

# WESTERN KANSAS IRRIGATION

MAY 06, 2025

WISH-119625

CUSTOMER : K STATE RAINGER LINEAR

VALLEY 8000 LINEAR  
7 TOWER - 1241.66 FT  
SYSTEM 423.5 GPM @ 9 PSI

P.O. NO. : INV170092

NELSON D3030 SPRAY NOZZLES  
NELSON 6 PSI REGULATORS  
NO ENDGUN  
ELEVATION 0 FT UP, 0 FT DOWN

2707 JONES AVENUE  
GARDEN CITY, KANSAS 67846  
(620)276-8257

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#### WARRANTY

WATER APPLICATION UNIFORMITY OBTAINED WITH THIS SYSTEM CAN BE ADVERSELY AFFECTED BY MANY VARIABLES INCLUDING THE IMPROPER MAKEUP OR INSTALLATION OF THE SPRINKLER OR SPRAY NOZZLE PACKAGE, OBSTRUCTED NOZZLES, MAINTAINING INCORRECT PIVOT PRESSURE, UNFAVORABLE CLIMATIC CONDITIONS, TIGHT AND/OR SLOPING SOILS, IMPROPER END GUN ARC SETTINGS, ERRATIC AND IMPROPER OPERATING SPEED OF THE SYSTEM, POOR QUALITY OF WATER WITH ABRASIVES, CORROSIVES, AND/OR SOLIDS WHICH CAN CAUSE PLUGGING AND JAMMING, AS WELL AS INHERENT VARIABLES IN THE MANY COMPONENTS COMPRISING THE SYSTEM. THEREFORE WESTERN IRRIGATION SUPPLY HOUSE, INC., MAKES NO WARRANTY AS TO THE UNIFORMITY OF COVERAGE OBTAINED FROM THIS WATER APPLICATION PRINTOUT OTHER THAN ITS MATHEMATICAL ACCURACY.

IT IS THE RESPONSIBILITY OF THE END USER TO DETERMINE IF ANY INCOMPATIBILITY EXISTS BETWEEN THE WATER DISTRIBUTION DEVICES AND THE CROP, THE SOIL, AND THE PHYSICAL STRUCTURE OF THE MECHANICAL MOVE SYSTEM. WESTERN IRRIGATION SUPPLY HOUSE, INC., THEREFORE, DISCLAIMS ANY LIABILITY FOR DAMAGES DUE TO FAILURE OF THE SYSTEM TO PERFORM AS CONTEMPLATED.

FIGURES PRESENTED ON THIS COMPUTER PRINTOUT ARE BASED ON THE FOLLOWING:

1. DATA FURNISHED TO WESTERN IRRIGATION SUPPLY HOUSE, INC., ON PIPE LENGTH, DIAMETER, SURFACE FINISH, OUTLET SPACINGS, WATER FLOW, PIVOT PRESSURE AND ALL OTHER APPLICABLE INFORMATION.
2. THERE IS 100% WATER APPLICATION EFFICIENCY (ZERO WIND VELOCITY AND NO EVAPORATION).
3. PIVOT PRESSURE IS MEASURED ON THE MAIN HORIZONTAL DISTRIBUTION PIPE JUST AFTER THE LAST ELBOW.
4. MAIN PIPE PRESSURE IS CALCULATED AS IF THE PIVOT IS ALWAYS ON LEVEL GROUND.
5. SPRINKLER OR SPRAY NOZZLE BASE PRESSURE MAY BE LESS THAN MAIN LINE PIPE PRESSURE DUE TO THE USE OF PRESSURE REGULATORS. WHERE DROP PIPES ARE USED THE STATIC HEAD IS ADDED TO AND FRICTION LOSS IS SUBTRACTED FROM THE MAIN LINE PIPE PRESSURE TO DETERMINE INLET PSI. REGULATORS ARE CONSIDERED MOUNTED AT THE SAME HEIGHT AS THE SPRINKLING DEVICE UNLESS NOTED.

<u>DEALER</u>			<u>IRRIGATOR</u>			
WESTERN KANSAS IRRIGATION			K STATE RAINGER LINEAR			
2707 JONES AVENUE						
GARDEN CITY, KANSAS 67846			INV170092			
TOTAL TARGET GPM	423.50	FRICTION FACTOR USED	140	SPANS	LENGTH	PIPE I.D.
TOP OF PIVOT PRESSURE	9.00	TOTAL LENGTH	1241.66	1	160.85	6.415
NO ENDGUN		NUMBER OF TOWERS	7	5	180.18	6.415
NUMBER OF OUTLETS	496	NUMBER OF SPRINKLERS	247	1	179.91	6.415

NELSON D3030 SPRAY NOZZLES - CONCAVE BLUE 36 DEEP GROOVE X BUBBLER PLATES  
NELSON ALL-FLO 6 PSI INTEGRAL SERIES REGULATORS  
DROPS AVERAGE 12.5 FT OF .75 I.D. PREMIUM BLUE FLEXIBLE HOSE - NELSON 1 LB WEIGHT  
ELEVATION IS 0 FT UP AND 0 FT DOWN

CAUTIONS AND WARNINGS

1. When using spray nozzles with five foot ground clearance or less, nozzle should travel between crop rows and spacing should not exceed 80 inches.

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE										SPRK NO.	REG SIZE	PLUG NO.
1		.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
2		3.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
3		5.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
4	8.44	8.44	1.71	1.71	8.95	6.10	D3030	20	TURQUOISE								1	NEL06AF	
5		10.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
6	5.00	13.44	1.71	1.71	8.83	6.10	D3030	20	TURQUOISE								2	NEL06AF	
7		15.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
8	5.00	18.44	1.71	1.71	8.70	6.10	D3030	20	TURQUOISE								3	NEL06AF	
9		20.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
10	5.00	23.44	1.71	1.71	8.59	6.10	D3030	20	TURQUOISE								4	NEL06AF	
11		25.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
12	5.00	28.44	1.71	1.71	8.49	6.10	D3030	20	TURQUOISE								5	NEL06AF	
13		30.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
14	5.00	33.44	1.71	1.71	8.39	6.10	D3030	20	TURQUOISE								6	NEL06AF	
15		35.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
16	5.00	38.44	1.71	1.71	8.30	6.10	D3030	20	TURQUOISE								7	NEL06AF	
17		40.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
18	5.00	43.44	1.71	1.71	8.22	6.10	D3030	20	TURQUOISE								8	NEL06AF	
19		45.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
20	5.00	48.44	1.71	1.71	8.15	6.10	D3030	20	TURQUOISE								9	NEL06AF	
21		50.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
22	5.00	53.44	1.71	1.71	8.08	6.10	D3030	20	TURQUOISE								10	NEL06AF	
23		55.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
24	5.00	58.44	1.71	1.71	8.03	6.10	D3030	20	TURQUOISE								11	NEL06AF	
25		60.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
26	5.00	63.44	1.71	1.71	7.98	6.10	D3030	20	TURQUOISE								12	NEL06AF	
27		65.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
28	5.00	68.44	1.71	1.71	7.94	6.10	D3030	20	TURQUOISE								13	NEL06AF	
29		70.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
30	5.00	73.44	1.71	1.71	7.90	6.10	D3030	20	TURQUOISE								14	NEL06AF	
31		75.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
32	5.00	78.44	1.69	1.71	7.88	6.10	D3030	20	TURQUOISE								15	NEL06AF	
33		80.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
34	4.90	83.34	1.68	1.71	7.86	6.10	D3030	20	TURQUOISE								16	NEL06AF	
35		85.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
36	5.00	88.34	1.69	1.71	7.85	6.10	D3030	20	TURQUOISE								17	NEL06AF	
37		90.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
38	5.00	93.34	1.69	1.71	7.85	6.10	D3030	20	TURQUOISE								18	NEL06AF	
39		95.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
40	5.00	98.34	1.70	1.71	7.86	6.10	D3030	20	TURQUOISE								19	NEL06AF	
41		100.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
42	5.00	103.34	1.70	1.71	7.87	6.10	D3030	20	TURQUOISE								20	NEL06AF	
43		105.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
44	5.00	108.34	1.70	1.71	7.90	6.10	D3030	20	TURQUOISE								21	NEL06AF	
45		110.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
46	5.00	113.34	1.70	1.71	7.93	6.10	D3030	20	TURQUOISE								22	NEL06AF	
47		115.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
48	5.00	118.34	1.70	1.71	7.97	6.10	D3030	20	TURQUOISE								23	NEL06AF	



OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE						SPRK NO.	REG SIZE	PLUG NO.
96	5.00	238.55	1.71	1.71	7.11	6.10	D3030	20	TURQUOISE				47	NEL06AF	50
97		241.05	-	-	-	-	-	-	-	-	-	-	-	-	
98	5.00	243.55	1.71	1.71	7.08	6.10	D3030	20	TURQUOISE				48	NEL06AF	51
99		246.05	-	-	-	-	-	-	-	-	-	-	-	-	
100	5.00	248.55	1.71	1.71	7.06	6.10	D3030	20	TURQUOISE				49	NEL06AF	52
101		251.04	-	-	-	-	-	-	-	-	-	-	-	-	
102	4.98	253.53	1.71	1.71	7.05	6.10	D3030	20	TURQUOISE				50	NEL06AF	53
103		256.03	-	-	-	-	-	-	-	-	-	-	-	-	
104	5.00	258.53	1.71	1.71	7.05	6.10	D3030	20	TURQUOISE				51	NEL06AF	54
105		261.03	-	-	-	-	-	-	-	-	-	-	-	-	
106	5.00	263.53	1.71	1.71	7.05	6.10	D3030	20	TURQUOISE				52	NEL06AF	55
107		266.03	-	-	-	-	-	-	-	-	-	-	-	-	
108	5.00	268.53	1.71	1.71	7.06	6.10	D3030	20	TURQUOISE				53	NEL06AF	56
109		271.03	-	-	-	-	-	-	-	-	-	-	-	-	
110	5.00	273.53	1.71	1.71	7.08	6.10	D3030	20	TURQUOISE				54	NEL06AF	57
111		276.03	-	-	-	-	-	-	-	-	-	-	-	-	
112	5.00	278.53	1.71	1.71	7.11	6.10	D3030	20	TURQUOISE				55	NEL06AF	58
113		281.03	-	-	-	-	-	-	-	-	-	-	-	-	
114	5.00	283.53	1.71	1.71	7.15	6.10	D3030	20	TURQUOISE				56	NEL06AF	59
115		286.03	-	-	-	-	-	-	-	-	-	-	-	-	
116	5.00	288.53	1.71	1.71	7.20	6.10	D3030	20	TURQUOISE				57	NEL06AF	60
117		291.03	-	-	-	-	-	-	-	-	-	-	-	-	
118	5.00	293.53	1.71	1.71	7.25	6.10	D3030	20	TURQUOISE				58	NEL06AF	61
119		296.03	-	-	-	-	-	-	-	-	-	-	-	-	
120	5.00	298.53	1.71	1.71	7.32	6.10	D3030	20	TURQUOISE				59	NEL06AF	62
121		301.03	-	-	-	-	-	-	-	-	-	-	-	-	
122	5.00	303.53	1.71	1.71	7.39	6.10	D3030	20	TURQUOISE				60	NEL06AF	63
123		306.03	-	-	-	-	-	-	-	-	-	-	-	-	
124	5.00	308.53	1.71	1.71	7.47	6.10	D3030	20	TURQUOISE				61	NEL06AF	64
125		311.03	-	-	-	-	-	-	-	-	-	-	-	-	
126	5.00	313.53	1.71	1.71	7.56	6.10	D3030	20	TURQUOISE				62	NEL06AF	65
127		316.03	-	-	-	-	-	-	-	-	-	-	-	-	
128	5.00	318.53	1.71	1.71	7.65	6.10	D3030	20	TURQUOISE				63	NEL06AF	66
129		321.03	-	-	-	-	-	-	-	-	-	-	-	-	
130	5.00	323.53	1.71	1.71	7.76	6.10	D3030	20	TURQUOISE				64	NEL06AF	67
131		326.03	-	-	-	-	-	-	-	-	-	-	-	-	
132	5.00	328.53	1.71	1.71	7.87	6.10	D3030	20	TURQUOISE				65	NEL06AF	68
133		331.03	-	-	-	-	-	-	-	-	-	-	-	-	
134	5.00	333.53	1.71	1.71	7.93	6.10	D3030	20	TURQUOISE				66	NEL06AF	69
135		336.03	-	-	-	-	-	-	-	-	-	-	-	-	
136	5.00	338.53	1.75	1.71	7.91	6.10	D3030	20	TURQUOISE				67	NEL06AF	70
TOWER 2	180.18	341.03	-	-	-	-	-	-	-	-	-	-	-	-	
137		341.23	-	-	-	-	-	-	-	-	-	-	-	-	71
138	5.20	343.73	1.77	1.71	7.90	6.10	D3030	20	TURQUOISE				68	NEL06AF	
139		346.23	-	-	-	-	-	-	-	-	-	-	-	-	72
140	5.00	348.73	1.76	1.71	7.89	6.10	D3030	20	TURQUOISE				69	NEL06AF	
141		351.23	-	-	-	-	-	-	-	-	-	-	-	-	72
142	5.00	353.73	1.75	1.71	7.76	6.10	D3030	20	TURQUOISE				70	NEL06AF	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE						SPRK NO.	REG SIZE	PLUG NO.
143		356.23	-	-	-	-	-	-	-	-	-	-	-	-	73
144	5.00	358.73	1.74	1.71	7.63	6.10	D3030	20	TURQUOISE				71	NEL06AF	
145		361.23	-	-	-	-	-	-	-	-	-	-	-	-	74
146	5.00	363.73	1.74	1.71	7.50	6.10	D3030	20	TURQUOISE				72	NEL06AF	
147		366.23	-	-	-	-	-	-	-	-	-	-	-	-	75
148	5.00	368.73	1.73	1.71	7.39	6.10	D3030	20	TURQUOISE				73	NEL06AF	
149		371.23	-	-	-	-	-	-	-	-	-	-	-	-	76
150	5.00	373.73	1.73	1.71	7.28	6.10	D3030	20	TURQUOISE				74	NEL06AF	
151		376.23	-	-	-	-	-	-	-	-	-	-	-	-	77
152	5.00	378.73	1.73	1.71	7.18	6.10	D3030	20	TURQUOISE				75	NEL06AF	
153		381.23	-	-	-	-	-	-	-	-	-	-	-	-	78
154	5.00	383.73	1.72	1.71	7.09	6.10	D3030	20	TURQUOISE				76	NEL06AF	
155		386.23	-	-	-	-	-	-	-	-	-	-	-	-	79
156	5.00	388.73	1.72	1.71	7.01	6.10	D3030	20	TURQUOISE				77	NEL06AF	
157		391.23	-	-	-	-	-	-	-	-	-	-	-	-	80
158	5.00	393.73	1.72	1.71	6.93	6.10	D3030	20	TURQUOISE				78	NEL06AF	
159		396.23	-	-	-	-	-	-	-	-	-	-	-	-	81
160	5.00	398.73	1.72	1.71	6.86	6.10	D3030	20	TURQUOISE				79	NEL06AF	
161		401.23	-	-	-	-	-	-	-	-	-	-	-	-	82
162	5.00	403.73	1.72	1.71	6.81	6.10	D3030	20	TURQUOISE				80	NEL06AF	
163		406.23	-	-	-	-	-	-	-	-	-	-	-	-	83
164	5.00	408.73	1.72	1.71	6.76	6.10	D3030	20	TURQUOISE				81	NEL06AF	
165		411.23	-	-	-	-	-	-	-	-	-	-	-	-	84
166	5.00	413.73	1.72	1.71	6.72	6.10	D3030	20	TURQUOISE				82	NEL06AF	
167		416.23	-	-	-	-	-	-	-	-	-	-	-	-	85
168	5.00	418.73	1.72	1.71	6.68	6.10	D3030	20	TURQUOISE				83	NEL06AF	
169		421.23	-	-	-	-	-	-	-	-	-	-	-	-	86
170	5.00	423.73	1.72	1.71	6.66	6.10	D3030	20	TURQUOISE				84	NEL06AF	
171		426.23	-	-	-	-	-	-	-	-	-	-	-	-	87
172	5.00	428.73	1.71	1.71	6.64	6.10	D3030	20	TURQUOISE				85	NEL06AF	
173		431.22	-	-	-	-	-	-	-	-	-	-	-	-	88
174	4.98	433.71	1.71	1.71	6.63	6.10	D3030	20	TURQUOISE				86	NEL06AF	
175		436.21	-	-	-	-	-	-	-	-	-	-	-	-	89
176	5.00	438.71	1.71	1.71	6.64	6.10	D3030	20	TURQUOISE				87	NEL06AF	
177		441.21	-	-	-	-	-	-	-	-	-	-	-	-	90
178	5.00	443.71	1.71	1.71	6.64	6.10	D3030	20	TURQUOISE				88	NEL06AF	
179		446.21	-	-	-	-	-	-	-	-	-	-	-	-	91
180	5.00	448.71	1.71	1.71	6.66	6.10	D3030	20	TURQUOISE				89	NEL06AF	
181		451.21	-	-	-	-	-	-	-	-	-	-	-	-	92
182	5.00	453.71	1.71	1.71	6.69	6.10	D3030	20	TURQUOISE				90	NEL06AF	
183		456.21	-	-	-	-	-	-	-	-	-	-	-	-	93
184	5.00	458.71	1.71	1.71	6.72	6.10	D3030	20	TURQUOISE				91	NEL06AF	
185		461.21	-	-	-	-	-	-	-	-	-	-	-	-	94
186	5.00	463.71	1.71	1.71	6.76	6.10	D3030	20	TURQUOISE				92	NEL06AF	
187		466.21	-	-	-	-	-	-	-	-	-	-	-	-	95
188	5.00	468.71	1.71	1.71	6.81	6.10	D3030	20	TURQUOISE				93	NEL06AF	
189		471.21	-	-	-	-	-	-	-	-	-	-	-	-	96
190	5.00	473.71	1.71	1.71	6.87	6.10	D3030	20	TURQUOISE				94	NEL06AF	





OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.
238	5.00	593.91	1.72	1.71	6.43	6.10	D3030	20	TURQUOISE			118	NEL06AF	
239		596.41	-	-	-	-	-	-	-	-	-	-	-	121
240	5.00	598.91	1.72	1.71	6.40	6.10	D3030	20	TURQUOISE			119	NEL06AF	
241		601.41	-	-	-	-	-	-	-	-	-	-	-	122
242	5.00	603.91	1.72	1.71	6.38	6.10	D3030	20	TURQUOISE			120	NEL06AF	
243		606.41	-	-	-	-	-	-	-	-	-	-	-	123
244	5.00	608.91	1.71	1.71	6.36	6.10	D3030	20	TURQUOISE			121	NEL06AF	
245		611.40	-	-	-	-	-	-	-	-	-	-	-	124
246	4.98	613.89	1.71	1.71	6.36	6.10	D3030	20	TURQUOISE			122	NEL06AF	
247		616.39	-	-	-	-	-	-	-	-	-	-	-	125
248	5.00	618.89	1.71	1.71	6.36	6.10	D3030	20	TURQUOISE			123	NEL06AF	
249		621.39	-	-	-	-	-	-	-	-	-	-	-	126
250	5.00	623.89	1.71	1.71	6.38	6.10	D3030	20	TURQUOISE			124	NEL06AF	
251		626.39	-	-	-	-	-	-	-	-	-	-	-	127
252	5.00	628.89	1.71	1.71	6.40	6.10	D3030	20	TURQUOISE			125	NEL06AF	
253		631.39	-	-	-	-	-	-	-	-	-	-	-	128
254	5.00	633.89	1.71	1.71	6.43	6.10	D3030	20	TURQUOISE			126	NEL06AF	
255		636.39	-	-	-	-	-	-	-	-	-	-	-	129
256	5.00	638.89	1.71	1.71	6.46	6.10	D3030	20	TURQUOISE			127	NEL06AF	
257		641.39	-	-	-	-	-	-	-	-	-	-	-	130
258	5.00	643.89	1.71	1.71	6.51	6.10	D3030	20	TURQUOISE			128	NEL06AF	
259		646.39	-	-	-	-	-	-	-	-	-	-	-	131
260	5.00	648.89	1.71	1.71	6.56	6.10	D3030	20	TURQUOISE			129	NEL06AF	
261		651.39	-	-	-	-	-	-	-	-	-	-	-	132
262	5.00	653.89	1.71	1.71	6.62	6.10	D3030	20	TURQUOISE			130	NEL06AF	
263		656.39	-	-	-	-	-	-	-	-	-	-	-	133
264	5.00	658.89	1.71	1.71	6.70	6.10	D3030	20	TURQUOISE			131	NEL06AF	
265		661.39	-	-	-	-	-	-	-	-	-	-	-	134
266	5.00	663.89	1.71	1.71	6.77	6.10	D3030	20	TURQUOISE			132	NEL06AF	
267		666.39	-	-	-	-	-	-	-	-	-	-	-	135
268	5.00	668.89	1.71	1.71	6.86	6.10	D3030	20	TURQUOISE			133	NEL06AF	
269		671.39	-	-	-	-	-	-	-	-	-	-	-	136
270	5.00	673.89	1.72	1.71	6.96	6.10	D3030	20	TURQUOISE			134	NEL06AF	
271		676.39	-	-	-	-	-	-	-	-	-	-	-	137
272	5.00	678.89	1.72	1.71	7.06	6.10	D3030	20	TURQUOISE			135	NEL06AF	
273		681.39	-	-	-	-	-	-	-	-	-	-	-	138
274	5.00	683.89	1.72	1.71	7.17	6.10	D3030	20	TURQUOISE			136	NEL06AF	
275		686.39	-	-	-	-	-	-	-	-	-	-	-	139
276	5.00	688.89	1.72	1.71	7.29	6.10	D3030	20	TURQUOISE			137	NEL06AF	
277		691.39	-	-	-	-	-	-	-	-	-	-	-	140
278	5.00	693.89	1.72	1.71	7.36	6.10	D3030	20	TURQUOISE			138	NEL06AF	
279		696.39	-	-	-	-	-	-	-	-	-	-	-	141
280	5.00	698.89	1.75	1.71	7.35	6.10	D3030	20	TURQUOISE			139	NEL06AF	
TOWER 4	180.18	701.39	-	-	-	-	-	-	-	-	-	-	-	142
281		701.59	-	-	-	-	-	-	-	-	-	-	-	
282	5.20	704.09	1.78	1.71	7.35	6.10	D3030	20	TURQUOISE			140	NEL06AF	
283		706.59	-	-	-	-	-	-	-	-	-	-	-	143
284	5.00	709.09	1.77	1.71	7.34	6.10	D3030	20	TURQUOISE			141	NEL06AF	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE						SPRK NO.	REG SIZE	PLUG NO.
285		711.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	144
286	5.00	714.09	1.76	1.71	7.22	6.10	D3030	20	TURQUOISE				142	NEL06AF	
287		716.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	145
288	5.00	719.09	1.75	1.71	7.09	6.10	D3030	20	TURQUOISE				143	NEL06AF	
289		721.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	146
290	5.00	724.09	1.74	1.71	6.98	6.10	D3030	20	TURQUOISE				144	NEL06AF	
291		726.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	147
292	5.00	729.09	1.74	1.71	6.87	6.10	D3030	20	TURQUOISE				145	NEL06AF	
293		731.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	148
294	5.00	734.09	1.73	1.71	6.76	6.10	D3030	20	TURQUOISE				146	NEL06AF	
295		736.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	149
296	5.00	739.09	1.73	1.71	6.67	6.10	D3030	20	TURQUOISE				147	NEL06AF	
297		741.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	150
298	5.00	744.09	1.73	1.71	6.59	6.10	D3030	20	TURQUOISE				148	NEL06AF	
299		746.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	151
300	5.00	749.09	1.73	1.71	6.51	6.10	D3030	20	TURQUOISE				149	NEL06AF	
301		751.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	152
302	5.00	754.09	1.73	1.71	6.44	6.10	D3030	20	TURQUOISE				150	NEL06AF	
303		756.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	153
304	5.00	759.09	1.72	1.71	6.38	6.10	D3030	20	TURQUOISE				151	NEL06AF	
305		761.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	154
306	5.00	764.09	1.72	1.71	6.33	6.10	D3030	20	TURQUOISE				152	NEL06AF	
307		766.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	155
308	5.00	769.09	1.72	1.71	6.29	6.10	D3030	20	TURQUOISE				153	NEL06AF	
309		771.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	156
310	5.00	774.09	1.72	1.71	6.25	6.10	D3030	20	TURQUOISE				154	NEL06AF	
311		776.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	157
312	5.00	779.09	1.72	1.71	6.23	6.10	D3030	20	TURQUOISE				155	NEL06AF	
313		781.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	158
314	5.00	784.09	1.72	1.71	6.21	6.10	D3030	20	TURQUOISE				156	NEL06AF	
315		786.59	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	159
316	5.00	789.09	1.72	1.71	6.20	6.10	D3030	20	TURQUOISE				157	NEL06AF	
317		791.58	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	160
318	4.98	794.07	1.71	1.71	6.20	6.10	D3030	20	TURQUOISE				158	NEL06AF	
319		796.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	161
320	5.00	799.07	1.72	1.71	6.21	6.10	D3030	20	TURQUOISE				159	NEL06AF	
321		801.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	162
322	5.00	804.07	1.72	1.71	6.22	6.10	D3030	20	TURQUOISE				160	NEL06AF	
323		806.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	163
324	5.00	809.07	1.72	1.71	6.24	6.10	D3030	20	TURQUOISE				161	NEL06AF	
325		811.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	164
326	5.00	814.07	1.72	1.71	6.28	6.10	D3030	20	TURQUOISE				162	NEL06AF	
327		816.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	165
328	5.00	819.07	1.72	1.71	6.32	6.10	D3030	20	TURQUOISE				163	NEL06AF	
329		821.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	166
330	5.00	824.07	1.72	1.71	6.36	6.10	D3030	20	TURQUOISE				164	NEL06AF	
331		826.57	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	167
332	5.00	829.07	1.72	1.71	6.42	6.10	D3030	20	TURQUOISE				165	NEL06AF	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE								SPRK NO.	REG SIZE	PLUG NO.		
333	5.00	831.57	-	-	-	-	-	-	-	-	-	-	-	-	-	168			
334		834.07	1.72	1.71	6.48	6.10	D3030	20	TURQUOISE	-	-	-	-	-	166	NEL06AF	169		
335		836.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
336	5.00	839.07	1.72	1.71	6.56	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	167		NEL06AF	170
337	5.00	841.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
338		844.07	1.72	1.71	6.64	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	168	NEL06AF		
339		846.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171		
340	5.00	849.07	1.72	1.71	6.73	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	169	NEL06AF	172
341	5.00	851.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
342		854.07	1.72	1.71	6.83	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	170	NEL06AF	
343		856.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173	
344	5.00	859.07	1.72	1.71	6.93	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	171	NEL06AF	174
345	5.00	861.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
346		864.07	1.72	1.71	7.05	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	172	NEL06AF	
347		866.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	175	
348	5.00	869.07	1.72	1.71	7.17	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	173	NEL06AF	176
349	5.00	871.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
350		874.07	1.72	1.71	7.24	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	174	NEL06AF	
351		876.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	177	
352	5.00	879.07	1.75	1.71	7.23	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	175	NEL06AF	178
TOWER 5	180.18	881.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
353	881.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
354	5.20	884.27	1.78	1.71	7.23	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	176	NEL06AF	179
355	5.00	886.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
356		889.27	1.77	1.71	7.23	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	177	NEL06AF	
357		891.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	
358	5.00	894.27	1.76	1.71	7.11	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	178	NEL06AF	181
359	5.00	896.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
360		899.27	1.75	1.71	6.99	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	179	NEL06AF	
361		901.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	182	
362	5.00	904.27	1.75	1.71	6.87	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	180	NEL06AF	183
363	5.00	906.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
364		909.27	1.74	1.71	6.76	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	181	NEL06AF	
365		911.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	184	
366	5.00	914.27	1.74	1.71	6.66	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	182	NEL06AF	185
367	5.00	916.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
368		919.27	1.74	1.71	6.57	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	183	NEL06AF	
369		921.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	186	
370	5.00	924.27	1.74	1.71	6.49	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	184	NEL06AF	187
371	5.00	926.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
372		929.27	1.73	1.71	6.42	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	185	NEL06AF	
373		931.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188	
374	5.00	934.27	1.73	1.71	6.35	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	186	NEL06AF	189
375	5.00	936.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
376		939.27	1.73	1.71	6.29	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	187	NEL06AF	
377		941.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190	
378	5.00	944.27	1.73	1.71	6.24	6.10	D3030	20	TURQUOISE	-	-	-	-	-	-	-	188	NEL06AF	191
379	946.77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.
380	5.00	949.27	1.73	1.71	6.20	6.10	D3030	20	TURQUOISE			189	NEL06AF	
381		951.77	-	-	-	-	-	-	-	-	-	-	-	192
382	5.00	954.27	1.73	1.71	6.17	6.10	D3030	20	TURQUOISE			190	NEL06AF	
383		956.77	-	-	-	-	-	-	-	-	-	-	-	193
384	5.00	959.27	1.73	1.71	6.15	6.10	D3030	20	TURQUOISE			191	NEL06AF	
385		961.77	-	-	-	-	-	-	-	-	-	-	-	194
386	5.00	964.27	1.73	1.71	6.13	6.10	D3030	20	TURQUOISE			192	NEL06AF	
387		966.77	-	-	-	-	-	-	-	-	-	-	-	195
388	5.00	969.27	1.73	1.71	6.12	6.10	D3030	20	TURQUOISE			193	NEL06AF	
389		971.76	-	-	-	-	-	-	-	-	-	-	-	196
390	4.98	974.25	1.72	1.71	6.12	6.10	D3030	20	TURQUOISE			194	NEL06AF	
391		976.75	-	-	-	-	-	-	-	-	-	-	-	197
392	5.00	979.25	1.72	1.71	6.13	6.10	D3030	20	TURQUOISE			195	NEL06AF	
393		981.75	-	-	-	-	-	-	-	-	-	-	-	198
394	5.00	984.25	1.72	1.71	6.15	6.10	D3030	20	TURQUOISE			196	NEL06AF	
395		986.75	-	-	-	-	-	-	-	-	-	-	-	199
396	5.00	989.25	1.73	1.71	6.17	6.10	D3030	20	TURQUOISE			197	NEL06AF	
397		991.75	-	-	-	-	-	-	-	-	-	-	-	200
398	5.00	994.25	1.73	1.71	6.21	6.10	D3030	20	TURQUOISE			198	NEL06AF	
399		996.75	-	-	-	-	-	-	-	-	-	-	-	201
400	5.00	999.25	1.73	1.71	6.25	6.10	D3030	20	TURQUOISE			199	NEL06AF	
401		1001.75	-	-	-	-	-	-	-	-	-	-	-	202
402	5.00	1004.25	1.73	1.71	6.30	6.10	D3030	20	TURQUOISE			200	NEL06AF	
403		1006.75	-	-	-	-	-	-	-	-	-	-	-	203
404	5.00	1009.25	1.73	1.71	6.36	6.10	D3030	20	TURQUOISE			201	NEL06AF	
405		1011.75	-	-	-	-	-	-	-	-	-	-	-	204
406	5.00	1014.25	1.73	1.71	6.42	6.10	D3030	20	TURQUOISE			202	NEL06AF	
407		1016.75	-	-	-	-	-	-	-	-	-	-	-	205
408	5.00	1019.25	1.73	1.71	6.50	6.10	D3030	20	TURQUOISE			203	NEL06AF	
409		1021.75	-	-	-	-	-	-	-	-	-	-	-	206
410	5.00	1024.25	1.73	1.71	6.58	6.10	D3030	20	TURQUOISE			204	NEL06AF	
411		1026.75	-	-	-	-	-	-	-	-	-	-	-	207
412	5.00	1029.25	1.73	1.71	6.67	6.10	D3030	20	TURQUOISE			205	NEL06AF	
413		1031.75	-	-	-	-	-	-	-	-	-	-	-	208
414	5.00	1034.25	1.73	1.71	6.77	6.10	D3030	20	TURQUOISE			206	NEL06AF	
415		1036.75	-	-	-	-	-	-	-	-	-	-	-	209
416	5.00	1039.25	1.73	1.71	6.88	6.10	D3030	20	TURQUOISE			207	NEL06AF	
417		1041.75	-	-	-	-	-	-	-	-	-	-	-	210
418	5.00	1044.25	1.73	1.71	7.00	6.10	D3030	20	TURQUOISE			208	NEL06AF	
419		1046.75	-	-	-	-	-	-	-	-	-	-	-	211
420	5.00	1049.25	1.73	1.71	7.12	6.10	D3030	20	TURQUOISE			209	NEL06AF	
421		1051.75	-	-	-	-	-	-	-	-	-	-	-	212
422	5.00	1054.25	1.73	1.71	7.19	6.10	D3030	20	TURQUOISE			210	NEL06AF	
423		1056.75	-	-	-	-	-	-	-	-	-	-	-	213
424	5.00	1059.25	1.77	1.71	7.19	6.10	D3030	20	TURQUOISE			211	NEL06AF	
TOWER 6	180.18	1061.75												
425		1061.95	-	-	-	-	-	-	-	-	-	-	-	214
426	5.20	1064.45	1.71	1.71	7.19	6.10	D3030	20	TURQUOISE			212	NEL06AF	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.
427		1066.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	215
428	5.00	1069.45	1.72	1.71	7.19	6.10	D3030	20	TURQUOISE			213	NEL06AF	
429		1071.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	216
430	5.00	1074.45	1.72	1.71	7.07	6.10	D3030	20	TURQUOISE			214	NEL06AF	
431		1076.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	217
432	5.00	1079.45	1.73	1.71	6.94	6.10	D3030	20	TURQUOISE			215	NEL06AF	
433		1081.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	218
434	5.00	1084.45	1.73	1.71	6.83	6.10	D3030	20	TURQUOISE			216	NEL06AF	
435		1086.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	219
436	5.00	1089.45	1.74	1.71	6.72	6.10	D3030	20	TURQUOISE			217	NEL06AF	
437		1091.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	220
438	5.00	1094.45	1.74	1.71	6.63	6.10	D3030	20	TURQUOISE			218	NEL06AF	
439		1096.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	221
440	5.00	1099.45	1.74	1.71	6.54	6.10	D3030	20	TURQUOISE			219	NEL06AF	
441		1101.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	222
442	5.00	1104.45	1.74	1.71	6.46	6.10	D3030	20	TURQUOISE			220	NEL06AF	
443		1106.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	223
444	5.00	1109.45	1.75	1.71	6.38	6.10	D3030	20	TURQUOISE			221	NEL06AF	
445		1111.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	224
446	5.00	1114.45	1.75	1.71	6.32	6.10	D3030	20	TURQUOISE			222	NEL06AF	
447		1116.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	225
448	5.00	1119.45	1.75	1.71	6.26	6.10	D3030	20	TURQUOISE			223	NEL06AF	
449		1121.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	226
450	5.00	1124.45	1.75	1.71	6.21	6.10	D3030	20	TURQUOISE			224	NEL06AF	
451		1126.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	227
452	5.00	1129.45	1.75	1.71	6.17	6.10	D3030	20	TURQUOISE			225	NEL06AF	
453		1131.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	228
454	5.00	1134.45	1.76	1.71	6.14	6.10	D3030	20	TURQUOISE			226	NEL06AF	
455		1136.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	229
456	5.00	1139.45	1.76	1.71	6.12	6.10	D3030	20	TURQUOISE			227	NEL06AF	
457		1141.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	230
458	5.00	1144.45	1.76	1.71	6.11	6.10	D3030	20	TURQUOISE			228	NEL06AF	
459		1146.95	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	231
460	5.00	1149.45	1.76	1.71	6.10	6.10	D3030	20	TURQUOISE			229	NEL06AF	
461		1151.94	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	232
462	4.98	1154.43	1.76	1.71	6.10	6.10	D3030	20	TURQUOISE			230	NEL06AF	
463		1156.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	233
464	5.00	1159.43	1.76	1.71	6.11	6.10	D3030	20	TURQUOISE			231	NEL06AF	
465		1161.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	234
466	5.00	1164.43	1.77	1.71	6.13	6.10	D3030	20	TURQUOISE			232	NEL06AF	
467		1166.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	235
468	5.00	1169.43	1.77	1.71	6.16	6.10	D3030	20	TURQUOISE			233	NEL06AF	
469		1171.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	236
470	5.00	1174.43	1.77	1.71	6.19	6.10	D3030	20	TURQUOISE			234	NEL06AF	
471		1176.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	237
472	5.00	1179.43	1.78	1.71	6.23	6.10	D3030	20	TURQUOISE			235	NEL06AF	
473		1181.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	238
474	5.00	1184.43	1.78	1.71	6.28	6.10	D3030	20	TURQUOISE			236	NEL06AF	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE					SPRK NO.	REG SIZE	PLUG NO.
475		1186.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	239
476	5.00	1189.43	1.71	1.71	6.34	6.10	D3030	20	TURQUOISE			237	NEL06AF	
477		1191.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	240
478	5.00	1194.43	1.73	1.71	6.41	6.10	D3030	20	TURQUOISE			238	NEL06AF	
479		1196.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	241
480	5.00	1199.43	1.75	1.71	6.49	6.10	D3030	20	TURQUOISE			239	NEL06AF	
481		1201.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	242
482	5.00	1204.43	1.77	1.71	6.57	6.10	D3030	20	TURQUOISE			240	NEL06AF	
483		1206.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	243
484	5.00	1209.43	1.71	1.71	6.66	6.10	D3030	20	TURQUOISE			241	NEL06AF	
485		1211.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	244
486	5.00	1214.43	1.75	1.71	6.77	6.10	D3030	20	TURQUOISE			242	NEL06AF	
487		1216.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	245
488	5.00	1219.43	1.78	1.71	6.87	6.10	D3030	20	TURQUOISE			243	NEL06AF	
489		1221.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	246
490	5.00	1224.43	1.71	1.71	6.99	6.10	D3030	20	TURQUOISE			244	NEL06AF	
491		1226.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	247
492	5.00	1229.43	1.71	1.71	7.12	6.10	D3030	20	TURQUOISE			245	NEL06AF	
493		1231.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	248
494	5.00	1234.43	1.71	1.71	7.18	6.10	D3030	20	TURQUOISE			246	NEL06AF	
495		1236.93	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	249
496	5.00	1239.43	1.71	1.71	7.18	6.10	D3030	20	TURQUOISE			247	NEL06AF	
TOWER 7	179.91	1241.66												
OVERHANG	.00	1241.66												

TOTAL GPM = 423.38

MINIMUM RECOMMENDED REGULATOR INLET PRESSURE IS 11.00 PSI  
 WITH GRADUATED ELEVATION OF .00 FT THE INLET PRESSURE IS 11.87 PSI FOR SPRINKLER 247  
 THIS POSITION IS THE CLOSEST TO THE MINIMUM RECOMMENDED INLET PRESSURE

**SUMMARY OF SPRINKLERS**

247 D3030 20 TURQUOISE

**249 PLUGS**

**SUMMARY OF REGULATORS**

247 Nelson Int All-Flo 6 psi

**TOTAL OF 247 REGULATORS**

## NOZZLE POSITION CHART

D3030 20 TURQUOISE

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25,  
26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50,  
51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75,  
76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100,  
101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125,  
126,

NOZZLE POSITION CHART

D3030 21 TURQUOISE

244



Rotation time at 100% = 3.54 Hours Or 212 minutes

423.5 GPM @ 9 PSI

Installation Chart

Page 1

Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg			
1	PLUG				61	PLUG				56		59	20	06AF	43	PLUG				30		118	20	06AF			
2	PLUG				62		30	20	06AF	57	PLUG		20	06AF	44					31	PLUG		119	20	06AF		
3	PLUG				63	PLUG				58		60	20	06AF	45	PLUG	89	20	06AF	32					06AF		
4		1	20	06AF	64		31	20	06AF	59	PLUG		20	06AF	46		90	20	06AF	33	PLUG				06AF		
5	PLUG				TOWER 1					60		61	20	06AF	47	PLUG				34			120	20	06AF		
6		2	20	06AF		1	PLUG			61	PLUG		20	06AF	48		91	20	06AF	35	PLUG				06AF		
7	PLUG					2		32	20	06AF	62		20	06AF	49	PLUG				36			121	20	06AF		
8		3	20	06AF		3	PLUG			63	PLUG		20	06AF	50		92	20	06AF	37	PLUG				06AF		
9	PLUG					4		33	20	06AF	64		20	06AF	51	PLUG				38			122	20	06AF		
10		4	20	06AF		5	PLUG			65	PLUG		20	06AF	52		93	20	06AF	39	PLUG				06AF		
11	PLUG					6		34	20	06AF	66		20	06AF	53	PLUG				40			123	20	06AF		
12		5	20	06AF		7	PLUG			67	PLUG		20	06AF	54		94	20	06AF	41	PLUG				06AF		
13	PLUG					8		35	20	06AF	68		20	06AF	55	PLUG				42			124	20	06AF		
14		6	20	06AF		9	PLUG			69	PLUG		20	06AF	56		95	20	06AF	43	PLUG				06AF		
15	PLUG					10		36	20	06AF	70		20	06AF	57	PLUG				44			125	20	06AF		
16		7	20	06AF		11	PLUG			71	PLUG		20	06AF	58		96	20	06AF	45	PLUG				06AF		
17	PLUG					12		37	20	06AF	72		20	06AF	59	PLUG				46			126	20	06AF		
18		8	20	06AF		13	PLUG			TOWER 2					60		97	20	06AF	47	PLUG				06AF		
19	PLUG					14		38	20		06AF	1	PLUG			61	PLUG				48			127	20	06AF	
20		9	20	06AF		15	PLUG				2		68	20	06AF	62		98	20	06AF	49	PLUG				06AF	
21	PLUG					16		39	20		06AF	3	PLUG			63	PLUG				50			128	20	06AF	
22		10	20	06AF		17	PLUG				4		69	20	06AF	64		99	20	06AF	51	PLUG				06AF	
23	PLUG					18		40	20	06AF	5	PLUG			65	PLUG				52			129	20	06AF		
24		11	20	06AF		19	PLUG				6		70	20	06AF	66		100	20	06AF	53	PLUG				06AF	
25	PLUG					20		41	20	06AF	7	PLUG			67	PLUG				54			130	20	06AF		
26		12	20	06AF		21	PLUG				8		71	20	06AF	68		101	20	06AF	55	PLUG				06AF	
27	PLUG					22		42	20	06AF	9	PLUG			69	PLUG				56			131	20	06AF		
28		13	20	06AF		23	PLUG				10		72	20	06AF	70		102	20	06AF	57	PLUG				06AF	
29	PLUG					24		43	20	06AF	11	PLUG			71	PLUG				58			132	20	06AF		
30		14	20	06AF		25	PLUG				12		73	20	06AF	72		103	20	06AF	59	PLUG				06AF	
31	PLUG					26		44	20	06AF	13	PLUG			14	TOWER 3				60			133	20	06AF		
32		15	20	06AF		27	PLUG				14		74	20	06AF		1	PLUG				61	PLUG				06AF
33	PLUG					28		45	20	06AF	15	PLUG			15			104	20	06AF	62			134	20	06AF	
34		16	20	06AF		29	PLUG				16		75	20	06AF		2	PLUG				63	PLUG				06AF
35	PLUG					30		46	20	06AF	17	PLUG			16		105	20	06AF	64			135	20	06AF		
36		17	20	06AF		31	PLUG				18		76	20	06AF	5	PLUG				65	PLUG				06AF	
37	PLUG					32		47	20	06AF	19	PLUG			17		106	20	06AF	66			136	20	06AF		
38		18	20	06AF		33	PLUG				20		77	20	06AF	7	PLUG				67	PLUG				06AF	
39	PLUG					34		48	20	06AF	21	PLUG			18		107	20	06AF	68			137	20	06AF		
40		19	20	06AF		35	PLUG				22		78	20	06AF	9	PLUG				69	PLUG				06AF	
41	PLUG					36		49	20	06AF	23	PLUG			10		108	20	06AF	70			138	20	06AF		
42		20	20	06AF		37	PLUG				24		79	20	06AF	11	PLUG				71	PLUG				06AF	
43	PLUG					38		50	20	06AF	25	PLUG			12		109	20	06AF	72						06AF	
44		21	20	06AF		39	PLUG				26		80	20	06AF	13	PLUG				TOWER 4					06AF	
45	PLUG					40		51	20	06AF	27	PLUG			14		110	20	06AF	1		PLUG					06AF
46		22	20	06AF		41	PLUG				28		81	20	06AF	15	PLUG					2			140	20	06AF
47	PLUG					42		52	20	06AF	29	PLUG			16		111	20	06AF	3		PLUG					06AF
48		23	20	06AF		43	PLUG				30		82	20	06AF	17	PLUG				4			141	20	06AF	
49	PLUG					44		53	20	06AF	31	PLUG			18		112	20	06AF	5	PLUG					06AF	
50		24	20	06AF		45	PLUG				32		83	20	06AF	19	PLUG				6			142	20	06AF	
51	PLUG					46		54	20	06AF	33	PLUG			20		113	20	06AF	7	PLUG					06AF	
52		25	20	06AF		47	PLUG				34		84	20	06AF	21	PLUG				8			143	20	06AF	
53	PLUG					48		55	20	06AF	35	PLUG			22		114	20	06AF	9	PLUG					06AF	
54		26	20	06AF		49	PLUG				36		85	20	06AF	23	PLUG				10			144	20	06AF	
55	PLUG					50		56	20	06AF	37	PLUG			24		115	20	06AF	11	PLUG					06AF	
56		27	20	06AF		51	PLUG				38		86	20	06AF	25	PLUG				12			145	20	06AF	
57	PLUG					52		57	20	06AF	39	PLUG			26		116	20	06AF	13	PLUG					06AF	
58		28	20	06AF		53	PLUG				40		87	20	06AF	27	PLUG				14			146	20	06AF	
59	PLUG					54		58	20	06AF	41	PLUG			28		117	20	06AF	15	PLUG					06AF	
60		29	20	06AF		55	PLUG				42		88	20	06AF	29	PLUG				16			147	20	06AF	

Rotation time at 100% = 3.54 Hours Or 212 minutes

423.5 GPM @ 9 PSI

Installation Chart

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Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	
17	PLUG				4		177	20	06AF	64		207	20	06AF	51	PLUG				
18					5	PLUG				65	PLUG				52			237	20	06AF
19	PLUG	148	20	06AF	6		178	20	06AF	66		208	20	06AF	53	PLUG				
20					7	PLUG				67	PLUG				54			238	20	06AF
21	PLUG	149	20	06AF	8		179	20	06AF	68		209	20	06AF	55	PLUG				
22					9	PLUG				69	PLUG				56			239	20	06AF
23	PLUG	150	20	06AF	10		180	20	06AF	70		210	20	06AF	57	PLUG				
24					11	PLUG				71	PLUG				58			240	20	06AF
25	PLUG	151	20	06AF	12		181	20	06AF	72		211	20	06AF	59	PLUG				
26					13	PLUG				TOWER 6					60			241	20	06AF
27	PLUG	152	20	06AF	14		182	20	06AF	1	PLUG				61	PLUG				
28					15	PLUG				2		212	20	06AF	62			242	20	06AF
29	PLUG	153	20	06AF	16		183	20	06AF	3	PLUG				63	PLUG				
30					17	PLUG				4		213	20	06AF	64			243	20	06AF
31	PLUG	154	20	06AF	18		184	20	06AF	5	PLUG				65	PLUG				
32					19	PLUG				6		214	20	06AF	66			244	20	06AF
33	PLUG	155	20	06AF	20		185	20	06AF	7	PLUG				67	PLUG				
34					21	PLUG				8		215	20	06AF	68			245	20	06AF
35	PLUG	156	20	06AF	22		186	20	06AF	9	PLUG				69	PLUG				
36					23	PLUG				10		216	20	06AF	70			246	20	06AF
37	PLUG	157	20	06AF	24		187	20	06AF	11	PLUG				71	PLUG				
38					25	PLUG				12		217	20	06AF	72			247	20	06AF
39	PLUG	158	20	06AF	26		188	20	06AF	13	PLUG				TOWER 7					
40					27	PLUG				14		218	20	06AF						
41	PLUG	159	20	06AF	28		189	20	06AF	15	PLUG									
42					29	PLUG				16		219	20	06AF						
43	PLUG	160	20	06AF	30		190	20	06AF	17	PLUG									
44					31	PLUG				18		220	20	06AF						
45	PLUG	161	20	06AF	32		191	20	06AF	19	PLUG									
46					33	PLUG				20		221	20	06AF						
47	PLUG	162	20	06AF	34		192	20	06AF	21	PLUG									
48					35	PLUG				22		222	20	06AF						
49	PLUG	163	20	06AF	36		193	20	06AF	23	PLUG									
50					37	PLUG				24		223	20	06AF						
51	PLUG	164	20	06AF	38		194	20	06AF	25	PLUG									
52					39	PLUG				26		224	20	06AF						
53	PLUG	165	20	06AF	40		195	20	06AF	27	PLUG									
54					41	PLUG				28		225	20	06AF						
55	PLUG	166	20	06AF	42		196	20	06AF	29	PLUG									
56					43	PLUG				30		226	20	06AF						
57	PLUG	167	20	06AF	44		197	20	06AF	31	PLUG									
58					45	PLUG				32		227	20	06AF						
59	PLUG	168	20	06AF	46		198	20	06AF	33	PLUG									
60					47	PLUG				34		228	20	06AF						
61	PLUG	169	20	06AF	48		199	20	06AF	35	PLUG									
62					49	PLUG				36		229	20	06AF						
63	PLUG	170	20	06AF	50		200	20	06AF	37	PLUG									
64					51	PLUG				38		230	20	06AF						
65	PLUG	171	20	06AF	52		201	20	06AF	39	PLUG									
66					53	PLUG				40		231	20	06AF						
67	PLUG	172	20	06AF	54		202	20	06AF	41	PLUG									
68					55	PLUG				42		232	20	06AF						
69	PLUG	173	20	06AF	56		203	20	06AF	43	PLUG									
70					57	PLUG				44		233	20	06AF						
71	PLUG	174	20	06AF	58		204	20	06AF	45	PLUG									
72					59	PLUG				46		234	20	06AF						
TOWER 5					60		205	20	06AF	47	PLUG									
1	PLUG				61	PLUG				48		235	20	06AF						
2					62		206	20	06AF	49	PLUG									
3	PLUG	176	20	06AF	63	PLUG				50		236	20	06AF						

**PRECIPITATION CHART FOR FULL CIRCLE**

WISH-119625

MAY 06, 2025

DEALER - WESTERN KANSAS IRRIGATION

IRRIGATOR - K STATE RANGER LINEAR

TOTAL LENGTH PIPE = 1241.66    SYSTEM PRESSURE = 9 PSI  
GPM UNDER PIPE = 423.38    TOTAL GPM = 423.38  
ACRES UNDER PIPE = 46.24  
RANGE OF ENDGUN = .00  
GPM OF ENDGUN = .00  
ACRES UNDER ENDGUN = .00

MOTOR SIZE (HP) = .6  
LOADED MOTOR RPM = 1800  
CENTER GEAR BOX RATIO = 53  
WHEEL GEAR BOX RATIO = 52  
TIRE SIZE = 14.9 X 24  
LAST TOWER SPEED (FPM) = 7.68

**PRECIPITATION BASED**

**% TIMER BASED**

PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.07	100.00	3.54 - 212(min)	100.00	.07	3.54 - 212(min)
.10	71.56	4.94	90.00	.08	3.93
.20	35.78	9.89	80.00	.09	4.42
.25	28.63	12.36	70.00	.10	5.05
.30	23.85	14.83	60.00	.12	5.90
.40	17.89	19.77	50.00	.14	7.07
.50	14.31	24.71	45.00	.16	7.86
.60	11.93	29.66	40.00	.18	8.84
.70	10.22	34.60	35.00	.20	10.11
.75	9.54	37.07	30.00	.24	11.79
.80	8.95	39.54	25.00	.29	14.15
.90	7.95	44.49	20.00	.36	17.69
1.00	7.16	49.43	15.00	.48	23.58
1.25	5.73	61.79	10.00	.72	35.37
1.50	4.77	74.14	5.00	1.43	70.75

CAUTION: The relationship between precipitation rate, timer setting, and hours per revolution provided above are theoretical numbers based on the data list at the top of the page. Actual precipitation rates may vary due to the following field and machine conditions: wind drift; evaporation; tire slippage, tire loaded radius; drive train efficiency; elevation changes; soil type. Due to these varying field and machine conditions the above chart should be used as a guide only.