



# **Pan Humidifier**

Electric Resistance type

## **Principle of operation**

Pan Humidifiers are based on Isothermal humidification. Tubular heaters are immersed in water, used to heat the water and produce steam. Uses electricity as an external source to change water to steam.

Pan Humidifiers are based on Isothermal humidification. It uses electricity as an external source to convert water to steam. Humidification water is heated according to the principle of immersion heaters i.e. When a strong electric current is passed through the heating element, it heats the water around it.



## **KEY FEATURES**

- Stainless steel ANSI 304 construction minimizes the deposit formation
- and hence minimum maintenance
- Low density heating element ensuring safe operation
- Built in Safeties
- Easy & quick interlocking with AHU, humidistat, field controls
- Complete package with all plumbing and electrical works done and factory tested.

## **CONSTRUCTIONAL FEATURES**

- Immersion type Tubular heating elements
- Chrome plated seamless Copper Sheath/ Incoloy available as option
- Warm-up heater to maintain the water temp. between 60-70°C for faster response time.
- Water tank of Stainless-steel ANSI 304 sheet
- Fiberglass insulation & with G.I./Aluminum cladding
- Terminal box for power and control connections
- Available in Wall mounting, Floor standing design



## STANDARD CONTROLS & SAFETIES

- Electronic water level sensor
- Float valve for water make up
- Indicators for unit ON/Trip status
- Sight Glass
- Geyser-stat
- Safety-stat

## CUSTOM CONTROLS

- Automatic water flushing device
- Manual reset thermal cutout
- Water level indicator
- Analog / Digital Humidistat
- Humidity transmitter
- PID for humidity control
- Humidifier Control Panels with varied control options:
- De-energizing magnetic contactors for RH control
- Step Controller for multi stage humidity control
- SCR/Thyristor Control for precise control from 0- 100%
- BMS Compatible

## TECHNICAL PARAMETERS

Model	Power	Electrical Supply		Voltage	No Of	Steam	Dimensions (mm)			BTU/HR	Net Weight (Kg)
	(KW)	Amp	Main Swt Rating	(V)	Elements	Outlet	L	W	H		
EH-01	1.5	2	6	415	3	1x1.5"	725	275	250	5,120	18
EH-03	3.0	4	6	415	3	1x1.5"	725	275	250	10,240	18
EH-04	4.5	6	10	415	3	1x1.5"	725	275	250	15,350	21
EH-06	6.0	8	16	415	3	1x1.5"	725	275	250	20,470	22
EH-07	7.5	10	16	415	3	1x2"	825	275	250	25,590	25
EH-09	9.0	13	20	415	3	1x2"	825	275	250	30,710	25
EH-12	12.0	17	25	415	6	1x2"	825	350	325	40,950	30
EH-15	15.0	21	32	415	6	1x2"	825	350	325	51,180	30
EH-18	18.0	25	40	415	6	1x2"	825	350	325	61,420	30
EH-21	21.0	29	40	415	6	1x2"	825	350	325	71,650	30
EH-24	24.0	33	63	415	12	2x2"	825	400	375	81,890	40
EH-27	27.0	38	63	415	12	2x2"	825	400	375	92,130	40
EH-30	30.0	42	63	415	12	2x2"	825	400	375	1,02,360	40

Higher rating Resistance Humidifiers are also available to meet your requirements. Please consult factory. Dimensions & Weight indicated are approximate. Always check submittal prints for final parameters.

## HEAT REQUIREMENT CALCULATIONS

$$\begin{aligned} &\text{Heat Required} \\ &\text{to Raise Water Temperature from } T^{\circ}\text{C to } 100^{\circ}\text{C} \\ &= \frac{(\text{Specific Heat of Water}) \times \text{Ltrs.} \times \Delta T^{\circ}\text{C}}{3415} \end{aligned}$$

$$\begin{aligned} &\text{Heat Required} \\ &\text{to Create vapour at } 100^{\circ}\text{C} \\ &= \frac{(\text{Specific Heat of Vaporization}) \times \text{Ltrs.} \times 0.9478}{3415} \end{aligned}$$

Total KW Required = Sum of KW Obtained from above equations.