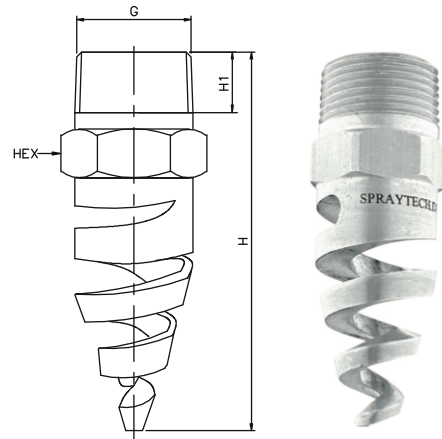


# DF Series Spiral Full Cone Spray Nozzles

**DF**

- Characteristic** : The absence of any internal parts make these nozzles non-clogging.
- Design** : One piece construction, non clogging type.
- Application** : Gas Washing, Cooling Towers , Fire Fighting Systems.
- Flow Rate** : 5 LPM TO 3410 LPM
- Pressure** : 2.0 Kg/cm<sup>2</sup> or Specified
- Spray Angle** : 60° To 180°
- End Connection** : 1/4" TO 4" BSP/ BSPT / NPT
- M.O.C.** : SS. 316, 304, BRASS, PVDF, PVC, PP, Teflon®



The helix spiral full cone nozzles combine small nozzle sizes with wide flow openings.

60° SPRAY ANGLE	CONNECTION END										ORIFICE SIZE (mm)	FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE							G/A DIMENSION. MM				
	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"			PRESSURE [BAR]							CONN.	H	H1	HEX	
MODEL NO.	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP		0.5	1.0	2.0	3.0	5.0	7.0	10.0					
DF14.475	●											2.4	2.37	3.36	4.75	5.82	7.51	8.89	10.62	1/4"	48	10	14
DF14.650	●											2.8	3.25	4.60	6.50	7.96	10.28	12.16	14.53	Weight (Metals) = 27.0 gms. Approx			
DF14.800	●											3.1	4.00	5.66	8.00	9.80	12.65	14.97	17.89	3/8"	58	10	17
DF24.100	●	●										3.5	5.00	7.07	10.00	12.25	15.81	18.71	22.36	Weight (Metals) = 53.7 gms. Approx			
DF24.125	●	●										3.9	6.25	8.84	12.50	15.31	19.76	23.39	27.95	1/2"	76	13.2	22
DF24.160	●	●										4.4	8.00	11.31	16.00	19.60	25.30	29.93	35.78	Weight (Metals) = 80.0 gms. Approx			
DF24.180	●	●										4.6	9.00	12.73	18.00	22.05	28.46	33.67	40.25	3/4"	86	14.5	27
DF24.200	●	●										4.9	10.00	14.14	20.00	24.49	31.62	37.42	44.72	Weight (Metals) = 170.0 gms. Approx			
DF24.225		●										5.2	11.25	15.91	22.50	27.56	35.58	42.09	50.31	1"	108	16.8	36
DF24.250		●										5.5	12.50	17.68	25.00	30.62	39.53	46.77	55.90	Weight (Metals) = 323.0 gms. Approx			
DF24.320		●										6.2	16.00	22.63	32.00	39.19	50.60	59.87	71.55	1 1/2"	138	19.1	51
DF24.400		●										7.0	20.00	28.28	40.00	48.99	63.25	74.83	89.44	Weight (Metals) = 634.0 gms. Approx			
DF24.520		●										7.9	26.00	36.77	52.00	63.69	82.22	97.28	116.28	2"	148	23.4	64
DF24.650			●									8.9	32.5	45.96	65.00	79.61	102.77	121.60	145.34	Weight (Metals) = XX gms. Approx			
DF24.800			●									9.8	40.00	56.57	80.00	97.98	126.49	149.67	178.89	3"	216	29.8	89
DF34.100			●									11.0	50.00	70.71	100.0	122.47	158.11	187.08	223.61	Weight (Metals) = XX gms. Approx			
DF34.118			●									12.0	59.00	83.44	118.0	144.52	186.57	220.76	263.86				
DF34.130				●								12.6	65.00	91.92	130.0	159.22	205.55	243.21	290.69				
DF34.160				●								13.9	80.00	113.14	160.0	195.96	252.98	299.33	357.77				
DF34.200					●							15.6	100	141.42	200.0	244.95	316.23	374.17	447.21				
DF34.227					●							16.6	113.5	160.51	227.0	278.02	358.92	424.68	507.59				
DF34.250					●							17.4	125	176.78	250.0	306.19	395.19	467.71	559.02				
DF34.300					●							19.0	150	212.13	300	367.42	474.34	561.25	670.82				
DF34.337					●							20.2	168.5	238.29	337.0	412.74	532.84	630.47	753.55				
DF34.400						●						22.0	200	282.84	400.0	489.90	632.46	748.33	894.43				
DF34.500						●						24.6	250	353.55	500.0	612.37	790.57	935.41	1118.03				
DF34.625						●						27.5	312.5	441.94	625.0	765.47	988.21	1169.27	1397.54				
DF34.710						●						29.3	355	502.05	710.0	869.57	1122.61	1328.29	1587.61				
DF34.800						●						31.1	400	565.69	800.0	979.80	1264.91	1496.66	1788.85				
DF44.1000							●					34.8	500	707.11	1000	1224.74	1581.14	1870.83	2236.07				
DF44.1250							●					38.9	625	883.88	1250	1530.93	1976.42	2338.54	2795.08				
DF44.1600							●					44.0	800	1131	1600	1959.59	2529.82	2993.33	3577.71				
DF44.2000								●				49.2	1000	1414	2000	2449.49	3162.28	3741.66	4472.14				
DF44.2500								●				55.1	1250	1767	2500	3061.86	3952.85	4677.07	5590.17				
DF44.3125								●				61.6	1562.5	2209	3125	3827.33	4941.06	5846.34	6987.71				

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

# DF Series Spiral Full Cone Spray Nozzles

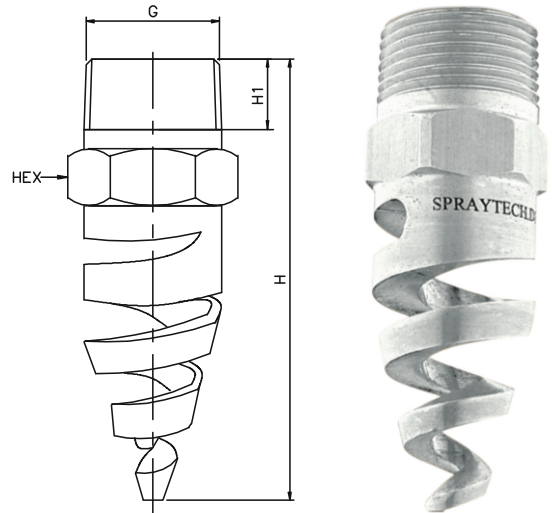
90° SPRAY ANGLE	CONNECTION END										FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE							G/A DIMENSION. MM			
	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	ORIFICE SIZE (mm)	PRESSURE [BAR]							CONN.	H	H1	HEX
MODEL NO.	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP		0.5	1.0	2.0	3.0	5.0	7.0	10.0				
DF16.475	●									2.4	2.37	3.36	4.75	5.82	7.51	8.89	10.62	1/4"	48	10	14
DF16.650	●									2.8	3.25	4.60	6.50	7.96	10.28	12.16	14.53	Weight (Metals) = 27.0 gms. Approx			
DF16.800	●									3.1	4.00	5.66	8.00	9.80	12.65	14.97	17.89	3/8"	58	10	17
DF26.100	●	●								3.5	5.00	7.07	10.00	12.25	15.81	18.71	22.36	Weight (Metals) = 53.7 gms. Approx			
DF26.125	●	●	●							3.9	6.25	8.84	12.50	15.31	19.76	23.39	27.95	1/2"	76	13.2	22
DF26.160	●	●	●	●						4.4	8.00	11.31	16.00	19.60	25.30	29.93	35.78	Weight (Metals) = 80.0 gms. Approx			
DF26.180	●	●	●	●	●					4.6	9.00	12.73	18.00	22.05	28.46	33.67	40.25	3/4"	86	14.5	27
DF26.200	●	●	●	●	●	●				4.9	10.00	14.14	20.00	24.49	31.62	37.42	44.72	Weight (Metals) = 170.0 gms. Approx			
DF26.225	●	●	●	●	●	●	●			5.2	11.25	15.91	22.50	27.56	35.58	42.09	50.31	1"	108	16.8	36
DF26.250	●	●	●	●	●	●	●	●		5.5	12.50	17.68	25.00	30.62	39.53	46.77	55.90	Weight (Metals) = 323.0 gms. Approx			
DF26.320	●	●	●	●	●	●	●	●		6.2	16.00	22.63	32.00	39.19	50.60	59.87	71.55	1 1/2"	138	19.1	51
DF26.400	●	●	●	●	●	●	●	●		7.0	20.00	28.28	40.00	48.99	63.25	74.83	89.44	Weight (Metals) = 634.0 gms. Approx			
DF26.520	●	●	●	●	●	●	●	●		7.9	26.00	36.77	52.00	63.69	82.22	97.28	116.28	2"	148	23.4	64
DF26.650			●	●	●	●	●	●		8.9	32.5	45.96	65.00	79.61	102.77	121.60	145.34	Weight (Metals) = XX gms. Approx			
DF26.800			●	●	●	●	●	●		9.8	40.00	56.57	80.00	97.98	126.49	149.67	178.89	3"	216	29.8	89
DF36.100			●	●	●	●	●	●		11.0	50.00	70.71	100.0	122.47	158.11	187.08	223.61	Weight (Metals) = XX gms. Approx			
DF36.118			●	●	●	●	●	●		12.0	59.00	83.44	118.0	144.52	186.57	220.76	263.86				
DF36.130				●	●	●	●	●		12.6	65.00	91.92	130.0	159.22	205.55	243.21	290.69				
DF36.160				●	●	●	●	●		13.9	80.00	113.14	160.0	195.96	252.98	299.33	357.77				
DF36.200					●	●	●	●		15.6	100	141.42	200.0	244.95	316.23	374.17	447.21				
DF36.227					●	●	●	●		16.6	113.5	160.51	227.0	278.02	358.92	424.68	507.59				
DF36.250					●	●	●	●		17.4	125	176.78	250.0	306.19	395.19	467.71	559.02				
DF36.300					●	●	●	●		19.0	150	212.13	300	367.42	474.34	561.25	670.82				
DF36.337					●	●	●	●		20.2	168.5	238.29	337.0	412.74	532.84	630.47	753.55				
DF36.400						●	●	●		22.0	200	282.84	400.0	489.90	632.46	748.33	894.43				
DF36.500						●	●	●		24.6	250	353.55	500.0	612.37	790.57	935.41	1118.03				
DF36.625						●	●	●		27.5	312.5	441.94	625.0	765.47	988.21	1169.27	1397.54				
DF36.710							●	●		29.3	355	502.05	710.0	869.57	1122.61	1328.29	1587.61				
DF36.800							●	●		31.1	400	565.69	800.0	979.80	1264.91	1496.66	1788.85				
DF46.1000								●		34.8	500	707.11	1000	1224.74	1581.14	1870.83	2236.07				
DF46.1250								●		38.9	625	883.88	1250	1530.93	1976.42	2338.54	2795.08				
DF46.1600								●		44.0	800	1131	1600	1959.59	2529.82	2993.33	3577.71				
DF46.2000								●		49.2	1000	1414	2000	2449.49	3162.28	3741.66	4472.14				
DF46.2500								●		55.1	1250	1767	2500	3061.86	3952.85	4677.07	5590.17				
DF46.3125								●		61.6	1562.5	2209	3125	3827.33	4941.06	5846.34	6987.71				

120° SPRAY ANGLE	CONNECTION END										FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE							G/A DIMENSION. MM			
	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	ORIFICE SIZE (mm)	PRESSURE [BAR]							CONN.	H	H1	HEX
MODEL NO.	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP	BSP		0.5	1.0	2.0	3.0	5.0	7.0	10.0				
DF18.475	●									2.4	2.37	3.36	4.75	5.82	7.51	8.89	10.62	1/4"	48	10	14
DF18.650	●									2.8	3.25	4.60	6.50	7.96	10.28	12.16	14.53	Weight (Metals) = XX gms. Approx			
DF18.800	●									3.1	4.00	5.66	8.00	9.80	12.65	14.97	17.89	3/8"	58	10	17
DF28.100	●	●								3.5	5.00	7.07	10.00	12.25	15.81	18.71	22.36	Weight (Metals) = XX gms. Approx			
DF28.125	●	●	●							3.9	6.25	8.84	12.50	15.31	19.76	23.39	27.95	1/2"	76	13.2	22
DF28.160	●	●	●	●						4.4	8.00	11.31	16.00	19.60	25.30	29.93	35.78	Weight (Metals) = XX gms. Approx			
DF28.180	●	●	●	●	●					4.6	9.00	12.73	18.00	22.05	28.46	33.67	40.25	3/4"	86	14.5	27
DF28.200	●	●	●	●	●	●				4.9	10.00	14.14	20.00	24.49	31.62	37.42	44.72	Weight (Metals) = XX gms. Approx			
DF28.225	●	●	●	●	●	●	●			5.2	11.25	15.91	22.50	27.56	35.58	42.09	50.31	1"	108	16.8	36
DF28.250	●	●	●	●	●	●	●	●		5.5	12.50	17.68	25.00	30.62	39.53	46.77	55.90	Weight (Metals) = XX gms. Approx			
DF28.320	●	●	●	●	●	●	●	●		6.2	16.00	22.63	32.00	39.19	50.60	59.87	71.55	1 1/2"	138	19.1	51
DF28.400	●	●	●	●	●	●	●	●		7.0	20.00	28.28	40.00	48.99	63.25	74.83	89.44	Weight (Metals) = XX gms. Approx			
DF28.520	●	●	●	●	●	●	●	●		7.9	26.00	36.77	52.00	63.69	82.22	97.28	116.28	2"	148	23.4	64
DF28.650			●	●	●	●	●	●		8.9	32.5	45.96	65.00	79.61	102.77	121.60	145.34	Weight (Metals) = XX gms. Approx			
DF28.800			●	●	●	●	●	●		9.8	40.00	56.57	80.00	97.98	126.49	149.67	178.89	3"	216	29.8	89
DF38.100			●	●	●	●	●	●		11.0	50.00	70.71	100.0	122.47	158.11	187.08	223.61	Weight (Metals) = XX gms. Approx			
DF38.118			●	●	●	●	●	●		12.0	59.00	83.44	118.0	144.52	186.57	220.76	263.86				
DF38.130				●	●	●	●	●		12.6	65.00	91.92	130.0	159.22	205.55	243.21	290.69				
DF38.160				●	●	●	●	●		13.9	80.00	113.14	160.0	195.96	252.98	299.33	357.77				
DF38.200					●	●	●	●		15.6	100	141.42	200.0	244.95	316.23	374.17	447.21				
DF38.227					●	●	●	●		16.6	113.5	160.51	227.0	278.02	358.92	424.68	507.59				
DF38.250					●	●	●	●		17.4	125	176.78	250.0	306.19	395.19	467.71	559.02				
DF38.300					●	●	●	●		19.0	150	212.13	300	367.42	474.34	561.25	670.82				
DF38.337					●	●	●	●		20.2	168.5	238.29	337.0	412.74	532.84	630.47	753.55				
DF38.400						●	●	●		22.0	200	282.84	400.0	489.90	632.46	748.33	894.43				
DF38.500						●	●	●		24.6	250	353.55	500.0	612.37	790.57	935.41	1118.03				
DF38.625						●	●	●		27.5	312.5	441.94	625.0	765.47	988.21	1169.27	1397.54				
DF38.710							●	●		29.3	355	502.05	710.0	869.57	1122.61	1328.29	1587.61				
DF38.800							●	●		31.1	400	565.69	800.0	979.80	1264.91	1496.66	1788.85				
DF48.1000								●		34.8	500	707.11	1000	1224.74	1581.14	1870.83	2236.07				
DF48.1250								●		38.9	625	883.88	1250	1530.93	1976.42	2338.54	2795.08				
DF48.1600								●		44.0	800	1131	1600	1959.59	2529.82	2993.33	3577.71				
DF48.2000								●		49.2	1000	1414	2000	2449.49	3162.28	3741.66	4472.14				
DF48.2500								●		55.1	1250	1767	2500	3061.86	3952.85	4677.07	5590.17				
DF48.3125								●		61.6	1562.5	2209	3125	3827.33	4941.06	5846.34	6987.71				

End Connection : X – BSP, Y - BSPT, Z – NPT Available.

# DF Series Spiral Full Cone Spray Nozzles

- Characteristic** : Absence of any internal parts make these nozzles non-clogging.
- Design** : One piece construction, non clogging type.
- Application** : Gas Scrubbing, Washing, Cooling Towers , Fire Fighting Systems.
- Flow Rate** : 5 LPM TO 3410 LPM
- Pressure** : 2.0 Kg/cm<sup>2</sup> or Specified
- Spray Angle** : 60° To 180°
- End Connection** : 1/4" TO 4" BSP/ BSPT / NPT
- M.O.C.** : SS. 316, 304, BRASS, PVDF, PVC, PP, Teflon®



180° SPRAY ANGLE	CONNECTION END							ORIFICE SIZE (mm)	FLOW CAPACITY IN LPM AT DIFFERENT PRESSURE							G/A DIMENSION. MM			
	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"		PRESSURE [BAR]							CONN.	H	H1	HEX
MODEL NO.	BSP	BSP	BSP	BSP	BSP	BSP	BSP	0.5	1.0	2.0	3.0	5.0	7.0	10.0	1/4"	3/8"	1/2"	3/4"	
DF19.475	●							2.4	2.37	3.36	4.75	5.82	7.51	8.89	10.62				
DF19.650	●							2.8	3.25	4.60	6.50	7.96	10.28	12.16	14.53				
DF19.800	●							3.1	4.00	5.66	8.00	9.80	12.65	14.97	17.89				
DF29.100	●	●						3.5	5.00	7.07	10.00	12.25	15.81	18.71	22.36				
DF29.125	●	●						3.9	6.25	8.84	12.50	15.31	19.76	23.39	27.95				
DF29.160	●	●						4.4	8.00	11.31	16.00	19.60	25.30	29.93	35.78				
DF29.180	●	●						4.6	9.00	12.73	18.00	22.05	28.46	33.67	40.25				
DF29.200	●	●						4.9	10.00	14.14	20.00	24.49	31.62	37.42	44.72				
DF29.225		●						5.2	11.25	15.91	22.50	27.56	35.58	42.09	50.31				
DF29.250		●						5.5	12.50	17.68	25.00	30.62	39.53	46.77	55.90				
DF29.320		●						6.2	16.00	22.63	32.00	39.19	50.60	59.87	71.55				
DF29.400		●						7.0	20.00	28.28	40.00	48.99	63.25	74.83	89.44				
DF29.520		●						7.9	26.00	36.77	52.00	63.69	82.22	97.28	116.28				
DF29.650			●					8.9	32.5	45.96	65.00	79.61	102.77	121.60	145.34				
DF29.800			●					9.8	40.00	56.57	80.00	97.98	126.49	149.67	178.89				
DF39.100			●					11.0	50.00	70.71	100.0	122.47	158.11	187.08	223.61				
DF39.118			●					12.0	59.00	83.44	118.0	144.52	186.57	220.76	263.86				
DF39.130				●				12.6	65.00	91.92	130.0	159.22	205.55	243.21	290.69				
DF39.160				●				13.9	80.00	113.14	160.0	195.96	252.98	299.33	357.77				
DF39.200					●			15.6	100	141.42	200.0	244.95	316.23	374.17	447.21				
DF39.227					●			16.6	113.5	160.51	227.0	278.02	358.92	424.68	507.59				
DF39.250					●			17.4	125	176.78	250.0	306.19	395.19	467.71	559.02				
DF39.300					●			19.0	150	212.13	300.0	367.42	474.34	561.25	670.82				
DF39.337					●			20.2	168.5	238.29	337.0	412.74	532.84	630.47	753.55				
DF39.400						●		22.0	200	282.84	400.0	489.90	632.46	748.33	894.43				
DF39.500						●		24.6	250	353.55	500.0	612.37	790.57	935.41	1118.03				
DF39.625						●		27.5	312.5	441.94	625.0	765.47	988.21	1169.27	1397.54				
DF39.710							●	29.3	355	502.05	710.0	869.57	1122.61	1328.29	1587.61				
DF39.800							●	31.1	400	565.69	800.0	979.80	1264.91	1496.66	1788.85				
DF49.1000							●	34.8	500	707.11	1000	1224.74	1581.14	1870.83	2236.07				
DF49.1250							●	38.9	625	883.88	1250	1530.93	1976.42	2338.54	2795.08				

End Connection : X – BSP, Y - BSPT, Z – NPT Available.