



FULL CONE NOZZLES

ABSORPTION · FIRE PROTECTION
CHEMICAL INJECTION · RINSING
FOAM CONTROL · CLEANING
GAS TREATMENT · DESUPERHEATING
MIST ELIMINATION · COOLING
DUST CONTROL



FULL CONE NOZZLES INTRODUCTION



CHOOSE FROM THE INDUSTRY'S LARGEST SELECTION

Styles:

- Conventional
- Quick-connect
- Maximum free passage

Spray patterns:

- Standard
- Wide angle
- Narrow angle
- Square
- Wide angle square
- Oval

Spray angles: 15° to 170°

Flow rate range: .05 to 8728 gpm (.19 to 32530 lpm)

Operating pressure range: up to 400 psi (25 bar)

Connections:

- 1/8" to 12" pipe sizes
- Female and male NPT and BSPT
- Flange

Materials:

- Brass
- Mild steel
- 303 stainless steel
- 316 stainless steel
- Polyvinyl chloride
- Hardened stainless steel
- Kynar®
- Polypropylene
- ProMax®
- PTFE
- Other specialty materials available

See Trademark Registration and Ownership, page i-1.

OPTIMIZE THE PERFORMANCE OF FULLJET® NOZZLES:

Prevent debris from damaging and clogging nozzles, valves and pumps by using strainers. **T-style strainers** are available in a wide range of sizes, materials and pressure ratings.

See page F4



Precisely position spray nozzles to ensure proper coverage of target and minimize overspray with **adjustable ball fittings**. Leak-proof, clog-resistant fittings are available in several sizes and styles.

See page F23



Use **split-eyelet connectors** to simplify and facilitate installation of nozzles, gauges, hoses and other fittings. Economical connectors eliminate cutting, threading and brazing.

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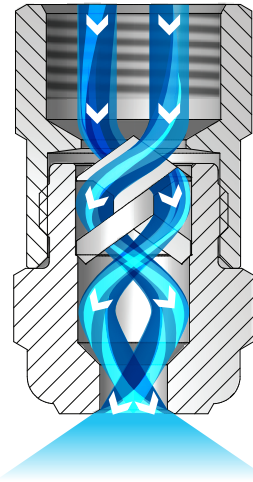
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OVERVIEW: FULLJET G AND H

- Solid cone-shaped spray pattern with round impact area
- Unique vane design minimizes turbulence of the fluid to ensure uniform spray distribution and consistent spray coverage
- Large unobstructed flow passages minimize clogging and increase throughput
- Removable caps and vanes in most models make maintenance fast and easy
- Standard, wide and narrow spray angles



FullJet G and H Nozzles

The liquid enters the nozzle and proceeds through the vane. The vane causes the liquid to swirl. The design of the nozzle ensures the liquid continues to swirl as it enters the orifice. The liquid breaks up as it exits the nozzle orifice forming a well defined cone pattern. The drops are uniform in size and distributed equally throughout the spray pattern.

FULLJET G NOZZLES

- Spray angles: Standard – 43° to 94°, Narrow – 15° or 30°, Wide – 112° to 120°
- Uniform spray distribution from .07 to 25 gpm (.29 to 92 lpm)
- Operating pressures up to 300 psi (20 bar)
- Wall-mount versions for installation on room exterior, vessel or pipeline
- Right-angle mount versions for 90° angle mounting in areas with limited space



G
1/8" to 1/2" female conn.
Removable cap and vane



GG
1/8" to 1/2" male conn.
Removable cap and vane

FULLJET G OPTIONS

GD – 1/8" to 1/2" female conn.
Wall-mount
Removable cap and vane

GGD – 1/8" to 1/2" male conn.
Wall-mount
Removable cap and vane

GA – 1/8" to 1/2" female conn.
Angle-type
Removable cap and vane

GGA – 1/8" to 1/2" male conn.
Angle-type
Removable cap and vane

G-15
1/8" to 1/2" female conn.
Removable cap and vane

GG-15
1/8" to 1/2" male conn.
Removable cap and vane

G-30
1/8" to 3/4" female conn.
Removable cap and vane


GG-30
1/8" to 3/4" male conn.
Removable cap and vane

S STANDARD ANGLE SPRAY

W WIDE ANGLE SPRAY

N NARROW ANGLE SPRAY

FULLJET H NOZZLES

- Spray angles: Standard – 43° to 94°, Narrow – 15° or 30°, Wide – 102° to 125°
- Uniform spray distribution from .07 to 5324 gpm (.29 to 19842 lpm)
- Operating pressures up to 300 psi (20 bar)
- Wall-mount versions for installation on room exterior, vessel or pipeline
- Certain nozzles available with UL listing 

S
W



H – 3/4" to 1" female conn.
One-piece body

S
W



H – 1-1/4" to 8" female conn.
Removable vane/cast body

S
W



H – 1-1/2" to 2" female conn.
Removable vane/
polypropylene*

FULLJET H OPTIONS

S
W



HH – 1/8" to 1" male conn.
One-piece body

S



D-HH – 1/2" to 3/4" male conn.
One-piece body/plastic**

S



HF – 4" to 10" flange conn.
Removable vane/cast body

*Max. temperature for polypropylene: 150°F (66°C). ** Max. temperature for Kynar®: 212°F (100°C).

S



HD – 3/4" to 3" female conn.
Wall-mount
One-piece body

N



H-15 – 3/4" to 3" female conn.
One-piece body
Removable vane

N



H-15 – 4" to 5" female conn.
Two-piece cast body
Removable vane

N



HH-30 – 1" to 2-1/2" male conn.
One-piece body
Removable vane

ORDERING INFORMATION

FULLJET G, GD, GA, G-15, G-30, H, HF, HD, H-15 AND HH-30



Example



BSPT connections require the addition of a "B" prior to the inlet connection.

FULLJET D-HH



Example



BSPT connections require the addition of a "B" prior to the inlet connection.

**RELATIVE DROP SIZE
IN MICRONS**

10 to 100

100 to 500

500 to 1000

1000 to 5000

Drop size will vary based on flow rate and pressure.





QUICK REFERENCE GUIDE

Model	Connection/ Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
G	F	1/8 to 1/2	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)	B7	B12
GG	M	1/8 to 1/2			
GD	F, Wall-mount	1/8 to 1/2			
GGD	M, Wall-mount	1/8 to 1/2			
GA	F, Angle-type	1/8 to 1/2			
GGA	M, Angle-type	1/8 to 1/2			
G-W	F	1/8 to 1/2	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)	B10	
GG-W	M	1/8 to 1/2			
GA-W	F, Angle-type	1/8 to 1/2			
GGA-W	M, Angle-type	1/8 to 1/2			
G-15	F	1/8 to 1/2	Brass, 303 stainless steel (SS)	B11	
GG-15	M	1/8 to 1/2			
G-30	F	1/8 to 3/4	Brass, 303 stainless steel (SS), 316 stainless steel/303 caps (SS)	B11	
GG-30	M	1/8 to 3/4			
H	F	3/4 to 1	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)	B7	
H	F, Cast	1-1/4 to 8	Brass, 316 stainless steel (SS)	B7–B9	
H	F	1-1/2 to 2	Polypropylene (PP)	B8	
HH	M	1/8 to 1	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)	B7	
D-HH	M	1/2 to 3/4	Kynar®, Polypropylene (PP)	B9	
HF	Flange, Cast	4 to 10	Brass, 316 stainless steel (SS)	B8, B9	
HD	F, Wall-mount	3/4 to 3	Brass, Mild steel (I), 303 stainless steel (SS)	B7, B8	
H-W	F	3/4 to 1	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS)	B10	
H-W	F, Cast	1-1/4 to 4	Brass, 316 stainless steel (SS)		
H-W	F	1-1/2 to 2	Polypropylene (PP)		
HH-W	M	1/8 to 1-1/2	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)	B11	
H-15	F	3/4 to 3	Brass, 303 stainless steel (SS)		
H-15	F, Cast	4 to 5	Brass, 316 stainless steel/303 caps (SS)		
HH-30	M	1 to 2-1/2	Brass, 303 stainless steel (SS), 316 stainless steel/303 caps (SS)	B11	

F = female thread; M = male thread. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request. For more dimensions and sizes, contact your sales engineer.





PERFORMANCE DATA:
STANDARD ANGLE SPRAY



Inlet Conn. (in.)	Nozzle Type										Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)										Spray Angle (°)		
	Standard				Wall-Mount			Angle						5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi		
	G	GG	H	HH	HF	GD	HD	GGD	GA	GGA																
1/8	•	•		•		•					1	.031	.025	–	–	.10	.14	.19	.26	.29	.35	–	58	53		
	•	•		•							1.5	.044	.025	.11	.13	.15	.21	.28	.39	.43	.52	52	65	59		
	•	•		•		•		•	•	•	2	.048	.040	.15	.17	.20	.28	.38	.52	.58	.70	43	50	46		
	•	•		•		•		•	•	•	3	.063	.040	.22	.25	.30	.41	.57	.78	.87	1.0	52	65	59		
	•	•		•		•		•	•	•	3.5	.063	.050	.25	.30	.35	.48	.66	.91	1.0	1.2	43	50	46		
									•	•	3.9	.078	.040	.28	.33	.39	.54	.74	1.0	1.1	1.4	77	84	79		
	•	•		•		•		•	•	•	5	.078	.050	.36	.42	.50	.69	.95	1.3	1.4	1.7	52	65	59		
1/4								•	•	6.1	.094	.050	.44	.52	.61	.84	1.2	1.6	1.8	2.1	69	74	68			
	•	•		•		•		•	•	6.5	.094	.063	.47	.55	.65	.89	1.2	1.7	1.9	2.3	45	50	46			
	•	•		•		•		•	•	10	.109	.063	.73	.85	1.0	1.4	1.9	2.6	2.9	3.5	58	67	61			
3/8								•	•	12.5	.125	.063	.91	1.1	1.3	1.7	2.4	3.3	3.6	4.3	69	74	68			
	•	•		•		•		•	•	9.5	.109	.094	.69	.81	.95	1.3	1.8	2.5	2.7	3.3	45	50	46			
	•	•		•		•		•	•	15	.141	.094	1.1	1.3	1.5	2.1	2.8	3.9	4.3	5.2	64	67	61			
									•	•	20	.156	.109	1.5	1.7	2.0	2.8	3.8	5.2	5.8	7.0	76	80	73		
1/2	•	•		•		•		•	•	22	.188	.109	1.6	1.9	2.2	3.0	4.2	5.7	6.3	7.6	87	90	82			
	•	•		•		•		•	•	16	.141	.125	1.2	1.4	1.6	2.2	3.0	4.2	4.6	5.6	48	50	46			
	•	•		•		•		•	•	25	.188	.125	1.8	2.1	2.5	3.4	4.7	6.5	7.2	8.7	64	67	61			
	•	•		•		•		•	•	32	.203	.141	2.3	2.7	3.2	4.4	6.1	8.3	9.2	11.1	72	75	68			
	•	•		•		•		•	•	40	.250	.141	2.9	3.4	4.0	5.5	7.6	10.4	11.5	13.9	88	91	83			
3/4								•	•	50	.266	.156	3.6	4.2	5.0	6.9	9.5	13.0	14.4	17.4	91	94	86			
			•	•		•				2.5	.188	.172	2.1	2.5	2.9	4.1	5.6	7.7	8.5	10.2	48	50	46			
			•	•		•				4.0	.250	.172	3.4	4.0	4.7	6.5	8.9	12.3	13.6	16.4	67	70	63			
1			•	•		•				7.0	.328	.203	6.0	7.0	8.2	11.3	15.6	21	24	29	89	92	84			
			•	•		•				4.2	.234	.219	3.6	4.2	4.9	6.8	9.4	12.9	14.3	17.2	48	50	46			
			•	•		•				7.0	.328	.219	6.0	7.0	8.2	11.3	15.6	21	24	29	67	68	62			
			•	•		•				8.0	.375	.219	6.9	8.0	9.4	13.0	17.8	25	27	33	72	81	82			
			•	•		•				10	.469	.219	8.6	10.0	11.8	16.2	22	31	34	41	78	90	94			
			•	•		•				12	.469	.250	10.3	12.0	14.1	19.4	27	37	41	49	89	92	84			
1-1/4			•			•				6	.297	.250	5.1	6.0	7.1	9.7	13.4	18.4	20	25	48	50	44			
			•			•				10	.375	.250	8.6	10.0	11.8	16.2	22	31	34	41	64	67	58			
			•			•				12	.422	.250	10.3	12.0	14.1	19.4	27	37	41	49	66	70	60			
			•			•				14	.484	.250	12.0	14.0	16.5	23	31	43	48	57	77	80	70			
			•			•				16	.500	.313	13.7	16.0	18.9	26	36	49	54	66	73	76	66			
		•			•				20	.594	.313	17.1	20	24	32	45	61	68	82	90	93	81				

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type										Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	Standard					Wall-Mount			Angle					5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
	G	GG	H	HH	HF	GD	HD	GGD	GA	GGA														
1-1/2			●				●				10	.375	.344	8.6	10.0	11.8	16.2	22	31	34	41	48	50	44
			●				●				16	.500	.344	13.7	16.0	18.9	26	36	49	54	66	72	74	64
			●				●				20	.563	.344	17.1	20	24	32	45	61	68	82	74	76	66
			●				●				30*	.719	.406	26	30	35	49	67	92	102	123	91	94	82
2			●				●				17	.500	.438	14.6	17.0	20	28	38	52	58	70	49	50	44
			●				●				30	.688	.438	26	30	35	49	67	92	102	123	72	74	64
			●				●				35	.750	.438	30	35	41	57	78	107	119	143	75	77	68
			●				●				40	.828	.438	34	40	47	65	89	123	136	164	78	80	70
			●				●				50*	.938	.563	43	50	59	81	111	153	170	205	83	85	75
			●				●				60*	1.125	.563	51	60	71	97	134	184	204	246	98	100	86
2-1/2			●				●				25	.594	.563	21	25	29	41	56	77	85	102	49	50	44
			●				●				50	.875	.563	43	50	59	81	111	153	170	205	72	74	64
			●				●				60	.969	.563	51	60	71	97	134	184	204	246	76	78	68
			●				●				70	1.125	.563	60	70	82	113	156	215	238	287	79	82	72
			●				●				80	1.125	.688	69	80	94	130	178	245	272	328	86	88	77
			●				●				90	1.250	.688	77	90	106	146	201	276	306	369	95	97	84
3			●				●				42	.750	.688	36	42	49	68	94	129	143	172	49	50	44
			●				●				80	1.094	.688	69	80	94	130	178	245	272	328	81	84	73
			●				●				90	1.188	.688	77	90	106	146	201	276	306	369	86	89	77
			●				●				100	1.281	.688	86	100	118	162	223	307	340	410	92	95	83
			●				●				110	1.938	.813	93	110	131	186	263	372	416	509	86	89	77
			●				●				120	1.375	.813	101	120	143	203	287	406	454	555	102	105	89
4			●		●						160	1.688	.750	137	160	189	259	357	491	544	655	87	90	70
			●		●						180	1.859	.875	154	180	212	292	401	552	612	737	92	95	83
			●		●						200	2.0	1.0	171	200	236	324	446	613	680	819	97	100	87
			●		●						210	2.156	1.0	180	210	247	340	468	644	714	860	102	105	91
5			●		●						250	1.875	1.125	214	250	295	405	557	767	850	1024	89	91	80
			●		●						280	2.078	1.125	240	280	330	454	624	859	952	1147	93	96	84
			●		●						320	2.688	1.375	274	320	377	519	713	981	1087	1310	97	100	87
			●		●						330	2.844	1.375	283	330	389	535	736	1012	1121	1351	102	105	91
6			●		●						350	2.406	1.625	300	350	412	567	780	1073	1189	1433	87	90	78
			●		●						400	2.719	1.625	343	400	471	648	892	1227	1359	1638	92	95	83
			●		●						450	3.031	1.750	385	450	530	729	1003	1380	1529	1843	97	100	87
			●		●						480	3.219	1.750	411	480	566	778	1070	1472	1631	1966	102	105	91

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

*These capacity sizes are not available for H in polypropylene.

Highlighted column shows the rated pressure.



S PERFORMANCE DATA: **STANDARD ANGLE SPRAY**

Inlet Conn. (in.)	Nozzle Type										Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	Standard					Wall-Mount			Angle					5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
	G	GG	H	HH	HF	GD	HD	GGD	GA	GGA														
8			●		●						500	2.750	1.875	428	500	589	810	1115	1533	1699	2048	78	80	70
			●		●						600	3.156	1.875	514	600	707	972	1338	1840	2039	2457	86	88	77
			●		●						700	3.594	1.875	600	700	825	1135	1561	2147	2379	2867	92	95	83
			●		●						800	4.031	2.250	685	800	943	1297	1784	2453	2719	3276	102	105	91
			●		●						900	4.875	2.250	771	900	1060	1459	2007	2760	3058	3686	106	110	96
10					●						800	3.344	2.500	685	800	943	1297	1784	2453	2719	3276	78	80	70
					●						1000	3.969	2.500	857	1000	1178	1621	2229	3067	3398	4095	86	89	77
					●						1200	4.797	2.625	1028	1200	1414	1945	2675	3680	4078	4914	97	100	87
					●						1300	5.313	2.625	1114	1300	1532	2107	2898	3987	4418	5324	103	106	92

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.

S PERFORMANCE DATA: **STANDARD ANGLE SPRAY**

Inlet Conn. (in.)	Nozzle Type			Capacity Size	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)									
	D-HH					5 psi	7 psi	10 psi	20 psi	30 psi	40 psi	60 psi	80 psi	100 psi	150 psi
	Spray Angle														
	70°	90°	120°												
1/2	●	●		24	0.161	1.7	2.0	2.4	3.3	4.0	4.6	5.5	6.3	6.9	8.3
		●		26	0.161	1.9	2.2	2.6	3.6	4.3	5.0	5.9	6.8	7.5	9.0
	●	●		27.5	0.162	2.0	2.3	2.8	3.8	4.6	5.3	6.3	7.2	7.9	9.6
	●	●	●	31	0.118	2.3	2.6	3.1	4.3	5.1	5.9	7.1	8.1	8.9	10.8
		●	●	40	0.138	2.9	3.4	4.0	5.5	6.6	7.7	9.1	10.4	11.5	13.9
		●	●	50	0.165	3.6	4.2	5.0	6.9	8.3	9.6	11.4	13.0	14.4	17.4
		●	●	58	0.197	4.2	4.9	5.8	8.0	9.6	11.1	13.2	15.1	16.7	20.2
3/4		●		3.4	0.197	2.9	3.4	4.0	5.5	6.7	7.7	9.1	10.4	11.5	13.9
		●		4.1	0.197	3.5	4.1	4.8	6.6	8.1	9.2	11.0	12.6	13.8	16.7
		●		4.8	0.197	4.1	4.8	5.6	7.7	9.4	10.7	12.9	14.7	16.2	19.5
		●	●	6	0.221	5.2	6.0	7.1	9.8	11.7	13.6	16.1	18.4	20.5	24.7
		●	●	7	0.221	6.0	7.0	8.3	11.4	13.7	15.9	18.8	21.5	23.9	28.9
		●	●	8.5	0.228	7.3	8.5	10.0	13.8	16.6	19.2	22.8	26.0	28.8	34.8
			●	10	0.228	8.6	10.0	11.8	16.2	19.5	22.3	26.9	30.7	34.0	41.0

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



W PERFORMANCE DATA:
WIDE ANGLE SPRAY



Inlet Conn. (in.)	Nozzle Type						Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	Standard				Angle					5 psi	7 psi	10 psi	15 psi	20 psi	40 psi	80 psi	5 psi	10 psi	80 psi	
	G-W	GG-W	HH-W	H-W	GA-W	GGA-W														
1/8	•	•					1.5W	.047	.025	-	-	.15	.18	.21	.28	.39	-	120	86	
	•	•	•				2.8W	.063	.040	-	-	.28	.34	.39	.53	.73	-	120	102	
	•	•	•		•	•	4.3W	.078	.040	-	-	.43	.52	.59	.81	1.1	-	120	102	
	•	•					5.6W	.094	.040	-	.48	.56	.67	.77	1.1	1.5	-	120	102	
	•	•	•		•	•	8W	.094	.050	-	.68	.80	.96	1.1	1.5	2.1	-	120	103	
1/4	•	•					10W	.109	.050	.73	.85	1.0	1.2	1.4	1.9	2.6	112	120	103	
	•	•					12W	.125	.050	.87	1.0	1.2	1.4	1.7	2.3	3.1	114	120	103	
	•	•	•		•	•	14W	.141	.063	1.0	1.2	1.4	1.7	1.9	2.6	3.6	114	120	103	
3/8	•	•	•				17W	.156	.063	1.2	1.4	1.7	2.0	2.3	3.2	4.4	114	120	103	
	•	•	•		•	•	20W	.172	.094	1.5	1.7	2.0	2.4	2.8	3.8	5.2	114	120	104	
	•	•	•				24W	.188	.094	1.7	2.0	2.4	2.9	3.3	4.5	6.2	114	120	104	
	•	•	•				27W	.203	.109	2.0	2.3	2.7	3.3	3.7	5.1	7.0	114	120	106	
1/2	•	•	•				30W	.219	.109	2.2	2.5	3.0	3.6	4.1	5.7	7.8	114	120	108	
	•	•	•		•	•	35W	.234	.125	2.5	3.0	3.5	4.2	4.8	6.6	9.1	114	120	108	
	•	•	•				40W	.250	.125	2.9	3.4	4.0	4.8	5.5	7.6	10.4	114	120	108	
	•	•	•				45W	.250	.141	3.3	3.8	4.5	5.4	6.2	8.5	11.7	114	120	110	
	•	•	•		•	•	50W	.266	.156	3.6	4.2	5.0	6.0	6.9	9.5	13.0	114	120	112	
3/4			•	•			6W	.391	.172	5.2	6.0	7.0	8.4	9.5	12.9	17.5	115	120	112	
1			•	•			11W	.516	.219	9.5	11.0	12.9	15.4	17.5	24	32	117	120	117	
1-1/4			•	•			16W	.609	.250	13.8	16.0	18.7	22	25	34	47	118	121	119	
1-1/2			•	•			24W	.719	.406	21	24	28	34	38	52	70	119	124	119	
2				•			47W	.984	.438	41	47	55	66	75	101	137	120	124	119	
2-1/2				•			70W	1.3	.563	60	70	82	98	111	151	204	120	125	119	
3				•			95W	1.4	.688	82	95	111	133	151	205	277	120	125	119	
4				•			188W	2.0	.813	162	188	220	263	298	405	549	120	125	119	

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



N PERFORMANCE DATA:
NARROW ANGLE SPRAY

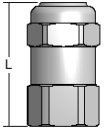
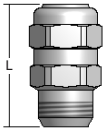
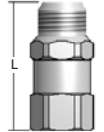
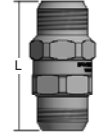


Inlet Conn. (in.)	Nozzle Type						Capacity Size	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)										Spray Angle (°)			
	G-15	G-30	GG-15	GG-30	H-15	HH-30			10 psi	15 psi	20 psi	40 psi	80 psi	100 psi	150 psi	200 psi	300 psi	10 psi	15 psi	40 psi	100 psi	
1/8	●		●				1507	.063	.35	.43	.49	.70	.99	1.1	1.4	1.6	1.9	13	14	15	15	
	●		●				1514	.094	.70	.86	.99	1.4	2.0	2.2	2.7	3.1	3.8	13	14	15	15	
1/4	●		●				1530	.125	1.5	1.8	2.1	3.0	4.2	4.7	5.8	6.7	8.2	13	14	15	15	
3/8	●		●				1550	.172	2.5	3.1	3.5	5.0	7.1	7.9	9.7	11.2	13.7	13	14	15	15	
1/2	●		●				1590	.219	4.5	5.5	6.4	9.0	12.7	14.2	17.4	20	25	13	14	15	15	
3/4					●		15150	.297	7.5	9.2	10.6	15.0	21	24	29	34	41	13	14	15	15	
1					●		15280	.391	14.0	17.1	19.8	28	40	44	54	63	77	13	14	15	15	
1-1/4					●		15430	.484	22	26	30	43	61	68	83	96	118	14	14	15	15	
1-1/2					●		15630	.594	32	39	45	63	89	100	122	141	173	14	14	15	15	
2					●		151150	.797	58	70	81	115	163	182	223	257	315	14	14	15	15	
2-1/2					●		151750	.969	88	107	124	175	247	277	339	391	479	14	14	15	15	
3					●		152500	1.156	125	153	177	250	354	395	484	559	685	14	14	15	15	
4					●		154500	1.141	225	276	318	450	636	712	871	1006	1232	14	14	15	15	
5					●		157000	1.922	350	429	495	700	990	1107	1356	1565	1917	14	14	15	15	
1/8		●		●			3001.4	.031	.070	.086	.099	.14	.20	.22	.27	.31	.38	11	17	30	31	
		●		●			3002.5	.031	.13	.15	.18	.25	.35	.40	.48	.56	.68	12	17	30	32	
		●		●			3004	.047	.20	.24	.28	.40	.57	.63	.77	.89	1.1	20	26	30	32	
		●		●			3007	.063	.35	.43	.49	.70	.99	1.1	1.4	1.6	1.9	20	23	30	30	
1/4		●		●		3009	.078	.45	.55	.64	.90	1.3	1.4	1.7	2.0	2.5	20	23	30	30		
3/8		●		●		3014	.094	.70	.86	.99	1.4	2.0	2.2	2.7	3.1	3.8	20	25	30	30		
1/2		●		●		3030	.125	1.5	1.8	2.1	3.0	4.2	4.7	5.8	6.7	8.2	21	26	30	31		
3/4		●		●		3050	.172	2.5	3.1	3.5	5.0	7.1	7.9	9.7	11.2	13.7	22	26	30	31		
1						●	3070	.203	3.5	4.3	4.9	7.0	9.9	11.1	13.6	15.7	19.2	22	27	30	30	
						●	30100	.250	5.0	6.1	7.1	10.0	14.1	15.8	19.4	22	27	22	27	30	30	
1-1/4						●	30150	.297	7.5	9.2	10.6	15.0	21	24	29	34	41	22	27	30	30	
						●	30200	.344	10.0	12.2	14.1	20	28	32	39	45	55	22	27	30	30	
1-1/2						●	30250	.375	12.5	15.3	17.7	25	35	40	48	56	68	22	27	30	30	
						●	30300	.406	15.0	18.4	21	30	42	47	58	67	82	22	27	30	30	
2						●	30350	.438	17.5	21	25	35	49	55	68	78	96	22	28	30	30	
						●	30400	.469	20	24	28	40	57	63	77	89	110	22	28	30	30	
						●	30500	.531	25	31	35	50	71	79	97	112	137	22	28	30	30	
2-1/2						●	30600	.578	30	37	42	60	85	95	116	134	164	22	28	30	30	
						●	30700	.625	35	43	49	70	99	111	136	157	192	22	28	30	30	
						●	301000	.750	50	61	71	100	141	158	194	224	274	22	28	30	30	
						●	301100	.781	55	67	78	110	156	174	213	246	301	22	28	30	30	
					●	301200	.813	60	73	85	120	170	190	232	268	329	22	28	30	30		

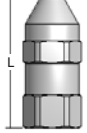
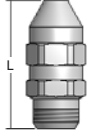
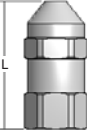
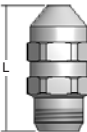
Highlighted column shows the rated pressure.



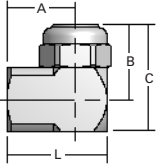
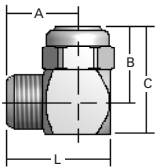
DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	Net Weight (oz.)
	G (F) G-W (F)	1/8	1.219	9/16	1
		1/4	1.469	11/16	1.5
		3/8	1.812	13/16	2.5
		1/2	2.250	1	6
	GG (M) GG-W (M)	1/8	1.281	9/16	0.8
		1/4	1.563	11/16	1.5
		3/8	1.844	13/16	2.5
		1/2	2.219	1	6
	GD (F)	1/8	1.391	9/16	1
		1/4	1.609	11/16	1.5
		3/8	1.813	1	2.5
		1/2	1.203	1	4.8
	GGD (M)	1/8	1.453	9/16	1
		1/4	1.703	11/16	1.5
		3/8	1.844	13/16	2.5
		1/2	2.172	1	4.5

Based on the largest/heaviest version of each type.

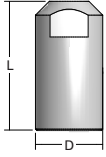
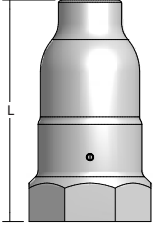
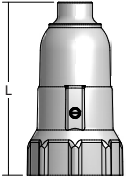
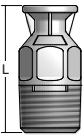
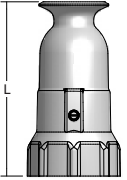
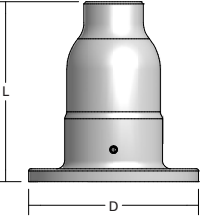
Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	Net Weight (oz.)
	G-15 (F)	1/8	1.313	9/16	1
		1/4	1.625	11/16	2
		3/8	1.875	13/16	3
		1/2	2.406	1	6
	GG-15 (M)	1/8	1.375	9/16	1
		1/4	1.719	11/16	1.3
		3/8	1.906	13/16	3.3
		1/2	2.406	1	6
	G-30 (F)	1/8	1.390	11/16	2.3
		1/4	1.688	13/16	3.3
		3/8	2.125	1	6
		1/2	2.343	1-1/4	11.3
		3/4	3.313	1-1/2	15
	GG-30 (M)	1/8	1.531	23/32	2
		1/4	1.781	13/16	3
		3/8	2.188	13/16	5.5
		1/2	2.750	1-1/4	9
		3/4	3.438	1-1/2	20

Based on the largest/heaviest version of each type.

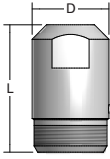
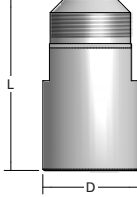
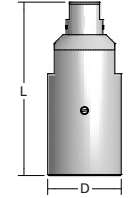
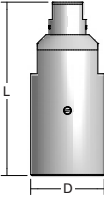
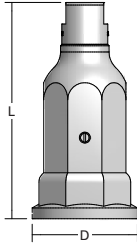
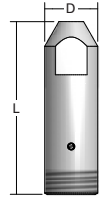
Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	A (in.)	B (in.)	C (in.)	Net Weight (oz.)
	GA (F) GA-W (F)	1/8	0.910	0.630	0.563	0.844	1.5
		1/4	1.130	0.790	0.781	1.125	2
		3/8	1.281	0.875	1.188	1.594	3.3
		1/2	1.563	1.063	1.532	2.032	6.3
	GGA (M) GGA-W (M)	1/8	0.940	0.660	0.563	0.844	1.5
		1/4	1.160	0.820	0.781	1.125	2
		3/8	1.313	0.906	1.188	1.594	3.3
		1/2	1.609	1.109	1.359	1.859	6.3

Based on the largest/heaviest version of each type.

DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	D (Dia.) (in.)	Net Weight (oz.)	
	H (F) H-W (F)	3/4	2.188	1.250	7.3	
		1	2.734	1.500	12.4	
	H (F) H-W (F) Cast	1-1/4	3.440	2.063 oct.	25.7	
		1-1/2	4.063	2.313 oct.	25.4	
		2	5.440	3.000 oct.	60	
		2-1/2	6.313	3.438 oct.	76	
		3	7.375	4.063 oct.	95.3	
		4	9.563	5.438 oct.	12 lbs.	
		H (F) Cast	5	11.563	6.750 oct.	30.8 lbs.
			6	14.375	8.000 oct.	49 lbs.
	H (F) Polypropylene	1-1/2	4.100	2.344	2.3	
		2	5.188	3.000	3.8	
	D-HH (M) Polypropylene	1/2	1.700	0.750	0.3	
		3/4	2.090	1.000	0.9	
	H-W (F) Polypropylene	1-1/2	4.240	2.344	1.9	
		2	5.465	2.813	4	
	HF (Flange)	4	8.125	8.750	28.8 lbs.	
		5	10.560	10.000	34.3 lbs.	
		6	12.625	11.000	49 lbs.	
		8	16.625	13.500	120 lbs.	
		10	20.750	16.000	193 lbs.	

Based on the largest/heaviest version of each type.

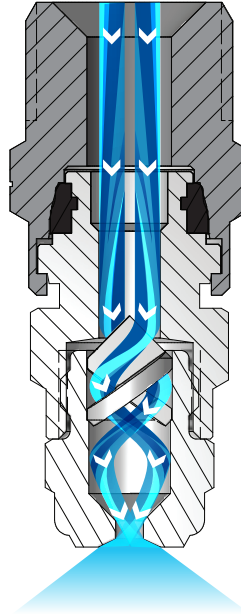
Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	D (Dia.) (in.)	Net Weight (oz.)
	HH (M) HH-W (M)	1/8	0.875	0.500	0.5
		1/4	0.880	0.531	0.5
		3/8	0.940	0.656	1
		1/2	1.156	0.813	1.5
		3/4	1.531	1.063	3.5
		1	2.031	1.313	7
	HH-W (M) (Wide angle only) Standard angle not available for these sizes	1-1/4	2.750	1.688	21.4
		1-1/2	3.250	2.000	28.7
	HD (F)	3/4	2.125	1.250	6
		1	2.688	1.500	10.4
		1-1/4	3.375	1.875	25.6
		1-1/2	4.063	2.250	47.3
		2	5.063	2.750	66.3
		2-1/2	6.250	3.250	7.9 lbs.
		3	7.313	4.000	12.6 lbs.
			H-15 (F)	3/4	2.844
1	3.625			1.500	19
1-1/4	4.625			1.875	36.7
1-1/2	5.000			2.313	39.3
2	7.219			3.000	43.8
2-1/2	8.656			3.109	6.2 lbs.
	H-15 (F) Cast	3	10.563	4.125	7.6 lbs.
		4	13.313	5.438	14.8 lbs.
	HH-30 (M)	1	3.625	1.313	16
		1-1/4	6.090	1.750	41
		1-1/2	6.190	1.875	47
		2	7.859	2.375	11.7 lbs.
		2-1/2	10.375	2.875	12 lbs.
		3	10.375	3.500	31.9 lbs.

Based on the largest/heaviest version of each type.



OVERVIEW: QUICK FULLJET AND PROMAX QUICK FULLJET












- Reduce maintenance time – bodies remain on pipe/header; quick quarter-turn removes/installs spray tips with automatic alignment
- Save on nozzle replacement costs – bodies can be reused, only spray tips are replaced
- Spray angles: Standard – 43° to 91°, Narrow – 15° or 30°, Wide – 102° to 120°
- Uniform spray distribution from .10 to 19.4 gpm (.38 to 72 lpm)
- Operating pressures up to 300 psi (20 bar)
- Choice of metal or ProMax materials. ProMax features:
 - ProMax material, a special grade of polypropylene, resists build-up and chemical attack; for use up to 150 psi (10 bar)
 - Internal O-ring provides a positive seal between the body and tip; seal remains attached to tip eliminating accidental loss
 - Optional external O-ring protects nozzle from contaminants
 - Tips are color-coded for easy flow rate identification



Quick FullJet and ProMax Quick FullJet Nozzles

The liquid enters the nozzle and proceeds through the vane. The vane causes the liquid to swirl. The design of the nozzle ensures the liquid continues to swirl as it enters the orifice. The liquid breaks up as it exits the nozzle orifice forming a well-defined cone pattern. The drops are uniform in size and distributed equally throughout the spray pattern.

QUICK FULLJET OPTIONS

<p>S W</p>  <p>QJLA Body 3/8" to 1/2" female conn.</p>	 <p>QJJA Body 1/8" to 1/2" male conn.</p>	 <p>QJJLA Body 3/8" to 1/2" male conn.</p>	
 <p>QGA Spray Tip + QJA Body 1/8" to 1/2" female conn. Removable cap and vane</p>	<p>S W</p>  <p>QLGA Spray Tip Removable cap and vane/ Large conn. Use with QJLA and QJJLA bodies</p>	<p>S W</p>  <p>QHA Spray Tip Non-removable vane Use with QJA and QJJA bodies</p>	<p>S W</p>  <p>QLHA Spray Tip Non-removable vane/ Large conn. Use with QJLA and QJJLA bodies</p>
<p>N</p>  <p>QGA-15 Spray Tip Removable cap and vane Use with QJA and QJJA bodies</p>	<p>N</p>  <p>QLGA-15 Spray Tip Removable cap and vane/ Large conn. Use with QJLA and QJJLA bodies</p>	<p>N</p>  <p>QGA-30 Spray Tip Removable cap and vane Use with QJA and QJJA bodies</p>	<p>N</p>  <p>QLGA-30 Spray Tip Removable cap and vane/ Large conn. Use with QJLA and QJJLA bodies</p>

PROMAX QUICK FULLJET OPTIONS



QPHA Spray Tip + QPPA Body
1/8" to 1/2" male conn.
Optional external O-ring



QPHA Spray Tip – Brown
QPHA-1 .1 gpm (.38 lpm)
Use with QPPA body



QPHA Spray Tip – White
QPHA-1.5 .15 gpm (.57 lpm)
QPHA-2.8W .28 gpm (1.1 lpm)
Use with QPPA body



QPHA Spray Tip – Gray
QPHA-2 .2 gpm (.76 lpm)
Use with QPPA body



QPHA Spray Tip – Black
QPHA-3 .3 gpm (1.1 lpm)
QPHA-4.3W .43 gpm (1.6 lpm)
Use with QPPA body



QPHA Spray Tip – Orange
QPHA-3.5 .35 gpm (1.3 lpm)
QPHA-5.6W .56 gpm (2.1 lpm)
Use with QPPA body



QPHA Spray Tip – Green
QPHA-5 .5 gpm (1.9 lpm)
QPHA-8W .8 gpm (3.1 lpm)
Use with QPPA body



QPHA Spray Tip – Yellow
QPHA-6.5 .65 gpm (2.5 lpm)
QPHA-10W 1.0 gpm (3.8 lpm)
Use with QPPA body



QPHA Spray Tip – Beige
QPHA-8 .8 gpm (3.1 lpm)
Use with QPPA body



QPHA Spray Tip – Blue
QPHA-10 1.0 gpm (3.8 lpm)
QPHA-12W 1.2 gpm (4.6 lpm)
Use with QPPA body

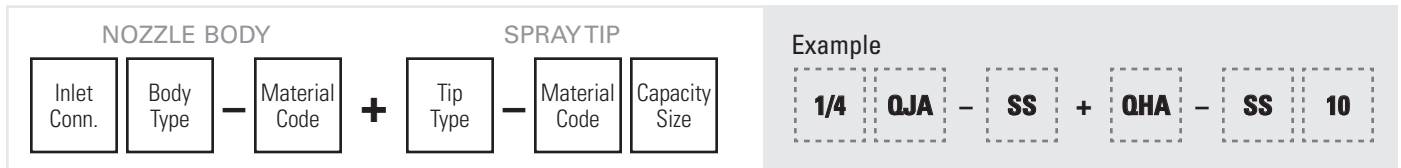


QPHA Spray Tip – Red
QPHA-15 1.5 gpm (5.7 lpm)
QPHA-14W 1.4 gpm (5.3 lpm)
Use with QPPA body

Capacities at 10 psi (0.7 bar).

ORDERING INFORMATION

METAL QUICK FULLJET



BSPT connections require the addition of a "B" prior to the inlet connection.

PROMAX QUICK FULLJET



Optional external O-ring for ProMax Quick FullJet nozzle: CP7717-2/17-VI

BSPT connections require the addition of a "B" prior to the inlet connection.

RELATIVE DROP SIZE IN MICRONS



Drop size will vary based on flow rate and pressure.

QUICK REFERENCE GUIDE

Model	Connection	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
QJA and QJLA bodies	F	1/8 to 1/2	Brass, 303 stainless steel (SS)	–	B19
QJJA and QJJLA bodies	M	1/8 to 1/2		–	
QGA, QLGA, QHA and QLHA spray tips	NA	NA		B17	
OPPA body	M	1/4 to 3/8	ProMax	–	
OPHA spray tips	NA	NA		B17	
QGA-W, QLGA-W, QHA-W and QLHA-W spray tips	NA	NA	Brass, 303 stainless steel (SS)	B18	
OPHA-W spray tips	NA	NA	ProMax		
QGA-15, QLGA-15, QGA-30 and QLGA-30 spray tips	NA	NA	Brass, 303 stainless steel (SS)		

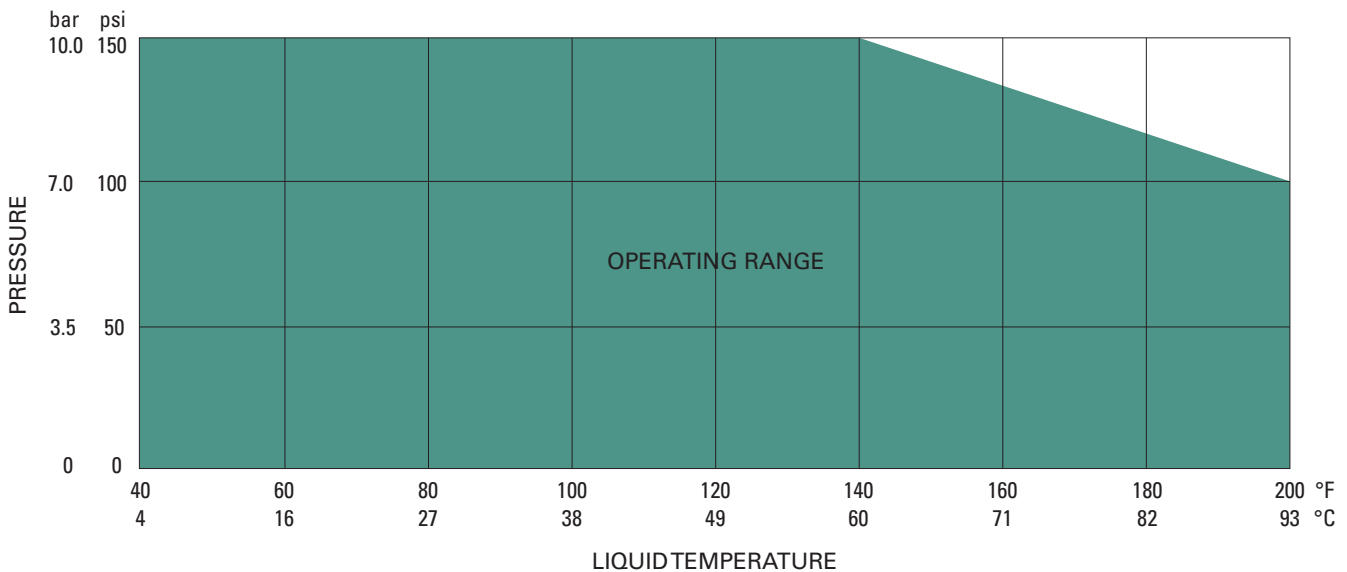
F = female thread; M = male thread. NA = not applicable. There is no material code for brass. Leave material code blank when ordering. For ProMax, the material code is built into part number. Other materials available upon request.

Brass Quick FullJet nozzles have Buna-N seal. Stainless steel FullJet nozzles have a Viton® seal.

For more dimensions and sizes, contact your sales engineer.

PROMAX QUICKJET NOZZLE MAXIMUM PRESSURES AT VARIOUS TEMPERATURES

The recommended maximum operating pressure for ProMax QuickJet nozzles varies based on temperature. As temperature increases, the recommended operating pressure decreases. Do not use outside of operating range.



S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Quick FullJet Tip Type					Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	QGA	QLGA	QHA	QLHA	QPHA				7 psi	10 psi	20 psi	40 psi	70 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
1/8, 1/4, 3/8, 1/2	●				●	1	.031	.025	–	.10	.14	.19	.24	.26	.29	.35	–	58	53
	●				●	1.5	.047	.025	.13	.15	.21	.28	.37	.39	.43	.52	52	65	59
	●				●	2	.047	.040	.17	.20	.28	.38	.49	.52	.58	.70	43	50	46
	●				●	2.5	.053	.040	.21	.25	.34	.47	.61	.65	.72	.87	43	50	46
	●				●	3	.063	.040	.25	.30	.41	.57	.73	.78	.87	1.0	52	65	59
	●		●		●	3.5	.063	.050	.30	.35	.48	.66	.86	.91	1.0	1.2	43	50	46
	●				●	4	.067	.050	.34	.40	.55	.76	.98	1.0	1.2	1.4	48	55	50
	●				●	5	.078	.050	.42	.50	.69	.95	1.2	1.3	1.4	1.7	52	65	59
1/4, 3/8, 1/2	●		●		●	6.5	.094	.063	.55	.65	.89	1.2	1.6	1.7	1.9	2.3	45	50	46
					●	8	.096	.063	.68	.80	1.1	1.5	2.0	2.1	2.3	2.8	54	65	61
	●		●		●	10	.109	.063	.85	1.0	1.4	1.9	2.4	2.6	2.9	3.5	58	67	61
					●	15	.141	.063	1.3	1.5	2.1	2.8	3.7	3.9	4.3	5.2	80	85	80
3/8, 1/2	●					9.5	.109	.094	.81	.95	1.3	1.8	2.3	2.5	2.7	3.3	45	50	46
	●			●		15	.141	.094	1.3	1.5	2.1	2.8	3.7	3.9	4.3	5.2	64	67	61
	●					20	.156	.109	1.7	2.0	2.8	3.8	4.9	5.2	5.8	7.0	76	80	73
	●			●		22	.188	.109	1.9	2.2	3.0	4.2	5.4	5.7	6.3	7.6	87	90	82
1/2		●				16	.141	.125	1.4	1.6	2.2	3.0	3.9	4.2	4.6	5.6	48	50	46
		●				20	.161	.125	1.7	2.0	2.8	3.8	4.9	5.2	5.8	7.0	62	65	59
		●		●		25	.188	.125	2.1	2.5	3.4	4.7	6.1	6.5	7.2	8.7	64	67	61
		●				30	.189	.141	2.5	3.0	4.1	5.7	7.3	7.8	8.7	10.4	69	72	66
		●				32	.203	.141	2.7	3.2	4.4	6.1	7.8	8.3	9.2	11.1	72	75	68
		●				40	.250	.141	3.4	4.0	5.5	7.6	9.8	10.4	11.5	13.9	88	91	83
		●				50	.266	.156	4.2	5.0	6.9	9.5	12.2	13.0	14.4	17.4	91	94	86

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



W PERFORMANCE DATA:
WIDE ANGLE SPRAY

Inlet Conn. (in.)	Quick FullJet Tip Type					Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)						Spray Angle (°)		
	QGA-W	QLGA-W	QHA-W	QLHA-W	QPHA-W				7 psi	10 psi	15 psi	40 psi	70 psi	80 psi	5 psi	10 psi	80 psi
1/8, 1/4, 3/8, 1/2	●		●		●	2.8W	.063	.040	–	.28	.33	.52	.66	.70	–	120	102
	●				●	4.3W	.078	.040	–	.43	.51	.79	1.0	1.1	–	120	102
	●		●		●	5.6W	.094	.040	.48	.56	.67	1.0	1.3	1.4	–	120	102
	●		●		●	8W	.094	.050	.68	.80	.96	1.5	1.9	2.0	–	120	103
1/4, 3/8, 1/2	●		●		●	10W	.109	.050	.85	1.0	1.2	1.8	2.4	2.5	112	120	103
	●		●		●	12W	.125	.050	1.0	1.2	1.4	2.2	2.8	3.0	114	120	103
	●		●		●	14W	.141	.063	1.2	1.4	1.7	2.6	3.3	3.5	114	120	103
3/8, 1/2	●					17W	.156	.063	1.5	1.7	2.0	3.1	4.0	4.2	114	120	103
	●			●		20W	.172	.094	1.7	2.0	2.4	3.7	4.7	5.0	114	120	104
	●					24W	.188	.094	2.1	2.4	2.9	4.4	5.7	6.0	114	120	104
	●					27W	.203	.109	2.3	2.7	3.2	5.0	6.4	6.7	114	120	106
1/2		●				30W	.219	.109	2.6	3.0	3.6	5.5	7.1	7.5	114	120	108
		●				35W	.234	.125	3.0	3.5	4.2	6.4	8.2	8.7	114	120	108
		●				40W	.250	.125	3.4	4.0	4.8	7.4	9.4	10.0	114	120	108
		●				45W	.250	.141	3.8	4.5	5.4	8.3	10.6	11.2	114	120	110
		●				50W	.266	.156	4.3	5.0	6.0	9.2	11.8	12.5	114	120	112

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.

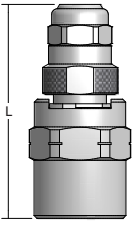
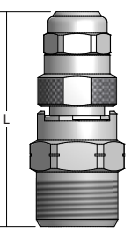
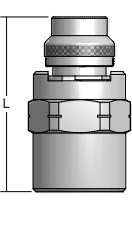
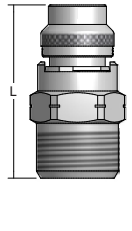
N PERFORMANCE DATA:
NARROW ANGLE SPRAY

Body Inlet Conn. (in.)	Quick FullJet Tip Type				Capacity Size	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)				
	QGA-15	QGA-30	QLGA-15	QLGA-30			10 psi	15 psi	20 psi	40 psi	80 psi	100 psi	150 psi	200 psi	300 psi	10 psi	15 psi	40 psi	100 psi
1/8, 1/4, 3/8, 1/2	●				1507	.063	.35	.43	.49	.70	.99	1.1	1.4	1.6	1.9	13	14	15	15
	●				1514	.094	.70	.86	.99	1.4	2.0	2.2	2.7	3.1	3.8	13	14	15	15
1/4, 3/8, 1/2	●				1530	.125	1.5	1.8	2.1	3.0	4.2	4.7	5.8	6.7	8.2	13	14	15	15
3/8, 1/2	●				1550	.172	2.5	3.1	3.5	5.0	7.1	7.9	9.7	11.2	13.7	13	14	15	15
1/2			●		1590	.219	4.5	5.5	6.4	9.0	12.7	14.2	17.4	20	25	13	14	15	15
1/8, 1/4, 3/8, 1/2		●			3001.4	.031	.070	.086	.099	.14	.20	.22	.27	.31	.38	11	17	30	31
		●			3002.5	.031	.13	.15	.18	.25	.35	.40	.48	.56	.68	12	17	30	32
		●			3004	.047	.20	.24	.28	.40	.57	.63	.77	.89	1.1	20	26	30	32
		●			3007	.063	.35	.43	.49	.70	.99	1.1	1.4	1.6	1.9	20	23	30	30
1/4, 3/8, 1/2		●			3009	.078	.45	.55	.64	.90	1.3	1.4	1.7	2.0	2.5	20	23	30	30
3/8, 1/2			●		3014	.094	.70	.86	.99	1.4	2.0	2.2	2.7	3.1	3.8	20	25	30	30

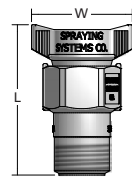
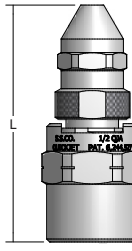
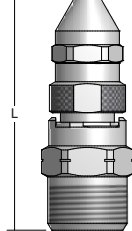
Highlighted column shows the rated pressure.



DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	W (Width) (in.)	Net Weight (oz.)
	QJA (F) + QGA	1/8, 1/4, 3/8, 1/2	2.352	1	–	4.2
	QJA (F) + QGA-W	1/8, 1/4, 3/8, 1/2	2.662	1	–	4.3
	QJLA (F) + QLGA	3/8, 1/2	3.078	1-1/8	–	8.7
	QJLA (F) + QLGA-W	3/8, 1/2	3.265	1-1/8	–	9.3
	QJJA (M) + QGA	1/8, 1/4, 3/8, 1/2	2.250	7/8	–	3.8
	QJJA (M) + QGA-W	1/8, 1/4, 3/8, 1/2	2.565	7/8	–	4.2
	QJJLA (M) + QLGA	3/8, 1/2	3.115	1-1/8	–	8.2
	QJJLA (M) + QLGA-W	3/8, 1/2	3.290	1-1/8	–	8.9
	QJA (F) + QHA	1/8, 1/4, 3/8, 1/2	1.980	1	–	3.8
	QJA (F) + QHA-W	1/8, 1/4, 3/8, 1/2	1.895	1	–	3.5
	QJLA (F) + QLHA	3/8, 1/2	2.368	1-1/8	–	5.9
	QJLA (F) + QLHA-W	3/8, 1/2	2.140	1-1/8	–	5
	QJJA (M) + QHA	1/8, 1/4, 3/8, 1/2	1.773	7/8	–	3.2
	QJJA (M) + QHA-W	1/8, 1/4, 3/8, 1/2	1.802	7/8	–	3.5
	QJJLA (M) + QLHA	3/8, 1/2	2.375	1-1/8	–	5.4
	QJJLA (M) + QLHA-W	3/8, 1/2	2.171	1-1/8	–	5

Based on the largest/heaviest version of each type.

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	W (Width) (in.)	Net Weight (oz.)
	QPPA (M) + QPHA or QPHA-W	1/8, 1/4, 3/8, 1/2	1.899	7/8	1.250	0.5
	QJA (F) + QGA-15 or QGA-30	1/8, 1/4, 3/8, 1/2	2.736	1	–	5.5
	QJLA (F) + QLGA-15 or QLGA-30	3/8, 1/2	3.425	1-1/8	–	9.7
	QJJA (M) + QGA-15 or QGA-30	1/8, 1/4, 3/8, 1/2	2.635	7/8	–	4.6
	QJJLA (M) + QLGA-15 or QLGA-30	3/8, 1/2	3.465	1-1/8	–	9.2

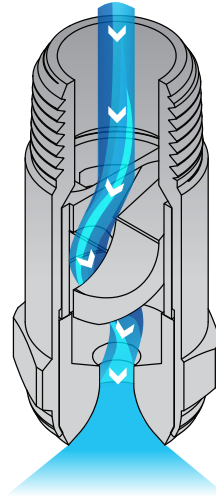
Based on the largest/heaviest version of each type.

BODY TYPES

Inlet Conn. (in.)	QuickJet and ProMax QuickJet Bodies				
	Conn. F		Conn. M		
	QJA	QJLA	QJJA	QJJLA	QPPA
1/8	•		•		•
1/4	•		•		•
3/8	•	•	•	•	•
1/2	•	•	•	•	•

OVERVIEW: FULLJET MAXIMUM FREE PASSAGE (MFP)

- Solid cone-shaped spray pattern
- Patented vane design provides largest free passage of maximum free passage nozzles; ideal for use with fluids with particulates
- More uniform spray distribution than other large free passage nozzles
- Uniform spray distribution from 1.4 to 57 gpm (5.3 to 216 lpm)
- Operating pressures up to 80 psi (6 bar)
- Spray angles: 60°, 90° and 115°



MFP FullJet Nozzles

The liquid comes in contact with the vane as it enters the nozzle. The unique vane design stabilizes the fluid before it enters the swirl region. The swirling liquid passes through the nozzle and breaks up as it exits the nozzle orifice. The spray pattern produced is a well-defined cone shape consisting of uniform drops equally distributed throughout the spray pattern. The large, open passages in the nozzle minimize clogging.

FULLJET MAXIMUM FREE PASSAGE (MFP) OPTIONS

PATENTED VANE TECHNOLOGY

PROVIDES SUPERIOR PERFORMANCE

PLUS NEW SIZES AND CAPACITIES NOW AVAILABLE



HMFP
3/8" to 1-1/2" female conn.



HMFP
2" to 3" female conn.



HHMFP
3/8" to 1-1/2" male conn.



HHMFP
2" to 3" male conn.

ORDERING INFORMATION

FULLJET MAXIMUM FREE PASSAGE (MFP)

Inlet Conn.	Nozzle Type	—	Material Code	Spray Angle	Capacity Size	Example
						3/4 HHMFP — SS 90 70

BSPT connections require the addition of a "B" prior to the inlet connection. Use material code SS for 316 stainless steel MFP nozzles.

RELATIVE DROP SIZE IN MICRONS



Drop size will vary based on flow rate and pressure.

QUICK REFERENCE GUIDE

Model	Connection/Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
HMFP	F	3/8 to 1	316 stainless steel vane and choice of brass or 316 stainless steel (SS) bodies	B21-B22	B23
	F	1-1/4 to 3	316 stainless steel vane and 316 stainless steel (SS) body		
HHMFP	M	3/8 to 1	316 stainless steel vane and choice of brass or 316 stainless steel (SS) bodies	B21-B22	
	M	1-1/4 to 3	316 stainless steel vane and 316 stainless steel (SS) body		

F = female thread; M = male thread. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request. For more dimensions and sizes, contact your sales engineer.

S PERFORMANCE DATA: STANDARD ANGLE SPRAY 

Inlet Conn. (in.)	Nozzle Type		Capacity Size	Approx. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)				Spray Angle (°)					
	HMFP	HHMFP			Flow Rate Capacity (gallons per minute)				60° Series		90° Series		115° Series	
					10 psi	20 psi	40 psi	80 psi	10 psi	40 psi	10 psi	40 psi	10 psi	40 psi
3/8	●	●	14	.125	1.4	1.8	2.4	3.2	60	62	90	84	115	100
	●	●	22	.156	2.2	2.9	3.8	5.1	60	62	90	84	115	100
	●	●	32	.188	3.2	4.2	5.6	7.4	60	62	90	84	115	100
1/2	●	●	32	.188	3.2	4.2	5.6	7.4	60	62	90	84	115	100
	●	●	51	.219	5.1	6.7	8.9	11.7	60	62	90	84	115	100
	●	●	57	.250	5.7	7.5	9.9	13.1	60	62	90	84	115	100
3/4	●	●	70	.281	7.0	9.2	12.2	16.1	60	62	90	84	115	100
	●	●	84	.313	8.4	11.1	14.6	19.3	60	62	90	84	115	100
	●	●	100	.344	10.0	13.2	17.4	23	60	62	90	84	115	100
	●	●	120	.375	12.0	15.8	21	28	60	62	90	84	115	100
1	●	●	120	.375	12.0	15.8	21	28	60	62	90	84	115	100
	●	●	150	.406	15.0	19.5	25	33	60	62	90	88	115	105
	●	●	170	.437	17.0	22	29	37	60	62	90	88	115	105
1-1/4	●	●	170	.437	17.0	22	29	37	60	62	90	88	115	105
	●	●	200	.469	20	26	34	44	60	62	90	88	115	105
	●	●	220	.500	22	29	37	48	60	62	90	88	115	105
	●	●	240	.531	24	31	41	53	60	62	90	88	115	105
	●	●	260	.562	26	34	44	57	60	62	90	88	115	105

Approximate Free Passage Diameter is the approximate diameter as listed of foreign matter that can pass through the nozzle without clogging. **Highlighted column shows the rated pressure.**

S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type		Capacity Size	Approx. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)				Spray Angle (°)					
	HMFP	HHMFP			Flow Rate Capacity (gallons per minute)				60° Series		90° Series		115° Series	
					10 psi	20 psi	40 psi	80 psi	10 psi	40 psi	10 psi	40 psi	10 psi	40 psi
1-1/2	●	●	240	.54	24	32	43	58	60	59	89	89	108	104
	●	●	260	.558	26	35	47	63	62	61	90	92	113	103
	●	●	280	.571	28	38	50	68	62	62	89	91	113	107
	●	●	300	.59	30	42	58	80	63	62	93	92	114	108
	●	●	350	.63	35	48	67	93	63	63	91	93	117	113
	●	●	400	.66	40	55	77	106	64	64	92	93	120	115
	●	●	450	.7	45	62	86	119	65	63	92	91	117	116
2	●	●	500	.76	50	70	97	135	59	58	90	86	103	98
	●	●	600	.82	60	84	116	162	61	58	89	86	108	102
	●	●	700	.86	70	98	136	189	62	57	92	91	114	106
	●	●	800	.97	80	111	155	216	60	57	93	89	113	111
2-1/2	●	●	1000	1	100	137	188	258	61	58	92	90	112	112
	●	●	1200	1.21	120	165	226	309	63	59	94	91	110	108
	●	●	1400	1.36	140	192	263	361	62	60	93	92	113	111
	●	●	1700	1.41	170	233	320	438	62	60	89	88	112	110
3	●	●	1800	1.55	180	242	325	436	61	59	90	92	112	108
	●	●	2000	1.73	200	269	361	485	63	61	93	91	112	109
	●	●	2400	2.2	240	322	433	582	62	60	95	93	114	111

Approximate Free Passage Diameter is the approximate diameter as listed of foreign matter that can pass through the nozzle without clogging.
Highlighted column shows the rated pressure.




DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	Spray Angle	Capacity Size	L (in.)	Hex. (in.)	Net Weight (oz.)
	HMFP (F)	3/8	60°, 90°, 115°	14, 22	1.460	13/16	2.4
			60°, 90°, 115°	32	1.701	13/16	2.5
		1/2	60°, 90°, 115°	32	1.770	1	4.5
			60°, 90°, 115°	51, 57	2.120	1	4.6
		3/4	60°, 90°, 115°	70	2.400	1-1/4	8.9
			60°, 90°, 115°	84	2.637	1-3/8	12.6
			60°, 90°, 115°	100	2.894	1-3/8	13.3
		1	60°, 90°, 115°	120	3.070	1-3/8	12.9
		1	60°, 90°, 115°	120, 150, 170	3.250	1-3/4	22.5
		1-1/4	60°, 90°, 115°	170, 200, 220, 240, 260	3.750	2	30.5
1-1/2	60°, 90°, 115°	240, 260, 280, 300, 350, 400, 450	4.380	2-3/16	35.3		
	HMFP (F)	2	60°, 90°, 115°	500, 600, 700, 800	6.528	2-3/4 dia.	52.9
		2-1/2	60°, 90°, 115°	1000, 1200, 1400, 1700	8.000	3-13/16 dia.	93.5
		3	60°, 90°, 115°	1800, 2000, 2400	9.440	4-3/16 dia.	114.6
	HHMFP (M)	3/8	60°, 90°, 115°	14, 22	1.000	11/16	1.4
			60°, 90°, 115°	32	1.701	3/4	2
		1/2	60°, 90°, 115°	32	1.225	7/8	2.4
			60°, 90°, 115°	51, 57	2.198	1	4.9
		3/4	60°, 90°, 115°	70	1.810	1-1/8	5
			60°, 90°, 115°	84	2.713	1-3/8	11.5
			60°, 90°, 115°	100	2.980	1-3/8	12.1
		1	60°, 90°, 115°	120	3.100	1-3/8	11.5
		1	60°, 90°, 115°	120, 150, 170	3.250	1-3/4	22.5
		1-1/4	60°, 90°, 115°	170, 200, 220, 240, 260	3.750	2	32
1-1/2	60°, 90°, 115°	240, 260, 280, 300, 350, 400, 450	4.380	2-3/16	36.7		
	HHMFP (M)	2	60°, 90°, 115°	500, 600, 700, 800	6.528	2-3/4 dia.	52.9
		2-1/2	60°, 90°, 115°	1000, 1200, 1400, 1700	8.000	3-13/16 dia.	93.5
		3	60°, 90°, 115°	1800, 2000, 2400	9.440	4-3/16 dia.	114.6

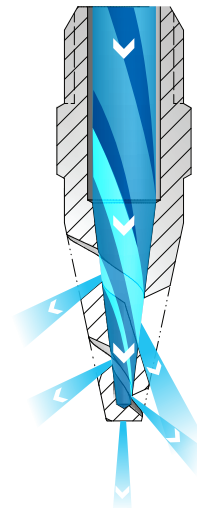
Based on the largest/heaviest version of each type.



OVERVIEW: SPIRALJET

- Solid cone-shaped spray pattern
- Open passages ideal for use with fluids with particulates
- Maximum liquid throughput for a given pipe size
- Spray angles from 60° to 170°
- Uniform spray distribution from .7 to 3320 gpm (2.7 to 11967 lpm)
- Operating pressures up to 400 psi (25 bar)
- Compact size enables easy installation or retrofit on most pipe systems
- Certain nozzles available with UL listing  for fire protection applications

For other certifications, contact your sales engineer.



SpiralJet HHSJ and HHSJX Nozzles

The liquid enters the nozzle and passes through the orifice. The liquid exits the nozzle through the voids in the spiral. As it deflects off the spiral surface, a full cone pattern is formed.

SPIRALJET OPTIONS



HHSJ

1/4" to 2" male conn.
Hex. body style/316 stainless steel

Other body styles, connection sizes and materials available.
See Quick Reference Guide.



HHSJX

3/8" to 2" male conn.
Extra large free passage design
Hex. body style/brass

Other body styles, connection sizes and materials available.
See Quick Reference Guide.

ORDERING INFORMATION

SPIRALJET

Inlet Conn.	Nozzle Type	—	Material Code	Spray Angle	Capacity Size	Example
						1/4 HHSJ — SS 120 07

BSPT connections require the addition of a "B" prior to the inlet connection.

**RELATIVE DROP SIZE
IN MICRONS**



Drop size will vary based on flow rate and pressure.



QUICK REFERENCE GUIDE

Model	Connection/Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
HHSJ	M, Hex.	1/4 to 2	Brass, 316 stainless steel (316SS)	B25	B26
	M, Flats, Cast	1/4 to 4	316 stainless steel (SS)		
	M, Round	1/4 to 4	Polyvinyl chloride (PVC), PTFE (TEF)		
HHSJX	M, Hex.	3/8 to 2	Brass	B26	
	M, Flats, Cast	3/8 to 2	316 stainless steel (SS)		
	M, Round	3/8 to 2	Polypropylene (PP), Polyvinyl chloride (PVC)		

M = male thread. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request.
 For more dimensions and sizes, contact your sales engineer.

S PERFORMANCE DATA: STANDARD ANGLE SPRAY 

Inlet Conn. (in.)	Nozzle Type	Spray Angle at 10 psi					Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)				
		60°	90°	120°	150°	170°				10 psi	20 psi	40 psi	100 psi	400 psi
1/4	●	●	●	●			07	.094	.094	.70	.99	1.4	2.2	4.4
	●	●	●	●	●	●	13	.125	.125	1.3	1.8	2.6	4.1	8.2
	●	●	●	●	●	●	20	.156	.125	2.0	2.8	4.0	6.3	12.6
3/8	●	●					07	.094	.094	.70	.99	1.4	2.2	4.4
	●	●					13	.125	.125	1.3	1.8	2.6	4.1	8.2
	●	●					20	.156	.125	2.0	2.8	4.0	6.3	12.6
	●	●	●	●	●	●	30	.188	.125	3.0	4.2	6.0	9.5	19.0
	●	●	●	●	●	●	40	.219	.125	4.0	5.7	8.0	12.6	25
	●	●	●	●	●	●	53	.250	.125	5.3	7.5	10.6	16.8	34
	●	●	●	●	●	●	82	.313	.125	8.2	11.6	16.4	26	52
1/2	●	●	●	●	●	●	120	.375	.188	12.0	17.0	24	38	76
	●	●	●	●	●	●	164	.438	.188	16.4	23	33	52	104
	●					●	210	.500	.188	21	30	42	66	133
3/4	●	●	●	●	●	●	210	.500	.188	21	30	42	66	133
1	●	●	●	●	●	●	340	.625	.250	34	48	68	108	215
	●	●	●	●	●	●	470	.750	.250	47	66	94	149	297
1-1/2	●	●	●	●	●	●	640	.875	.313	64	91	128	202	405
	●	●	●	●	●	●	820	1.000	.313	82	116	164	259	519
	●	●	●	●	●	●	960	1.125	.313	96	136	192	304	607
2	●	●	●	●	●	●	1400	1.375	.438	140	198	280	443	885
	●	●	●	●	●	●	1780	1.500	.438	178	252	356	563	1126
3	●	●	●	●			2560	1.750	.563	256	362	512	810	1619
	●	●	●	●			3360	2.000	.563	336	475	672	1063	2125
4	●	●	●	●			5250	2.500	.625	525	742	1050	1660	3320

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



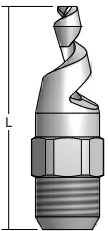
S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type	Spray Angle at 10 psi		Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)				
		HHSJX	90°				120°	10 psi	20 psi	40 psi	100 psi
3/8	●	●	●	30	.188	.188	3.0	4.2	6.0	9.5	19.0
	●	●	●	40	.219	.219	4.0	5.7	8.0	12.6	25
	●	●	●	53	.250	.250	5.3	7.5	10.6	16.8	34
	●	●	●	82	.313	.313	8.2	11.6	16.4	26	52
1/2	●	●	●	120	.375	.375	12.0	17.0	24	38	76
	●	●	●	164	.438	.438	16.4	23	33	52	104
3/4	●	●	●	210	.500	.500	21	30	42	66	133
1	●	●	●	340	.625	.625	34	48	68	108	215
	●	●	●	470	.750	.750	47	66	94	149	297
1-1/2	●	●	●	640	.875	.875	64	91	128	202	405
	●	●	●	820	1.000	1.000	82	116	164	259	519
	●	●	●	960	1.125	1.125	96	136	192	304	607
2	●	●	●	1400	1.375	1.375	140	198	280	443	885
	●	●	●	1780	1.500	1.500	178	252	356	563	1126

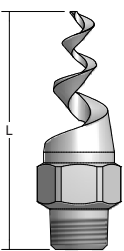
Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.

DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	Net Weight (oz.)
	HHSJ (M)	1/4	2.125	9/16	1
		3/8	2.375	11/16	1.8
		1/2	3.125	7/8	3.5
		3/4	3.438	1-1/16	5.4
		1	4.563	1-3/8	10
		1-1/2	6.750	2	27
		2	6.875	2-1/2	35
		3	11.875	3-3/4	92
		4	13.250	4-1/2	10.3 lbs.

Based on the largest/heaviest version of each type.

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	Net Weight (oz.)
	HHSJX (M)	3/8	2.750	7/8	3
		1/2	3.375	1-1/16	4.5
		3/4	4.625	1-3/8	8
		1	5.125	1-3/4	18
		1-1/2	6.750	2	30
		2	11.000	3	88

Based on the largest/heaviest version of each type.

OVERVIEW: DISTRIBOJET EXTRA LARGE FREE PASSAGE

- Solid cone-shaped spray pattern with round impact area
- Extra large flow passages and large open orifice eliminate clogging
- Internal vane is cast as part of the nozzle
- Uniform spray distribution from 27 to 8728 gpm (122 to 32530 lpm)
- Operating pressures up to 60 psi (4 bar); full cone pattern develops at 1 psi (.07 bar)
- 50°, 60°, 80° and 95° spray angles; 50° and 65° styles feature specially designed grooved orifices for accurate flow rates and spray angle control



DistriboJet R, RF and RR Nozzles

The liquid comes in contact with the vane cast inside the nozzle as it enters. This contact causes the liquid to swirl. As the liquid flows through the extra large flow passages, the liquid continues to swirl. The liquid breaks up as it exits the large open orifice producing a deluge-like cone pattern.

DISTRIBOJET EXTRA LARGE FREE PASSAGE OPTIONS



R
2" to 8" female conn.



RF
4" to 12" flange conn.



RR
2" to 8" male conn.

ORDERING INFORMATION

DISTRIBOJET EXTRA LARGE FREE PASSAGE DESIGN

Inlet Conn.	Nozzle Type	—	Material Code	Spray Angle	Capacity Size	Example
						2 RR — SS 50 45

BSPT connections require the addition of a "B" prior to the inlet connection.

**RELATIVE DROP SIZE
IN MICRONS**

10 to 100	100 to 500	500 to 1000	1000 to 5000
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Drop size will vary based on flow rate and pressure.

QUICK REFERENCE GUIDE

Model	Connection/ Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
R	F, Cast	2 to 8	Brass, 316 stainless steel (SS)	B28, B29	B29
RR	M, Cast	2 to 8			
RF	Flange, Cast	4 to 12			

F = female thread; M = male thread. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request.
For more dimensions and sizes, contact your sales engineer.

S PERFORMANCE DATA:
STANDARD ANGLE SPRAY



Inlet Conn. (in.)	Nozzle Type												Capacity Size	Flow Rate Capacity (gallons per minute)							
	R				RR				RF					1 psi	3 psi	5 psi	7 psi	10 psi	20 psi	40 psi	60 psi
	Spray Angle																				
	50°	65°	80°	95°	50°	65°	80°	95°	50°	65°	80°	95°									
2	•	•		•	•	•		•					45	27	45	57	66	78	108	148	179
		•		•		•		•					60	36	60	76	89	104	144	198	238
2-1/2	•	•		•	•	•		•					70	42	70	89	103	122	168	230	278
		•		•		•		•					90	54	90	114	133	157	215	296	357
3	•	•		•	•	•		•					110	66	110	139	162	191	263	362	436
		•		•		•		•					140	84	140	177	207	244	335	461	555
4	•	•	•		•	•	•		•	•	•		160	97	160	202	236	278	383	527	635
		•		•		•		•	•	•		•	190	115	190	240	281	331	455	625	754
		•		•		•		•		•		•	250	151	250	316	369	435	598	823	992
5	•	•	•		•	•	•		•	•	•		250	151	250	316	369	435	598	823	992
		•		•		•		•	•	•		•	280	169	280	354	413	487	670	922	1111
		•		•		•		•		•		•	380	229	380	481	561	661	909	1251	1508
6	•	•	•		•	•	•		•	•	•		360	217	360	455	532	626	862	1185	1428
		•		•		•		•	•	•		•	400	241	400	506	591	696	957	1317	1587
		•		•		•		•		•		•	560	338	560	708	827	974	1340	1844	2222
8	•	•	•		•	•	•		•	•	•		650	392	650	822	960	1131	1556	2140	2579
		•		•		•		•	•	•		•	750	452	750	949	1107	1305	1795	2469	2975
		•		•		•		•		•		•	850	513	850	1075	1255	1479	2034	2798	3372
				•				•				•	1000	603	1000	1265	1477	1740	2393	3292	3967

For orifice information, contact your sales engineer.

Highlighted column shows the rated pressure.



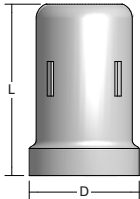
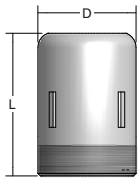
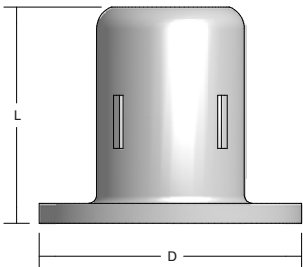
S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type												Capacity Size	Flow Rate Capacity (gallons per minute)							
	R				RR				RF					1 psi	3 psi	5 psi	7 psi	10 psi	20 psi	40 psi	60 psi
	Spray Angle																				
	50°	65°	80°	95°	50°	65°	80°	95°	50°	65°	80°	95°									
12												●	1400	845	1400	1771	2067	2436	3351	4609	5554
												●	1600	965	1600	2024	2363	2784	3829	5267	6347
												●	1700	1026	1700	2150	2510	2958	4069	5597	6744
												●	1800	1086	1800	2277	2658	3132	4308	5926	7141
												●	2000	1207	2000	2530	2953	3480	4787	6584	7934
												●	2200	1327	2200	2783	3249	3828	5265	7243	8728

For orifice information, contact your sales engineer.

Highlighted column shows the rated pressure.

DIMENSIONS AND WEIGHTS

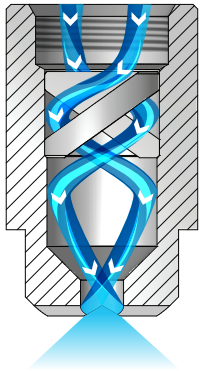
Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	D (Dia.) (in.)	Net Weight (oz.)
	R (F)	2	4.438	2.938	48
		2-1/2	5.469	3.469	88
		3	6.500	4.125	7.5 lbs.
		4	8.125	5.000	13.5 lbs.
		5	10.031	6.375	33 lbs.
		6	11.813	7.625	38.5 lbs.
		8	15.313	9.500	75 lbs.
	RR (M)	2	3.250	2.375	32
		2-1/2	4.000	2.875	84
		3	4.875	3.500	92
		4	6.500	4.500	10 lbs.
		5	8.313	5.563	25 lbs.
		6	9.750	6.625	29 lbs.
		8	13.000	8.625	56 lbs.
	RF (Flange)	4	6.563	8.875	23 lbs.
		5	8.813	9.875	39 lbs.
		6	9.813	10.875	45 lbs.
		8	13.000	13.375	85 lbs.
		12	19.500	19.000	201 lbs.

Based on the largest/heaviest version of each type.



OVERVIEW: FULLJET SQUARE AND OVAL SPRAY PATTERNS AND VANELESS DESIGN

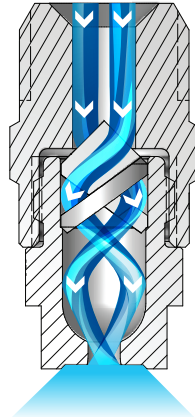
FullJet G and H Square Spray Nozzles



Square spray

As the liquid enters the nozzle, it flows over and through the vane. This creates the initial swirling of the liquid. The design of the nozzle ensures the liquid continues to swirl after passing through the vane. As the liquid exits the orifice, it interacts with cross cuts located on the face of the nozzle and forms a square spray pattern.

FullJet G-VL and GG-VL Nozzles



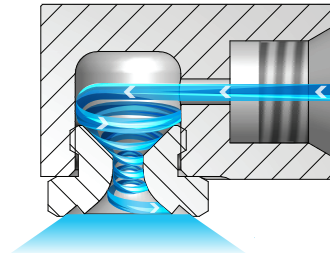
Oval spray

As the liquid enters the nozzle, it flows over and through the vane. This creates the initial swirling of the liquid. The design of the nozzle ensures the liquid continues to swirl after passing through the vane. The exit orifice of the nozzle has an oval shape. The liquid follows the oval shape as it exits the nozzle.

FullJet GANV and GGANV Nozzles

Vaneless spray

The liquid begins to swirl as it enters the swirlchamber. The swirling continues as it passes through the orifice. The breakup of the liquid occurs as it exits the nozzle orifice in a well-defined cone pattern.



FULLJET SQUARE SPRAY PATTERN

- Cone-shaped spray pattern with square-like impact area for coverage of rectangular areas or spray zones
- Unique vane design and large flow passages provide superior spray pattern control
- Uniform spray distribution from .26 to 1977 gpm (1.1 to 7371 lpm)
- Operating pressures up to 150 psi (10 bar)
- Spray angles: Standard – 43° to 94°, Wide – 112° to 120°

S



G-SQ

1/8" to 1/2" female conn.
Removable cap and vane

S



W



H-SQ

1" female conn.
One-piece body

FULLJET SQUARE SPRAY OPTIONS

S



GG-SQ – 1/8" to 1/2" male conn.
Removable cap and vane

S



W



H-SQ – 1-1/4" to 6" female conn.
Removable vane/cast body

S



W



HH-SQ – 1/8" to 1" male conn.
One-piece body

W



H-WSQ – 3/4" to 1" female conn.
One-piece body

W



H-WSQ – 1-1/4" to 3" female conn.
Removable vane/cast body

W



HH-WSQ – 1/4" to 1" male conn.
One-piece body

FULLJET OVAL SPRAY PATTERN

- Solid cone-shaped spray pattern with oval impact area; the width of the spray is approximately half its length
- Unique vane design provides superior spray pattern control
- Uniform spray distribution from .59 to 3.2 gpm (2.2 to 11.9 lpm)
- Operating pressures up to 150 psi (10 bar)
- Spray angles: Standard – 43° to 94°



G-VL – 3/8" female conn.
Removable cap and vane



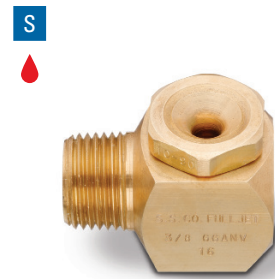
GG-VL – 3/8" male conn.
Removable cap and vane

FULLJET VANELESS DESIGN

- Solid cone-shaped spray pattern with round impact area
- Uniform spray distribution from .35 to 23 gpm (1.4 to 87 lpm)
- Operating pressures up to 100 psi (7 bar)
- No vane for unrestricted flow – coarse spray is projected at 90° from axis at the inlet
- Spray angles: Standard – 43° to 94°



GANV – 1/4" to 1/2" female conn.
Vaneless design
Removable cap



GGANV – 1/4" to 1/2" male conn.
Vaneless design
Removable cap

ORDERING INFORMATION

FULLJET SQUARE SPRAY PATTERN

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size	Example
					1/4 G – SS 12SQ

BSPT connections require the addition of a "B" prior to the inlet connection.

FULLJET OVAL SPRAY PATTERN

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size	Example
					3/8 G – SS 4.9VL

BSPT connections require the addition of a "B" prior to the inlet connection.

FULLJET VANELESS DESIGN

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size	Example
					1/4 GANV – SS 10

BSPT connections require the addition of a "B" prior to the inlet connection.

RELATIVE DROP SIZE IN MICRONS



Drop size will vary based on flow rate and pressure.

QUICK REFERENCE GUIDE

Model	Connection/ Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
G-SQ	F	1/8 to 1/2	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS)	B32	B35
GG-SQ	M				
H-SQ	F	1	Brass, Mild steel (I), 303 stainless steel (SS)	B32	
H-SQ	F, Cast	1-1/4 to 6	Brass, 316 stainless steel (SS)	B33	
HH-SQ	M	1/8 to 1	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)	B32	
H-WSQ	F	3/4 to 1	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS)	B33	
H-WSQ	F, Cast	1-1/4 to 3	Brass, 316 stainless steel (SS)		
HH-WSQ	M	1/4 to 1	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS), Polyvinyl chloride (PVC)		
G-VL	F	3/8	Brass, 303 stainless steel (SS)	B34	
GG-VL	M				
GANV	F	1/4 to 1/2	Brass, 303 stainless steel (SS)		
GGANV	M				

F = female thread; M = male thread. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request.
For more dimensions and sizes, contact your sales engineer.

S PERFORMANCE DATA:
STANDARD ANGLE SPRAY



Inlet Conn. (in.)	Nozzle Type				Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	G-SQ	GG-SQ	HH-SQ	H-SQ				5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
1/8	●	●	●		3.6SQ	.063	.050	.26	.31	.36	.50	.68	.94	1.0	1.3	40	52	47
	●	●	●		4.8SQ	.078	.050	.35	.41	.48	.66	.91	1.2	1.4	1.7	48	63	57
	●	●	●		6SQ	.094	.050	.44	.51	.60	.83	1.1	1.6	1.7	2.1	60	66	60
1/4	●	●	●		10SQ	.109	.063	.73	.85	1.0	1.4	1.9	2.6	2.9	3.5	62	67	61
	●	●	●		12SQ	.125	.063	.87	1.0	1.2	1.7	2.3	3.1	3.5	4.2	70	75	68
			●		14.5SQ	.154	.063	1.1	1.2	1.5	2.0	2.7	3.8	4.2	5.0	78	82	75
3/8	●	●	●		18SQ	.156	.094	1.3	1.5	1.8	2.5	3.4	4.7	5.2	6.3	71	75	68
1/2	●	●	●		29SQ	.219	.125	2.1	2.5	2.9	4.0	5.5	7.5	8.4	10.1	71	75	68
			●		36SQ	.250	.125	2.6	3.1	3.6	5.0	6.8	9.4	10.4	12.5	78	82	75
3/4			●		50SQ	.266	.172	3.6	4.2	5.0	6.9	9.5	13.0	14.4	17.4	71	75	68
1			●	●	106SQ	.391	.219	7.7	9.0	10.6	14.6	20	28	31	37	78	80	73

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type				Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	G-SQ	GG-SQ	HH-SQ	H-SQ				5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
1-1/4				●	177SQ	.500	.250	12.9	15.0	17.7	24	33	46	51	62	78	80	73
1-1/2				●	230SQ	.563	.344	16.7	19.5	23	32	44	60	66	80	73	77	70
2				●	290SQ	.609	.438	21	25	29	40	55	75	84	101	66	70	64
				●	360SQ	.687	.438	26	31	36	50	68	94	104	125	70	74	67
				●	480SQ	.828	.438	35	41	48	66	91	125	138	167	79	82	74
2-1/2				●	490SQ	.791	.563	36	42	49	67	93	128	141	170	62	67	61
				●	590SQ	.875	.563	43	50	59	81	112	154	170	205	75	78	71
				●	950SQ	1.125	.688	69	81	95	131	180	247	274	330	81	84	76
5				●	2980SQ	1.875	1.125	217	253	298	410	564	776	859	1036	89	91	83
6				●	5690SQ	3.219	1.750	414	483	569	783	1077	1481	1641	1977	102	105	95

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.

W PERFORMANCE DATA:
WIDE ANGLE SPRAY



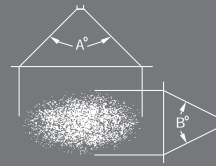
Inlet Conn. (in.)	Nozzle Type		Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)							Spray Angle (°)		
	H-WSQ	HH-WSQ				5 psi	7 psi	10 psi	15 psi	20 psi	40 psi	80 psi	5 psi	10 psi	80 psi
1/4		●	14WSQ	.141	.063	1.0	1.2	1.4	1.7	1.9	2.6	3.5	99	101	93
3/8		●	17WSQ	.156	.063	1.3	1.5	1.7	2.0	2.3	3.1	4.2	99	101	93
		●	20WSQ	.172	.094	1.5	1.7	2.0	2.4	2.7	3.7	5.0	104	110	94
		●	24WSQ	.188	.094	1.8	2.1	2.4	2.9	3.3	4.4	6.0	104	110	94
		●	27WSQ	.203	.109	2.0	2.3	2.7	3.2	3.7	5.0	6.7	104	110	98
1/2		●	30WSQ	.219	.109	2.2	2.6	3.0	3.6	4.1	5.5	7.5	104	110	102
		●	35WSQ	.234	.125	2.6	3.0	3.5	4.2	4.7	6.4	8.7	104	110	102
		●	40WSQ	.250	.125	2.9	3.4	4.0	4.8	5.4	7.4	10.0	104	110	102
		●	45WSQ	.250	.141	3.3	3.8	4.5	5.4	6.1	8.3	11.2	104	110	102
	●	50WSQ	.266	.156	3.7	4.3	5.0	6.0	6.8	9.2	12.5	104	110	102	
3/4	●	●	71WSQ	.391	.172	5.2	6.1	7.1	8.5	9.6	13.1	17.7	105	110	102
1	●	●	130WSQ	.516	.219	9.6	11.1	13.0	15.5	17.6	24	32	107	110	107
1-1/4	●		190WSQ	.609	.219	14.0	16.2	19.0	23	26	35	47	108	111	109
1-1/2	●		290WSQ	.719	.313	21	25	29	35	39	53	72	109	114	109
2	●		560WSQ	.984	.438	41	48	56	67	76	103	140	110	114	109
2-1/2	●		830WSQ	1.250	.563	61	71	83	99	113	153	207	110	115	109
3	●		1070WSQ	1.375	.688	79	91	107	128	145	197	267	110	115	109

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Highlighted column shows the rated pressure.



S PERFORMANCE DATA:
STANDARD ANGLE SPRAY



Inlet Conn. (in.)	Nozzle Type		Capacity Size	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)							Spray Angle (°)							
	G-VL	GG-VL			15 psi	30 psi	40 psi	60 psi	80 psi	100 psi	150 psi	15 psi		40 psi		100 psi		150 psi	
												A°	B°	A°	B°	A°	B°	A°	B°
3/8	●	●	4.9VL	.040	.59	.81	.93	1.1	1.3	1.4	1.7	104	66	90	60	86	52	83	47
	●	●	6.5VL	.050	.78	1.1	1.2	1.5	1.7	1.9	2.3	106	64	95	60	85	50	81	45
	●	●	8.1VL	.050	.98	1.3	1.5	1.8	2.1	2.3	2.8	102	64	100	65	84	50	80	45
	●	●	9.2VL	.050	1.1	1.5	1.7	2.1	2.4	2.7	3.2	103	65	100	65	86	51	81	46

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.
Calibration pressure = 10 psi (0.7 bar).

S PERFORMANCE DATA:
STANDARD ANGLE SPRAY



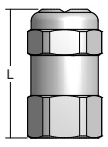
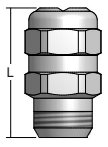
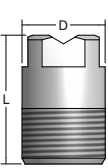
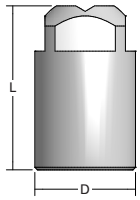
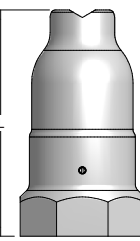
Inlet Conn. (in.)	Nozzle Type		Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	GANV	GGANV				5 psi	7 psi	10 psi	15 psi	20 psi	40 psi	80 psi	100 psi	7 psi	20 psi	80 psi
1/4	●	●	5	.109	.078	.35	.42	.50	.61	.71	1.0	1.4	1.6	68	75	82
	●	●	7	.125	.094	.49	.59	.70	.86	.99	1.4	2.0	2.2	68	75	82
	●	●	8	.156	.109	.57	.67	.80	.98	1.1	1.6	2.3	2.5	75	80	85
	●	●	10	.156	.125	.71	.84	1.0	1.2	1.4	2.0	2.8	3.2	75	80	85
	●	●	11	.156	.141	.78	.92	1.1	1.3	1.6	2.2	3.1	3.5	75	80	85
3/8	●	●	11	.172	.125	.78	.92	1.1	1.3	1.6	2.2	3.1	3.5	75	85	83
	●	●	13	.172	.141	.92	1.1	1.3	1.6	1.8	2.6	3.7	4.1	75	85	83
	●	●	16	.172	.156	1.1	1.3	1.6	2.0	2.3	3.2	4.5	5.1	75	85	83
	●	●	20	.219	.172	1.4	1.7	2.0	2.4	2.8	4.0	5.7	6.3	75	85	83
	●	●	23	.219	.188	1.6	1.9	2.3	2.8	3.3	4.6	6.5	7.3	75	85	83
	●	●	26	.234	.203	1.8	2.2	2.6	3.2	3.7	5.2	7.4	8.2	75	85	83
	●	●	29	.234	.219	2.1	2.4	2.9	3.6	4.1	5.8	8.2	9.2	75	85	83
1/2	●	●	33	.297	.234	2.3	2.8	3.3	4.0	4.7	6.6	9.3	10.4	75	85	83
	●	●	32	.313	.203	2.3	2.7	3.2	3.9	4.5	6.4	9.1	10.1	85	90	95
	●	●	40	.313	.234	2.8	3.3	4.0	4.9	5.7	8.0	11.3	12.6	85	90	95
	●	●	48	.313	.281	3.4	4.0	4.8	5.9	6.8	9.6	13.6	15.2	85	90	95
	●	●	56	.391	.297	4.0	4.7	5.6	6.9	7.9	11.2	15.8	17.7	85	90	95
	●	●	64	.391	.328	4.5	5.4	6.4	7.8	9.1	12.8	18.1	20	85	90	95
	●	●	72	.391	.359	5.1	6.0	7.2	8.8	10.2	14.4	20	23	85	90	95

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

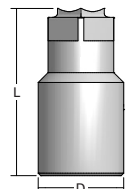
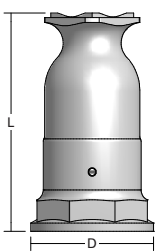
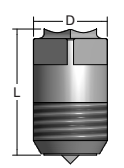
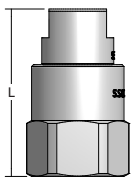
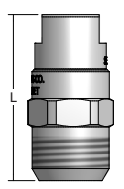
Highlighted column shows the rated pressure.



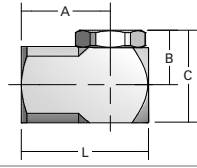
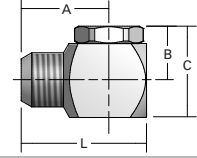
DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	D (Dia.) (in.)	Net Weight (oz.)
	G-SQ (F)	1/8	1.124	9/16	–	0.9
		1/4	1.342	11/16	–	1.6
	GG-SQ (M)	1/8	1.187	9/16	–	0.1
		1/4	1.436	11/16	–	0.1
	HH-SQ (M)	1/8	0.875	–	0.500	0.5
		1/4	0.875	–	0.531	0.5
		3/8	0.938	–	0.656	0.8
		1/2	1.131	–	0.813	1.7
		3/4	1.531	–	1.063	3.6
		1	2.031	–	1.313	1.4
	H-SQ (F)	1	2.688	–	1.500	13.2
	H-SQ (F) Cast	1-1/4	2.688	1-7/8 oct.	–	16.9
		1-1/2	4.000	2-1/8 oct.	–	25.4
		2	5.000	2-5/8 oct.	–	41.4
		2-1/2	6.156	3-1/8 oct.	–	80.5
		5	12.250	6-3/4 oct.	–	38
		6	14.375	8 oct.	–	53

Based on the largest/heaviest version of each type.

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	D (Dia.) (in.)	Net Weight (oz.)
	H-WSQ (F)	3/4	1.594	–	1.250	3.6
		1	2.078	–	1.500	6.5
	H-WSQ (F) Cast	1-1/4	3.375	–	2.063	14
		1-1/2	4.000	–	2.313	24.6
		2	5.000	–	3.000	45.2
		2-1/2	6.156	–	3.438	72.8
		3	7.344	–	4.063	106.5
	HH-WSQ (M)	1/4	0.906	–	0.531	0.5
		3/8	1.188	–	0.656	1.1
		1/2	1.375	–	0.813	1.8
		3/4	1.594	–	1.063	3.5
		1	2.078	–	1.313	7.0
	G-VL (F)	3/8	1.500	13/16	2.250	2.3
	GG-VL (M)	3/8	1.500	13/16	2.250	1.9

Based on the largest/heaviest version of each type.

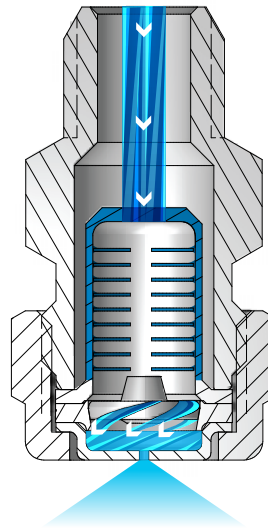
Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	A (in.)	B (in.)	C (in.)	Net Weight (oz.)
	GANV (F)	1/4	1.250	0.875	0.535	0.909	2
		3/8	1.406	0.969	0.629	1.066	3.3
		1/2	1.812	1.312	0.756	1.256	6.3
	GGANV (M)	1/4	1.250	0.875	0.535	0.910	2
		3/8	1.406	0.969	0.629	1.066	3.3
		1/2	1.875	1.375	0.756	1.256	6.3

Based on the largest/heaviest version of each type.



OVERVIEW: UNIJET

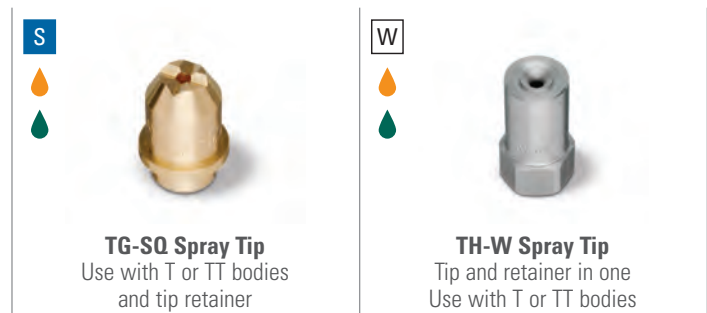
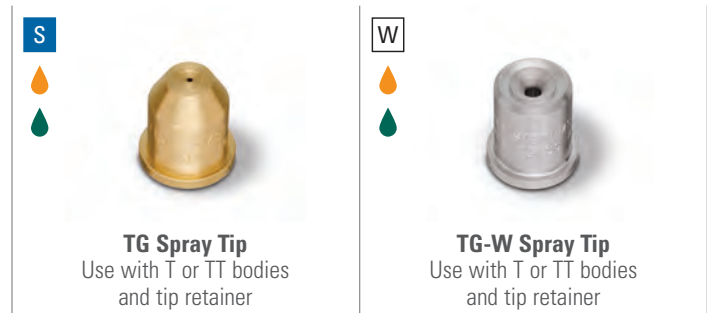
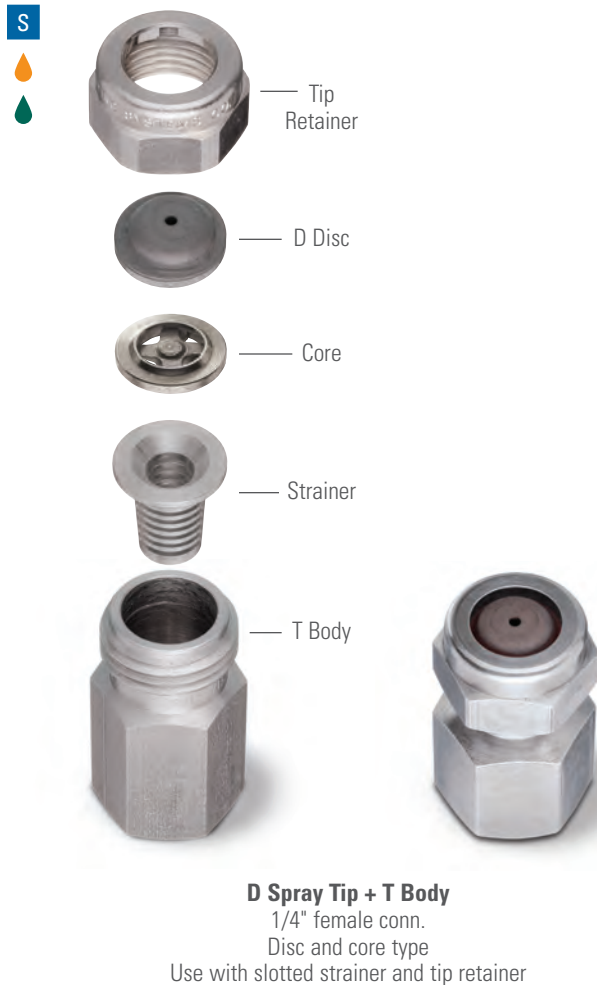
- Quick-connect nozzles reduce maintenance time – bodies remain on pipe/header
- Save on nozzle replacement costs – bodies can be reused, only spray tips are replaced; tips fit on male or female bodies
- Solid cone-shaped spray pattern with round impact area or cone-shaped spray pattern with square-like impact area for coverage of rectangular areas or spray zones
- Spray angles: Standard – 43° to 91°, Wide – 112° to 120°
- Uniform spray distribution from .08 to 7.4 gpm (.3 to 28 lpm)
- Operating pressures up to 300 psi (20 bar)



UniJet D and TG Nozzles

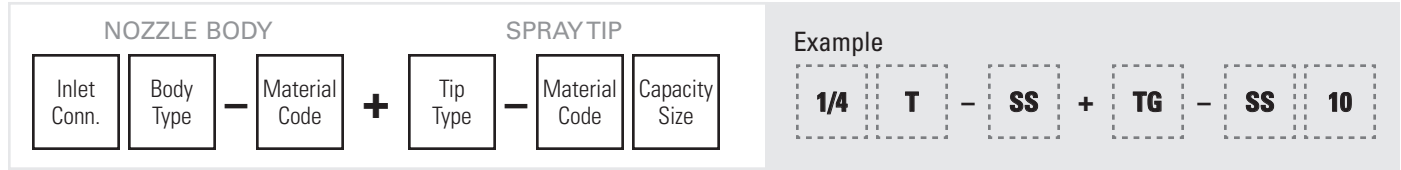
As the liquid enters the nozzle, it passes through an internal strainer and into the slotted core where the swirling begins. The swirling continues as the liquid passes through a disc. The breakup of the liquid occurs as it exits the orifice, producing a well-defined cone pattern. The drops are uniform in size and distributed equally throughout the spray pattern.

UNIJET OPTIONS



ORDERING INFORMATION

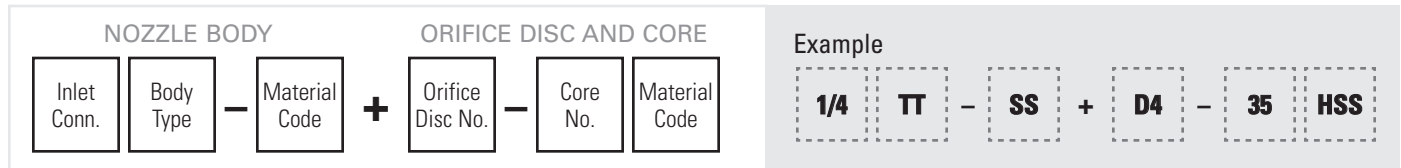
UNIJET



UniJet nozzle assemblies include a pre-sized wire mesh based on orifice diameter. When ordering just a UniJet spray tip, the mesh is not included. See Accessories, page F6 for a mesh selection guide and ordering information.

BSPT connections require the addition of a "B" prior to the nozzle body inlet connection.

UNIJET – DISC AND CORE TYPE



UniJet nozzle assemblies include a pre-sized wire mesh based on orifice diameter. When ordering just a UniJet spray tip, the mesh is not included. See Accessories, page F6 for a mesh selection guide and ordering information.

BSPT connections require the addition of a "B" prior to the nozzle body inlet connection.

QUICK REFERENCE GUIDE

Model	Connection	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
T body	F	1/8 to 1/2	Brass, 303 stainless steel (SS)	–	B40
TT body	M			–	
D spray tip	NA	NA	303 stainless steel (SS), Hardened stainless steel (HSS)	B38	
TG spray tip	NA	NA	Brass, 303 stainless steel (SS)	B39	
TG-W and TH-W spray tips	NA	NA	Brass, 303 stainless steel (SS)	B39	
TG-SQ spray tip	NA	NA	Brass, 303 stainless steel (SS)	B40	

F = female thread; M = male thread; NA = not applicable. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request. For more dimensions and sizes, contact your sales engineer.

RELATIVE DROP SIZE IN MICRONS



Drop size will vary based on flow rate and pressure.

S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Body Inlet Conn. (in.)	UniJet Tip Type	Orifice Disc No. – Core No.	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)									Spray Angle (°)		
				10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	200 psi	300 psi	20 psi	40 psi	80 psi	
1/4	●	D1-31	.031	.08	.11	.15	.20	.23	.27	.31	.37	49	47	43	
	●	D1.5-31	.036	.10	.14	.19	.26	.29	.35	.40	.48	57	65	53	
	●	D2-31	.041	.12	.16	.22	.30	.33	.40	.45	.55	62	63	61	
	●	D3-31	.047	.13	.18	.24	.33	.37	.44	.50	.60	63	65	63	
	●	D1-33	.031	.09	.11	.14	.20	.22	.26	.30	.37	27	32	35	
	●	D1.5-33	.036	.12	.15	.19	.26	.30	.36	.41	.50	37	43	45	
	●	D2-33	.041	.13	.17	.24	.33	.37	.45	.52	.63	45	52	55	
	●	D3-33	.047	.15	.21	.29	.41	.45	.55	.63	.76	48	54	57	
	●	D4-33	.063	.20	.28	.39	.54	.60	.73	.83	1.02	50	56	61	
	●	D1-35	.031	.08	.11	.14	.20	.22	.26	.29	.35	19	23	26	
	●	D1.5-35	.036	.10	.14	.19	.26	.29	.34	.39	.46	23	27	29	
	●	D2-35	.041	.14	.18	.25	.34	.37	.45	.51	.60	40	44	47	
	●	D3-35	.047	.16	.22	.30	.41	.45	.55	.62	.74	45	50	52	
	●	D4-35	.063	.27	.37	.50	.70	.79	.93	1.1	1.3	68	70	71	
	●	D5-35	.078	.34	.48	.66	.92	1.0	1.2	1.4	1.7	67	69	71	
	●	D2-56	.041	–	–	.25	.35	.39	.47	.55	.67	–	14	17	
	●	D3-56	.047	–	–	.34	.48	.53	.65	.75	.92	–	20	23	
	●	D4-56	.063	–	.39	.55	.78	.87	1.1	1.2	1.5	20	26	29	
	●	D5-56	.078	.38	.54	.76	1.1	1.2	1.5	1.7	2.1	26	32	34	
	●	D6-56	.094	.55	.78	1.1	1.6	1.7	2.1	2.5	3.0	34	39	41	
●	D7-56	.109	.76	1.1	1.5	2.2	2.4	2.9	3.4	4.2	45	52	54		
●	D8-56	.125	.96	1.4	1.9	2.7	3.1	3.7	4.3	5.3	52	57	59		
●	D10-56	.156	1.4	1.9	2.7	3.8	4.3	5.2	6.0	7.4	62	65	67		

For nozzles using Orifice Disc Nos. 1, 1.5 and 2 or Core Nos. 31 and 33, Slotted Strainer No. 4514-20 equivalent to 25 mesh screen size is supplied. For all other larger capacity Discs and Cores, Slotted Strainer No. 4514-32 equivalent to 16 mesh screen size is supplied.

Other body sizes may be available. Contact your sales engineer for further information.

For additional information see Data Sheet 4498-1.

Highlighted column shows the rated pressure.



S PERFORMANCE DATA: **STANDARD ANGLE SPRAY**

Body Inlet Conn. (in.)	UniJet Tip Type		Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
	TG					5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
1/4	●		.3	.020	.016	–	–	–	.041	.057	.078	.087	.10	–	50	61
	●		.4	.022	.018	–	–	–	.055	.076	.10	.12	.14	–	56	63
	●		.5	.024	.020	–	–	–	.069	.095	.13	.14	.17	–	56	63
	●		.6	.027	.020	–	–	–	.083	.11	.16	.17	.21	–	54	62
	●		.7	.030	.020	–	–	–	.096	.13	.18	.20	.24	–	54	63
	●		1	.036	.025	–	–	.10	.14	.19	.26	.29	.35	–	58	53
	●		2	.047	.040	.15	.17	.20	.28	.38	.52	.58	.70	43	50	46
	●		3	.062	.040	.22	.25	.30	.41	.57	.78	.87	1.0	52	65	59
	●		3.5	.067	.050	.25	.30	.35	.48	.66	.91	1.0	1.2	43	50	46
	●		5	.082	.050	.36	.42	.50	.69	.95	1.3	1.4	1.7	52	65	59
	●		6.5	.094	.063	.47	.55	.65	.89	1.2	1.7	1.9	2.3	45	50	46
	●		10	.109	.063	.73	.85	1.0	1.4	1.9	2.6	2.9	3.5	58	67	61

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Other body sizes may be available. Contact your sales engineer for further information.

Highlighted column shows the rated pressure.

W PERFORMANCE DATA: **WIDE ANGLE SPRAY**

Body Inlet Conn. (in.)	UniJet Tip Type		Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)							Spray Angle (°)		
	TG-W	TH-W				5 psi	7 psi	10 psi	15 psi	20 psi	40 psi	80 psi	5 psi	10 psi	80 psi
1/8, 1/4	●	●	2.8W	.063	.040	–	–	.28	.34	.39	.53	.73	–	120	102
	●	●	4.3W	.078	.040	–	–	.43	.52	.59	.81	1.1	–	120	102
	●	●	5.6W	.094	.040	–	.48	.56	.67	.77	1.1	1.5	–	120	102
	●	●	8W	.094	.050	–	.68	.80	.96	1.1	1.5	2.1	–	120	103
1/4	●	●	10W	.109	.050	.73	.85	1.0	1.2	1.4	1.9	2.6	112	120	103
	●		12W	.125	.050	.87	1.0	1.2	1.4	1.7	2.3	3.1	114	120	103
	●	●	14W	.141	.063	1.0	1.2	1.4	1.7	1.9	2.6	3.6	114	120	103
3/8		●	17W	.156	.063	1.2	1.4	1.7	2.0	2.3	3.2	4.4	114	120	103
		●	20W	.172	.094	1.5	1.7	2.0	2.4	2.8	3.8	5.2	114	120	104
		●	24W	.188	.094	1.7	2.0	2.4	2.9	3.3	4.5	6.2	114	120	104
		●	27W	.203	.109	2.0	2.3	2.7	3.3	3.7	5.1	7.0	114	120	106
1/2		●	30W	.219	.109	2.2	2.5	3.0	3.6	4.1	5.7	7.8	114	120	108
		●	35W	.234	.125	2.5	3.0	3.5	4.2	4.8	6.6	9.1	114	120	108

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

Other body sizes may be available. Contact your sales engineer for further information.

Highlighted column shows the rated pressure.



S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

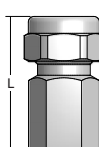
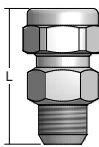
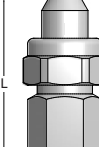
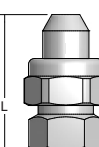
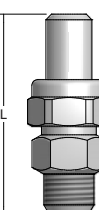
Body Inlet Conn. (in.)	UniJet Tip Type	Capacity Size	Orifice Dia. Nom. (in.)	Max. Free Passage Dia. (in.)	Flow Rate Capacity (gallons per minute)								Spray Angle (°)		
					5 psi	7 psi	10 psi	20 psi	40 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
1/4	●	6SQ	.094	.050	.44	.51	.60	.83	1.1	1.6	1.7	2.1	60	66	60
	●	8SQ	.099	.050	.58	.68	.80	1.1	1.5	2.1	2.3	2.8	70	75	68
	●	10SQ	.109	.063	.73	.85	1.0	1.4	1.9	2.6	2.9	3.5	62	66	60
	●	12SQ	.125	.063	.87	1.0	1.2	1.7	2.3	3.1	3.5	4.2	70	75	68
3/8	●	18SQ	.156	.094	1.3	1.5	1.8	2.5	3.4	4.7	5.2	6.3	71	75	68

Maximum Free Passage Diameter is the maximum diameter as listed of foreign matter that can pass through the nozzle without clogging.

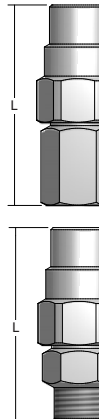
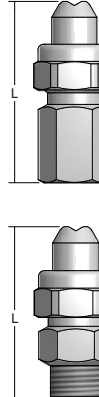
Other body sizes may be available. Contact your sales engineer for further information.

Highlighted column shows the rated pressure.

DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	Net Weight (oz.)
	T (F) + D	1/4	1.500	13/16	2.1
	TT (M) + D	1/4	1.500	13/16	1.9
	T (F) + TG	1/4	1.844	13/16	2.3
	TT (M) + TG	1/4	1.844	13/16	2.1
	T (F) + TG-W TT (M) + TG-W	1/8	2.078	13/16	2.1
		1/4	2.078	13/16	2.3

Based on the largest/heaviest version of each type. Additional sizes are available.

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	Hex. (in.)	Net Weight (oz.)
	T (F) + TH-W TT (M) + TH-W	1/8	2.157	13/16	3.8
		1/4	2.673	13/16	3.7
		3/8	2.679	13/16	4.1
		1/2	2.610	1	4.3
	T (F) + TG-SQ TT (M) + TG-SQ	1/4	2.281	13/16	1.7
		3/8	2.288	13/16	2.1

Based on the largest/heaviest version of each type. Additional sizes are available.