

TP 110°/ 80° 40" TIP SPACING

ALL VALUES BASED ON WATER FOR OTHER LIQUIDS SEE USEFUL FORMULAS AND CONVERSIONS

mph		4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	
psi gpm																			
8001VS	20	0.07	2.6	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9
	30	0.09	3.2	2.9	2.6	2.3	2.2	2.0	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.1
11001VS	40	0.10	3.7	3.3	3.0	2.7	2.5	2.3	2.1	2.0	1.9	1.7	1.7	1.6	1.5	1.4	1.4	1.3	1.2
100 MESH	50	0.11	4.2	3.7	3.3	3.0	2.8	2.6	2.4	2.2	2.1	2.0	1.8	1.8	1.7	1.6	1.5	1.4	1.4
ORANGE	60	0.12	4.5	4.0	3.6	3.3	3.0	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.6	1.5
80015VS	20	0.11	3.9	3.5	3.1	2.9	2.6	2.4	2.2	2.1	2.0	1.9	1.7	1.7	1.6	1.5	1.4	1.4	1.3
	30	0.13	4.8	4.3	3.9	3.5	3.2	3.0	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.8	1.7	1.6
110015VS	40	0.15	5.6	5.0	4.5	4.1	3.7	3.4	3.2	3.0	2.8	2.6	2.5	2.3	2.2	2.1	2.0	1.9	1.9
100 MESH	50	0.17	6.2	5.5	5.0	4.5	4.2	3.8	3.6	3.3	3.1	2.9	2.8	2.6	2.5	2.4	2.3	2.2	2.1
GREEN	60	0.18	6.8	6.1	5.5	5.0	4.6	4.2	3.9	3.6	3.4	3.2	3.0	2.9	2.7	2.6	2.5	2.4	2.3
8002VS	20	0.14	5.2	4.7	4.2	3.8	3.5	3.2	3.0	2.8	2.6	2.5	2.3	2.2	2.1	2.0	1.9	1.8	1.7
	30	0.17	6.4	5.7	5.1	4.7	4.3	4.0	3.7	3.4	3.2	3.0	2.9	2.7	2.6	2.4	2.3	2.2	2.1
11002VS	40	0.20	7.4	6.6	5.9	5.4	5.0	4.6	4.2	4.0	3.7	3.5	3.3	3.1	3.0	2.8	2.7	2.6	2.5
50 MESH	50	0.22	8.3	7.4	6.7	6.0	5.5	5.1	4.8	4.4	4.2	3.9	3.7	3.5	3.3	3.2	3.0	2.9	2.8
YELLOW	60	0.25	9.1	8.1	7.3	6.6	6.1	5.6	5.2	4.9	4.5	4.3	4.0	3.8	3.6	3.5	3.3	3.2	3.0
8003VS	20	0.21	7.9	7.0	6.3	5.7	5.2	4.8	4.5	4.2	3.9	3.7	3.5	3.3	3.1	3.0	2.9	2.7	2.6
	30	0.26	9.7	8.6	7.7	7.0	6.4	5.9	5.5	5.1	4.8	4.5	4.3	4.1	3.9	3.7	3.5	3.4	3.2
11003VS	40	0.30	11.1	9.9	8.9	8.1	7.4	6.9	6.4	5.9	5.6	5.2	5.0	4.7	4.5	4.2	4.1	3.9	3.7
50 MESH	50	0.34	12.4	11.1	9.9	9.0	8.3	7.7	7.1	6.6	6.2	5.9	5.5	5.2	5.0	4.7	4.5	4.3	4.1
BLUE	60	0.37	13.6	12.1	10.9	9.9	9.1	8.4	7.8	7.3	6.8	6.4	6.1	5.7	5.4	5.2	5.0	4.7	4.5
8004VS	20	0.28	10.5	9.3	8.4	7.6	7.0	6.5	6.0	5.6	5.3	4.9	4.7	4.4	4.2	4.0	3.8	3.7	3.5
	30	0.35	12.8	11.4	10.3	9.3	8.6	7.9	7.3	6.9	6.4	6.0	5.7	5.4	5.1	4.9	4.7	4.5	4.3
11004VS	40	0.40	14.9	13.2	11.9	10.8	9.9	9.1	8.5	7.9	7.4	7.0	6.6	6.3	5.9	5.7	5.4	5.2	5.0
50 MESH	50	0.45	16.6	14.8	13.3	12.1	11.1	10.2	9.5	8.9	8.3	7.8	7.4	7.0	6.6	6.3	6.0	5.8	5.5
RED	60	0.49	18.2	16.2	14.6	13.2	12.1	11.2	10.4	9.7	9.1	8.6	8.1	7.7	7.3	6.9	6.6	6.3	6.1
8005VS	20	0.35	13.1	11.7	10.5	9.6	8.8	8.1	7.5	7.0	6.6	6.2	5.8	5.5	5.3	5.0	4.8	4.6	4.4
	30	0.43	16.1	14.3	12.9	11.7	10.7	9.9	9.2	8.6	8.0	7.6	7.1	6.8	6.4	6.1	5.8	5.6	5.4
11005VS	40	0.50	18.6	16.5	14.9	13.5	12.4	11.4	10.6	9.9	9.3	8.7	8.3	7.8	7.4	7.1	6.8	6.5	6.2
50 MESH	50	0.56	20.8	18.4	16.6	15.1	13.8	12.8	11.9	11.1	10.4	9.8	9.2	8.7	8.3	7.9	7.5	7.2	6.9
BROWN	60	0.61	22.7	20.2	18.2	16.5	15.1	14.0	13.0	12.1	11.4	10.7	10.1	9.6	9.1	8.7	8.3	7.9	7.6

TP 110° 80° 40" TIP SPACING

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12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	mph				
																			gpm	psi
0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.07	20	8001VS		
1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.09	30	11001VS		
1.2	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.10	40	100 MESH		
1.3	1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.11	50	ORANGE		
1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.12	60			
1.3	1.2	1.2	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.11	20	80015VS		
1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.13	30	110015VS		
1.8	1.7	1.7	1.6	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.1	1.1	0.15	40	100 MESH		
2.0	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.2	0.17	50	GREEN		
2.2	2.1	2.0	2.0	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.4	0.18	60			
1.7	1.6	1.6	1.5	1.4	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.0	0.14	20	8002VS		
2.1	2.0	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.4	1.3	1.3	0.17	30	11002VS		
2.4	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.7	1.7	1.7	1.6	1.6	1.5	1.5	0.20	40	50 MESH		
2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.8	1.8	1.8	1.7	1.7	0.22	50	YELLOW		
2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.3	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.8	0.25	60			
2.5	2.4	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.7	1.7	1.7	1.6	1.6	0.21	20	8003VS		
3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.3	2.2	2.1	2.1	2.0	2.0	1.9	0.26	30	11003VS		
3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.2	0.30	40	50 MESH		
4.0	3.8	3.7	3.6	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	2.6	2.5	0.34	50	BLUE		
4.4	4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	0.37	60			
3.4	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.1	0.28	20	8004VS		
4.1	4.0	3.8	3.7	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.6	2.6	0.35	30	11004VS		
4.8	4.6	4.4	4.2	4.1	4.0	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.0	3.0	0.40	40	50 MESH		
5.3	5.1	4.9	4.7	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	0.45	50	RED		
5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.2	4.0	3.9	3.8	3.7	3.6	0.49	60			
4.2	4.0	3.9	3.8	3.6	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.8	2.8	2.7	2.6	0.35	20	8005VS		
5.1	4.9	4.8	4.6	4.4	4.3	4.1	4.0	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	0.43	30	11005VS		
5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.6	4.5	4.4	4.2	4.1	4.0	3.9	3.8	3.7	0.50	40	50 MESH		
6.6	6.4	6.1	5.9	5.7	5.5	5.4	5.2	5.0	4.9	4.7	4.6	4.5	4.4	4.3	4.2	0.56	50	BROWN		
7.3	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.3	5.2	5.0	4.9	4.8	4.7	4.5	0.61	60			

TP 110°/ 80° 40" TIP SPACING

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mph		4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	
8006VS	20	0.42	15.7	14.0	12.6	11.4	10.5	9.7	9.0	8.4	7.9	7.4	7.0	6.6	6.3	6.0	5.7	5.5	5.2
	30	0.52	19.3	17.2	15.4	14.0	12.9	11.9	11.0	10.3	9.7	9.1	8.6	8.1	7.7	7.4	7.0	6.7	6.4
11006VS	40	0.60	22.3	19.8	17.8	16.2	14.9	13.7	12.7	11.9	11.1	10.5	9.9	9.4	8.9	8.5	8.1	7.7	7.4
	50	0.67	24.9	22.1	19.9	18.1	16.6	15.3	14.2	13.3	12.5	11.7	11.1	10.5	10.0	9.5	9.1	8.7	8.3
50 MESH GRAY	60	0.74	27.3	24.3	21.8	19.8	18.2	16.8	15.6	14.6	13.6	12.8	12.1	11.5	10.9	10.4	9.9	9.5	9.1
	20	0.63	23.5	20.9	18.8	17.1	15.6	14.4	13.4	12.5	11.7	11.0	10.4	9.9	9.4	8.9	8.5	8.2	7.8
8008VS	30	0.69	25.7	22.9	20.6	18.7	17.2	15.8	14.7	13.7	12.9	12.1	11.4	10.8	10.3	9.8	9.4	8.9	8.6
	40	0.80	29.7	26.4	23.8	21.6	19.8	18.3	17.0	15.8	14.9	14.0	13.2	12.5	11.9	11.3	10.8	10.3	9.9
11008VS	50	0.89	33.2	29.5	26.6	24.1	22.1	20.4	19.0	17.7	16.6	15.6	14.8	14.0	13.3	12.6	12.1	11.5	11.1
	60	0.98	36.4	32.3	29.1	26.5	24.3	22.4	20.8	19.4	18.2	17.1	16.2	15.3	14.6	13.9	13.2	12.7	12.1
8010SS	20	0.71	26.2	23.3	21.0	19.1	17.5	16.2	15.0	14.0	13.1	12.4	11.7	11.1	10.5	10.0	9.5	9.1	8.7
	30	0.87	32.2	28.6	25.7	23.4	21.4	19.8	18.4	17.1	16.1	15.1	14.3	13.5	12.9	12.2	11.7	11.2	10.7
11010SS	40	1.00	37.1	33.0	29.7	27.0	24.8	22.8	21.2	19.8	18.6	17.5	16.5	15.6	14.9	14.1	13.5	12.9	12.4
	50	1.12	41.5	36.9	33.2	30.2	27.7	25.5	23.7	22.1	20.8	19.5	18.4	17.5	16.6	15.8	15.1	14.4	13.8
50 MESH	60	1.23	45.5	40.4	36.4	33.1	30.3	28.0	26.0	24.3	22.7	21.4	20.2	19.1	18.2	17.3	16.5	15.8	15.2
	20	1.06	39.4	35.0	31.5	28.6	26.3	24.2	22.5	21.0	19.7	18.5	17.5	16.6	15.8	15.0	14.3	13.7	13.1
8015SS	30	1.30	48.2	42.9	38.6	35.1	32.2	29.7	27.6	25.7	24.1	22.7	21.4	20.3	19.3	18.4	17.5	16.8	16.1
	40	1.50	55.7	49.5	44.6	40.5	37.1	34.3	31.8	29.7	27.8	26.2	24.8	23.4	22.3	21.2	20.3	19.4	18.6
11015SS	50	1.68	62.3	55.3	49.8	45.3	41.5	38.3	35.6	33.2	31.1	29.3	27.7	26.2	24.9	23.7	22.6	21.7	20.8
	60	1.84	68.2	60.6	54.6	49.6	45.5	42.0	39.0	36.4	34.1	32.1	30.3	28.7	27.3	26.0	24.8	23.7	22.7
8020SS	20	1.41	52.5	46.7	42.0	38.2	35.0	32.3	30.0	28.0	26.2	24.7	23.3	22.1	21.0	20.0	19.1	18.3	17.5
	30	1.73	64.3	57.2	51.4	46.8	42.9	39.6	36.7	34.3	32.2	30.3	28.6	27.1	25.7	24.5	23.4	22.4	21.4
11020SS	40	2.00	74.3	66.0	59.4	54.0	49.5	45.7	42.4	39.6	37.1	34.9	33.0	31.3	29.7	28.3	27.0	25.8	24.8
	50	2.24	83.0	73.8	66.4	60.4	55.3	51.1	47.4	44.3	41.5	39.1	36.9	35.0	33.2	31.6	30.2	28.9	27.7
50 MESH	60	2.45	90.9	80.8	72.7	66.1	60.6	56.0	52.0	48.5	45.5	42.8	40.4	38.3	36.4	34.6	33.1	31.6	30.3

TP 110° 80° 40" TIP SPACING

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12.5	13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	19.5	20.0	mph		
5.0	4.8	4.7	4.5	4.3	4.2	4.1	3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.2	3.1	0.42	20	8006VS 11006VS
6.2	5.9	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.5	4.4	4.3	4.2	4.1	4.0	3.9	0.52	30	
7.1	6.9	6.6	6.4	6.1	5.9	5.7	5.6	5.4	5.2	5.1	5.0	4.8	4.7	4.6	4.5	0.60	40	50 MESH GRAY
8.0	7.7	7.4	7.1	6.9	6.6	6.4	6.2	6.0	5.9	5.7	5.5	5.4	5.2	5.1	5.0	0.67	50	
8.7	8.4	8.1	7.8	7.5	7.3	7.0	6.8	6.6	6.4	6.2	6.1	5.9	5.7	5.6	5.5	0.74	60	
0.57																		
7.5	7.2	7.0	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.4	5.2	5.1	4.9	4.8	4.7	0.63	20	8008VS 11008VS
8.2	7.9	7.6	7.4	7.1	6.9	6.6	6.4	6.2	6.1	5.9	5.7	5.6	5.4	5.3	5.1	0.69	30	
9.5	9.1	8.8	8.5	8.2	7.9	7.7	7.4	7.2	7.0	6.8	6.6	6.4	6.3	6.1	5.9	0.80	40	50 MESH WHITE
10.6	10.2	9.8	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.4	7.2	7.0	6.8	6.6	0.89	50	
11.6	11.2	10.8	10.4	10.0	9.7	9.4	9.1	8.8	8.6	8.3	8.1	7.9	7.7	7.5	7.3	0.98	60	
8.4	8.1	7.8	7.5	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.4	5.2	0.71	20	8010SS 11010SS
10.3	9.9	9.5	9.2	8.9	8.6	8.3	8.0	7.8	7.6	7.3	7.1	7.0	6.8	6.6	6.4	0.87	30	
11.9	11.4	11.0	10.6	10.2	9.9	9.6	9.3	9.0	8.7	8.5	8.3	8.0	7.8	7.6	7.4	1.00	40	50 MESH
13.3	12.8	12.3	11.9	11.4	11.1	10.7	10.4	10.1	9.8	9.5	9.2	9.0	8.7	8.5	8.3	1.12	50	
14.6	14.0	13.5	13.0	12.5	12.1	11.7	11.4	11.0	10.7	10.4	10.1	9.8	9.6	9.3	9.1	1.23	60	
12.6	12.1	11.7	11.3	10.9	10.5	10.2	9.8	9.5	9.3	9.0	8.8	8.5	8.3	8.1	7.9	1.06	20	8015SS 11015SS
15.4	14.8	14.3	13.8	13.3	12.9	12.4	12.1	11.7	11.3	11.0	10.7	10.4	10.2	9.9	9.6	1.30	30	
17.8	17.1	16.5	15.9	15.4	14.9	14.4	13.9	13.5	13.1	12.7	12.4	12.0	11.7	11.4	11.1	1.50	40	50 MESH
19.9	19.2	18.4	17.8	17.2	16.6	16.1	15.6	15.1	14.6	14.2	13.8	13.5	13.1	12.8	12.5	1.68	50	
21.8	21.0	20.2	19.5	18.8	18.2	17.6	17.0	16.5	16.0	15.6	15.2	14.7	14.4	14.0	13.6	1.84	60	
16.8	16.2	15.6	15.0	14.5	14.0	13.5	13.1	12.7	12.4	12.0	11.7	11.4	11.1	10.8	10.5	1.41	20	8020SS 11020SS
20.6	19.8	19.1	18.4	17.7	17.1	16.6	16.1	15.6	15.1	14.7	14.3	13.9	13.5	13.2	12.9	1.73	30	
23.8	22.8	22.0	21.2	20.5	19.8	19.2	18.6	18.0	17.5	17.0	16.5	16.1	15.6	15.2	14.9	2.00	40	50 MESH
26.6	25.5	24.6	23.7	22.9	22.1	21.4	20.8	20.1	19.5	19.0	18.4	17.9	17.5	17.0	16.6	2.24	50	
29.1	28.0	26.9	26.0	25.1	24.2	23.5	22.7	22.0	21.4	20.8	20.2	19.7	19.1	18.7	18.2	2.45	60	