

WESTERN KANSAS IRRIGATION

SEPTEMBER 26, 2025

WISH-119620

CUSTOMER : ALFALFA FARMS

VALLEY 6000 - 30
8 TOWER - 1299.78 FT
SYSTEM 900 GPM @ 38 PSI

P.O. NO. : INV170075

VALLEY SPRAY NOZZLES
NO REGULATORS
NELSON P85AS 11/16
ELEVATION 0 FT UP, 0 FT DOWN

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

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> WESTERN KANSAS IRRIGATION 2707 JONES AVENUE GARDEN CITY, KANSAS 67846			<u>IRRIGATOR</u> ALFALFA FARMS INV170075			
TOTAL TARGET GPM	900.00	FRICTION FACTOR USED	140	SPANS	LENGTH	PIPE I.D.
TOP OF PIVOT PRESSURE	38.00	TOTAL LENGTH	1299.78	1	161.50	6.415
ENDGUN TARGET GPM	66.50	NUMBER OF TOWERS	8	7	160.00	6.415
NUMBER OF OUTLETS	519	NUMBER OF SPRINKLERS	131	OH	18.28	6.415

VALLEY SPRAY NOZZLES - FLAT GROOVED PADS
NO REGULATORS
DROPS AVERAGE 6.5 FT OF 3/4 INCH SCHEDULE 40 GALVANIZED PIPE
ELEVATION IS 0 FT UP AND 0 FT DOWN

CAUTIONS AND WARNINGS

1. Inadequate crop clearance and/or structural interference may cause poor water distribution, resulting in decreased uniformity and possible streaking.

2. Over watering at beginning of system due to practical limitations on smallest nozzle sizes available and/or allowable for proper operation.

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	4.20	1.70	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
2		4.20	0.04	0.74	37.93	40.09	VALLEY	SPRAY	5	-	-	-	-	-	1		
3		6.70	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
4		9.20	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
5	10.00	11.70	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
6		14.20	0.14	0.74	37.62	39.99	VALLEY	SPRAY	5	-	-	-	-	-	2		
7		16.70	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
8		19.20	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
9	10.00	21.70	-	-	-	-	-	-	-	-	-	-	-	-	-	7	
10		24.20	0.23	0.74	37.22	39.81	VALLEY	SPRAY	5	-	-	-	-	-	3		
11		26.70	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
12		29.20	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
13	10.00	31.70	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
14		34.20	0.33	0.73	36.86	39.45	VALLEY	SPRAY	5	-	-	-	-	-	4		
15		36.70	-	-	-	-	-	-	-	-	-	-	-	-	-	11	
16		39.20	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
17	10.00	41.70	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
18		44.20	0.43	0.73	36.54	39.35	VALLEY	SPRAY	5	-	-	-	-	-	5		
19		46.70	-	-	-	-	-	-	-	-	-	-	-	-	-	14	
20		49.20	-	-	-	-	-	-	-	-	-	-	-	-	-	15	
21	10.00	51.70	-	-	-	-	-	-	-	-	-	-	-	-	-	16	
22		54.20	0.53	0.73	36.26	39.06	VALLEY	SPRAY	5	-	-	-	-	-	6		
23		56.70	-	-	-	-	-	-	-	-	-	-	-	-	-	17	
24		59.20	-	-	-	-	-	-	-	-	-	-	-	-	-	18	
25	10.00	61.70	-	-	-	-	-	-	-	-	-	-	-	-	-	19	
26		64.20	0.62	0.73	36.01	39.03	VALLEY	SPRAY	5	-	-	-	-	-	7		
27		66.70	-	-	-	-	-	-	-	-	-	-	-	-	-	20	
28		69.20	-	-	-	-	-	-	-	-	-	-	-	-	-	21	
29	10.00	71.70	-	-	-	-	-	-	-	-	-	-	-	-	-	22	
30		74.20	0.72	0.73	35.80	38.82	VALLEY	SPRAY	5	-	-	-	-	-	8		
31		76.70	-	-	-	-	-	-	-	-	-	-	-	-	-	23	
32		79.20	-	-	-	-	-	-	-	-	-	-	-	-	-	24	
33	10.00	81.70	-	-	-	-	-	-	-	-	-	-	-	-	-	25	
34		84.20	0.82	0.73	35.63	38.65	VALLEY	SPRAY	5	-	-	-	-	-	9		
35		86.70	-	-	-	-	-	-	-	-	-	-	-	-	-	26	
36		89.20	-	-	-	-	-	-	-	-	-	-	-	-	-	27	
37	10.00	91.70	-	-	-	-	-	-	-	-	-	-	-	-	-	28	
38		94.20	0.91	0.73	35.50	38.52	VALLEY	SPRAY	5	-	-	-	-	-	10		
39		96.70	-	-	-	-	-	-	-	-	-	-	-	-	-	29	
40		99.20	-	-	-	-	-	-	-	-	-	-	-	-	-	30	
41	10.00	101.70	-	-	-	-	-	-	-	-	-	-	-	-	-	31	
42		104.20	1.01	0.73	35.40	38.42	VALLEY	SPRAY	5	-	-	-	-	-	11		
43		106.70	-	-	-	-	-	-	-	-	-	-	-	-	-	32	
44		109.20	-	-	-	-	-	-	-	-	-	-	-	-	-	33	
45	10.00	111.70	-	-	-	-	-	-	-	-	-	-	-	-	-	34	
46		114.20	1.11	1.35	35.35	38.13	VALLEY	SPRAY	6	-	-	-	-	-	12		
47		116.70	-	-	-	-	-	-	-	-	-	-	-	-	-	35	
48		119.20	-	-	-	-	-	-	-	-	-	-	-	-	-	36	

[illegible]

[illegible]

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.
332	10.00	829.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	249		
333		831.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250		
334		834.20	8.07	8.04	26.47	28.33	VALLEY	SPRAY	16										
335		836.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	251		
336		839.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	252		
337	10.00	841.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	253		
338		844.20	8.17	8.03	26.24	28.28	VALLEY	SPRAY	16										
339		846.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	254		
340		849.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	255		
341		851.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	256		
342	10.00	854.20	8.27	8.00	26.06	28.10	VALLEY	SPRAY	16										
343		856.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	257		
344		859.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	258		
345		861.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	259		
346		864.20	8.37	8.01	25.91	28.13	VALLEY	SPRAY	16										
347	10.00	866.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260		
348		869.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261		
349		871.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	262		
350		874.20	8.48	7.99	25.81	28.03	VALLEY	SPRAY	16										
351		876.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	263		
352	10.00	879.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	264		
353		881.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265		
354		884.20	8.58	9.06	25.74	27.75	VALLEY	SPRAY	17										
355		886.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	266		
356		889.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	267		
357	10.00	891.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	268		
358		894.20	8.67	9.05	25.71	27.72	VALLEY	SPRAY	17										
359		896.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	269		
360		899.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	270		
361		901.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	271		
362	10.00	904.20	8.76	9.06	25.73	27.73	VALLEY	SPRAY	17										
363		906.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272		
364		909.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	273		
365		911.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	274		
366		914.20	8.85	9.04	25.78	27.62	VALLEY	SPRAY	17										
367	10.00	916.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275		
368		919.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	276		
369		921.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	277		
370		924.20	8.94	9.05	25.87	27.71	VALLEY	SPRAY	17										
371		926.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	278		
372	10.00	929.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	279		
373		931.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280		
374		934.20	9.04	9.05	26.00	27.67	VALLEY	SPRAY	17										
375		936.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	281		
376		939.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	282		
377	10.00	941.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	283		
378		944.20	9.13	9.05	26.17	27.68	VALLEY	SPRAY	17										
379		946.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	284		

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	10.00	1066.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	320
428		1069.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	321
429		1071.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	322
430		1074.20	10.44			9.85		25.13		26.81		VALLEY	SPRAY	18							108						
431		1076.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	323
432	10.00	1079.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	324
433		1081.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	325
434		1084.20	10.56			11.07		25.25		26.64		VALLEY	SPRAY	19							109						326
435		1086.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	327
436		1089.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	328
437	10.00	1091.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	329
438		1094.20	10.64			11.07		25.40		26.66		VALLEY	SPRAY	19							110						330
439		1096.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	331
440		1099.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	332
441		1101.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	333
442	10.00	1104.20	10.71			11.08		25.60		26.70		VALLEY	SPRAY	19							111						334
443		1106.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	335	
444		1109.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	336
445		1111.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	337
446		1114.20	10.79			11.09		25.79		26.75		VALLEY	SPRAY	19							112						338
447	10.00	1116.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	339
448		1119.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340
TOWER 7		160.00	1121.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	341
449		1121.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	342
450		10.00	1124.20	10.87			11.09		25.77		26.73		VALLEY	SPRAY	19						113						343
451	10.00	1126.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	344
452		1129.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	345
453		1131.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	346
454		1134.20	10.96			11.08		25.61		26.72		VALLEY	SPRAY	19							114						347
455		1136.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	348
456	10.00	1139.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	349
457		1141.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	350
458		1144.20	11.05			11.06		25.36		26.62		VALLEY	SPRAY	19							115						351
459		1146.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	352
460		1149.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	353
461	10.00	1151.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	354
462		1154.20	11.14			11.02		25.15		26.42		VALLEY	SPRAY	19							116						355
463		1156.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	356
464		1159.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	357
465		1161.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	358
466	10.00	1164.20	11.25			11.02		24.98		26.40		VALLEY	SPRAY	19							117						359
467		1166.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360
468		1169.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	361
469		1171.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	362
470		1174.20	11.36			10.99		24.85		26.27		VALLEY	SPRAY	19							118						363
471	10.00	1176.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	364
472		1179.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	365
473		1181.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	366

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.
474	10.00	1184.20	11.49	11.00	24.75	26.33	VALLEY SPRAY 19										119		
475		1186.70	-	-	-	-													356
476		1189.20	-	-	-	-													357
477		1191.70	-	-	-	-													358
478	10.00	1194.20	11.63	12.15	24.70	25.96	VALLEY SPRAY 20										120		
479		1196.70	-	-	-	-													359
480		1199.20	-	-	-	-													360
481		1201.70	-	-	-	-													361
482	10.00	1204.20	11.68	12.14	24.68	25.95	VALLEY SPRAY 20										121		
483		1206.70	-	-	-	-													362
484		1209.20	-	-	-	-													363
485		1211.70	-	-	-	-													364
486	10.00	1214.20	11.72	12.15	24.71	25.97	VALLEY SPRAY 20										122		
487		1216.70	-	-	-	-													365
488		1219.20	-	-	-	-													366
489		1221.70	-	-	-	-													367
490	10.00	1224.20	11.77	12.16	24.77	26.03	VALLEY SPRAY 20										123		
491		1226.70	-	-	-	-													368
492		1229.20	-	-	-	-													369
493		1231.70	-	-	-	-													370
494	10.00	1234.20	11.81	12.16	24.87	26.00	VALLEY SPRAY 20										124		
495		1236.70	-	-	-	-													371
496		1239.20	-	-	-	-													372
497		1241.70	-	-	-	-													373
498	10.00	1244.20	11.85	12.19	25.01	26.13	VALLEY SPRAY 20										125		
499		1246.70	-	-	-	-													374
500		1249.20	-	-	-	-													375
501		1251.70	-	-	-	-													376
502	10.00	1254.20	11.88	12.20	25.18	26.17	VALLEY SPRAY 20										126		
503		1256.70	-	-	-	-													377
504		1259.20	-	-	-	-													378
505		1261.70	-	-	-	-													379
506	10.00	1264.20	11.90	12.21	25.40	26.25	VALLEY SPRAY 20										127		
507		1266.70	-	-	-	-													380
508		1269.20	-	-	-	-													381
509		1271.70	-	-	-	-													382
510	10.00	1274.20	11.89	12.23	25.61	26.33	VALLEY SPRAY 20										128		
511		1276.70	-	-	-	-													383
512		1279.20	-	-	-	-													384
TOWER 8	160.00	1281.50																	
513		1281.70	-	-	-	-													385
514	10.00	1284.20	11.82	12.23	25.61	26.33	VALLEY SPRAY 20										129		
515		1286.70	-	-	-	-													386
516		1289.20	-	-	-	-													387
517		1291.70	-	-	-	-													388
518	10.00	1294.20	7.19	6.88	25.61	27.27	VALLEY SPRAY 15										130		
519	2.50	1296.70	7.35	6.88	25.61	27.27	VALLEY SPRAY 15										131		
	DRAIN-SANDTRAP		12.30	11.89			F SPRAY 19 BLACK												

OVERHANG 18.28 1299.78 65.82 ENDGUN (1) NELSON P85AS 11/16

THERE IS NO BOOSTER PUMP
TOTAL GPM = 900.49
GPA = 6.74

THIS SYSTEM WILL ALSO DELIVER :

	PSI - 10%	PSI	PSI + 10%
PIVOT PRESSURE	34.20	38.00	41.80
TOTAL GPM	810.44	900.49	944.44
ENDGUN GPM	63.73	65.82	69.15
END PRESSURE	24.00	25.61	28.26
PRESSURE LOSS	10.20	12.39	13.54

HYDRAULICS SUMMARY

<u>TOWER NUMBER</u>	<u>ACRES UNDER SPAN</u>	<u>GPM NEED</u>	<u>ACTUAL GPM</u>	<u>PERCENT DEVIATION</u>	<u>GPM PER ACRE</u>	<u>AVERAGE IN. PER HR DELIVERED UNDER SPAN</u>	<u>AVERAGE IN. DELIVERED FOR REVOLUTION TIME</u>		
							<u>36 HR</u>	<u>48 HR</u>	<u>60 HR</u>
1	1.88	12.68	15.23	20%	8.10	0.018	0.64	0.86	1.07
2	5.57	37.56	37.08	-1%	6.65	0.015	0.53	0.71	0.88
3	9.27	62.45	62.38	0%	6.73	0.015	0.54	0.71	0.89
4	12.96	87.34	87.38	0%	6.74	0.015	0.54	0.72	0.89
5	16.65	112.23	111.84	0%	6.72	0.015	0.53	0.71	0.89
6	20.34	137.11	136.95	0%	6.73	0.015	0.54	0.71	0.89
7	24.04	162.00	161.62	0%	6.72	0.015	0.53	0.71	0.89
8	27.73	186.89	187.11	0%	6.75	0.015	0.54	0.72	0.89
OVERHANG	3.40	22.94	23.18	1%	6.81	0.015	0.54	0.72	0.90
ENDGUN	9.91	66.50	65.82	-1%	6.64				
TOTAL	131.75	887.70	888.60		6.74				

SUMMARY OF SPRINKLERS

11	VALLEY SPRAY 5
5	VALLEY SPRAY 6
5	VALLEY SPRAY 7
6	VALLEY SPRAY 8
5	VALLEY SPRAY 9
6	VALLEY SPRAY 10
8	VALLEY SPRAY 11
8	VALLEY SPRAY 12
7	VALLEY SPRAY 13
8	VALLEY SPRAY 14
11	VALLEY SPRAY 15
10	VALLEY SPRAY 16
10	VALLEY SPRAY 17
10	VALLEY SPRAY 18
11	VALLEY SPRAY 19
10	VALLEY SPRAY 20

388 PLUGS

NOZZLE POSITION CHART

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

WESTERN KANSAS IRRIGATION

2707 JONES AVENUE

GARDEN CITY, KANSAS 67846

SEPTEMBER 26, 2025

WISH-119620

ALFALFA FARMS

VALLEY 6000 - 30

VALLEY SPRAY NOZZLES

NO REGULATORS

3/4 INCH SCHEDULE 40 GALVANIZED PIPE

NELSON P85AS 11/16

Rotation time at 100% = 21.20 Hours Or 1272 minutes

900 GPM @ 38 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	PLUG				51	PLUG				46		60	13	
2		1	5		62		16	6		57	PLUG				52	PLUG				47	PLUG			
3	PLUG				63	PLUG				58		31	9		53	PLUG				48	PLUG			
4	PLUG				64	PLUG				59	PLUG				54		46	11		49	PLUG			
5	PLUG				TOWER 1					60	PLUG				55	PLUG				50		61	13	
6		2	5		1	PLUG				61	PLUG				56	PLUG				51	PLUG			
7	PLUG				2		17	7		62		32	9		57	PLUG				52	PLUG			
8	PLUG				3	PLUG				63	PLUG				58		47	12		53	PLUG			
9	PLUG				4	PLUG				64	PLUG				59	PLUG				54		62	14	
10		3	5		5	PLUG				TOWER 2					60	PLUG				55	PLUG			
11	PLUG				6		18	7		1	PLUG				61	PLUG				56	PLUG			
12	PLUG				7	PLUG				2		33	10		62		48	12		57	PLUG			
13	PLUG				8	PLUG				3	PLUG				63	PLUG				58		63	14	
14		4	5		9	PLUG				4	PLUG				64	PLUG				59	PLUG			
15	PLUG				10		19	7		5	PLUG				TOWER 3					60	PLUG			
16	PLUG				11	PLUG				6		34	10		1	PLUG				61	PLUG			
17	PLUG				12	PLUG				7	PLUG				2		49	12		62		64	14	
18		5	5		13	PLUG				8	PLUG				3	PLUG				63	PLUG			
19	PLUG				14		20	7		9	PLUG				4	PLUG				64	PLUG			
20	PLUG				15	PLUG				10		35	10		5	PLUG				TOWER 4				
21	PLUG				16	PLUG				11	PLUG				6		50	12		1	PLUG			
22		6	5		17	PLUG				12	PLUG				7	PLUG				2		65	14	
23	PLUG				18		21	7		13	PLUG				8	PLUG				3	PLUG			
24	PLUG				19	PLUG				14		36	10		9	PLUG				4	PLUG			
25	PLUG				20	PLUG				15	PLUG				10		51	12		5	PLUG			
26		7	5		21	PLUG				16	PLUG				11	PLUG				6		66	14	
27	PLUG				22		22	8		17	PLUG				12	PLUG				7	PLUG			
28	PLUG				23	PLUG				18		37	10		13	PLUG				8	PLUG			
29	PLUG				24	PLUG				19	PLUG				14		52	12		9	PLUG			
30		8	5		25	PLUG				20	PLUG				15	PLUG				10		67	14	
31	PLUG				26		23	8		21	PLUG				16	PLUG				11	PLUG			
32	PLUG				27	PLUG				22		38	10		17	PLUG				12	PLUG			
33	PLUG				28	PLUG				23	PLUG				18		53	12		13	PLUG			
34		9	5		29	PLUG				24	PLUG				19	PLUG				14		68	14	
35	PLUG				30		24	8		25	PLUG				20	PLUG				15	PLUG			
36	PLUG				31	PLUG				26		39	11		21	PLUG				16	PLUG			
37	PLUG				32	PLUG				27	PLUG				22		54	12		17	PLUG			
38		10	5		33	PLUG				28	PLUG				23	PLUG				18		69	14	
39	PLUG				34		25	8		29	PLUG				24	PLUG				19	PLUG			
40	PLUG				35	PLUG				30		40	11		25	PLUG				20	PLUG			
41	PLUG				36	PLUG				31	PLUG				26		55	13		21	PLUG			
42		11	5		37	PLUG				32	PLUG				27	PLUG				22		70	15	
43	PLUG				38		26	8		33	PLUG				28	PLUG				23	PLUG			
44	PLUG				39	PLUG				34		41	11		29	PLUG				24	PLUG			
45	PLUG				40	PLUG				35	PLUG				30		56	13		25	PLUG			
46		12	6		41	PLUG				36	PLUG				31	PLUG				26		71	15	
47	PLUG				42		27	8		37	PLUG				32	PLUG				27	PLUG			
48	PLUG				43	PLUG				38		42	11		33	PLUG				28	PLUG			
49	PLUG				44	PLUG				39	PLUG				34		57	13		29	PLUG			
50		13	6		45	PLUG				40	PLUG				35	PLUG				30		72	15	
51	PLUG				46		28	9		41	PLUG				36	PLUG				31	PLUG			
52	PLUG				47	PLUG				42		43	11		37	PLUG				32	PLUG			
53	PLUG				48	PLUG				43	PLUG				38		58	13		33	PLUG			
54		14	6		49	PLUG				44	PLUG				39	PLUG				34		73	15	
55	PLUG				50		29	9		45	PLUG				40	PLUG				35	PLUG			
56	PLUG				51	PLUG				46		44	11		41	PLUG				36	PLUG			
57	PLUG				52	PLUG				47	PLUG				42		59	13		37	PLUG			
58		15	6		53	PLUG				48	PLUG				43	PLUG				38		74	15	
59	PLUG				54		30	9		49	PLUG				44	PLUG				39	PLUG			
60	PLUG				55	PLUG				50		45	11		45	PLUG				40	PLUG			

WESTERN KANSAS IRRIGATION

2707 JONES AVENUE

GARDEN CITY, KANSAS 67846

SEPTEMBER 26, 2025

WISH-119620

ALFALFA FARMS

VALLEY 6000 - 30

VALLEY SPRAY NOZZLES

NO REGULATORS

3/4 INCH SCHEDULE 40 GALVANIZED PIPE

NELSON P85AS 11/16

Rotation time at 100% = 21.20 Hours Or 1272 minutes

900 GPM @ 38 PSI

Installation Chart

Page 2

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
41	PLUG				36	PLUG				31	PLUG				26		119	19	
42		75	15		37	PLUG				32	PLUG				27	PLUG			
43	PLUG				38		90	17		33	PLUG				28	PLUG			
44	PLUG				39	PLUG				34		105	18		29	PLUG			
45	PLUG				40	PLUG				35	PLUG				30		120	20	
46		76	15		41	PLUG				36	PLUG				31	PLUG			
47	PLUG				42		91	17		37	PLUG				32	PLUG			
48	PLUG				43	PLUG				38		106	18		33	PLUG			
49	PLUG				44	PLUG				39	PLUG				34		121	20	
50		77	15		45	PLUG				40	PLUG				35	PLUG			
51	PLUG				46		92	17		41	PLUG				36	PLUG			
52	PLUG				47	PLUG				42		107	18		37	PLUG			
53	PLUG				48	PLUG				43	PLUG				38		122	20	
54		78	15		49	PLUG				44	PLUG				39	PLUG			
55	PLUG				50		93	17		45	PLUG				40	PLUG			
56	PLUG				51	PLUG				46		108	18		41	PLUG			
57	PLUG				52	PLUG				47	PLUG				42		123	20	
58		79	16		53	PLUG				48	PLUG				43	PLUG			
59	PLUG				54		94	17		49	PLUG				44	PLUG			
60	PLUG				55	PLUG				50		109	19		45	PLUG			
61	PLUG				56	PLUG				51	PLUG				46		124	20	
62		80	16		57	PLUG				52	PLUG				47	PLUG			
63	PLUG				58		95	17		53	PLUG				48	PLUG			
64	PLUG				59	PLUG				54		110	19		49	PLUG			
	TOWER 5				60	PLUG				55	PLUG				50		125	20	
1	PLUG				61	PLUG				56	PLUG				51	PLUG			
2		81	16		62		96	17		57	PLUG				52	PLUG			
3	PLUG				63	PLUG				58		111	19		53	PLUG			
4	PLUG				64	PLUG				59	PLUG				54		126	20	
5	PLUG					TOWER 6				60	PLUG				55	PLUG			
6		82	16		1	PLUG				61	PLUG				56	PLUG			
7	PLUG				2		97	17		62		112	19		57	PLUG			
8	PLUG				3	PLUG				63	PLUG				58		127	20	
9	PLUG				4	PLUG				64	PLUG				59	PLUG			
10		83	16		5	PLUG					TOWER 7				60	PLUG			
11	PLUG				6		98	17		1	PLUG				61	PLUG			
12	PLUG				7	PLUG				2		113	19		62		128	20	
13	PLUG				8	PLUG				3	PLUG				63	PLUG			
14		84	16		9	PLUG				4	PLUG				64	PLUG			
15	PLUG				10		99	18		5	PLUG					TOWER 8			
16	PLUG				11	PLUG				6		114	19		1	PLUG			
17	PLUG				12	PLUG				7	PLUG				2		129	20	
18		85	16		13	PLUG				8	PLUG				3	PLUG			
19	PLUG				14		100	18		9	PLUG				4	PLUG			
20	PLUG				15	PLUG				10		115	19		5	PLUG			
21	PLUG				16	PLUG				11	PLUG				6		130	15	
22		86	16		17	PLUG				12	PLUG				7		131	15	
23	PLUG				18		101	18		13	PLUG								
24	PLUG				19	PLUG				14		116	19						
25	PLUG				20	PLUG				15	PLUG								
26		87	16		21	PLUG				16	PLUG								
27	PLUG				22		102	18		17	PLUG								
28	PLUG				23	PLUG				18		117	19						
29	PLUG				24	PLUG				19	PLUG								
30		88	16		25	PLUG				20	PLUG								
31	PLUG				26		103	18		21	PLUG								
32	PLUG				27	PLUG				22		118	19						
33	PLUG				28	PLUG				23	PLUG								
34		89	17		29	PLUG				24	PLUG								
35	PLUG				30		104	18		25	PLUG								

PRECIPITATION CHART FOR FULL CIRCLE

WISH-119620

SEPTEMBER 26, 2025

DEALER - WESTERN KANSAS IRRIGATION

IRRIGATOR - ALFALFA FARMS

TOTAL LENGTH PIPE = 1299.78 SYSTEM PRESSURE = 38 PSI
GPM UNDER PIPE = 834.67 TOTAL GPM = 900.49
ACRES UNDER PIPE = 121.84
RANGE OF ENDGUN = 51.82
GPM OF ENDGUN = 65.82
ACRES UNDER ENDGUN = 9.91
WATERING LENGTH = 1351.60

MOTOR SIZE (HP) = 1
LOADED MOTOR RPM = 1745
CENTER GEAR BOX RATIO = 58
WHEEL GEAR BOX RATIO = 52
TIRE SIZE = 11 X 24.5
LAST TOWER SPEED (FPM) = 6.33

PRECIPITATION DATA FIGURED WITH ENDGUN RUNNING

PRECIPITATION BASED			% TIMER BASED		
PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.32	100.00	21.20 - 1272 (min)	100.00	.32	21.20 - 1272 (min)
.40	80.22	26.43	90.00	.36	23.56
.50	64.18	33.03	80.00	.40	26.50
.60	53.48	39.64	70.00	.46	30.29
.70	45.84	46.25	60.00	.53	35.33
.75	42.79	49.55	50.00	.64	42.40
.80	40.11	52.85	45.00	.71	47.11
.90	35.66	59.46	40.00	.80	53.00
1.00	32.09	66.07	35.00	.92	60.57
1.25	25.67	82.58	30.00	1.07	70.67
1.50	21.39	99.10	25.00	1.28	84.80
1.75	18.34	115.62	20.00	1.60	106.00
2.00	16.04	132.13	15.00	2.14	141.34
2.25	14.26	148.65	10.00	3.21	212.00
2.50	12.84	165.17	5.00	6.42	424.01

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.