

# INDUSTRIAL Applications

the original  
**BIG GUN®**  
SPRINKLER

## Why choose a Nelson Big Gun®

- The Nelson name is synonymous with the best quality available.
- **Heavy-duty construction** ensures long wear life & reliability.
- **Greatest range of options.** Full & part-circle sprinklers available in a variety of trajectory, nozzle & coating options.
- **Valve combinations available** for maximum system efficiency.
- **Easy to operate, maintain and repair** with readily available parts and documentation.

## Advantages for Industrial Applications

- Efficient dust suppression
- High volume in short time
- Rugged durability in dirty & corrosive conditions
- Large nozzles less likely to plug, filtration requirements minimal
- All ball bearings are sealed

## IT'S THE ONE FOR THE JOB



Nelson Big Gun® sprinklers are ideal for a wide range of industrial applications. With a full range of models available (see *The Original Big Gun®* brochure), flow rates of 30-1200 GPM (6.8-275 m<sup>3</sup>/hr) can be achieved with maximum uniformity to match a variety of needs.

### MINING DUST SUPPRESSION

The rugged durability of Nelson Big Gun® sprinklers make them a favorite for dust suppression. Big Guns are preferred because of the ability to move a large amount of water in a short time. The large nozzle is less likely to plug and the filtration requirements are minimal. All bearings on the gun are sealed ball bearings. Some sprinklers are mounted on high towers in order to throw over the piles. Alternatively, a high trajectory Big Gun sprinkler (fixed 43° and adjustable 15-45° models available) can achieve the necessary stream height to reduce tower height and clear the top of the piles.

### SPECIAL OPTIONS:

ANODIZED, POWDER COATED AND STAINLESS STEEL BIG GUNS® for sprinkling with corrosive waters.

COUNTERBALANCE KIT for operation of the Big Gun® with a tilted riser.

WEDGE INSERT for modified trajectory.

HEAVY-DUTY BRONZE BRAKE for operation in environments with airborne, abrasive, dust particles (100 Series only).



# BIG GUN® PERFORMANCE FOR 43° MODELS

R = Radius of Throw; H = Maximum Stream Height; rH = Distance from Big Gun to Maximum Stream Height  
(See *The Original Big Gun*® brochure or [www.nelsonirrigation.com](http://www.nelsonirrigation.com) for performance information of 24° models.)

## SR75DS TAPER RING NOZZLE — 43° TRAJECTORY (U.S. UNITS - RADIUS IN FEET)

PSI	0.4"				0.45"				0.5"				.55"				.6"				.65"				.7"				.75"				.8"				
	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	
30	—	—	—	—	—	—	—	—	—	37	66	28	49	45	66	30	50	55	69	30	51	64	72	31	55	75	76	32	56	87	78	33	58	99	80	34	60
40	27	62	30	49	35	67	31	50	43	71	31	52	52	75	33	53	63	79	33	56	74	82	35	61	87	85	35	63	98	89	37	64	112	92	39	66	
50	30	67	31	50	39	72	32	52	48	78	32	54	59	81	34	56	70	85	36	60	83	88	39	64	95	92	42	67	109	96	43	68	123	99	45	71	
60	33	70	32	52	42	77	33	55	53	82	33	59	64	87	35	62	77	92	38	63	91	95	43	67	104	99	46	70	120	102	47	71	136	106	48	73	
70	36	73	33	54	45	81	33	58	57	87	34	62	69	92	37	66	83	97	43	69	98	101	46	72	113	106	49	75	129	108	50	76	147	113	52	78	
80	39	76	34	58	49	86	36	62	61	93	37	66	74	97	41	70	89	102	45	73	105	107	48	77	121	111	52	80	138	114	53	81	158	118	55	83	

## SR75DS TAPER RING NOZZLE — 43° TRAJECTORY (METRIC UNITS - RADIUS IN METERS)

kg/cm <sup>2</sup>	10.2 mm				11.4 mm				12.7 mm				14.0 mm				15.2 mm				16.5 mm				17.8 mm				19.1 mm				20.3 mm			
	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH
2.50	—	—	—	—	7.6	20	9.2	14	9.4	22	9.5	15	11.4	23	9.7	15	13.6	24	9.9	16	16.0	25	10.2	17	18.5	26	10.3	18	21.1	27	10.7	19	24.0	28	11.5	20
3.00	6.6	20	9.2	15	8.3	22	9.5	15	10.3	23	9.7	16	12.4	25	10.1	16	14.9	26	10.4	17	17.6	26	11.0	19	20.3	27	11.0	19	23.1	29	11.6	20	26.3	30	12.2	21
3.50	7.1	21	9.5	15	9.0	23	9.8	16	11.1	25	9.8	16	13.4	26	10.4	17	16.1	27	11.0	18	19.0	28	11.9	20	21.9	29	12.8	20	25.0	30	13.1	21	28.4	32	13.7	22
4.00	7.6	22	9.6	15	9.6	24	9.8	16	11.9	26	9.9	17	14.4	27	10.5	18	17.2	28	11.3	19	20.3	29	12.2	20	23.4	30	13.2	21	26.7	31	13.4	21	30.4	34	14.1	22
4.50	8.1	22	9.7	16	10.2	25	9.9	16	12.6	27	10.0	17	15.2	28	10.7	18	18.3	29	11.7	19	21.5	30	12.6	20	24.8	32	13.5	21	28.4	32	13.8	22	32.3	36	14.4	22
5.00	8.5	23	10.1	16	10.8	25	10.1	18	13.3	27	10.4	19	16.1	29	11.3	20	19.3	30	13.1	21	22.7	31	14.0	22	26.1	33	14.9	23	29.9	33	15.2	23	34.0	36	15.8	24
5.50	8.9	24	10.4	18	11.3	26	11.0	19	13.9	28	11.3	20	16.9	30	12.5	21	20.2	31	13.7	22	23.8	32	14.6	24	27.4	34	15.9	24	31.3	34	16.1	25	35.7	37	16.8	25
6.00	9.3	24	10.7	19	11.8	26	11.9	20	14.6	29	12.2	21	17.6	30	13.7	23	21.1	31	14.3	24	24.8	33	15.3	25	28.6	35	16.8	26	32.7	35	17.0	26	37.2	37	17.7	27

## SR100DS TAPER BORE NOZZLE — 43° TRAJECTORY (U.S. UNITS - RADIUS IN FEET)

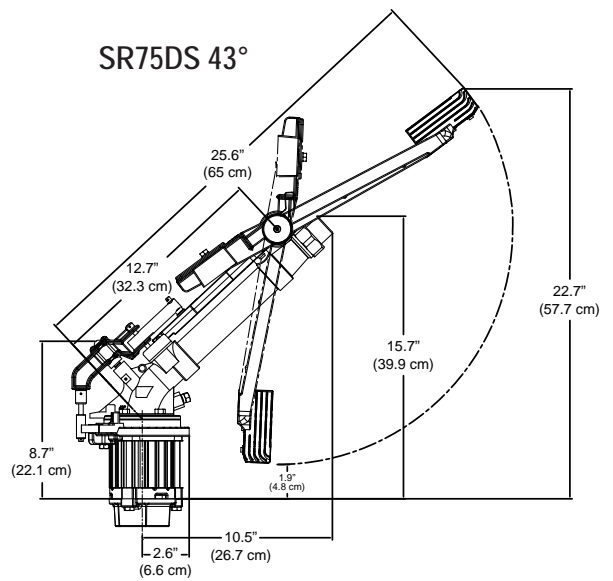
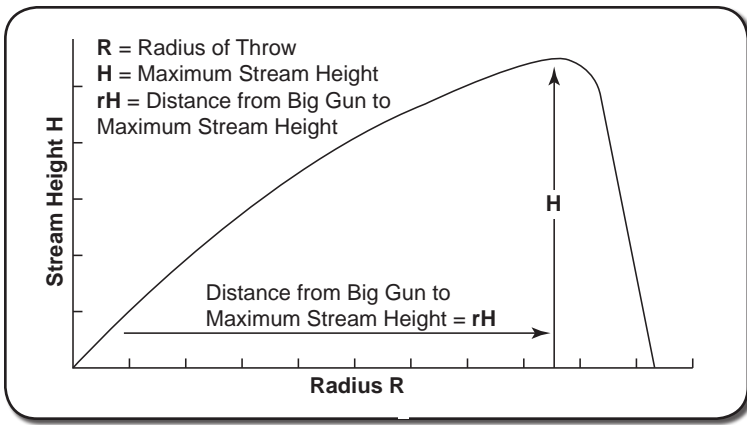
PSI	0.6"				0.65"				0.7"				.75"				.8"				.85"				.9"				1.0"								
	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	
50	74	98	36	59	87	108	40	65	100	117	44	71	115	120	44	72	130	123	46	75	150	125	46	76	165	129	47	78	204	136	48	82					
60	81	102	39	63	96	109	44	68	110	121	47	74	126	124	48	75	143	127	49	77	164	131	49	79	182	133	50	81	224	140	51	85					
70	88	105	43	68	103	114	47	73	120	125	50	79	136	128	51	81	155	131	53	83	177	133	54	85	197	138	55	87	243	144	56	91					
80	94	111	46	74	110	119	49	79	128	129	53	84	146	132	54	86	165	135	56	88	189	138	56	90	210	142	59	92	258	149	60	97					
90	100	118	49	79	117	123	52	83	135	133	56	87	155	136	57	90	175	139	59	93	201	143	60	94	223	146	62	95	274	153	64	99					
100	106	120	51	82	123	128	54	87	143	137	58	92	163	140	59	93	185	143	61	95	212	148	62	98	235	150	65	101	289	157	67	105					
110	111	122	52	84	129	132	56	89	150	141	60	94	171	144	62	96	195	147	64	98	222	151	65	100	247	154	67	103	304	162	69	108					
120	115	124	53	85	135	135	56	90	157	145	61	95	179	148	63	99	204	151	65	103	232	155	67	105	258	159	69	107	320	166	71	111					

## SR100DS TAPER BORE NOZZLE — 43° TRAJECTORY (METRIC UNITS - RADIUS IN METERS)

kg/cm <sup>2</sup>	15.2 mm				16.5 mm				17.8 mm				19.1 mm				20.3 mm				21.6 mm				22.9 mm				25.4 mm								
	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH	M <sup>3</sup> /H	R	H	rH					
3.5	15.6	30	11	18	18.3	33	12	20	21.0	36	13	22	24.1	37	14	22	27.5	38	14	23	31.5	38	14	24	34.8	39	14	24	42.8	42	15	25					
4	18.0	31	12	19	21.1	33	13	21	24.6	37	14	22	27.8	38	14	23	31.2	38	15	23	36.2	40	15	24	40.4	40	15	25	49.5	42	15	26					
5	20.1	32	13	21	23.6	35	14	23	27.5	38	15	24	31.2	39	16	25	34.9	40	16	26	40.5	41	17	26	45.2	42	17	27	55.6	44	17	28					
6	22.1	35	15	24	25.9	37	16	25	30.1	40	17	26	34.3	41	17	27	38.2	42	18	28	44.5	43	18	28	49.5	44	19	29	60.5	46	19	30					
7	23.8	37	16	25	27.9	39	17	27	32.5	42	18	28	37.0	43	18	28	41.3	44	19	29	48.0	45	19	30	53.5	46	20	31	65.5	48	21	32					
8	25.5	38	16	26	29.7	41	17	27	34.8	44	18	29	39.4	45	19	30	44.1	46	20	31	51.2	47	20	31	57.2	48	21	32	70.2	50	21	33					

## SR150DS TAPER BORE NOZZLE — 43° TRAJECTORY (U.S. UNITS - RADIUS IN FEET)

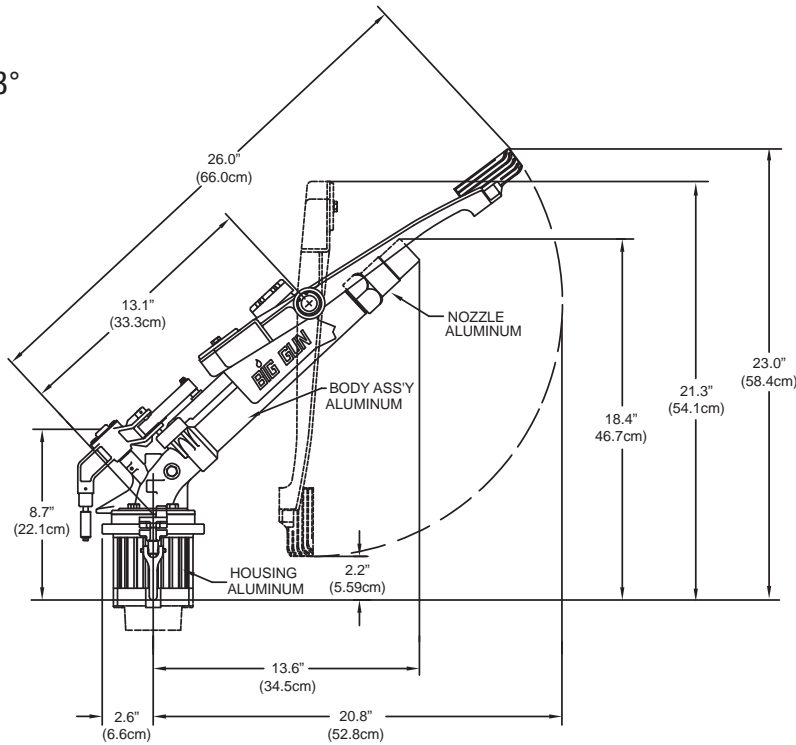
PSI	0.7"				0.8"				0.9"				1.0"				1.1"				1.2"				1.3"												
	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH	GPM	R	H	rH					
50	100	117	44	71	130	123	46	75	165	129	47	78	205	136	48	82	255	140	49	85	300	149	50	90	350	153	51	93									
60	110	121	47	74	143	127	49	77	182	133	50	81	225	140	51	85	275	145	52	88	330	154	53	94	385	157	54	96									
70	120	125	50	79	155	131	53	83	197	138	55	87	245	144	56	91	295	151	57	95	355	158	59	100	415	161	60	101									
80	128	129	53	84	165	135	56	88	210	142	59	92	260	149	60	97	315	162	61	105	380	163	64	106	445	167	65	112									
90	135	133	56	87	175	139	59	93	223	146	62	95	275	153	64	99	335	165	65	107	405	168	68	109	475	171	70	114									
100	143	137	58	92	185	143	61	96	235	150	65	101	290	157	67	105	355	167	68	110	425	172	71	113	500	176	73	116									
110	150	141	60	94	195	147	64	98	247	154	67	103	305	162	69	108	370	172	70	115	445	176	74	118	525	180	76	121									
120	157	145	61	97	204	151	65	103	258	159	69	107	320	166																							



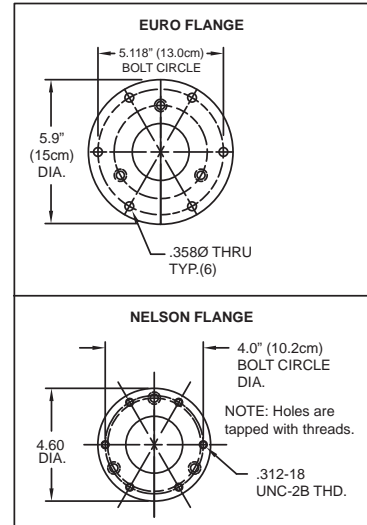
NOTE: The rotation speed of the gun is an important factor in some dust control applications. In general the rotation of the gun is 2-3 minutes when the mid-range pressure and nozzle are used. Drive arm speed adjustment can increase the rotation speed to twice as fast if more frequent wetting is wanted. A full circle Big Gun has 1/2 the water application rate of a half circle Big Gun with the same nozzle. The half circle Big Gun will pass over a specific location twice as often as a full circle Big Gun.

Contact the factory for information on the SRA100, SRA150 and the 12° Wedge Kit.

### SR100DS 43°

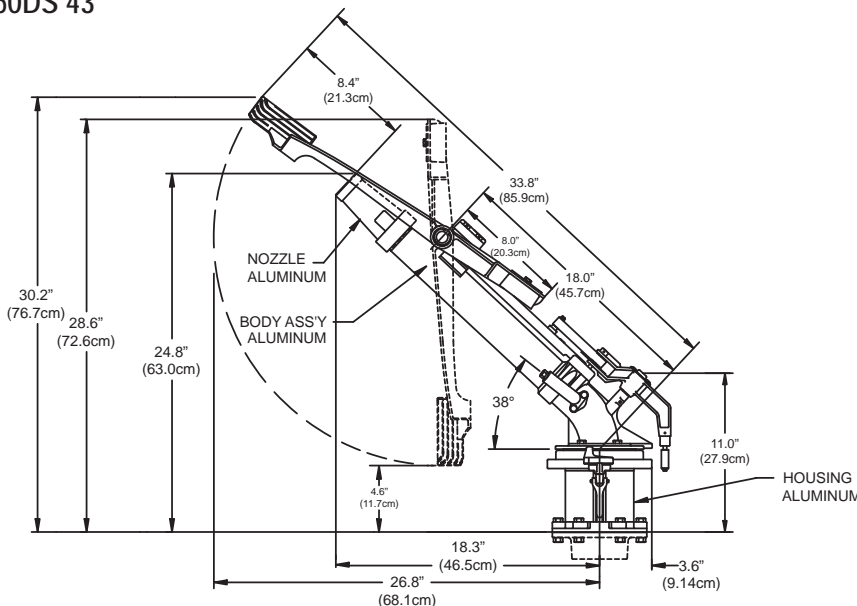


### 75 & 100 SERIES FLANGES

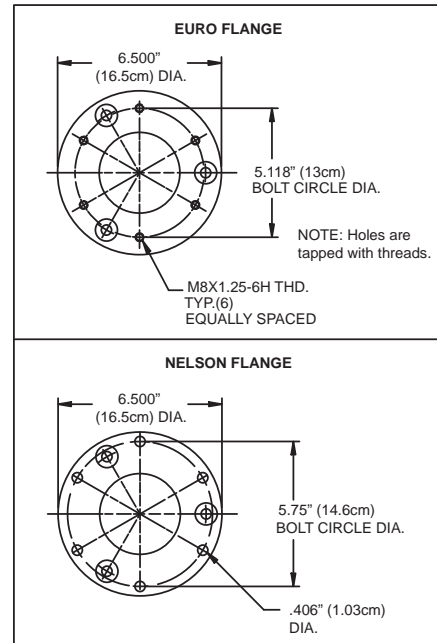


ANSI Flange option not shown.

### SR150DS 43°



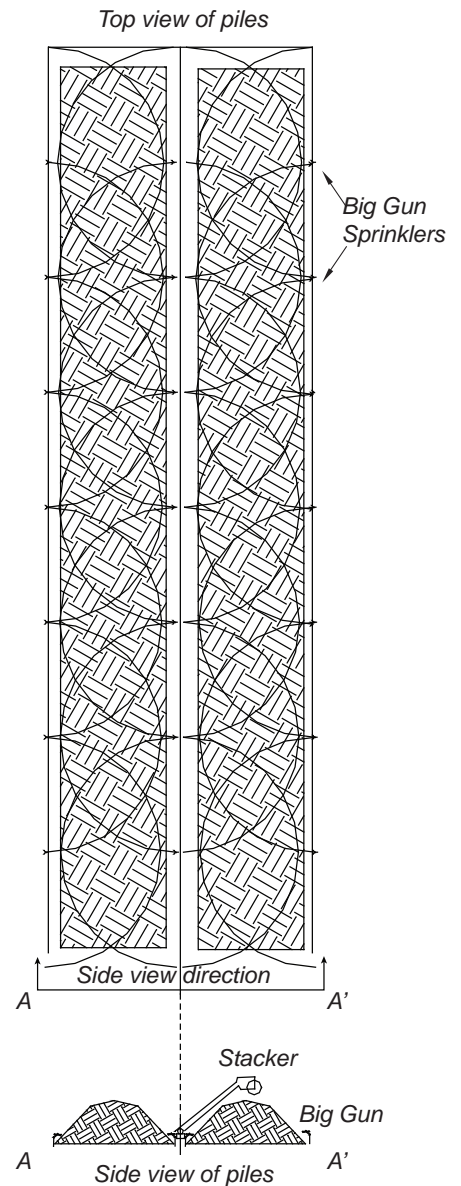
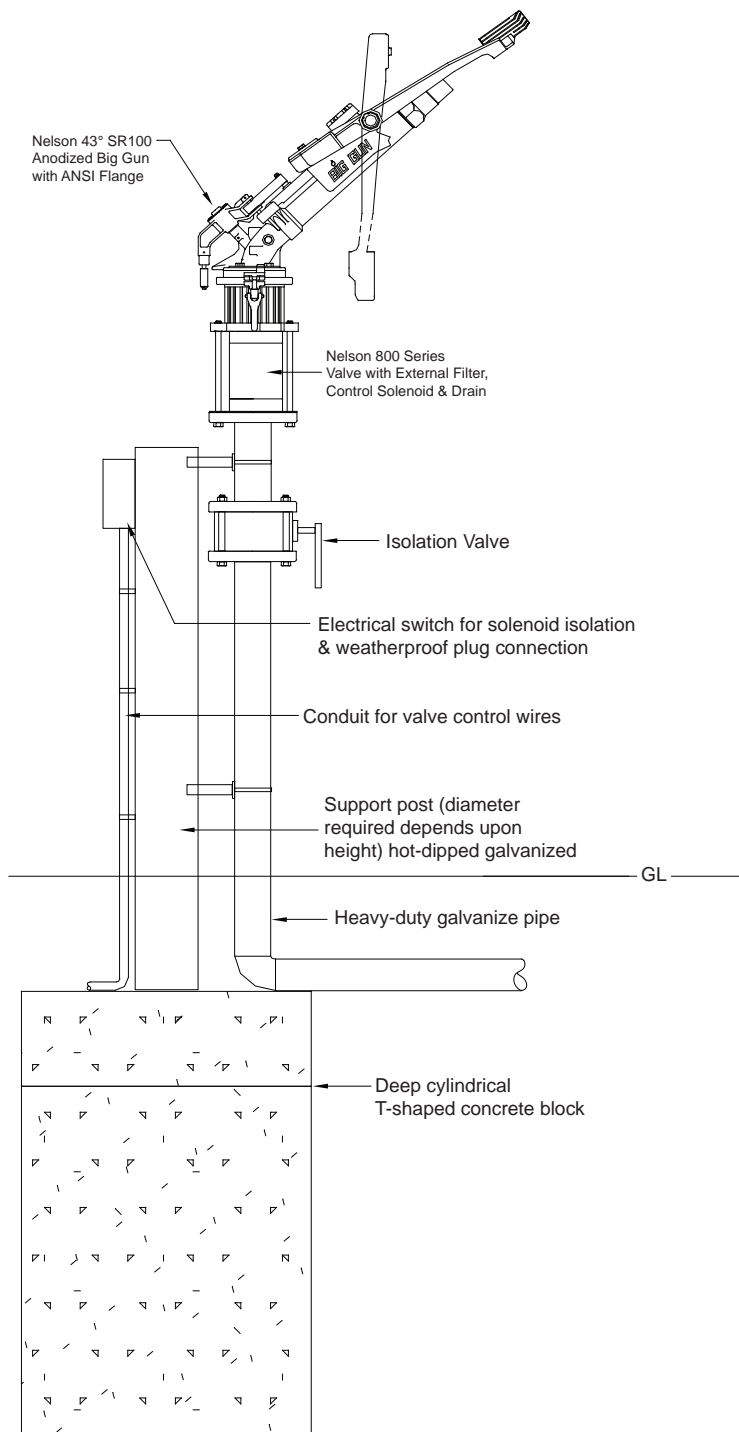
### 150 SERIES FLANGES



ANSI Flange option not shown.

# BIG GUN® SPRINKLERS *for Industrial Applications*

One method for mounting the Big Gun is on a riser near the base of the pile. See drawing below for details of a 100 Series Big Gun installation.



Mounting Design must always consider thrust force and drive arm action as well as wind distortion.

One basic spacing rule of thumb is to have 100% overlap of the spray pattern. For example a sprinkler that throws 100 feet (30.5 m) radius would be spaced not more than 100 feet (30.5 m) apart. Doing this will give some assurance for adequate coverage of water in windy conditions.

**CAUTION:** *If freezing conditions are to occur then plan for a method to drain water from all above ground pipe, stand pipes and risers.*

**WARRANTY AND DISCLAIMER:** Nelson Big Gun® Sprinklers are warranted for one year from date of original sale to be free of defective materials and workmanship when used within the working specifications for which the products were designed and under normal use and service. The manufacturer assumes no responsibility for installation, removal or unauthorized repair of defective parts. The manufacturer's liability under this warranty is limited solely to replacement or repair of defective parts and the manufacturer will not be liable for any crop or other consequential damages resulting from defects or breach of warranty. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSES AND OF ALL OTHER OBLIGATIONS OR LIABILITIES OF MANUFACTURER. No agent, employee or representative of the manufacturer has authority to waive, alter or add to the provisions of this warranty, nor to make any representations or warranty not contained herein.

This product may be covered by one or more of the following U.S. Patent Nos. 3,744,720, 3,559,887 and other U.S. Patents pending or corresponding issued or pending foreign patents.



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