SKE4-Resistive Steam Humidifier Brochure

neptronic®

SKE4 RESISTIVE STEAM HUMIDIFIER

The resistive heating elements of the SKE4 convert electrical energy to heat energy that is then transmitted to the surrounding water, raising the temperature to its boiling point, creating steam. The process allows mineral-free, odorless, sterile steam to be generated quickly with any water condition.

Advantages

The SKE4 humidifier generates mineral free, odorless, sterile steam without the replacement cost associated with electrode cylinders.

- Capacities from 6-300 lb/hr (2.7-136 kg/hr)
- Compartmentalized enclosure separates the plumbing, controls, and high-voltage sections
- Remove the stainless steel evaporation chamber quickly without tools (the heating elements and the steam hose remain fixed)
- Patent-pending water level detection system using 2 sensor technologies
- Patented Anti-Foaming Energy Conservation (AFEC) System
- Available with BACnet MS/TP or Modbus communication interface
- Optional ethernet module for BACnet IP or Modbus IP, and Web services
- Independent scheduling system for unit operation and drain cycle

Evaporation Chamber

Evaporate water, not money!

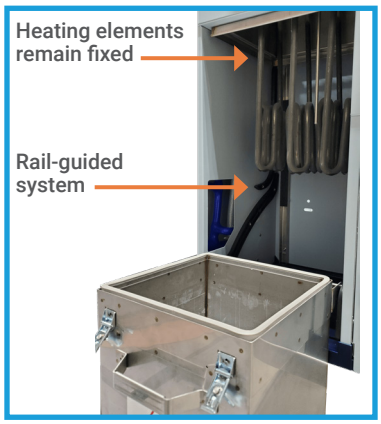
The Neptronic SKE4 humidifier includes a permanent, lightweight and reusable stainless steel chamber instead of a disposable plastic bottle that must be replaced at least once a year, resulting in thousands of dollars of savings. These savings will more than pay for the initial cost of the humidifier.

No tools required

No heavy lifting required

Disconnect the water inlet

Disengage the 2 clamps



Drop down evaporation chamber with rail-guided system

System Overview

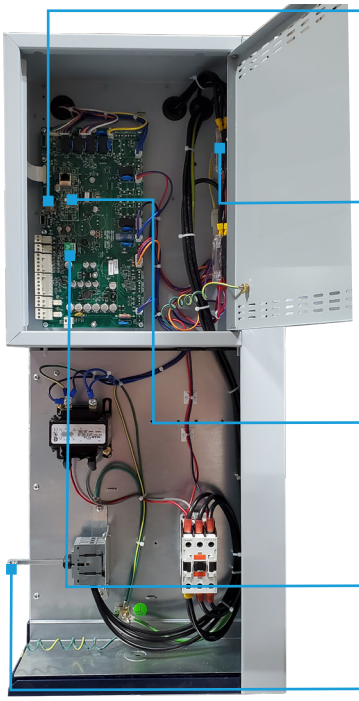
Patent-Pending Water Level Detection System

- Self-cleaning and self-calibrating sensors
- Utilizes 2 different sensor technologies
- Precise and reliable water level detection
- Anti-Foaming Energy Conservation (AFEC) System: drains water when foam is detected

***All Silicone Piping**

- No copper piping
- Resistant to higher water temperatures
- Suitable for all water types including DI and RO (Consult factory for Ultrapure water)

** Alternate piping available*



SD Card

- Event history log
- Firmware upgrade

SSR with External Heat Sink

- No cooling fan required
- Reduces noise level

Ethernet Module (optional)

- BACnet IP or Modbus IP
- Local and remote web services

BACnet MS/TP and Modbus Module (optional)

Disconnect switch

Manual Drain

- Functions even without power

Power drain pump

Quick Connect Water Inlet

- No tools required

Integrated, Multi-Platform Controller

The SKE4 controller is configured specifically for your SKE4 Steam Humidifier.

- User-friendly, menu-driven interface on a 128 x 64 LCD with 8 function buttons for faster configuration and operation
- User rights management system allows for menu to display only functions available to the type of user logged in: End User, Service Technician, Installer or Integrator
- Quick Config menu allows for faster and easier installation, by displaying only the most commonly used functions and configurations
- Independent scheduling system for unit operation and drain cycle configurable via the menu or the BACnet communication interface
- In-field firmware upgradeable via SD card, USB or BACnet
- Simple viewing and exporting of trending log and alarm log

Optional features:

- The selectable BACnet MS/TP or Modbus menus allow access to over 75 objects/registers for integration with a BMS and IoT (Internet of Things)
- Ethernet module
- BACnet IP or Modbus IP
- Web services make it possible to perform humidifier configurations, remote diagnostics and many more functions from any location

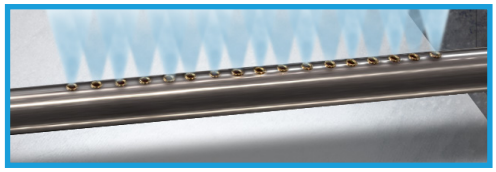
Options

Steam Distribution Systems

For duct distribution installation, the SKE4 requires either a Multi-Steam, S.A.M. or S.A.M.E2 as a steam distribution system to disperse steam.

For fan distribution installation, the SKE4 can supply steam directly with an SDU (Steam distribution unit) into the room without a duct network or for a localized area.

For absorption distance of less than 3' (914mm)

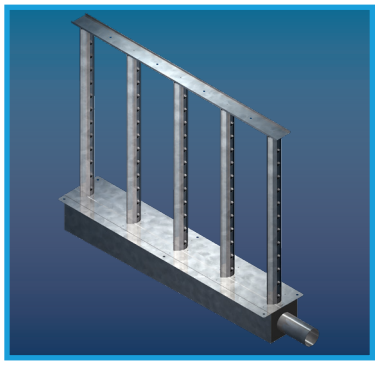


For absorption distance of less than 5' (1500mm)

For Models SKE4-N02 to SKE4-N30

X-Stream™ Technology

- High efficiency insulated steam distributor (channel and header) with steam ejector eyelets
- Double wall 304 stainless steel with encapsulated Armacell UT/ Solaflex™ foam insulation
- Specially engineered 304 stainless steel eyelets prevent condensate ejection on start up and any modulating humidity demand
- Significant reduction in wasted energy
- Reduces airstream heat gain and generated condensate



Multi-Steam™ HD

Outdoor Enclosure

- Fully insulated and constructed from heavy duty steel
- Stainless steel bottom drip pan
- Zinc primer and polyurethane powder coating for resistance against scratches and corrosion on the exterior and interior surfaces
- Built-in anti-freeze and overheat protection
- Easy Installation on a roof curb or stand
- Connection can be made from side or bottom of unit for flexibility in any configuration

Specifications

Output and Power Consumption

Model	Steam	Consumption									Steam Output		
	Capacity lb/hr [kg/hr]	Power (kW)	Amperage								Qty	Diameter inches [mm]	Space Distribution Unit (SDU)
			120/1	240/1	208/1	208/3	480/1	480/3	600/1	600/3			
SKE4-N02	6 [2.7]	2	17	8.5	10	-	4.5	-	3.5	-	1	1 3/8 [35]	SDU4-1
SKE4-N04	12 [5.5]	4	-	17	19	11.5	8.5	5	7	4	1	1 3/8 [35]	SDU4-1
SKE4-N06	18 [8]	6	-	26	30	16.5	13	7.2	10.5	6	1	1 3/8 [35]	SDU4-1
SKE4-N10	30 [14]	10	-	-	-	28	-	12	-	10	1	1 3/8 [35]	SDU4-2
SKE4-N14	40 [19]	13.5	-	-	-	38	-	16.5	-	13.5	1	1 3/8 [35]	SDU4-2
SKE4-N16	48 [21.8]	16	-	-	-	45	-	-	-	16	1	2 [51]	SDU4-3
SKE4-N20	60 [28]	20	-	-	-	-	-	25	-	20	1	2 [51]	SDU4-3
SKE4-N30	90 [41]	30	-	-	-	-	-	36	-	30	1	2 [51]	SDU4-3
SKE4-N20 L	60 [28]	20	-	-	-	56	-	-	-	-	1	3 [76]	-
SKE4-N40	120 [56]	40	-	-	-	-	-	50	-	40	1	3 [76]	-
SKE4-N50	150 [68]	50	-	-	-	-	-	60	-	50	1	3 [76]	-
SKE4-N60	180 [82]	60	-	-	-	-	-	72	-	60	1	3 [76]	-
SKE4-N30X	90 [41]	30	-	-	-	83.4	-	-	-	-	1	3 [76]	-
SKE4-N40X	120 [56]	40	-	-	-	111	-	-	-	-	1	3 [76]	-
SKE4-N70	210 [95]	70	-	-	-	-	-	84	-	70	1	3 [76]	-
SKE4-N80	240 [108]	80	-	-	-	-	-	96	-	81	2	3 [76]	-
SKE4-N90	270 [122]	90	-	-	-	-	-	109	-	91	2	3 [76]	-
SKE4-N100	300 [136]	100	-	-	-	-	-	120	-	96	2	3 [76]	-

Note: Designate the letter M for modulationg units (i.e.: SKE4-N20M)

SKE4 Series

Intertek 4011008

OSHPD
Office of Statewide Health Planning and Development

SKE4-N02
SKE4-N04
SKE4-N06

SKE4-N10
SKE4-N14
SKE4-N16
SKE4-N20
SKE4-N30

SKE4-N20L
SKE4-N40
SKE4-N50
SKE4-N60

SKE4-N30X
SKE4-N40X
SKE4-N70
SKE4-N80
SKE4-N90
SKE4-N100

Humidisoft

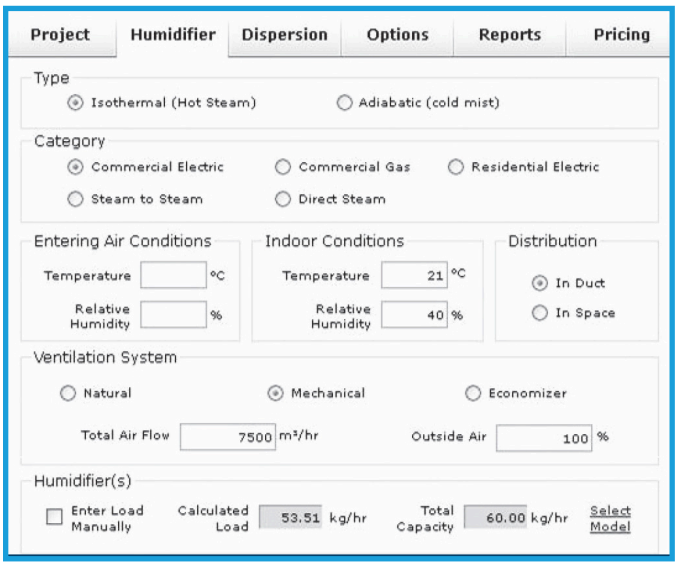
Specify your SKE4 online

Humidifer System Design and Specification Web Application

Ready to specify your Humidifier? Neptronic has developed a web application that saves you time when sizing and specifying Neptronic commercial, industrial or residential humidifiers.

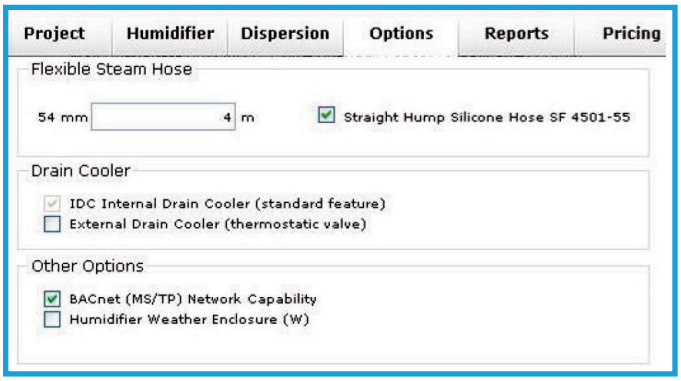
Features

- Automatic humidification load calculation
- Web based
- Selection specific report generator
- Only options related to your selections appear
- Manage users, clients, job sites and humidifier specs
- History log



Easy to Use

Go to neptronic.com, select Humidisoft and log in. Enter design requirements and Humidisoft automatically calculates the humidification load and adjusts available options based on your selections. When done, print a complete schedule, CSI and/or submittal report at the click of a button.



Humidifier Product Line

SKE4

Electric

- Capacities from 6 - 300 lb/hr
- Remove chamber easily, without tools
- Outdoor unit available

SKG4

Gas Fired

- Capacities from 110 - 810 lb/hr
- Modular design
- Outdoor unit available

SKS4

Steam to Steam

- Capacities from 17 - 1250 lb/hr
- Scale management system for easy maintenance
- Insulated external panels

SKVF

Evaporative Cooler

- Airflow up to 6000 CFM
- ECM fan with variable output
- Compact, quiet and standalone

SKR

Residential

- Capacities from 4.5 - 12 lb/hr
- Permanent cleanable chamber
- Reliable siphon drain

SKH

High Pressure Atomizer

- Capacities up to 4638 lb/hr
- Up to 3 zones
- Installation in-duct or in-space

SKV

Evaporative

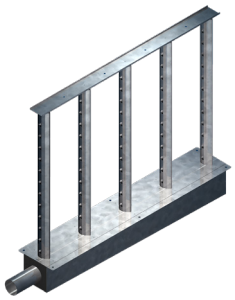
- Free cooling up to 22°F (12°C)
- Custom design to fit your application
- Hygienic operation with silver ion dosing system

SKD

Direct Steam

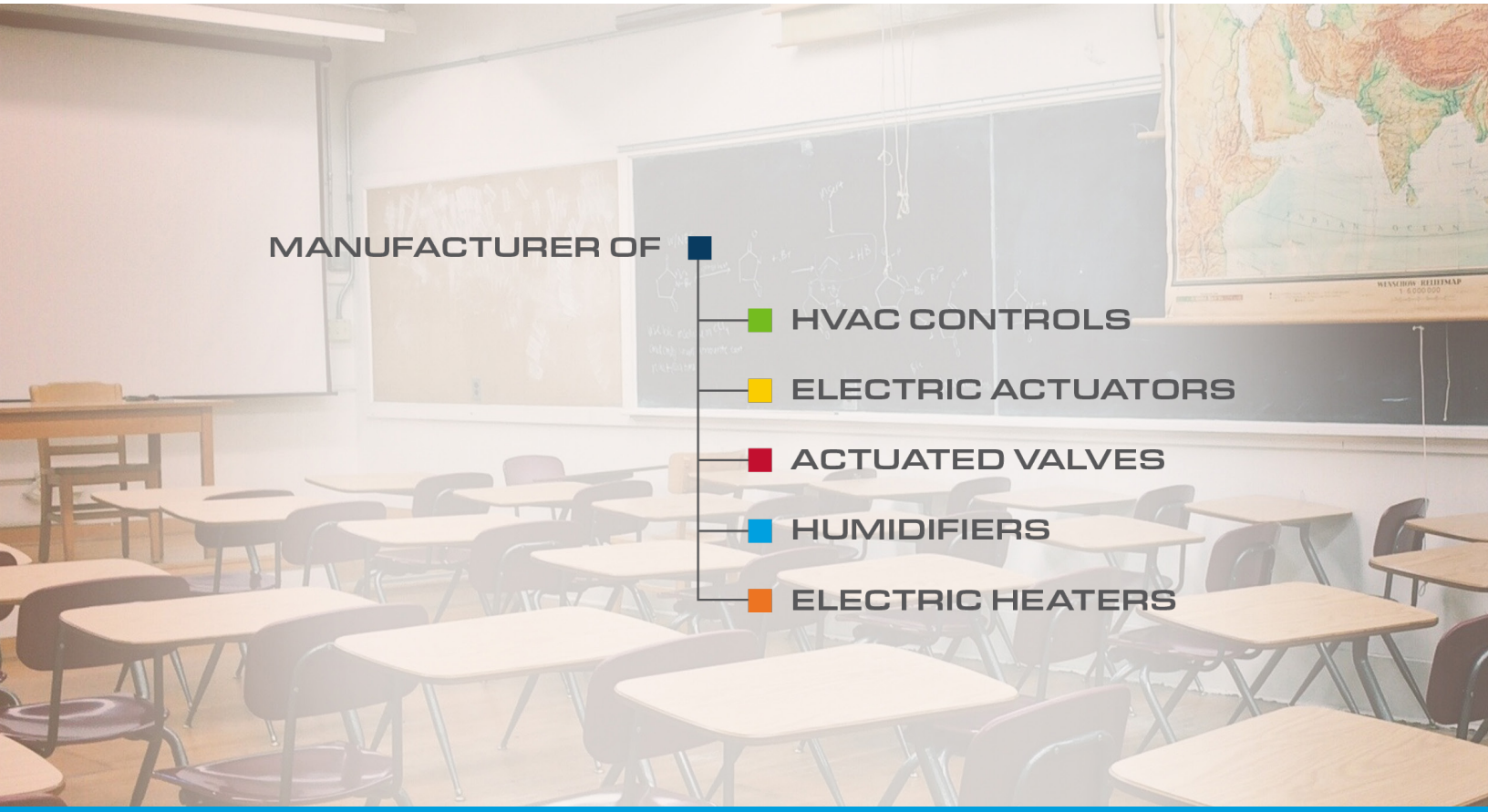
- Capacities from 5 - 1650 lb/hr
- Jacketed or Multi-Steam™ SD/HD
- Unique electronic steam controller
- Optional pressurized condensate return (PCR) system

Distribution



Steam Distribution

- Multi-Steam™ SD/HD distribution
- S.A.M. & S.A.M.E2 wands
- SDU (Space distribution unit)



MANUFACTURER OF

- HVAC CONTROLS
- ELECTRIC ACTUATORS
- ACTUATED VALVES
- HUMIDIFIERS
- ELECTRIC HEATERS

neptronic.com