



# HYBRID CHEMIE

Technical information IM 02

## **Pulsed air mixer**

### **Operation and safety**

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# Pulsed air mixer

## Operation and safety

Operating instructions for the pulsed air mixer with important information for start-up, handling and safety data.

Before starting up the pulsed air mixer, please refer to the

IM01

technical notes for compressed air generation.

## Scope of Supply



Compressed air hose (3 m) with connection for control unit and mixing lance



Crossbeam support



Control unit



Mixing lance

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## Normal operation

The pulsed air mixer operates with compressed air for mixing, stirring and homogenization of liquids.

Pulse-controlled compressed air drives the mixing lance to generate horizontal and vertical liquid movement to ensure optimal blending of the liquid.

The pulsed air mixer must be used exclusively for its intended application. Any other use is not permitted.

An integral component of its designated use is compliance with the guidelines for "Safe handling of compressed air" and the assembly instructions.

The manufacturer or dealer accepts no liability for any damages as a result of improper use or incorrect application.

The pulsed air mixer must be operated only with approved accessories.

Personnel who are operating the pulsed air mixer or perform maintenance work must be fully familiarized with the technical details, including any potential hazards. In addition, the applicable accident prevention regulations must be complied with.

Any other general regulations related to occupational safety standards and safety aspects shall be complied with. Changes and modifications of the pulsed air mixer will automatically invalidate any manufacturer's liability or consequential damages.

Any further applications are expressly excluded and considered to be outside the limits of intended use.

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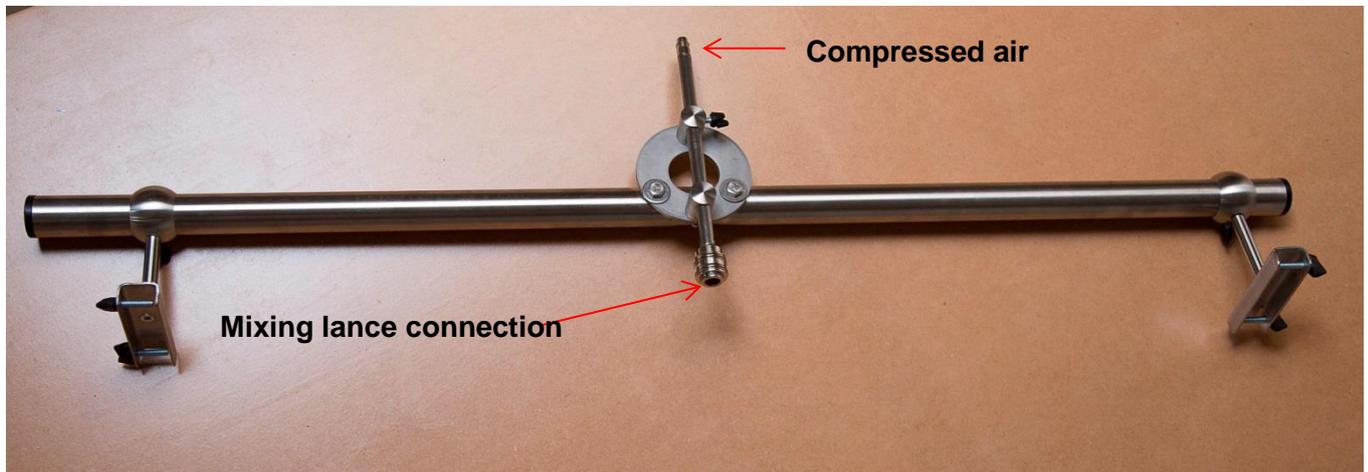
### Initial start-up and assembly of component parts

Safety goggles must be worn to protect against splashing.

Before starting the pulsed air mixer, ensure that the main connection of the compressed air system or of the compressor is closed.

Place the cross beam support onto a flat, even surface.

The compressed air coupling must face to the top. The mixing lance coupling must face down.



Insert the mixing lance into the crossbeam coupling.



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Lift the crossbeam with the mixing shaft into the opening of the container.



After inserting the mixing lance into the container, it must be locked in place. Using the left and right wing nuts, attach the cross beam to the metal cage of the container.



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Mount the control unit onto the wall or onto the container.



Now connect the compressed air hoses, and ascertain that they match the feed and discharge connections.

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Fit the discharge hose of the control unit onto the coupling of the crossbeam.



Open the compressed air feed line and adjust the pressure to 8 bar maximum. Ensure that a minimum of 400 L/min. intake air is available. Set the main switch of the control unit to “ON.” Adjust the control valves to minimum settings by turning them clockwise. The output capacity of the mixing lance can be varied individually by adjusting the two control valves (pulse, bubble volume). Once the desired settings have been obtained, use the locking screw to fix the control valves in position.



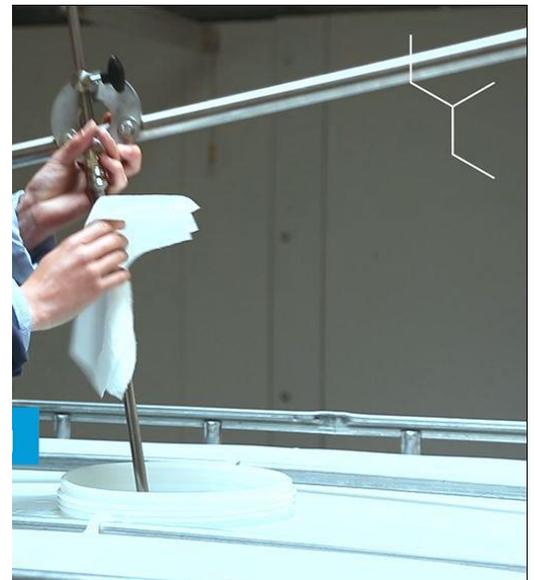
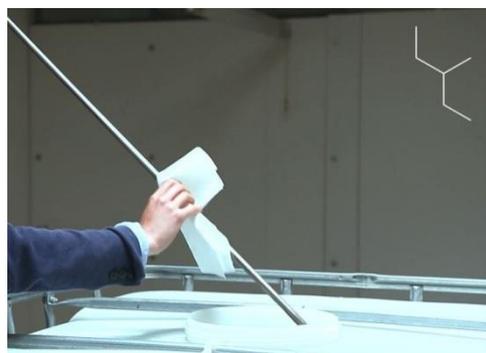
## Shut-down procedure

To shut down the pulse mixer, set the control unit main switch to “OFF.”  
Thereafter, shut off the compressed air and wait until the mixer stops rotating.  
Remove the mixing lance from the cross beam only after the assembly has been lifted out of the container.

Remove the compressed air hose from the crossbeam coupling.



Detach the crossbar from the locking mechanism and lift it out of the container. Using a suitable material, clean the mixing lance by wiping it from the top down. Follow the operating instructions for the respective medium.



Disconnect the mixing lance from the crossbar and rinse off with a suitable medium.

## Frequently Asked Questions - FAQ

**Our existing compressed air supply system operates at 20 bar**  
Fit a pressure reducer to adjust the operating pressure to 8 bar.

**Our existing compressed air system is not free of oil, water or solids**  
Install a suitable filter upstream of the control unit.

**Excessive comp. air pressure fluctuations**  
Ensure a constant minimum supply rate of 400 l/min.

**How can I check the air injection lance resistance against the medium to be mixed?**  
Contact HYBRID CHEMIE for a list of suitable materials and their resistance against the various mixtures and ingredients.

**The air injection lance will not rotate, despite adequate comp. air supply.**  
Check if the L-shaped injection lance may be jammed against the container? Ensure a minimum clearance of 5 cm between lance and container walls and the bottom.

**Connectors will not release easily**  
Ensure that the system is pressureless before disconnecting.

**Is the pulsed air mixer suitable for continuous operation?**  
The injection lance swivel part is subject to wear; its expected lifetime is 300 to 600 h, depending on the load and the type of mixture.

**How can I control the size of the air bubbles and the frequency of the pulsed air?**  
By adjusting the two „Pulse“ and „Volume“ dials on the control unit.

**What to do if the mixture starts foaming?**  
The bubble size is too small. Adjust the volume dial on the control unit to increase the bubble size.

**Mixture is splashing over the container**  
The liquid volume in the container exceeds the specified permissible level  
- Adjust the bubble size  
- Insert an air vent into the container cover

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