

PRODUCT IN FOCUS

Our Boilers

for your Projects



HEAT TRACING SYSTEMS

HEATERS

SURFACE HEATING SYSTEMS

BOILERS

KLÖPPER
THERM

Electric Boilers for Low Voltage

Power Range 35–1,200 kW

Klöpper-Therm electric flow boilers are used for generating hot water in heating units for direct heating, storage operation or for Power-to-Heat systems.

THE SYSTEM AT A GLANCE

For the worldwide use of our products and services we are fulfilling the high quality demands and expectations of our customers from the design up to the commissioning. It is our declared goal not only to keep these demands but to develop them continuously to the benefit of our customers.

This is reached by our integrated management system and the clearly defined company aims. Each of our employees is involved in the management system and is responsible for the quality of our products and services.

Quality right from the Start

ELECTRIC BOILERS FOR LOW VOLTAGE

As an alternative to other energy types in new buildings or when converting central heating units, these boilers offer a universal range of applications: radiator heating, floor heating, mixed systems or bivalent operation with other energy types. Depending on the relevant operating conditions of the energy supplier, the boilers are used for direct or storage heating by utilising free electric power during off-peak times.

Their main application areas are municipalities, industry, local and district heat supply e.g.:

- ▶ For Power-to Heat
- ▶ combined operation, parallel or as an alternative in combination with other energy sources during off-peak periods
- ▶ for direct heating operation by economic utilization of free electric power input
- ▶ temperature increase by waste heat recovery
- ▶ storage heating operation at night and during off-peak hours
- ▶ integration into block heating stations
- ▶ as operation reserve

Advantages:

- ▶ efficient use of electric power ordered
- ▶ optimisation of operating costs with bivalent operation
- ▶ operation during off-peak periods
- ▶ secure supply of energy
- ▶ easily integrated in existing plants and systems
- ▶ increased plant efficiency
- ▶ emission-free heat production
- ▶ long service life
- ▶ low space requirements
- ▶ low maintenance costs

A future-oriented boiler design is the result of many years of research and development.

Our Management System

IECEX Quality Assessment Report

Quality Management according to DIN EN ISO 9001

Safety Management according to the SCC** catalogue

Ex-Directive 94/9/EG (ATEX)

Pressure Equipment Directive according to DGRL 97/23/EG

AD 2000 HPO

ASME U-Stamp



Hot Water Boiler

Type SB

Power Range

180-1200 kW



Design

This design series consists of 3 boiler sizes with 8 different power ranges from 180 to 1,200 kW. The boilers are constructed for a permitted power range of 180 – 1,200 kW with maximum allowable working pressure of 6 bar, in special design 16 bar and a design temperature of 95°C. Serial and parallel connection of single boilers, offer additional variants for power and operation.

The electric flow boilers are used for generating hot water in heating units for direct heating, storage heating operation or in combination with other heating systems. Their main application areas are municipalities, industry, local and district heat supply.

Model SB	Pressure (bar)	Power at 400 V kW	Dimensions W x L x H (mm)	Connection Nozzles		Weight (kg)
				flow return	safety valve expansion vessel	
SB 4180	6	180	860 x 1000 x 1415	DN 100 PN 16	1,5" inner screw thread	290
SB 4225	6	225				300
SB 4300	6	300				310
SB 4375	6	375	1034 x 1332 x 1411	DN 125 PN 16	2" inner screw thread	450
SB 4450	6	450				450
SB 4600	6	600				450
SB 4750	6	750	1290 x 1794 x 1423	DN 125 PN 16	DN 65 PN 16	1050
SB 41200	6	1200				1050

Construction

The electrode flow boilers type SB are designed on consideration of the relevant TRD, DIN and VDE-Directives. They mainly consist of the boiler vessel with heating elements flanged from the top, mineral fibre thermal insulation, the outer sheath made of plastic-coated steel plate and removable front cover as well as the complete electronic equipment with power part, control, regulation and safety temperature limiter.

Boiler Regulator

The electric flow boilers are equipped with an electronic control unit for the proportional control of boiler power in 15 steps and from 375 kW onwards with 30 steps. The regulator provides a number of operational functions by internal or external control.

Sequential Boiler Control

Simultaneous operation of maximum 4 boilers in series, achieved by interconnecting the boiler regulators in an automatic ranking order without affecting them when switching off a single boiler. The innovative, mature technology guarantees a lifetime above average and a high operational safety at the place of installation. Thanks to the variable regulation and control mechanism, Klöpper-Therm flow boilers can be used universally and can be adapted to various operating modes. A clearly structured shape and slim dimensions characterize the outer boiler construction.

Additional Functions

Additional equipment adapted to the boiler regulator facilitate among others:

- ▶ regulation of the boiler flow temperature in dependance of the outdoor temperature
- ▶ bivalent operation of the electric boilers in combination with boilers using other energy sources
- ▶ direct control of the regulator by e.g. EVU - circuit control impulse for connecting or disconnecting the boiler power
- ▶ contact to the central process control

Special Features/Comments

- ▶ easily accessible plug-in cartridge for the control and regulation unit
- ▶ electric connection box for selection of right- or left-sided installation (cable insertion from top or bottom)
- ▶ tolerance of the connection achievement: +5%,-10%
- ▶ required height for the dismantling of the heating elements: 1 m

The kettles are certificated by NEMKO according to EMC/LVD.

Hot Water Boiler

Type MB

Power Range 35-150 kW



Design data: 95° C, 6 bar

Operating temperature max: 95° C

Design

- ▶ Electric flow boiler in a compact construction including complete electronic equipment
- ▶ with automatic temperature control of the boiler power by an electronic 7-step-thermostat, installed at the front for flow temperatures from 30 - 95°C
- ▶ Boiler vessel made of steel with heating elements flanged from the top
- ▶ mineral fibre thermal insulation
- ▶ removable cover made of plastic-coated steel plate
- ▶ connecting flange for flow and return of the heating DN 65, PN 16
- ▶ 1" nozzles for connecting the expansion and draining pipes
- ▶ 4 adjustable supports

Boiler Model	Power at 400 V kW	Dimensions W x D x H (mm)	Connection Nozzles		Weight (kg)
			flow return	safety valve expansion vessel	
MB 4035	35	380 x 690 x 1280			128
MB 4045	45	380 x 690 x 1280			131
MB 4060	60	380 x 690 x 1280			136
MB 4075	75	380 x 690 x 1280	DN 65	1" inner screw thread	138
MB 4090	90	380 x 690 x 1280	PN 16		144
MB 4105	105	380 x 690 x 1280			145
MB 4120	120	380 x 690 x 1280			150
MB 4135	135	380 x 690 x 1280			150
MB 4150	150	380 x 690 x 1280			155

Take us for granted. Gladly at any Time.

Apart from careful planning and manufacturing, a professional installation is essential for the proper function of a heating system.

Our skilled and qualified assembly team offers you this service.

Our employees install, test and put our heating systems including respective control units into operation.

The quality of our work is guaranteed by regular training measures and the application of our management system and the SCC** catalogue (safety, health and environment).

A continuous maintenance of our heating systems and a detailed technical documentation complete our service package.

SERVICE PROMISES

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