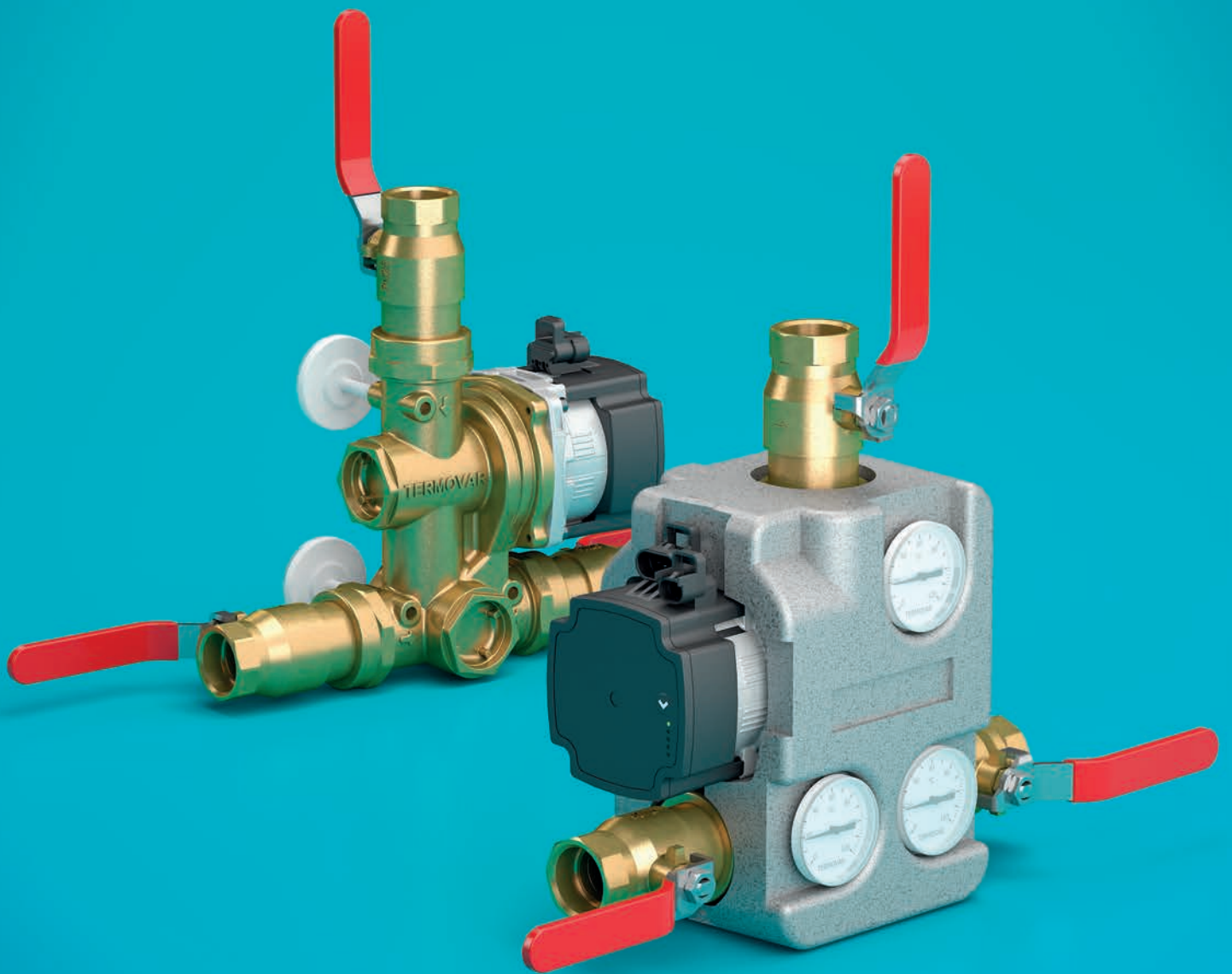


VEXVE

New TERMOVAR Loading Unit

The link between bio-energy boiler and storage tank system



New TERMOVAR Loading Unit

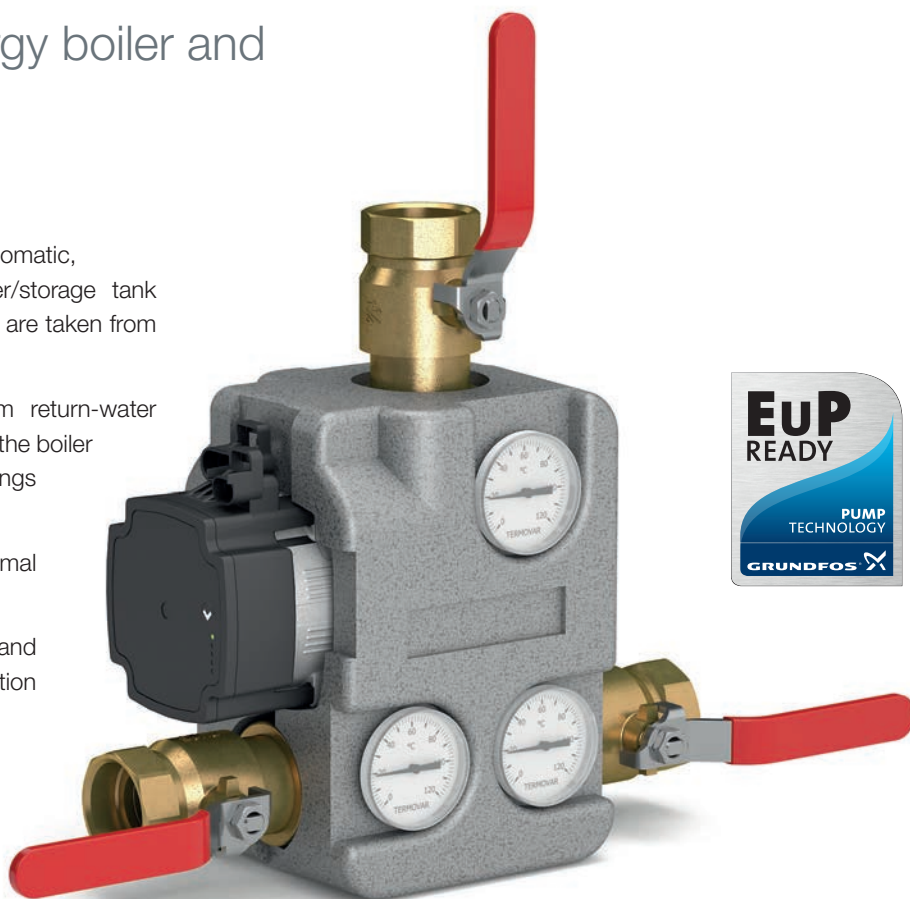
The link between bio-energy boiler and storage tank system

TERMOVAR LOADING UNIT is a pre-fabricated, automatic, thermally operated valve unit for solid-fuel boiler/storage tank installations, where heating and domestic hot water are taken from the storage tank.

TERMOVAR LOADING UNIT ensures a minimum return-water temperature to the solid-fuel boiler, which increases the boiler efficiency, prevents tarring and considerably prolongs boiler lifetime.

TERMOVAR eliminates the risk of destructive thermal shock caused by surges of cold return water.

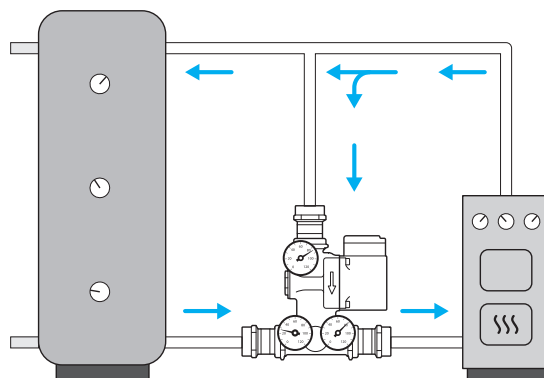
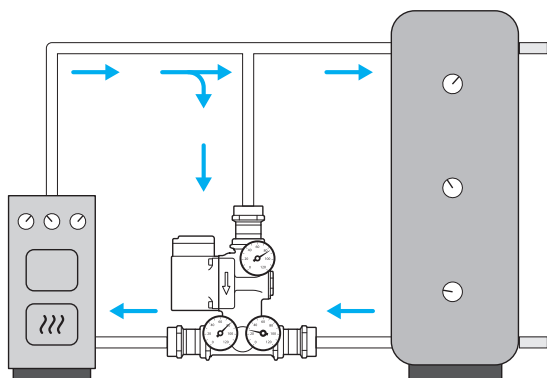
TERMOVAR promotes more effective combustion and is therefore a necessary part of a solid fuel installation with a storage tank.

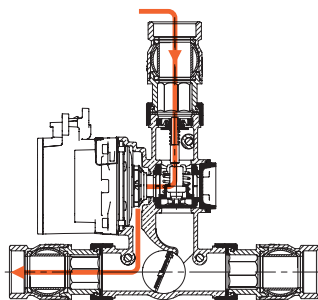
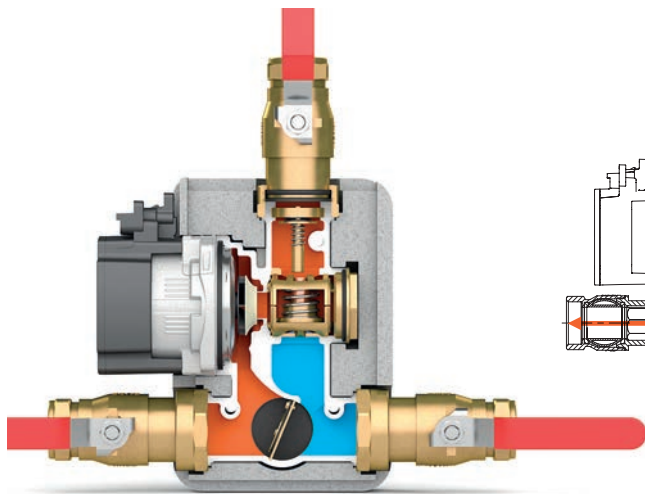


TERMOVAR LOADING UNIT has several advantages:

The pre-fabricated unit saves time and provides a quick and trouble-free installation.

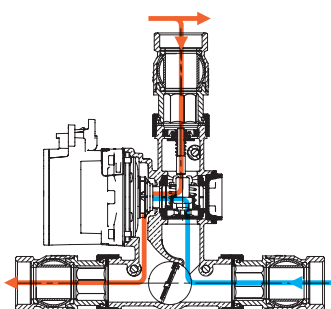
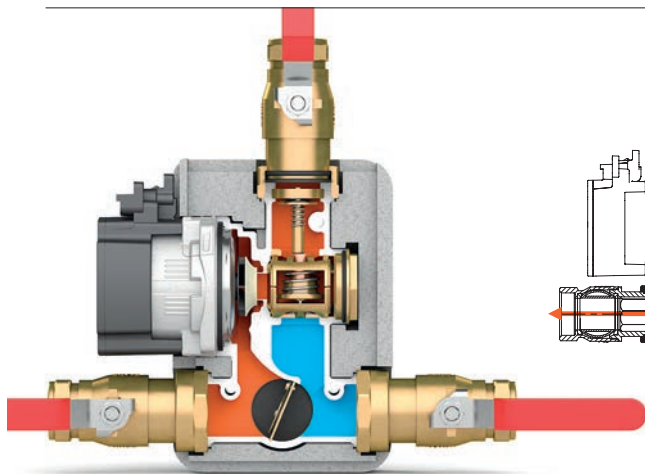
The only thing you have to do when choosing a right or left installation is to move the thermometers to the opposite side.





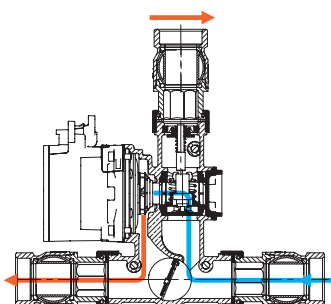
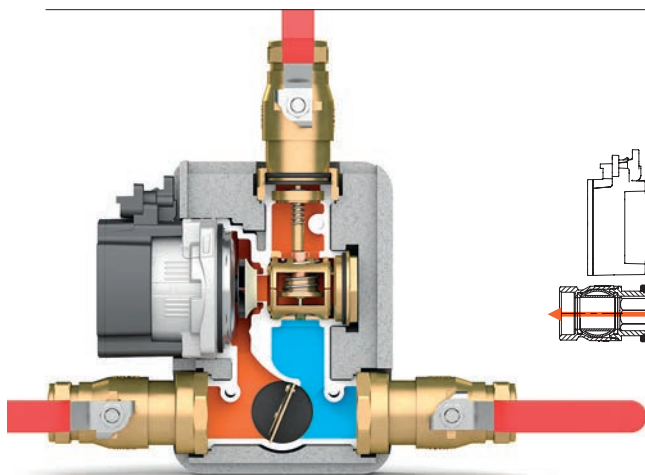
The unit starts with a “warm up” process before loading starts

The thermostat is closed until the thermostat's operating temperature is reached.



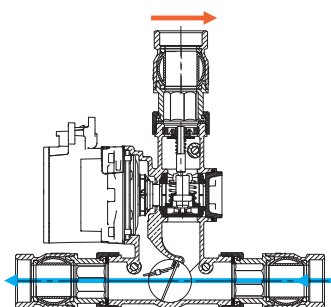
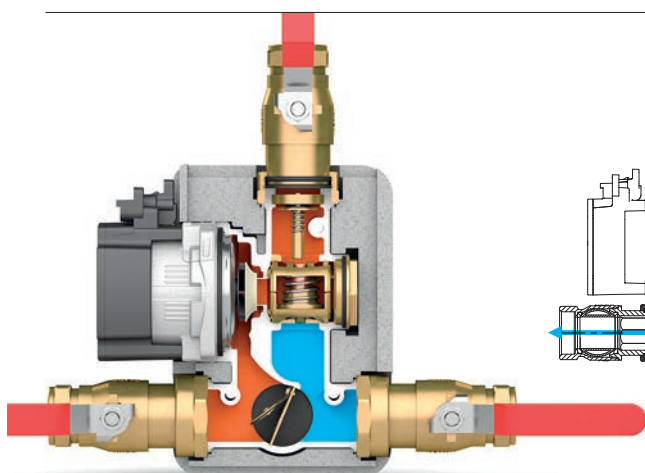
The unit provides a constant loading temperature to the storage tank

The thermostat is placed in the position where hot water from the boiler is affecting the thermostat element which means that the thermostat's open position is regulated by the boiler power. The most common thermostat temperature is 72 °C. At 25 kW the working temperature is 78 °C and return temperature to boiler 68 °C. At 50 kW the working temperature is 80 °C and return temperature to boiler 60 °C.



A smart balancing and closing valve provides maximum loading power to storage system

The thermostat is placed in the position where it first opens to 50% without affecting the balancing and closing valves. When storage tank system begins to be loaded the temperature increases and the thermostat opens more to finally the maximum position. Between 50% to 100% opening, the thermostat also controls and finally closes the balancing and closing valve. In the closed position the pump power is used 100% to load the storage tank system.



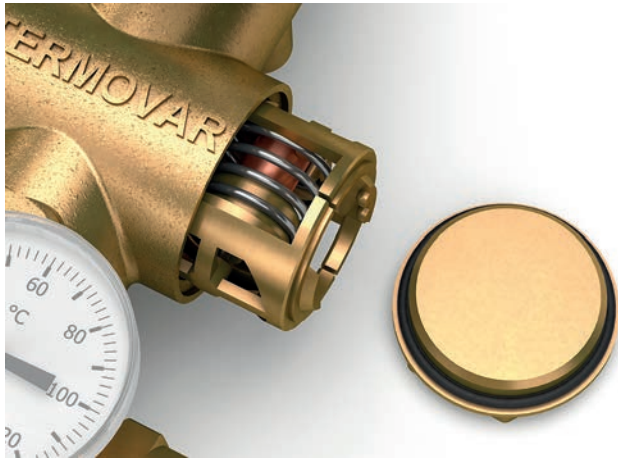
Automatic self-circulation when the pump is not active

The return flow preventer is made of reliable Viton rubber material and opens easily for self-circulation and has three important functions:

- In case of power failure or pump break down, hot water can self-circulate to storage tank.
- The boiler residual heat will be used after boiler has stopped burning and pump stopped.
- When the storage tank is heated by another heat source it can't self-circulate back to boiler.

Very service friendly and all parts are easy to maintain without draining the system

The thermostat and return flow preventer are easy to maintain from both sides in all installations.

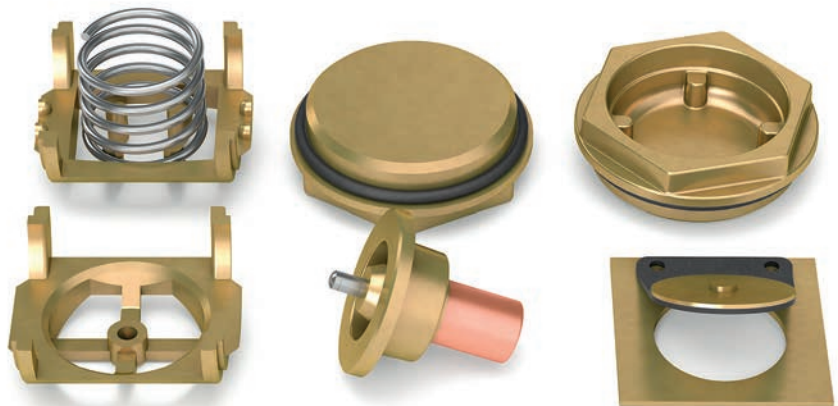


Brass housing with high quality design



High quality internal parts

The loading unit has high quality parts made mainly of brass. EPDM material is used for sealing of brass plugs. The return flow preventer is made with a Viton rubber seal.



Union ball valves in new design

The loading unit has union ball valves of totally new design with very high flow rate and special construction to prevent leaking. Dimensions available are DN25, DN32 and CU28mm.



Delivered with modern GRUNDFOS UPM3 High Quality pump

UPM3 AUTO L -50

- EuP2015 ready
- Max electricity consumption 33 watts at 2450 l/h



UPM3 AUTO L -70

- EuP2015 ready
- Max electricity consumption 52 watts at 2900 l/h



Delivery dimension of loading unit

The loading unit has union ball valves of totally new design with very high flow rate and special construction to prevent leaking. Dimensions available are DN25, DN32 and CU28mm.



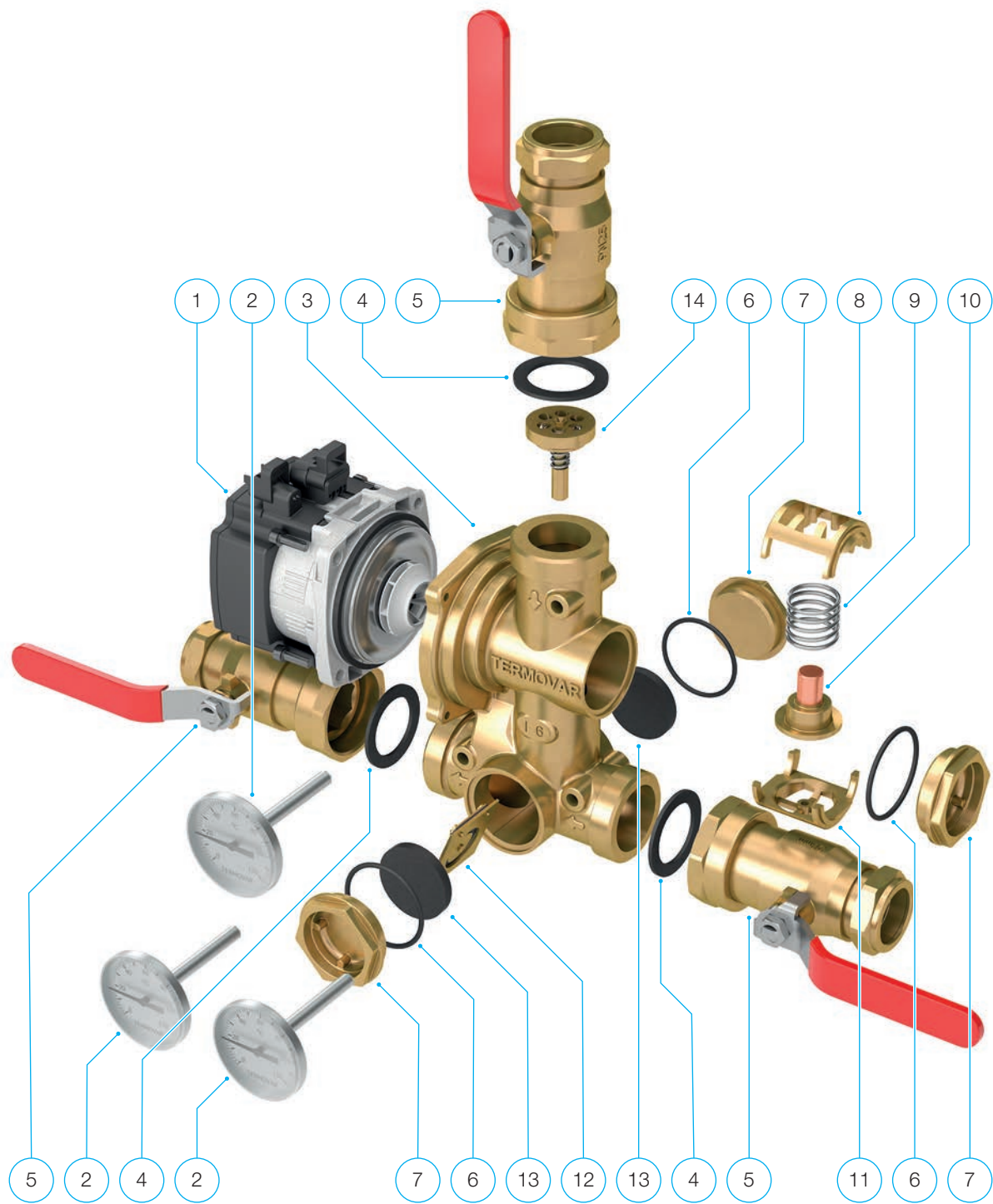
TERMOMVAR delivery includes:

- thermally operated loading valve unit
- backflow preventer
- circulation pump
- three thermometers
- three ball valves
- insulation EPS

Technical data

Pump	UPM3 AUTO L -50	UPM3 AUTO L -50	UPM3 AUTO L -70
Voltage	230 VAC 50/60 Hz	230 VAC 50/60 Hz	230 VAC 50/60 Hz
Power consumption	2–33 VA	2–33 VA	2–52 VA
Max. boiler capacity	35 kW	65 kW	100 kW
Max. operating temperature	110°C	110°C	110°C
Max. operating pressure	0,6 MPa (6 bar)	0,6 MPa (6 bar)	0,6 MPa (6 bar)
Opening temperatures	55°C, 61°C, 72°C or 80°C	55°C, 61°C, 72°C or 80°C	55°C, 61°C, 72°C or 80°C
Sizes	Rp ¾" and CU22 mm	Rp 1", Rp 1¼" and CU28 mm	Rp 1", Rp 1¼" and CU28 mm
Body	Brass	Brass	Brass
Dimensions with insulation and without union valves	190 x 200 x 125 mm	190 x 200 x 125 mm	190 x 200 x 125 mm
Weight	4,4–6,0 kg	4,4–6,0 kg	4,4–6,0 kg

TERMOVAR Loading Unit part list



Part no.	Order no.	Part name
1	1923440	UPM3 AUTO L -50
	1923445	UPM3 AUTO L -70
2	1920623	Thermometer 51 x 7 mm
3	1923500	Termovar body 55°C
	1923505	Termovar body 61°C
	1923510	Termovar body 72°C
	1923515	Termovar body 80°C
4	1920746	Seal 44 x 32 x 2 mm
5	192xxxx	Ball valve Rp 1½" x ¾"
	1923420	Ball valve Rp 1½" x 28 mm
	1923425	Ball valve Rp 1½" x 1"
	1923430	Ball valve Rp 1½" x 1¼"

Part no.	Order no.	Part name
6	1920629	O-ring EPDM Ø 36.2 mm x 3 mm
7	1920215	Cover G 1¼"
8, 9, 11	1920070	Thermostat retainer with spring
10	1920061	Thermostat 45°C
	1920062	Thermostat 55°C
	1920063	Thermostat 61°C
	1920064	Thermostat 72°C
	1920065	Thermostat (78) 80°C
12	1920209	Backflow preventer (not in 35 kW model)
	1920811	Backflow preventer blocking plate
13	1920429	Seal Ø 40 mm x 6 mm
14	1920219	Balancing valve (included in part 3)
	1923400	Insulation EPS

TERMOVAR Loading Unit most common spare parts



1920061	Thermostat element 45 °C
1920062	Thermostat element 55 °C
1920063	Thermostat element 61 °C
1920064	Thermostat element 72 °C
1920065	Thermostat element 80 °C



1920076 Return flow preventer



1920811 Plug instead of return flow preventer

Ordering data

Order no.	Version
1400320	TERMOVAR-65 28mm 55° Grundfos UPM3-50
1400321	TERMOVAR-65 28mm 61° Grundfos UPM3-50
1400322	TERMOVAR-65 28mm 72° Grundfos UPM3-50
1400323	TERMOVAR-65 28mm 80° Grundfos UPM3-50
1400330	TERMOVAR-65 DN25 55° Grundfos UPM3-50
1400331	TERMOVAR-65 DN25 61° Grundfos UPM3-50
1400332	TERMOVAR-65 DN25 72° Grundfos UPM3-50
1400333	TERMOVAR-65 DN25 80° Grundfos UPM3-50
1400340	TERMOVAR-65 DN32 55° Grundfos UPM3-50
1400341	TERMOVAR-65 DN32 61° Grundfos UPM3-50
1400342	TERMOVAR-65 DN32 72° Grundfos UPM3-50
1400343	TERMOVAR-65 DN32 80° Grundfos UPM3-50

Order no.	Version
1400350	TERMOVAR-100 28mm 55° Grundfos UPM3-70
1400351	TERMOVAR-100 28mm 61° Grundfos UPM3-70
1400352	TERMOVAR-100 28mm 72° Grundfos UPM3-70
1400353	TERMOVAR-100 28mm 80° Grundfos UPM3-70
1400360	TERMOVAR-100 DN25 55° Grundfos UPM3-70
1400361	TERMOVAR-100 DN25 61° Grundfos UPM3-70
1400362	TERMOVAR-100 DN25 72° Grundfos UPM3-70
1400363	TERMOVAR-100 DN25 80° Grundfos UPM3-70
1400370	TERMOVAR-100 DN32 55° Grundfos UPM3-70
1400371	TERMOVAR-100 DN32 61° Grundfos UPM3-70
1400372	TERMOVAR-100 DN32 72° Grundfos UPM3-70
1400373	TERMOVAR-100 DN32 80° Grundfos UPM3-70



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