where heating and domestic hot water are taken from the storage tank. The Vexve ACG loading group ensures a minimum return water temperature to the solid fuel

boiler, which increases boiler efficiency, prevents tarring and considerably prolongs the lifetime of the solid fuel boiler. Vexve ACG eliminates the risk of destructive thermal shock caused by surges of cold return water. Therefore ACG is a vital part of a solid fuel installation with storage tank.

### Solution

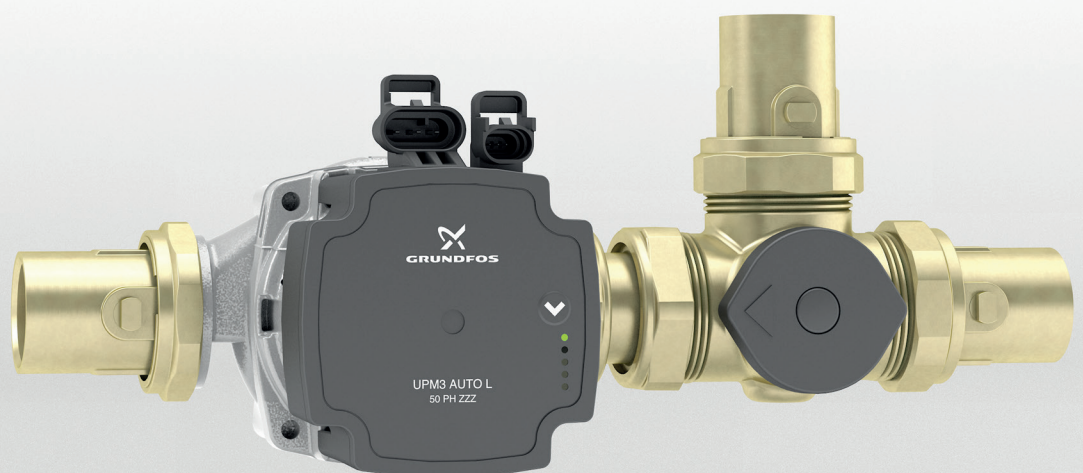
- Thermally operated loading group for solid fuel boilers up to 40 Kw
- Installation in
  - Single family houses
  - Industrial buildings
- Heat sources
  - Solid fuel boiler
  - Pellet boiler
  - Pellet/wood stove hydronic systems

### Delivery

- Thermally operated loading valve
- Backflow preventer
- Circulation pump
- Three ball valves

### Main features

- Easy to install, start up and use
- Easy to maintain
- Automatic self-circulation, down to elements opening temperature
- Constant loading temperature to storage tank
- Backflow preventer to eliminate heat losses
- High return temperature to boiler
- Ready for right- or left-hand installation, very easy to change
- Grundfos UPM3 High efficiency pump





# Vexve ACGE

## Loading group

The Vexve ACGE loading group is a factory assembled, automatic electrically operated loading group for solid fuel boiler/storage tank installations, where heating and domestic hot water are taken from the storage tank. The Vexve ACGE loading group ensures a minimum return water temperature to

the solid fuel boiler, which increases boiler efficiency, prevents tarring and considerably prolongs the lifetime of the solid fuel boiler. Vexve ACGE eliminates the risk of destructive thermal shock caused by surges of cold return water. Therefore ACGE is a vital part of a solid fuel installation with storage tank.

### Solution

- Electrically operated loading group for solid fuel boilers up to 65 kW or 150 kW
- Installation in
  - Single family houses
  - Industrial buildings
- Heat sources
  - Solid fuel boiler
  - Pellet boiler
  - Pellet/wood stove hydronic systems

### Delivery

- Electrical constant temperature controller Vexve AMCTS
- Vexve AMV3231 high flow 3-way mixing valve
- Circulation pump
- Three ball valves

### Main features

- Easy to install, start up and use
- Easy to maintain
- Automatic self-circulation, down to temperature setpoint
- Constant, easily adjustable loading temperature to storage tank
- Backflow preventer function to eliminate heat losses
- High return temperature to boiler
- Ready for right- or left-hand installation, very easy to change
- Grundfos UPM3 High efficiency pump



# Vexve AMV3, AMV4 and ABV4

## Brass mixing valves

Vexve's brass mixing valve product range covers valves from traditional 3-way mixing valves to advanced 4-way bivalent valves. All valves are highly reliable and easy to maintain.

Valves are equipped with standard 4-point connection for easy automating with any actuator.

### Solution

- Heating control:
  - Floor, radiator, etc. heating systems as well as various cooling applications
  - ABV4 valve can combine two different heat sources automatically, or maintain temperature stratification in storage tank
- Heat production:
  - Boilers, solar heating and heat pump systems
- AMV3 mixing valves can also be used as diverting valves

### Delivery

- AMV series 3-way, 4-way and 4-way bivalent DZR brass valves:
  - Sizes DN 15–32 with female thread
  - Sizes DN 20–40 with male thread
- AMV series valves with male thread also available with compression fittings CU 22mm and CU 28mm
- Repair and service kits for all valves

### Main features

- High reliability
- Excellent features for control purposes
- Very good tightness rate
- Low torque
- Due to standard 4-point attachment it is easy to automate the operation with various actuators
- Full compatibility with AM range heating controllers
- Easy to change the opening direction. Opening direction of AMV series valves can be changed even when pressurized
- Easy to install, operate and maintain
- Long service life
- Wide range of Kv-values





# Vexve Termomix

## 3- and 4-way mixing valves

Termomix 3-way and 4-way mixing valves of cast iron have been developed especially for hydronic heating systems, boilers, heat exchangers and air heating/cooling applications. Termomix valves can be used as mixing valves or as diverting valves. There are several means of installation and valves can be mounted in any position. Termomix valves have excellent

control characteristics; they control both supply and return lines. Termomix valves are very suitable for motorizing because of their low torque. Termomix A is a series of compact mixing valves for mounting directly on heating boilers, heat exchangers and air heating/cooling applications.

### Solution

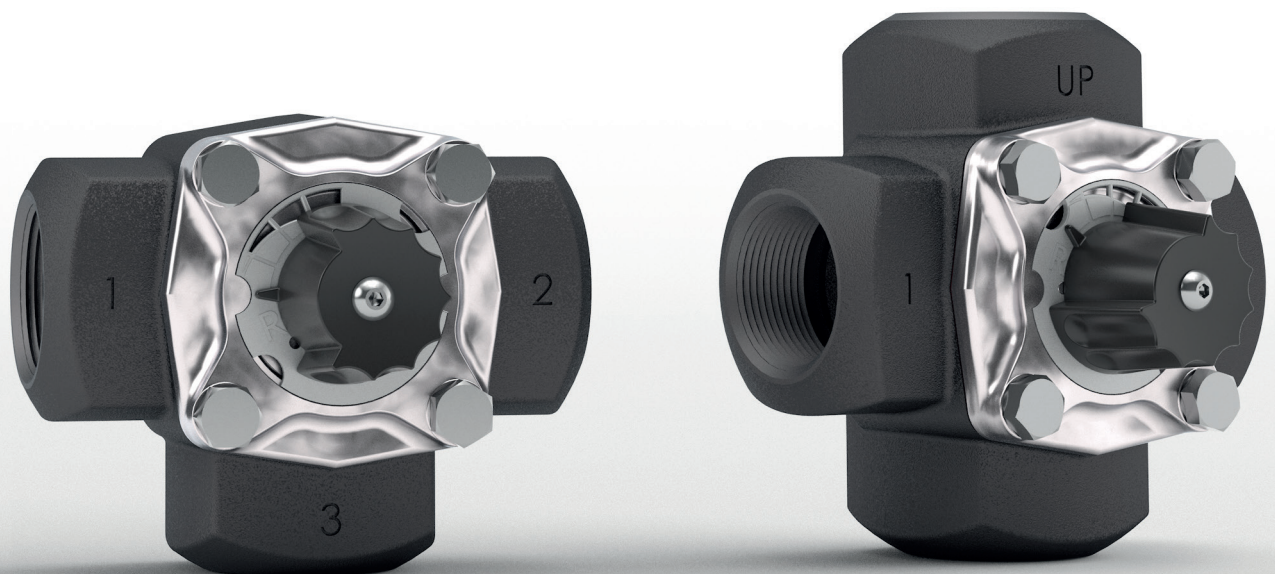
- Temperature control for hydronic heating system
  - Floor heating systems
  - Radiator heating systems
  - Industrial applications
- Installation in
  - Single family houses
  - Apartment houses
  - Industrial buildings
- Heat sources
  - District heating substations
  - Bioenergy and solar hybrid systems
  - Boilers

### Delivery

- 3-way DN 20 to DN 50 cast iron
- 4-way DN 20 to DN 50 cast iron
- 4-way DN 20 to DN 32 cast iron for boiler mounting

### Main features

- Easy to install
- Low torque
- Right- and left-hand mounting
- 4-point connection for actuator







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