CYCO®
Dongguan Changyuan Spraying Technology Co., Ltd.
TANK WASHER NOZZLE
To make the world-class spray nozzle
www.ccnozzle.com

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Brief Introduction

Dongguan Changyuan Spraying Technology Limited Company, branding as CYCO, founded in 1999, is a professional manufacturer of spray nozzles and aftermarket sales. We are committed on research and design of industrial spray nozzles which includes full cone nozzles, hollow cone nozzles, spiral nozzles, air atomizing nozzles, tank washing nozzles and millions of different nozzles for over 22 years.

We are supplying many types of spray nozzles which are applied to marine scrubber for Exhaust Gas Cleaning System, such as spiral nozzle, short type full cone nozzle and large flow rate full cone nozzle which are made of plastic, silicone carbide, and stainless steel with various parameters.

Let us walk you through.

Tank washing optimizing

It is a challenging subject that washing your tanks thoroughly by your best way and reduce the expensive chemicals, water and labor at the meantime. You can maximize the cleaning equipment performance through many respects. We have selected several excellent cleaning solutions for you here which will help to optimize cleaning efficiency.

Covering area of spray

Are you still cleaning tanks manually? If you are currently using cleaning nozzle or tank washing machines, you can improve your cleaning efficiency greatly through a few simple changes or try to change the cleaning device.

You get the following benefits by applying the automation technology:

- The cleaning effect will be more consistent and thoroughly;
- Avoid direct contact with dangerous chemicals, and workers are safer;
- Faster cleaning, downtime minimization, tanks can be quickly restored to working state;
- Usage of water and chemicals will be reduced drastically and lower the cost of wastewater disposal.

Extra labor freed from cleaning operations can create other benefits for the company.

If you want to optimize tank washing, you need to evaluate the proposed operation firstly.

- How many tanks need to be cleaned? Diameter, length and height of each tank.
- Are there any obstacles such as stirrer or mixer inside the tanks that your company using now?
- Compared with other areas, is there any specific area needs to be more careful cleaning, such as degreased line?
- What residues need to be removed? Are these residues sticky? Can residues be washed out easily?
- Whether need detergent, is the water sufficient? Whether need to heat the cleaning liquid?
- Is there any problem with the cleaning method you are currently applying?
- With the clear answer to these questions, what you need to do next is to evaluate which cleaning product you are going to use.

Spraying pattern:

- Liquid column spray with high impact force
- Fan spray with medium impact force
- Solid cone spray with low impact force
Six key specification guidelines

Spray distance
Spray Distance is usually expressed as tank diameter. If you are using a tank with a diameter of 20 feet (6m) and a height of 40 feet (12m), you will need two spray tank washers with diameter of 20 feet (6m) or a tank washer with diameter of 40 feet (12m).

Impact force
You can increase the impact by increasing the flow or pressure. Relatively speaking, the way to increase the flow is particularly effective. If the flow rate is doubled, the impact force can also be increased by 100%, while if the pressure is doubled, the impact force can only be increased by 48%. In a word, to ensure the optimal cleaning efficiency, the best solution is still to choose tank cleaning products with sufficient impact force.

Flow rate
Operating at the lowest possible flow can significantly reduce operating costs. In this way, cleaning fluid, sewage treatment and energy consumption can be greatly reduced. In view of this, our basic guideline is to use flows between 0.2 gal/min/m² (liters/min/m²) and 0.4 gal/min/m² (liters/min/m²). This guideline usually applies to stationary nozzles where all surfaces of tanks can be flushed simultaneously. Rotating nozzles are usually in contact with tank parts at a certain time, allowing for lower flow rates.

Spray pattern
Solid stream sprays provide the greatest impact force, followed by fan and full cone sprays.

Spray coverage
Spray coverage of tank washing nozzle varies from 60° to 360°. To reach all areas of the tank, you may need to use multiple nozzles, especially if there is a mixer in the tank.

Material
In view of the durability and high temperature resistance of stainless steel, most tank washing nozzles are made of stainless steel. Nozzles made of PTFE (teflon) or PVDF (polyvinylidene fluoride) are used for operations involving corrosion protection requirements. Make sure the material with the seal or o-ring device is compatible with the cleaning fluid.

Free evaluation of tank washing:
After you have read this unit, you may consider taking advantage of our free on-site tank cleaning evaluation. Our company will send a tank cleaning expert to the site to conduct field inspection of related operations.

<table>
<thead>
<tr>
<th>Flow rate</th>
<th>Pressure</th>
<th>Relative impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>12gpm/50l/min</td>
<td>65 psi/4.5 bar</td>
<td>1.0</td>
</tr>
<tr>
<td>13gpm/55l/min</td>
<td>90 psi/6.0 bar</td>
<td>1.4</td>
</tr>
<tr>
<td>26gpm/100l/min</td>
<td>45 psi/3.5 bar</td>
<td>2.4</td>
</tr>
</tbody>
</table>

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360-A Tank Cleaning Nozzle

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 Schematic diagram of the decomposition structure of the 360-A bottle cleaning nozzle

Figure 2 Schematic diagram of the external structure of the 380-A bottle cleaning nozzle

Working principle

The upper impeller (13) is mounted inside the connecting rod (17) and fixed with a clamping spring; the lower impeller (16) is assembled with the shaft assembly (44) and locked, after water enters the 360-A style bottle and tank from the pump, it generates swirling flow through the fixed upper impeller (13), enters the lower impeller (16), then enters the connecting rod (17), and then enters the Y-main body (22), through the X-body (6), the jet is ejected from the nozzle body (9), through the rotating water flow of the upper impeller (13) to drive the shaft fixed (44) to rotate, and fixed gears are installed below the shaft assembly (44). The gears of the shaft assembly (44) drive the gears of 40, 41, 45, 48 and 24, the inner gear (24) is fixed with the y-body (22), which drives the Y-body (22) to rotate 360 degrees around the x-axis perpendicular to the ground, in 360 - A type of water inside the bottles from the two directions of the nozzle body (9) in spraying, rotating force due to water flow in two directions, so that the X-ray (6) around the Y - subject (22) parallel to the surface of the shaft direction, the X - (6) and the Y - subject (22) is equipped with A bevel gear meshing, the X - (6) around the Y - subject (22) transmission more stable, this 360 - A type container has realized the two directions of transmission, achieve 360 degrees cleaning.

Detailed parameters:

- Processing customized: Yes
- Material: 316L
- Installation type: Male thread connection
- Working temperature: 300°C
- Working pressure: 3-14 bar
- Medium liquid
- Range of application: Environmental protection, cleaning, purification, coating

Advantages and features

- Clean large tank from 8 m to 40 m.
- With unique and precise rotating mechanism (rotating through 47-49).
- The nozzle rotates 360° around the horizontal and vertical axes at the same time, and a dense mesh is made in the container to ensure that every corner of the container is thoroughly cleaned by the high-impact water flow.
- Pressure range: 1-21bar, suggest to run it under 7-13bar.
- Flow rate range: 6-5000L/h
- Cleaning time is from 5min. to 30min.
- Connection size: 1-1/2 to 2inch flange or pipe thread(BSP, NPT)

Rotary Tank Washing Nozzle CYCO-05

CYCOS-4 data sheet

Model: CYCOS-4
Type: Impeller reducer drive
Weight: 2.6 kg
Work Pressure: 4-20bar
Recommend pressure: 5-10Bar
Clean cycle: 4-6min
Materials: 316L
Clean angle: 360°
Clean Diameter: 5m
Minimum mounting rail: 100m
Connection: 3/4"BSP Female (customized connection optional)

Theory: The rotary tank washer nozzle drives the turbine to actuate the internal decontamination mechanism, cleaning liquid. The gear mechanism operates according to the set trajectory to achieve rotation and rotation, thus achieving 360° and no dead angle cleaning.

Application: It is suitable for three-dimensional cleaning of medium and small tanks and for tanker trucks and underground tanks, such as tank cleaning, beer, pharmaceutical, chemical, industrial fermentation, and occasions where high impact cleaning is required.

Characteristics: Independent decontamination gear box mechanism, good seal, strong impact water flow.

Order Info

- Series: CYCOS-05
- Orifice: 4
- Nozzle qty: 4
- Angle: 360°
- Materials: 316LSS
- Connection: BSP 3/4

CYCO-0SSeries small 3D tank washing Specification

- Material: 316LSS PEERK
- Lubrication: Self lubricating through cleaning fluid
- Working Pressure: 3-150 bar
- Recommend Pressure: 1-100 bar
- Max working Temperature: 95°C
- Max Temperature: 140°C
- Clean angle: 360°
- Clean Diameter: 5m
- Min cut size: 110mm
- Connection: 3/4"BSP Female
- Weight: 2.6 kg
- Clean cycle: 3-5 min

Technical Data

Performance Curve

Flow rate (L/min) vs Pressure (bar)

Technical Parameters

- Working temperature: 30, 90, 120, 150, 180
- Working pressure: 4, 8, 12, 16, 20
- Maximum tank volume: 316L
- Manufacturing material: 316L, PEERK, EPDM
- Installation highlights: Full automatic, self-cleaning, independent gearbox design
- Other parameters: Cleaning cycle 3-5min, element spaying 5-10min, angle 360°, diameter ≤ 110mm
K4 Tank Washing Nozzle-6160 Type 10250 Type

Design features

The 6160 fixed tank washing nozzle assembly features a large flow capacity for cleaning tanks up to 3.1 meters in diameter.

The flow rates can be changed by using the size of 1/4" or 1/8" full cone spray nozzle. The 6160 nozzle can pass thought tank mouth of 130mm of large in diameter.

For cleaning large tanks where extra-large flow capacity is use to clean the tank which diameter reaches 6.7 meter. It uses size of 1/2", 3/4 "or 1" full cone to change the flow rates.

The 10250-1 nozzle assembly can pass thought tank mouth of 230mm in diameter. For deep tanks the 10250-1 version is available with a 1.5 inch bottom outlet connection for use with a pipe extension and a 6160 nozzle assembly.

On Application

- Washbox defoaming
- Stock tank cleaning

Performance data

<table>
<thead>
<tr>
<th>Pipe Size NPT or BSPT (Female)</th>
<th>Nozzle in the first order number</th>
<th>Flow rate (l/min.) at different pressures &amp; Aprox. Max. Tank Dia</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.5 Bar</td>
<td>2 Bar</td>
</tr>
<tr>
<td>3 Inch</td>
<td>10250-1-1/2</td>
<td>280</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>10250-1-3/4</td>
<td>360</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>10250-1-1</td>
<td>1000</td>
<td>4.0</td>
</tr>
<tr>
<td>1 1/2 Inch</td>
<td>6160-14G05</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>6160-14G10</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>6160-14G22</td>
<td>155</td>
<td>177</td>
</tr>
</tbody>
</table>

K4 Tank Washing Nozzle-9800 model

Design features

The 9800 wash nozzle is designed for effective cleaning of small containers.

The nozzle is available in a choice of 13 or 21 full cone spray tips that can provide complete coverage of the interior surface of the small containers at pressure up to 10 bar.

The 9800 nozzle fits through a standard drum mouth. It can be installed on a self driven drum washer. The biggest diameter of the spray tip is 35mm with a 16mm reduced neck design. Constructed of SS, this nozzle is an ideal application when max. corrosion resistance is required.

Dimensions and weight

Based on largest / heaviest version of each type

<table>
<thead>
<tr>
<th>Nozzle serial number 9800-</th>
<th>Pipe joints NPT or BSPT (male)</th>
<th>1 Inch Pipe joints NPT or BSPT (male)</th>
<th>1 Inch Net Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A(mm)</td>
<td>35</td>
<td>C (mm)</td>
<td>16</td>
</tr>
<tr>
<td>B(mm)</td>
<td>156</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**K4 Tank Washing Nozzle-36250 28250**

**Design features**

Feature of 36250/28250 Compact Nozzle:

There are three high-pressure fan spray nozzles at the rotary spray head. The spray tip should be precisely oriented, in order to well wash all inner surface. Therefore, the two models of nozzle can be used to effectively wash inner of small bottle, jar, and barrel.

36250 Nozzle body is made of anticorrosive plastic, and bearing spring is made of hard stainless steel for max. wearable life and high-pressure washing with max. Pressure of 9 bar. 28250 Impact Nozzle can pass inlet with diameter of 42 mm. The sector spray head with low flux has good effect to wash small container. The spray body is made of 316 stainless steel for max. wearable life and high pressure washing with max. pressure of 7 bar.

**Performance data**

<table>
<thead>
<tr>
<th>Nozzle Order Number</th>
<th>Capacity (l/min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Bar</td>
</tr>
<tr>
<td>36250-STCN10-PP</td>
<td>69</td>
</tr>
<tr>
<td>36250-STCN12-PP</td>
<td>71</td>
</tr>
<tr>
<td>36250-STCN17-316SS</td>
<td>22</td>
</tr>
<tr>
<td>36250-STCN29-316SS</td>
<td>43</td>
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</table>

**Size and weight**

<table>
<thead>
<tr>
<th>Nozzle Model</th>
<th>Joint NPT or BSPF (Female)</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>C Hexagon (mm)</th>
<th>Net Weight (KG)</th>
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</thead>
<tbody>
<tr>
<td>36250</td>
<td>3/4 inch</td>
<td>145</td>
<td>115</td>
<td>65</td>
<td>75</td>
<td>0.55</td>
</tr>
<tr>
<td>28250</td>
<td>3/4 inch</td>
<td>122</td>
<td>100</td>
<td>56</td>
<td>44.5</td>
<td>0.68</td>
</tr>
</tbody>
</table>

**K4 Tank Washing Nozzle-19250**

**Design features**

19250 Compact Nozzle can generate self-rotary drive for side spraying by two flat fan spray tip with 25 mm hole. The top hatch makes a whole global spraying available.

The main material is 316 stainless steel, while axizine and axizine circle are made of rigid stainless steel for longest wearable life. The max. pressure is 13 bar and max temperature is 180 centigrade.

**Performance data**

<table>
<thead>
<tr>
<th>Nozzle Order Number</th>
<th>Capacity (l/min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Bar</td>
</tr>
<tr>
<td>19250-STCN9-316SS</td>
<td>47</td>
</tr>
<tr>
<td>19250-STCN9-313SS</td>
<td>15.5</td>
</tr>
<tr>
<td>19250-STCN7-316SS</td>
<td>22.5</td>
</tr>
<tr>
<td>19250-STCN9-316SS</td>
<td>27</td>
</tr>
<tr>
<td>19250-STCN9-316SS</td>
<td>27</td>
</tr>
</tbody>
</table>

**Size and weight**

<table>
<thead>
<tr>
<th>Nozzle Number</th>
<th>A(mm)</th>
<th>B(mm)</th>
<th>C(mm)</th>
<th>Net Weight(KG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19250</td>
<td>89</td>
<td>89.4</td>
<td>25.4</td>
<td>0.23</td>
</tr>
</tbody>
</table>
12810 Tank Washing Nozzle

Design features

The 12810 nozzle is a compact, easy install small rotating Rotary cleaning nozzle, which can extend into the bottle neck as diameter 25 mm for an effective cleaning.

The unique design, the four flat fan spray nozzle produce a driving force for their special positions to the tank for 360-degree.

So the 12810 is very effective for the small tank and drum cleaning.

## Tech Data

<table>
<thead>
<tr>
<th>Order No.</th>
<th>1bar</th>
<th>1.5bar</th>
<th>2bar</th>
<th>3bar</th>
<th>4bar</th>
<th>5bar</th>
<th>weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12810-3/8</td>
<td>23.2</td>
<td>28.6</td>
<td>33.8</td>
<td>45.2</td>
<td>49.4</td>
<td>56</td>
<td>72</td>
</tr>
</tbody>
</table>

M-50 Rotating Tank Washing Nozzle

Design features

- Compact design fits through small openings. O.D.: M50-49mm
- Superior cleaning at low pressures and low flow rates for greater economy
- Self-cleaning
- No ball bearing to corrode

Spray Characteristics

- High impact scrubbing action
- Slow rotation speed provides better cleaning
- Wide coverage
- Flow rate: 76 to 132 l/min.

M-50 Nozzle Components

M-50 consists of the welded pipe of 304SS, long plug, short plug, spring, small protective case of Teflon, big protective case of Teflon, rotating rod of POM, rotor and connecting rod of 316SS

Technical Data

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>Flow Rates (l/m)</th>
<th>Spray Rate (m3/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>GPM</td>
<td></td>
</tr>
<tr>
<td>1.4/20</td>
<td>76</td>
<td>20</td>
</tr>
<tr>
<td>2.1/30</td>
<td>95</td>
<td>25</td>
</tr>
<tr>
<td>2.8/40</td>
<td>110</td>
<td>29</td>
</tr>
<tr>
<td>3.4/50</td>
<td>125</td>
<td>33</td>
</tr>
<tr>
<td>4.1/60</td>
<td>132</td>
<td>35</td>
</tr>
</tbody>
</table>
### 36300 Tank Washing Nozzle

**Design features**
- The maximum diameter is about 7.6mm.
- It is suitable for CIP (Cleaning in place) system.
- The reaction force of the cleaning liquid turns the nozzle, no need power to drive it.
- It can be cleaned and rinsed under low pressure.
- Teflon material has a long service life.
- Jet Angle range between 180° to 360°.

**Main Feature**
- Flow Rate Range: 15-1400L/min.
- Pressure Range: 0.7-3.5Bar.
- Highest Temperature: 90°C.
- Tank Opening Size: 50-180mm.
- Spraying Angle: 180°, 270°, 360°.

**Spraying Angle**
- 180° Spraying Up
- 270° Spraying Up
- 360° Spraying Up
- 180° Spraying Down
- 270° Spraying Down
- 360° Spraying Down

**Size (mm)**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>60.3</td>
<td>49.2</td>
<td>28.6</td>
</tr>
<tr>
<td>3/4</td>
<td>55.6</td>
<td>57.2</td>
<td>33.3</td>
</tr>
<tr>
<td>1</td>
<td>78.2</td>
<td>69.8</td>
<td>45.3</td>
</tr>
<tr>
<td>2</td>
<td>111</td>
<td>123.8</td>
<td>69.8</td>
</tr>
<tr>
<td>3</td>
<td>149.2</td>
<td>174.6</td>
<td>98.4</td>
</tr>
</tbody>
</table>

**Performance Data**

<table>
<thead>
<tr>
<th>Model No</th>
<th>Orifice diameter (mm)</th>
<th>Capacity (L/min.)</th>
<th>Max. Cleaning Diameter</th>
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</thead>
<tbody>
<tr>
<td>1/2-8</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>3/4-12</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>1/2-16</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>1/2-20</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>1/2-25</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>1/2-30</td>
<td>2.4</td>
<td>2.4</td>
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</tr>
</tbody>
</table>

### 36500 Tank Washing Nozzle

**Design features**
- The maximum diameter is about 7.6mm.
- It is suitable for CIP (Cleaning in place) system.
- The reaction force of the cleaning liquid turns the nozzle, no need power to drive it.
- It can be cleaned and rinsed under low pressure.
- Teflon material has a long service life.
- Jet Angle range between 180° to 360°.

**Main Feature**
- Flow Rate Range: 15-1400L/min.
- Pressure Range: 0.7-3.5Bar.
- Highest Temperature: 90°C.
- Tank Opening Size: 50-180mm.
- Spraying Angle: 180°, 270°, 360°.

**Spraying Angle**
- 180° Spraying Up
- 270° Spraying Up
- 360° Spraying Up
- 180° Spraying Down
- 270° Spraying Down
- 360° Spraying Down

**Size (mm)**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>60.3</td>
<td>49.2</td>
<td>28.6</td>
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<tr>
<td>3/4</td>
<td>55.6</td>
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<td>33.3</td>
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<td>1</td>
<td>76.2</td>
<td>69.8</td>
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<td>3</td>
<td>149.2</td>
<td>174.6</td>
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**Performance Data**

<table>
<thead>
<tr>
<th>Model No</th>
<th>Orifice diameter (mm)</th>
<th>Capacity (L/min.)</th>
<th>Max. Cleaning Diameter</th>
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<tr>
<td>1/2-8</td>
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<tr>
<td>3/4-12</td>
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<td>2.4</td>
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<td>1/2-16</td>
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<td>2.4</td>
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</tr>
<tr>
<td>1/2-30</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>
36300R Tank Washing Nozzle

Design features
The maximum diameter is about 5.5 meter
No thread, the tapered design facilitates drainage, prevent the formation of nozzle hydrops, better advantage in sanitation application
316SS bolt design, safer and more reliable
Teflon material is suitable for corrosive chemical cleaning agent
Removable design, it can be easily removed during inspection and maintenance
Jet Angle range between 180° to 360°

Main Feature
Flow Rate Range: 34-290l/min.
Highest Temperature: 95°C
Spraying Angle: 180°, 270°, 360°
Pressure Range: 0.7-3.5bar
Tank Opening Size: 54-102mm
36300R Bolt Type

Spraying Angle
180° Spraying Up 180° Spraying Down 270° Spraying Up 270° Spraying Down 360°
A 6 Holes B 6 Holes C 7 Holes D 7 Holes E 8 Holes

Size (mm)
Model No. A B C
1/2 60.3 49.2 28.6
3/4 66.5 57.2 33.3
1 76.2 69.8 45.3
2 111 120.8 69.8

Performance Data

Model No. 3/4-18 3/4-32 3/4-48 1”-50 1”-70 1”-1/2”-53 1”-1/2”-70
Drill Diameter (mm) 2.4 4.0 6.0 4.0 5.5 5.1 6.8
Capacity (l/min.) 0.7bar 0.5bar 1bar 2bar 3bar 2bar 3bar 3bar
Max. Cleaning Diameter 43 43 43 5.5 5.5 5.5 5.5

HWS Tank Washing Nozzle

Design features
Compared with static tank nozzles, the cleaning speed is faster under low flow and pressure:
The best choice for surface cleaning treatment:
Welded design, more durable;
316 stainless steel material, more resistant to corrosion;
Multiple connection methods such as: threaded type, bolt type, welded type;
Suitable for CIP (clean in place).

Main Characteristics
Self-cleaning bearing;
High speed rotating spray;
360 degree high efficiency cleaning;
Flow rate: 3.7-89.7l/min.

Nozzle Models

Model No. Diameter of cleaning (m) Model No. Diameter of cleaning (m)
HWS-20 1.5 HWS-40 4
HWS-30 2 HWS-50 6

Connection Ways
Model No. Bolt type Welded Type Female Threaded Type
HWS-20 3/8° 1/4° 1/8°
HWS-30 3/8° 1/4° 1/8°
HWS-40 1/2° 1/2° 1/4°
HWS-50 1/2° 1/2° 1/4°

Technical Parameter

Thread Size 1/8” 1/4” 3/4” 1-1/2”
Capacity Code 0.7 1.4 2.1 2.8 3.5 4.2
Capacity Code 14.08 17.34 20.33 23.85 24.11 24.6
Capacity Code 20.33 23.85 24.11 24.6 16.6 42.7 24.95
Capacity Code 30 39.63 39.63 54.69 66.91 76.5 84.29 91.37
Capacity Code 21.11 21.11 32.74 32.74 45.27 49.51 53.97
Capacity Code 49.51 53.97 64.29 64.29 81.37 91.37
Dimension (mm) 68 103 175 236 315 395 525
Weight (g) 158 158 158 158 158 158 158
<table>
<thead>
<tr>
<th>Nozzle</th>
<th>Tank max diameter(ft)</th>
<th>Working theory</th>
<th>Pressure psi(bar)</th>
<th>Capacity range gpm/(l/min)</th>
<th>Spray angle</th>
<th>Tank min hole size ft²/(mm²)</th>
<th>Temperature °F(°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>(30)</td>
<td>Liquid-driven turbine</td>
<td>40-350 (28-24)</td>
<td>30-300 (1135-1156)</td>
<td>360*</td>
<td>6.25 (158.7)</td>
<td>250 (121)</td>
</tr>
<tr>
<td>22</td>
<td>(6)</td>
<td>Liquid-driven turbine</td>
<td>345-580 (10-40)</td>
<td>27.54 (10-204)</td>
<td>360*</td>
<td>5 (140)</td>
<td>185 (85)</td>
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<tr>
<td>17</td>
<td>(5)</td>
<td>Liquid-driven turbine</td>
<td>58-290 (4-207)</td>
<td>7.69 (25-200)</td>
<td>360*</td>
<td>3.5 (105)</td>
<td>203 (95)</td>
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<tr>
<td>27</td>
<td>(6.7)</td>
<td>Static type</td>
<td>20-50 (1.5-3.5)</td>
<td>72-385 (280-1470)</td>
<td>360*</td>
<td>10 (254)</td>
<td>212 (100)</td>
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<tr>
<td>2</td>
<td>(0.6)</td>
<td>Static type</td>
<td>60-50 (1.5-3.5)</td>
<td>55-117 (23-43)</td>
<td>210*,360*</td>
<td>2 (53)</td>
<td>212 (100)</td>
</tr>
<tr>
<td>5</td>
<td>(1.5)</td>
<td>Driven by the counter-force of the liquid</td>
<td>10-60 (1-4)</td>
<td>50-22 (23-82)</td>
<td>360*</td>
<td>2.25 (60)</td>
<td>350 (177)</td>
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<tr>
<td>3</td>
<td>(0.9)</td>
<td>Driven by the counter-force of the liquid</td>
<td>20-200 (1.5-1.2)</td>
<td>3.5-22 (14-79)</td>
<td>360*</td>
<td>1.03 (26)</td>
<td>350 (177)</td>
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<tr>
<td>6.5</td>
<td>(2.0)</td>
<td>Driven by the counter-force of the liquid</td>
<td>15-60 (1-4)</td>
<td>2.5-7.3 (9.5-28)</td>
<td>180°L/F, 360*</td>
<td>槽长1250; C(PEL:2150)</td>
<td>300 (149)</td>
</tr>
<tr>
<td>8</td>
<td>(2.4)</td>
<td>Driven by the counter-force of the liquid</td>
<td>10-50 (0.7-4)</td>
<td>2.1-4.5 (7.8-18)</td>
<td>180°L/F, 360*</td>
<td>1 (25)</td>
<td>200 (93)</td>
</tr>
<tr>
<td>25</td>
<td>(7.6)</td>
<td>Driven by the counter-force of the liquid</td>
<td>10-50 (0.7-3.5)</td>
<td>4.391 (15.3-1490)</td>
<td>180°L/F, 270°L/F, 360*</td>
<td>2-7 (51-178)</td>
<td>200 (93)</td>
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<td>18</td>
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<td>Driven by the counter-force of the liquid</td>
<td>10-50 (0.7-3.5)</td>
<td>9.78 (34-295)</td>
<td>180°L/F, 360*</td>
<td>2-7 (51-178)</td>
<td>200 (93)</td>
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<tr>
<td>25</td>
<td>(7.6)</td>
<td>Driven by the counter-force of the liquid</td>
<td>10-50 (0.7-3.5)</td>
<td>4.391 (15.3-1490)</td>
<td>180°L/F, 270°L/F, 360*</td>
<td>2-7 (51-178)</td>
<td>200 (93)</td>
</tr>
<tr>
<td>6.5</td>
<td>(2.0)</td>
<td>Driven by the counter-force of the liquid</td>
<td>15-60 (1-4)</td>
<td>2.5-7.3 (9.5-28)</td>
<td>180°L/F, 360*</td>
<td>槽长1250; C(PEL:2150)</td>
<td>300 (149)</td>
</tr>
<tr>
<td>13</td>
<td>(3.7)</td>
<td>Static type</td>
<td>15-40 (1-2.8)</td>
<td>22-51 (83-192)</td>
<td>360*</td>
<td>1.5-4 (38-102)</td>
<td>400 (204)</td>
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