Alfa Laval SaniMagnum
Hygienic, Low-Flow Cleaning

Application
The Toftejorg SaniMagnum is an efficient replacement for traditional static spray balls as it uses low volumes of liquid at low pressure. The device, particularly well-suited to hygienic applications, can be used in tanks ranging from 5 m³ to 50 m³.

Working principle
The flow of the cleaning media causes the head of the Toftejorg SaniMagnum to rotate, with fan jets laying out a swirling pattern throughout the vessel. This generates a vibrating impact and cascading flow that covers all internal surfaces of the tank or reactor. The device’s self-cleaning feature is achieved by directing the cleaning media through the rotating bearing track and onto the neck of the elongated head.

TECHNICAL DATA
Lubricant: ................... Self-lubricating with the cleaning fluid
Wetting radius: .................. Max. 3 m
Impact cleaning radius: .......... Max. effective 2 m
Pressure
Working pressure: ............... 1-3 bar
Recommended pressure: .......... 2 bar
Spray Pattern
360°  270° up  180° down

Standard Design
As standard documentation, the Toftejorg SaniMagnum can be supplied with a “Declaration of Conformity” for material specifications or 3.1 certification for metallic parts. Conformity of Declaration ATEX available on request. The device is available in hastelloy C22 (balls in hastelloy C276) with 3.1 certification for metallic parts. ATEX approved, Category 1 for installation in zone 0/20.

Certificates
2.2 material certificate, Q-doc and ATEX.

PHYSICAL DATA
Materials
Inlet connections/Head: ............ 316L (UNS S31603)
Bearing race parts: ................. Duplex steel (UNS S31803)
Balls: ............................. 316L (UNS S31603) /PTFE*
Clip parts: .......................... 316
* FDA compliance 21CFR§177

Standard Surface finish:
exterior: .......................... Ra 0.8μm
internal: ........................... Ra 0.8μm

Improved Surface finish:
exterior: .......................... Ra 0.5μm
internal: ........................... Ra 0.8μm

Temperature
Max. working temperature: ........ 95°C
Max. ambient temperature: ......... 140°C
Weight
Thread and clip-on: 0.76 kg
On pipe: 0.97/1.52 kg

Connections
- Thread: 1 1/4" or 1 1/2" Rp (BSP) or NPT
- Weld-on: 1 1/2" or 2" ISO 2037, or DN40 DIN11850-R2, or 1 1/2" or 2" BPE US
- Clip-on: 1 1/2" or 2" ISO 2037, or DN40 DIN11850-R1 or R2, or 1 1/2" or 2" BPE US

Caution
Avoid hydraulic shock, hard and abrasive particles in the cleaning liquid, as this can cause increased wear and/or damage of internal mechanisms. In general, a filter in the supply line is recommended. Do not use for gas evacuation or air dispersion. For steaming we refer to the manual.

Qualification Documentation (Q-doc)

<table>
<thead>
<tr>
<th>Q-doc</th>
<th>Equipment Documentation includes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- EN 10204 type 3.1 Material Inspection certificate</td>
</tr>
<tr>
<td></td>
<td>- USP Class VI certificate</td>
</tr>
<tr>
<td></td>
<td>- FDA Declaration of Conformity</td>
</tr>
<tr>
<td></td>
<td>- TSE Declaration</td>
</tr>
<tr>
<td></td>
<td>- QC Declaration of Conformity</td>
</tr>
</tbody>
</table>

ATEX approved machine for use in explosive atmospheres.
Media driven version:
- Category 1 for installation in zone 0/20 in accordance to Ex II 1 GD c T140°C, 284°F
- ATEX

Air driven version:
- Medium driven version:
  - Category 1 for installation in zone 0/20 in accordance to Ex II 1 GD c T140°C, 284°F
  - Air driven version:
  - Category 2 for installation in zone 1/21 in accordance to Ex II 2 GD c IIC T4 Tamb -20°C-4°F to +40°C104°F
For Clip-on models, the flow rate is increased by approx. 1.5 m³/h

### Dimensions (mm)

**Thread**

<table>
<thead>
<tr>
<th>TH</th>
<th>ID</th>
<th>OD x t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/4” (BSP)</td>
<td>ID 1: 1 1/4”</td>
<td>Ø38.4 mm ISO</td>
</tr>
<tr>
<td>1 1/4” NPT</td>
<td>ID 2: 2”</td>
<td>Ø51.3 mm BPE US</td>
</tr>
<tr>
<td>1 1/2” (BSP)</td>
<td>DIN Range 1</td>
<td>Ø40.4 mm BPE US</td>
</tr>
<tr>
<td>1 1/2” NPT</td>
<td>DIN Range 2</td>
<td>Ø41.4 mm DIN Range 1</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tread</td>
<td>130</td>
<td>Ø65</td>
<td>44</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clip-on</td>
<td>157</td>
<td>Ø65</td>
<td>30</td>
<td>15</td>
<td></td>
<td>Ø4.2</td>
</tr>
<tr>
<td>Weld-on</td>
<td>157, 500, 1000</td>
<td>Ø65</td>
<td></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.