

**M for
Modulating**



Steam generators **JUNIOR TC** series

Size	Steam capacity kg/h	Method of combustion
1	80 – 120	Oil or gas
2	150 – 200	Oil or gas
3	250 – 400	Oil or gas

Steam generators **UNIVERSAL TC** series

Size	Steam capacity kg/h	Method of combustion
4	500 – 600	Oil, gas or combination
5	700 – 850	Oil, gas or combination
6	1000 – 1300	Oil, gas or combination
7	1500 – 1800	Oil, gas or combination

Steam generators **ELEKTRO E 100 – 120 M** series

Size	Steam capacity kg/h	Method of heating
One size	135 / 160	Electrical 100 / 120 kW



CONTAINER Steam System
Completely equipped and ready to operate



CVE
Supply unit as complete ready-to-operate boiler housing installation
In addition: Water softening equipment, measuring equipment



CERTUSS EXHAUST GAS HEAT EXCHANGERS
CERTECON for Junior 80 – 400 as well as CERTECON and ECO SPI for Universal 500 – 2000



DESALINATION HEAT EXCHANGER
Heat recycling from the desalination condensate to heat feed water
Reduction of the amount of cooling water at steam systems with mixing heat exchangers when waste water cooling is required



Electrical E 6 – 72 M at a glance

Operator convenience

- + Easy-to-service compact device, easy to operate
- + Optionally with supply system for water treatment and water cooling
- + Insertion possible through norm doors up to 1 m wide
- + Wide solid bases to ensure safe transportation on the side or front
- + Direct front access to all parts for easy maintenance

Efficiency

- + Short heat-up time
- + Fully electronic pressure and output control, immediate load adjustment
- + Electrical heating elements made of stainless steel with large heating surface
- + Constant network load without consumption peaks
- + Output limitation by output selection switch starting on type E 18 M*

Operation and installation

- + Low space requirement, reduced and robust heavy-duty model in elegant design
- + Can be installed in work areas
- + No permit required for installation and use in Germany
- + Fully automatic operation by means of time control or remote pulse (with supplementary equipment)*
- + Automatic blow down*
- + Automatic desalination*

Safety and quality

- + Function and malfunction indications can be linked to central control system / building services control system provided by customer
- + Series production in the framework of the CERTUSS range
- + Customer service standby 24 hours a day, 365 days a year
- + Spare parts supply guaranteed for 20 years
- + Stainless steel version of all boiler parts in contact with water and steam for pure steam generation possible



E 6 - 72 M: The new generation of the classic generator

The electric steam generators E 6 - 72 M are genuine CERTUSS steam generators. They are distinguished by their short heat-up time and their low space requirement. They are low-loss and extremely reliable in construction proven over decades. The E 6 - 72 M convinces through immediate output adjustment, simplified operation and increased ease of maintenance.

Small, complete and safe

The E 6 - 72 M are complete, ready-to-operate, electronically controlled steam generators with built-in feed water tank and feed water pump as well as all safety devices for pressure and temperature. Also available as unit with water conditioning installed on mounting frame. Only the disposal and supply lines are to be installed by the customer.

Manual, remote-controlled or automatic

Controlling is carried out either manually by simply pressing buttons or with an optional "Thermotimat" automatic control in the unit. Controlling via a central control system / building services control system or an external impulse is also just as possible as the display and transfer of operating and fault messages. The heart of the E 6 - 72 M consists of a PLC control system that displays the operating and fault messages with corresponding fault codes.

Electronically controlled electrical heating

The output of the heating elements is controlled progressively through semiconductor contactors. This ensures virtually constant steam pressure under a symmetrical load of the power supply. The respective operating pressure range can be preset progressively.

Output selection switch*

On multiple stage generators the heating output can be limited.

Electrical E 6 – 72 M in detail



Automatic desalination*

A device for fully automatic time-controlled desalination is integrated and guarantees constant high steam quality.

Automatic blowdown*

The E 6 - 72 M steam generators can additionally be equipped with an automatic blowdown. The pressure vessel is then deslimes at every shutdown.

Installation conditions

In accordance with the European Pressure Equipment Directive 2014/68/EU the E 6 - 72 M are classified as Category II or III depending on the operating pressure. They have been tested in accordance with the EC type examination. The E 6 - 72 M steam generators have less-restricted conditions for installation and operation in the EC member states. In Germany it does not require supervision and approval by TÜV.

Technical Data E 6 – 72 M **		E 6 M	E 12 M	E 16 M	E 18 M	E 22 M	E 24 M	E 28 M	E 32 M	E 36 M	E 40 M	E 48 M	E 56 M	E 64 M	E 72 M	
Steam output	kg/h	8	16	21	24	29	32	37	42	48	53	64	75	86	97	
Heat output	kW	6	12	16	18	22	24	28	32	36	40	48	56	64	72	
Power stages		1-stage			2-stage						3-stage					
Electrical connection up to 0.6 MPa (6 bar) up to 1.2 MPa (12 bar)	kW	6.8 7.8	12.8 13.8	16.8 17.8	18.8 19.8	22.8 23.8	24.8 25.8	28.8 29.8	32.8 33.8	36.8 37.8	40.8 41.8	48.8 49.8	56.8 57.8	64.8 65.8	72.8 73.8	
Operating voltage		3 x 400 V / 50 Hz														
Admissible pressure	MPa bar	0.6 / 1.0 / 1.2 6 / 10 / 12														
Working press. min./max.	MPa bar	0.35 – 0.55 / 0.35 – 0.8 / 0.35 – 1.1 3.5 – 5.5 / 3.5 – 8.0 / 3.5 – 11														
Water capacity	l	28														
Measurements H x B x T	mm	1850 x 880 x 680 (depth including mountings approx. 785 mm)														
Empty weight approx.	kg	320														
Connections	DN	water vapors 1" / feed water 1/2" / steam 1/2" / SV-blow-off line 1" / condensate 3/4"														
Regulations	Germany	in accordance with EPED 2014/68/EU up to 0.6 MPa (6 bar) category II, above 0.6 MPa category III														

* Supplementary equipment.

** Delivery complete incl. stainless steel feed water tank. Measurements, weights and further values are rounded up or off. Indicated pressure are overpressure values.

Output values stated are related to 10°C feed water temperature. **We reserve the right to make technical modifications.**