



Electrolytic water treatment

## KEUV-TV

A complex solution for hot water

Ecological removal of water turbidity,  
rust and sediments from hot water

- High efficiency in removing iron in any form
- Extension of distribution parts lifetime and heat exchangers cleaning periods
- Environmentally friendly, no use of chemicals
- ✔ Fully automated and unattended operation
- ✔ Hot water quality enhancement with minimal operational costs



## WHAT DOES KEUV-TV SERVE FOR

KEUV-TV electrolytic water treatment plant serves for continuous filtration of iron compounds, turbidity and undissolved substances from hot water. KEUV-TV protects heat exchangers, boilers, hot water distribution pipelines and all other technology from sediments. Doing so, it significantly prolongs their lifespan and reduces their maintenance costs.

At low flows, iron compounds and undissolved substances get gradually deposited in horizontal distribution pipelines, in heat exchangers and in other places where hot water gets distributed. At times of peak demand, due to higher flow rate, these sediments start to whirl, which results in a subsequent decrease in water quality.

KEUV-TV water treatment plant is suitable for all distribution types and materials. With iron and galvanized distribution pipelines (coated with zinc) it reduces the formation of sediments that gradually decrease the nominal size (diameter) of the piping. With distribution piping made of plastic it very effectively prevents from formation of limescale, that may, in the form of small balls and little flakes, clog water-saving aerators on the water outlets, elbow pipes and other risk areas. KEUV-TV significantly decreases the interval of mechanical and chemical cleaning of heat exchangers, and with boilers it reduces the frequency of heat exchangers replacement. Having clean heat exchange surface prevents energy loss and regulation problems. A secondary benefit is the additional disinfection of hot water, which contributes to the reduction of microbiological life in distribution piping.

Oxidation- reduction (redox) reactions come about on the surface of the cathode and the anode and it results in formation of a small amount of chlorine and oxygen radicals that have disinfectant properties. It is possible to enhance this effect by means of an additional installation of copper electrodes that can be particularly used against the Legionella bacteria.



	KEUV-TV MINI	KEUV-TV 01	KEUV-TV 02	KEUV-TV 03
Maximum flow rate (m³/h)	3.5	6	14	25
Suitable for number of flats (approximately)	20 - 40	40 - 100	100 - 600	600 - 1000
DN input/output (mm)	40	50	50	80
Maximum power consumption (W)	30	55	75	85
Maximum operation temperature (°C)	60	60	60	60
Maximum operation overpressure (MPa)	1	1	1	1

## HOW DOES KEUV-TV WORK

KEUV-TV applies the principle of electrocoagulation. Due to direct current the limescale (boiler scale) starts to form on the electrodes and oxidation processes come about. Oxidized forms develop a precipitate which is removed on the filters sandbed. Also other impurities from water get caught on the iron precipitate. The filtration bed gets automatically flushed out in regular intervals and the impurities wash away into the sewerage system. The whole process is environmentally friendly, without the use of chemicals and it requires no involvement of the operation staff. The effects of the KEUV-TV treatment plant appear instantly and the complaints about hot water quality cease coming immediately after the installation.

## INSTALLATION OF THE EQUIPMENT

KEUV-TV treatment plant is transported to the installation site, connected to the hot water circuit and to the electrical network. The flushing water outlet is connected to the sewage system network and the equipment is setup and put into operation.

## OPERATION COSTS

The operation costs consist of the price for the flushing water, a little amount of electric power and for regular maintenance jobs. The lifespan of individual components ranges within several years. Water treatment cost of 1 m³ is usually about 0.025 USD.

 Environmentally friendly

 Economical

 Without chemicals

 No compromises