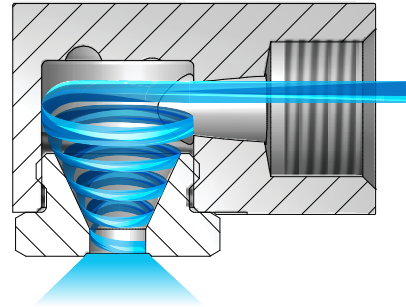


OVERVIEW: WHIRLJET STANDARD, WIDE AND EXTRA WIDE ANGLE NOZZLES

- 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.



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



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

WHIRLJET OPTIONS



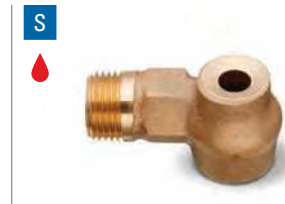
BX – 1/8" to 3/4" male conn.
Slope-bottom design
Removable cap



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



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



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	D16	
CF	Flange, Cast	4 to 6		D10		
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		D17
LAP (9360)	F	3/8 to 1/2		D11-D12		
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	D17	
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. (mm)	Orifice Dia. Nom. (mm)	Flow Rate Capacity (liters per minute)										Spray Angle (°)		
	AX	BX				0.2 bar	0.4 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	6 bar	7 bar	0.7 bar	1.5 bar	6 bar
1/8	●	●	.5	.79	1.2	-	-	.19	.23	.28	.32	.39	.46	.56	.60	39	58	69
	●	●	1	1.6	1.6	-	-	.38	.46	.56	.64	.79	.91	1.1	1.2	41	64	76
	●	●	2	2.0	2.0	-	.58	.76	.91	1.1	1.3	1.6	1.8	2.2	2.4	52	61	69
	●	●	3	2.4	2.4	-	.86	1.1	1.4	1.7	1.9	2.4	2.7	3.4	3.6	52	64	77
	●	●	5	3.2	3.2	1.0	1.4	1.9	2.3	2.8	3.2	3.9	4.6	5.6	6.0	56	67	76
	●	●	8	4.0	4.0	1.6	2.3	3.1	3.6	4.5	5.2	6.3	7.3	8.9	9.6	56	65	70
	●	●	10	4.4	4.4	2.0	2.9	3.8	4.6	5.6	6.4	7.9	9.1	11.2	12.1	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. (mm)	Orifice Dia. Nom. (mm)	Flow Rate Capacity (liters per minute)										Spray Angle (°)		
					0.2 bar	0.4 bar	0.5 bar	0.7 bar	1.5 bar	2 bar	3 bar	4 bar	6 bar	7 bar	0.5 bar	1.5 bar	6 bar
AP-W																	
1/4	3/8																
●	●	2-5W	2.0	3.2	–	.64	.90	1.1	1.6	1.8	2.2	2.6	3.1	3.4	126	135	131
●	●	2-8W	2.0	4.0	–	.71	1.0	1.2	1.7	2.0	2.4	2.8	3.5	3.7	121	133	130
●	●	2-10W	2.0	4.4	–	.78	1.1	1.3	1.9	2.2	2.7	3.1	3.8	4.1	121	135	127
●	●	2-15W	2.0	5.6	–	.85	1.2	1.4	2.1	2.4	3.0	3.5	4.2	4.6	120	133	132
●	●	2-20W	2.0	6.0	–	1.0	1.4	1.7	2.3	2.7	3.3	3.8	4.7	5.1	111	132	135
●	●	3-5W	2.4	3.2	–	.85	1.2	1.4	2.0	2.3	2.8	3.3	4.0	4.3	133	131	109
●	●	3-8W	2.4	4.0	–	1.0	1.4	1.7	2.3	2.7	3.3	3.8	4.7	5.1	133	131	110
●	●	3-10W	2.4	4.4	–	1.2	1.7	2.0	2.9	3.4	4.1	4.7	5.8	6.3	128	130	115
●	●	3-15W	2.4	5.6	–	1.3	1.8	2.1	3.1	3.6	4.4	5.1	6.3	6.8	128	130	118
●	●	3-20W	2.4	6.0	–	1.7	1.9	2.2	3.3	3.8	4.7	5.4	6.6	7.1	119	134	136
●	●	5-5W	3.6	3.2	–	1.4	1.6	1.9	2.8	3.2	3.9	4.6	5.6	6.0	125	112	98
●	●	5-8W	3.6	4.0	–	1.7	1.9	2.2	3.3	3.9	4.7	5.5	6.7	7.2	125	112	97
●	●	5-10W	3.6	4.4	–	2.0	2.2	2.6	3.7	4.3	5.3	6.1	7.5	8.1	125	118	102
●	●	5-15W	3.6	5.6	–	2.3	2.6	3.1	4.5	5.2	6.3	7.3	8.9	9.6	130	125	105
●	●	5-20W	3.6	6.0	–	2.5	2.8	3.3	4.8	5.5	6.8	7.8	9.6	10.4	125	125	112
●	●	8-5W	4.4	3.2	–	1.7	1.9	2.2	3.3	3.9	4.7	5.5	6.7	7.2	119	102	99
●	●	8-8W	4.4	4.0	1.6	2.3	2.6	3.1	4.5	5.2	6.3	7.3	8.9	9.6	112	100	87
●	●	8-10W	4.4	4.4	1.9	2.6	2.9	3.4	5.1	5.9	7.2	8.3	10.2	11.0	115	102	90
●	●	8-15W	4.4	5.6	2.2	3.1	3.5	4.1	6.1	7.1	8.7	10.0	12.3	13.3	121	110	98
●	●	8-20W	4.4	6.0	2.4	3.5	3.9	4.6	6.7	7.7	9.5	10.9	13.4	14.5	121	113	106
●	●	10-5W	4.8	3.2	–	–	2.1	2.5	3.6	4.2	5.1	5.9	7.3	7.8	115	98	85
●	●	10-8W	4.8	4.0	–	2.5	2.8	3.3	4.8	5.5	6.8	7.8	9.6	10.4	110	95	84
●	●	10-10W	4.8	4.4	2.0	2.9	3.2	3.8	5.6	6.4	7.9	9.1	11.2	12.1	111	97	89
●	●	10-15W	4.8	5.6	2.4	3.5	3.9	4.6	6.7	7.7	9.5	10.9	13.4	14.5	113	104	97
●	●	10-20W	4.8	6.0	2.9	4.0	4.5	5.3	7.8	9.0	11.1	12.8	15.6	16.9	118	107	102
●	●	15-5W	6.0	3.2	–	–	–	3.5	4.2	4.9	6.0	6.9	8.5	9.2	–	91	80
●	●	15-8W	6.0	4.0	–	–	3.2	3.8	5.6	6.4	7.9	9.1	11.2	12.1	102	93	80
●	●	15-10W	6.0	4.4	–	3.5	3.9	4.6	6.7	7.7	9.5	10.9	13.4	14.5	107	97	83
●	●	15-15W	6.0	5.6	3.1	4.3	4.8	5.7	8.4	9.7	11.8	13.7	16.7	18.1	110	98	90
●	●	15-20W	6.0	6.0	3.5	4.9	5.5	6.5	9.5	11.0	13.4	15.5	19.0	21	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. (mm)	Orifice Dia. Nom. (mm)	Flow Rate Capacity (liters per minute)										Spray Angle (°)		
LAP-W		LBP-W				0.2 bar	0.4 bar	0.5 bar	0.7 bar	1.5 bar	2 bar	3 bar	4 bar	6 bar	7 bar	0.5 bar	1.5 bar	6 bar
3/8	1/2	3/8																
●			20-8W	6.4	4.4	–	–	3.5	4.1	6.1	7.1	8.7	10.0	12.3	13.3	99	96	86
●			20-10W	6.4	4.8	–	3.2	4.5	5.3	7.8	9.0	11.1	12.8	15.6	16.9	101	98	88
●			20-15W	6.4	5.6	3.7	5.2	5.8	6.9	10.0	11.6	14.2	16.4	20	22	104	100	91
●			20-20W	6.4	6.4	4.1	5.8	6.4	7.6	11.2	12.9	15.8	18.2	22	24	106	101	93
●			20-25W	6.4	7.1	5.1	7.2	8.1	9.6	14.0	16.1	19.7	23	28	30	109	104	95
●			20-40W	6.4	8.7	5.9	8.3	9.3	11.0	16.2	18.7	23	26	32	35	110	107	98
●			20-50W	6.4	10.3	7.1	10.0	11.3	13.4	19.5	23	28	32	39	42	111	108	100
●			25-8W	7.1	4.4	–	–	–	4.6	6.7	7.7	9.5	10.9	13.4	14.5	–	89	78
●			25-10W	7.1	4.8	–	–	4.8	5.7	8.4	9.7	11.8	13.7	16.7	18.1	100	92	81
●			25-15W	7.1	5.6	–	4.3	6.1	7.2	10.6	12.2	15.0	17.3	21	23	102	96	85
●			25-20W	7.1	6.4	4.5	6.4	7.1	8.4	12.3	14.2	17.4	20	25	27	104	99	88
●			25-25W	7.1	7.1	5.1	7.2	8.1	9.6	14.0	16.1	19.7	23	28	30	107	102	91
●			25-40W	7.1	8.7	6.5	9.2	10.3	12.2	17.9	21	25	29	36	39	109	105	94
●			25-50W	7.1	10.3	8.0	11.3	12.6	14.9	22	25	31	36	44	47	110	108	99
●	●	●	40-10W	9.1	4.8	–	–	5.8	6.9	10.0	11.6	14.2	16.4	20	22	95	85	80
●	●	●	40-15W	9.1	5.6	4.9	6.9	7.7	9.1	13.4	15.5	18.9	22	27	29	97	88	82
●	●	●	40-20W	9.1	6.4	5.5	7.8	8.7	10.3	15.1	17.4	21	25	30	33	100	94	88
●	●	●	40-25W	9.1	7.1	6.5	9.2	10.3	12.2	17.9	21	25	29	36	39	103	97	91
●	●	●	40-40W	9.1	8.7	8.1	11.5	12.9	15.3	22	26	32	36	45	48	106	99	93
●	●	●	40-50W	9.1	10.3	10.2	14.4	16.1	19.0	28	32	39	46	56	60	109	101	96

Highlighted column shows the rated pressure.

W PERFORMANCE DATA:
EXTRA WIDE ANGLE SPRAY

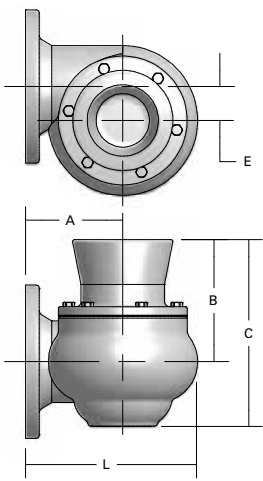
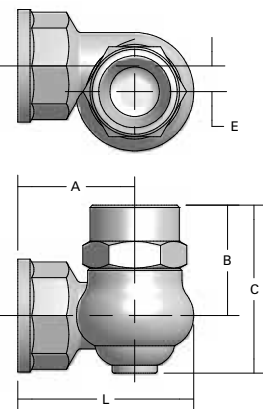
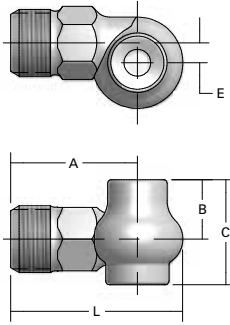
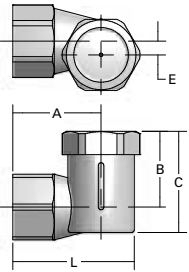


Inlet Conn. (in.)	Nozzle Type	Capacity Size	Inlet Dia. Nom. (mm)	Orifice Dia. Nom. (mm)	Flow Rate Capacity (liters per minute)										Spray Angle (°)			
	E Styles				0.2 bar	0.4 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	6 bar	7 bar	0.5 bar	1.5 bar	6 bar
1/4	●	2	1.6	6.4	–	–	–	.76	.91	1.1	1.3	1.6	1.8	2.2	2.4	–	165	158
	●	5	2.4	6.4	1.0	1.4	1.6	1.9	2.3	2.8	3.2	3.9	4.6	5.6	6.0	164	154	147
	●	5.8	2.8	6.4	1.2	1.7	1.9	2.2	2.6	3.2	3.7	4.6	5.3	6.5	7.0	164	154	147
	●	8	3.2	7.9	1.6	2.3	2.6	3.1	3.6	4.5	5.2	6.3	7.3	8.9	9.6	164	160	151
	●	10	3.6	7.9	2.0	2.9	3.2	3.8	4.6	5.6	6.4	7.9	9.1	11.2	12.1	164	154	147

Highlighted column shows the rated pressure.

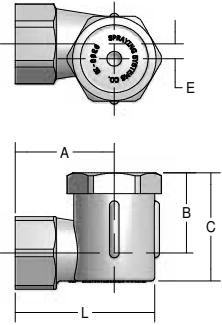
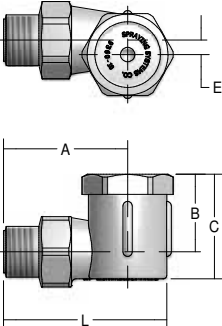
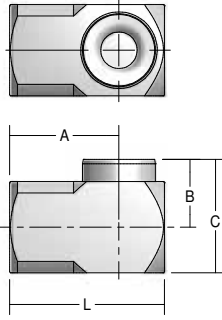
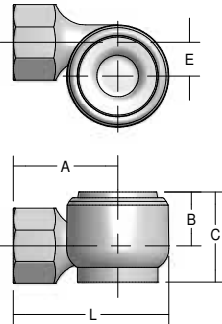


DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (mm)	A (mm)	B (mm)	C (mm)	E (mm)	Net Weight (kg)
	CF (Flange)	4	209.6	111.9	235.0	314.3	39.7	51.71
		6	311.2	174.6	220.7	338.1	61.9	57.15
	CRC (F)	1-1/4	86.5	54.0	53.2	77.8	10.3	1.02
		2	123.0	81.0	77.8	118.3	18.3	2.27
		3	176.2	112.7	150.8	213.5	28.6	8.62
		4	228.6	141.3	231.8	311.2	39.7	18.14
	D (M)	1/2	58.7	44.5	18.3	33.3	6.4	0.14
		3/4	69.1	50.8	23.8	42.1	7.9	0.21
	AP (F) AP-W (F)	1/4	36.5	25.4	22.0	29.4	4.0	0.01
		3/8	37.3	27.8	22.0	29.4	4.0	0.01

Based on the largest/heaviest version of each type.

DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	L (mm)	A (mm)	B (mm)	C (mm)	E (mm)	Net Weight (kg)
	LAP (F) LAP-W (F)	3/8	48.4	32.5	30.0	40.5	4.9	0.02
		1/2	51.6	35.7	30.0	40.5	4.9	0.02
	LBP (M) LBP-W (M)	3/8	53.2	39.7	31.4	40.5	4.9	0.02
	E (F)	1/4	31.8	22.2	12.7	19.1	–	0.06
		3/8	50.8	34.9	15.9	31.8	–	0.30
		1/2	60.3	41.3	19.4	41.3	–	0.49
	E (F) Cast	3/8	35.7	31.0	15.1	27.0	9.5	0.12
		1/2	55.6	36.5	17.5	31.8	12.7	0.17

Based on the largest/heaviest version of each type.