



US
SERIES



US SERIES

Condair's US Series
Cool Mist Ultrasonic
Humidifier



About the US Series Ultrasonic Humidifier

Overview

Condair is the world leader in humidification and evaporative cooling technology, creating the most appropriate solutions for every specific need. To this end, the new US Series, Ultrasonic Humidifiers, have been developed and engineered to meet the highest standards of cost-effective and efficient performance. Designed for ease of installation, simplicity of operation, reliability, energy efficiency and control accuracy, the US Series is ideally suited for many applications.

Using piezoelectric transducers operating at 1.7 MHz, the US Series generates an ultra-fine (1 – 3 micron) cool mist. This mist is then distributed directly into the space using a quiet and efficient Blower Pack. Since, unlike steam humidifiers, no water is boiled, ultrasonic technologies offer some of the lowest energy humidification on the market.

Additionally, the mist cools the air slightly as it evaporates generating more potential savings.

The US series has a lower operating cost than steam humidifiers. With an approximate power of 35 W per lbs/h of humidification, the US series will save up to 90% in energy costs compared with steam humidifiers. In addition, the US series provides free additional adiabatic cooling (Approx. 1 Ton of cooling per 10lbs/hr).

As an example, a 20 lbs/hr US series operating at 3000 hours per season would generate a payback compared with a similarly sized electric humidifier in only 2.5 years.



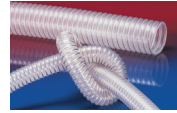
Specification	US-7	US-13	US-20	US-40
Capacity lbs/hr (kg/hr)	7 (3)	13 (6)	20 (9)	40 (18)
Dimensions (HxWxD): in (mm)	31x21x16 (780x530x405)	31x21x16 (780x530x405)	31x21x16 (780x530x405)	31x39x16 (780x1000x405)
Dry Weight lbs (kg)	88 (40)	88 (40)	88 (40)	161 (73)
Water	RO or DI	RO or DI	RO or DI	RO or DI
Power (KW)	0.3	0.5	0.7	1.3
Voltage/ Frequency/ph	110-240V / 50-60 Hz /1ph	110-240V / 50-60 Hz /1ph	110-240V / 50-60 Hz /1ph	110-240V / 50-60 Hz /1ph
Control	±1%	±1%	±1%	±1%

US Series | OPTIONS

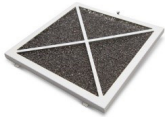
The following options are available for the US Series humidifier. Please refer to the chart below for required quantities based on humidifier model.



PART NUMBER - 2594401
Inlet Air Filter (Required)
 Merv 12 (Consumable)



PART NUMBER - 2594413
Remote Blower Pack Installation Kit
 9 ft (qty vary with model)



PART NUMBER - 2588764
Blower Pack Filter Set
 Fan dust protection only

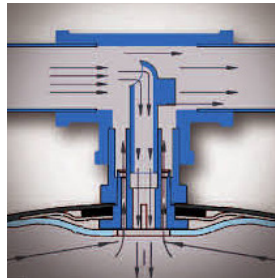
PART NUMBER - 2594996
Kit, Cleaning & Disinfection
 - Descaling
 - Cleaning Solution (H2O2)

Unit Size	PN	Quantity Required			
		US-07	US-13	US-20	US-40
*Ultrasonic Blower Pack, UB-07	2588747	1			
*Ultrasonic Blower Pack, UB-13	2588746		1		
*Ultrasonic Blower Pack, UB-20	2588741			1	2
Flexible Tube (x1) for Remote BP Mount	2594413	1	2	3	*6
US Blower Pack Filter Set	2588764	1	1	1	2
*Inlet Air Filter	2594401	1	1	1	2
Kit, Cleaning & Disinfection	2594996	1	1	1	1

*Required options. (US-40 always requires 6 flexible tubes).

WATER TREATMENT OPTIONS

RO-U Series – Reverse Osmosis



PRODUCT	RO-U Series – Reverse Osmosis
MANUFACTURER	Condair Ltd
PART NUMBER	2591880
CAPACITY	Rated Nominal Capacity: 4.4 GPH (20 L/hr)
INCLUSIONS	<ul style="list-style-type: none"> • Reverse Osmosis Unit - Pre-treats and removes unwanted water contaminants and minerals. • Dual high quality membranes remove more than 97% of mineral content • 5 micron and carbon pre-filters included for long membrane life • Water quality monitoring with maintenance warning • Integrated electric booster pump • Automatic flush sequence for optimal membrane performance • Pressure switch • Non-return valve • Stainless steel flow-through buffer tank with wall mount hardware • Powered w/ 120 to 24VAC transformer (UL rated) • DI cartridge optional • 2 Year Parts Warranty
EXCLUSIONS	Wiring, piping, external control valve and labor warranty.

WATER TREATMENT OPTIONS

DI - High Purity Monobed Deionizer

This deionizer option incorporates an ultra-pure low-odor resin with a maximum capacity of 2350 grains (self-contained) as well as Calcium Carbonate CaCO_3 . Recommended as an option with reverse osmosis systems where zero dusting is required.



PRODUCT	DI - High purity monobed Deionizer
MANUFACTURER	Aries Filterworks
PART NUMBER	<ul style="list-style-type: none"> • Monobed deionizer housing - 2597511 • Resin cartridge (Pack of 4) - 2597509 • Monitor Light - 259513 • Booster pump - 2597512
CAPACITY	Rated Nominal Capacity: 90 GPH (409 L/hr)
INCLUSIONS	<ul style="list-style-type: none"> • ResinTech® mixed bed resin • Low odor resin for humidification applications • Adds on to RO-U system, installed after buffer tank • Operating flow rate 30 GPH (136 L/hr) • Max flow rate 90 GPH (409 L/hr) • Min inlet pressure 20 psi (1.4 bar) • Max inlet pressure 125 psi (8.6 bar) • Mounting bracket included. Housing available with 3/4" NPT(M) or 1" NPT(M) connections. Hose adapters not included. Accessory for installation of monitor light available as an option if required. • Housing (diameter x length) 4.5" x 20" • Powered by 110 VAC • Built-in monitor light for resin replacement (green/red) • 2 Year Parts Warranty
EXCLUSIONS	Piping and labor warranty.

WATER TREATMENT OPTIONS

Ultrapure monobed deionizer



This deionizer option incorporates an ultrapure resin with a maximum capacity of 1050 grains (self-contained) as CaCO_3 . Recommended as an option with reverse osmosis systems for highly sensitive applications (e.g. laboratories).

PRODUCT	DI - Ultrapure monobed deionizer – Highly sensitive applications
MANUFACTURER	Cole-Parmer
PART NUMBER	Monobed deionizer with monitor light and adaptors (no resin included) - 2595819 Resin cartridge - 2595820
CAPACITY	Rated Nominal Capacity: 60 GPH (227 L/hr)
INCLUSIONS	<ul style="list-style-type: none">• FDA-grade ultraclean resin• ASTM Water Grade – Type 1• Adds on to RO-U system, installed after buffer tank• UL and CSA approved• Max flow rate 60 GPH (272 L/hr)• Max inlet pressure 125 psi (8.6 bar)• Mounting bracket and two polypropylene elbows (3/4" NPT(M) x 3/8" hose barb). Accepts 3/8" ID tubing• Powered by 110 VAC• Built-in monitor light for resin replacement (green/red)• 2 Year Parts Warranty
EXCLUSIONS	Piping and labor warranty.

WATER TREATMENT OPTIONS

LP3 OPTI

LP3 OPTI is a reverse osmosis system with smaller capacities that can operate on potable or softened water. These can be quoted with optional pressure tank, softener and dechlorinator and can feed an optional deionizer system. The LP3 can supply a single, or multiple, US humidifiers.



PRODUCT	LP3 OPTI - Reverse Osmosis Systems	
MANUFACTURER	Reo-Pure Water Purification Systems	
PART NUMBER	By quotation	
CAPACITY	0.16 GPM, 0.24 GPM, 0.35 GPM, 0.52 GPM, 0.69 GPM, 1.22 GPM	
INCLUSIONS	<ul style="list-style-type: none"> • Optimum Controller <ul style="list-style-type: none"> - Automatic Membrane Flush - Pretreatment Lockout - Tank Full Indicator - LED Status Indicators - Field Selectable Programs - Smooth Start/Stop Operations - System Fault Notifications • Sediment/Carbon Pre-Filtration • Pentek® 20" Slim Line Housings • Low Feed Water Pressure Safety Switch • Product Water Pressure Switch • On/Off Standby Switch 	<ul style="list-style-type: none"> • Feed Water Shutoff Ball Valve • Water Saving Recirculation Loop • Pre and Post Filter Pressure, Liquid Gauges • Operating Pressure, Liquid Gauge • Feed Water Solenoid Valve • Fluid-O-Tech™ Rotary Vane Pump • High Efficiency Carbonator Motor • Manual Membrane Flush Valve • Product Water Check Valve • John Guest® Safety Locking Clips • 115V, 60HZ, 1PH Electrical • Powder Coated Aluminum Frame • Factory Tested for Quality
EXCLUSIONS	Piping and labor warranty.	

WATER TREATMENT OPTIONS

MLRO



The MLRO is a large, industrial, RO system, which is ideal to replace feeding with supplying multiple US systems in a single application. The MLRO is fed by softened and dechlorinated water, and can be paired with an optional deionization system.

PRODUCT	MLRO
MANUFACTURER	Condair Ltd.
PART NUMBER	By quotation
CAPACITY	79 GPH (300 l/h), 132 GPH (500 l/h), 211 GPH (800 l/h), 264 GPH (1000 l/h), 396 GPH (1500 l/h), 528 GPH (2000 l/h), 792 GPH (3000 l/h)
INCLUSIONS	<ul style="list-style-type: none">• Atmospheric storage tank: black and opaque to restrict bacteria growth. 0.2 micron filter to restrict bacteria movement (standalone tank > MLRO 300)• RO pump that pumps raw water through the RO membrane(s) at a pressure of 116 – 174 psi (8-12 bar)• 5 micron pre-filter• Distribution pump that delivers treated RO water at 43-60 psi (3-4.2 bar)• Ultraviolet Sterilizer for Bacteria Control.• PLC Control: Mounted on the main pump station frame, includes a manual on/off/auto switch, fault light indicator, service light indicator, and terminal connection for power and control wiring• Interconnected piping, plumbing and connection fittings.• UL approved• High purity RO membranes• RO inlet water low pressure cut off switch• 208/3/60 or 480/3/60 options• Units are factory assembled and tested.• Components exposed to water made of corrosion resistant material
EXCLUSIONS	BMS interface, Labour Optional: water softener, dechlorinator, Deionization

WATER TREATMENT OPTIONS

MLRO DI Option

The MLRO DI option consists of two portable Culligan DI Mixed beds which are installed in series. Order of the beds is switched out as the resin loses its charge which you will see by an increase in conductivity. Generally, a third bed is provided for when the first replacement is necessary. DI beds must be sent out to be regenerated.



PRODUCT	DI Mixed Beds
PART NUMBER	2590412 - 9x44 MB DI Tanks (3) 2300039 - braided hosing (suggested: 100ft) 2597513 - Monitor Light
CAPACITY	11,300 grains Min service flow 1 gpm @ 1psi Max service flow 5 gpm @ 8.2 psi
INCLUSIONS	<ul style="list-style-type: none"> • Portable Mixed Bed DI beds • Activated carbon and high quality ion exchange resin • Low maintenance, once exhausted, a service technician delivers, exchanges, and maintains equipment. • Connect directly to RO source • Accessory for installation of monitor light available as an option if required
EXCLUSIONS	Labor

Applications

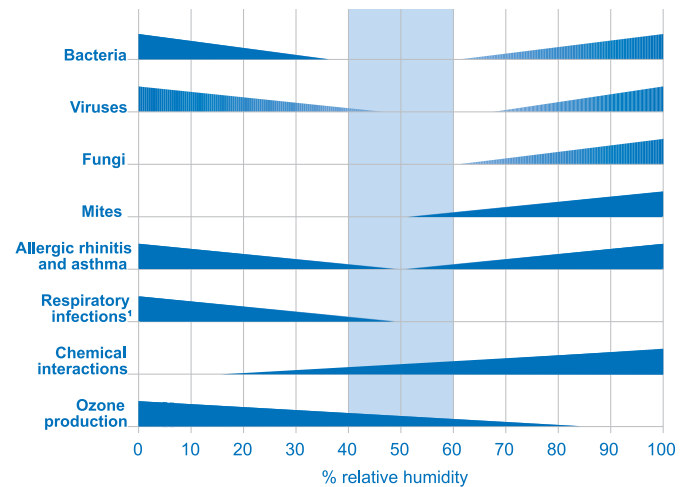
The US Series Humidifier is ideal for many applications including:

- Data centers
- Greenhouses
- Printing
- Storage facilities
- Textile
- Wine cellars

The Sterling Chart

The Sterling Chart illustrates how relative humidity affects health and well being and shows that the optimal air humidity level for humans is between 40 to 60% RH. This optimal humidity zone minimises risks to human health from biological contaminants and pathogens.

Colds, viruses, respiratory infections, dry eyes, itchy and cracked skin are all symptoms that are usually prevalent in the cold dry months of the winter when the indoor RH is at its lowest.



¹Insufficient data about 50% RH.

E.M. Sterling, Criteria for Human Exposure to Humidity in Occupied Buildings, 1985 ASHRAE.

About Condair

The Condair Group, founded in 1948, with its Head Office located in Pfäffikon (SZ) / Switzerland, is the world's leading manufacturer in the field of commercial, industrial air humidification and evaporative cooling with over 750 employees. With its innovative air humidification systems, Condair sets new standards in the comfortable and energy-efficient "hydration" of indoor air. With the new HumiLife product portfolio, Condair also offers individual solutions in health, productivity and sustainability for offices and private households. Scientific studies prove that a relative humidity of between 40 - 60 % is optimal for our immune system, successfully fights viruses and bacteria and protects our health. The Condair Group consists of sales and service organizations in 22 countries, production sites in Europe, North America and China, and has international sales partners in more than 50 locations. resource savings a reality.

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