

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.

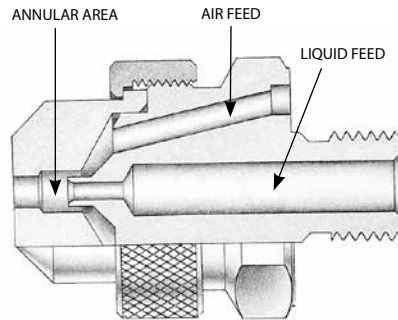
INTERNAL MIX SET-UPS

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.

E. Air Operated Shut-off



Bold letters (A, B, C, D, E, F) refer to hardware assemblies shown on p. 78.



Cutaway View: Internal Mix Set-up

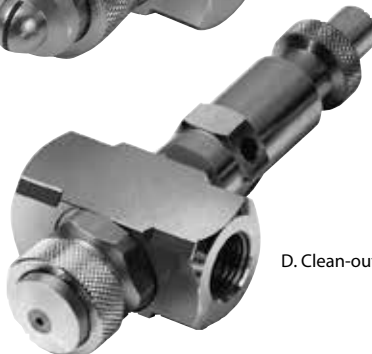
EXTERNAL MIX SET-UPS

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

A. End Plug

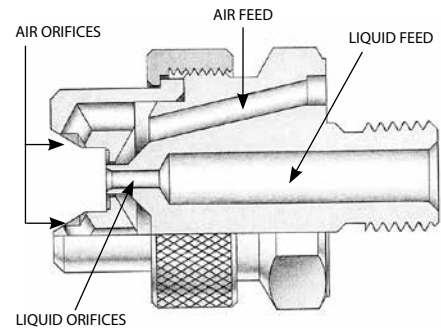


D. Clean-out/Shut-off



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 Engineers 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 pot. 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

B. Shut-off



XA Components & Options

lowest flow rates available in the XA series (as low as 0.38 l/hr). 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.*

XA00 Body
with C Hardware



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



XA03 Body



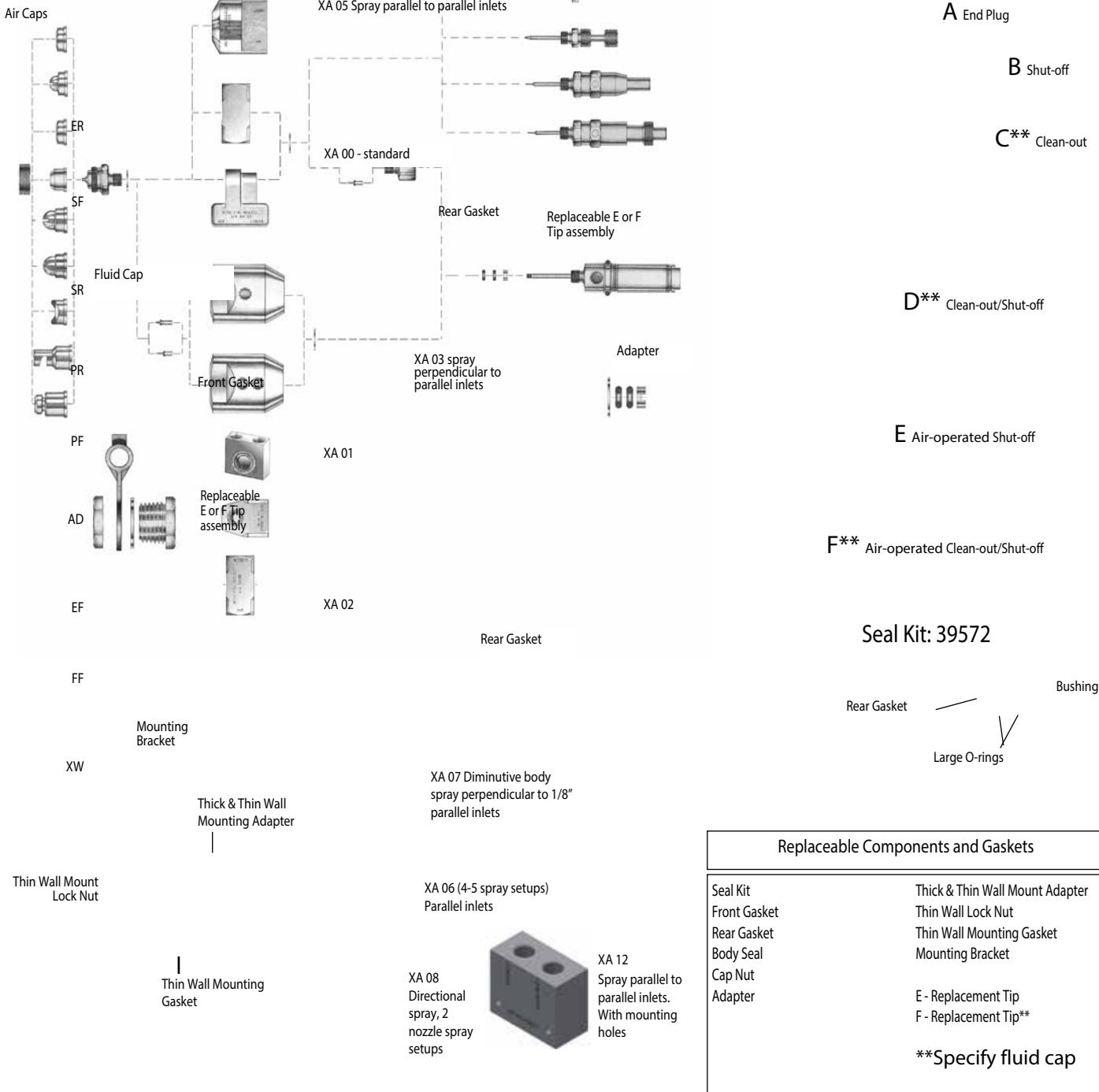
XA 01/02 Body
with E or F
Hardware

XA Components & Options

Spray Set-up

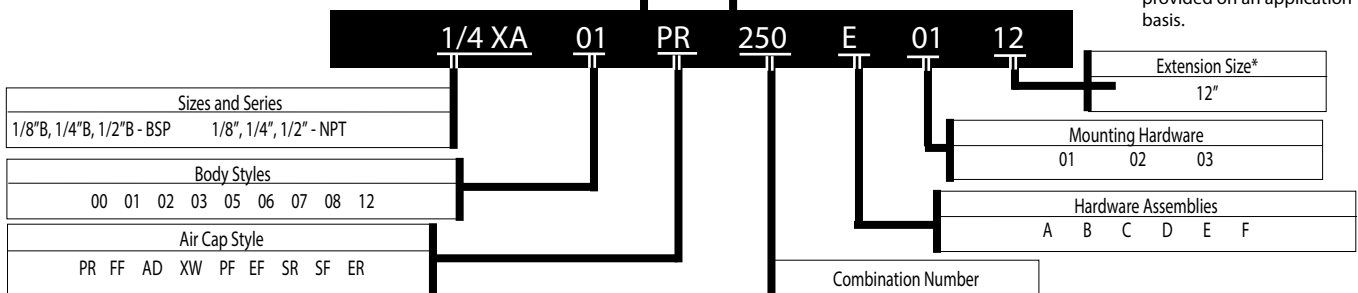
Body Styles and Seals

Hardware Assemblies



TO ORDER

Spray Set-up Number



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

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 2 bar.*

BODIES FOR AUTOMATIC OPERATION

The **XA01** and **XA02 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 2 bar.*

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



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

must be used when the air cylinder operates at a different pressure from the atomizing air or where the atomizing air is supplied below 2 bar.

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.

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.



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

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 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.



Corrosion-resistant XA in PVC

XA Components & Options

SPRAY EXTENSIONS

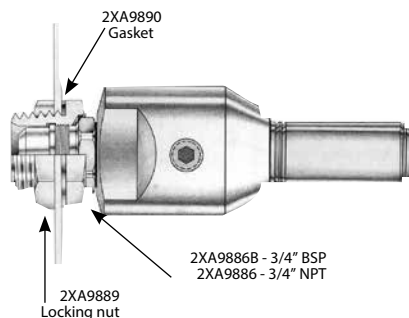
The spray set-up can be moved away from the nozzle body by using optional 152mm or 305mm extensions. These allow the spray to be moved closer to the target while keeping the nozzle body and associated piping at a distance.

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

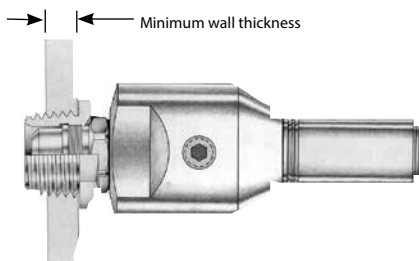
Three-piece adapter used to support an XA nozzle with the body located outside a tank or duct having a relatively thin (less than 10mm) wall and the spray directed into the interior. To use this adapter, a 27mm diameter hole must be drilled through the wall. This adapter both secures the air cap and 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 (10mm 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 13mm-diameter metal rod. The bracket allows flexibility in aiming the spray.

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 12 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

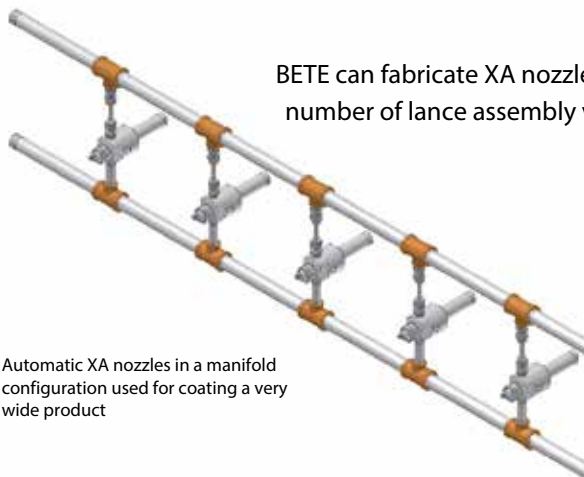
The standard material for XA gaskets is compressed fiber with a neoprene binder. For installations requiring FDA approval, SBR gaskets are available. Other elastomeric and metallic gasket materials can be supplied on request.

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



XA03 Mounting Bracket

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



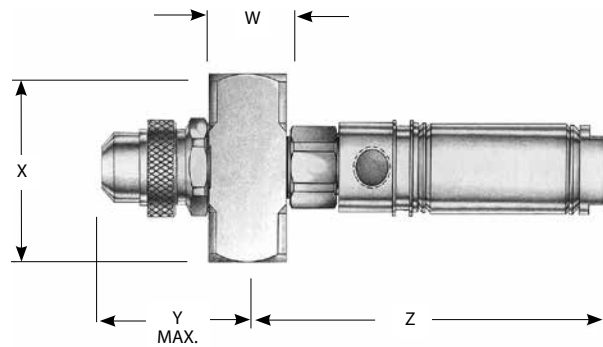
Spray lance (see pages 18, 19) with a right angle XA and quick-connect fittings

XA Components & Options

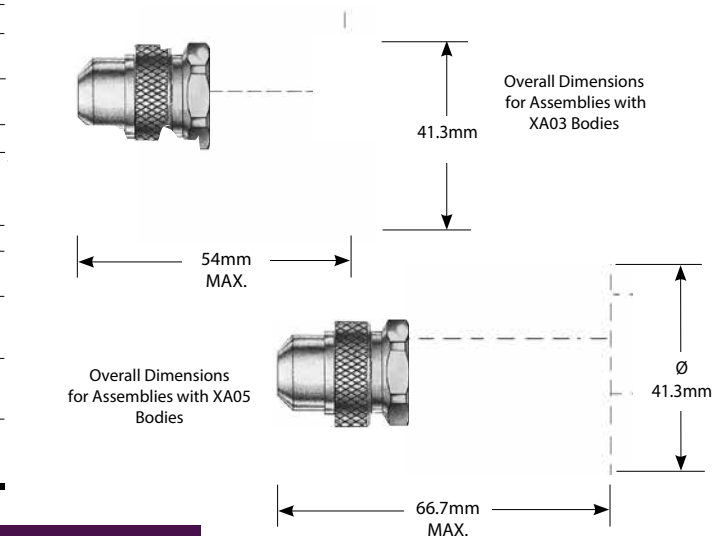
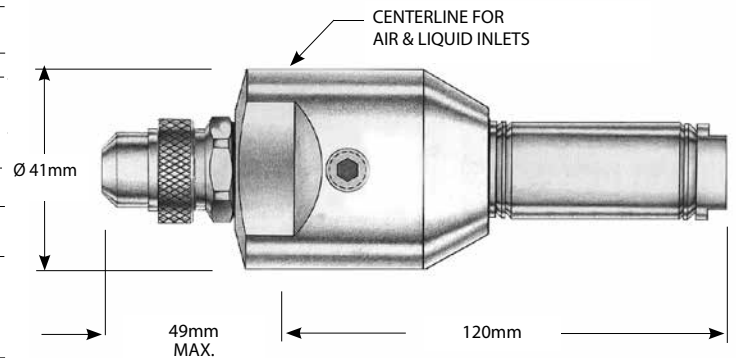
Spray Set-up Numbers						
SPRAY SET-UP	PIPE SIZE BSP or NPT	SET-UP NO.	FLUID CAP	AIR CAP		
EF	FLAT FAN (EXTERNAL MX)	1/8	EF 050	FC 7	AC 1001	
			EF 100		AC 1003	
			EF 150	FC 4	AC 1001	
			EF 200		AC 1003	
			EF 250		AC 1001	
			EF 300	FC 3	AC 1003	
			EF 350		AC 1002	
		OR	1/4	EF 400	FC 6	AC 1004
				EF 450	FC 2	AC 1002
				EF 500		AC 1004
				EF 550		AC 1002
				EF 600	FC 1	AC 1004
				EF 650	FC 8	AC 1005
				EF 700	FC 9	AC 1005
		EF 800	FC 5	AC 1005		
	1/2	EF 5050	FC 501	AC 5001		
SF	SIPHON FLAT FAN	1/8	SF 050	FC 3	AC 1101	
			SF 100	FC 6	AC 1102	
		OR	1/4	SF 150	FC 2	AC 1103
				SF 200	FC 2	AC 1104
SR	SIPHON ROUND	1/8	SR 050	FC 7	AC 1201	
			SR 150	FC 4	AC 1201	
			SR 200	FC 4	AC 1202	
		OR	1/4	SR 250	FC 3	AC 1202
				SR 400	FC 1	AC 1204
				SR 450	FC 5	AC 1205
	1/2	SR 5050	FC 501	AC 5201		
PF	PRESSURE FLAT FAN	1/8 OR 1/4	PF 050	FC 4	AC 1301	
			PF 100	FC 3	AC 1303	
			PF 150	FC 3	AC 1301	
			PF 200	FC 3	AC 1302	
			PF 250	FC 2	AC 1304	
			PF 300	FC 1	AC 1304	
			PF 350	FC 1	AC 1305	
PF 400	FC 5	AC 1306				
XW	EXTRA W DE-ANGLE ROUND	1/8 OR 1/4	PF 5050	FC 501	AC 5301	
			PF 5100	FC 502	AC 5302	
		1/2	XW 050	FC 8	AC 1401	
	1/2	XW 5050	FC 502	AC 5401		
PR	PRESSURE ROUND	1/8 OR 1/4	PR 050	FC 4	AC 1501	
			PR 100	FC 4	AC 1502	
			PR 150	FC 3	AC 1502	
			PR 200	FC 2	AC 1503	
			PR 250	FC 1	AC 1503	
		OR	1/2	PR 300	FC 5	AC 1504
				PR 5050	FC 501	AC 5501
				PR 5100	FC 502	AC 5502
				AD 050	FC 4	AC 1601
				AD 100	FC 2	AC 1603
AD	W DE-ANGLE ROUND	1/8 OR 1/4	AD 150	FC 2	AC 1602	
			AD 200	FC 1	AC 1603	
			AD 250	FC 1	AC 1604	
		OR	1/2	AD 300	FC 5	AC 1605
				AD 5050	FC 501	AC 5601
				AD 5100	FC 501	AC 5602
		AD 5150	FC 501	AC 5603		
		AD 5200	FC 502	AC 5604		
FF	DEFLECTED FLAT FAN	1/8 OR 1/4	FF 050	FC 10	AC 1701	
ER	NARROW ANGLE ROUND	1/8 OR 1/4	ER 050	FC 7	AC 1801	
			ER 150	FC 4	AC 1801	
			ER 250	FC 3	AC 1801	
		OR	1/4	ER 350	FC 6	AC 1802
				ER 450	FC 2	AC 1802
				ER 550	FC 1	AC 1802
		OR	1/2	ER 650	FC 3	AC 1803
				ER 750	FC 9	AC 1803
				ER 850	FC 5	AC 1803

Dimensions with Hardware Options for XA00 Body, BSP or NPT

Pipe Size	Hardware Option	Dimensions in (mm)			
		W	X	Y	Max. "Z"
1/8 OR 1/4	A				14.3
	B				42.3
	C	22.2	42.9	49.2	63.5
	D				77.0
	E				103
	F				103
1/2	A	31.8	63.5	68.3	25.4



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



AIR ATOMISING

Call for expert advice on all air atomising nozzles

Call 01273 400092

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 of high quality.

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

Siphon System Set-up

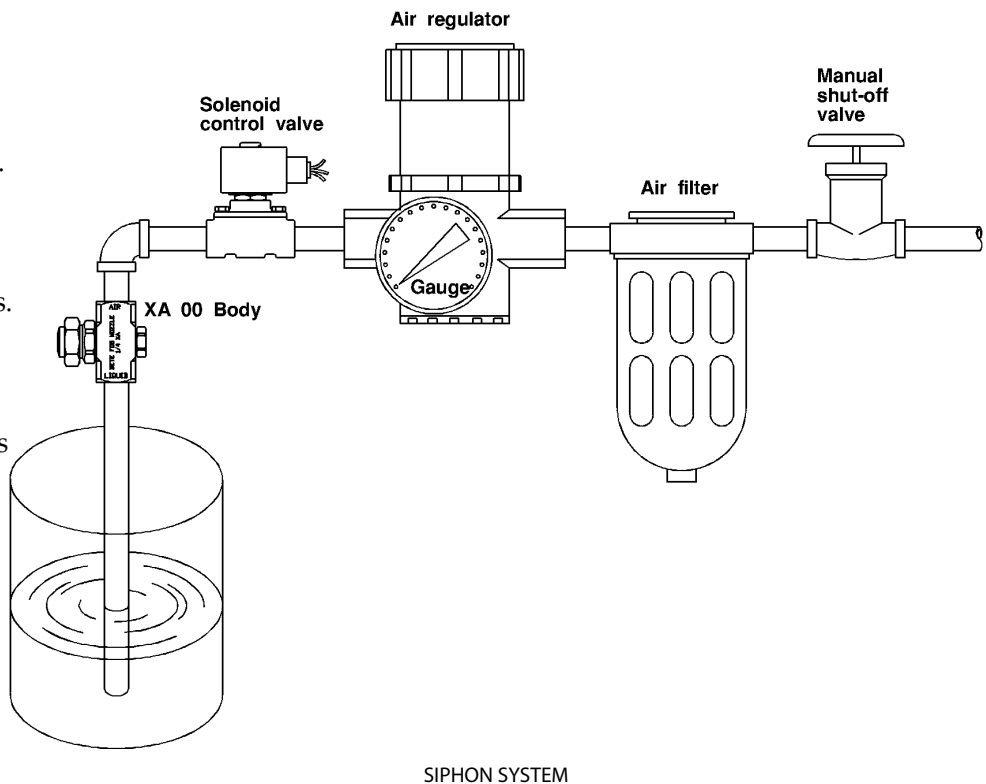
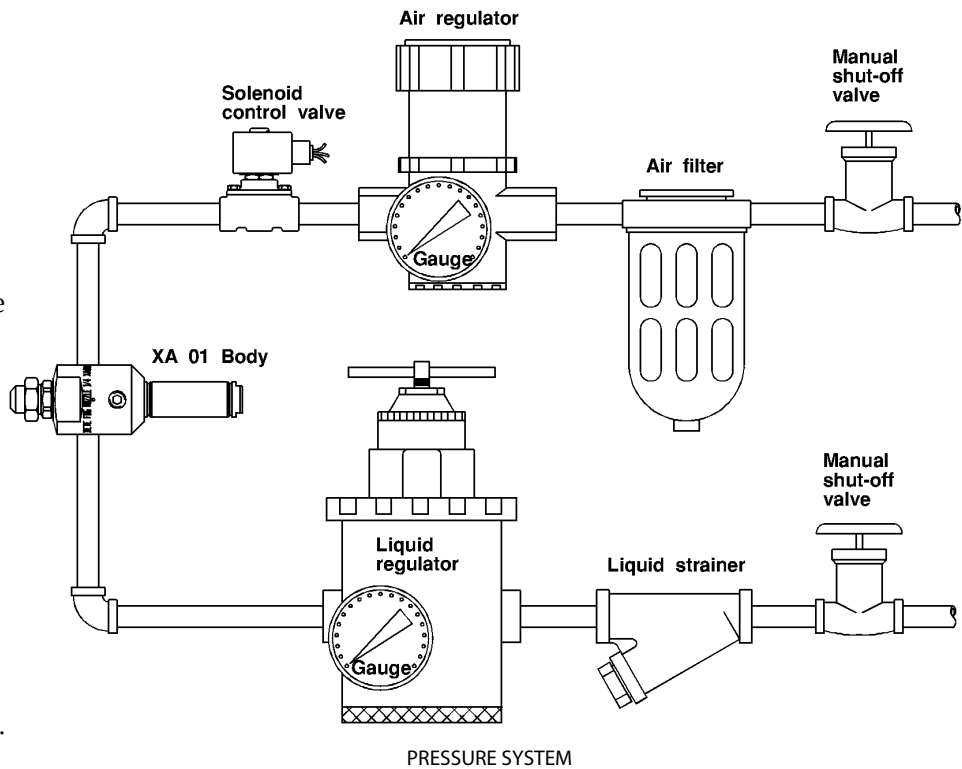
In a siphon-fed system, the liquid is supplied by either a siphon or gravity feed.

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 ATOMISING

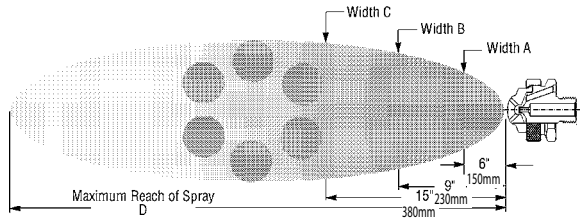
TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 78.

XAAD

Pressure-fed/Int. Mix/Wide Angle Round

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Very fine atomization
- 70° Hollow Cone spray pattern
- 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, BSP or NP T

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.7 Bar Liquid			1.5 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid			Spray Dimensions					
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	Bar liquid	A (mm)	B (mm)	C (mm)	D (m)
1/8 OR 1/4	AD 050	Fluid Cap FC4 & Air Cap AC1601	0.6	5.3	0.60	1.1	8.1	0.79	1.5	8.1	0.92	2.4	8.9	1.24	3.1	10.5	1.44	0.7	0.7	140	180	230	1.5
			0.7	4.3	0.72	1.3	7.0	0.88	1.8	6.6	1.09	2.7	8.1	1.40	3.4	9.7	1.68	1.4	1.5	150	190	240	1.8
			0.9	3.0	0.84	1.4	6.4	0.94	2.1	4.9	1.32	3.0	6.4	1.66	3.9	7.8	2.16	1.8	2.0	160	200	250	2.1
	AD 100	Fluid Cap FC2 & Air Cap AC1603	1.0	1.7	1.02	1.5	5.5	1.01	2.4	3.2	1.68	3.2	4.9	1.92	4.2	6.1	2.52	3.0	3.0	160	200	260	2.7
			0.9	7.0	3.00	1.7	13.2	4.08	2.0	18.5	4.08	2.8	25.0	5.04	3.7	31.0	5.76	0.9	0.7	180	240	310	1.8
			1.0	2.1	3.72	1.8	9.8	4.74	2.1	15.1	4.56	3.0	22.0	5.52	3.8	28.0	6.30	1.7	1.5	190	250	330	2.4
			3.2	15.1	6.54	3.4	12.1	7.14	4.2	20.0	7.80	3.1	18.5	6.06	3.9	26.0	6.78	2.1	2.0	190	250	330	3.2
			3.4	9.1	7.14	3.4	9.3	5.64	3.5	9.1	7.80	3.2	15.1	6.54	4.1	23.0	7.32	3.0	3.0	200	260	340	4.1
			3.7	6.1	8.52	4.2	6.4	5.46	4.2	6.4	6.30	4.2	6.1	8.52	4.9	6.8	11.0	4.1	4.0	210	280	370	5.9
	AD 150	Fluid Cap FC2 & Air Cap AC1602	1.1	12.3	2.40	2.2	16.3	3.72	2.7	21.0	4.14	4.2	19.3	6.00	5.6	22.0	7.80	1.5	0.7	150	190	230	2.7
			1.3	9.9	2.70	2.5	12.1	4.26	3.0	16.3	4.68	4.6	14.6	6.78	6.0	17.6	8.52	3.0	1.5	160	200	240	4.6
			1.4	7.9	3.00	2.8	8.9	4.74	3.2	12.3	5.16	4.9	10.8	7.44	6.3	14.0	9.12	3.4	2.0	160	200	240	5.5
1.5			6.1	3.24	3.0	7.6	4.98	3.4	10.7	5.46	5.3	8.1	8.10	6.7	11.4	9.78	3.0	3.0	160	200	240	5.5	
1.7			4.9	3.48	3.1	6.4	5.22	3.5	9.3	5.64	5.6	6.2	8.76	7.0	9.1	10.4	3.4	2.0	160	200	240	5.5	
1.8			3.9	3.72	3.2	5.5	5.46	3.9	6.4	6.30	6.0	4.9	9.42	7.0	9.1	10.4	5.3	3.0	180	220	250	7.3	
AD 200	Fluid Cap FC1 & Air Cap AC1603	2.0	3.1	4.02	3.4	4.7	5.70	4.2	4.7	6.90	6.3	4.0	10.0	4.9	6.8	11.0	6.3	4.0	190	240	280	9.4	
		0.7	23.1	1.70	1.4	37.1	2.38	2.1	26.9	3.91	2.8	49.2	3.91	3.7	57.2	4.59	0.9	0.7	190	250	360	2.1	
		0.9	8.30	2.89	1.5	30.3	2.89	2.2	22.3	4.42	3.0	40.1	4.59	3.8	53.0	5.10	1.5	1.5	200	270	370	3.2	
		1.0	3.40	3.40	1.7	18.2	3.74	2.4	11.4	5.44	3.1	32.9	5.10	4.0	44.7	5.95	2.4	2.0	200	270	370	4.1	
		1.8	11.7	4.42	2.5	7.20	5.95	3.2	28.8	5.44	4.2	28.8	5.44	4.2	34.4	6.80	3.2	3.0	200	280	380	5.0	
		3.7	7.60	8.33	4.9	7.60	8.33	7.0	7.60	8.33	7.0	7.60	8.33	7.0	7.60	8.33	7.0	7.60	8.33	7.0	7.60	8.33	7.0
AD 250	Fluid Cap FC1 & Air Cap AC1604	1.3	26.1	5.27	2.1	45.0	7.14	3.1	42.4	10.0	4.2	55.6	11.8	5.6	59.8	14.7	2.0	0.7	200	250	330	5.5	
		1.5	21.2	5.95	2.4	38.6	8.16	3.2	40.1	10.7	4.9	42.0	13.8	6.0	52.4	15.6	3.0	1.5	200	270	340	6.4	
		1.8	13.6	7.14	2.7	30.7	9.17	3.4	35.6	11.0	5.6	28.4	15.9	6.3	46.8	16.8	3.0	3.0	200	270	340	6.4	
		2.0	9.50	7.82	3.0	23.8	10.2	3.5	33.3	11.2	6.0	20.6	17.1	6.7	39.4	17.7	3.9	2.0	220	280	370	8.2	
		2.1	7.60	8.16	3.2	19.3	10.9	3.9	24.6	12.6	6.3	14.8	18.0	7.0	33.9	18.9	6.0	3.0	230	290	380	9.1	
		2.3	4.20	8.83	3.5	12.9	11.9	4.6	11.0	15.0	6.7	7.0	19.2	19.2	7.0	19.2	19.2	6.0	4.0	240	290	380	9.1
AD 300	Fluid Cap FC5 & Air Cap AC1605	2.4	2.60	9.17	4.2	1.50	14.1	4.9	6.40	16.0	7.0	1.20	20.1	7.0	1.20	20.1	6.3	4.0	240	320	400	10.4	
		1.7	25.0	9.36	3.0	39.0	13.8	3.4	50.0	15.0	4.6	62.0	19.2	6.0	93.0	23.7	2.0	0.7	240	330	460	5.5	
		1.8	19.7	10.0	3.1	33.0	14.4	3.5	43.0	15.6	4.9	47.0	20.7	6.3	77.0	25.5	3.2	1.5	250	340	470	6.4	
		2.0	15.1	10.7	3.2	27.0	15.3	3.7	41.0	16.5	5.3	36.0	22.5	6.7	62.0	27.6	3.9	2.0	280	370	510	7.3	
		2.1	11.4	11.6	3.4	23.0	15.9	3.9	27.0	18.0	5.6	26.0	24.3	7.0	52.0	29.7	5.3	3.0	290	380	530	7.9	
		2.3	7.6	12.3	3.5	18.5	16.8	4.1	23.0	18.6	6.0	18.9	26.1	7.0	13.6	27.6	6.3	4.0	330	420	580	9.8	

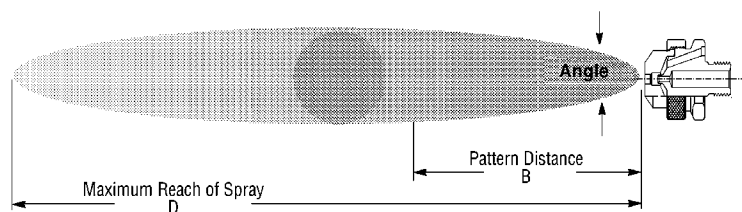
Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

XAPR

Pressure-fed/Int. Mix/Narrow Angle Round

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Very fine atomization
- Narrow spray angle (12° - 22°)
- Full cone pattern
- Large forward projection (up to 8.5 m)



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

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

XA PR Set-up Flow Rates and Dimensions

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

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.7 Bar Liquid			1.5 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid			Spray Dimensions							
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	Spray Angle (deg.)	B (mm)	D (m)			
1/8 OR 1/4	PR 050	Fluid Cap FC4 & Air Cap AC1501	0.7	2.5	0.960	1.1	6.4	0.720	1.4	6.4	0.840	2.7	6.2	1.38	3.5	7.8	1.68								
			0.9	1.8	1.14	1.4	5.0	0.900	1.7	5.5	1.02	2.8	5.7	1.50	3.7	7.3	1.74	0.9	0.7	13	300	3			
			1.0	1.4	1.32	1.7	4.1	1.14	2.0	4.5	1.20	3.0	5.2	1.62	3.9	6.4	1.98	1.7	1.5	13	330	3			
						1.8	3.4	1.20	2.2	3.4	1.44	3.1	4.7	1.74	4.2	5.5	2.28	2.5	2.0	13	360	3			
						2.0	3.0	1.38	2.4	3.0	1.56	3.2	4.3	1.86	4.5	4.5	2.58	3.1	3.0	14	390	4			
						2.1	2.6	1.50	2.5	2.5	1.68	3.4	3.9	1.98	4.6	4.1	2.70	4.5	4.0	15	440	4			
				2.2	2.0	1.62	2.7	2.3	1.86	3.7	3.0	2.28	4.8	3.7	2.82										
		PR 100	Fluid Cap FC4 & Air Cap AC1502	0.7	2.5	1.14	1.4	5.7	1.62	1.7	6.7	1.74	2.2	9.2	2.04	2.8	11.9	2.34							
	0.9			2.0	1.32	1.5	5.2	1.74	1.8	6.4	1.86	2.5	8.2	2.34	3.1	11.0	2.58	0.9	0.7	12	430	4			
	1.0			1.6	1.56	1.7	4.8	1.92	2.0	5.9	2.04	2.8	7.2	2.64	3.4	10.1	2.82	1.5	1.5	13	460	4			
						1.8	4.3	2.10	2.1	5.2	2.22	3.0	6.7	2.82	3.7	9.2	3.12	2.4	2.0	13	480	4			
						2.0	3.9	2.22	2.2	4.8	2.40	3.1	6.3	2.94	3.9	8.4	3.48	3.0	3.0	13	510	5			
					2.1	3.4	2.40	2.4	4.3	2.58	3.2	5.9	3.12	4.2	7.6	3.72	3.9	4.0	15	560	5				
	PR 150	Fluid Cap FC3 & Air Cap AC1502	0.9	4.8	1.26	1.7	8.4	1.86	2.0	10.7	1.98	2.7	16.5	2.22	3.4	20.0	2.58								
1.1			4.1	1.62	1.8	7.5	2.10	2.1	9.8	2.22	2.8	15.4	2.28	3.7	18.4	2.82	1.5	0.7	12	480	4				
1.4			3.4	1.98	2.0	7.0	2.22	2.4	8.2	2.52	3.1	13.6	2.58	3.9	16.8	3.00	2.5	1.5	13	510	4				
1.5			3.1	2.10	2.2	5.7	2.64	2.7	6.8	2.88	3.4	11.8	2.94	4.2	15.2	3.30	3.0	2.0	13	530	5				
1.7			3.0	2.34	2.5	4.8	2.94	3.0	5.9	3.30	3.7	10.4	3.30	4.5	13.8	3.60	3.4	3.0	14	560	5				
1.8			2.9	2.46	2.8	4.1	3.24	3.2	5.0	3.54	3.9	9.1	3.66	4.8	12.4	3.90	4.2	4.0	15	600	5				
	PR 200	Fluid Cap FC2 & Air Cap AC1503	2.0	2.8	2.64	3.1	3.6	3.54	3.5	4.1	3.90	4.2	7.9	3.90	4.9	11.8	4.08								
1.1			13.0	4.56	2.2	17.8	6.96	2.8	20.0	8.16	3.4	32.0	8.94	4.6	37.0	11.6									
1.4			8.9	5.46	2.5	13.1	7.80	3.1	16.3	8.94	3.9	25.0	10.2	5.3	29.0	13.2	1.7	0.7	18	660	5				
1.5			7.2	5.88	2.8	9.5	8.58	3.4	11.9	9.78	4.6	15.9	12.3	5.6	25.0	14.1	2.8	1.5	20	760	6				
1.7			5.8	6.30	3.1	7.0	9.42	3.9	7.0	11.2	5.3	9.1	14.4	6.0	21.0	15.0	3.9	2.0	20	810	7				
1.8			4.7	6.72	3.4	4.9	10.3	4.2	4.7	12.3	5.6	6.8	15.3	6.3	17.4	16.2	5.3	3.0	21	910	8				
	PR 250	Fluid Cap FC1 & Air Cap AC1503	2.0	3.6	7.14	3.5	4.2	10.7	4.6	3.0	13.2	6.0	5.0	16.5	6.7	14.0	17.4	6.0	4.0	21	910	8			
2.1			2.7	7.62								6.3	3.6	17.4	7.0	11.0	18.3								
0.9			31.0	3.42	1.4	61.0	4.14	2.1	53.0	5.76	2.7	80.0	6.18	3.8	88.0	8.10									
1.0			25.0	3.96	1.5	54.0	4.56	2.4	41.0	6.72	3.0	69.0	7.02	4.2	73.0	9.36	1.0	0.7	17	610	5				
1.1			18.5	4.50	1.7	48.0	5.10	2.7	31.0	7.62	3.2	59.0	7.80	4.6	61.0	10.6	1.8	1.5	18	690	6				
1.3			12.9	5.10	1.8	41.0	5.58	2.8	26.0	8.16	3.5	49.0	8.76	4.9	48.0	11.8	2.8	2.0	20	760	7				
	PR 300	Fluid Cap FC5 & Air Cap AC1504	2.0	2.0	35.0	6.12	3.0	22.0	8.64	3.7	44.0	9.24	5.3	39.0	12.9	3.5	3.0	20	790	7					
					2.1	30.0	6.60				3.8	37.0	9.66	5.6	31.0	14.4	4.9	4.0	21	910	9				
					2.2	25.0	7.14				3.9	35.0	10.2	6.0	23.0	15.6									
1.0			44.0	5.16	1.4	125	4.74	2.0	123	6.48	2.2	199	5.28	3.0	250	5.94									
1.1			32.0	6.12	1.5	106	5.46	2.1	108	7.14	2.5	174	6.60	3.2	225	7.20	1.0	0.7	19	890	6				
					1.7	87.0	6.30	2.2	95.0	7.80	2.8	146	7.98	3.5	205	8.46	1.7	1.5	20	990	7				
			1.8	70.0	7.08	2.4	79.0	8.58	3.1	121	9.24	3.8	182	9.78	2.4	2.0	21	1040	8						
			2.0	55.0	7.80	2.5	64.0	9.30	3.2	108	9.96	4.1	159	11.0	3.1	3.0	21	1070	8						
						2.7	52.0	9.96	3.4	95.0	10.6	4.6	121	13.5	3.8	4.0	22	1170	9						
						2.8	42.0	10.7	3.5	84.0	11.2	4.9	93.0	15.3											

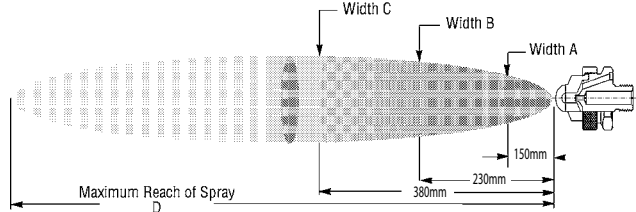
Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

XAPF

Pressure-fed/Internal Mix/Flat Fan

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Flat fan, wide angle spray patterns (between 80° and 90°)
- Very fine 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	0.7 Bar Liquid			1.5 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid			Spray Dimensions					
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)
1/8 OR 1/4	PF 050	Fluid Cap FC4 & Air Cap AC1301	0.7	5.5	1.44	1.3	1.86	2.0	8.6	2.52	2.7	11.2	3.12	3.9	12.0	4.14	4.6	1.1	0.7	250	360	460	2.6
			0.9	4.7	1.62	1.5	7.7	2.16	2.2	7.5	2.82	3.0	10.1	3.36	4.6	9.7	4.86	2.1	1.5	360	480	660	3.0
			1.0	4.1	1.86	1.8	6.5	2.52	2.5	6.2	3.12	3.2	9.1	3.72	5.3	7.5	5.58	2.8	2.0	380	530	760	3.2
			1.1	3.5	2.04	2.1	5.4	2.82	2.8	5.2	3.42	3.5	8.1	3.96	6.0	5.3	6.24	3.5	3.0	470	610	860	3.4
			1.3	3.0	2.22	2.4	4.3	3.12	3.1	4.2	3.78	4.2	5.4	4.74	6.3	4.3	6.60	3.5	4.0	560	740	940	4.0
	PF 100	Fluid Cap FC3 & Air Cap AC1303	1.3	3.9	1.80	2.1	7.4	2.40	3.0	6.1	3.12	3.9	9.4	3.60	5.3	10.2	4.68	1.5	0.7	250	330	460	1.8
			1.4	3.0	1.98	2.4	5.3	2.70	3.1	5.3	3.24	4.2	7.2	4.02	5.6	8.3	5.04	2.7	1.5	360	510	690	2.0
			1.5	2.3	2.10	2.5	4.4	2.82	3.2	4.5	3.42	4.6	5.3	4.38	6.0	6.6	5.34	3.2	2.0	480	580	740	2.0
			1.7	1.8	2.28	2.7	3.7	3.00	3.4	3.8	3.54	4.9	3.8	4.80	6.3	5.1	5.88	4.2	3.0	610	740	940	2.1
			2.0	1.0	2.46	2.8	3.1	3.12	3.5	3.2	3.72	3.30	3.9	1.8	4.08	4.2	5.6	5.6	4.0	640	760	970	2.3
	PF 150	Fluid Cap FC3 & Air Cap AC1301	0.9	8.2	1.20	1.4	14.4	1.62	2.1	13.5	2.16	2.7	19.1	2.52	4.6	16.1	4.14	1.1	0.7	360	460	710	2.1
			1.0	6.8	1.38	1.7	11.9	1.92	2.4	11.4	2.52	3.0	17.1	2.76	4.9	13.8	4.56	2.1	1.5	430	610	810	2.4
1.1			5.5	1.62	2.0	9.5	2.22	2.7	9.2	2.82	3.2	15.1	3.12	5.3	11.5	4.98	3.0	2.0	510	660	890	2.6	
1.3			4.1	1.80	2.1	8.3	2.40	3.0	7.1	3.18	3.5	13.1	3.42	5.6	9.3	5.40	3.5	3.0	580	760	970	2.7	
1.4			2.9	2.04	2.2	7.1	2.58	3.2	5.0	3.54	4.2	8.1	4.32	6.0	7.3	5.82	5.6	4.0	580	760	970	3.2	
PF 200	Fluid Cap FC3 & Air Cap AC1302	1.0	9.0	1.50	2.0	10.4	2.46	2.4	11.6	2.88	3.1	15.6	3.36	4.2	17.1	4.38	1.4	0.7	100	130	170	3.0	
		1.1	7.8	1.80	2.1	9.3	2.70	2.5	10.4	3.06	3.2	14.6	3.54	4.6	15.0	4.80	2.5	1.5	130	150	200	3.7	
		1.3	6.6	1.92	2.2	8.2	2.88	2.7	9.4	3.24	3.4	13.7	3.72	4.9	12.8	5.22	3.2	2.0	130	170	220	4.0	
		1.4	5.2	2.16	2.5	6.1	3.30	3.0	7.3	3.66	3.8	10.8	4.26	5.3	11.0	5.64	3.8	3.0	150	220	280	4.2	
		2.0	2.0	3.00	3.1	3.0	4.14	3.5	4.1	4.50	4.9	5.2	5.88	6.3	7.2	7.14	5.3	4.0	200	250	330	4.8	
PF 250	Fluid Cap FC2 & Air Cap AC1304	1.1	11.2	3.24	2.1	18.0	4.74	2.7	19.6	5.58	3.5	27.0	6.72	4.6	33.0	8.22	1.4	0.7	150	180	200	3.0	
		1.3	8.5	3.60	2.2	15.8	5.04	2.8	17.3	5.88	3.7	25.0	6.96	4.9	28.0	8.94	2.4	1.5	230	280	330	3.2	
		1.4	6.5	3.90	2.4	13.6	5.34	3.0	15.2	6.18	3.8	23.0	7.26	5.3	24.0	9.66	3.0	2.0	250	330	400	3.4	
		1.5	5.0	4.26	2.5	11.6	5.70	3.1	13.2	6.54	3.9	21.0	7.56	5.6	19.7	10.4	3.7	3.0	300	380	460	3.5	
		1.7	3.8	4.62	2.7	10.6	6.84	3.2	11.4	6.84	4.1	18.9	7.92	6.0	15.7	11.2	5.3	4.0	330	410	480	4.0	
PF 300	Fluid Cap FC1 & Air Cap AC1304	0.9	27.0	1.98	1.8	38.0	3.30	2.4	39.0	4.02	3.2	58.0	4.56	4.6	59.0	6.36	1.1	0.7	180	230	300	3.4	
		1.0	20.0	2.28	2.1	28.0	3.96	2.7	30.0	4.62	3.5	47.0	5.22	5.3	40.0	7.92	2.4	1.5	230	300	410	3.5	
		1.1	15.9	2.70	2.2	24.0	4.26	3.0	24.0	5.22	3.8	38.0	5.82	5.6	32.0	8.70	3.2	2.0	250	330	430	3.7	
		1.3	12.5	2.88	2.4	21.0	4.56	3.2	17.8	5.88	3.9	34.0	6.18	6.0	26.0	9.48	3.9	3.0	300	380	480	3.8	
		1.4	10.2	3.36	2.5	17.8	4.92	3.4	15.1	6.18	4.2	27.0	6.78	6.3	20.0	10.3	3.2	4.0	300	380	480	3.8	
PF 350	Fluid Cap FC1 & Air Cap AC1305	1.0	17.0	1.38	2.0	24.0	2.64	2.4	28.0	3.06	3.4	38.0	4.32	3.9	65.0	4.50	1.1	0.7	100	130	150	2.4	
		1.1	11.0	1.62	2.1	18.9	3.00	2.5	23.0	3.54	3.5	33.0	4.80	4.2	53.0	5.34	2.1	1.5	100	130	170	3.0	
		1.3	7.6	1.98	2.2	14.4	3.36	2.7	18.9	3.96	3.7	28.0	5.34	4.6	40.0	6.48	2.8	2.0	130	170	220	3.4	
		1.4	3.2	2.40	2.4	10.6	3.78	2.8	15.1	4.44	3.8	23.0	5.82	4.9	30.0	7.62	3.7	3.0	150	200	280	3.6	
		2.5	7.2	4.26	3.0	11.7	4.74	3.9	19.7	6.30	5.3	21.0	8.94	3.7	21.0	8.94	4.9	4.0	200	250	350	4.0	
PF 400	Fluid Cap FC5 & Air Cap AC1306	1.0	29.0	5.40	1.8	56.0	7.02	2.1	100	7.14	3.0	126	8.40	4.1	140	10.9	1.0	0.7	180	200	250	3.4	
		1.1	18.9	6.48	2.0	40.0	7.98	2.2	79.0	7.98	3.1	110	9.06	4.2	125	11.6	1.8	1.5	250	300	430	3.8	
		2.2	62.0	2.5	48.0	9.72	3.4	78.0	11.0	4.9	58.0	15.9	2.4	2.0	250	300	460	4.3					
		2.7	36.0	10.6	2.7	36.0	10.6	3.5	62.0	11.6	5.3	34.0	18.3	3.4	3.0	330	410	530	4.6				
		3.7	48.0	12.6	3.8	37.0	13.5	3.7	48.0	12.6	5.6	16.7	20.4	4.9	4.0	360	430	580	5.2				

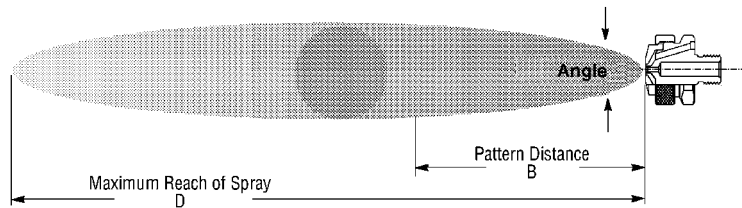
Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

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"XA SR 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, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	ATOMIZING AIR		Liquid Capacity in l/h (Liters Per Hour)								Spray Dimensions at 200 mm. Siphon Height				
			Air (bar)	Air Capacity (Nm ³ /h)	Gravity Head			Siphon Height					Air (bar)	Spray Angle (deg.)	B (mm)	D (m)	
					450 mm	300 mm	150 mm	100 mm	200 mm	300 mm	600 mm	900 mm					
1/8 or 1/4	SR 050	Fluid Cap FC7 & Air Cap AC 1201	0.7	0.66	1.5	1.3	1.1	0.9	0.7	0.5				0.7	18	280	1.8
			1.5	1.02	1.8	1.7	1.5	1.3	1.2	1.1	0.6			1.5	18	280	1.9
			3.0	1.68	2.1	1.9	1.7	1.5	1.4	1.3	1.1	0.8	3.0	18	300	2.3	
			4.0	2.16	2.2	2.0	1.8	1.6	1.5	1.4	1.2	0.9	4.0	18	360	2.6	
		SR 150	Fluid Cap FC4 & Air Cap AC1201	0.7	0.78	2.4	2.1	1.7	1.5	1.2	0.8			0.7	18	300	2.1
	1.5			1.20	2.8	2.6	2.4	2.1	1.9	1.6	0.9			1.5	18	330	2.3
3.0	1.92			3.4	3.1	2.9	2.8	2.6	2.4	1.7	1.1	3.0	18	380	2.6		
		4.0	2.46	3.7	3.4	3.3	3.1	2.9	2.7	2.1	1.5	4.0	19	430	3.0		
	SR 200	Fluid Cap FC4 & Air Cap AC1202	0.7	1.38	2.5	2.3	2.0	1.6	1.4	1.1			0.7	18	300	2.4	
1.5			2.16	2.9	2.8	2.5	2.2	2.0	1.7	0.9			1.5	18	330	2.7	
3.0			3.48	3.4	3.3	3.2	2.9	2.8	2.5	1.9	1.2	3.0	19	380	3.4		
		4.0	4.44	3.7	3.6	3.5	3.4	3.3	3.0	2.5	2.0	4.0	20	430	4.0		
	SR 250	Fluid Cap FC3 & Air Cap AC1202	0.7	1.14	4.5	4.0	3.4	2.1	1.8	1.4			0.7	21	380	3.0	
1.5			1.86	5.3	4.9	4.4	3.5	2.9	2.7	1.8			1.5	21	410	3.4	
3.0			3.00	6.0	5.6	5.0	4.4	4.0	3.4	2.4	1.2	3.0	21	460	4.0		
		4.0	3.90	5.7	5.4	5.0	4.2	3.9	3.5	2.8	1.9	4.0	22	510	4.6		
	SR 400	Fluid Cap FC1 & Air Cap AC 1204	1.5	3.48	22	19.9	16.3	12.3	10.5	8.3	2.8		1.5	17	460	3.7	
3.0			5.28	25	23	19.5	16.7	14.2	11.5	6.4	2.8		3.0	18	510	4.3	
4.0			6.66	26	24	21	18.4	15.7	12.9	7.9	4.5	4.0	18	530	4.9		
		5.6	8.82	26	24	22	19.7	17	14.6	9.8	6.1	5.6	19	580	5.5		
	SR 450	Fluid Cap FC5 & Air Cap AC 1205	2.0	8.64				27	22	16.8			2.0	20	510	6.7	
3.0			11.4				30	26	21				3.0	20	530	7.0	
4.0			14.4		43	40	31	28	23		11.0		4.0	21	580	7.6	
		5.6	18.9	44	42	39	31	28	24	16.7	8.3	5.6	22	630	8.2		

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

AIR ATOMISING

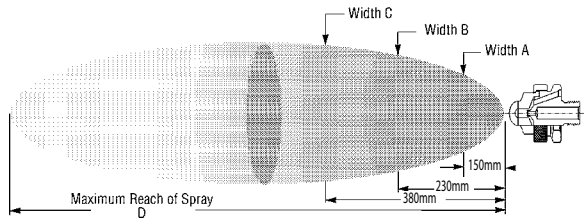
TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 78.

XA SF

Siphon-fed Flat Fan

DESIGN/SPRAY CHARACTERISTICS

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



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

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, BSP or NPT

Pipe Size	Spray Set-Up Number	Fluid Cap and Air Cap Numbers	ATOMIZING AIR		Liquid Capacity in l/h (Liters Per Hour)							Spray Dimensions at 200 mm Siphon Height					
			Air (bar)	Air Capacity (Nm ³ /h)	Gravity Head			Siphon Height				Air (bar)	A (mm)	B (mm)	C (mm)	D (m)	
					450 mm	300 mm	150 mm	100 mm	200 mm	300 mm	600 mm						900 mm
1/8 or 1/4	SF 050	Fluid Cap FC3 & Air Cap AC1101	0.7	1.68	1.3	1.2	1.1	1.0	1.0	0.8	0.6	0.5	0.7	200	260	380	2.1
			1.5	2.58	1.2	1.1	1.0	0.9	0.9	0.8	0.7	0.5	1.5	210	290	380	2.1
			2.0	3.00	0.8	0.8	0.7	0.6	0.5				2.0	230	300	380	1.8
	SF 100	Fluid Cap FC6 & Air Cap AC1102	1.5	3.36	3.7	3.5	3.3	2.9	2.8	2.5	2.3	2.1	1.5	230	320	380	2.7
			2.0	3.90	3.4	3.3	3.1	2.8	2.7	2.6	2.4	2.2	2.0	240	340	420	2.7
			3.0	5.22	2.8	2.7	2.5	2.4	2.2	2.1	1.9	1.7	3.0	270	370	460	3.0
SF 150	Fluid Cap FC2 & Air Cap AC1103	1.5	4.08	5.1	4.8	4.5	3.8	3.7	3.5	3.0	2.4	1.5	190	230	270	3.4	
		2.0	4.68	4.9	4.7	4.4	3.6	3.4	3.2	2.9	2.3	2.0	200	250	280	3.4	
		3.0	6.18	3.4	3.2	3.0	2.2	2.0	1.7			3.0	220	270	300	3.0	
SF 200	Fluid Cap FC2 & Air Cap AC1104	1.5	3.78	7.6	7.2	6.6	5.7	5.4	5.1	4.6	3.7	1.5	170	220	270	3.4	
		2.0	4.38	7.6	7.3	6.8	5.9	5.7	5.5	5.0	4.2	2.0	180	230	290	3.4	
		3.0	5.76	6.4	6.1	5.7	5.0	4.5	4.1	3.3		3.0	200	270	330	3.4	
			3.5	6.60	4.2	3.7	3.2	2.6									

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

XAEF

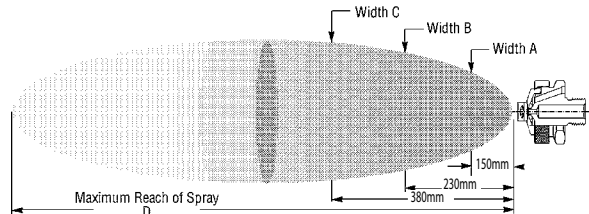
Pressure-fed/External Mix/Flat Fan

DESIGN FEATURES

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



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



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

XA EF Set-up Flow Rates and Dimensions

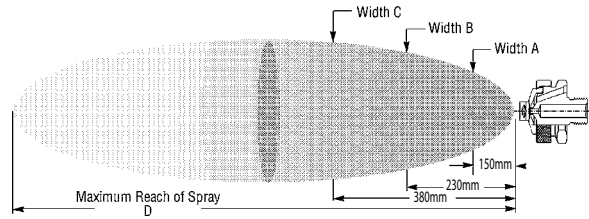
Pressure-fed, External Mix, Flat Fan Spray Pattern, 1/8" and 1/4" Pipe Sizes, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.2 Bar Liquid			0.3 Bar Liquid			0.7 Bar Liquid			1.5 Bar Liquid			3.0 Bar Liquid			Spray Dimensions							
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)		
1/8	EF 050	Fluid Cap FC7 & Air Cap AC1001	0.4		1.32	0.4		1.32	0.4		1.50	0.6		1.68	0.7		2.04	0.4	0.3	200	280	330	1.2		
			0.4		1.50	0.4		1.50	0.6		2.04	0.7		2.04	1.1		2.70	0.6	0.7	230	300	400	1.8		
			0.5	3	1.62	0.6	4	1.68	0.7	5	2.04	1.1	8	2.70	1.8	11	3.72	1.1	1.5	280	350	460	1.8		
			0.6		1.68	0.7		2.04	0.9		2.40	1.4		3.24	2.5		4.74	1.4	1.5	280	330	430	2.4		
																				1.4	1.5	250	300	410	2.7
																				1.1	2.0	280	350	480	2.6
1/4	EF 100	Fluid Cap FC7 & Air Cap AC1003	0.2		1.51	0.4		1.58	0.7		1.87	1.4		2.72	2.8		4.38	0.7	0.2	90	150	230	0.9		
			0.4		1.58	0.7		1.87	1.1		2.38	1.8		3.23	3.5		5.10	1.1	0.2	90	150	230	1.2		
			0.7	3	1.87	1.1	4	2.38	1.4	5	2.72	1.8	8	3.23	2.8	11	4.42	1.4	0.4	100	150	230	1.2		
			1.1		2.38	1.4		2.72	1.8		3.23	2.1		3.56	3.5		5.10	5.3	1.4	1.4	120	180	250	1.5	
			1.4		2.72	1.8		3.23	2.1		3.56	2.8		4.42	4.2		6.12	5.6	1.8	0.7	120	150	240	1.5	
			1.8		3.23	2.1		3.56	2.8		4.42	2.8		5.10	5.6		6.12	5.6	2.8	1.4	130	180	280	1.8	
1/8	EF 150	Fluid Cap FC4 & Air Cap AC1001	0.4		1.32	0.4		1.32	0.6		1.68	0.7		2.04	1.1		2.70	0.7	0.3	280	330	400	1.5		
			0.6		1.68	0.7		2.04	0.7		2.04	1.4		3.24	1.4		3.24	1.4	0.7	300	380	480	2.1		
			0.7	5	2.04	1.1	6	2.70	1.4	8	3.24	2.1	12	4.26	2.1	17	4.26	1.4	1.5	380	460	580	1.8		
			1.1		2.70	1.4		3.24	2.1		4.26	2.5		4.74	2.5		4.74	2.5	1.4	1.5	350	430	560	2.4	
																				2.5	1.5	330	400	510	3.0
																				1.8	2.0	380	460	580	2.7
1/4	EF 200	Fluid Cap FC4 & Air Cap AC1003	0.4		1.58	0.7		1.87	1.1		2.38	1.8		3.23	3.2		4.92	0.4	0.2	80	140	220	1.0		
			0.7		1.87	1.1		2.38	1.4		2.72	2.1		3.56	3.5		5.10	1.4	0.2	90	150	220	1.7		
			1.1	5	2.38	1.4	6	2.72	1.8	8	3.23	2.8	12	4.42	2.1	17	6.12	1.8	0.4	100	170	230	1.8		
			1.4		2.72	1.8		3.23	2.1		3.56	3.5		5.10	4.9		7.14	1.8	1.4	130	190	290	2.1		
			1.8		3.23	2.1		3.56	2.8		4.42	4.2		6.12	5.3		7.62	2.1	0.7	130	180	250	1.8		
			2.1		3.56	2.8		4.42	3.5		5.10	4.9		7.14	6.3		9.54	3.5	1.4	130	220	300	2.4		
1/8	EF 250	Fluid Cap FC3 & Air Cap AC1001	0.4		1.50	0.4		1.50	0.4		1.50	0.7		2.04	1.4		3.24	0.6	0.3	350	480	610	1.8		
			0.5		1.65	0.6		1.68	0.6		1.68	0.9		2.40	1.8		3.72	0.7	0.7	350	480	630	1.5		
			0.6	9	1.68	0.7	10	1.86	0.7	16	2.04	1.1	23	2.70	2.1	33	4.26	1.4	1.5	410	510	660	2.1		
			0.7		2.04	0.7		2.04	0.9		2.40	1.4		3.24	2.5		4.74	1.8	2.0	410	510	690	2.7		
																				3.0	3.0	410	510	690	2.9
																				2.1	2.0	410	510	690	2.9
1/4	EF 300	Fluid Cap FC3 & Air Cap AC1003	0.7		1.87	1.1		2.38	1.4		2.72	2.5		4.08	3.5		5.10	0.7	0.2	130	170	250	1.2		
			1.1		2.38	1.4		2.72	1.8		3.23	2.8		4.42	4.2		6.12	1.8	0.2	130	170	250	1.8		
			1.4		2.72	1.8		3.23	2.1		3.56	3.5		5.10	4.9		7.14	2.1	0.4	130	180	240	1.8		
			1.8	9	3.23	2.1	10	3.56	2.8	16	4.42	4.2	23	6.12	5.3	33	7.62	2.5	1.4	140	200	320	1.8		
			2.1		3.56	2.8		4.42	3.5		5.10	4.9		7.14	5.6		8.34	2.8	0.7	140	190	300	2.3		
			2.8		4.42	3.5		5.10	4.2		6.12	5.6		8.34	6.3		9.54	4.2	1.4	140	200	360	3.0		
		3.5	5.10	4.2	6.12	4.9	7.14	6.3	9.54	7.0						5.3	2.8	170	200	300	4.0				

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

AIR ATOMISING

TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 78.



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, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.2 Bar Liquid			0.3 Bar Liquid			0.7 Bar Liquid			1.5 Bar Liquid			3.0 Bar Liquid			Spray Dimensions						
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)	
1/8 OR 1/4	EF 350	Fluid Cap FC6 & Air Cap AC1002	0.6		5.46	0.7		6.12	1.4		9.36	2.1		12.6	3.2		17.1	1.4	0.3	330	380	480	3.8	
			0.7		6.12	1.1		7.80	2.1		12.6	2.8		15.6	4.2		21.6	2.1	0.7	330	400	560	4.3	
			1.1	13	7.80	1.8		11.0	2.5		14.1	3.5		18.6	5.3		25.8	3.2	1.5	380	480	660	4.6	
	1.4			9.36	2.1		12.6	2.8		15.6	4.2		21.6	5.6		27.3	3.9	2.0	410	510	690	4.6		
	EF 400		Fluid Cap FC6 & Air Cap AC1004	0.7		5.10	1.0		6.12	1.4		6.96	2.5		10.7	3.2		12.7	0.7	0.2	130	190	250	1.7
				1.0		6.12	1.4		6.96	1.8		8.34	2.8		11.7	3.5		13.9	1.8	0.2	130	190	250	2.7
		1.4		13	6.96	1.8		8.34	2.1		9.36	3.5		13.6	3.9		15.3	2.1	0.4	150	190	280	3.0	
		1.8			8.34	2.1		9.36	2.5		10.7	4.2		16.0	4.2		16.5	2.5	0.7	150	220	280	3.5	
		2.1			9.36	2.8		11.7	2.8		11.7	4.9		18.7	4.9		18.8	2.5	1.4	170	230	360	3.7	
		2.8			11.7	3.5		13.6	3.5		13.6	5.6		21.6	5.6		21.6	4.2	1.4	170	230	370	4.3	
	1/8 OR 1/4	EF 450	Fluid Cap FC2 & Air Cap AC1002	0.6		5.46	0.7		6.12	1.1		7.80	2.5		14.1	3.5		18.6	1.1	0.2	330	380	510	3.5
				1.1		7.80	1.4		9.36	1.8		11.0	3.2		17.1	4.6		22.8	1.8	0.7	350	480	640	3.0
1.4				18	9.36	1.8		11.0	2.5		14.1	3.9		19.8	6.0		28.5	3.2	1.5	330	430	610	4.3	
1.8				11.0	2.1		12.6	2.8		15.6	4.2		21.6	6.7		31.5	4.2	2.0	300	430	580	4.9		
EF 500		Fluid Cap FC2 & Air Cap AC1004		0.7		5.10	1.4		6.96	1.8		8.34	2.8		11.7	3.5		13.9	0.7	0.4	150	190	270	2.1
				1.0		6.12	1.8		8.34	2.1		9.36	3.2		12.7	4.2		16.5	1.8	0.7	150	190	270	3.0
			1.4	18	6.96	2.1		9.36	2.5		10.7	3.5		13.6	4.9		18.8	2.5	1.4	150	220	330	3.4	
			1.8		8.34	2.5		10.7	2.8		11.7	4.2		16.0	5.3		20.4	2.8	1.4	150	220	360	3.8	
			2.1		9.36	2.8		11.7	3.5		13.6	4.9		18.7	5.6		21.6	2.8	1.4	170	250	370	4.0	
			2.8		11.7	3.5		13.6	4.2		16.0	5.6		21.6	6.3		24.7	4.2	2.1	170	250	370	4.9	
1/8 OR 1/4		EF 550	Fluid Cap FC1 & Air Cap AC1002	0.7		6.12	1.1		7.80	1.8		11.0	3.2		17.1	5.3		25.8	2.1	0.3	400	560	760	3.0
				1.1		7.80	1.4		9.36	2.1		12.6	3.5		18.6	6.0		28.5	2.8	0.7	460	580	810	4.0
	1.4			36	9.36	2.1		12.6	2.8		15.6	4.9		24.3	6.7		31.5	4.6	1.5	430	530	760	4.9	
	1.8			11.0	2.5		14.1	3.2		17.1	5.9		27.3	7.0		33.0	3.9	2.0	480	640	840	4.3		
	EF 600	Fluid Cap FC1 & Air Cap AC1004		1.0		6.12	1.8		8.34	2.5		10.7	3.2		12.7	3.9		15.3	1.0	0.2	150	200	250	2.7
				1.4		6.96	2.1		9.36	2.8		11.7	3.5		13.6	4.2		16.5	2.1	0.2	150	220	290	3.0
			1.8	36	8.34	2.5		10.7	3.2		12.7	3.9		14.8	4.6		17.8	2.8	0.4	180	240	360	3.5	
			2.1		9.36	2.8		11.7	3.5		13.6	4.2		16.0	4.9		18.8	3.2	1.4	200	280	390	3.7	
			2.5		10.7	3.2		12.7	4.2		16.0	4.9		18.7	5.6		21.6	3.5	0.7	190	270	380	4.0	
			2.8		11.7	3.5		13.6	4.9		18.7	5.6		21.6	6.3		24.7	4.2	1.4	200	280	390	4.3	
	1/8 OR 1/4	EF 650	Fluid Cap FC8 & Air Cap AC1005	1.8		14.1	1.8		14.1	2.5		18.0	3.9		24.6				1.8	0.2	150	200	290	3.0
				2.1		15.6	2.1		15.6	2.8		19.8	4.2		26.7				2.8	0.2	150	200	300	3.4
2.5				36	18.0	2.5		18.0	3.2		21.3	4.6		28.8				2.8	0.3	150	200	300	4.0	
2.8				19.8	2.8		19.8	3.5		22.8	4.9		31.2				3.5	0.7	170	220	320	4.3		
3.2				21.3	3.2		21.3	3.9		24.6	5.3		33.9				3.9	1.5	170	220	340	4.6		
3.5				22.8	3.5		22.8	4.2		26.7	5.6		36.0				4.2	1.0	170	230	330	4.7		
EF 700		Fluid Cap FC9 & Air Cap AC1005	2.1		15.6	2.8		19.8	3.9		24.6	4.9		31.2				2.1	0.2	170	240	340	3.5	
			2.5		18.0	3.2		21.3	4.2		26.7	5.3		33.9				3.2	0.2	180	240	360	4.3	
			2.8	64	19.8	3.5		22.8	4.6		28.8	5.6		36.0				3.9	0.3	180	250	360	4.9	
			3.2		21.3	3.9		24.6	4.9		31.2	6.0		38.4				4.9	0.7	180	250	360	5.5	
			3.5		22.8	4.2		26.7	5.3		33.9	6.3		41.1				4.9	1.5	200	250	380	5.5	
			4.2		26.7	4.9		31.2	5.6		36.0	6.3		41.1				5.3	1.0	180	250	380	5.8	
EF 750	Fluid Cap FC5 & Air Cap AC1005	2.8		19.8	3.5		22.8	4.6		28.8	5.6		36.0				2.8	0.2	190	250	360	4.6		
		3.2		21.3	3.9		24.6	4.9		31.2	6.0		38.4				3.9	0.2	200	250	370	4.9		
		3.5	102	22.8	4.2		26.7	5.3		33.9	6.3		41.1				4.6	0.3	200	250	370	5.2		
		3.9		24.6	4.6		28.8	5.6		36.0	6.3		41.1				5.3	0.7	220	270	380	5.5		
		4.2		26.7	4.9		31.2	6.0		38.4	6.3		41.1				5.6	1.0	220	270	410	5.5		
		4.9		31.2	5.6		36.0	6.3		41.1	6.3		41.1				6.0	1.5	220	270	410	5.8		

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

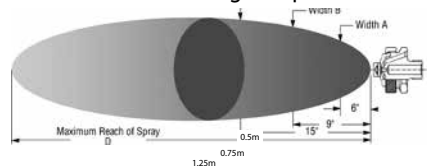
XAER

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

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.2 BAR Liquid			0.3 BAR Liquid			0.7 BAR Liquid			1.5 BAR Liquid			3 BAR Liquid			Spray Dimensions								
			BAR	L/h	Nm ³ /h	BAR	L/h	Nm ³ /h	BAR	L/h	Nm ³ /h	BAR	L/h	Nm ³ /h	BAR	L/h	Nm ³ /h	Liquid BAR	Air BAR	mm	mm	mm	D			
1/8"	ER 050	Fluid Cap FC7 & Air Cap AC1801	0.3	2.7	1.3	0.3	3	1.3	0.3	1.9	1.3	0.7	2.9	1.9	1.4	6.6	2.9	2.1	9.5	2.9	0.2	0.7	50	90	130	2.3
			0.7	2.9	1.9	0.7	3.7	1.9	0.7	2.9	1.9	2.1	3.7	2.9	2.1	4.6	3.7	2.8	4.6	3.7	0.3	1.4	60	90	110	3
			1.4	2.9	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	4.1	6.5	5.6	0.7	2.8	60	80	130	4.9
	ER 150	Fluid Cap FC4 & Air Cap AC1801	0.3	3.7	1.3	0.3	4.5	1.3	0.7	1.9	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	0.2	0.7	50	60	80	3
			0.7	3.7	1.9	0.7	4.6	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	0.3	1.4	60	80	80	4.3
			1.4	3.7	2.9	1.4	4.6	2.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	4.1	6.5	5.6	0.7	2.8	60	80	100	5.5
	ER 250	Fluid Cap FC3 & Air Cap AC1801	0.4	7.7	1.4	0.7	1.9	1.9	0.7	1.9	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	0.2	0.7	80	90	100	3
			0.7	7.7	1.9	0.7	2.9	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	0.3	1.4	80	80	130	4.3
			1.4	7.7	2.9	1.4	4.6	2.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	4.1	6.5	5.6	0.7	2.8	80	90	130	5.2
	ER 350	Fluid Cap FC6 & Air Cap AC1802	0.7	12	5.5	0.7	1.9	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	0.2	0.7	80	130	150	2.7
			1.0	12	7.2	1.4	8.8	8.8	2.1	15	11.6	2.1	22	11.6	3.4	32	17	4.1	47	19.6	0.3	1.4	80	100	150	3.4
			2.1	11.6	8.8	2.8	14.3	14.3	3.4	17.0	17.0	4.1	19.6	17.0	5.5	25.1	25.1	6.2	26.9	26.9	0.7	2.8	80	100	150	4.9
ER 450	Fluid Cap FC2 & Air Cap AC1802	0.7	19	5.5	0.7	1.9	1.9	1.4	2.9	1.9	2.1	3.7	2.9	2.8	4.6	3.7	3.4	5.6	4.6	0.2	0.7	100	140	210	4.3	
		1.4	19	7.2	1.4	8.8	8.8	2.1	33	11.6	2.1	33	11.6	3.4	49	17	4.1	72	19.6	0.3	1.4	110	130	150	5.5	
		2.1	11.6	8.8	2.8	14.3	14.3	3.4	17	17	4.1	19.6	17	4.8	22.3	22.3	5.5	25.1	25.1	0.7	2.8	130	120	180	6.7	
ER 550	Fluid Cap FC1 & Air Cap AC1802	1	39	7.2	1.4	23	8.8	2.1	33	11.6	2.1	33	11.6	3.4	49	17	4.1	72	19.6	0.2	1.4	140	150	220	4.9	
		1.4	39	8.8	2.1	46	11.6	3.4	68	17	3.4	68	17	4.1	97	17	4.1	119	19.6	0.3	1.4	130	150	230	4.6	
		2.1	11.6	8.8	2.8	14.3	14.3	3.4	17	17	4.8	22.3	22.3	5.5	25.1	25.1	6.2	26.9	26.9	0.7	2.8	130	170	180	6.4	
ER 650	Fluid Cap FC8 & Air Cap AC1803	1.0	39	11.6	1.4	23	8.8	2.1	33	11.6	2.1	33	11.6	3.4	49	17	4.1	72	19.6	0.3	2.8	100	110	140	6.4	
		1.4	39	14.1	1.7	16.6	16.6	2.1	46	18.8	2.1	46	18.8	3.4	68	17	4.1	97	19.6	0.7	2.8	130	120	180	6.7	
		2.1	11.6	8.8	2.8	14.3	14.3	3.4	17	17	4.1	19.6	17	4.8	22.3	22.3	5.5	25.1	25.1	1.5	2.1	120	110	160	6.1	
ER 750	Fluid Cap FC9 & Air Cap AC1803	1.4	65	14.1	2.1	18.8	18.8	3.4	49	17	3.4	49	17	4.1	72	19.6	4.1	72	19.6	1.5	4.1	100	130	180	6.7	
		2.1	65	18.8	2.8	23.2	23.2	3.4	49	17	3.4	49	17	4.1	72	19.6	4.1	72	19.6	1.5	2.1	110	130	180	5.5	
		2.8	23.2	18.8	3.4	27.7	27.7	4.1	31.9	31.9	4.1	31.9	31.9	4.8	36.1	36.1	5.5	40.5	40.5	0.2	1.4	150	150	220	5.8	
ER 850	Fluid Cap FC5 & Air Cap AC1803	2.8	95	23.2	3.4	27.7	27.7	4.1	31.9	31.9	4.1	31.9	31.9	4.8	36.1	36.1	5.5	40.5	40.5	0.3	4.8	90	110	180	6.1	
		3.4	95	27.7	4.1	109	31.9	4.5	34	34	5.5	40.5	40.5	6.2	44.8	44.8	6.2	44.8	44.8	0.7	4.8	90	110	150	5.8	
		3.8	29.8	18.8	4.5	34	34	5.5	40.5	40.5	6.2	44.8	44.8	6.2	44.8	44.8	6.2	44.8	44.8	1.5	5.5	90	100	150	5.5	
ER 850	Fluid Cap FC5 & Air Cap AC1803	4.1	31.9	18.8	4.8	36.1	36.1	5.5	40.5	40.5	6.2	44.8	44.8	6.2	44.8	44.8	6.2	44.8	44.8	1.5	5.5	90	100	150	5.5	
		4.5	34	18.8	5.5	40.5	40.5	6.2	44.8	44.8	6.2	44.8	44.8	6.2	44.8	44.8	6.2	44.8	44.8	1.5	6.2	80	100	140	5.8	

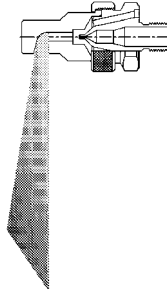
TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 78.

XAFF

Pressure-fed/Int. Mix/Deflected Flat Fan

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Very fine atomization
- 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, BSP or NPT

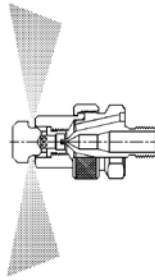
Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.7 Bar Liquid			1.5 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid		
			Air (bar)	l/hr	Nm ³ /hr	Air (bar)	l/hr	Nm ³ /hr	Air (bar)	l/hr	Nm ³ /hr	Air (bar)	l/hr	Nm ³ /hr	Air (bar)	l/hr	Nm ³ /hr
1/8 or 1/4	FF 050	Fluid Cap FC10 & Air Cap AC1701	0.4	11.0	2.70	1.1	14.5	4.74	1.5	15.7	5.76	2.1	20.0	6.84	2.7	26.0	7.98
			0.6	9.5	3.24	1.3	13.2	5.16	1.7	14.3	6.24	2.2	19.2	7.26	3.2	22.0	9.60
			0.7	7.6	3.90	1.4	11.8	5.70	1.8	12.9	6.72	2.7	15.8	8.76	3.8	17.7	11.2
			0.8	5.7	4.62	1.5	10.0	6.18	2.1	9.8	7.80	3.1	11.8	10.4	4.4	13.1	13.8
						1.7	8.7	6.78	2.2	8.3	8.52	3.2	10.3	11.0	4.6	10.2	15.0

XAxw

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

DESIGN/SPRAY CHARACTERISTICS

- Internal mix
- Very fine atomization
- 180° Extra-wide Hollow Cone



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

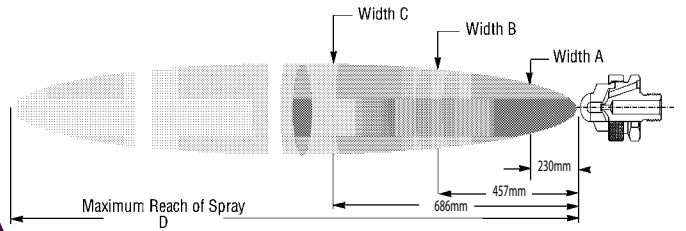
XA XW Set-up Flow Rates

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

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.7 Bar Liquid			1.5 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid		
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h
1/8 or 1/4	XW 050	Fluid Cap FC8 & Air Cap AC1401	1.4	15.1	4.14	2.8	19.5	8.52	3.5	21.0	11.1	4.2	48.0	12.6	6.0	45.0	20.4
			1.5	10.6	4.62	3.0	16.1	9.18	3.7	17.6	11.8	4.6	37.0	14.4	6.3	37.0	22.5
			1.7	7.6	5.04	3.1	13.2	9.90	3.8	14.8	12.6	4.9	28.0	16.5	6.7	30.0	24.3
			1.8	5.7	5.58	3.2	10.6	10.6	3.9	12.5	13.2	5.6	15.5	20.4	7.0	24.0	26.4
			2.0	4.2	6.18	3.4	8.3	11.3	4.2	8.1	14.7	6.3	7.8	25.5			

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

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, Wide Angle Round Spray Pattern, 1/2" Pipe Size, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.35 Bar Liquid			1.0 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid			Spray Dimensions									
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)				
1/2	AD 5050	Fluid Cap FC501 & Air Cap AC5601																									
			2.1	213	10.6	3.1	316	12.8	4.2	238	21.1	2.1	2.0	360	480	690	6.7										
			2.3	127	14.9	3.2	195	17.5	4.3	154	26.3	3.2	3.0	360	480	690	7.3										
				3.4	107	22.3	4.5	100	31.3	4.3	4.0	360	480	690	8.5												
1/2	AD 5100	Fluid Cap FC501 & Air Cap AC5602	0.6	102	11.0	1.1	215	9.18	2.5	185	21.3	3.7	192	33.6	5.0	230	49.8	0.7	0.35	330	470	650	6.1				
			0.7	57	13.8	1.3	124	13.8	2.7	146	24.6	3.9	150	37.2	5.3	158	56.4	1.3	1.0	340	480	670	7.9				
			0.85	32	16.8	1.4	84	16.8	2.8	112	27.9	4.0	119	40.8	5.6	108	64.8	2.8	2.0	330	470	650	6.4				
						3.0	86	31.2	4.2	86	46.2	4.6	86	46.2	4.6	86	46.2	4.0	3.0	340	480	670	7.3				
						3.1	65	34.8	4.2	65	34.8	4.2	65	34.8	4.2	65	34.8	5.3	4.0	360	480	690	8.2				
						0.7	129	19.5	1.7	182	32.4	3.1	265	48.6	4.3	350	60.0			0.85	0.35	360	500	690	7.9		
1/2	AD 5150	Fluid Cap FC501 & Air Cap AC5603	0.85	82	22.2	1.8	143	35.4	3.2	215	51.6	4.6	260	64.8			1.7	1.0	330	480	660	7.3					
			1.0	45	24.9	3.4	173	54.6	5.0	186	72.0	4.6	260	64.8			3.4	2.0	330	470	660	7.0					
						3.5	136	57.0	3.6	120	58.8	3.6	120	58.8			4.6	3.0	360	500	690	8.5					
						0.7	134	18.9	1.3	320	26.4	2.1	575	34.2	3.0	740	42.6	3.9	840	51.6	0.7	0.35	330	640	910	3.4	
						0.85	100	22.8	1.4	255	31.2	2.2	505	38.4	3.1	690	46.2	4.1	790	55.8	1.4	1.0	330	660	910	4.9	
									1.5	200	35.4	2.4	440	43.2	3.2	630	50.4	4.2	740	59.4	2.5	2.0	280	560	810	6.1	
1/2	AD 5200	Fluid Cap FC502 & Air Cap AC5604				1.7	154	40.2	2.5	380	47.4	3.4	570	54.6	4.4	690	64.2	3.4	3.0	280	530	740	6.7				
						2.7	330	51.6	3.5	520	58.8	4.5	650	68.4	4.5	650	68.4	4.5	4.0	280	560	790	7.6				
						2.8	275	55.8	3.7	470	63.0	4.6	600	72.6	4.6	600	72.6	4.6	600	72.6							
						3.0	235	60.6	3.8	420	67.2	4.8	550	76.8	4.8	550	76.8	4.8	550	76.8							
						3.1	195	64.8	3.9	345	71.4	4.9	510	81.0	4.9	510	81.0	4.9	510	81.0							
									4.1	325	75.6	4.1	325	75.6	4.1	325	75.6	5.1	465	85.8	5.1	465	85.8				
												5.2	425	89.4	5.2	425	89.4	5.2	425	89.4	5.2	425	89.4				
												5.3	390	93.6	5.3	390	93.6	5.3	390	93.6	5.3	390	93.6				
												5.5	350	98.4	5.5	350	98.4	5.5	350	98.4	5.5	350	98.4				

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

Pressure-fed, Internal Mix, Round Spray Pattern, 1/2" Pipe Size, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.35 Bar Liquid			1.0 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid			Spray Dimensions									
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)				
1/2	PR 5050	Fluid Cap FC501 & Air Cap AC5501	1.3	34	21.0	1.7	146	21.9	3.0	230	30.6							1.4	0.35					6.7			
			1.4	25	23.4	1.8	121	23.7	3.1	200	33.0								2.0	1.0	90	160	250	7.3			
			1.5	20	24.9	2.0	102	25.8	3.2	176	35.4								3.2	2.0					8.2		
			1.7	15.5	26.7	2.1	86	27.6	3.4	154	37.2																
1/2	PR 5100	Fluid Cap FC502 & Air Cap AC5502				1.7	154	40.2	2.5	380	47.4	3.4	570	54.6	4.4	690	64.2	3.4	3.0	100	180	250	12.5				
						2.7	330	51.6	3.5	520	58.8	4.5	650	68.4	4.5	650	68.4	4.5	4.0	100	180	250	14.3				
						2.8	275	55.8	3.7	470	63.0	4.6	600	72.6	4.6	600	72.6	4.6	600	72.6							
						3.0	235	60.6	3.8	420	67.2	4.8	550	76.8	4.8	550	76.8	4.8	550	76.8							
						3.1	195	64.8	3.9	345	71.4	4.9	510	81.0	4.9	510	81.0	4.9	510	81.0							
									4.1	325	75.6	4.1	325	75.6	4.1	325	75.6	5.1	465	85.8	5.1	465	85.8				
												5.2	425	89.4	5.2	425	89.4	5.2	425	89.4	5.2	425	89.4				
												5.3	390	93.6	5.3	390	93.6	5.3	390	93.6	5.3	390	93.6				
												5.5	350	98.4	5.5	350	98.4	5.5	350	98.4	5.5	350	98.4				

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

AIR ATOMISING

TO ORDER: specify pipe size, body style, spray set-up #, hardware and mounting assemblies, and material. See page 78.

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 Size, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.2 Bar Liquid			0.35 Bar Liquid			0.5 Bar Liquid			0.7 Bar Liquid			1.0 Bar Liquid			Spray Dimensions					
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)
1/2	EF 5050	Fluid Cap FC501 & Air Cap AC5001	2.1		52.6	2.8		64.5	3.2		70.4	3.9		81.5	5.6		110	2.5	0.2	216	368	520	5.80
			2.5		57.7	3.2		70.4	3.5		76.4	4.2		87.4	6.0		117	3.5	0.4	229	420	550	6.71
			2.8	522	64.5	3.5	681	76.4	3.9	795	81.5	4.9	953	98.4	6.3	1158	122	3.9	0.5	241	445	580	7.02
			3.2		70.4	3.9		81.5	4.2		87.4	4.6		93.3	5.6		110	4.9	0.7	241	460	610	7.63
					4.2		87.4	4.9		98.4	6.0		117	7.0		132	6.3	1.0	254	480	660	8.85	

PF

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

Pressure-fed, Internal Mix, Flat Fan Spray Pattern, 1/2" Pipe Size, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.35 Bar Liquid			1.0 Bar Liquid			2.0 Bar Liquid			3.0 Bar Liquid			4.0 Bar Liquid			Spray Dimensions						
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	air	liquid	A (mm)	B (mm)	C (mm)	D (m)	
1/2	PF 5050	Fluid Cap FC501 & Air Cap AC5301				1.8	154	35.4	3.4	184	57.0							2.0	1.0	460	740	910	5.8	
			2.0	119	38.4	3.5	157	60.6											3.5	2.0	510	790	970	7.0
			2.1	93	41.4	3.7	133	63.6																
	PF 5100	Fluid Cap FC502 & Air Cap AC5302	0.7	134	18.9	1.3	320	26.4	2.1	575	34.2	3.0	740	40.8	3.9	840	51.6	0.7	0.35	510	860	1190	4.0	
			0.85	100	22.8	1.4	255	31.2	2.2	505	38.4	3.1	690	43.2	4.1	790	55.8	1.4	1.0	860	1570	2110	4.6	
						1.5	200	35.4	2.4	440	43.2	3.2	630	46.1	4.2	740	59.4	2.5	2.0	860	1570	2080	5.2	
						1.7	154	40.2	2.5	380	47.4	3.4	570	50.8	4.4	690	64.2	3.4	3.0	910	1680	2160	5.8	
									2.7	330	51.6	3.5	520	54.1	4.5	650	68.4	4.5	4.0	910	1700	2260	6.4	
									2.8	275	55.8	3.7	470	59.3	4.6	600	72.6	4.9	4.0	910	1700	2260	6.4	
									3.0	235	60.6	3.8	420	63.3	4.8	550	76.8	5.2	4.0	910	1700	2260	6.4	
						3.1	195	64.8	3.9	345	69.2	4.9	510	81.0	5.3	4.0	910	1700	2260	6.4				
									4.1	325	74.1	5.1	465	85.8	5.5	4.0	910	1700	2260	6.4				

SR

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

Siphon-fed, External Mix, Round Spray Pattern, 1/2" Pipe Size, BSP or NPT

Pipe Size	Set-up Number	Fluid and Air Cap Numbers	ATOMIZING AIR		Liquid Capacity in l/h (Liters Per Hour)						Spray Dimensions at 200 mm Siphon Ht.					
			Air (bar)	Air Capacity (Nm ³ /h)	Gravity Head			Siphon Height			Air (bar)	B (mm)	D (m)			
					450 mm	300 mm	150 mm	100 mm	200 mm	300 mm				600 mm		
1/2	SR 5050	Fluid Cap FC501 & Air Cap AC5201	0.7	21.6						40				1.5		6.1
			1.5	34.2						97	64			2.0		6.7
			2.0	39.6						117	90			3.0		7.3
			3.0	52.2						150	123	90		3.5	150	7.9
			3.5	59.4	300	260	225			163	133	104		4.0		8.8
			4.0	66.0	305	270	240			170	143	115		5.0		9.8
			5.0	78.0	315	280	250			183	157	129	53	5.6		10.7
			5.6	87.0	320	290	255			188	164	136	62			

XW

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

Pressure-fed, Internal Mix, Extra-wide Angle, Hollow Cone Spray Pattern, 1/2" Pipe Size, BSP or NPT

Pipe Size	Spray Set-up Number	Fluid and Air Cap Numbers	0.7 Bar Liquid			1.4 Bar Liquid			2.1 Bar Liquid			2.8 Bar Liquid			4.2 Bar Liquid		
			Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h	Air (bar)	l/h	Nm ³ /h
1/2	XW 5050	Fluid Cap FC502 & Air Cap AC5401	1.0	213	20.7	1.7	394	27.2	2.5	439	38.0	3.4	462	47.2	5.0	484	68.3
			1.1	145	25.1	1.8	324	31.6	2.7	372	42.1	3.5	416	50.6	5.2	439	71.8
			1.3	98	34.5	2.0	275	34.4	2.8	322	45.0	3.7	372	53.4	5.3	409	75.2
			1.4	59	32.3	2.1	207	38.5	3.0	277	49.1	3.8	325	57.3	5.5	366	78.6
						2.3	159	42.1	3.1	272	52.4	3.9	282	61.1	5.6	325	82.0
						2.4	116	45.5	3.2	188	55.8	4.1	250	65.0	5.8	297	85.7
						2.5	93	49.7	3.4	145	59.4	4.2	209	68.1	5.9	257	89.1
						2.7	27	54.0	3.5	114	63.0	4.4	168	71.3	6.0	232	93.0
												4.5	141	75.5	6.3	182	100
												4.6	77	77.7			

Standard Materials: Nickel-plated Brass, 303 Stainless Steel, and 316 Stainless Steel

AIR ATOMISING

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