

DISTRIBUTION UNIFORMITY

Distribution Uniformity is a measure of how uniformly water is being applied and if some areas are receiving more water than others. Simply put, is a measure of the irrigation system efficiency.

Hydro-Rain Nozzles are designed to have a match precipitation rate giving you the best Distribution Uniformity as shown in the four corner average diagram.

HYDRO-RAIN®

Four Corner Average																								
1	1.5	2.5	2.5	11	1.5	1.5	2	2	0.5	1	1	0	2	1	0.5	0	4.5	1	1					
1	4	14	29	44	45	36	31	27	27	32	31	32	28	19	8.5	4	13	4	1.5					
4.5	13	42	59	55	55	45	47	59	67	72	56	54	49	42	34	34	42	14	2.5					
0	4	34	46	57	45	38	60	61	64	68	66	54	56	54	46	59	29	2.5						
0.5	8.5	34	54	57	56	74	75	72	72	69	67	65	66	62	57	57	55	44	11					
1	19	42	54	62	69	79	88	88	81	74	75	75	71	69	56	45	55	45	1.5					
2	28	49	56	66	71	77	84	85	85	79	75	78	77	79	74	38	45	36	1.5					
0	32	54	54	65	75	78	85	85	82	76	79	85	84	88	75	60	47	31	2					
1	31	56	66	67	75	75	79	79	78	78	79	85	88	88	72	61	59	27	2					
1	32	72	68	69	74	79	76	78	74	74	78	82	85	81	72	64	67	27	0.5					
0.5	27	67	64	72	81	85	82	78	74	74	78	76	79	74	69	68	72	32	1					
2	27	59	61	72	88	88	85	79	78	78	79	79	75	75	67	66	56	31	1					
2	31	47	60	75	88	84	85	79	76	82	85	85	78	75	65	54	54	32	0					
1.5	36	45	38	74	79	77	78	75	79	85	88	84	77	71	66	56	49	28	2					
1.5	45	55	45	56	69	71	75	75	74	81	88	88	79	69	62	54	42	19	1					
11	44	55	57	57	62	66	65	67	69	72	72	75	74	56	57	54	34	8.5	0.5					
2.5	29	59	46	54	54	56	54	66	68	64	61	60	38	45	57	46	34	4	0					
2.5	14	42	34	34	42	49	54	56	72	67	59	47	45	55	55	59	42	13	4.5					
1.5	4	13	4	8.5	19	28	32	31	32	27	27	31	36	45	44	29	14	4	1					
1	1	4.5	0	0.5	1	2	0	1	1	0.5	2	2	1.5	1.5	11	2.5	2.5	1.5	1					

COMPETITOR A

Four Corner Average																								
0.5	1.5	1	0	0.5	0	0	1	3	3	4.5	5.5	4	6	1.5	0.5	0	0.5	0.5						
0.5	2.5	5.5	7	12	28	21	26	31	36	41	47	50	58	47	33	24	21	1.5	1.5					
0.5	21	92	98	42	51	29	37	75	128	125	112	89	75	72	74	105	92	5.5	1					
0	24	105	70	107	65	32	32	78	59	75	66	60	52	68	41	70	98	7	0					
0.5	33	74	41	62	65	66	64	104	46	65	46	65	58	97	62	107	42	12	0.5					
1.5	47	72	68	97	63	57	103	38	45	66	97	39	37	63	65	65	51	28	0					
6	58	75	52	58	37	54	77	71	47	77	76	56	54	57	66	32	29	21	0					
4	50	80	60	65	39	56	80	72	83	55	53	80	77	103	69	32	37	26	1					
5.5	47	112	66	46	97	76	53	47	85	73	47	72	71	38	104	78	75	31	3					
4.5	41	125	75	65	66	77	55	73	59	59	85	83	47	45	46	59	128	36	3					
3	36	128	59	46	45	47	83	85	59	59	73	55	77	66	65	75	125	41	4.5					
3	31	75	78	104	38	71	72	47	73	85	47	53	76	97	46	66	112	47	5.5					
3	26	37	32	69	109	77	80	53	55	83	72	80	56	39	65	60	89	50	4					
0	21	29	32	66	57	54	56	76	77	47	71	77	54	37	58	52	75	98	6					
0	28	51	65	63	37	39	97	66	45	38	103	67	63	97	68	72	47	1.5						
0.5	12	42	107	62	97	58	65	46	65	46	104	69	66	65	62	41	74	33	0.5					
0	7	98	70	41	68	52	60	66	75	59	78	32	32	65	107	70	105	24	0					
1	5.5	92	105	74	72	75	89	112	125	128	75	37	29	51	42	98	92	21	0.5					
1.5	2.5	21	24	33	47	58	50	47	41	36	31	26	21	28	12	7	5.5	2.5	0.5					
0.5	0.5	0.5	0	0.5	1.5	6	4	5.5	4.5	3	3	1	0	0	0.5	0	1	1.5	0.5					

COMPETITOR B

Four Corner Average																								
2	2	3	3	4.5	7	11	13	12	10	8.5	7.5	5.5	3.5	1	1.5	2	12	18						
18	20	37	46	49	51	55	49	41	33	35	28	27	27	23	14	8.5	21	20	1					
12	21	43	53	56	66	59	52	59	58	56	48	45	38	32	25	30	43	37	1					
2	8.5	30	38	45	45	52	68	67	69	66	64	46	46	47	39	38	53	46	1					
1.5	14	25	39	52	51	64	73	78	81	79	79	73	73	63	52	45	56	49	4.5					
1	23	32	47	63	82	76	80	92	93	92	91	90	90	82	51	45	66	51	7					
1.5	27	38	46	72	90	99	100	106	107	105	103	101	99	76	64	52	59	55	11					
5.5	27	45	46	73	90	101	113	114	112	115	114	113	106	92	78	67	59	43	12					
7.5	28	48	64	79	91	103	116	122	123	117	122	114	106	92	78	67	59	43	12					
8.5	35	56	66	79	92	105	115	117	131	131	123	112	107	93	81	69	58	33	10					
10	33	58	69	81	93	107	112	123	131	131	117	115	105	92	79	66	56	35	8.5					
12	41	59	67	78	92	106	114	122	117	123	122	116	103	91	79	64	48	28	7.5					
13	49	52	68	73	80	100	113	116	115	112	114	113	101	90	73	46	45	27	5.5					
11	55	59	52	64	76	99	101	103	105	102	106	100	99	90	72	46	38	27	3					
7	51	66	45	51	82	90	90	91	92	93	92	80	76	82	63	47	32	23	1					
4.5	49	56	45	52	63	72	73	79	79	81	78	73	64	51	52	39	25	14	1.5					
1	46	53	38	39	47	46	46	64	66	69	67	68	52	45	45	38	30	8.5	1					
1	37	43	30	25	32	38	45	48	56	58	59	52	59	66	56	53	43	21	12					
6	20	21	8.5	14	23	27	27	28	35	33	41	49	55	51	49	46	37	20	18					
2	18	12	2	1.5	1	2.5	2.5	7.5	8.5	10	12	13	11	7	4.5	3	2	1						

HRN 200

Outstanding
Distribution
Uniformity
and Low
Precipitation
Rates

Features

- Top is color-coded according to spray radius
- Thick, ridged edges around top of nozzle gives excellent grip no matter the conditions
- Adjustment slot allows use of a screwdriver to give fine arc adjustment during operation
- Matched precipitation on fixed and adjustable nozzles allow for outstanding distribution uniformity
- Strip nozzles have the most uniform precipitation rate vs. leading competitors

How to Specify

	Model
HRN	Nozzle
	Series
200	Adjustable
	Radius
04	4 Feet
08	8 Feet
10	10 Feet
12	12 Feet
15	15 Feet
18	18 Feet
	Pattern
ADJ	Adjustable

Models (SKU)

- HRN-200-04-ADJ (04100)
- HRN-200-08-ADJ (04101)
- HRN-200-10-ADJ (04102)
- HRN-200-12-ADJ (04103)
- HRN-200-15-ADJ (04104)
- HRN-200-18-ADJ (04105)

Adjustable Pattern Spray Nozzles



Specifications

- Pressure range: 15-70 psi (1.03-4.83 bar)
- Optimized for 30 psi (2.1 bar)
- Filtration: 500 micron filter

sprinklers



PATTERN	PRESSURE PSI	RADIUS FT	FLOW GPM	PRECIP IN/H ■	PRECIP IN/H ▲	PRESSURE BARS	RADIUS M	FLOW M³/H	FLOW L/S	PRECIP MM/H ■	PRECIP MM/H ▲
HRN-200-04-ADJ (04100)						4° Trajectory SI (Metric)					
90° Arc 	20	4	0.61	14.75	17.03	1.4	1.2	0.14	0.04	374.55	432.50
	25	5	0.67	12.65	14.61	1.7	1.4	0.15	0.04	321.30	371.02
	30	5	0.73	11.22	12.95	2.1	1.5	0.17	0.05	284.96	329.05
	35	6	0.79	10.07	11.63	2.4	1.7	0.18	0.05	255.72	295.29
	40	6	0.84	8.97	10.36	2.8	1.8	0.19	0.05	227.96	263.23
180° Arc 	20	4	1.23	14.75	17.03	1.4	1.2	0.28	0.08	374.55	432.50
	25	5	1.33	12.65	14.61	1.7	1.4	0.30	0.08	321.30	371.02
	30	5	1.46	11.22	12.95	2.1	1.5	0.33	0.09	284.96	329.05
	35	6	1.58	10.07	11.63	2.4	1.7	0.36	0.10	255.72	295.29
	40	6	1.68	8.97	10.36	2.8	1.8	0.38	0.11	227.96	263.23
270° Arc 	20	4	1.84	14.75	17.03	1.4	1.2	0.42	0.12	374.55	432.50
	25	5	2.00	12.65	14.61	1.7	1.4	0.45	0.13	321.30	371.02
	30	5	2.18	11.22	12.95	2.1	1.5	0.50	0.14	284.96	329.05
	35	6	2.37	10.07	11.63	2.4	1.7	0.54	0.15	255.72	295.29
	40	6	2.52	8.97	10.36	2.8	1.8	0.57	0.16	227.96	263.23
360° Arc 	20	4	2.45	14.75	17.03	1.4	1.2	0.56	0.15	374.55	432.50
	25	5	2.66	12.65	14.61	1.7	1.4	0.60	0.17	321.30	371.02
	30	5	2.91	11.22	12.95	2.1	1.5	0.66	0.18	284.96	329.05
	35	6	3.16	10.07	11.63	2.4	1.7	0.72	0.20	255.72	295.29
	40	6	3.36	8.97	10.36	2.8	1.8	0.76	0.21	227.96	263.23
HRN-200-08-ADJ (04101)						10° Trajectory SI (Metric)					
90° Arc 	20	7	0.39	3.03	3.49	1.4	2.1	0.09	0.02	76.87	88.77
	25	8	0.42	2.77	3.20	1.7	2.3	0.10	0.03	70.45	81.35
	30	8	0.46	2.55	2.95	2.1	2.5	0.10	0.03	64.86	74.90
	35	9	0.50	2.37	2.73	2.4	2.7	0.11	0.03	60.09	69.39
	40	9	0.53	2.33	2.70	2.8	2.8	0.12	0.03	59.29	68.46
180° Arc 	20	7	0.77	3.03	3.49	1.4	2.1	0.17	0.05	76.87	88.77
	25	8	0.85	2.77	3.20	1.7	2.3	0.19	0.05	70.45	81.35
	30	8	0.92	2.55	2.95	2.1	2.5	0.21	0.06	64.86	74.90
	35	9	1.00	2.37	2.73	2.4	2.7	0.23	0.06	60.09	69.39
	40	9	1.06	2.33	2.70	2.8	2.8	0.24	0.07	59.29	68.46
270° Arc 	20	7	1.16	3.03	3.49	1.4	2.1	0.26	0.07	76.87	88.77
	25	8	1.27	2.77	3.20	1.7	2.3	0.29	0.08	70.45	81.35
	30	8	1.38	2.55	2.95	2.1	2.5	0.31	0.09	64.86	74.90
	35	9	1.49	2.37	2.73	2.4	2.7	0.34	0.09	60.09	69.39
	40	9	1.58	2.33	2.70	2.8	2.8	0.36	0.10	59.29	68.46
360° Arc 	20	7	1.54	3.03	3.49	1.4	2.1	0.35	0.10	76.87	88.77
	25	8	1.69	2.77	3.20	1.7	2.3	0.38	0.11	70.45	81.35
	30	8	1.84	2.55	2.95	2.1	2.5	0.42	0.12	64.86	74.90
	35	9	1.99	2.37	2.73	2.4	2.7	0.45	0.13	60.09	69.39
	40	9	2.11	2.33	2.70	2.8	2.8	0.48	0.13	59.29	68.46



*Adjusting the radius reduction screw/diffuser screw may be required to achieve catalog distance and flow

PATTERN	PRESSURE PSI	RADIUS FT	FLOW GPM	PRECIP IN/H ■	PRECIP IN/H ▲	PRESSURE BARS	RADIUS M	FLOW M³/H	FLOW L/S	PRECIP MM/H ■	PRECIP MM/H ▲
HRN-200-10-ADJ (04102)						18° Trajectory					
90° Arc 	20	9	0.39	1.83	2.11	1.4	2.7	0.09	0.02	46.50	53.70
	25	10	0.42	1.80	2.08	1.7	2.9	0.10	0.03	45.80	52.89
	30	10	0.46	1.77	2.05	2.1	3.0	0.10	0.03	45.01	51.97
	35	11	0.50	1.74	2.01	2.4	3.2	0.11	0.03	44.15	50.98
	40	11	0.53	1.68	1.94	2.8	3.4	0.12	0.03	42.65	49.25
180° Arc 	20	9	0.77	1.83	2.11	1.4	2.7	0.17	0.05	46.50	53.70
	25	10	0.85	1.80	2.08	1.7	2.9	0.19	0.05	45.80	52.89
	30	10	0.92	1.77	2.05	2.1	3.0	0.21	0.06	45.01	51.97
	35	11	1.00	1.74	2.01	2.4	3.2	0.23	0.06	44.15	50.98
	40	11	1.06	1.68	1.94	2.8	3.4	0.24	0.07	42.65	49.25
270° Arc 	20	9	1.16	1.83	2.11	1.4	2.7	0.26	0.07	46.50	53.70
	25	10	1.27	1.80	2.08	1.7	2.9	0.29	0.08	45.80	52.89
	30	10	1.38	1.77	2.05	2.1	3.0	0.31	0.09	45.01	51.97
	35	11	1.49	1.74	2.01	2.4	3.2	0.34	0.09	44.15	50.98
	40	11	1.58	1.68	1.94	2.8	3.4	0.36	0.10	42.65	49.25
360° Arc 	20	9	1.54	1.83	2.11	1.4	2.7	0.35	0.10	46.50	53.70
	25	10	1.69	1.80	2.08	1.7	2.9	0.38	0.11	45.80	52.89
	30	10	1.84	1.77	2.05	2.1	3.0	0.42	0.12	45.01	51.97
	35	11	1.99	1.74	2.01	2.4	3.2	0.45	0.13	44.15	50.98
	40	11	2.11	1.68	1.94	2.8	3.4	0.48	0.13	42.65	49.25
HRN-200-12-ADJ (04103)						18° Trajectory					
90° Arc 	20	12	0.51	1.48	1.71	1.4	3.5	0.12	0.03	37.55	43.36
	25	12	0.55	1.46	1.68	1.7	3.7	0.12	0.03	37.03	42.76
	30	13	0.58	1.43	1.65	2.1	3.8	0.13	0.04	36.40	42.03
	35	13	0.62	1.41	1.63	2.4	4.0	0.14	0.04	35.82	41.36
	40	14	0.65	1.37	1.58	2.8	4.1	0.15	0.04	34.86	40.26
180° Arc 	20	12	1.02	1.48	1.71	1.4	3.5	0.23	0.06	37.55	43.36
	25	12	1.09	1.46	1.68	1.7	3.7	0.25	0.07	37.03	42.76
	30	13	1.16	1.43	1.65	2.1	3.8	0.26	0.07	36.40	42.03
	35	13	1.24	1.41	1.63	2.4	4.0	0.28	0.08	35.82	41.36
	40	14	1.30	1.37	1.58	2.8	4.1	0.29	0.08	34.86	40.26
270° Arc 	20	12	1.52	1.48	1.71	1.4	3.5	0.35	0.10	37.55	43.36
	25	12	1.64	1.46	1.68	1.7	3.7	0.37	0.10	37.03	42.76
	30	13	1.74	1.43	1.65	2.1	3.8	0.40	0.11	36.40	42.03
	35	13	1.86	1.41	1.63	2.4	4.0	0.42	0.12	35.82	41.36
	40	14	1.95	1.37	1.58	2.8	4.1	0.44	0.12	34.86	40.26
360° Arc 	20	12	2.03	1.48	1.71	1.4	3.5	0.46	0.13	37.55	43.36
	25	12	2.18	1.46	1.68	1.7	3.7	0.50	0.14	37.03	42.76
	30	13	2.33	1.43	1.65	2.1	3.8	0.53	0.15	36.40	42.03
	35	13	2.48	1.41	1.63	2.4	4.0	0.56	0.16	35.82	41.36
	40	14	2.60	1.37	1.58	2.8	4.1	0.59	0.16	34.86	40.26



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PATTERN	PRESSURE PSI	RADIUS FT	FLOW GPM	PRECIP IN/H ■	PRECIP IN/H ▲	PRESSURE BARS	RADIUS M	FLOW M³/H	FLOW L/S	PRECIP MM/H ■	PRECIP MM/H ▲
HRN-200-15-ADJ (04104)						26° Trajectory SI (Metric)					
90° Arc 	20	13	0.59	1.34	1.54	1.4	4.0	0.13	0.04	33.94	39.19
	25	14	0.65	1.27	1.46	1.7	4.3	0.15	0.04	32.20	37.18
	30	15	0.69	1.27	1.47	2.1	4.4	0.16	0.04	32.25	37.25
	35	15	0.74	1.27	1.47	2.4	4.6	0.17	0.05	32.34	37.35
	40	16	0.79	1.19	1.38	2.8	4.9	0.18	0.05	30.29	34.98
180° Arc 	20	13	1.17	1.34	1.54	1.4	4.0	0.27	0.07	33.94	39.19
	25	14	1.29	1.27	1.46	1.7	4.3	0.29	0.08	32.20	37.18
	30	15	1.39	1.27	1.47	2.1	4.4	0.31	0.09	32.25	37.25
	35	15	1.49	1.27	1.47	2.4	4.6	0.34	0.09	32.34	37.35
	40	16	1.59	1.19	1.38	2.8	4.9	0.36	0.10	30.29	34.98
270° Arc 	20	13	1.76	1.34	1.54	1.4	4.0	0.40	0.11	33.94	39.19
	25	14	1.94	1.27	1.46	1.7	4.3	0.44	0.12	32.20	37.18
	30	15	2.08	1.27	1.47	2.1	4.4	0.47	0.13	32.25	37.25
	35	15	2.23	1.27	1.47	2.4	4.6	0.51	0.14	32.34	37.35
	40	16	2.38	1.19	1.38	2.8	4.9	0.54	0.15	30.29	34.98
360° Arc 	20	13	2.35	1.34	1.54	1.4	4.0	0.53	0.15	33.94	39.19
	25	14	2.58	1.27	1.46	1.7	4.3	0.59	0.16	32.20	37.18
	30	15	2.77	1.27	1.47	2.1	4.4	0.63	0.17	32.25	37.25
	35	15	2.98	1.27	1.47	2.4	4.6	0.68	0.19	32.34	37.35
	40	16	3.17	1.19	1.38	2.8	4.9	0.72	0.20	30.29	34.98
HRN-200-18-ADJ (04105)						30° Trajectory SI (Metric)					
90° Arc 	20	15	0.68	1.16	1.34	1.4	4.6	0.15	0.04	29.46	34.02
	25	16	0.75	1.13	1.31	1.7	4.9	0.17	0.05	28.78	33.24
	30	17	0.83	1.11	1.28	2.1	5.2	0.19	0.05	28.16	32.52
	35	18	0.90	1.07	1.24	2.4	5.5	0.20	0.06	27.22	31.43
	40	19	0.96	1.02	1.18	2.8	5.8	0.22	0.06	25.98	30.01
180° Arc 	20	15	1.36	1.16	1.34	1.4	4.6	0.31	0.09	29.46	34.02
	25	16	1.51	1.13	1.31	1.7	4.9	0.34	0.10	28.78	33.24
	30	17	1.66	1.11	1.28	2.1	5.2	0.38	0.10	28.16	32.52
	35	18	1.80	1.07	1.24	2.4	5.5	0.41	0.11	27.22	31.43
	40	19	1.92	1.02	1.18	2.8	5.8	0.44	0.12	25.98	30.01
270° Arc 	20	15	2.03	1.16	1.34	1.4	4.6	0.46	0.13	29.46	34.02
	25	16	2.26	1.13	1.31	1.7	4.9	0.51	0.14	28.78	33.24
	30	17	2.50	1.11	1.28	2.1	5.2	0.57	0.16	28.16	32.52
	35	18	2.70	1.07	1.24	2.4	5.5	0.61	0.17	27.22	31.43
	40	19	2.88	1.02	1.18	2.8	5.8	0.65	0.18	25.98	30.01
360° Arc 	20	15	2.71	1.16	1.34	1.4	4.6	0.62	0.17	29.46	34.02
	25	16	3.01	1.13	1.31	1.7	4.9	0.68	0.19	28.78	33.24
	30	17	3.33	1.11	1.28	2.1	5.2	0.76	0.21	28.16	32.52
	35	18	3.61	1.07	1.24	2.4	5.5	0.82	0.23	27.22	31.43
	40	19	3.84	1.02	1.18	2.8	5.8	0.87	0.24	25.98	30.01

*Adjusting the radius reduction screw/diffuser screw may be required to achieve catalog distance and flow

HRN 100

Outstanding
Distribution
Uniformity
and Low
Precipitation
Rates

Features

- Body is color-coded according to spray radius
- Thick, ridged edges around top of nozzle gives excellent grip no matter the conditions
- Adjustment slot allows use of a screwdriver to give fine arc adjustment during operation
- Matched precipitation on fixed and adjustable nozzles allow for outstanding distribution uniformity
- Strip nozzles have the most uniform precipitation rate vs. leading competitors

Fixed Pattern Spray Nozzles



Specifications

- Pressure range: 15-70 psi (1.03-4.83 bar)
- Optimized for 30 psi (2.1 bar)
- Filtration: 500 micron filter

How to Specify

	Model
HRN	Nozzle
	Series
100	Fixed
	Radius
04	4 Feet
08	8 Feet
10	10 Feet
12	12 Feet
15	15 Feet
18	18 Feet
	Pattern
Q	Quarter
H	Half
F	Full
SST	Side Strip
CST	Center Strip
EST	End Strip

Models (SKU)

- HRN-100-08-Q (04203)
- HRN-100-08-H (04204)
- HRN-100-08-F (04205)
- HRN-100-10-Q (04206)
- HRN-100-10-H (04207)
- HRN-100-10-F (04208)
- HRN-100-12-Q (04209)
- HRN-100-12-H (04210)
- HRN-100-12-F (04211)
- HRN-100-15-Q (04212)
- HRN-100-15-H (04213)
- HRN-100-15-F (04214)
- HRN-100-15-SST (04215)
- HRN-100-15-CST (04216)
- HRN-100-15-EST (04217)

PATTERN	PRESSURE PSI	W x L FT	FLOW GPM
HRN-100-15-SST (04215)			30° Trajectory
	20	4 X 28	1.09
	25	4 X 30	1.18
	30	4 X 30	1.28
	35	4 X 30	1.37
	40	4 X 32	1.48
HRN-100-15-CST (04216)			30° Trajectory
	20	4 X 28	1.09
	25	4 X 30	1.18
	30	4 X 30	1.28
	35	4 X 30	1.37
	40	4 X 32	1.48
HRN-100-15-EST (04217)			30° Trajectory
	20	4 X 15	0.54
	25	4 X 15	0.59
	30	4 X 15	0.64
	35	4 X 16	0.69
	40	4 X 16	0.74

PATTERN	PRESSURE PSI	RADIUS FT	FLOW GPM	PRECIP IN/H ■	PRECIP IN/H ▲	PRESSURE BARS	RADIUS M	FLOW M³/H	FLOW L/S	PRECIP MM/H ■	PRECIP MM/H ▲
HRN-100-08-Q (04203)			10° Trajectory			SI (Metric)					
	20	7	0.29	2.26	2.60	1.4	2.1	0.07	0.02	57.28	66.15
	25	8	0.32	2.09	2.42	1.7	2.3	0.07	0.02	53.15	61.38
	30	8	0.35	1.94	2.24	2.1	2.5	0.08	0.02	49.17	56.78
	35	9	0.37	1.78	2.05	2.4	2.7	0.08	0.02	45.15	52.13
	40	9	0.40	1.76	2.03	2.8	2.8	0.09	0.03	44.68	51.59
HRN-100-08-H (04204)			10° Trajectory			SI (Metric)					
	20	7	0.57	2.26	2.60	1.4	2.1	0.13	0.04	57.28	66.15
	25	8	0.64	2.09	2.42	1.7	2.3	0.14	0.04	53.15	61.38
	30	8	0.70	1.94	2.24	2.1	2.5	0.16	0.04	49.17	56.78
	35	9	0.75	1.78	2.05	2.4	2.7	0.17	0.05	45.15	52.13
	40	9	0.80	1.76	2.03	2.8	2.8	0.18	0.05	44.68	51.59
HRN-100-08-F (04205)			10° Trajectory			SI (Metric)					
	20	7	1.15	2.26	2.60	1.4	2.1	0.26	0.07	57.28	66.15
	25	8	1.28	2.09	2.42	1.7	2.3	0.29	0.08	53.15	61.38
	30	8	1.40	1.94	2.24	2.1	2.5	0.32	0.09	49.17	56.78
	35	9	1.50	1.78	2.05	2.4	2.7	0.34	0.09	45.15	52.13
	40	9	1.59	1.76	2.03	2.8	2.8	0.36	0.10	44.68	51.59
HRN-100-10-Q (04206)			15° Trajectory			SI (Metric)					
	20	9	0.42	2.00	2.31	1.4	2.7	0.10	0.03	50.73	58.58
	25	10	0.47	2.00	2.31	1.7	2.9	0.11	0.03	50.82	58.68
	30	10	0.52	1.99	2.30	2.1	3.0	0.12	0.03	50.63	58.47
	35	11	0.56	1.95	2.25	2.4	3.2	0.13	0.04	49.59	57.26
	40	11	0.60	1.91	2.21	2.8	3.4	0.14	0.04	48.52	56.02
HRN-100-10-H (04207)			15° Trajectory			SI (Metric)					
	20	9	0.84	2.00	2.31	1.4	2.7	0.19	0.05	50.73	58.58
	25	10	0.94	2.00	2.31	1.7	2.9	0.21	0.06	50.82	58.68
	30	10	1.04	1.99	2.30	2.1	3.0	0.24	0.07	50.63	58.47
	35	11	1.12	1.95	2.25	2.4	3.2	0.25	0.07	49.59	57.26
	40	11	1.20	1.91	2.21	2.8	3.4	0.27	0.08	48.52	56.02

PATTERN	PRESSURE PSI	RADIUS FT	FLOW GPM	PRECIP IN/H ■	PRECIP IN/H ▲	PRESSURE BARS	RADIUS M	FLOW M³/H	FLOW L/S	PRECIP MM/H ■	PRECIP MM/H ▲
HRN-100-10-F (04208)						15° Trajectory					
360° Arc 	20	9	1.68	2.00	2.31	1.4	2.7	0.38	0.11	50.73	58.58
	25	10	1.88	2.00	2.31	1.7	2.9	0.43	0.12	50.82	58.68
	30	10	2.07	1.99	2.30	2.1	3.0	0.47	0.13	50.63	58.47
	35	11	2.24	1.95	2.25	2.4	3.2	0.51	0.14	49.59	57.26
	40	11	2.40	1.91	2.21	2.8	3.4	0.55	0.15	48.52	56.02
HRN-100-12-Q (04209)						20° Trajectory					
90° Arc 	20	12	0.61	1.76	2.03	1.4	3.5	0.14	0.04	44.76	51.68
	25	12	0.68	1.81	2.09	1.7	3.7	0.15	0.04	45.95	53.06
	30	13	0.74	1.83	2.11	2.1	3.8	0.17	0.05	46.38	53.55
	35	13	0.80	1.83	2.11	2.4	4.0	0.18	0.05	46.39	53.57
	40	14	0.86	1.81	2.09	2.8	4.1	0.19	0.05	45.90	53.00
HRN-100-12-H (04210)						20° Trajectory					
180° Arc 	20	12	1.21	1.76	2.03	1.4	3.5	0.27	0.08	44.76	51.68
	25	12	1.35	1.81	2.09	1.7	3.7	0.31	0.09	45.95	53.06
	30	13	1.48	1.83	2.11	2.1	3.8	0.34	0.09	46.38	53.55
	35	13	1.60	1.83	2.11	2.4	4.0	0.36	0.10	46.39	53.57
	40	14	1.71	1.81	2.09	2.8	4.1	0.39	0.11	45.90	53.00
HRN-100-12-F (04211)						20° Trajectory					
360° Arc 	20	12	2.42	1.76	2.03	1.4	3.5	0.55	0.15	44.76	51.68
	25	12	2.71	1.81	2.09	1.7	3.7	0.61	0.17	45.95	53.06
	30	13	2.96	1.83	2.11	2.1	3.8	0.67	0.19	46.38	53.55
	35	13	3.21	1.83	2.11	2.4	4.0	0.73	0.20	46.39	53.57
	40	14	3.42	1.81	2.09	2.8	4.1	0.78	0.22	45.90	53.00
HRN-100-15-Q (04212)						28° Trajectory					
90° Arc 	20	14	0.76	1.61	1.86	1.4	4.1	0.17	0.05	40.87	47.19
	25	14	0.85	1.67	1.93	1.7	4.3	0.19	0.05	42.52	49.10
	30	15	0.96	1.75	2.02	2.1	4.4	0.22	0.06	44.50	51.39
	35	15	1.03	1.77	2.04	2.4	4.6	0.23	0.07	44.93	51.88
	40	16	1.11	1.77	2.05	2.8	4.7	0.25	0.07	45.00	51.96
HRN-100-15-H (04213)						28° Trajectory					
180° Arc 	20	14	1.52	1.61	1.86	1.4	4.1	0.35	0.10	40.87	47.19
	25	14	1.70	1.67	1.93	1.7	4.3	0.39	0.11	42.52	49.10
	30	15	1.91	1.75	2.02	2.1	4.4	0.43	0.12	44.50	51.39
	35	15	2.07	1.77	2.04	2.4	4.6	0.47	0.13	44.93	51.88
	40	16	2.21	1.77	2.05	2.8	4.7	0.50	0.14	45.00	51.96
HRN-100-15-F (04214)						28° Trajectory					
360° Arc 	20	14	3.05	1.61	1.86	1.4	4.1	0.69	0.19	40.87	47.19
	25	14	3.41	1.67	1.93	1.7	4.3	0.77	0.21	42.52	49.10
	30	15	3.83	1.75	2.02	2.1	4.4	0.87	0.24	44.50	51.39
	35	15	4.13	1.77	2.04	2.4	4.6	0.94	0.26	44.93	51.88
	40	16	4.42	1.77	2.05	2.8	4.7	1.00	0.28	45.00	51.96



*Adjusting the radius reduction screw/diffuser screw may be required to achieve catalog distance and flow