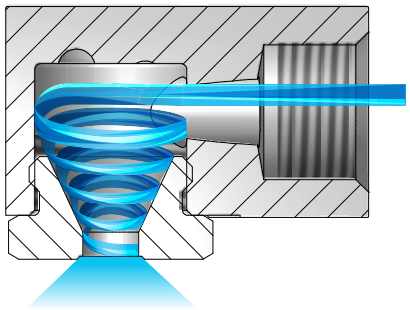
OVERVIEW: WHIRLJET STANDARD, WIDE AND EXTRA WIDE ANGLE NOZZLES

- Hollow cone spray pattern with a circular impact area
- Large, unobstructed flow passages minimize clogging
- Good atomization of liquids at lower pressures – ideal for fluid cooling applications
- Removable caps for easy inspection and cleaning on some models
- Slope-bottom design models reduce the drilling effect of the fluid vortex in the fluid chamber and premature wear
- AX and BX nozzles form smaller drops; ideal for use in air washers and dust suppression applications
- CX, CF, CRC and D nozzles feature higher flow rates; ideal for use in larger, evaporative cooling spray ponds
- AP, LAP and LBP nozzles are constructed of polypropylene and feature excellent corrosion resistance at temperatures up to 160°F (71°C); patented center post design provides extended wear life of the nozzle
- Standard, wide and extra wide spray angles

WhirlJet Nozzles

As liquid enters the nozzle, it passes into a whirlchamber and begins to spin in a circle at high speed. The rotation forces the liquid away from the center toward the edges of the whirlchamber. This causes the liquid to exit the orifice in a hollow cone pattern. Some WhirlJet nozzles have a slope bottom in the whirlchamber that helps extend wear life.

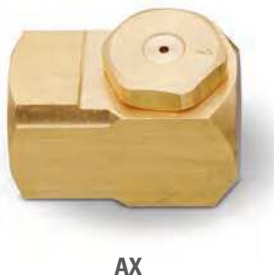


WHIRLJET AX, BX, CX AND D NOZZLES

- Spray angles: Standard – 43° to 91°, Wide – 112° to 120°
- Uniform spray distribution:
  - AX and BX nozzles – from .03 to 38 gpm (.19 to 145 lpm)
  - CX, CRC, CF and D nozzles – from 2.0 to 2362 gpm (7.3 to 9010 lpm)
- Operating pressures from 3.0 to 100 psi (0.2 to 7.0 bar)

Contact your local sales engineer for information about junction boxes.

S W



AX
1/8" to 3/4" female conn.
Slope-bottom design
Removable cap

S

CX
1" to 2-1/2" female conn.
Slope-bottom design
One-piece cast-type

WHIRLJET OPTIONS

S W

BX – 1/8" to 3/4" male conn.
Slope-bottom design
Removable cap

S

CRC
1-1/4" to 4" female conn.
Two-piece cast-type

S

CF
4" to 6" flange conn.
Two-piece cast-type

S

D
1/2" to 3/4" male conn.
One-piece cast-type

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.

WHIRLJET AP, LAP, LBP AND E NOZZLES

- Spray angles: Standard – 43° to 91°, Wide – 112° to 120°, Extra wide – 144° to 165°
- Uniform spray distribution:
  - AP, LAP and LBP nozzles – from .14 to 18.9 gpm (.20 to 15.9 lpm)
  - E nozzles – from .11 to 16.8 gpm (.41 to 64 lpm)
- Operating pressures from 3.0 to 100 psi (0.2 to 7.0 bar)

AP
1/4" to 3/8" female conn.

E
One-piece bar stock
1/4" to 3/8" female conn.

WHIRLJET OPTIONS

LAP
3/8" to 1/2" female conn.

LBP
3/8" male conn.

E
One-piece cast-type
3/8" to 1/2" female conn.

ORDERING INFORMATION

WHIRLJET AX

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size

Example: 1/4 AX – SS 10

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

WHIRLJET AP-W (9360)

Nozzle Series No.	–	Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size

Example: 9360 – 3/8 AP – PP 3-5W

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

WHIRLJET CF FLANGE CONNECTION

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size

Example: 6 CF – SS 550-65

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

WHIRLJET E

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size

Example: 1/4 E – SS 10

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

QUICK REFERENCE GUIDE

Model	Connection/ Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
AX	F	1/8 to 3/4	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS)	D6–D7	D15
BX	M	1/8 to 3/4		D6–D7	
AX-W	F	1/8 to 1/2		D8	
BX-W	M	1/8 to 1/2		D8	
CX	F, Cast	1 to 2-1/2	Brass, 316 stainless steel (SS)	D9	
CF	Flange, Cast	4 to 6		D10	D16
CRC	F, Cast	1-1/4 to 4		D10	
D	M, Cast	1/2 to 3/4	Brass	D11	
AP (9360)	F	1/4 to 3/8	Polypropylene (PP)	D11–D12	
LAP (9360)	F	3/8 to 1/2		D11–D12	D17
LBP (9360)	M	3/8		D11–D12	
AP-W (9360)	F	1/4 to 3/8		D13	D16
LAP-W (9360)	F	3/8 to 1/2		D14	D17
LBP-W (9360)	M	3/8		D14	
E	F	1/4 to 1/2	303 stainless steel (SS)	D14–D15	
E	F, Cast	3/8 to 1/2	Brass, 316 stainless steel (SS)	D14–D15	

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	Inlet Dia. Nom. (in.)	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)										Spray Angle (°)		
	AX	BX				3 psi	5 psi	10 psi	15 psi	20 psi	30 psi	40 psi	60 psi	80 psi	100 psi	10 psi	20 psi	80 psi
1/8	●	●	.5	.031	.047	–	–	.05	.06	.07	.09	.10	.12	.14	.16	39	58	69
	●	●	1	.063	.063	–	–	.10	.12	.14	.17	.20	.24	.28	.32	41	64	76
	●	●	2	.078	.078	–	.14	.20	.24	.28	.35	.40	.49	.57	.63	52	61	69
	●	●	3	.094	.094	–	.21	.30	.37	.42	.52	.60	.73	.85	.95	52	64	77
	●	●	5	.125	.125	.27	.35	.50	.61	.71	.87	1.0	1.2	1.4	1.6	56	67	76
	●	●	8	.156	.156	.44	.57	.80	.98	1.1	1.4	1.6	2.0	2.3	2.5	56	65	70
	●	●	10	.172	.172	.55	.71	1.0	1.2	1.4	1.7	2.0	2.4	2.8	3.2	55	65	72

Intermediate capacities: Caps are interchangeable for in-between capacities within each pipe size group. Request Data Sheets 3055, 3986 and 3987.
Spray dimension data: Request Data Sheets 15350 and 15362.
Highlighted column shows the rated pressure.

W PERFORMANCE DATA: WIDE ANGLE SPRAY

Nozzle Type/ Inlet Conn. (in.)		Capacity Size	Inlet Dia. Nom. (in.)	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)										Spray Angle (°)		
AP-W					3 psi	5 psi	7 psi	10 psi	20 psi	30 psi	40 psi	60 psi	80 psi	100 psi	7 psi	20 psi	80 psi
1/4	3/8																
●	●	2-5W	.078	.125	–	.20	.23	.28	.40	.48	.56	.69	.79	.89	126	135	131
●	●	2-8W	.078	.156	–	.22	.26	.31	.44	.54	.62	.76	.88	.98	121	133	130
●	●	2-10W	.078	.172	–	.24	.28	.34	.48	.59	.68	.83	.96	1.1	121	135	127
●	●	2-15W	.078	.219	–	.27	.32	.38	.54	.66	.76	.93	1.1	1.2	120	133	132
●	●	2-20W	.078	.234	–	.30	.35	.42	.60	.73	.84	1.0	1.2	1.3	111	132	135
●	●	3-5W	.094	.125	–	.25	.30	.36	.51	.62	.72	.88	1.0	1.1	133	131	109
●	●	3-8W	.094	.156	–	.30	.35	.42	.60	.73	.84	1.0	1.2	1.3	133	131	110
●	●	3-10W	.094	.172	–	.37	.44	.52	.74	.90	1.0	1.3	1.5	1.6	128	130	115
●	●	3-15W	.094	.219	–	.40	.47	.56	.79	.97	1.1	1.4	1.6	1.8	128	130	118
●	●	3-20W	.094	.234	–	.42	.49	.59	.83	1.0	1.2	1.5	1.7	1.9	119	134	136
●	●	5-5W	.141	.125	–	.35	.42	.50	.70	.86	1.0	1.2	1.4	1.6	125	112	98
●	●	5-8W	.141	.156	–	.42	.50	.60	.85	1.0	1.2	1.5	1.7	1.9	125	112	97
●	●	5-10W	.141	.172	–	.48	.56	.67	1.0	1.2	1.4	1.7	1.9	2.1	125	118	102
●	●	5-15W	.141	.219	–	.57	.67	.80	1.1	1.4	1.6	2.0	2.3	2.6	130	125	105
●	●	5-20W	.141	.234	–	.61	.72	.86	1.2	1.5	1.7	2.1	2.4	2.7	125	125	112
●	●	8-5W	.172	.125	–	.42	.50	.60	.85	1.0	1.2	1.5	1.7	1.9	119	102	99
●	●	8-8W	.172	.156	.44	.57	.67	.80	1.1	1.4	1.6	2.0	2.3	2.5	112	100	87
●	●	8-10W	.172	.172	.50	.64	.76	.91	1.3	1.6	1.8	2.2	2.6	2.9	115	102	90
●	●	8-15W	.172	.219	.59	.76	.90	1.1	1.5	1.9	2.2	2.6	3.1	3.4	121	110	98
●	●	8-20W	.172	.234	.65	.83	.99	1.2	1.7	2.0	2.4	2.9	3.3	3.7	121	113	106
●	●	10-5W	.188	.125	–	–	.54	.65	.92	1.1	1.3	1.6	1.8	2.0	115	98	85
●	●	10-8W	.188	.156	–	.61	.72	.86	1.2	1.5	1.7	2.1	2.4	2.7	110	95	84
●	●	10-10W	.188	.172	.55	.72	.84	1.0	1.4	1.7	2.0	2.4	2.8	3.1	111	97	89
●	●	10-15W	.188	.219	.67	.86	1.0	1.2	1.7	2.1	2.4	3.0	3.5	3.9	113	104	97
●	●	10-20W	.188	.234	.75	1.0	1.2	1.4	2.0	2.4	2.8	3.5	3.9	4.4	118	107	102
●	●	15-5W	.234	.125	–	–	–	.76	1.1	1.3	1.5	1.9	2.2	2.4	–	91	80
●	●	15-8W	.234	.156	–	–	.85	1.0	1.4	1.8	2.0	2.5	2.9	3.2	102	93	80
●	●	15-10W	.234	.172	–	.85	1.0	1.2	1.7	2.1	2.4	2.9	3.4	3.8	107	97	83
●	●	15-15W	.234	.219	.82	1.1	1.3	1.5	2.1	2.6	3.0	3.7	4.2	4.7	110	98	90
●	●	15-20W	.234	.234	.93	1.2	1.4	1.7	2.4	2.9	3.4	4.2	4.8	5.4	112	105	100

Highlighted column shows the rated pressure.

W PERFORMANCE DATA: WIDE ANGLE SPRAY

Nozzle Type/ Inlet Conn. (in.)			Capacity Size	Inlet Dia. Nom. (in.)	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)										Spray Angle (°)		
LAP-W		LBP-W				3 psi	5 psi	7 psi	10 psi	20 psi	30 psi	40 psi	60 psi	80 psi	100 psi	7 psi	20 psi	80 psi
3/8	1/2	3/8																
●			20-8W	.250	.172	–	–	.90	1.1	1.5	1.9	2.2	2.6	3.1	3.4	99	96	86
●			20-10W	.250	.188	–	.94	1.2	1.4	2.0	2.4	2.8	3.4	3.9	4.4	101	98	88
●			20-15W	.250	.219	.99	1.3	1.5	1.8	2.5	3.1	3.6	4.4	5.1	5.7	104	100	91
●			20-20W	.250	.250	1.1	1.4	1.7	2.0	2.8	3.5	4.0	4.9	5.6	6.3	106	101	93
●			20-25W	.250	.281	1.4	1.8	2.1	2.5	3.5	4.3	5.0	6.2	7.1	7.9	109	104	95
●			20-40W	.250	.344	1.6	2.0	2.4	2.9	4.0	5.0	5.7	7.0	8.1	9.0	110	107	98
●			20-50W	.250	.406	1.9	2.5	2.9	3.5	4.9	6.1	7.0	8.5	9.9	11.0	111	108	100
●			25-8W	.281	.172	–	–	–	1.2	1.7	2.1	2.4	2.9	3.4	3.8	–	89	78
●			25-10W	.281	.188	–	–	1.3	1.5	2.1	2.6	3.0	3.7	4.2	4.7	100	92	81
●			25-15W	.281	.219	–	1.3	1.6	1.9	2.7	3.3	3.8	4.6	5.3	6.0	102	96	85
●			25-20W	.281	.250	1.2	1.5	1.8	2.2	3.1	3.7	4.3	5.3	6.1	6.8	104	99	88
●			25-25W	.281	.281	1.4	1.8	2.1	2.5	3.5	4.3	5.0	6.2	7.1	7.9	107	102	91
●			25-40W	.281	.344	1.7	2.2	2.7	3.2	4.5	5.5	6.4	7.8	9.0	10.1	109	105	94
●			25-50W	.281	.406	2.1	2.8	3.3	3.9	5.5	6.8	7.8	9.6	11.0	12.3	110	108	99
●	●	●	40-10W	.359	.188	–	–	1.5	1.8	2.5	3.1	3.6	4.4	5.1	5.7	95	85	80
●	●	●	40-15W	.359	.219	1.3	1.7	2.0	2.4	3.4	4.2	4.9	5.9	6.9	7.7	97	88	82
●	●	●	40-20W	.359	.250	1.5	1.9	2.2	2.7	3.8	4.6	5.3	6.5	7.5	8.4	100	94	88
●	●	●	40-25W	.359	.281	1.8	2.3	2.7	3.2	4.5	5.5	6.4	7.8	9.0	10.1	103	97	91
●	●	●	40-40W	.359	.344	2.2	2.8	3.3	4.0	5.7	6.9	8.0	9.8	11.3	12.6	106	99	93
●	●	●	40-50W	.359	.406	2.8	3.6	4.2	5.0	7.1	8.7	10.0	12.3	14.1	15.9	109	101	96

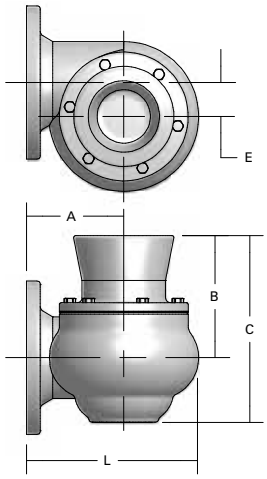
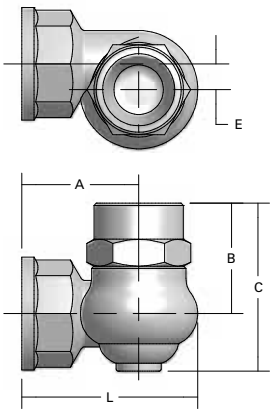
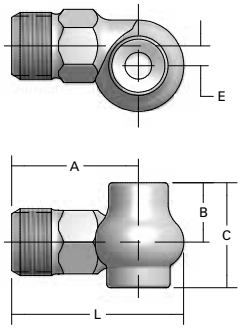
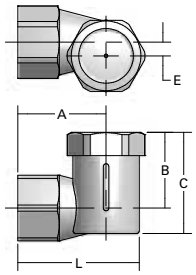
Highlighted column shows the rated pressure.

W PERFORMANCE DATA: EXTRA WIDE ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type	Capacity Size	Inlet Dia. Nom. (in.)	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)											Spray Angle (°)		
	E Styles				3 psi	5 psi	7 psi	10 psi	15 psi	20 psi	30 psi	40 psi	60 psi	80 psi	100 psi	7 psi	20 psi	80 psi
1/4	●	2	.063	.250	–	–	–	.20	.24	.28	.35	.40	.49	.57	.63	–	165	158
	●	5	.094	.250	.27	.35	.42	.50	.61	.71	.87	1.0	1.2	1.4	1.6	164	154	147
	●	5.8	.109	.250	.32	.41	.49	.58	.71	.82	1.0	1.2	1.4	1.6	1.8	164	154	147
	●	8	.125	.313	.44	.57	.67	.80	.98	1.1	1.4	1.6	2.0	2.3	2.5	164	160	151
	●	10	.141	.313	.55	.71	.84	1.0	1.2	1.4	1.7	2.0	2.4	2.8	3.2	164	154	147

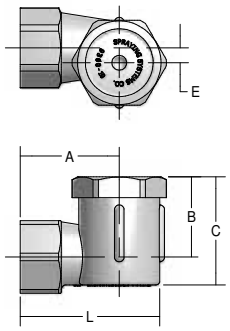
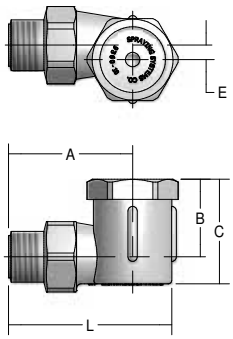
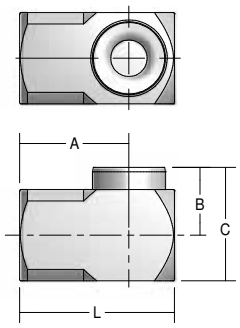
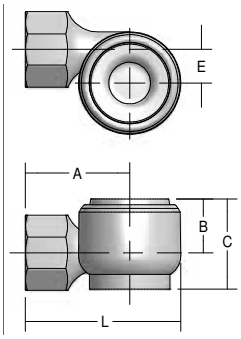
Highlighted column shows the rated pressure.

DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	A (in.)	B (in.)	C (in.)	E (in.)	Net Weight (oz.)
	**CF (Flange)**	4	8.250	4.406	9.250	12.375	1.563	114
		6	12.250	6.875	8.688	13.313	2.438	126
	**CRC (F)**	1-1/4	3.406	2.125	2.094	3.063	0.406	36
		2	4.844	3.188	3.063	4.656	0.719	80
		3	6.938	4.438	5.938	8.406	1.125	19
		4	9.000	5.563	9.125	12.250	1.563	40
	**D (M)**	1/2	2.313	1.750	0.719	1.313	0.250	5
		3/4	2.719	2.000	0.938	1.656	0.313	7.5
	**AP (F) AP-W (F)**	1/4	1.438	1.000	0.866	1.157	0.156	0.4
		3/8	1.469	1.094	0.866	1.157	0.156	0.4

Based on the largest/heaviest version of each type.

DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (in.)	A (in.)	B (in.)	C (in.)	E (in.)	Net Weight (oz.)
	**LAP (F) LAP-W (F)**	3/8	1.906	1.281	1.182	1.596	0.192	0.6
		1/2	2.031	1.406	1.182	1.596	0.192	0.8
	**LBP (M) LBP-W (M)**	3/8	2.094	1.563	1.236	1.596	0.192	0.6
	**E (F)**	1/4	1.250	0.875	0.500	0.750	–	2.3
		3/8	2.000	1.375	0.625	1.250	–	10.7
		1/2	2.375	1.625	0.766	1.625	–	17.3
	**E (F) Cast**	3/8	1.406	1.219	0.594	1.063	0.375	4.3
		1/2	2.188	1.438	0.688	1.250	0.500	6

Based on the largest/heaviest version of each type.