

## Tender specification

### Electrode steam generator **FlexLine SPA Electrode**

Ready-to-connect compact steam humidifier for fully automatic and intrinsically safe generation of mineral-free, odourless and sterile steam for steam bath, organic sauna, hamam and many more spa applications. Steam output 8.8 – 286 lbs/h per individual device. Installation and maintenance friendly design for wall mounting. Easy to mount with all commercially available mounting rail systems, manufacturer-specific systems are not required. Completely stainless steel cabinet for optimum handling additionally powder-coated with lockable stainless steel cover and separate areas for steam generation and electrics. With CSA C/US certification. Developed and produced in Germany. For direct connection to all standard tap water mains. No water treatment necessary.

Powerful control electronics for fastest possible steam delivery with optimal energy utilization and low maintenance operating mode. Comprehensive operational reliability through continuous self-monitoring of all device functions. Where required the control is modular and extendible with additional relay boards.

#### **Standard equipment:**

- Graphic capacitive 3.5 " touchscreen with simple menu structure for intuitive operation and clearly laid out display of all operating and service messages in plain text mode and as icons
- Separable plastic cylinder, cleanable without using chemicals, re-usable and with especially long service life: the PP/GRP composite material with exceptional wall thickness provides increased heat insulation and especially high wear resistance to mechanical loads during cleaning. For ecological and economic reasons neither disposable steam cylinders nor cylinders without fibre reinforcement are used
- For especially long service lives only large solid electrodes are used, standard solid stainless steel material, quickly replaceable without the need for tools; depending on conductivity of feed water optimized solid material geometries are possible (no perforated plates or grids)
- Integrated stand-alone electro-mechanical circuit breaker for the highest standards of safety: The units are equipped with certified, discrete and software-independent components and as verification of the highest standard of intrinsic safety. They are tested and certified by an independent body in compliance with the current product safety legislation based on the directive CSA Std. C22.2
- Powerful blow-down pump to extend service lives through pumping out scale deposits and hardeners
- Good component accessibility from three sides facilitated by unit's removable cover
- Roomy electric compartment
- Assembly materials
- Freely programmable overload protected digital input; amongst others load dumps or limited power decreases for reduction of power surges are consequently easily achieved

### **Performance characteristics:**

- Automatic system test incl. power-up diagnosis to check all functions and device components
- Load-dependent and/or time-based adjustable service interval display
- Support of preventative maintenance by maintenance-required messaging in good time BEFORE the occurrence of a possible malfunction by means of selective component monitoring with three alarm levels
- Continuous uniform steam production with constant steam bath temperature
- Programmable power retention and ECO function (fan shutdown when usage interrupted)
- Real-time clock with programmable timer function; 2 start / finish times can be set per day and weekly programme
- Supervision of maximum temperature with security switch-off
- Analogue output 0-10 V for simultaneous use of several devices
- The selectable operating modes "energy optimized", "load optimized" and "quick control" allow easy adaptation to differing supply networks
- Integrated galvanically isolated serial interface RS-485 (EIA-485)
- Integrated communication protocol Modbus RTU and BACnet MS/TP
- 2 potential-free relay signal functions; one of them freely parametrizable from 53 functions (factory preset: operating and collective fault)
- Individual adjustment to the respective water quality
- Stand-by blow-down to prevent stationary cylinder water according to VDI 6022
- DVGW compliant flushing of dead-end line to prevent tap water stagnation

### **Please select option:**

- Cylinder flushing system for significant extension of the service lives of cylinders by means of increased discharging of screenable scale deposits or hardeners
- Preventive device for portable water protection; allows a local backflow preventer to be dispensed with
- Galvanized electrodes for optimized service lives of electrodes where the chloride content of the feed water is high
- Integrated waste water cooling to limit waste water temperature to max. 140°F, when using PVC waste water pipes or pumping equipment
- Up to 7 additional relay signal functions, freely parametrizable from 53 functions such as e.g. up to 4 essence pumps, lighting, 2 supply and steam bath fans each or use of the booster function of the HygroMatik fan
- Implementation of up to 4 different lighting scenarios possible
- Remote control with capacitive graphic 5" touchscreen and user-oriented menu e.g. steam production only on request for 15 min.; suitable for installation in steam bath with appropriate on-site waterproofing; screen surface with protection class IP 65