



Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

STEINEN

Nozzle Catalog

Industrial Mining Oil Burner





About Steinen

The Wm Steinen Manufacturing Co. was founded in 1907 by William Steinen. Operations began in Newark, New Jersey as a tool and die shop. In response to customer requests, the company expanded its operations to include both screw machine and metal stamping capabilities.

In 1946 the company entered the fluid dispersal field with the introduction of the Steinen oil burner nozzle. The fluid dispersal activities have been expanded

into heating, mining and industrial fields worldwide. As a result of the expanding product line and worldwide sales activities the company doubled the size of its facilities and relocated from Newark, New Jersey to Parsippany, New Jersey, in the mid-1960's where it continues to operate today.

The HAHN Mining Spray Nozzle Division was acquired 30 years ago by Steinen and offers a wide range of spray nozzles for the mining industry.



Copies of this catalog are available for viewing and downloading at www.steinen.com

Changes in Specifications

Steinen's Industrial Nozzle product line has expanded and changed over the years to meet our customer's applications. We have made every attempt to make this catalog, and the product data within it, as accurate and complete as possible. However, spray nozzles are a complex product and new user and specification requirements are certain to continue to evolve.

Therefore, if you have any special requests for additional technical information or unlisted items, please call our sales service department at 973-887-6400. Steinen reserves the right to change or delete both product and specification data as required without notice.

Disclaimer and Errors

We believe that the information presented in this catalog is reliable and have carefully compiled and checked it. However, we assume no responsibility for possible errors or omissions. All of the nozzles listed in this catalog are water sprays.

Use of these nozzles with other liquids may result in unexpected and potentially dangerous results and is not recommended. Because each application is unique, Steinen makes no warranty as to the merchantability or suitability of any product for a particular use, nor will we be liable for any indirect, incidental or consequential damages that may arise from the use or sale of our product.



Contents

General Industrial

Page Cone Sprays

4	Solid Jet	Type S-SSM
6	Solid Jet Wide	Type SW-SSMW
8	Tan Jet Solid	Type TS

Hollow Cone Sprays

10	Tan Jet	Type T
12	Tan Jet Wide	Type TW
14	Spraylet	Type SH

Flat Sprays

15	Fan Jet	Type V
17	Fan Jet	Type FA
19	Fan Jet	Type VHP
20	Fan Jet	Type SN579
21	Flo Jet	Type F

Square Sprays

23	Square Jet	Type SSQ-SSMQ
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Misting

Misting, Cooling & Mosquito

25	SlimPRO	Type MC
26	Mini Mist	Type MN
28	Mist Jet Type P	Type P
30	Mist Jet Type A	Type A
32	Mosquito Nozzles	Type WCH

Oil Burner

Oil Burner Nozzles

33	MicroFlo™, Twin Filter & Standard
34	Oil Burner Nozzle CEN Markings
35	Oil Burner Capacity/Size Chart
36	Oil Burner Cross Reference Chart

Mining/Dust Suppression

Flat Sprays

37	Flat Sprays	SteinenHahn-Series 100
38	Flat Sprays	SteinenHahn-Type SN-579
39	Flat Sprays	Type V

Cone Spray

41	Cone Sprays	SteinenHahn-Type 331
42	Cone Sprays	SteinenHahn-Type 334
43	Cone Sprays	SteinenHahn-Type L
44	Cone Sprays	SteinenHahn-Type LW
45	Cone Sprays	SteinenHahn-Type H
46	Cone Sprays	SteinenHahn-Type PB
47	Cone Sprays	SteinenHahn-Type S

Drum Flush Fit Spray

48	Flush Mount Nozzles	SteinenHahn-Type X Flush Fit
49	Flush Mount Nozzles	SteinenHahn-Type X Hex Drive
50	Flush Mount Nozzles	SteinenHahn-Type X Plug
51	Flush Mount Nozzles	SteinenHahn-Type X Trim Jet
52	Flush Mount Nozzles	SteinenHahn-Type K

SH Water Sprays

53	Water Sprays	SteinenHahn-Type SH
55	Staple Lock Sprays	SteinenHahn-Type 603

All Other Sprays

56	Drench Nozzle	SteinenHahn-Type 361 WCAP
57	Drench Nozzle	SteinenHahn-Type 361
58	Misting Nozzle	Type A

Accessories

Ball Valves & Strainers

60	Ball Valves	Type BV
61	Line Strainer	Type MS



Solid-Jet[®] Solid Cone Spray

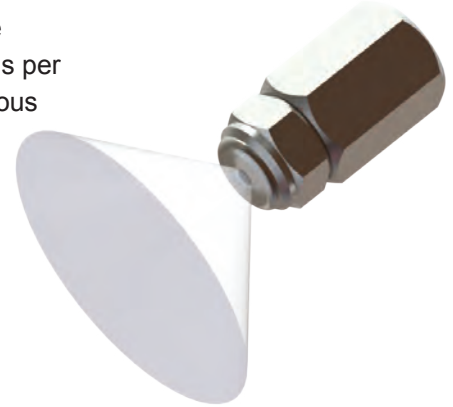
Type **SF**
Type **SM**
Type **SSM**

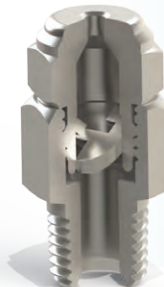
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Steinen offers several types of solid (full) cone spray Nozzles. Nozzles are offered in five different body styles, numerous flow rates from 0.12 gallons per minute (GPM) up to 50 GPM, at pressures from 3 PSI to 150 PSI, in various types of steel, stainless steel, brass and CPVC

Three types of nozzle construction are available:

- **Type SF** - three piece removable & internal vane nozzle
- **Type SM** - three piece removable & internal vane nozzle
- **Type SSM** - two piece removable vane nozzle

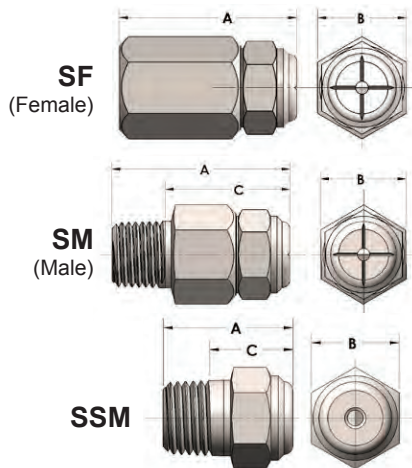


	Spray Characteristics	Construction	Materials
 <p>Type SF</p>	<p>Solid-Jet[®] solid cone type spray with uniform distribution and atomization throughout the entire spray pattern. Atomization finest at higher pressures.</p>	<p>Three-piece design with removable nozzle tip and internal vane possible without disturbing the pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" & 1" female NPT pipe thread.</p>	<p>These nozzles are available in 303 & 316 Stainless Steel, steel, brass and CPVC.</p>
 <p>Type SM</p>	<p>Solid-Jet[®] solid cone type spray with uniform distribution and atomization throughout the entire spray pattern. Atomization finest at higher pressures.</p>	<p>Three-piece design with removable nozzle tip and internal vane possible without disturbing the pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" & 1" male NPT pipe thread.</p>	<p>These nozzles are available in 303 & 316 Stainless Steel, steel, brass and CPVC.</p>
 <p>Type SSM</p>	<p>Solid-Jet[®] solid cone type spray with uniform distribution and atomization throughout the entire spray pattern. Atomization finest at higher pressures.</p>	<p>Three-piece design with removable nozzle tip and internal vane possible without disturbing the pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" & 1" male and female NPT pipe thread.</p>	<p>These nozzles are available in 303 & 316 Stainless Steel, steel, brass and CPVC.</p>



Nozzle Identifier	Pipe Size Availability <small>✓ indicates available</small>						Free Passage Size*	Capacity in Gallons Per Minute (At Various Pressures in Pounds Per Square Inch)						SPRAY ANGLE 40 psi
	1/8	1/4	3/8	1/2	3/4	1		10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	
0.2	✓						0.036	—	0.14	0.20	0.28	0.32	0.39	40°
0.4	✓						0.044	0.20	0.28	0.40	0.57	0.63	0.78	50°
0.6	✓						0.044	0.30	0.42	0.60	0.85	0.95	1.2	70°
0.8	✓						0.062	0.40	0.57	0.80	1.1	1.3	1.6	60°
1.0	✓						0.062	0.50	0.71	1.0	1.4	1.6	1.9	70°
1.0		✓					0.078	0.50	0.71	1.0	1.4	1.6	1.9	50°
1.5		✓					0.086	0.75	1.1	1.5	2.1	2.4	2.9	65°
2.0		✓					0.086	1.0	1.4	2.0	2.8	3.2	3.9	75°
2.5		✓					0.086	1.2	1.8	2.5	3.5	3.9	4.8	75°
2.0			✓				0.086	1.0	1.4	2.0	2.8	3.2	3.9	50°
2.5			✓				0.098	1.2	1.8	2.5	3.5	3.9	4.8	60°
3.0			✓				0.098	1.5	2.1	3.0	4.2	4.7	5.8	65°
3.5			✓				0.098	1.1	2.4	3.5	4.9	5.6	6.8	72°
4.0			✓				0.098	2.0	2.8	4.0	5.6	6.3	7.8	83°
4.5			✓				0.098	2.2	3.2	4.5	6.3	7.1	8.7	90°
3.5				✓			0.140	1.7	2.4	3.5	4.9	5.6	6.8	55°
4.0				✓			0.142	2.0	2.8	4.0	5.6	6.3	7.8	58°
4.5				✓			0.142	2.2	3.2	4.5	6.3	7.1	8.7	70°
5.0				✓			0.142	2.4	3.5	5.0	7.1	7.9	9.7	70°
5.5				✓			0.142	2.7	3.8	5.5	7.7	8.6	10.6	75°
6.0				✓			0.142	3.0	4.2	6.0	8.4	9.4	11.6	80°
7.0				✓			0.142	3.5	4.9	7.0	9.9	11.1	13.6	80°
8.0				✓			0.142	4.0	5.7	8.0	11.2	12.7	15.5	90°
6.0					✓		0.187	3.0	4.2	6.0	8.4	9.4	11.6	55°
7.0					✓		0.190	3.5	4.9	7.0	9.9	11.1	13.6	60°
8.0					✓		0.190	4.0	5.7	8.0	11.2	12.7	15.5	65°
9.0					✓		0.190	4.5	6.3	9.0	12.6	14.1	17.4	70°
10.0					✓		0.190	4.9	7.1	10.0	14.2	15.8	19.4	75°
12.0					✓		0.190	6.0	8.5	12.0	17.0	19.0	23.2	80°
14.0					✓		0.190	7.0	9.9	14.0	19.8	22.1	27.0	90°
16.0					✓		0.190	8.0	11.3	16.0	22.6	25.3	31.0	95°
10.0						✓	0.234	5.0	7.1	10.0	14.2	15.8	19.4	55°
12.0						✓	0.244	6.0	8.5	12.0	17.0	19.0	23.2	60°
14.0						✓	0.244	7.0	9.9	14.0	19.8	22.1	27.0	65°
16.0						✓	0.244	8.0	11.3	16.0	22.6	25.3	31.0	70°
18.0						✓	0.244	9.0	12.7	18.0	25.4	28.4	34.8	75°
20.0						✓	0.244	10.0	14.1	20.0	28.2	31.6	38.8	80°
24.0						✓	0.244	12.0	17.0	24.0	34.0	38.0	46.4	95°
26.0						✓	0.244	13.0	18.4	26.0	36.7	41.1	50.5	95°

*Determines maximum foreign particle size that will flow through the nozzle without clogging.



Type	Pipe Size	Net Weight Oz.	A	B	C
SF	1/8 NPT	0.75	1.063	0.563	---
	1/4 NPT	1.25	1.375	0.688	---
	3/8 NPT	2.25	1.563	0.813	---
	1/2 NPT	3.50	1.844	1.000	---
	3/4 NPT	8.00	2.219	1.188	---
	1 NPT	15.00	2.969	1.500	---
SM	1/8 NPT	0.75	1.125	0.563	.825
	1/4 NPT	1.50	1.438	0.688	1.125
	3/8 NPT	2.50	1.563	0.813	1.163
	1/2 NPT	4.00	1.844	1.000	1.300
	3/4 NPT	8.50	2.219	1.125	2.56
	1 NPT	15.75	2.969	1.375	2.062
SSM	1/8 NPT	0.50	0.625	0.500	.325
	1/4 NPT	0.75	0.938	0.625	.538
	3/8 NPT	1.50	0.969	0.750	.569
	1/2 NPT	3.25	1.406	0.875	.906
	3/4 NPT	5.25	1.500	1.125	.960
	1 NPT	12.00	2.375	1.375	1.437



Solid-Jet[®] Solid Cone Spray

Type **SFW**
Type **SMW**
Type **SSMW**

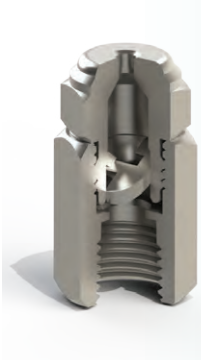


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Steinen offers several types of solid (full) cone spray Nozzles. Nozzles are offered in five different body styles, numerous flow rates from 0.12 gallons per minute (GPM) up to 50 GPM, at pressures from 3 PSI to 150 PSI, in various types of steel, stainless steel, brass and CPVC.

Three types of nozzle construction are available:

- **Type SFW** - three piece nozzle with a removable tip
- **Type SMW** - three piece nozzle with a removable tip
- **Type SSMW** - wide angle two piece nozzle

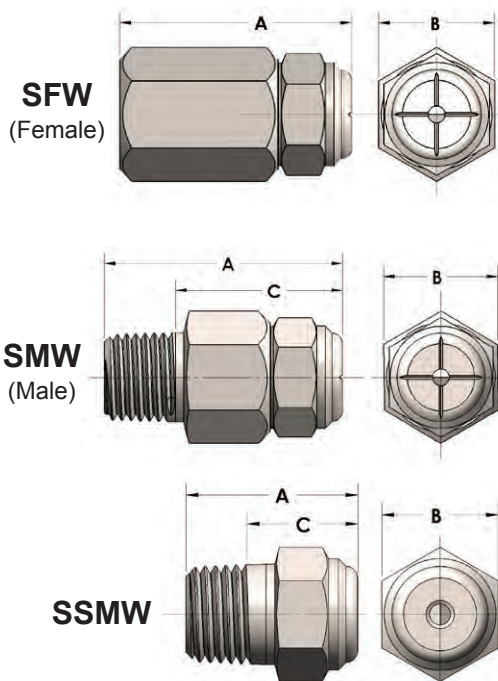


	Spray Characteristics	Construction	Materials
 <p>Type SFW</p>	<p>Uniform, solid cone spray pattern extended to a wide spray angle. The nozzle provides effective coverage of a wider area using fewer nozzles. Nozzles spray between 90 and 120 degrees. See product chart below for the angle you can expect at a certain flow rate and pressure.</p>	<p>Three piece design. The nozzle tip and internal vane are removable without disturbing the male or female pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" & 1" female NPT pipe size connections</p>	<p>Stainless steel spray nozzles (303 stainless as well as 316 stainless), brass, steel and other materials available upon request.</p>
 <p>Type SMW</p>	<p>Uniform, solid cone spray pattern extended to a wide spray angle. The nozzle provides effective coverage of a wider area using fewer nozzles. Nozzles spray between 90 and 120 degrees. See product chart below for the angle you can expect at a certain flow rate and pressure</p>	<p>Three piece design. The nozzle tip and internal vane are removable without disturbing the male or female pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" & 1" male NPT pipe size connections</p>	<p>Stainless steel spray nozzles (303 stainless as well as 316 stainless), brass, steel and other materials available upon request.</p>
 <p>Type SSMW</p>	<p>Spray characteristics are the same as the SFW & SMW types. See product chart below for the angle you can expect at a certain flow rate and pressure.</p>	<p>One-piece design, no cores or internal members to clog. Nozzles have 1/8" 1/4", 3/8", 1/2" and 3/4" male pipe size connections</p>	<p>Stainless steel spray nozzles (303 stainless as well as 316 stainless), brass, steel and other materials available upon request.</p>



Nozzle Identifier	Pipe Size Availability ✓ indicates available						Free Passage Size*	Capacity in Gallons per Minute (at various pressures in pounds per square inch)							Spray Angles 40 psi
	1/8	1/4	3/8	1/2	3/4	1		3 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	
0.80	✓						0.062	0.22	0.40	0.57	0.80	1.1	1.3	1.6	105°
1.0	✓						0.062	0.27	0.50	0.71	1.0	1.4	1.4	1.6	110°
1.5	✓						0.062	0.41	0.75	1.1	1.5	2.1	2.4	2.9	120°
2.0		✓					0.086	0.55	1.0	1.4	2.0	2.8	3.2	3.9	110°
2.5		✓					0.086	0.70	1.2	1.8	2.5	3.5	3.9	4.8	120°
3.0			✓				0.098	0.82	1.5	2.1	3.0	4.2	4.7	5.8	112°
3.5			✓				0.098	1.0	1.7	2.4	3.5	4.9	5.6	6.8	120°
4.0			✓				0.098	1.1	2.0	2.8	4.0	5.6	6.3	7.8	120°
6.0				✓			0.142	1.6	3.0	4.2	6.0	8.4	9.4	11.6	120°
8.0				✓			0.142	2.2	4.0	5.7	8.0	11.2	12.7	15.5	120°
10.0					✓		0.190	2.7	4.9	7.1	10.0	14.2	15.8	19.4	115°
14.0					✓		0.190	3.8	7.0	9.9	14.0	19.8	22.1	27.0	120°
20.0						✓	0.244	5.5	10.0	14.1	20.0	28.2	31.6	38.8	120°
26.0						✓	0.244	7.0	13.0	18.4	26.0	36.7	41.1	50.5	120°

*Determines maximum foreign particle size that will flow through the nozzle without clogging.



Type	Pipe Size	Net Weight Oz.	A	B	C
SFW	1/8 NPT	0.75	1.063	0.563	---
	1/4 NPT	1.25	1.375	0.688	---
	3/8 NPT	2.25	1.563	0.813	---
	1/2 NPT	3.50	1.844	1.000	---
	3/4 NPT	8.00	2.219	1.188	---
	1 NPT	15.00	2.969	1.500	---
SMW	1/8 NPT	0.75	1.125	0.563	0.825
	1/4 NPT	1.50	1.438	0.688	1.125
	3/8 NPT	2.50	1.563	0.813	1.163
	1/2 NPT	4.00	1.844	1.000	1.300
	3/4 NPT	8.50	2.219	1.125	2.560
	1 NPT	15.75	2.969	1.375	2.062
SSMW	1/8 NPT	0.50	0.625	0.500	0.325
	1/4 NPT	0.75	0.938	0.625	0.538
	3/8 NPT	1.50	0.969	0.750	0.569
	1/2 NPT	3.25	1.406	0.875	0.906
	3/4 NPT	5.25	1.500	1.125	0.960
	1 NPT	12.00	2.375	1.375	1.437



Tan Jet® Solid Cone Spray

Type **TSF**
Type **TSM**

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Steinen offers several types of full-cone spray nozzles to satisfy almost any requirement. Nozzles are offered in five different body styles, numerous flow rates from 0.12 gallons per minute (GPM) up to 50 GPM, at pressures from 3 PSI to 150 PSI, in various types of steel, stainless steel, brass and CPVC.

Two types of nozzle construction are available:

- **Type TSF** - four-piece removable tip nozzle
- **Type TSM** - four-piece removable tip nozzle



Type TSF

Spray Characteristics

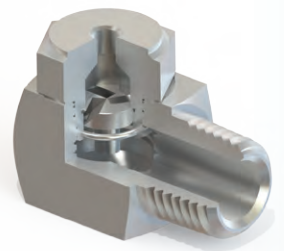
Tan-Jet® solid cone type spray with uniform distribution and atomization throughout the entire spray pattern. Atomization finest at higher pressures.

Construction

Three-piece design with removable nozzle tip and internal vane. Nozzles available in 1/4", 3/8" & 1/2" female NPT pipe thread.

Materials

These nozzles are available in 303 & 316 Stainless Steel, steel and brass.

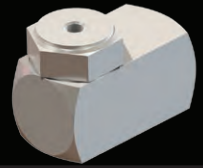


Type TSM

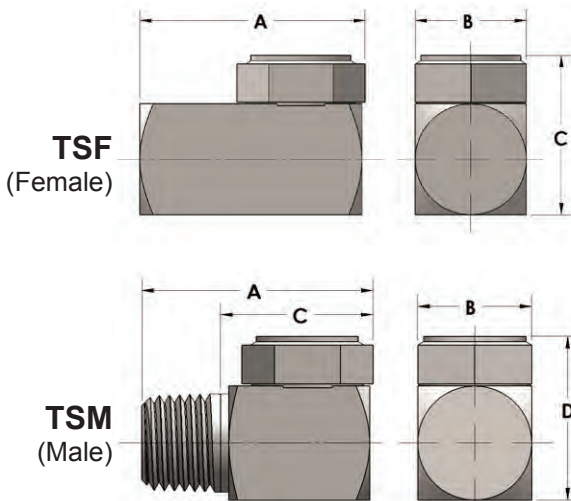
Tan-Jet® solid cone type spray with uniform distribution and atomization throughout the entire spray pattern. Atomization finest at higher pressures.

Three-piece design with removable nozzle tip and internal vane. Nozzles available in 1/4", 3/8" & 1/2" male NPT pipe thread.

These nozzles are available in 303 & 316 Stainless Steel, steel and brass.



Nozzle Identifier	Pipe Size Availability ✓ indicates available			Approx. Orifice Diameter*	Capacity in Gallons per Minute (At Various Pressures in Pounds Per Square Inch)						SPRAY ANGLES (At Various PSI)
	1/4	3/8	1/2		5 psi	20 psi	40 psi	80 psi	100 psi	125 psi	40 psi
0.50	✓			0.045	—	0.36	0.50	0.70	0.80	0.85	45°
0.60	✓			0.045	0.21	0.42	0.60	0.85	0.95	1.0	55°
0.80	✓			0.045	0.28	0.57	0.80	1.1	1.3	1.4	65°
1.0	✓			0.045	0.35	0.70	1.0	1.4	1.6	1.7	80°
1.5	✓			0.051	0.53	1.1	1.5	2.1	2.4	2.7	75°
2.0	✓			0.051	0.71	1.4	2.0	2.8	3.2	3.5	80°
2.5		✓		0.064	0.91	1.8	2.5	3.5	3.9	4.4	65°
3.0		✓		0.064	1.1	2.1	3.0	4.2	4.7	5.2	70°
3.5		✓		0.064	1.3	2.4	3.5	4.9	5.6	6.2	80°
4.0		✓		0.064	1.4	2.8	4.0	5.6	6.3	7.2	85°
4.5		✓		0.075	1.6	3.2	4.5	6.3	7.1	7.9	85°
5.0		✓		0.075	1.8	3.5	5.0	7.1	7.9	8.8	85°
5.0			✓	0.091	1.8	3.5	5.0	7.1	7.9	8.8	75°
6.0			✓	0.091	2.1	4.2	6.0	8.5	9.5	10.5	80°
7.0			✓	0.091	2.5	4.9	7.0	9.9	11.1	12.4	80°
8.0			✓	0.102	2.8	5.7	8.0	11.3	12.6	14.2	80°
9.0			✓	0.102	3.2	6.3	9.0	12.6	14.1	15.8	80°
10.0			✓	0.102	3.5	7.1	10.0	14.2	15.8	17.6	85°



	Pipe Size	Net Weight Oz.	A	B	C	D
Female	1/4 NPT	1.50	1.125	0.625	---	0.906
	3/8 NPT	2.75	1.344	0.750	---	1.250
	1/2 NPT	5.25	1.625	1.000	---	1.468
Male	1/4 NPT	1.75	1.250	0.625	0.820	0.906
	3/8 NPT	3.00	1.438	0.750	1.000	1.250
	1/2 NPT	5.50	1.813	0.875	1.245	1.406

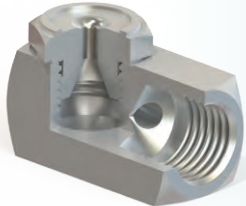
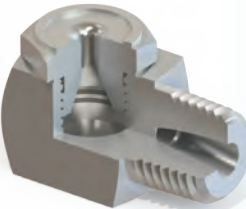
Steinen has designed two different hollow cone spray nozzles, the Tan-Jet®. The advantage of the Tan-Jet® nozzle is the vortex created as a result of incoming liquid introduced at 90°. As the liquid leaves the nozzle, the liquid is uniformly atomized and a distinct hollow cone pattern is achieved.

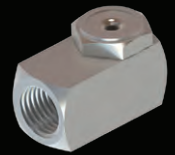
Two types of Tan-Jet® hollow cone, wide angle nozzles are available:

- Type **TF** - NPT female threads
- Type **TM** - NPT male threads

Numerous flow rates are available from 0.08 gallons per minute (GPM) up to 42 GPM, at pressures from 3 PSI to 125 PSI, in various types of steel, stainless steel and brass.



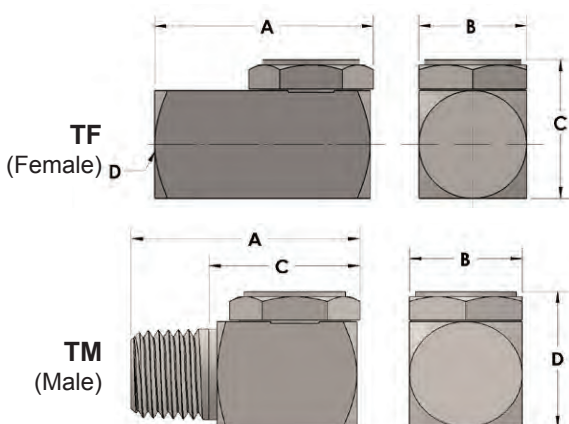
	Spray Characteristics	Construction	Materials
 <p>Type TF (Female)</p>	<p>Uniform hollow cone spray pattern with fine atomization at all pressures. Nozzles typically spray between 70 and 90 degree spray angles.</p>	<p>These nozzles are non-clogging as they do not contain any cores or internal vanes. Nozzles are two-piece design with removable caps. Nozzles are available in 1/8", 1/4", 3/8", 1/2" and 3/4" NPT female connections.</p>	<p>Stainless steel spray nozzles (330 stainless as well as 316 stainless), brass, steel and other materials upon request.</p>
 <p>Type TM (Male)</p>	<p>Uniform hollow cone spray pattern with fine atomization at all pressures. Nozzles typically spray between 70 and 90 degree spray angles.</p>	<p>These nozzles are non-clogging as they do not contain any cores or internal vanes. Nozzles are two-piece design with removable caps. Nozzles are available in 1/8", 1/4", 3/8", 1/2" and 3/4" NPT male connections.</p>	<p>Stainless steel spray nozzles (330 stainless as well as 316 stainless), brass, steel and other materials upon request.</p>



Available in 70 and 90 degree spray angles.

Nozzle Identifier	Pipe Size Availability ✓ indicates available					Approx. Orifice Diameter	Capacity in Gallons per Minute (At Various Pressures in Pounds Per Square Inch)						
	1/8	1/4	3/8	1/2	3/4		3	10	20	40	80	100	125
0.20	✓					0.059	—	0.10	0.14	0.20	0.28	0.31	0.34
0.40	✓					0.082	—	0.20	0.28	0.40	0.56	0.63	0.67
0.60	✓					0.093	—	0.30	0.42	0.60	0.85	0.95	1.0
0.80	✓					0.120	0.22	0.40	0.57	0.80	1.1	1.3	1.4
1.0	✓					0.125	0.27	0.50	0.70	1.0	1.4	1.6	1.7
1.2	✓					0.140	0.34	0.60	0.84	1.2	1.6	1.8	2.0
1.5	✓					0.156	0.41	0.75	1.1	1.5	2.1	2.4	2.7
2.0	✓					0.171	0.55	1.0	1.4	2.0	2.8	3.2	3.5
2.5	✓					0.203	0.70	1.2	1.8	2.5	3.5	3.9	4.4
0.40		✓				0.078	—	0.20	0.28	0.40	0.56	0.63	0.67
0.60		✓				0.098	—	0.30	0.42	0.60	0.85	0.95	1.0
0.80		✓				0.098	0.22	0.40	0.57	0.80	1.1	1.3	1.4
1.0		✓				0.125	0.27	0.50	0.70	1.0	1.4	1.6	1.7
1.2		✓				0.140	0.34	0.60	0.84	1.2	1.6	1.8	2.0
1.5		✓				0.156	0.41	0.75	1.1	1.5	2.1	2.4	2.7
2.0		✓				0.187	0.55	1.0	1.4	2.0	2.8	3.2	3.5
2.5		✓				0.203	0.70	1.2	1.8	2.5	3.5	3.9	4.4
3.0		✓				0.203	0.82	1.5	2.1	3.0	4.2	4.7	5.2
0.80			✓			0.098	0.22	0.4	0.6	0.8	1.1	1.3	1.4
1.0			✓			0.120	0.27	0.5	0.7	1.0	1.4	1.6	1.7
1.2			✓			0.128	0.34	0.6	0.8	1.2	1.6	1.8	2.0
1.5			✓			0.149	0.41	0.8	1.1	1.5	2.1	2.4	2.7
2.0			✓			0.171	0.55	1.0	1.4	2.0	2.8	3.2	3.5
2.5			✓			0.191	0.70	1.2	1.8	2.5	3.5	3.9	4.4
3.0			✓			0.218	0.82	1.5	2.1	3.0	4.2	4.7	5.2
3.5			✓			0.221	1.0	1.7	2.4	3.5	4.9	5.6	6.2

Nozzle Identifier	Pipe Size Availability ✓ indicates available					Approx. Orifice Diameter	Capacity in Gallons per Minute (At Various Pressures in Pounds Per Square Inch)						
	1/8	1/4	3/8	1/2	3/4		3	10	20	40	80	100	125
4.0			✓			0.228	1.1	2.0	2.8	4.0	5.6	6.3	7.2
4.5			✓			0.250	1.2	2.2	3.2	4.5	6.3	7.1	7.9
5.0			✓			0.250	1.4	2.4	3.5	5.0	7.1	7.9	8.8
4.0				✓		0.234	1.1	2.0	2.8	4.0	5.6	6.3	7.2
4.5				✓		0.234	1.2	2.2	3.2	4.5	6.3	7.1	7.9
5.0				✓		0.256	1.4	2.4	3.5	5.0	7.1	7.9	8.8
6.0				✓		0.265	1.6	3.0	4.2	6.0	8.5	9.5	10.5
7.0				✓		0.287	1.9	3.5	4.9	7.0	9.9	11.1	12.4
8.0				✓		0.296	2.2	4.0	5.7	8.0	11.3	12.6	14.2
9.0				✓		0.312	2.4	4.5	6.3	9.0	12.6	14.1	15.8
10.0				✓		0.339	2.7	4.9	7.1	10.0	14.2	15.8	17.6
12.0				✓		0.375	3.3	6.0	8.5	12.0	17.0	19.0	21.0
7.0					✓	0.312	1.9	3.5	4.5	7.0	9.9	11.1	12.4
8.0					✓	0.328	2.2	4.0	5.7	8.0	11.3	12.6	14.2
9.0					✓	0.348	2.4	4.5	6.3	9.0	12.6	14.1	15.8
10.0					✓	0.375	2.7	4.9	7.1	10.0	14.2	15.8	17.6
12.0					✓	0.404	3.3	6.0	8.5	12.0	17.0	19.0	21.0
13.0					✓	0.421	3.5	6.5	9.1	13.0	18.4	20.6	23.0
14.0					✓	0.437	3.8	7.0	9.9	14.0	19.8	22.1	24.8
16.0					✓	0.453	4.4	8.0	11.3	16.0	22.6	25.3	28.2
18.0					✓	0.468	4.9	9.0	12.7	18.0	25.4	28.4	31.8
19.0					✓	0.484	5.1	9.6	13.4	19.0	26.8	30.0	33.0
20.0					✓	0.500	5.5	10.0	14.1	20.0	28.2	31.6	35.2
21.0					✓	0.500	5.7	10.5	14.8	21.0	29.6	33.1	36.6
22.0					✓	0.515	6.0	11.0	15.5	22.0	31.1	34.7	38.6
24.0					✓	0.546	6.6	12.0	17.0	24.0	34.0	38.0	42.3



Type	Pipe Size	Net Weight Oz.	A	B	C	D
TF	1/8 NPT	0.75	0.875	0.563	---	0.625
	1/4 NPT	1.50	1.125	0.625	---	0.813
	3/8 NPT	2.75	1.344	0.750	---	1.000
	1/2 NPT	5.25	1.625	1.000	---	1.218
	3/4 NPT	11.00	2.063	1.250	---	1.594
TM	1/8 NPT	1.00	0.938	0.563	.610	0.625
	1/4 NPT	1.75	1.250	0.625	0.820	0.813
	3/8 NPT	3.00	1.438	0.750	1.000	1.000
	1/2 NPT	5.50	1.813	0.875	1.245	1.218
	3/4 NPT	11.75	2.125	1.250	2.560	1.594



Tan-Jet® Hollow Cone Wide-Angle

Type **TWF**
Type **TWM**

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen had designed a superior truly wide-angle, hollow cone spray nozzle, the Tan-Jet®. The advantage of this nozzle is the vortex created as a result of incoming liquid introduced at 90°. As the liquid leaves the nozzle, the liquid is uniformly atomized and a very wide and distance hollow cone pattern is achieved.

Two types of Tan-Jet® hollow cone, wide angle nozzles are available:

- Type **TWF** - NPT female threads
- Type **TWM** - NPT male threads

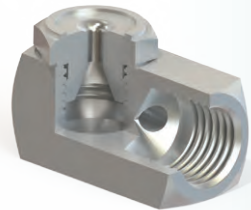
Numerous flow rates are available from 0.10 gallons per minute (GPM) up to 31 GPM at pressures, typically in the range of 5 PSI to 10 PSI, in various types of steel, stainless steel and brass.



Spray Characteristics

Construction

Materials

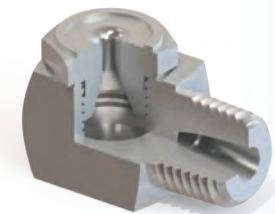


Type TWF (Female)

Uniform hollow cone, wide-angle spray pattern with fine atomization at all pressures. Nozzles typically spray between 105 and 120 degree spray angles. See chart on reverse side for expected angles a certain flow rates and pressures.

These nozzles are non-clogging as they do not contain any cores or internal vanes. Nozzles are two-piece design with removable caps. Nozzles are available in 1/8", 1/4", 3/8", 1/2" and 3/4" NPT female connections..

Stainless steel spray nozzles (330 stainless as well as 316 stainless), brass, steel and other materials upon request.



Type TWM (Male)

Uniform hollow cone, wide-angle spray pattern with fine atomization at all pressures. Nozzles typically spray between 105 and 120 degree spray angles. See chart on reverse side for expected angles a certain flow rates and pressures.

These nozzles are non-clogging as they do not contain any cores or internal vanes. Nozzles are two-piece design with removable caps. Nozzles are available in 1/8", 1/4", 3/8", 1/2" and 3/4" NPT male connections.

Stainless steel spray nozzles (330 stainless as well as 316 stainless), brass, steel and other materials upon request.



Tan-Jet® Hollow Cone Wide-Angle

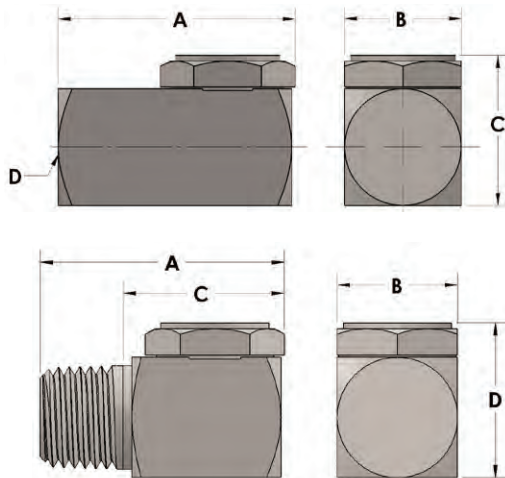
Type **TW**
(Female & Male)



Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Nozzle Identifier	Pipe Size Availability ✓ indicates available					Approx. Orifice Diameter*	Capacity in Gallons per Minute (At Various Pressures in Pounds Per Square Inch)						SPRAY ANGLES 40 psi
	1/8	1/4	3/8	1/2	3/8		5 psi	10 psi	20 psi	40 psi	80 psi	100 psi	
0.20	✓					0.062	—	0.10	0.14	0.2	0.28	0.31	115°
0.40		✓				0.086	—	0.20	0.28	0.4	0.56	0.63	115°
0.60		✓				0.096	—	0.30	0.42	0.6	0.85	0.95	115°
1.0		✓				0.120	—	0.50	0.70	1.0	1.4	1.6	115°
1.5		✓				0.140	0.55	0.75	1.1	1.5	2.1	2.4	115°
2.0		✓				0.187	0.71	1.0	1.4	2.0	2.8	3.2	115°
2.5		✓				0.187	0.91	1.2	1.8	2.5	3.5	3.9	115°
3.0		✓				0.205	1.1	1.5	2.1	3.0	4.2	4.7	115°
4.0			✓			0.250	1.4	2.0	2.8	4.0	5.6	6.3	100°
5.0			✓			0.272	1.8	2.4	3.5	5.0	7.1	7.9	97°
8.0				✓		0.312	2.8	4.0	5.7	8.0	11.3	12.6	105°
10.0				✓		0.343	3.5	4.9	7.1	10.0	14.2	15.8	105°
12.0					✓	0.375	4.3	6.0	8.5	12.0	17.0	19.0	105°
14.0					✓	0.437	5.0	7.0	9.9	14.0	19.8	22.1	105°
16.0					✓	0.453	5.7	8.0	11.3	16.0	22.6	25.3	105°
20.0					✓	0.500	7.1	10.0	14.1	20.0	28.2	31.6	105°

TWF
(Female)



TWM
(Male)

Type	Pipe Size	Net Weight Oz.	A	B	C	D
TWF	1/8 NPT	0.75	0.875	0.563	---	0.625
	1/4 NPT	1.50	1.125	0.625	---	0.813
	3/8 NPT	2.75	1.344	0.750	---	1.000
	1/2 NPT	5.25	1.625	1.000	---	1.218
	3/4 NPT	11.00	2.063	1.250	---	1.594
TWM	1/8 NPT	1.00	0.938	0.563	.610	0.625
	1/4 NPT	1.75	1.250	0.625	0.820	0.813
	3/8 NPT	3.00	1.438	0.750	1.000	1.000
	1/2 NPT	5.50	1.813	0.875	1.245	1.218
	3/4 NPT	11.75	2.125	1.250	2.560	1.594



Spraylet™ Hollow Cone



Type **SH**

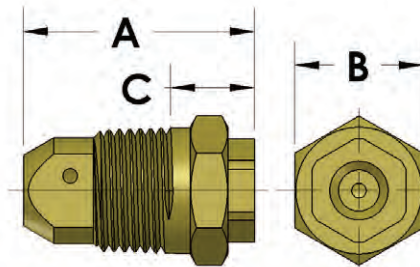
Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen Spraylet™ hollow cone nozzles are non-clogging because they do not contain any cores or internal vanes. All of these nozzles are of two piece design with removable caps for easy cleaning. They are offered in a variety of flow rates from 0.20 gallons per minute (GPM) up to 2.0 GPM (.75 liters/minute to 7.6 LPM), and in a variety of spray angles from 25° to 95°. The Spraylet™ body style allows for spray to exit the nozzle parallel to the pipe thread for a 'direct on' hollow cone spray.



Spraylets are constructed in various materials including 303 & 316 stainless steel and brass, and are available in 3/8 inch male pipe thread (other thread sizes and types available upon request).

Nozzles presented from low flow to high flow								Nozzles presented from narrow angle to wide angle							
Nozzle Ident	Free Passage Size*	Capacity in Gallons per Minute				Spray Angles		Nozzle Ident	Free Passage Size*	Capacity in Gallons per Minute				Spray Angles	
		10 psi	20 psi	40 psi	100 psi	20 psi	80 psi			10 psi	20 psi	40 psi	100 psi	20 psi	80 psi
SH 3-1	0.063	0.13	0.18	0.26	0.40	49°	65°	SH 20-1	0.063	0.24	0.33	0.47	0.74	15°	25°
SH 2	0.078	0.20	0.28	0.40	0.63	60°	70°	SH 20-2	0.078	0.38	0.54	0.75	1.2	25°	45°
SH 3-2	0.078	0.22	0.31	0.44	0.69	57°	74°	SH 20-3	0.094	0.62	0.88	1.2	2.0	35°	45°
SH 20-1	0.063	0.24	0.33	0.47	0.74	15°	25°	SH 3-1	0.063	0.13	0.18	0.26	0.40	49°	65°
SH 5-2	0.078	0.27	0.38	0.54	0.85	50°	65°	SH 5-2	0.078	0.27	0.38	0.54	0.85	50°	65°
SH 3	0.094	0.30	0.42	0.60	0.95	64°	77°	SH 3-2	0.078	0.22	0.31	0.44	0.69	57°	74°
SH 3-5	0.094	0.34	0.48	0.68	1.1	80°	95°	SH 5-3	0.094	0.37	0.52	0.74	1.2	59°	75°
SH 5-3	0.094	0.37	0.52	0.74	1.2	59°	75°	SH 2	0.078	0.20	0.28	0.40	0.63	60°	70°
SH 20-2	0.078	0.38	0.54	0.75	1.2	25°	45°	SH 3	0.094	0.30	0.42	0.60	0.95	64°	77°
SH 3-8	0.094	0.41	0.58	0.82	1.3	80°	95°	SH 8	0.156	0.80	1.1	1.6	2.5	65°	70°
SH 5	0.109	0.50	0.71	1.0	1.6	67°	76°	SH 10	0.156	1.0	1.4	2.0	3.2	65°	72°
SH 20-3	0.094	0.62	0.88	1.2	2.0	35°	45°	SH 5	0.109	0.50	0.71	1.0	1.6	67°	76°
SH 8	0.156	0.80	1.1	1.6	2.5	65°	70°	SH 3-5	0.094	0.34	0.48	0.68	1.1	80°	95°
SH 10	0.156	1.0	1.4	2.0	3.2	65°	72°	SH 3-8	0.094	0.41	0.58	0.82	1.3	80°	95°



Nozzle Type	Pipe Size	Weight Oz.	A	B	C
SH	3/8 NPT	1.00	1.218	0.688	0.420



Fan-Jet® Flat Spray Nozzles

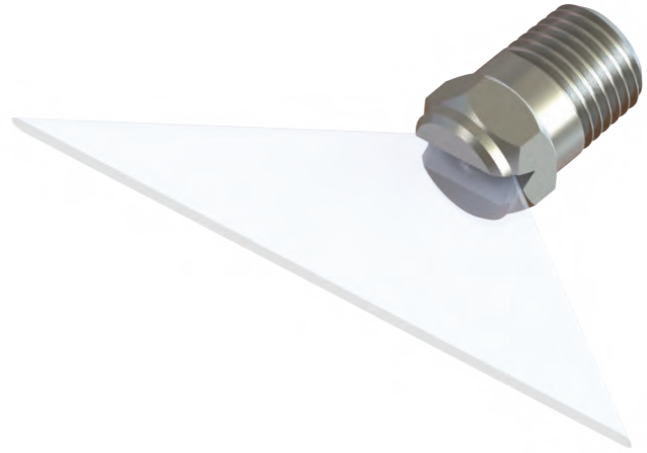
Type V

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen offers a wide variety of flat spray nozzles to satisfy almost any requirement. Nozzles are offered in 10 different spray angles from 0° to 110°, numerous flow rates from 0.20 gallons per minute (GPM) up to 50 GPM, at pressures from 5 PSI to 1,000 PSI, in various types of steel, stainless steel, brass and CPVC.

Nozzle construction available:

- **Type V** - single piece nozzle



Type V

Spray Characteristics

Flat spray nozzle with high impact, sharply defined spray pattern without heavy edges. This type of high velocity spray is very useful in cleaning and coating applications. Spray angles of 0, 15, 25, 40, 50, 65, 80 and 90 degrees are available.

Construction

One-piece design with no cores or internal members to clog. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4", and 1" NPT male pipe thread.

Materials

These nozzles are available in 303 & 316 Stainless Steel, mild steel, brass and CPVC.



Fan-Jet® Flat Spray Nozzles

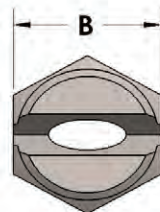
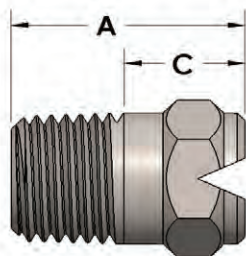
Type **V**



Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Nozzle Identifier	Pipe Size Availability <small>✓ indicates available</small>						Approx. Orifice Diameter	Capacity in Gallons per Minute (at various pressures in pounds per square inch)						
	1/8	1/4	3/8	1/2	3/4	1		10 psi	20 psi	40 psi	60 psi	100 psi	120 psi	150 psi
0.20	✓	✓					0.036	0.10	0.14	0.20	0.25	0.32	0.35	0.39
0.25	✓	✓					0.039	0.13	0.18	0.25	0.31	0.39	0.43	0.48
0.30	✓	✓					0.043	0.15	0.21	0.30	0.37	0.47	0.51	0.58
0.35	✓	✓					0.047	0.18	0.25	0.35	0.43	0.55	0.61	0.68
0.40	✓	✓					0.052	0.20	0.28	0.40	0.49	0.63	0.69	0.78
0.45	✓	✓					0.055	0.22	0.32	0.45	0.55	0.71	0.77	0.88
0.50	✓	✓					0.058	0.25	0.35	0.50	0.61	0.79	0.87	0.97
0.55	✓	✓					0.060	0.28	0.39	0.55	0.67	0.87	0.96	1.0
0.60	✓	✓					0.062	0.30	0.42	0.60	0.73	0.95	1.0	1.1
0.65	✓	✓					0.064	0.32	0.46	0.65	0.80	1.0	1.1	1.2
0.70	✓	✓					0.067	0.35	0.50	0.70	0.86	1.1	1.1	1.3
0.80	✓	✓					0.072	0.40	0.56	0.80	0.98	1.2	1.3	1.5
0.90	✓	✓					0.076	0.46	0.64	0.90	1.1	1.4	1.5	1.7
1.0	✓	✓	✓				0.078	0.50	0.70	1.0	1.2	1.6	1.7	1.9
1.5	✓	✓	✓				0.093	0.75	1.1	1.5	1.8	2.4	2.5	2.9
2.0	✓	✓	✓				0.109	1.0	1.4	2.0	2.5	3.2	3.5	3.9
3.0	✓	✓	✓				0.125	1.5	2.1	3.0	3.7	4.7	5.0	5.8
4.0	✓	✓	✓				0.156	2.0	2.8	4.0	4.9	6.3	6.8	7.7
5.0		✓	✓	✓			0.171	2.4	3.5	5.0	6.1	7.9	8.7	9.7
6.0		✓	✓	✓			0.187	3.0	4.2	6.0	7.3	9.5	10.0	11.6
7.0		✓	✓	✓			0.203	3.5	4.9	7.0	8.6	11.1	11.9	13.5
8.0		✓	✓	✓			0.218	4.0	5.7	8.0	9.8	12.6	13.6	15.4
9.0		✓	✓	✓			0.234	4.5	6.3	9.0	11.0	14.1	15.6	17.4
10.0			✓	✓			0.250	4.9	7.1	10.0	12.2	15.8	17.3	19.4
11.0			✓	✓			0.265	5.5	8.0	11.0	13.4	17.3	18.9	21.1
12.0			✓	✓			0.265	6.0	8.5	12.0	14.7	19.0	20.0	23.2
13.0			✓	✓			0.281	6.5	9.1	13.0	13.2	20.6	21.9	25.3
14.0			✓	✓			0.281	7.0	9.9	14.0	17.1	22.1	24.0	27.0
15.0			✓	✓			0.296	7.4	10.6	15.0	18.4	23.7	26.0	29.0
20.0				✓	✓		0.344	13.0	14.1	20.0	24.5	31.6	34.4	38.7
25.0				✓	✓		0.375	12.5	17.5	25.0	30.5	39.5	43.5	48.5
30.0					✓		0.421	15.0	21.2	30.0	36.8	47.4	52.0	58.0
35.0					✓		0.453	17.5	24.5	35.0	42.7	55.3	60.9	67.9
40.0					✓		0.500	20.0	28.3	40.0	49.0	63.2	68.8	77.4
50.0						✓	0.515	25.0	35.4	50.0	61.2	79.1	86.6	96.8

Flow and angle data for higher pressures available upon request



Pipe Size	Net Weight Oz.	A	B	C
1/8 NPT	0.25	0.750	0.438	0.450
1/4 NPT	0.75	0.938	0.563	0.460
3/8 NPT	1.25	1.188	0.750	0.750
1/2 NPT	2.00	1.250	0.875	0.825
3/4 NPT	2.75	1.500	1.063	0.985
1 NPT	7.00	1.375	1.375	1.280



Fan-Jet® Flat Spray Nozzles

Type **FAF**
Type **FAM**
(female or male)

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen offers a wide variety of flat spray nozzles to satisfy almost any requirement. Nozzles are offered in 10 different spray angles from 0° to 110°, numerous flow rates from 0.20 gallons per minute (GPM) up to 50 GPM, at pressures from 5 PSI to 1,000 PSI, in various types of steel, stainless steel, brass and CPVC.

Two types of nozzle construction are available:

- **Type FAF** - four-piece removable tip nozzle available with female thread
- **Type FAM** - four-piece removable tip nozzle available with male thread



Type FAF
(Female)

Spray Characteristics

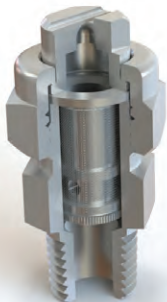
Spray Characteristics - Flat, high impact, sharply defined spray pattern without heavy edges. This type of high velocity spray is excellent for cleaning applications. Spray angles of 0, 15, 25, 40, 50, 65, 80, 95 and 110 degrees are available.

Construction

Nozzle is four parts: cap, orifice tip, strainer with 100 mesh screen, and the adapter. No cores or internal vanes to clog. Orifice tip adjustable directionally without disturbing the pipe connection. Available in 1/8" and 1/4" NPT female thread.

Materials

These nozzles are available in 303 & brass



Type FAM
(Male)

Spray Characteristics - Flat, high impact, sharply defined spray pattern without heavy edges. This type of high velocity spray is excellent for cleaning applications. Spray angles of 0, 15, 25, 40, 50, 65, 80, 95 and 110 degrees are available.

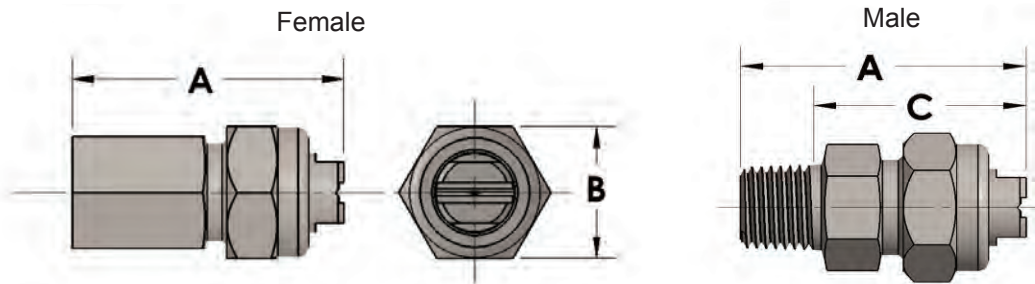
Nozzle is four parts: cap, orifice tip, strainer with 100 mesh screen, and the adapter. No cores or internal vanes to clog. Orifice tip adjustable directionally without disturbing the pipe connection. Available in 1/8" and 1/4" NPT male thread.

These nozzles are available in 303 & brass.



Nozzle Identifier	Pipe Sizes Male & Female ✓ Indicates available		Strainer Mesh	Capacity in Gallons per Minute (at various pressures in pounds per square inch)					
	1/8	1/4		10	20	40	60	100	150
0.20	✓	✓	100	0.10	0.14	0.20	0.25	0.32	0.39
0.25	✓	✓	100	0.13	0.18	0.25	0.31	0.39	0.48
0.30	✓	✓	100	0.15	0.21	0.30	0.37	0.47	0.58
0.35	✓	✓	100	0.18	0.25	0.35	0.43	0.55	0.68
0.40	✓	✓	100	0.20	0.28	0.40	0.49	0.63	0.78
0.50	✓	✓	100	0.25	0.35	0.50	0.61	0.79	0.97
0.60	✓	✓	100	0.30	0.42	0.60	0.73	0.95	1.1
0.80	✓	✓	100	0.40	0.56	0.80	0.98	1.2	1.5
1.0	✓	✓	*	0.50	0.71	1.0	1.2	1.5	1.9
1.5	✓	✓	*	0.75	1.0	1.5	1.8	2.3	2.9
2.0	✓	✓	*	1.0	1.4	2.0	2.4	3.1	3.8

*Capacities up to 7.0 G.P.M available upon request



Adjustable FAN-JET® Dimensions and Weights					
Type	Pipe Size	Net Weight Oz.	A	B	C
FAF	1/8 NPT	2.00	1.410	0.812	---
FAM	1/8 NPT	1.25	1.500	0.812	1.150
FAF	1/4 NPT	2.00	1.530	0.812	---
FAM	1/4 NPT	1.25	1.625	0.812	1.275

Types FAF & FAM: Four-piece design (cap, orifice tip, strainer with 100 mesh screen and pipe adapter), No internal vanes or cores to clog, orifice tip is adjustable directionally through 360° with out disturbing the pipe connection.



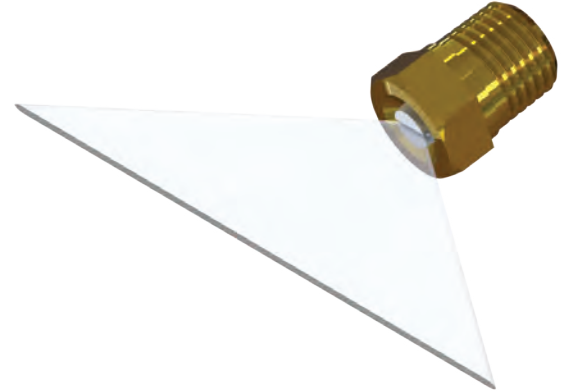
Fan Jet[®] Flat Spray (high pressure flat spray)



Type **VHP**

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen has developed the VHP nozzle specifically for high-pressure spray cleaning and washing processes. Flat, evenly distributed fan pattern provides maximum impact through the complete pattern.



Type VHP

Spray Characteristics

Flat, even low-capacity, high-pressure spray. Available with spray angles of 0°, 15°, 25°, 50°, 65°, 80°, and 90°

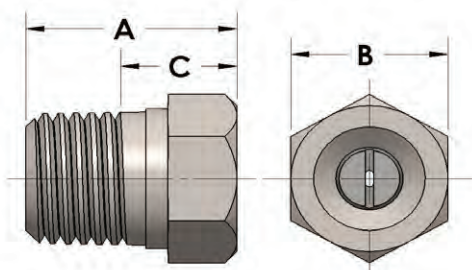
Construction

Two-piece design, brass body with permanently locked-in stainless or hardened orifice insert. Available in 1/8 or 1/2 inch male pipe connection.

Materials

Brass body with permanently locked-in stainless or hardened orifice insert.

Nozzle Identifier	Pipe Size Availability		Approx. Orifice Diameter	CAPACITY IN GALLONS PER MINUTE											
	✓ indicates available			(At Various Pressures in Pounds Per Square Inch)											
	1/8	1/4		20 psi	40 psi	100 psi	200 psi	300 psi	400 psi	500 psi	600 psi	700 psi	800 psi	900 psi	1000 psi
0.20	✓	✓	0.036	0.14	0.20	0.31	0.44	0.53	0.60	0.67	0.74	0.79	0.84	0.89	0.94
0.30	✓	✓	0.043	0.21	0.30	0.47	0.65	0.79	0.91	1.0	1.1	1.1	1.2	1.3	1.4
0.40	✓	✓	0.052	0.28	0.40	0.62	0.87	1.0	1.2	1.3	1.4	1.5	1.6	1.7	1.8
0.45	✓	✓	0.055	0.32	0.45	0.70	0.97	1.1	1.3	1.5	1.6	1.7	1.8	2.0	2.1
0.50	✓	✓	0.058	0.35	0.50	0.77	1.0	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.3
0.55	✓	✓	0.060	0.39	0.55	0.85	1.1	1.4	1.6	1.8	2.0	2.1	2.3	2.4	2.5
0.60	✓	✓	0.062	0.42	0.60	0.93	1.3	1.5	1.8	2.0	2.2	2.3	2.5	2.6	2.8
0.65	✓	✓	0.064	0.46	0.65	1.0	1.4	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.0
0.70	✓	✓	0.067	0.49	0.70	1.0	1.5	1.8	2.1	2.3	2.5	2.7	2.9	3.1	3.3
0.80	✓	✓	0.072	0.56	0.80	1.2	1.7	2.1	2.4	2.7	2.9	3.1	3.3	3.5	3.7
0.90	✓	✓	0.076	0.64	0.90	1.4	1.9	2.3	2.7	3.0	3.3	3.5	3.7	4.0	4.2
1.00	✓	✓	0.078	0.70	1.0	1.5	2.1	2.6	3.0	3.3	3.7	3.9	4.2	4.4	4.7



Type	Pipe Size	Net Weight Oz.	A	B	C
VHP	1/8 NPT	0.63	0.625	0.500	0.325
	1/4 NPT	0.67	0.750	0.563	0.400



Fan Jet® Flat Spray 3/8 inch NPT- Brass

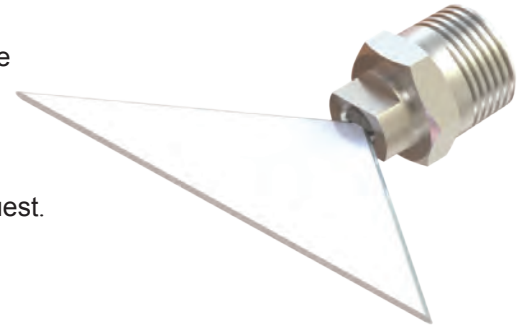


Type **SN-579**

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen SN-579 flat spray nozzles are precision flow “wrench flats” style nozzles designed for easy spray alignment. These nozzles do not contain any cores or internal vanes and are non-clogging.

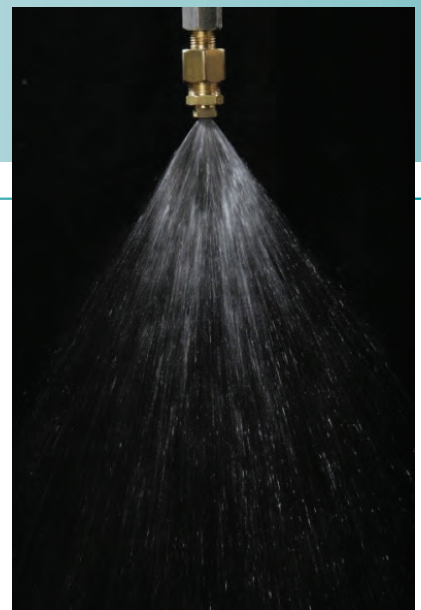
SN-579 flat spray nozzles are constructed in brass with 3/8 inch male pipe threads. Other materials and additional thread sizes are available upon request.



**Type
SN-579** Produces a uniform flat spray

Popular Sizes*	Capacity in Gallons per Minute				Spray Angle	
	40 psi	60 psi	80 psi	100 psi	40 psi	80 psi
1510	1.00	1.22	1.41	1.58	15°	18°
2510	1.00	1.22	1.41	1.58	25°	30°
4010	1.00	1.22	1.41	1.58	40°	45°
5010	1.00	1.22	1.41	1.58	50°	55°
6505	0.50	0.61	0.71	0.79	65°	72°
6506	0.60	0.73	0.85	0.95	65°	72°
6508	0.80	0.98	1.13	1.26	65°	72°
6510	1.00	1.22	1.41	1.58	65°	72°
8005	0.50	0.61	0.71	0.79	80°	85°
8010	1.00	1.22	1.14	1.58	80°	85°
9005	0.50	0.61	0.71	0.79	90°	95°
9010	1.00	1.22	1.41	1.58	90°	95°

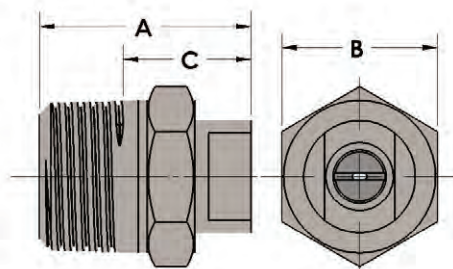
* More sizes available



Spray fan



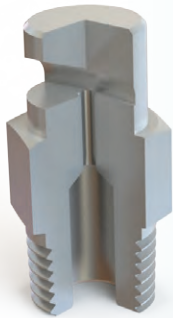
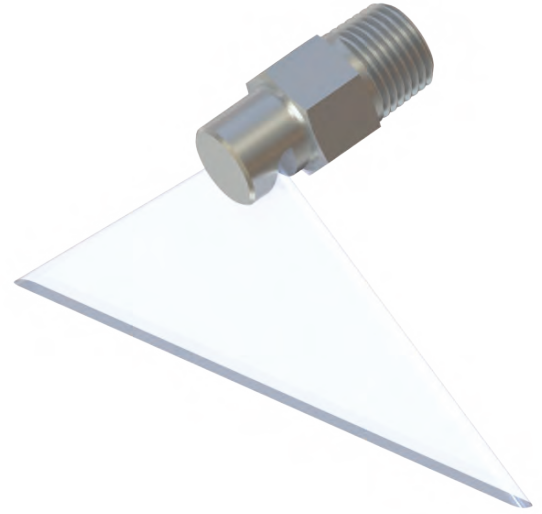
Side view of spray



Type	Pipe Size	A	B	C
SN-579	3/8 NPT	0.940	0.687	.500

These wide angle flat spray nozzles achieve up to 160° spray angles based on the flow rate of the nozzle and the operating pressure. See the table on reverse side for the spray angle you can expect at a given flow and pressure.

Numerous flow rates are available from 0.10 gallons per minute (GPM) up to 57 GPM, at pressures from 5 PSI to 60 PSI, in various types of steel, stainless steel, brass and CPVC.



**Type
F**

Spray Characteristics

Wide angle deflector type, low impact, flat spray pattern. This type of spray nozzle is useful for coating and cleaning processes. Spray angles, depending on pressure (see table below) can vary from 88 to 165 degrees. Information on capacities and angles not listed are available upon request. Spray exits the nozzle at a 70 degree angle.

Construction

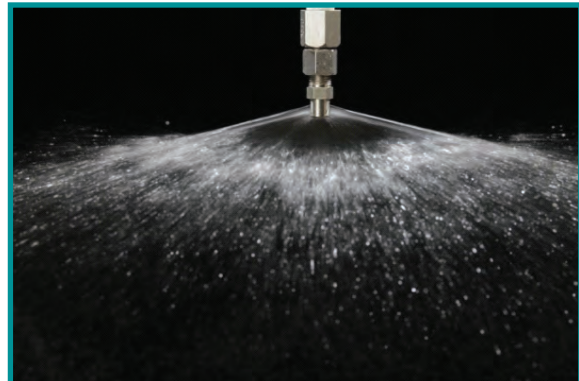
One-piece design, no cores or internal members to clog. Nozzles have 1/8" 1/4", 3/8", 1/2" and 3/4" male pipe size connections

Materials

Stainless steel spray nozzles (303 nozzles as well as 316 nozzles), Brass, and other materials available upon request.



70° angle of deflection

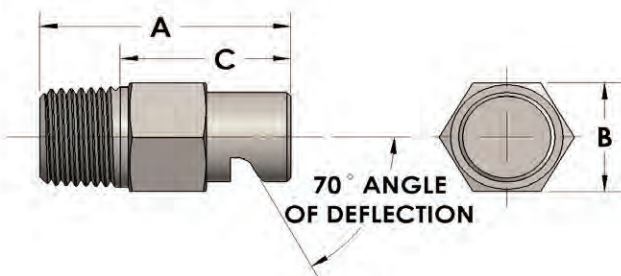


Wide Angle



Nozzle Identifier	Pipe Size ✓ indicates available					Approx. Orifice Diameter	Capacity in Gallons per Minute (at various pressures in pounds per square inch)					Spray Angle (in Degrees) 40 psi
	1/8	1/4	3/8	1/2	3/4		5 psi	10 psi	20 psi	40 psi	60 psi	
0.20	✓					0.035	-	0.1	0.14	0.20	0.24	125
0.30	✓					0.040	-	0.15	0.21	0.30	0.37	127
0.40	✓					0.046	-	0.20	0.28	0.40	0.49	127
0.50	✓					0.055	-	0.25	0.35	0.50	0.60	130
0.60	✓					0.059	0.21	0.3	0.42	0.60	0.73	135
0.80	✓					0.073	0.28	0.4	0.57	0.80	0.96	145
1.0	✓					0.082	0.35	0.5	0.71	1.0	1.2	140
1.5	✓					0.096	0.53	0.75	1.1	1.5	1.8	155
2.0	✓					0.111	0.71	1	1.4	2.0	2.5	160
2.5	✓					0.125	0.91	1.2	1.8	2.5	3.1	160
3.0	✓					0.136	1.1	1.5	2.1	3.0	3.7	138
3.5	✓					0.144	1.3	1.7	2.4	3.5	4.3	148
4.0	✓					0.154	1.4	2	2.8	4.0	4.9	148
4.0		✓				0.154	1.4	2	2.8	4.0	4.9	145
4.5		✓				0.166	1.6	2.2	3.2	4.5	5.4	145
5.0		✓				0.173	1.8	2.4	3.5	5.0	6.1	145
5.5		✓				0.182	1.9	2.7	3.8	5.5	6.7	145
6.0			✓			0.187	2.1	3	4.2	6.0	7.3	140
7.0			✓			0.201	2.5	3.5	4.9	7.0	8.6	140
8.0			✓			0.218	2.8	4	5.7	8.0	9.8	145
9.0			✓			0.234	3.2	4.5	6.3	9.0	11.0	145
10.0				✓		0.242	3.5	4.9	7.1	10.0	12.3	140
12.0				✓		0.265	4.2	6.0	8.5	12.0	14.7	140
14.0				✓		0.287	5.0	7.0	9.9	14.0	17.1	145
16.0				✓		0.312	5.6	8.0	11.3	16.0	19.6	145
18.0				✓		0.328	6.4	9.0	12.7	18.0	22.0	140
20.0				✓		0.343	7.1	10.0	14.1	20.0	24.5	140
22.0				✓		0.459	7.8	11.0	15.5	22.0	26.9	140
24.0				✓		0.375	8.5	12.0	17.0	24.0	29.4	135
*36.0				✓		0.453	12.6	18.0	25.5	36.0	44.1	150
*48.0				✓		0.515	14.8	21.0	29.6	48.0	57.4	150

*Available in certain materials only

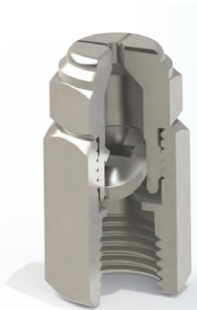
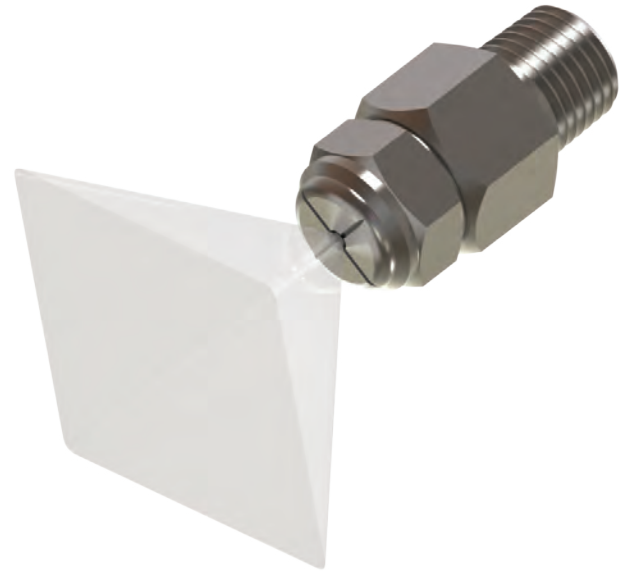


Type	Pipe Size	Net Weight	A	B	C
F201 to F2501	1/8 NPT	0.50	0.938	0.438	0.594
F3001 to F4001	1/8 NPT	0.75	1.063	0.563	0.719
F4002 to F5502	1/4 NPT	1.00	1.188	0.563	0.719
F6003 to F9003	3/8 NPT	2.00	1.500	0.688	1.000
F10004 to F16004	1/2 NPT	4.00	1.813	0.875	1.188
F18006 to F24006	3/4 NPT	7.00	1.938	1.125	1.125
F36006 to F48006	3/4 NPT	12.00	2.938	1.500	2.125

The unique Square-Jet[™] square spray nozzle can spray a nearly square spray pattern with uniform droplet distribution.

Four types of Square-Jet[®] square spray nozzles are available:

- Type **SFQ** - three piece nozzle with a removable cap (female)
- Type **SMQ** - three piece nozzle with a removable cap (male)
- Type **SSMQ** - two piece removable internal member (male)



Type SFQ
(Female)

Spray Characteristics

Square shaped spray with uniform distribution and atomization throughout the entire spray pattern. Atomization is finest at higher pressures. Nozzles spray between 55 and 80 degree spray angles. See product chart on the reverse for the expected angle at a certain flow rate and pressure.

Construction

Nozzle type SFQ is of a three piece design. The nozzle cap and internal member are removable without disturbing the male or female pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" and 1" female NPT pipe size connections.

Materials

Stainless steel spray nozzles (303 stainless as well as 316 stainless), brass, steel and other materials available upon request.



Type SMQ
(Male)

Square shaped spray with uniform distribution and atomization throughout the entire spray pattern. Atomization is finest at higher pressures. Nozzles spray between 55 and 80 degree spray angles. See product chart on the reverse for the expected angle at a certain flow rate and pressure.

Nozzle type SMQ is of a three piece design. The nozzle cap and internal member are removable without disturbing the male or female pipe connection. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" and 1" male NPT pipe size connections.

Stainless steel spray nozzles (303 stainless as well as 316 stainless), brass, steel and other materials available upon request.



Type SSMQ
(Male)

Similar in spray to the SFQ & SMQ types. Square shaped spray between 55 and 90 degree spray angles. See product chart on the reverse for the angle you can expect at a certain flow rate and pressure.

Nozzle type SSMQ is a two piece design with a removable internal member. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4" & 1" male NPT pipe size connections..

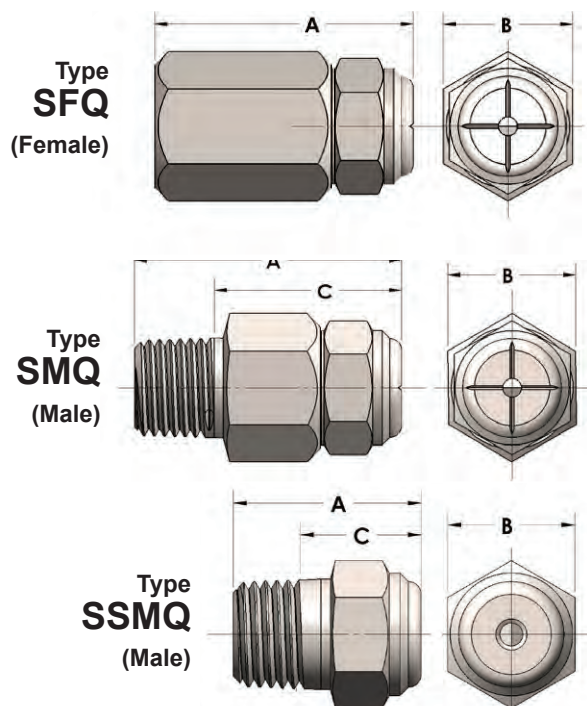
Stainless steel spray nozzles (303 stainless as well as 316 stainless), brass, steel and other materials available upon request.



Nozzle Identifier	Pipe Size ✓ indicates available							Free Passage Size*	CAPACITY IN GALLONS PER MINUTE (At Various Pressures in Pounds Per Square Inch)						SPRAY ANGLES 40 psi
	1/8	1/4	3/8	1/2	3/4	1	3 psi		20 psi	40 psi	80 psi	100 psi	150 psi		
0.80	✓						.052	0.22	0.57	0.80	1.10	1.30	1.60	60°	
1.0	✓						.062	0.27	0.71	1.00	1.40	1.6	1.90	70°	
1.2	✓						0.62	0.34	0.84	1.20	1.60	1.8	2.30	75°	
1.6		✓					0.86	0.44	1.10	1.60	2.30	2.5	3.10	60°	
2.0		✓					0.86	0.55	1.40	2.00	2.80	3.2	3.90	70°	
2.4		✓					0.86	0.68	1.70	2.40	3.30	3.7	4.60	75°	
3.0			✓				0.98	0.82	2.10	3.00	4.20	4.7	5.80	80°	
3.6			✓				0.98	0.99	2.50	3.60	5.00	5.6	6.90	80°	
4.0			✓				0.98	1.10	2.80	4.00	5.60	6.3	7.80	80°	
5.0				✓			.142	1.40	3.50	5.00	7.10	7.9	9.70	70°	
5.8				✓			.142	1.50	4.10	5.80	8.20	9.2	11.2	75°	
6.0				✓			.142	1.60	4.20	6.00	8.40	9.4	11.6	75°	
7.0				✓			.142	1.90	4.90	7.00	9.90	11.1	13.6	80°	
7.2				✓			.142	2.00	5.10	7.20	10.10	11.3	13.9	80°	
8.0**				✓			.142	2.20	5.70	8.00	11.20	12.7	15.5	80°	
10.0**					✓		.190	2.70	7.1	10.0	14.2	15.8	19.4	80°	
12.0**					✓		.190	3.30	8.50	12.0	17.00	19.0	23.2	80°	
16.0**					✓		.190	4.40	11.3	16.0	22.60	25.3	31.0	90°	
20.0**						✓	.190	5.50	14.1	20.0	28.20	31.6	38.8	80°	

*Determines maximum foreign particle size that will flow through nozzle without clogging.

**Available in SSMQ style



Type	Pipe Size	Net Weight Oz.	A	B	C
SFQ	1/8 NPT	0.75	1.063	0.563	---
	1/4 NPT	1.25	1.375	0.688	---
	3/8 NPT	2.25	1.563	0.813	---
	1/2 NPT	3.50	1.844	1.000	---
	3/4 NPT	8.00	2.219	1.188	---
	1 NPT	15.00	2.969	1.500	---
SMQ	1/8 NPT	0.75	1.125	0.563	.825
	1/4 NPT	1.50	1.438	0.688	1.125
	3/8 NPT	2.50	1.563	0.813	1.163
	1/2 NPT	4.00	1.844	1.000	1.300
	3/4 NPT	8.50	2.219	1.125	2.56
	1 NPT	15.75	2.969	1.375	2.062
SSMQ	1/8 NPT	0.50	0.625	0.500	.325
	1/4 NPT	0.75	0.938	0.625	.538
	3/8 NPT	1.50	0.969	0.750	.569
	1/2 NPT	3.25	1.406	0.875	.906
	3/4 NPT	5.25	1.500	1.125	.960
	1 NPT	12.00	2.375	1.375	1.437



SlimPRO™ Misting Spray Nozzles

Type MC

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen is the leading designer and manufacturer of misting nozzles in the world. The quality and precision of our misting nozzles cannot be matched by any other nozzle manufacturer. What sets Steinen apart is our ability to produce nozzles that can create a finely atomized spray with uniform droplet size, consistent spray angles, and at lower pressures than other manufacturer's nozzles. The result is a nozzle that offers the highest performance in a wide variety of settings and applications.



Type SlimPRO™ (Type MC) The Ultimate Misting Nozzle

- Available in the popular .008", .012", .016" and .020 sizes with 10/24 UNC thread (most widely used mist nozzles for misting systems)
- Nozzle is 100% high grade 303 stainless steel for the longest life and corrosion resistance. Nickel plated brass nozzles look good on the outside, but it's the inside where the spray is formed that counts – demand the best!
- Incredibly long internal porous bronze filter handles the toughest water conditions
- High performance spray and huge filter outlasts & outperforms other misting nozzles
- Mists from water pressure as low as 40 PSI and can handle high pressures up to 500 PSI
- Nozzle installation and filter replacement without any tools – everything is "finger tight"



Nozzle "Size"	PSI (BAR)	40 (2.75)	100 (6.9)	200 (13.8)	300 (20.7)	500 (34.5)	1,000 (69)
0.20 mm	LPH	0.95	1.5	2.1	2.6	3.3	4.7
0.008 in.	GPH	0.25	0.40	0.56	0.68	0.88	1.3
0.30 mm	LPH	1.4	2.2	3.1	3.8	4.9	7.0
0.012 in.	GPH	0.37	0.59	0.83	1.0	1.3	1.9
0.40 mm	LPH	1.9	3.0	4.2	5.3	6.6	9.5
0.016 in.	GPH	0.50	0.80	1.1	1.4	1.8	2.5
0.50 mm	LPH	2.5	3.8	5.7	6.8	8.7	12.5
0.020 in.	GPH	0.65	1.0	1.5	1.8	2.3	3.3

Thread: 10/24 UNC Liquid Temperature Range: 32F (0C) to 350F (175C)

Mist cooling nozzles, spray misters, mist sprays, water mist nozzles - whatever you call them, Steinen makes high performance versions of these common nozzles.

What makes Steinen mist cooling sprays different?

- Highest quality spray nozzle made from high grade stainless steel, not plated brass
- Steinen nozzles withstand a variety of harsh liquids, including high temperature water (up to 350°F)
- Wider spray angle for better spray distribution; consistent micro droplet size; and a uniform spray pattern
- All nozzles come with an integrated filter to minimize clogging and maximize nozzle life

Steinen's MistJet® misting nozzle, Type MN, is a miniature-sized nozzle tip with removable internal components and a 200 mesh filter with a 1/8 inch NPT male thread. The Type MN nozzle is available in an 80 degree spray angle in flow rates from 0.50 to 5.0 gallons per hour (GPH).

Type MN - miniature sized nozzle tip

Four additional types of misting nozzles

- **Type P** - compact size nozzle tip
- **Type A** - single nozzle tip
- **Type AF** - single nozzle tip/female adaptor
- **Type AM** - single nozzle tip/male adaptor



Type MN

Spray Characteristics

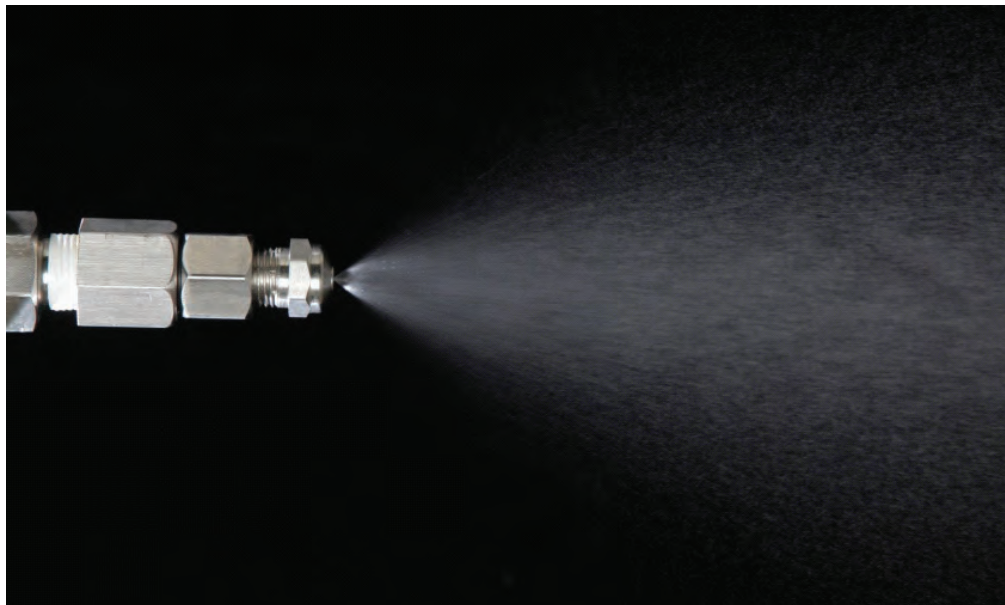
Uniform mist spray pattern with a fine micro-atomized mist spray. Spray angles of 80 degrees is available measured @ 150 P.S.I.

Construction

Type MN consists of a compact nozzle body with 1/8" male NPT connection and 200 mesh strainer.

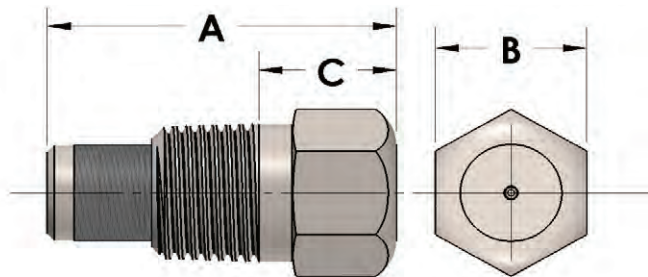
Materials

Nozzle is furnished in 303 stainless steel. Brass and 316 stainless steel are available upon request.





Nozzle Identifier	Approx. Orifice Diameter	Capacity in Gallons per Hour (at various pressures in pounds per square inch)								Spray Angles
		40 psi	60 psi	80 psi	100 psi	125 psi	150 psi	250 psi	500 psi	
0.50	0.010	0.50	0.61	0.71	0.79	0.88	0.97	1.3	1.8	Available in Spray Angles of 80 degrees. Other angles available upon request.
0.75	0.012	0.75	0.92	1.1	1.2	1.3	1.5	1.9	2.7	
1.00	0.014	1.0	1.2	1.4	1.6	1.8	1.9	2.5	3.5	
1.50	0.020	1.5	1.8	2.1	2.4	2.7	2.9	3.8	5.3	
2.00	0.024	2.0	2.4	2.8	3.2	3.5	3.9	5.0	7.1	
2.50	0.028	2.5	3.1	3.5	4.0	4.4	4.8	6.3	8.8	
3.00	0.028	3.0	3.7	4.2	4.7	5.3	5.8	7.5	10.6	
3.50	0.031	3.5	4.3	4.9	5.5	6.2	6.8	8.8	12.4	
4.00	0.036	4.0	4.9	5.7	6.3	7.1	7.7	10.0	14.1	
4.50	0.040	4.5	5.5	6.4	7.1	8.0	8.7	11.3	15.9	
5.00	0.040	5.0	6.1	7.1	7.9	8.8	9.7	12.5	17.7	



Type	Pipe Size	Net Weight Oz.	A	B	C
MN	1/8 NPT	0.50	0.938	0.438	0.375

Steinen offers a wide variety of misting nozzles to satisfy almost any requirement. Nozzles are offered in five different configurations, three different spray angles, numerous flow rates from 0.37 gallons per hour (GPH) up to 124 GPH, at pressures from 40 PSI to 500 PSI, in various types of stainless steel.

Five types of nozzle construction are available:

Type P - compact sized nozzle tip

Also Available:

- **Type MN** - miniature sized nozzle tip with removable internal components
- **Type A** - single nozzle tip
- **Type AF** - single nozzle tip/female adaptor
- **Type AM** - single nozzle tip/male adaptor



**Type
P**

Spray Characteristics

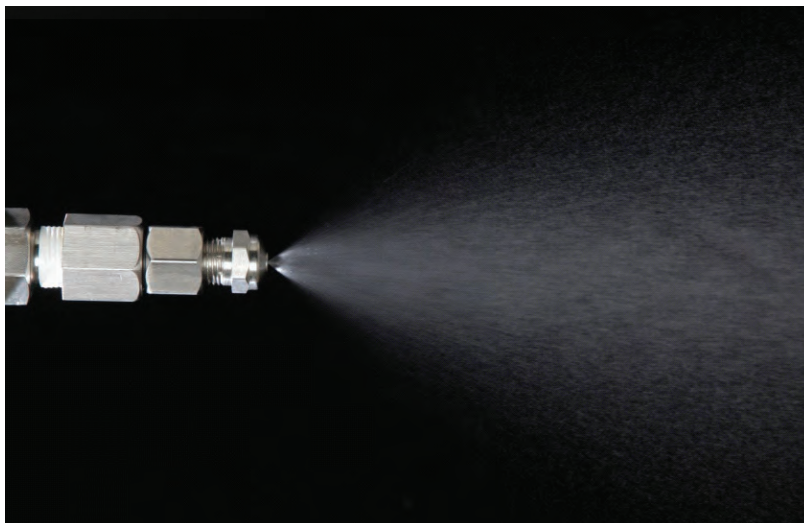
Uniform mist spray pattern with a fine micro-atomized mist spray. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I. Materials.

Construction

Type P consists of a compact nozzle body with 1/4" male NPT connection and 100 mesh strainer (for capacities of 0.37, 0.50 and 0.75 GPH, a 200 mesh strainer is furnished).

Materials

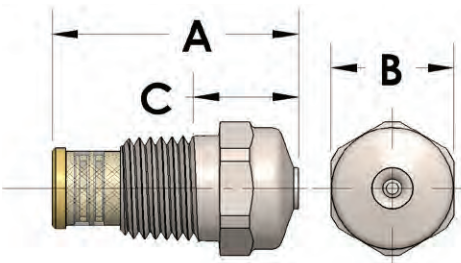
Nozzle is furnished in 303 stainless steel. (316 stainless steel upon request).



Mist Jet Type P



Nozzle Identifier	Approx. Orifice Diameter	Capacity in Gallons per Hour (at various pressures in pounds per square inch)								Spray Angles
		40 psi	60 psi	80 psi	100 psi	125 psi	150 psi	250 psi	500 psi	
0.37	0.009	0.37	0.45	0.52	0.59	0.65	0.72	0.93	1.3	Available in Spray Angles of 70, 80 and 90 degrees.
0.50	0.010	0.50	0.61	0.71	0.79	0.88	0.97	1.3	1.8	
0.75	0.012	0.75	0.92	1.1	1.2	1.3	1.5	1.9	2.7	
1.00	0.014	1.0	1.2	1.4	1.6	1.8	1.9	2.5	3.5	
1.50	0.020	1.5	1.8	2.1	2.4	2.7	2.9	3.8	5.3	
2.00	0.024	2.0	2.4	2.8	3.2	3.5	3.9	5.0	7.1	
2.50	0.028	2.5	3.1	3.5	4.0	4.4	4.8	6.3	8.8	
3.00	0.028	3.0	3.7	4.2	4.7	5.3	5.8	7.5	10.6	
3.50	0.031	3.5	4.3	4.9	5.5	6.2	6.8	8.8	12.4	
4.00	0.036	4.0	4.9	5.7	6.3	7.1	7.7	10.0	14.1	
4.50	0.040	4.5	5.5	6.4	7.1	8.0	8.7	11.3	15.9	
5.00	0.040	5.0	6.1	7.1	7.9	8.8	9.7	12.5	17.7	
5.50	0.040	5.5	6.7	7.8	8.7	9.7	10.7	13.8	19.4	
6.00	0.043	6.0	7.3	8.5	9.5	10.6	11.6	15.0	21.2	
6.50	0.046	6.5	8.0	9.2	10.3	11.5	12.6	16.3	23.0	
7.00	0.046	7.0	8.6	9.9	11.1	12.4	13.6	17.5	24.7	
7.50	0.046	7.5	9.2	10.6	11.9	13.3	14.5	18.8	26.5	
8.00	0.052	8.0	9.8	11.3	12.6	14.1	15.5	20.0	28.3	
8.50	0.052	8.5	10.4	12.0	13.4	15.0	16.5	21.3	30.1	
9.00	0.052	9.0	11.0	12.7	14.2	15.9	17.4	22.5	31.8	
10.0	0.059	10.0	12.2	14.1	15.8	17.7	19.4	25.0	35.4	
12.0	0.063	12.0	14.7	17.0	19.0	21.2	23.2	30.0	42.4	
13.0	0.067	13.0	15.9	18.4	20.6	23.0	25.2	32.5	46.0	
14.0	0.067	14.0	17.1	19.8	22.1	24.7	27.1	35.0	49.5	
15.0	0.070	15.0	18.4	21.2	23.7	26.5	29.0	37.5	53.0	
16.0	0.073	16.0	19.6	22.6	25.3	28.3	31.0	40.0	56.6	
18.0	0.076	18.0	22.0	25.5	28.5	31.8	34.9	45.0	63.6	
20.0	0.076	20.0	24.5	28.3	31.6	35.4	38.7	50.0	70.7	
22.0	0.078	22.0	26.9	31.1	34.8	38.9	42.6	55.0	77.8	
24.0	0.082	24.0	29.4	33.9	37.9	42.4	46.5	60.0	84.9	
26.0	0.082	26.0	31.8	36.8	41.1	46.0	50.3	65.0	91.9	
28.0	0.086	28.0	34.3	39.6	44.3	49.5	54.2	70.0	99.0	
30.0	0.089	30.0	36.7	42.4	47.4	53.0	58.1	75.0	106.1	
35.0	0.096	35.0	42.9	49.5	55.3	61.9	67.8	87.5	123.7	



Type	Pipe Size	Net Weight	A	B	C
P	1/4 NPT	0.75	1.937	0.625	0.500



Mist-Jet[®] Misting / Fogging Nozzle

Type **A**
Type **AF**
Type **AM**

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com




Steinen offers a wide variety of misting nozzles to satisfy almost any requirement. Nozzles are offered in five different configurations, three different spray angles, numerous flow rates from 0.37 gallons per hour (GPH) up to 124 GPH, at pressures from 40 PSI to 500 PSI, in various types of stainless steel.

- **Type A** - single nozzle tip
- **Type AF** - single nozzle tip/female adaptor
- **Type AM** - single nozzle tip/male adaptor

Also available

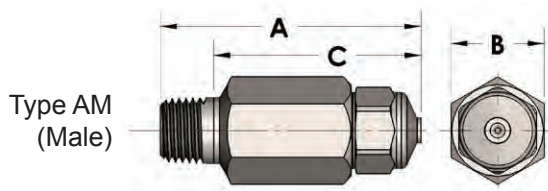
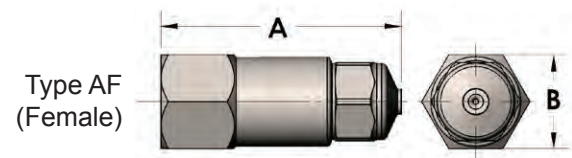
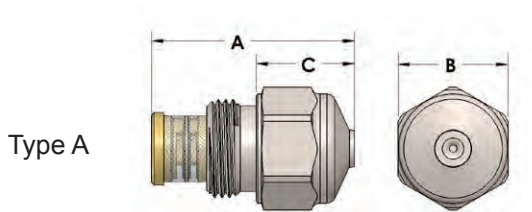
- **Type P** - compact sized nozzle tip with 1/4 NPT thread
- **Type MN** - miniature sized nozzle tip with removable internal components and 1/8 NPT thread



	Spray Characteristics	Construction	Materials
 <p>Type A</p>	Uniform hollow cone spray pattern with a fine micro-at-omized mist spray. Fog-like spray results with pressures over 150 P.S.I. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I.	Consists of basic nozzle tip with 9/16"-24 UNF connection and 100 mesh strainer (for capacities of 0.37, 0.50 and 0.75 GPH, a 200 mesh strainer is furnished).	Nozzle tip (all types) are furnished in 416 or 303 stainless steel.
 <p>Type AF</p>	Uniform hollow cone spray pattern with a fine micro-at-omized mist spray. Fog-like spray results with pressures over 150 P.S.I. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I.	Consists of Type A nozzle tip/strainer and 1/8" or 1/4" female adapter.	Nozzle tip (all types) are furnished in 303 stainless steel. Type AF (Female) adaptors are furnished in 303 stainless steel, brass or nickel plated brass.
 <p>Type AM</p>	Uniform hollow cone spray pattern with a fine micro-at-omized mist spray. Fog-like spray results with pressures over 150 P.S.I. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I.	Consists of Type A nozzle tip/strainer and 1/8", 1/4" or 3/8" NPT male adapter.	Nozzle tip (all types) are furnished in 303 stainless steel. Type AM (Male) adaptors are furnished in 303 stainless steel, brass or nickel plated brass.



Nozzle Identifier	Approx. Orifice Diameter	Capacity in Gallons per Hour (at various pressures in pounds per square inch)								Spray Angles
		40 psi	60 psi	80 psi	100 psi	125 psi	150 psi	250 psi	500 psi	
0.37	0.009	0.37	0.45	0.52	0.59	0.65	0.72	0.93	1.3	Available in Spray Angles of 70, 80 and 90 degrees.
0.50	0.010	0.50	0.61	0.71	0.79	0.88	0.97	1.3	1.8	
0.75	0.012	0.75	0.92	1.1	1.2	1.3	1.5	1.9	2.7	
1.00	0.014	1.0	1.2	1.4	1.6	1.8	1.9	2.5	3.5	
1.50	0.020	1.5	1.8	2.1	2.4	2.7	2.9	3.8	5.3	
2.00	0.024	2.0	2.4	2.8	3.2	3.5	3.9	5.0	7.1	
2.50	0.028	2.5	3.1	3.5	4.0	4.4	4.8	6.3	8.8	
3.00	0.028	3.0	3.7	4.2	4.7	5.3	5.8	7.5	10.6	
3.50	0.031	3.5	4.3	4.9	5.5	6.2	6.8	8.8	12.4	
4.00	0.036	4.0	4.9	5.7	6.3	7.1	7.7	10.0	14.1	
4.50	0.040	4.5	5.5	6.4	7.1	8.0	8.7	11.3	15.9	
5.00	0.040	5.0	6.1	7.1	7.9	8.8	9.7	12.5	17.7	
5.50	0.040	5.5	6.7	7.8	8.7	9.7	10.7	13.8	19.4	
6.00	0.043	6.0	7.3	8.5	9.5	10.6	11.6	15.0	21.2	
6.50	0.046	6.5	8.0	9.2	10.3	11.5	12.6	16.3	23.0	
7.00	0.046	7.0	8.6	9.9	11.1	12.4	13.6	17.5	24.7	
7.50	0.046	7.5	9.2	10.6	11.9	13.3	14.5	18.8	26.5	
8.00	0.052	8.0	9.8	11.3	12.6	14.1	15.5	20.0	28.3	
8.50	0.052	8.5	10.4	12.0	13.4	15.0	16.5	21.3	30.1	
9.00	0.052	9.0	11.0	12.7	14.2	15.9	17.4	22.5	31.8	
10.0	0.059	10.0	12.2	14.1	15.8	17.7	19.4	25.0	35.4	
12.0	0.063	12.0	14.7	17.0	19.0	21.2	23.2	30.0	42.4	
13.0	0.067	13.0	15.9	18.4	20.6	23.0	25.2	32.5	46.0	
14.0	0.067	14.0	17.1	19.8	22.1	24.7	27.1	35.0	49.5	
15.0	0.070	15.0	18.4	21.2	23.7	26.5	29.0	37.5	53.0	
16.0	0.073	16.0	19.6	22.6	25.3	28.3	31.0	40.0	56.6	
18.0	0.076	18.0	22.0	25.5	28.5	31.8	34.9	45.0	63.6	
20.0	0.076	20.0	24.5	28.3	31.6	35.4	38.7	50.0	70.7	
22.0	0.078	22.0	26.9	31.1	34.8	38.9	42.6	55.0	77.8	
24.0	0.082	24.0	29.4	33.9	37.9	42.4	46.5	60.0	84.9	
26.0	0.082	26.0	31.8	36.8	41.1	46.0	50.3	65.0	91.9	
28.0	0.086	28.0	34.3	39.6	44.3	49.5	54.2	70.0	99.0	
30.0	0.089	30.0	36.7	42.4	47.4	53.0	58.1	75.0	106.1	
35.0	0.096	35.0	42.9	49.5	55.3	61.9	67.8	87.5	123.7	



Type	Pipe Size	Net Weight Oz.	A	B	C
A	9/16-24NEF-2	0.75	1.141	0.625	0.500
AM	1/8 NPT	2.50	1.938	0.750	1.600
	1/4 NPT	2.50	2.125	0.750	1.600
	3/8 NPT	2.50	1.891	0.750	1.600
AF	1/8 NPT	2.50	1.844	0.750	---
	1/4 NPT	2.50	1.844	0.750	---



Mosquito Spray Nozzles

Type **WC**

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen is the leading designer and manufacturer of mosquito misting nozzles. Made in the USA, all of our mosquito misting nozzles are designed, manufactured and shipped from our New Jersey factory.

The Steinen nickel stainless steel (303 grade) drip-free mosquito misting nozzle has been refined over the years by our nozzle engineers to reward you with a flawless performance, accurate flow and spray angle, and instant shut-off at the orifice in less than 250 ms. The check valve located in the mister nozzle body instantaneously stops dripping and leaking which is necessary in such situations where any drips and leaks are unacceptable.

All Steinen mosquito nozzles have the same flow rates, despite the nozzle body style. Additionally, All nozzles are offered in either high (standard) or low pressure versions, and in either 70° (standard) or 80° wide spray angles. Three types of mosquito misting spray nozzles are available.

Mosquito Nozzle flow Rates (all Nozzles)				
Cracking Pressure 80-85 PSI - Closing Pressure 40-45 PSI				
<i>(based on a gradual increase/decrease of pressure applied to nozzle)</i>				
PSI	GPH	GPM	ML/MIN	OZ/MIN
100	0.27	0.004	16	0.56
120	0.41	0.007	26	0.87
140	0.50	0.008	31	1.06
160	0.57	0.009	36	1.20
180	0.63	0.011	40	1.35
200	0.70	0.012	44	1.50

Type Slim PRO™ The Ultimate Mosquito Nozzle

- Incorporates the time tested, high performance WC nozzle spray tip – without the bulky ‘wrench hex’ exterior.
- Internal nozzle tip components (valve, check valve, spring) interchangeable with standard Steinen WC nozzles.
- Appearance similar to slimline nozzles but with the high performance of the 4023 style nozzle - fits all existing slimline hardware .
- Incorporates the longest filter every used in a mosquito nozzle to minimize clogging and nozzle maintenance.
- High performance spray and check valve outlasts & outperforms slimline nozzles
- Nozzle installation and filter replacement without any tools – everything is “finger tight”.



Type WC 4023 Express™

- Incorporates the time tested, high performance WC nozzle tip into an adapter that fits all existing slimline hardware.
- High performance spray and check valve outlasts & outperforms slimline nozzles.
- Replaceable integrated bronze filter provides >800% greater filter area over slimline ‘white dots’ for long life and less clogging.
- Nozzle installation and filter replacement without any tools – everything is “finger tight”.
- Nickel plated adapter for long lasting appearance.
- Less expensive than buying 4023 type nozzles with standard adapters.



Type WC 4023

- New internal brass valve to minimize corrosion for longer nozzle life.
- Smoother slot finish minimizes potential clogging of valve slots.
- Available with either porous bronze (standard) or mesh filter.
- Male or female 1/8 & 1/4 inch and a 3/8 inch male only brass or 303 stainless steel barrel adapters available (see photo).



Adapter



Micro-Flo™, Twin Filter & Standard Oil Burner Nozzles

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

Steinen manufactures oil burner nozzles and accessories, industrial nozzles and mining industry nozzles. Our products have demonstrated a worldwide reputation for quality, performance and reliability. They are sold domestically and internationally through a company sales organization, independent sales representatives and distributors.

Steinen's worldwide reputation for quality and reliability is a direct result of our 100% devotion to producing the best oil burner nozzle on the market. Today, virtually every major burner manufacturer relies on Steinen nozzles to achieve optimum burner performance.

Our state-of-the-art facilities are available to meet our customers' most demanding requirements. As one of the few nozzle manufacturers who fabricate all components on-site, Steinen completely controls every aspect of nozzle fabrication, ensuring the consistent quality and reliability that make Steinen the number one choice. Every Steinen nozzle is performance tested for flow capacity, spray characteristics and spray angle before leaving our factory. This assures our customers the quality, performance and consistency they have come to expect from Steinen nozzles.



Micro-Flo™

Flow Rates
.20-.35 GPH

Steinen has the technical and engineering expertise to produce ultra-low flow Micro-Flo™ nozzles.

- The Micro-Flo™ nozzles were developed with the world's leading manufacturers of high efficiency burners.
- All Micro-Flo™ nozzles contain super-fine twin filters – standard
- Micro-Flo™ nozzles are 100% factory tested to ensure perfect performance.

Twin Filter

Flow Rates
.40-.55 GPH

The Twin-Filter Nozzle's advanced design allows the interior of the nozzle to stay clean longer:

- Increased total filtering capacity by 62%
- Inner filter nominal filtration rate of 25 microns
- Anti-clog design stays cleaner longer insuring longer nozzle life
- 100% electronic and visual testing
- Trouble free operation thanks to stainless steel construction

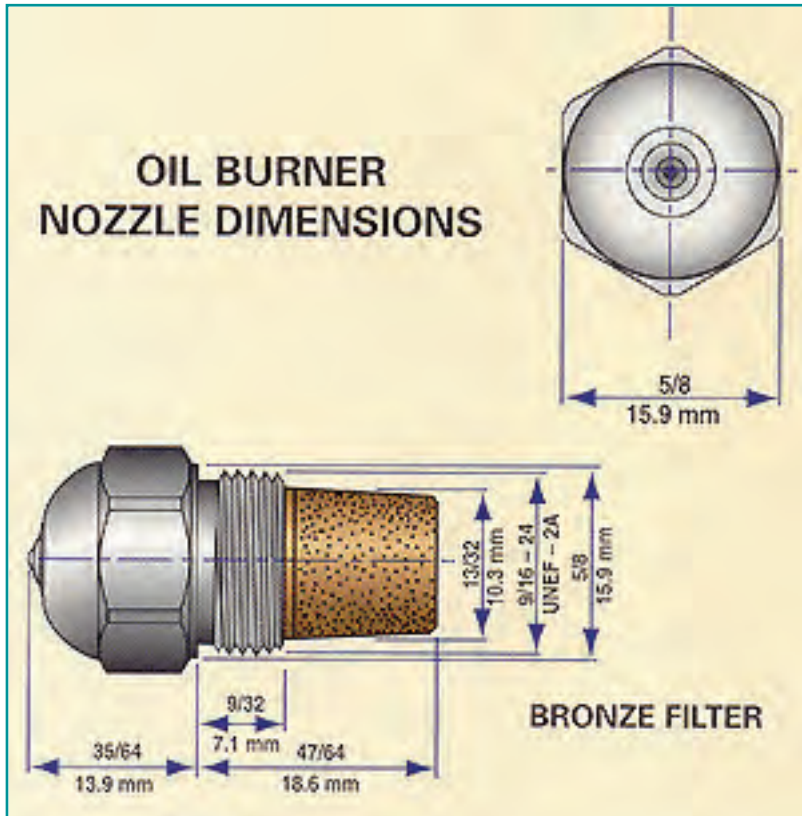
Standard

Flow Rates
.60-28 GPH

Steinen's Standard Oil Burner Nozzle's are available in a wide variety of designs to suit any burner application.

- Solid Cone (Type S and SS) nozzles from .60 – 28 G.P.H.
- Hollow Cone (Type H) nozzles from .60 – 2.25 G.P.H.
- Partial Hollow (Type PH) nozzles from .60 – 10.0 G.P.H.
- Unique Solid/Hollow (Type Q) nozzles from .60 – 3.0 G.P.H.
- 100% electronic and visual testing with filter

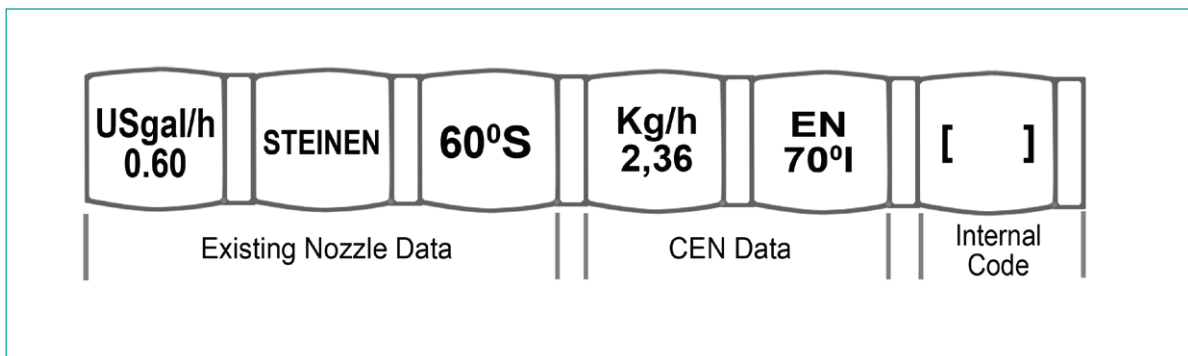
Nozzle CEN Markings



Steinen manufactures the only stainless steel nozzles to conform with the European CEN Standard EN 293 and EN 299

To meet the requirements and definitions of the CEN standard, dimensions, capacity (in Kg/h) and spray pattern/spray angle of each nozzle must be carefully and consistently designed and tested to meet stringent European CEN standards.

Each nozzle is stamped with required CEN data to assure you this is the best performing nozzle on the market today. The performance of Steinen oil burner nozzles remains unchanged as far as capacity, atomizing angle and spray pattern are concerned.





Micro-Flo™, Twin Filter & Standard Oil Burner Nozzles

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Capacity/Size Chart

STEINEN OIL BURNER NOZZLES

Availability of sizes and nozzle types

- Micro-Flo® MST & MHT Nozzles
- Twin Filter ST, HT & QT Nozzles
- Standard S, SS, H, PH & Q Nozzles

GPH		TYPE S / ST / MST NOZZLE				
100 PSI	10 BAR	30°	45°	60°	70°	80°
.20	0,79					
.25	1,01					
.30	1,15					
.35	1,37					
.40	1,59					
.45	1,76					
.50	1,91					
.55	2,12					
.60	2,36					
.65	2,59					
.75	2,89					
.85	3,31					
.90	3,57					
1.00	3,73					
1.10	4,33					
1.20	4,63					
1.25	4,83					
1.35	5,19					
1.50	5,78					
1.65	6,36					
1.75	6,74					
2.00	7,66					
2.25	8,61					
2.50	9,57					
2.75	10,53					
3.00	11,49					
3.50	13,40					
4.00	15,31					

GPH		TYPE H / HT / MHT NOZZLE				
100 PSI	10 BAR	45°	60°	70°	80°	90°
.20	0,79					
.25	1,01					
.30	1,15					
.35	1,37					
.40	1,59					
.45	1,76					
.50	1,91					
.55	2,12					
.57 MH	2,19					
.60	2,36					
.65	2,59					
.70	2,71					
.75	2,89					
.80	3,11					
.85	3,31					
.90	3,57					
1.00	3,73					
1.10	4,33					
1.25	4,83					
1.35	5,19					
1.50	5,78					
1.65	6,36					
1.75	6,74					
2.00	7,66					
2.25	8,61					

GPH		TYPE SS NOZZLE		
100 PSI	10 BAR	45°	60°	80°
4.50	17,23			
5.00	19,14			
5.50	21,06			
6.00	22,97			
6.50	24,89			
7.00	26,80			
7.50	28,71			
8.00	30,63			
9.00	34,46			
10.00	38,28			
11.00	42,11			
12.00	45,94			
13.00	49,77			
14.00	53,60			
15.00	57,43			
16.00	61,26			
17.00	65,08			
18.00	68,91			
20.00	76,57			
22.00	84,23			
24.00	91,88			
26.00	99,54			
28.00	107,20			

GPH		TYPE Q/QT NOZZLE		
100 PSI	10 BAR	45°	60°	80°
.50	1,91			
.60	2,36			
.65	2,59			
.75	2,89			
.85	3,31			
1.00	3,73			
1.10	4,33			
1.25	4,83			
1.35	5,19			
1.50	5,78			
1.65	6,36			
1.75	6,74			
2.00	7,66			
2.25	8,61			
2.50	9,57			
2.75	10,53			
3.00	11,49			

GPH		TYPE PH NOZZLE	
100 PSI	10 BAR	60°	80°
2.50	9,57		
2.75	10,53		
3.00	11,49		
3.50	13,40		
4.00	15,31		
4.50	17,23		
5.00	19,14		
5.50	21,06		
6.00	22,97		
6.50	24,89		
7.00	26,80		
7.50	28,71		
8.00	30,63		
9.00	34,46		
10.00	38,28		



Micro-Flo™, Twin Filter & Standard Oil Burner Nozzles

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Cross Reference Chart

The cross reference chart provides a quick look up of different manufacturers nozzles. This is only a starting point in determining the proper replacement nozzle.

Contact Steinen for more information if you wish to cross reference another oil burner nozzle to a Steinen nozzle.

INTERCHANGE CHART

TYPE	FLOW CAPACITY	TYPE	*TWIN FILTERS AVAILABLE	STEINEN
DELAVANA	A .40-2.25	H*	Hollow Cone	○
	A 2.50-10.00	PH	More Hollow	○
	B .40-4.00	S*	Solid Cone	●
	B 4.50-28.00	SS	Semi-Solid Cone	●
	W .50-3.00	Q*	Special	●
	MH .57	MH	Mobile Home	○
DANFOSS	S .40-4.00	S*	Solid Cone	●
	H .40-2.25	H*	Hollow Cone	○
	H 2.50-10.00	PH	More Hollow	○
	B 4.50-28.00	SS	Semi-Solid Cone	●
HAGO	H .40-2.25	H*	Hollow Cone	○
	H 2.50-10.00	PH	More Hollow	○
	B .40-4.00	S*	Solid Cone	●
	SS .50-3.00	Q*	Special	●
	SS 4.50-28.00	SS	Semi-Solid Cone	●
P ALL	S*	Solid Cone	●	
FLUIDICS	SF .40-.55	S*	Solid Cone	●
	S .60-4.00	S	Solid Cone	●
	HF .40-.55	H*	Hollow Cone	○
	H .60-2.25	H	Hollow Cone	○

Oil Burner Nozzles

Since 1907
Quality, Technology, Efficiency -
Because it Does Matter

WM. STEINEN MFG. CO.

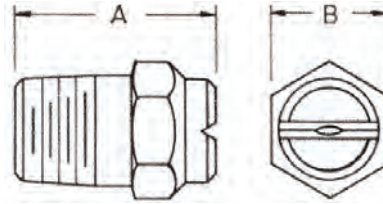
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Phone: 973-887-6400 • FAX: 973-887-4632
www.steinen.com

Twin-Filter Nozzle*



100 Series - 1/4" NPT

100 Series 1/4" FanJet flat spray nozzles are available in **Brass, Nickel Plated Brass and 303 Stainless Steel**. Nozzles can also be supplied with **Mesh filters** if desired.



DIMENSIONS

Inlet			
Conn. (in.)	A (in.)	B (in.)	
Series 100	1/4"	15/16"	9/16"

		SPRAY ANGLE								PART NUMBERS
		15°	25°	40°	50°	65°	80°	90°	110°	
FLOW RATE	0.3 GPM	1503	2503	4003	5003	6503	8003	9003	11003	
	0.4 GPM	1504	2504	4004	5004	6504	8004	9004	11004	
	0.5 GPM	1505	2505	4005	5005	6505	8005	9005	11005	
	0.6 GPM	1506	2506	4006	5006	6506	8006	9006	11006	
	0.8 GPM	1508	2508	4008	5008	6508	8008	9008	11008	
	1.0 GPM	1510	2510	4010	5010	6510	8010	9010	11010	
	1.5 GPM	1515	2515	4015	5015	6515	8015	9015	11015	
	2.0 GPM	1520	2520	4020	5020	6520	8020	9020	11020	
	3.0 GPM	1530	2530	4030	5030	6530	8030	9030	11030	
	4.0 GPM	1540	2540	4040	5040	6540	8040	9040	11040	
	5.0 GPM	1550	2550	4050	5050	6550	8050	9050	11050	
6.0 GPM	1560	2560	4060	5060	6560	8060	9060	11060		
7.0 GPM	1570	2570	4070	5070	6570	8070	9070	11070		
8.0 GPM	1580	2580	4080	5080	6580	8080	9080	11080		

PART PREFIX (add in front of the above part numbers)

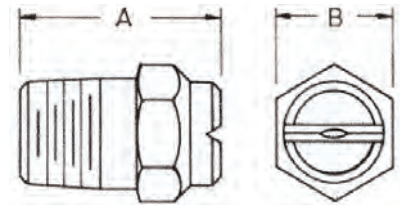
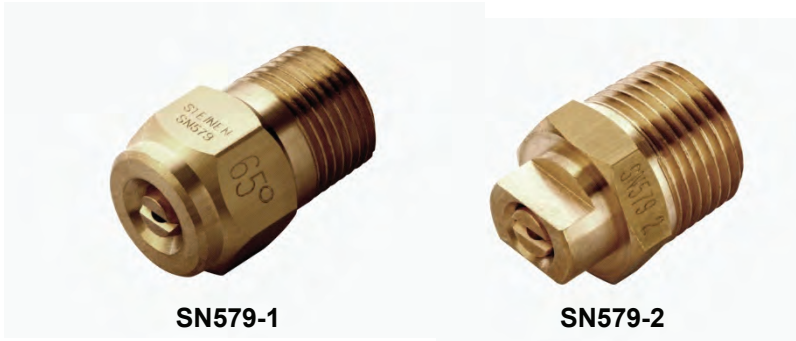
101- (Brass nozzle; 1.0 GPM and larger; no filter)	104- (303 Stainless Steel nozzle; 1.0 GPM and larger; no filter)
107- (Brass nozzle; <1.0 GPM and smaller; no filter)	111- (303 Stainless Steel nozzle; <1.0 GPM and smaller; no filter)
108- (Brass nozzle; all sizes; with a mesh filter)	112- (303 Stainless Steel nozzle; all sizes; with a mesh filter)
109- (Nickel Plated Brass nozzle; all sizes; no filter)	
110- (Nickel Plated Brass nozzle; all sizes; with a mesh filter)	

HAHN



FanJet SN-579 nozzles are manufactured by HAHN Industries, a Division of Steinen. These nozzles are replacements for equivalent Spraying Systems Type H-U and H-VV VeeJet® nozzles.

Type SN579 3/8" FanJet flat spray nozzles are available in two body styles. These nozzles are available in Brass or 303 Stainless Steel.



DIMENSIONS				
	Inlet Conn. (in.)	A (in.)	B (in.)	Wrench Flats
Type SN579-1	3/8"	1-3/16"	3/4"	n/a
Type SN579-2	3/8"	15/16"	11/16"	5/16"

SN579 -1 & -2 Spray Angle Table

Type SN579-1 or 2	SPRAY ANGLE	
	40 PSI	80 PSI
15 degrees	15°	18°
25 degrees	25°	30°
40 degrees	40°	45°
50 degrees	50°	55°
65 degrees	65°	72°
80 degrees	80°	85°
90 degrees	90°	95°

SN579 -1 & -2 Flow Rate Table

Type SN579-1 or 2	RATED CAPACITY (gallons/minute)			
	40 PSI	60 PSI	80 PSI	100 PSI
-05	0.50	0.61	0.71	0.79
-06	0.60	0.73	0.85	0.95
-08	0.80	0.98	1.13	1.26
-10	1.00	1.22	1.41	1.58

Part number is the spray angle desired plus the flow rate.
Example: 65 degree nozzle flowing .6 GPM is a 6506 nozzle



Fan-Jet® Flat Spray Nozzles

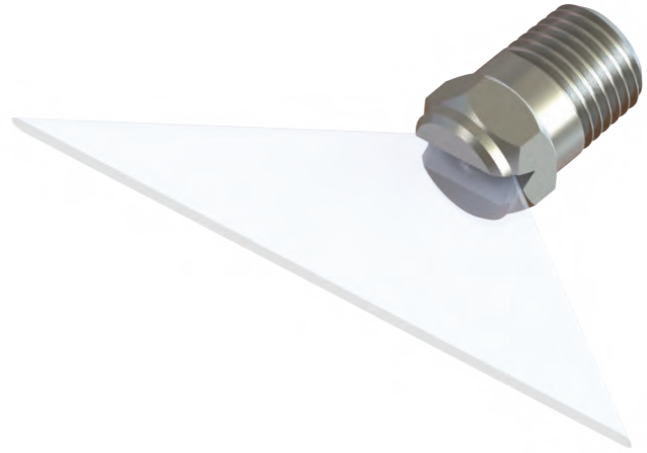
Type V

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Steinen offers a wide variety of flat spray nozzles to satisfy almost any requirement. Nozzles are offered in 10 different spray angles from 0° to 110°, numerous flow rates from 0.20 gallons per minute (GPM) up to 50 GPM, at pressures from 5 PSI to 1,000 PSI, in various types of steel, stainless steel, brass and CPVC.

Nozzle construction available:

- **Type V** - single piece nozzle



Type V

Spray Characteristics

Flat spray nozzle with high impact, sharply defined spray pattern without heavy edges. This type of high velocity spray is very useful in cleaning and coating applications. Spray angles of 0, 15, 25, 40, 50, 65, 80 and 90 degrees are available.

Construction

One-piece design with no cores or internal members to clog. Nozzles available in 1/8", 1/4", 3/8", 1/2", 3/4", and 1" NPT male pipe thread.

Materials

These nozzles are available in 303 & 316 Stainless Steel, mild steel, brass and CPVC.



Fan-Jet® Flat Spray Nozzles

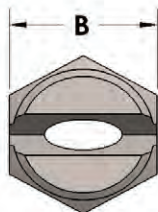
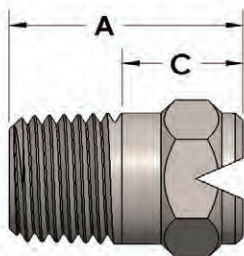
Type **V**



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Nozzle Identifier	Pipe Size Availability <small>✓ indicates available</small>						Approx. Orifice Diameter	Capacity in Gallons per Minute (at various pressures in pounds per square inch)						
	1/8	1/4	3/8	1/2	3/4	1		10 psi	20 psi	40 psi	60 psi	100 psi	120 psi	150 psi
0.20	✓	✓					0.036	0.10	0.14	0.20	0.25	0.32	0.35	0.39
0.25	✓	✓					0.039	0.13	0.18	0.25	0.31	0.39	0.43	0.48
0.30	✓	✓					0.043	0.15	0.21	0.30	0.37	0.47	0.51	0.58
0.35	✓	✓					0.047	0.18	0.25	0.35	0.43	0.55	0.61	0.68
0.40	✓	✓					0.052	0.20	0.28	0.40	0.49	0.63	0.69	0.78
0.45	✓	✓					0.055	0.22	0.32	0.45	0.55	0.71	0.77	0.88
0.50	✓	✓					0.058	0.25	0.35	0.50	0.61	0.79	0.87	0.97
0.55	✓	✓					0.060	0.28	0.39	0.55	0.67	0.87	0.96	1.0
0.60	✓	✓					0.062	0.30	0.42	0.60	0.73	0.95	1.0	1.1
0.65	✓	✓					0.064	0.32	0.46	0.65	0.80	1.0	1.1	1.2
0.70	✓	✓					0.067	0.35	0.50	0.70	0.86	1.1	1.1	1.3
0.80	✓	✓					0.072	0.40	0.56	0.80	0.98	1.2	1.3	1.5
0.90	✓	✓					0.076	0.46	0.64	0.90	1.1	1.4	1.5	1.7
1.0	✓	✓	✓				0.078	0.50	0.70	1.0	1.2	1.6	1.7	1.9
1.5	✓	✓	✓				0.093	0.75	1.1	1.5	1.8	2.4	2.5	2.9
2.0	✓	✓	✓				0.109	1.0	1.4	2.0	2.5	3.2	3.5	3.9
3.0	✓	✓	✓				0.125	1.5	2.1	3.0	3.7	4.7	5.0	5.8
4.0	✓	✓	✓				0.156	2.0	2.8	4.0	4.9	6.3	6.8	7.7
5.0		✓	✓	✓			0.171	2.4	3.5	5.0	6.1	7.9	8.7	9.7
6.0		✓	✓	✓			0.187	3.0	4.2	6.0	7.3	9.5	10.0	11.6
7.0		✓	✓	✓			0.203	3.5	4.9	7.0	8.6	11.1	11.9	13.5
8.0		✓	✓	✓			0.218	4.0	5.7	8.0	9.8	12.6	13.6	15.4
9.0		✓	✓	✓			0.234	4.5	6.3	9.0	11.0	14.1	15.6	17.4
10.0			✓	✓			0.250	4.9	7.1	10.0	12.2	15.8	17.3	19.4
11.0			✓	✓			0.265	5.5	8.0	11.0	13.4	17.3	18.9	21.1
12.0			✓	✓			0.265	6.0	8.5	12.0	14.7	19.0	20.0	23.2
13.0			✓	✓			0.281	6.5	9.1	13.0	13.2	20.6	21.9	25.3
14.0			✓	✓			0.281	7.0	9.9	14.0	17.1	22.1	24.0	27.0
15.0			✓	✓			0.296	7.4	10.6	15.0	18.4	23.7	26.0	29.0
20.0				✓	✓		0.344	13.0	14.1	20.0	24.5	31.6	34.4	38.7
25.0				✓	✓		0.375	12.5	17.5	25.0	30.5	39.5	43.5	48.5
30.0					✓		0.421	15.0	21.2	30.0	36.8	47.4	52.0	58.0
35.0					✓		0.453	17.5	24.5	35.0	42.7	55.3	60.9	67.9
40.0					✓		0.500	20.0	28.3	40.0	49.0	63.2	68.8	77.4
50.0						✓	0.515	25.0	35.4	50.0	61.2	79.1	86.6	96.8

Flow and angle data for higher pressures available upon request



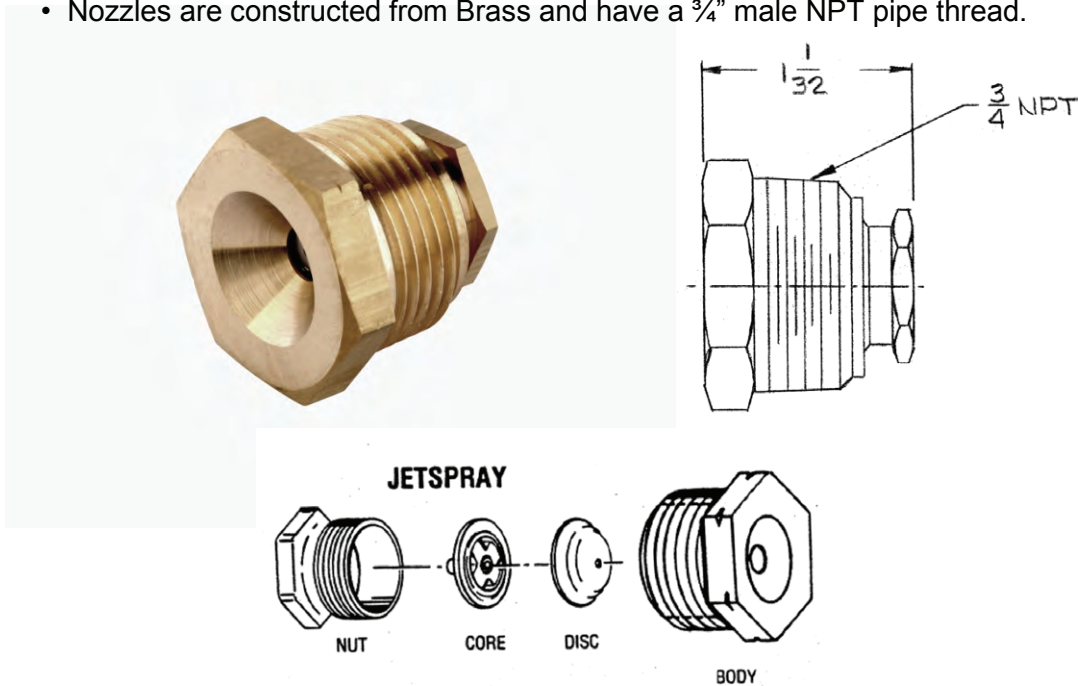
Pipe Size	Net Weight Oz.	A	B	C
1/8 NPT	0.25	0.750	0.438	0.450
1/4 NPT	0.75	0.938	0.563	0.460
3/8 NPT	1.25	1.188	0.750	0.750
1/2 NPT	2.00	1.250	0.875	0.825
3/4 NPT	2.75	1.500	1.063	0.985
1 NPT	7.00	1.375	1.375	1.280

TYPE 331 (Steinen/Hahn)

Type 331 JETSPRAY™ full cone nozzles produce a precision uniform cone spray, have removable discs and cores for easy cleaning, and are generally used in mining and other applications.

The Type 331 JETSPRAY™ nozzle is manufactured by HAHN Industries, a Division of Steinen.

- The Type 331 JETSPRAY™ is available in three different flow rates.
- Each nozzle has a removable disc and core for easy cleaning.
- Nozzles are constructed from Brass and have a 3/4" male NPT pipe thread.

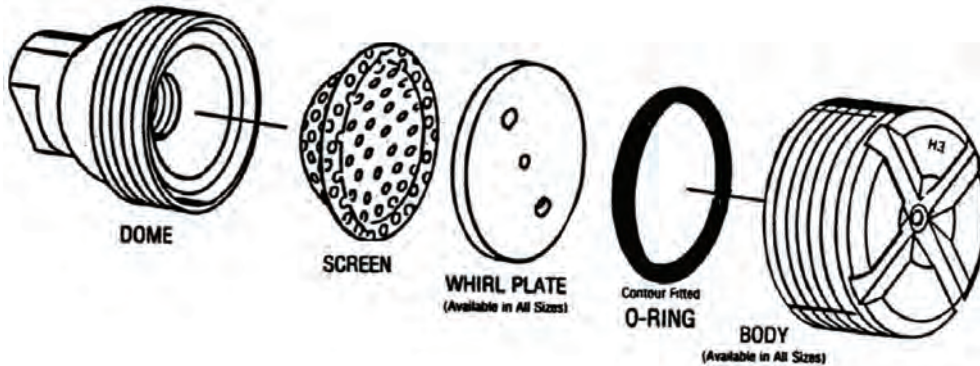
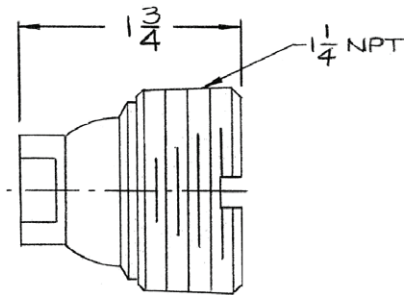


Nozzle Type	Steinen Part #	RATED CAPACITY (gallons/minute)					Spray Angle (approx.)
		20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
JETSPRAY #3 Disc	331-00321	0.21	0.30	0.37	0.42	0.47	30°
JETSPRAY #5 Disc	331-00521	0.57	0.80	0.98	1.13	1.26	40°
JETSPRAY #6 Disc	331-00621	0.71	1.00	1.23	1.41	1.58	50°

TYPE "334" (Steinen/Hahn)

Type 334 full cone nozzles produce a uniform cone spray and are generally used in mining and other applications for dust suppression.

Nozzle Description: **Dome Shaped Type 334** nozzles are precision spray nozzles with removable whirlplates and screens for easy cleaning and replacement utilizing a 1 1/4" outside thread.



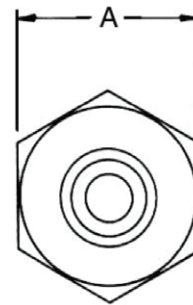
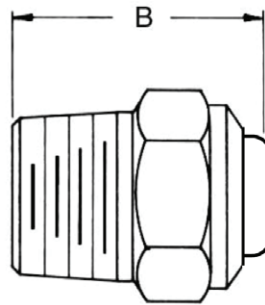
Type (Part Number):	RATED CAPACITY (gallons/minute)				SPRAY ANGLE	
	40 PSI	60 PSI	80 PSI	100 PSI	40 PSI	80 PSI
Type #3-1 (334-05301)	0.20	0.25	0.29	0.32	40°	50°
Type #3-3 (334-05303)	0.32	0.40	0.45	0.51	20°	25°
Type #4-1 (334-05401)	0.32	0.40	0.45	0.51	60°	60°
Type #5-1 (334-05501)	0.42	0.52	0.60	0.66	65°	70°
Type #5-7 (334-05507)	0.85	1.02	1.17	1.30	35°	40°

Many other sizes of the Dome Shaped Type 334 nozzle are available upon request.

TYPE "L" (Steinen/Hahn)

Type "L" full cone nozzles produce a uniform cone spray and are generally used in mining and other applications for dust suppression. Type L full cone nozzles are very similar to Steinen's full line of Solid-Jet® nozzles, except Type L nozzles have unique flow rates and spray angles as specified by some mining equipment manufacturers.

Type L nozzles are brass and available in 1/4" NPT (141-xxxxx) or 3/8" NPT (241-xxxxx).



DIMENSIONS & WEIGHTS

	Material	Inlet			Weight Approx.(oz.)
		Conn. (in.)	A (in.)	B (in.)	
Type L (141-xxxxx)	Brass	1/4"	5/8"	15/16"	3/4
Type L (241-xxxxx)	Brass	3/8"	3/4"	31/32"	1 1/2

RATED CAPACITY (gallons/minute)

Type (Part Number):	RATED CAPACITY (gallons/minute)				Spray Angle (approx.)
	40 PSI	60 PSI	80 PSI	100 PSI	
Type L #1 (141-03152)	0.20	0.24	0.28	0.32	40°
Type L #6.5 (141-09452)	1.30	1.60	1.84	2.06	65°
Type L #10 (141-10952)	1.90	2.33	2.69	3.00	75°
New! Type L #7 (241-13550)	1.35	1.65	1.91	2.13	50°
Type L #9.5 (241-10944)	1.80	2.20	2.55	2.85	60°

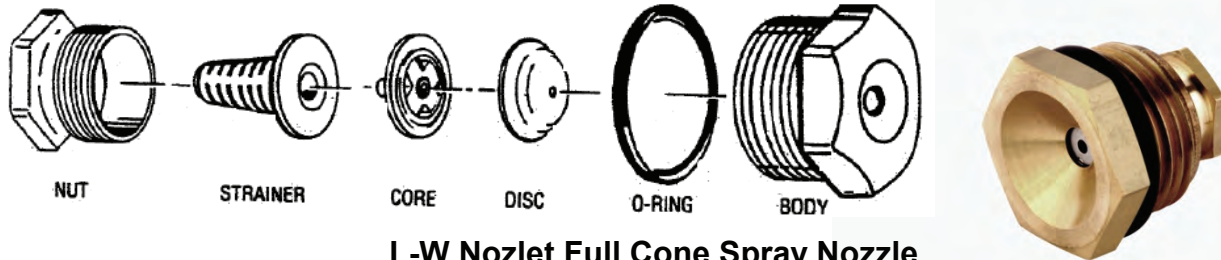
HAHN



TYPE "L-W" (Steinen/Hahn)

Type "L-W" full cone nozzles produce a uniform cone spray and are generally used in mining and other applications for dust suppression.

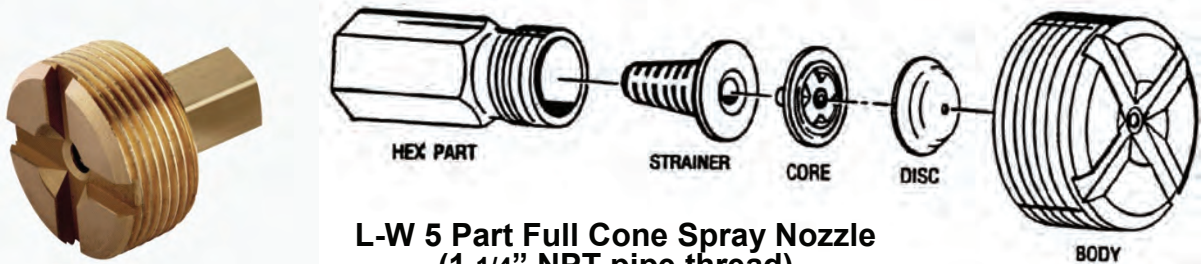
Nozzle Description: L-W Nozlet is a precision spray nozzle with a removable disc, core and strainer for easy cleaning and replacement utilizing a 1 1/16" outside thread.



**L-W Nozlet Full Cone Spray Nozzle
(1 1/16" NPT pipe thread)**

Type (Part Number):	RATED CAPACITY (gallons/minute)				SPRAY ANGLE	
	40 PSI	60 PSI	80 PSI	100 PSI	40 PSI	80 PSI
Type LW #3 (332-00321)	0.30	0.37	0.42	0.47	15°	25°
Type LW #5 (332-00521)	0.80	0.98	1.13	1.26	35°	40°

Nozzle Description: L-W 5 Part Nozzle is a precision spray nozzle with a removable disc, core and strainer for easy cleaning and replacement utilizing a 1 1/4" outside thread.



**L-W 5 Part Full Cone Spray Nozzle
(1 1/4" NPT pipe thread)**

Type (Part Number):	RATED CAPACITY (gallons/minute)				SPRAY ANGLE	
	40 PSI	60 PSI	80 PSI	100 PSI	40 PSI	80 PSI
Type LW #3 (335-00321)	0.30	0.37	0.42	0.47	15°	25°
Type LW #4 (335-00421)	0.55	0.67	0.78	0.87	25°	30°
Type LW #5 (335-00521)	0.80	0.98	1.13	1.26	35°	40°
Type LW #6 (335-00621)	1.05	1.29	1.48	1.66	40°	43°

HAHN

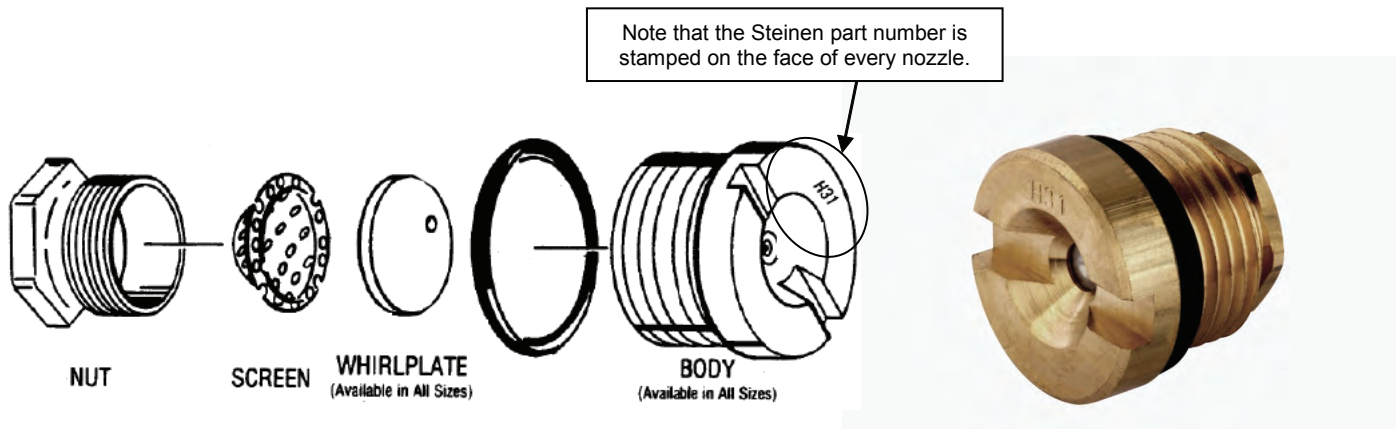


TYPE H (Steinen/Hahn)

Type H Whirlplate Nozlet nozzles produce a uniform cone spray and are generally used in mining and other applications for dust suppression.

The **Type H Whirlplate Nozlet** nozzle is manufactured by HAHN Industries, a Division of Steinen.

Nozzle Description: **Whirlplate Nozlet** is a precision spray nozzle with a removable whirlplate and screen for easy cleaning and replacement utilizing a 1 1/16" - 11½TPI outside thread.



Nozzle Type	Steinen Part #	RATED CAPACITY (gallons/minute)					Spray Angle (approx.)
		20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
H-31	333-05311	0.29	0.38	0.44	0.49	0.53	30°
H-51	333-05511	0.54	0.74	0.88	1.02	1.13	40°
H-53	333-05513	0.57	0.78	0.94	1.08	1.20	45°

For an H-31 solid cone, order Steinen Part # 333-005311. For an H-51 solid cone, order Steinen Part # 333-005511. For an H-53 solid cone, order Steinen Part # 333-005513.

TYPE "PB" (Steinen/Hahn)

Type "PB" full cone nozzles spray 2.7 gallons per minute in a uniform wide angle (120°) cone spray and are generally used in mining and other applications for dust suppression.

The Type "PB" nozzle is manufactured by HAHN Industries, a Division of Steinen.

- The Type "PB" nozzle is Steinen Part # 143-14132.
- Steinen sells a similar nozzle with a hex head as Part # SSMW270000201.

WIDE FULL CONE
PATTERN

Type "PB" nozzle

Part # 143-14132

Alternative:

Solid-Jet® nozzle

Part # SSMW270000201

WIDE FULL CONE
PATTERN



Steinen Part #	DIMENSIONS			
	Material	Inlet Conn. (in.)	Length	Wrench Flats/ or Hex
143-14132	Brass	1/4"	57/64"	13/32" Flats (four sided)
SSMW270000201	Brass	1/4"	15/16"	5/8" (Hex)



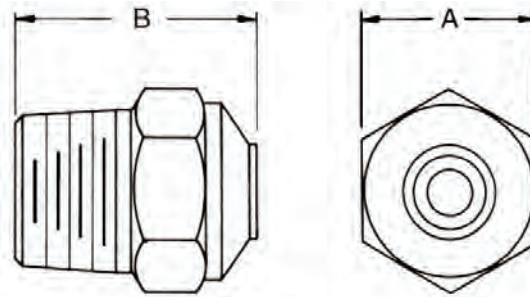
Nozzle Type	Steinen Part #	RATED CAPACITY (gallons/minute)					Spray Angle (approx.)
		20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
Type PB™	143-14132	1.91	2.70	3.31	3.82	4.27	120°
Solid-Jet®	SSMW270000201	1.91	2.70	3.31	3.82	4.27	120°

TYPE "S" (Steinen/Hahn)

Type "S" full cone nozzles produce a uniform wide angle (120°) cone spray and are generally used in mining and other applications for dust suppression.

The **Type "S"** nozzle is manufactured by HAHN Industries, a Division of Steinen.

- The **Type "S"** nozzle is Steinen Part # 147-00043.
- Steinen has also sold this nozzle under Part # SN180-00-000-01.
- This nozzle is also manufactured for **Joy Mining (Joy Part # 01566237-0000)**.
- **All of the above part numbers are the same nozzle.**



Type "S" nozzle
Part # 147-00043

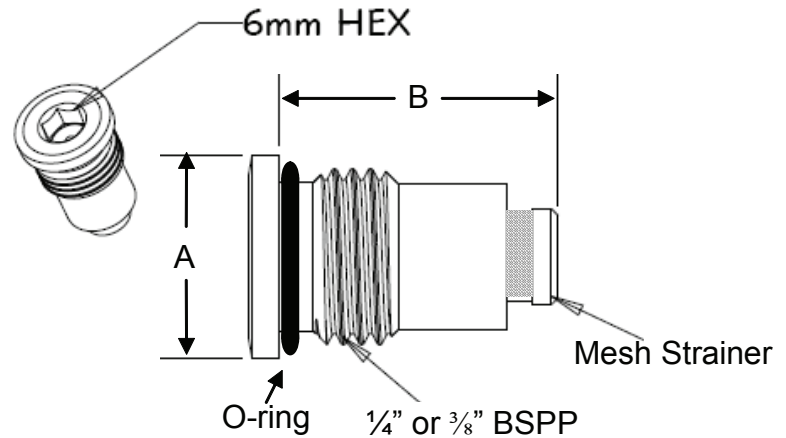
DIMENSIONS & WEIGHTS					
	Material	Inlet			Weight
		Conn. (in.)	A (in.)	B (in.)	Approx.(oz.)
147-00043	Brass	1/4"	5/8"	15/16"	3/4

Nozzle Type	Steinen Part #	RATED CAPACITY (gallons/minute)					Spray Angle (approx.)
		20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
"S"	147-00043	1.10	1.5	1.80	2.10	2.4	120°

TYPE "X" FLUSH-FIT™

Type "X" FLUSH-FIT™ spray nozzles produce a precision uniform full cone spray are generally used in Highwall and Longwall mining applications.

The Type X FLUSH-FIT™ nozzle is available in Brass or 303 stainless steel in 1/4" and 3/8" BSPP (British Parallel Thread). The Type "X" FLUSH-FIT™ nozzle is manufactured by HAHN Industries, a Division of Steinen.



DIMENSIONS

	Inlet		
	Conn. (in.)	A (in.)	B (in.)
Type X FLUSH FIT™	1/4" BSPP	19/32"	13/16"
Type X FLUSH FIT™	3/8" BSPP	23/32"	13/16"

Nozzle Type	Steinen Part #	ORIFICE		RATED CAPACITY (gallons/minute)				
		MM	Inches	40 PSI	100 PSI	150 PSI	200 PSI	250 PSI
Type X FLUSH FIT™	600-xxyy-06	0.6	0.024	0.08	0.14	0.18	0.21	0.23
Type X FLUSH FIT™	600-xxyy-07	0.7	0.028	0.12	0.19	0.23	0.27	0.30
Type X FLUSH FIT™ (1/32")	600-xxyy-08	0.8	0.032	0.16	0.25	0.30	0.34	0.38
Type X FLUSH FIT™	600-xxyy-10	1.0	0.039	0.24	0.36	0.42	0.49	0.54
Type X FLUSH FIT™	600-xxyy-12	1.2	0.047	0.37	0.54	0.63	0.72	0.81
Type X FLUSH FIT™	600-xxyy-15	1.5	0.059	0.50	0.65	0.79	0.91	1.04
Type X FLUSH FIT™ (1/16")	600-xxyy-16	1.6	0.063	0.51	0.68	0.83	0.96	1.08
Type X FLUSH FIT™	600-xxyy-20	2.0	0.079	0.52	0.78	0.95	1.09	1.23
Type X FLUSH FIT™ (3/32")	600-xxyy-24	2.4	0.094	0.67	1.00	1.25	1.43	1.60

(xx) 1/4" use 02; 3/8" use 03

(yy) Brass use 01; 303 Stainless Steel use 03

eg. 1/4" in 303 stainless steel with a 1.0mm orifice is 600-0203-10

**We also have 1/4" BSPP Plugs!
Part #600-0201-00**

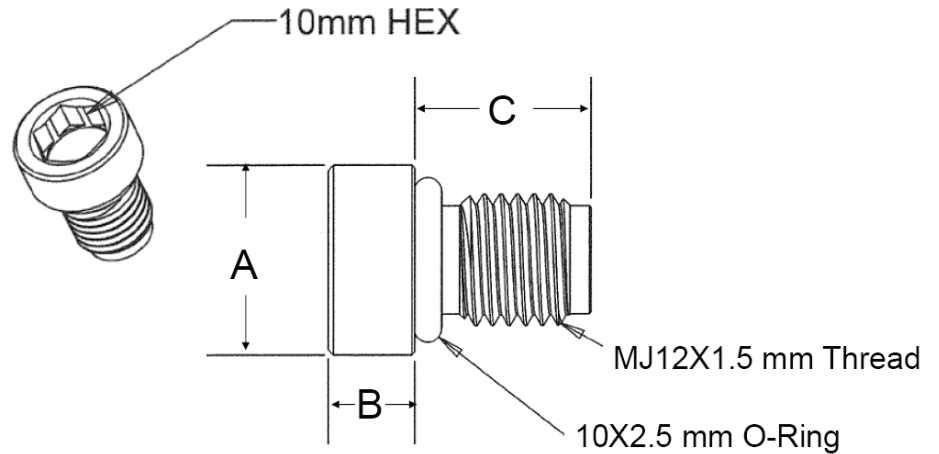
HAHN



TYPE "X" HEX-DRIVE™

Type "X" HEX-DRIVE™ spray nozzles produce a precision uniform full cone spray are generally used in dust control mining applications.

The Type X HEX-DRIVE™ nozzle is available in Brass or 303 stainless steel in MJ12X1.5mm metric thread. The Type "X" HEX-DRIVE™ nozzle is manufactured by HAHN Industries, a Division of Steinen.



Nozzle Type	Steinen Part #	ORIFICE		RATED CAPACITY (gallons/minute)					
		MM	Inches	40 PSI	100 PSI	150 PSI	200 PSI	250 PSI	300 PSI
Type X HEX-DRIVE™	601-MM01-08	0.8	0.032	0.15	0.24	0.29	0.34	0.38	0.41
		SPRAY ANGLE (approx.)		RATED CAPACITY (liters/minute)					
				2.8 BAR	6.9 BAR	10.3 BAR	13.8 BAR	17.2 BAR	20.7 BAR
			30°	0.57	0.91	1.10	1.29	1.44	1.55



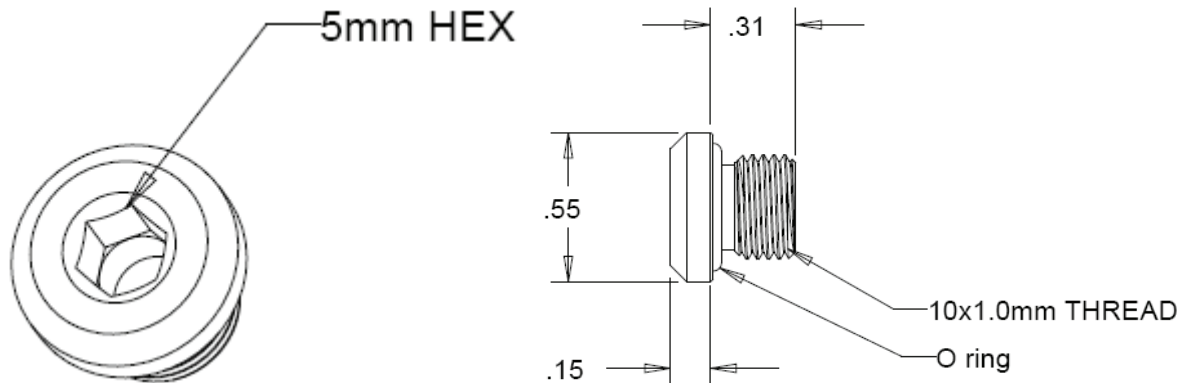
DIMENSIONS

Inlet		A (in.)	B (in.)	C (in.)
Type X HEX-DRIVE™	MJ12X1.5 mm Thread	11/16"	5/16"	5/8"
		A (mm)	B (mm)	C (mm)
		17.5 mm	7.9 mm	15.9 mm

FLUSH-FIT™ METRIC PLUG

The FLUSH-FIT™ Plug is designed to be a low profile manifold plug.

The FLUSH-FIT™ Plug is available in **Brass** or **303 stainless steel** in **10 MM (Metric Thread)**. The FLUSH-FIT™ Plug is manufactured by HAHN Industries, a Division of Steinen.



Part Numbers:	Material	Thread (metric)
602-M10-01-00	Brass	10 mm
602-M10-03-00	303 SS	10 mm

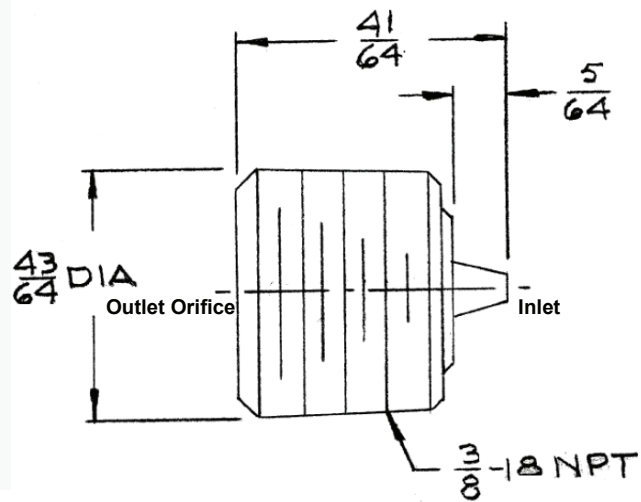


TYPE "X" TRIM-JET™

Type "X" TRIM-JET™ flush fit spray nozzles produce a precision uniform full cone spray are generally used in Highwall and Longwall mining applications.

The Type "X" TRIM-JET™ nozzle is manufactured by HAHN Industries, a Division of Steinen.

- The Type X TRIM-JET™ is available in Brass or 303 Stainless Steel in 3/8" NPT male thread.

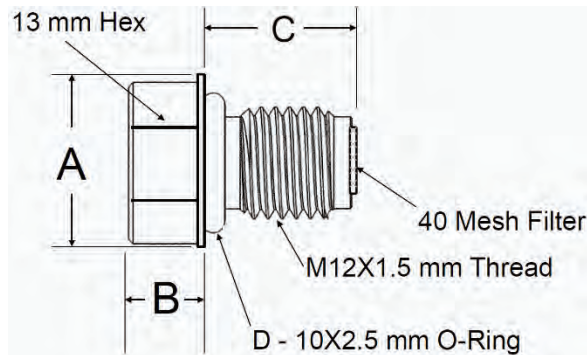
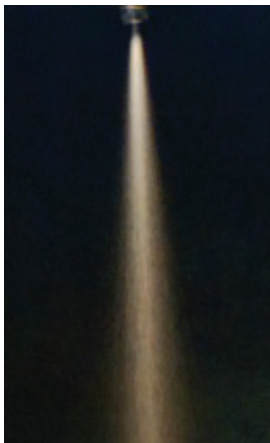


Nozzle Type	Steinen Part #	INLET		OUTLET ORIFICE		RATED CAPACITY (gallons/minute)					SPRAY ANGLE (approx.)
		Decimal	Fraction	Decimal	Fraction	20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
3/8" Type X TRIM JET™	270-20050	.063"	1/16"	0.08	5/64"	0.64	0.90	1.10	1.27	1.42	40°
	270-21050	.094"	3/32"	0.08	5/64"	1.10	1.25	1.53	1.77	1.98	45°

TYPE "K" HEX-DRIVE™

Type "K" HEX-DRIVE™ spray nozzles produce a precision uniform narrow angle full cone spray, generally used in dust control mining applications.

The Type K HEX-DRIVE™ nozzle is available in Brass or 303 stainless steel in M12 X 1.5mm thread. The Type "K" HEX-DRIVE™ nozzle is manufactured by HAHN Industries, a Division of Steinen.



Nozzle Type	Steinen Part #	ORIFICE		RATED CAPACITY (gallons/minute)					
		MM	Inches	40 PSI	100 PSI	150 PSI	200 PSI	250 PSI	300 PSI
Type K HEX-DRIVE™	611-MM01-10	1.0	0.0393	0.19	0.29	0.36	0.41	0.46	0.51
		SPRAY ANGLE (approx.)		RATED CAPACITY (liters/minute)					
		15°		2.8 BAR	6.9 BAR	10.3 BAR	13.8 BAR	17.2 BAR	20.7 BAR
				0.72	1.10	1.36	1.55	1.74	1.86

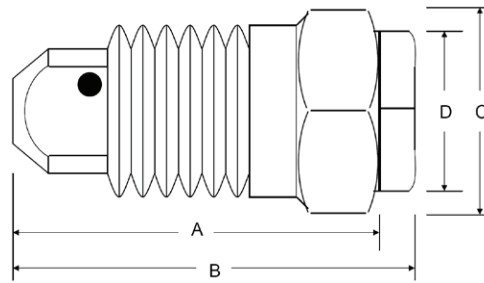


DIMENSIONS

Type K HEX-DRIVE™	Inlet				
	Thread	A (in.)	B (in.)	C (in.)	D (in.)
	M12X1.5 m m	11/16"	25/64"	5/8"	10X2.5m m o-ring
		A (mm)	B (mm)	C (mm)	D (mm)
		17.5 mm	10 mm	16 mm	10X2.5m m o-ring

TYPE SH (Steinen/Hahn)

Steinen Spraylet™ hollow cone nozzles are non-clogging because they do not contain any cores or internal vanes. All of these nozzles are of two piece design with removable caps for easy cleaning. They are offered in a variety of flow rates from 0.20 gallons per minute (GPM) up to 2.0 GPM (.75 liters/minute to 7.6 LPM), and in a variety of spray angles from 25° to 95°. The Spraylet™ body style allows for spray to exit the nozzle parallel to the pipe thread for a 'direct on' hollow cone spray.



DIMENSIONS & WEIGHTS

Nozzle Type	Material	Inlet Conn. (in.)	A (in.)	B (in.)	C (in.)	D (in.)	Weight Approx. (oz.)
All SH nozzles	Brass	3/8"	1 3/32"	1 7/32"	11/16"	1/2"	1

Steinen/Hahn	Spraying Sys	Joy Mining	BODY/TIP ORIFICE		RATED CAPACITY (gallons/minute)				SPRAY ANGLE	
			Decimal	Fraction	10 PSI	20 PSI	40 PSI	100 PSI	20 PSI	80 PSI
SH 2	BD 2		.078/.078	5/64 - 5/64	0.20	0.28	0.40	0.63	60°	70°
SH 3-1	BD 3-1	01566237-0007	.094/.063	3/32 - 1/16	-	0.18	0.26	0.40	49°	65°
SH 3-2	BD 3-2	01566237-0051	.094/.078	3/32 - 5/64	0.22	0.31	0.44	0.69	57°	74°
SH 3	BD 3	01566237-0006	.094/.094	3/32 - 3/32	0.30	0.42	0.60	0.95	64°	77°
SH 3-5	BD 3-5		.094/.125	3/32 - 1/8	0.34	0.48	0.68	1.1	80°	95°
SH 3-8	BD 3-8	01566237-0012	.094/.156	3/32 - 5/32	0.41	0.58	0.82	1.3	80°	95°
SH 5-2	BD 5-2		.109/.078	7/64 - 5/64	-	0.38	0.54	0.85	50°	65°
SH 5-3	BD 5-3		.109/.094	7/64 - 3/32	-	0.52	0.74	1.2	59°	75°
SH 5	BD 5	01566237-0047	.109/.125	7/64 - 1/8	0.50	0.71	1.0	1.6	67°	76°
SH 8	BD 8		.156/.156	5/32 - 5/32	0.80	1.1	1.6	2.5	65°	70°
SH 10	BD 10		.156/.172	5/32 - 11/64	1.0	1.4	2.0	3.2	65°	72°
SH 20-1	n/a		.156/.063	5/32 - 1/16	0.24	0.33	0.47	0.74	15°	25°
SH 20-2	n/a		.156/.078	5/32 - 5/54	0.38	0.54	0.75	1.20	25°	45°
SH 20-3	n/a		.156/.094	5/32 - 3/32	0.62	0.88	1.24	2.00	35°	45°

The Type SH Spraylet™ nozzle is manufactured by HAHN Industries, a Division of Steinen. These nozzles are direct replacements for equivalent Spraying Systems type BD WhirlJet® nozzles.

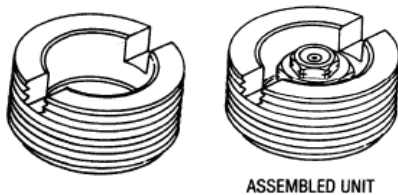
WhirlJet® is a registered trademark of the Spraying Systems Co.



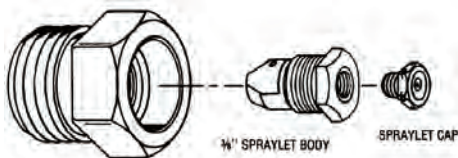
SPRAYLET™ *HOLLOW CONE* NOZZLES

ADAPTERS

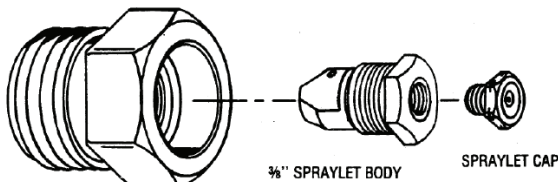
The Type SH Spraylet nozzle is manufactured by HAHN Industries, a Division of Steinen. Adapters for use with this nozzle converts the nozzles from a 3/8" male thread to either 3/4", 1-1/16" or 1-1/4" outside thread.



Above - Spraylet adapter (363-00000) with a 1 1/4" outside thread.



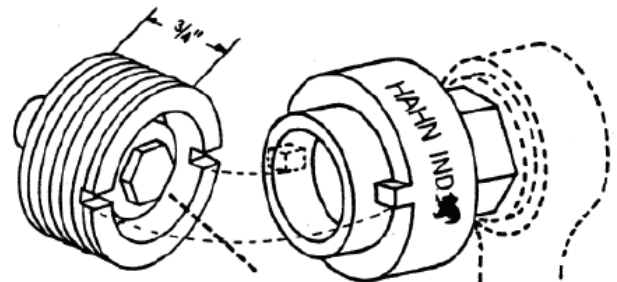
Above - Spraylet adapter (367-00000) with a 3/4" outside thread.



Above - Spraylet adapter (368-00000) with a 1 1/16" outside thread.



Above – Shows a Type SH 3-2 Spraylet nozzle as it is being screwed into an adapter with a 1 1/4" outside thread (Part # 363-00000).



1 1/4" ADAPTER HEAD TOOL

Adapter Head Tool (Part # 501-00001)
for installing adapter Part # 363-00000.

DIMENSIONS

Adapter Part Numbers:	Material	Spraylet Nozzle Conn. (in.)	Adapter Thread Conn. (in.)
Part # 363-00000	Brass	3/8"	1 - 1/4"
Part # 367-00000	Brass	3/8"	3/4"
Part # 368-00000	Brass	3/8"	1 - 1/16"

HAHN

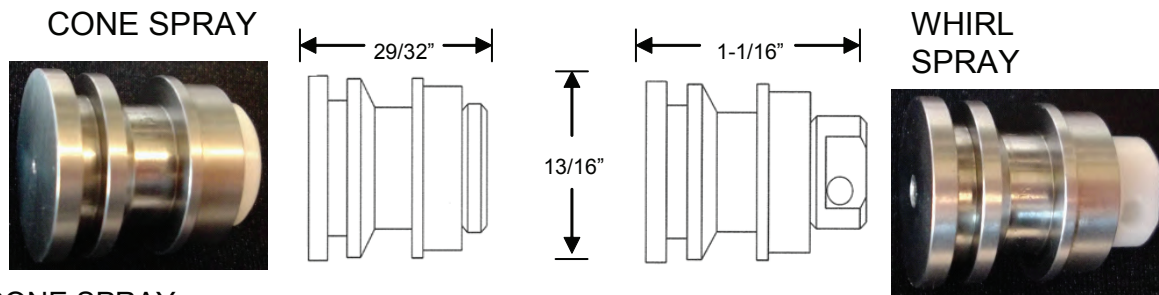
QUALITY SERVICE



FLUSH-FIT™ TYPE “603-2801”

Type 603-2801 FLUSH-FIT™ staple locking spray nozzles produce a precision uniform spray are generally used in Longwall and Continuous Miner applications.

The Type 603-2801 FLUSH-FIT™ staple locking nozzle is available in 303 stainless steel, manufactured by HAHN Industries, a Division of Steinen.



CONE SPRAY

Steinen Part #	INLET DIAMETERS (2 inlets at 35° angles with a .032" center inlet)		OUTLET ORIFICE		RATED CAPACITY (gallons/minute)					SPRAY ANGLE (approx.)
	Decimal	Fraction	MM	Inches	40 PSI	100 PSI	150 PSI	200 PSI	250 PSI	@ 100 PSI
603-2801-10-SC	.078"	5/64"	1.0	0.039	0.25	0.38	0.46	0.53	0.59	25°
603-2801-12-1.2C	.078"	5/64"	1.2	0.047	0.28	0.45	0.55	0.63	0.70	30°
603-2801-16-CC (1/16")	.078"	5/64"	1.6	0.063	0.62	0.93	1.13	1.30	1.45	50°
603-2801-20-MC	.078"	5/64"	2.0	0.079	0.78	1.19	1.45	1.67	1.86	60°
603-2801-24-DC (3/32")	.078"	5/64"	2.4	0.094	1.07	1.50	1.83	2.11	2.35	65°
603-2801-30-TC	.078"	5/64"	3.0	0.118	1.14	1.74	2.13	2.45	2.73	65°

WHIRL SPRAY

Steinen Part #	INLET		OUTLET ORIFICE		RATED CAPACITY (gallons/minute)					SPRAY ANGLE (approx.)
	Decimal	Fraction	MM	Inches	40 PSI	100 PSI	150 PSI	200 PSI	250 PSI	@ 100 PSI
603-2801-10-SW	.125"	1/8"	1.0	0.039	0.22	0.33	0.40	0.46	0.51	25°
603-2801-12-1.2W	.125"	1/8"	1.2	0.047	0.24	0.38	0.46	0.53	0.59	30°
603-2801-16-CW (1/16")	.125"	1/8"	1.6	0.063	0.40	0.62	0.75	0.86	0.96	40°
603-2801-20-MW	.125"	1/8"	2.0	0.079	0.53	0.82	1.00	1.15	1.28	45°
603-2801-24-DW (3/32")	.125"	1/8"	2.4	0.094	0.68	1.06	1.29	1.48	1.65	60°
603-2801-30-TW	.125"	1/8"	3.0	0.118	0.88	1.37	1.67	1.92	2.14	70°

JET SPRAY (No inlet orifice insert)

Steinen Part #	INLET	OUTLET ORIFICE		RATED CAPACITY (gallons/minute)					SPRAY ANGLE (approx.)
	No Insert	MM	Inches	40 PSI	100 PSI	150 PSI	200 PSI	250 PSI	@ 100 PSI
603-2801-10-SJ	None	1.0	0.039	0.22	0.34	0.41	0.47	0.52	0°
603-2801-12-1.2J	None	1.2	0.047	0.25	0.40	0.48	0.55	0.61	0°
603-2801-16-CJ (1/16")	None	1.6	0.063	0.58	0.91	1.11	1.28	1.43	0°
603-2801-20-MJ	None	2.0	0.079	0.78	1.22	1.49	1.72	1.92	0°
603-2801-24-DJ (3/32")	None	2.4	0.094	1.24	1.92	2.35	2.71	3.02	0°
603-2801-30-TJ	None	3.0	0.118	1.91	2.76	3.66	4.22	4.71	0°

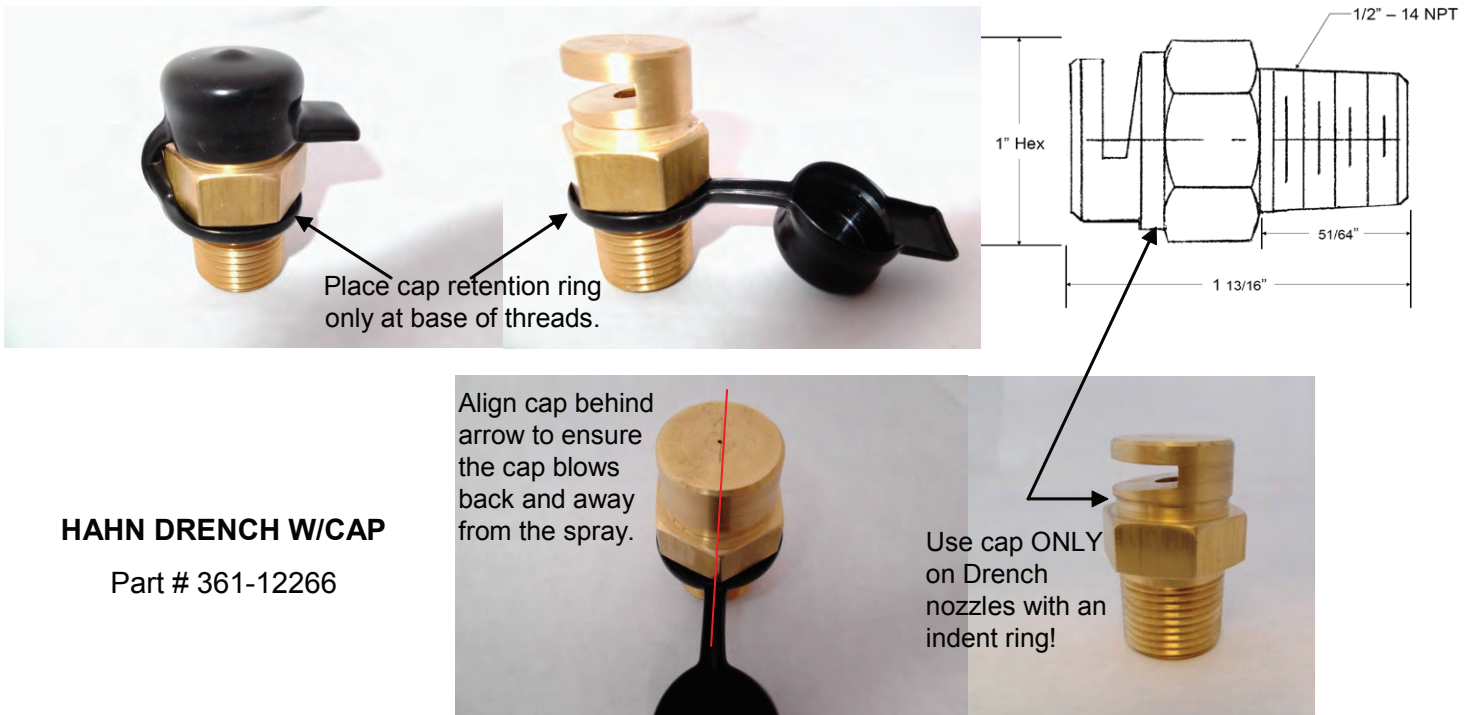


HAHN DRENCH W/CAP NOZZLE

The Hahn DRENCH W/CAP nozzle has a blow-off protective cap. The nozzle sprays 10 gallons of water per minute (at 40 psi) in a wide angle (180°) spray and is generally used for flooding an area with water.

The DRENCH W/CAP nozzle is manufactured by HAHN Industries, a Division of Steinen.

- The DRENCH W/CAP nozzle is Steinen Part # 361-12266.
- The protective cap is designed to blow-off between 2 - 5 psi water pressure.
- This is a high flow nozzle with large water droplet sizes for flooding of a wide area.



HAHN DRENCH W/CAP
Part # 361-12266

- **DO NOT USE THIS DRENCH W/CAP NOZZLE WHERE WATER PRESSURE MAY NOT EXCEED 20 PSI !**
- **DO NOT PLACE CAP RETENTION RING IN THE INDENT RING, ONLY AT THE BASE OF THE THREADS!**
- **DO NOT ATTEMPT TO PUT THIS CAP ON A STANDARD HAHN DRENCH NOZZLE (361-12265; has no indent ring) AS THE CAP WILL NOT BLOW OFF !**
- **DO NOT ATTEMPT TO RETROFIT THESE CAPS ON OTHER NOZZLES !**

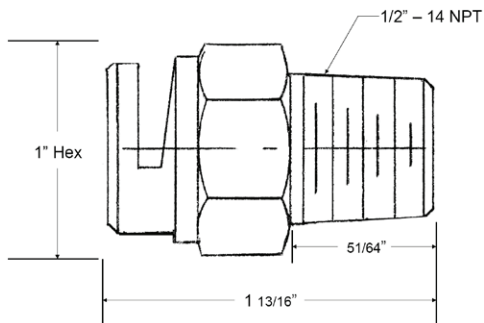
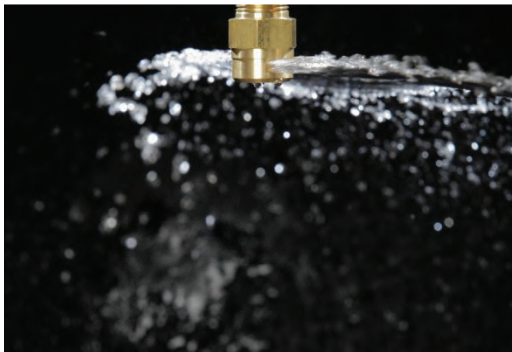
Nozzle Type	Steinen Part #	RATED CAPACITY (gallons/minute)					Spray Angle (approx.)
		20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
DRENCH w/CAP	361-12266	7	10	12.3	14.1	15.8	180°

HAHN *DRENCH* NOZZLE

The Hahn **DRENCH** nozzle sprays 10 gallons of water per minute in a wide angle (180°) spray and is generally used for flooding an area with water.

The **DRENCH** nozzle is manufactured by HAHN Industries, a Division of Steinen.

- The **DRENCH** nozzle is Steinen Part # 361-12265.
- *This is a high flow nozzle with large water droplet sizes for flooding of a wide area.*



HAHN DRENCH nozzle

Part # 361-12265

Nozzle Type	Steinen Part #	RATED CAPACITY (gallons/minute)					Spray Angle (approx.)
		20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	
DRENCH	361-12265	7	10	12.3	14.1	15.8	180°



Mist-Jet® Misting / Fogging Nozzle

Type **A**
Type **AF**
Type **AM**

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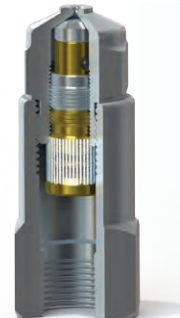

Steinen offers a wide variety of misting nozzles to satisfy almost any requirement. Nozzles are offered in five different configurations, three different spray angles, numerous flow rates from 0.37 gallons per hour (GPH) up to 124 GPH, at pressures from 40 PSI to 500 PSI, in various types of stainless steel.

- **Type A** - single nozzle tip
- **Type AF** - single nozzle tip/female adaptor
- **Type AM** - single nozzle tip/male adaptor

Also available

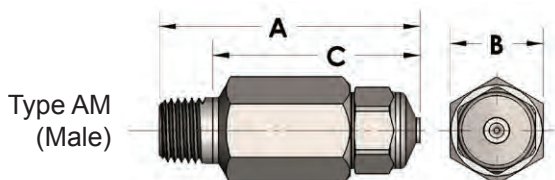
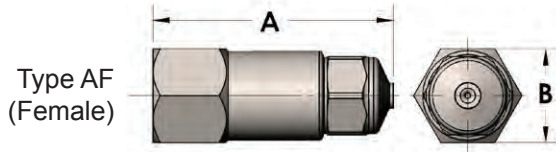
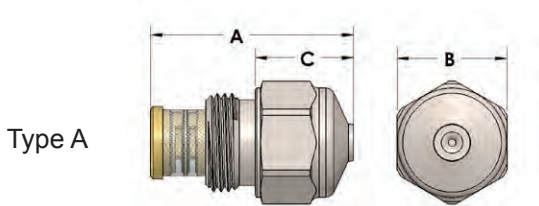
- **Type P** - compact sized nozzle tip with 1/4 NPT thread
- **Type MN** - miniature sized nozzle tip with removable internal components and 1/8 NPT thread



	Spray Characteristics	Construction	Materials
 <p>Type A</p>	Uniform hollow cone spray pattern with a fine micro-at-omized mist spray. Fog-like spray results with pressures over 150 P.S.I. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I.	Consists of basic nozzle tip with 9/16"-24 UNF connection and 100 mesh strainer (for capacities of 0.37, 0.50 and 0.75 GPH, a 200 mesh strainer is furnished).	Nozzle tip (all types) are furnished in 416 or 303 stainless steel.
 <p>Type AF</p>	Uniform hollow cone spray pattern with a fine micro-at-omized mist spray. Fog-like spray results with pressures over 150 P.S.I. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I.	Consists of Type A nozzle tip/strainer and 1/8" or 1/4" female adapter.	Nozzle tip (all types) are furnished in 303 stainless steel. Type AF (Female) adaptors are furnished in 303 stainless steel, brass or nickel plated brass.
 <p>Type AM</p>	Uniform hollow cone spray pattern with a fine micro-at-omized mist spray. Fog-like spray results with pressures over 150 P.S.I. Spray angles of 70, 80, and 90 degrees are available, with 70 degrees being standard, measured @ 150 P.S.I.	Consists of Type A nozzle tip/strainer and 1/8", 1/4" or 3/8" NPT male adapter.	Nozzle tip (all types) are furnished in 303 stainless steel. Type AM (Male) adaptors are furnished in 303 stainless steel, brass or nickel plated brass.



Nozzle Identifier	Approx. Orifice Diameter	Capacity in Gallons per Hour (at various pressures in pounds per square inch)								Spray Angles
		40 psi	60 psi	80 psi	100 psi	125 psi	150 psi	250 psi	500 psi	
0.37	0.009	0.37	0.45	0.52	0.59	0.65	0.72	0.93	1.3	Available in Spray Angles of 70, 80 and 90 degrees.
0.50	0.010	0.50	0.61	0.71	0.79	0.88	0.97	1.3	1.8	
0.75	0.012	0.75	0.92	1.1	1.2	1.3	1.5	1.9	2.7	
1.00	0.014	1.0	1.2	1.4	1.6	1.8	1.9	2.5	3.5	
1.50	0.020	1.5	1.8	2.1	2.4	2.7	2.9	3.8	5.3	
2.00	0.024	2.0	2.4	2.8	3.2	3.5	3.9	5.0	7.1	
2.50	0.028	2.5	3.1	3.5	4.0	4.4	4.8	6.3	8.8	
3.00	0.028	3.0	3.7	4.2	4.7	5.3	5.8	7.5	10.6	
3.50	0.031	3.5	4.3	4.9	5.5	6.2	6.8	8.8	12.4	
4.00	0.036	4.0	4.9	5.7	6.3	7.1	7.7	10.0	14.1	
4.50	0.040	4.5	5.5	6.4	7.1	8.0	8.7	11.3	15.9	
5.00	0.040	5.0	6.1	7.1	7.9	8.8	9.7	12.5	17.7	
5.50	0.040	5.5	6.7	7.8	8.7	9.7	10.7	13.8	19.4	
6.00	0.043	6.0	7.3	8.5	9.5	10.6	11.6	15.0	21.2	
6.50	0.046	6.5	8.0	9.2	10.3	11.5	12.6	16.3	23.0	
7.00	0.046	7.0	8.6	9.9	11.1	12.4	13.6	17.5	24.7	
7.50	0.046	7.5	9.2	10.6	11.9	13.3	14.5	18.8	26.5	
8.00	0.052	8.0	9.8	11.3	12.6	14.1	15.5	20.0	28.3	
8.50	0.052	8.5	10.4	12.0	13.4	15.0	16.5	21.3	30.1	
9.00	0.052	9.0	11.0	12.7	14.2	15.9	17.4	22.5	31.8	
10.0	0.059	10.0	12.2	14.1	15.8	17.7	19.4	25.0	35.4	
12.0	0.063	12.0	14.7	17.0	19.0	21.2	23.2	30.0	42.4	
13.0	0.067	13.0	15.9	18.4	20.6	23.0	25.2	32.5	46.0	
14.0	0.067	14.0	17.1	19.8	22.1	24.7	27.1	35.0	49.5	
15.0	0.070	15.0	18.4	21.2	23.7	26.5	29.0	37.5	53.0	
16.0	0.073	16.0	19.6	22.6	25.3	28.3	31.0	40.0	56.6	
18.0	0.076	18.0	22.0	25.5	28.5	31.8	34.9	45.0	63.6	
20.0	0.076	20.0	24.5	28.3	31.6	35.4	38.7	50.0	70.7	
22.0	0.078	22.0	26.9	31.1	34.8	38.9	42.6	55.0	77.8	
24.0	0.082	24.0	29.4	33.9	37.9	42.4	46.5	60.0	84.9	
26.0	0.082	26.0	31.8	36.8	41.1	46.0	50.3	65.0	91.9	
28.0	0.086	28.0	34.3	39.6	44.3	49.5	54.2	70.0	99.0	
30.0	0.089	30.0	36.7	42.4	47.4	53.0	58.1	75.0	106.1	
35.0	0.096	35.0	42.9	49.5	55.3	61.9	67.8	87.5	123.7	



Type	Pipe Size	Net Weight Oz.	A	B	C
A	⁹ / ₁₆ - 24NEF-2	0.75	1.141	0.625	0.500
AM	¹ / ₈ NPT	2.50	1.938	0.750	1.600
	¹ / ₄ NPT	2.50	2.125	0.750	1.600
	³ / ₈ NPT	2.50	1.891	0.750	1.600
AF	¹ / ₈ NPT	2.50	1.844	0.750	---
	¹ / ₄ NPT	2.50	1.844	0.750	---



1/4 Turn Highest Quality Ball Valves

Type **BV**

Steinen Mfg. Co. 29 East Halsey Road, Parsippany, NJ 07054 973.887.6400 F: 973.887.4632 info@steinen.com www.steinen.com

High quality brass ball valves in a compact design. Patented valve design makes for easy lever operation, allowing for very short levers. These general purpose valves are for a single directional flow and will handle liquids and gases compatible with brass.



1/4" and 3/8" design



1/2" design

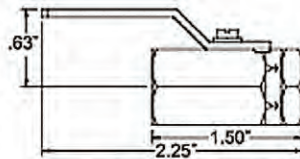


3/4" design

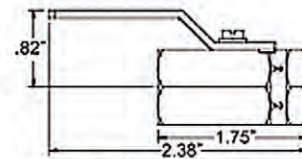
Construction – The valve body is machined, not forged, from a solid brass block. Our 1/4", 3/8" and 1/2" units have nickel plated ball valves for long life and Teflon® seats with Buna-N seals for a sure shut-off. Our 3/4" units utilize Teflon® valves and seats with Buna-N seals. Steinen miniature ball valves are simply the best available!

Features:

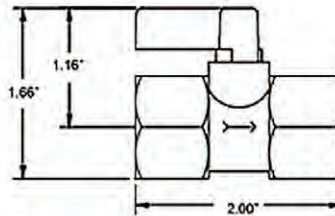
- Compact design – easy installation in minimum space
- Patented pressure seat & seal significantly reduces frictional resistance for easy lever "on-off" operation
- Quarter turn action – positive stops
- Maximum operating pressure 500 psi (150 psi for the 3/4" valve).
- Maximum operating temperature 180°F.
- Stamped with directional flow arrows
- Competitively priced
- Made in the USA



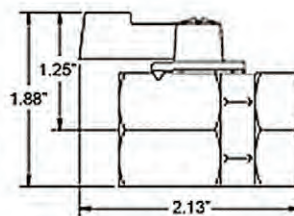
1/4 in. Female x 1/4 in. Female NPT
Part # BV-20020201



3/8 in. Female x 3/8 in. Female NPT
Part # BV-237030301



1/2 in. Female x 1/2 in. Female NPT
Part # BV-51040401



3/4 in. Female x 3/4 in. Female NPT
Part # BV-75060601

Model Number	Inlet	Outlet	Ball Construction	Opening Diameter	Spherical Seat	Seal	Handle	Valve Body Dimensions
BV-20	1/4" Fem. Pipe	1/4" Fem. Pipe	Plated Brass	1/32"	Acetal	Buna	Brass	11/16" Hex. 1-1/2" Long
BV-37B	3/8" Fem. Pipe	3/8" Fem. Pipe	Plated Brass	5/16"	Acetal	Buna	Plated Brass	7/8" Hex. 1-3/4" Long
BV-51B	1/2" Fem. Pipe	1/2" Fem. Pipe	Plated Brass	5/16"	Acetal	Buna	Plated Brass	1" Hex. 2" Long
BV-75	3/4" Fem. Pipe	3/4" Fem. Pipe	**Acetal Ball Segment	5/8"	Acetal	Buna	Plated Brass	1-1/4" Hex. 12-3/16" Long

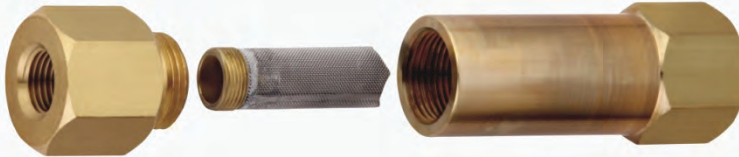
Furnished from a machined block of solid brass, these line strainers can be equipped with a 100 mesh (150 micron) or a 200 mesh (75 micron) Stainless Steel screen. Screens are easily removable for cleaning or replacement. Each screen provides a large area allowing for unrestricted flow and less frequent cleaning. Strainer is adaptable for many types of applications and has a maximum flow capacity of ten gallons per minute (10 gpm). Inlet and outlet connectors are available in 1/8" or 1/4" female NPT pipe thread.



Complete Assembly



Replacement Strainer Screen



Construction - The strainer body is machined, not forged, from a solid brass block. Our 1/8" and 1/4" female NPT units have very large replaceable Stainless Steel screens. Stainless Steel's corrosion resistance makes it ideal for applications such as piping systems and strainer baskets. Complete strainer assembly weighs 4 ounces.

Features:

- Compact design - easy installation in minimum space
- Maximum operating pressure 500 psi
- Cleanable and replaceable Stainless Steel screen
- Maximum operating temperature 180°F
- Machined from a solid brass block - very rugged
- Stamped with directional flow arrow
- Competitively priced
- Made in the USA

Material	Screen	Pipe Size	Part Number
Brass Body - Stainless Steel Screen	100 Mesh	1/8"x1/8" NPT	MS100000129
		1/4"x1/4" NPT	MS100000229
(Nickel Plated Brass)	(Nickel Plated Brass)	1/4"x1/4" NPT	MS100000281
Brass Body - Stainless Steel Screen	200 Mesh	1/8"x1/8" NPT	MS200000129
		1/4"x1/4" NPT	MS200000229

Material	Screen		Part Number
Stainless Steel Replacement Screen	100 Mesh		MSSCR100000029
Stainless Steel Replacement Screen	200 Mesh		MSSCR200000029



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