EHU-750 SERIES

ELECTRODE HUMIDIFIERS

EHU-750 series

EHU-750 is a reliable electrode humidifier producing sterile steam for all your humidification needs.

Features:

- Capacity ranging from 1 kg/h to 99 kg/h (2.2 lb/h to 218 lb/h).
- Accept all common control signals and Modbus protocol.
- Conductivity from 125µS/cm to 1250µS/cm.
- Possible conductivity 30µS/cm (subject to approval).
- Disposable and cleanable cylinders.
- Plain stainless steel electrodes.
- Menus available in 8 languages (Optional for EHU 751).
- Easy to operate and to install.

Options:

- Remote information board providing information on maintenance, steam production and defect.
- Sanitation system (keeping up water temperature inside boiler).
- Protective cabinets for outdoor installations.
- Support legs for ground installation.
- Stainless steel waste water tank for draining facilities.
- Bacnet connection.
- LonWorks connection.
- Drain Cooling Kit.

How the series EHU-750 works

The Armstrong Series EHU convert drinkable water to steam and distributes it to bring the relative humidity up to the desired level. It's ideal for providing humidification where no steam is available or where a steam source is too remote.

The humidity demand, sensed by the transmitter, is indicated by the EHU demand display (Optional for EHU-751). A microprocessor converts this demand signal into an amperage requirement. The internal power contactor closes, applying voltage to the electrodes, and the fill valve begins to fill the tank.

Water enters the bottom of the steam generator tank and rises until it reaches the electrodes. Upon contact, electrical current flows through the water, causing it to boil and produce steam (Figure 3-1).

When the water level rises, as shown in Figure 3-2, increased electrical current flows through the water, producing more steam. This increase will continue until the required output of steam (i.e. amperage requirement) is reached.

Figure 3-3 shows what happens when the humidistat demand signal drops below a minimum demand: The contactor is de-energized, and steam output stops.

A duct high-limit humidistat or an air flow interlock switch may also stop steam output. These devices prevent excess moisture and condensation in the duct.

The Series EHU may also be used in combination with an Armstrong Fan Package for direct area discharge of steam.

A high-water electrode sensor prevents water carryover into the duct due to a high water level in the tank.

An automatic drain cycle blows down mineral-laden water to extend tank life and reduce maintenance.

An overcurrent protection circuit will drain water from the tank to reduce current flow and then de-energize the contactor to stop current flow if overcurrent still exists.

After a period of no demand on the Series EHU-750, an "End of Season" drain is initiated to eliminate the potential for stagnant water to remain in the tank.

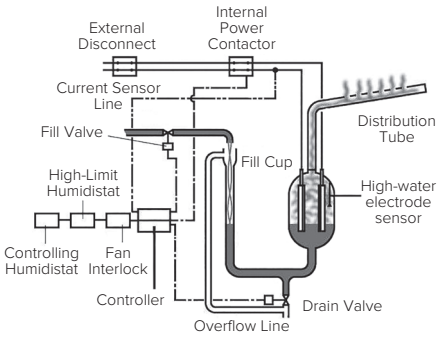


Figure 3-1. 100% Demand. Filling with water. low, increasing steam output.

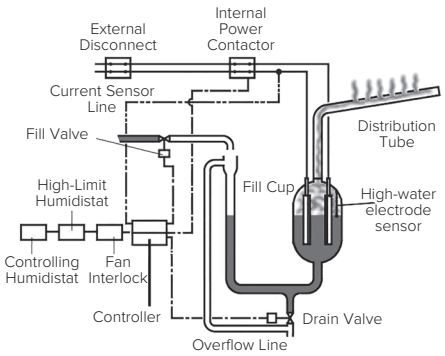


Figure 3-2. 100% Demand. Fill valve cycling to maintain output. High water level. High, constant steam output.

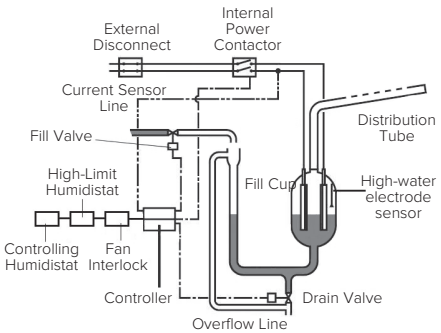
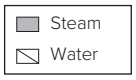
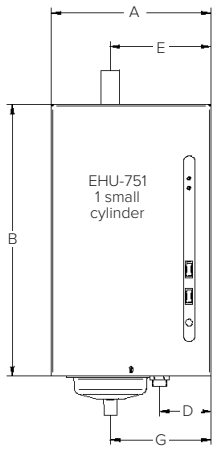
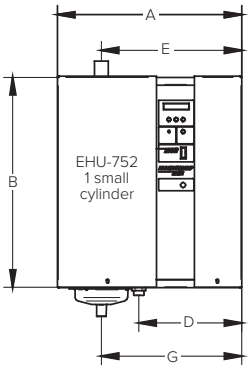


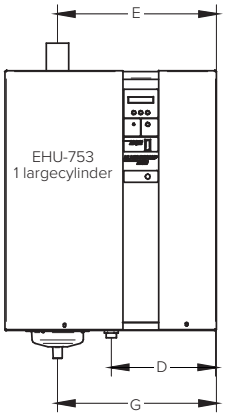
Figure 3-3. No demand. Contractor opens. No steam output.

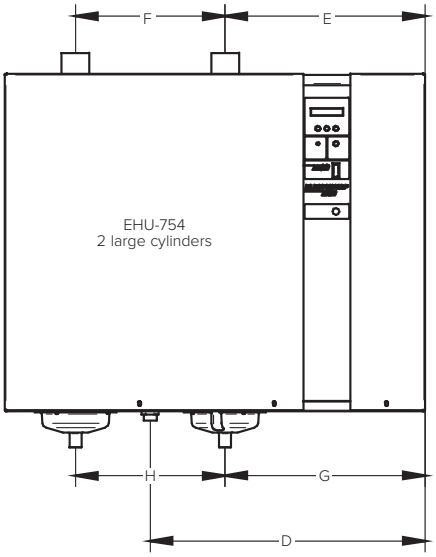


Dimensions and Weights









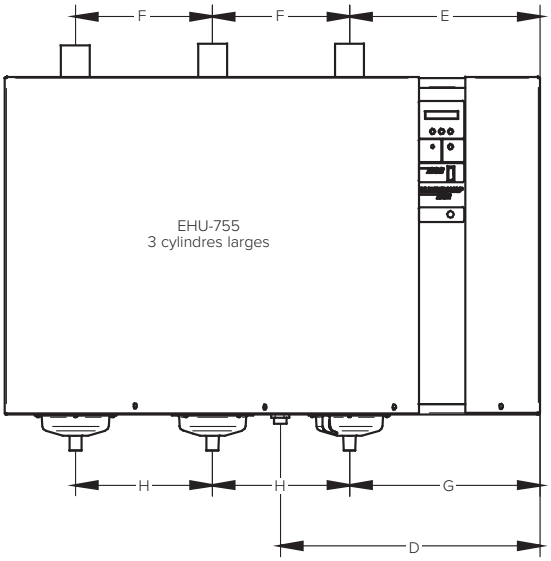


Table 4-1. Physical Data											
Model	Dimensions in mm									Weight in kg /lb	
	Humidifier			Water inlet	Steam outlet	Steam outlet spacing	Drain outlet	Drain outlet spacing	Steam outlet diameter		
	A	B	C	D	E	F	G	H	Ø	Empty	Operating
EHU-751	490	550	272	215	140	-	140	-	25	11 / 24	15 /33
EHU-752	475	540	217	215	355	-	355	-	25	15 / 33	23 / 50
EHU-753	550	680	272	270	410	-	410	-	40	22 /48	37 /81
EHU-754	845	680	272	270	400	300	400	300	40	30 / 66	60 /132
EHU-755	1075	680	272	270	380	275	380	275	40	45 / 99	90 / 198

Designs, materials, weights and performance ratings are approximate and subject to change without notice.
Visit **armstrong**international.com for up-to-date information.

EHU-750 series Capacity tables

Model	Output		Three Phase							
	Kg/h	lb/h	380 V	400 V	415 V	440 V	460 V	480 V	575 V	600 V
			kW	kW	kW	kW	kW	kW	kW	kW
EHU-752 (One small cylinder)										
EHU-752-5	5.0	11.0	3.80	3.76	3.76	3.76	3.78	3.76	3.74	3.76
EHU-752-8	8.0	18.0	6.00	6.02	6.03	6.02	5.98	6.02	6.00	6.02
EHU-752-10	10.0	22.0	7.50	7.52	7.52	7.52	7.55	7.52	7.47	7.62
EHU-752-15	15.0	33.0	11.30	11.29	11.28	11.29	11.25	11.28	11.31	11.28
EHU-753 (One large cylinder)										
EHU-753-20	20.0	44.0	15.00	15.05	15.04	15.05	15.02	15.04	15.04	15.04
EHU-753-30	30.0	66.0	22.60	22.57	22.57	22.57	22.58	22.56	22.52	22.56
EHU-753-30HC	33.0	72.0	24.69	24.83	24.84	25.00	25.17	24.62	24.58	24.68
EHU-754 (Two large cylinders)										
EHU-754-40	40.0	88.0	30.10	30.10	30.09	30.10	30.05	30.08	30.09	30.08
EHU-754-50	50.0	110.0	37.60	37.62	37.61	37.62	37.60	37.59	37.56	37.59
EHU-754-60	60.0	132.0	45.10	45.14	45.13	45.14	45.15	45.11	45.13	45.11
EHU-754-60HC	66.0	145.0	49.38	49.66	49.68	49.50	49.65	49.25	49.19	49.25
EHU-755 (Three large cylinders)										
EHU-755-90	90.0	198.0	67.50	67.65	67.70	67.72	67.65	67.67	67.65	67.67
EHU-755-90HC	99.0	218.0	74.08	74.49	74.54	74.50	74.73	74.69	74.73	73.87

Model	Three Phase								
	208 V			220 V			230 V		
EHU-752 (One small cylinder)									
EHU-752-5	4.5	10.0	4.13	5	11	4.20	5	11	4.14
EHU-752-8	7.0	16.0	6.49	8	18	6.50	8	18	6.49
EHU-752-10	9.0	20.0	8.07	10	22	8.10	10	22	8.07
EHU-753 (One large cylinder)									
EHU-753-15	13.6	30.0	12.04	15	33	12.00	15	33	12.04
EHU-753-20	18.0	40.0	15.98	20	44	16.00	20	44	15.98
EHU-753-25	23.0	50.0	19.95	30	55	19.80	30	55	19.95
EHU-754 (Two large cylinders)									
EHU-754-30	23.0	50.0	26.21	32	70	26.20	32	70	26.21
EHU-754-40	36.0	80.0	31.84	40	88	31.80	40	88	31.84
EHU-755 (Three large cylinders)									
EHU-755-50	45.0	100.0	39.75	50	110	39.90	50	110	39.75
EHU-755-60	54.0	120.0	47.66	60	132	47.90	60	132	47.66
EHU-755-70	-	-	-	70	154	55.50	70	154	55.57

Model	Output		Single Phase (l+N)		
	Kg/h	lb/h	115 V	220 V	230 V
			kW	kW	kW
EHU-751 (One small cylinder)					
EHU-751-1	1.0	2.2	-	0.75	0.75
EHU-751-1.5	1.5	3.3	2.47	-	-
EHU-751-2	2.0	4.4	-	1.50	1.50
EHU-751-2.5	2.5	5.5	4.05	-	-
EHU-751-3	3.0	6.6	-	-	-
EHU-751-4	4.0	8.8	-	-	-
EHU-752 (One small cylinder)					
EHU-752-5	5.0	11.0	-	3.80	3.75
EHU-752-10	10.0	22.0	-	7.50	7.52

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Features and benefits

Digital Display with Keypad: The screen offer clear message to the operator for easy use and maintenance of the unit.

Self Diagnostics: The unit continuously monitors the operation through self- diagnostics. If it sees an issue the unit first tries to fix it itself and then if the problem persist it will display one its messages to indicate the condition.

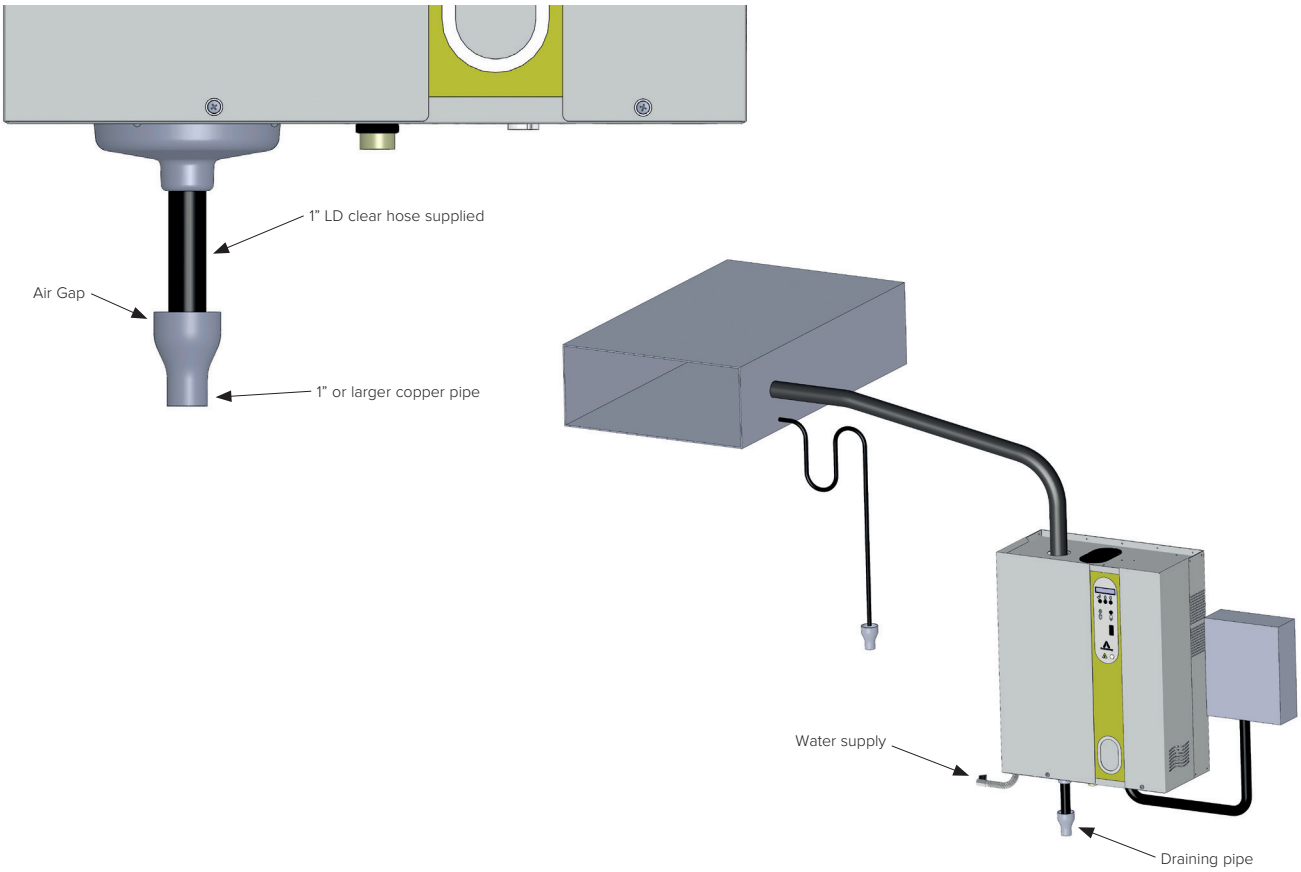
Adjustable Output: The EHU-750 series units are fully modulating, but the unit also has the ability to limit the maximum output

Cleanable and/or disposable cylinder: The tank provided with the EHU-750 series combines economical maintenance and convenience. You can easily disassemble and inspect the steam generator tank. When it is necessary, you have the option to clean the cylinder or replace it entirely.

Onboard Controller: This series also features an onboard controller, which gives the user the capability to install sensors instead of a standard humidistat or modulating high limit. This makes wiring easier as the sensors that are used to monitor the space conditions with the BMS can also be used to control the humidifier.

Standard Communications: As mentioned above, all EHU-750 series units come standard with Modbus communications (RS485 connection). This allows the user to communicate with the humidifier through the Building Management System (BMS). The humidifier can be controlled and monitored from a remote location. Everything that is accessible through the front display of the humidifier will be visible through the BMS. With being native Modbus, the unit can be easily converted to BACnet or LonWorks with the use of a protocol translator.

External connections: The water and drain connections are easily accessible points on the bottom of the unit to make installation much simpler and easier. This also eliminates some connection points inside the cabinet to help reduce the risk of electric failure due to moisture in the cabinet.



Typical installation of an EHU-750

Typical Specification

1. Armstrong EHU-750 is an electrode boiler producing sterile steam.
2. Humidifiers comply with CE requirements.
3. Galvanized zinc, epoxy painted cabinet with separate water and electrical compartments for safety. Secure removable door panels on 3 sides, providing easy access for installation and maintenance.
4. The humidifier fill water line(s) shall have an air gap to prevent backflow (siphoning) of contaminated water into water supply system.
5. Can operate with tap, softened, DI or RO water (30*-1000 µS).(* Subject to approval).
6. Draining settings adjustable depending on the quality of supply water in order to optimize energy consumption.
7. Accepts fully common modulating signal ON/OFF or proportional. The microprocessor regulates proper filling and draining, is able to limit capacity at 50% of nominal output and modulates capacity between 20 to 100%. Accuracy of ± 4%.
8. Digital display and keypad on the front panel indicating all functions of the humidifier including steam production, actual current, steam required, control signal output, high level water, over-current, actual power consumption, operational hours, maintenance due and interval, steam volume produce, fault codes.
9. Disposable or cleanable cylinders in polypropylene with fiberglass including plain stainless steel electrodes, divider, sediment strainer and electrode for water high level detection.
10. Plain and stainless steel power electrodes for longer run time.
11. Connection between electrodes and power cables in brass for good electrical contact quality.
12. Two power lamps on the front of the unit to indicate power and steam production.
13. Programmable maintenance schedule timer: 300 hours in standard, adjustable from 100 to 20 000 hours.
14. Special humidification drain solenoid valve with drain cooling and auto anti-scale obstruction sequence if an incomplete drain is detected.
15. Anti-foaming automatic drains and automatic conductivity compensation system.
16. Supplied with stainless steel steam distribution pipes with separate condensate drains. For large duct or short absorption distance, humidifiers shall be compatible with Humidipack and Expresspack.
17. End-of-season auto drain of the cylinder after period of inactivity: 3 days in standard, adjustable from 12 hours to 7 days.
18. Water supply pressure to humidifier shall range between 1 to 6 bar, inlet solenoid valve with flow restrictor and built-in strainer.
19. Water level detection by electrode.
20. Capacity to be linked with humidity sensor and humidistat for fully automatic control.
22. Can operate with duct pressure up to 150 mm WC.
23. One dry contact available for remote information.
24. The humidifier should have the following options available:
    a. BMS with Bacnet communication and LonWorks.
    b. Weather proof cabinet for outside application.
    c. Support Legs for non-wall mounted installation.
    d. Drain cooling kit.
    e. Sanitation system (maintaining temperature inside boiler).
    f. Stainless steel waste tank for drain.
    g. Open door detection.
    h. Pressure compensation accessory up to 1200 mm WC / 11”8 in WC.

INTELLIGENT SOLUTIONS IN STEAM, AIR AND HOT WATER

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