## **BETE Fog Nozzle, Inc.**

### HydroWhirl<sup>®</sup> S slotted rotating spray nozzle for quick, efficient tank cleaning

The HydroWhirl<sup>®</sup> S nozzle directs the cleaning water through a rotating head at the tip of the spray assembly. This produces a vigorous moving spray action against all areas of the walls of a tank. The spray pattern from the HydroWhirl S head uses impact and repetition to quickly wash the tank. This spray pattern is especially effective at breaking up and removing contaminants.

#### Advantages of the HydroWhirl S rotary spray nozzle.

- Cleans more quickly, and uses less water and lower pressure than static tank washers
- Complete 360° coverage
- Lower flow and pressure mean smaller pump size resulting in lower operating costs

# The HydroWhirl S nozzle has been carefully designed for long service life.

#### Low-maintenance bearing design

• Self-cleaning bearings are lubricated by water flow to clear away particles

#### High-precision machining and finish

- Stainless steel construction corrosion resistant
- Laser-welded design for durable assembly
- Surface finish of 0.8 microns R<sub>a</sub> or better
- Made from FDA-approved materials for use in Clean-in-Place (CIP) applications

#### **Comprehensive quality control**

- Material traceability controlled throughout production
- Lifecycle lab testing validates minimum service life of 300 hours
- All HydroWhirl S nozzle are available with ATEX approval for Zone 0.

#### **Design flexibility**

- Available in many different sizes and connections: threaded, clip-on, or welded
- 360° omni-directional spray pattern standard; other spray angles available upon request
- Flow range: 1.26 90.9 gpm (14.2 334 L/min)
- Dual bearing design nozzle operates effectively in any orientation



Surface finish ideal for sanitary applications

The HydroWhirl S nozzle is an outstanding combination of design, quality, and engineering. The HydroWhirl S nozzle is ideal for anyone who needs reliable, efficient cleaning of tanks and other interior spaces.

BETE Fog Nozzle, Inc. has been a nozzle pioneer for over 60 years. BETE Applications Engineers will work with you to ensure you choose the right BETE nozzle for your application.





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PERFORMANCE THROUGH ENGINEERING

# HydroWhirl<sup>®</sup>S

# Tank Washing - Slotted Spray Nozzle

#### **DESIGN FEATURES**

- Cleans more quickly, and uses less water and lower pressure than static tank washers
- Surface finish ideal for sanitary applications
- Laser-welded design for durable assembly
- Stainless steel construction corrosionresistant material
- Three connections: threaded, clip-on, and welded
- Made from FDA approved materials for use in Clean-In-Place (CIP) applications.

#### STANDARD CONNECTION SIZES

#### SPRAY CHARACTERISTICS

- Self-cleaning bearings
- Vigorous moving spray action
- Complete 360° omnidirectional coverage

Flow rates: 1.26 to 90.9 gpm

All HydroWhirl S nozzle are available with ATEX approval for Zone 0.

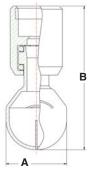


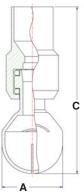
Additional connnection sizes available on request

Connection Type	Nozzle Number													
	HWS 20-3	HWS 20-4	HWS 20	HWS 30-5	HWS 30-6	HWS 30	HWS 40-7.5	HWS 40-8	HWS 40-9	HWS 40	HWS 40HF-11	HWS 40HF	HWS 50-16	HWS 50
Pipe Clip On						3/8"				3/4"		3/4"		1-1/2"
Tube Clip On						3/4"				1"		1"		2"
Pipe Weld On			1/4"			3/8", 1/2"				3/4", 1		3/4", 1		1-1/2", 2"
Tube Weld On			1/2"			3/4"				1"		1"		2"
FNPT/FBSP	1/8"	1/8"	1/8"	3/8"	3/8"	1/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1-1/2"	1-1/2"
DIN Clip On (mm)			8			15				20, 25		20, 25		40, 50
DIN Weld On (mm)			8, 10			15				15, 20, 25		15, 20, 25		40, 50

#### HydroWhirl<sup>®</sup> S Flow Rates and Dimensions

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Female Pipe Size	Nozzle	GALLONS PER MINUTE @PSI							Dimensions (in)			Coverage Diameter
	Number	10 psi	20 psi	30 psi	40 psi	50 psi	60 psi	А	В	С	(oz)	(ft) @40PSI
1/8"	HWS-20-3	1.26	1.63	1.89	2.10	2.28	2.44		1.68	2.72	0.88	4.9
	HWS-20-4	2.14	2.79	3.26	3.64	3.97	4.26	0.66				6
	HWS-20	3.16	4.31	5.45	6.41	7.16	7.83					
3/8"	HWS-30-5	2.31	3.29	4.12	4.80	5.37	5.88		2.34	3.28	3.28	
	HWS-30-6	5.54	6.97	7.98	8.78	9.46	10.1	1.1				8
1/4"	HWS-30	5.70	8.10	9.96	11.5	12.9	14.3					
3/4"	HWS-40-7.5	5.60	7.87	9.60	11.1	12.4	13.6		3.65	4.25	10.8	
	HWS-40-8	6.39	8.96	10.9	12.6	14.1	15.4	1.53				11
	HWS-40-9	7.94	11.3	13.9	16.0	17.8	19.6	1.00				
	HWS-40	9.08	13.1	16.1	18.3	20.3	22.2					
	HWS-40HF-11	12.2	17.1	20.8	24.1	26.9	29.4	1.53	3.65	4.25	10.6	13
	HWS-40HF	15.0	21.3	26.0	29.7	32.6	35.4					
1 1/2"	HWS-50-16	24.2	33.8	41.4	47.8	53.4	58.5	2.72	6.21	7.09	53.8	18
	HWS-50	37.2	52.4	64.1	74.2	82.9	90.9					





Standard Materials: nozzle: 316L; ball bearings: 316 stainless steel

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