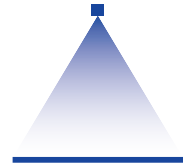


Low pressure flat fan nozzles with dovetail guide

Series 660

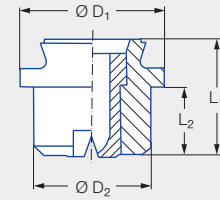


Features:

- Uniform, parabolic liquid distribution
- Stable spray angle
- Spray automatically aligned approx. 5° to the longitudinal axis of the pipe due to dovetail guide
- Assembly with retaining nut
- Non-clogging
- High spray energy



Series 660



Applications:

- Cleaning installations
- Spray pipes
- Cooling pipes

Connection	Dimensions [in]				Weight [lb] Brass
	L ₁	L ₂	Ø D ₁	Ø D ₂	
Assembly with retaining nut 3/8 BSPP and dovetail guide	0.47	0.28	0.58	0.47	0.02

Spray angle	Ordering number				Equivalent bore diameter A [in]	Narrowest free cross section Ø [in]	V̇ water [gal/min]							Spray width B [in] (at p = 75 psi)	
	Type	Material number					p [psi]								
		16	17 ¹	30											
		Stainless steel 303	Stainless steel 316Ti / Stainless steel 316L	Brass			7	15	30	45	75	liters per minute 5 bar	145	H = 10 [in]	H = 20 [in]
20°	660.301	●	●	●	0.03	0.02	0.04*	0.06*	0.09	0.11	0.14	0.51	0.19	3	6
	660.361	●	●	●	0.04	0.03	0.08*	0.12*	0.17	0.21	0.27	1.00	0.37	3	6
	660.441	●	●	●	0.05	0.04	0.16*	0.24	0.34	0.41	0.53	1.98	0.74	3	6
	660.481	●	●	●	0.06	0.05	0.21*	0.30	0.43	0.53	0.68	2.53	0.95	3	6
30°	660.302	●	●	●	0.02	0.02	0.04*	0.06*	0.09	0.11	0.14	0.51	0.19	5	9
	660.362	●	●	●	0.04	0.03	0.08*	0.12*	0.17	0.21	0.27	1.00	0.37	5	9
	660.402	●	●	●	0.05	0.035	0.13*	0.13	0.27	0.33	0.42	1.58	0.59	5	9
	660.482	●	●	●	0.06	0.04	0.21*	0.30	0.43	0.53	0.68	2.53	0.95	5	9
	660.562	●	●	●	0.08	0.06	0.32	0.32	0.67	0.81	1.04	3.95	1.48	5	9
45°	660.303	●	●	●	0.03	0.02	0.04*	0.06*	0.09	0.11	0.14	0.51	0.19	7	13
	660.363	●	●	●	0.04	0.024	0.08*	0.12*	0.17	0.21	0.27	1.00	0.37	7	14
	660.403	●	●	●	0.05	0.035	0.13*	0.13	0.27	0.33	0.42	1.58	0.59	8	15
	660.483	●	●	●	0.06	0.04	0.21*	0.30	0.43	0.53	0.68	2.53	0.95	8	15
	660.563	●	●	●	0.08	0.06	0.32	0.32	0.67	0.81	1.04	3.95	1.48	8	16
	660.643	●	●	●	0.10	0.07	0.52	0.76	1.08	1.32	1.70	6.33	2.36	9	16
60°	660.304	●	●	●	0.03	0.016	0.04*	0.06*	0.09	0.11	0.14	0.51	0.19	10	19
	660.334	●	●	●	0.035	0.02	0.06*	0.09*	0.12	0.15	0.19	0.71	0.27	10	19
	660.364	●	●	●	0.04	0.024	0.08*	0.12*	0.17	0.21	0.27	1.00	0.37	10	20
	660.404	●	●	●	0.047	0.03	0.13*	0.19	0.27	0.33	0.42	1.58	0.59	10	20
	660.444	●	●	●	0.05	0.04	0.16*	0.24	0.34	0.41	0.53	1.98	0.74	10	20

* Differing spray pattern.

¹ We reserve the right to supply material 316Ti or 316L under material no. 17.





Spray angle	Ordering number				Equivalent bore diameter A [in]	Narrowest free cross section Ø [in]	V̇ water [gal/min]						Spray width B [in] (at p = 75 psi)		
	Type	Material number					p [psi]						H = 10 [in]	H = 20 [in]	
		16	17 ¹	30			7	15	30	45	75	liters per minute 5 bar			145
		Stainless steel 303	Stainless steel 316Ti/ Stainless steel 316L	Brass											
60°	660.484	●	●	●	0.06	0.04	0.21*	0.30	0.43	0.53	0.68	2.53	0.95	10	20
	660.514	●	●	●	0.063	0.043	0.25*	0.36	0.51	0.62	0.81	3.00	1.12	11	20
	660.564	●	●	●	0.08	0.05	0.32	0.47	0.67	0.82	1.06	3.95	1.48	11	21
	660.604	●	●	●	0.09	0.06	0.41	0.60	0.85	1.04	1.34	4.98	1.86	11	21
	660.644	●	●	●	0.10	0.063	0.52	0.76	1.08	1.32	1.70	6.33	2.36	11	21
	660.724	●	●	●	0.12	0.08	0.82	1.20	1.69	2.07	2.68	9.96	3.72	11	22
660.804	●	●	●	0.16	0.10	1.30	1.90	2.69	3.29	4.25	15.81	5.91	11	23	
75°	660.145	●		●	0.008	0.005	–	0.01*	0.014	0.017	0.021	0.08	0.03	15	27
	660.165	●		●	0.008	0.005	–	0.01*	0.017	0.02	0.03	0.10	0.04	15	27
	660.185	●		●	0.008	0.006	–	0.011*	0.02	0.03	0.035	0.13	0.05	15	27
	660.215	●		●	0.02	0.008	–	0.02*	0.03	0.04	0.05	0.18	0.07	15	27
	660.245	●		●	0.02	0.012	–	0.03*	0.04	0.05	0.07	0.26	0.10	15	27
	660.275	●		●	0.024	0.012	0.03*	0.04*	0.06	0.07	0.09	0.35	0.13	15	27
90°	660.216	●		●	0.016	0.008	–	0.02*	0.03	0.04	0.05	0.18	0.07	17	31
	660.276	●		●	0.02	0.012	0.03*	0.04*	0.06	0.07	0.09	0.35	0.13	17	31
	660.306	●	●	●	0.03	0.016	0.04*	0.06*	0.09	0.11	0.14	0.51	0.19	17	31
	660.336	●	●	●	0.035	0.02	0.06*	0.09*	0.12	0.15	0.19	0.71	0.27	17	32
	660.366	●	●	●	0.04	0.02	0.08*	0.12*	0.17	0.21	0.27	1.00	0.37	18	33
	660.406	●	●	●	0.047	0.028	0.13*	0.19	0.27	0.33	0.42	1.58	0.59	18	33
	660.446	●	●	●	0.05	0.03	0.16*	0.24	0.34	0.41	0.53	1.98	0.74	18	34
	660.486	●	●	●	0.06	0.03	0.21*	0.30	0.43	0.53	0.68	2.53	0.95	19	34
	660.516	●	●	●	0.063	0.035	0.25*	0.36	0.51	0.62	0.81	3.00	1.12	19	35
	660.566	●	●	●	0.08	0.04	0.32	0.47	0.67	0.82	1.06	3.95	1.48	19	35
	660.606	●	●	●	0.09	0.047	0.41	0.60	0.85	1.04	1.34	4.98	1.86	20	36
	660.646	●	●	●	0.10	0.05	0.52	0.76	1.08	1.32	1.70	6.33	2.36	20	37
	660.676	●	●	●	0.11	0.06	0.62	0.90	1.28	1.56	2.02	7.51	2.81	20	37
	660.726	●	●	●	0.12	0.07	0.82	1.20	1.69	2.07	2.68	9.96	3.72	20	39
660.806		●	●	0.16	0.09	1.30	1.90	2.69	3.29	4.25	15.81	5.91	21	41	
120°	660.187	●		●	0.014	0.008	–	0.011*	0.02	0.03	0.035	0.13	0.05	25	42
	660.217	●		●	0.016	0.008	–	0.02*	0.03	0.04	0.05	0.18	0.07	26	43
	660.247	●		●	0.02	0.012	–	0.03*	0.04	0.05	0.07	0.26	0.10	26	43
	660.277	●		●	0.024	0.012	0.03*	0.04*	0.06	0.07	0.09	0.35	0.13	26	45
	660.307	●		●	0.03	0.012	0.04*	0.06*	0.09	0.11	0.14	0.51	0.19	28	49
	660.337	●	●	●	0.035	0.016	0.06*	0.09*	0.12	0.15	0.19	0.71	0.27	29	53
	660.367	●	●	●	0.04	0.016	0.08*	0.12*	0.17	0.21	0.27	1.00	0.37	31	56
	660.407	●	●	●	0.047	0.02	0.13*	0.19	0.27	0.33	0.42	1.58	0.59	33	58
	660.447	●	●	●	0.05	0.02	0.16*	0.24	0.34	0.41	0.53	1.98	0.74	33	60
	660.487	●	●	●	0.06	0.02	0.21*	0.30	0.43	0.53	0.68	2.53	0.95	33	61
	660.517	●	●	●	0.063	0.035	0.25*	0.36	0.51	0.62	0.81	3.00	1.12	33	61
	660.567	●	●	●	0.08	0.035	0.32	0.47	0.67	0.82	1.06	3.95	1.48	34	63
	660.607	●	●	●	0.09	0.04	0.41	0.60	0.85	1.04	1.34	4.98	1.86	34	64
	660.647	●	●	●	0.10	0.05	0.52	0.76	1.08	1.32	1.70	6.33	2.36	35	65
	660.727	●	●	●	0.12	0.06	0.83	1.20	1.66	2.04	2.63	9.96	3.72	35	66
	660.807	●		●	0.16	0.08	1.30	1.90	2.69	3.29	4.25	15.81	5.91	35	67

* Differing spray pattern.

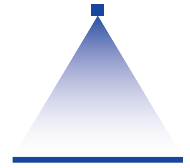
¹ We reserve the right to supply material 316Ti or 316L under material no. 17.

Conversion formula for this series: $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$

Ordering Type + Material no. = Ordering no.
example: 660.484 + 16 = 660.484.16



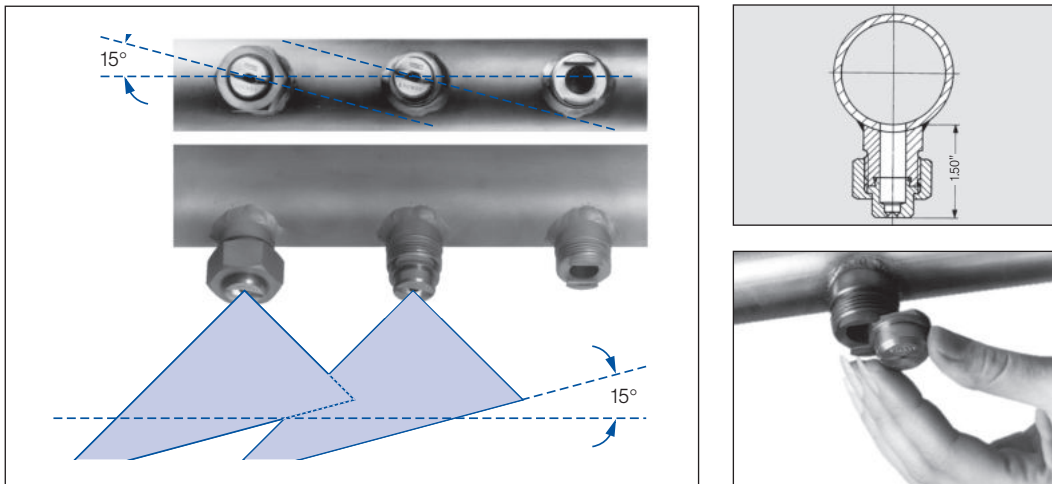
Assembly accessories can be found in Chapter 12 "Accessories".



Accessories

Nipple **066. 011. 17** (316 SS)
Weight: .14 lb.

Retaining nut **065. 200. 16** (303 SS)
065. 200. 17 (316 SS)
065. 200. 30 (Brass)
Weight: .13 lb.



Standard accessories, alignment, and installation for the Series 664 dovetail nozzle tip

A listing of alternatives for various assembly possibilities is shown in the Accessories section beginning on page 127.