Sanitary, Low-Flow Cleaning

Toftejorg SaniMagnum Rotary Spray Head

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 sanitary applications, can be used in tanks ranging from 5 m³ to 50 m³ (1,300 to 13,000 US gallons). Application and optimal positioning assistance is available in CAD format.

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.

Spray Pattern

Standard Design
As standard documentation, the Toftejorg SaniMagnum can be supplied with a “Declaration of Conformity” for material specifications or 3.1.B certification for metallic parts. The device is available in hastelloy C22 (balls in hastelloy C276/PTFE) with 3.1.B certification for metallic parts.

Materials

| Inlet connections: | 1.4404 (316L) |
| Bearing race parts: | SAF 2205 (UNS31803) |
| Balls: | 1.4401 (316L)/PTFE* |
| Head: | 1.4404 (316L) |

(*FDA approved 21 CFR § 177.1550)

Technical Data

Weight:
Thread and clip-on: 0.76 kg (1.48 lbs)
On pipe: 0.97/1.52 kg (2.14/3.35 lbs)
Self-lubricating with the cleaning fluid

Lubricant:

Working pressure:
1 - 3 bar (14.5 - 44 psi)

Recommended pressure:
2 bar (29 psi)

Max. working temperature:
95 °C (203 °F)

Max. ambient temperature:
140 °C (284 °F)

Wetting radius:
Max. 3 m (10 ft)

Impact cleaning radius:
Max. effective 2 m (6 ft)

Connection:
1 1/4" BSP or NPT thread.
Clip-on or weld-on for pipe:
ISO2037, ASTM A270, BS4825 part 1 or DIN 11.850
Tank Cleaning Equipment

Toftejorg SaniMagnum Rotary Spray Head

Flow Rate

<table>
<thead>
<tr>
<th>Flow Rate (m³/h, USgpm)</th>
<th>Inlet pressure (psi/bar)</th>
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<tbody>
<tr>
<td>5</td>
<td>1</td>
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<tr>
<td>10</td>
<td>2</td>
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<tr>
<td>15</td>
<td>3</td>
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<tr>
<td>20</td>
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<tr>
<td>25</td>
<td>2</td>
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<tr>
<td>30</td>
<td>3</td>
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<tr>
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<td>40</td>
<td>2</td>
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<tr>
<td>45</td>
<td>3</td>
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Cleaning Radius

<table>
<thead>
<tr>
<th>Cleaning Radius (m, ft)</th>
<th>Inlet pressure (psi/bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
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Dimensions (mm)

Thread

- TH
  - 1¼" BSP
  - 1¼" NPT

Clip-on

- ID
  - 1½" Ø38.4
  - 2" Ø51.3
  - NW40 Ø40.4
  - NW40 Ø41.4

Welded on pipe

- OD x t
  - Welded on pipe
    - 1½" Ø38 x 1.2
  - Weld end
    - 1½" Ø38 x 1.2
  - NW40 Ø41 x 1.5

For clip-on models, the flow rate is increased by approx. 0.5 m³/h.
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Ordering
Please specify desired spray pattern, required connections, material selection and type of certification required. Please also confirm the application suitability.

Options
- Downpipes with Tri-Clamp and flange connections
- Electropolishing