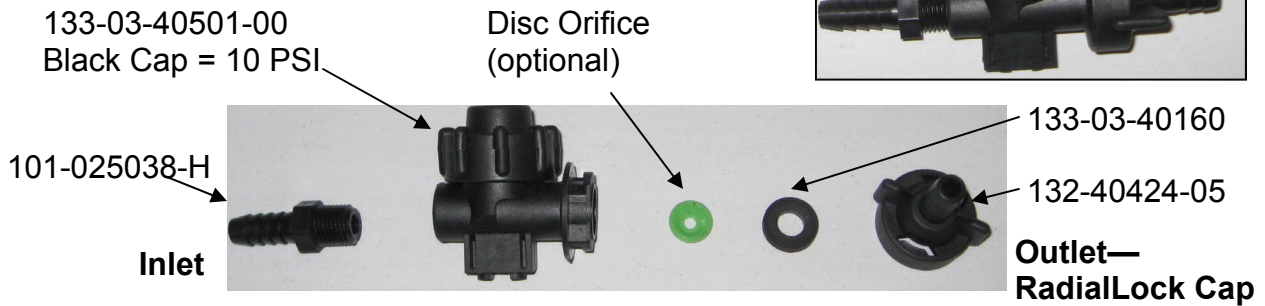


## Tower Accessory - Check Valves (4 lb recommended with electric pumps)

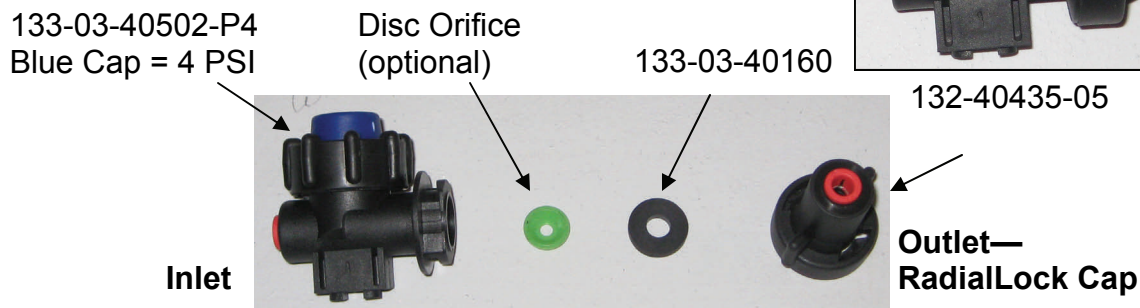
### 10 lb check valve with 3/8" hose barbs

The recommended check valve for most PumpRight installations is the 10 lb check with 3/8" hose barbs. This works with 3/8" rubber hose SureFire recommends for most applications over 10 GPA on 30" rows. The recommended minimum system operating pressure for this check is 20 psi, to ensure all checks open fully.



### 4 lb check valve with 1/4" quick connect

4 lb check valves are typically used with electric pump systems. SureFire recommends this valve for use with 1/4" tubing applying up to 10 GPA on 30" rows. The recommended minimum system operating pressure for this check is 10 psi, to ensure all checks open fully.



## Special Purpose Check Valve Assemblies

Assembly Part Number	Description	Suggested Uses (30" rows)
136-10-04QC04QC	1/4" QC x 1/4" QC 10 lb	< 10 GPA with PumpRight & 1/4" Tubing
136-10-06QC06QC	3/8" QC x 3/8" QC 10 lb	With 3/8" tubing plumbing
136-04-06HB06HB	3/8" HB x 3/8" HB 4 lb	> 10 GPA with Electric Pumps
136-10-08HB08HB	1/2" HB x 1/2" HB 10 lb	> 50 GPA

# Colored Disc Orifice Chart for 30" rows

See [www.surefireag.com](http://www.surefireag.com) for other row spacings

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	1.62	1.44	1.30	1.18	1.08	1.00	0.93
	20	0.046	2.28	2.02	1.82	1.66	1.52	1.40	1.30
	30	0.057	2.80	2.49	2.24	2.04	1.87	1.73	1.60
	40	0.065	3.24	2.88	2.59	2.36	2.16	1.99	1.85
	50	0.073	3.64	3.23	2.91	2.64	2.42	2.24	2.08
	60	0.081	3.99	3.54	3.19	2.90	2.66	2.45	2.28
Gray (30)	10	0.050	2.50	2.22	2.00	1.82	1.66	1.54	1.43
	20	0.072	3.55	3.15	2.84	2.58	2.37	2.18	2.03
	30	0.088	4.34	3.85	3.47	3.15	2.89	2.67	2.48
	40	0.101	4.99	4.44	4.00	3.63	3.33	3.07	2.85
	50	0.112	5.56	4.95	4.45	4.05	3.71	3.42	3.18
	60	0.124	6.13	5.45	4.91	4.46	4.09	3.77	3.50
Black (35)	10	0.070	3.46	3.08	2.77	2.52	2.31	2.13	1.98
	20	0.098	4.86	4.32	3.89	3.54	3.24	2.99	2.78
	30	0.120	5.96	5.30	4.77	4.33	3.97	3.67	3.40
	40	0.139	6.88	6.11	5.50	5.00	4.58	4.23	3.93
	50	0.156	7.71	6.85	6.17	5.61	5.14	4.74	4.41
	60	0.170	8.41	7.48	6.73	6.12	5.61	5.18	4.81
Brown (41)	10	0.094	4.64	4.13	3.71	3.38	3.10	2.86	2.65
	20	0.132	6.53	5.80	5.22	4.75	4.35	4.02	3.73
	30	0.162	8.02	7.13	6.41	5.83	5.34	4.93	4.58
	40	0.187	9.24	8.22	7.39	6.72	6.16	5.69	5.28
	50	0.209	10.34	9.19	8.27	7.52	6.89	6.36	5.91
	60	0.228	11.30	10.05	9.04	8.22	7.53	6.95	6.46
Orange (46)	10	0.119	5.91	5.26	4.73	4.30	3.94	3.64	3.38
	20	0.169	8.37	7.44	6.69	6.08	5.58	5.15	4.78
	30	0.207	10.25	9.11	8.20	7.45	6.83	6.31	5.86
	40	0.239	11.83	10.51	9.46	8.60	7.88	7.28	6.76
	50	0.267	13.23	11.76	10.58	9.62	8.82	8.14	7.56
	60	0.293	14.50	12.89	11.60	10.55	9.67	8.92	8.29
Maroon (52)	10	0.149	7.36	6.54	5.89	5.35	4.91	4.53	4.21
	20	0.210	10.38	9.23	8.31	7.55	6.92	6.39	5.93
	30	0.257	12.70	11.29	10.16	9.24	8.47	7.82	7.26
	40	0.296	14.67	13.04	11.74	10.67	9.78	9.03	8.39
	50	0.332	16.43	14.60	13.14	11.95	10.95	10.11	9.39
	60	0.363	17.96	15.96	14.37	13.06	11.97	11.05	10.26
Red (63)	10	0.218	10.78	9.58	8.62	7.84	7.18	6.63	6.16
	20	0.307	15.20	13.51	12.16	11.05	10.13	9.35	8.69
	30	0.376	18.62	16.55	14.89	13.54	12.41	11.46	10.64
	40	0.435	21.51	19.12	17.21	15.64	14.34	13.24	12.29
	50	0.486	24.05	21.38	19.24	17.49	16.03	14.80	13.74
	60	0.532	26.33	23.40	21.06	19.15	17.55	16.20	15.04
Blue (80)	10	0.351	17.39	15.46	13.91	12.65	11.59	10.70	9.94
	20	0.496	24.57	21.84	19.66	17.87	16.38	15.12	14.04
	30	0.608	30.09	26.75	24.08	21.89	20.06	18.52	17.20
	40	0.702	34.74	30.88	27.79	25.26	23.16	21.38	19.85
	50	0.785	38.86	34.54	31.08	28.26	25.90	23.91	22.20
	60	0.859	42.53	37.81	34.03	30.93	28.36	26.18	24.31
Yellow (95)	10	0.506	25.06	22.27	20.05	18.22	16.70	15.42	14.32
	20	0.715	35.39	31.46	28.32	25.74	23.60	21.78	20.23
	30	0.876	43.37	38.55	34.69	31.54	28.91	26.69	24.78
	40	1.009	49.94	44.39	39.95	36.32	33.29	30.73	28.54
	50	1.133	56.07	49.84	44.86	40.78	37.38	34.51	32.04
	60	1.239	61.33	54.51	49.06	44.60	40.88	37.74	35.04
Green (110)	10	0.686	33.95	30.18	27.16	24.69	22.63	20.89	19.40
	20	0.973	48.19	42.83	38.55	35.04	32.12	29.65	27.53
	30	1.186	58.70	52.18	46.96	42.69	39.13	36.12	33.54
	40	1.372	67.90	60.35	54.32	49.38	45.27	41.78	38.80
	50	1.531	75.78	67.36	60.63	55.12	50.52	46.64	43.30
	60	1.681	83.23	73.98	66.58	60.53	55.49	51.22	47.56

Pumpright Pressure Recommendations (with 10 lb check valves):

- Minimum 20 PSI
- Maximum 80 PSI

Tower Electric Pump Pressure Recommendations (with 4 lb check valves):

- Minimum 10 PSI
- Maximum 30 PSI

Chart is for 28-0-0 Fertilizer @ 70°

- Heavier fertilizers (like 10-34-0) will have 5-15% less flow than chart indicates for a certain pressure)
- Cold fertilizers will cause system pressure to increase at a given application rate.
- Tower Electric Pump Systems will have reduced flow and increased electrical current draw due to cold fertilizer increasing operating pressure. Use the largest orifice possible for cold weather operation.

# Application Rate (gal/ac) for Colored Disc Orifices

**Spacing (in.): 7.5**

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	6.48	5.76	5.19	4.72	4.32	3.99	3.70
	20	0.046	9.11	8.10	7.29	6.63	6.07	5.61	5.21
	30	0.057	11.21	9.97	8.97	8.16	7.48	6.90	6.41
	40	0.065	12.97	11.53	10.37	9.43	8.64	7.98	7.41
	50	0.073	14.54	12.93	11.63	10.58	9.70	8.95	8.31
	60	0.081	15.95	14.17	12.76	11.60	10.63	9.81	9.11
Gray (30)	10	0.050	9.99	8.88	7.99	7.26	6.66	6.15	5.71
	20	0.072	14.19	12.62	11.35	10.32	9.46	8.73	8.11
	30	0.088	17.35	15.42	13.88	12.62	11.56	10.68	9.91
	40	0.101	19.98	17.76	15.98	14.53	13.32	12.29	11.41
	50	0.112	22.25	19.78	17.80	16.18	14.84	13.69	12.72
	60	0.124	24.53	21.81	19.62	17.84	16.35	15.10	14.02
Black (35)	10	0.070	13.84	12.30	11.07	10.07	9.23	8.52	7.91
	20	0.098	19.45	17.29	15.56	14.15	12.97	11.97	11.11
	30	0.120	23.83	21.18	19.06	17.33	15.89	14.66	13.62
	40	0.139	27.51	24.45	22.01	20.01	18.34	16.93	15.72
	50	0.156	30.84	27.41	24.67	22.43	20.56	18.98	17.62
	60	0.170	33.64	29.90	26.91	24.47	22.43	20.70	19.22
Brown (41)	10	0.094	18.57	16.51	14.86	13.51	12.38	11.43	10.61
	20	0.132	26.11	23.21	20.89	18.99	17.41	16.07	14.92
	30	0.162	32.07	28.50	25.65	23.32	21.38	19.73	18.32
	40	0.187	36.97	32.86	29.58	26.89	24.65	22.75	21.13
	50	0.209	41.35	36.76	33.08	30.07	27.57	25.45	23.63
	60	0.228	45.21	40.18	36.17	32.88	30.14	27.82	25.83
Orange (46)	10	0.119	23.65	21.03	18.92	17.20	15.77	14.56	13.52
	20	0.169	33.47	29.75	26.77	24.34	22.31	20.60	19.12
	30	0.207	41.00	36.45	32.80	29.82	27.33	25.23	23.43
	40	0.239	47.31	42.05	37.85	34.41	31.54	29.11	27.03
	50	0.267	52.92	47.04	42.33	38.48	35.28	32.56	30.24
	60	0.293	58.00	51.55	46.40	42.18	38.67	35.69	33.14
Maroon (52)	10	0.149	29.44	26.17	23.55	21.41	19.62	18.12	16.82
	20	0.210	41.53	36.91	33.22	30.20	27.68	25.56	23.73
	30	0.257	50.81	45.17	40.65	36.96	33.88	31.27	29.04
	40	0.296	58.70	52.18	46.96	42.69	39.13	36.12	33.54
	50	0.332	65.71	58.41	52.57	47.79	43.81	40.44	37.55
	60	0.363	71.84	63.86	57.47	52.25	47.89	44.21	41.05
Red (63)	10	0.218	43.10	38.32	34.48	31.35	28.74	26.53	24.63
	20	0.307	60.80	54.05	48.64	44.22	40.53	37.42	34.74
	30	0.376	74.47	66.19	59.58	54.16	49.65	45.83	42.55
	40	0.435	86.03	76.47	68.83	62.57	57.36	52.94	49.16
	50	0.486	96.20	85.51	76.96	69.96	64.13	59.20	54.97
	60	0.532	105.31	93.61	84.25	76.59	70.21	64.80	60.18
Blue (80)	10	0.351	69.56	61.83	55.65	50.59	46.38	42.81	39.75
	20	0.496	98.30	87.38	78.64	71.49	65.53	60.49	56.17
	30	0.608	120.38	107.00	96.30	87.55	80.25	74.08	68.79
	40	0.702	138.95	123.51	111.16	101.05	92.63	85.51	79.40
	50	0.785	155.42	138.15	124.34	113.03	103.61	95.64	88.81
	60	0.859	170.14	151.24	136.11	123.74	113.43	104.70	97.22
Yellow (95)	10	0.506	100.23	89.09	80.18	72.89	66.82	61.68	57.27
	20	0.715	141.58	125.85	113.26	102.97	94.39	87.13	80.90
	30	0.876	173.47	154.19	138.78	126.16	115.65	106.75	99.13
	40	1.009	199.75	177.56	159.80	145.27	133.17	122.92	114.14
	50	1.133	224.28	199.36	179.43	163.12	149.52	138.02	128.16
	60	1.239	245.31	218.05	196.25	178.41	163.54	150.96	140.18
Green (110)	10	0.686	135.80	120.71	108.64	98.76	90.53	83.57	77.60
	20	0.973	192.74	171.33	154.19	140.18	128.50	118.61	110.14
	30	1.186	234.80	208.71	187.84	170.76	156.53	144.49	134.17
	40	1.372	271.59	241.42	217.27	197.52	181.06	167.13	155.20
	50	1.531	303.13	269.45	242.51	220.46	202.09	186.54	173.22
	60	1.681	332.92	295.93	266.34	242.12	221.95	204.87	190.24
White (125)	10	0.867	171.72	152.64	137.37	124.88	114.48	105.67	98.12
	20	1.230	243.56	216.50	194.85	177.13	162.37	149.88	139.18
	30	1.504	297.88	264.78	238.30	216.64	198.58	183.31	170.21
	40	1.735	343.43	305.27	274.75	249.77	228.96	211.34	196.25
	50	1.938	383.73	341.10	306.99	279.08	255.82	236.14	219.28
	60	2.124	420.53	373.81	336.42	305.84	280.35	258.79	240.30
Lime Green (156)	10	1.372	271.59	241.42	217.27	197.52	181.06	167.13	155.20
	20	1.947	385.49	342.65	308.39	280.35	256.99	237.22	220.28
	30	2.381	471.35	418.97	377.08	342.80	314.23	290.06	269.34
	40	2.752	544.94	484.39	435.95	396.32	363.29	335.35	311.39
	50	3.071	608.02	540.46	486.41	442.19	405.35	374.16	347.44
	60	3.363	665.84	591.86	532.67	484.25	443.89	409.75	380.48

**Spacing  
7.5 inches**

**Spacing  
7.5 inches**

**Spacing  
7.5 inches**

# Application Rate (gal/ac) for Colored Disc Orifices

**Spacing (in.): 10**

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	4.86	4.32	3.89	3.54	3.24	2.99	2.78
	20	0.046	6.83	6.07	5.47	4.97	4.56	4.21	3.90
	30	0.057	8.41	7.48	6.73	6.12	5.61	5.18	4.81
	40	0.065	9.72	8.64	7.78	7.07	6.48	5.98	5.56
	50	0.073	10.91	9.70	8.73	7.93	7.27	6.71	6.23
	60	0.081	11.96	10.63	9.57	8.70	7.97	7.36	6.83
Gray (30)	10	0.050	7.49	6.66	5.99	5.45	4.99	4.61	4.28
	20	0.072	10.64	9.46	8.52	7.74	7.10	6.55	6.08
	30	0.088	13.01	11.56	10.41	9.46	8.67	8.01	7.43
	40	0.101	14.98	13.32	11.99	10.90	9.99	9.22	8.56
	50	0.112	16.69	14.84	13.35	12.14	11.13	10.27	9.54
	60	0.124	18.40	16.35	14.72	13.38	12.27	11.32	10.51
Black (35)	10	0.070	10.38	9.23	8.31	7.55	6.92	6.39	5.93
	20	0.098	14.59	12.97	11.67	10.61	9.72	8.98	8.34
	30	0.120	17.87	15.89	14.30	13.00	11.92	11.00	10.21
	40	0.139	20.63	18.34	16.51	15.01	13.75	12.70	11.79
	50	0.156	23.13	20.56	18.50	16.82	15.42	14.23	13.22
	60	0.170	25.23	22.43	20.19	18.35	16.82	15.53	14.42
Brown (41)	10	0.094	13.93	12.38	11.14	10.13	9.29	8.57	7.96
	20	0.132	19.58	17.41	15.66	14.24	13.05	12.05	11.19
	30	0.162	24.05	21.38	19.24	17.49	16.03	14.80	13.74
	40	0.187	27.73	24.65	22.18	20.17	18.49	17.06	15.85
	50	0.209	31.01	27.57	24.81	22.56	20.68	19.09	17.72
	60	0.228	33.91	30.14	27.12	24.66	22.60	20.86	19.37
Orange (46)	10	0.119	17.74	15.77	14.19	12.90	11.83	10.92	10.14
	20	0.169	25.10	22.31	20.08	18.25	16.73	15.45	14.34
	30	0.207	30.75	27.33	24.60	22.36	20.50	18.92	17.57
	40	0.239	35.48	31.54	28.39	25.81	23.65	21.84	20.28
	50	0.267	39.69	35.28	31.75	28.86	26.46	24.42	22.68
	60	0.293	43.50	38.67	34.80	31.64	29.00	26.77	24.86
Maroon (52)	10	0.149	22.08	19.62	17.66	16.06	14.72	13.59	12.62
	20	0.210	31.15	27.68	24.92	22.65	20.76	19.17	17.80
	30	0.257	38.11	33.88	30.49	27.72	25.41	23.45	21.78
	40	0.296	44.02	39.13	35.22	32.02	29.35	27.09	25.16
	50	0.332	49.28	43.81	39.42	35.84	32.85	30.33	28.16
	60	0.363	53.88	47.89	43.10	39.19	35.92	33.16	30.79
Red (63)	10	0.218	32.33	28.74	25.86	23.51	21.55	19.89	18.47
	20	0.307	45.60	40.53	36.48	33.16	30.40	28.06	26.06
	30	0.376	55.85	49.65	44.68	40.62	37.23	34.37	31.92
	40	0.435	64.53	57.36	51.62	46.93	43.02	39.71	36.87
	50	0.486	72.15	64.13	57.72	52.47	48.10	44.40	41.23
	60	0.532	78.98	70.21	63.18	57.44	52.65	48.60	45.13
Blue (80)	10	0.351	52.17	46.38	41.74	37.94	34.78	32.11	29.81
	20	0.496	73.72	65.53	58.98	53.62	49.15	45.37	42.13
	30	0.608	90.28	80.25	72.23	65.66	60.19	55.56	51.59
	40	0.702	104.21	92.63	83.37	75.79	69.48	64.13	59.55
	50	0.785	116.57	103.61	93.25	84.78	77.71	71.73	66.61
	60	0.859	127.60	113.43	102.08	92.80	85.07	78.53	72.92
Yellow (95)	10	0.506	75.17	66.82	60.14	54.67	50.11	46.26	42.95
	20	0.715	106.18	94.39	84.95	77.22	70.79	65.34	60.68
	30	0.876	130.10	115.65	104.08	94.62	86.73	80.06	74.34
	40	1.009	149.81	133.17	119.85	108.96	99.88	92.19	85.61
	50	1.133	168.21	149.52	134.57	122.34	112.14	103.52	96.12
	60	1.239	183.98	163.54	147.19	133.81	122.65	113.22	105.13
Green (110)	10	0.686	101.85	90.53	81.48	74.07	67.90	62.68	58.20
	20	0.973	144.56	128.50	115.65	105.13	96.37	88.96	82.60
	30	1.186	176.10	156.53	140.88	128.07	117.40	108.37	100.63
	40	1.372	203.69	181.06	162.96	148.14	135.80	125.35	116.40
	50	1.531	227.35	202.09	181.88	165.35	151.57	139.91	129.91
	60	1.681	249.69	221.95	199.75	181.59	166.46	153.66	142.68
White (125)	10	0.867	128.79	114.48	103.03	93.66	85.86	79.25	73.59
	20	1.230	182.67	162.37	146.13	132.85	121.78	112.41	104.38
	30	1.504	223.41	198.58	178.73	162.48	148.94	137.48	127.66
	40	1.735	257.58	228.96	206.06	187.33	171.72	158.51	147.19
	50	1.938	287.80	255.82	230.24	209.31	191.87	177.11	164.46
	60	2.124	315.40	280.35	252.32	229.38	210.27	194.09	180.23
Lime Green (156)	10	1.372	203.69	181.06	162.96	148.14	135.80	125.35	116.40
	20	1.947	289.12	256.99	231.29	210.27	192.74	177.92	165.21
	30	2.381	353.51	314.23	282.81	257.10	235.67	217.54	202.01
	40	2.752	408.70	363.29	326.96	297.24	272.47	251.51	233.54
	50	3.071	456.01	405.35	364.81	331.65	304.01	280.62	260.58
	60	3.363	499.38	443.89	399.50	363.19	332.92	307.31	285.36

**Spacing  
10 inches**

**Spacing  
10 inches**

**Spacing  
10 inches**

# Application Rate (gal/ac) for Colored Disc Orifices

**Spacing (in.): 15**

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	3.24	2.88	2.59	2.36	2.16	1.99	1.85
	20	0.046	4.56	4.05	3.64	3.31	3.04	2.80	2.60
	30	0.057	5.61	4.98	4.49	4.08	3.74	3.45	3.20
	40	0.065	6.48	5.76	5.19	4.72	4.32	3.99	3.70
	50	0.073	7.27	6.46	5.82	5.29	4.85	4.47	4.16
	60	0.081	7.97	7.09	6.38	5.80	5.32	4.91	4.56
Gray (30)	10	0.050	4.99	4.44	4.00	3.63	3.33	3.07	2.85
	20	0.072	7.10	6.31	5.68	5.16	4.73	4.37	4.06
	30	0.088	8.67	7.71	6.94	6.31	5.78	5.34	4.96
	40	0.101	9.99	8.88	7.99	7.26	6.66	6.15	5.71
	50	0.112	11.13	9.89	8.90	8.09	7.42	6.85	6.36
	60	0.124	12.27	10.90	9.81	8.92	8.18	7.55	7.01
Black (35)	10	0.070	6.92	6.15	5.54	5.03	4.61	4.26	3.95
	20	0.098	9.72	8.64	7.78	7.07	6.48	5.98	5.56
	30	0.120	11.92	10.59	9.53	8.67	7.94	7.33	6.81
	40	0.139	13.75	12.23	11.00	10.00	9.17	8.46	7.86
	50	0.156	15.42	13.71	12.34	11.21	10.28	9.49	8.81
	60	0.170	16.82	14.95	13.46	12.23	11.21	10.35	9.61
Brown (41)	10	0.094	9.29	8.25	7.43	6.75	6.19	5.71	5.31
	20	0.132	13.05	11.60	10.44	9.49	8.70	8.03	7.46
	30	0.162	16.03	14.25	12.83	11.66	10.69	9.87	9.16
	40	0.187	18.49	16.43	14.79	13.44	12.32	11.38	10.56
	50	0.209	20.68	18.38	16.54	15.04	13.78	12.72	11.81
	60	0.228	22.60	20.09	18.08	16.44	15.07	13.91	12.92
Orange (46)	10	0.119	11.83	10.51	9.46	8.60	7.88	7.28	6.76
	20	0.169	16.73	14.87	13.39	12.17	11.16	10.30	9.56
	30	0.207	20.50	18.22	16.40	14.91	13.67	12.62	11.71
	40	0.239	23.65	21.03	18.92	17.20	15.77	14.56	13.52
	50	0.267	26.46	23.52	21.17	19.24	17.64	16.28	15.12
	60	0.293	29.00	25.78	23.20	21.09	19.33	17.85	16.57
Maroon (52)	10	0.149	14.72	13.08	11.77	10.70	9.81	9.06	8.41
	20	0.210	20.76	18.46	16.61	15.10	13.84	12.78	11.86
	30	0.257	25.41	22.58	20.33	18.48	16.94	15.64	14.52
	40	0.296	29.35	26.09	23.48	21.35	19.57	18.06	16.77
	50	0.332	32.85	29.20	26.28	23.89	21.90	20.22	18.77
	60	0.363	35.92	31.93	28.74	26.12	23.95	22.10	20.53
Red (63)	10	0.218	21.55	19.16	17.24	15.67	14.37	13.26	12.32
	20	0.307	30.40	27.02	24.32	22.11	20.27	18.71	17.37
	30	0.376	37.23	33.10	29.79	27.08	24.82	22.91	21.28
	40	0.435	43.02	38.24	34.41	31.28	28.68	26.47	24.58
	50	0.486	48.10	42.75	38.48	34.98	32.07	29.60	27.48
	60	0.532	52.65	46.80	42.12	38.29	35.10	32.40	30.09
Blue (80)	10	0.351	34.78	30.92	27.83	25.30	23.19	21.40	19.88
	20	0.496	49.15	43.69	39.32	35.75	32.77	30.25	28.09
	30	0.608	60.19	53.50	48.15	43.77	40.13	37.04	34.39
	40	0.702	69.48	61.76	55.58	50.53	46.32	42.75	39.70
	50	0.785	77.71	69.08	62.17	56.52	51.81	47.82	44.41
	60	0.859	85.07	75.62	68.06	61.87	56.71	52.35	48.61
Yellow (95)	10	0.506	50.11	44.55	40.09	36.45	33.41	30.84	28.64
	20	0.715	70.79	62.92	56.63	51.48	47.19	43.56	40.45
	30	0.876	86.73	77.10	69.39	63.08	57.82	53.38	49.56
	40	1.009	99.88	88.78	79.90	72.64	66.58	61.46	57.07
	50	1.133	112.14	99.68	89.71	81.56	74.76	69.01	64.08
	60	1.239	122.65	109.03	98.12	89.20	81.77	75.48	70.09
Green (110)	10	0.686	67.90	60.35	54.32	49.38	45.27	41.78	38.80
	20	0.973	96.37	85.66	77.10	70.09	64.25	59.31	55.07
	30	1.186	117.40	104.35	93.92	85.38	78.27	72.25	67.08
	40	1.372	135.80	120.71	108.64	98.76	90.53	83.57	77.60
	50	1.531	151.57	134.73	121.25	110.23	101.04	93.27	86.61
	60	1.681	166.46	147.96	133.17	121.06	110.97	102.44	95.12
White (125)	10	0.867	85.86	76.32	68.69	62.44	57.24	52.84	49.06
	20	1.230	121.78	108.25	97.42	88.57	81.19	74.94	69.59
	30	1.504	148.94	132.39	119.15	108.32	99.29	91.65	85.11
	40	1.735	171.72	152.64	137.37	124.88	114.48	105.67	98.12
	50	1.938	191.87	170.55	153.49	139.54	127.91	118.07	109.64
	60	2.124	210.27	186.90	168.21	152.92	140.16	129.39	120.15
Lime Green (156)	10	1.372	135.80	120.71	108.64	98.76	90.53	83.57	77.60
	20	1.947	192.74	171.33	154.19	140.18	128.50	118.61	110.14
	30	2.381	235.67	209.49	188.54	171.40	157.12	145.03	134.67
	40	2.752	272.47	242.19	217.98	198.16	181.65	167.67	155.70
	50	3.071	304.01	270.23	243.21	221.10	202.67	187.08	173.72
	60	3.363	332.92	295.93	266.34	242.12	221.95	204.87	190.24

**Spacing  
15 inches**

**Spacing  
15 inches**

**Spacing  
15 inches**

# Application Rate (gal/ac) for Colored Disc Orifices

**Spacing (in.): 20**

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	2.43	2.16	1.94	1.77	1.62	1.50	1.39
	20	0.046	3.42	3.04	2.73	2.48	2.28	2.10	1.95
	30	0.057	4.21	3.74	3.36	3.06	2.80	2.59	2.40
	40	0.065	4.86	4.32	3.89	3.54	3.24	2.99	2.78
	50	0.073	5.45	4.85	4.36	3.97	3.64	3.36	3.12
	60	0.081	5.98	5.32	4.78	4.35	3.99	3.68	3.42
Gray (30)	10	0.050	3.75	3.33	3.00	2.72	2.50	2.30	2.14
	20	0.072	5.32	4.73	4.26	3.87	3.55	3.28	3.04
	30	0.088	6.51	5.78	5.20	4.73	4.34	4.00	3.72
	40	0.101	7.49	6.66	5.99	5.45	4.99	4.61	4.28
	50	0.112	8.34	7.42	6.68	6.07	5.56	5.14	4.77
	60	0.124	9.20	8.18	7.36	6.69	6.13	5.66	5.26
Black (35)	10	0.070	5.19	4.61	4.15	3.78	3.46	3.19	2.97
	20	0.098	7.29	6.48	5.83	5.30	4.86	4.49	4.17
	30	0.120	8.94	7.94	7.15	6.50	5.96	5.50	5.11
	40	0.139	10.32	9.17	8.25	7.50	6.88	6.35	5.89
	50	0.156	11.56	10.28	9.25	8.41	7.71	7.12	6.61
	60	0.170	12.62	11.21	10.09	9.18	8.41	7.76	7.21
Brown (41)	10	0.094	6.97	6.19	5.57	5.07	4.64	4.29	3.98
	20	0.132	9.79	8.70	7.83	7.12	6.53	6.02	5.59
	30	0.162	12.02	10.69	9.62	8.75	8.02	7.40	6.87
	40	0.187	13.86	12.32	11.09	10.08	9.24	8.53	7.92
	50	0.209	15.51	13.78	12.41	11.28	10.34	9.54	8.86
	60	0.228	16.95	15.07	13.56	12.33	11.30	10.43	9.69
Orange (46)	10	0.119	8.87	7.88	7.10	6.45	5.91	5.46	5.07
	20	0.169	12.55	11.16	10.04	9.13	8.37	7.72	7.17
	30	0.207	15.38	13.67	12.30	11.18	10.25	9.46	8.79
	40	0.239	17.74	15.77	14.19	12.90	11.83	10.92	10.14
	50	0.267	19.84	17.64	15.88	14.43	13.23	12.21	11.34
	60	0.293	21.75	19.33	17.40	15.82	14.50	13.38	12.43
Maroon (52)	10	0.149	11.04	9.81	8.83	8.03	7.36	6.79	6.31
	20	0.210	15.57	13.84	12.46	11.33	10.38	9.58	8.90
	30	0.257	19.06	16.94	15.24	13.86	12.70	11.73	10.89
	40	0.296	22.01	19.57	17.61	16.01	14.67	13.55	12.58
	50	0.332	24.64	21.90	19.71	17.92	16.43	15.16	14.08
	60	0.363	26.94	23.95	21.55	19.59	17.96	16.58	15.39
Red (63)	10	0.218	16.16	14.37	12.93	11.76	10.78	9.95	9.24
	20	0.307	22.80	20.27	18.24	16.58	15.20	14.03	13.03
	30	0.376	27.93	24.82	22.34	20.31	18.62	17.19	15.96
	40	0.435	32.26	28.68	25.81	23.46	21.51	19.85	18.44
	50	0.486	36.07	32.07	28.86	26.24	24.05	22.20	20.61
	60	0.532	39.49	35.10	31.59	28.72	26.33	24.30	22.57
Blue (80)	10	0.351	26.09	23.19	20.87	18.97	17.39	16.05	14.91
	20	0.496	36.86	32.77	29.49	26.81	24.57	22.68	21.06
	30	0.608	45.14	40.13	36.11	32.83	30.09	27.78	25.80
	40	0.702	52.11	46.32	41.69	37.90	34.74	32.07	29.78
	50	0.785	58.28	51.81	46.63	42.39	38.86	35.87	33.30
	60	0.859	63.80	56.71	51.04	46.40	42.53	39.26	36.46
Yellow (95)	10	0.506	37.58	33.41	30.07	27.33	25.06	23.13	21.48
	20	0.715	53.09	47.19	42.47	38.61	35.39	32.67	30.34
	30	0.876	65.05	57.82	52.04	47.31	43.37	40.03	37.17
	40	1.009	74.91	66.58	59.93	54.48	49.94	46.10	42.80
	50	1.133	84.11	74.76	67.28	61.17	56.07	51.76	48.06
	60	1.239	91.99	81.77	73.59	66.90	61.33	56.61	52.57
Green (110)	10	0.686	50.92	45.27	40.74	37.04	33.95	31.34	29.10
	20	0.973	72.28	64.25	57.82	52.57	48.19	44.48	41.30
	30	1.186	88.05	78.27	70.44	64.04	58.70	54.18	50.31
	40	1.372	101.85	90.53	81.48	74.07	67.90	62.68	58.20
	50	1.531	113.67	101.04	90.94	82.67	75.78	69.95	64.96
	60	1.681	124.85	110.97	99.88	90.80	83.23	76.83	71.34
White (125)	10	0.867	64.39	57.24	51.52	46.83	42.93	39.63	36.80
	20	1.230	91.33	81.19	73.07	66.42	60.89	56.21	52.19
	30	1.504	111.70	99.29	89.36	81.24	74.47	68.74	63.83
	40	1.735	128.79	114.48	103.03	93.66	85.86	79.25	73.59
	50	1.938	143.90	127.91	115.12	104.65	95.93	88.55	82.23
	60	2.124	157.70	140.18	126.16	114.69	105.13	97.05	90.11
Lime Green (156)	10	1.372	101.85	90.53	81.48	74.07	67.90	62.68	58.20
	20	1.947	144.56	128.50	115.65	105.13	96.37	88.96	82.60
	30	2.381	176.75	157.12	141.40	128.55	117.84	108.77	101.00
	40	2.752	204.35	181.65	163.48	148.62	136.23	125.75	116.77
	50	3.071	228.01	202.67	182.41	165.82	152.00	140.31	130.29
	60	3.363	249.69	221.95	199.75	181.59	166.46	153.66	142.68

**Spacing  
20 inches**

**Spacing  
20 inches**

**Spacing  
20 inches**

# Application Rate (gal/ac) for Colored Disc Orifices

**Spacing (in.): 36**

Orifice Color (Approx Size)	PSI	Gal/Min 28-0-0	MPH						
			4.0	4.5	5.0	5.5	6.0	6.5	7.0
Pink (24)	10	0.033	1.35	1.20	1.08	0.98	0.90	0.83	0.77
	20	0.046	1.90	1.69	1.52	1.38	1.27	1.17	1.08
	30	0.057	2.34	2.08	1.87	1.70	1.56	1.44	1.34
	40	0.065	2.70	2.40	2.16	1.96	1.80	1.66	1.54
	50	0.073	3.03	2.69	2.42	2.20	2.02	1.86	1.73
	60	0.081	3.32	2.95	2.66	2.42	2.21	2.04	1.90
Gray (30)	10	0.050	2.08	1.85	1.66	1.51	1.39	1.28	1.19
	20	0.072	2.96	2.63	2.37	2.15	1.97	1.82	1.69
	30	0.088	3.61	3.21	2.89	2.63	2.41	2.22	2.07
	40	0.101	4.16	3.70	3.33	3.03	2.77	2.56	2.38
	50	0.112	4.64	4.12	3.71	3.37	3.09	2.85	2.65
	60	0.124	5.11	4.54	4.09	3.72	3.41	3.14	2.92
Black (35)	10	0.070	2.88	2.56	2.31	2.10	1.92	1.77	1.65
	20	0.098	4.05	3.60	3.24	2.95	2.70	2.49	2.32
	30	0.120	4.96	4.41	3.97	3.61	3.31	3.06	2.84
	40	0.139	5.73	5.09	4.58	4.17	3.82	3.53	3.27
	50	0.156	6.42	5.71	5.14	4.67	4.28	3.95	3.67
	60	0.170	7.01	6.23	5.61	5.10	4.67	4.31	4.01
Brown (41)	10	0.094	3.87	3.44	3.10	2.81	2.58	2.38	2.21
	20	0.132	5.44	4.83	4.35	3.96	3.63	3.35	3.11
	30	0.162	6.68	5.94	5.34	4.86	4.45	4.11	3.82
	40	0.187	7.70	6.85	6.16	5.60	5.13	4.74	4.40
	50	0.209	8.62	7.66	6.89	6.27	5.74	5.30	4.92
	60	0.228	9.42	8.37	7.53	6.85	6.28	5.80	5.38
Orange (46)	10	0.119	4.93	4.38	3.94	3.58	3.29	3.03	2.82
	20	0.169	6.97	6.20	5.58	5.07	4.65	4.29	3.98
	30	0.207	8.54	7.59	6.83	6.21	5.69	5.26	4.88
	40	0.239	9.86	8.76	7.88	7.17	6.57	6.07	5.63
	50	0.267	11.02	9.80	8.82	8.02	7.35	6.78	6.30
	60	0.293	12.08	10.74	9.67	8.79	8.06	7.44	6.90
Maroon (52)	10	0.149	6.13	5.45	4.91	4.46	4.09	3.77	3.50
	20	0.210	8.65	7.69	6.92	6.29	5.77	5.32	4.94
	30	0.257	10.59	9.41	8.47	7.70	7.06	6.51	6.05
	40	0.296	12.23	10.87	9.78	8.89	8.15	7.53	6.99
	50	0.332	13.69	12.17	10.95	9.96	9.13	8.42	7.82
	60	0.363	14.97	13.30	11.97	10.88	9.98	9.21	8.55
Red (63)	10	0.218	8.98	7.98	7.18	6.53	5.99	5.53	5.13
	20	0.307	12.67	11.26	10.13	9.21	8.44	7.80	7.24
	30	0.376	15.51	13.79	12.41	11.28	10.34	9.55	8.87
	40	0.435	17.92	15.93	14.34	13.04	11.95	11.03	10.24
	50	0.486	20.04	17.81	16.03	14.58	13.36	12.33	11.45
	60	0.532	21.94	19.50	17.55	15.96	14.63	13.50	12.54
Blue (80)	10	0.351	14.49	12.88	11.59	10.54	9.66	8.92	8.28
	20	0.496	20.48	18.20	16.38	14.89	13.65	12.60	11.70
	30	0.608	25.08	22.29	20.06	18.24	16.72	15.43	14.33
	40	0.702	28.95	25.73	23.16	21.05	19.30	17.81	16.54
	50	0.785	32.38	28.78	25.90	23.55	21.59	19.93	18.50
	60	0.859	35.45	31.51	28.36	25.78	23.63	21.81	20.25
Yellow (95)	10	0.506	20.88	18.56	16.70	15.19	13.92	12.85	11.93
	20	0.715	29.50	26.22	23.60	21.45	19.66	18.15	16.85
	30	0.876	36.14	32.12	28.91	26.28	24.09	22.24	20.65
	40	1.009	41.62	36.99	33.29	30.27	27.74	25.61	23.78
	50	1.133	46.73	41.53	37.38	33.98	31.15	28.75	26.70
	60	1.239	51.11	45.43	40.88	37.17	34.07	31.45	29.20
Green (110)	10	0.686	28.29	25.15	22.63	20.58	18.86	17.41	16.17
	20	0.973	40.15	35.69	32.12	29.20	26.77	24.71	22.95
	30	1.186	48.92	43.48	39.13	35.58	32.61	30.10	27.95
	40	1.372	56.58	50.29	45.27	41.15	37.72	34.82	32.33
	50	1.531	63.15	56.14	50.52	45.93	42.10	38.86	36.09
	60	1.681	69.36	61.65	55.49	50.44	46.24	42.68	39.63
White (125)	10	0.867	35.77	31.80	28.62	26.02	23.85	22.01	20.44
	20	1.230	50.74	45.10	40.59	36.90	33.83	31.23	28.99
	30	1.504	62.06	55.16	49.65	45.13	41.37	38.19	35.46
	40	1.735	71.55	63.60	57.24	52.04	47.70	44.03	40.88
	50	1.938	79.94	71.06	63.96	58.14	53.30	49.20	45.68
	60	2.124	87.61	77.88	70.09	63.72	58.41	53.91	50.06
Lime Green (156)	10	1.372	56.58	50.29	45.27	41.15	37.72	34.82	32.33
	20	1.947	80.31	71.39	64.25	58.41	53.54	49.42	45.89
	30	2.381	98.20	87.29	78.56	71.42	65.46	60.43	56.11
	40	2.752	113.53	100.91	90.82	82.57	75.69	69.86	64.87
	50	3.071	126.67	112.60	101.34	92.12	84.45	77.95	72.38
	60	3.363	138.72	123.30	110.97	100.88	92.48	85.36	79.27

**Spacing  
36 inches**

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36 inches**

**Spacing  
36 inches**