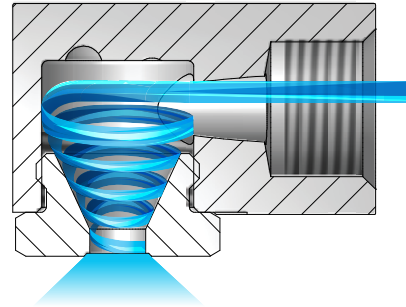


OVERVIEW: WHIRLJET STANDARD, WIDE AND EXTRA WIDE ANGLE NOZZLES

- 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



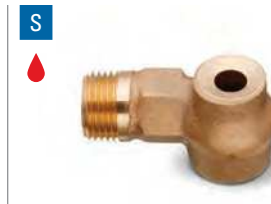
BX – 1/8" to 3/4" male conn.
Slope-bottom design
Removable cap



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	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.



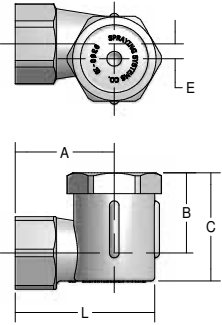
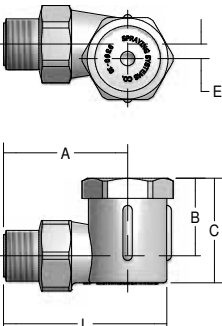
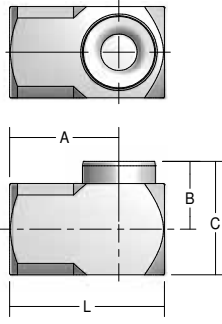
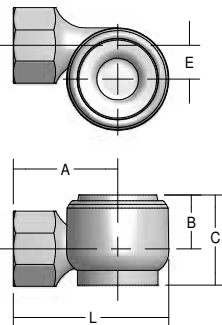
S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

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)
	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.