



## Tank cleaning machine with hygienic design.

### Construction

The OrbiJet is a patented machine for internal cleaning with external drive, which has been manufactured according to the latest technology. Its geometric shape and construction, which reduces dead storage and uses a minimum of components, is carried out in compliance with hygienic guidelines. All materials used conform with FDA stipulations. The high standard of manufacturing quality including unique properties of the surfaces plus excellent materials guarantee superb quality and a long service life. The economic efficiency of the machine is excellent owing to the loss-reduced method of flushing the entire body with the cleaning agent.

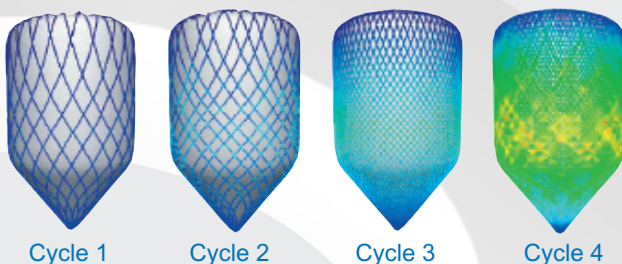
### Method of operation

The rotational movement of the cleaning head creates a spacial (orbital) spray pattern, i.e. the course of the jets is changing constantly. The asymmetric tooth system of the gearing in the machine head is responsible for the constant, fine meshed 360° - cleaning pattern reaching the walls of the container. This method ensures the optimal wetting of the entire interior surfaces and guarantees the repeatability and validatability of the cleaning result.

### Customisation

The OrbiJet is adapted in accordance with the specific ecological and economical requirements. Performance parameter regarding the geometry of the jets, number of nozzles as well as rotational speed are customised according to specific requirements of the tank and the contents to be cleaned (degree of contamination etc.). Cleaning pressure can be achieved continuously up to a standard 20 bar. The shank tube can be selected to a maximum of 2000 mm. Extreme versatility of fixing and positioning options enable more complicated cleaning processes to be carried out, regardless of the geometric shape or size of the vessel. The StatoJet can be integrated in any automated cleaning processes such as CIP.

### Operating Sequence of Cleaning spray pattern



The machine produces a constant cleaning pattern on the surface. After the first cycle the entire interior surface of the container has been cleaned. The following cycles reinforce the effect with fine meshed spraying which intensifies the final result.

## OrbiJet

### 3-dimensional cleaning

### Produktbeschreibung



### Application

- Reactors
- Vats
- Silos
- boilers
- Mixer
- Blenders
- Stirring vessels
- Barrels
- Casks
- Skips
- Containers
- Canisters
- Storage tanks
- Transport tanks
- Fermentation tanks
- Basins

### Branches

- Chemical industry
- Fine chemical industry
- Petrochemical industry
- Food and beverage industry
- Paper industry
- Pharmaceutical industry
- Cosmetic industry
- Paint and Varnish industry
- Biochemical industry
- Bio technological industry
- Transport
- Machine construction
- Plant construction

### Certificates

- ATEX
- CE
- Patents
- Manufacturer's Declaration

### Details

- all mounting positions possible
- optional magnetic drive
- variety of motors
- extensive accessories
- according to FDA
- according to GMP
- EHEGD-conformity

**OrbiJet with optional stainless steel engine covering and far reaching spraying nozzles.**



### Machine specification

#### volume current

- OJ 50 0,6 m<sup>3</sup> - 2,3 m<sup>3</sup>
- OJ 100 2,0 m<sup>3</sup> - 6,0 m<sup>3</sup>
- OJ 150 \*\*

#### Operational pressure

- 1 - 50 bar
- 50 - 100 bar \*\*

#### Operational temperature

- 5 - 95 °C
- max. 140 °C short time

#### Spray Scope

- 1000 - 8000 mm Radius varies according to number of nozzles

#### Cleaning Cycle

- 3,5 - 50 Minutes

#### Rotational Speed

- 14 min<sup>-1</sup>
- further speeds\*

#### unrestrained flushing

- 100 %

#### Cleaning Pattern

- 360° spacial = orbital

#### Number of nozzles

- 2 per Rotor
- 4 per Rotor \*

#### Rotors

- 1
- 2 \*

#### Mounting Positions

- any

#### Mounting orifice

- OJ 50; DN 50 ISO
- OJ 100; DN 100 ISO
- OJ 150; DN 150 ISO \*\*

#### Weight

- OJ 50; 10 - 20 kg
- OJ 100; 15 - 30 kg
- OJ 150; 25 - 50 kg weights vary according to machine details

#### Process Connection

- DIN ISO
- Tri - Clamp \*
- Sterile flange\*
- customer specified \*\*

#### Container connection

- DIN ISO
- ISO \*
- ASA \*
- customer specified \*\*

#### Drive

- Electro
- compressed air \*\*
- Hydraulic \*\*

#### Motor voltage

- 400 Volt, 50 Hz, IP54
- 230 Volt, 50 Hz, IP54 \*
- 24 Volt; DC\*
- EEX T4 \*
- specific voltage \*\*
- specific frequency \*\*
- Special protection\*\*

#### Gearing

- i = 100 : 1
- Planetary gearing\*

#### Material

- 1.4401
- 1.4404
- 1.4435 \*
- PTFE
- Special materials \*\*
- Isolast \*\*

#### Sealing

- polished stainless steel shafting with flexible Teflon-lip sealing

#### Magnet gearing

- hermetic-gas density Permanent gearing\*

#### Lubrication

- self lubricating

#### Filter fineness

- 30 µm necessary

#### pH-compatibility

- pH 3 - 14

#### Surface-Design

- Industry
- Pharma\*  
electro-polished  
Ra < 0,8 µm\*
- hand polished  
Ra < 0,4 µm\*

#### Machine-Design

- no wastage of space

\*optional

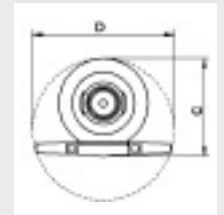
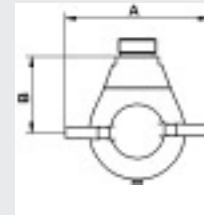
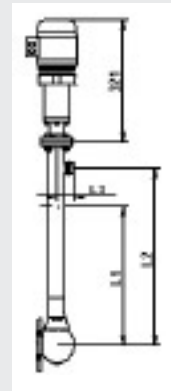
\*\* possible on demand

# OrbiJet

## 3-dimensional cleaning

### Technical Data

#### Mounting measurements (example: OrbiJet with electric motor)

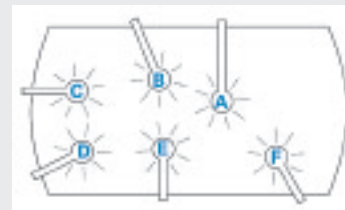


#### Measurements

[mm]	OJ 50	OJ 100
L1	75 - 1000	125 - 2000
L2	L1 + min. 30	L1 + min. 50
L3	min. 20	min. 30
A	40 - 80 *	100 - 180 *
B	71	135
C	50	100
D	62 *	146

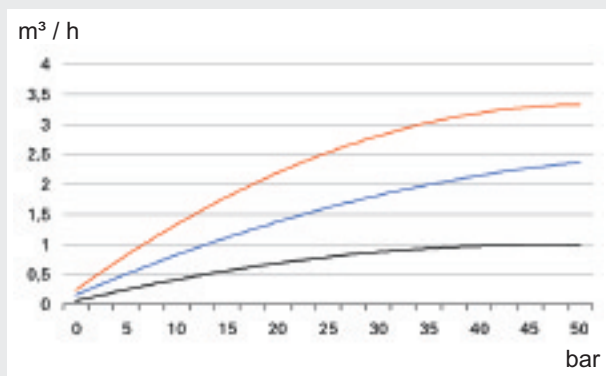
#### Mounting options

The OrbiJet can be mounted concentric or non concentric in the tank. Furthermore all positions can be fastened or adapted for mobile operation.



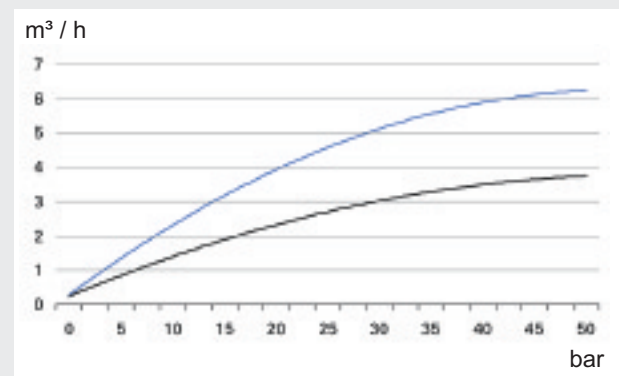
- A** hanging vertical from top of tank
- B** slanting from top
- C** horizontal sideways
- D** slanting sideways
- E** verticle stance from base of tank
- F** slanting from base

#### Performance data OrbiJet 50 (Rotor with 2 nozzles)



\_\_\_ Nozzle 2,0mm \_\_\_ Nozzle 2,5mm \_\_\_ Nozzle 3,0mm

#### Performance data OrbiJet 100 (Rotor with 2 nozzles)



\_\_\_ Nozzle 3,5mm \_\_\_ Nozzle 4,0mm