



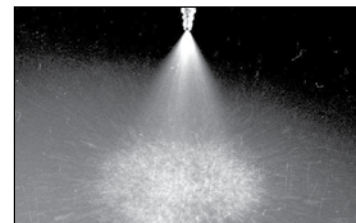
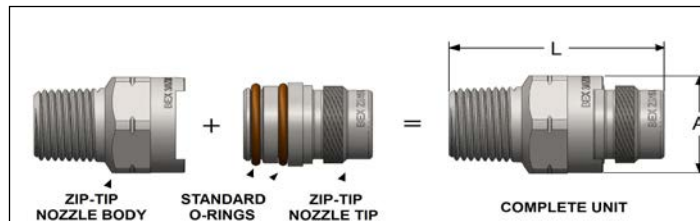
ZS SPRAY NOZZLE SPECIFICATIONS



ZIP-TIP NOZZLE INSTALLATION & REMOVAL

- NO TOOLS REQUIRED for ZIP-TIP nozzle tip installation or removal
- POSITIVE ALIGNMENT of spray pattern
- "Light-lock" feature allows for easy removal
- Seals located on and removed with nozzle tip for easy flushing

NOZZLE NPT PIPE SIZE	Length L (in)	Dim. A (in)
1/8" ZS	1.60	0.97
1/4" ZS	1.70	0.97
3/8" ZS	1.73	0.97
1/2" ZS	1.80	0.97
1/2" ZLS	2.11	1.25
3/4" ZLS	2.19	1.25



SPRAY CHARACTERISTICS:

Full cone spray pattern, with uniform distribution throughout the cone.

CONSTRUCTION:

The tip models listed are machined from bar stock and are of two piece construction. The tip also contains a patented insert with larger flow passages than older styles, and is less susceptible to clogging. Standard materials are brass, 303 stainless steel and 316 stainless steel. All bodies are available in either NPT or BSPT threads.

TYPICAL APPLICATIONS:

- Chemical Processing
 - Cooling Sprays
 - Foam Breaking
 - Continuous Casting
- U.S. Patent No. 4,142,682
Canadian Patent No. 1,050,589

Model		Max. Free Passage (in)	CAPACITY AT VARIOUS PRESSURES (USGPM)												SPRAY ANGLE @ (degrees)		
ZS Model	ZLS Model		3 psi	5 psi	7 psi	10 psi	15 psi	20 psi	30 psi	40 psi	60 psi	80 psi	100 psi	150 psi	7 psi	20 psi	80 psi
ZS1		0.033	0.06	0.07	0.08	0.10	0.12	0.14	0.17	0.20	0.25	0.28	0.32	0.39	--	55	52
ZS1.5		0.046	0.08	0.11	0.13	0.15	0.18	0.21	0.26	0.30	0.37	0.42	0.47	0.58	--	65	57
ZS2		0.051	0.11	0.14	0.17	0.20	0.25	0.28	0.35	0.40	0.49	0.57	0.63	0.77	54	59	60
ZS3		0.051	0.16	0.21	0.25	0.30	0.37	0.42	0.52	0.60	0.73	0.85	0.95	1.16	50	53	60
ZS3.5		0.035	0.19	0.25	0.29	0.35	0.43	0.50	0.61	0.70	0.86	0.99	1.11	1.36	48	58	61
ZS5		0.064	0.27	0.35	0.42	0.50	0.61	0.71	0.87	1.00	1.22	1.41	1.58	1.94	60	75	70
ZS6		0.064	0.33	0.42	0.50	0.60	0.73	0.85	1.04	1.20	1.47	1.70	1.90	2.32	67	72	70
ZS6.5		0.091	0.36	0.46	0.54	0.65	0.80	0.92	1.13	1.30	1.59	1.84	2.06	2.52	48	56	70
ZS7.5		0.091	0.41	0.53	0.63	0.75	0.92	1.06	1.30	1.50	1.84	2.12	2.37	2.90	55	65	48
ZS8.5		0.091	0.47	0.60	0.71	0.85	1.04	1.20	1.47	1.70	2.08	2.40	2.69	3.3	58	65	63
ZS10		0.091	0.55	0.71	0.84	1.00	1.22	1.41	1.73	2.00	2.45	2.83	3.2	3.9	60	65	62
ZS14		0.091	0.77	0.99	1.17	1.40	1.71	1.98	2.42	2.80	3.4	4.0	4.4	5.4	78	85	75
ZS15		0.102	0.82	1.06	1.26	1.50	1.84	2.12	2.60	3.00	3.7	4.2	4.7	5.8	63	65	60
ZS18		0.102	0.99	1.27	1.51	1.80	2.20	2.55	3.12	3.6	4.4	5.1	5.7	7.0	85	88	76
ZS20		0.102	1.10	1.41	1.67	2.00	2.45	2.83	3.5	4.0	4.9	5.7	6.3	7.7	76	82	75
ZS22		0.114	1.20	1.56	1.84	2.20	2.69	3.11	3.8	4.4	5.4	6.2	7.0	8.5	76	78	76
	ZLS16	0.144	0.88	1.13	1.34	1.60	1.96	2.26	2.77	3.2	3.9	4.5	5.1	6.2	55	60	55
	ZLS25	0.144	1.37	1.77	2.09	2.50	3.06	3.5	4.3	5.0	6.1	7.1	7.9	9.7	68	73	65
	ZLS32	0.144	1.75	2.26	2.68	3.2	3.9	4.5	5.5	6.4	7.8	9.1	10.1	12.4	80	90	75
	ZLS40	0.162	2.19	2.83	3.3	4.0	4.9	5.7	6.9	8.0	9.8	11.3	12.6	15.5	86	90	81