Low Flow Saves on Water and Chemicals
Alfa Laval TJ SanMicro Rotary Spray Head

Application
The Toftejorg SanMicro is a rotary spray head that uses cleaning media to provide coverage and impact. The device represents an effective alternative to traditional static spray balls because it uses low volumes of cleaning fluid at low pressure. The double ball bearing in the Toftejorg SanMicro’s rotating head makes the device suitable for all industrial cleaning applications, including tanks, reactors, vessels and other containers ranging from 0.05 to 1 m³, depending on dimensions and cleaning task.

Working principle
The flow of the cleaning media causes the head of the Toftejorg SanMicro to rotate, and the fan-shaped jets lay out a swirling pattern throughout the tank or reactor. This generates the impact needed for the efficient removal of residual product; the cascading flow covers all internal surfaces of the vessel.

TECHNICAL DATA
Lubricant: ................. Self-lubricating with the cleaning fluid
Wetting radius ............ Max. 2.5 m
Impact cleaning radius: . . . . . . Max. effective 0.6 m
Pressure
Working pressure: ........ 1-3 bar
Recommeded pressure: ....... 2 bar
Spray Pattern

360°  270° up  180° down

Standard Design
As standard documentation, the Toftejorg SanMicro can be supplied with a “Declaration of Conformity” for material specifications or 3.1 certification for metallic parts. The device is available in an electropolished version as well as in hastelloy C22 (balls in hastelloy C276) with 3.1 certification for metallic parts.

Certificates
2.2 material certificate, Q-doc, Q-doc incl. FAT & SAT and ATEX.

TECHNICAL DATA
Lubricant: .................... Self-lubricating with the cleaning fluid
Wetting radius ............ Max. 2.5 m
Impact cleaning radius: . . . . . . Max. effective 0.6 m
Pressure
Working pressure: ........ 1-3 bar
Recommeded pressure: ....... 2 bar
Spray Pattern

360°  270° up  180° down

PHYSICAL DATA
Materials
AISI 316L (UNS S31603); PTFE*
* FDA compliance 21CFR§177.
Clip parts ................. 316
Min. tank opening: ........... 25 mm diameter (DN25)

Standard Surface finish:
exterior: ..................... Ra 0.5µm
Internal: ..................... Ra 0.8µm

Improved Surface finish:
exterior + Electro polished: ........ Ra 0.5µm
Internal + Electro polished: ....... Ra 0.5µm

Temperature
Max. working temperature: ....... 95°C
Max. ambient temperature: ......... 140°C

Weight: ........................ 75 g

Connections
- Thread: 3/8” Rp (BSP), or 3/8” NPT
- Weld-on: 3/4” ISO 2037, or DN15 DIN18601-R1 or R2, or 3/4” BPE US
- Clip-on: 3/4” ISO 2037, or DN15 DIN11850-R1 or R2, or 3/4” BPE US
**Qualification Documentation (Q-doc)**

Designed for the BioPharm and Personal Care industry for qualification of hygienic Tank Cleaning Machines. Developed in accordance to the ISPE V-model and GDP, Good Documentation Practice, and includes: RS (Requirement Specification); DS (Design Specification incl. Traceability Matrix); FAT (Factory Acceptance Test incl. IQ & OQ); 3.1 and USP Class VI Certificates; FDA Declaration of Conformity; TSE Declaration of Conformity; SAT (Site Acceptance Test Protocol incl. IQ & OQ) for End-User Execution.

**Flow Rate Cleaning Radius**

<table>
<thead>
<tr>
<th>Flow Rate</th>
<th>Width (m)</th>
<th>360°</th>
<th>270° UP</th>
<th>270° UP LowFlow</th>
<th>180° D</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Inlet pressure**

For Clip-on models, the flow rate is increased by approx. 0.2 m³/h

**Dimensions (mm)**

<table>
<thead>
<tr>
<th>Thread</th>
<th>Clip-on</th>
<th>Weld-on</th>
</tr>
</thead>
<tbody>
<tr>
<td>TH</td>
<td>ID</td>
<td>OD x t</td>
</tr>
<tr>
<td>TH</td>
<td>ID</td>
<td>OD x t</td>
</tr>
<tr>
<td>ID</td>
<td>ID</td>
<td>OD x t</td>
</tr>
<tr>
<td>OD x t</td>
<td>OD x t</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thread</td>
<td>62</td>
<td>ø32</td>
<td>11</td>
<td>11</td>
<td>ø3.6</td>
</tr>
<tr>
<td>Clip-on</td>
<td>62</td>
<td>ø32</td>
<td>11</td>
<td>5.9</td>
<td>ø3.6</td>
</tr>
<tr>
<td>Weld-on</td>
<td>77.50</td>
<td>ø32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.