

## **Technical Submittal DriSteem RTS-RX**

The DriSteem RTS-RX is a resistive-to-steam electric steam humidifier.

### **Materials and specification:**

- Tank 2mm 304-stainless steel with water side welded seams for all water-submerged welds, optional insulated.
- Hygiene function : A 2-sided inclined tank bottom (diamond shaped) continues a complete drain and avoids standing water after draining to prevent bacterial growth within the tank.
- Hygiene function : at start-up after stop (End-of Season drain) the piping and tank will be flushed before the steam production starts.
- The factory-installed water-tempering device automatically cools discharged hot water at (60 °C) to meet requirements for safe discharge water temperature. Cooling discharged hot water also prevents damage to PVC drain piping.
- Incoloy alloy-sheathed electric heater elements, max output 14W/cm<sup>2</sup>.
- Removable front covers with quarter-turn latches allow easy one-sided access to the tank and electrical connections.
- Compact humidifier with small footprint. Both floor-mounting and wall-mounting available.
- The DriSteem humidifier, RTS-RX is capable of generating steam from: well, tap, softened, DI or RO water. The humidifier does not require changes to controls or components in the field due to changes in water type/quality.
- A fast tank filling (motorized valve) allows to fill the tank in less than 5 minutes and to have steam production within 10 minutes. As the humidifier boils water away, a second precision fill valve on the secondary heat exchanger will pulse on and off to maintain the water level in the tank. This water is pre-heated in the secondary heat exchanger before entering the tank. The precision fill algorithm in Vapor-logic controller keeps the tank from losing its boil on a re-fill, allowing for consistent steam output.
- The intelligent universal modulating water level control system is standard on each RTS-RX humidifier, for use with any water type, including DI/RO water:
  - Modulating water level controls depending on variable steam production.
  - Stops the humidifier with too low water level after adjustable period (low water cutout)



- The new smart water management is adjustable depending on the water quality.
  - Adjustable drain intervals automatically based on water quality (conductivity)
    - Decreases drain interval when highly conductive water (well water) is sensed to reduce scale buildup.
    - Extends drain interval with low conductive water such as RO or DI to reduce water usage.
  - Adjustable flush period after tank draining.
  - Adjustable water surface skimming: The water skimmer reduces minerals in the evaporating chamber. Skimming occurs each time the humidifier fills. The skim time duration is user adjustable. The water skimmer port also functions as an overflow port.
  - Adjustable End-of-Season drain: To avoid possible stagnant water and microbial growth, the humidifier automatically drains if there is no call for humidity after a user-defined time period (72-hour default).
  - Smart-drain technology
    - Programmable based on conductivity and concentration on minerals.
    - Automatic recognition of water quality (hard/soft or DI/RO)
  - Mini-drain technology
    - Programmable based on conductivity and concentration on minerals (3 points conductivity measurement probe for operation with and detection of all water types).
  
- The Vapor-logic controller provides accurate, responsive RH control, and PID control tunes the system for maximum performance:
  - Modbus®, BACnet®, or Lon Talk® : allows interoperability with multiple building automation systems. BACnet and Modbus are standard. Lon Talk is available as an option.
  - Modulating high-limit control: no on/off but modulated humidifier capacity controls when having high RH values in duct or AHU.
  - Web Interface: provides the capability to set up, view, and adjust humidifier functions via Ethernet, either directly or remotely through a network.
  - USB port allows easy firmware updates, and data backup and restore capability. All software updates can be downloaded from the DriSteem website [www.dristeem.com](http://www.dristeem.com), free of charge.
  - Real-time clock allows time-stamped alarm, message tracking, accurate drain and flush scheduling.
  - Programmable outputs allow remote signaling and device activation.
  - Data logs can be downloaded to a PC for viewing and analysis.
  - Multiple-humidifier control allows staged control of up to 8 humidifiers with one controller.
  - Enhanced diagnostics and data collection.
  - Adjustable aquastat (minimum tank temperature, tank preheating, allowing rapid response to a call of humidity).
  - Adjustable freeze protection.
  - Water management (see above)
  - Alphanumeric touchscreen keypad with all parameters, fault messages, etc...



- Optional: DriSteem offers a robust, affordable double-walled insulated enclosure for installing the RTS-RX humidifier outdoors. Independent testing has proven that the RTS-RX installed within this outdoor enclosure provides reliable operation under extreme conditions:
  - Protects in cold and hot climates. To ensure complete safety and operation in all climates, the outdoor enclosure has heating and venting systems that ensure humidifier operation in temperatures from -40°C to 48°C. The outdoor enclosure can also be ordered without the heater package.
  - Install on the ground or roof. The outdoor enclosure (optional) is ideal for facilities that have limited interior space.
  - Factory packaged. The outdoor enclosure ships complete with a RTS-RX unit pre-installed and tested, ready to easily connect to water and electricity.
  - Robust design. The outdoor enclosure is ruggedly built to completely protect internal components. The enclosure is constructed of heavy-duty galvanized steel and is fully insulated. Serviceable gaskets on access panels ensure a tight seal.

Technical details of RTS-RX models

<b>Type</b>	<b>Steam cap</b> kg/h	<b>Rating</b> kW	<b>Input</b> Phase	<b>Draw</b> I (A)	<b>Dimensions</b> HxWxD mm	<b>Weight</b> kg
RX 6-1	2.7	2	230/1	8.3	632x629x416	42
RX 12-1	5.4	4	400/3	8.7	632x629x416	42
RX 24-1	10.9	8	400/3	17.3	632x629x416	43
RX 36-1	16.3	12	400/3	17.3	632x629x416	43
RX 48-1	21.8	16	400/3	23.1	632x629x416	43
RX 63-1	28.6	21	400/3	30.3	632x629x416	44
RX 75-1	34	25	400/3	36.1	632x629x416	44
RX 90-2	40.8	30	400/3	43.3	798x663x533	63
RX 102-2	46.3	34	400/3	43.3	798x663x533	63
RX 126-2	57.1	42	400/3	49.1	798x663x533	64
RX 144-2	65.3	48	400/3	65	798x663x533	64
RX 162-2	73.5	54	400/3	69	798x663x533	65
RX 189-3	85.7	63	400/3	77	1049x950x549	92
RX 216-3	98	72	400/3	97	1049x950x549	92
RX 243-3	110	81	400/3	104	1049x950x549	93
RX 264-4	119	88	400/3	117	1049x950x549	96
RX 288-4	130	96	400/3	138	1049x950x549	96
RX 324-4	147	108	400/3	156	1049x950x549	97