



Universal Steam Water-Tube Boilers KU-V 8000, 12000, 16000, 20000, 25000 kg/hr

Technical Specifications

These are water-tube boilers with membrane walls, an overpressure furnace and natural circulation for the combustion of liquid and gaseous fuels. The pressure part is formed by steam and sludge cylinders, enclosed by dished heads, laid in horizontal position, connected with the membrane walls and the tube convection bundle. The disk heads are fitted with holes for the boiler pressure system control. The burner is fixed to a burner plate in the front membrane wall of the boiler. The boiler includes an economizer designed for natural gas or LO combustion. The economizer is supplied in blocks according to the boiler efficiency required, differing according to the type of fuel employed. For boilers burning natural gas, economizers from ribbed tubes are applied, whereas for those burning liquid fuels economizers from bare tubes are used. The boiler equipment includes a superheater with the superheated steam output temperature range specified by the client. The boiler is fitted with all the fittings and gauges and thermometers. The supplied set also includes a service platform. The boiler and economizer are fitted with insulation covered by sheeting. The boiler manufacturing, design and equipment comply with CSN 07 0240.

Boiler Modulation

The boiler can also be supplied in a hot-water modification. The boiler is ready for the installation of GESTRA equipment for steam-boiler plants operating without constant supervision (supervision intervals every 2 - 24 - 72 hours according to TRD 602 or TRD 604).

Technical Parameters

Parameters	Units	KU-V 8000	KU-V 12000	KU-V 16000	KU-V 20000	KU-V 25000
Rated steam output	kg/hr	8000	12000	16000	20000	25000
Rated thermal capacity	kW	6216	9324	12432	15540	19425
Construction overpressure	MPa	1,6 / 2,5 / 3,8				
Temperature of superheated steam*	°C	do 450				
Minimum temperature of feed water	°C	105				
Nominal temperature of combustion air	°C	20				
Efficiency at rated power: - Natural gas - LO	%	94 - 94,5 92 - 93				
Amount of fuel: Natural gas LO	Nm ³ /h kg/hr	665 612	997 918	1330 1224	1662 1530	2077 1913
Max. of air for combustion for lambda - 1,1 **	Nm ³ /h	7261	10891	14522	18522	22691
Amount of flue gases - output max**	Nm ³ /h	7932	11898	15864	19830	24788
Boiler resistance at the flue gas side	Pa	2000 - 3500				
Noise level	dB	max.80				
Flue gas temp. at the boiler output	°C	120 - 180				
Emissions***						
Natural gas - standard / low emission	mg/Nm ³	NOx - 160, CO - 50 / NOx - 100, CO - 50				
LO	mg/Nm ³	NOx - 450, CO - 175, SO ₂ - 1000, solid substances - 100, smoke rate < 2				
Boiler weight						
Transport weight (Applies for design pressure of 1,4 MPa)	kg	20000	23000	28000	30000	32000
Technical changes are reserved						

* The nominal temperature of superheated steam can be changed, depending on the client's request and the burned fuel.

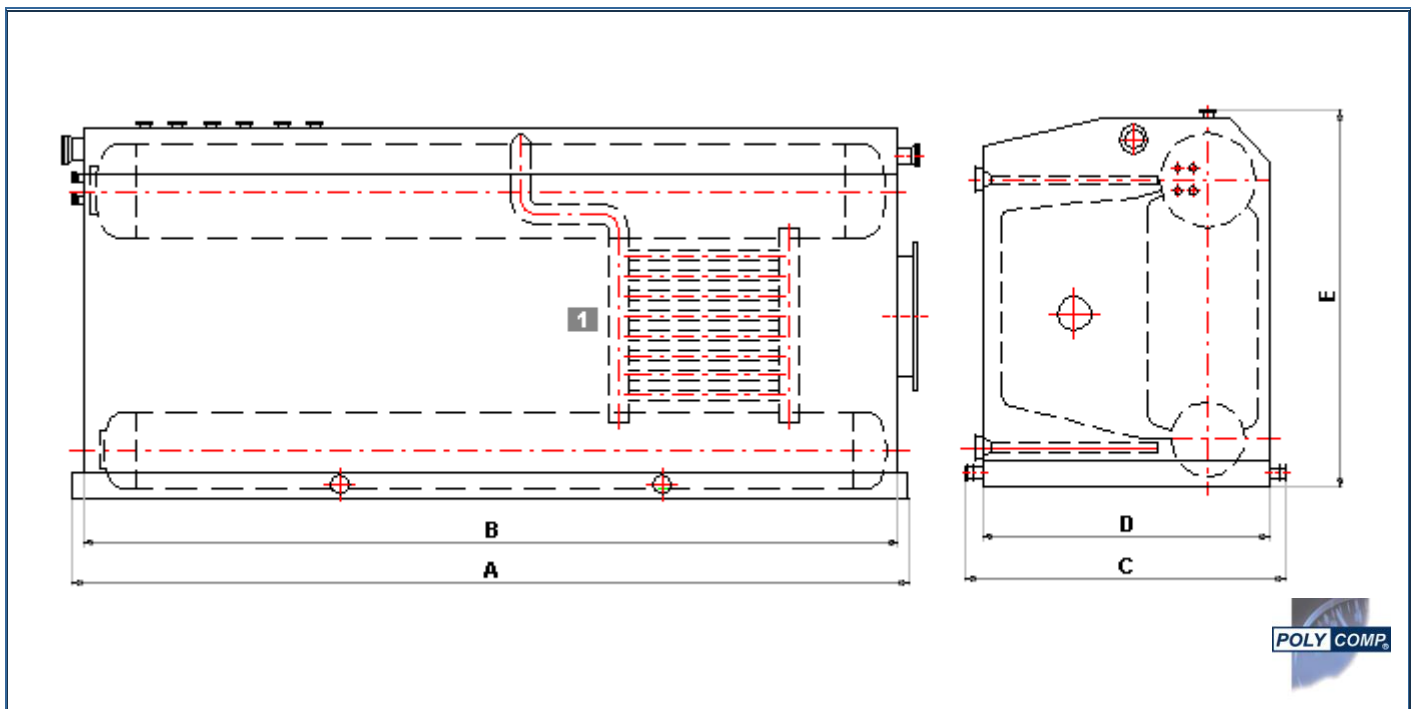
** The values relate to the maximum boiler output at the steam pressure of 2.5 MPa, superheated steam temperature of 400°C and efficiency of 92%.

*** Emission relate to 3% of O₂ in dry combustion products at t = 0°C and barometric pressure.

The given emission levels may be maintained only provided that the liquid fuel contains (except for values according to CSN 656506) maximally: S < 5 000 mg/kg, N < 1 000 mg/kg, asphaltenes < 3 %.

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PROPORTIONS (mm)					
BOILER	A	B	C	D	E
KUV 8000	4800	4340	3500	3100	3980
KUV 12000	5190	4730	3720	3375	3980
KUV 16000	5990	5530	3720	3375	3980
KUV 20000	8500	8040	4040	3695	3980
KUV 25000	8810	8350	4040	3695	3980

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