

ELWA

Preheater KVE/KVES

The reference hot water circuits



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Description



The series KVE/KVES heaters offer highly effective heating power for processes with water or similar media. The heating elements and the pumps can be perfectly adapted to the customers application.

Design

The KVE/KVES series is based on our approved 4600 WR series flow heater. With the mounted control cabinet and the integrated pumps we offer configurable units which can be used for many applications. We use high-quality centrifugal pumps. The heating elements can be exchanged with standard tools.

Electrics

Due to the flexible design, the units can be adapted to any operating voltage between 230 VAC and 690 VAC.

Operating pressure

10 bar in standard design/16 bar in HP design

Operating temperature

Max. 95/100 °C

Heat transfer

Due to the perfect hydraulic flow around the heating elements, the medium is gently heated to the specified temperature. The surface load (W/cm²) can be precisely adapted to the medium characteristics.

Recommended surface loads:.

3,5 W/cm²	aggressive media (e.g. chlorinated water, bilge water,...)
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6,5 W/cm²	potable water, engine cooling water with additives
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Material

All components in contact with the medium can be made of material suited to the application. By standard and with short delivery times: P265GH (mild steel) and 1.4571 (stainless steel). Other materials are available on request.

Controls (ELWA)

The KVE/KVES preheating units are delivered with ELWA control cabinets specially designed for the specific applications. The heating steps can be controlled either with mechanical or electronic temperature controllers. The power is then switched with conventional contactors, solid state relays or thyristor controllers. Please see data sheets for ELWA ETU/ELWA SPC/ELWA STC.

Typical applications

The series KVE/KVES heaters are the perfect choice for preheating the cooling water circuits of large diesel engines. Further possible areas of application: Heat source for industrial processes/building heating (booster/legionella cycle).



Safety

All units are equipped with built in safety temperature limiters (STB). Optional additional safety devices: flow switch, temperature limiter (self reset), PT-100 sensors and safety valves.

Thermal insulation

The heaters come with an efficient thermal insulation made of rockwool and galvanised steel sheet cover. The cover is also available made of stainless steel (polished upon request).

Painting

Heavy duty industrial painting with 2K structured PUR paint

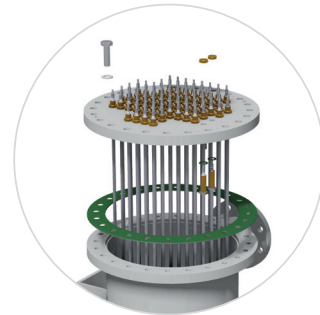
Process connections

Standard: Flanges according to DIN EN 1092-1/11B1/DN15-DN250/PN16

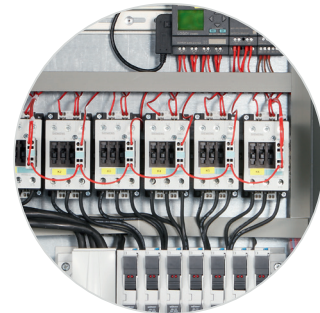
Optional: Triclamp or threaded connections

Classifications

ABS, BV, DNV, CCS, GL, LRS, RINA, TÜV, MRS, others on request



Each heating element can be exchanged



Intelligent controls



Heavy duty centrifugal pump



Overview table

Type	Heating (kW)	Steps (kW)	Cooling Water				Flanges (DN)
			flow (m³/h)		pressure (mWC)		
			50 Hz	60 Hz	50 Hz	60 Hz	
KVE-7,5	7,5	1x7,5	10	10	8	10	40
KVE-12	12	2x6	10	10	8	10	40
KVE-15	15	2x7,5	10	10	8	10	40
KVE-18	18	2x9	10	10	8	10	40
KVE-22,5	22,5	7,5+15	10	15	8	10	40
KVE-27	27	9+18	10	15	8	10	40
KVE-30	30	2x15	10	15	8	10	40
KVE-36	36	2x18	10	15	8	10	40
KVE-45	45	2x22,5	10	15	8	10	40
KVE-54	54	2x27	10	15	8	10	40
KVE-72	72	18+27+27	12,5	15	10	10	40
KVE-81	81	3x27	12,5	15	10	10	40
KVE-108	108	4x27	22	22	10	10	40

Type	Heating (kW)	Steps (kW)	Cooling Water				Flanges (DN)
			flow (m³/h)		pressure (mWC)		
			50 Hz	60 Hz	50 Hz	60 Hz	
KVES-108	108	4x27	22	22	9	11	50
KVES-135	135	3x45	22	22	9	11	50
KVES-147	147	3x34+1x45	22	22	9	11	50
KVES-169	169	1x34+3x45	29	29	10	11	50
KVES-203	203	2x34+3x45	29	29	10	11	65
KVES-214	214	1x34+4x45	29	29	10	11	65
KVES-247	247	3x45+2x56	34	35	10	11,7	65
KVES-270	270	1x45+4x56	34	35	10	11,7	65

The table shows recommended pump data. Please note that we can use smaller/larger pumps on request.

Complementary products

ELWA SPC

smart.power.control

Control box with heating steps and step-less control of a part of the heating power with our intelligent ELWA SPC control unit and solid state relays

ELWA STC

smart.thyristor.control

Control box with fully step-less regulation of the heating capacity using ELWA STC control

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