BEST A/V SYSTEMS
HUMIDIFICATION
HUMIDIFIERS

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Angel Steam Humidifier
ANDI & ANSW

GENERAL DESCRIPTION

The Best A/V Angel Steam Humidifier (ANDI/ANSW) is designed for low capacities requirements. The ANDI is suitable for DI/RO pure water, while ANSW is for softened or city water.

Both featured with Stainless Steel Body, Incoloy Heaters, Digital LED Display/Controller, SSR Controller, 3-in-one Breaker (Electric-Leakage, Over-Current and Short-Circuit breaker), and many other delicate controlling components. It is a low-cost unit, yet equipped with simple preheat function and efficient proportional control system. It is very suitable for humidification capacities below 67 kg/hr.

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KEY FEATURES

Earth Leakage Breaker:

This unique breaker is with multiple functions as follows:

- Electric-Leakage breaker
- Over-Current breaker
- Short-Circuit breaker

Earth Leakage Breaker

Material: (for ANDI)

- The frame and most inside fittings is constructed with high quality stainless steel
- Withstands corrosive DI/RO pure water
- No mineral build-up
- Minimal or no maintenance

Material: (for ANSW)

- The frame and most inside fittings is constructed with high quality stainless steel
- Minimal maintenance

SSR Controller:

Only the first one is SSR controller, the rest is/are relay/s controller. Major advantages of SSR control are:

- 3-Phases SSR modulation
- No connection points, hence no sparking
- Easy to control
- Quiet operation
- Linear proportional control: modulating humidifier output from 0% to 100% of maximum capacity

This device provides an accurate and easy way in controlling the output of power.

Timer-Operated Solenoid Valve Auto Drainage: (for ANSW only)

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- Automatically or manually draining water of vapor chamber in intervals, preventing mineral build-up and condensation.
- draining interval can be set from 1 to 30 minutes and draining time from 1 to 30 seconds.

Timer-Operated Solenoid Valve

LED Digital Display:

- Control and Display the output of humidifier system in 0~100%
- Good humidification control by controlling humidification output proportionally
- Accepts control room's signal in 2~10V or 4~20mA
- Can be set manually on the humidification output

Supply of Water:

RO/DI supply water are recommended for high efficient operation, reducing heat loss, prolong equipment's life span, and minimize maintenance time.
For ANDI: Reverse Osmosis or De-Ionized water.
(also adaptable to above 8MΩ pure water)
For ANSW: City Water, Softened Water.

Capacity Range:

- From 4 to 67 kg/hr for each unit
- Available for multiple-series connection

Proven Performance:

Control can be up to ± 2% RH, if sensing location, sensor quality and temperature control are in good condition.

Three Over-Heat Protections:

The unit provides three over-heat protections:

- **Make-Up Solenoid Valve :** control water levels. Recommended working pressure for Solenoid valve: 1~10kg/cm^{2}g.

- **Double-Float Switch:** Double floats valve is to control water levels and with low-water protection. When vapor chamber's water is reaching low water level, it

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will then actuate the solenoid valve and allow supply water to come in; when water level is reaching the highest point, it will shut down the solenoid valve and close the water supply. And when the water level is lower than the low-water point, it will turn off the unit's power and stop humidification.

- **Bimetal Temperature Protection Switch :** This services as the final protection for over-heating. When vapor chamber temperature is higher than factory-set temperature of 120^{O}C, shall shut down the humidifier and require operator to make an inspection. Also need manually turn on the power to re-energize the humidifier.

In sum, these three protections are designed in a way to minimize the damages caused by overheat and hence to save a lot of money from replacing and downtime for customers.

Heating Elements:

- Low watt density ensures heating element life for many seasons.
- In the unlikely event of an element burnout, heating elements can be removed easily with a small wrench.
- The heater is made of INCOLOY, is excellent for DI/RO water (also adaptable to above 18MΩ pure water) heating system and corrosion-proof.
- Can bear high current and voltage.

Heating Elements

Vapor Chamber:

Inner cabinet is made of stainless steel and seamed with same quality welding.

One-Year Limited Warranty:

Best A/V ANDI or ANSW humidifier warrants to the original user that its products will be free from defects in materials and workmanship for a period of one year after delivery.

Steam Hose: (Optional)

- 17 bar (250psi) robust steam hose, high tensile steel cords

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- Mainly made of EPDM, preventing loss of heat
- Rating: 17 bar / 236°C
- Size range: 3/4" ~ 1-1/2"
- Easy installation, long life span, maintenance free.

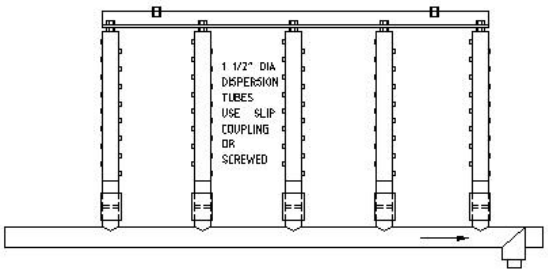
Drain Solenoid Valve - for Softwater System: (optional)

A drain solenoid valve is a must for softwater system as the valve will drain the vapor chamber's condensate at a fixed time and fixed amount to prevent mineral dust, such as Calcium, Magnesium, Silicon, etc…, and to prolong heater elements' life span and maintain heating efficiency.

Dispersion Panel: (optional)

In order to obtain high efficiency in dispersing of steam, equip the unique Best A/V Quick-Absorb dispersion tube panel is highly recommended.

- Quick-Absorb is an economic and ideal steam dispersion tube panel for limited absorption distance and middle capacity system. It is also made of stainless steel, a rapid and drip-free steam dispersion panel. Refer to the details described in quick-Absorb section of this catalog.



Quick-Absorb

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ANDI/ANSW Specifications & Capacities for each Unit / Chamber

MODEL		Steam Capacity (kg/hr)	Heater (Q'TY)	SSR (Q'TY)	Current Draw (Amps)					KW
					Single-Phase		Three-Phase			
					110V	220V	220V	380V	480V	
ANDI ANSW	4-1	5.3	1~3	1	36.0	18.2	10.5	6.10	4.8	4
	7-1	9.3	1~3	1	63.6	31.8	18.4	10.6	8.4	7
	8.3-1	11	1~3	1		37.7	21.8	12.6	10.0	8.3
	12-1	16	3	1			31.5	18.2	14.4	12
	15-1	20	3	1			39.3	22.7	18.0	15
	18-1	24	3	1				27.3	21.6	18
	21-1	28	3	1				31.9	25.2	21
	25-1	33.5	3	1				38.0	30.0	25
	36-2	48	6	2				54.6	43.3	36
	50-2	67	6	2				76.0	60.0	50

Dimensions – complete set (Unit: mm)

MODEL		L	W	H	N.W. (kgs)
ANDI ANSW	4-1	530	340	935	35
	7-1	530	340	935	35
	8.3-1	530	340	935	35
	12-1	530	340	935	38
	15-1	530	340	935	38
	18-1	530	340	935	38
	21-1	530	340	935	38
	25-1	530	340	935	38
	36-2	880	340	935	56
	50-2	880	340	935	56

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