



# FJ31

## Depositor head for surface filling



### Individually controlled nozzle-jets

The "FJ31.36" is a depositor head with a straight row of nozzles that each can "jet" droplets of liquid foodstuff at a high frequency. Every so-called "nozzle-jet" is individually controlled. It can fire droplets with varying volumes onto the moving surface of a detected object. This enables the operator to deposit or "print" freeform surfaces consisting of a large number of defined droplets. It is used in the MDMV depositor.

### Hygienic, easy to use, and low-maintenance

The depositor head is driven by compressed air; however, this does not come in contact with the foodstuff to be deposited as the actuating membranes also function as a seal. All food contact areas are stainless steel 316 and completely CIP-able. Maintenance is low, as there are no moving parts. The only wear part is an easily replaceable silicone membrane (FDA-approved). The valves switch with microsecond accuracy and are controlled over a high-speed

streaming communication bus from the host controller.

The patterns to be printed can be automatically defined by PC-processed camera contour information without the need for designing predefined patterns. Multiple in- and outfeed ports on the head's liquid-dividing manifold allow for efficient and thorough cleaning without the need for any disassembly or water recirculation over the nozzles.

### Surface filling

The typical field of operation for this type of depositor head is fixed pattern or freeform surface filling. Printable liquids may have soft solid particles; however, they will need to be smaller than 65% of the used nozzle diameter. Examples are medium-viscosity liquids such as tomato sauces, creams, liquid doughs, liquid cheeses, and tiger pastes.

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#### Technical specifications:

- Number of nozzles: 36 nozzles
- Nozzle sizes range:  $\text{Ø}$  3 – 8 mm
- Allowable consistency: 2 – 12 Bostwick value
- Position accuracy: better than 1 mm
- Deposit weight reproducibility: better than 2% at constant pressure and rheology
- Minimum droplet size: 5 mm
- Nozzle frequency: 0-50 Hz
- Long pneumatic valve lifetimes: 500.000.000 cycles

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PRECISION DEPOSITING SOLUTIONS