The SKS humidifier provides chemical free steam by using an on-site central boiler or steam generating station as a heat source. The raw steam under pressure or high temperature hot water (HTHW) from the boiler provides the energy to produce clean sterilized steam.

**SKS Advantages**

The SKS humidifier offers an innovative design and trouble free operation. The wide modulation range, high capacities and ease of servicing make it the most dependable and best steam to steam humidifier in the market.

- Capacities from 33 to 1250 lb/hr (15 to 570 kg/hr) of steam
- Maximum boiler steam pressure of 15 PSI for raw steam and up to 100 PSI for HTHW
- Copper (for HTHW) or stainless steel (for raw steam) heat exchangers
- Ease of servicing: cleans and re-installs within minutes
- Comprehensive scale management system
- AFEC system, mass measuring water sensor
- Drain water tempered to below 140°F (60°C)
- Uses either domestic, RO or DI water
- Available with BACnet communication interface

**Typical Applications**

The SKS is recommended when a pressurized steam or HTHW is available for providing pure and clean atmospheric steam in applications such as:

- Schools
- Hospitals
- Printing
- Museums
- Offices

**Typical Installation**

The main energy source of the SKS is either raw steam under pressure or high temperature hot water (HTHW) from an on-site central boiler.

The raw steam or HTHW passes through the heat exchanger of the humidifier, thus providing the energy to produce clean sterilized steam to be distributed to the Air Handling Unit (AHU) system or duct.
System Overview

**Evaporation Chamber**
The 304 stainless steel evaporation chamber is equipped with handles for easy removal without any tools.

**Heat Exchanger**
Raw steam or HTHW passes through the heat exchanger, thus providing the energy to produce clean sterilized steam. Available in 316 stainless steel (for low pressure) or copper (for HTHW).

**Self Cleaning System**
Scale management system

The SKS is designed with a comprehensive scale management system. The supply of cold water, located at the slopped bottom of the evaporation chamber, forces the precipitated mineral deposits into baskets that can easily be removed.

**Modulating Control**
The SKS are supplied with a linear actuated globe valve giving full modulating control of low pressure steam.
The AFEC technology developed by the Neptronic engineering team offers unique, safe and energy efficient control of boiling water and steam.

The AFEC system consists of:
- Mass measuring water sensor
- Anti-foam sensor
- Electronic high temperature sensor
- Interactive LCD display and microprocessor controller

The foam sensing probe, which is unique to our design, automatically initiates a drain cycle upon foam formation. Unlike the competition, the drain can be initiated only when necessary without having a continuous skimming to drain off expensive boiling water.

**Options**

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

**Steam Distribution Systems**

- **Multi-Steam**: For absorption distance of less than 3’ (99mm)
- **S.A.M.E2**: For absorption distance of less than 5’ (1500mm)

**X-Stream™ Technology**

- High efficiency insulated steam distributor (channel and header) with patent pending steam ejector eyelets
- Double wall 304 stainless steel with encapsulated Armacell UT/Solaflex™ foam insulation
- Specially engineered silicone eyelets prevent condensate ejection on start up and any modulating humidity demand
- Significant reduction in wasted energy
- Reduces airstream heat gain and generated condensate
- For more details, refer to the X-Stream™ sales literature
The SKS offers built in baskets located at the bottom of the evaporation chamber. These trays can be accessed from the top of the unit allowing for easy maintenance and scale removal.

### Specification

#### Heat Exchanger - SLP Stainless Steel 316

<table>
<thead>
<tr>
<th>Model</th>
<th>Nb of heat exc.</th>
<th>Output steam capacity lbs/hr (kg/h) for supply steam pressure</th>
<th>Steam outlet Qty &amp; Ø in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKS-100-SLP</td>
<td>1</td>
<td>33 (15) 53 (24) 67 (30) 80 (36) 100 (45)</td>
<td>(1x) 3&quot; (76)</td>
</tr>
<tr>
<td>SKS-130-SLP</td>
<td>1</td>
<td>43 (19) 69 (31) 87 (39) 104 (47) 130 (59)</td>
<td>(1x) 3&quot; (76)</td>
</tr>
<tr>
<td>SKS-190-SLP</td>
<td>1</td>
<td>63 (28) 101 (46) 127 (57) 152 (68) 190 (96)</td>
<td>(1x) 3&quot; (76)</td>
</tr>
<tr>
<td>SKS-290-SLP</td>
<td>1</td>
<td>97 (44) 155 (70) 193 (87) 232 (105) 290 (132)</td>
<td>(1x) 4&quot; (108)</td>
</tr>
<tr>
<td>SKS-390-SLP</td>
<td>1</td>
<td>130 (59) 208 (94) 260 (118) 312 (142) 390 (177)</td>
<td>(1x) 4&quot; (108)</td>
</tr>
<tr>
<td>SKS-500-SLP</td>
<td>1</td>
<td>167 (76) 267 (121) 333 (151) 400 (182) 500 (230)</td>
<td>(1x) 5&quot; (133)</td>
</tr>
<tr>
<td>SKS-690-SLP</td>
<td>1</td>
<td>230 (104) 368 (167) 460 (209) 552 (251) 660 (314)</td>
<td>(1x) 5&quot; (133)</td>
</tr>
<tr>
<td>SKS-950-SLP</td>
<td>1</td>
<td>317 (144) 507 (230) 633 (287) 760 (345) 950 (432)</td>
<td>(2x) 4&quot; (108)</td>
</tr>
<tr>
<td>SKS-1250-SLP</td>
<td>2</td>
<td>417 (189) 667 (303) 833 (378) 1000 (454) 1250 (566)</td>
<td>(2x) 5&quot; (133)</td>
</tr>
</tbody>
</table>

#### Heat Exchanger - CHP Copper

For HTHW - CHP Copper High Pressure (100 PSI Max.)

<table>
<thead>
<tr>
<th>Model</th>
<th>Output steam capacity lbs/hr (kg/h) for supply HTHW pressure</th>
<th>Steam outlet Qty &amp; Ø in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKS-200-CHP</td>
<td>40 (18) 65 (30) 85 (39) 150 (69) 220 (99) 330 (150) 440 (200)</td>
<td>(1x) 4&quot; (108)</td>
</tr>
<tr>
<td>SKS-333-CHP</td>
<td>65 (29) 110 (50) 145 (66) 255 (116) 365 (166) 550 (249) 730 (333)</td>
<td>(2x) 4&quot; (108)</td>
</tr>
<tr>
<td>SKS-667-CHP</td>
<td>130 (59) 220 (100) 290 (132) 510 (231) 730 (331) 1100 (499) 1465 (667)</td>
<td>(2x) 5&quot; (133)</td>
</tr>
</tbody>
</table>
Humidisoft
Specify your SKS Online

Humidifier System Design and Specification Web Application

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

Features

- Automatic load calculation
- Web based
- Report generator
- Display absorption distance
- Steam Dispersion Selection
- Humidifier Options
- Project Management

Easy to Use

Once you have registered for an online account, you can start creating projects and create your very own humidifier virtually with all the available features with ease.
Humidifier Product Line

**Engineered to Last**

### Electric
- **SK300**
  - Capacities from 6 - 270 lb/hr
  - Permanent cleanable chamber
  - Outdoor enclosure available

### Residential
- **SKR**
  - Capacities from 4.5 - 12 lb/hr
  - Permanent cleanable chamber
  - Reliable Siphon drain

### Gas Fired
- **SKG3000**
  - Capacities from 110 - 810 lb/hr
  - Modular design
  - Outdoor enclosure available

### Direct Steam
- **SKD**
  - Capacities from 7 - 1157 lb/hr
  - Jacketed or Multi-Steam Type
  - Unique Electronic Steam Controller

### Steam to Steam
- **SKS**
  - Capacities from 33 - 1250 lb/hr
  - Scale management system
  - Insulated external panels

### Evaporative
- **SKV**
  - Free cooling up to 12 °C (22 °F)
  - Custom design to fit your application
  - Hygienic operation with silver ions dosing system

### High Pressure Atomizer
- **SKH**
  - Capacities up to 2500 lb/hr
  - Up to 32 zones
  - Installation In-duct or In-space

### Steam Distribution
- **Distribution**
  - Multi-Steam distribution
  - S.A.M & S.A.M.E2 wands
  - SDU (Space distribution unit)

### Humidity Controls
- **Controls**
  - Humidity controls / sensors
  - Safety controls
  - BACnet compatible
MANUFACTURER OF

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

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