



your innovator in the food-industry



JASCA'S ATOMISED- HUMIDIFICATION SYSTEMS

For the baking industry

*Improve the quality of your
dough products by using the
right combination of temperature
and relative air humidity*

Contents

Page

The results	2
Nozzle units	3
Precipitation and legionella prevention	4
Technical information	5
Energy investments allowance	5
Flour dust allergy	6
Disinfection	7
Cases	8

Quality above all

JASCA's atomised-humidification system prevents drying out and as a result manages to keep the quality of your products. This is possible by using the right combination of temperature and relative air humidity to optimise every process in your bakery.

This way, no product gets lost during kneading, the cooling of dough is more controlled, and the amount of whirling flour dust is minimised. Dough is extremely sensitive to dehydration and often cools down during the proofing process, despite the ambient temperature being sufficiently warm enough. The problem is a low relative humidity level, which causes the dough to cool down and dry out. Since the core and the outer part of the dough rise at different rates, it can create an irregular crumb structure.

JASCA atomised-humidification system is specifically designed for the atomisation of liquid based products, such as water and oil. The system prevents your dough products from drying out and can be used in all proofers to create a smoothly ran dough- and kneading process.

The atomised-humidification system consists of a central control box, a pipeline network, and one or more nozzles with flowrate controllers.

HOW IT WORKS:

The specialised nozzles atomise the room with extremely fine mist by using normal tap water with any desired line pressure. The water is evaporated at short distance from the nozzle and because the water enters the room as fine mist, the energy consumption is only a 10-15% of a system based on steam systems.

APPLICATIONS

In the baking industry, JASCA's atomised-humidification systems can be utilised for:

- Proofers and pre-proofers
- The local workshop
- Flavouring and colouring of products
- Cooling cabinets
- Gel-atomisation on bread products
- Alcohol atomised humidification for a longer shelf life
- Hopper, container, and kneading atomised humidification
- Pre- and post-oven processes
- Disinfection



The results

The liquid in the nozzles, with potential additives such as oil, is evenly atomised to optimise the circulation of humidity and heat within the room.

THIS MEANS:

- Better quality of your products
- No more drying out of your dough
- Improved flavour and taste
- Thinner crust formation
- Enhanced baking results
- Improved colour formation
- More tender products
- Flexible oven load during the day
- Reduction of flour dust
- Improved conditioning and climate control within your work space

ADDITIONAL BENEFITS:

- Control of the proofing processes
- Energy efficient compared to steam systems
- No additional heat release
- Low maintenance and lime free system
- Compact installation

“Since I installed JASCA’s atomised-humidification system, we have better control over the humidity levels and the production process in general. This has improved the shine and crust of our products. Thus, we decided to install the system in all of our proofers and pre-proofers. Even our highly critical bakers are satisfied. The energy costs have been reduced drastically and our gas-fuelled steam boiler is completely gone.”

Klaas Fuite – director Bakery Fuite

Nozzle units

The nozzles utilise normal tap water, therefore water softening is not necessary. Thanks to a unique and patent system, the nozzles are also self-cleaning. It effectively cleanses the spraying system from lime scale and other pollutants.

This greatly reduces the chance of malfunctions. The nozzle units are made from stainless steel (air caps, cleaning needles and springs) and Teflon (seals and the moving parts).

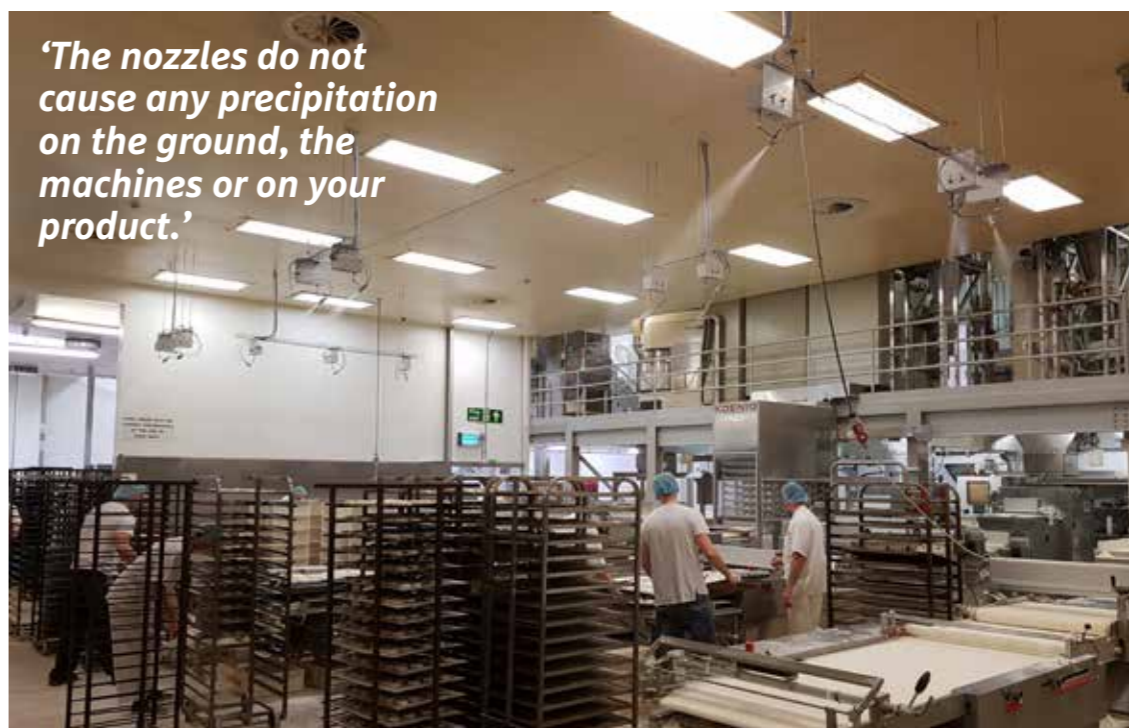
NON-STOP IMPROVEMENT

This technique is constantly in development. That is why JASCA improved the newest generations of nozzles with:

- A new round design
- Smaller drops for better atomisation
- Extra low-noise version
- Less air usage

CERTIFICATION

The JASCA nozzle units are 100% certified with the correct O-rings for the food industry. And all of our systems are included with affordable yearly inspections of the nozzles.



‘The nozzles do not cause any precipitation on the ground, the machines or on your product.’





Precipitation

"We are very happy that we are now able to provide our clients high quality services even in the summer months. Getting rid of the steam boilers has saved us 29% of our usual gas and electric bills. Also, our water use has been reduced with 86%, because using JASCA's atomised-humidification system has lowered our use from 132.0 m³ to 17.4 m³ per month."
*Reinhold Lipp, technical director
Lieken*

The nozzles use pressure to produce extremely small drops. These drops blend in intensively and turbulently within the environment and eventually evaporate.

The low-air pressure creates movement of air in the container, which causes the mixing of air and water drops. The nozzles also mix the moisture directly with the large amounts of air within the room itself. The water drops that do not directly evaporate will create very light mist that is barely visible.

Legionella prevention

At JASCA, we install a legionella prevention system in every control box with the possibility of pre-programming this procedure.

This causes the quantity of water to be evaporated, regardless of the time or the set relative humidity. If desired, this procedure can also be installed within the pipeline network. The nozzles and the pipelines operate independently from each other during the pre-programmed procedure. But these time intervals are completely programmable.

- To prevent the procedure from shutting down, the main power switch must be switched on at all times
- We advise to have yearly inspections carried out by JASCA technicians

Technical information

NOZZLE

- Nozzle capacity : 0.5 – 12 litre/hour, depending on the type of system
- Optimal compressed air pressure : 2 Bar excess pressure measured at nozzle
- Compressed air usage by optimal pressure : 2 nm³/hour
- Required water pressure : 0.2 Bar higher than the compressed air pressure (measured at nozzle)

MATERIALS

- Body, air caps, springs : stainless steel
- Seals (O-rings) : NBR 70/ Viton 80/ Silicon 70
- Temperatures : -10°C - +90°C
- Dimensions : cross section 38mm, length 110mm
- Fixation : M8*7mm
- Connecting parts : air: 1/8" BSP, water 1/8" BSP

REQUIRED WATER QUALITY

- Water hardness : min. 4 gr. DH, max. 15 gr. DH
- Temperatures : min. 5°C, max. 50°C
- Minimum water pressure measured at nozzle : 2.5 Bar excess pressure

Energie-investeringsaftreksubsidie EIA

Voor het Jasca vernevelsysteem kunt u een EIA-subsidie aanvragen. Door de goede resultaten van het koelvernevelingssysteem valt de investering (Inclusief montage) onder de subsidieregeling Energie-investeringsaftrek (EIA). Deze regeling is bedoeld voor ondernemers die willen investeren in energiebesparende technieken. Zo levert uw investering dubbel voordeel op: een besparing op energie én op inkomsten- of vennootschapsbelasting.

De EIA is een fiscale regeling van de ministeries van Financiën en Economische Zaken. Met de EIA wil de overheid het Nederlandse bedrijfsleven aansporen tot energiebesparing en toepassing van duurzame energie. Als u investeert in energiebesparende bedrijfsmiddelen of duurzame energie, kunt u - via de EIA - 45% (2019) van de investeringskosten aftrekken van de fiscale winst van uw onderneming. De EIA kunt u toepassen naast de gewone investeringsaftrek. Een EIA-aanvraag kan tot drie maanden na het aangaan van de investeringsverplichting worden ingediend.

**Besparing op energie
én op inkomsten-
of vennootschapsbelasting**



Flour dust allergy

Reduce flour dust in the working space, increase productivity

Disinfect by misting

The most effective way of disinfection

Unfortunately, flour dust allergy is common in the bakery industry and is a bigger problem than often thought. According to the Dutch Health Council, one in four employees in the bakery and flour-processing industry are affected. JASCA atomised-humidification system prevents flour dust drifting around, creating a more pleasant working climate.

With JASCA atomised-humidification system you are able to reduce flocking dust and thus optimally protect your people. Our atomised-humidification system evenly distributes moisture in your rooms, which gradually brings down the flour dust in the room. This creates the ideal climate for your bread and for your employees and can prevent these allergy troubles.

SIZE OF DROPS

The size of the flow controllers is dependent on the intensity of the dust particles. The flow controllers can vary from 0.5 to 8 litres per hour, depending on the situation. Every workplace is unique, that is why we tailor our system to your situation.

Rotating nozzle

JASCA's atomised-humidification system with rotatable nozzles provides a greater range of even humidification. This results in improved cooling of your room, a reduction of dust, and an overall more pleasant working climate.



Disinfection is crucial in the food industry. A thorough cleaning can reduce the number of microorganisms by 50-90%. This seems a lot, but it is significantly lower than the 99.9999% reduction required to prevent bacteria and fungi from growing.

POWERFUL MISTING

JASCA has developed a unique system, which reduces bacteria and fungi with 99.9999%. The nozzles, developed by JASCA, allow the disinfectant into the (production) rooms with powerful pressure. Because of this high pressure, even the smallest corners and the hard to reach places are successfully targeted. And that is a lot more effective and efficient than manual spraying!

CONNECTION TO EXISTING SYSTEMS

JASCA's system can be installed and integrated to your existing (water) systems. This helps you to meet all the legal requirements, as the mixing with water is impossible and the nozzles can be rinsed with water immediately after the disinfection process. This is not the only way to install our system. Of course, we can install it tailored to your company.

Disinfection by JASCA is quick, effective and can operate without supervision e.g. in the evening or at night. This saves you manpower and production time.

FINKTEC ®
Professional Hygiene Management

The JASCA disinfection system is developed in close collaboration with FINKTEC GmbH in Hamm, Germany





Bollenkast



Meelstofreductie



Bandverneveling



Ambachtelijke rijskast

Better control and management of the proofing process



Kuipverneveling



Ambachtelijke rijskast



Trechterverneveling

Energy efficient process and improved quality



Paternoster systeem





Jasca Bakery Technology BV

Westwal 4b, 7631 BN Ootmarsum The Netherlands

T +31 (0)541 - 29 36 88

F +31 (0)541 - 29 36 89

I www.jasca.nl

E info@jasca.nl

OPTIMALISEER UW PRODUCTIE

Vrijblijvend advies over hoe u deze vorm van koudwaterverneveling in kunt zetten in uw productieproces?

T: +31 (0)541 - 29 36 88

E: info@jasca.nl



Jasca: Sustainable and efficient solutions for the baking industry