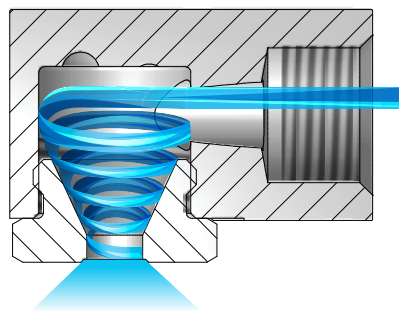


**OVERVIEW: WHIRLJET STANDARD, WIDE AND EXTRA WIDE ANGLE NOZZLES**

- 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**



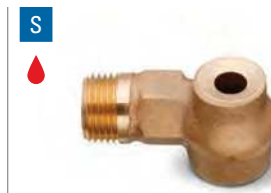
**BX** – 1/8" to 3/4" male conn.  
Slope-bottom design  
Removable cap



**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® NOZZLES**

**HOLLOW CONE**

**S** STANDARD ANGLE SPRAY | **W** WIDE ANGLE SPRAY

**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**

**S**  
**W**

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

**S**  
**W**

**LBP**  
3/8" male conn.

**W**

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

**ORDERING INFORMATION**

**WHIRLJET AX**

Inlet Conn.	Nozzle Type	–	Material Code	Capacity Size	<b>Example</b>
					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	<b>Example</b>
						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	<b>Example</b>
					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	<b>Example</b>
					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
<b>AX</b>	F	1/8 to 3/4	Brass, Mild steel (I), 303 stainless steel (SS), 316 stainless steel (316SS)	D6-D7	D15
<b>BX</b>	M	1/8 to 3/4		D6-D7	
<b>AX-W</b>	F	1/8 to 1/2		D8	
<b>BX-W</b>	M	1/8 to 1/2		D8	
<b>CX</b>	F, Cast	1 to 2-1/2	Brass, 316 stainless steel (SS)	D9	D16
<b>CF</b>	Flange, Cast	4 to 6		D10	
<b>CRC</b>	F, Cast	1-1/4 to 4		D10	
<b>D</b>	M, Cast	1/2 to 3/4	Brass	D11	D17
<b>AP (9360)</b>	F	1/4 to 3/8	Polypropylene (PP)	D11-D12	
<b>LAP (9360)</b>	F	3/8 to 1/2		D11-D12	
<b>LBP (9360)</b>	M	3/8		D11-D12	
<b>AP-W (9360)</b>	F	1/4 to 3/8		D13	
<b>LAP-W (9360)</b>	F	3/8 to 1/2		D14	
<b>LBP-W (9360)</b>	M	3/8		D14	
<b>E</b>	F	1/4 to 1/2	303 stainless steel (SS)	D14-D15	D17
<b>E</b>	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.



**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
1/4	●	●	1	.063	.063	–	–	.10	.12	.14	.17	.20	.24	.28	.32	47	53	67
	●	●	2	.078	.078	–	–	.20	.24	.28	.35	.40	.49	.57	.63	56	62	71
	●	●	3	.094	.094	–	.21	.30	.37	.42	.52	.60	.73	.85	.95	51	65	78
	●	●	5	.141	.141	.27	.35	.50	.61	.71	.87	1.0	1.2	1.4	1.6	63	73	79
	●	●	8	.156	.156	.44	.57	.80	.98	1.1	1.4	1.6	2.0	2.3	2.5	61	69	73
	●	●	10	.188	.172	.55	.71	1.0	1.2	1.4	1.7	2.0	2.4	2.8	3.2	63	70	74
	●	●	15	.234	.203	.82	1.1	1.5	1.8	2.1	2.6	3.0	3.7	4.2	4.7	63	71	72
3/8	●	●	5	.140	.125	.27	.35	.50	.61	.71	.87	1.0	1.2	1.4	1.6	64	73	79
	●	●	8	.172	.156	.44	.57	.80	.98	1.1	1.4	1.6	2.0	2.3	2.5	62	70	74
	●	●	10	.203	.172	.55	.71	1.0	1.2	1.4	1.7	2.0	2.4	2.8	3.2	64	72	75
	●	●	15	.234	.219	.82	1.1	1.5	1.8	2.1	2.6	3.0	3.7	4.2	4.7	64	72	74
	●	●	20	.281	.250	1.1	1.4	2.0	2.4	2.8	3.5	4.0	4.9	5.7	6.3	63	70	74
	●	●	25	.297	.297	1.4	1.8	2.5	3.1	3.5	4.3	5.0	6.1	7.1	7.9	63	70	74
	●	●	30	.328	.313	1.6	2.1	3.0	3.7	4.2	5.2	6.0	7.3	8.5	9.5	63	70	74
1/2	●	●	25	.375	.250	1.4	1.8	2.5	3.1	3.5	4.3	5.0	6.1	7.1	7.9	63	66	71
	●	●	30	.375	.297	1.6	2.1	3.0	3.7	4.2	5.2	6.0	7.3	8.5	9.5	67	71	75
	●	●	40	.375	.359	2.2	2.8	4.0	4.9	5.7	6.9	8.0	9.8	11.3	12.6	72	76	78
	●	●	50	.375	.438	2.7	3.5	5.0	6.1	7.1	8.7	10.0	12.2	14.1	15.8	74	79	82
	●	●	60	.375	.516	3.3	4.2	6.0	7.3	8.5	10.4	12.0	14.7	17.0	19.0	77	82	86
3/4	●	●	40	.500	.313	2.2	2.8	4.0	4.9	5.7	6.9	8.0	9.8	11.3	12.6	70	73	74
	●	●	50	.500	.344	2.7	3.5	5.0	6.1	7.1	8.7	10.0	12.2	14.1	15.8	72	75	77
	●	●	60	.500	.406	3.3	4.2	6.0	7.3	8.5	10.4	12.0	14.7	17.0	19.0	74	76	79
	●	●	70	.500	.469	3.8	4.9	7.0	8.6	9.9	12.1	14.0	17.1	19.8	22	76	79	83
	●	●	80	.500	.531	4.4	5.7	8.0	9.8	11.3	13.9	16.0	19.6	23	25	78	82	84
	●	●	90	.500	.578	4.9	6.4	9.0	11.0	12.7	15.6	18.0	22	25	28	81	84	84
	●	●	100	.500	.625	5.5	7.1	10.0	12.2	14.1	17.3	20	24	28	32	83	86	86
	●	●	110	.500	.672	6.0	7.8	11.0	13.5	15.6	19.1	22	27	31	35	85	88	88
	●	●	120	.500	.719	6.6	8.5	12.0	14.7	17.0	21	24	29	34	38	87	90	90

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.**

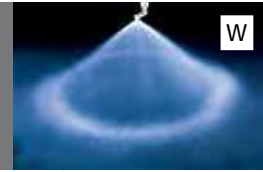


HOLLOW  
CONE

WHIRLJET® NOZZLES

W WIDE ANGLE SPRAY

W PERFORMANCE DATA:  
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 (°)		
	AX-W	BX-W				5 psi	7 psi	10 psi	15 psi	20 psi	30 psi	40 psi	60 psi	80 psi	10 psi	20 psi	80 psi	
1/8	●	●	0.5-0.5W	.031	.047	–	–	.05	.06	.07	.09	.10	.12	.14	103	117	98	
	●	●	1-1W	.063	.063	–	–	.10	.12	.14	.17	.20	.25	.28	110	125	110	
	●	●	2-3W	.078	.109	–	.21	.25	.31	.35	.43	.50	.61	.71	114	114	97	
	●	●	3-3W	.094	.109	–	.25	.30	.37	.42	.52	.60	.73	.85	114	114	97	
	●	●	3-5W	.094	.125	–	.29	.34	.42	.48	.59	.68	.83	.96	116	110	95	
	●	●	2-10W	.078	.172	–	.35	.41	.51	.59	.72	.82	1.0	1.2	130	135	120	
	●	●	5-5W	.125	.125	–	.42	.50	.61	.71	.86	1.0	1.2	1.4	116	110	92	
	●	●	5-10W	.125	.172	.46	.54	.65	.80	.92	1.1	1.3	1.6	1.8	126	121	95	
	●	●	8-10W	.156	.172	.64	.75	.90	1.1	1.3	1.6	1.8	2.2	2.5	124	112	90	
1/4	●	●	1-1W	.063	.063	–	–	.10	.12	.14	.17	.20	.25	.28	110	117	111	
	●	●	1-5W	.063	.125	–	–	.17	.21	.24	.29	.34	.42	.48	100	123	124	
	●	●	1-10W	.063	.172	–	–	.21	.26	.30	.36	.42	.51	.60	140	144	139	
	●	●	1-15W	.063	.219	–	–	.24	.29	.34	.42	.48	.59	.68	105	128	132	
	●	●	2-5W	.078	.125	–	.29	.34	.42	.49	.60	.68	.84	.89	118	123	113	
	●	●	2-10W	.078	.172	–	.35	.41	.51	.59	.72	.82	1.0	1.2	138	136	126	
	●	●	5-5W	.141	.125	–	.42	.50	.61	.71	.86	1.0	1.2	1.4	114	113	104	
	●	●	5-10W	.141	.172	.46	.54	.65	.80	.92	1.1	1.3	1.6	1.8	130	130	119	
	●	●	5-15W	.141	.219	.52	.64	.77	.94	1.1	1.3	1.5	1.8	2.2	130	132	120	
	●	●	8-10W	.156	.172	.64	.75	.90	1.1	1.3	1.6	1.8	2.2	2.5	129	122	103	
	●	●	10-10W	.188	.172	.71	.84	1.0	1.2	1.4	1.7	2.0	2.5	2.8	120	108	95	
	●	●	8-15W	.156	.219	.78	.92	1.1	1.4	1.6	1.9	2.2	2.7	3.1	129	122	107	
	●	●	10-15W	.188	.219	.86	1.0	1.2	1.5	1.7	2.1	2.4	3.0	3.4	120	108	97	
●	●	15-15W	.234	.219	1.1	1.3	1.5	1.8	2.1	2.6	3.0	3.7	4.2	101	95	88		
3/8	●	●	5-10W	.141	.172	.46	.54	.65	.80	.92	1.1	1.3	1.6	1.8	130	123	102	
	●	●	5-15W	.141	.219	.52	.64	.77	.94	1.1	1.3	1.5	1.8	2.2	138	131	112	
	●	●	8-10W	.172	.172	.64	.75	.90	1.1	1.3	1.6	1.8	2.2	2.5	122	110	96	
	●	●	10-10W	.203	.172	.71	.84	1.0	1.2	1.4	1.7	2.0	2.5	2.8	116	108	93	
	●	●	8-15W	.172	.219	.78	.92	1.1	1.4	1.6	1.9	2.2	2.7	3.1	133	120	105	
	●	●	10-15W	.203	.219	.86	1.0	1.2	1.5	1.7	2.1	2.4	3.0	3.4	126	115	100	
	●	●	8-25W	.172	.297	.92	1.1	1.3	1.6	1.9	2.3	2.6	3.2	3.7	122	118	109	
	●	●	10-20W	.203	.234	.97	1.1	1.4	1.7	1.9	2.4	2.7	3.3	3.9	118	112	102	
	●	●	15-15W	.234	.219	1.1	1.3	1.5	1.8	2.1	2.6	3.0	3.7	4.2	116	106	95	
	●	●	15-20W	.234	.234	1.2	1.5	1.7	2.1	2.5	3.0	3.5	4.3	4.9	113	108	98	
	●	●	20-20W	.281	.234	1.4	1.7	2.0	2.4	2.8	3.5	4.0	4.9	5.6	106	102	95	
	●	●	15-30W	.234	.313	1.6	1.8	2.2	2.7	3.1	3.8	4.4	5.4	6.2	116	110	102	
	●	●	25-25W	.297	.297	1.8	2.1	2.5	3.1	3.5	4.3	5.0	6.1	7.1	105	100	93	
●	●	25-30W	.297	.313	2.0	2.3	2.8	3.4	4.0	4.9	5.6	6.9	7.9	105	101	94		
1/2	●	●	50-50W	.375	.438	3.5	4.2	5.0	6.1	7.1	8.6	10.0	12.3	14.2	110	102	93	

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.

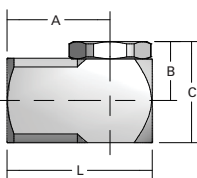
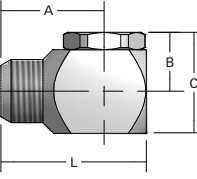
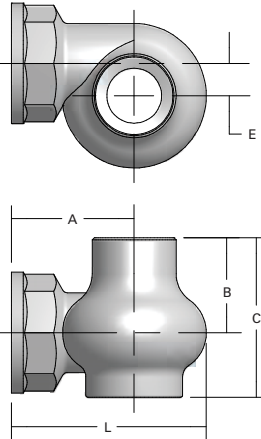


**W** PERFORMANCE DATA:  
**EXTRA WIDE ANGLE SPRAY**

Inlet Conn. (in.)	Nozzle Type E Styles	Capacity Size	Inlet Dia. Nom. (in.)	Orifice Dia. Nom. (in.)	Flow Rate Capacity (gallons per minute)											Spray Angle (°)		
					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
3/8	●	8	.109	.484	.44	.57	.67	.80	.98	1.1	1.4	1.6	2.0	2.3	2.5	164	160	157
	●	10	.125	.484	.55	.71	.84	1.0	1.2	1.4	1.7	2.0	2.4	2.8	3.2	164	160	157
	●	15	.172	.484	.82	1.1	1.3	1.5	1.8	2.1	2.6	3.0	3.7	4.2	4.7	165	163	155
	●	20	.203	.484	1.1	1.4	1.7	2.0	2.4	2.8	3.5	4.0	4.9	5.7	6.3	162	152	147
	●	25	.234	.484	1.4	1.8	2.1	2.5	3.1	3.5	4.3	5.0	6.1	7.1	7.9	162	158	154
	●	33	.266	.641	1.8	2.3	2.8	3.3	4.0	4.7	5.7	6.6	8.1	9.3	10.4	162	154	148
	●	53	.375	.641	2.9	3.7	4.4	5.3	6.5	7.5	9.2	10.6	13.0	15.0	16.8	159	152	149
1/2	●	25	.219	.641	1.4	1.8	2.1	2.5	3.1	3.5	4.3	5.0	6.1	7.1	7.9	162	158	154
	●	30	.250	.641	1.6	2.1	2.5	3.0	3.7	4.2	5.2	6.0	7.3	8.5	9.5	163	155	148
	●	40	.297	.641	2.2	2.8	3.3	4.0	4.9	5.7	6.9	8.0	9.8	11.3	12.6	160	152	144
	●	53	.375	.641	2.9	3.7	4.4	5.3	6.5	7.5	9.2	10.6	13.0	15.0	16.8	159	152	149

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.)
	<b>AX (F) AX-W (F)</b>	1/8	1.000	0.688	0.469	0.781	–	1.5
		1/4	1.250	0.875	0.531	0.906	–	2.8
		3/8	1.469	1.031	0.688	1.125	–	4.3
		1/2	1.938	1.375	0.785	1.348	–	8.8
		3/4	2.188	1.375	0.879	1.563	–	11
	<b>BX (M) BX-W (M)</b>	1/8	1.188	0.875	0.652	1.375	–	1.5
		1/4	1.375	1.000	0.531	1.563	–	2.5
		3/8	1.563	1.125	0.688	1.563	–	4
		1/2	1.938	1.375	0.844	1.938	–	7
		3/4	2.250	1.625	1.563	1.250	–	10.8
	<b>CX (F)</b>	1	2.625	1.750	1.250	1.844	0.348	11
		1-1/4	3.063	2.063	1.313	2.188	0.438	20
		1-1/2	3.688	2.438	1.500	2.875	0.563	28
		2	4.531	3.688	2.109	3.688	0.719	48
		2-1/2	5.531	3.500	2.688	4.500	0.469	68

Based on the largest/heaviest version of each type.