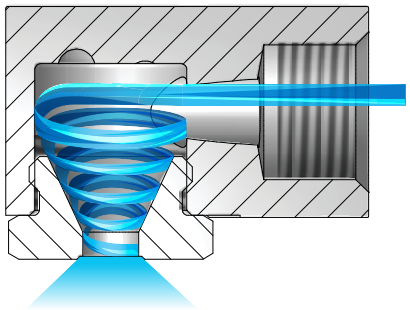
OVERVIEW: WHIRLJET STANDARD, WIDE AND EXTRA WIDE ANGLE NOZZLES

- 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

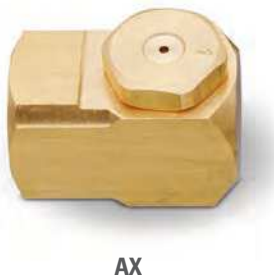
As liquid enters the nozzle, it passes into a whirlchamber and begins to spin in a circle at high speed. The rotation forces the liquid away from the center toward the edges of the whirlchamber. This causes the liquid to exit the orifice in a hollow cone pattern. Some WhirlJet nozzles have a slope bottom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

S PERFORMANCE DATA: STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type D	Capacity Size	Inlet Dia. Nom. (mm)	Orifice Dia. Nom. (mm)	Flow Rate Capacity (liters per minute)												Spray Angle (°)		
					0.2 bar	0.3 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	0.7 bar	1.5 bar	4 bar
1/2	●	3	11.1	7.9	7.3	9.0	10.3	11.6	13.7	16.3	20	23	28	33	40	43	62	65	67
	●	4	11.1	9.9	9.7	11.9	13.8	15.4	18.2	22	27	31	38	44	53	58	68	71	73
	●	5	11.1	11.9	12.2	14.9	17.2	19.3	23	27	33	39	47	54	67	72	74	77	80
	●	7	11.1	13.9	17.1	21	24	27	32	38	47	54	66	76	93	101	77	80	83
3/4	●	4	14.3	9.1	9.7	11.9	13.8	15.4	18.2	22	27	31	38	44	53	58	63	66	67
	●	5	14.3	10.7	12.2	14.9	17.2	19.3	23	27	33	39	47	54	67	72	67	69	70
	●	6	14.3	12.3	14.6	17.9	21	23	27	33	40	46	57	65	80	86	71	73	77
	●	7	14.3	13.9	17.1	21	24	27	32	38	47	54	66	76	93	101	73	75	80
	●	10	14.3	16.7	24	30	34	39	46	54	67	77	94	109	133	144	77	80	84

Highlighted column shows the rated pressure.

S PERFORMANCE DATA: STANDARD 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 (°)		
AP		LAP		LBP				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	0.7 bar	1.5 bar	6 bar
1/4	3/8	3/8	1/2	3/8																
●	●				2	2.0	2.0	–	.57	.64	.75	1.1	1.3	1.6	1.8	2.2	2.4	53	70	80
●	●				2-3	2.0	2.4	–	.69	.77	.89	1.3	1.5	1.9	2.2	2.7	2.9	61	76	83
●	●				2-5	2.0	2.8	–	.80	.90	1.1	1.6	1.8	2.2	2.6	3.1	3.4	63	81	90
●	●				2-8	2.0	3.6	–	.98	1.1	1.2	1.8	2.1	2.6	3.0	3.7	4.0	71	87	95
●	●				2-10	2.0	4.4	–	1.1	1.2	1.4	2.0	2.3	2.8	3.3	4.0	4.3	72	94	104
●	●				2-15	2.0	5.2	–	1.2	1.3	1.5	2.2	2.5	3.1	3.6	4.4	4.7	77	100	111
●	●				2-20	2.0	6.0	–	1.3	1.4	1.7	2.5	2.8	3.5	4.0	4.9	5.3	81	103	113
●	●				3-2	2.4	2.0	–	.75	.84	1.0	1.5	1.7	2.1	2.4	2.9	3.1	58	67	76
●	●				3	2.4	2.4	–	.87	.97	1.2	1.7	1.9	2.4	2.7	3.3	3.6	55	79	80
●	●				3-5	2.4	2.8	–	1.1	1.2	1.4	2.0	2.3	2.8	3.3	4.0	4.3	72	82	86
●	●				3-8	2.4	3.6	–	1.3	1.4	1.7	2.5	2.8	3.5	4.0	4.9	5.3	73	88	92
●	●				3-10	2.4	4.4	–	1.4	1.5	1.8	2.7	3.1	3.8	4.4	5.4	5.8	81	94	97
●	●				3-15	2.4	5.2	–	1.6	1.8	2.1	3.1	3.5	4.3	5.0	6.1	6.6	83	93	100
●	●				3-20	2.4	6.0	–	1.8	2.0	2.4	3.5	4.0	4.9	5.7	6.9	7.5	90	100	107
●	●				5-2	3.6	2.0	–	–	–	1.4	2.0	2.3	2.8	3.3	4.0	4.3	49	61	67
●	●				5-3	3.6	2.4	–	–	1.3	1.6	2.3	2.6	3.2	3.7	4.6	4.9	57	68	69
●	●				5	3.6	2.8	–	1.4	1.6	2.2	2.8	3.2	3.9	4.6	5.6	6.0	70	75	79
●	●				5-8	3.6	3.6	–	1.7	1.9	2.3	3.3	3.9	4.7	5.5	6.7	7.2	80	78	82
●	●				5-10	3.6	4.4	–	2.0	2.2	2.5	3.7	4.3	5.3	6.1	7.5	8.1	80	87	89
●	●				5-15	3.6	5.2	–	2.3	2.6	3.1	4.5	5.2	6.3	7.3	8.9	9.6	83	91	95
●	●				5-20	3.6	6.0	–	2.5	2.8	3.3	4.8	5.5	6.8	7.8	9.6	10.4	88	98	102

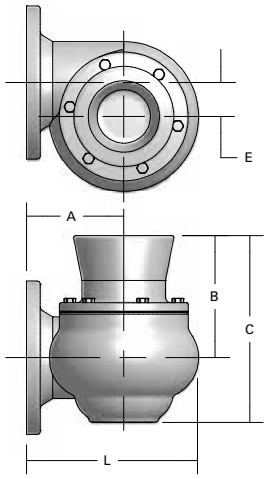
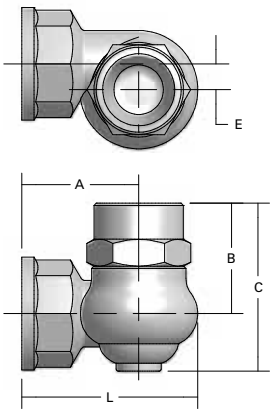
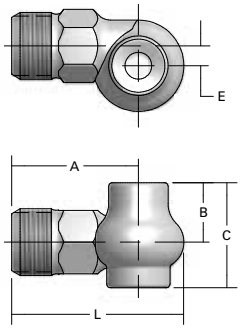
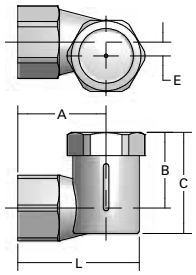
Highlighted column shows the rated pressure.

S PERFORMANCE DATA: STANDARD 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 (°)		
AP		LAP		LBP				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	0.7 bar	1.5 bar	6 bar
1/4	3/8	3/8	1/2	3/8																
●	●				8-5	4.4	2.8	–	1.7	1.9	2.2	3.3	3.9	4.7	5.5	6.7	7.2	60	68	71
●	●				8	4.4	3.6	1.6	2.3	2.6	3.1	4.5	5.2	6.3	7.3	8.9	9.6	65	72	74
●	●				8-10	4.4	4.4	1.9	2.7	3.0	3.5	5.2	6.1	7.4	8.6	10.5	11.3	73	81	81
●	●				8-15	4.4	5.2	2.2	3.1	3.5	4.1	6.1	7.1	8.7	10.0	12.3	13.3	78	84	87
●	●				8-20	4.4	6.0	2.4	3.4	3.9	4.6	6.7	7.7	9.5	10.9	13.4	14.5	84	89	92
●	●				10-5	4.8	2.8	–	–	2.1	2.5	3.6	4.2	5.1	5.9	7.3	7.8	55	64	67
●	●				10-8	4.8	3.6	–	2.5	2.8	3.3	4.8	5.5	6.8	7.8	9.6	10.4	60	64	66
●	●				10	4.8	4.4	2.0	2.8	3.2	3.8	5.6	6.4	7.9	9.1	11.2	12.1	70	76	75
●	●				10-15	4.8	5.2	2.4	3.4	3.9	4.6	6.7	7.7	9.5	10.9	13.4	14.5	76	81	79
●	●				10-20	4.8	6.0	2.9	4.1	4.5	5.3	7.8	9.0	11.1	12.8	15.6	16.9	78	85	98
●	●				15-5	6.0	2.8	–	–	–	2.9	4.2	4.9	6.0	6.9	8.5	9.2	52	65	60
●	●				15-8	6.0	3.6	–	–	3.2	3.8	5.6	6.4	7.9	9.1	11.2	12.1	55	68	64
●	●				15-10	6.0	4.4	–	3.5	3.9	4.6	6.7	7.7	9.5	10.9	13.4	14.5	65	75	71
●	●				15	6.0	5.2	3.1	4.4	4.8	5.7	8.4	9.7	11.8	13.7	16.7	18.1	70	72	75
●	●				15-20	6.0	6.0	3.5	4.9	5.5	6.5	9.5	11.0	13.4	15.5	19.0	21	78	80	82
		●			20-5	6.4	3.2	–	–	–	3.1	4.6	5.4	6.6	7.6	9.3	10.0	33	40	55
		●			20-8	6.4	4.4	–	–	3.5	4.1	6.1	7.1	8.7	10.0	12.3	13.3	40	47	60
		●			20-10	6.4	4.8	–	4.0	4.5	5.3	7.8	9.0	11.1	12.8	15.6	16.9	39	55	65
		●			20-15	6.4	6.0	3.7	5.2	5.8	6.9	10.0	11.6	14.2	16.4	20	22	55	63	68
		●			20	6.4	6.4	4.1	5.8	6.4	7.6	11.2	12.9	15.8	18.2	22	24	59	66	70
		●			20-25	6.4	7.5	5.1	7.2	8.1	9.6	14.0	16.1	19.7	23	28	30	60	73	77
		●			20-40	6.4	9.1	5.9	8.3	9.3	11.0	16.2	18.7	23	26	32	35	80	82	86
		●			20-50	6.4	11.1	7.1	10.0	11.3	13.4	19.5	23	28	32	39	42	83	90	97
		●			20-60	6.4	13.1	8.2	11.6	12.9	15.3	22	26	32	36	45	48	86	94	99
		●			25-8	7.1	4.4	–	–	–	4.6	6.7	7.7	9.5	10.9	13.4	14.5	27	42	57
		●			25-10	7.1	4.8	3.1	4.4	4.8	5.7	8.4	9.7	11.7	13.7	16.7	18.1	35	50	59
		●			25-15	7.1	6.0	3.9	5.5	6.1	7.2	10.6	12.2	15.0	17.3	21	23	44	57	64
		●			25-20	7.1	6.4	4.5	6.4	7.1	8.4	12.3	14.2	17.4	20	25	27	53	63	68
		●			25	7.1	7.5	5.1	7.2	8.1	9.6	14.0	16.1	19.7	23	28	30	60	70	74
		●			25-40	7.1	9.1	6.5	9.2	10.3	12.2	17.9	21	25	29	36	39	69	73	79
		●			25-50	7.1	11.1	8.0	11.3	12.6	14.9	22	25	31	36	44	47	76	81	85
		●			25-60	7.1	13.1	9.2	13.0	14.5	17.2	25	29	36	41	50	54	83	86	92
		●	●	●	40-8	9.1	4.4	–	–	–	5.7	8.4	9.7	11.8	13.7	16.7	18.1	30	41	48
		●	●	●	40-10	9.1	4.8	–	–	5.8	6.9	10.0	11.6	14.2	16.4	20	22	34	45	53
		●	●	●	40-15	9.1	6.0	4.9	6.9	7.7	9.1	13.4	15.5	18.9	22	27	29	44	48	57
		●	●	●	40-20	9.1	6.4	5.5	7.8	8.7	10.3	15.1	17.4	21	25	30	33	45	52	59
		●	●	●	40-25	9.1	7.5	6.5	9.2	10.3	12.2	17.9	21	25	29	36	39	48	56	61
		●	●	●	40	9.1	9.1	8.2	11.6	12.9	15.3	22	26	32	36	45	48	67	71	73
		●	●	●	40-50	9.1	11.1	10.2	14.4	16.1	19.0	28	32	39	46	56	60	68	80	84
		●	●	●	40-50.1	9.1	10.7	10.2	14.4	16.1	19.0	28	32	39	46	56	60	40	47	50
		●	●	●	40-60	9.1	13.1	12.2	17.3	19.3	23	33	39	47	55	67	72	80	86	90

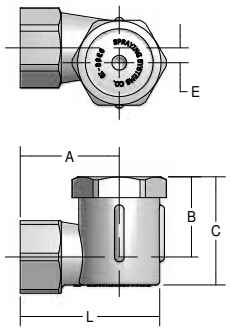
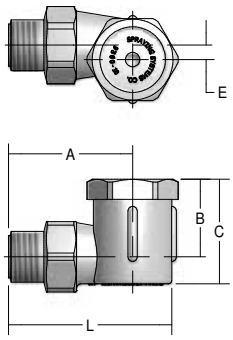
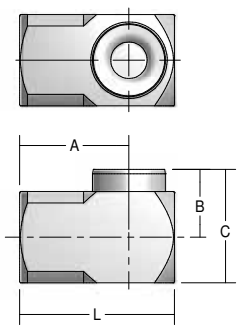
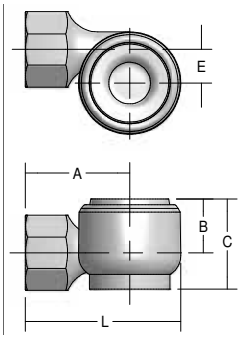
Highlighted column shows the rated pressure.

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.