

XA

Low Flow Air Atomizing

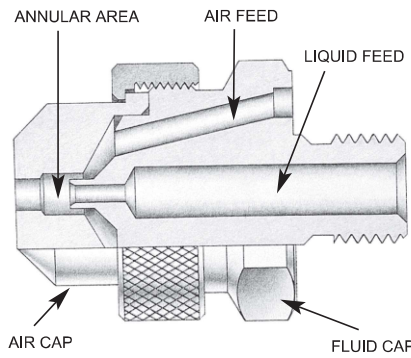
The XA nozzle system uses the energy in compressed air to produce highly atomized sprays at low flow rates. There are many interchangeable components that can be assembled to achieve a variety of spraying objectives.

SPRAY SET-UPS

XA nozzles produce eight distinctly different types of sprays, depending on which interchangeable air and fluid caps are selected. The spray type and flow rate are determined by the "set-up"—a specific combination of one air cap and one fluid cap.

Internal Mix Set-ups

Liquid and air streams meet within the nozzle and are mixed together and expelled through the same orifice(s). This internal mixing means the streams are not independent; a change in air flow will affect the liquid flow. This makes precise metering of the liquid more difficult than with an External Mix Set-up. Internal Mix Set-ups are able to produce the finest atomization of any of the XA set-ups, but they are generally not suitable for use with liquids which have a viscosity that is above 200 centipoise.

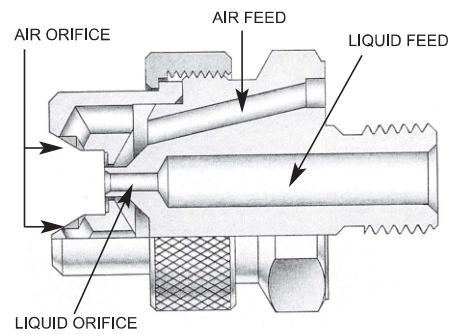


Cutaway View: Internal Mix Set-up

External Mix Set-ups

The air and liquid streams exit the nozzle independently and are combined and mixed outside of the nozzle. Because there is no connection between the air and liquid lines within the nozzle, the air and liquid flow rates can be controlled independently, allowing precise metering of the liquid. The atomization can be controlled by adjusting the air flow rate—more air produces finer atomization. In most cases these set-ups do not atomize as finely as Internal Mix Set-ups.

External Mix Set-ups may be used with liquids having a viscosity above 200 centipoise and for abrasive suspensions. BETE Applications Engineering can provide guidance for spraying high viscosity liquids.



Cutaway View: External Mix Set-up

Siphon Set-ups

Internal and External Mix Set-ups require the liquid to be supplied to the nozzle under pressure from a municipal water supply, pump, or pressure vessel. Siphon Set-ups use the flow of compressed air within the nozzle to siphon liquid from a container. Siphon Set-ups are frequently used for spraying additives from a container without the use of a pump. They provide the

AIR ATOMIZING

TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 74.

E. Air Operated Shut-off

A. End Plug

B. Shut-off

D. Clean-out/Shut-off

Bold letters (A, B, C, D, E, F) refer to hardware assemblies shown on p. 74.

XA Components & Options

lowest flow rates available in the XA series (as low as 0.1 GPH). They are generally not suitable for use with liquids having a viscosity above 200 centipoise.

By supplying the liquid under pressure, SR Set-ups may be used with liquids having a viscosity above 200 centipoise. In this case, the liquid flow rate is regulated by the fluid cap, and can be determined by using the EF chart for the specific fluid cap.

BASIC OPERATION

The basic XA nozzle assembly consists of a body, a spray set-up, and a "hardware assembly" that can provide shut-off and clean-out capabilities.

Non-Automatic Operation

The XA00 Square Body is the basic component of a non-automatic XA nozzle. Air and liquid feeds are located at opposite ends, perpendicular to the spray.

The XA03 Body has air and liquid feeds on one side, perpendicular to the spray axis.

The XA05 Body has air and liquid inlets located in-line with the spray. *Hardware assemblies cannot be used with the XA05 body.*

Hardware Assemblies for Non-Automatic Operation

A. Plug. The minimum option hardware assembly required for XA operation. Provides neither clean-out nor shut-off.

B. Shut-off. Turning the knurled knob will stop the flow of liquid to the nozzle. Should not be used to meter the flow of liquid.

C. Clean-out. Pressing the spring-loaded plunger will force a small diameter rod through the liquid orifice, cleaning any obstruction. Useful for intermittent spraying of a liquid that may dry in the orifice when not in use.

D. Clean-out/Shut-off. Combines functions of hardware assemblies B and C in one unit.



PR Air Cap



Fluid Cap



FF Air Cap



SR Air Cap



ER Air Cap



EF Air Cap



XW Air Cap

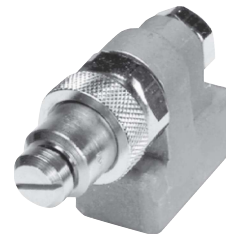


PF Air Cap

XA00 Body
with C Hardware



XA05 Body



XA03 Body



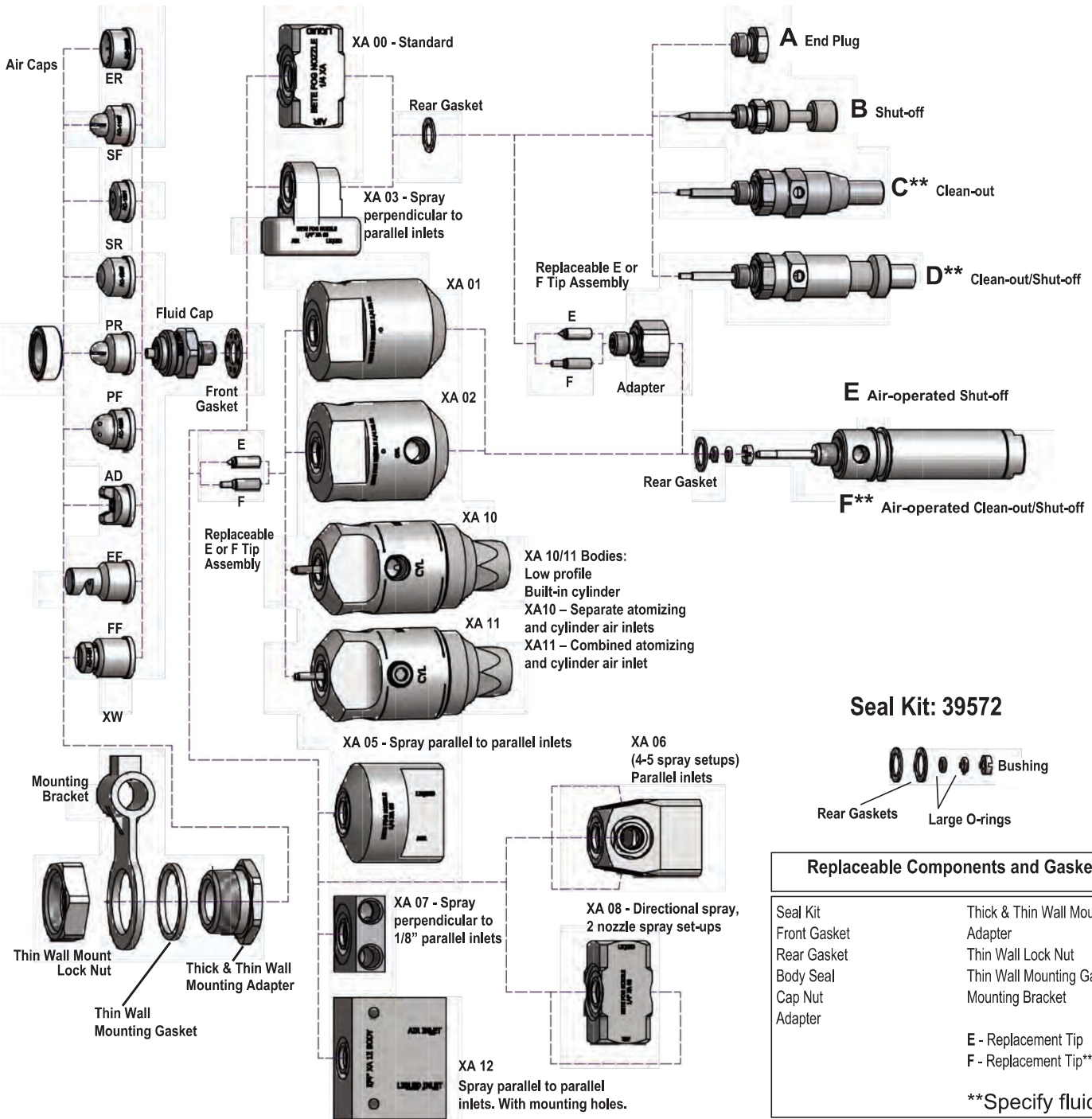
XA 01/02 Body
with E or F
Hardware

XA Components & Options

Spray Set-up

Body Styles and Seals

Hardware Assemblies



Replaceable Components and Gaskets	
Seal Kit	Thick & Thin Wall Mount
Front Gasket	Adapter
Rear Gasket	Thin Wall Lock Nut
Body Seal	Thin Wall Mounting Gasket
Cap Nut	Mounting Bracket
Adapter	
	E - Replacement Tip
	F - Replacement Tip**
	**Specify fluid cap

TO ORDER

Spray Set-up Number



SIZES AND SERIES		Extension Size*		
1/8" B, 1/4" B, 1/2" B - BSP	1/8", 1/4", 1/2" - NPT	12"		
BODY STYLES		MOUNTING HARDWARE		
00 01 02 03 05 06 07 08 10 11 12		01	02	03
AIR CAP STYLE		HARDWARE ASSEMBLIES		
PR FF AD XW PF EF SR SF ER		A	B	C
		D	E	F
Combination Number				

*For extensions, A hardware is standard; E and F hardware may be provided on an application-specific basis.

AIR ATOMIZING

TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 74.

XA Components & Options

AUTOMATIC OPERATION

For critical applications which require automatic, no-drip, or high-speed spray shut-off, the XA can be supplied with an air cylinder operated shut-off or clean-out/shut-off. These air cylinders provide virtually instantaneous liquid shut-off at rates of up to 180 cycles per minute. *The air cylinders require a minimum of 80 PSI to run that fast.*

Bodies for Automatic Operation

The XA01, XA02, XA10, and XA11 Round Bodies are rugged, highly reliable, and well suited to the rigors of high-cycle automatic operation. They have been designed to simplify the feed piping required for installing automatic nozzles by providing a constant location for the air inlet piping. With their neat, professional appearance, they are particularly recommended for OEM applications.

The XA01 Round Body has one inlet for air and one for liquid. Because the air inlet supplies air for both cylinder movement and liquid atomization, spraying during start-up and shut-off is not as crisp and precise as with the XA02. *The XA01 body cannot be used with atomizing air pressure under 30 PSI.*

The XA02 Round Body has two inlets for air and one inlet for liquid. One of the air inlets supplies the cylinder and the other supplies atomizing air. The XA02 body

must be used when the air cylinder operates at a different pressure from the atomizing air or where the atomizing air is supplied below 30 PSI.

NOTE: The XA00 Square and XA03 Bodies used for non-automatic operation can also be used, with hardware assemblies E or F, for automatic operation. Special design features allow field upgrading to automatic operation.

The XA10 and XA11 Bodies have a built in air-operated cylinder. The integral cylinder provides a smaller profile for use where space is limited.

Hardware Assemblies for Automatic Operation

E. Air-Operated Shut-off. Removal of air pressure to the cylinder causes a spring-loaded poppet valve actuator to shut off liquid flow.

F. Air-Operated Clean-out/Shut-off. Operation similar to E, but includes a clean-out needle.

SOLENOID VALVES

Electrically operated solenoid valves can be used to control the operation of any XA nozzle. BETE can supply solenoid valves matched to your specific application.

Solenoids for Automatic XA Nozzles.

A 3-way, quick-exhaust solenoid valve is required to operate the E or F hardware assembly. The valve is

located in the line that supplies air to the cylinder, as close to the nozzle as possible. Independent control of the atomizing air of an XA02 or square body requires an additional 2-way solenoid valve.

Solenoids for Non-Automatic XA Nozzles.

Two-way solenoid valves can be used to stop and start the flow of air and liquid to any non-automatic XA nozzle.

FILTERS, REGULATORS AND STRAINERS

For optimum reliability, every pressure-fed XA nozzle should have a strainer and regulator in the liquid feed line and a filter and regulator in the air feed line. Every XA nozzle with a Siphon Feed Set-up should have a filter and regulator in the air line. The size and type of each of these components depends on the application, and can be determined by your BETE sales representative. BETE maintains an inventory of filters, strainers, and regulators that can be supplied with your XA nozzle to ensure reliable operation. These components can be purchased individually or in kit form.



Simple piping and robust design describe this multiple nozzle XA lance.



The XA06 manifold body can be fitted with up to five nozzle setups and is often used for humidification of large areas.



Corrosion-resistant XA in PVC

XA Components & Options

SPRAY EXTENSIONS

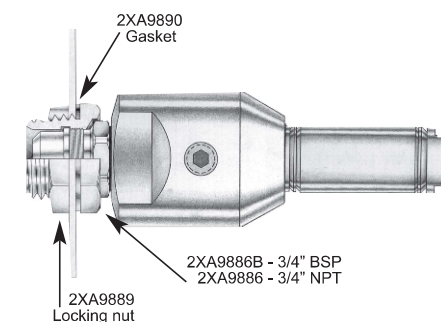
The spray set-up can be moved away from the nozzle body by using optional 6" or 12" extensions. These allow the spray to be moved closer to the target while keeping the nozzle body and associated piping at a distance.

MOUNTING HARDWARE

In many XA installations the nozzle is supported by the rigid metal pipe that supplies air or liquid. There are several components which can provide support for the XA Bodies when it isn't appropriate to suspend the nozzle from piping; for example, when the nozzle will spray through the wall of a tank or duct, or when the air and liquid will be supplied through flexible tubing. All XA bodies except the XA03 can be used with any of the mounting hardware described here.

Thin Wall 02 Adapter

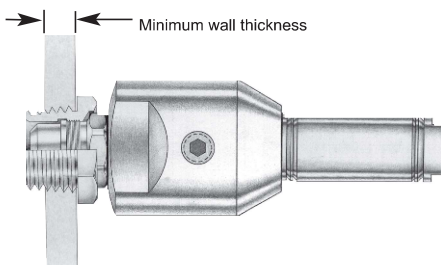
Three-piece adapter used to support an XA nozzle with the body located outside a tank or duct having a relatively thin (less than 3/8") wall and the spray directed into the interior. To use this adapter, a 1-1/16" diameter hole must be drilled through the wall. This adapter both secures the air cap and attaches the nozzle body to the tank wall.



XA02 with Thin Wall 02 Adapter

Thick Wall 01 Adapter

Similar in design and function to the Thin Wall Adapter, but intended for use with tanks or ducts with walls that are thick enough (3/8" or over) to be drilled and tapped for a 3/4" NPT thread.



XA02 with Thick Wall 01 Adapter

Mounting Bracket 03 Adapter

This bracket is used in combination with a Thin Wall Adapter to support an XA nozzle from a 1/2"-diameter metal rod. The bracket allows flexibility in aiming the spray.



XA03 Mounting Bracket

MATERIALS

Bodies, Fluid Caps, Air Caps, Hardware Assemblies, Mounting Hardware

The standard materials for the XA series are nickel-plated brass and 303 and 316 stainless steels. Other metals and plastics can be supplied on request. See page 13 for a complete material list.

Air Cylinders

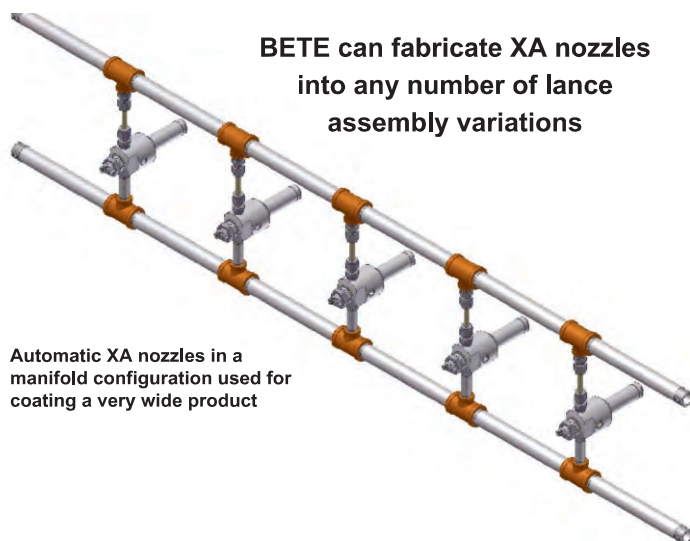
The air cylinders used for XA hardware assemblies E and F have rods and cylinders made of stainless steel and end caps made of anodized aluminum. All metal parts in contact with the spray liquid are 316 stainless steel.

Seals

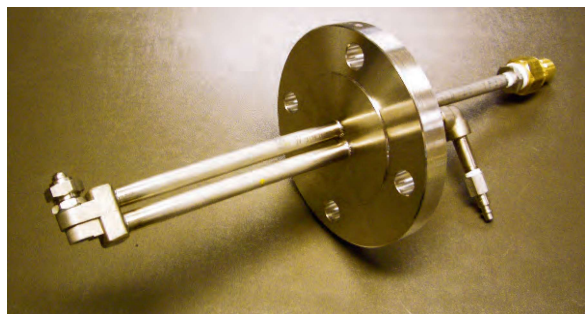
The standard material for XA gaskets is compressed fiber with a neoprene binder. For installations requiring FDA approval, SBR gaskets are available. Other elastomeric and metallic gasket materials can be supplied on request.

The standard material for O-rings in XA automatics is Viton®. Other materials available on request.

BETE can fabricate XA nozzles into any number of lance assembly variations



Automatic XA nozzles in a manifold configuration used for coating a very wide product



Spray lance (see pages 18,19) with a right angle XA and quick-connect fittings

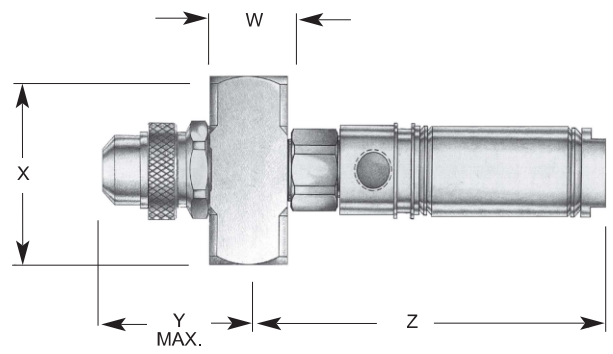
XA Components & Options

Dimensions are approximate. Check with BETE for critical dimension applications.

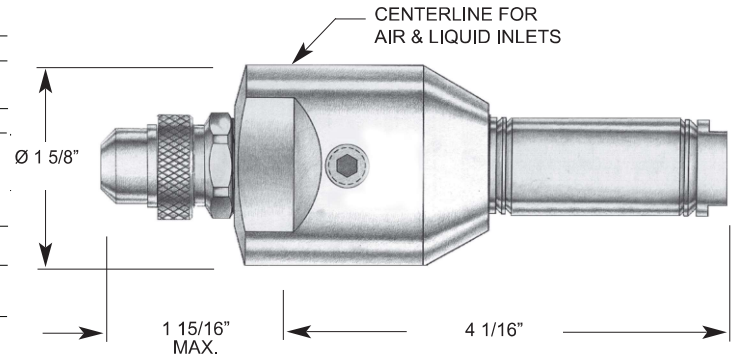
Spray Set-up Numbers						
SPRAY SET-UP	PIPE SIZE BSP or NPT	SET-UP NO.	FLUID CAP	AIR CAP		
EF	FLAT FAN (EXTERNAL MIX)	1/8	EF 050	FC7	AC1001	
			EF 100		AC1003	
		OR	1/8	EF 150	FC4	AC1001
				EF 200		AC1003
		1/4	1/4	EF 250	FC3	AC1001
				EF 300		AC1003
		1/4	1/4	EF 350	FC6	AC1002
				EF 400		AC1004
		1/4	1/4	EF 450	FC2	AC1002
				EF 500		AC1004
		1/4	1/4	EF 550	FC1	AC1002
				EF 600		AC1004
		1/2	1/2	EF 650	FC8	AC1005
				EF 700	FC9	AC1005
1/2	1/2	EF 750	FC5	AC1005		
		EF 5050	FC501	AC5001		
SF	SIPHON FLAT FAN	1/8 OR 1/4	SF 050	FC3	AC1101	
			SF 100	FC6	AC1102	
SR	SIPHON ROUND	1/8 OR 1/4	SR 050	FC7	AC1201	
			SR 150	FC4	AC1201	
1/8 OR 1/4	1/8 OR 1/4	SR 200	FC4	AC1202		
		SR 250	FC3	AC1202		
1/4	1/4	SR 400	FC1	AC1204		
		SR 450	FC5	AC1205		
1/2	1/2	SR 5050	FC501	AC5201		
		PF	PRESSURE FLAT FAN	1/8 OR 1/4	PF 050	FC4
PF 100	FC3				AC1303	
1/8 OR 1/4	PF 150			FC3	AC1301	
	PF 200			FC3	AC1302	
1/4	PF 250			FC2	AC1304	
	PF 300			FC1	AC1304	
1/4	PF 350	FC1	AC1305			
	PF 400	FC5	AC1306			
XW	EXTRA WIDE-ANGLE ROUND	1/2	PF 5050	FC501	AC5301	
			PF 5100	FC502	AC5302	
1/8 OR 1/4	1/8 OR 1/4	XW 050	FC8	AC1401		
		1/2	XW 5050	FC502	AC5401	
PR	PRESSURE ROUND	1/8 OR 1/4	PR 050	FC4	AC1501	
			PR 100	FC4	AC1502	
		1/8 OR 1/4	PR 150	FC3	AC1502	
			PR 200	FC2	AC1503	
		1/4	PR 250	FC1	AC1503	
			PR 300	FC5	AC1504	
1/2	1/2	PR 5050	FC501	AC5501		
		PR 5100	FC502	AC5502		
AD	WIDE ANGLE ROUND	1/8 OR 1/4	AD 050	FC4	AC1601	
			AD 100	FC2	AC1603	
		1/8 OR 1/4	AD 150	FC2	AC1602	
			AD 200	FC1	AC1603	
		1/4	AD 250	FC1	AC1604	
			AD 300	FC5	AC1605	
1/2	1/2	AD 5050	FC501	AC5601		
		AD 5100	FC501	AC5602		
1/2	1/2	AD 5150	FC501	AC5603		
		AD 5200	FC502	AC5604		
FF	DEFLECTED FLAT FAN	1/8 OR 1/4	FF 050	FC10	AC1701	
ER	NARROW ANGLE ROUND	1/8 OR 1/4	ER 050	FC7	AC1801	
			ER 150	FC4	AC1801	
		1/8 OR 1/4	ER 250	FC3	AC1801	
			ER 350	FC6	AC1802	
		1/4	ER 450	FC2	AC1802	
			ER 550	FC1	AC1802	
1/2	1/2	ER 650	FC3	AC1803		
		ER 750	FC9	AC1803		
ER 850	FC5	AC1803				

Dimensions with Hardware Options for XA00 Body, BSP or NPT

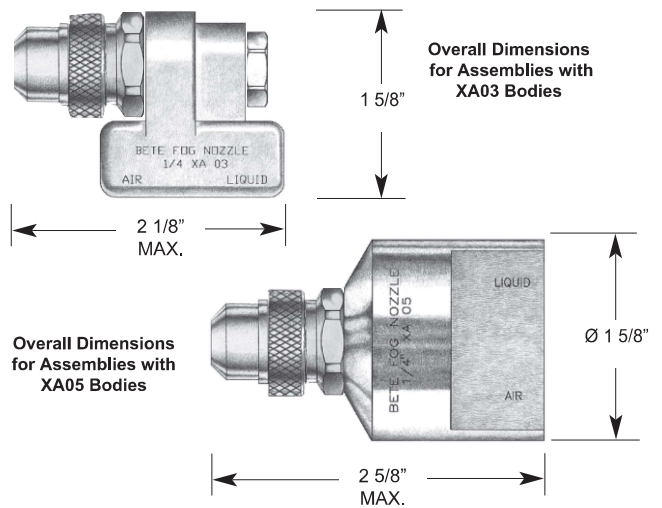
Pipe Size	Hardware Option	Dimensions in inches			
		W	X	Y	Max. "Z"
1/8 OR 1/4	A				9/16
	B				1 5/8
	C	7/8	1 11/16	1 15/16	2 5/8
	D				3 3/16
	E				4 1/16
	F				4 1/16
1/2	A	1 1/4	2 1/2	2 11/16	1



Overall Dimensions of XA Assemblies with XA00 Body (Shown with E or F Hardware)



Overall Dimensions for Assemblies with XA01 or XA02 Bodies



Overall Dimensions for Assemblies with XA05 Bodies

AIR ATOMIZING

CALL 413-772-0846
Call for the name of your nearest BETE representative.

XA Components & Options

SYSTEM SET-UPS AND ACCESSORIES

BETE carries a complete line of controls and accessories required for setting up a system using the XA Series nozzles.

Contact your BETE representative for details.

Pressure System Set-up

In a pressure-fed system, the liquid is supplied under pressure to either internal or external mix BETE XA Series nozzles.

Air and liquid regulators control the fluid delivery pressure, while the air filter and liquid strainer ensure that the supplied fluids are free of particulate.

Operational control is main-tained by manual or solenoid valves used in conjunction with the various hardware assemblies.

Siphon System Set-up

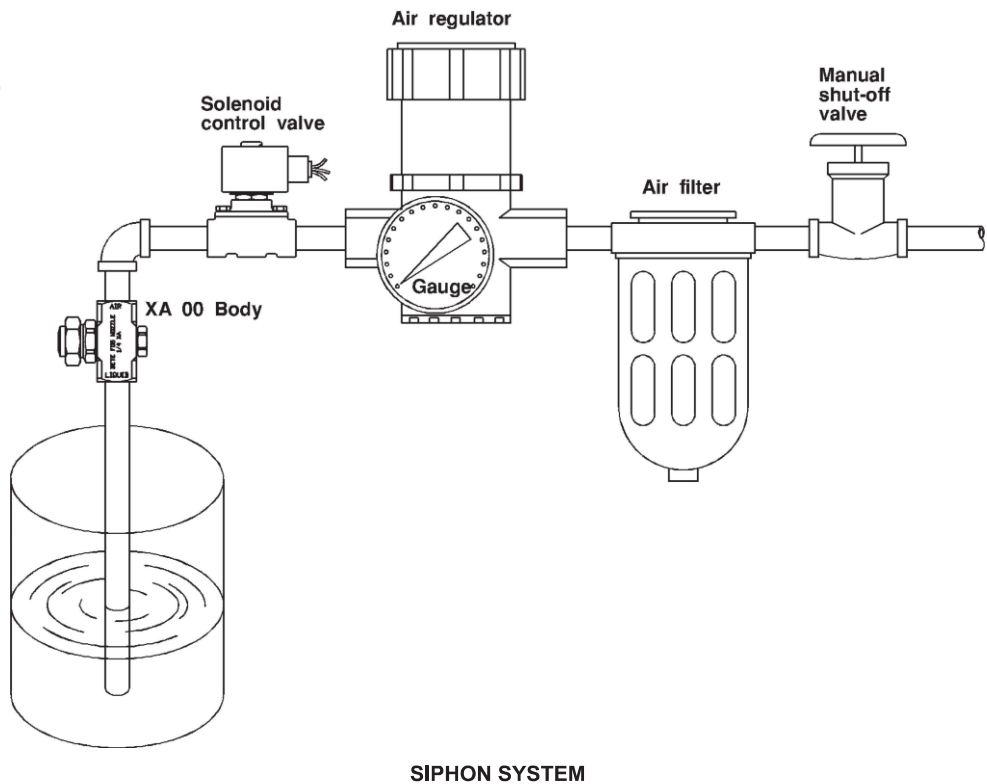
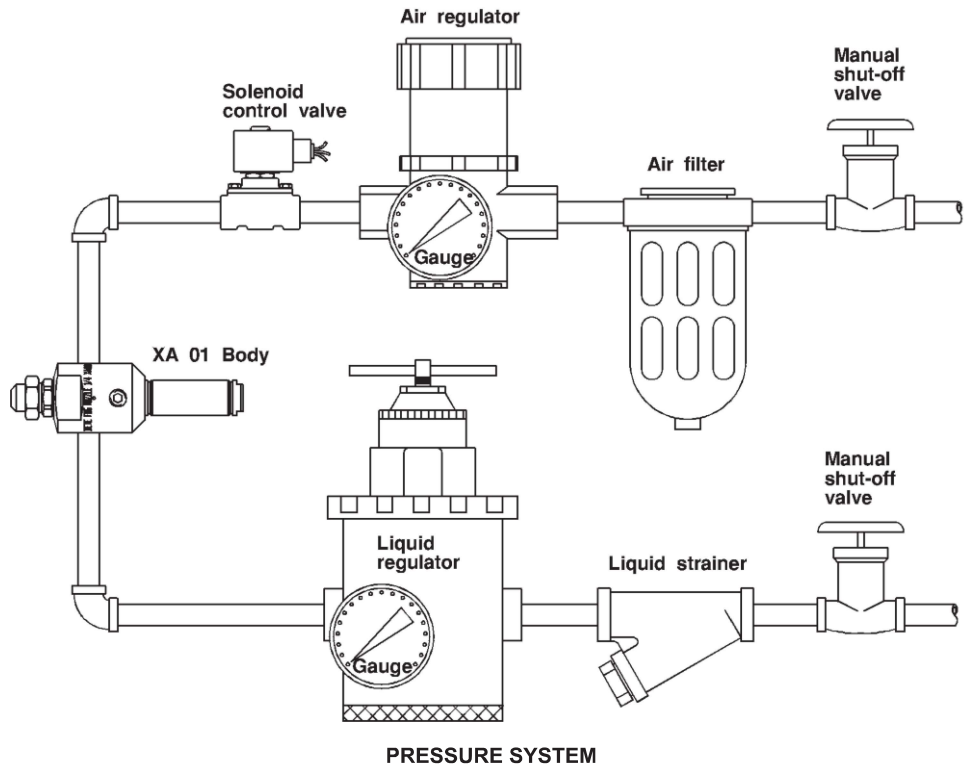
In a siphon-fed system, the liquid is supplied by either a siphon or gravity feed.

An air regulator controls the air delivery pressure, while the air filter ensures that the compressed air is of high quality.

Operational control is maintained by manual or solenoid valves used in conjunction with the various hardware assemblies.

When used as a gravity feed set-up, a positive liquid shutoff capability should be provided.

Filters, regulators, and strainers matched to your XA application are available from stock.



AIR ATOMIZING

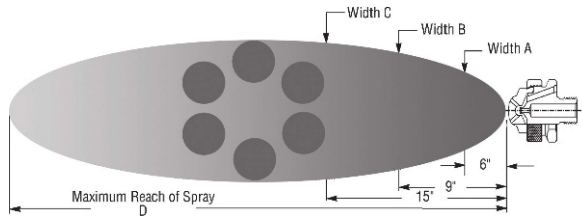
TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 74.

XAAD

Pressure-fed/Int. Mix/Wide Angle Round

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- 70° Hollow Cone spray pattern
- Finest atomization
- Moderate forward spray projection



1/4" XA AD100 C
XA 00 Body; C Hardware

Dimensions are approximate. Check with BETE for critical dimension applications.

XA AD Set-up Flow Rates and Dimensions

Pressure Fed, Internal Mix, Wide Angle Round Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	10 PSI Liquid			20 PSI Liquid			30 PSI Liquid			40 PSI Liquid			60 PSI Liquid			Spray Dimensions							
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	PSI liquid	"A" in.	"B" in.	"C" in.	"D" feet		
1/8 or 1/4	AD 050	Fluid Cap FC4 & Air Cap AC1601	8	1.4	0.4	14	2.1	0.4	22	2.4	0.6	30	2.5	0.7	44	3.0	0.8								
			10	1.1	0.4	16	1.9	0.5	26	2.0	0.7	34	2.2	0.8	48	2.7	0.9	10	10	6	7	9	5'0"		
			12	0.8	0.5	18	1.7	0.6	30	1.6	0.8	38	1.9	0.9	55	2.3	1.2	20	20	6	8	10	6'0"		
			14	0.5	0.6	20	1.4	0.6	34	1.2	1.0	42	1.5	1.1	60	1.9	1.4	34	30	7	8	10	7'0"		
						22	1.2	0.7	36	0.9	1.1	46	1.1	1.3	65	1.5	1.6	42	40	7	8	11	9'0"		
						24	0.9	0.8	38	0.7	1.2	48	0.9	1.4	70	1.1	1.8	60	60	8	9	12	12'0"		
				26	0.6	0.9	40	0.4	1.3	50	0.7	1.5	75	0.7	2.1										
		AD 100	Fluid Cap FC2 & Air Cap AC1603	12	1.9	1.8	22	3.3	2.3	30	5.1	2.5	38	6.4	2.8	54	8.8	3.4							
	14			0.6	2.2	24	2.2	2.8	32	4.3	2.9	42	4.7	3.4	56	8.1	3.7	12	10	7	10	13	6'0"		
						26		3.1	34	3.4	3.2	44	3.9	3.7	58	7.4	4.0	24	20	8	10	13	8'0"		
									36	2.5	3.5	46	3.1	4.1	60	6.8	4.3	34	30	8	10	13	10'0"		
									38	1.6	3.9	48	2.3	4.4	65	5.1	5.1	46	40	8	11	14	13'0"		
								40	0.7	4.3	50	1.4	4.8	70	3.5	6.0	60	60	9	11	15	16'0"			
	AD 150	Fluid Cap FC2 & Air Cap AC1602	16	3.2	1.4	28	4.6	2.0	42	5.3	2.7	55	5.7	3.3	80	7.1	4.5								
18			2.6	1.6	32	3.4	2.3	46	4.0	3.0	60	4.2	3.7	85	5.8	4.9	22	10	6	8	9	9'0"			
20			2.1	1.8	36	2.5	2.6	48	3.5	3.1	65	3.2	4.1	90	4.7	5.3	40	20	7	8	10	15'0"			
22			1.6	1.9	40	1.8	2.9	50	3.0	3.3	70	2.3	4.4	95	3.8	5.7	50	30	7	8	10	18'0"			
24			1.3	2.1	42	1.5	3.0	55	2.1	3.6	75	1.7	4.8	100	3.0	6.0	70	40	7	9	10	22'0"			
26			1.0	2.2	44	1.2	3.1	60	1.5	4.0	80	1.3	5.2				90	60	8	10	11	26'0"			
	AD 200	Fluid Cap FC1 & Air Cap AC1603	10	6.3	1.1	20	9.0	1.6	30	11.2	2.0	40	12.4	2.5	56	16.2	2.8								
12			3.6	1.5	22	6.9	2.0	32	9.3	2.4	42	10.6	2.9	58	14.8	3.1	12	10	8	10	14	7'0"			
14			2.0	2.0	24	5.1	2.4	34	7.4	2.8	44	8.8	3.3	60	13.8	3.5	22	20	8	11	15	10'0"			
					26		2.8	36	5.4	3.2	46	7.1	3.7	65	9.8	4.4	34	30	8	11	15	12'0"			
								38	3.6	3.6	48	5.4	4.1	70	6.5	5.4	46	40	8	11	15	15'0"			
								40	2.3	4.0	50	3.6	4.5	75	4.0	6.3	65	60	8	11	16	19'0"			
	AD 250	Fluid Cap FC1 & Air Cap AC1604	18	9.4	3.0	30	13.4	4.2	44	15.3	5.5	60	15.6	7.1	80	21.4	8.6								
22			7.7	3.6	34	11.9	4.7	48	13.8	5.9	70	12.5	8.3	85	19.5	9.2	28	10	8	10	13	18'0"			
26			6.0	4.1	38	10.3	5.1	55	11.3	6.8	80	9.3	9.5	90	17.9	9.8	42	20	8	11	14	21'0"			
28			5.2	4.4	42	8.9	5.6	65	7.8	8.0	85	7.8	10.1	95	16.5	10.4	65	30	9	11	15	22'0"			
30			4.4	4.7	46	7.3	6.1	70	6.1	8.6	90	6.2	10.7	100	15.1	11.0	85	40	9	12	15	24'0"			
32			3.7	5.0	50	5.8	6.7	75	4.5	9.3	95	4.8	11.3				90	60	10	13	16	28'0"			
	AD 300	Fluid Cap FC5 & Air Cap AC1605	24	6.7	5.5	38	10.7	7.4	48	16.5	8.8	60	18.6	10.4	85	29.2	13.7								
26			5.2	5.9	42	7.6	8.3	52	12.5	9.6	65	13.7	11.4	90	24.6	14.7	28	10	10	13	18	18'0"			
28			4.0	6.3	44	6.2	8.7	56	9.2	10.4	70	10.0	12.4	95	20.7	15.8	46	20	10	14	19	20'0"			
30			3.0	6.8	46	5.0	9.1	60	6.6	11.3	75	7.4	13.5	100	17.5	16.9	60	30	11	15	20	24'0"			
32			2.0	7.2	48	4.0	9.5	62	5.6	11.7	80	5.5	14.5				75	40	12	15	21	26'0"			
					50	3.0	9.9	65	4.4	12.3	85	4.0	15.5				90	60	13	17	23	28'0"			
			52	2.4	10.3	70	2.6	13.3	90	2.5	16.6														

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

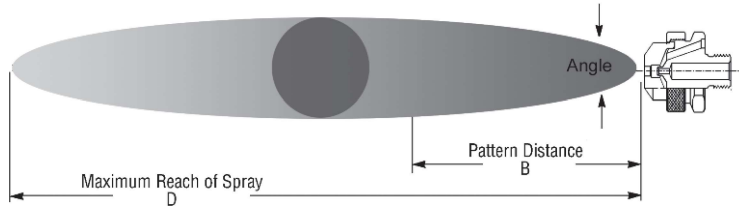
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

XAPR

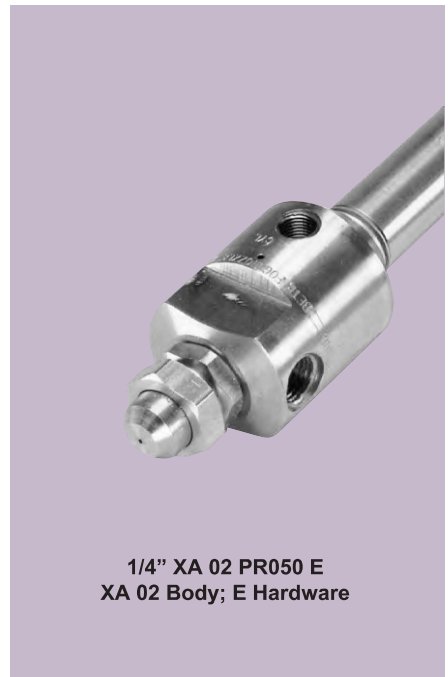
Pressure-fed/Int. Mix/Narrow Angle Round

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Finest atomization
- Narrow spray angle (12° - 22°)
- Full cone pattern
- Large forward projection (up to 28 feet)



Dimensions are approximate. Check with BETE for critical dimension applications.



1/4" XA 02 PR050 E
XA 02 Body; E Hardware

XA PR Set-up Flow Rates and Dimensions

Pressure-fed, Internal Mix, Round Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	10 PSI Liquid			20 PSI Liquid			30 PSI Liquid			40 PSI Liquid			60 PSI Liquid			Spray Dimensions				
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	Angle deg.	"B" in.	"D" feet
1/8	PR 050	Fluid Cap FC4 & Air Cap AC1501	10	0.7	0.6	14	1.5	0.4	24	1.7	0.6	32	1.9	0.7	50	2.3	1.0	12	10	13	12	9'0"
			12	0.5	0.7	18	1.2	0.5	28	1.4	0.6	36	1.6	0.8	54	2.1	1.1	24	20	13	13	10'0"
			14	0.4	0.8	22	1.0	0.6	32	1.1	0.8	40	1.3	0.9	58	1.8	1.2	36	30	13	14	11'0"
						24	0.9	0.7	36	0.8	1.0	44	1.1	1.1	62	1.6	1.4	44	40	14	16	12'0"
						26	0.7	0.8	38	0.7	1.0	48	0.9	1.2	66	1.3	1.5	44	40	14	16	12'0"
						28	0.6	0.8	40	0.7	1.1	50	0.7	1.3	68	1.2	1.6	62	60	15	18	14'0"
				30	0.5	0.9	42	0.5	1.2	52	0.7	1.4	70	1.1	1.7							
	PR 100	Fluid Cap FC4 & Air Cap AC1502	10	0.7	0.7	18	1.4	0.9	24	2.0	1.0	30	2.4	1.1	40	3.3	1.4	12	10	12	17	12'0"
			12	0.5	0.8	20	1.3	1.0	28	1.7	1.2	34	2.2	1.3	46	2.9	1.5	20	20	13	18	13'0"
			14	0.4	0.9	22	1.2	1.1	32	1.4	1.4	38	1.9	1.5	52	2.6	1.8	34	30	13	19	14'0"
						24	1.1	1.2	34	1.3	1.5	42	1.6	1.7	58	2.3	2.1	42	40	13	20	15'0"
						26	0.9	1.3	36	1.2	1.6	44	1.5	1.8	62	2.1	2.3	42	40	13	20	15'0"
					38	1.1	1.7	46	1.1	1.7	46	1.4	1.9	66	1.9	2.5	58	60	15	22	17'0"	
			40	1.0	1.8	48	1.0	1.8	48	1.3	2.0	70	1.7	2.7								
1/4	PR 150	Fluid Cap FC3 & Air Cap AC1502	12	1.3	0.7	22	2.2	1.1	30	2.9	1.2	36	4.3	1.3	48	5.8	1.5	22	10	12	19	13'0"
			16	1.1	0.9	26	1.7	1.3	34	2.5	1.4	40	3.9	1.4	52	5.3	1.7	34	20	13	20	14'0"
			20	0.9	1.2	30	1.4	1.5	38	2.1	1.7	44	3.6	1.6	56	4.9	1.7	34	20	13	20	14'0"
			22	0.8	1.3	34	1.3	1.7	42	1.7	1.9	48	2.8	1.8	60	4.6	1.9	42	30	13	21	15'0"
			24	0.8	1.4	38	1.1	1.9	46	1.5	2.0	52	2.5	2.0	64	4.1	2.1	48	40	14	22	16'0"
			26	0.8	1.4	40	1.0	2.0	50	1.2	2.3	56	2.2	2.2	68	3.7	2.3	60	60	15	24	17'0"
				28	0.8	1.6	42	0.9	2.0	52	1.2	2.4	60	3.6	2.3							
	PR 200	Fluid Cap FC2 & Air Cap AC1503	16	3.4	2.7	28	5.0	3.7	40	6.1	4.7	48	7.8	5.3	65	10.7	6.7	24	10	18	26	16'0"
			20	2.4	3.2	32	3.7	4.2	44	5.0	5.2	55	6.0	6.1	75	8.7	7.7	40	20	20	30	20'0"
			22	1.9	3.5	36	2.6	4.7	48	4.0	5.7	65	3.6	7.3	80	7.7	8.3	40	20	20	30	20'0"
			24	1.5	3.7	40	1.9	5.1	55	2.3	6.5	75	2.0	8.5	85	6.7	8.8	55	30	20	32	22'0"
			26	1.2	4.0	44	1.3	5.6	60	1.6	7.1	80	1.4	9.1	90	5.6	9.4	75	40	21	36	26'0"
28			1.0	4.2	48	0.9	6.1	65	1.1	7.8	85	1.0	9.7	95	4.6	10.0	85	60	21	38	28'0"	
			30	0.7	4.5	50	0.8	6.4	70	0.7	8.4	90	0.7	10.3	100	3.6	10.6					
PR 250	Fluid Cap FC1 & Air Cap AC1503	12	8.1	2.0	20	13.6	2.6	30	16.3	3.3	38	19.5	3.7	54	25.7	4.7	14	10	17	24	16'0"	
		14	6.6	2.3	22	12.0	2.9	34	13.1	3.8	42	16.5	4.2	60	21.8	5.3	26	20	18	27	18'0"	
		16	4.9	2.7	24	10.2	3.2	38	9.9	4.3	46	13.6	4.7	65	18.5	6.0	26	20	18	27	18'0"	
		18	3.4	3.0	26	8.6	3.5	40	8.7	4.6	50	10.8	5.3	70	15.2	6.7	40	30	20	30	22'0"	
					28	7.2	3.8	42	7.6	4.9	52	9.6	5.6	75	12.2	7.8	50	40	20	31	23'0"	
					30	5.9	4.1	44	6.6	5.2	54	8.6	5.9	80	10.0	8.1	70	60	21	36	25'0"	
			32	4.6	4.4	46	5.6	5.5	56	7.6	6.1	85	8.0	8.9								
PR 300	Fluid Cap FC5 & Air Cap AC1504	14	11.7	3.1	20	27.5	3.0	28	36.6	3.6	32	49.4	3.3	42	70.6	3.2	14	10	19	35	20'0"	
		16	8.5	3.6	22	23.0	3.5	30	32.6	4.0	36	42.2	4.1	46	65.0	3.9	24	20	20	39	23'0"	
					24	18.0	4.0	32	28.7	4.4	40	35.1	4.9	50	59.0	4.6	24	20	20	39	23'0"	
					26	14.4	4.4	34	24.8	4.8	44	28.0	5.7	54	53.2	5.4	34	30	21	41	25'0"	
					28	11.3	4.9	36	20.9	5.2	46	24.5	6.1	58	47.4	6.2	44	40	21	42	26'0"	
					38	17.5	5.6	48	17.5	5.6	48	21.0	6.5	65	37.8	7.5	54	60	22	46	28'0"	
			40	14.6	6.0	50	18.4	6.9	50	18.4	6.9	70	30.0	8.6								

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

AIR ATOMIZING

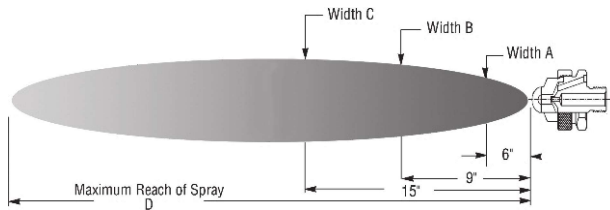
TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 74.

XAPF

Pressure-fed/Internal Mix/Flat Fan

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Flat fan, wide angle spray patterns (between 80° and 90°)
- Finest atomization



Dimensions are approximate. Check with BETE for critical dimension applications.



XA PF Set-up Flow Rates and Dimensions

Pressure-fed, Internal Mix, Flat Spray Pattern, 1/8" and 1/4" Pipe Sizes, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	10 PSI Liquid			20 PSI Liquid			30 PSI Liquid			40 PSI Liquid			60 PSI Liquid			Spray Dimensions					
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	A (in.)	B (in.)	C (in.)	D (feet)
1/8 OR 1/4	PF 050	Fluid Cap FC4 & Air Cap AC1301	10	1.4	0.8	18	2.2	1.5	28	2.5	1.5	38	2.8	1.8	55	3.4	2.4	16	10	10	14	18	8
			12	1.3	1.0	22	1.8	1.6	32	2.2	1.6	42	2.5	2.0	65	2.8	2.9	30	20	14	20	26	9
			14	1.1	1.1	26	1.5	1.8	36	1.9	1.8	46	2.2	2.2	75	2.3	3.3	30	20	14	20	26	9
			16	0.9	1.2	30	1.2	2.0	40	1.6	2.0	50	1.9	2.4	85	1.7	3.7	40	30	14	20	30	10
			18	0.8	1.3	34	0.9	2.2	44	1.3	2.2	60	1.3	2.8	90	1.4	3.9	50	40	18	24	34	11
			20	0.7	1.4	38	0.7	2.4	48	1.0	2.4	65	0.9	3.0	95	1.1	4.1	60	50	18	24	34	11
	22	0.5	1.6	40	0.6	2.7	55	0.7	2.7	70	0.7	3.3	100	0.9	4.3	85	60	22	28	36	13		
	PF 100	Fluid Cap FC3 & Air Cap AC1303	20	0.8	1.2	34	1.1	1.6	44	1.8	1.9	60	1.6	2.4	80	2.7	2.9	22	10	10	14	18	6
			22	0.6	1.3	36	0.9	1.7	46	1.6	1.9	65	1.2	2.6	85	2.2	3.1	38	20	14	20	28	6
			24	0.5	1.4	38	0.7	1.8	48	1.4	2.0	70	0.8	2.9	90	1.8	3.4	46	30	23	28	36	7
			26	0.4	1.5	40	0.6	1.9	50	1.1	2.1							60	40	24	28	37	7
			28	0.3	1.6	42	0.5	2.0	55	0.7	2.4							80	60	25	30	38	8
44			0.5	2.0	55	0.7	2.1																
PF 150	Fluid Cap FC3 & Air Cap AC1301	12	2.2	0.7	20	3.4	1.0	30	4.0	1.3	38	4.7	1.5	65	4.8	2.4	16	10	14	18	28	7	
		14	1.8	0.8	24	2.7	1.1	34	3.4	1.5	42	4.1	1.7	70	4.2	2.6	30	20	16	24	32	8	
		16	1.5	1.0	28	2.1	1.3	38	2.9	1.6	46	3.6	1.9	75	3.6	2.9	30	20	16	24	32	8	
		18	1.1	1.1	30	1.8	1.5	42	2.3	1.9	50	3.1	2.1	80	3.1	3.1	42	30	20	26	35	8	
		20	0.8	1.2	32	1.4	1.6	46	1.7	2.1	60	1.8	2.6	85	2.5	3.4	50	40	22	28	38	9	
		34	1.2	1.7	48	1.4	2.2	65	1.2	2.8	90	2.0	3.6	80	2.0	3.9	80	60	23	30	38	10	
PF 200	Fluid Cap FC3 & Air Cap AC1302	14	2.4	0.9	22	3.2	1.1	34	3.4	1.6	40	4.4	1.8	60	5.0	2.5	20	10	4	5	7	10	
		16	2.1	1.1	26	2.8	1.4	38	2.9	1.9	44	3.8	2.0	65	4.4	2.7	34	20	5	6	8	12	
		18	1.7	1.1	30	2.1	1.6	42	2.3	2.1	48	3.3	2.2	70	3.9	3.0	34	20	5	7	9	13	
		20	1.4	1.3	34	1.5	1.9	46	1.8	2.4	54	2.6	2.6	75	3.4	3.3	46	30	5	7	9	13	
		24	0.8	1.5	38	1.2	2.1	50	1.4	2.6	60	1.9	3.0	80	3.0	3.6	54	40	6	9	11	14	
		28	0.5	1.8	42	0.7	2.4	60	0.6	3.2	70	1.1	3.5	90	2.3	4.1	75	60	8	10	12	16	
PF 250	Fluid Cap FC2 & Air Cap AC1304	16	3.0	1.9	28	4.5	2.7	38	5.9	3.2	46	7.5	3.7	65	9.7	4.8	20	10	6	7	8	9	
		18	2.3	2.1	30	3.9	2.8	40	5.4	3.4	50	6.5	4.0	70	8.6	5.2	32	20	9	11	12	10	
		20	1.7	2.3	32	3.3	3.0	42	4.9	3.6	52	5.9	4.2	72	8.0	5.6	32	20	9	11	12	10	
		24	1.3	2.5	34	2.8	3.2	44	4.3	3.7	54	5.4	4.3	80	6.4	6.0	42	30	10	13	18	11	
		36	1.0	2.7	36	2.3	3.4	46	3.8	3.9	56	4.9	4.5	85	5.3	6.5	54	40	12	15	18	12	
		48	3.3	4.1	58	4.3	4.7	90	4.3	4.7	90	4.3	4.7	90	4.3	7.0	75	60	13	16	19	13	
PF 300	Fluid Cap FC1 & Air Cap AC1304	12	7.0	1.2	22	11.5	1.7	34	12.4	2.2	46	13.7	2.8	65	18.3	3.6	16	10	7	9	12	10	
		14	5.4	1.4	26	8.3	2.0	38	9.8	2.6	50	10.9	3.1	75	12.6	4.5	32	20	9	12	14	11	
		16	4.2	1.6	30	6.0	2.4	42	7.8	3.0	54	8.7	3.5	80	10.6	5.0	32	20	9	12	14	11	
		18	3.3	1.7	32	5.1	2.6	46	5.9	3.3	56	7.8	3.7	85	8.7	5.4	46	30	10	13	16	12	
		20	2.7	2.0	34	4.3	2.8	48	5.0	3.5	60	6.4	4.1	90	6.9	5.9	56	40	12	15	19	12	
		22	2.0	2.2	36	3.6	3.0	50	4.3	3.7	65	4.6	4.5	95	5.5	6.3	85	60	13	16	20	14	
PF 350	Fluid Cap FC1 & Air Cap AC1305	14	4.5	0.8	24	7.5	1.2	34	9.5	1.7	44	11.1	2.2	56	19.8	2.8	16	10	4	5	6	8	
		16	2.9	1.0	26	6.0	1.4	36	7.8	2.0	46	9.7	2.5	60	16.7	3.0	30	20	4	5	7	10	
		18	2.0	1.2	28	4.5	1.7	38	6.5	2.2	48	8.4	2.7	65	13.5	3.5	30	20	4	5	7	10	
		20	0.8	1.4	30	3.4	1.8	40	5.2	2.5	52	5.7	3.3	70	9.7	4.3	40	30	5	7	9	11	
		32	2.4	2.1	42	4.1	2.7	56	3.9	3.8	80	4.8	5.7	90	4.8	5.7	52	40	6	8	11	12	
		34	1.3	2.3	46	2.6	3.3	60	2.4	4.4	90	1.8	7.4	70	6.8	7.4	70	60	8	10	12	13	
PF 400	Fluid Cap FC5 & Air Cap AC1306	14	7.7	3.2	26	10.5	4.6	34	20.8	4.8	42	29.4	5.2	58	44.7	6.1	14	10	7	8	10	11	
		16	5.0	3.8	28	7.0	5.2	36	16.6	5.3	44	25.1	5.6	60	41.0	6.4	20	10	7	8	10	11	
		38	12.8	5.8	46	16.7	6.4	48	16.7	6.4	48	16.7	6.6	70	22.5	8.8	38	30	10	12	18	14	
		40	9.5	6.4	48	16.7	6.9	50	13.1	7.2	50	13.1	7.2	75	15.0	10.1	48	40	12	16	20	15	
		42	6.7	6.9	50	11.1	7.7	52	10.1	8.3	52	10.1	8.3	80	8.7	11.5	70	60	14	17	23	16	
		7.3	8.3	8.0	80	8.7	11.5	70	60	14	17	23	16										

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

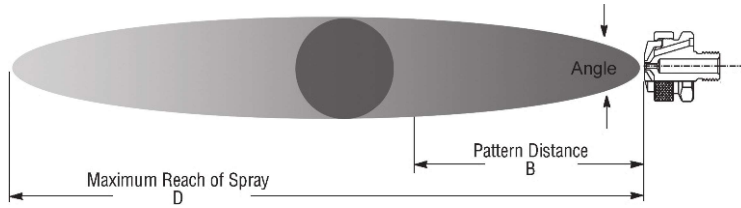
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

XASR

Siphon-fed Round

DESIGN FEATURES

- Lowest flow available
- Very fine atomization
- Narrow spray angle (12° - 22°)
- Full cone pattern
- Short to moderate forward spray projection



1/4" XASR 200 B
XA 00 Body; B Hardware

Dimensions are approximate. Check with BETE for critical dimension applications.

XA SR Set-up Flow Rates and Dimensions

Siphon-fed, External Mix, Round Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	ATOMIZING AIR		Liquid Capacity in GPH (Gallons Per Hour)								Spray Dimensions at 8" Siphon Height				
			PSI air	Air Capacity SCFM	Gravity Head			Siphon Height					PSI air	Angle deg.	B in.	D feet	
					18"	12"	6"	4"	8"	12"	24"	36"					
1/8 or 1/4	SR 050	Fluid Cap FC7 & Air Cap AC1201	10	0.4	0.4	0.4	0.3	0.2	0.2	0.1				10	18	11	6
			20	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.1			20	18	11	6
			40	1.0	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2		40	18	12	7
			60	1.3	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.2		60	18	14	8
	SR 150	Fluid Cap FC4 & Air Cap AC1201	10	0.5	0.6	0.6	0.5	0.4	0.3	0.2				10	18	12	7
			20	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.2	0.1		20	18	13	8
			40	1.1	0.9	0.8	0.8	0.7	0.7	0.6	0.4	0.3		40	18	15	9
			60	1.5	1.0	0.9	0.9	0.8	0.8	0.7	0.6	0.4		60	19	17	10
	SR 200	Fluid Cap FC4 & Air Cap AC1202	10	0.8	0.7	0.6	0.5	0.4	0.4	0.3				10	18	12	8
			20	1.2	0.8	0.7	0.6	0.6	0.5	0.4	0.2			20	18	13	9
			40	1.9	0.9	0.9	0.8	0.8	0.7	0.7	0.5	0.3		40	19	15	11
			60	2.7	1.0	1.0	0.9	0.9	0.9	0.8	0.7	0.6		60	20	17	12
SR 250	Fluid Cap FC3 & Air Cap AC1202	10	0.7	1.2	1.1	0.9	0.6	0.5	0.4				10	21	15	10	
		20	1.0	1.4	1.3	1.1	0.9	0.8	0.7	0.5			20	21	16	11	
		40	1.7	1.6	1.5	1.3	1.2	1.1	0.9	0.6	0.3		40	21	18	12	
		60	2.4	1.5	1.4	1.3	1.1	1.0	0.9	0.7	0.5		60	22	20	14	
SR 400	Fluid Cap FC1 & Air Cap AC1204	20	1.9	5.8	5.2	4.2	3.1	2.7	1.9	0.6			20	17	18	12	
		40	3.0	6.5	6.0	5.1	4.3	3.7	3.0	1.7	0.7		40	18	20	13	
		60	4.1	6.8	6.4	5.6	4.9	4.2	3.5	2.2	1.3		60	18	21	15	
		80	5.2	6.8	6.4	5.8	5.2	4.5	3.9	2.6	1.6		80	19	23	16	
SR 450	Fluid Cap FC5 & Air Cap AC1205	30	5.3				7.2	6.0	4.6				30	20	20	22	
		40	6.5				7.8	6.8	5.3				40	20	21	23	
		60	8.8				8.3	7.4	6.2	3.2			60	21	23	25	
		80	11.1	11.6	11.4	10.6	8.3	7.5	6.4	3.6	2.2		80	22	25	27	

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

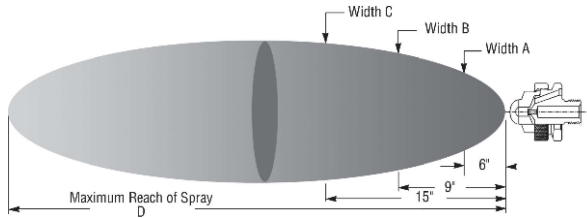
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

XA SF

Siphon-fed Flat Fan

DESIGN/SPRAY CHARACTERISTICS

- Lowest flow available
- Very fine atomization
- Flat fan spray pattern
- Moderate spray angle (60° - 85°)
- Moderate forward projection
- Siphon-fed



Dimensions are approximate. Check with BETE for critical dimension applications.

XA SF Set-up Flow Rates and Dimensions

Siphon-fed, Internal Mix, Flat Fan Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	ATOMIZING AIR		Liquid Capacity in GPH (Gallons Per Hour)								Spray Dimensions at 8" Siphon Height					
			PSI air	Air Capacity SCFM	Gravity Head				Siphon Height				PSI air	"A" in	"B" in.	"C" in	"D" feet	
					18"	12"	6"	4"	8"	12"	24"	36"						
1/8 or 1/4	SF 050	Fluid Cap FC3 & Air Cap AC1101	10	1.0	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	10	8	11	15	7'0"
			20	1.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	20	9	12	15	7'0"
			30	1.8	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	30	9	12	15	6'0"
	SF 100	Fluid Cap FC6 & Air Cap AC1102	20	1.9	1.0	1.0	0.9	0.8	0.7	0.7	0.6	0.6	0.6	20	9	13	15	8'0"
			30	2.4	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.6	30	10	14	17	9'0"
			40	3.0	0.8	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5	40	11	15	18	10'0"
	SF 150	Fluid Cap FC2 & Air Cap AC1103	20	2.3	1.4	1.3	1.2	1.0	1.0	0.9	0.8	0.6	0.6	20	8	9	11	10'0"
			30	2.9	1.3	1.2	1.1	0.9	0.9	0.8	0.7	0.6	30	8	10	11	11'0"	
			40	3.5	1.0	0.9	0.9	0.7	0.6	0.5	0.4	0.4	40	9	11	12	10'0"	
	SF 200	Fluid Cap FC2 & Air Cap AC1104	20	2.1	2.0	1.9	1.7	1.5	1.4	1.3	1.2	0.9	0.9	20	7	9	11	10'0"
			30	2.7	2.0	1.9	1.8	1.6	1.5	1.5	1.3	1.0	30	7	9	12	11'0"	
			40	3.3	1.8	1.7	1.6	1.4	1.3	1.2	1.0	1.0	40	8	11	13	11'0"	
50	3.9	1.1	1.0	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.



1/4"XA02 SF 050 F
XA 02 Body; F Hardware

AIR ATOMIZING

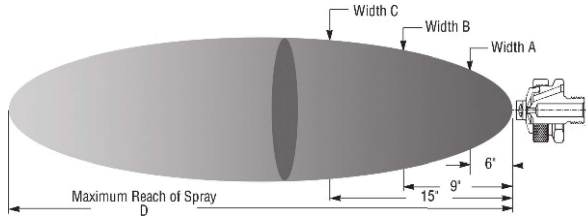
CALL 413-772-0846
Call for the name of your nearest BETE representative.

XAEF

Pressure-fed/External Mix/Flat Fan

DESIGN FEATURES

- External mix: allows spraying of viscous materials
- Variable atomization
- Moderate spray angle (60° - 90°)
- Precise metering of the liquid flow rate



Dimensions are approximate. Check with BETE for critical dimension applications.



1/4" XAEF 150 E
XA 00 Body; E Hardware

AIR ATOMIZING

XAEF Set-up Flow Rates and Dimensions

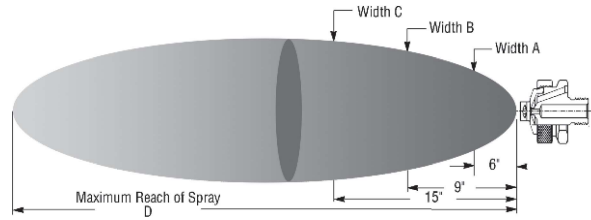
Pressure-fed, External Mix, Flat Fan Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	3 PSI Liquid			5 PSI Liquid			10 PSI Liquid			20 PSI Liquid			40 PSI Liquid			Spray Dimensions														
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	"A" in.	"B" in.	"C" in.	"D" feet									
1/8	EF 050	Fluid Cap FC7 & Air Cap AC1001	5	0.8	0.8	5	1.0	0.8	6	1.4	0.9	8	2.0	1.0	2.8	1.2	10	2.8	1.6	6	5	8	11	13	4'0"							
			6		0.9	6		0.9	8		1.0	10		1.2		15	8		10	9	12	16	6'0"									
			7		1.0	8		1.0	10		1.2	15		1.6		25	15		20	11	13	17	8'0"									
			8		1.0	10		1.2	12		1.4	15		1.9		35	20		20	10	12	16	8'0"									
1/4	EF 100	Fluid Cap FC7 & Air Cap AC1003	3	0.8	0.9	5	1.0	0.9	10	1.4	1.1	20	2.0	1.6	2.8	1.9	40	2.8	2.6	3	3	4	6	9	3'0"							
			5		0.9	10		1.1	15		1.4	20		1.6		30	2.1		60	3.6	20	5	4	6	9	4'0"						
			10		1.1	15		1.4	20		1.6	30		2.1		60	3.6		20	5	4	6	9	4'0"								
			15		1.4	20		1.6	25		1.9	30		2.1		40	2.6		70	4.2	20	5	7	10	5'0"							
			20		1.6	25		1.9	30		2.1	40		2.6		50	3.0		75	4.5	25	10	5	6	10	5'0"						
			25		1.9	30		2.1	40		2.6	50		3.0		60	3.6		80	4.9	40	20	5	7	11	6'0"						
1/8	EF 150	Fluid Cap FC4 & Air Cap AC1001	5	1.2	0.8	5	1.6	0.8	8	2.2	1.0	10	3.1	1.2	4.4	1.5	15	4.4	1.6	10	5	11	13	16	5'0"							
			8		1.0	10		1.2	10		1.2	20		2.9		20	1.9		10	20	15	18	23	7'0"								
			10		1.2	15		1.6	20		1.9	30		2.5		30	2.5		25	20	13	16	20	9'0"								
			15		1.6	20		1.9	30		2.5	35		2.8		35	2.8		25	30	15	18	23	10'0"								
1/4	EF 200	Fluid Cap FC4 & Air Cap AC1003	5	1.2	0.9	10	1.6	1.1	15	2.2	1.4	25	3.1	1.9	4.4	2.9	45	4.4	2.9	5	3	3	6	9	4'0"							
			10		1.1	15		1.4	20		1.6	30		2.1		50	3.0		20	3	4	6	9	5'0"								
			15		1.4	20		1.6	25		1.9	40		2.6		60	3.6		25	5	4	7	9	6'0"								
			20		1.6	25		1.9	30		2.1	50		3.0		70	4.2		25	20	5	8	12	7'0"								
			25		1.9	30		2.1	40		2.6	60		3.6		75	4.5		30	10	5	7	10	6'0"								
			30		2.1	40		2.6	50		3.0	70		4.2		90	5.6		50	20	5	9	12	8'0"								
1/4	EF 250	Fluid Cap FC3 & Air Cap AC1001	6	2.3	0.9	6	3.0	0.9	6	4.2	0.9	10	5.9	1.2	8.4	2.0	20	8.4	1.9	8	5	14	19	24	5'0"							
			7		1.0	8		1.0	8		1.0	12		1.4		25	2.2		10	20	15	19	25	6'0"								
			8		1.0	9		1.1	10		1.2	15		1.6		30	2.5		20	20	17	21	26	8'0"								
			10		1.2	10		1.2	12		1.4	20		1.9		35	2.8		25	30	16	20	27	9'0"								
1/4	EF 300	Fluid Cap FC3 & Air Cap AC1003	10	2.3	1.1	15	3.0	1.4	20	4.2	1.6	35	5.9	2.4	8.4	5.0	50	8.4	3.0	10	3	5	7	10	4'0"							
			15		1.4	20		1.6	25		1.9	40		2.6		60	3.6		25	3	5	7	10	5'0"								
			20		1.6	25		1.9	30		2.1	50		3.0		70	4.2		30	5	5	7	10	6'0"								
			25		1.9	30		2.1	40		2.6	60		3.6		75	4.5		35	20	6	8	13	8'0"								
			30		2.1	40		2.6	50		3.0	70		4.2		80	4.9		40	10	6	8	12	7'0"								
			40		2.6	50		3.0	60		3.6	80		4.9		90	5.6		60	20	6	8	14	10'0"								
1/4	EF 300	Fluid Cap FC3 & Air Cap AC1003	50	2.3	3.0	60	3.6	7.0	4.2	4.2	90	5.9	5.6	8.4	100	8.4	6.2	75	40	7	8	12	12	12'0"								

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 74.



Dimensions are approximate. Check with BETE for critical dimension applications.

XA EF Set-up Flow Rates and Dimensions
 Pressure-fed, External Mix, Flat Fan Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	3 PSI Liquid			5 PSI Liquid			10 PSI Liquid			20 PSI Liquid			40 PSI Liquid			Spray Dimensions					
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	"A" in.	"B" in.	"C" in.	"D" feet
1/8 or 1/4	EF 350	Fluid Cap FC6 & Air Cap AC1002	8		3.2	10		3.6	20		5.5	30		7	45		10	20	5	13	15	19	10'0"
			10		3.6	15		4.6	30		7.4	40		9	60		13	30	10	13	16	22	12'0"
			15	3.6	4.6	25	4.7	6.5	35	6.6	8.3	50	9.3	11	75	13.2	15	60	20	15	19	25	13'0"
	EF 400	Fluid Cap FC6 & Air Cap AC1004	10		3.0	15		3.6	20		4.1	35		6	45		8	10	3	5	8	10	6'0"
			15		3.6	20		4.1	25		4.9	30		7	50		8	25	3	5	8	10	8'0"
			20	3.6	4.1	25	4.7	5.5	35	6.6	6.3	60	9.3	9	60	13.2	10	35	10	6	9	11	11'0"
	EF 450	Fluid Cap FC2 & Air Cap AC1002	8		3.2	10		3.6	15		4.6	35		8	50		11	15	3	13	15	20	11'0"
			15		4.6	20		5.5	25		6.5	45		10	65		14	35	20	15	18	25	12'0"
			20	4.8	5.5	25	6.2	6.5	35	8.7	8.3	55	12.3	12	85	17.4	17	60	20	12	17	23	16'0"
	EF 500	Fluid Cap FC2 & Air Cap AC1004	10		3.0	15		3.6	20		4.1	30		7	50		8	10	3	6	8	11	7'0"
			15		3.6	25		4.9	30		5.5	45		8	60		10	25	3	6	8	11	10'0"
			20	4.8	4.1	30	6.1	5.5	35	8.7	6.3	50	12.3	8	70	17.4	11	35	5	6	9	13	11'0"
EF 550	Fluid Cap FC1 & Air Cap AC1002	10		3.6	15		4.6	25		6.5	45		10	75		15	30	5	16	22	30	11'0"	
		15		4.6	20		5.5	30		7.4	50		11	85		17	40	10	18	23	32	13'0"	
		20	9.9	5.5	30	12.7	7.4	40	18.0	9.1	70	25.5	14	95	36.0	19	65	20	17	21	30	16'0"	
EF 600	Fluid Cap FC1 & Air Cap AC1004	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	9.9	4.9	35	12.7	6.3	45	18.0	8	55	25.5	9	65	36.0	11	40	5	7	10	14	11'0"	
EF 650	Fluid Cap FC8 & Air Cap AC1005	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	9.9	4.9	35	12.7	6.3	45	18.0	8	55	25.5	9	65	36.0	11	40	5	7	10	14	11'0"	
EF 700	Fluid Cap FC9 & Air Cap AC1005	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	17.4	5.5	40	22.5	6.9	50	31.5	8	60	44.7	11	70	72.0	13	45	10	7	10	14	11'0"	
EF 750	Fluid Cap FC5 & Air Cap AC1005	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	27.9	5.5	40	36.0	7.5	60	50.6	9	70	72.0	11	80		13	50	10	8	11	15	13'0"	
EF 750	Fluid Cap FC5 & Air Cap AC1005	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	27.9	5.5	40	36.0	7.5	60	50.6	9	70	72.0	11	80		13	50	10	8	11	15	13'0"	
EF 750	Fluid Cap FC5 & Air Cap AC1005	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	27.9	5.5	40	36.0	7.5	60	50.6	9	70	72.0	11	80		13	50	10	8	11	15	13'0"	
EF 750	Fluid Cap FC5 & Air Cap AC1005	10		3.6	15		4.9	35		6	45		8	55		9	15	3	6	8	10	8'0"	
		15		4.1	30		5.5	40		7	50		8	60		10	30	3	6	9	12	10'0"	
		20	27.9	5.5	40	36.0	7.5	60	50.6	9	70	72.0	11	80		13	50	10	8	11	15	13'0"	

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

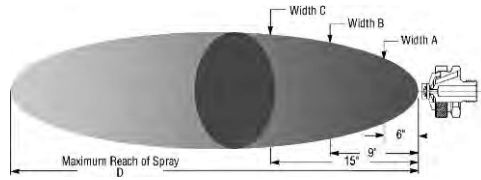
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

XAER

Pressure-fed/Ext. Mix/Narrow Angle Round

DESIGN/SPRAY CHARACTERISTICS

- External mix: allows spraying of viscous liquids
- Variable atomization
- Narrow spray angle (10°- 30°)
- Precise metering of liquid flow rate



Dimensions are approximate. Check with BETE for critical dimension applications.



1/4" XAER850A
XA 00 Body; A Hardware

XA ER Set-up Flow Rates and Spray Dimensions Pressure-fed, External Mix, Narrow Round Spray Pattern, 1/8" and 1/4" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	3 PSI Liquid			5 PSI Liquid			10 PSI Liquid			20 PSI Liquid			40 PSI Liquid			Spray Dimensions					
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI Liquid	Air	A in	B in	C in	D ft
1/8"	ER 050	Fluid Cap FC7 & Air Cap AC1801	5	0.7	0.8	5	0.8	0.8	5	1.2	1.2	10	1.2	1.8	20	1.8	3	10	2	4	5	8	
		10	1.2	1.2	10	1.2	1.2	20	1.8	2.3	30	2.3	2.9	40	2.9	3.5	10	40	2	3	5	12	
		20	1.8	2.3	30	2.3	2.9	40	2.9	3.5	50	3.5	4.0	60	4.0	4.7	20	20	3	2	3	14	
	ER 150	Fluid Cap FC4 & Air Cap AC1801	5	1.0	0.8	5	0.8	0.8	10	1.2	1.2	20	1.8	30	2.3	40	2.9	3	10	2	3	3	10
		10	1.2	1.2	20	1.8	2.3	30	2.3	2.9	40	2.9	3.5	50	3.5	4.0	20	40	3	3	3	14	
		20	1.8	2.3	30	2.3	2.9	40	2.9	3.5	50	3.5	4.0	60	4.0	4.7	20	40	3	3	3	16	
	ER 250	Fluid Cap FC3 & Air Cap AC1801	6	2.0	0.9	10	1.2	1.2	10	1.2	1.2	20	1.8	30	2.3	40	2.9	3	10	3	4	4	10
		10	1.2	1.2	20	1.8	2.3	30	2.3	2.9	40	2.9	3.5	50	3.5	4.0	20	40	3	3	3	14	
		20	1.8	2.3	30	2.3	2.9	40	2.9	3.5	50	3.5	4.0	60	4.0	4.7	20	40	3	3	3	16	
	ER 350	Fluid Cap FC6 & Air Cap AC1802	10	3.3	3.4	10	3.4	3.4	15	4.5	4.5	20	5.5	30	7.2	40	8.9	3	10	3	5	6	9
		15	4.5	4.5	20	5.5	5.5	30	7.2	7.2	40	8.9	8.9	50	10.6	10.6	5	20	3	4	4	6	11
		20	5.5	5.5	30	7.2	7.2	40	8.9	8.9	50	10.6	10.6	60	12.2	12.2	5	40	3	4	4	6	16
ER 450	Fluid Cap FC2 & Air Cap AC1802	10	5.0	3.4	10	3.4	3.4	15	4.5	4.5	20	5.5	30	7.2	40	8.9	3	10	4	6	9	14	
	15	4.5	4.5	20	5.5	5.5	30	7.2	7.2	40	8.9	8.9	50	10.6	10.6	5	20	4	5	6	6	18	
	20	5.5	5.5	30	7.2	7.2	40	8.9	8.9	50	10.6	10.6	60	12.2	12.2	5	40	5	5	7	21		
ER 550	Fluid Cap FC1 & Air Cap AC1802	15	10	4.5	20	5.5	4.0	30	7.2	7.2	40	8.9	40	10.6	50	13.9	3	20	6	6	9	16	
	20	5.5	30	13	7.2	50	10.6	50	12.2	60	13.9	70	15.6	80	15.6	5	40	5	7	7	21		
	30	7.2	40	18	8.9	60	12.2	70	10.6	80	13.9	70	15.6	80	15.6	5	60	6	6	10	22		
ER 650	Fluid Cap FC8 & Air Cap AC1803	15	10	7.2	20	8.8	30	11.7	50	17.2	50	17.2	50	17.2	50	17.2	3	20	5	6	8	17	
	25	8.8	25	10.3	30	11.7	40	14.5	55	18.5	65	21.1	80	25.2	90	27.9	5	30	6	6	6	22	
	30	11.7	40	13	14.5	55	18.5	65	21.1	80	25.2	90	27.9	90	27.9	5	50	5	5	6	22		
ER 750	Fluid Cap FC9 & Air Cap AC1803	20	17	8.8	30	11.7	40	14.5	50	17.2	50	17.2	50	17.2	50	17.2	3	20	6	6	9	19	
	30	11.7	40	20	14.5	50	17.2	60	19.8	65	21.1	70	22.5	80	25.2	90	5	30	6	6	8	21	
	40	14.5	50	20	17.2	60	19.8	65	21.1	70	22.5	80	25.2	90	27.9	10	60	5	5	7	22		
ER 850	Fluid Cap FC5 & Air Cap AC1803	40	25	14.5	55	18.5	65	21.1	80	25.2	90	27.9	80	25.2	90	27.9	3	40	6	6	7	22	
	50	17.2	60	29	19.8	70	22.5	80	25.2	90	27.9	80	25.2	90	27.9	5	70	4	5	7	20		
	55	18.5	65	29	21.1	80	25.2	90	27.9	80	25.2	90	27.9	10	80	4	4	4	6	18			

Standard Materials: Nickel Plated Brass, 303 Stainless Steel, and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

AIR ATOMIZING

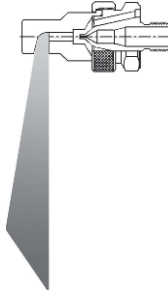
TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 74.

XAFF

Pressure-fed/Int. Mix/Deflected Flat Fan

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Deflected flat fan spray pattern



1/4"XA 01 FF050 F
XA01 Body; F Hardware

XA FF Set-up Flow Rates

Pressure-fed, Internal Mix, Deflected Flat Fan Spray Pattern, 1/8" and 1/4" Pipe Sizes

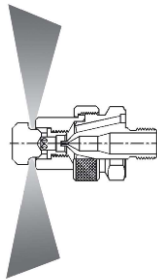
Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	10 PSI Liquid			20 PSI Liquid			30 PSI Liquid			40 PSI Liquid			60 PSI Liquid		
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM
1/8 or 1/4	FF 050	Fluid Cap FC10 & Air Cap AC1701	6	2.9	1.6	14	3.9	2.6	22	4.7	3.3	26	5.8	3.6	38	7.4	4.6
			8	2.5	1.9	16	3.5	2.8	24	4.3	3.6	32	4.8	4.4	46	6.4	5.5
			10	2.0	2.3	18	3.1	3.1	26	4.0	3.8	38	3.8	5.3	54	5.3	6.6
			12	1.5	2.7	20	2.8	3.5	30	3.3	4.5	44	2.8	6.2	62	4.2	7.8
			22	2.3	3.8	34	2.3	5.2	46	2.3	6.6	70	2.8	9.4			

XAxw

Pressure-fed/Int. Mix/Extra-wide Angle

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- 180° Extra-wide hollow cone



1/4"XA 03 XW050 A
XA 03 Body; A Hardware

XA XW Set-up Flow Rates

Pressure-fed, Internal Mix, Extra-Wide Spray pattern, 1/8" and 1/4" Pipe Sizes

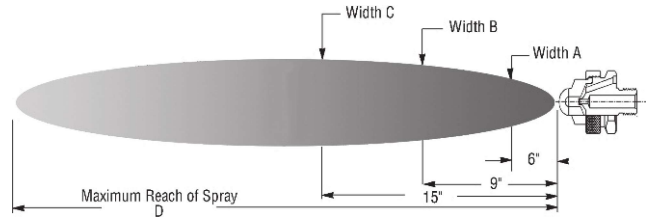
Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	10 PSI Liquid			20 PSI Liquid			30 PSI Liquid			40 PSI Liquid			60 PSI Liquid		
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM
1/8 or 1/4	XW 050	Fluid Cap FC8 & Air Cap AC1401	20	4.0	2.5	34	6.6	4.1	50	7.1	6.4	60	11.0	7.6	85	14.4	11.8
			22	2.8	2.7	38	4.4	4.8	52	6.2	6.8	65	8.3	8.6	90	12.0	13.0
			24	2.0	3.0	42	2.8	5.5	56	4.4	7.6	70	6.1	9.8	95	9.8	14.1
			26	1.5	3.3	46	1.7	6.3	60	3.2	8.4	80	3.1	12.4	100	7.8	15.4
			28	1.1	3.6	48	1.3	6.9	70	1.3	11.8	90	1.4	15.4			

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

AIR ATOMIZING

CALL 413-772-0846
Call for the name of your nearest BETE representative.

1/2 XA



Air Atomizing

Dimensions are approximate. Check with BETE for critical dimension applications.

AD 1/2" XA AD Set-up Flow Rates and Dimensions Pressure-fed, Internal Mix, Narrow Angle Round Spray Pattern, 1/2" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	5 PSI Liquid			15 PSI Liquid			25 PSI Liquid			35 PSI Liquid			55 PSI Liquid			Spray Dimensions						
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	A (in.)	B (in.)	C (in.)	D (feet)	
1/2	AD 5050	Fluid Cap FC 501 & Air Cap AC 5601							28	33.0	8.40	40	28.8	11.3	58	66.0	12.2	30	25	13.5	19.0	26.5	22	
									30	19.8	10.8	42	15.6	13.9	60	42.0	15.0	40	35	13.5	19.0	26.5	24	
																62	25.5	18.2	60	55	14.0	19.5	27.0	28
	AD 5100	Fluid Cap FC 501 & Air Cap AC 5602	8	27.0	6.50	18	42.0	7.00	32	47.0	11.0	46	42.6	18.1	70	81.0	30.0	10	5.0	13.0	18.5	25.5	20	
			10	15.0	8.20	20	29.4	8.80	34	36.0	12.8	48	32.4	20.2	75	45.0	35.0	20	15	13.5	19.0	25.5	26	
			12	8.4	9.80	22	20.2	10.5	36	25.2	14.7	50	25.8	22.2	80	22.2	39.6	36	25	13.0	18.5	26.5	21	
						24	14.4	12.2	38	18.6	16.6	52	19.8	24.0				50	35	13.5	19.0	26.5	24	
						40	13.8	18.6	54	15.6	25.8							75	55	14.0	19.0	27.0	27	
	AD 5150	Fluid Cap FC 501 & Air Cap AC 5603	10	34.2	11.4	26	46.2	20.2	40	62.6	27.5	54	75.6	32.6	75	127	39.0	12	5.0	14.0	19.5	27.0	26	
			12	21.6	13.0	28	37.2	22.0	42	52.8	29.6	56	57.0	34.3	80	108	42.0	30	15	13.5	19.0	26.5	24	
			14	12.0	14.7	30	28.4	23.7	44	42.0	31.6	58	46.8	35.8	85	98	46.0	46	25	13.0	18.5	26.0	23	
					32	21.6	25.3	46	33.6	33.6	60	39.0	37.3				60	35	14.0	19.5	27.0	28		
					34	16.2	27.0	48	25.2	35.6	62	33.0	38.8				80	55	14.0	19.5	28.0	30		
								50	18.0	37.5	65	25.8	41.2											
AD 5200	Fluid Cap FC 502 & Air Cap AC 5604	10	35.4	11.1	18	103	15.4	26	155	17.7	36	180	23.0	54	222	29.1	10	5.0	13.0	25.0	36.0	11		
		12	26.4	13.4	20	81.6	17.6	28	135	20.0	38	162	25.4	56	204	31.2	20	15	11.0	26.0	36.0	16		
					22	63.6	19.8	30	115	22.5	40	147	27.8	58	192	34.0	32	25	11.0	22.0	32.0	20		
					24	49.3	22.6	32	100	25.1	42	131	30.2	60	180	36.3	44	35	11.0	21.0	29.0	22		
								34	84.0	27.5	44	116	32.6	62	166	38.9	64	55	11.0	22.0	31.0	25		
								36	69.5	30.0	46	101	35.1	64	154	41.6								
								38	56.4	32.6	48	85.0	37.6	66	142	44.1								
								40	45.7	35.3	50	75.0	40.2	68	130	46.6								

PR 1/2" XA PR Set-up Flow Rates and Dimensions Pressure-fed, Internal Mix, Narrow Angle Round Spray Pattern, 1/2" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	5 PSI Liquid			15 PSI Liquid			25 PSI Liquid			35 PSI Liquid			55 PSI Liquid			Spray Dimensions						
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	A (in.)	B (in.)	C (in.)	D (feet)	
1/2	PR 5050	Fluid Cap FC 501 & Air Cap AC 5501	18	9.00	12.4	28	31.7	14.9	38	58.0	17.3	48	80.0	19.3				20	5.0				22	
			20	6.70	13.7	32	22.5	17.0	44	37.7	20.8	54	55.2	23.6				36	15				24	
			22	5.40	14.7	38	15.9	19.3	50	24.7	24.8	60	40.0	27.5				50	25	3.5	6.5	10	27	
			24	4.10	15.7	36	13.2	20.4	54	19.5	27.5	66	30.0	32.1				60	35				30	
						40	11.1	21.5	58	16.0	30.2	72	23.3	37.0										
						42	9.20	22.6	60	14.5	31.8	78	18.3	42.2										
	PR 5100	Fluid Cap FC 502 & Air Cap AC 5502	10	35.4	11.1	18	103	15.4	26	155	17.7	36	180	23.0	54	222	29.1	10	5.0	4.0	7.0	9.0	23	
			12	26.4	13.4	20	81.6	17.6	28	135	20.0	36	162	25.4	56	205	31.2	20	15	6.0	10	13	21	
						22	63.6	19.8	30	115	22.5	40	147	27.8	58	190	34.0	32	25	5.0	8.0	10	37	
						24	49.3	22.6	32	100	25.1	42	131	30.2	60	178	36.3	44	35	4.0	7.0	10	41	
									34	84.0	27.5	44	116	32.6	62	166	38.9	64	55	4.0	7.0	10	47	
									36	69.5	30.0	46	101	35.1	64	154	41.6							
						38	56.4	32.6	48	85.0	37.6	66	142	44.1										
						40	45.7	35.3	50	73.0	40.2	68	130	46.6										

Standard Materials: Nickel Plated Brass, 303 Stainless Steel, and 316 Stainless Steel.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

Dimensions are approximate. Check with BETE for critical dimension applications.

EF

1/2" XA EF Set-up Flow Rates and Dimensions

Pressure-fed, External Mix, Flat Fan Spray Pattern, 1/2" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	3 PSI Liquid			5 PSI Liquid			7 PSI Liquid			10 PSI Liquid			15 PSI Liquid			Spray Dimensions						
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	A (in.)	B (in.)	C (in.)	D (feet)	
1/2	EF 5050	Fluid Cap FC501 & Air Cap AC5001	30		31.0	40		38.0	45		41.5	55		48.0	80		65	35	3	8.5	14.5	20.5	19	
			35		34.0	45		41.5	50		45.0	60		51.5	85		69	50	5	9.0	16.5	21.5	22	
			40	138	38.0	50		45.0	55		48.0	60	210		58.0	90	306	72	7	9.5	17.5	23.0	23	
			45		41.5	55		48.0	60		51.5	75		55.0	80		65.0	100	75	10	9.5	18.5	24.0	25
						60		51.5	70		58.0	85		69.0		78		90	15	10	19.5	26.0	29	

PF

1/2" XA PF Set-up Flow Rates and Dimensions

Pressure-fed, Internal Mix, Flat Fan Spray Pattern, 1/2" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	5 PSI Liquid			15 PSI Liquid			25 PSI Liquid			35 PSI Liquid			55 PSI Liquid			Spray Dimensions						
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	liquid	A (in.)	B (in.)	C (in.)	D (feet)	
1/2	PF5050	Fluid Cap FC501 & Air Cap AC5301				28	39.0	22.4	44	44.1	31.5	58	53.0	40.0				20	10	17	28	35	18	
			30			30	31.8	24.0	46	37.2	33.5	60	45.6	42.0				30	15	18	29	36	19	
			32			32	24.6	25.9	48	31.2	35.1	62	38.0	44.0				40	20	19	30	37	21	
			34			34	19.8	27.5	50	26.0	36.9	65	31.0	47.0				50	25	20	31	38	23	
			36			36	15.0	29.1	60	20.6	38.7	70	21.0	52.5				60	35	24	36	43	27	
	PF 5100	Fluid Cap FC502 & Air Cap AC5302	10	35.4	11.1	18	103	15.4	26	155	17.7	36	180	23.0	54	222	29.1							
			12	26.4	13.4	20	81.6	17.6	28	135	20.1	36	162	25.4	56	205	31.2	10	5.0	20	34	47	13	
						22	63.6	19.8	30	115	22.5	40	147	27.8	58	190	34.0	20	15	34	62	83	15	
						24	49.3	22.6	32	100	25.1	42	131	30.2	60	178	36.3	32	25	34	62	82	17	
						34			34	84.0	27.5	44	116	32.6	62	166	38.9	44	35	36	66	85	19	
						36			36	69.5	30.0	46	101	35.1	64	154	41.6	64	55	36	67	89	21	
						38			38	56.4	32.6	48	85.0	37.6	66	142	44.1							
						40			40	45.7	35.3	50	73.0	40.2	68	130	46.6							
												52	62.4	42.7	70	119	49.3							
															72	108	51.6							
												74	97.4	54.2										
												76	87.5	57.1										

SR

1/2" XA SR Set-up Flow Rates and Dimensions

Siphon-fed, External Mix, Narrow Angle Round Spray Pattern, 1/2" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	ATOMIZING AIR		Liquid Capacity in GPH (Gallons Per Hour)								Spray Dimensions at 8" Siphon Ht.			
			PSI air	Air Capacity SCFM	Gravity Head			Siphon Height					PSI air	B (in.)	D (feet)	
					18"	12"	6"	4"	8"	12"	24"					
1/2	SR 5050	Fluid Cap FC501 & Air Cap AC5201	10	12.7						10.7				20		20
			20	18.5					22.8		13.9			30		22
			30	24.0					32.4		24.8		13.8	40		24
			43	29.2		67.6	58.8		38.8		31.2		22.7	50	6	26
			50	34.8	79.8	70.5	62.8		43.0		35.2		27.6	60		29
			60	40.1	81.9	72.1	63.5		45.4		38.3		30.5	70		32
			70	46.1	83.2	74.5	66.0		48.0		41.4		33.9	80		35
			80	51.0	84.6	76.2	67.6		49.8		43.2		36.0			16.5

XW

1/2" XA XW Set-up Flow Rates and Dimensions

Pressure-fed, Internal Mix, 180° Extra-Wide Angle, Hollow Cone Spray Pattern, 1/2" Pipe Sizes

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	10 PSI Liquid			20 PSI Liquid			30 PSI Liquid			40 PSI Liquid			40 PSI Liquid		
			PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM	PSI air	GPH	SCFM
1/2	XW 5050	Fluid Cap FC502 & Air Cap AC5401	14	56.4	12.2	24	104	16.0	36	116	22.4	48	122	27.8	72	128	40.2
			16	38.4	14.8	26	85.8	18.6	38	98.4	24.8	50	110	29.8	74	116	42.3
			18	25.8	16.8	28	70.0	20.3	40	85.2	26.5	52	98.4	31.5	76	108	44.3
			20	15.6	19.0	30	54.6	22.7	42	73.2	28.9	54	85.8	33.8	78	96.6	46.3
						32	42.0	24.8	44	61.0	30.9	56	74.4	36.0	80	85.8	48.3
						34	30.6	26.8	46	49.8	35.0	58	66.0	38.3	82	78.6	50.5
						36	20.0	29.3	48	38.4	35.0	60	55.2	40.1	84	67.8	52.5
						38	7.20	31.8	50	30.0	37.8	62	44.4	42.0	86	60.0	54.8
												64	37.2	44.5	90	48.0	59.0
												66	20.4	45.8			

Standard Materials: Nickel Plated Brass, 303 Stainless Steel and 316 Stainless Steel.

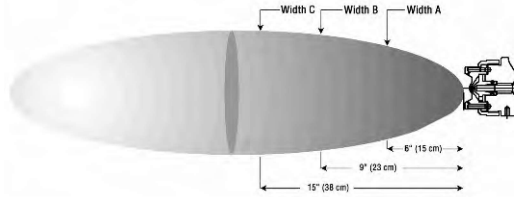
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

SAM

External Mix/Flat Fan or Narrow Round

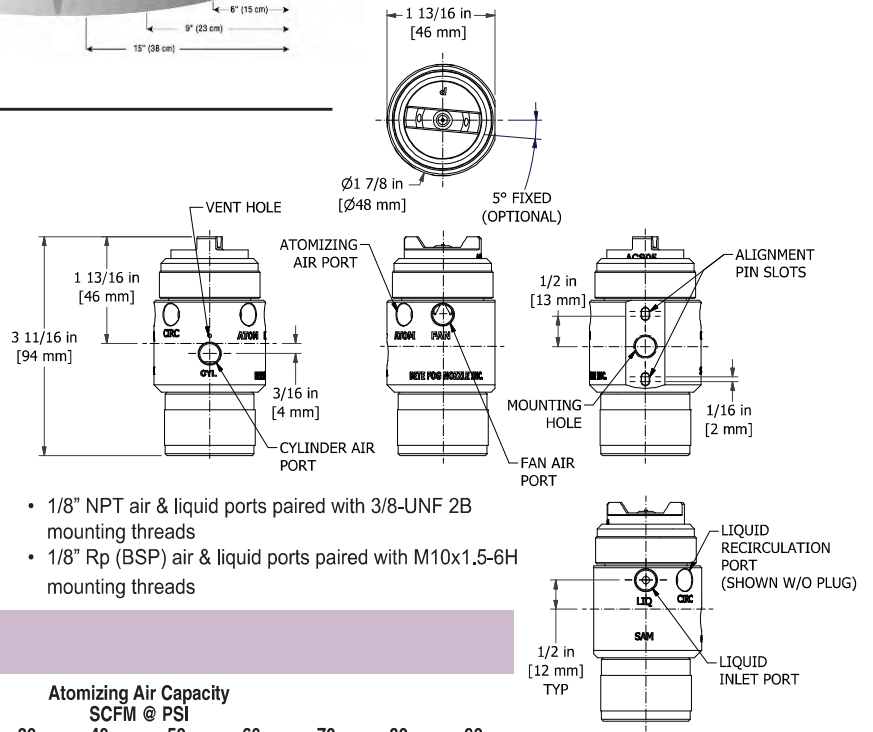
DESIGN FEATURES

- Separate atomizing and fan air lines provide variable coverage and fine control of drop size without affecting liquid flow rates. Higher atomizing air pressure yields finer drop size; higher fan air pressure yields broader patterns
- Pneumatically-controlled shut-off and clean-out built in
- External mix; allows spraying of viscous materials
- Liquid flow rates are independent of air
- Precise metering of the liquid flow rate
- Removable plug provided for liquid recirculation port



SAM Liquid Flow Rates

Pipe Size	Spray Set-up Number	Fluid Cap and Air Cap Number	Liquid Capacity GPH @ PSI				
			3 PSI	5 PSI	10 PSI	15 PSI	20 PSI
1/8"	SAM-01-02	FCS 01 & ACS 02	0.70	1.00	1.40	1.70	1.90
	SAM-02-02	FCS 02 & ACS 02	1.10	1.50	2.10	2.50	2.90
	SAM-03-02	FCS 03 & ACS 02	2.20	2.80	4.00	4.90	5.60
	SAM-04-03	FCS 04 & ACS 03	3.60	4.70	6.60	8.00	9.40
	SAM-05-03	FCS 05 & ACS 03	4.90	6.40	9.00	11.0	12.8
	SAM-06-04	FCS 06 & ACS 04	10.0	13.0	18.4	23.0	26.0
	SAM-07-05	FCS 07 & ACS 05	18.3	24.0	33.0	41.0	47.0



- 1/8" NPT air & liquid ports paired with 3/8-UNF 2B mounting threads
- 1/8" Rp (BSP) air & liquid ports paired with M10x1.5-6H mounting threads

SAM Air Flow Rates

Pipe Size	Spray Set-up Number	Fluid Cap and Air Cap Number	Atomizing Air Capacity SCFM @ PSI									
			10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI
1/8"	SAM-01-02	FCS 01 & ACS 02	0.44	0.53	0.62	0.82	1.00	1.30	1.50	1.70	2.00	2.20
	SAM-02-02	FCS 02 & ACS 02										
	SAM-03-02	FCS 03 & ACS 02										
	SAM-04-03	FCS 04 & ACS 03	1.60	2.00	2.40	3.20	4.00	4.70	5.50	6.30	7.00	7.80
	SAM-05-03	FCS 05 & ACS 03	1.60	2.00	2.40	3.10	3.90	4.70	5.40	6.20	7.00	7.80
	SAM-06-04	FCS 06 & ACS 04	1.80	2.20	2.60	3.60	4.40	5.30	6.20	7.00	7.80	8.60
	SAM-07-05	FCS 07 & ACS 05	1.80	2.20	2.60	3.60	4.40	5.30	6.20	7.00	7.80	8.60

Note: Spray set-ups consist of fluid and air caps. Set-ups are interchangeable but each clean-out/shut-off needle uses a different needle size.

Pipe Size	Spray Set-up Number	Fluid Cap and Air Cap Number	Fan Air Capacity SCFM @ PSI									
			10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	50 PSI	60 PSI	70 PSI	80 PSI	90 PSI
1/8"	SAM-01-02	FCS 01 & ACS 02	2.20	2.70	3.30	4.40	5.50	6.60	7.60	8.60	9.60	10.6
	SAM-02-02	FCS 02 & ACS 02										
	SAM-03-02	FCS 03 & ACS 02										
	SAM-04-03	FCS 04 & ACS 03	3.50	4.40	5.40	7.20	8.90	10.6	12.3	14.0	15.5	17.2
	SAM-05-03	FCS 05 & ACS 03	3.90	4.90	6.00	8.10	10.2	12.3	14.3	16.3	18.2	20.0
	SAM-06-04	FCS 06 & ACS 04	3.90	4.80	5.80	7.80	9.80	11.7	13.6	15.4	17.2	18.8
	SAM-07-05	FCS 07 & ACS 05	3.90	4.80	5.80	7.80	9.80	11.7	13.6	15.4	17.2	18.8

Pneumatically-Controlled Clean-out/ Shutoff. Removal of air pressure to the cylinder causes a spring loaded poppet valve actuator to shut off liquid flow and extends a clean-out needle through the nozzle orifice.

Replacement air caps include replacement Blue-Gard® gaskets.

Standard Materials: 303 Stainless Steel, Blue-Gard® Gasket, Viton® O-rings

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

Dimensions are approximate. Check with BETE for critical dimension applications.

SAM Coverage Chart

Variable Spray, Pressure Fed, Flat Fan or *Narrow Round Spray Pattern

Pipe Size	Spray Set-up Number	Fluid Cap and Air Cap Number	Spray Dimensions with Varied Fan Air Pressure														
			PSI air	PSI liquid	0° PSI			10 PSI			40 PSI			60 PSI			
					A in.	B in.	C in.	A in.	B in.	C in.	A in.	B in.	C in.	A in.	B in.	C in.	
1/8	SAM-01-02	FCS 01 & ACS 02	10	3 10 20	2 2.5 2	3 3.5 3	4 4.5 4	7 7.5 8	9 10 12	10 12 14	6 7 9	8 8 11	11 11 14	6 7 8	8 8 10	11 12 13	
			30	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 7.5 9	7 10 13	8 8 10	10 10 12	14 13 15	8 8 9.5	11 10 11.5	14 12 14.5	
			40	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 7 8	7 8 10	8 9 12	8 10 12	10 11 14	14 14 14	9 9 10	11 11 11	14 13 13
			60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 7 8	7 8 9	8 9 12	8 10 12	10 11 14	14 14 16	9 9 10	11 12 13	14 15 17
	SAM-02-02	FCS 02 & ACS 02	10	3 10 20	2 2 2	3 3.5 3	4 4.5 4	8 8 8	10 12 15	12 15 15	6.5 9 9	8.5 14 18	11 18 18	6 7 8	9 10 10	12 13 13	
			30	3 10 20	2 2 2	3 3 3	4 4.5 5	5.5 7 7	7 9 10	8 12 12	8 10 13	10 12 16	14 14 18	8 9 9.5	11 10 11.5	14 13 14.5	
			40	3 10 20	2 2 2	3 3 3	4 4.5 5	5 6.5 7	6 8 9	7 8 12.5	8 9.5 11.5	10 12 15	14 14 17	14 14 17	9 9 11	11 12 14	14 15 18
			60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 5.5 6	6 7 8.5	7 8.5 9.5	8 9 10	10.5 11 14	13 14 18	13 14 18	9 10 11	11 12 14	14 15 18
	SAM-03-02	FCS 03 & ACS 02	10	3 10 20	2 2 2	3 2.5 3	4 4.5 5	9 12 10	12 15 12	15 21 16	7 12 12	9 20 23	11 23 22	7 10 13	9 10 11	12 13 21	
			30	3 10 20	2 2 2	3 2.5 3	4 4.5 5	6 8 8	8 11 12	9 15 14	8 11 16	10 13 20	13 13 22	8 10 12	10 11 13	13 13 27	
			40	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	7 8 9	8 11 13.5	8 11 13	10 13 18	13 15 21	13 15 21	8 10 12	11 12 17	13 13 21
			60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 8	6 7 8	7 9.5 10	8 10 12	8 10 13	10 13 18	16 16 22	8 11 13	10 13 18	13 15 21
SAM-04-03	FCS 04 & ACS 03	10	3 10 20	2 2 2	3 3 3	4 4.5 5	9 10 9	13 14 13	17 16 17								
		30	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 5 5	6 7 6	7 9 9	11 13 13	15 17 20	18 22 24	12 18 17	15 21 22	18 22 27		
		40	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 8	7 10 11	8 11 15	9 10 15	12 14 21	14 18 21	11 15 16	13 18 20	18 22 25	
		60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 9 10	8 10 12	8 11 13	10 14 18	13 16 22	10 11 12	12 15 17	17 18 22	
SAM-05-03	FCS 05 & ACS 03	10	3 10 20	3 3 3	4 4 4	5 5 5	8 9 9	11 12 12	15 15 15	24 21 21	29 28 28	35					
		30	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 6	6 8 9	8 14 15	12 18 19	15 23 27	19 23 27	12 17 18	15 22 23	19 25 27		
		40	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 10 13	8 12 17	10 16 22	13 20 22	17 21 22	12 15 16	14 18 20	18 22 24	
		60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 9 10	8 10 13	9 11 14	11 14 17	16 20 22	10 12 12	12 16 17	17 20 23	
SAM-06-04	FCS 06 & ACS 04	10	3 10 20	3 3 3	4 4 4	5 5 5	7 8 8	10 11 11	13 15 15	21 17 17	26 22 22	33 30					
		30	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 6	6 8 8.5	8 13 11	12 16 16	14 22 21	21 22 21	15 16 18	17 21 18	19 23 24		
		40	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 10 13	8 11 13	9 14 17	12 20 17	17 24 13	12 14 13	17 18 18	21 25 26	
		60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 9 10	8 10 13	9 12 14	12 16 21	17 21 24	10 12 14	13 16 19	18 21 27	
SAM-07-05	FCS 07 & ACS 05	10	3 10 20	3 3 3	4 4 4	5 5 5	8 9 9	11 13 14	15 18 17	21 19 14	27 24 24	35 33					
		30	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 10	7 9 10	8 13 14	10 17 17	13 22 24	17 18 24	12 17 18	15 22 22	27 29 29	
		40	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 9 12	8 11 12	9 15 14	12 20 21	17 24 21	12 14 14	15 20 19	24 29 27	
		60	3 10 20	2 2 2	3 2.5 3	4 4.5 5	5 6 7	6 8 9	7 9 10	8 10 13	9 12 14	11 15 17	19 24 21	12 14 15	14 17 17	17 23 24	

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

SpiralAir®

High-Flow Air Atomizing

DESIGN FEATURES

- A two-fluid nozzle using any gas as the atomizing fluid
- Three-stage atomization for highest performance
- Designed for high reliability in extremely hostile environments
- Efficient design reduces compressed air consumption

SPRAY CHARACTERISTICS

Spray patterns: Full Cone and Flat Fan
Spray angles: 20°, 60°, 90°
 (Other angles available by special order)
Flow rates: 0.33 to 26 gpm

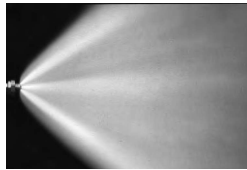


1 1/2" SA (Set-up #) - A - 00

AIR ATOMIZING



Narrow Round 20°

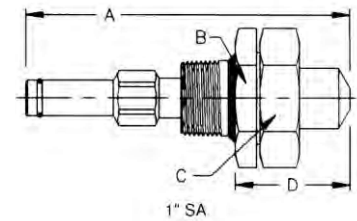


Wide Round 90°

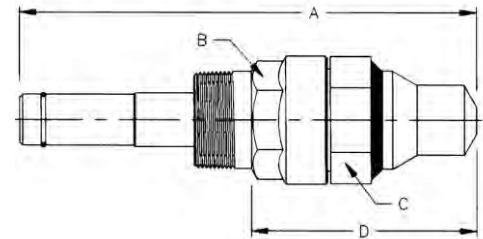


Flat Fan 60°

Dimensions are approximate. Check with BETE for critical dimension applications.

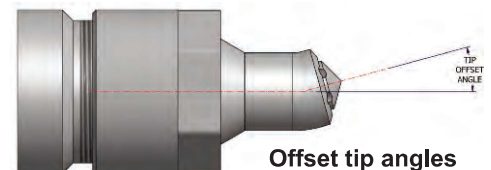
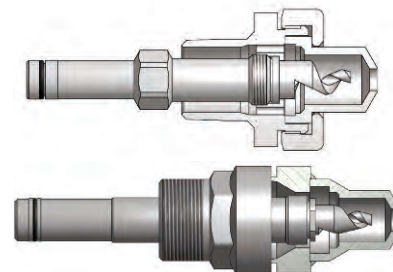


1 SA (Set-up #) - A - 00



1 1/2" SA (Set-up #) - A - 00

Larger sizes and flow rates available upon request.



Offset tip angles available upon request

SpiralAir Spray Set-up, Spiral Tip and Dimensions

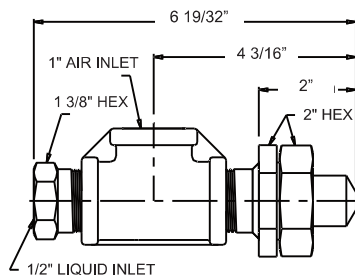
Pipe Size	Spray Set-up Number	Spiral Tip No.	Spray Angle	Spray Type	Approx. Free Pass. Dia. (in.)	Dimensions (in.)				Wt. (lbs)	
						A	B	C	D		
1"	SA 101	14	20°	Narrow Round	0.19	1	5.83	2.00	2.00	2.00	1.4
	SA 308		90°	Wide Round	0.106						
	SA 310	60°	Round	0.106							
	SA 402	90°	Flat Fan	0.166							
	SA 404	60°		0.166							
	SA 103	20	20°	Narrow Round	0.281						
	SA 307		90°	Wide Round	0.137						
	SA 309		60°	Round	0.137						
SA 401	90°		Flat Fan	0.205							
SA 403	60°			0.205							
1 1/2"	SA 2001		24	20°	Narrow Round	0.365	1 1/2	9.00	2.00	2.19	4.45
	SA 2008	90°		Wide Round	0.213						
	SA 2012	60°		Round	0.213						
	SA 2100	28	20°	Narrow Round	0.365						
	SA 2300		90°	Wide Round	0.213						
	SA 2301		60°	Round	0.213						

Standard Materials: 316 Stainless Steel with optional Cobalt Alloy 6 wear components.

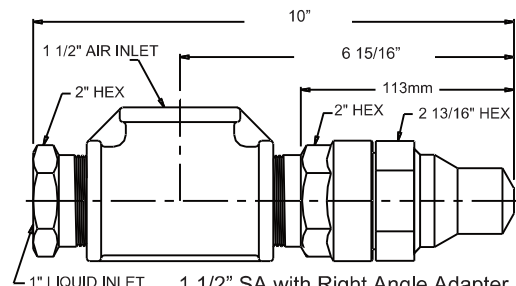
Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.

TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material.

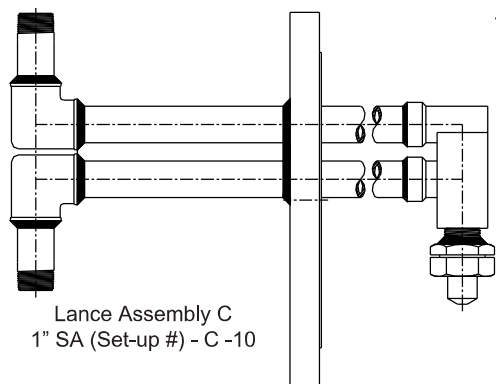
The SpiralAir can be configured to fit any installation requirement. The examples shown are just a few of the custom assemblies available. For more information, contact BETE Applications Engineering.



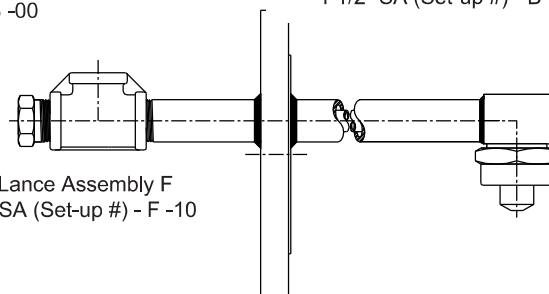
1" SA with Right Angle Adapter
1" SA (Set-up #) - B -00



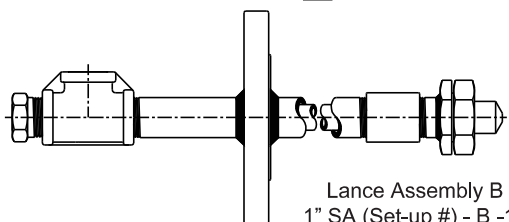
1 1/2" SA with Right Angle Adapter
1 1/2" SA (Set-up #) - B -00



Lance Assembly C
1" SA (Set-up #) - C -10



Lance Assembly F
1" SA (Set-up #) - F -10



Lance Assembly B
1" SA (Set-up #) - B -10

Because very small variations in liquid pressure produce large variations in liquid flow, BETE recommends using a metering pump or other flow metering device to control the liquid flow.

AIR ATOMIZING

Call for the name of your nearest BETE representative.
CALL 413-772-0846

SpiralAir Set-up Flow Rates
Narrow, Wide and Flat Fan Patterns 1" and 1 1/2" Pipe Size

Pipe Size	Spiral Tip Rating	30 PSI Air			40 PSI Air			50 PSI Air			60 PSI Air			70 PSI Air			80 PSI Air			90 PSI Air			100 PSI Air																										
		GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM	GPM	PSI liquid	SCFM																								
1"	14	0.33	26	37	0.33	34	52	0.33	44	68	0.33	53	85	0.33	64	103	0.33	75	121	0.33	86	139	0.33	98	158	0.66	28	24	0.66	37	34	0.66	46	45	0.66	56	56	0.66	67	68	0.66	78	79	0.66	90	92	0.66	102	104
		1.00	30	19	1.00	39	27	1.00	48	35	1.00	58	44	1.00	69	53	1.00	80	62	1.00	92	71	1.00	104	81	1.33	31	16	1.33	40	22	1.33	50	30	1.33	60	37	1.33	71	44	1.33	82	52	1.33	94	60	1.33	106	68
		1.66	32	14	1.66	41	20	1.66	51	26	1.66	61	32	1.66	72	39	1.66	83	45	1.66	95	52	1.66	107	59	2.00	33	12	2.00	42	18	2.00	52	23	2.00	62	29	2.00	73	35	2.00	85	41	2.00	96	47	2.00	109	53
		2.33	34	11	2.33	43	16	2.33	53	21	2.33	63	26	2.33	74	31	2.33	86	37	2.33	98	43	2.33	110	48	2.66	35	10	2.66	44	15	2.66	54	19	2.66	64	24	2.66	75	29	2.66	87	34	2.66	99	39	2.66	111	45
		3.00	35	10	3.00	45	14	3.00	55	18	3.00	65	22	3.00	76	27	3.00	88	32	3.00	100	37	3.00	112	42	1.0	27	38	1.0	34	52	1.0	42	65	1.0	51	79	1.0	59	92	1.0	69	106	1.0	78	120	1.0	88	133
		2.0	29	27	2.0	37	36	2.0	45	45	2.0	54	55	2.0	63	64	2.0	72	74	2.0	82	84	2.0	92	93	3.0	31	22	3.0	39	29	3.0	47	37	3.0	56	45	3.0	65	52	3.0	75	60	3.0	84	68	3.0	94	76
		4.0	33	19	4.0	41	25	4.0	49	32	4.0	58	38	4.0	67	45	4.0	76	52	4.0	86	58	4.0	96	65	5.0	35	17	5.0	42	22	5.0	51	28	5.0	59	34	5.0	69	40	5.0	78	46	5.0	88	52	5.0	98	58
		6.0	35	15	6.0	43	20	6.0	52	26	6.0	61	31	6.0	70	36	6.0	79	42	6.0	89	47	6.0	100	53	7.0	36	14	7.0	44	19	7.0	53	24	7.0	62	29	7.0	71	34	7.0	81	39	7.0	91	44	7.0	101	49
		8.0	37	13	8.0	45	18	8.0	54	22	8.0	63	27	8.0	72	31	8.0	82	36	8.0	92	41	8.0	102	45	9.0	38	12	9.0	46	17	9.0	55	21	9.0	64	25	9.0	73	30	9.0	83	34	9.0	93	38	9.0	103	43
		10	39	12	10	47	16	10	56	20	10	65	24	10	74	28	10	84	32	10	94	36	10	104	41	5.0	39	87	5.0	49	106	5.0	59	127	5.0	68	152	5.0	78	181	5.0	87	213	5.0	95	248			
1 1/2"	24	8.0	42	68	8.0	53	83	8.0	63	83	8.0	72	101	8.0	82	122	8.0	92	145	8.0	102	173	8.0	112	203	11	47	53	11	57	66	11	67	76	11	77	86	11	86	118	11	96	141	11	106	168			
		14	62	52	14	72	62	14	82	72	14	92	82	14	102	92	14	112	102	14	122	112	14	132	122	17	80	52	17	90	62	17	100	72	17	110	82	17	120	92	17	130	102						
		17	80	52	17	90	62	17	100	72	17	110	82	17	120	92	17	130	102	17	140	112	20	98	53	20	108	63	20	118	73	20	128	83	20	138	93	20	148	103									
		20	118	55	20	128	68	20	138	78	20	148	88	20	158	98	20	168	108	20	178	118	20	188	128	23	118	55	23	128	68	23	138	81	23	148	94	23	158	107	23	168	119						
		26	139	58	26	149	72	26	159	86	26	169	100	26	179	114	26	189	128	26	199	142	26	209	156	26	219	170	26	229	184	26	239	198															
		10	46	36	10	54	51	10	64	67	10	73	85	10	83	105	10	93	127	10	103	149	10	113	171	11	46	34	11	55	47	11	65	63	11	74	79	11	85	98	11	95	117	11	106	137			
		12	47	31	12	56	44	12	65	59	12	75	74	12	85	91	12	95	109	12	105	127	12	115	145	12	47	31	12	56	44	12	65	59	12	75	74	12	85	91	12	95	109	12	105	127			
		13	48	30	13	57	42	13	66	55	13	76	70	13	86	86	13	97	103	13	107	119	13	117	135	13	48	30	13	57	42	13	66	55	13	76	70	13	86	86	13	97	103	13	107	119			
		14	48	28	14	57	39	14	67	52	14	77	66	14	87	81	14	98	97	14	108	114	14	118	130	14	48	28	14	57	39	14	67	52	14	77	66	14	87	81	14	98	97	14	108	114			
		15	49	27	15	58	37	15	67	49	15	77	63	15	87	77	15	98	92	15	108	108	15	118	124	15	49	27	15	58	37	15	67	49	15	77	63	15	87	77	15	98	92	15	108	108			
16	50	25	16	59	36	16	68	47	16	78	60	16	88	73	16	99	88	16	109	98	16	119	103	16	50	25	16	59	36	16	68	47	16	78	60	16	88	73	16	99	88	16	109	98					
17	50	24	17	59	34	17	69	45	17	79	57	17	89	70	17	100	84	17	110	94	17	120	104	17	50	24	17	59	34	17	69	45	17	79	57	17	89	70	17	100	84	17	110	94					
18	51	23	18	60	32	18	69	43	18	79	54	18	89	67	18	100	80	18	110	90	18	120	100	18	51	23	18	60	32	18	69	43	18	79	54	18	89	67	18	100	80	18	110	94					
19	51	22	19	60	31	19	70	41	19	80	52	19	90	64	19	100	77	19	110	87	19	120	97	19	51	22	19	60	31	19	70	41	19	80	52	19	90	64	19	100	77	19	110	87					
20	52	21	20	61	30	20	70	40	20	80	50	20	90	62	20	100	74	20	110	82	20	120	92	20	52	21	20	61	30	20	70	40	20	80	50	20	90	62	20	100	74	20	110	82	20	120	92		

Standard Materials: 316 Stainless Steel with optional Cobalt Alloy 6 wear components.

Spray angle performance varies with pressure. Contact BETE for specific data on critical applications.