



**Sealpump
Engineering Ltd**

Aquarius
HUMIDITY CONTROL



Aquarius Humidification System



**Sealpump
Engineering Ltd**

From a single nozzle to a complete integrated and controlled spraying system, **Sealpump Engineering** provides the total solution for all spraying applications

With over 40 years' experience, Sealpump Engineering Limited is one of the UK's major designers and suppliers of industrial spray nozzle systems. Our UK wide team of dedicated designers and sales engineers visit sites to advise on the optimum solution for each application.

We design, manufacture, supply and install spray nozzle systems for a wide variety of applications within all industries. As these industries strive to meet ever more stringent standards on production efficiency and product quality, Sealpump Engineering has designed unique methods and processes in key areas such as humidification.

Our partnerships with selected engineering service providers allow us to offer total solutions, integrating our spraying products into new and existing processes. Customers derive cost benefits from decreased water and material consumption and energy efficiency through well designed systems.

Sealpump Engineering Limited is a quality assured company in accordance to standard ISO 9001: 2015

Leaders in spray technology

With Water, Less is More

All you need to know...



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In all areas of precision spray nozzles and applications, Sealpump Engineering is a leading and innovative spray technology company. Founded in 1979, we have a wealth of experience in spray technology and have designed and supplied our spraying expertise to virtually every processing and manufacturing industry, none more so than the food and baking industries.

There are many industries and applications which can benefit greatly from accurately controlled humidification and spray systems, ranging from processes within the food and bakery sector, to digital printing, automotive manufacturing, electronics and even your office or work building.

Sealpump Engineering Ltd has the correct nozzle for your spray application, with thousands of nozzles readily available in various configurations and materials, a quick, professional service is guaranteed. Optimising spray performance and improving productivity is a key aspect to our automated spraying systems, fully controllable and ensuring the highest level of performance is achieved from every spray system.



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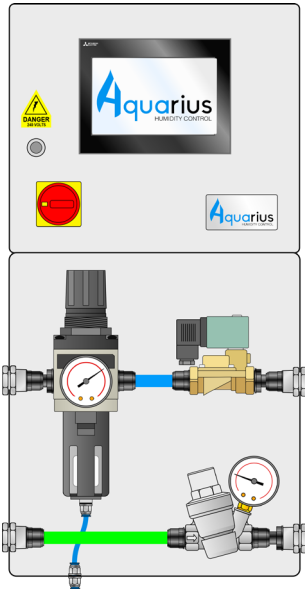
Aquarius
HUMIDITY CONTROL

What is the Aquarius?

To complement our dry fog nozzle technology and to offer a **full and comprehensive solution**, our Aquarius Humidification control system offers a completely automated, user-friendly humidification system. Our Aquarius controller works along with our Dry Fog nozzles to create a **perfectly controlled environment**, whatever your process.

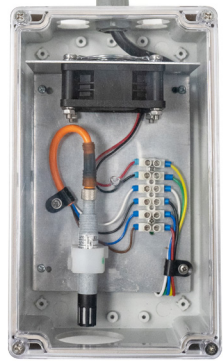
The Aquarius controller, available in either painted steel or stainless steel, offers accurate control over the relative humidity in a variety of applications such as production halls and facilities, cold stores, printing, and bakeries.

Depending on how you intend to integrate and install the Aquarius controller and water treatment, we offer options on how the controller is built and supplied. The Aquarius controller & water treatment can either be supplied as wall mounted options, or can be supplied combined, mounted on an easy to install floor standing frame. Both options are very easy to install and come ready for connection to your mains water, compressed air and electrical supply.



The Aquarius control system has a range of features which have been designed to not only improve control accuracy, but also to make it as user friendly as possible, low maintenance and reliable.

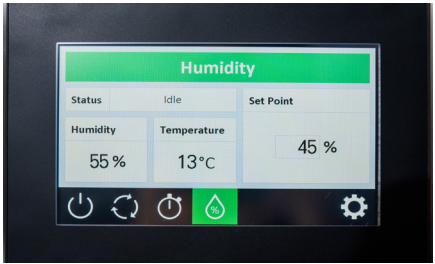
Control is key...



The Aquarius system monitors and records both humidity & temperature, allowing the user to monitor the effects temperature can have on the humidity level. Our advanced sensor comes in an aspirated box and features sensor protection which hides the sensor from corrosive fluids. Built in timers are also included should customers prefer to set the timer function. To increase the accuracy, the Aquarius has a pulsed operation which means that it can always maintain the correct RH level without 'over shooting' above the set parameters.

Colour Touch Screen

The latest colour touch screen HMI is used within the Aquarius which has easy to use graphics and menu screens. We offer customisable graphics depending on the customers application and requirements which can greatly improve the user experience. The Aquarius system also offers the user the option of remote monitoring without being near the controller itself. You can log in via the internet wherever you are to look at real time humidity and temperature levels within your controlled area.



Multiple Zone Control

For applications where humidification control is needed in more than one area, the Aquarius humidity control system offers multi-zone control. For example, for a production facility with three separate areas/zones to be controlled, the system would include a humidity & temperature sensor in each zone, which can be set to different parameters so the zone can be controlled independently, all from the same touch screen on the Aquarius unit.

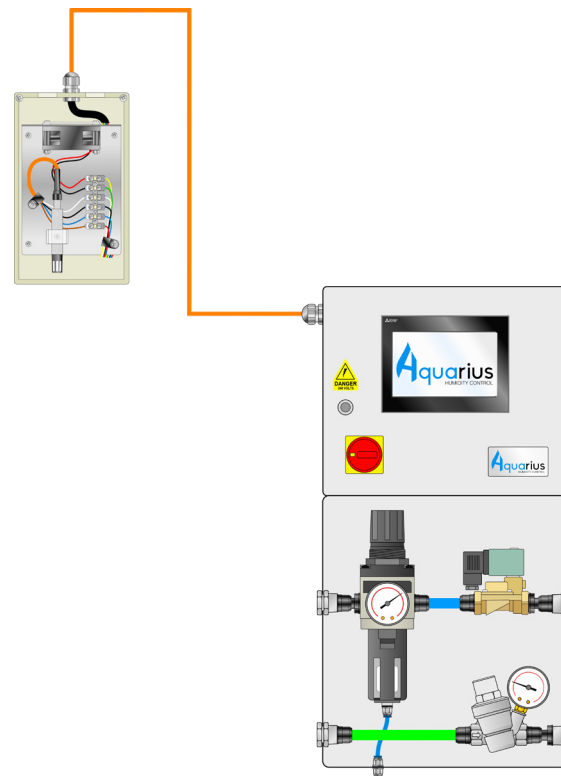
Humidification & Room Disinfection



The Aquarius System also offers a dual function for both humidification and for room disinfection. Should the customer wish to use The Aquarius to disinfect the room or area that it humidifies, a disinfection function can be included, which enables the user to schedule in a fixed disinfection time, and run time, by switching from the humidification function to the disinfection function.

By switching the function, this moves from full water supply (humidification) to water supply with a suitable disinfectant dosed in via a dosing unit. This feature must be specified at the time of order. Please be aware that we neither supply nor recommend a particular brand or supplier, however, we stress that only approved and safe solutions are used.

As well as being an effective way of disinfecting rooms and the equipment and surfaces within the room, it is also disinfecting the humidification system and its components, which assists with your maintenance and hygiene.



Features

- ✓ Available in painted steel or stainless steel
- ✓ Colour touch screen
- ✓ Easy to use graphics - customisable
- ✓ Single or multi zone control
- ✓ Single or double humidity/temperature measurement
- ✓ Sensor in aspirated Box
- ✓ Sensor protection hides sensor from corrosive fluids
- ✓ Settable parameters for humidity including pulse
- ✓ Daily flush of system when not in use for hygiene
- ✓ Dual fluid control - e.g. humidity and disinfection
- ✓ Remote access using Internet
- ✓ Built-in timers to permit continued production
- ✓ External audible and visual alarm
- ✓ Electronics and fluids in separate enclosures for safety
- ✓ Three sizes available - 1/4" / 1/2" / 1" BSP
- ✓ Wall mounted or all-in-one floor standing design

Low
levels of maintenance...
High
levels of hygiene...



When atomising liquid so finely, water treatment and hygiene is essential for both preventing suspended solids and particles entering the system and also removing bacteria build up in the water.

To maintain optimal hygiene standards within The Aquarius system, through the pipework to the fogging nozzles, The Aquarius automatically flushes the system daily when not in use. The flush cycle is pre-set to work for 2 minutes every 12 hours, this is to combat any potential bacteria build up caused by stagnant water that has been stored for too long.

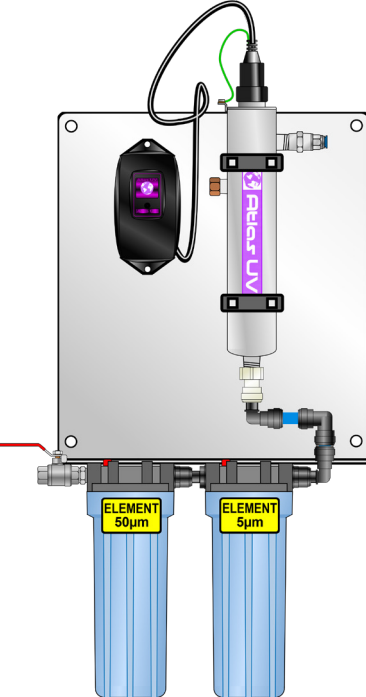


Water treatment

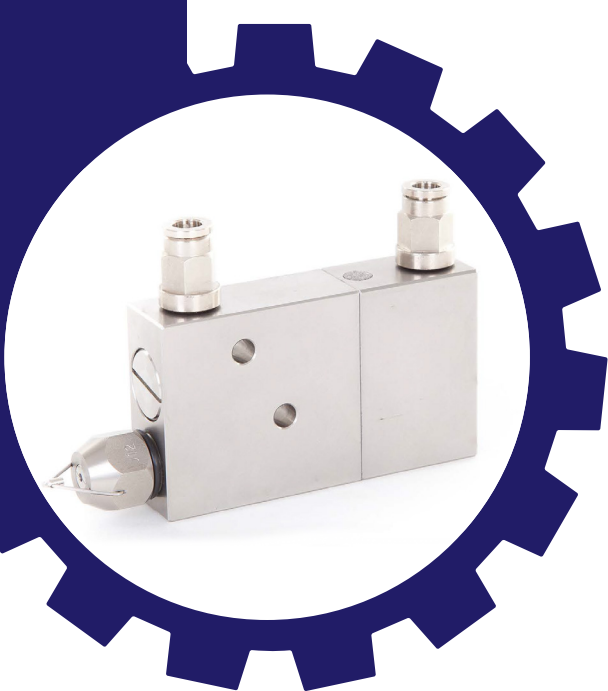
Our water treatment unit includes inline water filters, one 50 micron, the other 5 micron, and an ultraviolet disinfection unit.

The UV unit is a versatile unit designed to eliminate waterborne bacteria using the proven method of exposure to ultraviolet light. The water treatment unit comes fully assembled and piped, ready to be connected to your water supply.

This unit can be supplied ready to mount to a wall or a machine, or supplied along with the control panel, all in one convenient floor standing design.



Dry Fog Nozzles



Our Dry Fog nozzle is ideal for increasing the level of relative humidity within a room or process by introducing moisture back into the atmosphere without causing wet areas or excessive water drop out.

Ultra fine droplets down to only 1 micron (0.001mm) are possible, therefore ensuring the soft plume of water droplets remain in suspension until evaporation takes place. When complemented with our unique water valve assembly, the unit becomes a highly efficient non-drip, self-cleaning atomiser. The heavy-duty stainless steel water valve is controlled by the same compressed air supply to activate the nozzle.

Use Dry Fog for
increased control over humidity



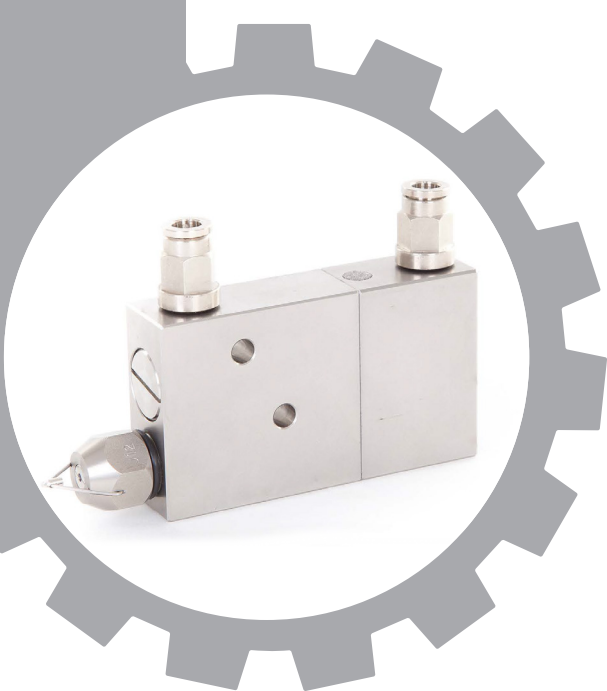
- Sonicom Dry Fogging Nozzle Features**
- ✓ Less than 5-micron droplets
 - ✓ Non-drip system
 - ✓ Self cleaning nozzles
 - ✓ Low energy consumption
 - ✓ Low running costs
 - ✓ Virtually maintenance free
 - ✓ No pump required
 - ✓ Easy mounting & install (User can install)
 - ✓ Saves up to 90% on steam running costs
 - ✓ Reduces down time and material usage

A simple on/off signal is required to activate the system and when the signal is removed, the water valve self cleans every time by blowing excess water away, significantly reducing any potential particulate build up.

This air-controlled valve also ensures that every time the nozzle is turned on/off, it does not drip meaning there is no risk of having a blocked nozzle. This allows for use in environments where control is essential and access is limited.



022H Ultrasonic Spray Nozzle



DESCRIPTION

Compressed air and liquid mixes within the resonator cap external to the nozzle and creates a straight spray pattern of ultra-fine spray droplets nominally 1-5 micron. The nozzle assembly offers both non-drip and self-cleaning functions to this nozzle range. The nozzle has a separate air and liquid connection being 1/8" female.

MATERIALS AVAILABLE
Stainless Steel

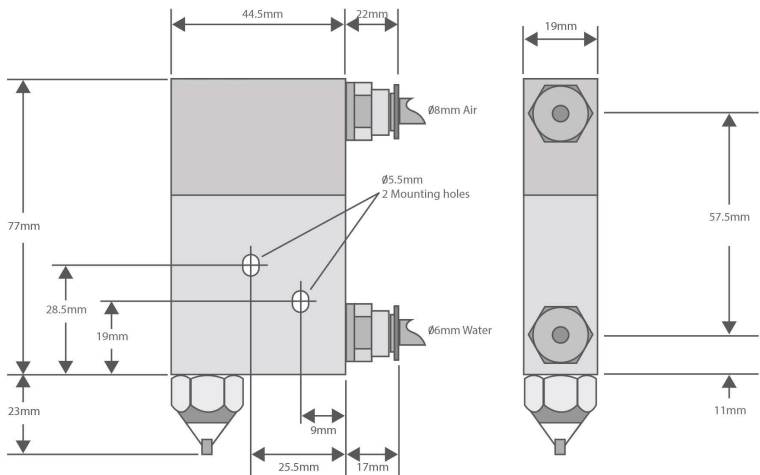
SPRAY ANGLES AVAILABLE
Straight & Fan

ORDERING EXAMPLE
022H Ultrasonic Spray Assembly

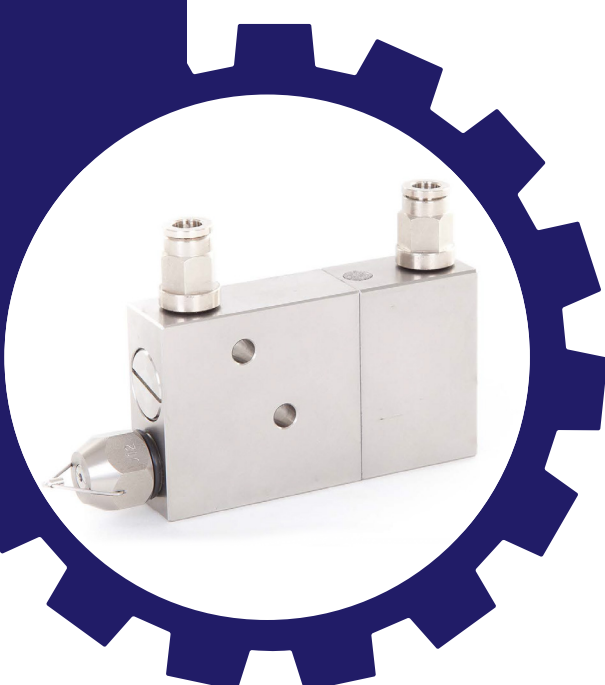
Features

- ✓ Consistent Atomisation
- ✓ Low water consumption
- ✓ 2 micron mean droplet size
- ✓ Self-cleaning
- ✓ Non-drip
- ✓ Low running costs
- ✓ Straight spray

0.5 BAR LIQUID		0.7 BAR LIQUID		0.9 BAR LIQUID		1.0 BAR LIQUID	
AIR (BAR)	LITRES PER HOUR	AIR (BAR)	LITRES PER HOUR	AIR (bar)	LITRES PER HOUR	AIR (BAR)	LITRES PER HOUR
2.4	1	2.8	1.9	3.1	2.8	4.1	2.9
STRAIGHT		STRAIGHT		STRAIGHT		FAN	



035H
Ultrasonic
Spray Nozzle



DESCRIPTION
Compressed air and liquid mixes within the resonator cap external to the nozzle and creates a wide spray pattern of ultra-fine spray droplets nominally 3 – 5 micron. The nozzle assembly offers both non-drip and self-cleaning functions to this nozzle range. The nozzle has a separate air and liquid connection being 1/8" female.

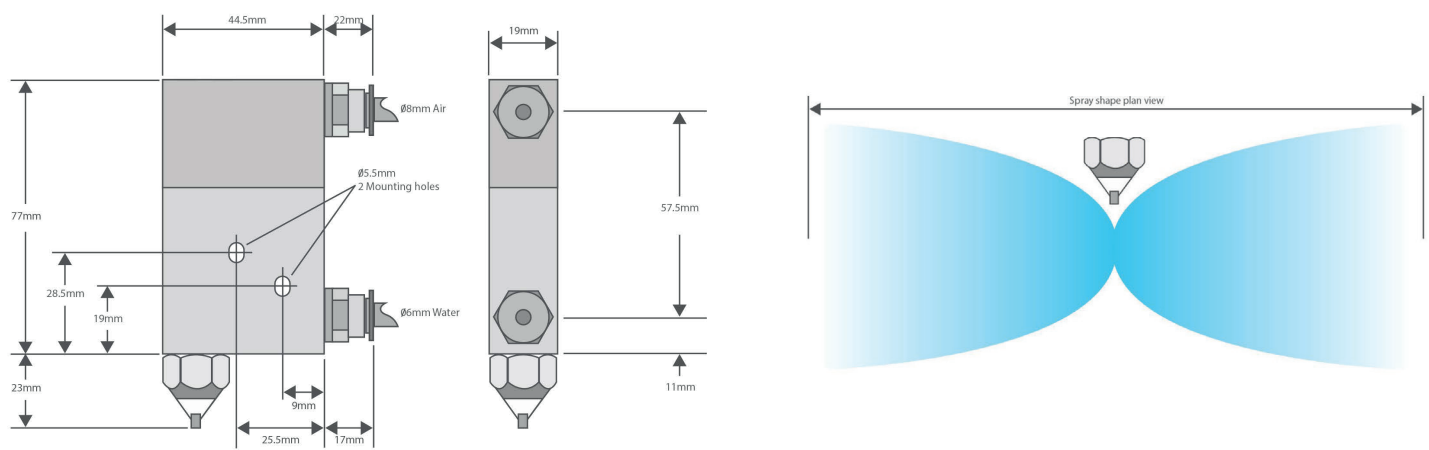
MATERIALS AVAILABLE
Stainless Steel

SPRAY ANGLES AVAILABLE
Wide

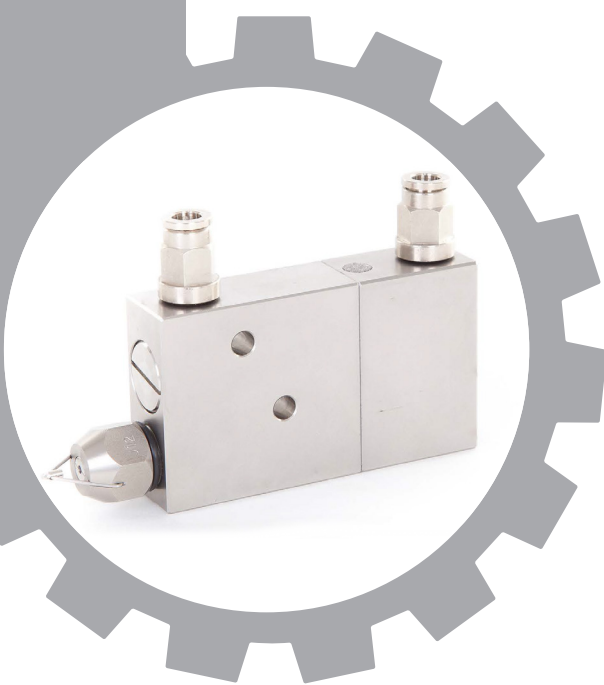
ORDERING EXAMPLE
035H Ultrasonic Spray Assembly

- Features**
- ✓ Consistent atomisation
 - ✓ Low water consumption
 - ✓ 3 – 5 micron droplets
 - ✓ Self-cleaning
 - ✓ Non-drip
 - ✓ Low pressures

0.5 BAR LIQUID		1.0 BAR LIQUID		1.5 BAR LIQUID		2.0 BAR LIQUID	
AIR (BAR)	LITRES PER HOUR	AIR (BAR)	LITRES PER HOUR	AIR (bar)	LITRES PER HOUR	AIR (BAR)	LITRES PER HOUR
4	2.5	4	4.5	4	6.1	4	8.2
5	1.2	5	3.4	5	5.4	5	7.3



052H
Ultrasonic
Spray Nozzle



DESCRIPTION
Compressed air and liquid mixes within the resonator cap external to the nozzle and creates a wide spray pattern of ultra-fine spray droplets nominally 5-10 micron. The nozzle assembly offers both non-drip and self-cleaning functions to this nozzle range. The nozzle has a separate air and liquid connection being 1/8" female.

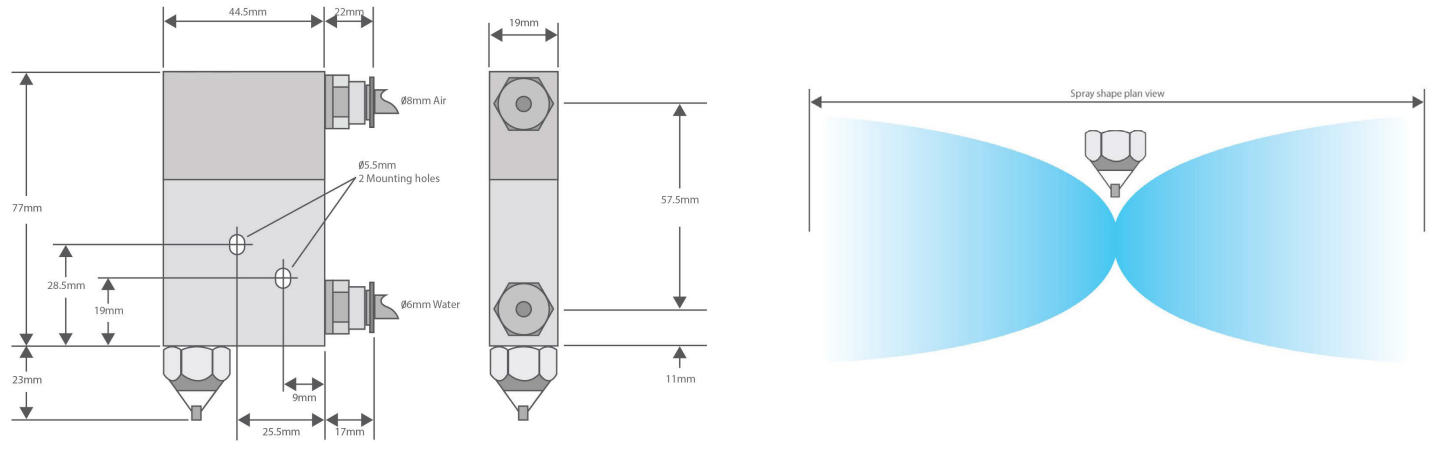
MATERIALS AVAILABLE
Stainless Steel

SPRAY ANGLES AVAILABLE
Wide

ORDERING EXAMPLE
052H Ultrasonic Spray Assembly

- Features**
- ✓ Consistent atomisation
 - ✓ Low water consumption
 - ✓ 5 - 10 micron droplets
 - ✓ Self-cleaning
 - ✓ Non-drip
 - ✓ Low pressures

0.5 BAR LIQUID		1.0 BAR LIQUID		1.5 BAR LIQUID		2.0 BAR LIQUID	
AIR (BAR)	LITRES PER HOUR	AIR (BAR)	LITRES PER HOUR	AIR (bar)	LITRES PER HOUR	AIR (BAR)	LITRES PER HOUR
4	6.5	4	10.0	4	13.6	4	17.4
5	3.6	5	8.8	5	11.8	5	15.3





Applications

Food & Bakery | Printing & Paper | Automotive | Building
Furniture | Woodworking | Electronics

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