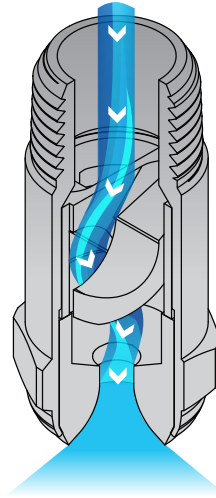


OVERVIEW: FULLJET MAXIMUM FREE PASSAGE (MFP)

- Solid cone-shaped spray pattern
- Patented vane design provides largest free passage of maximum free passage nozzles; ideal for use with fluids with particulates
- More uniform spray distribution than other large free passage nozzles
- Uniform spray distribution from 1.4 to 57 gpm (5.3 to 216 lpm)
- Operating pressures up to 80 psi (6 bar)
- Spray angles: 60°, 90° and 115°



MFP FullJet Nozzles

The liquid comes in contact with the vane as it enters the nozzle. The unique vane design stabilizes the fluid before it enters the swirl region. The swirling liquid passes through the nozzle and breaks up as it exits the nozzle orifice. The spray pattern produced is a well-defined cone shape consisting of uniform drops equally distributed throughout the spray pattern. The large, open passages in the nozzle minimize clogging.

FULLJET MAXIMUM FREE PASSAGE (MFP) OPTIONS

PATENTED VANE TECHNOLOGY

PROVIDES SUPERIOR PERFORMANCE

PLUS NEW SIZES AND CAPACITIES NOW AVAILABLE



HMFP
3/8" to 1-1/2" female conn.



HMFP
2" to 3" female conn.



HHMFP
3/8" to 1-1/2" male conn.



HHMFP
2" to 3" male conn.

ORDERING INFORMATION

FULLJET MAXIMUM FREE PASSAGE (MFP)

Inlet Conn.	Nozzle Type	Material Code	Spray Angle	Capacity Size
Example				
3/4	HHMFP	316SS	90	70

BSPT connections require the addition of a "B" prior to the inlet connection.

RELATIVE DROP SIZE IN MICRONS



Drop size will vary based on flow rate and pressure.

QUICK REFERENCE GUIDE

Model	Connection/Type	Connection Size (in.)	Materials	Page Number	
				Performance Data	Dimensions and Weights
HMFP	F	3/8 to 1-1/4	Brass, 316 stainless steel (316SS)	B21-B22	B23
	F	1-1/2	316 stainless steel (316SS)		
	F, Cast	2 to 3	316 stainless steel (SS)		
HHMFP	M	3/8 to 1-1/4	Brass, 316 stainless steel (316SS)	B21-B22	
	M	1-1/2	316 stainless steel (316SS)		
	M, Cast	2 to 3	316 stainless steel (SS)		

F = female thread; M = male thread. There is no material code for brass. Leave material code blank when ordering. Other materials available upon request. For more dimensions and sizes, contact your sales engineer.

S PERFORMANCE DATA:
STANDARD ANGLE SPRAY



Inlet Conn. (in.)	Nozzle Type		Capacity Size	Approx. Free Passage Dia. (mm)	Flow Rate Capacity (liters per minute)				Spray Angle (°)					
									60° Series		90° Series		115° Series	
	HMFP	HHMFP			0.7 bar	1.5 bar	3 bar	6 bar	0.7 bar	3 bar	0.7 bar	3 bar	0.7 bar	3 bar
3/8	●	●	14	3.2	5.3	7.2	9.5	12.6	60	62	90	84	115	100
	●	●	22	4.0	8.4	11.4	15.0	19.8	60	62	90	84	115	100
	●	●	32	4.8	12.2	16.5	22	29	60	62	90	84	115	100
1/2	●	●	32	4.8	12.2	16.5	22	29	60	62	90	84	115	100
	●	●	51	5.5	19.4	26	35	46	60	62	90	84	115	100
	●	●	57	6.4	22	29	39	51	60	62	90	84	115	100
3/4	●	●	70	7.1	27	36	48	63	60	62	90	84	115	100
	●	●	84	7.9	32	43	57	76	60	62	90	84	115	100
	●	●	100	8.7	38	52	68	90	60	62	90	84	115	100
	●	●	120	9.5	46	62	82	108	60	62	90	84	115	100
1	●	●	120	9.5	46	62	82	108	60	62	90	84	115	100
	●	●	150	10.3	57	76	99	129	60	62	90	88	115	105
	●	●	170	11.1	65	86	113	146	60	62	90	88	115	105
1-1/4	●	●	170	11.1	65	86	113	146	60	62	90	88	115	105
	●	●	200	11.9	76	102	132	172	60	62	90	88	115	105
	●	●	220	12.7	84	112	146	189	60	62	90	88	115	105
	●	●	240	13.5	91	122	159	207	60	62	90	88	115	105
	●	●	260	14.3	99	132	172	224	60	62	90	88	115	105

Approximate Free Passage Diameter is the approximate diameter as listed of foreign matter that can pass through the nozzle without clogging. **Highlighted column shows the rated pressure.**



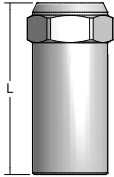
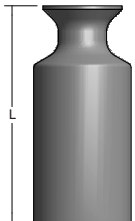
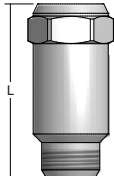
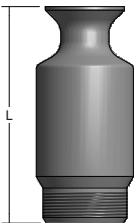
S PERFORMANCE DATA:
STANDARD ANGLE SPRAY

Inlet Conn. (in.)	Nozzle Type		Capacity Size	Approx. Free Passage Dia. (mm)	Flow Rate Capacity (liters per minute)				Spray Angle (°)					
									60° Series		90° Series		115° Series	
	HMFP	HHMFP			0.7 bar	1.5 bar	3 bar	6 bar	0.7 bar	3 bar	0.7 bar	3 bar	0.7 bar	3 bar
1-1/2	●	●	240	13.7	91	121	166	228	60	59	89	89	108	104
	●	●	260	14.2	98	139	191	263	62	61	90	92	113	103
	●	●	280	14.5	106	151	207	285	62	62	89	91	113	107
	●	●	300	15.0	112	159	219	301	63	62	93	92	114	108
	●	●	350	16.0	132	187	258	355	63	63	91	93	117	113
	●	●	400	16.8	147	209	287	395	64	64	92	93	120	115
	●	●	450	17.8	168	246	347	492	65	63	92	91	117	116
2	●	●	500	19.3	200	256	290	341	59	58	90	86	103	98
	●	●	600	20.8	225	285	317	363	61	58	89	86	108	102
	●	●	700	21.8	260	318	370	431	62	57	92	91	114	106
	●	●	800	24.6	299	385	422	497	60	57	93	89	113	111
2-1/2	●	●	1000	25.4	375	549	776	1098	61	58	92	90	112	112
	●	●	1200	30.7	454	664	940	1329	63	59	94	91	110	108
	●	●	1400	34.5	530	775	1097	1551	62	60	93	92	113	111
	●	●	1700	35.8	643	941	1331	1882	62	60	89	88	112	110
3	●	●	1800	25.4	672	983	1391	1967	61	59	90	92	112	108
	●	●	2000	43.9	771	1128	1596	2257	63	61	93	91	112	109
	●	●	2400	55.9	912	1335	1888	2670	62	60	95	93	114	111

Approximate Free Passage Diameter is the approximate diameter as listed of foreign matter that can pass through the nozzle without clogging.
Highlighted column shows the rated pressure.



DIMENSIONS AND WEIGHTS

Nozzle	Nozzle Type	Inlet Conn. (in.)	Spray Angle	Capacity Size	L (mm)	Hex. (in.)	Net Weight (kg)
	HMFP (F)	3/8	60°, 90°, 115°	14, 22	37.3	13/16	0.07
			60°, 90°, 115°	32	43.3	13/16	0.07
		1/2	60°, 90°, 115°	32	44.8	1	0.13
			60°, 90°, 115°	51, 57	54.0	1	0.13
		3/4	60°, 90°, 115°	70	71.4	1-1/4	0.25
			60°, 90°, 115°	84	67.0	1-3/8	0.36
			60°, 90°, 115°	100	73.0	1-3/8	0.38
		1	60°, 90°, 115°	120	77.0	1-3/8	0.37
		1	60°, 90°, 115°	120, 150, 170	82.6	1-3/4	0.64
		1-1/4	60°, 90°, 115°	170, 200, 220, 240, 260	95.3	2	0.86
1-1/2	60°	240, 260, 280	111.3	2-3/16	1		
	90°, 115°	300, 350, 400, 450	108.2	2-3/16	1		
	HMFP (F) Cast	2	60°	500, 600	165.8	—	1.5
			90°, 115°	700, 800	155.8	—	1.4
		2-1/2	60°	1000, 1200	203.2	—	2.65
			90°, 115°	1400, 1700	193	—	2.53
		3	60°	1800, 2000	228	—	3.25
			90°, 115°	2400	218	—	3.12
	HMFP (M)	3/8	60°, 90°, 115°	14, 22	25.4	11/16	0.04
			60°, 90°, 115°	32	28.3	3/4	0.06
		1/2	60°, 90°, 115°	32	31.0	7/8	0.07
			60°, 90°, 115°	51, 57	55.6	1	0.14
		3/4	60°, 90°, 115°	70	31.0	1-1/8	0.14
			60°, 90°, 115°	84	68.7	1-3/8	0.33
			60°, 90°, 115°	100	75.4	1-3/8	0.34
			60°, 90°, 115°	120	77.8	1-3/8	0.33
		1	60°, 90°, 115°	120, 150, 170	82.6	1-3/4	0.64
		1-1/4	60°, 90°, 115°	170, 200, 220, 240, 260	95.3	2	0.91
1-1/2	60°	240, 260, 280	111.3	2-3/16	1.04		
	90°, 115°	300, 350, 400, 450	108.2	2-3/16	1.04		
	HMFP (M) Cast	2	60°	500, 600	165.8	—	1.5
			90°, 115°	700, 800	155.8	—	1.4
		2-1/2	60°	1000, 1200	203.2	—	2.65
			90°, 115°	1400, 1700	193	—	2.53
		3	60°	1800, 2000	228	—	3.25
			90°, 115°	2400	218	—	3.12

Based on the largest/heaviest version of each type.

