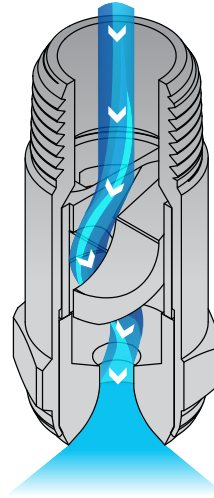


OVERVIEW: FULLJET MAXIMUM FREE PASSAGE (MFP)

- 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 — SS 90 70

BSPT connections require the addition of a "B" prior to the inlet connection. Use material code SS for 316 stainless steel MFP nozzles.

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	316 stainless steel vane and choice of brass or 316 stainless steel (SS) bodies	B21-B22	B23
	F	1-1/4 to 3	316 stainless steel vane and 316 stainless steel (SS) body		
HHMFP	M	3/8 to 1	316 stainless steel vane and choice of brass or 316 stainless steel (SS) bodies	B21-B22	
	M	1-1/4 to 3	316 stainless steel vane and 316 stainless steel (SS) body		

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. (in.)	Flow Rate Capacity (gallons per minute)				Spray Angle (°)					
									60° Series		90° Series		115° Series	
	HMFP	HHMFP			10 psi	20 psi	40 psi	80 psi	10 psi	40 psi	10 psi	40 psi	10 psi	40 psi
3/8	●	●	14	.125	1.4	1.8	2.4	3.2	60	62	90	84	115	100
	●	●	22	.156	2.2	2.9	3.8	5.1	60	62	90	84	115	100
	●	●	32	.188	3.2	4.2	5.6	7.4	60	62	90	84	115	100
1/2	●	●	32	.188	3.2	4.2	5.6	7.4	60	62	90	84	115	100
	●	●	51	.219	5.1	6.7	8.9	11.7	60	62	90	84	115	100
	●	●	57	.250	5.7	7.5	9.9	13.1	60	62	90	84	115	100
3/4	●	●	70	.281	7.0	9.2	12.2	16.1	60	62	90	84	115	100
	●	●	84	.313	8.4	11.1	14.6	19.3	60	62	90	84	115	100
	●	●	100	.344	10.0	13.2	17.4	23	60	62	90	84	115	100
	●	●	120	.375	12.0	15.8	21	28	60	62	90	84	115	100
1	●	●	120	.375	12.0	15.8	21	28	60	62	90	84	115	100
	●	●	150	.406	15.0	19.5	25	33	60	62	90	88	115	105
	●	●	170	.437	17.0	22	29	37	60	62	90	88	115	105
1-1/4	●	●	170	.437	17.0	22	29	37	60	62	90	88	115	105
	●	●	200	.469	20	26	34	44	60	62	90	88	115	105
	●	●	220	.500	22	29	37	48	60	62	90	88	115	105
	●	●	240	.531	24	31	41	53	60	62	90	88	115	105
	●	●	260	.562	26	34	44	57	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. (in.)	Flow Rate Capacity (gallons per minute)				Spray Angle (°)					
	HMFP	HHMFP			Flow Rate Capacity (gallons per minute)				60° Series		90° Series		115° Series	
					10 psi	20 psi	40 psi	80 psi	10 psi	40 psi	10 psi	40 psi	10 psi	40 psi
1-1/2	●	●	240	.54	24	32	43	58	60	59	89	89	108	104
	●	●	260	.558	26	35	47	63	62	61	90	92	113	103
	●	●	280	.571	28	38	50	68	62	62	89	91	113	107
	●	●	300	.59	30	42	58	80	63	62	93	92	114	108
	●	●	350	.63	35	48	67	93	63	63	91	93	117	113
	●	●	400	.66	40	55	77	106	64	64	92	93	120	115
	●	●	450	.7	45	62	86	119	65	63	92	91	117	116
2	●	●	500	.76	50	70	97	135	59	58	90	86	103	98
	●	●	600	.82	60	84	116	162	61	58	89	86	108	102
	●	●	700	.86	70	98	136	189	62	57	92	91	114	106
	●	●	800	.97	80	111	155	216	60	57	93	89	113	111
2-1/2	●	●	1000	1	100	137	188	258	61	58	92	90	112	112
	●	●	1200	1.21	120	165	226	309	63	59	94	91	110	108
	●	●	1400	1.36	140	192	263	361	62	60	93	92	113	111
	●	●	1700	1.41	170	233	320	438	62	60	89	88	112	110
3	●	●	1800	1.55	180	242	325	436	61	59	90	92	112	108
	●	●	2000	1.73	200	269	361	485	63	61	93	91	112	109
	●	●	2400	2.2	240	322	433	582	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 (in.)	Hex. (in.)	Net Weight (oz.)
	HMFP (F)	3/8	60°, 90°, 115°	14, 22	1.460	13/16	2.4
			60°, 90°, 115°	32	1.701	13/16	2.5
		1/2	60°, 90°, 115°	32	1.770	1	4.5
			60°, 90°, 115°	51, 57	2.120	1	4.6
		3/4	60°, 90°, 115°	70	2.400	1-1/4	8.9
			60°, 90°, 115°	84	2.637	1-3/8	12.6
			60°, 90°, 115°	100	2.894	1-3/8	13.3
			60°, 90°, 115°	120	3.070	1-3/8	12.9
		1	60°, 90°, 115°	120, 150, 170	3.250	1-3/4	22.5
		1-1/4	60°, 90°, 115°	170, 200, 220, 240, 260	3.750	2	30.5
1-1/2	60°, 90°, 115°	240, 260, 280, 300, 350, 400, 450	4.380	2-3/16	35.3		
	HMFP (F)	2	60°, 90°, 115°	500, 600, 700, 800	6.528	2-3/4 dia.	52.9
		2-1/2	60°, 90°, 115°	1000, 1200, 1400, 1700	8.000	3-13/16 dia.	93.5
		3	60°, 90°, 115°	1800, 2000, 2400	9.440	4-3/16 dia.	114.6
	HHMFP (M)	3/8	60°, 90°, 115°	14, 22	1.000	11/16	1.4
			60°, 90°, 115°	32	1.701	3/4	2
		1/2	60°, 90°, 115°	32	1.225	7/8	2.4
			60°, 90°, 115°	51, 57	2.198	1	4.9
		3/4	60°, 90°, 115°	70	1.810	1-1/8	5
			60°, 90°, 115°	84	2.713	1-3/8	11.5
			60°, 90°, 115°	100	2.980	1-3/8	12.1
			60°, 90°, 115°	120	3.100	1-3/8	11.5
		1	60°, 90°, 115°	120, 150, 170	3.250	1-3/4	22.5
		1-1/4	60°, 90°, 115°	170, 200, 220, 240, 260	3.750	2	32
1-1/2	60°, 90°, 115°	240, 260, 280, 300, 350, 400, 450	4.380	2-3/16	36.7		
	HHMFP (M)	2	60°, 90°, 115°	500, 600, 700, 800	6.528	2-3/4 dia.	52.9
		2-1/2	60°, 90°, 115°	1000, 1200, 1400, 1700	8.000	3-13/16 dia.	93.5
		3	60°, 90°, 115°	1800, 2000, 2400	9.440	4-3/16 dia.	114.6

Based on the largest/heaviest version of each type.

