

REINKE IRRIGATION SYSTEMS
PIVOT SYSTEM SPRINKLER CHART
E65/60 Std 114"
REINKE IRRIGATION SYSTEMS
RMCchart0.97c

Electric

CASE NUMBER: RP040076

DATE: 09 Jan 2004

DEALER: SOTRAVIC LTEE
NUMBER: 81922

CUSTOMER NAME: NORTHERN PLAINS #1
SERIAL NUMBER: ~~0104-30616-2060SG~~

NUMBER OF TOWERS: 6 NOZZLE FILES: N3000G , R3000G
GAUGE PRESSURE: 5.1 bar NOZZLE SELECTION OPTION: 1
TOTAL SYSTEM FLOW: 1480.1 lpm FRICTION C-FACTOR: 135
TOTAL PIPE LENGTH: 355.5 m COVERAGE WITHOUT GUN: 356.4 m
END GUN TYPE: SR75 ADJ. END GUN RADIUS: 23.1 m
FLOW RATE & RADIUS SPECIFIED-NOT COMPUTED

SYSTEM lpm PER ha: 32.9

LAST TOWER - TIRE SIZE: 14.9 x 24 CENTERDRIVE: 48:1

SYSTEM MANUFACTURER: REINKE

1 194-60 SPAN 1, 60.4 m, 14.73 cm ID PIPE
4 194-60 SPANS 2- 5, 59.1 m, 14.73 cm ID PIPE =
1 160-60 SPAN 6, 49.2 m, 14.73 cm ID PIPE
1 32GF OVERHANG, 9.4 m, 14.73 cm ID PIPE

DISCLAIMER

The uniformity of water application obtained with this system can be adversely affected by many variables including, but not limited to, the improper makeup or installation of the nozzle package; obstructed nozzles; tight and/or sloping soils; improper end gun arc settings; incorrect maintenance of pivot pressure; unfavorable climate conditions; and erratic and improper operating speed of the system. Reinke Mfg. Co., Inc. makes no warranty as to the uniformity of the coverage to be obtained from this water application printout other than its mathematical accuracy.

The products, which are specified as a part of this nozzle package design, are covered by the original manufacturer's printed "Warranty and Disclaimer", which applies to the individual components of their own manufacture. Reinke Mfg. Co., Inc. cannot be responsible for the performance of these products and makes no warranties, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, where permitted by law, and does hereby disclaim any liability for damages due to failure of these products to perform as anticipated.

-OUTLET-		-SPRINKLER-			-REG-	LPM	PRESSURE		
NO.	LOC.	NO.	SEP.	MODEL	NOZZLE	MODEL	REQ.	DEL.	INLINE
1	2.7			PLUG					
2	5.6			PLUG					
3	8.5			PLUG					
4	11.4	1	11.4	N3000	TN-#12 Gold	LB10	2.1	3.3	4.9 72
5	14.3			PLUG					
6	17.2	2	5.8	N3000	TN-#12 Gold	LB10	2.8	3.3	4.9 78
7	20.1			PLUG					
8	23.0	3	5.8	N3000	TN-#12 Gold	LB10	3.4	3.3	4.9 84
9	25.9			PLUG					
10	28.8	4	5.8	N3000	TN-#13 Gold w/lime	LB10	4.0	3.8	4.9 84
11	31.7			PLUG					
12	34.6	5	5.8	N3000	TN-#14 Lime	LB10	4.3	4.4	4.9 84
13	37.5			PLUG					
14	40.4	6	5.8	N3000	TN-#14 Lime	LB10	4.7	4.4	4.9 84
15	43.3			PLUG					
16	46.2	7	5.8	N3000	TN-#16 Lavender	LB10	5.6	5.8	4.9 78
17	49.1			PLUG					
18	52.0	8	5.8	N3000	TN-#16 Lavender	LB10	6.1	5.8	4.9 72
19	54.9			PLUG					
20	57.8	9	5.8	N3000	TN-#19 Gray w/trqu	LB10	7.8	8.1	4.8 60

60.4 TOWER NO. 1

21	61.9			PLUG					
22	64.8	10	7.0	R3000	TN-#17 Lvndr w/gra	LB20	8.4	8.8	4.8 66
23	67.7			PLUG					
24	70.6	11	5.8	R3000	TN-#16 Lavender	LB20	8.2	7.8	4.8 72
25	73.5			PLUG					
26	76.4	12	5.8	R3000	TN-#18 Gray	LB20	9.3	9.7	4.8 78
27	79.2			PLUG					
28	82.1	13	5.8	R3000	TN-#18 Gray	LB20	9.5	9.7	4.8 84
29	85.0			PLUG					
30	87.9	14	5.8	R3000	TN-#18 Gray	LB20	10.3	9.7	4.8 84
31	90.8			PLUG					
32	93.7	15	5.8	R3000	TN-#19 Gray w/trqu	LB20	11.5	10.9	4.8 84
33	96.6			PLUG					
34	99.5	16	5.8	R3000	TN-#20 Turquoise	LB20	12.2	12.1	4.8 84
35	102.4			PLUG					
36	105.3	17	5.8	R3000	TN-#21 Trqu w/yllw	LB20	12.7	13.1	4.8 78
37	108.2			PLUG					
38	111.1	18	5.8	R3000	TN-#21 Trqu w/yllw	LB20	12.9	13.1	4.8 72
39	114.0			PLUG					
40	116.9	19	5.8	R3000	TN-#23 Yllw w/red	LB20	15.3	15.6	4.8 60

-OUTLET- NO.	LOC.	-SPRINKLER- NO.	SEP.	MODEL	NOZZLE	-REG- MODEL	LPM REQ.	DEL.	PRESSURE INLINE
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119.6 TOWER NO. 2

41	121.0			PLUG					
42	123.9	20	7.0	R3000	TN-#23 Yllw w/red	LB20	16.0	15.6	4.8 66
43	126.8			PLUG					
44	129.7	21	5.8	R3000	TN-#23 Yllw w/red	LB20	15.9	15.6	4.8 72
45	132.6			PLUG					
46	135.5	22	5.8	R3000	TN-#24 Red	LB20	16.5	17.2	4.7 78
47	138.4			PLUG					
48	141.3	23	5.8	R3000	TN-#23 Yllw w/red	LB20	16.4	15.6	4.7 84
49	144.2			PLUG					
50	147.1	24	5.8	R3000	TN-#25 Red w/white	LB20	18.1	18.5	4.7 84
51	150.0			PLUG					
52	152.9	25	5.8	R3000	TN-#24 Red	LB20	17.8	17.2	4.7 84
53	155.8			PLUG					
54	158.6	26	5.8	R3000	TN-#26 White	LB20	19.5	20.1	4.7 84
55	161.5			PLUG					
56	164.4	27	5.8	R3000	TN-#25 Red w/white	LB20	19.0	18.5	4.7 78
57	167.3			PLUG					
58	170.2	28	5.8	R3000	TN-#27 White w/blu	LB20	20.9	21.5	4.7 72
59	173.1			PLUG					
60	176.0	29	5.8	R3000	TN-#28 Blue	LB20	22.7	23.4	4.7 60

178.7 TOWER NO. 3

61	180.1			PLUG					
62	183.0	30	7.0	R3000	TN-#28 Blue	LB20	23.4	23.4	4.7 66
63	185.9			PLUG					
64	188.8	31	5.8	R3000	TN-#28 Blue	LB20	22.6	23.4	4.7 72
65	191.7			PLUG					
66	194.6	32	5.8	R3000	TN-#28 Blue	LB20	22.6	23.4	4.7 78
67	197.5			PLUG					
68	200.4	33	5.8	R3000	TN-#28 Blue	LB20	23.2	23.4	4.7 84
69	203.3			PLUG					
70	206.2	34	5.8	R3000	TN-#29 Blue w/brn	LB20	24.5	24.9	4.7 84
71	209.1			PLUG					
72	212.0	35	5.8	R3000	TN-#29 Blue w/brn	LB20	24.9	24.9	4.7 84
73	214.9			PLUG					
74	217.8	36	5.8	R3000	TN-#30 Drk Brown	LB20	26.0	26.6	4.7 84
75	220.7			PLUG					
76	223.6	37	5.8	R3000	TN-#30 Drk Brown	LB20	26.1	26.6	4.7 78
77	226.5			PLUG					
78	229.4	38	5.8	R3000	TN-#30 Drk Brown	LB20	26.8	26.6	4.7 72
79	232.3			PLUG					

-OUTLET-		-SPRINKLER-			-REG-		LPM	PRESSURE	
NO.	LOC.	NO.	SEP.	MODEL	NOZZLE	MODEL	REQ.	DEL.	INLINE
80	235.2	39	5.8	R3000	TN-#33 Ornge w/grn	LB20	31.3	32.1	4.7 60
	237.8	TOWER NO. 4							
81	239.3			PLUG					
82	242.2	40	7.0	R3000	TN-#32 Orange	LB20	31.1	30.2	4.7 66
83	245.1			PLUG					
84	248.0	41	5.8	R3000	TN-#32 Orange	LB20	30.5	30.2	4.7 72
85	250.9			PLUG					
86	253.7	42	5.8	R3000	TN-#32 Orange	LB20	30.6	30.2	4.7 78
87	256.6			PLUG					
88	259.5	43	5.8	R3000	TN-#33 Ornge w/grn	LB20	31.4	32.1	4.7 84
89	262.4			PLUG					
90	265.3	44	5.8	R3000	TN-#32 Orange	LB20	31.0	30.2	4.6 84
91	268.2			PLUG					
92	271.1	45	5.8	R3000	TN-#34 Drk Green	LB20	33.2	34.1	4.6 84
93	274.0			PLUG					
94	276.9	46	5.8	R3000	TN-#33 Ornge w/grn	LB20	32.1	32.1	4.6 84
95	279.8			PLUG					
96	282.7	47	5.8	R3000	TN-#34 Drk Green	LB20	33.8	34.1	4.6 78
97	285.6			PLUG					
98	288.5	48	5.8	R3000	TN-#34 Drk Green	LB20	34.1	34.1	4.6 72
99	291.4			PLUG					
100	294.3	49	5.8	R3000	TN-#37 Prpl w/blck	HB20	38.9	40.1	4.6 60
	297.0	TOWER NO. 5							
101	298.4			PLUG					
102	301.3	50	7.0	R3000	TN-#36 Purple	HB20	38.5	37.6	4.6 66
103	304.2			PLUG					
104	307.1	51	5.8	R3000	TN-#36 Purple	HB20	37.6	37.6	4.6 72
105	310.0			PLUG					
106	312.9	52	5.8	R3000	TN-#36 Purple	HB20	37.3	37.6	4.6 72
107	315.8			PLUG					
108	318.7	53	5.8	R3000	TN-#33 Ornge w/grn	HB20	32.2	32.3	4.6 72
109	320.7			PLUG					
110	322.8	54	4.1	R3000	TN-#33 Ornge w/grn	HB20	32.9	32.3	4.6 72
111	325.7			PLUG					
112	328.6	55	5.8	R3000	TN-#37 Prpl w/blck	HB20	39.8	40.1	4.6 72
113	331.5			PLUG					
114	334.4	56	5.8	R3000	TN-#37 Prpl w/blck	HB20	39.7	40.1	4.6 72
115	337.3			PLUG					
116	340.2	57	5.8	R3000	TN-#38 Black	HB20	42.7	42.3	4.6 66
117	343.1			PLUG					

-OUTLET-	-SPRINKLER-			-REG-	LPM	PRESSURE		
NO.	LOC.	NO.	SEP.	MODEL	NOZZLE	MODEL REQ.	DEL.	INLINE

346.2 TOWER NO. 6

118	346.6	58	6.5	R3000	TN-#37 Prpl w/blck	HB20	39.0	40.1	4.6	72
119	348.1				PLUG					
120	349.5				PLUG					
121	351.0	59	4.3	R3000	TN-#31 Brwn w/orng	HB20	28.1	28.4	4.6	66
122	352.4				PLUG					
123	353.6				PLUG					
124	354.7	60	3.7	R3000	TN-#29 Blue w/brn	HB20	25.6	25.2	4.6	72

END GUN: (NOZZLE SELECTED BASED ON RECOMMENDED 170 DEGREE ARC.)
 355.5 SR75 .45" NOZZLE 168.6 168.1 4.6

2 INCH DIAPHRAM END GUN VALVE PRESSURE LOSS: 0.0 bar
 RESULTING END GUN PRESSURE: 4.6 bar

SYSTEM INLINE END PRESSURE: 3.1 bar, INCLUDING PLUS 16 m ELEVATION

TOTAL lpm DELIVERED: 1479.7

SYSTEM lpm PER ha: 32.9

SPRINKLER SPACING LIMITS HAVE BEEN EXTENDED AT SOME OF THE TOWERS.

9 MOUNTING ASSEMBLIES:		First outlet=	4,	Last outlet=	20
Blk Combo Tube/Hose		151892		(Length=152.44 cm)	
U-PIPE- 3/4"Male x Female Galv		008100			
DROP- 3/4"M Tube/Hose	<Vari>	143894		(Length=152.44 cm)	
Standard Tee		000100		(as needed)	
Standard Regulator		0000-000		(as needed)	

51 MOUNTING ASSEMBLIES: First outlet= 22, Last outlet= 124
 Black Plastic Semi-Rigid 151870 (Length=152.44 cm)
 U-PIPE- 3/4"Male x Female Galv 008100
 DROP- 3/4"M Blk.Plastic <Vari> 143874 (Length=152.44 cm)
 Standard Tee 000100 (as needed)
 Standard Regulator 0000-000 (as needed)

===== NOZZLE SELECTION VERIFICATION =====

SPAN #	1	2	3	4	5	6	OH+EG
lpm REQ.	40.8	110.3	182.6	251.5	326.7	300.8	261.3
lpm DEL.	42.1	110.5	183.0	255.1	327.3	299.9	261.8
% DEV.	3%	0%	0%	1%	0%	-0%	0%

DATA FILE IDENTIFICATION

File	Sprinkler	Plate	SprNo	ID	Regulator	Flow	Duty	PSI	Outlet	ID
N3000G	Nutator	Green	1- 9	4E91	LB10	LO	BLUE	10	Sqr	7549
R3000G	Rotator	Green	10- 60	D4D5	LB20	LO	BLUE	20	Sqr	7628
					HB20	HI	BLUE	20	Sqr	748B

----- WATER APPLICATION DEPTH PER REVOLUTION -----

APPLICATION DEPTH (mm)	2.58	6.35	12.70	19.05	25.40	31.75	38.10
% TIMER SETTING	100	41	20	14	10	8	7
REVOLUTION TIME	13HRS	32HRS	65HRS	97HRS	129HRS	161HRS	194HRS

GROUND SPEED AT 100% TIMER SETTING: 2.77 m/min

The revolution time may vary some from the values indicated above. This may be due to generator speed, slippage, or over/under inflated tires.

Power frequency is 50 Hertz.
 Loaded radius of tires is 59.7 cm.