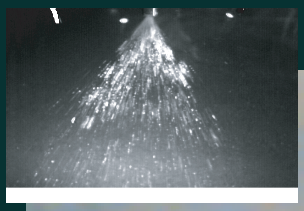
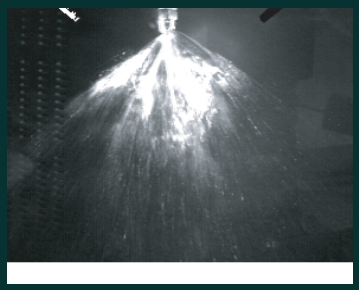
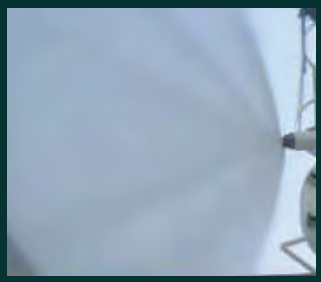
WILSON
SPRAY NOZZLE

Manufacturer since 1994










INDUSTRIAL SPRAY NOZZLES for

Scrubbing, Rinsing, Descaling, Coating,
Curing, Fogging, Etching, Mixing, Tank Cleaning,
Quenching, Humidification, Spray Drying, Defoaming,
Pulp Bleaching, Cold Rolling, Aeration, Pollution Control,
Absorption, Misting, Cleaning in Process etc.

www.wilsonspraynozzle.sg

NOZZLE SELECTION

NOZZLE CONSTRUCTION

The basic elements of spray nozzle construction are pipe connection, physical dimensions, and material of construction.

PIPE CONNECTION is described by type, size, male, female, or flange. Nozzles described in this catalog have NPT threaded pipe connections (BSPT are also available for most models).
SIZE - Standard sizes from 1/8 NPT to 4" NPT, or as indicated.
MALE AND FEMALE connections are available where indicated.

SPRAY CHARACTERISTICS

A spray may be characterized by describing its spray pattern, flow rate, atomization and spray angle. This catalog describes these characteristics for the listed nozzles, for spraying water under controlled conditions.

SPRAY PATTERN: Common spray patterns (flat, full cone, hollow cone) are all described in this catalog. The spray pattern of a nozzle will generally travel further under higher fluid pressures. However, fine mist-like sprays are very susceptible to air movement, and may be carried away by such movement of air.

FLOW RATE: The low rates listed in this catalog are for water in U.S. gallons per minute, or Litres per minute.

ATOMIZATION: Atomization is primarily dependent on pressure and viscosity, and varies from point to point within a spray pattern. A range of particle sizes is produced, with some average value which varies according to conditions. For this reason, spray droplet sizes are not listed in this catalog. If you require spray droplet information for critical applications, Wilson will be pleased to provide you with measurements, using our in-house laser doppler anemometry equipment.

SPRAY ANGLES: The spray angles listed in this catalog are for water spray under controlled conditions. Under low pressure, the sides of the spray may curve in due to the acceleration of gravity. Spray angles may also be reduced due to the tendency of spray patterns to interfere with themselves or with spray patterns from adjacent nozzles.

INCLUDED SPRAY ANGLE	W/D RATIO	Theoretical coverage (W) at various distances (D) from the nozzle									
		Distance (D) inches									
		2	3	4	6	8	12	16	24	34	48
5°	0.087	0.2	0.3	0.3	0.5	0.7	1.0	1.4	2.1	3.0	4.2
10°	0.175	0.3	0.5	0.7	1.0	1.4	2.1	2.8	4.2	5.9	8.4
15°	0.263	0.5	0.8	1.1	1.6	2.1	3.2	4.2	6.3	9.0	12.6
20°	0.353	0.7	1.1	1.4	2.1	2.8	4.2	5.6	8.5	12.0	16.9
25°	0.443	0.9	1.3	1.8	2.7	3.5	5.3	7.1	10.6	15.1	21.3
30°	0.536	1.1	1.6	2.1	3.2	4.3	6.4	8.6	12.9	18.2	25.7
35°	0.631	1.3	1.9	2.5	3.8	5.0	7.6	10.1	15.1	21.4	30.3
40°	0.728	1.5	2.2	2.9	4.4	5.8	8.7	11.6	17.5	24.7	34.9
45°	0.828	1.7	2.5	3.3	5.0	6.6	9.9	13.3	19.9	28.2	39.8
50°	0.933	1.9	2.8	3.7	5.6	7.5	11.2	14.9	22.4	31.7	45
55°	1.04	2.1	3.1	4.2	6.2	8.3	12.5	16.7	25.0	35.4	50
60°	1.15	2.3	3.5	4.6	6.9	9.2	13.9	18.5	27.7	39.3	55
65°	1.27	2.5	3.8	5.1	7.6	10.2	15.3	20.4	30.6	43	61
70°	1.40	2.8	4.2	5.6	8.4	11.2	16.8	22.4	33.6	48	67
75°	1.53	3.1	4.6	6.1	9.2	12.3	18.4	24.6	36.8	52	74
80°	1.68	3.4	5.0	6.7	10.1	13.4	20.1	26.9	40	57	81
85°	1.83	3.7	5.5	7.3	11.0	14.7	22.0	29.3	44	62	88
90°	2.00	4.0	6.0	8.0	12.0	16.0	24.0	32.0	48	68	96
95°	2.18	4.4	6.5	8.7	13.1	17.5	26.2	34.9	52	74	105
100°	2.38	4.8	7.2	9.5	14.3	19.1	28.6	38.1	57	81	114
110°	2.86	5.7	8.6	11.4	17.1	22.9	34.3	46	69	97	137
120°	3.46	6.9	10.4	13.9	20.8	27.7	42	55	83	118	166
130°	4.29	8.6	12.9	17.2	25.7	34.3	51	69	103	146	206
140°	5.49	11.0	16.5	22.0	33.0	44	66	88	132	187	264
150°	7.46	14.9	22.4	29.9	45	60	90	119	179	254	358

FACTORS AFFECTING SPRAY

When the conditions controlling spray nozzle performance change, the spray characteristics may change. This section lists conditions which may vary, and how those conditions may affect the spray characteristics.

PRESSURE: The flow rate of a liquid is proportional to the square root of the pressure difference between the pressure liquid and external (usually atmospheric) conditions, thus

$$\frac{\text{Flow A}}{\text{Flow B}} = \frac{\sqrt{\text{Pressure A}}}{\sqrt{\text{Pressure B}}}$$

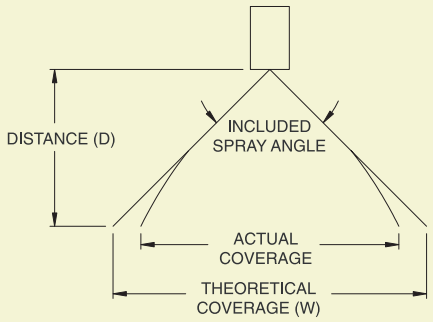
higher pressure generally results in finer spray atomization, greater spray impact, and greater spraying distance.

VISCOSITY: Spraying liquids with higher viscosity than water generally results in reduced atomization, and impact. Spray angle will usually decrease.

SPECIFIC GRAVITY: Flow rates shown in this catalog are for water. (The specific gravity of water is 1.0). For liquids with a different specific gravity, flow is given by the formula:

$$\text{Flow} = \text{Water Flow} \times \frac{1}{\sqrt{\text{Spec. gravity}}}$$

SURFACE TENSION: An increase in surface tension generally results in an increase in spray droplet size, and a reduction in spray angle.



Spray coverages shown in Table 1 are based on straight sided spray patterns. At low pressures the sides may curve in, as shown below, because of the acceleration due to gravity.

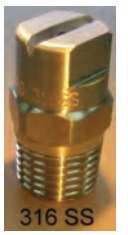
To find the width of a spray (W) at any distance (D), multiply the W/D ratio by the distance.

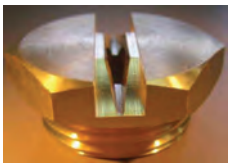
TYPES OF SPRAY

FOG

FOG

FAN SPRAY





FAN

FULL CONE

FULL CONE

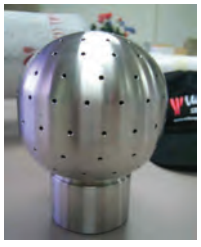
HOLLOW CONE

HOLLOW

AIR ATOMISING

ATOMISING

TANK WASHING



TANK WASH

WILSON SPRAY NOZZLE

T series

FULL CONE Spray Nozzles

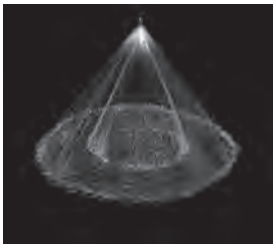
DESIGN FEATURES

* Non clog thru hole
* One piece construction
* Equal droplets distribution
* Maximum discharge velocity
* Consistent spray spread

CHARACTERISTICS

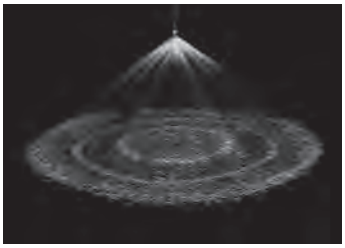
* Versatile for many demanding applications
* Droplets 1/3 smaller than that of internal whirl for similar size
* Hollow Cone or Full Cone

Spray Angle : 60°, 90°, 120°, 150° and 170°

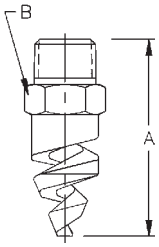


Full Cone 60°

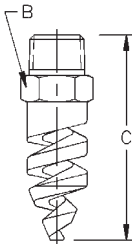
Full Cone 90°



Full Cone 150°/170°



60°, 90°, 120°



150°, 170°

FULL CONE FLOW RATE VS PRESSURE CHART

Male Pipe Size	Nozzle Number	Available Spray Angles 60 90 120 150 170	K Factor	LITERS PER MINUTE @ BAR 0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar (Above 5 bar not recom. for PTFE)	High Pressure Operation recom. for Metal Only 10 bar	20 bar	Approx. (mm) Orif. Dia.	Free Pass Dia.	Dim. (mm) for Metal Only* A	B	C	Wt. (g) 60 90 120 Metal	Plas.
1/8	T 6	60 90 120 150 170	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	42.9	14.3		28	6
	T 8	60 90 120 150 170	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18					
1/4	T 6	60 90 120 150 170	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	47.6	14.3		35	6
	T 8	60 90 120 150 170	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18					
	T 10	60 90 120 150 170	9.12	6.45	7.63	9.12	12.9	15.8	20.4	28.8	40.8	3.97	3.18					
3/8	T 6	60	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	47.6	17.5	60.5	46	7
	T 8	60	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18					
	T 10	60	9.12	6.45	7.63	9.12	12.9	15.8	20.4	28.8	40.8	3.97	3.18					
	T 12	60 90 120 150 170	13.7	9.67	11.4	13.7	19.3	23.7	30.6	43.2	61.1	4.76	3.18					
	T 14	60 90 120 150 170	18.5	13.1	15.4	18.5	26.1	32.0	41.3	58.4	82.6	6.10	3.18					
	T 16	60 90 120 150 170	24.2	17.1	20.2	24.2	34.2	41.8	54.0	76.4	108	7.11	3.18					
	T 20	60 90 120 150 170	37.6	26.6	31.5	37.6	53.2	65.1	84.1	119	168	9.14	3.18					
1/2	T 24	60 90 120 150 170	54.9	38.8	46.0	54.9	77.7	95.1	123	174	246	10.9	4.76	63.5	22.2	77.7	85	14
	T 28	60 90 120 150 170	75.2	53.2	62.9	75.2	106	130	168	238	336	13.5	4.76					
3/4	T 32	60 90 120 150 170	95.7	67.7	80.1	95.7	135	166	214	303	428	15.2	4.76	69.9	28.6	88.9	156	25
1	T 40	60 90 120 150 170	153	108	128	153	216	264	341	483	683	19.6	6.35	92.1	34.9	111	241	71
	T 48	60 90 120 150 170	217	153	181	216	306	375	484	685	968	23.6	6.35					
1 1/2	T 56	60 90 120 150 170	294	208	246	294	416	509	657	930	1320	27.7	7.94	111	50.8	137	624	120
	T 64	60 90 120 150 170	385	272	322	385	545	667	861	1220	1720	32.8	7.94	111	50.8	137		
	T 72	60 90 120 150 170	438	309	366	438	619	758	978	1380	1960	33.5	7.94	111	50.8	143		
2	T 88	60 90 120 150 170	638	451	534	638	902	1110	1430	2020	2850	41.7	11.1	143	63.5	175	1300	227
	T 96	60 90 120 150 170	806	570	674	806	1140	1400	1800	2550	3600	41.7	11.1	176	63.5	178	1530	255
3	T 112	60 90 120°	1170	825	976	1170	1650	2020	2610	3690	5220	50.8	14.3	219	88.9		3230	567
	T 128	60 90 120°	1550	1090	1290	1550	2190	2680	3460	4891	6920	58.4	14.3					
4	T 160	60 90 120°	2390	1690	2000	2390	3380	4140	5350	7570	10700	80.0	15.9	257	114		4790	765

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene, and PTFE.

XT series

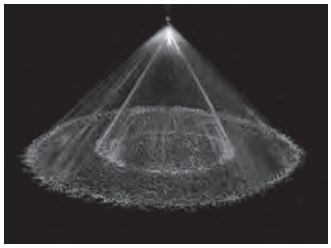
FULL CONE Spray Nozzles

DESIGN FEATURES

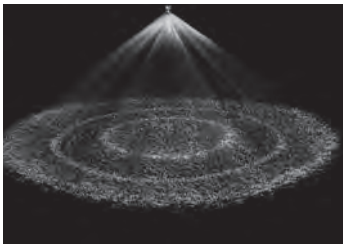
***** 2 piece or 3 piece assembly
* Inter-changeable tips
* Exotic material in C276 Hastelloy or Silicon Carbide
* For Demanding applications
* Maximum Free Passage

SPRAY CHARACTERISTICS

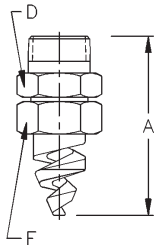
• Fine atomization
Spray pattern: Full Cone
Spray angles: 90° and 120° standard
Flow rates: 2.26 to 10700 l/min



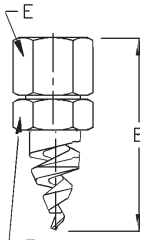
Full Cone 90°



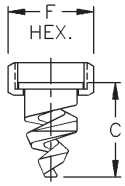
Full Cone 120°



3-piece Male



3-piece Female



2-piece Female

FULL CONE FLOW RATE VS PRESSURE CHART

Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	10 bar	20 bar	Approx. (mm) Free Orifice Pass. Dia.	Free Pass. Dia.	Approximate Dimensions (mm) A	B	C	D	E	F	Wt. (kg) Male
1/4	XT6	3.19	2.26	2.67	3.19	4.5	5.5	7.1	10.1	14.3	2.38	2.38	63.5	65.0	30.0	17.5	17.5	20.6	0.09
	XT8	5.93	4.19	4.96	5.93	8.4	10.3	13.2	18.7	26.5	3.18	3.18	65.0	65.0	29.2	17.5	17.5	20.6	
	XT10	9.12	6.45	7.63	9.12	12.9	15.8	20.4	28.8	40.8	3.97	3.18	65.0	65.0	29.7	17.5	17.5	20.6	
3/8	XT12	13.7	9.67	11.4	13.7	19.3	23.7	30.6	43.2	61.1	4.76	3.18	74.7	74.7	33.3	23.9	23.9	28.7	0.14
	XT14	18.5	13.1	15.4	18.5	26.1	32.0	41.3	58.4	82.6	5.56	3.18	73.2	74.7	31.8	23.9	23.9	28.7	
	XT16	24.2	17.1	20.2	24.2	34.2	41.8	54.0	76.4	108	6.35	3.18	73.2	74.7	34.5	23.9	23.9	28.7	
	XT20	37.6	26.6	31.5	37.6	53.2	65.1	84.1	119	168	7.94	3.18	73.2	74.7	31.8	23.9	23.9	28.7	
3/4	XT24	54.9	38.8	46.0	54.9	77.7	95.1	123	174	246	9.53	4.76	90.4	95.3	30.2	35.1	35.1	38.1	0.28
	XT28	75.2	53.2	62.9	75.2	106	130	168	238	336	11.1	4.76	89.7	95.3	45.2	35.1	35.1	38.1	
	XT32	95.7	67.7	80.1	95.7	135	166	214	303	428	12.7	4.76	93.7	95.3	44.7	35.1	35.1	38.1	
1	XT40	153	108	128	153	216	264	341	483	683	15.9	6.35	116	116	61.0	47.8	44.5	50.8	0.57
	XT48	216	153	181	216	306	375	484	685	968	19.1	6.35	116	116	60.5	47.8	44.5	50.8	
1 1/2	XT56	294	208	246	294	416	509	657	930	1320	22.2	7.94	143	145	84.8	49.3	54.1	55.6	0.79
	XT64	385	272	322	385	545	667	861	1220	1720	25.4	7.94	143	145	85.6	49.3	54.1	55.6	
	XT72	438	309	366	438	619	758	978	1380	1960	28.6	7.94	143	145	83.8	49.3	54.1	55.6	
2	XT88	638	451	534	638	902	1110	1430	2020	2850	34.9	11.1	194	162	121	76.2	88.9	88.9	2.27
	XT96	806	570	674	806	1140	1400	1800	2550	3600	38.1	11.1	229	210	143	92.2	102	102	3.18
3	XT112	1170	826	977	1170	1650	2020	2610	3690	5220	44.5	14.3	251		168	92.2	102	102	4.08
	XT128	1540	1090	1290	1540	2180	2670	3450	4880	6900	50.8	14.3	270		185	92.2	102	102	
4	XT160	2390	1690	2000	2390	3380	4140	5350	7570	10700	63.5	15.9	295		208	116	127	127	6.35

Flow Rate (l_{min}) $= K \sqrt{bar}$

Standard Materials: Base and Caps - 316 Stainless Steel; Tip - C276 Hastelloy or Silicon Carbide

WILSON SPRAY NOZZLE

M series

FULL CONE Spray Nozzles

DESIGN FEATURES

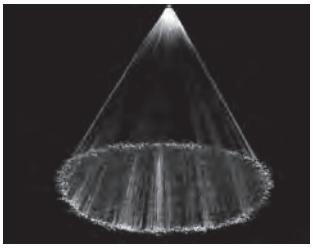
* Clog resistant vortex flow
* Casted
* S shaped internal vanes allowing optimum free passage of fluid
* seal welded S shape internal vane

SPRAY CHARACTERISTICS

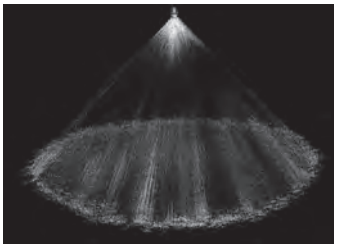
• High reliability spray performance under the most difficult conditions

Spray pattern : Full Cone

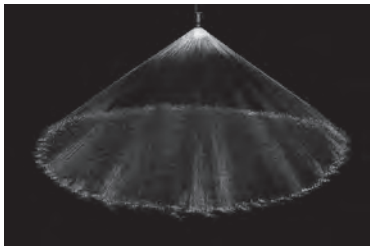
Full Cone 30°



Full Cone 60°



Full Cone 90°



Full Cone 120°

M series Flow rates and dimensions

Full Cone, 30° 60° 90° and 120° *Spray Angles, 3/8" to 4" Pipe Sizes, BSP or NPT*

Maleor Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE@ BAR 0.2 bar	0.3 bar	0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	Approx. Free Passage Dia. (mm)	Approx. Dimensions (mm) Overall Length 30 A	60 A	90 A	120 A	C	Wt.* (kg) Meta
3/8	M 125	5.59	2.75	3.29	4.12	4.77	5.59	7.58	9.06	11.3	3.18	76.2	38.1	38.1	38.1	22.2	0.09
	M 156	8.87	4.37	5.22	6.54	7.58	8.87	12.0	14.4	18.0	3.97						0.09
	M 187	12.8	6.31	7.54	9.45	11.0	12.8	17.4	20.8	26.0	4.76						0.07
1/2	M 187	12.8	6.31	7.54	9.45	11.0	12.8	17.4	20.8	26.0	4.76	102	47.6	47.6	47.6	25.4	0.13
	M 218	20.4	10.0	12.0	15.0	17.4	20.4	27.6	33.0	41.4	5.56						0.11
	M 250	23.0	11.3	13.5	17.0	19.7	23.0	31.2	37.3	46.7	6.35						0.11
3/4	M 281	28.3	13.9	16.6	20.8	24.2	28.3	38.3	45.8	57.4	7.14	102	63.5	60.3	63.5	31.8	0.23
	M 312	34.2	16.8	20.1	25.2	29.2	34.2	46.4	55.4	69.4	7.94						0.23
	M 343	41.7	20.6	24.6	30.8	35.7	41.7	56.6	67.7	84.7	8.73						0.20
	M 375	49.3	24.3	29.0	36.3	42.1	49.3	66.9	79.9	100	9.53						0.20
1	M 375	49.3	24.3	29.0	36.3	42.1	49.3	66.9	79.9	100	9.53	111	74.6	74.6	74.6	38.1	0.35
	M 406	59.1	29.1	34.8	43.6	50.5	59.1	80.2	95.9	120	10.3						0.33
	M 437	69.0	34.0	40.6	50.9	59.0	69.0	93.6	112	140	11.1						0.33
1 1/4	M 437	69.0	34.0	40.6	50.9	59.0	69.0	93.6	112	140	11.1	137	85.9	85.9	85.9	50.8	0.61
	M 500	88.7	43.7	52.2	65.4	75.8	88.7	120	144	180	12.7	164	85.9	85.9	85.9	50.8	0.61
	M 531	98.6	48.5	58.0	72.7	84.2	98.6	134	160	200	13.5	164	85.9	85.9	85.9	50.8	0.61
	M 562	108	53.4	63.8	79.9	92.7	108	147	176	220	14.3	164	85.9	85.9	85.9	50.8	0.61
1 1/2	M 562	108	53.4	63.8	79.9	92.7	108	147	176	220	14.3	173	111	111	111	57.2	0.91
	M 593	123	60.7	72.5	90.8	105	123	167	200	250	15.1	184	111	111	111	57.2	0.91
	M 625	131	64.7	77.4	96.9	112	131	178	213	267	15.9	184	111	111	111	57.2	0.91
	M 656	159	78.5	93.8	117	136	159	216	258	324	16.7	184	111	111	111	57.2	0.91
	M 687	168	82.5	98.7	124	143	168	227	272	340	17.5	184	111	111	111	57.2	0.91

Standard Materials: 316 stainless steel, C276 Hastelloy, Silicon Carbide

Dimension changes depending on Cast

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WILSON SPRAY NOZZLE

M series

FULL CONE Spray Nozzles

DESIGN FEATURES

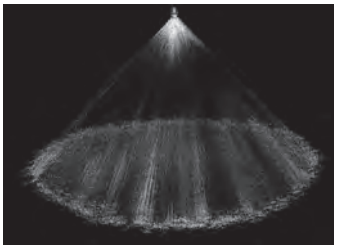
* Clog resistant vortex flow
* Casted
* S shaped internal vanes allowing optimum free passage of fluid
* seal welded S shape internal vane

SPRAY CHARACTERISTICS

• High reliability spray performance under the most difficult conditions

Spray pattern : Full Cone

Dimension changes depending on Cast



Full Cone 90°

M Series Flow rate and Specifications

Full cone 30°, 60°, 90° and 120°. Connection 3/8" to 4" NPT or BSP

Male or Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 0.2 bar	0.3 bar	0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	Approx Free Passage Dia (mm)	Approx. Dimensions (mm) Overall Length 30 A	60 A	90 A	120 A	C[1]	Wt.* (kg) Meta
2	M 750	204	100	120	150	174	204	276	330	414	19.1	210	178	146	159	66.8	1.59
	M 812	223	110	132	165	191	223	303	362	454	20.6	210	183	146	159	66.8	1.59
	M 875	276	136	162	203	236	276	374	448	560	22.2	210	183	146	159	66.8	1.59
	M 937	309	152	182	228	264	309	419	501	627	23.8	229	194	152	165	82.6	1.70
	M 1000	361	178	213	266	309	361	490	586	734	25.4	262	194	152	168	82.6	1.70
	M 1125	444	218	261	327	379	444	602	719	901	28.6	262	194	152	171	82.6	1.70
2 1/2	M 1125	444	218	261	327	379	444	602	719	901	28.6	267	213	165	178	82.6	2.04
	M 1250	532	262	313	392	455	532	722	863	1080	31.8	305	244	165	181	82.6	2.04
	M 1375	637	314	375	470	545	637	865	1030	1290	34.9	305	244	213	229	102	2.84
	M 1500	782	385	460	576	668	782	1060	1270	1590	38.1	330	267	213	229	102	2.84
3	M 1500	782	385	460	576	668	782	1060	1270	1590	38.1	343	279	229	248	121	3.29
	M 1625	920	453	542	678	786	920	1250	1490	1870	41.3	343	279	229	251	121	3.29
	M 1750	1050	518	619	775	899	1050	1430	1710	2140	44.5	343	279	229	251	121	3.29
4	M 1750	1050	518	619	775	899	1050	1430	1710	2140	44.5	406	356	225	248	121	3.63
	M 1875	1180	583	696	872	1010	1180	1620	1920	2400	47.6	406	356	225	248	121	3.63
	M 2000	1390	683	816	1020	1190	1390	1880	2250	2820	50.8	406	356	286	311	152	7.26
	M 2125	1540	761	909	1140	1320	1540	2100	2500	3140	54.0	406	356	286	311	152	7.26
	M 2250	1680	825	987	1240	1430	1680	2270	2720	3400	57.2	406	356	286	311	152	7.26

Flow Rate $(l_{min}) = K (bar)^{0.44}$

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene, and PTFE.

WILSON SPRAY NOZZLE

R series

FULL CONE Spray Nozzles

Brass RF Flange

DESIGN FEATURES

- Ultimate clog-resistant design with largest free passage

SPRAY CHARACTERISTICS

- High reliability spray performance under the most difficult conditions
  Spray pattern : Full Cone

Spray Nozzles • 50°/ 65°/ 80°/ 95° / 110°

FULL CONE

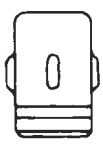
Stainless Steel (F) NPT

Flow Characteristics,

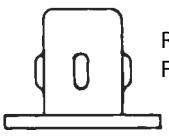
Nozzle Inlet Connection NPT or BSPT	Capacity Size	Inner Orifice Diameter mm	CAPACITY (liters per minute)									
			0.1 bar	0.2 bar	0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar
2	45	27.0	122	168	205	255	300	355	425	485	590	670
	60	32.1	163	225	270	340	400	470	570	650	780	890
2-1/2	70	36.5	190	260	315	400	465	550	660	760	910	1040
	90	39.7	245	335	405	510	600	710	850	970	1170	1330
3	110	46.4	300	410	495	630	730	860	1040	1190	1430	1630
	140	50.0	380	530	630	800	930	1100	1320	1510	1820	2070
4	160	51.2	435	600	720	910	1070	1250	1510	1720	2080	2370
	190	56.0	520	710	860	1080	1260	1490	1790	2050	2470	2810
	250	66.7	680	940	1130	1420	1660	1960	2360	2690	3240	3700
5	250	63.9	680	940	1130	1420	1660	1960	2360	2690	3240	3700
	280	67.5	760	1050	1260	1590	1860	2190	2640	3010	3630	4140
	380	81.8	1030	1420	1710	2160	2520	2970	3580	4090	4930	5620

Connection Types

R
Internal
Female
thread



RR
External
Male
thread



RF
Flange

Part Number

2	R	–	50	45	SS
Inlet Conn.	Nozzle Type		Spray Angle	Capacity Size	Material

MATERIAL :
CAST IRON,
BRASS,
316 STAINLESS STEEL

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WILSON SPRAY NOZZLE

W series

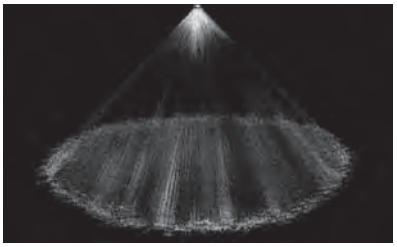
FULL CONE Low Flow

DESIGN FEATURES

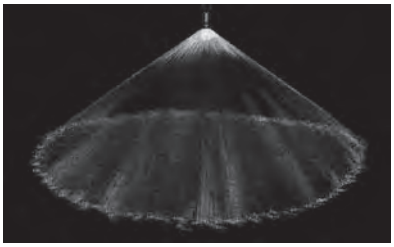
* Specifically for low flow
* Z shape internal vane for uniform spray discharge
* BSPT or NPT connection

SPRAY CHARACTERISTICS

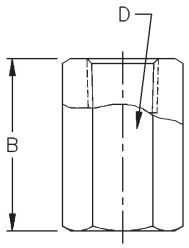
Spray pattern : Full Cone
Spray angle : 30°, 60 °, 90 °, and 120 °



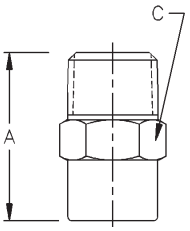
Full Cone 90 °



Full Cone 120 °



Female Metal



Male Metal

W series Flow rates and Dimensions

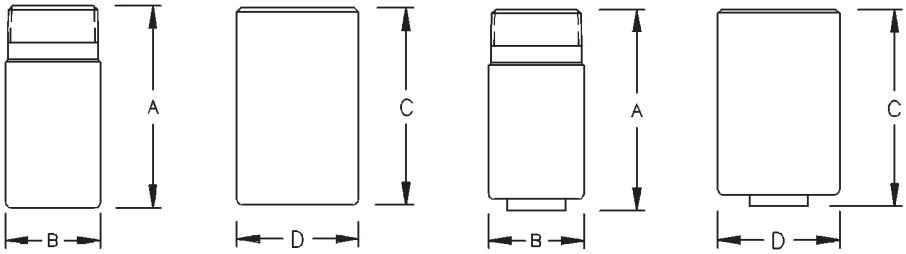
Full Cone, 30°, 60, 90° and 120 Spray Angles, BSP or NPT

Male Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 0.7 bar	1 bar	2 bar	3 bar	5 bar	10 bar	15 bar	20 bar	Approx. Orifice Dia.(mm)	Dimensions for Metal Only (mm) A	B	C	D	Wt.(g) Metal	Plas.
1/8	W 1/4	0.587	0.497	0587	0.814	0984	1.25	1.73	2.10	2.40	109	22.2	286	11.1	143	28.4	7.1
	W 1/2	1.17	0993	1.17	163	197	2.50	3.47	4.19	480	1.40						
	W 3/4	1.76	1.49	1.76	2.44	295	3.75	5.20	629	720	183						
1/4	W 1	235	199	235	325	394	5.01	6.93	839	960	208	27.0	349	142	175	42.5	106
	W 1 1/2	352	298	352	488	591	7.51	10.4	126	14.4	2.77						
1/4 , 3/8	W 2	4.70	397	4.70	651	787	100	13.9	168	192	3.18						
3/8	W 3	705	596	705	9.76	11.8	150	20.8	252	288	396	31.8	38.1	175	222	56.7	142
	W 4	9.40	795	9.40	130	15.7	200	27.7	336	38.4	4.78						
1/2	W 5	11.7	993	11.7	163	19.7	250	34.7	419	480	5.16	38.1	508	222	286	85.1	28.4
	W 6	14.1	119	14.1	195	23.6	300	41.6	503	576	556						
	W 7	16.4	139	16.4	228	27.6	350	48.5	58.7	672	5.79						
3/4	W 8	188	159	188	260	31.5	400	55.5	67.1	768	594	44.5	540	286	349	170	425
	W 10	235	199	235	325	39.4	50.1	69.3	839	960	7.14						
	W 12	282	238	282	390	47.2	60.1	83.2	101	115	792						
1	W 15	352	298	352	488	59.1	75.1	104	126	144	833	55.6	603	349	413	397	992
	W 20	470	39.7	470	65.1	78.7	100	139	168	192	953						

Standard materials : Brass, 316 stainless steel, PVC, Polypropylene and PTFE

NC Series

PLASTIC FULL CONE Spray



Male 60°/90° | Female 60°/90° | Male 120° | Female 120°

NC Flow Rates and Dimensions

Full Cone 60, 90 and 120 degrees,

Male or Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 0.2 bar	0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	7 bar	Approx. Orifice Dia.(mm)	Approx. Free Pass. Dia.(mm)	Dimensions (mm) A	B	C	D	Wt. (kg) Male
2	**NC 2050**	266	125	192	225	266	369	447	568	665	22.6	15.2	148	63.5	148	76.2	361
	NC 2060	320	150	231	270	320	443	536	681	798	23.9	16.0					
	NC 2065	346	163	250	293	346	480	581	738	865	25.4	17.0					
	NC 2070	373	175	269	316	373	517	625	795	931	26.7	17.3					
2 1/2	**NC 2570**	373	175	269	316	373	517	625	795	931	26.7	17.3	149	76.2	148	88.9	546
	NC 2580	426	200	308	361	426	591	715	909	1060	28.7	17.5					
	NC 2590	480	225	346	406	480	664	804	1020	1200	30.2	19.8					
3	**NC 3058**	309	145	223	261	309	428	518	659	772	24.1	16.0	149	88.9	148	102	645
	NC 3084	448	210	323	379	448	620	750	954	1120	29.7	22.4					
	NC 3096	512	240	369	433	512	709	858	1090	1280	28.4	24.1					
	NC 30117	624	293	450	527	624	864	1050	1330	1560	34.5	24.6					
4	**NC 40125**	666	313	481	563	666	923	1120	1420	1660	35.3	24.9	149	114	184	127	1320
	NC 40130	693	325	500	586	693	960	1160	1480	1730	35.3	24.9					
	NC 40180	959	450	693	811	959	1330	1610	2040	2390	42.9	33.3					
	NC 40250	1330	625	962	1130	1330	1850	2230	2840	3330	50.3	40.1					
6	**NC 60350**	1860	876	1350	1580	1860	2580	3130	3980	4660	60.5	43.2	241	168	279	178	3680
	NC 60480	2560	1200	1850	2160	2560	3540	4290	5450	6390	69.9	44.5					
	NC 60615	3280	1540	2370	2770	3280	4540	5490	6980	8180	79.0	50.0					

Flow Rate $({}^{l}_{min}) = K (bar)^{0.47}$

Standard Materials: PVC, Polypropylene, and PTFE.

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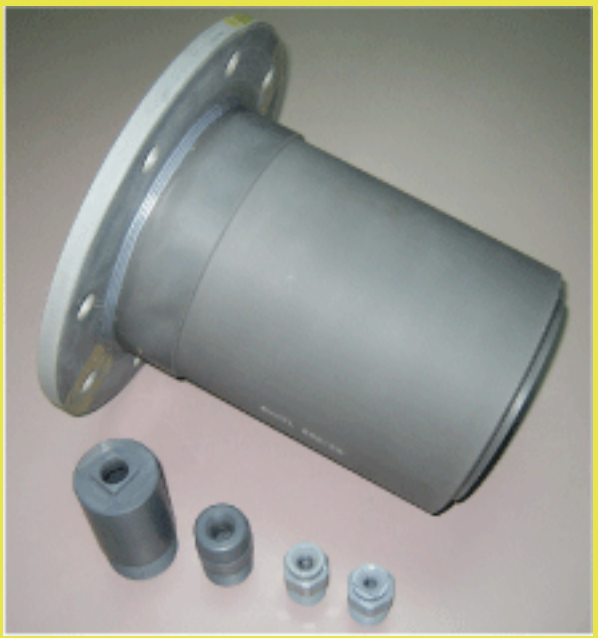
WILSON SPRAY NOZZLE

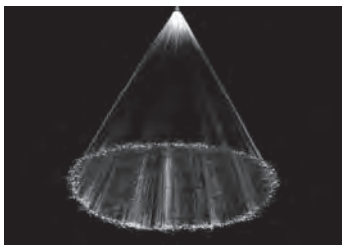
NC Series

PLASTIC FULL CONE Spray

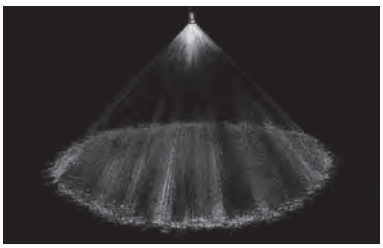


DESIGN FEATURES
- Maximium Free Passage
- Consistent Droplets Distribution
- BSP or NPT 3/4" to 1 1/2"
  Flange Connection for 2"

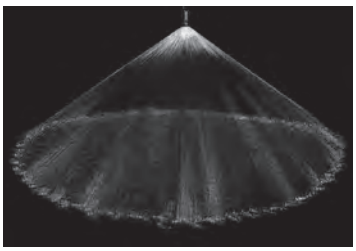
SPRAY CHARACTERISTICS
Spray pattern : Full Cone
Spray angle60°, 90°, and 120°
Flow rates 7.5 to 599 l/min



Full Cone 60°



Full Cone 90°



Full Cone 120°

NC Flow Rates and Dimensions
Full Cone, 60° , 90 and 120 Spray angles, 3/4" to 1 1/2" BSP or NPT and Flange for 2 inch

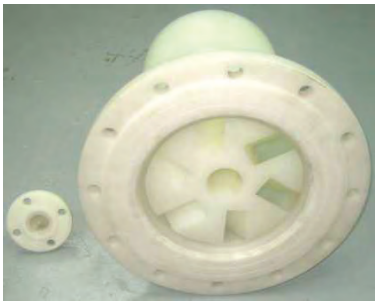
Male or Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ B AR 0.2 bar	0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	7 bar	Appro. Orifice Dia.(mm)	Appro Free Pass. Dia.(mm)	Dimensions (mm) A	B	C	D	Wt. (g) Male
3/4	NC 0703	16.0	7.50	11.5	13.5	16.0	22.1	26.8	34.1	39.9	6.35	4.06	44.5	28.4	53.8	38.1	28
	NC 0704	21.3	10.0	15.4	18.0	21.3	29.5	35.7	45.4	53.2	6.35	4.83					
	NC 0707	37.3	17.5	26.9	31.6	37.3	51.7	62.5	79.5	93.1	8.38	5.84					
1	NC 1009	48.0	22.5	34.6	40.6	48.0	66.4	80.39	102	120	9.65	6.35	55.6	34.9	63.5	44.5	35
	NC 1012	64.0	30.0	46.2	54.1	64.0	88.6	107	136	160	11.4	7.62					
1 1/4	NC 1214	74.6	35.0	53.9	63.1	74.6	103	125	159	186	11.9	8.64	82.6	44.5	82.6	50.8	106
	NC 1217	90.6	42.5	65.4	76.6	90.6	126	152	193	226	13.5	9.65					
1 1/2	NC 1516	85.3	40.0	61.6	72.1	85.3	118	143	182	213	12.7	9.65	108	50.8	108	63.5	191
	NC 1520	107	50.0	77.0	90.1	107	148	179	227	266	14.2	10.4					
	NC 1524	128	60.0	92.4	108	128	177	214	273	319	15.5	11.2					
2	NC 2017	90.6	42.5	65.4	76.6	91	126	152	193	226	13.5	9.65	148	63.5	148	76.2	361
	NC 2020	107	50.0	77.0	90.1	107	148	179	227	266	14.2	10.4					
	NC 2033	176	82.6	127	149	176	244	295	375	439	18.3	14.0					
	NC 2040	213	100	154	180	213	295	357	454	532	20.3	16.0					
	NC 2045	240	113	173	203	240	332	402	511	599	21.3	16.0					
	NC 2065	346	163	250	293	346	480	581	738	865	25.4	17.0					

Flow Rate $(l_{min}) = K (bar)^{0.47}$

Standard Materials: PVC, Polypropylene and PTFE

NC Flange

PLASTIC FULL CONE Large Flow



12 inch Polypropylene Flange Nozzle

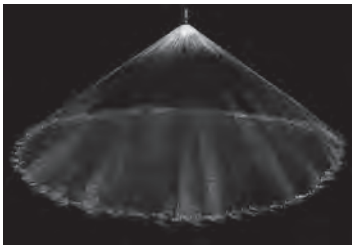
DESIGN FEATURES

- Maximium Free Passage
- Consistent Droplets Distribution
- Flat Face or Raise Face Flange Connection

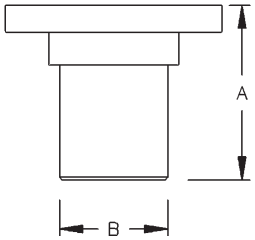
SPRAY CHARACTERISTICS

Spray pattern: Full Cone
Spray angles: 60°, 90°, and 120°
Flow rates: 350 to 19700 l/min

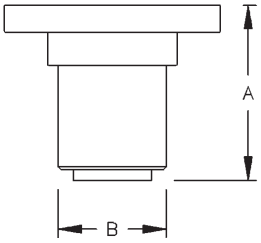
Full Cone 60° (N)



Full Cone 120° (W)



Flanged



Flanged 120°

NCFL Flow Rates and Dimensions

Full Cone Flange Connection

Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ B AR 0.2 bar	0.3 bar	0.4 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	Approx. Orifice Dia.(mm)	Approx. Free Pass. Dia.(mm)	Dim.(mm) A	Dim.(mm) B	Wt. (kg) PVC
4	NCFL40140	746	350	424	485	539	631	746	903	1030	37 6	25.4			
	NCFL40180	959	450	545	624	693	811	959	1160	1330	42 9	33.3	149	114	3.63
	NCFL40250	1330	625	757	866	962	1130	1330	1610	1850	50 3	40.1			
6	NCFL60350	1860	876	1060	1213	1350	1580	1860	2260	2580	60 5	44.5			
	NCFL60480	2560	1200	1450	1663	1850	2160	2560	3100	3540	69 9	50.0	254	168	6.35
	NCFL60615	3280	1540	1860	2131	2370	2770	3280	3970	4540	79 0	42.2			
8	NCFL80665	3540	1660	2010	2300	2560	3000	3540	4290	4910	82 6	53.8			
	NCFL80775	4130	1940	2350	2690	2980	3490	4130	5000	5720	89.4	60.5	305	219	11.8
	NCFL80885	4720	2210	2680	3070	3410	3990	4720	5710	6530	95 3	66.5			
12	NCFL1201280	6820	3200	3870	4430	4930	5770	6820	8260	9450	114	73.2			
	NCFL1201910	10200	4780	5780	6620	7350	8610	10200	12300	14100	140	82.6	457	323	31.8
	NCFL1202665	14200	6670	8070	9230	10300	12000	14200	17200	19700	159	88.9			

Flow Rate $({}^{l}/_{\text{min}}) = K\ (\ bar\ )^{0.47}$

Standard Materials: PVC, Polypropylene and PTFE.

WILSON SPRAY NOZZLE

WZ series

RIGHT ANGLE FULL CONE

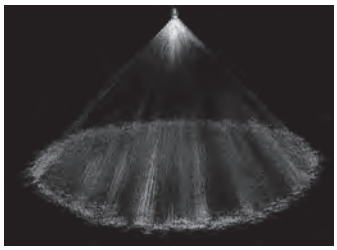
Metal

DESIGN FEATURES

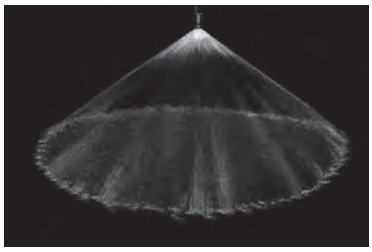
- Low flow at right angle
- consistent spray distribution
- BSP or NPT connections

SPRAY CHARACTERISTICS

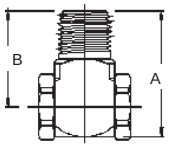
Spray pattern : Full Cone
Spray angle : 90° and 110°
Flow rate : 0.50 to 70.4 l/min

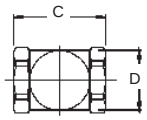


Full Cone 90 °



Full Cone 110 °





Metal

WZ Flow Rates and Dimensions
Full Cone, 90 ° and 120 ° Spray Angles, 1/4", 3/8" and 1/2" Pipe Size, BSP or NPT

Male or Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 0.5 bar	1 bar	2 bar	3 bar	5 bar	7 bar	10 bar	Approx. Orifice Dia. (mm)	Dimensions (mm) Metal Only A	B	C	D
1/4"	WZ 50	1.13	0.80	1.13	1.60	1.96	2.53	2.99	3.58	1.90	33	25	20	16
	WZ 56	1.27	0.90	1.27	1.80	2.20	2.84	3.36	4.02	2.00				
	WZ 62	1.41	1.00	1.41	2.00	2.45	3.16	3.74	4.47	2.10				
	WZ 77	1.77	1.25	1.77	2.50	3.06	3.95	4.67	5.59	2.30				
3/8"	WZ 98	2.23	1.58	2.23	3.15	3.86	4.98	5.90	7.05	2.60	38	28	30	19
	WZ 120	2.83	2.00	2.83	4.00	4.90	6.33	7.48	8.95	3.00				
	WZ 150	3.53	2.50	3.53	5.00	6.12	7.90	9.35	11.2	3.30				
	WZ 170	3.96	2.80	3.96	5.60	6.86	8.86	10.5	12.5	3.50				
	WZ 200	4.46	3.15	4.46	6.30	7.72	10.0	11.8	14.1	3.70				
	WZ 250	5.66	4.00	5.66	8.00	9.80	12.7	15.0	17.9	4.15				
	WZ 280	6.36	4.50	6.36	9.00	11.0	14.2	16.8	20.1	4.40				
	WZ 310	7.07	5.00	7.07	10.0	12.3	15.8	18.7	22.4	4.65				
	WZ 390	8.84	6.25	8.84	12.5	15.3	19.8	23.4	28.0	5.20				
	WZ 500	11.3	8.00	11.3	16.0	19.6	25.3	29.9	35.8	5.80				
1/2"	WZ 620	14.1	10.0	14.1	20.0	24.5	31.6	37.4	44.7	7.30	47	35	37	25
	WZ 780	17.7	12.5	17.7	25.0	30.6	39.5	46.8	55.9	8.00				
	WZ 980	22.3	15.8	22.3	31.5	38.6	49.8	58.9	70.4	8.70				

Standard Materials: Brass, PVC, 303 Stainless Steel and 316 Stainless Steel.

WILSON SPRAY NOZZLE

WE series

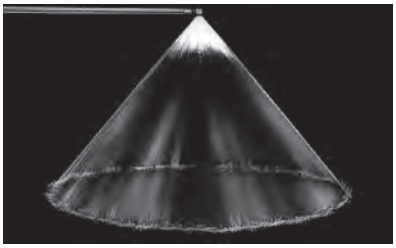
Tangential Hollow Cone

DESIGN FEATURES

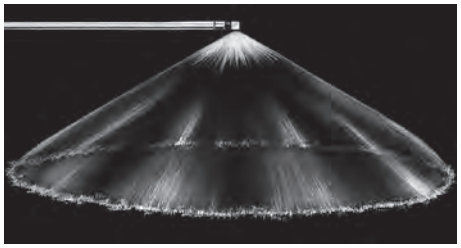
- Tangential Spray Right Angle
- Metal or plastic material
- Male and female NPT connections

SPRAY CHARACTERISTICS

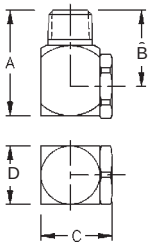
Spray pattern : Hollow Cone
Spray angle : 90° to 120°



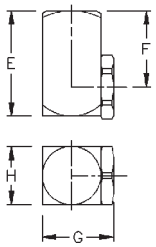
Hollow Cone 90°



Hollow Cone 120°



Male



Female

WE Flow Rates and Dimensions

Hollow Cone, 90 deg and 120 deg

Male or Female Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ B AR 0.3 bar	0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	7 bar	Approx Inlet Dia.	Approx Orifice Dia.	Dimensions A	B	C	D	E	F	G	H	Wt.(g) Metal	Plas.
1/8	WE29	2.96	1.62	2.09	2.48	2.96	4.19	5.13	6.62	7.84	3.56	3.56	28.4	22.4	16.0	12.7	22.4	16.0	16.5	12.7	28	14
	WE36	3.65	2.00	2.58	3.05	3.65	5.16	6.32	8.15	9.65	3.81	4.06										
	WE41	4.10	2.25	2.90	3.43	4.10	5.80	7.10	9.17	10.9	4.32	4.06										
	WE45	4.56	2.50	3.22	3.81	4.56	6.45	7.89	10.2	12.1	4.32	4.83										
1/4	WE54	5.47	3.00	3.87	4.58	5.47	7.73	9.47	12.2	14.5	5.08	5.59	33.3	25.4	20.1	16.0	28.4	20.6	20.1	16.0	85	21
	WE63	6.38	3.49	4.51	5.34	6.38	9.02	11.1	14.3	16.9	5.08	5.59										
	WE68	6.84	3.74	4.83	5.72	6.84	9.67	11.8	15.3	18.1	5.08	5.59										
	WE77	7.75	4.24	5.48	6.48	7.75	11.0	13.4	17.3	20.5	5.59	6.10										
3/8	WE91	9.12	4.99	6.45	7.63	9.12	12.9	15.8	20.4	24.1	6.10	6.86	38.1	28.4	24.6	19.1	34.0	24.6	24.6	19.1	85	21
	WE100	10.0	5.49	7.09	8.39	10.0	14.2	17.4	22.4	26.5	6.60	7.62										
	WE114	11.4	6.24	8.06	9.53	11.4	16.1	19.7	25.5	30.1	6.60	7.11										
	WE128	12.8	6.99	9.02	10.7	12.8	18.0	22.1	28.5	33.8	6.60	7.87										
1/2	WE137	13.7	7.49	9.67	11.4	13.7	19.3	23.7	30.6	36.2	8.38	7.87	47.5	34.8	31.8	25.4	46.0	33.3	31.8	25.4	276	113
	WE182	18.2	9.99	12.9	15.3	18.2	25.8	31.6	40.8	48.2	9.14	9.14										
	WE228	22.8	12.5	16.1	19.1	22.8	32.2	39.5	51.0	60.3	9.14	11.2										
	WE273	27.3	15.0	19.3	22.9	27.3	38.7	47.4	61.1	72.4	10.2	12.2										
3/4	WE319	31.9	17.5	22.6	26.7	31.9	45.1	55.3	71.3	84.4	11.9	12.2	57.2	41.1	38.1	31.8	55.6	39.6	38.1	31.8	397	227
	WE365	36.5	20.0	25.8	30.5	36.5	51.6	63.2	81.5	96.5	12.2	13.0										
	WE410	41.0	22.5	29.0	34.3	41.0	58.0	71.0	91.7	109	12.7	14.2										
	WE456	45.6	25.0	32.2	38.1	45.6	64.5	78.9	102	121	13.2	15.0										
	WE501	50.1	27.5	35.5	41.9	50.1	70.9	86.8	112	133	13.5	16.0										
	WE547	54.7	30.0	38.7	45.8	54.7	77.3	94.7	122	145	14.0	17.5										

Standard Materials: Brass and 316 stainless steel

WILSON SPRAY NOZZLE

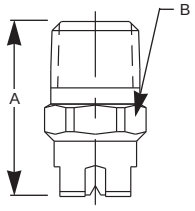
F series

FAN Spray Nozzles

DESIGN FEATURES
- One-piece construction
- No internal parts
- Venturi run up for best pressure
- Male BSP or NPT connection

SPRAY CHARACTERISTICS
- High impact
- Uniform distribution with tapered edges for overlapping sprays

Spray pattern: Fan and Straight Jet



3/8" - 2" Metal

COMMON APPLICATIONS

- Cooling and quenching
- Product washing
- Water cooling
- Air and gas washers
- Scrubbers
- Liquor washers
- Dust control
- Fire protection

F Flow Rates

Fan and Straight Jet, 0°, 15, 30, 50, 6 5, 80 , 90° , 110°, and 120 S pray Angles, 1/8" to 2" Pipe Sizes

Male Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ B AR 0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	10 bar	30 bar	Orifice Dia.(mm)
	F01	0.228	0.16	0.19	0 23	0 32	0 39	0 51	0.72	1.25	0.66
1/8	F015	0.342	0.24	0.29	0 34	0.48	0 59	0.76	1.08	1.87	0.79
	F02	0.455	0.32	0.38	0.46	0 64	0.79	1.02	1.44	2.49	0.91
or	F025	0.569	0.40	0.48	0 57	0 81	0 99	1.27	1.80	3.12	1.02
	F03	0.683	0.48	0.57	0 68	0 97	1.18	1.53	2.16	3.74	1.09
1/4	F04	0.911	0.64	0.76	0 91	1.29	1.58	2.04	2.88	4 99	1.32
	F05	1.14	0.81	0.95	1.14	1.61	1.97	2.55	3.60	6 24	1.45
	F06	1.37	0.97	1.14	1.37	1.93	2.37	3.06	4.33	7.49	1.57
	F08	1.82	1.28	1.52	1.82	2.57	3.15	4.06	5.74	9.95	1.83
1/8	F10	2.28	1.61	1.91	2.28	3.22	3.95	5.10	7.21	12 5	2.03
or	F15	3.42	2.42	2.86	3.42	4.83	5.92	7.64	10 8	18.7	2.38
1/4	F20	4.56	3.22	3.81	4.56	6.45	7.89	10 2	14.4	25 0	2.78
or	F30	6.84	4.83	5.72	6.84	9.67	11 8	15 3	21 6	37.4	3.57
3/8	F40	9.12	6.45	7.63	9.12	12 9	15 8	20.4	28 8	49 9	3.97
1/4	F50	11.4	8.06	9.53	11.4	16.1	19.7	25 5	36 0	62.4	4.37
or	F60	13.7	9.67	11.4	13.7	19 3	23.7	30 6	43 2	74 9	4.76
3/8	F70	16.0	11.3	13.3	16.0	22 6	27 6	35.7	50.4	87.4	5.16
	F60	13.7	9.67	11.4	13.7	19 3	23.7	30 6	43 2	74 9	4.76
3/8	F70	16.0	11.3	13.3	16.0	22 6	27 6	35.7	50.4	87.4	5.16
or	F80	18.2	12.9	15.3	18.2	25 8	31 6	40 8	57.7	99 9	5.56
1/2	F90	20.5	14.5	17.2	20.5	29 0	35 5	45 9	64 9	112	5.95
	F100	22.8	16.1	19.1	22.8	32 2	39 5	51 0	72.1	125	6.35
	F120	27.3	19.3	22.9	27.3	38.7	47.4	61.1	86 5	150	6.75
1/2	F150	34.2	24.2	28.6	34.2	48 3	59 2	76.4	108	187	7.54
	F200	45.6	32.2	38.1	45.6	64 5	78 9	102	144	250	8.73
3/4	F300	68.4	48.3	57.2	68.4	96.7	118	153	216	374	10.7
	F400	91.2	64.5	76.3	91.2	129	158	204	288	499	12.7
1	F400	91.2	64.5	76.3	91.2	129	158	204	288	499	12.7
	F750	171	121	143	171	242	296	382	540	936	17.5
1 1/4	F800	182	129	153	182	258	316	408	577	999	18.3
	F1150	262	185	219	262	371	454	586	829	1440	21.8
1 1/2	F1500	342	242	286	342	483	592	764	1080	1870	24.6
2	F2750	627	443	524	627	886	1090	1400	1980	3430	33.3

F Dimensions

BSP or NPT

Pipe Size	Dim.for Meta Only (mm) A	B	Wt.(g) Metal	Plas.
1/8	22.2	11.1	28.4	7.09
1/4	27.0	14.3	42 5	10.6
3/8	31.8	17.5	56.7	14.2
1/2	38.1	22.2	85.1	28.4
3/4	44.5	28 6	170	42.5
1	55.6	34 9	227	56.7
1 1/4	63.5	44 5	340	85.1
1 1/2	76.2	50 8	567	142
2	88.9	63 5	1588	284

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene, and PTFE.

WILSON SPRAY NOZZLE

FW series

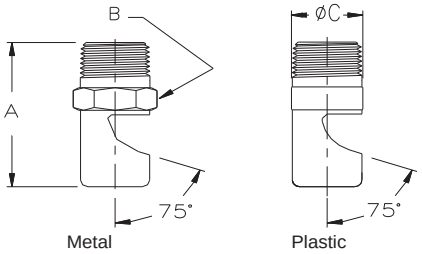
145° Wide Angle Fan

DESIGN CHARACTERISTICS

- One-piece construction
- Through Hole Non-Clog
- Deflect spray to effect Wide Angle
- Even Fan distribution

SPRAY CHARACTERISTICS

- Extra-wide 145° spray angle
- Concentrated impact spray to displace dirt on target surface.



Metal Plastic

APPLICATIONS;

* WINDOW CLEANING
* PIT MUD WASH
* DECK COOLING
* BULKHEAD COOLING
* TANK SLUDGE CLEANING

FW FLOW RATE SPECIFICATIONS

145 Deg. FAN spray. NPT or BSP Thread

Male Pipe Size	Nozzle Number	K Factor	LITER PER MINUTE @ BAR 0.2 bar	0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	10 bar	Orifice Dia. (mm)
1/8	FW041	0.684	0.306	0.483	0.572	0.684	0.967	1.18	1.53	2.16	1.04
	FW065	1.82	0.815	1.29	1.53	1.82	2.58	3.16	4.08	5.77	1.65
	FW093	3.42	1.53	2.42	2.86	3.42	4.83	5.92	7.64	10.8	2.36
	FW104	4.56	2.04	3.22	3.81	4.56	6.45	7.89	10.2	14.4	2.64
	FW125	5.70	2.55	4.03	4.77	5.70	8.06	9.87	12.7	18.0	3.18
1/4	FW129	6.84	3.06	4.83	5.72	6.84	9.67	11.8	15.3	21.6	3.28
	FW141	8.20	3.67	5.80	6.86	8.20	11.6	14.2	18.3	25.9	3.58
	FW148	9.12	4.08	6.45	7.63	9.12	12.9	15.8	20.4	28.8	3.76
	FW156	10.0	4.48	7.09	8.39	10.0	14.2	17.4	22.4	31.7	3.96
	FW161	10.9	4.89	7.73	9.15	10.9	15.5	18.9	24.5	34.6	4.09
	FW172	12.3	5.50	8.70	10.3	12.3	17.4	21.3	27.5	38.9	4.39
3/8	FW187	13.7	6.11	9.67	11.4	13.7	19.3	23.7	30.6	43.2	4.75
	FW196	16.0	7.1	11.3	13.3	16.0	22.6	27.6	35.7	50.4	4.98
	FW209	17.0	7.6	12.0	14.2	17.0	24.0	29.4	38.0	53.8	5.31
	FW221	20.5	9.2	14.5	17.2	20.5	29.0	35.5	45.9	64.9	5.61
1/2	FW250	23.9	10.7	16.9	20.0	23.9	33.8	41.4	53.5	75.7	6.35
	FW256	27.3	12.2	19.3	22.9	27.3	38.7	47.4	61.1	86.5	6.55
	FW281	31.9	14.3	22.6	26.7	31.9	45.1	55.3	71.3	101	7.14
	FW312	36.5	16.3	25.8	30.5	36.5	51.6	63.2	81.5	115	7.92
3/4	FW316	41.0	18.3	29.0	34.3	41.0	58.0	71.0	92	130	8.03
	FW348	50.1	22.4	35.5	41.9	50.1	70.9	86.8	112	159	8.84
	FW406	63.8	28.5	45.1	53.4	63.8	90.2	111	143	202	10.3
	FW453	82.0	36.7	58.0	68.6	82.0	116	142	183	259	11.5
	FW500	109	48.9	77.3	91.5	109	155	189	245	346	12.7

FW Dimension

Dim.(mm) A	B	C	Wt.(g.) M	P
25.4	11.2	12.7	0.85	0.28
35.1	14.2	16.0	1.70	0.57
44.5	17.5	19.1	4.53	0.85
50.8	22.4	22.4	6.24	1.13
66.8	38.1	38.1	18.7	3.40

Standard material : PP, PVC, Brass, Stainless Steel

WILSON SPRAY NOZZLE PTE LTD
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WILSON SPRAY NOZZLE

FS series

SHORT FLAT FAN Nozzles

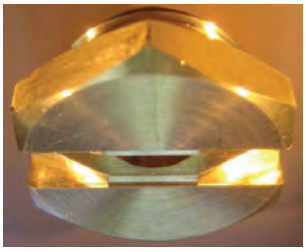
DESIGN FEATURES

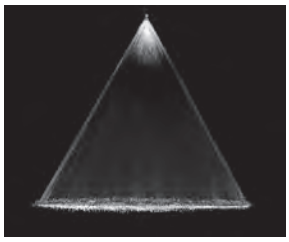
- Short length
- Flat Fan.
- Direct connection to pipe

Flow rates: 0.20 to 951 l/min

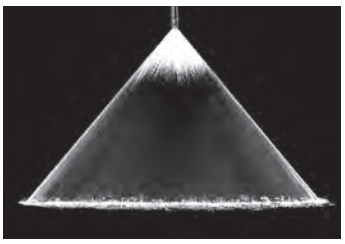
SPRAY CHARACTERISTICS

Spray pattern: FAN shape
Spray angles: 20°, 30°, 45°, 60°, 90°, and 120° Fan

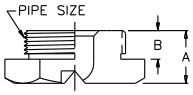


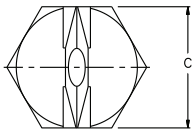


Fan 45°

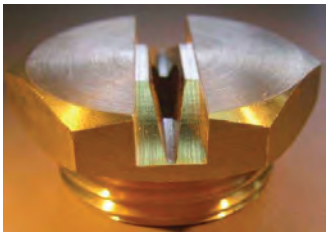


Fan 120°





Metal



FS Flow Rates and Dimensions

Flat Fan, 20 ° , 30 °, 45 °, 60 °, 90 ° & 120 ° Spray Angles, 1/4" to 2" Pipe Sizes

Male Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 0.5 bar	1 bar	2 bar	3 bar	5 bar	7 bar	10 bar	Equiv. Orifice Dia. (mm)
1/4	FS 012	0.28	0.20	0.28	0.40	0.49	0.63	0.75	0.89	0.800
	FS 019	0.44	0.31	0.44	0.63	0.77	0.99	1.18	1.41	1.00
	FS 031	0.71	0.50	0.71	1.00	1.23	1.59	1.88	2.25	1.20
	FS 039	0.88	0.62	0.88	1.25	1.53	1.98	2.34	2.79	1.35
	FS 050	1.13	0.80	1.13	1.60	1.96	2.53	2.99	3.58	1.50
	FS 059	1.35	0.95	1.35	1.90	2.33	3.01	3.56	4.25	1.65
	FS 077	1.77	1.25	1.77	2.50	3.06	3.95	4.67	5.59	2.00
	FS 098	2.23	1.58	2.23	3.15	3.86	4.98	5.90	7.05	2.20
	FS 12	2.83	2.00	2.83	4.00	4.90	6.33	7.48	8.95	2.50
	FS 15	3.36	2.38	3.36	4.75	5.82	7.51	8.89	10.6	2.70
1/4 or 3/4"	FS 25	5.66	4.00	5.66	8.00	9.80	12.7	15.0	17.9	3.50
	FS 31	7.10	5.02	7.10	10.0	12.3	15.9	18.8	22.5	4.00
	FS 39	8.83	6.25	8.83	12.5	15.3	19.8	23.4	27.9	4.50
	FS 50	11.3	8.00	11.3	16.0	19.6	25.3	29.9	35.8	5.00
	FS 62	14.1	10.0	14.1	20.0	24.5	31.6	37.4	44.7	5.50
	FS 77	17.7	12.5	17.7	25.0	30.6	39.5	46.7	55.9	6.00
	FS 93	21.2	15.0	21.2	30.0	36.7	47.4	56.1	67.0	6.90
3/4 or 1-1/4	FS 124	28.3	20.0	28.3	40.0	49.0	63.3	74.8	89.5	8.00
	FS 155	35.3	25.0	35.3	50.0	61.2	79.0	93.5	112	9.00
	FS 185	42.1	29.8	42.1	59.6	73.0	94.2	112	133	9.50
	FS 195	44.6	31.5	44.6	63.0	77.2	100	118	141	10.0
1-1/4	FS 309	70.4	49.8	70.4	100	122	158	186	223	12.0
	FS 496	113	80.0	113	160	196	253	299	358	15.0
2	FS 557	127	89.8	127	180	220	284	336	402	16.0
	FS 620	141	100	141	200	245	316	374	447	17.0
	FS 775	177	125	177	250	306	395	467	559	19.0
	FS 977	223	158	223	315	386	498	590	705	21.0
	FS 1130	258	182	258	365	447	577	683	816	22.5
	FS 1320	301	213	301	425	521	673	796	951	24.5

FS Dimensions and Spray Angles

Pipe Size	Nozzle Number	Spray Angles Available	Dimensions (mm) A	B	C	D
1/4	FS 012 To FS 39	20° 30° 45° 60° 90° 120°	11.9	7.11		
	FS 50	20° 30° 45° 60° 90°			17.5	
	FS 62	45° 60° 90°				
	FS 77	45°				19.1
3/4	FS 25 To FS 77	20° 30° 45° 60° 90° 120°	15.0			
	FS 93	120°		7.87		
	FS 124	20° 30° 45° 60° 90° 120°				
	FS 155	20° 30° 45° 60° 90° 120°			31.8	
	FS 185	120°				
	FS 195	20° 30° 45° 60° 90° 120°				35.1
	FS 309	20° 30° 45° 60° 90° 120°				
1¼	FS 124* To FS 496	20° 30° 45° 60° 90° 120°	22.1	11.9	50.8	55.4
2	FS 557 To FS 1320	20° 30° 45° 60° 90° 120°	31.8	20.1	69.9	76.2

Standard Materials: Brass, 316 Stainless Steel, 303 Stainless Steel

WILSON
SPRAY NOZZLE

WILTEX 360°

WATER SCREEN FLAT FAN

WILTEX 360 FLAT

WILTEX 360 FLAT spray nozzle has an external deflector, which discharges water in a flat circular shaped pattern of small droplet size. The water is uniformly distributed over the surface to be protected.

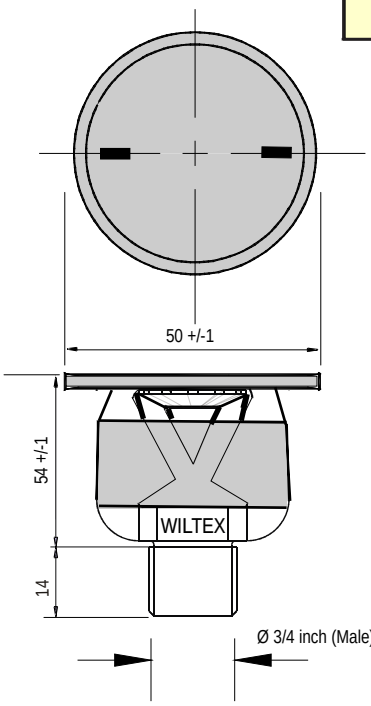
The nozzle is used in water screening application

The minimum desirable pressure to achieve a reasonable spray pattern is 1.4 Kg./Sq.cm. The water distribution pattern as shown in the graph in following pages is at an average pressure of 5.0 Kg/Sq.cm. The change in pressure between 1.4 to 3.5 Kg,/sq.cm does not affect much change in spray angle. The spray pattern should is in laboratory conditions. Outdoor performance is largely dependent on wind seep, its velocity and direction including field obstruction.

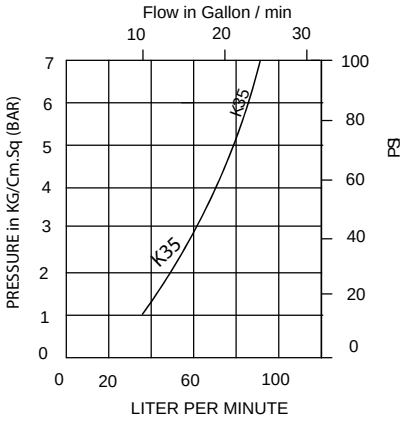
SPECIFICATION

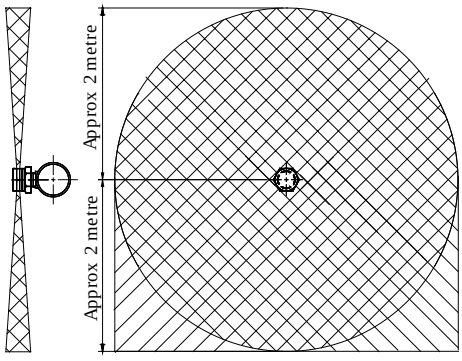
Size : 1/2" or 3/4" NPT (M)
Spray : 360 Flat Fan
Mat'l : Brass or 316 SS

Male Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ Bar						
			0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	10 bar
1/2	**K-22**	22	16.1	19.1	22.8	32.2	39.5	51.0	72.1
3/4	**K-35**	35	24.2	28.6	34.2	48.3	59.2	76.4	108



DISCHARGE CHARACTERISTICS





Note : Dimension and design may change with actual product.

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4P series

Four piece Fan Nozzles

* FAN Spray with Four piece construction.
* Stainless Steel Strainer
* Inter-changeable Tip

* Fan Spray from 0 to 140 degrees

Material : Brass or 316 Stainless Steel

Body SS Strainer Fan Tip Locking Cap

316 Stainless Steel

4P Flow Specifications

Fan, 0 °, 15 °, 25 °, 40 °, 50 °, 65 °, 73 °, 80 °, 95 °, 110° , 120° , 130° , 140° *Male NPT or BSP Connection*

Thread Size	Model No	Orifice (mm)	K Factor	LITERS PER MINUTE @ BAR									
				0.3 bar	0.5 bar	0.7 bar	2 bar	4 bar	5 bar	10 bar	20 bar	30 bar	40 bar
1/8	4P020	0.20	0.021	0.011	0.015	0.017	0.029	0.041	0.046	0.065	0.092	0.11	0.13
	4P028	0.28	0.039	0.021	0.027	0.032	0.055	0.077	0.087	0.12	0.17	0.21	0.25
	4P033	0.33	0.048	0.026	0.034	0.04	0.068	0.096	0.11	0.15	0.21	0.26	0.30
	4P038	0.38	0.075	0.041	0.053	0.063	0.11	0.15	0.17	0.24	0.34	0.41	0.48
	4P050	0.50	0.114	0.062	0.081	0.095	0.16	0.23	0.25	0.36	0.51	0.62	0.72
	4P058	0.58	0.153	0.084	0.11	0.13	0.22	0.31	0.34	0.48	0.68	0.84	0.97
1/4	4P071	0.71	0.228	0.12	0.16	0.19	0.32	0.46	0.51	0.72	1.02	1.25	1.44
	4P084	0.84	0.342	0.19	0.24	0.29	0.48	0.68	0.76	1.08	1.53	1.87	2.16
	4P099	0.99	0.456	0.25	0.32	0.38	0.64	0.91	1.02	1.44	2.04	2.50	2.88
	4P119	1.19	0.684	0.37	0.48	0.57	0.97	1.37	1.53	2.16	3.06	3.74	4.32
	4P130	1.30	0.877	0.48	0.62	0.73	1.24	1.75	1.96	2.77	3.92	4.81	5.55
	4P140	1.40	0.912	0.50	0.64	0.76	1.29	1.82	2.04	2.88	4.08	4.99	5.77
	4P155	1.55	1.139	0.62	0.81	0.95	1.61	2.28	2.55	3.60	5.10	6.24	7.21
3/8	4P170	1.70	1.367	0.75	0.97	1.14	1.93	2.73	3.06	4.32	6.11	7.49	8.65
	4P183	1.83	1.755	0.96	1.24	1.47	2.48	3.51	3.92	5.55	7.85	9.61	11.1
	4P198	1.98	2.106	1.15	1.49	1.76	2.98	4.21	4.71	6.66	9.42	11.5	13.3
	4P272	2.72	3.418	1.87	2.42	2.86	4.83	6.84	7.64	10.8	15.3	18.7	21.6
	4P318	3.18	4.558	2.50	3.22	3.81	6.45	9.12	10.2	14.4	20.4	25.0	28.8
	4P397	3.97	9.116	4.99	6.45	7.63	12.9	18.2	20.4	28.8	40.8	49.9	57.7
	4P476	4.76	13.673	7.49	9.67	11.4	19.3	27.3	30.6	43.2	61.1	74.9	86.5
	4P516	5.16	15.952	8.74	11.3	13.3	22.6	31.9	35.7	50.4	71.3	87.4	101

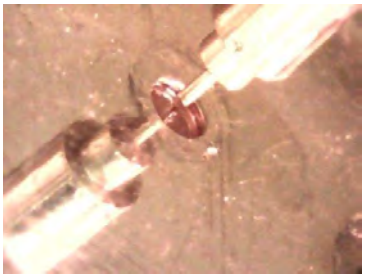
WILSON SPRAY NOZZLE

Series 8

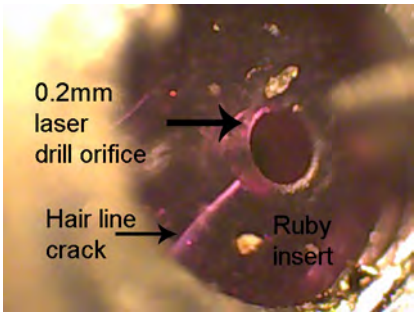
GAS TURBINE DRY FOG COOLING

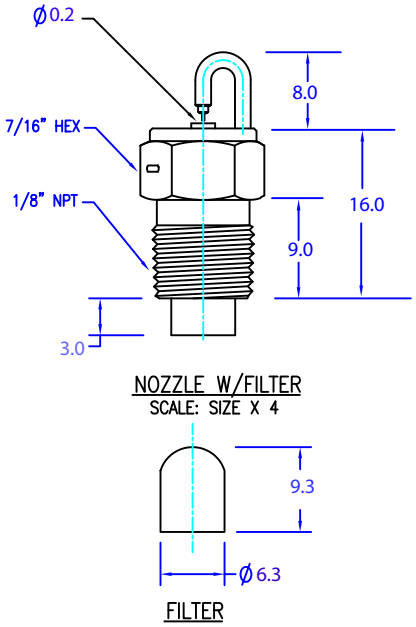
Ruby-orifice 316 Stainless Steel Fog Nozzle produces Fog from 1 to 10 microns @ 140 bar

Serie 8 is specifically designed and manufactured for critical Gas Turbine Cooling.
It is constructed of 316 stainless steel material in its entirety with hardened Ruby Insert Orifice of 0.2mm diameter. Demineralized water is pressured into billions of fine micron fog by means of high pressure positive displacement pump at 140 bar.
The critical mass of fine fog equivalent to massive droplet surface area is essential for optimum heat absorption in the turbine air intake column. It is imperative that no cracks are prevalent in the ruby insert as damage to the gas turbine parts can be costly



Microscopic Inspection on the Ruby Orifice





Series	Orifice (inch)	Flow Rate in GPM at PSI						Orifice (mm)	Flow Rate in LPM at BAR					
		400	800	1000	1200	1500	2000		40	60	70	80	100	140
8	.008	.029	.041	.046	.050	.056	.065	.20	.127	.161	.174	.188	.210	.248

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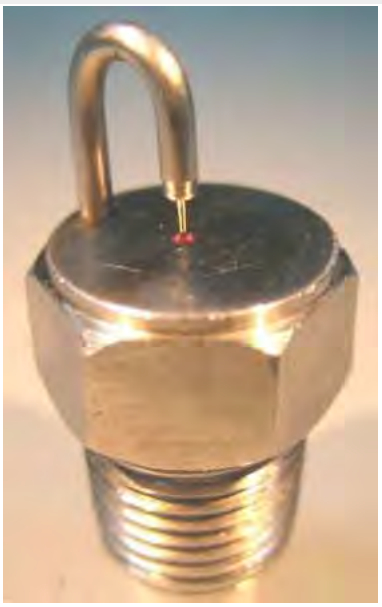
RI series

RUBY INSERT Fog Nozzles

Ruby-orifice 316 Stainless Steel Fog Nozzle produces Fog from 1 to 15 microns @ 70 bar

Spray angle : 90 to120 degrees plume Fog

Connection sizes in 1/8" (male) NPT

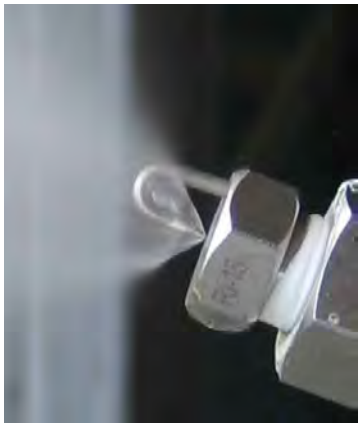


NOZZLE MODELS	ORIFCE DIAMETER (INCH)	FLOW RATE @ 5 BAR (LPM) MIST	ORIFCE DIAMETER (MM)	FLOW RATE @ 70 BAR (LPM) FOG
RI-15	0.0060	0.030	0.15	0.097
RI-20	0.0080	0.086	0.20	0.174
RI-30	0.0120	0.120	0.30	0.343
R-50 or P-20	0.0196	0.342	0.50	0.560

Note : Material
RI nozzles - 316 SS body with brass insert and ruby orifice
Serie 8 - All 316 SS in its entirety and ruby orifice
RI-50 or P-20 Atomise without ruby for larger droplets pass.

Imperative that water to RI nozzle is filtered to prevent clog

The RI series consist of a 316 SS body, Brass insert with ruby-orifice, 316SS impingement pin and polypropylene filter to avoid trapping particles in the base of the nozzle. High-pressure of max 70 bar exiting the nozzle ruby orifice into fine liquid jet against an impingement pin of equal diameter resulting in the finest atomization possible, atomizing water into billions of 1 to 15 micron droplets like those occurring in natural fog.



WILSON SPRAY NOZZLE

A series
ATOMISING Nozzles

A series Flow rates

Impingement, 90 Spray Angle,

Male Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ B AR 2 bar	3 bar	5 bar	10 bar	20 bar	30 bar	50 bar	70 bar	Approx. Orifice Dia.(mm)
1/8	A 6	0.0137				0.043	0.061	0.075	0.097	0.114	0.152
	A 8	0.0259			0.058	0.082	0.116	0.142	0.183	0.217	0.203
	A 10	0.0387		0.067	0.0866	0.123	0.173	0.212	0.274	0.324	0.254
	A 12	0.0524		0.091	0.117	0.166	0.234	0.287	0.371	0.439	0.305
	A 15	0.0843	0.119	0.146	0.189	0.267	0.377	0.462	0.596	0.705	0.381
	A 20	0.153	0.216	0.264	0.341	0.483	0.683	0.836	1.08	1.28	0.508
	A 24	0.228	0.322	0.395	0.510	0.721	1.02	1.25	1.61	1.91	0.610
	A 28	0.296	0.419	0.513	0.662	0.9368	1.32	1.62	2.09	2.48	0.711
	A 32	0.410	0.580	0.710	0.917	1.2972	1.83	2.25	2.90	3.43	0.813
	A 40	0.638	0.902	1.11	1.43	2.02	2.85	3.49	4.51	5.34	1.02

SPRAY CHARACTERISTICS

* Produces Mist droplets of 100um@10bar
• Produces Fog droplets of 30um@70bar
Spray pattern: Cone-Shaped Fog
Spray angle: 90°

Material : Brass, Stainless Steel

AD series
MISTING Nozzles

A Misting nozzle is a low cost atomising nozzle for evaporative cooling and dust suppression applications. Liquids passing them through a small orifice under high pressure producing droplets range from 30 to 80 microns. Complete with anti drip spring / ball assembly including internal filter.

AD Flow rate

MODEL NO	ORIFICE (mm)	FLOW-RATE (Litre per min)	PRESSURE (Bar)	CONN (UCN)	MAT'L
AD15	0.15	0.046	70	10/24	BRASS
AD20	0.20	0.089	70	10/24	
AD30	0.30	0.145	70	10/24	
AD15T	0.15	0.046	70	10/32	STAINLESS STEEL
AD20T	0.20	0.089	70	10/32	
AD30T	0.30	0.145	70	10/32	

Brass body with anti drip spring and ball assembly

WILSON SPRAY NOZZLE

P series

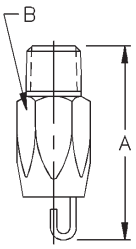
ATOMISING Nozzles

FEATURES

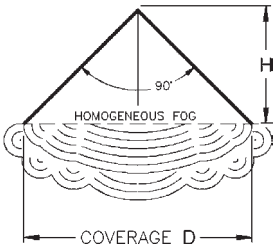
* One piece construction
* Impingement stem same diameter as orifice for complete atomisation
* Stem forge into body.
* Non clog
* No internal parts

SPRAY

* Fine Atomisation
* Droplets range from 30 to 400 microns
* 90 degrees Full cone
* NPT or BSP



Male



Fog Pattern

Excellent for Dust Suppression, Cooling and Coating

P Flow rates and dimensions

Cone -Shaped Fog, 90° Spray Angle,

Male Pipe Size	Nozzle Number	K Factor	LITERS PER MINUTE @ BAR 1 bar	2 bar	3 bar	5 bar	7 bar	10 bar	20 bar	30 bar	Approx. Orifice Dia.(mm)	Approx. Coverage (mm) D	Approx. Spray Height H (mm	Approx. Dim.(mm) A	B	Wt. (g) Metal
	P20	0.153	0.153	0 216	0 264	0 341	0.404	0.483	0 683	0 836	0.508	300	150			
	P24	0 228	0.228	0 322	0 395	0 510	0.603	0.721	1 02	1.25	0.610	400	200			
	P28	0 296	0.296	0.419	0 513	0 662	0.784	0 937	1 32	1.62	0.711	460	230			
	P32	0.410	0.410	0 580	0.710	0 917	1 09	1 30	1 83	2.25	0.813	560	280			
1/4	**P40**	0 638	0.638	0 902	1.11	1.43	1 69	2 02	2 85	3.49	1 02	610	305	50 8	16 0	57
	P48	0 912	0.912	1 29	1 58	2.04	2.41	2 88	4 08	4.99	1 22	710	355			
	P54	1.21	1 21	1.71	2 09	2.70	3 20	3 82	5.40	6.62	1 37	760	380			
	P66	1.71	1.71	2.42	2 96	3.82	4 52	5.40	7 64	9.36	1 68	910	455			
	P80	2.46	2.46	3.48	4 26	5.50	6 51	7.78	11 0	13 5	2 03	1200	600			
	P120	5.54	5 54	7 83	9 59	12.4	14.7	17 5	24 8	30 3	3 05	1500	750			

Material : 316 stainless steel

WILSON SPRAY NOZZLE

LUMP

360° TANK WASHING NOZZLE

Complete with ten (10) qty of full cone nozzles clustered in a header, LUMP 6160 is a large flow 360 degrees tank cleaning nozzle. It facilitates thorough and efficient tank cleaning in a continuous blast of liquid supply.

Characteristics

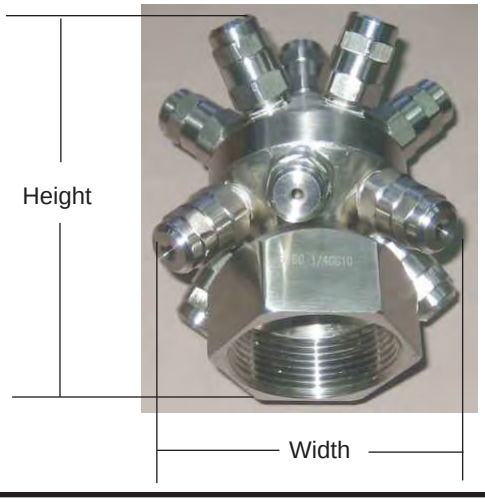
* Cluster can house 10 qty of internal vane W series or spiral nozzles T series
* Complete 360 degrees coverage.
* Stainless Steel

LUMP Scrubbing and Rinsing Diameter

Female Pipe Size	Nozzle Model	Scrubbing Diameter (mm) @ 1.5 bar	Scrubbing Diameter (mm) @ 2 bar	Scrubbing Diameter (mm) @ 3 bar	Rinsing Diameter (mm) @ 3 bar	Scrubbing Diameter (mm) @ 3.5 bar
1 1/2"	6160 - 1/4GG5	1200	1200	1200	2400	1200
	6160 - 1/4GG5	2100	2100	2100	3700	2100
	6160 - 1/4GG5	3000	3000	3000	4300	3000
3"	10250 - 1-1/2	3000	3500	3500	4500	4000
	10250 - 1-3/4	3500	4000	4500	4900	5000
	10250 - 1-1	4000	5000	6000	6500	6500

LUMP Flow Rates and Dimensions

Female Pipe Size	Nozzle Model	LITERS PER MINUTE @ BAR 1 bar	2 bar	3 bar	3.5 bar	Size (mm) Height	Width
1 1/2"	6160 -1/4GG5	35	40	48	52	114	114
	6160 - 1/4GG10	70	80	97	104	114	114
	6160 - 1/4GG22	155	177	215	230	121	127
3"	10250 - 1-1/2	280	320	390	415	166	191
	10250 - 1-3/4	580	650	800	880	174	210
	10250 - 1-1	1000	1130	1370	1470	183	229



www.wilsonspraynozzle.sg
e-mail : sales@wilsonspraynozzle.sg

WILSON SPRAY NOZZLE

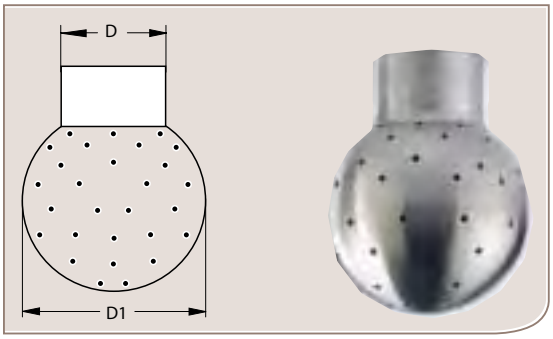
Tank Cleaning - Fix Head SprayBall

Features

* Continuous 360 deg spray
* Stainless steel material
* threaded, clip on and welded
* suitable for cleaning in place

UAA fixed spray heads are a simple, fast and efficient device for cleaning the inside of small size tanks where a simple rinsing action is required.
Their simple design allows for the head to be easily cleaned after being operated, which makes it possible to leave the heads ready for use, permanently in place inside the tank.
Because of the relatively high washing fluid flow rate, they are usually operated at low pressures and can achieve low impact action on the tank wall.
However, in those cases where fixed heads can achieve a satisfactory cleaning result, their simple design assures low investment cost and maximum reliability,
The figures for wetting radiuses shown at the right of the table have been obtained operating the heads with a water pressure value of 1 bar.

Material	B31	Aisi 316L Stainless steel
Connection		Female BSP thread
		Pipe clip



Spray pattern		Connection	
Z	360°	B	BSP Female
T	180° up	N	NPT Female
S	180° down	C	Clip

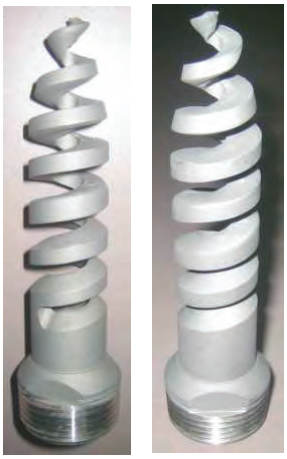
FLOW RATE and Washing Diameter Chart

Model	D	D1	liter per minute						Washing Diameter (meter) When spraying at 3 bar
			BAR 1	BAR 1,5	BAR 2	BAR 2.5	BAR 3	BAR 4	
UAA 1228 B3 ZB	1/4"	28	31	38	44	48	54	62	1.0
UAA 2050 B3 ZB	1/2"	50	90	110	127	142	155	180	2.4
UAA 2465 B3 ZB	3/4"	65	221	271	312	349	383	442	2.9
UAA 3000 B3 ZB	1"	70	260	318	367	411	450	520	4.9
UAA 3990 B3 ZB	1" 1/4	90	498	610	704	787	862	996	5.7

WILSON SPRAY NOZZLE

WA series

Rinsing & Washing Nozzles



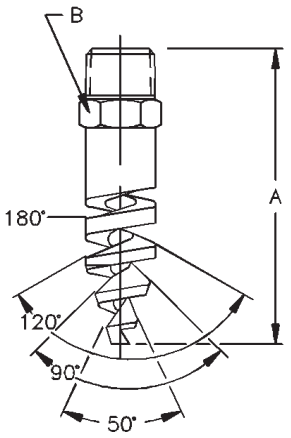
WA 1

DESIGN FEATURES

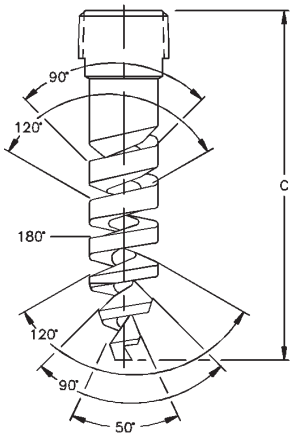
* Non Clog
* 270 degrees wide spray angle.
* High Impact Force.
* No moving parts
* No maintenance
* Manufactured in Brass or stainless steel
* Suit any liquid medium

APPLICATION

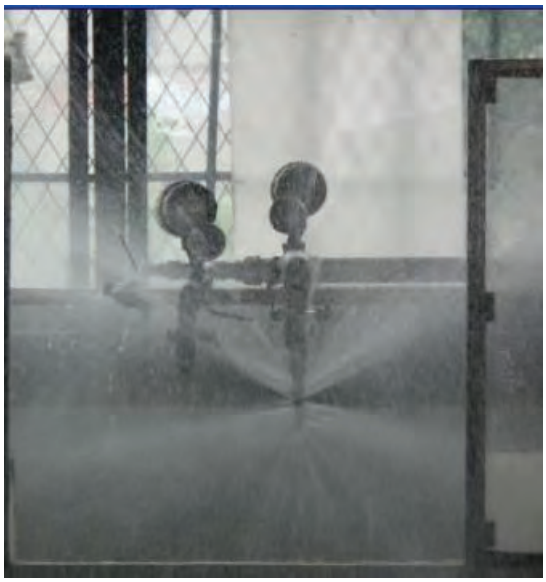
* Scrubbing of tanks
* Descaling
* Rinsing
* Washing
* Defoaming
* Low cost
* Easy to install



WA 12 - WA 18



WA 1



Tank Washing WA Coverage Chart

When spraying at 2 - 3 BAR,

Pipe Size	Nozzle Number	Scrubbing Diameter (mm)	Rinsing Diameter (mm)
3/8	WA 12	380	760
	WA 14	460	1200
	WA 16	610	1500
	WA 18	910	2100
1	WA 1	2400	6100

Tank Washing Flow Ratesand Dimensions

WA 180 and 270° Spray Angles,

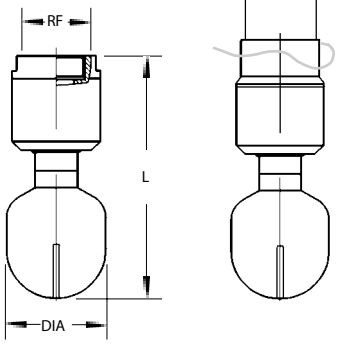
Male Pipe Size	Nozzle Number	Spray Angles	K Factor	LITERS PER MINUTE 0.7 bar	1 bar	2 bar	3 bar	4 bar	5 bar	10 bar	15 bar	Approx(mm) Orifice Dia	Free Pass. Dia.	Metal Only Dim.(imm) A	B	C	Weigh (g) Metal
3/8	WA 12	180	13.7	11.4	13.7	19.3	**23.7**	27.3	30.6	43.2	53.0	4.83	3.30	73.0	17.5		49.6
	WA 14	180	18.5	15.4	18.5	26.1	**32.0**	36.9	41.3	58.4	71.5	5.59	3.30				
	WA 16	180	24.2	20.2	24.2	34.2	**41.8**	48.3	54.0	76.4	93.6	6.35	3.30				
	WA 18	180	37.6	31.5	37.6	53.2	**65.1**	75.2	84.1	119	146	7.87	3.30				
1	WA 1	270	116	97.2	116	164	**201**	232	260	368	450	14.2	5.08			130	298

Standard Materials: 316 Stainless steel

UBC/ UBF

TANK WASHING Rotary Nozzles

UBC



UBC type rotary tank washer nozzles contain slotted, flat-shaped spray orifices positioned such that the jets provide the reaction forces to produce the rotary motion. This simple yet robust design, utilizing two ball bearing assemblies, makes it possible to operate the nozzle in any orientation, giving an efficient 360 ^{O} of coverage.

The largest UBC nozzle can accommodate tanks up to15 feet in diameter for deep washing and 20 feet for rinsing. All of the other nozzles listed in the table have a washing range of 10 feet and a rinsing range of 14 feet.

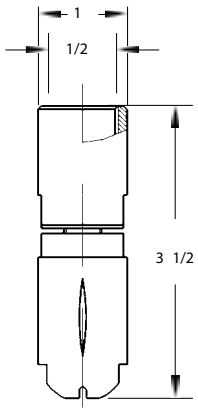
The body, bearings and races are all fabricated from 316 stainless steel. The UBC series is supplied either with a standard threaded female pipe connection or, for applications where frequent cleaning is required, a slip-on fitting with a safety locking pin. To order the slip-on fitting add the letter 'C' to the nozzle code shown in the table.

Nozzle code	RF	Flow rates (gpm) at various pressures (psi)				Angle AA	Max. Throw MT	Weight W	Dimensions	
		30	45	75	105				L	DIA
UBC 2899 B3x	1/2"	19	24	31	43	360	80"	0.66	41/2"	13/4"
UBC 2900 B3x	3/4"	19	24	31	43	360	80"	0.66	41/2"	13/4"
UBC 3120 B3x	1"	26	32	41	48	360	80"	1.3	41/2"	13/4"
UBC 3300 B3x	11/4"	65	79	103	121	360	80"	1.5	5"	23/8"

Connection: Female thread
Slip-on fitting (add 'C' to nozzle code)

Materials: All 316 stainless steel

UBF



UBF type rotary tank washer nozzles contain all the features of the UBC series, but are designed to operate in smaller size tanks that contain relatively limited size openings such as found in pressurized soft-drink containers and beer kegs.

The spray coverage from type UBF nozzles is 270 $^{O.}$
The body, bearings and races are all fabricated from 316 stainless steel.

Connection: Female thread

Materials: All 316 stainless steel

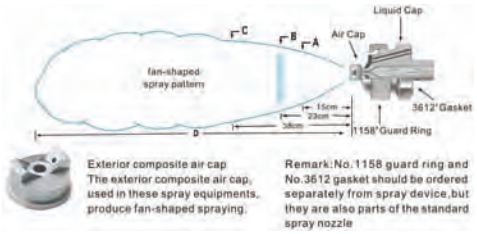
Nozzle code	Flow rates (gpm) at various pressures (psi)					Angle AA	Max. Throw MT	Weight W
	15	45	75	150	180			
UBF 2270 B3	4	7	10	14	15	270	60"	0.5
UBF 2380 B3	6	10	13	18	20	270	60"	0.5

WILSON SPRAY NOZZLE

SUE series

AIR and LIQUID ATOMISER

With independent stream and control of Air and liquid inlet, the Air / Liquid Atomising Fan Spray External mix facilitates fine atomisation for liquid that contains abrasive suspended particles and is **well suited even for viscosity above 150 centipose.** Spray Angle : 45 or 60 degrees Fan



Exterior composite air cap
The exterior composite air cap, used in these spray equipments, produce fan-shaped spraying.

Remark:No.1158 guard ring and No.3612 gasket should be ordered separately from spray device,but they are also parts of the standard spray nozzle

spray device model	spray device consists of air cap and fluid cap	liquid flow (L/min)and flow (L/min) Water pressure (bar)																Size					
		0.2bar			0.3bar			0.7bar			1.5bar			4bar									
		Air pressure (bar)	Water (L/h)	Air (L/min)	Air pressure (bar)	Water (L/h)	Air (L/min)	Air pressure (bar)	Water (L/h)	Air (L/min)	Air pressure (bar)	Water (L/h)	Air (L/min)	Air pressure (bar)	Water (L/h)	Air (L/min)	Air (bar)	Liquid (bar)	A (cm)	B (cm)	C (cm)	D (cm)
SUE 15B	Liquid Cap 1650 and Air Cap 67228-45°	0.2	25.2		0.35	26.3		0.7	31.2		1.4	45.3		2.8	73.6		0.2	0.2	9	15	23	0.9
		0.35	26.3		0.7	31.2		1.05	39.6		1.75	53.8		3.5	85.0		1.05	0.2	9	15	23	1.2
		0.7	31.2		1.05	39.6		1.4	45.3		2.1	59.5		4.2	102		1.4	0.35	10	15	23	1.2
		1.05	39.6	2.8	1.4	45.3	3.5	1.75	53.8	5.3	2.8	73.6	7.8	4.9	119	11.0	1.4	1.4	11.5	18	25	1.5
		1.4	45.3		1.75	53.8		2.1	59.4		3.5	85.0		5.3	127.5		1.75	0.7	11.5	15	24	1.5
		1.75	53.8		2.1	59.4		2.8	73.6		4.2	102		5.6	139		2.8	1.4	13	18	28	1.8
		2.1	59.4		2.8	73.6		3.5	85.0		5.6	139		6.3	159		4.9	2.8	15	18	24	2.4
SUE 18B	Liquid Cap 1650 and Air Cap 67228-45°																0.4	0.3	20	28	33	1.2
		0.35	22		0.35	22		0.4	25		0.6	28		0.7	34		0.6	0.7	23	30	40	1.8
		0.4	25		0.4	25		0.6	28		0.7	34		1.1	45		0.6	1.5	28	35	46	1.8
				2.8			3.5			5.3			7.8			11.0	1.1	1.5	28	33	43	2.4
		0.5	27.5		0.6	28		0.7	34		1.1	45		1.8	62		1.4	1.5	25	30	41	2.7
		0.6	28		0.7	34		0.85	40		1.4	54		2.5	79		1.1	2.0	28	35	48	2.6
																	1.4	3.0	30	38	51	2.7
SUE 15A	Liquid Cap 2050 and Air Cap 67228-45°	0.35	26.3		0.7	31.2		1.05	39.6		1.75	53.8		3.15	82		0.35	0.2	7.5	14	22	1.0
		0.7	31.2		1.05	39.6		1.4	45.3		2.1	59.4		3.5	85		1.4	0.2	9	15	22	1.7
		1.05	39.6		1.4	45.3		1.75	53.8		2.8	73.6		4.2	102		1.75	0.35	10	16.5	23	1.8
		1.4	45.3	4.5	1.75	53.8	5.5	2.1	59.4	8.3	3.5	85.0	12.2	4.9	119	16.6	1.75	1.4	13	19	29	2.1
		1.75	53.8		2.1	59.4		2.8	73.6		4.2	102		5.25	127		2.1	0.7	13	18	25	1.8
		2.1	59.4		2.8	73.6		3.5	85.0		5.6	119		6.3	159		3.5	1.4	13	22	0	2.4
		2.8	73.6		3.5	85.0		4.2	102		6.3	159		6.7	164		5.3	2.8	15	19	25	3.0
SUE 18A	Liquid Cap 2050 and Air Cap 62240-60°																0.7	0.2	13	16.5	25	1.2
		0.35	22		0.35	22		0.6	28		0.7	34		1.1	45		1.75	0.2	13	16.5	25	1.8
		0.6	28		0.7	34		0.7	34		1.4	54		1.4	54		2.1	0.35	13	18.0	24	1.8
				4.5			5.5			8.3			12.2			33	2.5	1.4	14	20	32	1.8
		0.7	34		1.1	45		1.4	54		2.1	71		2.1	71		2.8	0.7	14	19	30	2.3
		1.1	45		1.4	54		2.1	71		2.5	79		2.5	79		4.2	1.4	14	20	36	3.0
																	5.3	2.8	16.5	20	30	4.0
SUE 15	Liquid Cap 2850 and Air Cap 67228-45°	0.7	31.2		1.05	39.6		1.4	45.3		2.5	68		3.5	85		0.7	0.2	13	16.5	25	1.2
		1.05	39.6		1.4	45.3		1.75	53.8		2.8	73.6		4.2	102		1.75	0.2	13	16.5	25	1.8
		1.4	45.3		1.75	53.8		2.1	59.4		3.5	85		4.9	119		2.1	0.35	13	18.0	24	1.8
		1.75	53.8	8.5	2.1	59.4	10.4	2.8	73.6	15.9	4.2	102	23	5.3	127	33	2.5	1.4	14	20	32	1.8
		2.1	59.4		2.8	73.6		3.5	85.0		4.9	119		5.6	139		2.8	0.7	14	19	30	2.3
		2.8	73.6		3.5	85		4.2	102		5.6	139		6.3	159		4.2	1.4	14	20	36	3.0
		3.5	85		4.2	102		4.9	119		6.3	159		7.0	176		5.3	2.8	16.5	20	30	4.0
SUE 18	Liquid Cap 2850 and Air Cap 62240-60°																0.6	0.3	35	48	61	1.8
		0.4	25		0.4	25		0.4	25		0.7	34		1.4	54		0.6	0.7	35	48	63	1.5
		0.5	27.5		0.6	28		0.6	28		0.85	40		1.8	62		0.7	1.5	38	48	63	1.8
				8.5			10.4			15.9			23			33	1.1	1.5	41	51	66	2.1
		0.6	28		0.65	31		0.7	34		1.1	45		2.1	71		1.4	1.5	43	53	66	2.4
		0.7	34		0.7	34		0.85	40		1.4	54		2.5	79		1.8	2.0	41	51	69	2.7
																	2.1	3.0	41	51	69	2.9

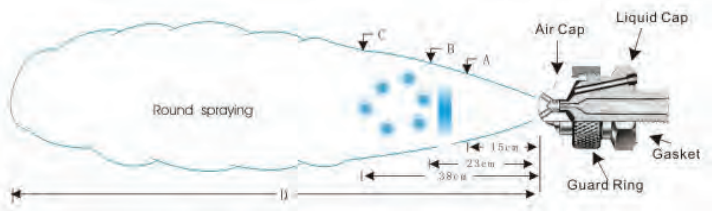
Standard Material : 316 stainless steel

WILSON SPRAY NOZZLE

SUK series

AIR and LIQUID ATOMISER

The liquid and air stream under pressure collide in the internal mixing chamber effecting a thorough mix before exiting th Being internally mix, the streams are dependent on each other. Although, changes in the air stream affects the liquic line, the Internal mix produces the finest atomisation possible in any Air and liquid atomiser. However, it is gets clog easily for liquid with viscosity above 150 centioise



spray device model	spray device consists of air cap and fluid cap	liquid flow (L/min)and flow (L/min) Water pressure (bar) 0.7bar Air pressure (bar)	0.7bar Water (L/h)	0.7bar Air (L/min)	1.5bar Air pressure (bar)	1.5bar Water (L/h)	1.5bar Air (L/min)	2bar Air pressure (bar)	2bar Water (L/h)	2bar Air (L/min)	3bar Air pressure (bar)	3bar Water (L/h)	3bar Air (L/min)	4bar Air pressure (bar)	4bar Water (L/h)	4bar Air (L/min)	Size Air (bar)	Liquid (bar)	A (cm)	B (cm)	C (cm)	D (cm)
SUK16	Liquid Cap 2050 and Air Cap 67-6-20-70°	0.6	5.3	10.2	1.1	6.1	13.3	1.5	8.1	16.4	2.4	8.9	22	3.1	10.5	24	0.7	0.7	14	18	23	1.5
		0.7	4.3	12.2	1.3	7.0	15.0	1.8	6.6	21	2.7	8.1	26	3.4	9.7	28	1.4	1.5	15	19	24	1.8
		0.85	3.0	14.2	1.4	6.4	17.0	2.1	4.9	25	3.0	6.4	30	3.9	7.8	36	1.8	2.0	16	20	25	2.1
		1.0	1.7	17.0	1.5	5.5	19.0	2.4	3.2	29	3.2	4.9	34	4.2	6.1	42	3.0	3.0	16	20	26	2.7
					1.7	4.5	22				3.4	4.2	37	4.6	4.4	47	3.9	4.0	19	23	30	4.0
					1.8	3.5	24				3.5	3.4	40	4.9	2.8	54						
SUK26B	Liquid Cap 60100 and Air Cap 140-6-37-70°	0.85	7.0	5.0	1.7	13.2	68	2.0	18.5	68	2.8	25	84	3.7	31	96						
		1.0	2.1	62	1.8	9.8	79	2.1	15.1	76	3.0	22	92	3.8	28	105	0.85	0.7	18	24	31	1.8
								2.2	11.7	85	3.1	18.5	101	3.9	26	113	1.7	1.5	19	25	33	2.4
											3.2	15.1	119	4.1	23	122	2.1	2.0	19	25	33	3.2
											3.4	12.1	130	4.2	20	130	3.2	3.0	20	26	26	4.1
											3.5	9.1	142	4.6	13.6	153	4.1	4.0	21	28	28	5.9
											3.7	6.1	65	4.9	6.8	183						
SUK26	Liquid Cap 60100 and Air Cap 140-6-37-70°	0.7	24	32	1.4	43	37	2.1	33	66	2.8	52	76	3.7	63	68					36	
		0.85	13.6	44	1.5	35	49	2.2	26	78	3.0	46	87	3.8	68	79	1.85	0.7	19	25	37	2.1
		1.0	7.6	57	1.7	28	61	2.4	18.9	89	3.1	39		3.9	52	101	1.5	1.5	20	27	37	3.2
					1.8	21	71	2.5	11.7	100	3.2	33	99	4.2	41	111	2.4	2.0	20	27	38	4.1
											3.4	26	110	4.6	27	138	3.2	3.0	20	28	38	5.0
											3.5	19.5	122	4.9	15.9	166	3.9	4.0	20	28	39	6.8
											3.7	13.2	133									
SUK29	Liquid Cap 60100 and Air Cap 140-6-52-70°	1.3	36	85	2.1	57	116	3.1	53	156	4.2	64	197	5.6	74	245						
		1.5	29	102	2.4	51	130	3.2	50	163	4.9	51	230	6.0	68	260	2.0	0.7	20	25	33	5.5
		1.8	23	117	2.7	45	143	3.4	47	170	5.6	40	265	6.3	62	280	3.0	1.5	20	27	34	6.4
		2.0	19.7	125	3.0	39	157	3.5	45	177	6.0	34	285	6.7	56	295	3.9	2.0	22	28	37	8.2
		2.1	16.7	133	3.2	33	170	3.9	38	194	6.3	28	300	7.0	51	315	6.0	3.0	23	29	38	9.1
		2.3	14.0	142	3.5	28	185	4.6	25	230	6.7	22	320				6.3	4.0	24	32	41	10.4
		2.4	11.4	149	4.2	13.6	220	4.9	18.5	245	7.0	17.8	335									
SUK30	Liquid Cap 40100 and Air Cap 120-6-35-60°	1.1	12.3	40	2.2	16.3	62	2.7	21	69	4.2	19.3	100	5.6	22	130						
		1.3	9.9	45	2.5	12.1	71	3.0	16.3	78	4.6	14.6	113	6.0	17.6	142	1.5	0.7	15	19	23	2.7
		1.4	7.9	50	2.8	8.9	79	3.2	12.3	86	4.9	10.8	124	6.3	14.0	152	3.0	1.5	16	20	24	4.6
		1.5	6.1	54	3.0	7.6	83	3.4	10.7	91	5.3	8.1	135	6.7	11.4	163	3.4	2.0	16	20	24	5.5
		1.7	4.9	58	3.1	6.4	87	3.5	9.3	94	5.6	6.2	146	7.0	9.1	174	5.3	3.0	18	22	25	7.3
		1.8	3.9	62	3.2	5.5	91	3.9	6.4	105	6.0	4.9	157				6.3	4.0	19	24	30	9.4
		2.0	3.1	67	3.4	4.7	95	4.2	4.7	115	6.3	4.0	167									
SUK46	Liquid Cap 100150 and Air Cap 189-6-62-70°	1.7	25	156	3.0	39	230	3.4	50	250	4.6	62	320	6.0	93	395	2.0	0.7	24	33	46	5.5
		1.8	19.7	167	3.1	33	240	3.5	43	260	4.9	47	345	6.3	77	425	3.2	1.5	25	34	47	6.4
		2.0	15.1	178	3.2	27	255	3.7	41	275	5.3	36	375	6.7	62	460	3.9	2.0	28	37	51	7.3
		2.1	11.4	193	3.4	23	265	3.9	27	300	5.6	26	405	7.0	52	495	5.3	3.0	29	38	53	7.9
		2.3	7.6	205	3.5	18.5	280	4.1	23	310	6.0	18.9	435				6.3	4.0	33	42	58	9.8
					3.7	14.8	290	4.2	18.9	320	6.3	13.6	460									
								4.4	15.9	335												

Standard Material : 316 stainless steel

Spray Angle : Wide angle 60 degrees to 70 degrees Cone

WILSON SPRAY NOZZLE

SA series

LARGE MASS ATOMISATION

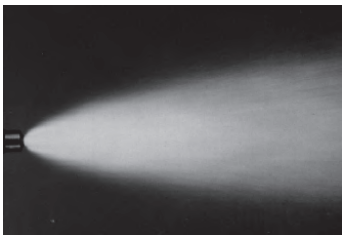
DESIGN FEATURES

- A two-fluid nozzle using either steam or
- air as the atomizing fluid
- Fine atomization

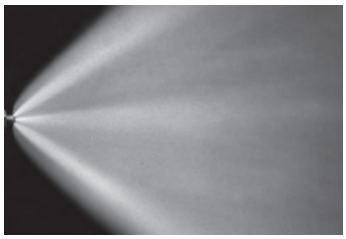
Design for Gas cooling

SPRAY CHARACTERISTICS

Spray pattern : Full cone
Spray angle : 20° to 90°
Flow rate : 2.0 to 80 l/min



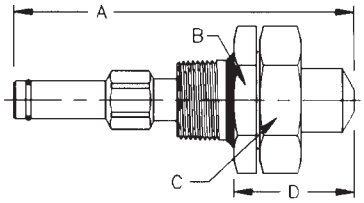
Narrow Round 20°



Full cone 90

SA Spray Chart,

Pipe Size	Model	Spray Angle	Spray Type	Approx. Free Pass. Dia. (mm.)	Pipe Size	Dimensions (mm.) A	B	C	D	Wt. (Kg.)
1”	SA 101	20°	Narrow Round	3.30	1	148	50.8	50.8	50.8	0.64
	SA 308	90°	Wide Round	2.69						
	SA 310	60°		2.69						
	SA 402	90°	Flat Fan	3.30						
	SA 404	60°		3.30						
	SA 103	20°	Narrow Round	3.30	1	148	50.8	50.8	50.8	0.64
	SA 307	90°	Wide Round	3.30						
	SA 309	60°		3.30						
	SA 401	90°	Flat Fan	3.30						
	SA 403	60°		3.30						
1 1/2”	SA 2100	20°	Narrow Round	4.83	1 1/2	229	50.8	55.6	113	1.5
	SA 2310	90°	Wide Round	4.65						
	SA 2303	60°		4.65						



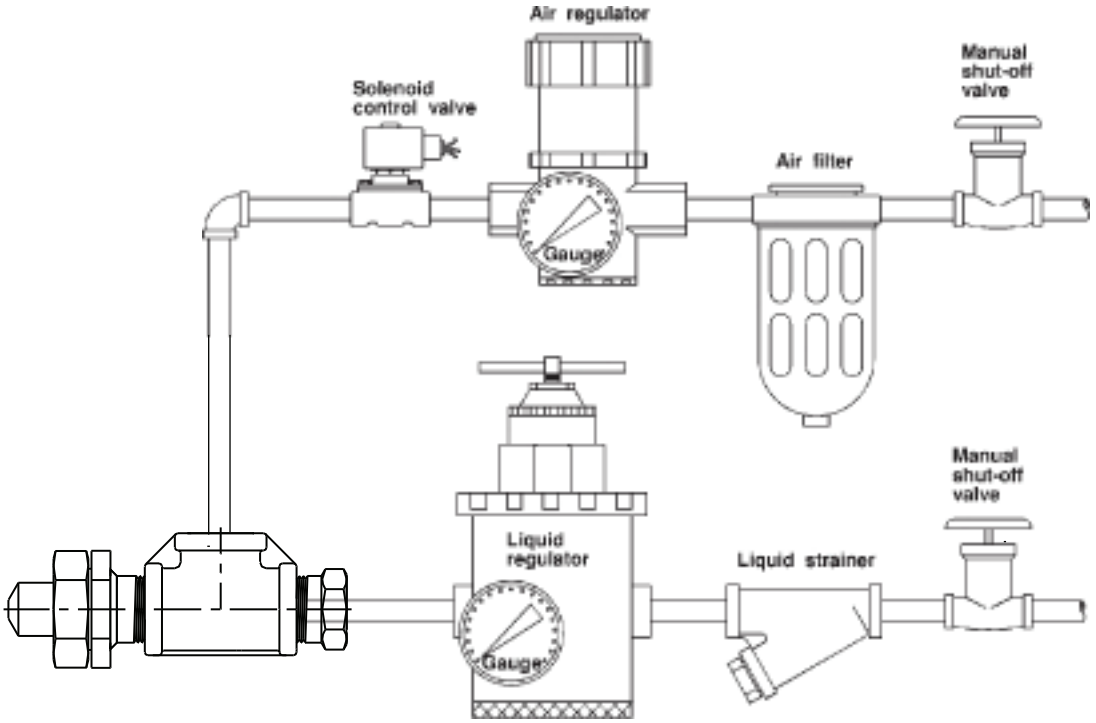
1 SA (Set-Up

Standard material : Full 316 stainless steel or with C276 Hastelloy tip

WILSON SPRAY NOZZLE

SA series

LARGE MASS ATOMISING



Air Pressure and Liquid Pressure vs Flow rates Chart

Size NPT	Spiral Tip Rating	1,0 Bar Air			2,0 Bar Air			3,0 Bar Air			4,0 Bar Air			5,0 Bar Air			6,0 Bar Air			7,0 Bar Air		
		liquid [l/min]	liquid [bar]	air [Nm³/h]	**liquid [l/min]**	liquid [bar]	air [Nm³/h]	**liquid [l/min]**	liquid [bar]	air [Nm³/h]	**liquid [l/min]**	liquid [bar]	air [Nm³/h]	**liquid [l/min]**	liquid [bar]	air [Nm³/h]	**liquid [l/min]**	liquid [bar]	air [Nm³/h]	liquid [l/min]	liquid [bar]	air [Nm³/h]
1"	14	**2**	0,9	25,0	**2**	1,9	45,0	**2**	2,8	60,2	**2**	3,7	86,3	**2**	4,6	105	**2**	5,7	137	**2**	6,4	149
		3	0,9	20,2	**3**	1,9	39,0	**3**	2,8	56,8	**3**	3,8	79,8	**3**	4,7	97,9	**3**	5,7	135	**3**	6,5	146
		4	1,0	17,3	**4**	2,0	29,1	**4**	2,9	50,8	**4**	3,8	73,0	**4**	4,8	88,9	**4**	5,9	123	**4**	6,5	134
					5	2,0	26,8	**5**	3,0	43,8	**5**	3,9	64,8	**5**	4,8	82,6	**5**	5,9	110	**5**	6,6	117
					6	2,1	24,4	**6**	3,0	41,2	**6**	3,9	57,9	**6**	4,9	78,3	**6**	6,1	100	**6**	6,7	112
					7	2,1	21,9	**7**	3,0	38,5	**7**	4,0	53,2	**7**	5,0	69,9	**7**	6,2	94,9	**7**	6,8	107
								8	3,1	35,4	**8**	4,1	49,9	**8**	5,0	66,7	**8**	6,2	88,9	**8**	6,9	100
											9	4,1	47,0	**9**	5,1	64,1	**9**	6,3	79,8	**9**	7,0	93,2
											10	4,2	45,3	**10**	5,1	60,5	**10**	6,4	75,2	**10**	7,1	86,0
											12	4,4	39,3	**12**	5,3	53,2	**11**	6,6	69,6	**11**	7,2	83,6
																	12	6,6	68,4	**12**	7,3	80,3
	20	**4**	0,2	34,9	**4**	1,5	64,4	**4**	2,4	91,7	**4**	3,2	117	**4**	4,0	140	**4**	4,8	161	**4**	5,6	180
		8	0,8	24,3	**8**	1,7	45,9	**8**	2,6	68,1	**8**	3,5	91,0	**8**	4,4	114	**8**	5,2	139	**8**	6,0	163
					11	1,9	35,8	**11**	2,9	56,3	**11**	3,8	78,0	**11**	4,6	101	**11**	5,3	125	**11**	6,0	151
					15	2,1	26,8	**15**	3,0	45,8	**15**	3,9	65,2	**15**	4,8	85,2	**15**	5,6	105	**15**	6,4	126
					19	2,2	23,6	**19**	3,1	39,0	**19**	4,1	55,9	**19**	5,0	74,4	**19**	5,8	94,3	**19**	6,7	116
					23	2,4	21,8	**23**	3,3	36,7	**23**	4,2	51,6	**23**	5,1	67,2	**23**	5,9	82,8	**23**	6,8	98,7
								26	3,5	31,8	**26**	4,4	46,9	**26**	5,2	61,6	**26**	6,1	76,1	**26**	6,9	90,2
											30	4,5	42,9	**30**	5,4	55,6	**30**	6,2	70,4	**30**	7,1	87,4
											34	4,7	37,0	**34**	5,6	50,6	**34**	6,5	62,7	**34**	7,3	73,2
											38	5,0	32,4	**38**	5,9	47,2	**38**	6,7	57,8	**38**	7,5	64,2
1 1/2"	28							**40**	3,1	76,3	**40**	4,0	107	**40**	5,0	142	**40**	6,0	183	**40**	7,0	229
								45	3,2	69,0	**45**	4,2	97,4	**45**	5,2	130	**45**	6,2	167	**45**	7,3	208
								50	3,3	61,8	**50**	4,2	88,4	**50**	5,2	118	**50**	6,3	152	**50**	7,3	189
								55	3,4	55,5	**55**	4,3	80,7	**55**	5,3	109	**55**	6,3	141	**55**	7,4	175
								60	3,5	49,1	**60**	4,4	73,2	**60**	5,4	100	**60**	6,4	130	**60**	7,5	162
								65	3,6	43,1	**65**	4,6	66,3	**65**	5,6	92,3	**65**	6,6	121	**65**	7,6	152
								70	3,8	37,5	**70**	4,8	60,2	**70**	5,8	85,8	**70**	6,8	114	**70**	7,9	145
								75	4,0	32,1	**75**	5,0	54,6	**75**	6,1	80,2	**75**	7,1	109	**75**	8,2	141
								80	4,2	27,1	**80**	5,2	49,8	**80**	6,2	76,0	**80**	7,2	106	**80**	8,2	139

Standard material : Full 316 stainless steel or with C276 Haastelloy tip

TE Series Eductor Mixing Nozzle

Stainless steel

Plastic

DESIGN FEATURES

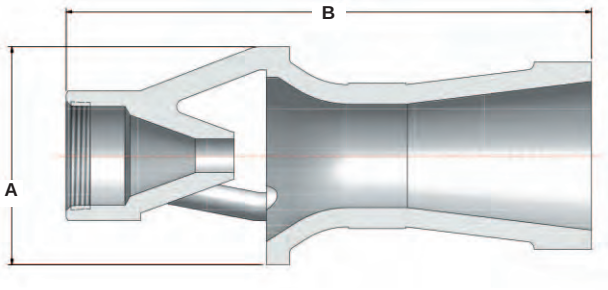
- Effective, economical way to circulate liquids in closed or open tanks
- No moving parts
- Non clog
- Nol maintenance
- Ventury multiplying effect

SPRAY CHARACTERISTICS

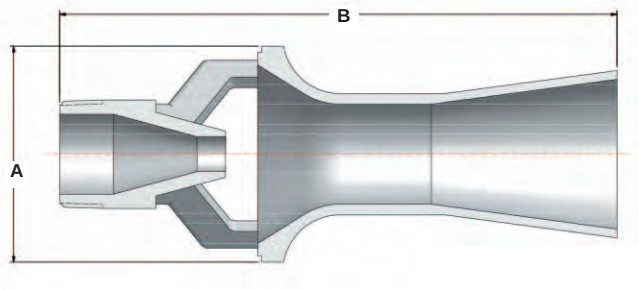
- Cone-shaped plume

Flow rates: 26.7 to 12000 l/min

- The volume of discharge liquid will be 3-5 times greater than the motive liquid pumped



Metal



Plastic

Polypropylene Plastic

Connection Size NPT		Part Number	K Factor	Motive Flow Rate LITERS PER MINUTE @ BAR* 0.7 bar	1 bar	1.5 bar	2 bar	2.5 bar	3 bar	3.5 bar	Dimensions (mm) A	B
Male	3/8	TE73	33.2	27.8	33.2	40.7	47	52.5	57.6	62.2	54	114
	1/2	TE120	54.3	45.4	54.3	66.5	76.7	85.8	94	101	64	165
	3/4	TE137	62.4	52.2	62.4	76.4	88.2	98.6	108	117	73	162
	1	TE240	109	90.8	108	133	153	172	188	203	89	241
	1 1/2	TE340	155	130	155	190	219	245	269	290	114	248

Dimensions are approximate.

316 Stainless steel

Connection Size NPT		Part Number	K Factor	Motive Flow Rate LITERS PER MINUTE @ BAR* 0.7 bar	1 bar	1.5 bar	2 bar	3 bar	5 bar	7 bar	Dimensions (mm) A	B
Male	3/8	TE70	31.9	26.7	31.9	39.1	45.1	55.3	71.4	84.4	43	108
	1/2	TE110	50.1	41.9	50.1	61.3	70.8	87.0	112	132	55	133
	3/4	TE150	68.4	57.2	68.4	83.7	96.7	118	153	181	67	159
	1	TE230	105	87.7	105	128	148	182	234	277	83	200
	1 1/2	TE320	146	122	146	179	206	253	326	386	97	233
	2	TE620	282	236	282	345	399	489	631	746	121	286
	3	TE1500	684	572	684	837	967	1180	1530	1810	165	492
Flanged (PN6)	4	TE2510	1130	950	1130	1390	1610	1970	2540	3000	213	864
	6	TE6010	2720	2270	2720	3330	3840	4710	6080	7190	321	1320
	8	TE10050	4550	3800	4550	5570	6430	7870	10200	12000	416	1730

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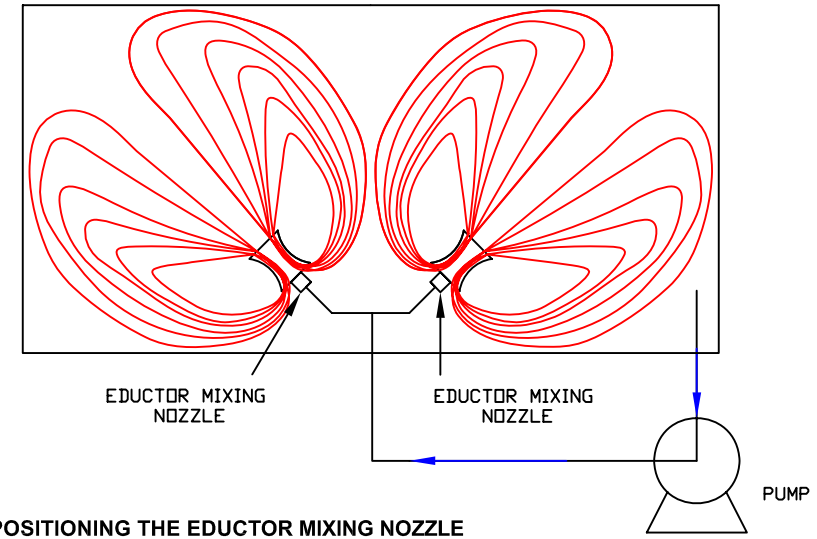
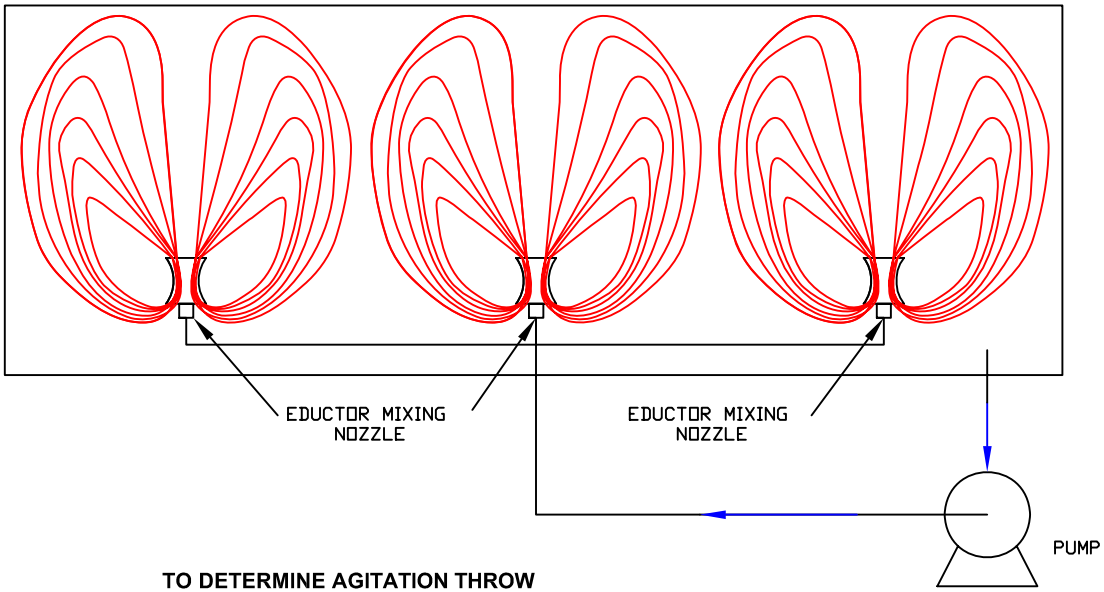
SQUARE AND RECTANGULAR TANK

END VIEW



SIDE VIEW



POSITIONING THE EDUCTOR MIXING NOZZLE

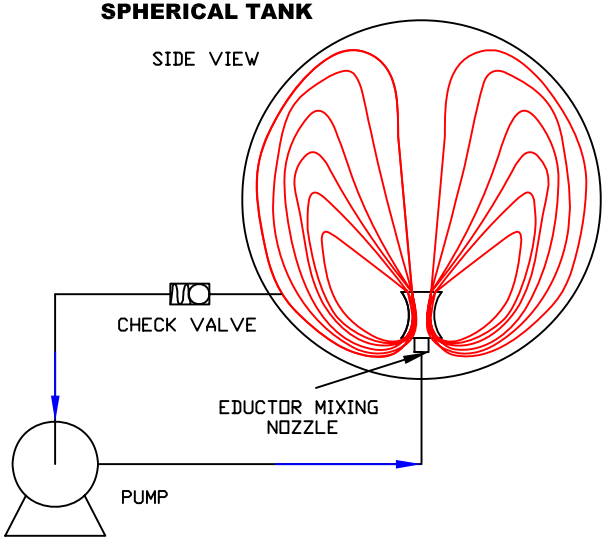
To agitate the liquid, position the Nozzle at the bottom of one side of the tank and direct the plume upwards towards the opposite side of the tank, aiming at the highest likely liquid level. To sweep solids along the tank bottom, direct the nozzle plume downwards at a 20 degrres angle towards the pump inlet.

TO DETERMINE AGITATION THROW

The Nozzle plume is cone shaped, diverging at an angle of approximately 11 degrees. To determine the approximate length of the discharge, multiply the presssure drop across the Eductor Nozzle in PSI times 1 foot.

SPHERICAL TANK

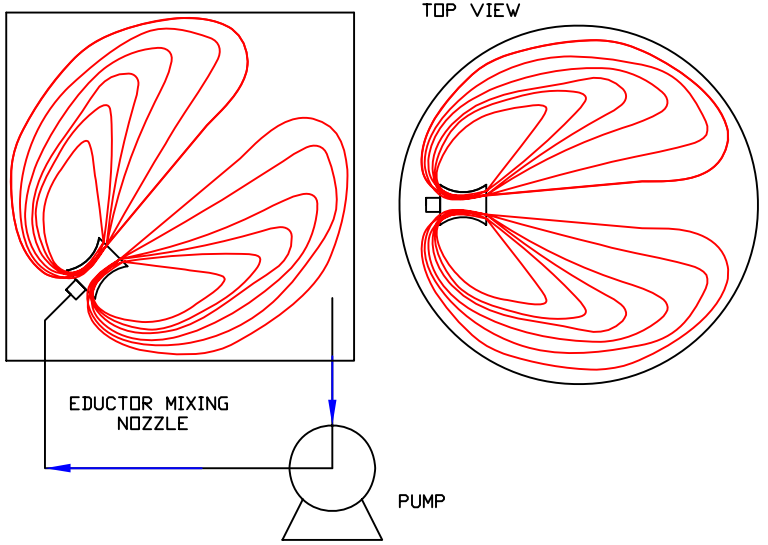
SIDE VIEW



CYLINDRICAL TANK

SIDE VIEW

TOP VIEW



REV	DATE	DESCRIPTION	CHECK	APPROVE
0	21/04/08	FOR APPROVAL	VN	ET

WILSON ENGINEERING (S) PTE LTD

CUSTOMER :

PROJECT : 1092 CJ70 JACK UP

MODEL : EDUCTOR MIXING NOZZLE

DRAWING TITLE : PLAN AND ELEVATION VIEWS

PO REF : DOC. NO :

SHEET 1 OF 1 | DWG NO : TM1 | REV 0

WILSON SPRAY NOZZLE

FA series

AIR NOZZLE

1/4F-SS

DESIGN FEATURES

* Wide uniform air distribution
* High impact compressed air coverage
* Mounted individually or side by side mounting for wider coverage
* Efficient laminal air flow
* 1/4" male connection BSPT
* up to 2 DB sound level
* 2 thru hole for secure locking

SPRAY CHARACTERISTICS

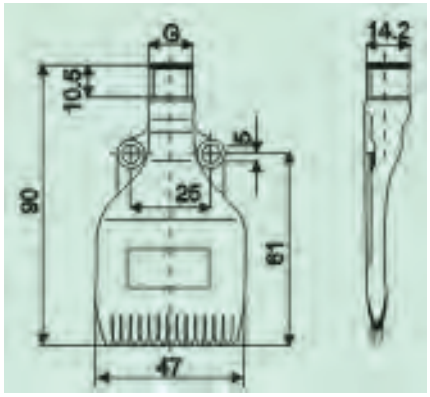
Spray pattern : Fan
Air Flow rate : 10 to 35 Nm3/hr
Air Preaaure : 1 bar to 5 bar (ABS plastic)
: 1 bart to 8 bar (Al and SS)

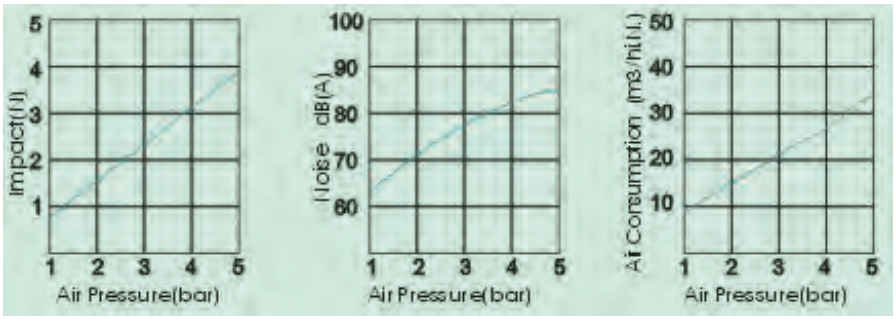
MATERIAL

* ABS Plastic injection from mould
* Alunimium Alloy by machine center
* Stainless steel by machine center

FLOW SPECIFICATION

Male BSPT	Model	Air Capacity (Nm 3 / h) @ BAR 1	2	3	4	5	Material
1/4"	F- ABS	10	15	20	28	35	Plastic
1/4"	F- ALMA	10	15	20	28	35	Alumium
1/4"	F- SS	10	15	20	28	35	Stainless steel





1/4F-ABS

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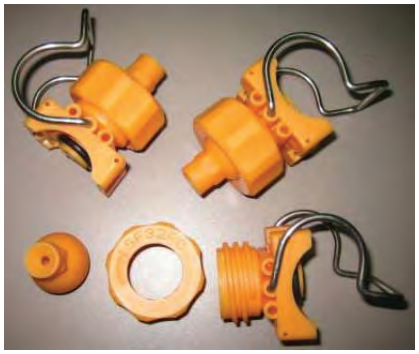
WILSON SPRAY NOZZLE

SF series

CLIP - ON Spray Nozzles



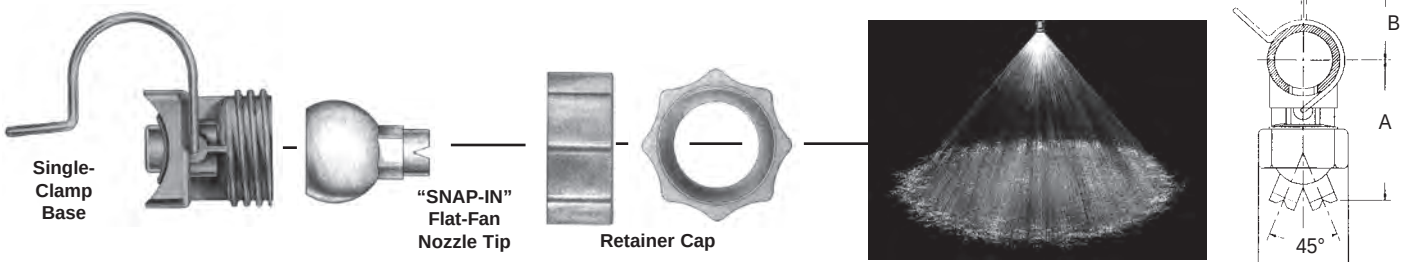
DESIGN FEATURES

- Nozzles can be quickly changed and aligned by hand without tools
- Quick set-up system features special "CLIP-ON" tips
- Polypropylene, resistant to most acids and alkalies

SPRAY CHARACTERISTICS

- Quick Set-Up System can be provided with fan or hollow or full cone spray tips
- Full 45° alignment of spray without tools

Spray angles : Full Cone: 80°



SF Flow Rates and Dimensions

SF Full Cone 80° Spray angle *1", 1-1/4", 1-1/2" and 2"*

Nozzle Number	Spray Angle	K Factor	LITERS PER MINUTE @ BAR 0.5 bar	0.7 bar	1 bar	2 bar	3 bar	5 bar	7 bar	10 bar
SF20	*80°*	7.596	5.45	6.40	7.60	10.6	12.9	16.4	19.3	22.9
SF30	*80°*	7.855	5.63	6.62	7.86	11.0	13.3	17.0	20.0	23.7
SF80	*80°*	25.02	17.9	21.1	25.0	34.9	42.4	54.2	63.7	75.6

Pipe Size	Approx Dim. (mm.) A	B	Wt. (g.)
1"	83.8	43.2	62.4
1-1/4"	86.4	48.3	62.4
1-1/2"	91.4	50.8	62.4
2"	94.0	55.9	62.4

Flow Rate (l/min) = K (BAR) $^{0.48}$

Standard Materials: Polypropylene, 302 stainless steel clamp, EPDM seal.
Optional Materials: 316 Stainless steel clamp, Viton seal.

NOTE: Drill 16.7mm (21/32") hole in pipe to install SF.

NOTE: Maximum recommended pressures for SF assemblies: With single clamp 5 bar for 1" pipe; 3.5 bar for 1-1/4" and 1-1/2" pipe; and 2 bar for 2" pipe; with double clamp up to 10 bar.

WILSON SPRAY NOZZLE

APL series

Filter Nozzles

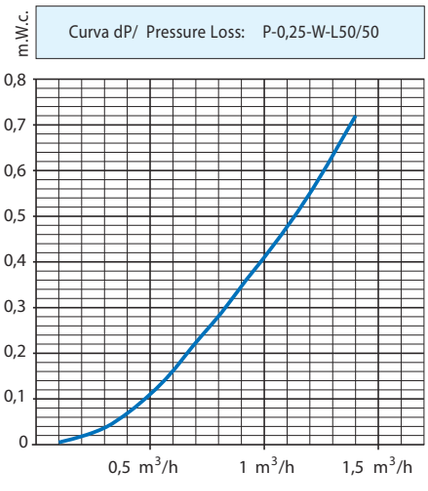
FILTER NOZZLES WITH VERTICAL SLOTS
Model : APL - Yellow or Black

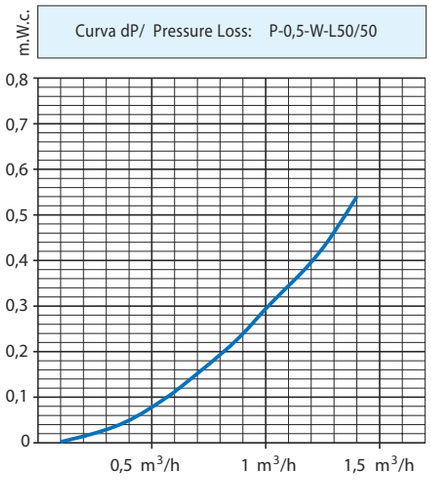
- For Sand and Anthracite Filter
- Clean by backwash
- Complete set of thread and stem
- Durable with little maintenance
- low cost

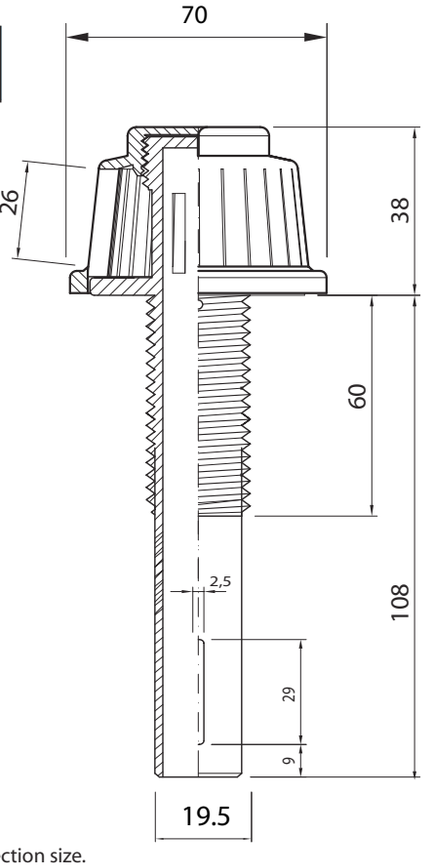
Type	Slot width mm	Slots No.	Area mm 2
APL	0,2	40	165

Thread size : 3/4 inch BSP or NPT

Material:	Polypropylene







Dimension changes depending on connection size.

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WILSON
SPRAY NOZZLE

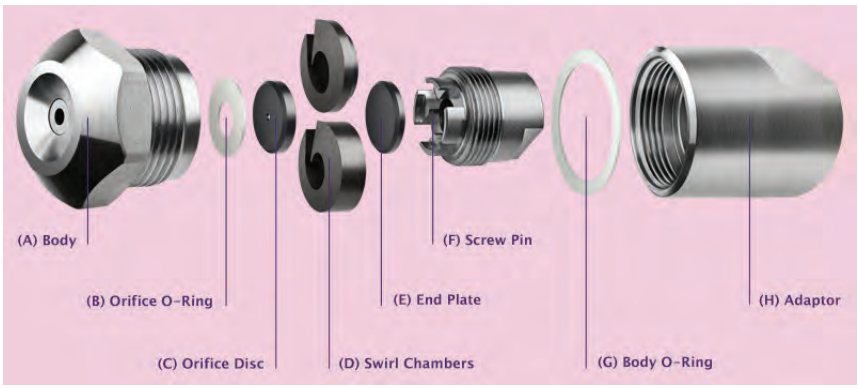
SY series

SPRAY DRY Hollow Cone

FEATURES
* Full Stainless steel construction
* NPT , BSP or Butt Weld Connection
* Durable, low maintenance
* One piece swirl unit

CHARACTERISTICS
* 65 to 80 deg Hollow Cone

APPLICATIONS
* Dairy
* Food and beverage



FLOW SPECIFICATIONS

Size	Nozzle Model	Spray Angle	Orifice mm	K Factor	Liters / hr 15 bar	35 bar	50 bar	70 bar	90 bar	100 bar	120 bar	150 bar	175 bar	200 bar	275 bar	350 bar
	SY1-80	**80°**	**0.940**	9.12	35.3	53.9	64.5	76.3	86.5	91.2	99.9	112	121	129	151	171
	SY2-75	**75°**	**1.02**	11.4	44.1	67.4	80.6	95.3	108	114	125	140	151	161	189	213
1/4”	**SY3-70**	**70°**	**1.02**	13.7	53.0	80.9	96.7	114	130	137	150	167	181	193	227	256
3/8”	**SY4-65**	**65°**	**1.02**	16.0	61.8	94.4	113	133	151	160	175	195	211	226	265	298
1/2”	**SY3-75**	**75°**	**1.24**	18.2	70.6	108	129	153	173	182	200	223	241	258	302	341
3/4”	**SY3-75**	**75°**	**1.40**	20.5	79.4	121	145	172	195	205	225	251	271	290	340	384
	SY4-70	**70°**	**1.32**	22.8	88.3	135	161	191	216	228	250	279	301	322	378	426
	SY4-70 **SY3-80**	**70°** **80°**	**1.47** **1.70**	25.1	97.1	148	177	210	238	251	275	307	332	355	416	469

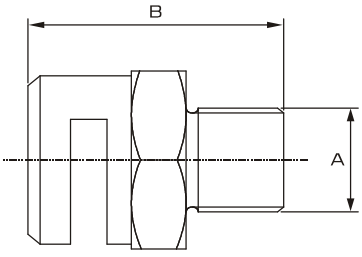
Material : 316 stainless steel and Tungsten Carbide

WC series

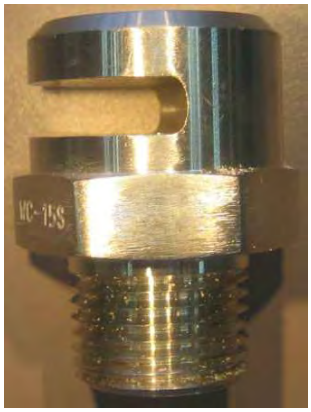
WATER CURTAIN Nozzles

MODEL	WC-15 & WC-20 in Brass IS319 / ASTM B16 WC-15S & WC-20S in 316 stainless steel construction
MAXIMUM WORKING PRESSURE	12 3 Kg./Sq.cm. (175 PSI)
EFFECTIVE WORKING PRESSURE	1.4 TO 3.5 Kg /Sq.cm. (20 TO 50 PSI)
END CONNECTION	WC-15 & WC-15S with ½" BSPT (NPT optional) WC-20 & WC-20S with ¾" BSPT (NPT optional)
K- FACTOR	Model : WC-15 / WC-15S K23, K30, K37, K45, K53 & K72 Model : WC-20 / WC-20S K98, K120, K140
APPROXIMATE WEIGHT	Model WC-15 - 0.180 Kg. Model WC-20 - 0.250 Kg.
FINISH	Nickel chrome or Brass finish for WC-15 & WC-20 Natural finish for WC-15S & WC-20S as base 316 stainless steel
ORDERING INFORMATION	Please specify Model, K factor and Finish.

DIMENSION in millimetre (Approximate)



MODEL	A	B
WC-15 & WC-15S	½" BSPT or (M)NPT	42
WC-20 & WC-20S	¾" BSPT or (M) NPT	46



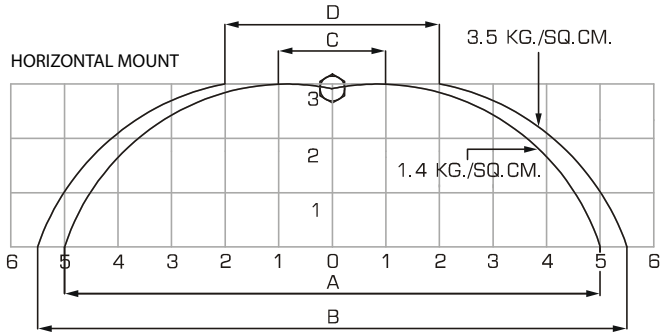
Water Curtain Nozzle distributes water in a flat curtain extending all the way to the ground.

Water Curtain Nozzle when mounted in pendent position acts as a window spray nozzle to protect interior walls, windows and other opening of the building which are affected by fire.

The nozzles when mounted in horizontal position with flow towards ground, a flat water curtain is produced to segregate the area which is under fire.

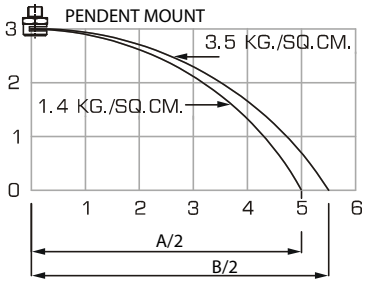
Water Curtain Nozzles are available in Brass and Stainless Steel construction with different flow rate.

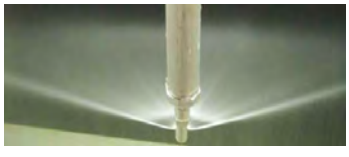
SPRAY TRAJECTORY @ 3.5 bar

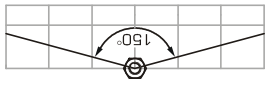


DIMENSION in meters (Approximate)

	K23	K30	K37	K45	K53	K72	K98	K120	K140
A	10.0	10.0	11.0	11.0	12.2	13.8	14.0	14.4	14.6
B	11.0	11.0	12.0	12.0	13.3	14.2	14.4	15.0	15.1
C	01.8	01.8	02.2	02.2	03.3	04.4	04.2	04.4	04.5
D	02.2	02.2	02.4	02.4	03.6	04.8	05.2	05.4	05.5







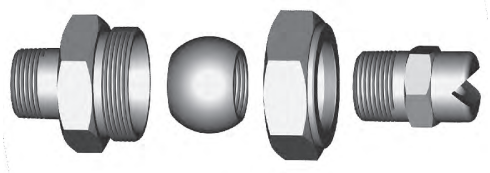
WILSON SPRAY NOZZLE

SW series

Swivel Joint Adjustable

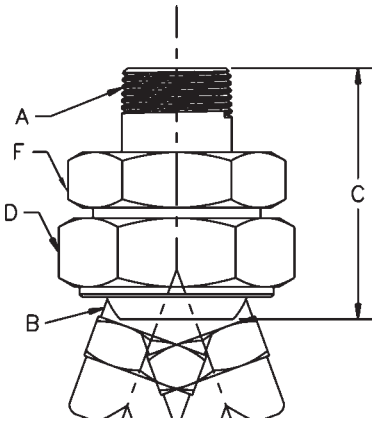
DESIGN FEATURES

- Adjustable swivel joints facilitates alignment of spray nozzles
- Leak-proof design
- Standard materials are brass and stainless steel
- **Adjustmentangles :** 40° to 70°
- Greater control of spray direction for precise coverage



FLOW SPECIFICATIONS SIZE : BSP or NPT

Model	A Inlet Pipe Conn.	B Outlet Pipe Conn.	C Overall Length (mm)	D Hex Size (mm)	E Hex Size (mm)	F Angle of Adjustment
1/8 X 1/8 SW	1/8 M	1/8 F	34.9	28.7	35.1	55°
1/4 X 1/4 SW	1/4 M	1/4 F	49.0	38.1	35.1	70°
3/8 X 1/4 SW	3/8 M	1/4 F	47.6	38.1	35.1	70°
3/8 X 3/8 SW	3/8 M	3/8 F	47.6	38.1	35.1	55°
1/2 X 3/8 SW	1/2 M	3/8 F	49.2	38.1	35.1	55°
1/2 X 1/2 SW	1/2 M	1/2 F	60.3	50.8	47.8	60°
1/2 X 3/4 SW	1/2 M	3/4 F	57.9	50.8	47.8	40°
3/4 X 1/2 SW	3/4 M	1/2 F	58.7	50.8	47.8	40°
3/4 X 3/4 SW	3/4 M	3/4 F	58.7	50.8	47.8	40°
1 X 1 SW	1 M	1 F	77.8	57.2	47.8	40°
1 1/4 X 1 1/4 SW	1 1/4 M	1 1/4 F	99.2	71.9	47.8	30°
1 1/2 X 1 1/2 SW	1 1/2 M	1 1/2 F	99.2	85.7	47.8	30°
2 X 2 SW	2 M	2 F	106	102	47.8	40°



RIG COOLING SYSTEM

Rig Cooling in Singapore Yard

Skid mounted Rig Cooling System complete with heavy duty submersible pump interconnected with 60m long armoured cables to explosion proof electric starter control panel. Classified for application in Class I, II Grp C, D, F and G hazardous environment, the suction in-line filters sea water and discharge up 60m of hydraulic hose to rig deck into pressure accumulator to be discharged through copper nickel pipes into Wilson T48-170 non clog CuNi Spiral nozzles.

The equipments contained therein are as follows;

1) Type : Deep Submersible Pump

Model : 8080LM3.5

Driver Specifications : submersible electric motor

- Power supply : 460VAC / 3phase / 60 Hz
- Motor speed : 1800 rpm, Motor rating : 75 kw
- Running current at max kw : 123 ampere
- Rig breaker required : 150 motor rated breaker
- Starting system : electric soft start

Pump Specifications

- Volume capacity : 8080 liters per minute @ 35m head (3.5bar)
- Submersible pump cable spec : 60 metre 4 core armoured cable
- Outlet connection : 6 inch ANSI 150# flange
- Enclosure class : UL and CSA approved explosion proof
- Insulation : F class insulation with 1.15 service service factor
- Material : Cast Iron

2) Starter system

2.1) Type : Electric Starter Control Panel

- Manufacturer : Appleton c/w EJB684-N4 junction box, Appleton snap switch, Weldmuller Klippon SAK2.5 terminals
- Classifications : Class I, Grp C and D, Class II, Grp F and G.

2.2) ABB Explosion Proof Armoured Cable

- Type : BFCU 0.6 / 1 KV, 4 core, 2.5 mm black terminated with Hawke type : ICG 653 flameproof barrier cable gland.

3) Wilson Spray Nozzles

Type : Spiral Non Clog
Model : T48-170
Flow rate : 404 liter/sec @3.5 bar
Spray angle : 170 degress Full Cone
Material : Copper Nickel (CuNi)
Connection : 1 inch (M) NPT
Qty : 20 pieces

Droplets Characteristics
D32 : 750u
Dv0.5 : 970u
Dv0.1 : 430u
Dv0.9 : 1800 microns

4) Skid Construction

Constructed of ASTM A36 structural steel material, sandblasted to bare white SA 2.5 and hot dipped galvanised to BS728. c/w 30 liter/sec inline bladder accumulator, 60m heavy duty hydraulic hose and stainless steel chain and lifting winch for pump. Slide rail system provides easy removal of pump unit without disturbing discharge piping. Unique flow design utilizes a locking cam action with locator lugs and a large O-ring for positive sealing (no leakage) while allowing a tangential discharge for high efficiency. This is an important feature when pump sea water or slurries; if a tight seal is not achieved, leakage can cause rapid and excessive wear of the mating flanges resulting in reduction of performance as well as increased maintenance costs.

Submersible Motors

Model : 8080LM3.5

Rig Cooling submersible series motors are designed and built specifically for tough slurry pumping. Heavy-duty design features for reliability include:

- UL and CSA Approved Explosion Proof
- Epoxy encapsulated and butt-spliced cable entry system prevents liquid from entering top of motor and provides non-wicking design.
- Permanently lubricated and sealed ball bearings.
- F Class insulation and 1.15 service factor standard.
- Tandem mechanical seals provide complete protection for motor internals.
- Thermal protection standard.
- Dual moisture probes provide early warning of seal failure.
- Conforms to NEMA, IEEE, ANSI and NEC standards.
- High temperature option allows operation to 194° F (90° C).
- **c/w 60 Metre Armoured Cable Type BFCU 0.6/1 kv, 4 core, 2.5 sq mm terminated with Hawke Type ICG 653 Flameproof Cable Barrrier Gland.**

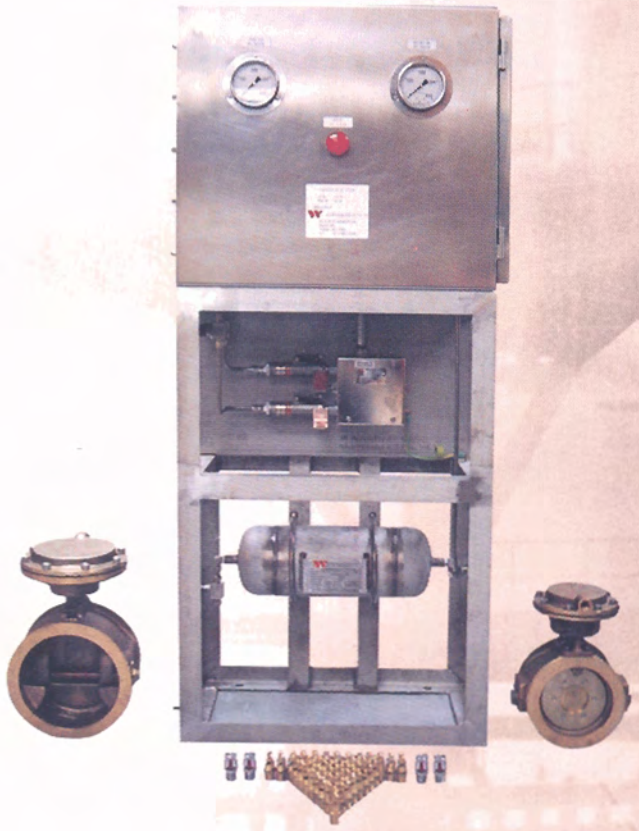
WILSON SPRAY NOZZLE

WILSON SPRAY NOZZLE PTE LTD
www.wilsonspraynozzle.sg

DELUGE 2000™

GREAT MANY LIVES-DEPEND ON DELUGE 2000™.

From the oil fires in Kuwait, to LPG tank farm in Saudi,
to drilling platforms in the South China Sea,
Deluge 2000™ meets the rigorous demands
of fire protection around the world.



Deluge 2000™ Firewater Deluge Control Panel is modular design to allow operations of the system by a signal from any of the followings;

a) Fire & Gas Panel (WFGP) in Master Control Room (MCR Auto or Manual)
b) Pneumatic Detection Devices (Fusible Plugs)
c) Manual Fire stations
d) Signal operation of the soleniod valves.
e) Manual operation of the emergency pull-to-bleed valves.

As in Figure 1, the deluge system pipework is uncharged and open at the nozzles. The deluge valve is held closed by a pneumatic latching mechanism. With a signal received, a depressurisation of instrument air occur. This action reduces pressure on the alarm valve clack to effect Fire-water deluge to the Fire protection nozzles.
The control panel is constructed of 316L stainless steel in its entirety and is rated for IP 56.
Internal tubings are of 317L stainless steel material with instruments of 316 S.S. material.
System is easily mobilise for installation on site.

SPECIFICATION

MODEL	**DELUGE 2000™**

TYPE		FIREWATER DELUGE CONTROL PANEL
MATERIAL		316L STAINLESS STEEL
THICKNESS		3 MM
PRESSURE (MAX)		200 PSI
PRESSURE (NORMAL)	:	80 PSI
PRESSURE VESSEL		6 LITRES ASME CODE STAINLESS STEEL TANK RATED AT 250 PSI.
ENCLOSURE CLASS		IP 56
TEMPERATURE CLASS	:	T3
CLASSIFACTION		CLASS 1, DIV 1, GROUP C & D
WEIGHT (NET)		210 KG
DIMENSION		700 MM X 400 MM X 1600 MM

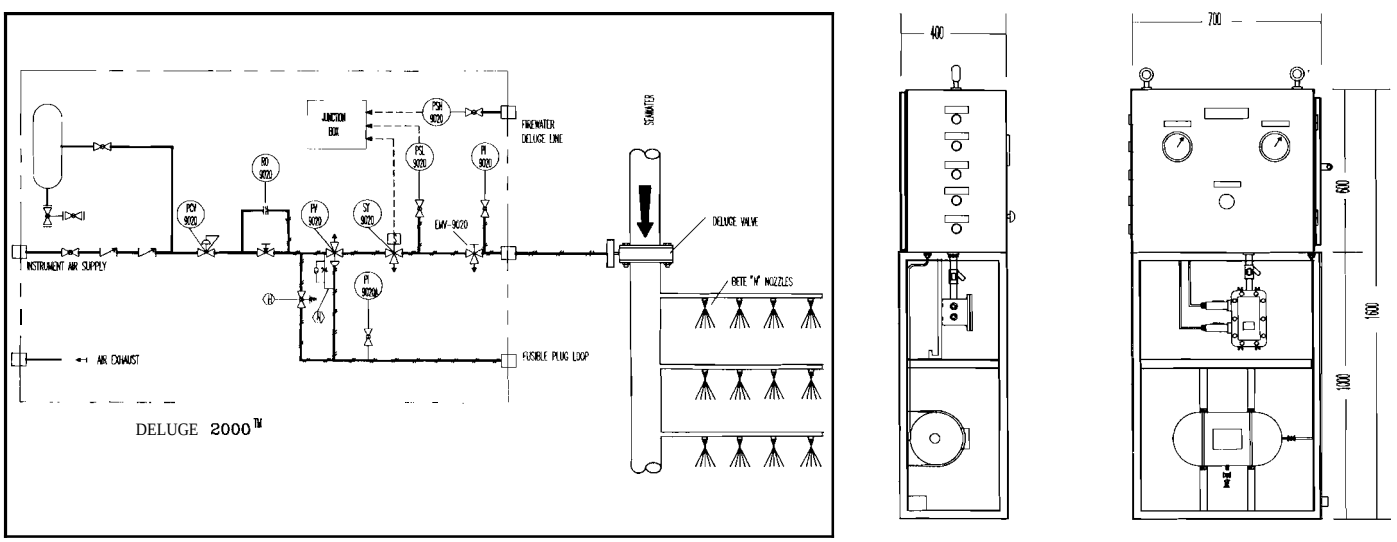
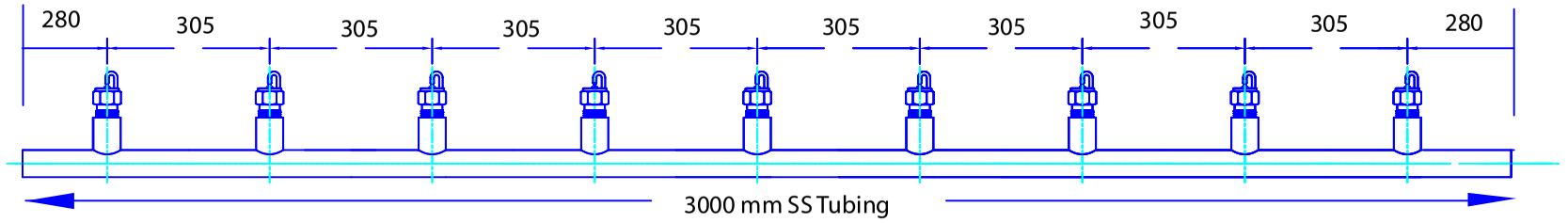


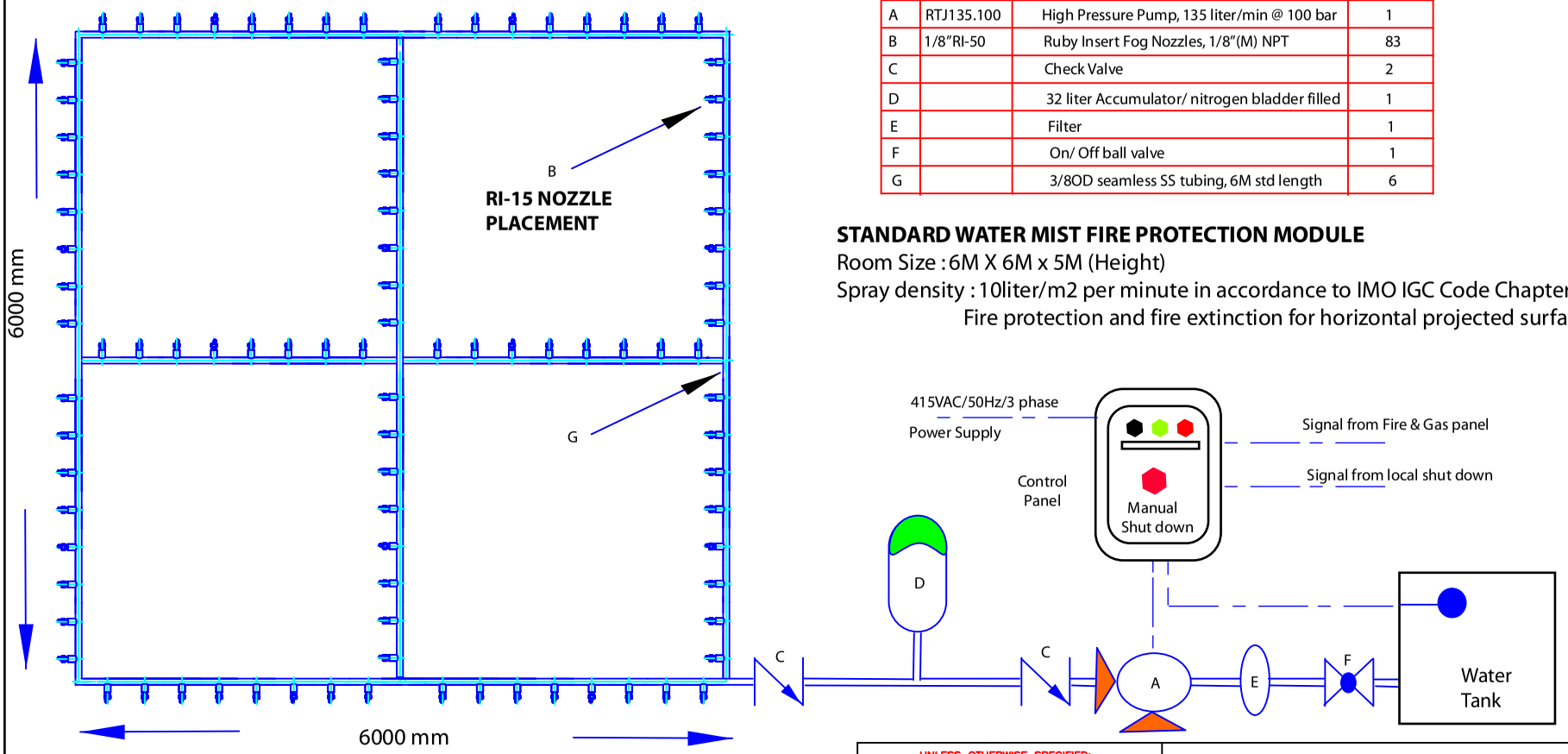
FIGURE 1

Head Office (Manufacturer)

Wilson Engineering (S) Pte Ltd
34, #02-22 Commonwealth Lane,
Singapore 0314.
Fax: 777 9813 / 776 1323
Tel: 774 1828 (Main Line)



BILL OF MATERIALS			
Item	**Part No**	**Description**	**Qty**
A	RTJ135.100	High Pressure Pump, 135 liter/min @ 100 bar	1
B	1/8"RI-50	Ruby Insert Fog Nozzles, 1/8"(M) NPT	83
C		Check Valve	2
D		32 liter Accumulator/ nitrogen bladder filled	1
E		Filter	1
F		On/ Off ball valve	1
G		3/8OD seamless SS tubing, 6M std length	6



STANDARD WATER MIST FIRE PROTECTION MODULE

Room Size : 6M X 6M x 5M (Height)

Spray density : 10liter/m2 per minute in accordance to IMO IGC Code Chapter 11
Fire protection and fire extinction for horizontal projected surfaces

RUBY INSERT FOG NOZZLE

Nozzle Number	Orifice (inch)	Flow Rate in GPM at PSI 400	800	1000	1200	1500	2000	Orifice (mm)	Flow Rate in LPM at BAR 40	60	70	80	100	140
RI–50	.019	.094	.132	.148	.162	.181	.210	0.50	.417	.511	.560	.598	.669	.792

*Standard nozzle size: .006" orifice. Mass mean droplet size: 15 microns at **70 bar**

All dimension in mm.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONS DECIMALS ANGULAR
± 1/16 .XX ±.03 ± 1°
.XXX ±.010
INTERPRET PER ASME Y14.5M
DO NOT SCALE DRAWING IF NOT SPECIFIED

MATERIAL: ASSY
FINISH: 125

www.wilsonspraynozzle.sg
E-mail : sales@wisonspraynozzle.sg
Tel : 67741828, Fax : 67779813

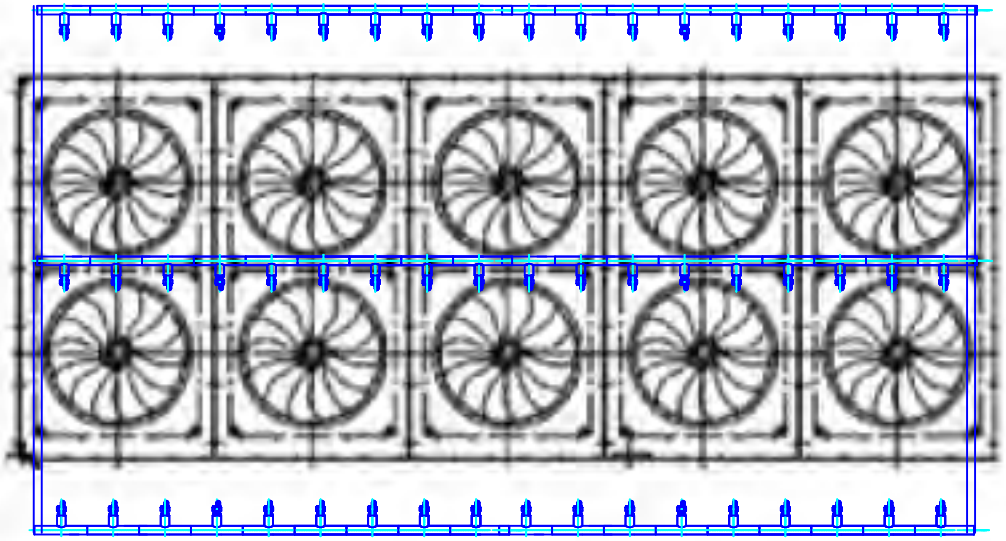
WILSON SPRAY NOZZLE PTE LTD
Blk 51 #05-10/11 Ayer Rajah Crescent, Ayer Rajah Industrial Estate, Singapore 139948.

TITLE: **WATER MIST FIRE PROTECTION MODULE**

SIZE	DRAWN	DATE	DWG NO.	REV.
B	VN	8th Dec 10	45937	0
	CHECKED: JET	DATE: 28th Dec 10	For:	

SCALE: 1:2 | FILE NAME: | JOB NO. | SHEET 1 OF 1

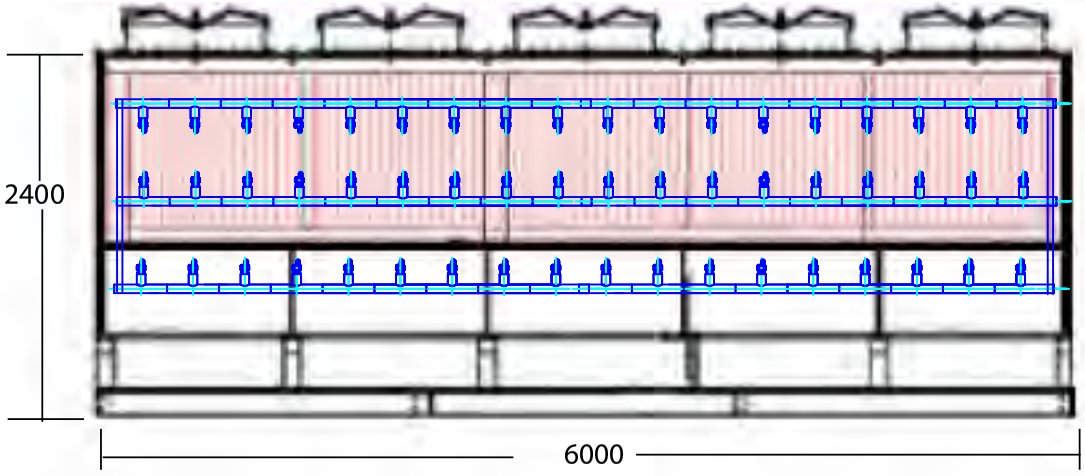
REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	ECN

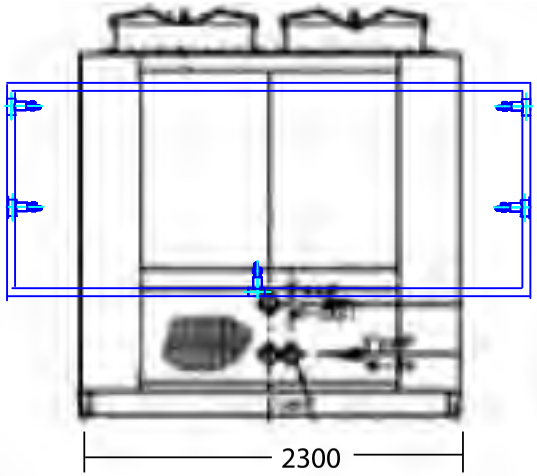


Tubing assembly
Type : 316 stainless steel seamless tubing
Size : 3/8 inch OD
Pressure rating : 300 Bar
c/w 1/8 inch Female 316 stainless steel sprocket welded to tubing, spaced center to center by 305mm.
Standard length : 6000mm (metre)
Each standard holds 18 (Eighteen) pieces of Ruby Insert Fog Nozzle Model : RI-15.

Qty : 5 pieces of (6 metre) standard length

ALL DIMENSION IN mm.





SPECIFICATIONS

A) HIGH PRESSURE PUMP
Model : XM-M-08-10N
Flow rate : 8.0 liter/min @ 100 bar
Inlet / outlet connection : 3/8 inch OD
Supply : 230 VAC / 1 phase / 50 Hz.
Power : 2.0 HP, 1450 rpm

B) RUBY INSERT FOG NOZZLES
Model : Serie 8
Flow rate : 0.210 liter/min @ 100 bar
Material : 316 SS with ruby orifice
Size : 1/8" Male (NPT)

Total (35 qty) required
Total Flow : 7.35 liter/min @ 100 bar

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONS DECIMALS ANGULAR
± 1/16 XX ±.03 ± 1°
XXX ±.010
INTERPRET PER ASME Y14.5M
DO NOT SCALE DRAWING IF NOT SPECIFIED

MATERIAL	FINISH
ASSY	125

www.wilsonspraynozzle.sg
E-mail : sales@wisonspraynozzle.sg
Tel : 67741828
Fax : 67779813

WILSON SPRAY NOZZLE PTE LTD
Blk 71 #04-23/24 Ayer Rajah Crescent, Ayer Rajah Industrial Estate, Singapore 139951.

TITLE: General Arrangement Drawing

SIZE	DRAWN	DATE	DWG NO.	REV.
B	VN	10–05–2000	8765	0
	CHECKED GT	DATE 05–17–2004	For:	

SCALE	FILE NAME:	JOB NO.	SHEET	OF
1:2			1	1