

HydroWhirl® Stinger

(HWS2) Reactionary Force Tank Cleaning Nozzle



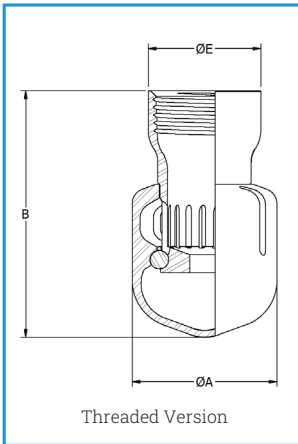
DESIGN FEATURES

- Patent-pending no-weld design eliminates weak points and uneven surfaces
- Centrally located bearing assembly for even balance and quality spray propagation
- Uniform spray, even at low pressures
- Compact size fits openings with inside diameters between 23 mm and 47 mm, including tri-clamp and flanged connections
- Unique pipe thread technology self flushes to reduce contamination and bacteria growth
- Zirconia ceramic bearings for extreme chemical resistance and long service life*
- 32 Ra surface finish ideal for sanitary applications
- *Note: Rated for use with liquids only. Compressed air, steam, or other gasses should never be run through the nozzle as the bearings are lubricated by the process media.

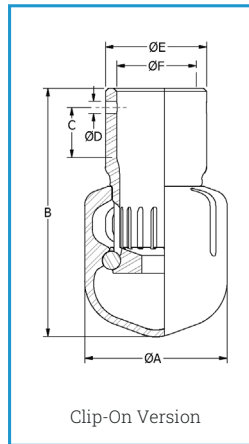
SPRAY CHARACTERISTICS

- Vigorous spray action
- Optimum cleaning performance @ 3 bar
- Spray Angles:** Complete 360° spray coverage
- Flow Rates:** 4.15 to 380 l/min
- Max Temperature:** 200 °F/93 °C
- Filtration:**
 - Line strainer with a mesh size 0.07 mm/200 mesh for nozzle number HWS2-4 and smaller
 - Line strainer with a mesh size 0.10 mm/150 mesh for nozzle number HWS2-7.5 and larger

TANK CLEANING



Threaded Version



Clip-On Version

Clip-On HWS2 Dimensions (mm)

Tube Size	A	B	C	D	E	F	Wt (g)	Min Tank Entry Dia*
1"	46.7	86.4	21.3	3.96	33.5	25.4	340	46.7
3/4"	34.3	72.2	12.7	2.18	26.9	19.0	198	34.3
1/2"	21.6	48.3	12.4	2.18	21.3	12.7	85	30.2
3/8"	15.2	34.9	8.61	2.18	14.2	9.52	23	22.9

*Minimum tank entry diameter does not include the clip.

Threaded HWS2 Dimensions (mm)

Pipe Size	A	B	E	Wt (g)	Min Tank Entry Dia
1"	46.7	80.0	36.6	298	46.7
3/4"	34.3	69.1	29.2	146	34.3
1/2"	34.3	60.3	24.1	134	34.3
3/8"	21.6	45.2	19.1	40	21.6
1/8"	15.2	31.7	12.8	28	15.2

Dimensions are approximate. Check with BETE for critical dimension applications.

HWS2 Flow Rates

Materials: 316L Stainless Steel Body, Ceramic Bearings

Connection Type	Nozzle Number	Spray Angle	Flow Rate (l/min) @ Differential Pressure (bar)					Max Free Passage	Coverage Dia @ 2 bar
			0.7	1	2	3	4		
			bar	bar	bar	bar	bar		
1/8" FNPT, BSPP 3/8" Tube Clip-On	HWS2-2.1	360°	4.15	4.92	6.83	8.27	9.48	0.64	0.6
	HWS2-4		7.80	9.27	13.0	15.8	18.1	0.99	2
	HWS2-7.5		14.6	17.4	24.3	29.6	34.0	1.60	2
3/8" FNPT, BSPP 1/2" Tube Clip-On	HWS2-10	360°	18.8	22.6	32.1	39.5	45.7	0.61	2
	HWS2-12		23.7	28.1	39.0	47.3	54.2	0.99	3
	HWS2-17		32.8	39.1	54.9	67.1	77.3	2.00	3
1/2" FNPT, BSPP	HWS2-20	360°	39.0	46.3	64.8	78.9	90.6	0.99	3
	HWS2-26		49.0	58.8	83.6	103	119	1.63	3
3/4" FNPT, BSPP 3/4" Tube Clip-On	HWS2-20	360°	39.0	46.3	64.8	78.9	90.6	0.99	3
	HWS2-26		49.0	58.8	83.6	103	119	1.63	3
1" FNPT, BSPP 1" Tube Clip-On	HWS2-33	360°	63.5	75.7	107	130	150	0.79	3
	HWS2-55		105	126	177	217	251	1.63	4
	HWS2-66		127	152	213	260	300	2.39	4
	HWS2-84		165	195	272	331	380	3.18	4

Flow rates represent threaded connections with a 360° spray angle.

Flow rates may vary for other connection types.

TO ORDER: specify pipe size, connection type, nozzle number, spray angle, and material.