

SURFACE WATER FLOW TABLE (DN100-DN500)

ks value 0.6mm	Pipe size (mm)																Notes
	DN 100		DN 150		DN 225		DN 300		DN 375		DN 400		DN 450		DN 500		
	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	
1 in 10	2.47	19.41	3.22	56.87	4.18	166.02	5.01	354.36	5.77	637.40	6.01	755.25	6.47	1029.13	6.91	1357.06	
1 in 20	1.75	13.73	2.28	40.21	2.95	117.39	3.54	250.57	4.08	450.71	4.25	534.04	4.58	727.71	4.89	959.58	
1 in 30	1.43	11.21	1.86	32.83	2.41	95.85	2.89	204.59	3.33	368.00	3.47	436.04	3.74	594.17	3.99	783.50	
1 in 40	1.24	9.71	1.61	28.44	2.09	83.01	2.51	177.18	2.89	318.70	3.01	377.62	3.24	514.57	3.46	678.53	
1 in 50	1.11	8.68	1.44	25.43	1.87	74.25	2.24	158.47	2.58	285.06	2.69	337.76	2.89	460.24	3.09	606.89	
1 in 60	1.01	7.92	1.31	23.22	1.70	67.78	2.05	144.67	2.36	260.22	2.45	308.33	2.64	420.14	2.82	554.02	
1 in 70	0.93	7.34	1.22	21.50	1.58	62.75	1.89	133.94	2.18	240.92	2.27	285.46	2.45	388.98	2.61	512.92	
1 in 80	0.87	6.86	1.14	20.11	1.48	58.70	1.77	125.29	2.04	225.36	2.12	267.02	2.29	363.85	2.44	479.79	
1 in 90	0.82	6.47	1.07	18.96	1.39	55.34	1.67	118.12	1.92	212.47	2.00	251.75	2.06	343.04	2.30	452.35	
1 in 100	0.78	6.14	1.02	17.98	1.32	52.50	1.59	112.06	1.82	201.56	1.90	238.83	2.05	325.44	2.19	429.14	
1 in 110	0.75	5.85	0.97	17.15	1.26	50.06	1.51	106.84	1.74	192.18	1.81	227.72	1.95	310.29	2.08	409.17	
1 in 120	0.71	5.60	0.93	16.42	1.21	47.93	1.45	102.29	1.67	184.00	1.73	218.02	1.87	297.08	2.00	391.75	
1 in 130	0.69	5.38	0.89	15.77	1.16	46.05	1.39	98.28	1.60	176.78	1.67	209.47	1.79	285.43	1.92	376.38	
1 in 140	0.66	5.19	0.86	15.20	1.12	44.37	1.34	94.71	1.54	170.35	1.61	201.85	1.73	275.05	1.85	362.69	
1 in 150	0.64	5.01	0.83	14.68	1.08	42.87	1.29	91.50	1.49	164.58	1.55	195.00	1.67	265.72	1.78	350.39	
1 in 175	0.59	4.64	0.77	13.59	1.00	39.69	1.20	84.71	1.38	152.37	1.44	180.54	1.55	246.01	1.65	324.40	
1 in 200	0.55	4.34	0.72	12.72	0.93	37.12	1.12	79.24	1.29	142.53	1.34	168.88	1.45	230.12	1.55	303.45	
1 in 225	0.52	4.09	0.68	11.99	0.88	35.00	1.06	74.71	1.22	134.38	1.27	159.22	1.36	216.96	1.46	286.09	
1 in 250	0.49	3.88	0.64	11.37	0.84	33.20	1.00	70.87	1.15	127.48	1.20	151.05	1.29	205.83	1.38	271.41	
1 in 275	0.47	3.70	0.61	10.84	0.80	31.66	0.96	67.57	1.10	121.55	1.15	144.02	1.23	196.25	1.32	258.78	
1 in 300	0.45	3.54	0.59	10.38	0.76	30.31	0.92	64.70	1.05	116.37	1.10	137.89	1.18	187.89	1.26	247.76	

THESE GRADIENTS ARE NOT RECOMMENDED

FOUL WATER FLOW TABLE (DN100-DN500)

ks value 1.5mm	Pipe size (mm)																Notes
	DN 100		DN 150		DN 225		DN 300		DN 375		DN 400		DN 450		DN 500		
	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	Velocity m/s	Discharge l/s	
1 in 10	2.12	16.64	2.79	49.24	3.65	145.00	4.40	311.20	5.09	562.00	5.31	666.65	5.72	910.19	6.12	1202.28	
1 in 20	1.50	11.77	1.97	34.82	2.58	102.53	3.11	220.05	3.60	397.40	3.75	471.39	4.05	643.60	4.33	850.14	
1 in 30	1.22	9.61	1.61	28.43	2.11	83.71	2.54	179.67	2.94	324.47	3.06	384.89	3.30	525.50	3.54	694.14	
1 in 40	1.06	8.32	1.39	24.62	1.82	72.50	2.20	155.60	2.54	281.00	2.65	333.32	2.86	455.10	3.06	601.14	
1 in 50	0.95	7.44	1.25	22.02	1.63	64.84	1.97	139.17	2.28	251.34	2.37	298.13	2.56	407.05	2.74	537.67	
1 in 60	0.86	6.79	1.14	20.10	1.49	59.19	1.80	127.05	2.08	229.44	2.17	272.16	2.34	371.59	2.50	490.83	
1 in 70	0.80	6.29	1.05	18.61	1.38	54.80	1.66	117.62	1.92	212.42	2.01	251.97	2.16	344.02	2.31	454.42	
1 in 80	0.75	5.88	0.99	17.41	1.29	51.26	1.56	110.03	1.80	198.70	1.88	235.70	2.02	321.80	2.16	425.07	
1 in 90	0.71	5.55	0.93	16.41	1.22	48.33	1.47	103.73	1.70	187.33	1.77	222.22	1.91	303.40	2.04	400.76	
1 in 100	0.67	5.26	0.88	15.57	1.15	45.85	1.39	98.41	1.61	177.72	1.68	210.81	1.81	287.83	1.94	380.19	
1 in 110	0.64	5.02	0.84	14.85	1.10	43.72	1.33	93.83	1.53	169.45	1.60	201.00	1.73	274.43	1.85	362.50	
1 in 120	0.61	4.80	0.80	14.21	1.05	41.86	1.27	89.84	1.47	162.24	1.53	192.44	1.65	262.75	1.77	347.07	
1 in 130	0.59	4.61	0.77	13.66	1.01	40.21	1.22	86.31	1.41	155.87	1.47	184.89	1.59	252.44	1.70	333.45	
1 in 140	0.57	4.45	0.74	13.16	0.97	38.75	1.18	83.17	1.36	150.20	1.42	178.17	1.53	243.26	1.64	321.32	
1 in 150	0.55	4.30	0.72	12.71	0.94	37.44	1.14	80.35	1.31	145.11	1.37	172.13	1.48	235.01	1.58	310.43	
1 in 175	0.51	3.98	0.67	11.77	0.87	34.66	1.05	74.39	1.22	134.34	1.27	159.36	1.37	217.58	1.46	287.40	
1 in 200	0.47	3.72	0.62	11.01	0.82	32.42	0.98	69.59	1.14	125.67	1.19	149.07	1.28	203.53	1.37	268.84	
1 in 225	0.45	3.51	0.59	10.38	0.77	30.57	0.93	65.61	1.07	118.48	1.12	140.54	1.21	191.89	1.29	253.46	
1 in 250	0.42	3.33	0.56	9.85	0.73	29.00	0.88	62.24	1.02	112.40	1.06	133.33	1.14	182.04	1.22	240.46	
1 in 275	0.40	3.17	0.53	9.39	0.70	27.65	0.84	59.34	0.97	107.17	1.01	127.12	1.09	173.57	1.17	229.27	
1 in 300	0.39	3.04	0.51	8.99	0.67	26.47	0.80	56.82	0.93	102.61	0.97	121.71	1.04	166.18	1.12	219.50	

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