

TC as in  
Touch Control



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 ELEKTRO E 6 – 72 M series		
Size	Steam capacity kg/h	Method of heating
One size	8 – 97	Electrical 6 – 72 kW

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 – 1800



**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



## Universal 500 – 1800 TC at a glance

### Efficiency

- + Extremely high degree of efficiency (with exhaust gas heat exchanger up to 98%) achieved through the 3-fold air insulation with simultaneous preheating of combustion air at very low emission losses
- + Short heat-up time. Full steam output is reached after a maximum of 5 minutes
- + Immediate output adjustment to the respective stream requirements which saves energy and thus costs through electronic combustion management and pilot flame system (gas burner)
- + With gas burner equipment modulating output control between 50 and 100% steam output (at oil operation via two output stages 50 and 100%)
- + Low-maintenance, continuous speed-controlled feed water pump
- + Low-emission burner developed specially to latest European standards for all sizes

### User friendliness

- + Notably simplified operation through self-explanatory touch screen menu navigation
- + Graphically supported start and shutdown instructions
- + "Thermotimat" automatic system for fully automatic operation\*
- + Remote control and control via Ethernet and mobile communications\*
- + Optionally: "CVE" supply unit as complete boiler housing installation of boiler feed pump, steam dryer, water conditioning and waste-water mixing heat exchanger

### Operation and installation

- + Secure installation without foundation at low space requirements

- + Can be installed in work areas, no boiler housing required
- + No permit required for installation and use in Germany up to Category III
- + Standard equipping for operation without constant supervision

### Safety and quality

- + Function and malfunction indications can be linked to central control system / building services control system provided by customer
- + Can be remotely programmed and read out or controlled via Ethernet, CAN bus, PROFIBUS or GSM/UMTS modem\*
- + Customer service standby 24 hours a day, 365 days a year
- + Spare parts supply guaranteed for 20 years
- + Function and error messages as well as service instructions through clear text display in many languages

### Advantages of our technology

- + Robust all-steel design with double-shell air cooling without insulation materials
- + Air intake from above, trapped heat in boiler house extracted, floor dust remains
- + Noise and vibration damping, elastic aggregate fastening
- + Flue-gas recycling (NO<sub>x</sub> reduction)\*
- + Vertical tension-free central mounting of the heating system with low-point clarifying filtration
- + Recognized exemplary service
- + Can optionally be equipped with burners for EL heating oil, natural gas, liquid gas or combined (natural gas/EL heating oil) tested and approved by the TÜV-Rheinland-Berlin/ Brandenburg in accordance with the latest EU regulations for burners

### The new generation of a proven series

The steam generators CERTUSS Universal 500 - 1800 TC are characterized by the immediate modulating output adjustment and the simplified operation.

### Complete and safe

The new Universal 500 - 1800 TC series encompasses completely equipped, ready-to-operate, electronically controlled steam generators with all safety devices for burner technology, pressure and temperature. An electronic combustion management with self-monitoring of the latest generation can be programmed for all types of fuel. The Universal 500 - 1800 TC steam generators are started via non-seated flow controllers. Steam and waste gas temperatures are controlled through self-monitoring electronic thermostats with approval.

### Manual, remote-controlled or automatic

The new series disposes of a self-explanatory control and operation function via a graphical user interface on a 7" touch screen.

All the operating and fault messages as well as service instruction are displayed visually in all the desired languages. Controlling is carried out either manually or graphics-supported start and shutdown instructions or with optional "Thermotimat" automatic system in the system for fully automatic operation without operating personnel. Controlling via a central control system / building services control system is also just as possible as the display and transfer of operating and fault messages via Ethernet, CAN bus or PROFIBUS, as well as remote programming via a GSM modem.

## Universal 500 – 1800 TC in detail



### Automatic desliming and start dewatering

The Universal 500 - 1800 TC steam generators can be equipped additionally with an automatic desliming and start dewatering in connection with the "Thermotimat" automatic system.

### Installation conditions

In accordance with the European Pressure Equipment Directive 2014/68/EU the CERTUSS steam generators are classified as Category III or IV depending on the operating pressure. They have been tested in accordance with the EC type examination. No permit is required for installation and use in Germany up to Category III Initial and repetitive tests can be carried out by the CERTUSS customer service as qualified persons on the Universal 500 - 600 series up to an operating pressure of 20 bar.

Size	Capacities			Levels	Pressures		Consumption			Dimensions (~ mm)						Weight (~ kg)	Connections							Categorization	Regulations	
	Steam-capacity kg/h	Heating capacity kW	Nominal load kW		Max. operating pressure MPa (bar)	Max. permissible overpressure MPa (bar)	Heating oil (EL) kg/h	Natural gas m³/h	Liquid-gas m³/h	Height A	Width B	Depth C	Boiler Ø D	Flue gas pipe Ø E	Flue gas (center) F		Electrical connection load kVA	Oil connection DN	Natural gas DN	Liquid gas DN	Feed water DN	Steam connection DN	Safety valve DN			Start-up line DN
4	500 600	328 393	364 436	2	0.8-1.4-1.8-2.2-2.9 (8-14-18-22-29)	1.0-1.6-2.0-2.5-3.2 (10-16-20-25-32)	30.6 36.8	36.4 43.6	14.1 16.9	1980	930	1600	700	250	1460	950	6.32	3/8"	50	25	1 1/4"	32	40	3/4"	III	up to 20 bar CERTUSS <sup>1)</sup> over 20-32 bar AIA <sup>2)</sup>
5	700 850	459 557	510 619	2	0.8-1.4-2.2-2.9 (8-14-22-29)	1.0-1.6-2.5-3.2 (10-16-25-32)	42.9 52.1	50.9 61.8	19.7 24.0	2290	1160	1870	870	300	1750	1100	7.34	3/8"	65	40	1 1/4"	40	40	1"	up to 25 bar III over 25-32 bar IV	AIA <sup>2)</sup>
6	1000 1300	656 853	728 947	2	0.8-1.4-2.2-2.9 (8-14-22-29)	1.0-1.6-2.5-3.2 (10-16-25-32)	61.3 79.8	72.7 94.6	28.2 36.7	2535	1260	2125	1000	350	1940	1500	13.02	3/8"	65	40	1 1/4"	50	40	1 1/2"	up to 16 bar III over 16-32 bar IV	AIA <sup>2)</sup>
7	1500 1800	984 1180	1093 1311	2	0.8-1.4-2.2-2.9 (8-14-22-29)	1.0-1.6-2.5-3.2 (10-16-25-32)	92.0 110.4	109.1 130.9	42.3 50.8	2675	1380	2310	1100	500	2025	2300	15.85	1/2"	80	50	1 1/4"	65	50	1 1/2"	up to 10 bar III over 10-32 bar IV	AIA <sup>2)</sup>

Reference values: Natural gas 10 kW/Nm<sup>3</sup> - 8600 kcal/Nm<sup>3</sup>, liquid gas 25,8 kW/Nm<sup>3</sup> - 22200 kcal/Nm<sup>3</sup>.  
Dimensions and weights have been rounded up or down. MPa and bar are overpressure values.  
Performance values referenced to 100 °C feed-water temperature and 1 MPa (10 bar) steam overpressure.  
CERTUSS burner with flue-gas recycling (NO<sub>x</sub> reduction)\*.

<sup>1)</sup> Through CERTUSS customer service as "qualified persons"

<sup>2)</sup> Through "approved inspection agency", e.g. TÜV

\* Supplementary equipment

**We reserve the right to make technical modifications.**