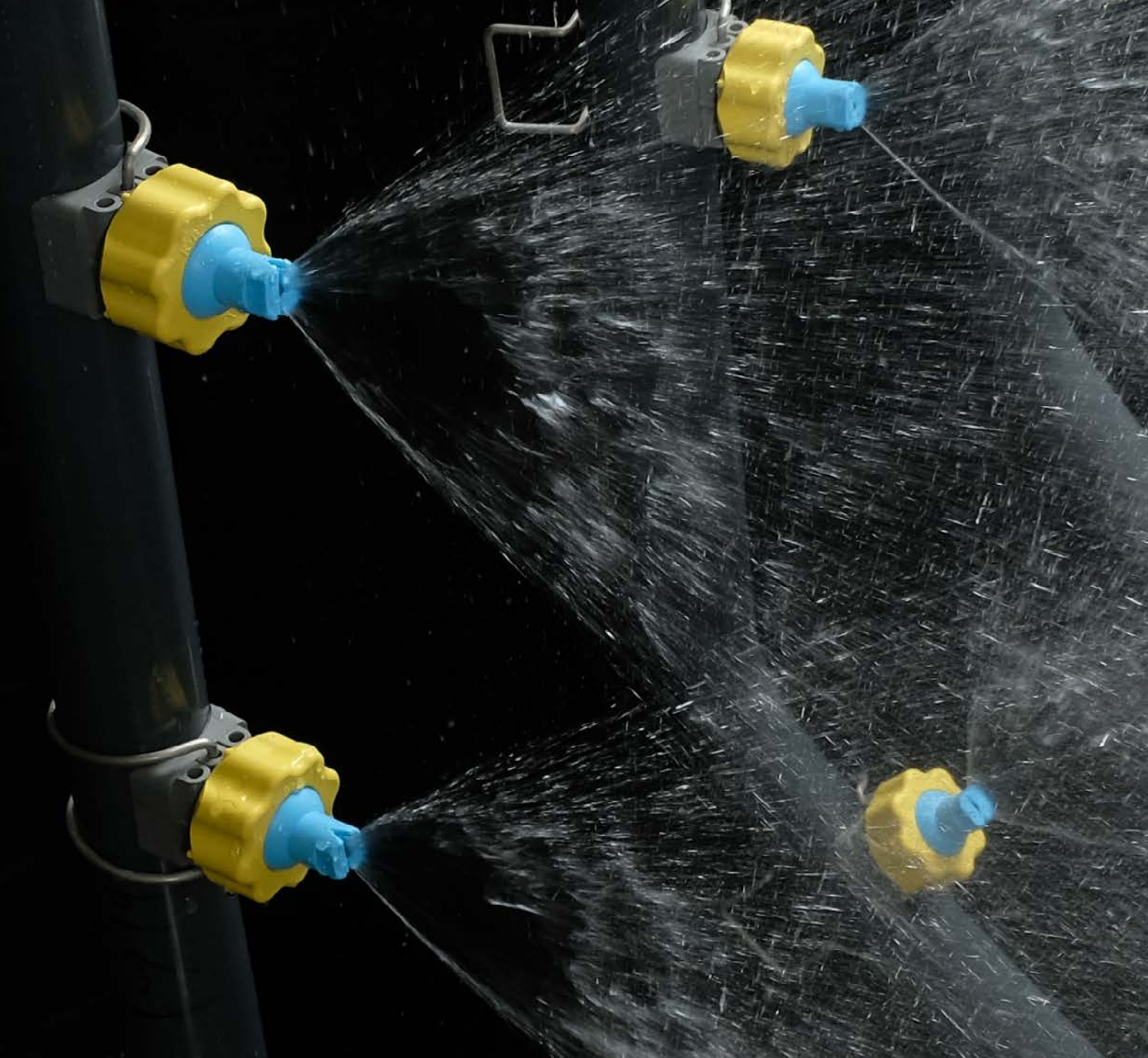




K-Ball Spray Nozzles

K-Ball Clip-On Spray Nozzels & Assemblies

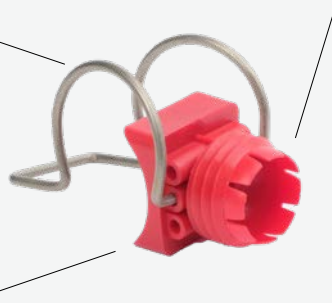
BEX adjustable K-Ball assemblies provide a robust and reliable solution for multi-stage washers and spray wash machines. Simply drill a 9/16" hole into any 1", 1 1/4", 1 1/2", or 2", and mount the assembly to the pipe using the clip. The spray ball can be swapped out or replaced simply by loosening and tightening the cap, no tools required.



Heavy-duty stainless steel spring clips allow operating pressures up to 100 PSI. A dual-clip system is also available for pressures up to 150 PSI.

Optional **"finger" system** on the K-Body prevents movement of the spray ball while the cap is being tightened.

K-Ball bodies fit securely onto the pipe. Available in Polypropylene for temperatures up to 175°F, and PVDF for temperatures up to 275°F. Includes one standard KOR O-ring for sealing the 9/16" connection hole to the pipe. A KCOR O-ring is also available for sealing 21/32" connection holes.



K-Ball cap is designed with strong threads made of glass-reinforced polypropylene, which lock in tightly with the K-body, providing a leak-free spray.



With a variety of **interchangeable spray balls**, the K-ball system can support a wide range of spray patterns, flow-rates, and angles.

BF Balls



Flat fan patterns which taper at the edges to permit overlapping of sprays. Available in angles ranging from zero to 110 degrees, & flow rates from 1 to 15 USGPM at 40 psi.

BFL Balls



A wide, flat shaped spray with low impact. The spray is deflected 75 degrees down from the centerline of the nozzle. Available in 5 capacity options

BPH Balls



A hollow cone pattern with low impact for phosphating applications. Available in 3 capacity options

KPLUG

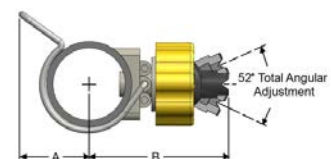


Shut-Off plug
Completely shut off the water flow through a clip-on opening.

K-Ball bodies are compatible with 4 standard pipe sizes. Each is color coded to indicate the pipe size it will fit, and whether the body features "fingers".

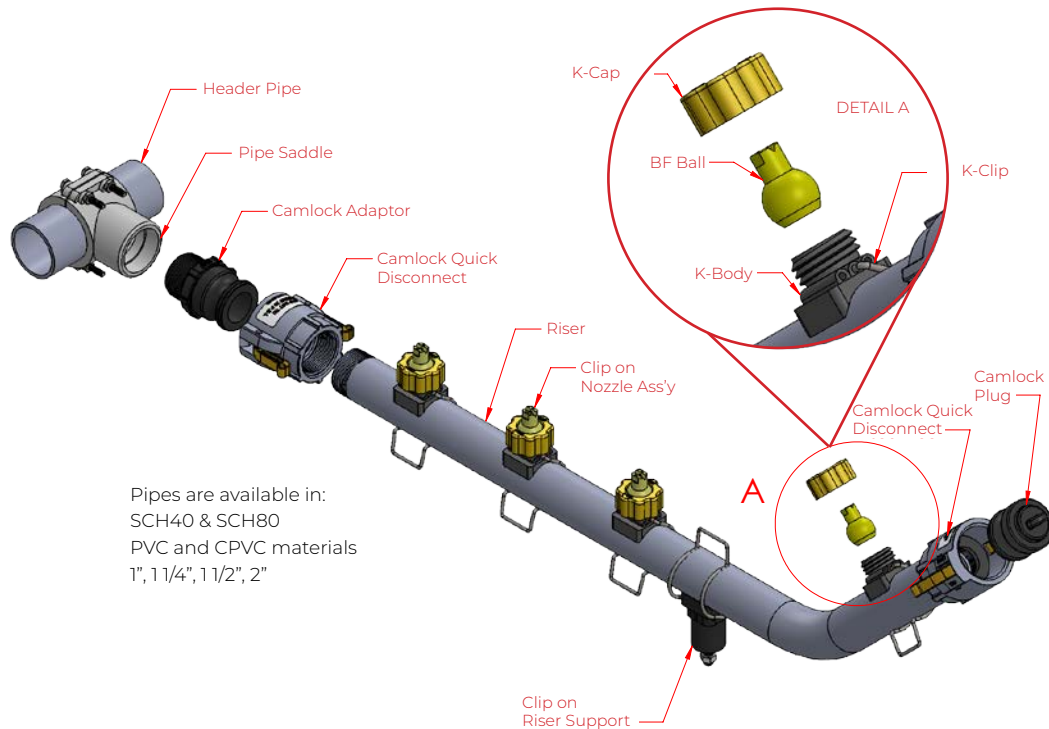
Pipe Sizes	Standard Body	Body with Fingers
1"	1K (white)	1KF (green)
1-1¼"	1.2K (grey)	1.2KF (yellow)
1-1½"	1.5K (black)	1.5KF (red)
2"	2K (tan)	2KF (blue)

Pipe Size	Dim A.	Dim B.
1"	1¾ (45 mm)	2⅞ (73 mm)
1¼"	2 (51 mm)	3 (77 mm)
1½"	2⅜ (54 mm)	3⅜ (80 mm)
2"	2⅞ (61 mm)	3½ (89 mm)



K-Risers Complete Custom-Built Riser Assemblies

Whether it be a straight-forward single-stage riser assembly, or complex multi-stage washing system, BEX will collaborate with you to design and assemble a complete risers system tailored to your unique needs.



How to Order K-SYSTEM Risers

- 1 Draw up a plan of your riser, or have one of our sales reps assist you.
- 2 As a minimum, we would need to know:
 - Length, pipe spec (eg. 1" sched 40 PVC), quantity, number and type of nozzles,
 - Number of bends, angle of bends, tees, caps, elbows, riser clamps, as well as any cam locks, saddles etc.
 - Risers are typically sized based on the largest part to wash.
- 3 Submit plan to BEX for an estimate.
- 4 A quote and a drawing will be supplied to you for your approval.
- 5 Submit a PO together with the approved drawing to BEX.
- 6 Your unique riser part number will be assigned.
- 7 Production begins.
- 8 Risers are inspected and packaged.



BF Ball Assembly

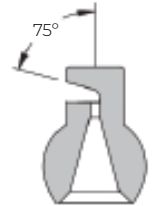
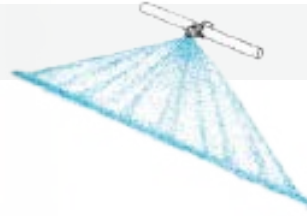


Spray density tapers off toward the outside to permit overlapping of the spray patterns, while maintaining uniform spray density. Balls are color coded to make it easier to identify spray characteristics.

Model	Ball Color	Equivalent Orifice Diameter (inches)	Capacities at Various Pressures USGPM														Spray Angle	
			5 psi	7 psi	10 psi	15 psi	20 psi	25 psi	30 psi	40 psi	50 psi	60 psi	80 psi	100 psi	150 psi	20 psi	40 psi	
BF11060	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	107°	110°	
BF9530	Purple	0.129	1.06	1.26	1.50	1.84	2.12	2.37	2.60	3.00	3.4	3.7	4.2	4.7	5.8	63°	95°	
BF9540	Green	0.149	1.41	1.67	2.00	2.45	2.83	3.2	3.5	4.0	4.5	4.9	5.7	6.3	7.7	63°	95°	
BF9550	Yellow	0.167	1.77	2.09	2.50	3.06	3.5	4.0	4.3	5.0	5.6	6.1	7.1	7.9	9.7	63°	95°	
BF9560	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	63°	95°	
BF8010	Black	0.074	0.35	0.42	0.50	0.61	0.71	0.79	0.87	1.00	1.12	1.22	1.41	1.58	1.94	75°	80°	
BF8020	Lt. Blue	0.105	0.71	0.84	1.00	1.22	1.41	1.58	1.73	2.00	2.24	2.45	2.83	3.2	3.9	63°	80°	
BF8030	Purple	0.129	1.06	1.26	1.50	1.84	2.12	2.37	2.60	3.00	3.4	3.7	4.2	4.7	5.8	63°	80°	
BF8040	Green	0.149	1.41	1.67	2.00	2.45	2.83	3.2	3.5	4.0	4.5	4.9	5.7	6.3	7.7	76°	80°	
BF8050	Yellow	0.167	1.77	2.09	2.50	3.06	3.5	4.0	4.3	5.0	5.6	6.1	7.1	7.9	9.7	77°	80°	
BF8060	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	77°	80°	
BF8070	Red	0.197	2.47	2.93	3.5	4.3	4.9	5.5	6.1	7.0	7.8	8.6	9.9	11.1	13.6	78°	80°	
BF80100	Brown	0.238	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	11.2	12.2	14.1	15.8	19.4	75°	80°	
BF6520	Lt. Blue	0.105	0.71	0.84	1.00	1.22	1.41	1.58	1.73	2.00	2.24	2.45	2.83	3.2	3.9	63°	65°	
BF6530	Purple	0.129	1.06	1.26	1.50	1.84	2.12	2.37	2.60	3.00	3.4	3.7	4.2	4.7	5.8	63°	65°	
BF6540	Green	0.149	1.41	1.67	2.00	2.45	2.83	3.2	3.5	4.0	4.5	4.9	5.7	6.3	7.7	63°	65°	
BF6550	Yellow	0.167	1.77	2.09	2.50	3.06	3.5	4.0	4.3	5.0	5.6	6.1	7.1	7.9	9.7	63°	65°	
BF6560	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	63°	65°	
BF6570	Red	0.197	2.47	2.93	3.5	4.3	4.9	5.5	6.1	7.0	7.8	8.6	9.9	11.1	13.6	63°	65°	
BF65100	Brown	0.238	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	11.2	12.2	14.1	15.8	19.4	58°	65°	
BF5020	Lt. Blue	0.105	0.71	0.84	1.00	1.22	1.41	1.58	1.73	2.00	2.24	2.45	2.83	3.2	3.9	63°	50°	
BF5030	Purple	0.129	1.06	1.26	1.50	1.84	2.12	2.37	2.60	3.00	3.4	3.7	4.2	4.7	5.8	63°	50°	
BF5040	Green	0.149	1.41	1.67	2.00	2.45	2.83	3.2	3.5	4.0	4.5	4.9	5.7	6.3	7.7	43°	50°	
BF5050	Yellow	0.167	1.77	2.09	2.50	3.06	3.5	4.0	4.3	5.0	5.6	6.1	7.1	7.9	9.7	43°	50°	
BF5060	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	43°	50°	
BF5070	Red	0.197	2.47	2.93	3.5	4.3	4.9	5.5	6.1	7.0	7.8	8.6	9.9	11.1	13.6	43°	50°	
BF50100	Brown	0.238	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	11.2	12.2	14.1	15.8	19.4	44°	50°	
BF4040	Green	0.149	1.41	1.67	2.00	2.45	2.83	3.2	3.5	4.0	4.5	4.9	5.7	6.3	7.7	33°	40°	
BF4050	Yellow	0.167	1.77	2.09	2.50	3.06	3.5	4.0	4.3	5.0	5.6	6.1	7.1	7.9	9.7	35°	40°	
BF4060	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	37°	40°	
BF4070	Red	0.197	2.47	2.93	3.5	4.3	4.9	5.5	6.1	7.0	7.8	8.6	9.9	11.1	13.6	35°	40°	
BF40100	Brown	0.238	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	11.2	12.2	14.1	15.8	19.4	33°	40°	
BF2540	Green	0.149	1.41	1.67	2.00	2.45	2.83	3.2	3.5	4.0	4.5	4.9	5.7	6.3	7.7	22°	25°	
BF2550	Yellow	0.167	1.77	2.09	2.50	3.06	3.5	4.0	4.3	5.0	5.6	6.1	7.1	7.9	9.7	20°	25°	
BF2560	Blue	0.183	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	7.3	8.5	9.5	11.6	18°	25°	
BF2570	Red	0.197	2.47	2.93	3.5	4.3	4.9	5.5	6.1	7.0	7.8	8.6	9.9	11.1	13.6	19°	25°	
BF25100	Brown	0.236	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	11.2	12.2	14.1	15.8	19.4	21°	25°	
BF15100	Brown	0.236	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	11.2	12.2	14.1	15.8	19.4	13°	15°	
BF15120	Black	0.258	4.2	5.0	6.0	7.3	8.5	9.5	10.4	12.0	13.4	14.7	17.0	19.0	23.2	12°	15°	
BF15150	Black	0.289	5.3	6.3	7.5	9.2	10.6	11.9	13.0	15.0	16.8	18.4	21.2	23.7	29.0	12°	15°	

BFL Ball Assembly

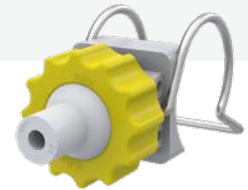
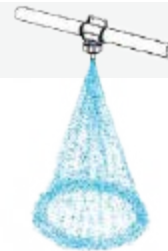
BFL series nozzles produce a wide, flat fan-shaped spray with low impact. The spray is deflected 75° away from the centerline of the pipe connection



Model	Equiv. Orif. Dia. (inches)	Capacities at Various Pressures USGPM										Spray Angle	
		3 psi	5 psi	7 psi	10 psi	15 psi	20 psi	25 psi	30 psi	40 psi	50 psi	3 psi	5 psi
BFL5	0.076	1.04	0.35	0.42	0.50	0.61	0.71	0.79	0.87	1.00	1.12	114°	130°
BFL10	0.110	0.55	0.71	0.84	1.00	1.22	1.41	1.58	1.73	2.00	2.24	134°	146°
BFL18	0.149	0.99	1.27	1.51	1.80	2.20	2.55	2.85	3.12	3.6	4.0	130°	142°
BFL24	0.167	1.31	1.70	2.01	2.40	2.94	3.4	3.8	4.2	4.8	5.4	121°	136°
BFL30	0.183	1.64	2.12	2.51	3.00	3.7	4.2	4.7	5.2	6.0	6.7	120°	133°
BFL40	0.218	2.19	2.83	3.3	4.0	4.9	5.7	6.3	6.9	8.0	8.9	130°	144°

BPH Ball Assembly

A hollow cone pattern with low impact. Designed specifically for phosphate stages. This large droplet, low impact spray results in tighter and more consistent phosphate crystalline structure. It minimizes the misting of phosphate spray, thus reducing 'pre-coating', streaking, and carry over to adjacent stages



Model	Ball Color	Maximum Free Passage (inches)	Capacities at Various Pressures USGPM									Spray Angle @			
			3 psi	5 psi	7 psi	10 psi	15 psi	20 psi	25 psi	30 psi	40 psi	5 psi	7 psi	10 psi	20 psi
BPH28	White	0.191	5.8	1.98	2.34	2.80	3.4	4.0	4.4	4.8	5.6	44°	52°	53°	55°
BPH51	Grey	0.280	2.74	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	37°	40°	42°	48°
BPH53	Black	0.280	2.74	3.5	4.2	5.0	6.1	7.1	7.9	8.7	10.0	62°	70°	71°	73°

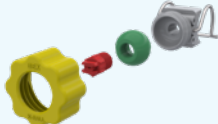
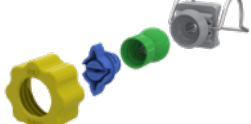
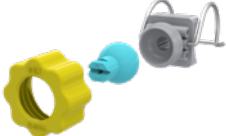
K-Plug Assembly

The K-PLUG nozzle ball is used in place of a standard nozzle to completely shut off the flow of the nozzle. A practical alternative to replacing the pipe when the hole positining has to change.



K-Ball Nozzle Adapters

By using a K-Ball adapter, practically any nozzle in the BEX catalogue can be used in a K-Ball assembly. Threaded nozzles and Zip-Tip quick disconnect nozzles can be attached to the ball, opening up thousands of possibilities for spraying applications.

Nozzle Connection	Pipe Connection	Adapter	Adjustable Position?	Assembled Image	Exploded Image	Compatible Spray Categories
Threaded	Clip-On	K-Ball Adapter	✓			Flat Fan (F, FP, FL) Full Cone (S) Hollow Cone (H) Solid Stream (F0) Tank Mixing Eductor
Zip-Tip	Clip-On	KZBD	✓			Flat Fan (ZF, ZFP, ZFL) Full Cones (ZS) Hollow Cone (ZH) Solid Stream (ZF0)
Threaded	Clip-On	Threaded Adapter	✗			Flat Fan (F, FP, FL) Full Cone (S) Hollow Cone (H) Solid Stream (F0) Tank Mixing Eductor
Ball	Threaded	Threaded K-Ball	✓			Flat Fan (BF, BFL) Hollow Cone (BPH) Plug (KPLUG)
Zip-Tip	Threaded	ZBD	✗			Flat Fan (ZF, ZFP, ZFL) Full Cone (ZS) Hollow Cone (ZH) Solid Stream (ZF0)
Ball	Clip-On	K-Ball Assembly	✓			Flat Fan (BF, BFL) Hollow Cone (BPH) Plug (KPLUG)

The experts at BEX have over 50 years of experience designing and manufacturing nozzle systems. We have worked with companies across all industries, and supplied them with the knowledge and tools necessary to achieve their goals. Contact us to request a quote.



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