

MaxiPass™

Maximum Free Passage

DESIGN FEATURES

- Ultimate clog-resistant design with largest free passage available in a full cone nozzle
- Two unique S-shaped internal vanes allow free passage of particles
- High energy efficiency
- Easily handles dirty, lumpy liquids
- Male and female connections
- Flanged connection available
- U.S. Patent

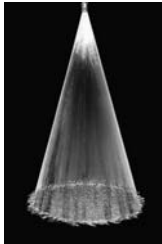
SPRAY CHARACTERISTICS

- High reliability spray performance under the most difficult conditions
- Spray pattern:** Full Cone*
(Square patterns to special order)
- Spray angles:** 30°, 60°, 90°, and 120°
- Flow rates:** 0.7 to 978 gpm
(Flow rates up to 4500 gpm available; call BETE Applications Engineering for details.)

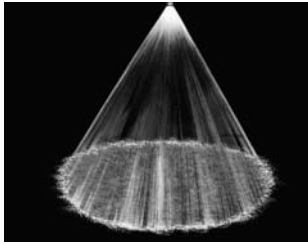


Wide Angle Metal

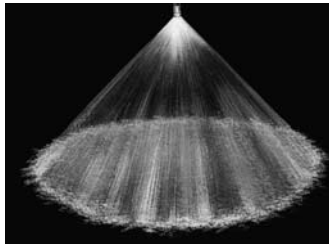
Design pressure 20 psi. Spray pattern data varies with pressure. Call BETE with any questions.



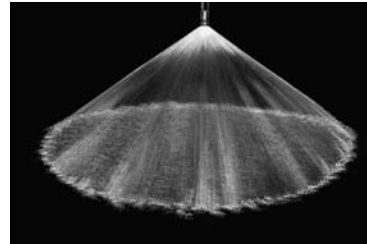
Full Cone 30° (NN)



Full Cone 60° (N)



Full Cone 90° (M)



Full Cone 120° (W)

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

MaxiPass Flow Rates and Dimensions

Full Cone, Extra Narrow 30° (NN), Narrow 60° (N), Medium 90° (M) and Wide 120° (W) Spray Angles, 3/8" to 4" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI									Approx. Free Passage Dia. (in.)	Approx. Dimensions (in.) Overall length					Wt.** (lbs.) Metal	
			3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	60 PSI		80 PSI	30° A	60° A	90° A	120° A		B
3/8	MP125	0.416	0.70	0.89	1.04	1.23	1.49	1.70	2.06	2.35	2.85	3.26	0.125					0.19	
	MP156	0.661	1.11	1.41	1.65	1.95	2.36	2.70	3.27	3.74	4.52	5.18	0.156	3.00	1.50	1.50	1.50	0.88	0.19
	MP187	0.954	1.60	2.03	2.38	2.82	3.41	3.90	4.72	5.40	6.54	7.48	0.188						0.16
1/2	MP187	0.954	1.60	2.03	2.38	2.82	3.41	3.90	4.72	5.40	6.54	7.48	0.188						0.28
	MP218	1.52	2.54	3.23	3.79	4.48	5.42	6.20	7.50	8.59	10.4	11.9	0.219	4.00	1.88	1.88	1.88	1.00	0.25
	MP250	1.71	2.87	3.65	4.27	5.05	6.11	7.00	8.47	9.70	11.7	13.4	0.250						0.25
3/4	MP281	2.10	3.53	4.48	5.25	6.21	7.51	8.60	10.4	11.9	14.4	16.5	0.281						0.50
	MP312	2.54	4.26	5.42	6.35	7.51	9.08	10.4	12.6	14.4	17.4	20.0	0.290	4.00	2.50	2.38	2.50	1.25	0.50
	MP343	3.11	5.21	6.62	7.75	9.17	11.1	12.7	15.4	17.6	21.3	24.4	0.344						0.44
	MP375	3.67	6.15	7.82	9.16	10.8	13.1	15.0	18.1	20.8	25.1	28.8	0.375						0.44
1	MP375	3.67	6.15	7.82	9.16	10.8	13.1	15.0	18.1	20.8	25.1	28.8	0.375						0.78
	MP406	4.40	7.38	9.38	11.0	13.0	15.7	18.0	21.8	24.9	30.2	34.5	0.406	4.38	2.94	2.94	2.94	1.50	0.72
	MP437	5.14	8.61	10.9	12.8	15.2	18.3	21.0	25.4	29.1	35.2	40.3	0.438						0.72
1 1/4	MP437	5.14	8.61	10.9	12.8	15.2	18.3	21.0	25.4	29.1	35.2	40.3	0.438	5.38	3.38	3.38	3.38	2.00	1.34
	MP500	6.61	11.1	14.1	16.5	19.5	23.6	27.0	32.7	37.4	45.2	51.8	0.500	5.38	3.38	3.38	3.38	2.00	1.34
	MP531	7.34	12.3	15.6	18.3	21.7	26.2	30.0	36.3	41.6	50.3	57.6	0.531	5.38	3.38	3.38	3.38	2.00	1.34
	MP562	8.07	13.5	17.2	20.1	23.8	28.8	33.0	39.9	45.7	55.3	63.3	0.562	5.38	3.38	3.38	3.38	2.00	1.34
1 1/2	MP562	8.07	13.5	17.2	20.1	23.8	28.8	33.0	39.9	45.7	55.3	63.3	0.550	7.25	4.38	4.38	4.38	2.25	2.00
	MP593	9.17	15.4	19.5	22.9	27.1	32.8	37.5	45.4	51.9	62.8	71.9	0.594	7.25	4.38	4.38	4.38	2.25	2.00
	MP625	9.79	16.4	20.8	24.4	28.9	34.9	40.0	48.4	55.4	67.0	76.7	0.625	7.25	4.38	4.38	4.38	2.25	2.00
	MP656	11.9	19.9	25.3	29.6	35.0	42.4	48.5	58.7	67.2	81.3	93.0	0.656	7.25	4.38	4.38	4.38	2.25	2.00
	MP687	12.5	20.9	26.6	31.1	36.8	44.6	51.0	61.7	70.6	85.5	97.8	0.688	7.25	4.38	4.38	4.38	2.25	2.00

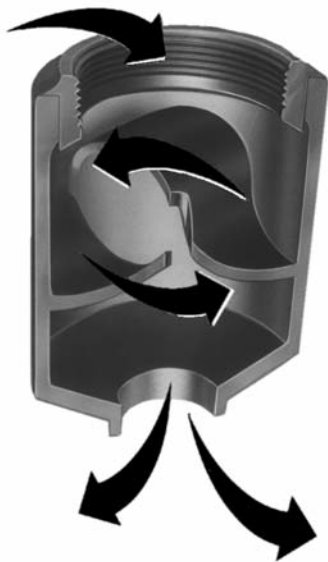
Flow Rate (GPM) = K (PSI)^{0.47}

** Weights given are for 60°, 90°, and 120°

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene, and PTFE. (PTFE not available in 3/8" and 1/2" sizes.)

*The spray angle of wide and medium angle whirl nozzles is affected by increasing pressure. Contact BETE Applications Engineering when using the MaxiPass above 40 PSI.

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



A cutaway view of the MaxiPass nozzle showing the S-shaped vanes that enable the nozzle to successfully handle large particles without clogging.

To correct flow for fluids with a Specific Gravity other than 1, use this formula:

$$\left(\frac{Q_2}{Q_1}\right) = \sqrt{\frac{SG_1}{SG_2}}$$

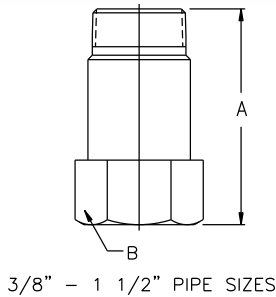


MaxiPass™ Free Passage

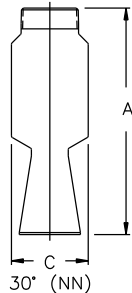


Traditional Full Cone Free Passage

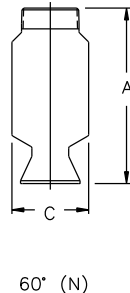
A comparison of the free passage available with the BETE MaxiPass nozzle compared to the free passage of a traditional full cone nozzle. The BETE MaxiPass is designed to pass solid particles that are 2-3 times larger in diameter than particles that will pass through a traditional full cone nozzle.



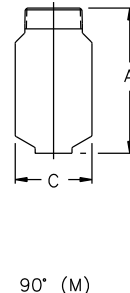
3/8" - 1 1/2" PIPE SIZES



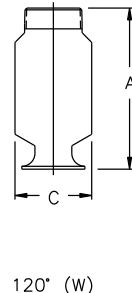
30° (NN)



60° (N)



90° (M)



120° (W)

For plastic dimensions, please call BETE Customer Service.

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

MaxiPass Flow Rates and Dimensions

Full Cone, Extra Narrow 30°(NN), Narrow 60° (N), Medium 90°(M) and Wide 120°(W) Spray Angles, 3/8" to 4" Pipe Sizes

Male or Female Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI										Approx. Free Passage Dia. (in.)	Approx. Dimensions (in.) Overall Length					Wt.** (lbs.) Metal
			3 PSI	5 PSI	7 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI		30° A	60° A	90° A	120° A	C*	
2	MP750	15.2	25.4	32.3	37.9	44.8	54.2	62.0	75.0	85.9	104	119	0.750	8.25	7.19	5.75	6.25	2.63	3.50
	MP812	16.6	27.9	35.4	41.5	49.1	59.4	68.0	82.3	94.2	114	130	0.813	8.25	7.19	5.75	6.25	2.63	3.50
	MP875	20.5	34.4	43.8	51.3	60.6	73.4	84.0	102	116	141	161	0.875	8.25	7.19	5.75	6.25	2.63	3.50
	MP937	23.0	38.5	49.0	57.4	67.9	82.1	94.0	114	130	158	180	0.938	9.00	7.63	6.00	6.50	3.25	3.75
	MP1000	26.9	45.1	57.3	67.2	79.4	96.1	110	133	152	184	211	1.00	10.3	7.63	6.00	6.63	3.25	3.75
	MP1125	33.0	55.3	70.4	82.4	97.5	118	135	163	187	226	259	1.12	10.3	7.63	6.00	6.75	3.25	3.75
2 1/2	MP1125	33.0	55.3	70.4	82.4	97.5	118	135	163	187	226	259	1.12	10.5	8.38	6.50	7.00	3.25	4.50
	MP1250	39.6	66.4	84.4	98.9	117	142	162	196	224	271	311	1.24	12.0	9.63	6.50	7.13	3.25	4.50
	MP1375	47.5	79.5	101	118	140	169	194	235	269	325	372	1.37	12.0	9.63	8.38	9.00	4.00	6.25
	MP1500	58.2	97.6	124	145	172	208	238	288	330	399	457	1.50	13.0	10.5	8.38	9.00	4.00	6.25
3	MP1500	58.2	97.6	124	145	172	208	238	288	330	399	457	1.46	13.5	11.0	9.00	9.75	4.75	7.25
	MP1625	68.5	115	146	171	202	245	280	339	388	469	537	1.62	13.5	11.0	9.00	9.88	4.75	7.25
	MP1750	78.3	131	167	195	231	280	320	387	443	536	614	1.75	13.5	11.0	9.00	9.88	4.75	7.25
4	MP1750	78.3	131	167	195	231	280	320	387	443	536	614	1.75	16.0	14.0	8.88	9.75	4.75	8.00
	MP1875	88.1	148	188	220	260	314	360	436	499	603	691	1.87	16.0	14	8.88	9.75	4.75	8.00
	MP2000	103	173	220	258	305	369	422	511	585	707	810	1.96	16.0	14	11.2	12.2	6.00	16.0
	MP2125	115	193	245	287	339	411	470	569	651	788	902	2.12	16.0	14.0	11.2	12.2	6.00	16.0
	MP2250	125	209	266	311	368	446	510	617	706	855	978	2.25	16.0	14.0	11.2	12.2	6.00	16.0

Flow Rate (GPM) = K (PSI)^{0.47}

* C dimension for 30° (NN) is larger

** Weights given are for 60°, 90°, and 120°

Standard Materials: Brass, 316 Stainless Steel, PVC, Polypropylene, and PTFE.

The spray angle of wide and medium angle whirl nozzles is affected by increasing pressure. Contact BETE Applications Engineering when using the MaxiPass above 40 PSI.

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