Made in Sweden

EN

sustainable energy solutions

termoventiler
A DEBE FLOW GROUP COMPANY

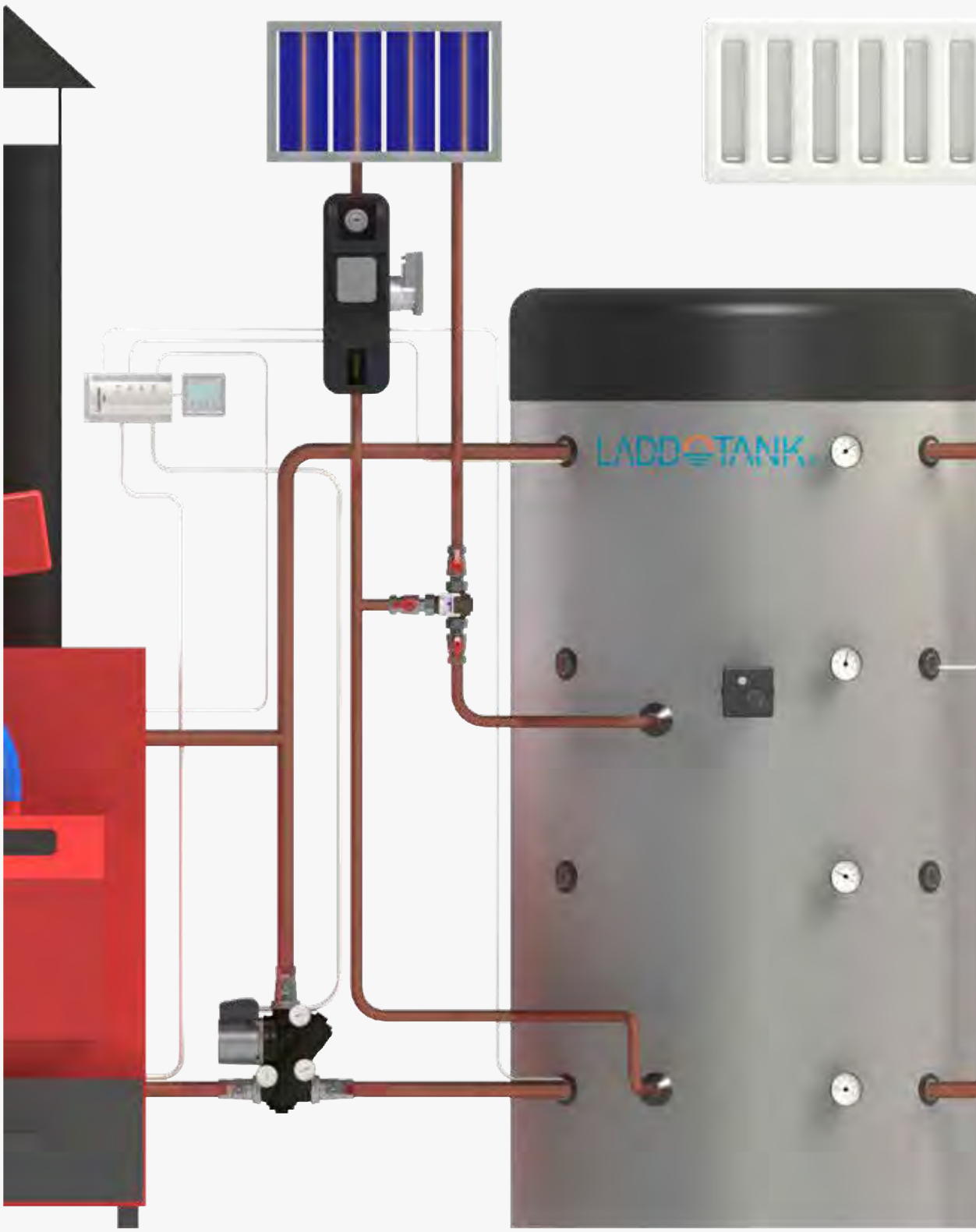
debe flow group

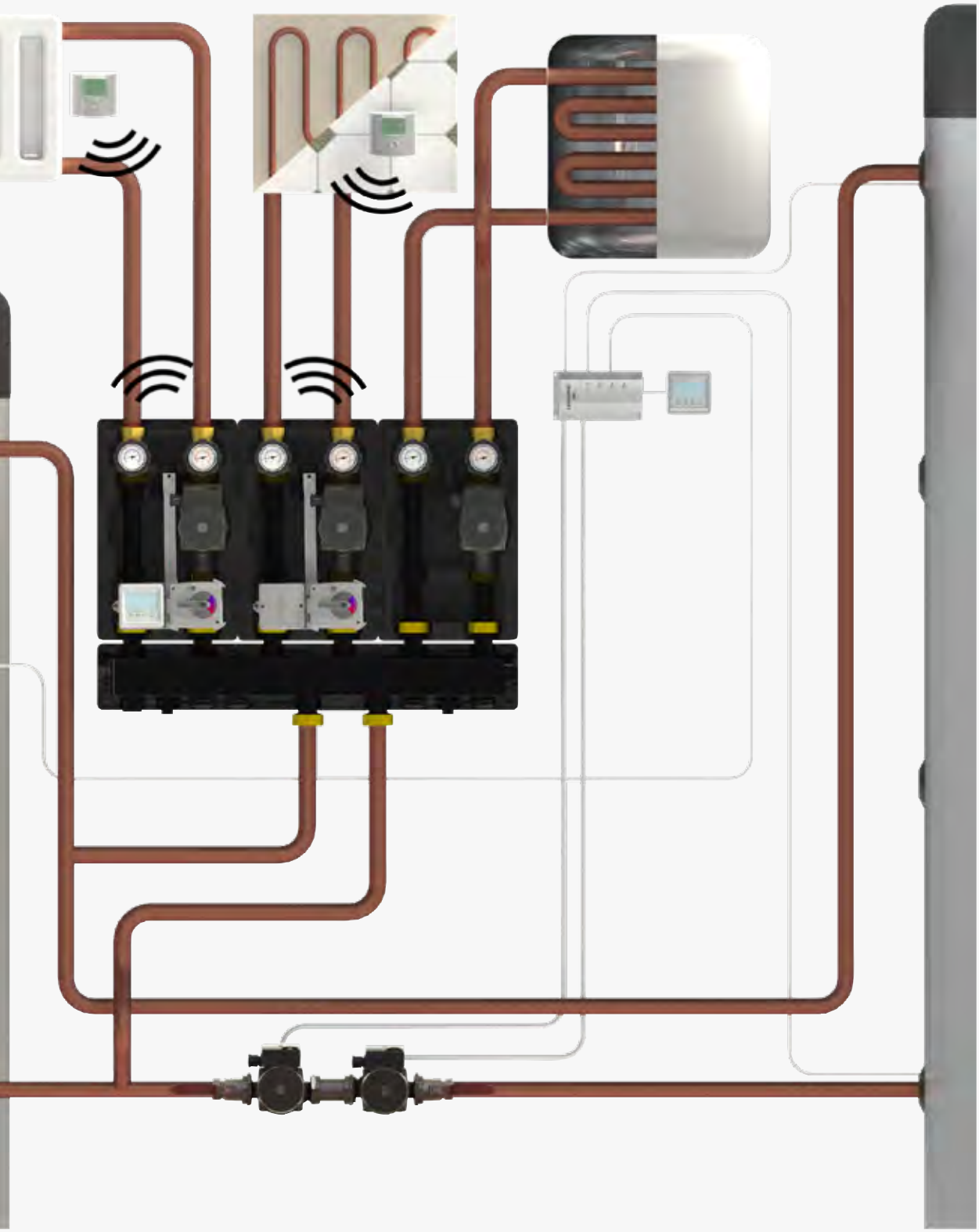
Smart choices help you save both energy and money.

Debe Flow Group AB´s brand Termoventiler specializes in and supplies market-leading products for reliable, energy-efficient, environmentally-adapted installations with long service lives.

Water-borne heating systems are Termoventiler's home area. Whether you choose geothermal or biofuel heating, we will help you by delivering safe and reliable components. Our control and regulation equipments facilitates an optimised installation and a comfortable indoor climate, the way it should be.

We, our distributors and installers will help you to customise your system to suit your own needs and requirements with maximum efficiency and as little environmental impact as possible.


LADDTANK



Why Laddomat® ?

This is the answer for you who burn biofuel and wonder why you should complement your boiler with Laddomat and an accumulator tank.

Prolong the system's lifetime

Laddomat in your system prolongs the lifetime of your boiler. Because Laddomat cools the boiler with pre-warmed return water, the corrosion in the bottom half of the boiler is reduced drastically. Many boiler manufacturers also provide a longer boiler warranty when Laddomat is fitted to the heating system.

Improved economy

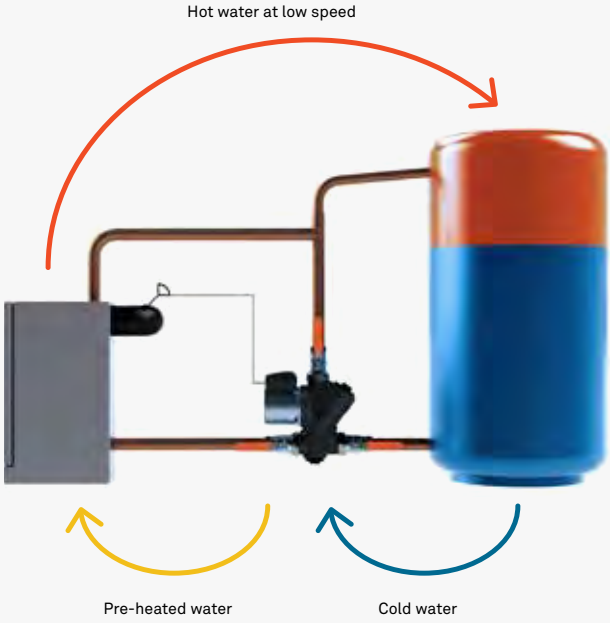
A tankless system (direct system) must be started several times per day to maintain heat, which means that it consumes more wood or pellets. When you fit an accumulator tank and Laddomat to your system you can save up to 50% of your costs.

Greater comfort

An accumulator tank acts as a buffer and intermediate store for water that is pumped around the heating system. The boiler heats the water in the tank, and the hot water is then supplied to the consumers. The boiler fires less often when an accumulator tank is fitted.

Environmental benefits

With an accumulator tank and Laddomat you do not need to fire up the boiler as often as when the boiler is connected directly to the heating system. You exploit the energy that the fuel liberates significantly better, and create optimum conditions for environmentally sound heating.



This is how Laddomat® works

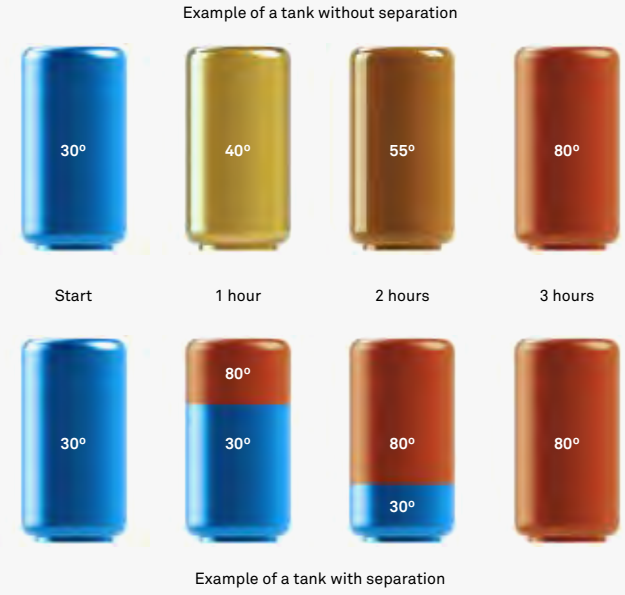
When the boiler starts to fire up, Laddomat circulates the water internally in the boiler, so that it rapidly achieves its working temperature and can begin to heat the tank. Laddomat then pumps the hot water into the top of the accumulator tank slowly and under full control, so that separation remains optimum. In addition, Laddomat cools the boiler with pre-heated return water – hot water from the top of the boiler is mixed with some cold water from the bottom of the tank.

Why an accumulator tank?

The function of an accumulator tank is simple, and is built around the principle that hot water is lighter than cold water. Hot water from the boiler is pumped into the top of the tank, at the same time as cold water is retrieved from the bottom of the tank.

If this process is to function as intended, the boundary between hot and cold water must be sharp. If hot water and cold water are continually mixed, the water temperature will be lower. This means that capacity is reduced – in a worst case scenario, there will not be enough energy to heat the water for a single shower.

The secret behind perfect separation is to control the intake of the tank so the separation is not disturbed. The fitting that accomplishes this is called a charging unit, and the market leading charging unit is Laddomat.



LADDOMAT® 21-series

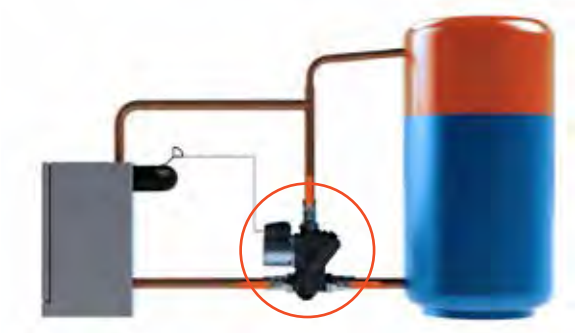
Thermal charging and anti-condensation unit.

Laddomat 21-60 *(example image)*

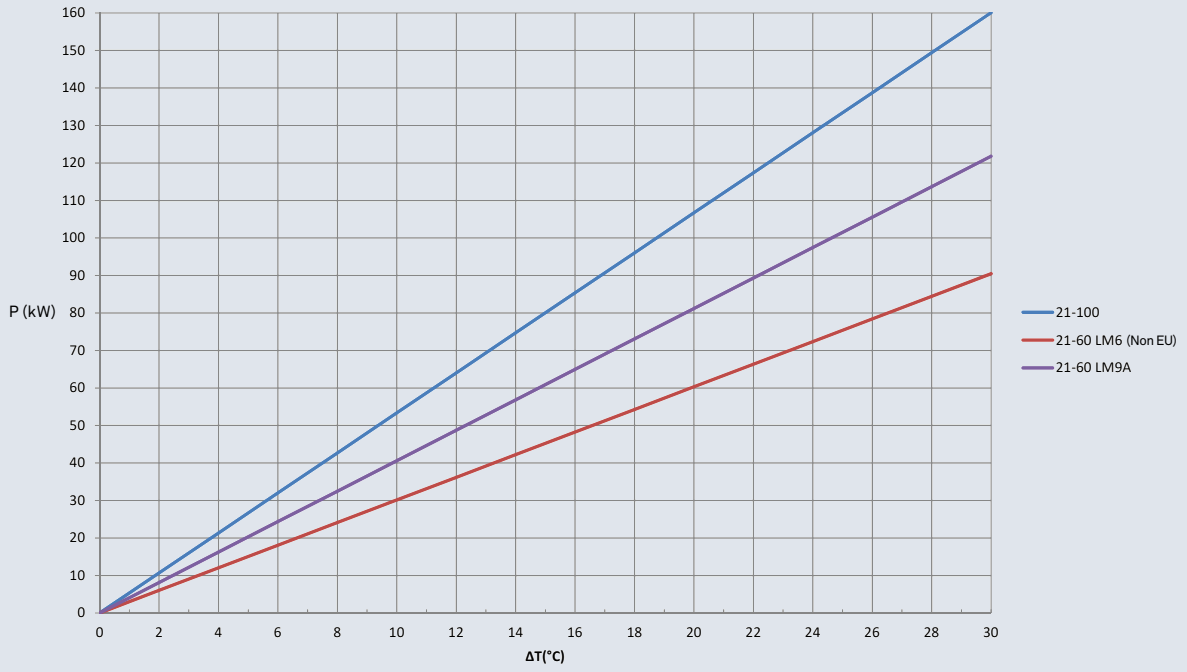
Laddomat 21-100 *(example image)*

The Laddomat 21 is a complete unit and is simple to install. It ensures perfect charging of the tank. Thanks to efficient hot water control, Laddomat 21 has a higher opening temperature at high boiler output compared to other similar products.

- Laddomat 21 enables the boiler to attain the right working temperature quickly and then charges with a slow flow and a high and even temperature. The vitally important boundary layer between hot and cold water is therefore optimal.
- Laddomat 21 raises the return temperature to the bottom of the boiler. This prevents corrosion and tar formation, which extends the service life of the boiler.
- During the final part of firing, Laddomat 21 charges the accumulator tank fully, thanks to the unique thermal valve, which closes the bypass port completely.
- After firing, Laddomat 21 makes use of the residual heat in the boiler and embers by the self-circulation of hot water from the top of the boiler into the accumulator tank. Self-circulation also works in the event of a power failure.
- Laddomat 21 has a simple design with generous sealing surfaces, for simple fitting.
- Laddomat 21 is manufactured for maximum service life and problem free function.
- Laddomat 21 is extremely easy to service, thanks to its ball valves with teflon pack box and heavy lever in metal. This means that maintenance can be carried out easily without draining the system.
- Our ball valves have extra large openings to cope with the maximum flow demand at the end of the charging period and during self-circulation.
- EPP insulation is standard.



Laddomat 21-60 located between the boiler and the tank.
(Example image)



ΔT=temperature difference in/out boiler

Technical data 21-60

Thermostat cartridge:	53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	6 m (non EU) 9 m ErP (or equivalent)
Connections:	Cu28 R32 R40 adapterkit, see page 47 R50 adapterkit, see page 47
Rec. boiler output:	Max. 80 kW (see diagram above)

(Example image)

Technical data 21-100

Thermostat cartridge:	53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	7,5 m ErP
Connections:	R32 R40 adapterkit, see page 47 R50 adapterkit, see page 47
Rec. boiler output:	Max. 120 kW (see diagram above)

(Example image)

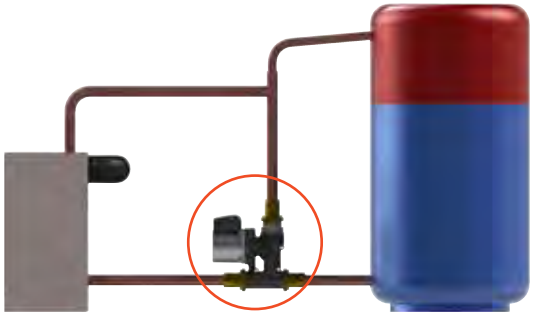
LADDOMAT® 20

NEW!

Thermal charging and anti-condensation unit.

(Example image)

(Example image)



Laddomat 20 located between the boiler and the tank.
(Example image)

Laddomat 20 is a complete unit and is simple to install. It ensures perfect charging of the tank.
Thanks to efficient hot water control, the same as in our Laddomat 21 series, Laddomat 20 can have a higher opening temperature at high boiler output compared to other similar products.

- Laddomat 20 raises the return temperature to the bottom of the boiler. This prevents corrosion and tar formation, which extends the service life of the boiler.
- Laddomat 20 enables the boiler to attain the right working temperature quickly and then charges with a slow flow and a high and even temperature. The vitally important boundary layer between hot and cold water is therefore optimal.
- During the final part of firing, Laddomat 20 charges the accumulator tank fully, thanks to the unique thermal valve, which closes the bypass port completely.
- After firing, Laddomat 20 makes use of the residual heat in the boiler and embers by the self-circulation of hot water from the top of the boiler into the accumulator tank. Self-circulation also works in the event of a power failure.
- Laddomat 20 has a simple design with generous sealing surfaces, for simple fitting.
- Laddomat 20 is manufactured for maximum service life and problem free function.
- EPP insulation is standard.

Technical data

Opening temperature:	53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	4 m (non EU) 9 m ErP (or equivalent)
Connection:	R25
Max. boiler output:	60 kW

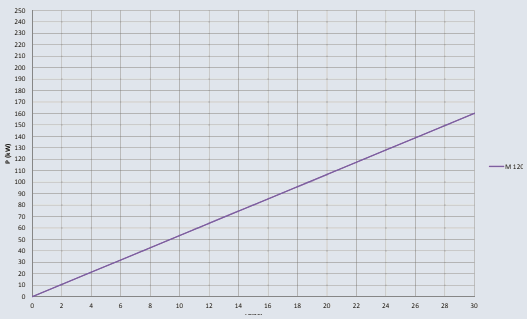
LADDOMATIC® M120

Motorised charging and anti-condensation unit.

(Example image)

Laddomatic M120 is a complete charging unit with motorised control of the return temperature to biofuel boilers. The charging unit is based on our renowned and reliable Laddomat 21-100.

- Laddomatic M120 is easy to install and is designed to keep a precisely set return temperature to the boiler. This protects the boiler against corrosion and tar formation, which extends the service life of the boiler.
- The charging unit increases the boiler's efficiency by rapidly ensuring that the correct operating temperature is reached and maintained.
- The accumulator tank is charged at a low flow in order to ensure that perfect separation is achieved.
- Our Thermomatic range ensures precision control.
- Integrated non-return valve for self-circulation in the final phase of the firing and during, for example, a power failure.



ΔT=temperature difference in/out boiler

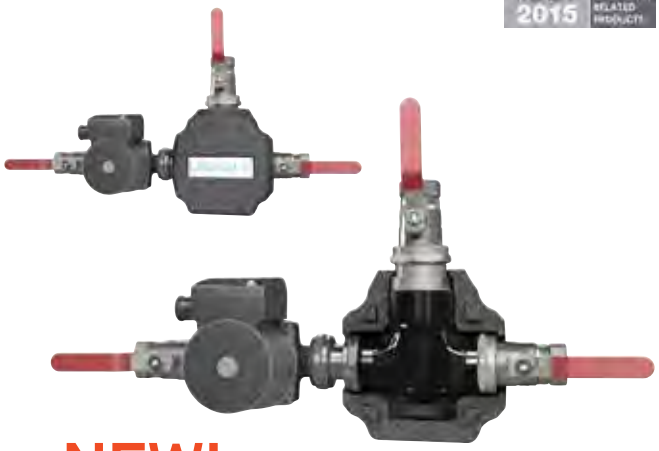
Technical data

Pump:	7,5 m ErP
Flow characteristics:	Linear / Kvs ~16
Connection:	R32 R40 adapterkit, see page 47 R50 adapterkit, see page 47
Rec. boiler output:	Max. 120 kW (see diagram)
Actuator:	Thermomatic TVM, see page 43 Thermomatic CC, see page 42

LADDOMAT® 11-series

Thermal charging and anti-condensation unit.

Laddomat 11-30 *(example image)*

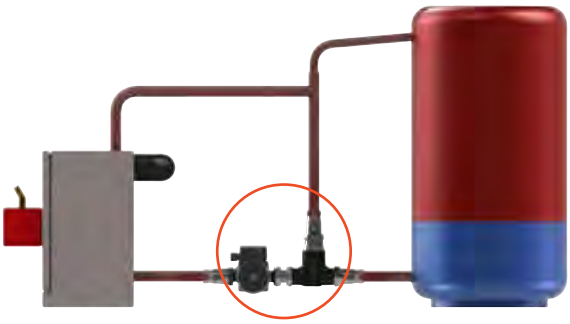


NEW!

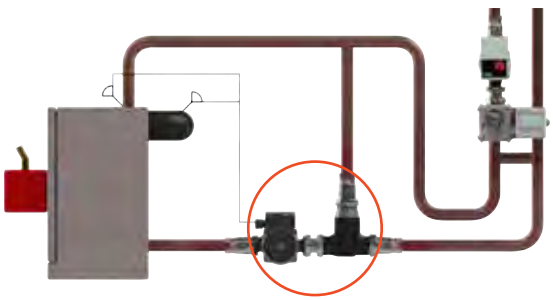
Laddomat 11-200 *(example image)*

The Laddomat 11 is a complete unit and is simple to install. It ensures perfect charging of the tank. Thanks to efficient hot water control, Laddomat 11 can have a higher opening temperature at high boiler output compared to other similar products.

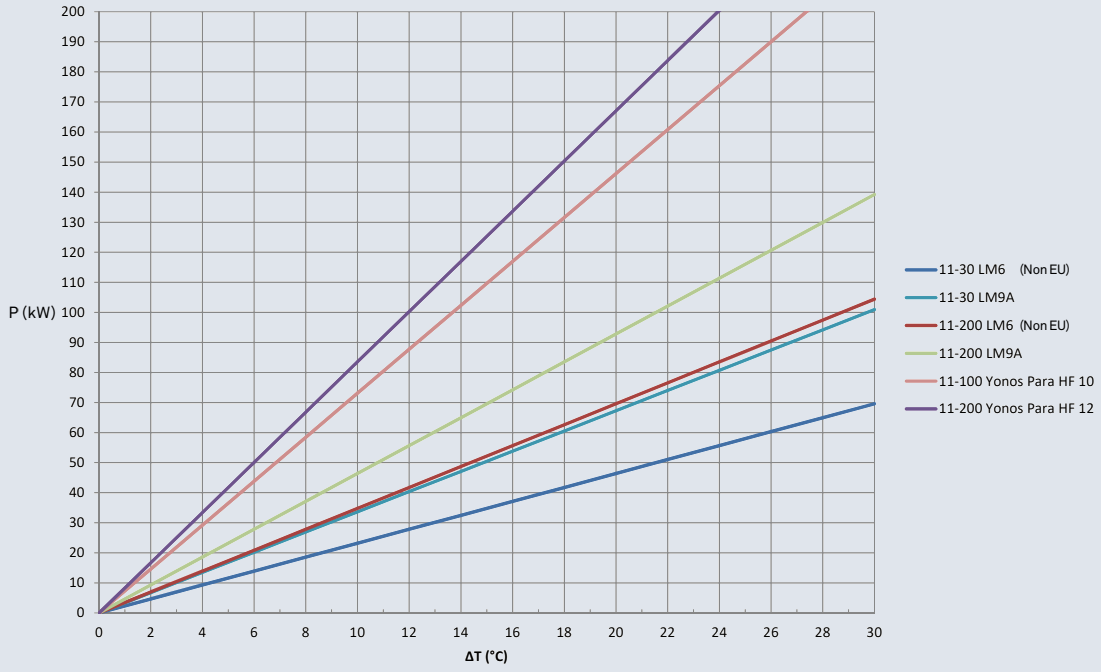
- Laddomat 11 raises the return temperature to the bottom of the boiler. This prevents corrosion and tar formation, which extends the service life of the boiler.
- Laddomat 11 enables the boiler to attain working temperature in a very short space of time. This improves boiler efficiency.
- Laddomat 11 charges the accumulator tank by means of a slow flow of hot water. A thin boundary layer in the tank is necessary for an effective, easy-to operate boiler system. With Laddomat 11 separation is optimal.
- During the final part of firing, Laddomat 11 charges the accumulator tank fully, thanks to the unique thermal valve, which chokes the bypass port.
- Laddomat 11 is supplied with ball valves to facilitate any servicing without having to drain the system.
- EPP insulation fitted as standard in the Laddomat 11-200.



Laddomat 11 positioned by the boiler or the tank. *(Example image)*



Example of installation without tank. *(Example image)*



ΔT=temperature difference in/out boiler

Technical data 11-30

Thermostat cartridge:	53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	6 m (non EU) 9 m ErP (or equivalent)
Connections:	Cu22 R25
Rec. boiler output:	Max. 60 kW (see diagram above)

Technical data 11-200

Thermostat cartridge:	53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	6 m 9 m ErP 10 m ErP 12 m ErP
Connections:	Cu22 Cu28 R32
Rec. boiler output:	Max. 185 kW (see diagram above)

Accessories 11-200

Connections:	R40 adapterkit, see page 47 R50 adapterkit, see page 47
Check valve:	Built-in
Thermometers:	For R32 connections

LADDOMAT® 11 Duo NEW!

Thermal quick charging unit —
For quicker charging of the accumulator tank.

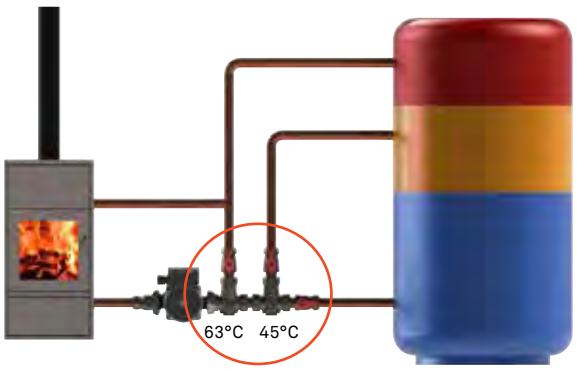
Laddomat 11-200 Duo *(example image)*

Laddomat 11-30 Duo *(example image)*

Motorised control together with Laddomat 11-200 *(example image)*

Laddomat 11 Duo increases the flow of hot water from the boiler to the accumulator tank.

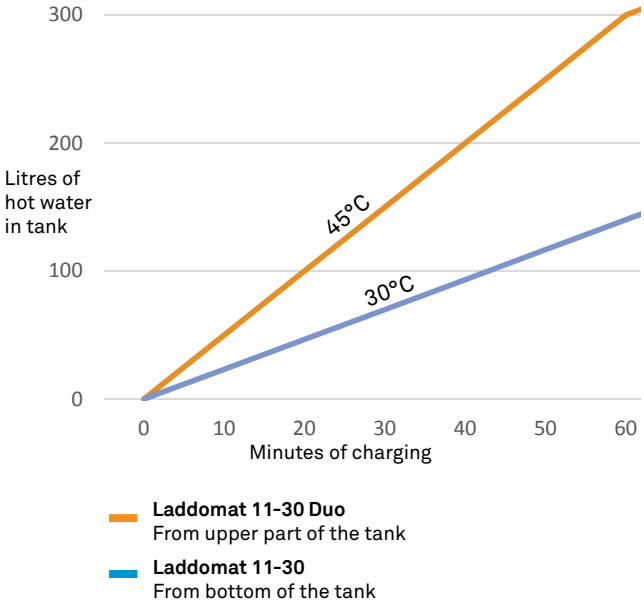
- Laddomat 11 Duo consists of 2 pcs Laddomat 11 valves and makes it possible to speed up the charging during start-up by using the warmer water from the upper part of the tank as cooling.
- The Duo-connection is specially suitable for smaller installations where you want to get a larger volume of hot water in the top of the tank quicker after firing begins.



(Example image)

Technical data

Thermostat cartridge:	63°+45°C
Pump:	6 m
Connection:	Cu22 R25 Cu28 R32
Rec. boiler output:	Max. 40 / 65 kW



LADDOMAT® 11-30 FDV

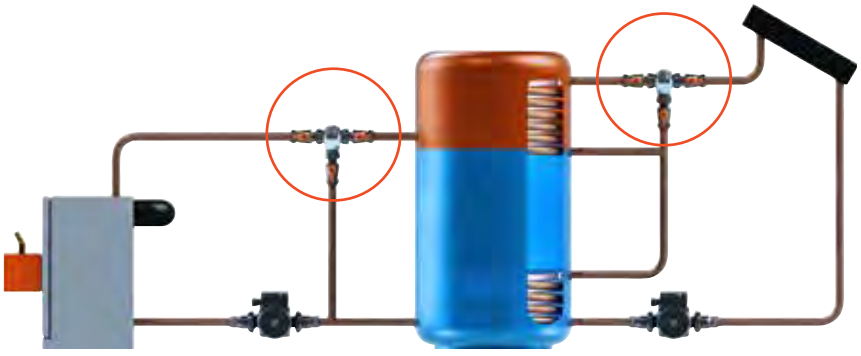
Thermal distribution valve.

Laddomat 11-30 FDV is a thermal 3-way valve for distribution systems. Areas of use include systems with solar panels where cooler water is introduced to the lower part of the tank and the warmer water at the top, or as a distributor in a boiler system (see picture below).

Laddomat 11-30 FDV has a thermostat cartridge that detects the incoming water temperature and distributes the flow accordingly. The change from one port to the other takes place within ± 2°C or ± 3°C, depending on the temperature range.

Technical data

Accuracy:	+/- 1°C
Temperature range distribution:	60°C ±3°C (multiple alternatives exist)
Media temperature:	Continuous max. 100°C Temporary max. 110°C Min. 0°C
Pressure class:	PN 6
Max. differential pressure:	100 kPa (1.0 bar)



LADDOMATIC®

Motorised charging and anti-condensation unit.

Laddomatic *(example image)*

Laddomatic XXL *(example image)*

Laddomatic is a motorised charging unit for biofuel boilers. The charging unit is based on our reliable mixing valves and our renowned Thermomatic range.

- Laddomatic is easy to install and is designed to keep a precisely set return temperature to the boiler. This protects the boiler against corrosion and tar formation, which extends the service life of the boiler.
- The charging unit increases the boiler's efficiency by rapidly ensuring that the correct operating temperature is reached and maintained.
- The accumulator tank is charged at a low flow in order to ensure that perfect separation is achieved.
- Our Thermomatic range ensures precision control.

Technical data Laddomatic

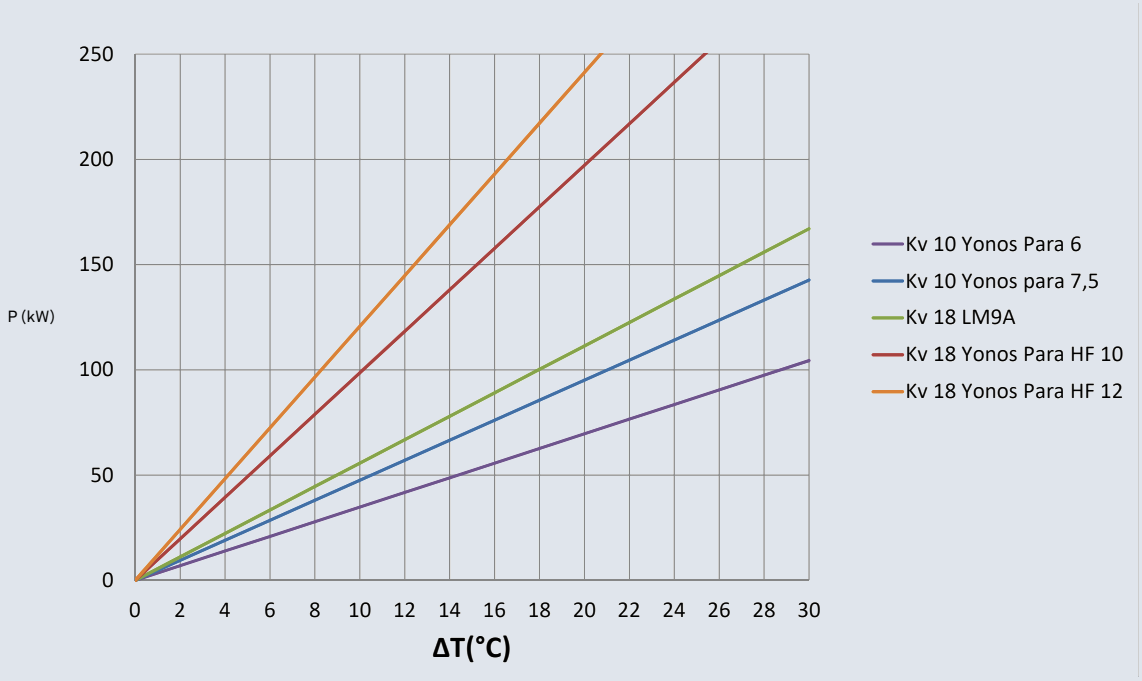
Pump:	See diagram
Flow characteristics:	Linear / Kvs 10, Kvs 18
Connection:	R32 / 1 ¼" Rp R40 adapterkit, see page 47 R50 adapterkit, see page 47
Rec. boiler output:	Max. 240 kW (see diagram)
Actuator:	Thermomatic TVM, see page 43 Thermomatic CC, see page 42

Technical data Laddomatic XXL

Pump:	See diagram
Flow characteristics:	Linear / Kvs 18, Kvs 25, Kvs 63
Connection:	R32 / 1 ¼" Rp R40 adapterkit, see page 47 R50 adapterkit, see page 47 R40 / 1 ½" Rp R65 / 2 ½" Flange or Rp
Rec. boiler output:	Max. 800 kW (see diagram)
Actuator:	Thermomatic TVM, see page 43 Thermomatic CC, see page 42

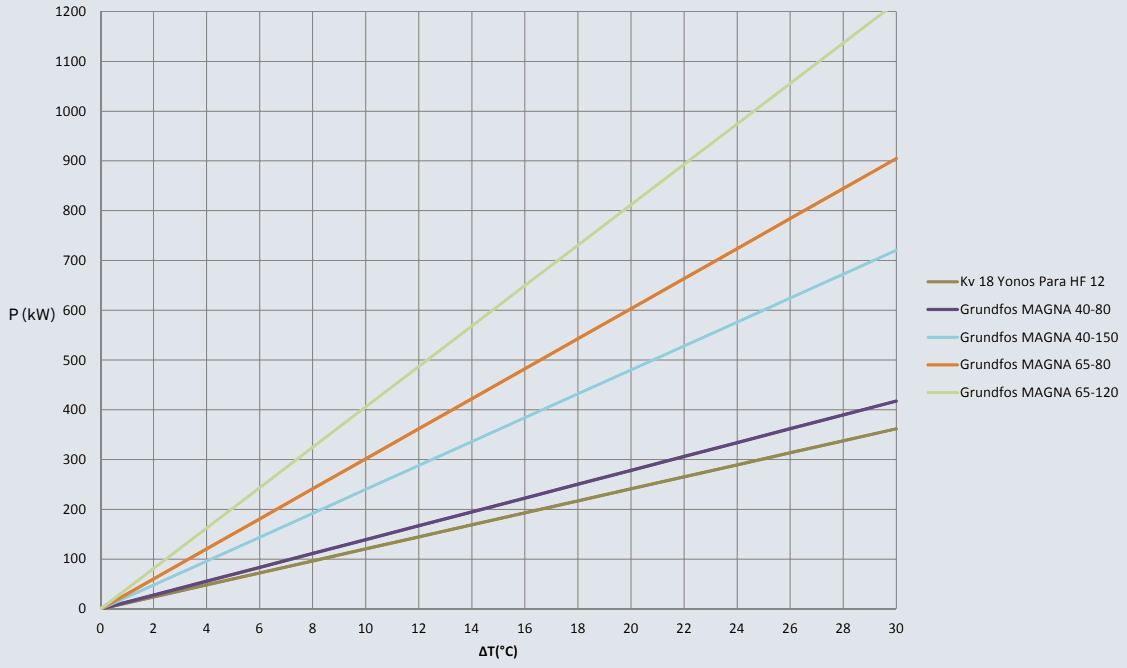
Laddomatic for outputs up to 8000 kW on request (DN80, DN100, DN125, DN150)

Output diagram Laddomatic



ΔT=temperature difference in/out boiler

Output diagram Laddomatic XXL



ΔT=temperature difference in/out boiler

LADDOTANK®

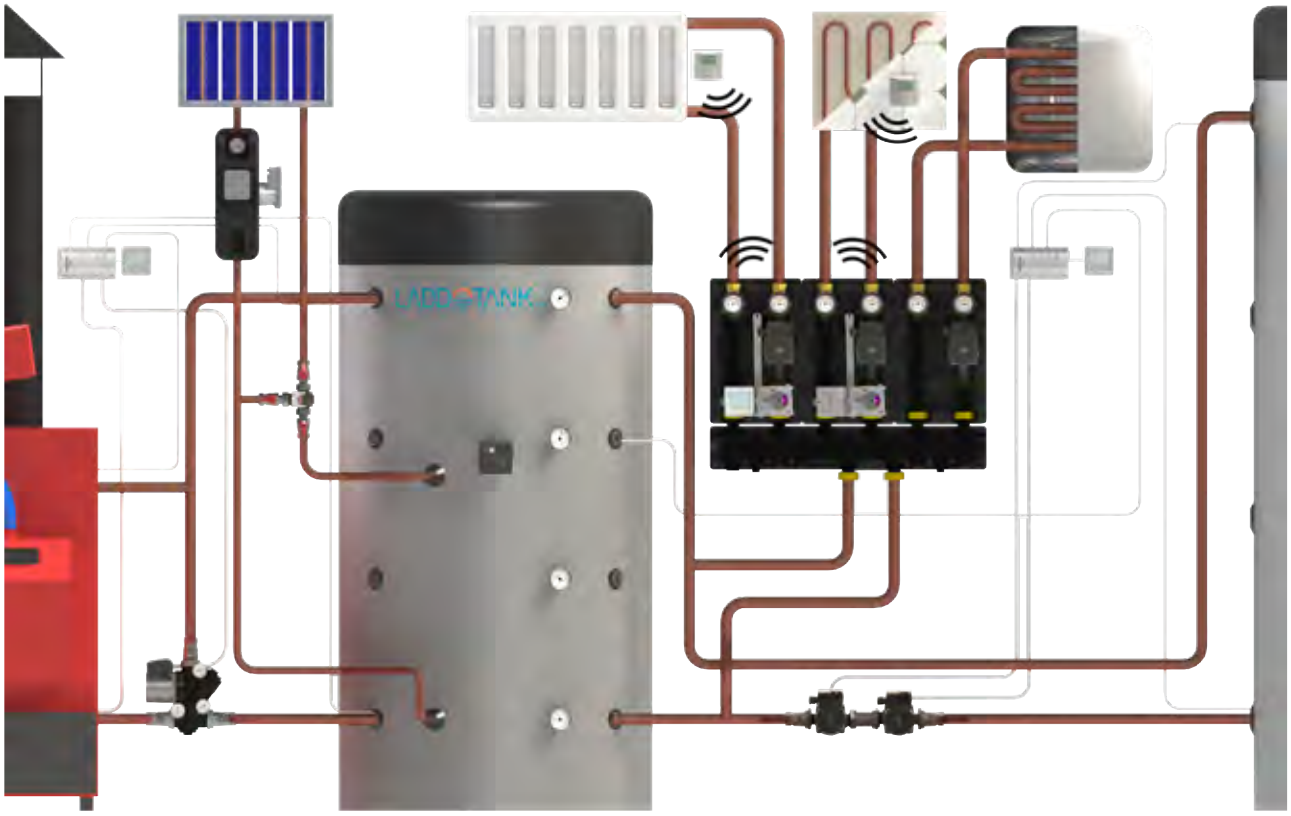
NEW!

Accumulator tanks for efficient storage of heating energy in waterborne heating systems.

TECHNICAL DESCRIPTION
Laddotank has been designed for thermal energy storage in waterborne heating system, and to optimize the operating conditions of the heat source (ie. heat pump, oil, wood, pellet, sun etc).
The accumulator tank increases the user's heating comfort significantly thanks to a steady supply of thermal energy even when the boiler is not running.

MATERIAL
Steel construction with exterior paint.

INSULATION
Meets the applicable ErP Directives.
Covered in gray PVC jacket and lid.



Puffer
Tanks with or without heating coils

Eco Combi
Tanks with DHW coil and with or without heating coils

Bolly
Calorifiers with one or two heating coils.

Bollyterm
Calorifiers with built-in heat pump, with or without heating coils.

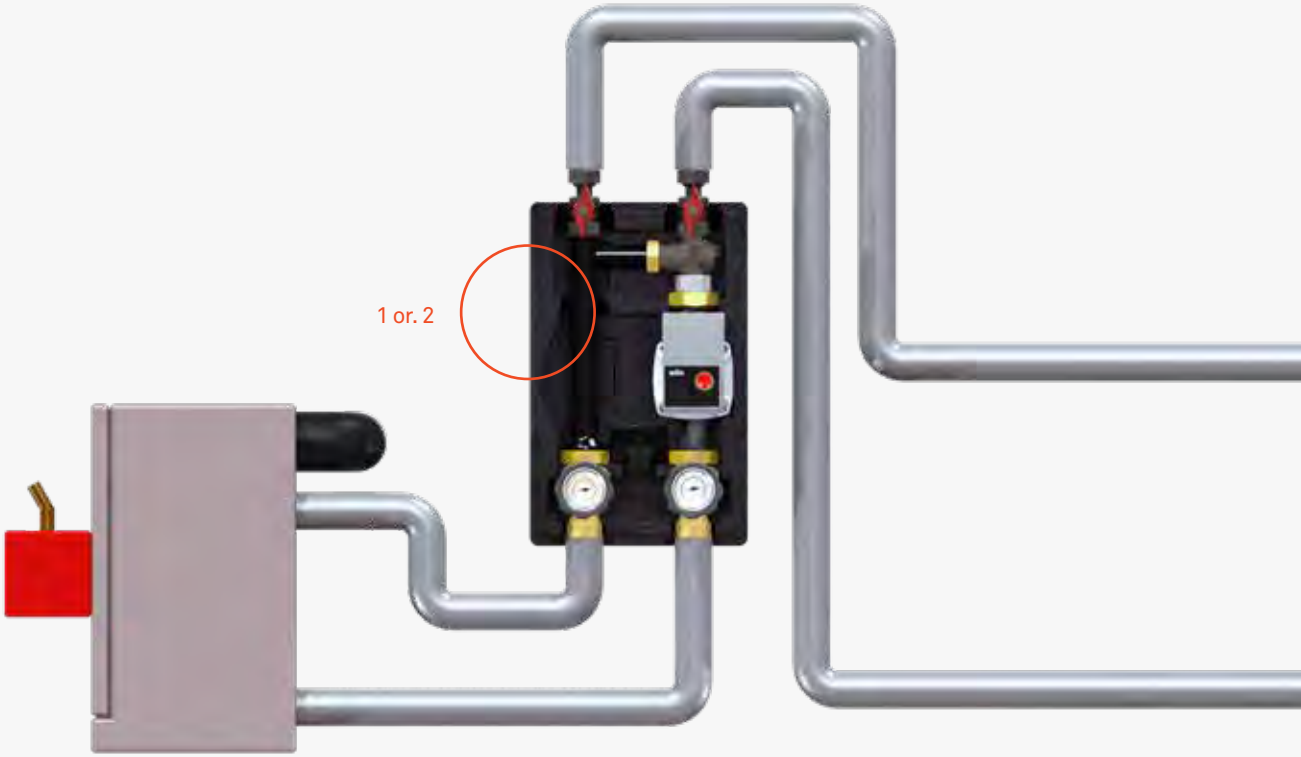
Volano - Energy buffer for heat pump
VOLANO TERMICO PDC
Floor standing. Sizes 100 / 200 / 300 / 500 l.
HANGING VOLANO TERMICO PDC
Wall hung. Sizes 12 / 25 / 50 / 100 l.

Expansion vessels
- Sizes from 8 l up to 500 l
- Replaceable membrane (EPDM).
- Epoxy painted steel - no rust or corrosion.
- Well tested.
- CE according to Directive PED 97 /23/CE

Accessories: Immersion heater etc. See page 48.

4H Groups

Complete, insulated package solutions in standard dimensions (125 / 160 cc), to facilitate installation of heating systems.



1. Laddomat 125

See page 22

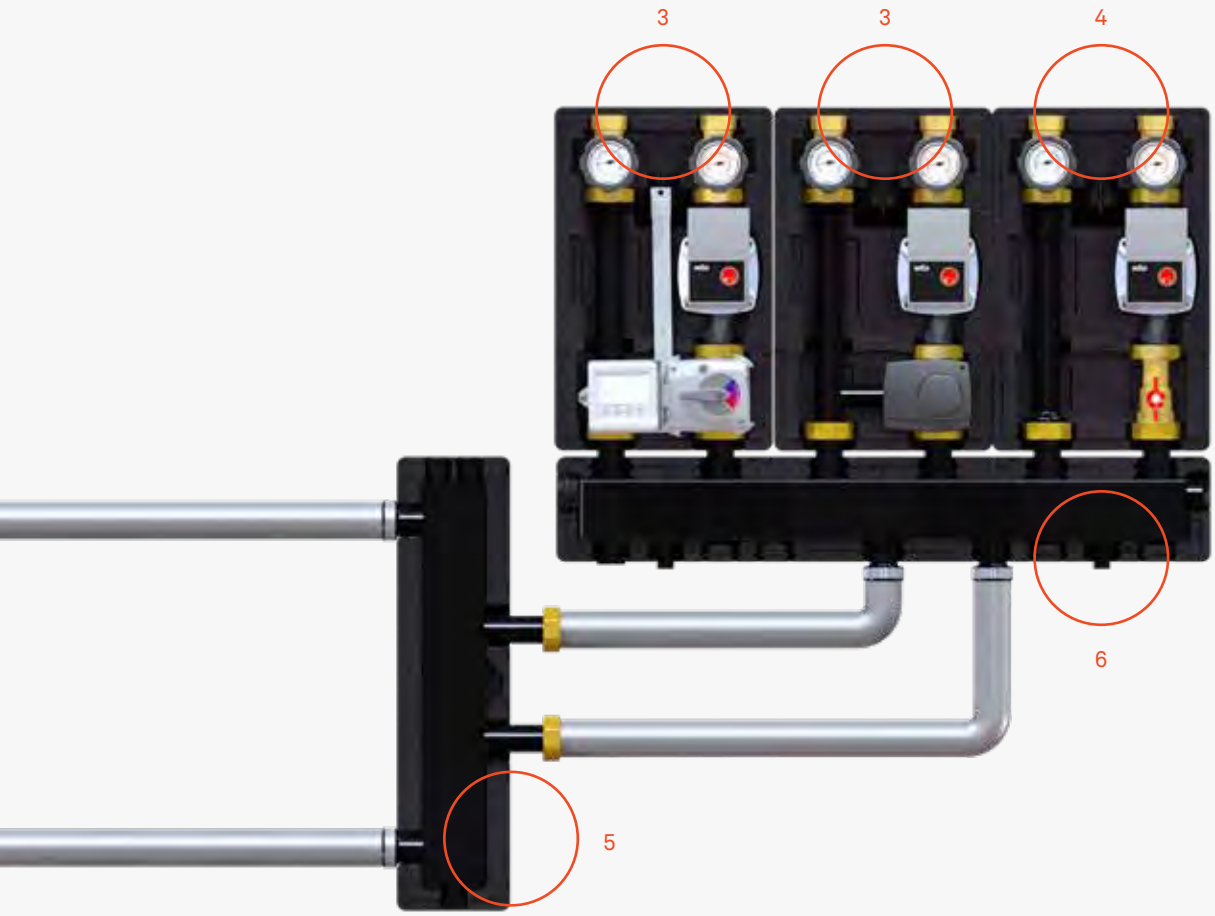
2. Laddomatic 125 / 160

See page 23

3. Thermomatic 125 / 160

See page 24

Connection example:



4. Pump unit 125 / 160

See page 25

5. Hydraulic separator

See page 26-27

6. Manifold

See page 25

(Example images)

LADDOMAT® 125

Thermal charging and anti-condensation group.

(Example images)

Laddomat 125 is a series of thermal charging groups for biofuel boilers, based on our well-known Laddomat 11 series.

- The charging groups have a capacity of up to 60 kW for DN25 and 90 kW for DN32.
- The charging groups raise the return temperature to the boiler, which protects the boiler from corrosion and extends its life.
- The integrated thermal valve increases the boiler's efficiency by rapidly ensuring that the correct operating temperature is reached.
- The accumulator tank is charged at a low flow in order to ensure that perfect separation is achieved.
- The highly efficient energy-saving pump, together with dense insulation, provides an energy-efficient charging group.
- Easy installation through standardised installation dimensions and connections.
- Wall bracket included as standard.

Technical data DN25 / 125 cc

Thermal valve:	Laddomat 11-30, see page 10-11
Thermostat cartridge:	45°, 53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	6 m, 180 mm
Connections:	R25
Rec. boiler output:	Max. 60 kW

Technical data DN32 / 125 cc

Thermal valve:	Laddomat 11-200, see page 10-11
Thermostat cartridge:	45°, 53°, 57°, 63°, 66°, 72°, 78°, 83° or 87°C
Pump:	8 m, 180 mm
Connections:	R32-R40
Rec. boiler output:	Max. 90 kW

LADDOMATIC® 125 / 160

Motorised charging and anti-condensation group.

(Example images)

Laddomatic 125 / 160 is a series of motorised charging groups for biofuel boilers based on our trusted mixing valves and our renowned Thermomatic range.

- The unit increases the boiler's efficiency by rapidly ensuring that the correct operating temperature is reached.
- The charging groups raise the return temperature to the boiler, which protects the boiler from corrosion and extends its life.
- Our Thermomatic range optimises control perfectly for all kinds of systems.
- The accumulator tank is charged at a low flow in order to ensure that perfect separation is achieved.
- The highly efficient energy-saving pump, together with dense insulation, provides an energy-efficient charging group.
- Easy installation through standardised installation dimensions and connections.
- Wall bracket included as standard.

Technical data DN25 / 125 cc

Pump:	6 m, 180 mm
Connections:	R25-R40
Kvs value:	8,3
Rec. boiler output:	Max. 70 kW

Technical data DN32 / 125 cc

Pump:	8 m, 180 mm (Max. 95 kW) 10 m, 180 mm (Max. 170 kW)
Connections:	R32-R50
Kvs value:	17,0
Rec. boiler output:	Max. 170 kW

Technical data DN40 / 160 cc

Pump:	12 m, 250 mm
Connections:	R40 - R40 Flange (PN6)
Kvs value:	30,0
Rec. boiler output:	Max. 460 kW
Actuator:	Without actuator Thermomatic TVM, see page 43 Thermomatic CC, see page 42

THERMOMATIC® 125 / 160

Distribution group for control of heating systems.

(Example images)

Thermomatic 125 is a range of complete distribution groups with the mixing operation for both heating and cooling applications. The range is based on our reliable mixing valves and our renowned Thermomatic range.

- The distribution groups are optimised to meet the system's energy needs safely and perfectly, thanks to the available actuator options.
- The insulation's ventilation function protects the device from condensation during cooling applications.
- The highly efficient energy-saving pump, together with dense insulation, provides an energy-efficient distribution group.
- Simple and tidy installation thanks to its standard installation dimensions.
- Wall bracket included as standard.
- When installing more than one distribution group the manifold (see page 25) makes a neat and easy installation.

Technical data DN25 / 125 cc

Actuator:	Without actuator Thermomatic TVM, see page 43 Thermomatic CC, see page 42 Thermomatic EC Home, see page 40 Thermomatic EC Home WL, see page 40
Pump:	6 m, 180 mm
Connections:	R40-R25
Kvs value:	8,3

Technical data DN32 / 125 cc

Actuator:	Without actuator Thermomatic TVM, see page 43 Thermomatic CC, see page 42 Thermomatic EC Home, see page 40 Thermomatic EC Home WL, see page 40
Pump:	10 mm, 180 mm
Connections:	R50 - R32
Kvs value:	17,0

Technical data DN40 / 160 cc

Actuator:	Without actuator Thermomatic TVM, see page 43 Thermomatic CC, see page 42
Pump:	12 m, 250 mm
Connections:	R40 - R40 flange (PN6)
Kvs value:	30,0

LADDOMAT® Pump unit 125 / 160

Distribution group for optimised direct supply of heating or cooling.

(Example images)

Laddomat Pump unit is a device for direct supply of heating or cooling.

- The insulation's ventilation function protects the device from condensation during cooling applications.
- The highly efficient energy-saving pump, together with dense insulation, provides an energy-efficient unit.
- Simple installation thanks to its standard installation dimensions.
- Wall bracket included as standard.
- When installing more than one distribution unit the manifold (see below) makes a neat and easy installation.

Technical data DN25 / 125 cc

Pump:	6 m. 180 mm
Connections:	R40 - R25

Technical data DN32 / 125 cc

Pump:	8 m, 180 mm
	10 m, 180 mm
Connections:	R50 – R32

Technical data DN40 / 160 cc

Pump:	12 m, 250 mm
Connections:	R40 - R40 Flange (PN6)

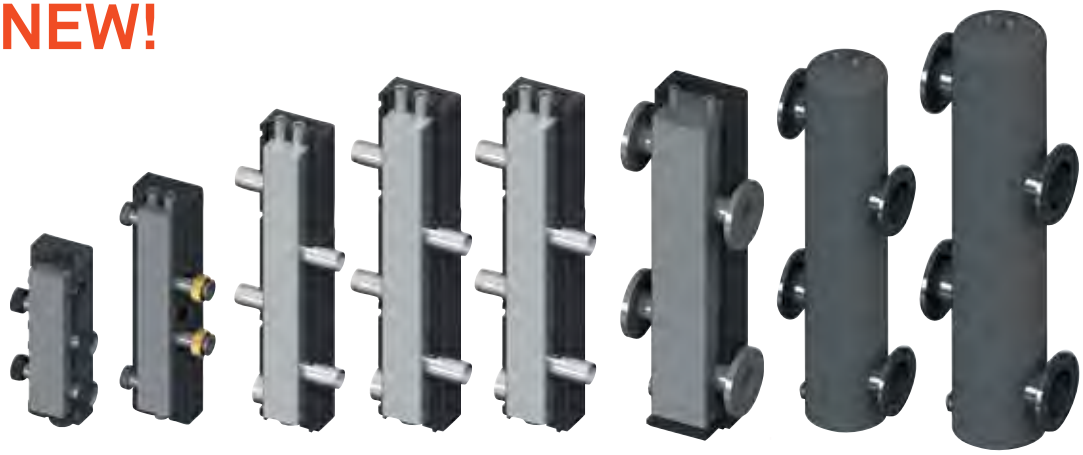
Manifold for Thermomatic and Pump unit. Other accessories, see page 49.

For connection of 2, 3, 4 or 5 units. Includes all necessary seals and fittings.
i8ub

(Example image)

Hydraulic separators

NEW!

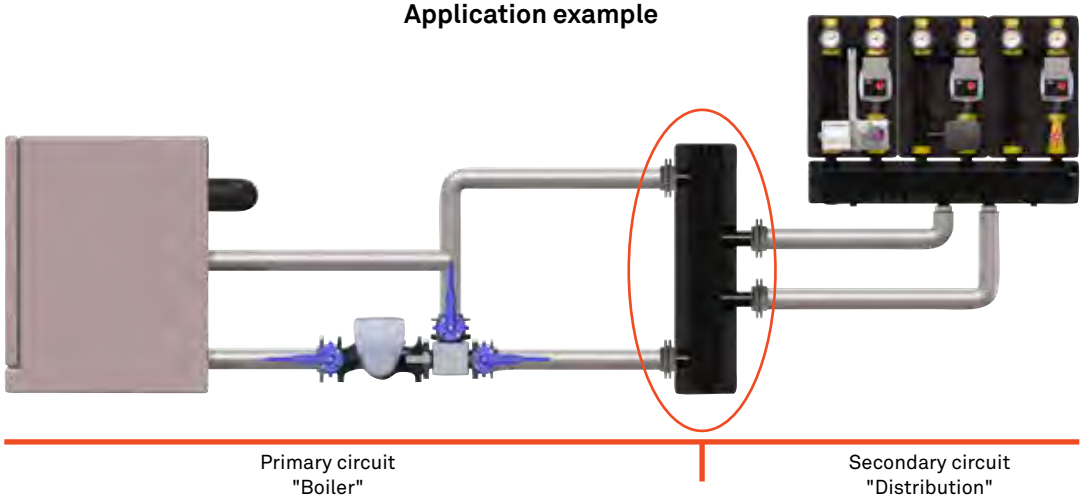


CP60 CP70 CP90 CP120 CP120 CP160 CP220 CP270

Hydraulic separator is installed when the primary circuit interacts with one or more secondary circuit circulators in the same system.
The separator avoid problems relating to flow rate variations and circuits prevalence.
The separator also acts as an air separator.

- Separating primary and secondary circuit
- Maintaining independent mass flow in the primary circuit and the secondary circuit
- Eliminating flow rate balancing in the primary circuit and the secondary circuit

Application example



Hydraulic separators - Principle of operation

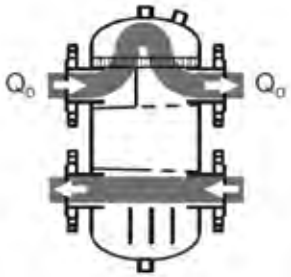


Fig 1

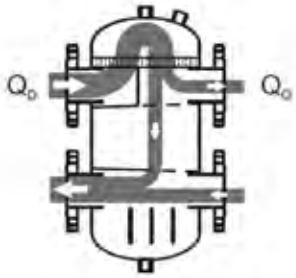


Fig 2

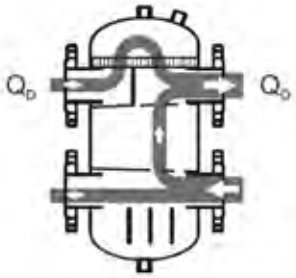


Fig 3

- Fig 1 – The flow rate in the primary circuit is the same as the flow rate in the secondary circuit.
  The quantity of heat delivered is the same as the quantity of heat received.

- Fig 2 – When the heating demand is reduced, the flow rate in the secondary circuit is reduced.
  A part of the flow in the primary circuit is returned to the heat source. The excess heat indicates that the boiler output should be reduced or stopped.

- Fig 3 – When the heating demand increases, the flow rate in the secondary circuit is increased.
  The return temperature to the boiler will fall, which incidates that boiler output should be increased.

Technical data

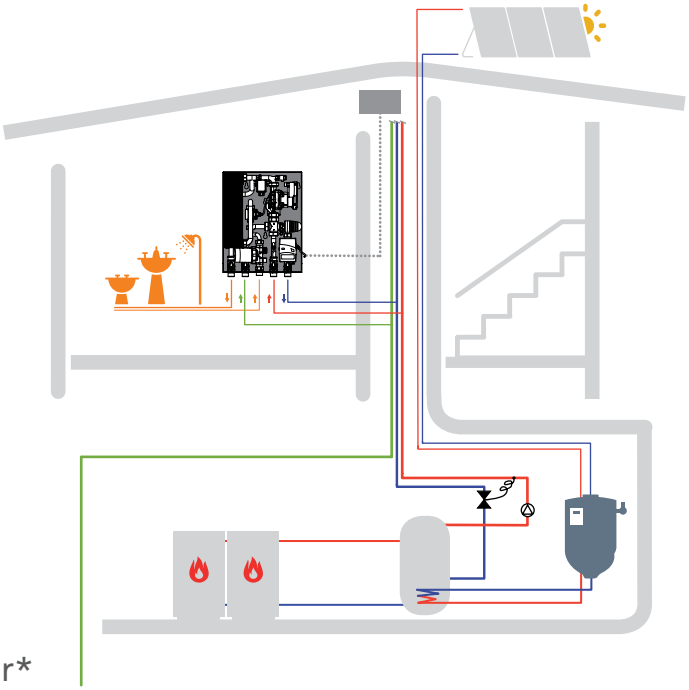
Model:		**CP60**	**CP70**	**CP80**	**CP90**	**CP120**	**CP160**	**CP220**	**CP270**
Dimension		DN20	DN25	DN32	DN50	DN65	DN65	DN100	DN150
Flow rate	m³/h	1.7	2.5	6.5	9.5	18	18	30	50
Capacity	l	0.7	1.9	4.8	11	11	21	46	81
Max. Temperature	°C	110	110	110	110	110	100	100	100
Max. Pressure	bar	6	6	6	6	6	6	6	6
Rec. boiler output	kW		60	150	225	450	450	700	1150
Raw material		Steel ST37.1	Steel ST37.1	Steel ST37.1	Steel ST37.1	Steel ST37.1	Steel ST37.1	Steel ST37.1	Steel ST37.1
Insulation		EPP 40g/l	EPP 40g/l	EPP 40g/l	EPP 40g/l	EPP 40g/l	EPP 40g/l	Trocellen C-EN5F13	Trocellen C-EN5F13

DHW Stations

Area of use, connection example

A DHW station is a complete module with heat exchanger, temperature control and circulation pump, and is extra suitable for systems where it's not possible to use for example a built-in coil or if the current coil or domestic water heater is broken.

Thanks to the design, the amount of produced hot water may be high, even if there is no large accumulation available – as long as there is a large enough heat source as backup.

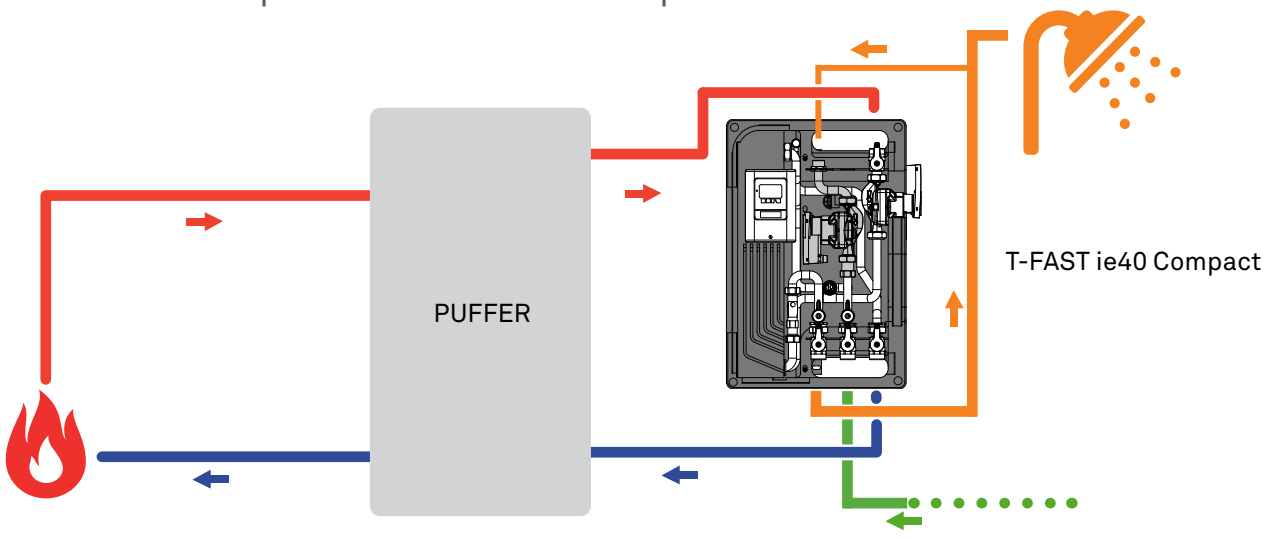


Dimensioning domestic hot water*

For a normal shower, about 10–12 l/min water is used, which means that a T-FAST i20 (20 l/min) is enough to run one older shower, or two modern showers with lower flow, at the same time.
To fill a bath tub might demand some extra capacity; For example, a regular bath tub holds about 150 l water when filled. The size of the DHW station is decided by the desired fill time, which also decides how large tank volume or heat source is needed as backup. It takes about 6 kW to heat 150 l from 10 to 45°C.

**Heating from 10 to 45°C*

Connection example with T-FAST ie40 Compact



TERMOVENTILER T-FAST MINI

DHW Production module

Wall-hung
340x450x120 mm

Built-in
400x500x110 mm

Compact dimensions, maximum result

T-FAST MINI is a DHW production module that uses the working principle of a stainless steel plate heat exchanger. The temperature of the water is managed by a thermostatic mixing valve on the primary circuit.

The pump placed on the primary circuit is activated by the signal of the flowswitch that is placed on the secondary circuit.

A DHW recirculation pump kit is available.

ADVANTAGES

- Compact module with white cover, ral 9010
- Preassembled and tested module
- Wall-hung or built-in version
- Shut-off valves both on primary and secondary circuit
- Reduced maintenance
- Easy temperature setting
- Large capacity of DHW
- No need to balance the flow rate of the primary circuit
- Modulating flow rate by the thermostatic mixing valve on the primary circuit
- Secondary return kit available, with return temperature setting
- Design for installation of heat meter (primary circuit)

TECHNICAL DATA

Max flow rate of primary flow:	1450 l/h
Max flow rate of secondary outlet (DHW):	28 l /min, 0,5 bar
DHW temperature set:	40–55°C
Min. flow rate DHW production ON/OFF:	2,5 ± 0,3 l/m
Power supply:	230 V AC, 45 W
Max. working pressure:	10 bar
Accessories:	Pump for DHW recirculation Energy meter

TERMOVENTILER T-FAST i20/i35

DHW Production module

High reduction of water stagnation and legionella risk

T-FAST-i20 and i35 are instantaneous domestic hot water production modules, that uses the working principle of a stainless steel plates exchanger.

The setting of the domestic hot water temperature is made through the regulation of the thermostatic actuator of the primary circuit mixing valve.

The primary circuit pump is controlled by means of a pressure switch electrically connected.

A DHW recirculation pump kit is available.

ADVANTAGES

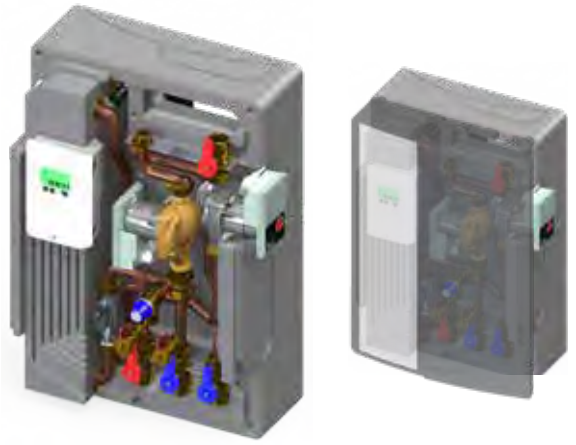
- Domestic hot water is produced on requests, so that big accumulations are not necessary
- DHW nominal supply 20 / 35 l/min
- High performances thanks to the oversized plate heat exchanger
- High reduction of water stagnation and legionella risk
- Possibility to install domestic recirculation
- Installation on wall or directly on a tank
- High efficiency circulating pump
- Quick installation and easy maintenance
- It may be combined with each heat generator
- Complete with thermal insulation

TECHNICAL DATA

Max flow rate of primary flow:	1200 l/h 1700 l/h
Max flow rate of secondary outlet (DHW):	20 l /min, 0,5 bar 35 l/min, 0,5 bar
DHW temperature set:	40–55°C
Min. flow rate DHW production ON/OFF:	2,5 ± 0,3 l/m
Power supply:	230 V AC, 45 W
Max. working pressure:	6 bar
Accessories:	Pump for DHW recirculation

TERMOVENTILER T-FAST ie40 / ie60

DHW Production module



T-FAST ie40 Compact

T-FAST ie60

High reduction of water stagnation and legionella risk

T-FAST-ie40 and ie60 are instantaneous domestic hot water production modules, that uses the working principle of a stainless steel plates exchanger.

The setting of the domestic hot water outlet temperature (secondary side) happens with the modulation of the primary circuit flow rate through a variable flow pump controlled by the MFWC controller (PWM control).

A DHW recirculation pump kit is available.

ADVANTAGES

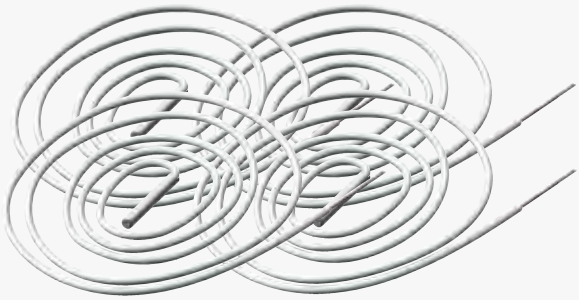
- Domestic hot water is produced on requests, so that big accumulations are not necessary
- DHW nominal supply 40 / 60 l/min
- High performances thanks to the oversized plate heat exchanger
- High reduction of water stagnation and legionella risk
- Possibility to install domestic recirculation
- High efficiency circulating pump
- Quick installation and easy maintenance
- It may be combined with each heat generator
- Complete with thermal insulation

TECHNICAL DATA

Max flow rate of primary flow:	1850 l/h 3600 l/h
Max flow rate of secondary outlet (DHW):	40 l /min, 0,8 bar 110 l/min, 0,8 bar
DHW temperature set:	30–90°C
Min. flow rate DHW production ON/OFF:	2,5 ± 0,3 l/m 5 ± 0,3 l/m
Power supply:	230 V AC, 45 W
Max. working pressure:	6 bar
Accessories:	Pump for DHW recirculation

LADDOMAT® MR

Laddomat MR is a versatile control device with separate connection centre (CC) with a total of 3 relays and 4 sensor inputs. A number of different control programs are available. All settings are made in the separate control panel (CP).



- A Laddomat MR can control in many different ways, partly making it easier to have it in stock, partly easier to learn one and the same control with the settings, connections and the adjustments that are possible.
- Removable terminals in the connection centre make it easier to connect sensors and pumps.
- The display provides an overview of relevant temperatures and settings, as well as what is currently operating.
- Possibility of connection up to 4 sensors to read temperatures in the display.
- Submersible tubes and/or materials for sensor tube assembly are always included according to the specification for best functions.

Technical data

The connection centre has:

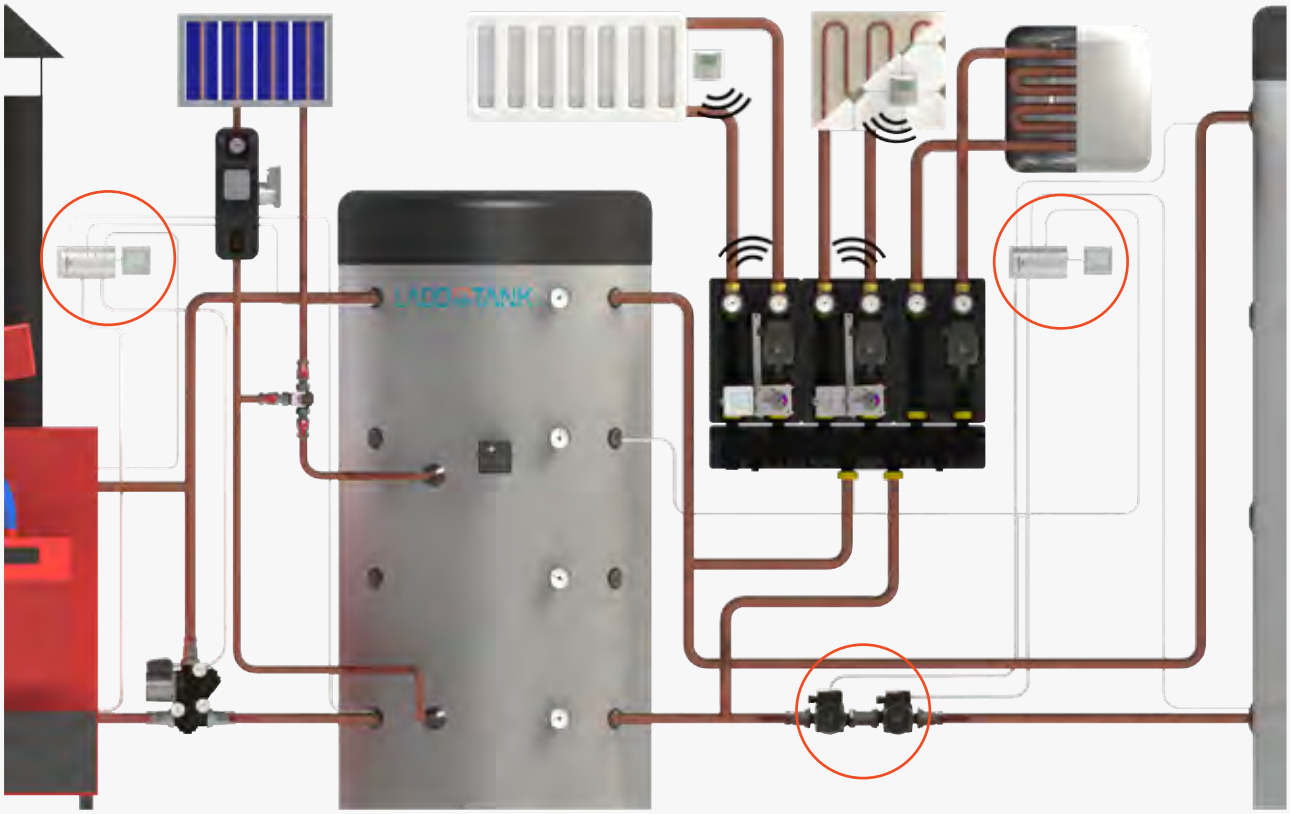
3 relay outputs, one of which is potential-free. 250 V, 5 A.

4 x temperature sensor inputs, NTC 50 kOhm @ 25°C (10 kOhms selectable in the service menu).

Permissible ambient temperature in operation: 0-55°C, 95% RH.

Scope of delivery:

Laddomat MR control panel with 1.5 m communication cable. Connection centre. 4 x sensors with 3 m cable. DIN rail for wall mounting the CC. Screws and plugs for installing the CP and CC are also included.



Control options

Laddomat MR 10 - Burner control, Sys 10, page 31.
Laddomat MR 10 is a complete burner control for batch charging tank(s).

Laddomat MR 30 – Culvert control, Sys 30, page 32-33.
Laddomat MR 30 is used for batch charging between main tank(s) and slave tank(s).

Laddomat MR 30 – Culvert control with return charging, Sys 31, page 32-33.
Laddomat MR 30 is used for batch charging and return charging between the main tank (s) and the slave tank(s).

Laddomat MR 40 – Charging/discharging between the boiler and the tank, Sys 40, page 34-35.
Laddomat MR 40 is a charging unit for boilers with integrated hot water heater and mixing valve.

Laddomat MR 40 – Charging/discharging between the boiler and the tank with burner control, Sys 41, page 34-35.
Laddomat MR 40 is a charging unit for boilers with integrated hot water heater and mixing valve. Burner control is included.

Laddomat MR 50 – Charging/discharging between tanks, Sys 50, page 36-37.
Laddomat MR 50 is used for charging and discharging between the main tank(s) and extra tank(s).

Laddomat MR 50 – Charging/discharging between tanks with extra charging, Sys 51, page 36-37
Laddomat MR 50 is used for charging and discharging between the main tank(s) and extra tank(s).

Other control options:

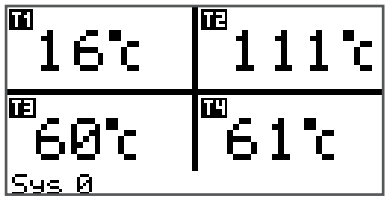
See page 30.

LADDOMAT® MR

In addition to the complete application packages, the following control options are available.

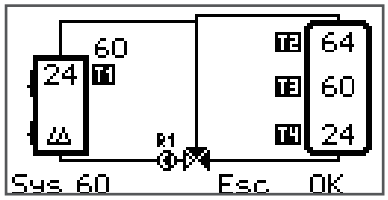
Sys 0

Display of up to four different temperatures.



Sys 60

Start of circulation pump plus display of boiler temperature and three different tank temperatures.



Sys 70

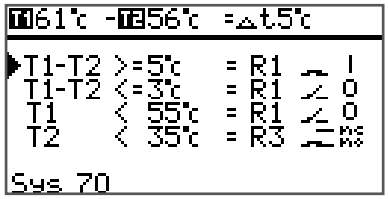
Differential control with two temperature sensors.

Examples of areas of use:

Charging from solar collectors when the solar collector is warmer than the tank.

Charging from one tank to another, when the first tank is warmer than the second.

Additional heating can be started if the temperature T2 is too low.

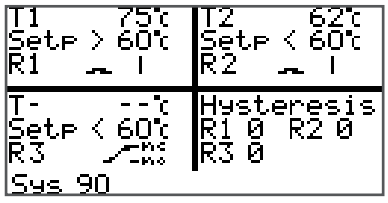


Sys 90

Thermostat function, where one, two or three relays can be controlled from one temperature sensor each.

Example of area of use:

To start circulation pump and additional heating.



Sys 99

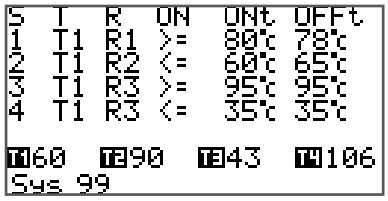
"Free" function, where optional temperature sensor is used for optional relay. Up to eight different settings are possible.

Examples of areas of use:

When the sensor T1 is warmer than 80°C, a charging pump is started.

When the sensor T1 is colder than 60°C, a recharging pump is started.

When the sensor T1 is warmer than 95°C or colder than 35°C, an alarm is sent.



LADDOMAT® MR 10

Burner control with a thermal charging unit for optimum charging of accumulator tanks.

Laddomat 11-30

Laddomat 11-200

Laddomat MR 10 is a burner control for batch charging of a tank or tanks.

Applications:

- **Sys 10 – Burner control.** To control starting/stopping burners (e.g. oil or pellets) for batch charging of the tank(s). This provides long operation times and fewer starts/stops of the burner.

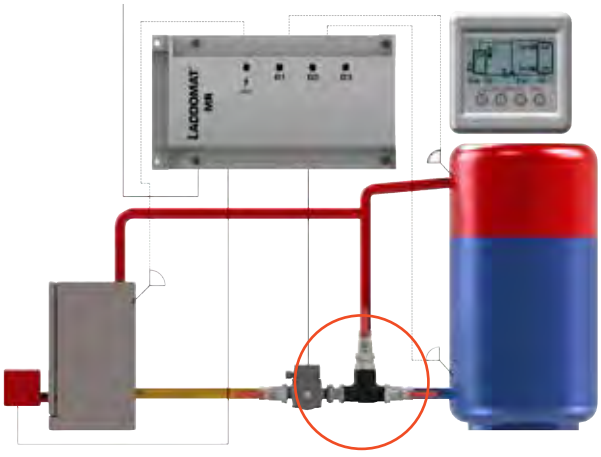
Sensors that are not used for control can be used for temperature reading in a separate menu.

Scope of delivery:

- Laddomat MR, complete.
- Thermal charging unit Laddomat 11-30 or 11-200, with pump and ball valves.
- 2 x 3-bulb submersible tubes for bulbs with D=6 mm. R15, L=150 mm.
- 3 x sensor holders and hose ties for pipe fitting.

Function Sys10

The burner starts when the sensor at the top of the tank becomes cold and stops when the sensor at the bottom of the tank is hot. The charging pump starts when the sensor in the boiler heats up, or directly when the burner starts, so-called "constant" operation.



LADDOMAT® MR 30

Control and charging package for batch charging between tanks, and re-charging the main tank.

Laddomat MR 30 is used for batch charging between the main tank and slave tank.

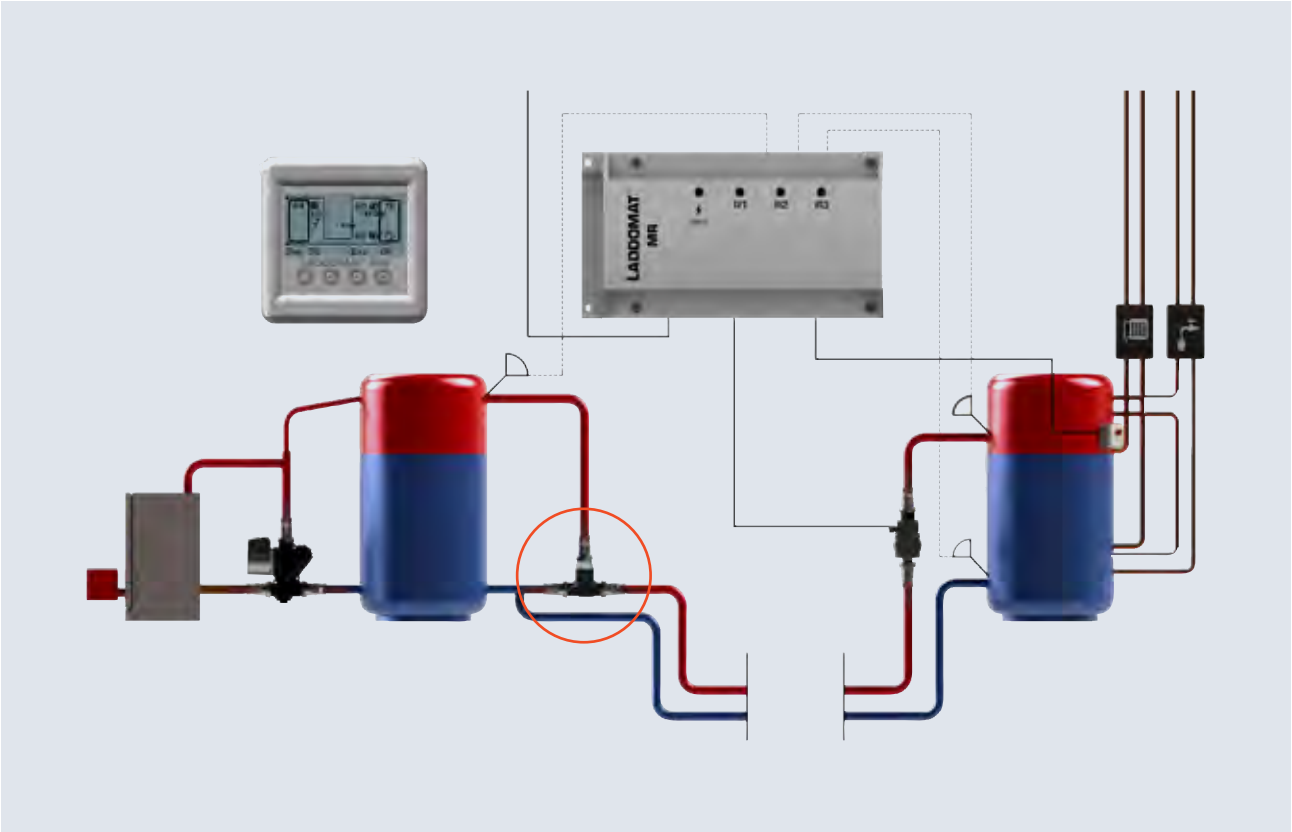
- Reduces culvert losses.
- Increases accumulation capacity.
- Automatic start of additional heating when the main tank is empty.
- Non-return valve and automatic stop of the charging pump guarantees that additional heating does not heat the main tank.
- There is an option to customise to send heat back to the main tank, e.g. if the slave tank has a solar coil.

Applications:

- **Sys 30 - Culvert control.** Batch charging from, e.g. a main tank in a separate boiler room into a slave tank in the living areas. Batch charging significantly reduces heat losses in the culvert.

- **Sys 31 - Culvert control with return charging .** Culvert control can be supplemented for return charge with an extra sensor and pump. This will start the return charging, for example, if a solar coil is fitted in the slave tank and it overheats. The surplus heat is returned to the main tank in the boiler room.

Sensors that are not used for control can be used for temperature reading in a separate menu.



Scope of delivery:

Sys 30
- Laddomat MR, complete.
- Spring-loaded non-return valve BV FB40-T
- Charge pump, 130 mm, with 2 x ball valves.

As above but also with an adaptor for PEX culvert with temperature limiter:
- Laddomat MR, complete.
- Charge pump, as above
- Thermal valve Laddomat 31-200 with built-in non-return valve, 72°C, with 3 x ball valves and EPP-insulation. Thermostat cartridge with 78°C opening temperature is included.

Sys 31
- Laddomat MR, complete.
- Laddomat 5000 double non-return valve, with 2 pumps LM9A-130 and 2 x ball valves.

As above but also with an adaptor for PEX culvert with temperature limiter:
- Thermal valve Laddomat 31-200, as above but adapted for return flow.

For sensor installation, the following are always included:
4 x 3-bulb submersible tubes for bulbs with D=6 mm. R15, L=150 mm, and 2 x sensor holders and hose ties for pipe fitting.

Function Sys 30

Charging
Laddomat MR starts the charging pump when the sensor in the top of the main tank is hot, at the same time as the sensor in the slave tank's top calls for heat. In order to optimise the charging you can set a delay time before the charging can be started. In that way, you get a greater volume of hot water that can be charged into the slave tank in the start sequence. Charging continues until the sensor in the bottom of the slave tank is hot. The pump restarts when the sensor in the top of the slave tank gets cold. After completed firing in the boiler the main tank will be drained gradually.

Additional heating
When the temperature at the sensor in the top of the main tank is below the set value, the charging pump is stopped and, if necessary, additional heat in the slave tank starts.

Function Sys 31

Return charging
If a fourth sensor is used, it is possible to start the return charging pump to send heat back to the main tank, e.g. if there is a solar coil in the slave tank. The surplus is sent to the main tank and the solar heating can give the maximum heating all of the time to the slave tank. If the slave tank cools again, the heat is sent back from the main tank.

LADDOMAT® MR 40

Control and charging unit for charging/discharging for boilers with integrated hot water heaters and mixing valves, connected to an accumulator tank.

Laddomat MR 40 is a charging unit for boilers with integrated hot water heater and mixing valve. The thermal 3-way valve has 2 non-return valves to ensure that the flow can go in two directions.

Applications:

- **Sys 40 – Charging/discharging between boiler/tank.** Charging from the boiler with an integrated water heater and mixing valve to accumulator tank/tanks. Discharging from the tank starts when the boiler temperature drops. When the tank is cold, additional heating may be started.

- **Sys 41 – Charging/discharging between boiler/tank with burner control.** To increase water volume for e.g. pellet boilers with built-in hot water heater and mixing valve.

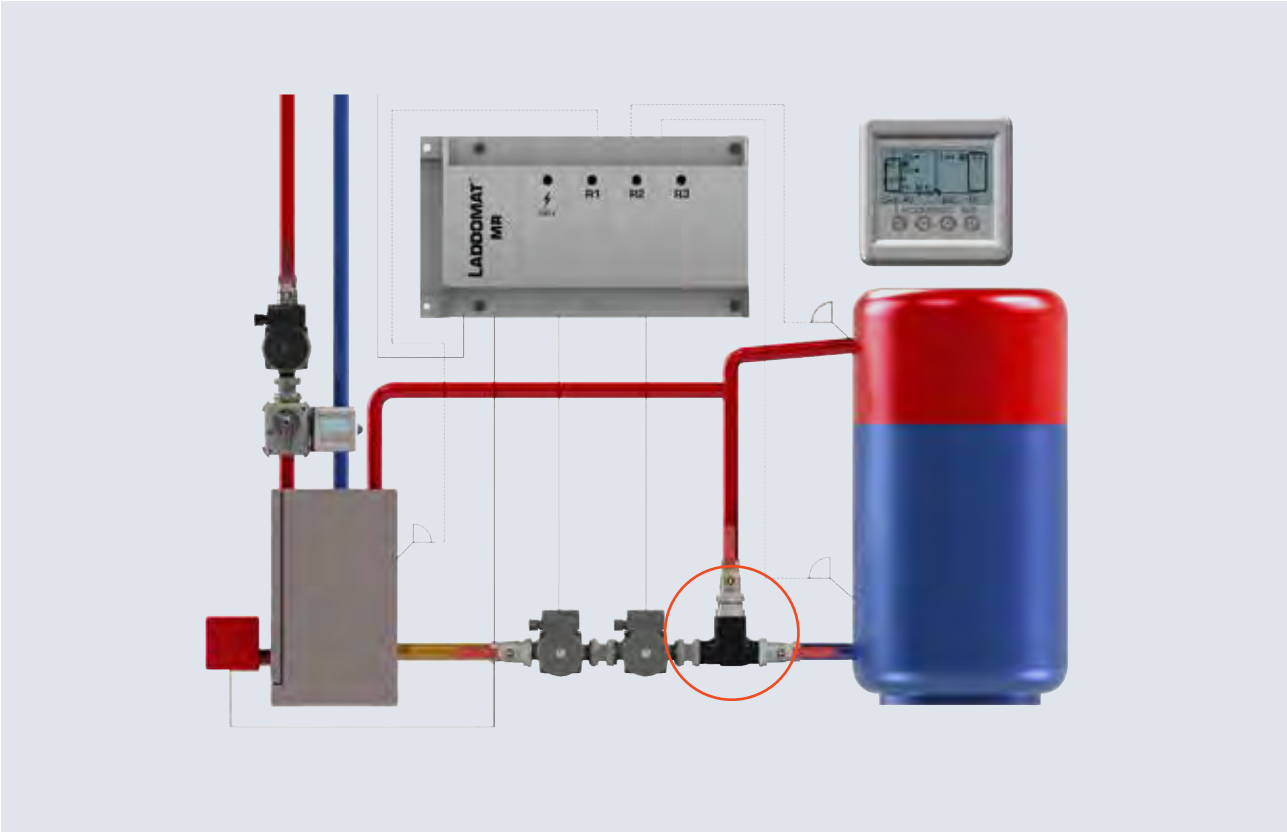
Sensors that are not used for control can be used for temperature reading in a separate menu.

Scope of delivery:

Sys 40 / Sys 41
Valve package Laddomat MR 40 with:

- Laddomat MR, complete.
- Charging and discharging valve Laddomat 41-200, with 2 x built-in non-return valves.
- 2 x pumps, Laddomat LM9A-130.
- 3 x ball valves, Cu28 or R32.
- Submersible tube for boiler sensor. Connection R10, L = 50-480 mm.
- 3 x 3-bulb submersible tubes for bulbs with D=6 mm. R15, L=150 mm.
- 2 x sensor holders and hose ties for pipe fitting
- EPP insulation for the thermal valves supplied as standard.

For boiler output max. 45 kW.



Function Sys 40

Charging
When firing up, the boiler quickly reaches its working temperature. The charging pump starts when the boiler sensor is hot. Hot water from the boiler top is mixed with cold water from the bottom of the tank to approximately 60°C in the Laddomat 41-200 valve, and into the bottom of the boiler to be re-heated. No risk of condensation which can cause corrosion due to low bottom temperature. The tank top is supplied with hot water at a low flow, providing efficient separation of the heat in the tank.

Discharging
When firing stops, the boiler cools and the charging pump is stopped when the boiler sensor is cold. When the boiler has cooled so that the boiler sensor is less than the set temperature, the discharging pump starts, and the now cold water at the bottom of the boiler is pumped over to the bottom of the tank. At the same time, hot water is sent to the top of the boiler. This takes place at a low flow thanks to that the Laddomat 41-200 valve is equipped with a strong choke. Efficient separation of the heat is thereby achieved both in the tank and the boiler. Discharging can only be started if the tank is warmer than the boiler.

Additional heating
Discharging can be interrupted at the desired temperature at the tank top sensor and the additional heating, if any, may then be started in addition.

Function Sys 41 – Burner control + charging/discharging

The burner is started by the tank top sensor. It continues until the sensor in the bottom of the tank exceeds the set temperature. When the burner stops, the tank empties little by little. When it is completely empty and the temperature at the sensor at the top of the tank is less than the set temperature, the burner re-starts. The charging pump can either start when the burner starts, or when the boiler exceeds the set temperature.

LADDOMAT® MR 50

Control and charging unit for charging/discharging between the main tank(s) and extra tank(s).

Laddomat MR 50 is used for charging and discharging between the main tank and extra tanks. The double non-return valve that is included means that the flow can go in both directions.

- The extra tanks can be positioned a long way from the main tank.
- No involuntary circulation between the tanks.
- Piping can be made with the smaller dimensions = easier and cheaper installation.
- Efficient separation = large accumulation capacity
- Optimisation of solar heating, if fitted.

Scope of delivery:

Sys 50 / Sys 51
Valve package Laddomat MR 50 with:

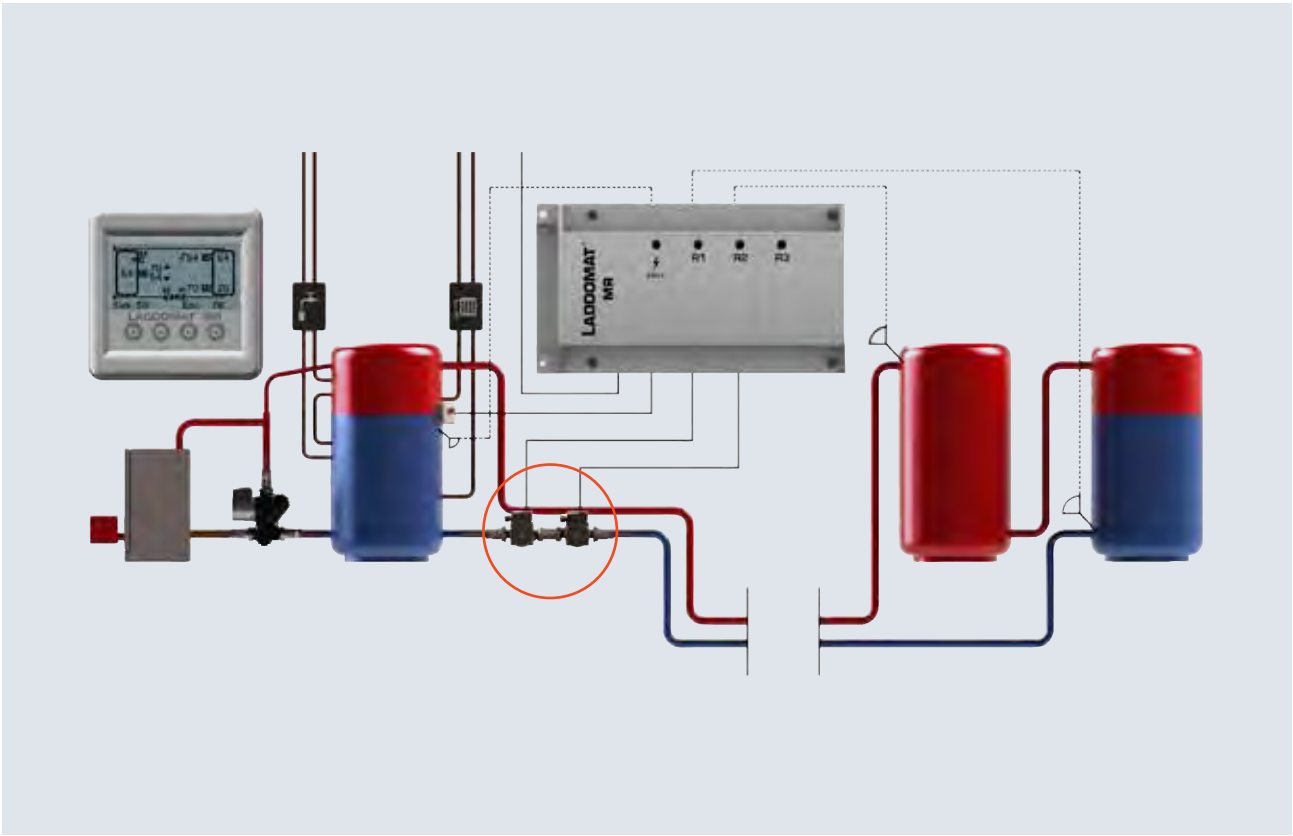
- Laddomat MR, complete.
- Patented dual action non-return valve.
- 2 pumps, Laddomat LM9A-130.
- 2 ball valves, Cu28 or R32.
- 3 x 3-bulb submersible tubes for bulbs with D=6 mm. R15, L=150 mm
- 2 x sensor holders and hose ties for pipe fitting

Applications:

- **Sys 50 - Charging/discharging between tank/tank. Charging from the main tank to the extra slave tank/tanks.** Charging can be stopped when the slave tank is fully charged. Discharging from the slave tank occurs when the main tank drops below the set temperature. Used to easily expand the accumulator volume with one or more tanks, even if they are not directly located next to the main tank due to lack of space.

- **Sys 51 - Charging/discharging between tank/tank with extra charging.** With e.g. a solar coil in the main tank, this system can be used to optimise the efficiency of solar panels. The tanks are filled in two stages, which also maximises the charging volume. It is also possible to use this to prevent the system from overheating, for example when burning wood.

Sensors that are not used for control can be used for temperature reading in a separate menu.



Function Sys 50

Charging
When the boiler heats the main tank so that the temperature is higher than the set temperature, the charging pump starts to pump hot water into the slave tank. The sensor in the bottom of the slave tank stops the process when the slave tank is fully charged.

Discharging
When the main tank is cold, the discharging pump starts and pumps over hot water from the top of the slave tank to the main tank. This takes place at a low flow thanks to that the Laddomat 5000 valve is equipped with a strong choke. Efficient separation of the heat is thereby achieved in both tanks. Discharging can only be started if the slave tank is warmer than the main tank.

Additional heating
Discharging can be interrupted at the desired temperature at the tank top sensor and, the additional heating, if any, may then be started in addition.

Function Sys 51

Extra charging
A fourth sensor can be put in the main tank to force the charging pump, in this way optimise use of any solar heating. By heating in two steps the solar coil can heat the primary tank first and then heat up the entire system. It is first then that the entire volume's temperature is increased. It is also possible to use this function to prevent the system from overheating, for example when burning wood.

Laddomat 5000 – patented double non-return valve, DBV

A double non-return valve is fitted in order to prevent involuntary circulation between the tanks. This has an integrated choke of the flow during discharging that provides optimum separation. As the non-return valve is spring-loaded in both directions it is completely mode-independent.

Why Thermomatic® ?

Automatic mixing control for water-borne heating systems creates optimum conditions and environmentally adapted heating for your house.

Prolong the system's lifetime

Thermomatic allows you to transport the temperature that is needed by your heating system to achieve the desired indoor temperature. It allows you to save stored heat in your heat source for as long as possible and to reduce the number of heating phases, which prolongs the service life of your system.

Improved economy

The basic Thermomatic EC Home package, and the simplest setting gives you control that only works by room temperature. According to tests of Thermomatic this is the most economic control, offering you savings of up to 24%. If you expand your control with an outdoor sensor, the savings can be even higher.

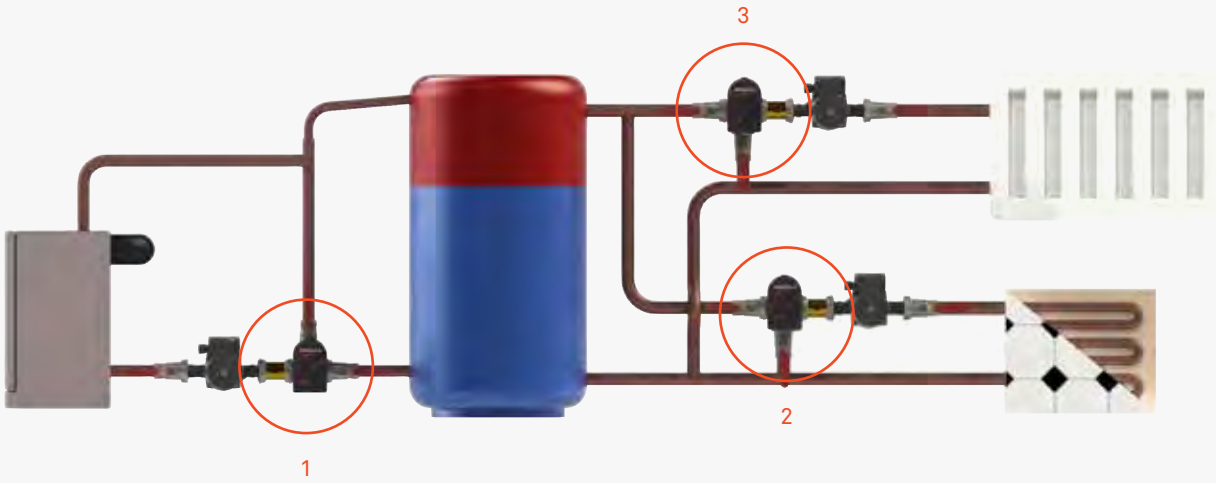
Greater comfort

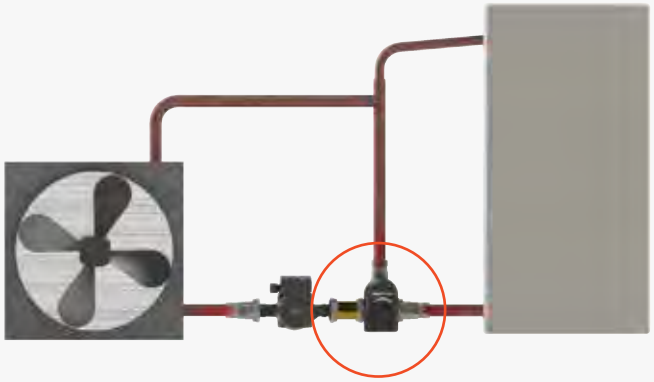
Thermomatic gives you evener and better controlled indoor temperatures and knows all about the various heat sources that you have in a normal residence; whether you will be having guests, lighting your fire, whether weather conditions are changing rapidly, etc. It allows you lean back and enjoy your desired indoor temperature. You do not need to regulate manually with your mixing valve. Thermomatic does the job for you!

Environmental benefits

With automatically regulated indoor temperature, you use the energy stored in your heating system longer. This creates the optimum conditions for environmentally adapted heating for your house.

Connection example:





1. **Thermomatic CC/TVM** installed for control of the return temperature to the boiler.
2. **Thermomatic** installed for maintenance of constant supply temperature to underfloor heating circuits.
3. **Thermomatic** installed for control of the radiator circuit.
4. **Thermomatic CC** installed for maintenance of constant supply temperature to cooling convectors.

THERMOMATIC® EC Home

Easy-to-use mixing valve automation, with ten different control options – for one or two heating circuits.

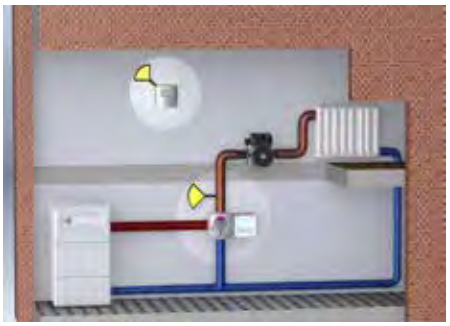
Actuator and connection centre with control panel/room sensor

Control two heating circuits from one control panel

The equipment makes it possible to:

- Change regulation or upgrade to wireless without changing equipment.
- Use day and night temperatures.
- Receive an alarm if temperature is too high or too low and in case of sensor error.
- Use external control, e.g. a GSM module, to control temperature.
- Control the circulation pump and additional heating through a relay box.
- Limit access and viewing data for unauthorised persons.
- Read history of indoor, outdoor and supply temperatures.

Control with room sensor or supply pipe sensor alone



Control with room sensor

This gives the most efficient and easiest control function in a single family dwelling or premises with uniform heating needs.
Easy installation/operation and optimum heating economy.

Art.No. 12 15 01
Thermomatic EC Home, complete with room sensor.

Art.No. 12 15 02
Thermomatic EC Home WL, as above, with wireless room sensor.

Control with supply pipe sensor

EC Home will keep a constant supply pipe temperature, adjustable 0-90°C.

Art. No. 12 15 01

Art. No. 12 15 02

Control with outdoor sensor

Control with room and outdoor sensor

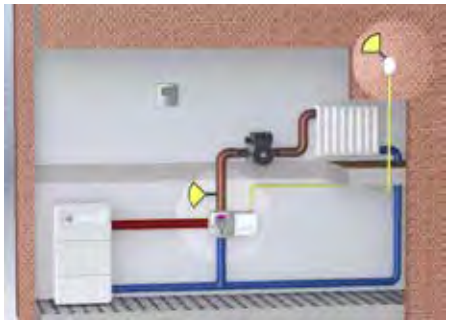
Easy to choose which control option to use.

• ROr means that the room sensor decides the temperature at first. Higher heating comfort is achieved with outdoor sensor controlled max. and min. temp. limits. Used mainly in a family house or premises with uniform heating needs.

• ROo means that the outdoor sensor controls the heating according to set control curve. The room sensor is used to prevent unnecessary high room temperature. Used mainly for regulation in multi-occupancy buildings.

Art.No. 12 15 07
Thermomatic EC Home RO, complete, with room and outdoor sensor.

Art.No. 12 15 04
Thermomatic EC Home WLO, as above, incl. wireless room sensor.



Control with outdoor sensor

For control in multi-occupancy buildings. The outdoor sensor controls the heating according to the set control curve.

Art.No. 12 15 03
Thermomatic EC Home O, complete with outdoor sensor.

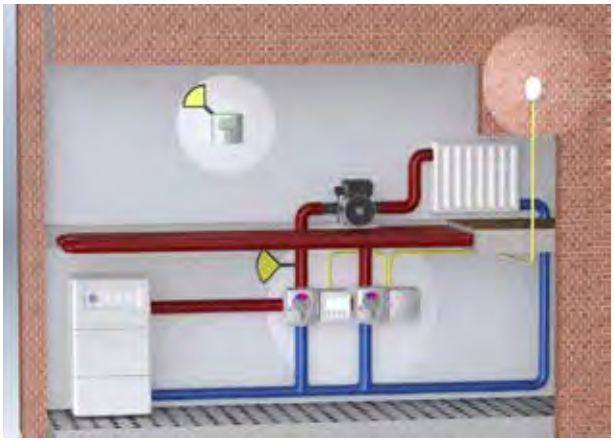
Art.No. 12 15 04
Thermomatic EC Home WLO, as above, incl. wireless room sensor.

Art. No. 12 15 07

Art. No. 12 15 04

Art. No. 12 15 03

Control of two circuits



Control of two heating circuits

Art.No. 12 15 05
Thermomatic EC Home 2K, expansion package for two circuits, without control panel, incl. actuator.
Incl. cable for connection to standard package.

Art.No. 12 15 06
Thermomatic EC Home WL 2K, wireless expansion package for two circuits, without control panel, incl. actuator, with wireless room sensor.
Incl. cable for connection to standard package.

Accessories

Art. No. 12 70 01
Outdoor sensor, incl. 25 m 2-wire cable.

Art. No. 12 70 02
Passive room sensor, incl. 25 m 2-wire cable.

Art. No. 12 70 03
Relay box for control of circulation pump and add. heating.

Art. No. 12 70 01
Art. No. 12 70 02

Art. No. 12 70 03

Art. No. 12 15 05

Art. No. 12 15 06

THERMOMATIC® CC 2.0

Constant regulator for rotating mixing valves.

Thermomatic CC is a constant regulator for controlling a rotating mixing valve with a 90 degree turning angle.

- Thermomatic CC can be used for both cooling and heating applications, such as constant regulation of the supply temperature for an underfloor heating system or for keeping a constant return temperature to a solid fuel boiler.
- The set point is adjustable between 0°C-99°C.
- Settings are easily made using the knob on the regulator, which are resistant to mechanical contact, as well as to dust and moisture.

Technical data

Operating time:	73 s
Torque:	15 Nm
Turning angle:	90°
Control type:	PID
Voltage:	24 VAC
Power consumption:	7,5 VA (6 VA standby)
IP code:	IP 44
Safety class:	II

Example showing Thermomatic CC installed for control of the return temperature to the boiler, Laddomatic.

THERMOMATIC® TVM 2.0

Actuator for rotating mixing valves.

Thermomatic TVM is an actuator for controlling a rotating mixing valve with a 90 degree turning angle. Its modern design provides quiet and reliable operation.

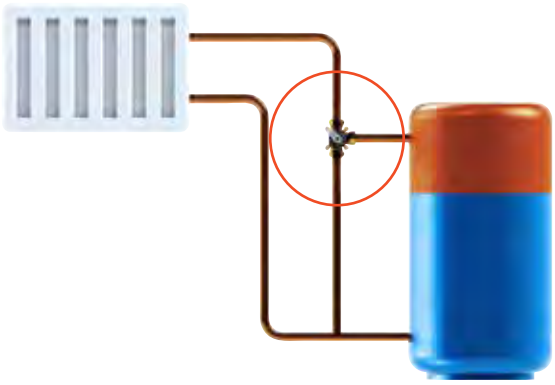
- Thermomatic TVM has a clear indicator that shows the valve position as well as turning direction.
- The actuator can be easily moved by hand and has an integrated blocking protection.
- Thermomatic TVM is easy to install and completely maintenance-free.

Technical data

Operating time:	73 / 147 s
Torque:	15 Nm
Turning angle:	90°
Control type:	3-point
Voltage:	230V
Power consumption:	6 VA (0 VA standby)
IP code:	IP 44
Safety class:	II

Example showing Thermomatic TVM installed for control of the return temperature to the boiler, Laddomatic.

Mixing valves TV 3S & TV 3XL



TV 3S and TV 3XL are 3-way brass mixing valves for control of heating or cooling applications.

The valves are fitted with a wheel for manual mixing but can easily – and with advantage – be motorised, e.g. with our Thermomatic controls. All of the connection examples can be reversed. The scale is graded on both sides, and can also be reversed. All important parts can easily be replaced.

Technical data

Turning angle:	90°
Pressure class:	PN 10
Media temperature:	max. (continual) +110°C max. (temporary) +130°C min. 0°C
Torque (at nominal pressure):	Kvs < 11, < 3 Nm Kvs > 11, < 5 Nm
Operating pressure:	1 MPa (10 bar)
Connections:	Rp (internal thread), EN 10226-1 G (external thread), ISO 228/1 Cu (compression fit), EN 1254-2

Our mixing valves can be supplied with the following connections and Kvs values.

Connections:

R15 / ½" Rp and G

R20 / ¾" Rp and G

R25 / 1" Rp and G

Cu22

Cu28

Pump flange R40 / 1 ½" Rp can be pre-fitted on special order. It is also possible to combine different connection dimensions.

Kvs values:

2,5 / 4 / 6 / 8 / 10

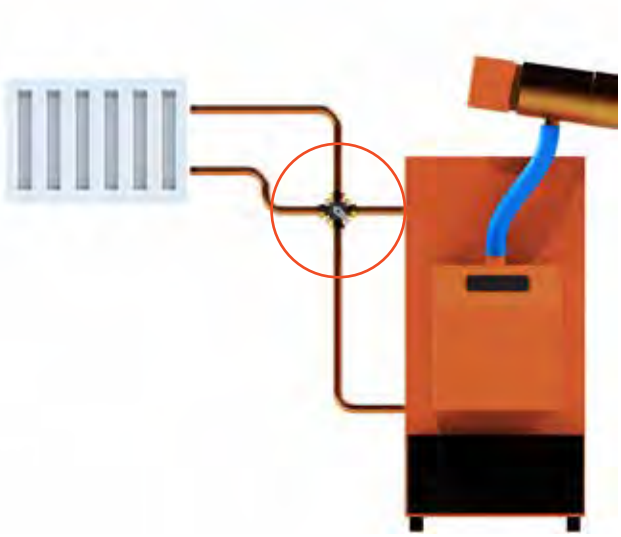
TV 3XL has extra large flow and connections for large installations:

R32 / 1 ¼" Rp, Kvs 16

R40 / 1 ½" Rp, Kvs 25

R50 / 2" Rp, Kvs 40

Mixing valves valves TV 4S



TV 4S are 4-way brass mixing valves intended for control of heating applications.

TV 4S are used to preheat the return flow to the heat source in order to reduce the risk of condensation. The valves are fitted with a wheel for manual mixing but can easily – and with advantage – be motorised, e.g. with our Thermomatic controls. All of the connection examples can be reversed. The scale is graded on both sides, and can also be reversed. All important parts can easily be replaced.

Technical data

Turning angle:	90°
Pressure class:	PN 10
Media temperature:	max. (continual) +110°C max. (temporary) +130°C min. 0°C
Torque (at nominal pressure):	< 3 Nm
Operating pressure:	1 MPa (10 bar)
Connections:	Rp (internal thread), EN 10226-1 G (external thread), ISO 228/1 Cu (compression fit), EN 1254-2

Our mixing valves can be supplied with the following connections and Kvs values

Connections:

R15 / ½" Rp and G

R20 / ¾" Rp and G

R25 / 1" Rp and G

Cu22

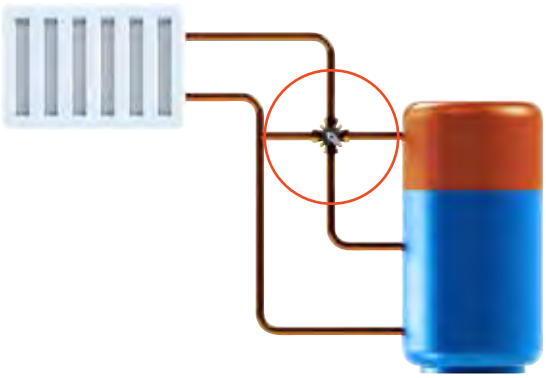
Cu28

Pump flange R40 / 1 ½" Rp can be pre-fitted on special order. It is also possible to combine different connection dimensions.

Kvs values:

2,5 / 4 / 6 / 8 / 10

Mixing valves TV 4BIV



TV 4BIV are brass bivalent mixing valves for control of heating or cooling applications.

TV 4BIV are used to take heat from two different levels in an accumulator tank, or from two different heat sources. The valves are fitted with a wheel for manual mixing but can easily – and with advantage – be motorised, e.g. with our Thermomatic controls. All of the connection examples can be reversed. The scale is graded on both sides, and can also be reversed. All important parts can easily be replaced.

Technical data

Turning angle:	90°
Pressure class:	PN 10
Media temperature:	max. (continual) +110°C max. (temporary) +130°C min. 0°C
Torque (at nominal pressure):	< 3 Nm
Operating pressure:	1 MPa (10 bar)
Connections:	Rp (internal thread), EN 10226-1 G (external thread), ISO 228/1 Cu (compression fit), EN 1254-2

Our mixing valves can be supplied with the following connections and Kvs values.

Connections:

R15 / ½" Rp and G

R20 / ¾" Rp and G

R25 / 1" Rp and G

Cu22

Cu28

Pump flange R40 / 1 ½" Rp can be pre-fitted on special order. It is also possible to combine different connection dimensions.

Kvs values:

4 / 6

Accessories

Thermostat cartridges

Available in various temperatures for different installations and products. Very precise and with short hysteresis. Suitable for most available products on the market that include thermostat cartridges.

Temperatures:
45°, 53°, 57°, 63°, 66°, 72°, 78°, 83, 87°C

Non-return valves for connection to pumps

SC40-S, for self-circulation, suction side

SC40-T, for self-circulation, pressure side

FB40-S, prevents self-circulation, suction side

FB40-T, prevents self-circulation, pressure side

DBV, double non-return valve, spring-loaded in two directions, with integrated choke

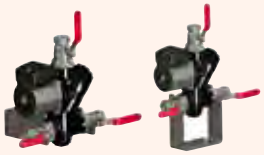
QvickFlow

1 litre bottle
QuickFlow is a medium that eliminates air and circulation problems in heating and cooling systems.

Consoles

Console for Laddomat 21-60/11-100/11-200

Console for Laddomat 21/21-100



The Laddomat console can be used as a wall bracket or placed directly on the floor. In both cases, it is easy to service the Laddomat without disconnecting it from the system.

Dirt filter

Dirt filter for Laddomat 21-60/11-100

Dirt filter for Laddomat 21/21-100

Fitted after the ball valve on the tank return. Keeps the system clear of small particles, is made from stainless materials for a long lifetime and you save on having to install an extra filter in the system.

Adapter

Adapter/bushing R32-R40, 3 pcs

Adapter/bushing R32-R50, 3 pcs

Designed to fit our ball valves. Makes work of fitting the Laddomat to a larger pipe dimension much simpler. Delivered in a set of 3, including the necessary seals.

Cirkulation pumps

ErP approved pumps for heating systems
130 or 180 mm installation length.

Perfecta Core 25U-4
Max flow 2500 l/h, up to 60 kW (Δ20°C)

Perfecta Core 25U-6
Max flow 3000 l/h, up to 70 kW (Δ20°C)

Perfecta Core 25U-8
Max flow 4000 l/h, up to 90 kW (Δ20°C)

Contact us for more alternatives.

Thermometers

Thermometer panel incl. 3 remote thermometers
Intended for easy and comfortable readout of 3 different temperatures, e.g. in an accumulator tank.

Thermometer panel
Sturdy panel in coated steel.

Remote thermometer, 0-120°C
Easy to install, submersible tube and clamps included, long (3 m) capillary tube for flexible installation.

Flue gas thermometer, 50-500°C

ThermoQvick 0–120°C
For surface mounting on metal pipes, dimension 20-90 mm.

Union valves

R40-R25

R50-R32

Ball valves

R50-R32

R40-R32

R40-Cu28

R40-Cu22

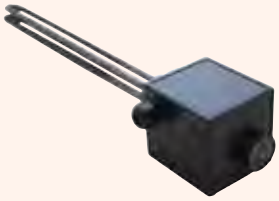
R25-Cu22

R25-R25

Our ball valves have a sealing box around the spindle. If the valve starts to leak, it is a simple matter to tighten the nut, which compresses the sealing box further and the leak disappears. You can even remove the nut and "re-seal", without draining the system.
All seals are made from teflon. This means that you do not need to replace the valve, even after many years of operation.
Operation of your installation will be very dependable.

Laddotank

Immersion heater 6 kW, R40, alt. 9 kW, R40 or R50.



Thermometer 0–120°C, incl. submersible tube

Mixing valve DHW 35–65°C

Safety valve DHW 3, 6 or 9 bar.
For domestic hot water.

Valve combination DHW
Combination of shut-off check valve and mixing valve for mixing tap warm water.

Thermostats

A simple and reasonably-priced range of thermostats that meet stringent specifications. The thermostats can be used to stop and start pumps, burners, electrical heating cartridges, etc. They have an alternating contact, which means that they can start or stop during temperature increases or decreases.

Flue thermostat 300
1.5 m, with installation kit, 50-300°C

Flue thermostat 500
1 m, with installation kit, 50-500°C

Capillary thermostat
2.5 m, incl. submersible tube, 30-90°C

Immersed thermostat
With submersible tube R15, 30-90°C

Double thermostat
With submersible tube R15, 30-90/95°C

Contact thermostat
With special clamp, 30-90°C

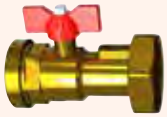
4H-series

Ball valve with built-in non-return valve for DN25
Prevents self-circulation

Connection kit for DN25 and DN32
2 pcs R25-R25 ball valves
2 pcs R50-R32 ball valves

Connection kit for Manifold for DN25
2 pcs R25-R25 ball valves + 2 pcs R25-R40 double nipples

Ball valve for Pumpunit DN25
Ball valve R40-R40



Support legs for DN40

Reduction DN40-DN32
For connection of units DN32, 125 cc, to manifold DN40, 160 cc

Our journey has just begun

Assar Thomasson started a plumbing company in Marbäck in 1951. Like most plumbers, he considered different ways of improving and developing the products within the industry. The result was the company BT-ventiler, which manufactured the so-called vacuum clip valve that prevented drips from the injectors in oil burners. Another product was Termoshunt, which used bimetal regulation of the supply temperature, and was controlled by a liquid-filled bulb placed outdoors.
In 1981 Termoventiler AB was established with the aim of developing and selling valves and automatic controls for accumulating heating systems under the trademarks Laddomat® and Thermomatic.

After running the company successfully, Assar Thomasson retired and handed over to his son Anders who further developed the company and the products. In 1998 the operations moved to purpose-built premises in Marbäck in the beautiful Ulricehamn Municipality, where all the company's products are manufactured.

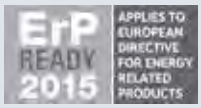
In 2006, Anders Thomasson sold the company to the Pomona Group – a strong and long-term industrial owner that is owned by the Rapp family.

From 2017, Termoventiler is a part of a new company family, Debe Flow Group, with the same strong owners as us, namely the Pomona Group. In December 2021 Termoventiler is merged into Debe Flow Group AB. This is a natural step for Termoventiler, as the company over the last years has developed from being a component supplier to also act as a system supplier in waterborne heating systems. This segment is closely related to the area which Debe Flow Group is working in today. Debe Flow Group is a swedish company that manufactures pumps and services for geo-energy and water wells.

Termoventiler is very well equipped to meet the future, both in terms of financial position and product development. Together with Debe Flow Group we can now make Termoventiler reach new and higher levels.

Termoventiler is represented in the following countries:

Australia, Belgium, Bulgaria, Chile, Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Canada, Croatia, Latvia, Liechtenstein, Lithuania, Moldova, the Netherlands, New Zealand, Norway, Austria, Poland, Portugal, Romania, Russia, Switzerland, Serbia, Slovakia, Slovenia, Spain, Sweden, the Czech Republic, Turkey, Germany, Ukraine, Hungary, USA and Belarus.



All high efficiency pumps applies to European directive for energy related products. ErP 2009/125/ECFor deliveries inside EU, only high effeciency pumps are used.

EAC

EC – Declaration of conformity:Laddomat® products, as delivered, are CE-certified according to relevant provisions.

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