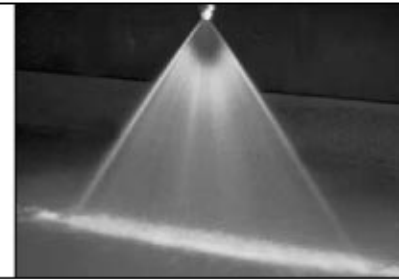
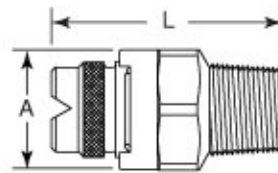


Flat "V" spray nozzles

ZF SERIES

DIMENSIONS

NOZZLE BSPT PIPE SIZE	Length L (mm)	Dim. A (mm)
1/8 ZF	41	25
1/4 ZF	43	25
3/8 ZF	44	25
1/2 ZF	46	25
3/8 ZLF	54	32
1/2 ZLF	56	32



SPRAY CHARACTERISTICS:

ZF-Series spray nozzles produce a flat, fan-shaped spray pattern with spray angles available from 15° to 110° measured at 3 bar. Spray angles generally increase with pressure, as shown in the capacity table.

Spray density tapers off toward the outside of these sprays, to permit overlapping of spray patterns while maintaining uniform spray density.

CONSTRUCTION:

The tip models listed are machined from bar stock and are one piece construction. Standard materials are brass, 303 stainless steel and 316 stainless steel. All bodies are available in either BSPT or NPT threads.

Please see page 40 for body styles and adapters.

Please see page 55 for molded plastic models.

TYPICAL APPLICATIONS:

Suitable for a variety of washing and spraying applications.

- Parts Cleaning
- Metal Washing
- Foam Control
- Asphalt Spraying
- Gravel Washing
- Vehicle Washing
- Fertilizer Spraying
- Dishwashers

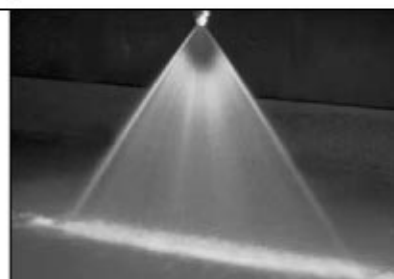
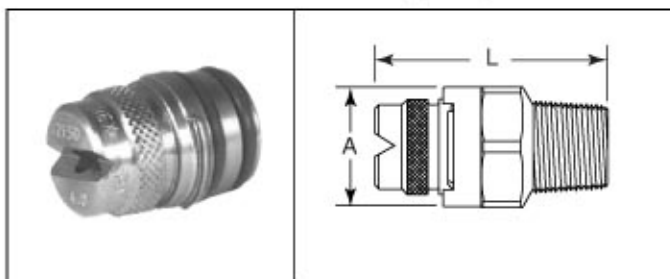
SPRAY ANGLE @ 3bar	ZF MODEL	ZLF MODEL	EQUIV ORIFICE DIAMETER (mm)	CAPACITY (L/min) AT VARIOUS PRESSURES (bar)													SPRAY ANGLE @			
				0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	5 bar	7 bar	10 bar	20 bar	30 bar	1.5 bar	3 bar	5 bar	
110°	ZF11003		1.1	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	92°	110°	118°	
	ZF11004		1.2	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	90°	110°	112°	
	ZF11005		1.35	0.62	0.81	0.95	0.31	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	96°	110°	114°	
	ZF11006		1.47	0.75	0.97	1.14	0.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	97°	110°	115°	
	ZF11008		1.70	1.00	1.29	1.53	0.49	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	100°	110°	115°	
	ZF11010		1.91	1.25	1.61	1.91	0.61	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	102°	110°	115°	
	ZF11015		2.31	1.87	2.42	2.86	0.92	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	102°	110°	115°	
	ZF11020		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	103°	110°	112°	
	ZF11030		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	103°	110°	115°	
	ZF11040		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	103°	110°	115°	
	ZF11050		4.24	6.2	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36	51	62	107°	110°	116°	
	ZF11060		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36	43	61	75	103°	110°	115°	
	ZF11070		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	32	36	42	50	71	87	107°	110°	115°	
		ZLF11080		5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	107°	110°	115°
		ZLF110100		5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	106°	110°	115°
		ZLF110120		6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	108°	110°	117°
	ZLF110150		7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	104°	110°	115°	
	ZLF110200		8.46	25.0	32.2	38.1	45.6	55.8	64	79	91	102	121	144	204	250	106°	110°	116°	
	ZLF110400		11.96	50	64	76	91	112	129	158	182	204	241	288	408	499	105°	110°	115°	
95°	ZF9503		1.1	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	86°	95°	101°	
	ZF9504		1.2	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	86°	95°	101°	
	ZF9505		1.35	0.62	0.81	0.95	0.31	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	86°	95°	101°	
	ZF9506		1.47	0.75	0.97	1.14	0.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	86°	95°	101°	
	ZF9508		1.70	1.00	1.29	1.53	0.49	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	86°	95°	100°	
	ZF9510		1.91	1.25	1.61	1.91	0.61	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	88°	95°	99°	
	ZF9515		2.31	1.87	2.42	2.86	0.92	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	90°	95°	100°	
	ZF9520		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	89°	95°	99°	
	ZF9530		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	90°	95°	101°	
	ZF9540		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	90°	95°	100°	
	ZF9550		4.24	6.2	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36	51	62	91°	95°	101°	
	ZF9560		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36	43	61	75	92°	95°	102°	
	ZF9570		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	32	36	42	50	71	87	92°	95°	103°	
		ZLF9580		5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	92°	95°	103°
		ZLF95100		5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	92°	95°	103°
		ZLF95120		6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	92°	95°	103°
	ZLF95150		7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	92°	95°	102°	

QUICK DISCONNECT

SPRAY ANGLE @ 3bar	ZF MODEL	ZLF MODEL	EQUIV. ORIFICE DIAMETER (mm)	CAPACITY (L/min) AT VARIOUS PRESSURES (bar)													SPRAY ANGLE @			
				0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	5 bar	7 bar	10 bar	20 bar	30 bar	1.5 bar	3 bar	5 bar	
80°	ZF8002		0.91	0.25	0.32	0.38	0.46	0.56	0.64	0.79	0.91	1.0	1.2	1.4	2.0	2.45	74°	80°	83°	
	ZF8003		1.1	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	74°	80°	83°	
	ZF8004		1.2	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	74°	80°	83°	
	ZF8005		1.35	0.62	0.81	0.95	0.31	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	74°	80°	83°	
	ZF8006		1.47	0.75	0.97	1.14	0.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	74°	80°	83°	
	ZF8008		1.70	1.00	1.29	1.53	0.49	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	75°	80°	83°	
	ZF8010		1.91	1.25	1.61	1.91	0.61	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	75°	80°	83°	
	ZF8015		2.31	1.87	2.42	2.86	0.92	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	74°	80°	86°	
	ZF8020		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	74°	80°	85°	
	ZF8030		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	75°	80°	86°	
	ZF8040		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	76°	80°	85°	
	ZF8050		4.24	6.2	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36	51	62	77°	80°	84°	
	ZF8060		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36	43	61	75	77°	80°	84°	
	ZF8070		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	32	36	42	50	71	87	78°	80°	87°	
		ZLF8080		5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	78°	80°	88°
		ZLF80100		5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	75°	80°	83°
		ZLF80120		6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	73°	80°	84°
		ZLF80150		7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	74°	80°	82°
		ZLF80200		8.46	25.0	32.2	38.1	45.6	55.8	64	79	91	102	121	144	204	250	74°	80°	82°
		ZLF80400		11.96	50	64	76	91	112	129	158	182	204	241	288	408	499	74°	80°	82°
65°	ZF6502		0.91	0.25	0.32	0.38	0.46	0.56	0.64	0.79	0.91	1.0	1.2	1.4	2.0	2.45	53°	65°	72°	
	ZF6503		1.1	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	53°	65°	72°	
	ZF6504		1.2	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	54°	65°	72°	
	ZF6505		1.35	0.62	0.81	0.95	0.31	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	54°	65°	72°	
	ZF6506		1.47	0.75	0.97	1.14	0.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	54°	65°	72°	
	ZF6508		1.70	1.00	1.29	1.53	0.49	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	55°	65°	71°	
	ZF6510		1.91	1.25	1.61	1.91	0.61	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	57°	65°	73°	
	ZF6512		2.08	1.50	1.93	2.29	2.73	3.3	3.9	4.7	5.5	6.1	7.2	8.6	12.2	15.0	59°	65°	71°	
	ZF6515		2.31	1.87	2.42	2.86	0.92	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	59°	65°	72°	
	ZF6520		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	61°	65°	72°	
	ZF6530		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	62°	65°	72°	
	ZF6540		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	63°	65°	72°	
	ZF6550		4.24	6.2	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36	51	62	63°	65°	73°	
	ZF6560		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36	43	61	75	63°	65°	73°	
	ZF6570		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	32	36	42	50	71	87	63°	65°	74°	
		ZLF6580		5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	59°	65°	69°
		ZLF65100		5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	59°	65°	69°
		ZLF65120		6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	59°	65°	68°
		ZLF65150		7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	59°	65°	68°
		ZLF65200		8.46	25.0	32.2	38.1	45.6	55.8	64	79	91	102	121	144	204	250	60°	65°	67°
	ZLF65300		10.36	37	48	57	68	84	97	118	137	153	181	216	306	374	60°	65°	68°	
	ZLF65400		11.96	50	64	76	91	112	129	158	182	204	241	288	408	499	60°	65°	68°	
50°	ZF5002		0.91	0.25	0.32	0.38	0.46	0.56	0.64	0.79	0.91	1.0	1.2	1.4	2.0	2.45	43°	50°	57°	
	ZF5003		1.1	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	44°	50°	57°	
	ZF5004		1.2	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	44°	50°	56°	
	ZF5005		1.35	0.62	0.81	0.95	0.31	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	44°	50°	56°	
	ZF5006		1.47	0.75	0.97	1.14	0.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	45°	50°	56°	
	ZF5008		1.70	1.00	1.29	1.53	0.49	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	45°	50°	56°	
	ZF5010		1.91	1.25	1.61	1.91	0.61	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	43°	50°	55°	
	ZF5012		2.08	1.50	1.93	2.29	2.73	3.3	3.9	4.7	5.5	6.1	7.2	8.6	12.2	15.0	43°	50°	55°	
	ZF5015		2.31	1.87	2.42	2.86	0.92	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	43°	50°	55°	
	ZF5020		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	43°	50°	55°	
	ZF5030		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	43°	50°	54°	
	ZF5040		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	43°	50°	54°	
	ZF5050		4.24	6.2	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36	51	62	43°	50°	53°	
	ZF5060		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36	43	61	75	43°	50°	53°	
	ZF5070		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	32	36	42	50	71	87	44°	50°	53°	

DIMENSIONS

NOZZLE BSPT PIPE SIZE	Length L (mm)	Dim. A (mm)
1/8 ZF	41	25
1/8 ZF	43	25
3/16 ZF	44	25
1/2 ZF	46	25
5/8 ZLF	54	32
1/2 ZLF	56	32



SPRAY ANGLE @ 3bar	ZF MODEL	ZLF MODEL	EQUIV. ORIFICE DIAMETER (mm)	CAPACITY (L/min) AT VARIOUS PRESSURES (bar)													SPRAY ANGLE @		
				0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	5 bar	7 bar	10 bar	20 bar	30 bar	1.5 bar	3 bar	5 bar
40°		ZLF5080	5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	44°	50°	52°
		ZLF50100	5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	44°	50°	52°
		ZLF50120	6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	44°	50°	53°
		ZLF50150	7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	46°	50°	52°
		ZLF50200	8.46	25.0	32.2	38.1	45.6	55.8	64	79	91	102	121	144	204	250	46°	50°	54°
		ZLF50300	10.36	37	48	57	68	84	97	118	137	153	181	216	306	374	47°	50°	54°
	ZLF50400	11.96	50	64	76	91	112	129	158	182	204	241	288	408	499	47°	50°	54°	
	ZF4002		0.91	0.25	0.32	0.38	0.46	0.56	0.64	0.79	0.91	1.0	1.2	1.4	2.0	2.45	26°	40°	46°
	ZF4003		1.04	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	30°	40°	45°
	ZF4004		1.19	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	32°	40°	45°
	ZF4005		1.35	0.62	0.81	0.95	1.14	1.40	1.61	1.97	2.28	2.55	3.01	3.60	5.1	6.2	35°	40°	44°
	ZF4006		1.47	0.75	0.97	1.14	1.37	1.67	1.93	2.37	2.73	3.06	3.62	4.32	6.1	7.5	37°	40°	44°
	ZF4008		1.70	1.00	1.29	1.53	1.82	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	35°	40°	43°
	ZF4010		1.91	1.25	1.61	1.91	2.28	2.79	3.22	3.95	4.56	5.10	6.0	7.2	10.2	12	30°	40°	43°
ZF4015		2.31	1.87	2.42	2.86	3.42	4.19	4.83	5.92	6.8	7.6	9.0	10.8	15	19	35°	40°	41°	
ZF4020		2.67	2.50	3.22	3.81	4.56	5.58	6.4	7.9	9.1	10.2	12.1	14.4	20	25	33°	40°	43°	
ZF4030		3.28	3.74	4.83	5.72	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37	34°	40°	45°	
ZF4040		3.78	4.99	6.45	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	33°	40°	43°	
ZF4050		4.24	6.24	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36.0	51	62	35°	40°	46°	
ZF4060		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36.2	43.2	61	75	37°	40°	48°	
ZF4070		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	31.9	35.7	42.2	50.4	71	87	36°	40°	47°	
25°		ZLF4080	5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	35°	40°	46°
		ZLF40100	5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	33°	40°	44°
		ZLF40120	6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	36°	40°	43°
		ZLF40150	7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	36°	40°	43°
		ZLF40200	8.46	25.0	32.2	38.1	45.6	55.8	64	79	91	102	121	144	204	250	37°	40°	44°
		ZLF40400	11.96	50	64	76	91	112	129	158	182	204	241	288	408	499	38°	40°	43°
	ZF2503		1.04	0.37	0.48	0.57	0.68	0.84	0.97	1.18	1.37	1.53	1.81	2.16	3.06	3.74	20°	25°	31°
	ZF2504		1.19	0.50	0.64	0.76	0.91	1.12	1.29	1.58	1.82	2.04	2.41	2.88	4.08	4.99	19°	25°	31°
	ZF2505		1.35	0.62	0.81	0.95	1.14	1.40	1.61	1.97	2.28	2.55	3.01	3.60	5.1	6.2	18°	25°	31°
	ZF2506		1.47	0.75	0.97	1.14	1.37	1.67	1.93	2.37	2.73	3.06	3.62	4.32	6.1	7.5	17°	25°	31°
	ZF2508		1.70	1.00	1.29	1.53	1.82	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	16°	25°	32°
	ZF2510		1.91	1.25	1.61	1.91	2.28	2.79	3.22	3.95	4.56	5.10	6.0	7.2	10.2	12	17°	25°	31°
	ZF2515		2.31	1.87	2.42	2.86	3.42	4.19	4.83	5.92	6.8	7.6	9.0	10.8	15	19	18°	25°	30°
	ZF2520		2.67	2.50	3.22	3.81	4.56	5.58	6.4	7.9	9.1	10.2	12.1	14.4	20	25	18°	25°	28°
ZF2530		3.28	3.74	4.83	5.72	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37	19°	25°	29°	
ZF2540		3.78	4.99	6.45	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	22°	25°	32°	
ZF2550		4.24	6.24	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36.0	51	62	20°	25°	32°	
ZF2560		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36.2	43.2	61	75	18°	25°	28°	
ZF2570		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	31.9	35.7	42.2	50.4	71	87	19°	25°	27°	
	ZLF2580	5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	20°	25°	27°	
	ZLF25100	5.99	12.5	16.1	19.1	22.8	27.9	32.2	39.5	45.6	51.0	60	72	102	125	21°	25°	28°	
	ZLF25120	6.55	15.0	19.3	22.9	27.3	33.5	38.7	47.4	54.7	61.1	72	86	122	150	20°	25°	28°	
	ZLF25150	7.34	18.7	24.2	28.6	34.2	41.9	48.3	59.2	68	76	90	108	153	187	18°	25°	28°	
	ZLF25200	8.46	25.0	32.2	38.1	45.6	55.8	64	79	91	102	121	144	204	250	19°	25°	27°	
	ZLF25400	11.96	50	64	76	91	112	129	158	182	204	241	288	408	499	19°	25°	27°	

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SPRAY ANGLE @ 3bar	ZF MODEL	ZLF MODEL	EQUIV ORIFICE DIAMETER (mm)	CAPACITY (L/min) AT VARIOUS PRESSURES (bar)													SPRAY ANGLE @			
				0.3 bar	0.5 bar	0.7 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	5 bar	7 bar	10 bar	20 bar	30 bar	1.5 bar	3 bar	5 bar	
15°	ZF1505		1.35	0.62	0.81	0.95	1.14	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	10°	15°	20°	
	ZF1506		1.47	0.75	0.97	1.14	1.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	11°	15°	24°	
	ZF1508		1.70	1.00	1.29	1.53	1.82	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	11°	15°	21°	
	ZF1510		1.91	1.25	1.61	1.91	2.28	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	13°	15°	16°	
	ZF1515		2.31	1.87	2.42	2.86	3.4	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	11°	15°	20°	
	ZF1520		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	11°	15°	20°	
	ZF1530		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	11°	15°	18°	
	ZF1540		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	12°	15°	18°	
	ZF1550		4.24	6.2	8.1	9.5	11.4	14.0	16.1	19.7	22.8	25.5	30.1	36	51	62	12°	15°	19°	
	ZF1560		4.62	7.5	9.7	11.4	13.7	16.7	19.3	23.7	27.3	30.6	36	43	61	75	12°	15°	17°	
	ZF1570		5.00	8.7	11.3	13.3	16.0	19.5	22.6	27.6	32	36	42	50	71	87	12°	15°	19°	
		ZLF1580		5.36	10.0	12.9	15.3	18.2	22.3	25.8	31.6	36.5	40.8	48.2	58	82	100	12°	15°	19°
		ZLF15100		5.99	12.5	16.1	19.1	22.8	27.9	32	39	46	51	60	72	102	125	12°	15°	19°
		ZLF15120		6.55	15.0	19.3	22.9	27.3	33	39	47	55	61	72	86	122	150	12°	15°	19°
		ZLF15150		7.34	18.7	24.2	28.6	34	42	48	59	68	76	90	108	153	187	12°	15°	18°
	ZLF15200		8.46	25.0	32.2	38	46	56	64	79	91	102	121	144	204	250	13°	15°	17°	
5°	ZF0505		1.35	0.62	0.81	0.95	1.14	1.40	1.61	1.97	2.28	2.55	3.01	3.6	5.1	6.2	10°	15°	20°	
	ZF0506		1.47	0.75	0.97	1.14	1.37	1.67	1.93	2.37	2.73	3.06	3.6	4.3	6.1	7.5	11°	15°	24°	
	ZF0508		1.70	1.00	1.29	1.53	1.82	2.23	2.58	3.2	3.6	4.1	4.8	5.8	8.2	10.0	11°	15°	21°	
	ZF0510		1.91	1.25	1.61	1.91	2.28	2.79	3.2	3.9	4.6	5.1	6.0	7.2	10.2	12.5	13°	15°	16°	
	ZF0515		2.31	1.87	2.42	2.86	3.4	4.2	4.8	5.9	6.8	7.6	9.0	10.8	15.3	18.7	11°	15°	20°	
	ZF0520		2.67	2.50	3.2	3.8	4.6	5.6	6.4	7.9	9.1	10.2	12.1	14.4	20.4	25.0	11°	15°	20°	
	ZF0530		3.28	3.7	4.8	5.7	6.8	8.4	9.7	11.8	13.7	15.3	18.1	21.6	30.6	37.4	11°	15°	18°	
	ZF0540		3.78	5.0	6.4	7.6	9.1	11.2	12.9	15.8	18.2	20.4	24.1	28.8	41	50	12°	15°	18°	