2025

RAIN®

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It's our best warranty ever,
and no one else offers anything better.

(See page 92 for detailed information)

Our Grass Roots

It's about hard work and teamwork and a relentless spirit. It's about fifty plus years of every little thing mattering.

It's not rocket science. Or is it?

Our story begins with a rocket scientist. A real rocket scientist. With a background in chemical engineering and a stint in the Army Artillery Corps Guided Missile School, Carl Kah Jr. helped develop early reusable rocket technology at Pratt & Whitney. That's NASA rocket technology (still in use today mind you).

With a natural born instinct for invention, Carl turned his attention to his own landscape irrigation system and thought, I can make it better. Call it: When science meets grass roots greatness. From the lathe in his garage, he designed and machined a valve that cycled zone-to-zone and eliminated the need for multiple valves. That creative inventiveness, or inventive creativity, led to patent number one in 1966.

With acres of ideas for greening up any size space, in 1970 Carl invented and patented a device he called Modulated Pressure Control. It allowed for the control of the entire irrigation system of a golf course without wires or tubes. The sale of that patent was the green light to incorporating K-Rain® Manufacturing in 1972.

Cultivating growth

Helping to grow the business from the ground up was son, Chip, who joined the company in 1986. Committed to engineering products that are reliable and eco-conscious, Chip led the development and growth of indexing valves for the wastewater disposal industry.

In 1991, Carl and Chip, always innovating, introduced the first of many patented gear drive rotors. Four years later, K-Rain® augmented the professional line by expanding its products into the retail market - taking the business to the next level.

Joining the burgeoning business that same year were Carl's two daughters, Gretchen and Deborah. Gretchen would lead growth in the west coast sales division. Deborah, an attorney, would be managing intellectual property and human resources. And in 2016, Chip's two sons, Christopher and Trevor, joined K-Rain® making it a 3rd generation company.

Green and Growing the Industry

Look across the industry and you'll find a little bit of K-Rain® innovation sprinkled into the competitive set. K-Rain® holds over 100 patents specific to irrigation including the three-spring reversing mechanism still used today in most gear-driven sprinklers.

Engineering the hardest-working irrigation products in the world is our heritage and our mission. Our commitment to quality is reflected in an ISO 9001 quality certification - the standard for manufacturing and process control.

We're also environmentally conscious about the materials we select and the products we produce. Sustainability is in our DNA. That's why we're an industry leader with a full range of products for reclaimed/recycled water.

Over 400 men and women make up the K-Rain® dream team, serving customers in the United States and more than 60 countries worldwide.

ROTORS

Rotors | Comparison Chart

From small landscapes to sports stadiums, K-Rain® has a rotor for every landscape. Designed and built to provide high performance and low maintenance year after year, K-Rain® rotors deliver outstanding coverage on any terrain. Enjoy a comprehensive range of innovative features and exceptional functionality.

	MiniPro®	RPS™50	RPS™75	RPS™75i	RPS™ Select	ProPlus®	SuperPro®	ProSport®
Specifications								
Inlet Size	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	1"
Radius	18'-33'	18'-33'	22'-51'	26'-48'	33'-46'	22'-50'	26'-46'	43'-77'
Flow Range (GPM)	0.8-3.8	0.8-3.8	0.7-8.3	0.9-9.7	1.3-6.8	0.5-10.0	0.8-11.1	5.1-32.5
Features								
Pressure Rating (PSI)	20-70	20-70	20-70	20-70	20-70	20-70	20-70	40-90
Nozzle Trajectory	25°	25°	26°	26°	24°	26°	26°	26°
Pre-installed Nozzles	#1.5	#1.5	#3.0	#2.5	4 built-in selectable	#2.5	#2.5	#10
Low Angle Nozzle Choices			●	●		●	●	
Non-Strippable Drive (arc memory clutch)						●	●	●
Arc Adjustment Range	40°-360°	40°-360°	40°-360°	40°-360°	40°-360°	40° to cont. 360°	40° to cont. 360°	40° to cont. 360°
Top Arc Set	●				●	●	●	●
Intelligent Flow Technology®				●			●	
Reclaimed Water Available	●	●	●	●	●	●	●	●
Stainless Steel Available			●	●				●
Optional or Factory Installed CV	●	●	●	●	●	●	●	Standard
Pressure Regulation Optional			●	●				
Customizable			●	●			●	
Warranty	7 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years

MiniPro®

Perfect for small lawn and landscape areas.

Features

- Revolutionary Patented Top Arc Set – Simplified arc set allows for wet or dry adjustment in seconds
- 1/2" Inlet – Replaces all standard mini rotors and pop-up sprays
- Adjustable to 360° – Full range of adjustment from 40° to 360°
- Patented Top Arc Set Degree Markings – Clearly indicates the current watering pattern and simplifies arc set adjustment
- Time Proven Patented Reversing Mechanism – Assures continuous reverse and return...over a 35 year history
- Rubber Cover – Seals out dirt and increases product durability
- Optional Check Valve – Prevents low head drainage

Fast Facts

ALL	INLET: 1/2" (1,3 CM) FEMALE THREAD NPT	
4"	Retracted height:	6" (15,2 cm)
	Riser height:	4" (10,2 cm)
6"	Retracted height:	8 3/8" (21,3 cm)
	Riser height:	6" (15,2 cm)
12"	Retracted height:	15 1/4" (38,7 cm)
	Riser height:	12" (30,5 cm)

Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.8 – 3.8 GPM (3,0 – 14,4 LPM)
- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation Rate: 0.26 – 0.67 in/hr (7 – 17 mm/hr) (depending on spacing and nozzle used)
- Recommended Spacing: 18' – 33' (5,5 – 10,1 m)
- Radius: 18' – 33' (5,5 – 10,1 m)
- Nozzle Trajectory: 25°

Easy Arc Setting

Arc Selection: 40° to 360°
Adjust from left start

Model

13003 4" (10,2 cm) MiniPro®

13006 6" (15,2 cm) MiniPro®

13012 12" (30,5 cm) MiniPro®

Accessories

See page 26-27

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#0.75	30	18	0.8	0.45	0.55
	40	19	0.8	0.43	0.49
	50	20	0.9	0.43	0.50
#1.0	30	26	0.9	0.26	0.30
	40	27	1.2	0.32	0.37
	50	27	1.3	0.34	0.40
#1.5 Pre-Installed	30	27	1.5	0.40	0.46
	40	27	1.8	0.48	0.55
	50	28	2.0	0.49	0.57
#2.0	30	29	2.0	0.46	0.53
	40	30	2.3	0.49	0.57
	50	31	2.7	0.54	0.62
#3.0	30	32	3.0	0.56	0.65
	40	33	3.4	0.60	0.69
	50	33	3.8	0.67	0.78

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#0.75	2,1	5,5	3,0	11	14
	2,8	5,8	3,0	11	12
	3,4	6,1	3,4	11	12
#1.0	2,1	7,9	3,4	7	8
	2,8	8,2	4,5	8	9
	3,4	8,2	4,9	9	10
#1.5 Pre-Installed	2,1	8,2	5,7	10	12
	2,8	8,2	6,8	12	14
	3,4	8,5	7,6	12	14
#2.0	2,1	8,8	7,6	12	13
	2,8	9,1	8,7	12	14
	3,4	9,4	10,2	14	16
#3.0	2,1	9,8	11,4	14	17
	2,8	10,1	12,9	15	18
	3,4	10,1	14,4	17	20

**All precipitation rates calculated for 180° operation.*
For the precipitation rate for a 360° sprinkler, divide by 2.

How to Specify with Options

MODELS	OPTIONS	
13003	-CV	▶ Check Valve
13006	-NN	▶ No Nozzle
13012	-RCW	▶ Reclaimed Water Use

Examples: 13003-NN, 13006-RCW-CV

RPS™ 50

Designed for smaller landscape areas.

Features

- Right Position Start
- Patented Reversing Mechanism – Continuous reverse and return
- Ideal for use in tandem with larger rotors
- Rubber Cover – Seals out dirt and increases product durability
- Comes with 5 Nozzles for system flexibility
- Optional Check Valve – Prevents low head drainage

Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.8 – 3.8 GPM (3,0 – 14,4 LPM)
- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation Rate: 0.26 – 0.67 in/hr (7 – 17 mm/hr) (depending on spacing and nozzle used)
- Recommended Spacing: 18' – 33' (5,5 – 10,1 m)
- Radius: 18' – 33' (5,5 – 10,1 m)
- Nozzle Trajectory: 25°

Easy Arc Setting

Arc Selection: 40° to 360°
Adjust from right start

Model

RPS50 RPS™ 50

Accessories

See page 26-27

Fast Facts

INLET: 1/2" (1,3 CM) FEMALE THREAD NPT	
Retracted height:	6" (15,2 cm)
Riser height:	4" (10,2 cm)

How to Specify

MODELS	OPTIONS	
RPS50	-CV	▶ Check Valve
	-RCW	▶ Reclaimed Water Use

Examples: RPS50-CV

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#0.75	30	18	0.8	0.45	0.55
	40	19	0.8	0.43	0.49
	50	20	0.9	0.43	0.50
#1.0	30	26	0.9	0.26	0.30
	40	27	1.2	0.32	0.37
	50	27	1.3	0.34	0.40
#1.5 Pre-Installed	30	27	1.5	0.40	0.46
	40	27	1.8	0.48	0.55
	50	28	2.0	0.49	0.57
#2.0	30	29	2.0	0.46	0.53
	40	30	2.3	0.49	0.57
	50	31	2.7	0.54	0.62
#3.0	30	32	3.0	0.56	0.65
	40	33	3.4	0.60	0.69
	50	33	3.8	0.67	0.78

**All precipitation rates calculated for 180° operation.*
For the precipitation rate for a 360° sprinkler, divide by 2.

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#0.75	2,1	5,5	3,0	11	14
	2,8	5,8	3,0	11	12
	3,4	6,1	3,4	11	12
#1.0	2,1	7,9	3,4	7	8
	2,8	8,2	4,5	8	9
	3,4	8,2	4,9	9	10
#1.5 Pre-Installed	2,1	8,2	5,7	10	12
	2,8	8,2	6,8	12	14
	3,4	8,5	7,6	12	14
#2.0	2,1	8,8	7,6	12	13
	2,8	9,1	8,7	12	14
	3,4	9,4	10,2	14	16
#3.0	2,1	9,8	11,4	14	17
	2,8	10,1	12,9	15	18
	3,4	10,1	14,4	17	20

RPS™ 75

Sets the standard for 3/4" gear-driven rotors.

Features

- Right Position Start
- Patented Reversing Mechanism – Continuous reverse and return
- Full and Part Circle Rotation – Provides a full range of adjustment from 40° to 360°
- Non-flushing Wiper Seal – Reduces leaks caused by debris trapped under seal
- 3/4" (1,9 cm) Inlet – Replaces all standard rotors
- Rubber Cover – Seals out dirt and increases durability
- Wide Selection of Nozzles – Including standard and low angle for flexibility in system design
- Includes 5 Free Check Valve Assemblies Per Box
- Universal Riser Assembly – Fits into existing Hunter® PGP® and PGP® Ultra cans
- Pressure Regulated – 45 PSI available (6" only)

Fast Facts

ALL	INLET: 3/4" (1,9 CM) FEMALE THREAD NPT	
4"	Retracted height:	7 3/8" (19,7 cm)
	Riser height:	4 3/8" (11,1 cm)
6"	Retracted height:	9 1/2" (24,1 cm)
	Riser height:	6 3/8" (16,2 cm)
Shrub	Height:	7 1/2" (19,1 cm)

Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.7 – 8.3 GPM (2,6 – 31 LPM)
- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation Rate: .16 – 1.0 in/hr (4 – 25,4 mm/hr) (depending on spacing and nozzle used)
- Recommended Spacing: 22' – 51' (6,7 – 15,5 m)
- Radius: 22' – 51' (6,7 – 15,5 m)
- Nozzle Trajectory: 26°
- Low Angle Nozzle Trajectory: 11°
- 8 Standard and 4 Low Angle Nozzles Included

Easy Arc Setting

Arc Selection: 40° to 360°
Adjust from right start

Accessories

See page 26-27

RPS™ 75

Models

RPS75	RPS™ 75 Rotor
RPS75-360	RPS™ 75 Rotor, 360°
RPS75-SH	RPS™ 75 Rotor, Shrub
RPS75-360-SH	RPS™ 75 Rotor, 360°, Shrub
RPS75-6INCH	RPS™ 75 Rotor 6" (15,2 cm)

How to Specify with Options

MODELS	OPTIONS	
RPS75	-SS	▶ Stainless Steel
RPS75-360	-CV	▶ Check Valve
RPS75-SH	-NN	▶ No Nozzle
RPS75-360-SH	-RCW	▶ Reclaimed Water Use
RPS75-6inch	-PR	▶ Pressure Regulation (6"only)

Examples: RPS75-SS, RPS75-360-RCW-CV

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#.75	30	29	0.7	0.16	0.19
	40	30	0.8	0.17	0.20
	50	30	0.9	0.19	0.22
	60	31	1.0	0.20	0.23
#1.0	30	30	0.9	0.19	0.22
	40	31	1.0	0.20	0.23
	50	31	1.2	0.24	0.28
	60	32	1.3	0.24	0.28
#1.5	30	32	1.2	0.23	0.26
	40	33	1.4	0.25	0.29
	50	34	1.6	0.27	0.31
	60	34	1.8	0.30	0.35
#2.0	30	34	1.6	0.27	0.31
	40	36	1.8	0.27	0.31
	50	38	2.0	0.27	0.31
	60	38	2.2	0.29	0.34
#3.0 Pre-Installed	30	36	2.0	0.30	0.34
	40	38	2.4	0.32	0.37
	50	40	2.7	0.32	0.38
	60	40	2.9	0.35	0.40
#4.0	30	36	2.6	0.39	0.45
	40	40	3.0	0.36	0.42
	50	42	3.4	0.37	0.43
	60	42	3.7	0.40	0.47
#6.0	40	38	4.2	0.56	0.65
	50	43	4.9	0.51	0.59
	60	46	5.5	0.50	0.58
	70	47	6.0	0.52	0.60
#8.0	40	45	6.0	0.57	0.66
	50	48	6.8	0.57	0.66
	60	49	7.6	0.61	0.70
	70	51	8.2	0.61	0.70

PR Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#.75	30	29	0.7	0.16	0.19
	40	30	0.8	0.17	0.20
	50	30	0.9	0.19	0.22
	60	30	0.9	0.19	0.22
#1.0	30	30	0.9	0.19	0.22
	40	31	1.0	0.20	0.23
	50	31	1.2	0.24	0.28
	60	31	1.2	0.24	0.28
#1.5	30	32	1.2	0.23	0.26
	40	33	1.4	0.25	0.29
	50	34	1.6	0.27	0.31
	60	34	1.6	0.27	0.31
#2.0	30	34	1.6	0.27	0.31
	40	36	1.8	0.27	0.31
	50	38	2.0	0.27	0.31
	60	38	2.0	0.27	0.31
#3.0 Pre-Installed	30	36	2.0	0.30	0.34
	40	38	2.4	0.32	0.37
	50	40	2.7	0.32	0.38
	60	40	2.7	0.32	0.38
#4.0	30	36	2.6	0.39	0.45
	40	40	3.0	0.36	0.42
	50	42	3.4	0.37	0.43
	60	42	3.4	0.37	0.43
#6.0	40	38	4.2	0.56	0.65
	50	43	4.9	0.51	0.59
	60	43	4.9	0.51	0.59
	70	43	4.9	0.51	0.59
#8.0	40	45	6.0	0.57	0.66
	50	48	6.8	0.57	0.66
	60	48	6.8	0.57	0.66
	70	48	6.8	0.57	0.66

Low Angle Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#1.0	30	22	1.2	0.48	0.55
	40	24	1.7	0.57	0.66
	50	26	1.8	0.51	0.59
	60	28	2.0	0.49	0.57
#3.0	30	29	3.0	0.69	0.79
	40	32	3.1	0.58	0.67
	50	35	3.5	0.55	0.64
	60	37	3.8	0.53	0.62
#4.0	30	31	3.4	0.68	0.79
	40	34	3.9	0.65	0.75
	50	37	4.4	0.62	0.71
	60	38	4.7	0.63	0.72
#6.0	40	38	6.5	0.87	1.00
	50	40	7.3	0.88	1.01
	60	42	8.0	0.87	1.01
	70	44	8.3	0.86	0.99

PR Low Angle Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#1.0	30	22	1.2	0.48	0.55
	40	24	1.7	0.57	0.66
	50	26	1.8	0.51	0.59
	60	26	1.8	0.51	0.59
#3.0	30	29	3.0	0.69	0.79
	40	32	3.1	0.58	0.67
	50	35	3.5	0.55	0.64
	60	35	3.5	0.55	0.64
#4.0	30	31	3.4	0.68	0.79
	40	34	3.9	0.65	0.75
	50	37	4.4	0.62	0.71
	60	37	4.4	0.62	0.71
#6.0	40	38	6.5	0.87	1.00
	50	40	7.3	0.88	1.01
	60	40	7.3	0.88	1.01
	70	40	7.3	0.88	1.01

WATCH VIDEO

**All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.*

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#.75	2,1	8,8	2,6	4	5
	2,8	9,1	3,0	4	5
	3,4	9,1	3,4	5	6
	4,1	9,4	3,8	5	6
#1.0	2,1	9,1	3,4	5	6
	2,8	9,4	3,8	5	6
	3,4	9,4	4,5	6	7
	4,1	9,8	4,9	6	7
#1.5	2,1	9,8	4,5	5	7
	2,8	10,1	5,3	6	7
	3,4	10,4	6,1	7	8
	4,1	10,4	6,8	8	9
#2.0	2,1	10,4	6,1	7	8
	2,8	11,0	6,8	7	8
	3,4	11,6	7,6	7	8
	4,1	11,6	8,3	7	9
#3.0 Pre-Installed	2,1	11,0	7,6	8	9
	2,8	11,6	9,1	8	9
	3,4	12,2	10,2	8	10
	4,1	12,2	11,0	9	10
#4.0	2,1	11,0	9,8	10	11
	2,8	12,2	11,4	9	11
	3,4	12,8	12,9	9	11
	4,1	12,8	14,0	10	12
#6.0	2,8	11,6	15,9	14	17
	3,4	13,1	18,5	13	15
	4,1	14,0	20,8	13	15
	4,8	14,3	22,7	13	15
#8.0	2,8	13,7	22,7	14	17
	3,4	14,6	25,7	14	17
	4,1	14,9	28,8	15	18
	4,8	15,5	31,0	15	18

PR Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#.75	2,1	8,8	2,7	4	5
	2,8	9,2	3,0	4	5
	3,5	9,2	3,4	5	6
	4,1	9,2	3,4	5	6
#1.0	2,1	9,2	3,4	5	6
	2,8	9,5	3,8	5	6
	3,5	9,5	4,5	6	7
	4,1	9,5	4,5	6	7
#1.5	2,1	9,8	4,5	6	7
	2,8	10,1	5,3	6	7
	3,5	10,4	6,1	7	8
	4,1	10,4	6,1	7	8
#2.0	2,1	10,4	6,1	7	8
	2,8	11,0	6,8	7	8
	3,5	11,6	7,6	7	8
	4,1	11,6	7,6	7	8
#3.0 Pre-Installed	2,1	11,0	7,6	8	9
	2,8	11,6	9,1	8	9
	3,5	12,2	10,2	8	10
	4,1	12,2	10,2	8	10
#4.0	2,1	11,0	9,9	10	11
	2,8	12,2	11,4	9	11
	3,5	12,8	12,9	9	11
	4,1	12,8	12,9	9	11
#6.0	2,8	11,6	15,9	14	17
	3,5	13,1	18,6	13	15
	4,1	13,1	18,6	13	15
	4,8	13,1	18,6	13	15
#8.0	2,8	13,7	22,7	14	17
	3,5	14,6	25,8	14	17
	4,1	14,6	25,8	14	17
	4,8	14,6	25,8	14	17

Low Angle Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#1.0	2,1	6,7	4,5	12	14
	2,8	7,3	6,4	14	17
	3,4	7,9	6,8	13	15
	4,1	8,5	7,6	12	14
#3.0	2,1	8,8	11,4	18	20
	2,8	9,8	11,7	15	17
	3,4	10,7	13,2	14	16
	4,1	11,3	14,4	13	16
#4.0	2,1	9,4	12,9	17	20
	2,8	10,4	14,8	17	19
	3,4	11,3	16,7	16	18
	4,1	11,6	17,8	16	18
#6.0	2,8	11,6	24,6	22	25
	3,4	12,2	27,6	22	26
	4,1	12,8	30,3	22	26
	4,8	13,4	32,6	22	25

PR Low Angle Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#1.0	2,1	6,7	4,5	12	14
	2,8	7,3	6,4	14	17
	3,5	7,9	6,8	13	15
	4,1	7,9	6,8	13	15
#3.0	2,1	8,8	11,4	18	20
	2,8	9,8	11,7	15	17
	3,5	10,7	13,3	14	16
	4,1	10,7	13,3	14	16
#4.0	2,1	9,5	12,9	17	20
	2,8	10,4	14,8	17	19
	3,5	11,3	16,7	16	18
	4,1	11,3	16,7	16	18
#6.0	2,8	11,6	24,6	22	25
	3,5	12,2	27,7	22	26
	4,1	12,2	27,7	22	26
	4,8	12,2	27,7	22	26

**All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.*

RPS™ 75i

With Patented Intelligent Flow Technology®.

Features

- Right position start
- Patented Intelligent Flow Technology® – Reduce distance and water flow simultaneously and proportionately
- Shut off flow from the head
- Patented Reversing Mechanism – Continuous reverse and return
- Wide Selection of Nozzles – Including standard and low angle for flexibility in system design
- Rugged RPS Family Construction and features
- Superior Uniformity, Conserves Water, Fewer Zones Required
- Save Time on Every Project — New or retrofit
- Includes 5 Free Check Valve Assemblies Per Box
- Universal Riser Assembly – Fits into existing Hunter® PGP® and PGP® Ultra cans
- Pressure Regulated – 45 PSI available (6" only)

Fast Facts

ALL	INLET: 3/4" (1,9 CM) FEMALE THREAD NPT	
4"	Retracted height:	7 3/8" (19,7 cm)
	Riser height:	4 1/4" (10,8 cm)
6"	Retracted height:	9 1/2" (24,1 cm)
	Riser height:	6 1/4" (15,9 cm)
Shrub	Height:	7 1/2" (19,1 cm)

Specifications

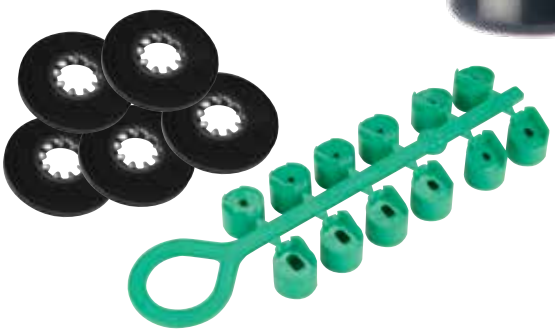
- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.9 – 9.7 GPM (3,4 – 36,7 LPM)
- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation Rate: 0.22 – 0.95 in/hr (6 – 22 mm/hr)
- Recommended Spacing: 18' – 48' (5,6 – 14,6 m)
- Radius: 18' – 48' (5,6 – 14,6 m)
- Nozzle Trajectory: 26°
- Low Angle Nozzle Trajectory: 11°
- Nozzles Included: 8 Standard, 4 Low Angle

Models

RPS 75i	RPS™ 75i Rotor
RPS75i-360	RPS™ 75i Rotor, 360°
RPS75i-SH	RPS™ 75i Rotor, Shrub
RPS75i-360-SH	RPS™ 75i Rotor, Shrub, 360°
RPS75i-6INCH	RPS™ 75i Rotor 6" (15,2 cm)

Accessories

See page 26-27



How to Specify with Options

MODELS	OPTIONS	
RPS75i	-SS	▶ Stainless Steel
RPS75i-360	-CV	▶ Check Valve
RPS75i-SH	-NN	▶ No Nozzle
RPS75i-360-SH	-RCW	▶ Reclaimed Water Use
RPS75i-6inch	-PR	▶ Pressure Regulation (6"only)

Examples: RPS75i-NN, RPS75-360-RCW

Intelligent Flow Technology®

- Reduces distance and flow rate simultaneously and proportionately
- Provides full on/off control

WATCH VIDEO

Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲	FEET	GPM	■	▲
#1.0	30	31	1.1	0.22	0.25	22	0.8	0.31	0.36
	40	32	1.4	0.26	0.30	22	1.0	0.38	0.43
	50	33	1.6	0.28	0.33	23	1.1	0.40	0.47
	60	34	1.8	0.30	0.35	24	1.3	0.43	0.49
#1.5	30	33	1.5	0.27	0.31	23	1.1	0.38	0.44
	40	35	1.8	0.28	0.33	25	1.3	0.40	0.47
	50	35	2.0	0.31	0.36	25	1.4	0.45	0.52
	60	36	2.2	0.33	0.38	25	1.5	0.47	0.54
#2.0	30	33	1.8	0.32	0.37	23	1.3	0.45	0.53
	40	34	2.1	0.35	0.40	24	1.5	0.50	0.58
	50	36	2.4	0.36	0.41	25	1.7	0.51	0.59
	60	38	2.7	0.36	0.42	27	1.9	0.51	0.59
#2.5 Pre-Installed	30	35	2.2	0.35	0.40	25	1.5	0.49	0.57
	40	38	2.6	0.35	0.40	27	1.8	0.50	0.57
	50	39	3.0	0.38	0.44	27	2.1	0.54	0.63
	60	40	3.3	0.40	0.46	28	2.3	0.57	0.66
#3.0	30	38	2.7	0.36	0.42	27	1.9	0.51	0.59
	40	40	3.1	0.37	0.43	28	2.2	0.53	0.62
	50	41	3.5	0.40	0.46	29	2.5	0.57	0.66
	60	41	3.9	0.45	0.52	29	2.7	0.64	0.74
#4.0	30	38	3.5	0.47	0.54	27	2.5	0.67	0.77
	40	40	4.0	0.48	0.56	28	2.8	0.69	0.79
	50	43	4.4	0.46	0.53	30	3.1	0.65	0.76
	60	43	4.9	0.51	0.59	30	3.4	0.73	0.84
#5.0	30	43	4.4	0.46	0.53	30	3.1	0.65	0.76
	40	43	5.0	0.52	0.60	30	3.5	0.74	0.86
	50	44	5.5	0.55	0.63	31	3.9	0.78	0.90
	60	42	5.9	0.64	0.74	29	4.1	0.92	1.06
#6.0	30	40	5.0	0.60	0.70	28	3.5	0.86	0.99
	40	43	5.9	0.61	0.71	30	4.1	0.88	1.01
	50	43	6.6	0.69	0.79	30	4.6	0.98	1.13
	60	44	7.3	0.73	0.84	31	5.1	1.04	1.20
#8.0	30	43	6.8	0.71	0.82	30	4.8	1.01	1.17
	40	47	7.9	0.69	0.80	33	5.5	0.98	1.14
	50	48	8.8	0.74	0.85	34	6.2	1.05	1.21
	60	47	9.7	0.85	0.98	33	6.8	1.21	1.40

Low Angle Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲	FEET	GPM	■	▲
#1.0	30	26	0.9	0.25	0.29	18	0.6	0.35	0.41
	40	27	1	0.26	0.31	19	0.7	0.38	0.44
	50	27	1.2	0.32	0.37	19	0.8	0.45	0.52
	60	26	1.4	0.4	0.46	18	1	0.57	0.66
#1.5	30	28	1.3	0.32	0.37	20	0.9	0.46	0.53
	40	29	1.5	0.34	0.4	20	1.1	0.49	0.57
	50	30	1.7	0.36	0.42	21	1.2	0.52	0.6
	60	31	1.9	0.38	0.44	22	1.3	0.54	0.63
#2.0	30	29	1.9	0.44	0.5	20	1.3	0.62	0.72
	40	32	2.2	0.41	0.48	22	1.5	0.59	0.68
	50	33	2.5	0.44	0.51	23	1.8	0.63	0.73
	60	34	2.8	0.47	0.54	24	2	0.67	0.77
#3.0	30	32	2.5	0.47	0.54	22	1.8	0.67	0.78
	40	34	3	0.5	0.58	24	2.1	0.71	0.82
	50	35	3.5	0.55	0.64	25	2.5	0.79	0.91
	60	36	4	0.59	0.69	25	2.8	0.85	0.98

**All precipitation rates calculated for 180° operation.*
For the precipitation rate for a 360° sprinkler, divide by 2.

RPS™ 75i

PR Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲	FEET	GPM	■	▲
#1.0	30	31	1.1	0.22	0.25	22	0.8	0.31	0.36
	40	32	1.4	0.26	0.30	22	1.0	0.37	0.43
	50	33	1.6	0.28	0.33	23	1.1	0.40	0.47
	60	33	1.6	0.28	0.33	23	1.1	0.40	0.47
#1.5	30	33	1.5	0.27	0.31	23	1.1	0.39	0.44
	40	35	1.8	0.28	0.33	25	1.3	0.40	0.47
	50	35	2.0	0.31	0.36	25	1.4	0.44	0.51
	60	35	2.0	0.31	0.36	25	1.4	0.44	0.51
#2.0	30	33	1.8	0.32	0.37	23	1.3	0.46	0.53
	40	34	2.1	0.35	0.40	24	1.5	0.50	0.57
	50	36	2.4	0.36	0.41	25	1.7	0.51	0.59
	60	36	2.4	0.36	0.41	25	1.7	0.51	0.59
#2.5 Pre-Installed	30	35	2.2	0.35	0.40	25	1.5	0.50	0.57
	40	38	2.6	0.35	0.40	27	1.8	0.50	0.57
	50	39	3.0	0.38	0.44	27	2.1	0.54	0.63
	60	39	3.0	0.38	0.46	27	2.1	0.54	0.66
#3.0	30	38	2.7	0.36	0.42	27	1.9	0.51	0.60
	40	40	3.1	0.37	0.43	28	2.2	0.53	0.61
	50	41	3.5	0.40	0.46	29	2.5	0.57	0.66
	60	41	3.5	0.40	0.46	29	2.5	0.57	0.66
#4.0	30	38	3.5	0.47	0.54	27	2.5	0.67	0.77
	40	40	4.0	0.48	0.56	28	2.8	0.69	0.80
	50	43	4.4	0.46	0.53	30	3.1	0.66	0.76
	60	43	4.4	0.46	0.53	30	3.1	0.66	0.76
#5.0	30	43	4.4	0.46	0.53	30	3.1	0.66	0.76
	40	43	5.0	0.52	0.60	30	3.5	0.74	0.86
	50	44	5.5	0.55	0.63	31	3.9	0.79	0.90
	60	44	5.5	0.55	0.63	31	3.9	0.79	0.90
#6.0	30	40	5.0	0.60	0.70	28	3.5	0.86	1.00
	40	43	5.9	0.61	0.71	30	4.1	0.87	1.01
	50	43	6.6	0.69	0.79	30	4.6	0.99	1.13
	60	43	6.6	0.69	0.79	30	4.6	0.99	1.13
#8.0	30	43	6.8	0.71	0.82	30	4.8	1.01	1.17
	40	47	7.9	0.69	0.80	33	5.5	0.99	1.14
	50	48	8.8	0.74	0.85	34	6.2	1.06	1.21
	60	48	8.8	0.74	0.85	34	6.2	1.06	1.21

PR Low Angle Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲	FEET	GPM	■	▲
#1.0	30	26	0.9	0.25	0.29	18	0.6	0.36	0.41
	40	27	1.0	0.26	0.31	19	0.7	0.37	0.44
	50	27	1.2	0.32	0.37	19	0.8	0.46	0.53
	60	27	1.2	0.32	0.37	19	0.8	0.46	0.53
#1.5	30	28	1.3	0.32	0.37	20	0.9	0.46	0.53
	40	29	1.5	0.34	0.4	20	1.1	0.49	0.57
	50	30	1.7	0.36	0.42	21	1.2	0.51	0.6
	60	30	1.7	0.36	0.42	21	1.2	0.51	0.6
#2.0	30	29	1.9	0.44	0.5	20	1.3	0.63	0.71
	40	32	2.2	0.41	0.48	22	1.5	0.59	0.69
	50	33	2.5	0.44	0.51	23	1.8	0.63	0.73
	60	33	2.5	0.44	0.51	23	1.8	0.63	0.73
#3.0	30	32	2.5	0.47	0.54	22	1.8	0.67	0.77
	40	34	3.0	0.50	0.58	24	2.1	0.71	0.83
	50	35	3.5	0.55	0.64	25	2.5	0.79	0.91
	60	35	3.5	0.55	0.64	25	2.5	0.79	0.91

Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲	METER	L/M	■	▲
#1.0	2,1	9,4	4,2	6	6	7	3,0	8	9
	2,8	9,8	5,3	7	8	7	3,8	10	11
	3,4	10,1	6,1	7	8	7	4,1	10	12
	4,1	10,4	6,8	8	9	7	4,9	11	12
#1.5	2,1	10,1	5,7	7	8	7	4,1	10	11
	2,8	10,7	6,8	7	8	8	4,9	10	12
	3,4	10,7	7,6	8	9	8	5,3	11	13
	4,1	11,0	8,3	8	10	8	5,7	12	14
#2.0	2,1	10,1	6,8	8	9	7	4,9	11	13
	2,8	10,4	7,9	9	10	7	5,7	13	15
	3,4	11,0	9,1	9	10	8	6,4	13	15
	4,1	11,6	10,2	9	11	8	7,2	13	15
#2.5 Pre-Installed	2,1	10,7	8,3	9	10	8	5,7	12	14
	2,8	11,6	9,8	9	10	8	6,8	13	14
	3,4	11,9	3,6	10	11	8	7,9	14	16
	4,1	12,2	3,7	10	12	9	8,7	14	17
#3.0	2,1	11,6	10,2	9	11	8	7,1	13	15
	2,8	12,2	11,7	9	11	9	8,3	13	16
	3,4	12,5	13,3	10	12	9	9,5	14	17
	4,1	12,5	14,8	11	13	9	10,2	16	19
#4.0	2,1	11,6	13,3	12	14	8	9,5	17	20
	2,8	12,2	15,1	12	14	9	10,6	18	20
	3,4	13,1	16,7	12	13	9	11,7	17	19
	4,1	13,1	18,6	13	15	9	12,9	19	21
#5.0	2,1	13,1	6,7	12	13	9	11,7	17	19
	2,8	13,1	18,9	13	15	9	13,3	19	22
	3,4	13,4	20,8	14	16	9	14,8	20	23
	4,1	12,8	22,3	16	19	9	15,5	23	27
#6.0	2,1	12,2	18,9	15	18	9	13,3	22	25
	2,8	13,1	22,3	15	18	9	15,5	22	26
	3,4	13,1	25,0	18	20	9	17,4	25	29
	4,1	13,4	27,6	19	21	9	19,3	26	30
#8.0	2,1	13,1	25,7	18	21	9	18,2	26	30
	2,8	14,3	29,9	18	20	10	20,8	25	29
	3,4	14,6	33,3	19	22	10	23,5	27	31
	4,1	14,3	36,7	22	25	10	25,7	31	35

PR Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲	METER	L/M	■	▲
#1.0	2,1	9,5	4,2	6	6	6,6	2,9	8	9
	2,8	9,8	5,3	7	8	6,8	3,7	9	11
	3,5	10,1	6,1	7	8	7,0	4,2	10	12
	4,1	10,1	6,1	7	8	7,0	4,2	10	12
#1.5	2,1	10,1	5,7	7	8	7,0	4,0	10	11
	2,8	10,7	6,8	7	8	7,5	4,8	10	12
	3,5	10,7	7,6	8	9	7,5	5,3	11	13
	4,1	10,7	7,6	8	9	7,5	5,3	11	13
#2.0	2,1	10,1	6,8	8	9	7,0	4,8	12	13
	2,8	10,4	8,0	9	10	7,3	5,6	13	15
	3,5	11,0	9,1	9	10	7,7	6,4	13	15
	4,1	11,0	9,1	9	10	7,7	6,4	13	15
#2.5 Pre-Installed	2,1	10,7	8,3	9	10	7,5	5,8	13	15
	2,8	11,6	9,9	9	10	8,1	6,9	13	15
	3,5	11,9	11,4	10	11	8,3	8,0	14	16
	4,1	11,9	11,4	10	12	8,3	8,0	14	17
#3.0	2,1	11,6	10,2	9	11	8,1	7,2	13	15
	2,8	12,2	11,7	9	11	8,5	8,2	13	16
	3,5	12,5	13,3	10	12	8,8	9,3	15	17
	4,1	12,5	13,3	10	12	8,8	9,3	15	17
#4.0	2,1	11,6	13,3	12	14	8,1	9,3	17	20
	2,8	12,2	15,2	12	14	8,5	10,6	17	20
	3,5	13,1	16,7	12	13	9,2	11,7	17	19
	4,1	13,1	16,7	12	13	9,2	11,7	17	19
#5.0	2,1	13,1	16,7	12	13	9,2	11,7	17	19
	2,8	13,1	19,0	13	15	9,2	13,3	19	22
	3,5	13,4	20,8	14	16	9,4	14,6	20	23
	4,1	13,4	20,8	14	16	9,4	14,6	20	23
#6.0	2,1	12,2	19,0	15	18	8,5	13,3	22	25
	2,8	13,1	22,4	15	18	9,2	15,7	22	26
	3,5	13,1	25,0	18	20	9,2	17,5	25	29
	4,1	13,1	25,0	18	20	9,2	17,5	25	29
#8.0	2,1	13,1	25,8	18	21	9,2	18,0	26	30
	2,8	14,3	29,9	18	20	10,0	21,0	25	29
	3,5	14,6	33,4	19	22	10,2	23,3	27	31
	4,1	14,6	33,4	19	22	10,2	23,3	27	31

Low Angle Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲	METER	L/M	■	▲
#1.0	2,1	7,9	3,4	6	7	5	2,3	9	10
	2,8	8,2	3,8	7	8	6	2,7	10	11
	3,4	8,2	4,5	8	9	6	3,0	11	13
	4,1	7,9	5,3	10	12	5	3,8	14	17
#1.5	2,1	8,5	4,9	8	9	6	3,4	12	13
	2,8	8,8	5,7	9	10	6	4,2	12	14
	3,4	9,1	6,4	9	11	6	4,5	13	15
	4,1	9,4	7,2	10	11	7	4,9	14	16
#2.0	2,1	8,8	7,2	11	13	6	4,9	16	18
	2,8	9,8	8,3	10	12	7	5,7	15	17
	3,4	10,1	9,5	11	13	7	6,8	16	19
	4,1	10,4	10,6	12	14	7	7,6	17	20
#3.0	2,1	9,8	9,5	13	14	7	6,8	17	20
	2,8	10,4	11,4	14	15	7	7,9	18	21
	3,4	10,7	13,3	14	16	8	9,5	20	23
	4,1	11,0	15,1	15	18	8	10,6	22	25

PR Low Angle Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲	METER	L/M	■	▲
#1.0	2,1	7,9	3,4	6	7	5,6	2,4	9	11
	2,8	8,2	3,8	7	8	5,8	2,7	9	11
	3,5	8,2	4,5	8	9	5,8	3,2	12	13
	4,1	8,2	4,5	8	9	5,8	3,2	12	13
#1.5	2,1	8,5	4,9	8	9	6,0	3,4	12	13
	2,8	8,8	5,7	9	10	6,2	4,0	12	15
	3,5	9,2	6,4	9	11	6,4	4,5	13	15
	4,1	9,2	6,4	9	11	6,4	4,5	13	15
#2.0	2,1	8,8	7,2	11	13	6,2	5,0	16	18
	2,8	9,8	8,3	10	12	6,8	5,8	15	17
	3,5	10,1	9,5	11	13	7,0	6,6	16	19
	4,1	10,1	9,5	11	13	7,0	6,6	16	19
#3.0	2,1	9,8	9,5	12	14	6,8	6,6	17	20
	2,8	10,4	11,4	13	15	7,3	8,0	18	21
	3,5	10,7	13,3	14	16	7,5	9,3	20	23
	4,1	10,7	13,3	14	16	7,5	9,3	20	23

**All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.*

RPS™ Select

Four built-in selectable nozzles for the fastest nozzle change of any rotor.

Features

- All adjustments made from the top – wet or dry – including flow shutoff. No special tools needed.
- Four Built-in Selectable Nozzles – Nozzles #1 through #4 match arc settings 90° through 360°
- Matched Precipitation Rates – When nozzle setting matched to arc
- Precision-Engineered Nozzles – Ensures water-saving efficiency
- Standard Rubber Cover
- Proven Water-lubricated Gear-drive Design – Common to the popular RPS™ 75 Series
- Universal Riser Assembly – Fits into existing Hunter® PGP® and PGP® Ultra cans

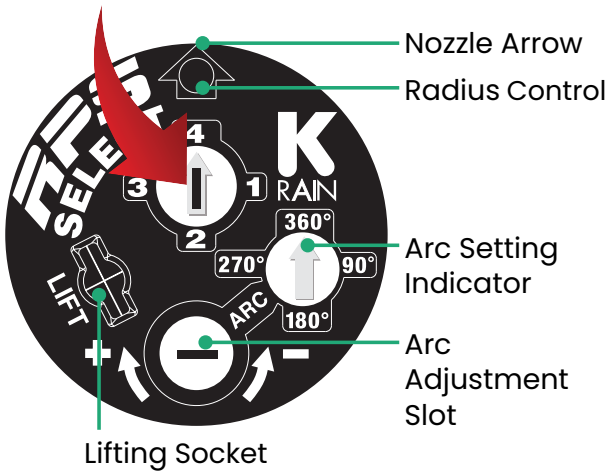
Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 1.3 – 6.8 GPM (4,9 – 25,8 LPM)
- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation Rate: 0.21 – 0.69 in/hr (5 – 18 mm/hr) (depending on spacing and nozzle used)
- Recommended Spacing: 33' – 46' (10 – 14 m)
- Radius: 33' – 46' (10 – 14 m)
- Nozzle Trajectory: 24°

Models

60003	RPS™ Select Rotor
60003-SH	RPS™ Select Rotor, Shrub
60003-6INCH	RPS™ Select Rotor 6" (15,2 cm)

Nozzle Selector



Fast Facts

ALL	INLET: 3/4" (1,9 CM) FEMALE THREAD NPT	
4"	Retracted height:	7 3/8" (19,7 cm)
	Riser height:	4 3/8" (11,1 cm)
6"	Retracted height:	9 1/2" (24,1 cm)
	Riser height:	6 3/8" (16,2 cm)
Shrub	Height:	7 5/8" (16,8 cm)

WATCH VIDEO

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#1.0	30	33'	1.3	0.23	0.24
	35	34'	1.4	0.23	0.27
	40	37'	1.5	0.21	0.29
	45	37'	1.6	0.22	0.26
	50	37'	1.8	0.25	0.29
#2.0	30	37'	2.6	0.37	0.42
	35	38'	2.8	0.37	0.43
	40	39'	3.0	0.38	0.44
	45	40'	3.2	0.39	0.44
	50	40'	3.6	0.43	0.50
#3.0	30	37'	3.8	0.53	0.62
	35	40'	4.1	0.49	0.57
	40	41'	4.5	0.52	0.60
	45	41'	4.7	0.54	0.62
	50	43'	4.9	0.51	0.59
#4.0	30	38'	5.2	0.69	0.80
	35	40'	5.7	0.69	0.79
	40	44'	6.0	0.60	0.69
	45	45'	6.4	0.61	0.70
	50	46'	6.8	0.62	0.71

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
#1.0	2,1	10,1	4,9	6	6
	2,4	10,4	5,3	6	7
	2,8	10,4	5,7	5	7
	3,1	11,3	6,1	6	7
	3,4	11,3	6,8	6	7
#2.0	2,1	11,3	9,8	9	11
	2,4	11,6	10,6	9	11
	2,8	11,9	11,4	10	11
	3,1	12,2	12,1	10	11
	3,4	12,2	13,6	11	13
#3.0	2,1	11,3	14,4	13	16
	2,4	12,2	15,5	12	14
	2,8	12,2	17,0	13	15
	3,1	12,5	17,8	14	16
	3,4	13,1	18,5	13	15
#4.0	2,1	11,6	19,6	18	20
	2,4	12,2	21,5	18	20
	2,8	13,4	22,7	15	18
	3,1	13,7	24,2	15	18
	3,4	14,0	25,7	16	18

**All precipitation rates calculated for 180° operation.*
For the precipitation rate for a 360° sprinkler, divide by 2.

How to Specify with Options

MODELS	OPTIONS	
60003	-CV	▶ Check Valve
60003-SH	-RCW	▶ Reclaimed Water Use
60003-6INCH		

Examples: 60003-6INCH-CV, 60003-RCW

Accessories

See page 26-27

ProPlus®

Tough, proven and advanced.

Features

- Patented Top Arc Set – Allows for wet or dry adjustment in seconds
- Full arc range adjustment from 40° to continuous 360°
- Patented Arc Set Degree Markings – Clearly indicates current watering pattern & simplifies arc set adjustment
- Arc Memory Clutch – Prevents internal gear damage and returns rotor to its prior setting automatically if nozzle turret is forced past its stop
- Patented Reversing Mechanism – Ensures continuous reverse and return
- Ratcheting Riser – Allows for easy adjustment of the fixed starting position with a simple turn of the riser
- Rubber Cover – Seals out dirt, increases product durability
- Wide Selection of Nozzles – Including standard and low angle, provides flexibility in system design
- Replaces all standard 3/4" rotors
- Optional Check Valve – Prevents low head drainage

Specifications

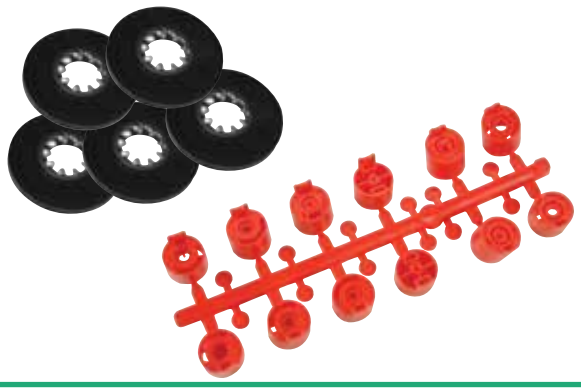
- Arc Adjustment Range: 40° to Continuous 360°
- Flow Range: 0.5 – 10.0 GPM (1,9 – 37,8 LPM)
- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation Rate: 0.12 – 0.88 in/hr (3 – 22 mm/hr) (depending on spacing and nozzle used)
- Recommended Spacing: 22' – 50' (6,7 – 15,2 m)
- Radius: 22' – 50' (6,7 – 15,2 m)
- Nozzle Trajectory: 26°
- Low Angle Nozzle Trajectory: 12°
- Standard and Low Angle Nozzles Included

Model

11003 ProPlus®

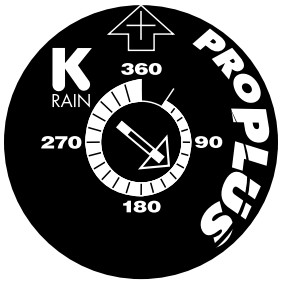
Accessories

See page 26-27



Fast Facts

ALL	INLET: 3/4" (1,9 CM) FEMALE THREAD NPT	
4"	Retracted height:	7 1/2" (19 cm)
	Riser height:	4 1/4" (10,8 cm)



Easy Arc Setting

Arc Selection: 40° to continuous 360°
Adjust from left start

How to Specify with Options

MODELS	OPTIONS	
11003	-CV	▶ Check Valve
	-LA	▶ Low angle Nozzle
	-NN	▶ No Nozzle
	-RCW	▶ Reclaimed Water

Examples: 11003-RCW-CV

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	NO ADJUSTMENT PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#1.0	30	28	0.5	0.12	0.14
	40	29	0.6	0.14	0.16
	50	29	0.7	0.16	0.19
	60	30	0.8	0.17	0.20
#1.5	30	29	0.7	0.16	0.19
	40	30	0.8	0.17	0.20
	50	31	0.9	0.18	0.21
	60	32	1.0	0.19	0.22
#2.0	30	32	1.3	0.24	0.28
	40	33	1.5	0.27	0.31
	50	34	1.6	0.27	0.31
	60	35	1.8	0.28	0.33
#2.5 Pre-Installed	30	37	2.4	0.34	0.39
	40	40	2.5	0.30	0.35
	50	42	3.0	0.33	0.38
	60	43	3.3	0.34	0.36
#3.0	30	38	2.5	0.33	0.38
	40	39	2.8	0.35	0.41
	50	40	3.2	0.39	0.44
	60	41	3.5	0.40	0.46
#4.0	30	38	3.6	0.48	0.55
	40	39	4.2	0.53	0.61
	50	41	4.6	0.53	0.61
	60	42	5.0	0.55	0.63
#5.0	30	43	4.4	0.46	0.53
	40	44	5.1	0.51	0.59
	50	46	5.6	0.51	0.59
	60	49	5.9	0.47	0.55
#6.0	40	45	5.9	0.56	0.65
	50	46	6.0	0.55	0.63
	60	48	6.3	0.53	0.61
	70	49	6.7	0.54	0.62
#8.0	40	42	8	0.87	1.01
	50	45	8.5	0.81	0.93
	60	49	9.5	0.76	0.88
	70	50	10	0.77	0.89

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	NO ADJUSTMENT PRECIP mm/hr	
	BAR	METER	L/M	■	▲
#1.0	2,1	8,5	1,9	3	4
	2,8	8,8	2,3	4	4
	3,4	8,8	2,7	4	5
	4,1	9,1	3,0	5	5
#1.5	2,1	8,8	2,7	4	5
	2,8	9,1	3,0	4	5
	3,4	9,4	3,4	5	5
	4,1	9,8	3,8	5	6
#2.0	2,1	9,8	4,9	6	7
	2,8	10,1	5,7	7	8
	3,4	10,4	6,1	7	8
	4,1	10,7	6,8	7	8
#2.5 Pre-Installed	2,1	11,3	9,1	9	10
	2,8	12,2	9,5	8	9
	3,4	12,8	11,4	8	10
	4,1	13,1	11,4	8	9
#3.0	2,1	11,6	9,5	8	10
	2,8	11,9	10,6	9	10
	3,4	12,2	12,1	10	11
	4,1	12,5	13,3	10	12
#4.0	2,1	11,6	13,6	12	14
	2,8	11,9	15,9	13	15
	3,4	12,5	17,4	13	15
	4,1	12,8	19,0	14	16
#5.0	2,1	13,1	16,7	12	13
	2,8	13,4	19,3	13	15
	3,4	14,0	21,2	13	15
	4,1	14,9	22,4	12	14
#6.0	2,8	13,7	22,4	14	17
	3,4	14,0	22,7	14	16
	4,1	14,6	23,9	13	15
	4,8	14,9	25,4	14	16
#8.0	2,8	12,8	30,3	22	26
	3,4	13,7	32,2	21	24
	4,1	14,9	36,0	19	22
	4,8	15,2	37,9	20	23

Low Angle Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	NO ADJUSTMENT PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#1.0	30	22	1.2	0.48	0.55
	40	24	1.7	0.57	0.66
	50	26	1.8	0.51	0.59
	60	28	2.0	0.49	0.57
#3.0	30	29	3.0	0.69	0.79
	40	32	3.1	0.58	0.67
	50	35	3.5	0.55	0.64
	60	37	3.8	0.53	0.62
#4.0	30	31	3.4	0.68	0.79
	40	34	3.9	0.65	0.75
	50	37	4.4	0.62	0.71
	60	38	4.7	0.63	0.72
#6.0	40	38	6.5	0.87	1.00
	50	40	7.3	0.88	1.01
	60	42	8.0	0.87	1.01
	70	44	8.3	0.86	0.99

Low Angle Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	NO ADJUSTMENT PRECIP mm/hr	
	PSI	FEET	GPM	■	▲
#1.0	2,1	6,7	4,5	12	14
	2,8	7,3	6,4	14	17
	3,4	7,9	6,8	13	15
	4,1	8,5	7,6	12	14
#3.0	2,1	8,8	11,4	18	20
	2,8	9,8	11,7	15	17
	3,4	10,7	13,2	14	16
	4,1	11,3	14,4	14	16
#4.0	2,1	9,4	12,9	17	20
	2,8	10,4	14,8	17	19
	3,4	11,3	16,7	16	18
	4,1	11,6	17,8	16	18
#6.0	2,8	11,6	24,6	22	25
	3,4	12,2	27,7	22	26
	4,1	12,8	30,3	22	26
	4,8	13,4	32,6	22	25

**All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.*

SuperPro®

All the best features in one rotor including Intelligent Flow Technology®.

Features

- Patented Intelligent Flow Technology® – Reduce distance and water flow simultaneously and proportionately
- Patented easy arc set – Simplified setting wet or dry. Water flow can be turned off or adjusted in the popped-up position.
- Adjustable or continuous rotation – Provides a full range of adjustment from 40° to continuous 360°
- Patented arc set degree markings – Clearly indicates current watering pattern, simplifies arc set adjustment
- Arc memory clutch – Prevents internal gear damage and returns rotor to its prior setting automatically if nozzle turret is forced out of adjustment
- Patented reversing mechanism – Ensures continuous reverse and return
- Ratcheting riser – Allows for easy adjustment of your left starting position with a simple turn of the riser
- Rubber cover – Seals out dirt and increases durability
- Optional check valve – Prevents low head drainage
- Rugged stainless steel spring – 302 stainless steel spring extends the life of the rotor

Specifications

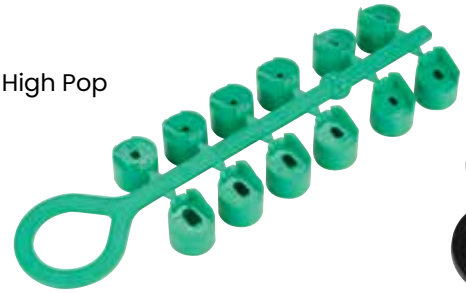
- Arc adjustment range: 40° to continuous 360°
- Flow range: 0.8 – 11.1 GPM (3,0 – 42,0 LPM)
- Pressure rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Precipitation rate: 0.21 – 1.05 in/hr (5 – 27 mm/hr) (depending on spacing and nozzle used)
- Recommended spacing: 26' – 46' (7,9 – 14,0 m)
- Radius: 26' – 46' (7,9 – 14,0 m)
- Nozzle trajectory: 26°
- Low angle nozzle trajectory: 11°
- Standard and low angle nozzles included

Fast Facts

ALL	INLET: 3/4" (1,9 CM) FEMALE THREAD NPT	
Standard	Retracted height:	7 1/2" (19,0 cm)
	Riser height:	4 3/4" (12,1 cm)
High pop	Retracted height:	17 (43,2 cm)
	Riser height:	11 1/2" (29,2 cm)
Shrub	Height:	7 3/4" (19,7 cm)

Models

10003 SuperPro
10003-HP SuperPro High Pop



Accessories

See page 26-27

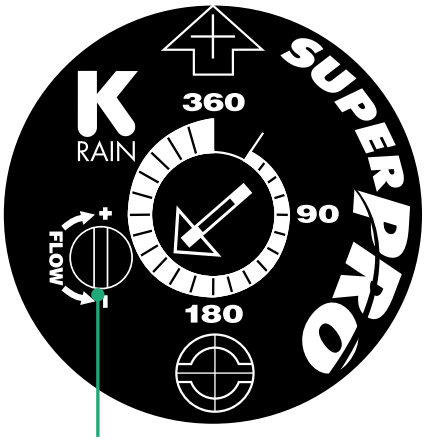
Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr ■	PRECIP in/hr ▲	-30% ADJUSTMENT RADIUS	FLOW	PRECIP in/hr ■	PRECIP in/hr ▲
	PSI	FEET	GPM			FEET	GPM		
#1.0	30	30	1.2	0.21	0.25	21	0.8	0.30	0.36
	40	31	1.3	0.23	0.27	22	0.9	0.33	0.39
	50	31	1.5	0.27	0.31	22	1.1	0.39	0.44
	60	32	1.8	0.32	0.37	22	1.3	0.46	0.53
#1.5	30	36	1.5	0.22	0.26	25	1.1	0.31	0.37
	40	37	1.8	0.25	0.29	26	1.3	0.36	0.41
	50	37	2.0	0.28	0.32	26	1.4	0.40	0.46
	60	38	2.2	0.29	0.34	27	1.5	0.41	0.49
#2.0	30	35	1.8	0.28	0.33	25	1.3	0.40	0.47
	40	35	2.2	0.35	0.4	25	1.5	0.50	0.57
	50	36	2.6	0.39	0.45	25	1.8	0.56	0.64
	60	38	2.9	0.39	0.45	27	2.0	0.56	0.64
#2.5 Pre-Installed	30	37	2.5	0.35	0.41	26	1.8	0.50	0.59
	40	38	3.0	0.40	0.46	27	2.1	0.57	0.66
	50	40	3.4	0.41	0.47	28	2.4	0.59	0.67
	60	40	3.8	0.46	0.53	28	2.7	0.66	0.76
#3.0	30	36	3.0	0.45	0.51	25	2.1	0.64	0.73
	40	37	3.4	0.48	0.55	26	2.4	0.69	0.79
	50	38	4.0	0.53	0.62	27	2.8	0.76	0.89
	60	41	4.4	0.50	0.58	29	3.1	0.71	0.83
#4.0	30	37	4.0	0.56	0.65	26	2.8	0.80	0.93
	40	39	4.5	0.57	0.66	27	3.2	0.81	0.94
	50	39	5.2	0.66	0.76	27	3.6	0.94	1.09
	60	40	5.6	0.67	0.78	28	3.9	0.96	1.11
#5.0	30	37	4.8	0.68	0.78	26	3.4	0.97	1.11
	40	38	5.6	0.75	0.86	27	3.9	1.07	1.23
	50	41	6.5	0.74	0.86	29	4.6	1.06	1.23
	60	43	7.2	0.75	0.87	30	5.0	1.07	1.24
#6.0	30	40	6.0	0.72	0.83	28	4.2	1.03	1.19
	40	41	6.8	0.78	0.9	29	4.8	1.11	1.29
	50	42	7.5	0.82	0.95	29	5.3	1.17	1.36
	60	44	8.4	0.84	0.96	31	5.9	1.20	1.37
#8.0	30	38	7.9	1.05	1.22	27	5.5	1.50	1.74
	40	44	9.2	0.92	1.06	31	6.4	1.31	1.51
	50	45	10.4	0.99	1.14	32	7.3	1.41	1.63
	60	46	11.1	1.01	1.17	32	7.8	1.44	1.67

Low Angle Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr ■	PRECIP in/hr ▲	-30% ADJUSTMENT RADIUS	FLOW	PRECIP in/hr ■	PRECIP in/hr ▲
	PSI	FEET	GPM			FEET	GPM		
#1.0	30	26	1.1	0.31	0.36	18	0.8	0.44	0.51
	40	30	1.3	0.28	0.32	21	0.9	0.40	0.46
	50	30	1.4	0.30	0.35	21	1.0	0.43	0.50
	60	30	1.6	0.34	0.40	21	1.1	0.49	0.57
#1.5	30	27	1.4	0.37	0.43	19	1.0	0.53	0.61
	40	28	1.7	0.42	0.48	20	1.2	0.60	0.69
	50	31	1.9	0.38	0.44	22	1.3	0.54	0.63
	60	30	2.1	0.45	0.52	21	1.5	0.64	0.74
#2.0	30	30	2.1	0.45	0.52	21	1.5	0.64	0.74
	40	31	2.4	0.48	0.56	22	1.7	0.69	0.80
	50	33	2.8	0.50	0.57	23	2.0	0.71	0.81
	60	31	3.1	0.62	0.72	22	2.2	0.89	1.03
#3	30	32	3.0	0.56	0.65	22	2.1	0.80	0.93
	40	34	3.5	0.58	0.67	24	2.5	0.83	0.96
	50	35	3.9	0.61	0.71	25	2.7	0.87	1.01
	60	35	4.3	0.68	0.78	25	3.0	0.97	1.11

**All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide*



Intelligent Flow Technology®

- Reduces distance and flow rate simultaneously and proportionately
- Provides full on/off control

How to Specify with Options

MODELS	OPTIONS	
10003	-CV	▶ Check Valve
10003-HP	-NN	▶ No Nozzle
10003-SH	-RCW	▶ Reclaimed Water Use
	-OS	▶ On-site Wastewater

Examples: 10003-RCW-CV

WATCH VIDEO

SuperPro®

Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲	METER	L/M	■	▲
#1.0	2,1	10,1	4,5	5	6	6,4	3,2	8	9
	2,8	10,1	4,9	6	7	6,6	3,4	8	10
	3,4	10,1	5,7	7	8	6,6	4,0	10	11
	4,1	10,1	6,8	8	9	6,8	4,8	12	13
#1.5	2,1	11,0	5,7	6	7	7,7	4,0	8	9
	2,8	11,3	6,8	6	7	7,9	4,8	9	11
	3,4	11,3	7,6	7	8	7,9	5,3	10	12
	4,1	11,6	8,3	7	9	8,1	5,8	11	12
#2.0	2,1	10,7	6,8	7	8	7,5	4,8	10	12
	2,8	10,7	8,3	9	10	7,5	5,8	13	15
	3,4	11,0	9,8	10	11	7,7	6,9	14	16
	4,1	11,6	11,0	10	11	8,1	7,7	14	16
#2.5 Pre-Installed	2,1	11,3	9,5	9	10	7,9	6,6	13	15
	2,8	11,6	11,4	10	12	8,1	8,0	15	17
	3,4	12,2	12,9	10	12	8,5	9,0	15	17
	4,1	12,2	14,4	12	13	8,5	10,1	17	19
#3.0	2,1	11,0	11,4	11	13	7,7	8,0	16	19
	2,8	11,3	12,9	12	14	7,9	9,0	17	20
	3,4	11,6	15,1	13	16	8,1	10,6	19	22
	4,1	12,5	16,7	13	15	8,8	11,7	18	21
#4.0	2,1	11,3	15,1	14	17	7,9	10,6	20	24
	2,8	11,9	17,0	14	17	8,3	11,9	21	24
	3,4	11,9	19,7	17	19	8,3	13,8	24	28
	4,1	12,2	21,2	17	20	8,5	14,9	24	28
#5.0	2,1	11,3	18,2	17	20	7,9	12,7	25	28
	2,8	11,6	21,2	19	22	8,1	14,9	27	31
	3,4	12,5	24,6	19	22	8,8	17,2	27	31
	4,1	13,1	27,3	19	22	9,2	19,1	27	32
#6.0	2,1	12,2	22,7	18	21	8,5	15,9	26	30
	2,8	12,5	25,7	20	23	8,8	18,0	28	33
	3,4	12,8	28,4	21	24	9,0	19,9	30	34
	4,1	13,4	31,8	21	24	9,4	22,3	30	35
#8.0	2,1	11,6	29,9	27	31	8,1	21,0	38	44
	2,8	13,4	34,8	23	27	9,4	24,4	33	38
	3,4	13,7	39,4	25	29	9,6	27,6	36	41
	4,1	14,0	42,0	26	30	9,8	29,4	37	42

PR Low Angle Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr		-30% ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲	METER	L/M	■	▲
#1.0	2,1	7,9	4,2	8	9	5,6	2,9	11	13
	2,8	9,1	4,9	7	8	6,4	3,4	10	12
	3,4	9,1	5,3	8	9	6,4	3,7	11	13
	4,1	9,1	6,1	9	10	6,4	4,2	12	15
#1.5	2,1	8,2	5,3	9	11	5,8	3,7	13	16
	2,8	8,5	6,4	11	12	6,0	4,5	15	17
	3,4	9,4	7,2	10	11	6,6	5,0	14	16
	4,1	9,1	7,9	11	13	6,4	5,6	16	19
#2.0	2,1	9,1	7,9	11	13	6,4	5,6	16	19
	2,8	9,4	9,1	12	14	6,6	6,4	17	20
	3,4	10,1	10,6	13	14	7,0	7,4	18	21
	4,1	9,4	11,7	16	18	6,6	8,2	22	26
#3.0	2,1	9,8	11,4	14	17	6,8	8,0	20	24
	2,8	10,4	13,2	15	17	7,3	9,3	21	24
	3,4	10,7	14,8	15	18	7,5	10,3	22	26
	4,1	10,7	16,3	17	20	7,5	11,4	25	28

**All precipitation rates calculated for 180° operation.*
For the precipitation rate for a 360° sprinkler, divide by 2.

ProSport®

Designed for sports turf and commercial applications.

Features

- Patented Top Arc Set – Allows for wet or dry adjustment in seconds
- Triple Nozzle Configuration – Ensures even distribution of water
- Arc adjustment from 40° to a continuous 360°
- Top Arc Set Degree Markings – Clearly indicates the current watering pattern and simplifies arc set adjustment
- Arc Memory Clutch – Prevents internal gear damage and returns rotor to its prior setting automatically if nozzle turret is forced past stop
- Patented Reversing Mechanism – Ensures continuous reverse and return
- Heavy Duty Rubber Cover and Mud Guard – Protects against physical injury and allows sprinkler to be installed below grade
- Factory Installed Check Valve – Prevents low head drainage

Specifications

- Arc Adjustment Range: 40° to Continuous 360°
- Flow Range: 5.1 – 32.5 GPM (19,3 – 123 LPM)
- Pressure Rating: 40 – 90 PSI (2,8 – 6,2 bar)
- Precipitation Rate: 0.48 – 1.35 in/hr (12,2 – 34 mm/hr) (depending on spacing and nozzle used)
- Recommended Spacing: 43' – 77' (13,1 – 23,5 m)
- Radius: 43' – 77' (13,1 – 23,5 m)
- Nozzle Trajectory: 26°

Model

14003	ProSport® Plastic
14003-6INCH	ProSport® 6 inch
14053	ProSport® High Speed Plastic
14053-6INCH	ProSport® High Speed Plastic 6 inch

Easy Arc Setting

Arc Selection: 40°
to continuous 360°
Adjust from left start

Accessories

See page 26-27

Fast Facts

ALL	INLET: 1" (2,5 CM) FEMALE THREAD NPT OR BSP	
4"	Retracted height:	7 1/2" (19 cm)
	Riser height:	4 1/2" (11,4 cm)
6"	Retracted height:	12" (30,5 cm)
	Riser height:	6 1/4" (15,9 cm)

How to Specify with Options

MODELS	OPTIONS	
14003	-SS	▶ Stainless Steel (4" only)
14003-6INCH	-BSP	▶ with BSP Thread
14053	-RCW	▶ Reclaimed Water Use

Examples: 14003-BSP, 14053-RCW-NN

14003 Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#5	40	45	5.1	0.48	0.58
	50	47	5.9	0.51	0.62
	60	47	6.5	0.57	0.68
	70	49	7.1	0.57	0.68
#10	50	53	10.6	0.73	0.87
	60	53	11.8	0.81	0.97
	70	53	12.6	0.86	1.04
Pre-Installed	80	55	13.5	0.86	1.03
#15	50	57	13.0	0.77	0.92
	60	59	14.2	0.79	0.94
	70	59	15.4	0.85	1.02
	80	63	16.5	0.80	0.96
#20	60	65	18.9	0.86	1.03
	70	67	20.5	0.88	1.06
	80	69	21.9	0.89	1.06
	90	71	23.2	0.89	1.06
#25	60	67	22.8	0.98	1.17
	70	71	24.8	0.95	1.14
	80	75	26.5	0.91	1.09
	90	77	26.8	0.87	1.04
#30	60	67	23.7	1.02	1.22
	70	69	25.6	1.04	1.24
	80	69	27.5	1.11	1.33
	90	71	29.2	1.12	1.34

14003 Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲
#5	2,8	13,7	19,3	12	15
	3,5	14,3	22,3	13	16
	4,1	14,3	24,6	14	17
	4,8	14,9	26,9	14	17
#10	3,5	16,2	40,1	18	22
	4,1	16,2	44,7	21	25
	4,8	16,2	47,7	22	26
Pre-Installed	5,5	16,8	51,1	22	26
#15	3,5	17,4	49,2	20	23
	4,1	18,0	53,8	20	24
	4,8	18,0	58,3	22	26
	5,5	19,2	62,5	20	24
#20	4,1	19,8	71,5	22	26
	4,8	20,4	77,6	22	27
	5,5	21,0	82,9	23	27
	6,2	21,6	87,8	23	27
#25	4,1	20,4	86,3	25	30
	4,8	21,6	93,9	24	29
	5,5	22,9	100,3	23	28
	6,2	23,5	101,4	22	26
#30	4,1	20,4	89,7	26	31
	4,8	21,0	96,9	26	31
	6,2	21,0	104,1	28	34
	6,2	21,6	110,5	28	34

14053 Performance Data - U.S.

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
#5	40	43	5.9	0.61	0.71
	50	44	6.2	0.62	0.71
	60	45	6.4	0.61	0.70
	70	45	7.6	0.72	0.83
#10	50	49	10.6	0.85	0.98
	60	53	11.5	0.79	0.91
	70	53	13.3	0.91	1.05
Pre-Installed	80	54	14.0	0.92	1.07
#15	50	52	12.4	0.88	1.02
	60	54	13.6	0.90	1.04
	70	56	14.6	0.90	1.03
	80	58	15.9	0.91	1.05
#20	60	56	19.8	1.22	1.40
	70	58	21.2	1.21	1.40
	80	59	22.8	1.26	1.46
	90	60	24.4	1.30	1.51
#25	60	59	22.4	1.24	1.43
	70	66	25.7	1.14	1.31
	80	67	27.8	1.19	1.38
	90	68	29.9	1.24	1.44
#30	60	60	25.2	1.35	1.56
	70	72	28.5	1.06	1.22
	80	73	30.8	1.11	1.28
	90	75	32.5	1.11	1.28

14053 Performance Data - Metric

NOZZLE	PRESSURE	NO ADJUSTMENT RADIUS	FLOW	PRECIP mm/hr	
	BAR	METER	L/M	■	▲
#5	2,8	13,1	22,3	15	18
	3,5	13,4	23,5	16	18
	4,1	13,7	24,2	15	18
	4,8	13,7	28,8	18	21
#10	3,5	14,9	40,1	22	25
	4,1	15,8	44,3	20	23
	4,8	16,1	50,3	23	27
Pre-Installed	5,5	16,5	53,0	23	27
#15	3,5	15,8	46,9	22	26
	4,1	16,5	55,3	23	26
	4,8	17,1	58,7	23	26
	5,5	17,1	60,2	23	27
#20	4,1	17,1	66,2	31	36
	4,8	17,7	71,5	31	36
	5,5	18,0	78,7	32	37
	6,2	18,3	82,1	33	38
#25	4,1	18,0	84,8	31	36
	4,8	20,1	97,3	29	33
	5,5	20,4	105,2	30	35
	6,2	20,7	113,2	31	37
#30	4,1	18,3	95,4	34	40
	4,8	22,0	107,9	27	31
	6,2	22,2	116,6	28	33
	6,2	22,9	123,0	28	33

**All precipitation rates calculated for 180° operation. For the precipitation rate for a 360° sprinkler, divide by 2.*

WATCH VIDEO

Visit our Sport Field Designs.

Rotor Accessories

Nozzle Racks

P52775 MiniPro® and RPS™ 50 Nozzle Rack (red)

P51399 ProPlus® Nozzle Rack (red)
Standard: 0.5, 0.75, 1, 2, 3, 4, 6, 8 GPM
Low Angle: 1, 3, 4, 6 GPM
Pre-installed Nozzle: 2.5 GPM

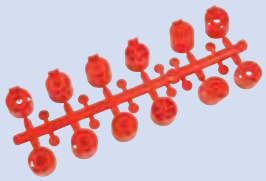
P16001101 RPS™ 75 Nozzle Rack (red)
Standard: 0.75, 1, 1.5, 2, 4, 6, 8 GPM
Low Angle: 1, 3, 4, 6 GPM
Pre-installed Nozzle: 3.0 GPM

P90001102 ProPlus-RCW low angle nozzle rack

P16001110 RPS™ 75i, SuperPro Nozzle Rack (green)
Standard: 1, 1.5, 2, 2.5, 3, 4, 5, 6, 8 GPM
Low Angle: 1, 1.5, 2, 3 GPM
Pre-installed Nozzle: 2.5 GPM

P52775

P51399



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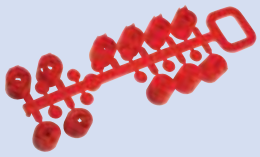

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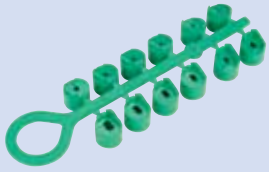


P90001102

ProSport®

P14055130 Nozzle Pack (1 nozzle of each)

P55519 5 GPM (18,9 LPM), white (12 count)
10 GPM (37,9 LPM), green (12 count)
15 GPM (56,8 LPM), gray (12 count)
20 GPM (75,7 LPM), brown (12 count)
25 GPM (94,6 LPM), blue (12 count)
30 GPM (113,5 LPM), black (12 count)

P55519

5 GPM

10 GPM

15 GPM

20 GPM

25 GPM

30 GPM

How to Specify Nozzle

MODEL	OPTION
55519	-5

Example: P55519-5, P55519-10

Adjustment Tools

P59995 K-Key; MiniPro®, ProPlus® Adjustment Key

P1000902 SuperPro®, RPS™ Select, ProSport® Adjustment Key

P1000901 RPS™ 75, RPS™ 75i, RPS™ 50 Adjustment Key

P59995

P1000901

P1000902

Riser Clips, Check Valves and Filter Baskets

P54065	Riser Clip
P51210	SuperPro®-HP, SuperPro®-SH, RPS™ Select-SH, RPS™ 75-SH, RPS™ 75i-SH, ProPlus® High Pop and ProPlus® Shrub Check Valve
P513995	MiniPro®, RPS™ 50 Check Valve
P16009110	RPS™ 75, 75i, Select, ProPlus®, SuperPro® Check Valve Assembly
P53425	ProSport® Check Valve
P51114	MiniPro® Filter Basket
P51115	RPS™ 75, 75i, Select Filter Basket
P51112	SuperPro® High Pop, ProPlus® High Pop Filter Basket, SuperPro®-SH, RPS™ Select-SH, RPS™ 75-SH, RPS™ 75i-SH, Shrub Check Valve
P58115	ProPlus®, SuperPro® Filter Basket

Swing Pipe & Fittings

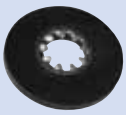
KA05100	Swing Pipe, 1/2" x 100' Roll
SWPC050	Swing Pipe, Coupling, 1/2" Barb
SWPT050	Swing Pipe, Tee, 1/2" Barb
SWPE050	Swing Pipe, Elbow, 1/2" MNPT x 1/2" Barb
SWPE075	Swing Pipe, Elbow, 3/4" MNPT x 1/2" Barb
SWPA060505	Swing Pipe Assembly, 6in, 1/2" Inlet x 1/2" Outlet
SWPA120505	Swing Pipe Assembly, 12in, 1/2" Inlet x 1/2" Outlet
SWPA127575	Swing Pipe Assembly, 12in, 3/4" Inlet x 3/4" Outlet
SWPA180505	Swing Pipe Assembly, 18in, 1/2" Inlet x 1/2" Outlet

P54065

P51210

P513995

P16009110



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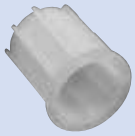


P51115

P51112

P58115

KA05100

SWPC050

SWPT050

SWPE050

SWPE075

SWPA127575

SPRAYS

Spray Body | Comparison Chart

The perfect combination of precise engineering and extensive field testing ensures long life and outstanding performance with every K-Rain® spray. Well-suited for any application, the sprays are rugged, reliable and available in a wide selection of sizes for optimal flexibility.

	Pro-S™ Sprays					NP Sprays		K-Sprays			
	78002	78003	78004	78006	78012	NP2	NP4	73001	74001	76001	71201
Specifications											
Pop-up height	1 1/2"	2 1/2"	3 1/2"	5 1/2"	11 1/2"	2"	3 7/8"	2 1/2"	4"	5 7/8"	11 1/2"
Retracted height	4 3/8"	5"	6"	9 3/8"	16"	4"	6"	4 3/4"	5 7/8"	8"	15 3/4"
Pressure range (PSI)	20-110	20-110	20-110	20-110	20-110	20-70	20-70	20-70	20-70	20-70	20-70
Inlet	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread
Nozzle	female thread	female thread	female thread	female thread	female thread	female thread	female thread	male thread	male thread	male thread	male thread
Features											
Co-molded wiper seal	●	●	●	●	●						
Ratcheting riser	●	●	●	●	●	●	●	●	●	●	●
Heavy duty retraction spring	●	●	●	●	●	●	●	●	●	●	●
Side inlet				●	●						●
Narrow profile						●	●				
Warranty	7 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years
Options											
Check valve	●	●	●	●	●	●	●	●	●	●	●
Nozzle guard	●	●	●	●	●						
Pressure regulator 30 PSI			●	●	●						
Pressure regulator 40 PSI			●	●	●						
Reclaimed water use	●	●	●	●	●			●	●	●	●
Stop Flow™			●	●							
Customizable	●	●	●	●	●						

Pro-S™ Sprays

Proven long life and outstanding performance.

Features

- Co-molded wiper seal — Ensures a leak-free, full pop-up even under low pressure situations. Treated with UV inhibitors for long life. Carefully selected seal material reduces degradation and stick-ups
- Ratcheting Riser – Allows for easy pattern alignment by turning the riser
- Heavy-duty retraction spring — Strongest in the industry for complete retraction in all soil conditions
- Pre-installed flush cap
- Accepts female threaded nozzles
- Riser assembly fits into 1800 body

Fast Facts

ALL	INLET: 1/2" (1,3 CM) FEMALE THREAD NPT	
2"	Retracted height:	4 3/8" (11,1 cm)
	Riser height:	1 1/2" (3,8 cm)
3"	Retracted height:	5" (12,7 cm)
	Riser height:	2 1/2" (6,4 cm)
4"	Retracted height:	6" (15,2)
	Riser height:	3 1/2" (8,9 cm)
6"	Retracted height:	9 3/8" (23,8 cm)
	Riser height:	5 1/2" (14,0 cm)
12"	Retracted height:	16" (40,6 cm)
	Riser height:	11 1/2" (29,2 cm)

Specifications

- Pressure rating: 20 – 110 PSI (1,4 – 7,6 bar)
- Flow-by: 0 – 8 PSI (0,6 bar) 0.20 GPM (0,76 LPM)
- Inlet: 1/2" (1,3 cm) Female Thread NPT

Models

78002 Pro-S 2" (5 cm) Pop-up
78003 Pro-S 3" (7,5 cm) Pop-up
78004 Pro-S 4" (10 cm) Pop-up
78006 Pro-S 6" (15 cm) Pop-up w/optional side inlet
78012 Pro-S 12" (30 cm) Pop-up w/side inlet

Accessories

See page 34

Options

- **In-stem Pressure Regulator**
  - Factory preset at 30 or 40 PSI (2,1 or 2,8 bar)
  - Available in 4", 6", and 12". EPA WaterSense certified
  - Visit krain.com/watersense-certified for a full list

look for WaterSense Meets EPA Criteria

- **In-stem Check Valve**
  - Pre-installed or installs in the field
  - Holds up to 10' (3 m) of head pressure

- **Pre-installed Nozzle Guard**
  - Protects the nozzle from foot traffic, mowers, edgers, and arc changes

- **Stop Flow™**
  - Automatically stops water flow should the nozzle become damaged or removed 4" and 6" only

Stop Flow™ valve

How to Specify with Options

MODELS	OPTIONS	
78002	-CV	▶ Check Valve
78003	-GUARD	▶ Nozzle Guard
78004	-NSI	▶ No Side Inlet (6" only)
78006	-PR30	▶ Pressure Regulator 30 PSI (4", 6" 12" only)
78012	-PR40	▶ Pressure Regulator 40 PSI (4", 6" 12" only)
	-RCW	▶ Reclaimed Water Use
	-SF	▶ Stop Flow™ 4" and 6" Only

Examples: 78004-CV, 78006-NSI-RCW, 78012-CV-PR30

Pro-S Spray

Pro-S Spray with Stop Flow

NP Sprays

Ideal for watering smaller lawns, ground cover, and shrub areas.

Features

- Available in 2" and 4" (5 cm and 10 cm) Models – Provides flexibility in system design
- Accepts Female Threaded Nozzles
- Stainless Steel Retraction Spring – Provides reliable retraction of the riser in all soil conditions
- Ratcheting Riser – Allows for easy pattern alignment by turning the riser
- Narrow Profile Body – Easy to retrofit with existing systems

Specifications

- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Inlet: 1/2" (1,3 cm) female thread NPT

Models

NP2 2" (5 cm) Narrow Profile Spray Body

NP4 4" (10 cm) Narrow Profile Spray Body

Fast Facts

ALL	INLET: 1/2" (1,3 CM) FEMALE THREAD NPT	
NP2	Retracted height:	4" (10,2 cm)
	Riser height:	2" (5,1 cm)
NP4	Retracted height:	6" (15,2 cm)
	Riser height:	3 7/8" (9,8 cm)

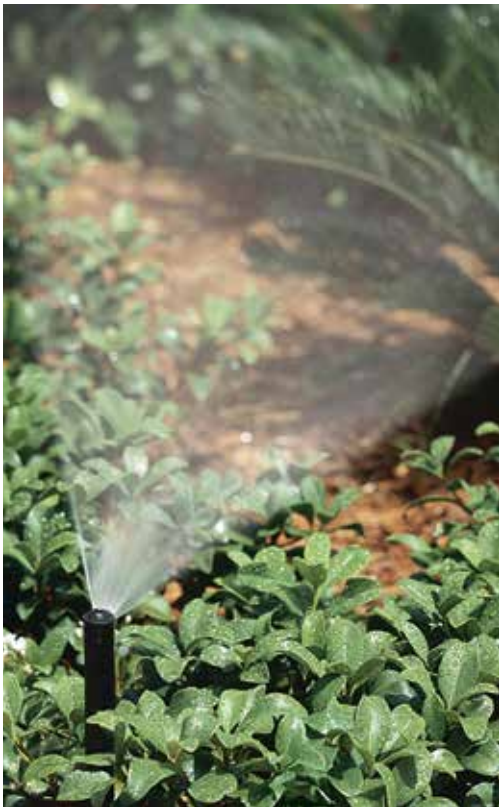
How to Specify

MODELS	OPTIONS	
NP2 NP4	-CV	▶ Check Valve

Examples: NP4-CV

Accessories

See page 34



K-Sprays

For small flower beds to residential and light commercial lawns.

Features

- Available in 3", 4", 6" and 12" Models – Provides flexibility in system design
- Accepts Male Threaded Nozzles
- Stainless Steel Retraction Spring – Provides reliable retraction of the riser in all soil conditions
- Ratcheting Riser – Allows for easy pattern alignment by turning the riser
- Heavy Duty Wiper Seal – Ensures leak free, full pop-up operation even under low-pressure situations
- Optional Water-Saving Check Valve – Eliminates low head drainage
- Optional Purple Cap for Reclaimed Water Use – Highly visible for identification of RCW systems

Specifications

- Pressure Rating: 20 – 70 PSI (1,4 – 4,8 bar)
- Inlet: 1/2" (1,3 cm) female thread NPT

Models

73001 3" (7,6 cm) Pop-Up

74001 4" (10 cm) Pop-Up

76001 6" (15 cm) Pop-Up

71201 12" (30,5 cm) Pop-Up

How to Specify with Options

MODELS	OPTIONS	
73001	-CV	▶ Check Valve
74001	-RCW	▶ Reclaimed Water Use
76001		
71201		

Examples: 73001-CV, 71201-RCW

Accessories

See page 34

Fast Facts

ALL	INLET: 1/2" (1,3 CM) FEMALE THREAD NPT	
73001	Retracted height:	4 3/4" (12,1 cm)
	Riser height:	2 1/2" (6,4 cm)
74001	Retracted height:	5 7/8" (14,9 cm)
	Riser height:	4" (10,2 cm)
76001	Retracted height:	8" (20,3 cm)
	Riser height:	5 7/8" (14,9 cm)
71201	Retracted height:	15 3/4" (40 cm)
	Riser height:	11 1/2" (29,2 cm)

Spray Accessories

Models

SHRUB ADAPTERS

PSA	Shrub Adapter, Female Thread (for male nozzles)
PFSA	Shrub Adapter, Male Thread (for female nozzles)
PSA-RCW	RCW Shrub adapter, Female Thread, (for male nozzles)
PFSA-RCW	RCW Shrub adapter, Male Thread, (for female nozzles)

CHECK DISKS

P53426	K-Spray™ Check Valve
P53428	Pro-S™ Check Valve
P53429	NP Spray™ Check Valve

NOZZLE GUARD

78000	Nozzle Guard (fits Pro-S™ Sprays)
78000-RCW	Nozzle Guard for Reclaimed Water (Does not include riser seal)

SWING PIPE & FITTINGS

KA05100	Swing Pipe, 1/2" x 100' Roll
SWPC050	Swing Pipe, Coupling, 1/2" Barb
SWPT050	Swing Pipe, Tee, 1/2" Barb
SWPE050	Swing Pipe, Elbow, 1/2" MNPT x 1/2" Barb
SWPE075	Swing Pipe, Elbow, 3/4" MNPT x 1/2" Barb
SWPA060505	Swing Pipe Assembly, 6in, 1/2" Inlet x 1/2" Outlet
SWPA120505	Swing Pipe Assembly, 12in, 1/2" Inlet x 1/2" Outlet
SWPA127575	Swing Pipe Assembly, 12in, 3/4" Inlet x 3/4" Outlet
SWPA180505	Swing Pipe Assembly, 18in, 1/2" Inlet x 1/2" Outlet

PSA

PFSA

PSA-RCW

PFSA-RCW

P53426

P53428

P53429

78000

78000-RCW

KA05100

SWPC050

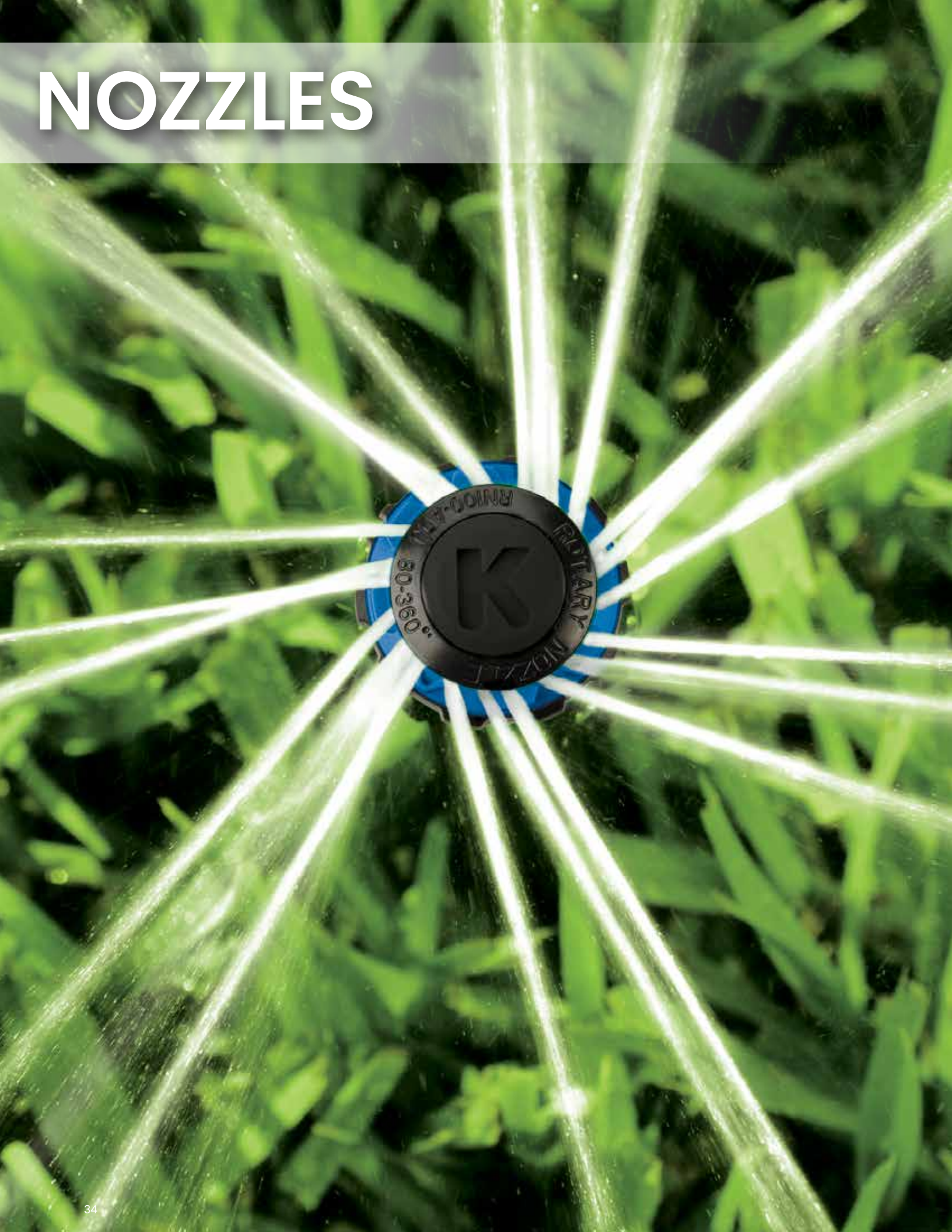
SWPT050

SWPA127575

SWPE050

SWPE075

NOZZLES



Nozzle | Comparison Chart

Designed with the utmost attention to detail, the versatility of the K-Rain® nozzle line ensures that the professional has everything needed for a variety of residential and commercial terrains.

	Rotary Nozzle Series	Fully Adjustable Rotary Nozzle	KVF Adjustable Nozzles	KV Adjustable Nozzles	Fixed Pattern Nozzles
	Full 360° & Adjustable	Fully Adjustable	Fully Adjustable	Fully Adjustable	Fixed Spray
Specifications					
Arc	90° - 360°	80° - 360°	0° - 360°	0°- 360°	90° - 360°
Radius	8' - 28'	13' - 30'	6' - 18'	7' - 20'	6' - 17'
Thread	female	female	female	male	female & male
Special patterns	right, left & side strip				center, end, side & high/low strip
Features					
Color-coded	•	•	•	•	•
Automatic matched precipitation	•	•	•	•	•
Warranty	3 years	3 years	7 years	7 years	7 years

Rotary Nozzle Series

Superior uniformity for demanding low-precipitation applications.

Features

- **Patented Flow Control** – Improved radius adjustment
- **Durable Design** – Molded with high-impact engineered resin for long life
- **Superior Uniformity** – Multi-stream technology provides outstanding coverage eliminating brown spots
- **Matched Precipitation** – Low precipitation rate is proportionate even after arc and radius adjustment
- **Water-smart Technology** – Reduce water usage up to 30% without compromising on results
- **Double pop-up Design** – Delivers additional protection from dirt/particulate intrusion in all conditions
- **Simple to Adjust** – Easiest adjustment in the industry - Hand adjustable/no tool required
- **Color-Coded** – Easily identify 9 standard nozzles and 3 specialty nozzles in the field

WATCH VIDEO

RN100

RADIUS
8' - 15' | 2,4 - 4,6m

RN200

RADIUS
16' - 20' | 4,9 - 6,1m

RN300

RADIUS
20' - 28' | 6,1 - 8,5m

RIGHT END STRIP

LEFT END STRIP

SIDE STRIP

Models

RN100-ADJ-90-210
90°-210° Adjustable
8' - 15' (2,4 - 4,6 m)
■ Dark Green

RN100-ADJ-210-270
210°-270° Adjustable
8' - 15' (2,4 - 4,6 m)
■ Medium Green

RN100-FIX30
360° Fixed Pattern
8' - 15' (2,4 - 4,6 m)
■ Light Green

RN200-ADJ-90-210
90°-210° Adjustable
16' - 20' (4,9 - 6,1 m)
■ Dark Blue

RN200-ADJ-210-270
210°-270° Adjustable
16' - 20' (4,9 - 6,1 m)
■ Medium Blue

RN200-FIX30
360° Fixed Pattern
16' - 20' (4,9 - 6,1 m)
■ Light Blue

RN300-ADJ-90-210
90°-210° Adjustable
20' - 28' (6,1 - 8,5 m)
■ Dark Gray

RN300-ADJ-210-270
210°-270° Adjustable
20' - 28' (6,1 - 8,5 m)
■ Medium Gray

RN300-FIX30
360° Fixed Pattern
20' - 28' (6,1 - 8,5 m)
■ Light Gray

RNS-RES-515
Right End Strip
■ Burnt Orange

RNS-LES-515
Left End Strip
■ Olive

RNS-SS-530
Side Strip
■ Brown

Performance Data - U.S.

RN100-ADJ-90-210 ■ Dark Green

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	30	13	0.23	0.51	0.59
	35	14	0.25	0.48	0.56
	40	15	0.26	0.44	0.51
	45	15	0.28	0.48	0.55
	50	16	0.30	0.45	0.52
180°	30	13	0.45	0.51	0.59
	35	14	0.48	0.47	0.54
	40	14	0.51	0.50	0.58
	45	15	0.55	0.47	0.54
	50	15	0.59	0.50	0.58
210°	30	13	0.52	0.51	0.59
	35	14	0.56	0.47	0.54
	40	14	0.58	0.49	0.56
	45	14	0.62	0.52	0.60
	50	15	0.68	0.50	0.58

Performance Data - U.S.

RN100-ADJ-210-270 ■ Medium Green

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
210°	30	13	0.52	0.51	0.59
	35	14	0.56	0.47	0.54
	40	14	0.58	0.49	0.56
	45	14	0.62	0.52	0.60
	50	15	0.68	0.50	0.53
270°	30	13	0.68	0.51	0.59
	35	14	0.71	0.46	0.54
	40	14	0.75	0.49	0.57
	45	14	0.79	0.52	0.60
	50	15	0.86	0.49	0.57

Performance Data - U.S.

RN100-FIX360 ■ Light Green

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
360°	30	13	.88	.50	.58
	35	14	.94	.46	.53
	40	14	1.00	.49	.57
	45	15	1.15	.49	.57
	50	15	1.20	.51	.59

Performance Data - U.S.

RN200-ADJ-90-210 ■ Dark Blue

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	30	19	0.38	0.41	0.47
	35	19	0.42	0.45	0.52
	40	20	0.45	0.43	0.50
	45	20	0.48	0.46	0.53
	50	21	0.51	0.45	0.51
180°	30	19	0.75	0.40	0.46
	35	20	0.80	0.39	0.44
	40	20	0.85	0.41	0.47
	45	21	0.90	0.39	0.45
	50	21	1.00	0.44	0.50
210°	30	18	0.89	0.45	0.52
	35	19	0.95	0.43	0.50
	40	20	1.00	0.41	0.48
	45	20	1.05	0.43	0.50
	50	21	1.10	0.41	0.48

Performance Data - U.S.

RN200-ADJ-210-270 ■ Medium Blue

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
210°	30	18	0.89	0.45	0.52
	35	19	0.95	0.43	0.50
	40	20	1.00	0.41	0.48
	45	20	1.05	0.43	0.50
	50	21	1.10	0.41	0.48
270°	30	17	1.10	0.49	0.56
	35	18	1.20	0.48	0.55
	40	19	1.30	0.46	0.53
	45	19	1.40	0.50	0.57
	50	19	1.45	0.52	0.60

Performance Data - U.S.

RN200-FIX360 ■ Light Blue

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
360°	30	16	1.34	.50	.58
	35	17	1.50	.50	.58
	40	18	1.65	.49	.57
	45	19	1.68	.45	.52
	50	19	1.88	.50	.58

Performance Data - U.S.

RN300-ADJ-90-210 ■ Dark Gray

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	30	27	0.90	0.48	0.55
	35	27	0.95	0.50	0.58
	40	28	1.00	0.49	0.57
	45	28	1.05	0.52	0.60
	50	29	1.10	0.50	0.58
180°	30	26	1.65	0.47	0.54
	35	26	1.75	0.50	0.58
	40	27	1.86	0.49	0.57
	45	27	1.95	0.51	0.59
	50	28	2.10	0.52	0.60
210°	30	25	1.81	0.48	0.55
	35	26	1.95	0.48	0.55
	40	27	2.15	0.49	0.56
	45	27	2.30	0.52	0.60
	50	28	2.40	0.51	0.58

Performance Data - U.S.

RN300-ADJ-210-270 ■ Medium Gray

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
210°	30	25	1.81	0.48	0.55
	35	26	1.95	0.48	0.55
	40	27	2.15	0.49	0.56
	45	27	2.30	0.52	0.60
	50	28	2.40	0.51	0.58
270°	30	25	2.40	0.49	0.57
	35	26	2.55	0.48	0.56
	40	27	2.70	0.48	0.55
	45	27	2.87	0.51	0.58
	50	27	3.00	0.53	0.61

Performance Data - U.S.

RN300-FIX360 ■ Light Gray

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
360°	30	26	3.10	.44	.51
	35	27	3.20	.42	.49
	40	28	3.50	.43	.50
	45	28	3.55	.44	.50
	50	30	3.70	.40	.46

Performance Data - U.S.

Special Patterns

RNS-RES-515 ■ Burnt Orange

PATTERN	NOZZLE	PRESSURE	W X L	FLOW
		PSI	FEET	GPM
RIGHT END STRIP		30	4 x 15	.30
		35	5 x 15	.32
		40	5 x 15	.35
		45	6 x 16	.38
		50	6 x 16	.40

Performance Data - U.S.

Special Patterns

RNS-LES-515 ■ Olive

PATTERN	NOZZLE	PRESSURE	W X L	FLOW
		PSI	FEET	GPM
LEFT END STRIP		30	4 x 15	.30
		35	5 x 15	.32
		40	5 x 15	.35
		45	6 x 15	.38
		50	6 x 16	.40

Performance Data - U.S.

Special Patterns

RNS-SS-530 ■ Brown

PATTERN	NOZZLE	PRESSURE	W X L	FLOW
		PSI	FEET	GPM
SIDE STRIP		30	4 x 29	.50
		35	5 x 30	.55
		40	5 x 30	.60
		45	6 x 31	.65
		50	7 x 32	.70

Rotary Nozzle Series

Performance Data - Metric
RN100-ADJ-90-210 ■ Dark Green

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
90°	2,1	4,0	0,85	13	15
	2,4	4,3	0,93	12	14
	2,8	4,6	0,98	11	13
	3,1	4,6	1,06	12	14
	3,4	4,9	1,14	11	13
180°	2,1	4,0	1,70	13	15
	2,4	4,3	1,82	12	14
	2,8	4,3	1,93	13	15
	3,1	4,6	2,08	12	14
	3,4	4,6	2,23	13	15
210°	2,1	4,0	1,97	13	15
	2,4	4,3	2,12	12	14
	2,8	4,3	2,20	12	14
	3,1	4,3	2,35	13	15
	3,4	4,6	2,57	13	15

Performance Data - Metric
RN100-ADJ-210-270 ■ Medium Green

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
210°	2,1	4,0	1,97	13	15
	2,4	4,3	2,12	12	14
	2,8	4,3	2,20	12	14
	3,1	4,3	2,35	13	15
	3,4	4,6	2,57	13	15
270°	2,1	4,0	2,56	13	15
	2,4	4,3	2,69	12	14
	2,8	4,3	2,84	12	14
	3,1	4,3	2,99	13	15
	3,4	4,6	3,26	12	14

Performance Data - Metric
RN100-FIX360 ■ Light Green

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
360°	2,1	4,0	3,33	13	15
	2,4	4,3	3,56	12	13
	2,8	4,3	3,79	12	14
	3,1	4,6	4,35	12	14
	3,4	4,6	4,54	13	15

Performance Data - Metric
RN200-ADJ-90-210 ■ Dark Blue

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
90°	2,1	5,8	1,44	10	12
	2,4	5,8	1,59	11	13
	2,8	6,1	1,70	11	13
	3,1	6,1	1,82	12	14
	3,4	6,4	1,93	11	13
180°	2,1	5,8	2,84	10	12
	2,4	6,1	3,03	10	11
	2,8	6,1	3,22	10	12
	3,1	6,4	3,41	10	12
	3,4	6,4	3,79	11	13
210°	2,1	5,5	3,37	12	13
	2,4	5,8	3,60	11	13
	2,8	6,1	3,79	10	12
	3,1	6,1	3,97	11	13
	3,4	6,4	4,16	10	12

Performance Data - Metric
RN200-ADJ-210-270 ■ Medium Blue

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
210°	2,1	5,5	3,37	12	13
	2,4	5,8	3,60	11	13
	2,8	6,1	3,79	10	12
	3,1	6,1	3,97	11	13
	3,4	6,4	4,16	10	12
270°	2,1	5,2	4,16	12	14
	2,4	5,5	4,54	12	14
	2,8	5,8	4,92	12	14
	3,1	5,8	5,30	13	15
	3,4	5,8	5,49	13	15

Performance Data - Metric
RN200-FIX360 ■ Light Blue

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
360°	2,1	4,9	5.07	13	15
	2,4	5,2	5,68	13	15
	2,8	5,5	6,25	12	14
	3,1	5,8	6,36	11	13
	3,4	5,8	7,12	13	15

Performance Data - Metric
RN300-ADJ-90-210 ■ Dark Gray

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
90°	2,1	8,2	3,41	12	14
	2,4	8,2	3,60	13	15
	2,8	8,5	3,79	12	14
	3,1	8,5	3,97	13	15
	3,4	8,8	4,16	13	15
180°	2,1	7,9	6,25	12	14
	2,4	7,9	6,62	13	15
	2,8	8,2	7,04	12	14
	3,1	8,2	7,38	13	15
	3,4	8,5	7,95	13	15
210°	2,1	7,6	6,85	12	14
	2,4	7,9	7,38	12	14
	2,8	8,2	8,14	12	14
	3,1	8,2	8,71	13	15
	3,4	8,5	9,08	13	15

Performance Data - Metric
RN300-ADJ-210-270 ■ Medium Gray

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
210°	2,1	7,6	6,85	12	14
	2,4	7,9	7,38	12	14
	2,8	8,2	8,14	12	14
	3,1	8,2	8,71	13	15
	3,4	8,5	9,08	13	15
270°	2,1	7,6	9,08	13	14
	2,4	7,9	9,65	12	14
	2,8	8,2	10,22	12	14
	3,1	8,2	10,86	13	15
	3,4	8,2	11,36	13	15

Performance Data - Metric
RN300-FIX360 ■ Light Gray

ARC DEGREE	PRESSURE Bar	RADIUS METERS	FLOW L/M	PRECIP mm/hr ■	PRECIP mm/hr ▲
360°	2,1	7,9	11,73	11	13
	2,4	8,2	12,11	11	12
	2,8	8,5	13,25	11	13
	3,1	8,5	13,44	11	13
	3,4	9,1	14,01	10	12

Performance Data - Metric
Special Patterns
RNS-RES-515 ■ Burnt Orange

PATTERN	NOZZLE	PRESSURE Bar	W X L METERS	FLOW L/M
RIGHT END STRIP		2,1	1,2 x 4,6	1,14
		2,4	1,5 x 4,6	1,21
		2,8	1,5 x 4,6	1,32
		3,1	1,8 x 4,9	1,43
		3,4	1,8 x 4,9	1,51

Performance Data - Metric
Special Patterns
RNS-LES-515 ■ Olive

PATTERN	NOZZLE	PRESSURE Bar	W X L METERS	FLOW L/M
LEFT END STRIP		2,1	1,2 x 4,6	1,14
		2,4	1,5 x 4,6	1,21
		2,8	1,5 x 4,6	1,32
		3,1	1,8 x 4,6	1,43
		3,4	1,8 x 4,9	1,51

Performance Data - Metric
Special Patterns
RNS-SS-530 ■ Brown

PATTERN	NOZZLE	PRESSURE Bar	W X L METERS	FLOW L/M
SIDE STRIP		2,1	1,2 x 8,8	1,80
		2,4	1,5 x 9,1	2,08
		2,8	1,5 x 9,1	2,30
		3,1	1,8 x 9,4	2,46
		3,4	2,1 x 9,7	2,64

Fully Adjustable Rotary Nozzles

The only fully adjustable rotary nozzle from 80° – 360°.

Features

- Fully adjustable 80° to 360° – only one SKU per distance
- Female Threaded – fits any male threaded spray body
- Hand adjustable – no tools needed
- Radius adjustment up to 30% – patented flow control
- Arc adjustment wet or dry – visual left start and right stop
- Double pop-up system – superior dirt tolerance
- Three model options – distances from 13' to 30' (3,96 m to 9,14 m)
- Matched precipitation – superior efficiency in water and uniformity through all patterns and distances
- Low precipitation rate – reduces runoff and improves soil absorption
- Low flow rate – allows for more heads per zone, fewer zones
- Viscous dampening – ensures consistent application speed over varying flow rates and pressures
- Multiple stream technology – for improved wind resistance
- Large filter – prolongs product life
- Can be installed in the same zone as rotors

Models

RN100-ADJ
80°-360° Adjustable
13' – 15' (4 – 4,6 m)
Green

RN200-ADJ
80°-360° Adjustable
16' – 19' (4,9 – 5,8 m)
Blue

RN300-ADJ
80°-360° Adjustable
26' – 30' (7,9 – 9,1 m)
Red

WATCH VIDEO

RN100-ADJ

13′ - 15′ (4-4,6 m)

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	30	13	0.22	.50	.58
	40	14	0.25	.49	.57
	50	15	0.30	.51	.59
180°	30	13	0.44	.50	.58
	40	14	0.50	.49	.57
	50	15	0.60	.51	.59
360°	30	13	0.90	.51	.59
	40	14	1.00	.49	.57
	50	15	1.20	.51	.59

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	2,1	3,96	0,83	13	15
	2,8	4,27	0,95	12	14
	3,5	4,57	1,14	13	15
180°	2,1	3,96	1,67	13	15
	2,8	4,27	1,89	12	14
	3,5	4,57	2,27	13	15
360°	2,1	3,96	3,41	13	15
	2,8	4,27	3,79	12	14
	3,5	4,57	4,54	13	15

RN200-ADJ

16′ - 19′ (4,9-5,8 m)

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	30	16	0.34	0.51	0.59
	40	18	0.41	0.49	0.56
	50	19	0.47	0.50	0.58
180°	30	16	0.67	0.50	0.58
	40	18	0.83	0.49	0.57
	50	19	0.94	0.50	0.58
360°	30	16	1.35	0.51	0.59
	40	18	1.70	0.51	0.58
	50	19	1.90	0.51	0.58

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	2,1	4,88	1,29	13	15
	2,8	5,49	1,55	12	14
	3,5	5,79	1,78	13	15
180°	2,1	4,88	2,54	13	15
	2,8	5,49	3,14	12	14
	3,5	5,79	3,56	13	15
360°	2,1	4,88	5,11	13	15
	2,8	5,49	6,44	13	15
	3,5	5,79	7,19	13	15

RN300-ADJ

26′ - 30′ (7,9-9,1 m)

Performance Data - U.S.

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	30	26	0.80	0.46	0.53
	40	27	0.90	0.48	0.55
	50	29	1.00	0.46	0.53
180°	30	26	1.50	0.43	0.49
	40	27	1.60	0.42	0.49
	50	29	1.80	0.41	0.48
360°	30	26	3.00	0.43	0.49
	40	27	3.20	0.42	0.49
	50	28	3.80	0.47	0.54

Performance Data - Metric

NOZZLE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	2,1	7,92	3,03	12	13
	2,8	8,23	3,41	12	14
	3,5	8,84	3,79	12	13
180°	2,1	7,92	5,68	11	12
	2,8	8,23	6,06	11	12
	3,5	8,84	6,81	10	12
360°	2,1	7,92	11,36	11	12
	2,8	8,23	12,11	11	12
	3,5	8,83	14,38	12	14

**Data represents test results in zero wind. Adjust for local conditions.*

KVF Nozzles

Complete flexibility for working in a variety of terrains.

Features

- Superior Spray Patterns
- Fits any male-threaded spray body
- Color-coded for Easy Identification
- Uniform Water Distribution
- Water Efficient Low Flow Rates
- Extra Long Filters Extend Time Between Cleanings

Models

KVF6
6' (1,8 m) Nozzle
Red

KVF8
8' (2,4 m) Nozzle
Green

KVF10
10' (3 m) Nozzle
Blue

KVF12
12' (3,7 m) Nozzle
Brown

KVF15
15' (4,6 m) Nozzle
Black

KVF17
17' (5,2 m) Nozzle
Gray

Performance Data - U.S.

KVF6 6' (1,8 m) Nozzle (red)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	5	0.36	5.54	6.40
	25	5	0.43	6.16	7.65
	30	**6**	**0.50**	**5.35**	**6.17**
	40	6	0.59	6.31	7.29
180°	20	5	0.60	4.61	5.33
	25	5	0.66	5.07	5.86
	30	**6**	**0.74**	**3.95**	**4.56**
	40	6	0.86	4.59	5.30
270°	20	5	0.80	4.10	4.74
	25	5	0.89	4.56	5.27
	30	**6**	**0.97**	**3.45**	**3.99**
	40	6	1.20	4.27	4.93
360°	20	5	1.08	4.15	4.79
	25	5	1.25	4.81	5.55
	30	**6**	**1.37**	**3.66**	**4.22**
	40	6	1.62	4.33	4.99

Performance Data - Metric

KVF6 6' (1,8 m) Nozzle (red)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	1,5	1,36	141	163
	1,72	1,5	1,63	156	194
	2,07	**1,8**	**1,89**	**136**	**157**
	2,76	1,8	2,23	160	185
180°	1,38	1,5	2,27	117	135
	1,72	1,5	2,50	129	149
	2,07	**1,8**	**2,80**	**100**	**116**
	2,76	1,8	3,26	117	135
270°	1,38	1,5	3,03	104	120
	1,72	1,5	3,37	116	134
	2,07	**1,8**	**3,67**	**88**	**101**
	2,76	1,8	4,54	108	125
360°	1,38	1,5	4,09	105	122
	1,72	1,5	4,73	122	141
	2,07	**1,8**	**5,19**	**93**	**107**
	2,76	1,8	6,13	110	127

Performance Data - U.S.

KVF8 8' (2,4 m) Nozzle (green)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	9	0.39	1.85	2.14
	25	10	0.42	1.62	1.87
	30	**10**	**0.50**	**1.93**	**2.22**
	40	11	0.61	1.94	2.24
180°	20	9	0.75	1.78	2.06
	25	9	0.85	2.02	2.33
	30	**10**	**1.00**	**1.93**	**2.22**
	40	10	1.16	2.23	2.58
270°	20	9	1.15	1.82	2.10
	25	9	1.25	1.98	2.29
	30	**10**	**1.50**	**1.93**	**2.22**
	40	10	1.75	2.25	2.59
360°	20	9	1.50	1.78	2.06
	25	9	1.70	2.02	2.33
	30	**10**	**2.00**	**1.93**	**2.22**
	40	10	2.30	2.21	2.56

Performance Data - Metric

KVF8 8' (2,4 m) Nozzle (green)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	2,7	1,48	47	54
	1,72	3,1	1,59	41	47
	2,07	**3,1**	**1,89**	**49**	**56**
	2,76	3,4	2,31	49	57
180°	1,38	2,7	2,84	45	52
	1,72	2,7	3,22	51	59
	2,07	**3,1**	**3,79**	**49**	**56**
	2,76	3,1	4,39	57	65
270°	1,38	2,7	4,35	46	53
	1,72	2,7	4,73	50	58
	2,07	**3,1**	**5,68**	**49**	**56**
	2,76	3,1	6,62	57	66
360°	1,38	2,7	5,68	45	52
	1,72	2,7	6,44	51	59
	2,07	**3,1**	**7,57**	**49**	**56**
	2,76	3,1	8,71	56	65

Performance Data - U.S.

KVF10 10' (3 m) Nozzle (blue)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	10	0.45	1.73	2.00
	25	11	0.54	1.72	1.98
	30	**12**	**0.62**	**1.66**	**1.91**
	40	12	0.70	1.87	2.16
180°	20	10	0.90	1.73	2.00
	25	11	1.10	1.75	2.02
	30	**12**	**1.25**	**1.67**	**1.93**
	40	12	1.40	1.87	2.16
270°	20	10	1.35	1.73	2.00
	25	11	1.65	1.75	2.02
	30	**12**	**1.85**	**1.65**	**1.90**
	40	12	2.10	1.87	2.16
360°	20	10	1.80	1.73	2.00
	25	11	2.20	1.75	2.02
	30	**12**	**2.50**	**1.67**	**1.93**
	40	12	2.80	1.87	2.16

Performance Data - Metric

KVF10 10' (3 m) Nozzle (blue)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	3,1	1,70	44	51
	1,72	3,4	2,04	44	50
	2,07	**3,7**	**2,35**	**42**	**49**
	2,76	3,7	2,65	47	55
180°	1,38	3,1	3,41	44	51
	1,72	3,4	4,16	44	51
	2,07	**3,7**	**4,73**	**42**	**49**
	2,76	3,7	5,30	47	55
270°	1,38	3,1	5,11	44	51
	1,72	3,4	6,25	44	51
	2,07	**3,7**	**7,00**	**42**	**48**
	2,76	3,7	7,95	47	55
360°	1,38	3,1	6,81	44	51
	1,72	3,4	8,33	44	51
	2,07	**3,7**	**9,46**	**42**	**49**
	2,76	3,7	10,60	47	55

**Data represents test results in zero wind. Radius may be reduced with the radius reduction screw.*
Bold = recommended pressure of 30 PSI

Performance Data - U.S.

KVF12 12' (3,7 m) Nozzle (brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	12	0.65	1.74	2.01
	25	13	0.70	1.59	1.84
	30	**14**	**0.80**	**1.57**	**1.81**
	40	14	0.90	1.77	2.04
180°	20	12	1.30	1.74	2.01
	25	13	1.40	1.59	1.84
	30	**14**	**1.60**	**1.57**	**1.81**
	40	14	1.80	1.77	2.04
270°	20	12	1.90	1.69	1.96
	25	13	2.10	1.59	1.84
	30	**14**	**2.40**	**1.57**	**1.81**
	40	14	2.60	1.70	1.97
360°	20	12	2.20	1.47	1.70
	25	13	2.60	1.48	1.71
	30	**14**	**3.10**	**1.52**	**1.76**
	40	14	3.50	1.72	1.98

Performance Data - Metric

KVF12 12' (3,7 m) Nozzle (brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	3,7	2,46	44	51
	1,72	4,0	2,65	40	47
	2,07	**4,3**	**3,03**	**40**	**46**
	2,76	4,3	3,41	45	52
180°	1,38	3,7	4,92	44	51
	1,72	4,0	5,30	40	47
	2,07	**4,3**	**6,06**	**40**	**46**
	2,76	4,3	6,81	45	52
270°	1,38	3,7	7,19	43	50
	1,72	4,0	7,95	40	47
	2,07	**4,3**	**9,08**	**40**	**46**
	2,76	4,3	9,84	43	50
360°	1,38	3,7	8,33	37	43
	1,72	4,0	9,84	38	43
	2,07	**4,3**	**11,73**	**39**	**45**
	2,76	4,3	13,25	44	50

Performance Data - U.S.

KVF15 15' (4,6 m) Nozzle (black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	14	0.75	1.47	1.70
	25	15	0.85	1.45	1.68
	30	**15**	**0.95**	**1.63**	**1.88**
	40	17	1.10	1.47	1.69
180°	20	14	1.40	1.38	1.59
	25	15	1.70	1.45	1.68
	30	**15**	**1.90**	**1.63**	**1.88**
	40	17	2.30	1.53	1.77
270°	20	14	2.25	1.47	1.70
	25	15	2.55	1.45	1.68
	30	**15**	**2.80**	**1.60**	**1.84**
	40	17	3.40	1.51	1.74
360°	20	14	3.00	1.47	1.70
	25	15	3.40	1.45	1.68
	30	**15**	**3.80**	**1.63**	**1.88**
	40	17	4.60	1.53	1.77

Performance Data - Metric

KVF15 15' (4,6 m) Nozzle (black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	4,3	2,84	37	43
	1,72	4,6	3,22	37	43
	2,07	**4,6**	**3,60**	**41**	**48**
	2,76	5,2	4,16	37	43
180°	1,38	4,3	5,30	35	40
	1,72	4,6	6,44	37	43
	2,07	**4,6**	**7,19**	**41**	**48**
	2,76	5,2	8,71	39	45
270°	1,38	4,3	8,52	37	43
	1,72	4,6	9,65	37	43
	2,07	**4,6**	**10,60**	**41**	**47**
	2,76	5,2	12,87	38	44
360°	1,38	4,3	11,36	37	43
	1,72	4,6	12,87	37	43
	2,07	**4,6**	**14,38**	**41**	**48**
	2,76	5,2	17,41	39	45

Performance Data - U.S.

KVF17 17' (5,2 m) Nozzle (gray)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	17	0.85	1.13	1.31
	25	17	0.95	1.27	1.46
	30	**18**	**1.05**	**1.25**	**1.44**
	40	18	1.20	1.43	1.65
180°	20	16	1.70	1.28	1.48
	25	17	1.90	1.27	1.46
	30	**18**	**2.10**	**1.25**	**1.44**
	40	18	2.40	1.43	1.65
270°	20	16	2.50	1.25	1.45
	25	17	2.80	1.24	1.44
	30	**18**	**3.15**	**1.25**	**1.44**
	40	18	3.60	1.43	1.65
360°	20	16	3.40	1.28	1.48
	25	17	3.80	1.27	1.46
	30	**18**	**4.20**	**1.25**	**1.44**
	40	18	4.80	1.43	1.65

Performance Data - Metric

KVF17 17' (5,2 m) Nozzle (gray)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	5,2	3,22	29	33
	1,72	5,2	3,60	32	37
	2,07	**5,5**	**3,97**	**32**	**37**
	2,76	5,5	4,54	36	42
180°	1,38	4,9	6,44	32	37
	1,72	5,2	7,19	32	37
	2,07	**5,5**	**7,95**	**32**	**37**
	2,76	5,5	9,08	36	42
270°	1,38	4,9	9,46	32	37
	1,72	5,2	10,60	32	36
	2,07	**5,5**	**11,92**	**32**	**37**
	2,76	5,5	13,63	36	42
360°	1,38	4,9	12,87	32	37
	1,72	5,2	14,38	32	37
	2,07	**5,5**	**15,90**	**32**	**37**
	2,76	5,5	18,17	36	42

**Data represents test results in zero wind. Radius may be reduced with the radius reduction screw.*
Bold = recommended pressure of 30 PSI.

KV Nozzles

Adjustable pattern, male-threaded nozzles.

Features

- Superior Spray Patterns
- Fits any female-threaded spray body
- Color-coded for Easy Identification
- Extra Long Filters Extend Time Between Cleanings

Models

KV8
8' (2,4 m) Nozzle,
Green

KV10
10' (3 m) Nozzle,
Blue

KV12
12' (3,7 m) Nozzle,
Brown

KV15
15' (4,6 m) Nozzle,
Black

KV17
17' (5,2 m) Nozzle,
Gray

Performance Data - U.S.
KV8 8′ (2,4 m) Nozzle (Green)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	7	0.30	2.36	2.72
	30	**8**	**0.40**	**2.41**	**2.78**
	40	8	0.40	2.41	2.78
	50	9	0.40	1.9	2.2
180°	20	7	0.80	3.14	3.63
	30	**8**	**0.90**	**2.71**	**3.13**
	40	8	1.00	3.01	3.47
	50	9	1.10	2.61	3.02
270°	20	7	1.20	3.14	3.63
	30	**8**	**1.20**	**2.41**	**2.78**
	40	8	1.30	2.61	3.01
	50	9	1.50	2.38	2.74
360°	20	7	1.90	3.73	4.31
	30	8	2.00	3.01	3.47
	40	8	2.20	3.31	3.82
	50	9	2.30	2.73	3.16

Performance Data - Metric
KV8 8′ (2,4 m) Nozzle (Green)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	2,1	1,14	60	69
	2,07	**2,4**	**1,51**	**61**	**70**
	2,76	2,4	1,51	61	70
	3,45	2,7	1,51	48	56
180°	1,38	2,1	3,03	80	92
	2,07	**2,4**	**3,41**	**69**	**79**
	2,76	2,4	3,79	76	88
	3,45	2,7	4,16	66	77
270°	1,38	2,1	4,54	80	92
	2,07	**2,4**	**4,54**	**61**	**70**
	2,76	2,4	4,92	66	76
	3,45	2,7	5,68	60	70
360°	1,38	2,1	7,19	95	109
	2,07	**2,4**	**7,57**	**76**	**88**
	2,76	2,4	8,33	84	97
	3,45	2,7	8,71	69	80

Performance Data - U.S.
KV10 10′ (3 m) Nozzle (Blue)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	12	0.70	1.87	2.16
	30	**12**	**1.10**	**2.94**	**3.40**
	40	13	1.40	3.19	3.68
	50	14	1.50	2.95	3.40
180°	20	11	1.40	2.23	2.57
	30	**11**	**1.60**	**2.55**	**2.94**
	40	12	1.80	2.41	2.78
	50	13	2.00	2.28	2.63
270°	20	10	1.70	2.18	2.52
	30	**10**	**2.00**	**2.57**	**2.96**
	40	11	2.30	2.44	2.82
	50	12	2.60	2.32	2.68
360°	20	10	2.20	2.12	2.45
	30	**10**	**2.70**	**2.60**	**3.00**
	40	11	3.00	2.39	2.76
	50	12	3.50	2.34	2.70

Performance Data - Metric
KV10 10′ (3 m) Nozzle (Blue)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	3,7	2,65	47	55
	2,07	**3,7**	**4,16**	**75**	**86**
	2,76	4,0	5,30	81	93
	3,45	4,3	5,68	75	86
180°	1,38	3,4	5,30	56	65
	2,07	**3,4**	**6,06**	**65**	**75**
	2,76	3,7	6,81	61	70
	3,45	4,0	7,57	58	67
270°	1,38	3,1	6,44	55	64
	2,07	**3,1**	**7,57**	**65**	**75**
	2,76	3,4	8,71	62	71
	3,45	3,7	9,84	59	68
360°	1,38	3,1	8,33	54	62
	2,07	**3,1**	**10,22**	**66**	**76**
	2,76	3,4	11,36	61	70
	3,45	3,7	13,25	59	69

Performance Data - U.S.
KV12 12′ (3,7 m) Nozzle (Brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	12	1.10	2.94	3.40
	30	**13**	**1.30**	**2.96**	**3.42**
	40	14	1.50	2.95	3.40
	50	15	1.70	2.91	3.36
180°	20	11	1.60	2.55	2.94
	30	**12**	**1.80**	**2.41**	**2.78**
	40	13	2.20	2.51	2.89
	50	14	2.40	2.36	2.72
270°	20	11	1.90	2.02	2.33
	30	**12**	**2.40**	**2.14**	**2.47**
	40	12	2.60	2.32	2.68
	50	13	3.20	2.43	2.81
360°	20	11	2.80	2.23	2.57
	30	**12**	**3.10**	**2.07**	**2.39**
	40	12	3.50	2.34	2.70
	50	13	3.90	2.22	2.56

Performance Data - Metric
KV12 12′ (3,7 m) Nozzle (Brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	3,7	4,16	75	86
	2,07	**4,0**	**4,92**	**75**	**87**
	2,76	4,3	5,68	75	86
	3,45	4,6	6,44	74	85
180°	1,38	3,4	6,06	65	75
	2,07	**3,7**	**6,81**	**61**	**70**
	2,76	4,0	8,33	64	73
	3,45	4,3	9,08	60	69
270°	1,38	3,4	7,19	51	59
	2,07	**3,7**	**9,08**	**54**	**63**
	2,76	3,7	9,84	59	68
	3,45	4,0	12,11	62	71
360°	1,38	3,4	10,60	56	65
	2,07	**3,7**	**11,73**	**53**	**61**
	2,76	3,7	13,25	59	69
	3,45	4,0	14,76	56	65

**Data represents test results in zero wind. Radius may be reduced with the radius reduction screw.*
Bold = recommended pressure of 30 PSI.

Performance Data - U.S.

KV15 15' (4,6 m) Nozzle (Black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	15	1.30	2.22	2.57
	30	**17**	**1.60**	**2.13**	**2.46**
	40	18	1.80	2.14	2.47
	50	19	2.00	2.13	2.46
180°	20	14	1.80	1.77	2.04
	30	**15**	**2.30**	**1.97**	**2.27**
	40	16	2.60	1.96	2.26
	50	18	2.80	1.66	1.92
270°	20	14	2.70	1.77	2.04
	30	**15**	**3.20**	**1.83**	**2.11**
	40	16	3.60	1.80	2.08
	50	18	4.00	1.58	1.83
360°	20	14	3.40	1.67	1.93
	30	**15**	**4.20**	**1.80**	**2.07**
	40	16	4.70	1.77	2.04
	50	16	5.30	1.99	2.30

Performance Data - Metric

KV15 15' (4,6 m) Nozzle (Black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	4,6	4,92	56	65
	2,07	**5,2**	**6,06**	**54**	**62**
	2,76	5,5	6,81	54	63
	3,45	5,8	7,57	54	62
180°	1,38	4,3	6,81	45	52
	2,07	**4,6**	**8,71**	**50**	**58**
	2,76	4,9	9,84	50	57
	3,45	5,5	10,60	42	49
270°	1,38	4,3	10,22	45	52
	2,07	**4,6**	**12,11**	**46**	**53**
	2,76	4,9	13,63	46	53
	3,45	5,5	15,14	40	46
360°	1,38	4,3	12,87	42	49
	2,07	**4,6**	**15,90**	**46**	**53**
	2,76	4,9	17,79	45	52
	3,45	4,9	20,06	51	58

Performance Data - U.S.

KV17 17' (5,2 m) Nozzle (Gray)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90°	20	18	1.70	2.02	2.33
	30	**18**	**1.80**	**2.14**	**2.47**
	40	19	2.00	2.13	2.46
	50	20	2.20	2.12	2.45
180°	20	17	1.90	1.27	1.46
	30	**18**	**2.40**	**1.43**	**1.65**
	40	19	2.60	1.39	1.60
	50	19	2.90	1.55	1.79
270°	20	16	2.90	1.45	1.68
	30	**17**	**3.40**	**1.51**	**1.74**
	40	18	4.00	1.58	1.83
	50	18	4.50	1.78	2.06
360°	20	15	3.50	1.50	1.73
	30	**17**	**4.40**	**1.47**	**1.69**
	40	17	4.90	1.63	1.88
	50	18	5.40	1.60	1.85

Performance Data - Metric

KV17 17' (5,2 m) Nozzle (Gray)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90°	1,38	5,5	6,44	51	59
	2,07	**5,5**	**6,81**	**54**	**63**
	2,76	5,8	7,57	54	62
	3,45	6,1	8,33	54	62
180°	1,38	5,2	7,19	32	37
	2,07	**5,5**	**9,08**	**36**	**42**
	2,76	5,8	9,84	35	41
	3,45	5,8	10,98	39	45
270°	1,38	4,9	10,98	37	43
	2,07	**5,2**	**12,87**	**38**	**44**
	2,76	5,5	15,14	40	46
	3,45	5,5	17,03	45	52
360°	1,38	4,6	13,25	38	44
	2,07	**5,2**	**16,66**	**37**	**43**
	2,76	5,2	18,55	41	48
	3,45	5,5	20,44	41	47

**Data represents test results in zero wind. Radius may be reduced with the radius reduction screw.*

Bold = recommended pressure of 30 PSI.

Fixed Pattern Nozzles

Male-threaded, female-threaded, and special patterns for system flexibility.

Features

- Four distances plus eight fixed patterns provide an array of system configurations
- Color-coded for easy identification

Models

FN-8
8' (2,4 m) Female Nozzle
Green

FN-10
10' (3,0 m) Female Nozzle
Blue

FN-12
12' (3,7 m) Female Nozzle
Brown

FN-15
15' (4,6 m) Female Nozzle
Black

FN-15CS
Center Strip, Female

FN-15ES
End Strip, Female

FN-15SS
Side Strip, Female

FN-15HL
High Low, Female

P12
12' (3,7 M) Male Nozzle
Brown

P15
15' (4,6 m) Male Nozzle
Black

P15CS
Center Strip, Male

P15ES
End Strip, Male

P15SS
Side Strip, Male

P15HL
High Low, Male

Performance Data - U.S.

FN-8 8' (2,4 m) Nozzle, Female (Green)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90° FN-8Q	20	6	0.21	2.25	2.59
	25	7	0.24	1.89	2.18
	30	**8**	**0.26**	**1.56**	**1.81**
180° FN-8H	20	6	0.42	2.25	2.59
	25	7	0.47	1.85	2.13
	30	**8**	**0.52**	**1.56**	**1.81**
270° FN-8TQ	20	6	0.63	2.25	2.59
	25	7	0.71	1.86	2.15
	30	**8**	**0.78**	**1.56**	**1.81**
360° FN-8F	20	6	0.86	2.30	2.66
	25	7	0.96	1.89	2.18
	30	**8**	**1.05**	**1.58**	**1.82**

Performance Data - Metric

FN-8 8' (2,4 m) Nozzle, Female (Green)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90° FN-8Q	1,4	1,8	0,80	57	66
	1,7	2,1	0,90	48	55
	2,1	2,4	1,00	40	46
180° FN-8H	1,4	1,8	1,60	57	66
	1,7	2,1	1,80	47	54
	2,1	2,4	2,00	40	46
270° FN-8TQ	1,4	1,8	2,40	57	66
	1,7	2,1	2,70	47	54
	2,1	2,4	3,00	40	46
360° FN-8F	1,4	1,8	3,30	58	67
	1,7	2,1	3,60	48	55
	2,1	2,4	4,00	40	46

Performance Data - U.S.

FN-10 10' (3 m) Nozzle, Female (Blue)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90° FN-10Q	20	8	0.33	1.99	2.29
	25	9	0.36	1.71	1.98
	30	**10**	**0.39**	**1.50**	**1.73**
180° FN-10H	20	8	0.65	1.96	2.26
	25	9	0.72	1.71	1.98
	30	**10**	**0.79**	**1.52**	**1.76**
270° FN-10TQ	20	8	0.98	1.97	2.27
	25	9	1.08	1.71	1.98
	30	**10**	**1.18**	**1.51**	**1.75**
360° FN-10F	20	8	1.03	1.55	1.79
	25	9	1.44	1.71	1.98
	30	**10**	**1.58**	**1.52**	**1.76**

Performance Data - Metric

FN-10 10' (3 m) Nozzle, Female (Blue)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90° FN-10Q	1,4	2,4	1,20	50	58
	1,7	2,7	1,40	43	50
	2,1	**3,1**	**1,50**	**38**	**44**
180° FN-10H	1,4	2,4	2,50	50	57
	1,7	2,7	2,70	43	50
	2,1	**3,1**	**3,00**	**39**	**45**
270° FN-10TQ	1,4	2,4	3,70	50	58
	1,7	2,7	4,10	43	50
	2,1	**3,1**	**4,50**	**38**	**44**
360° FN-10F	1,4	2,4	3,90	39	45
	1,7	2,7	5,50	43	50
	2,1	**3,1**	**6,00**	**39**	**45**

Performance Data - U.S.

FN-12 12' (3,7 m) Nozzle, Female (Brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90° FN-12Q	20	10	0.53	2.04	2.36
	25	11	0.60	1.91	2.20
	30	**12**	**0.65**	**1.74**	**2.01**
180° FN-12H	20	10	1.05	2.02	2.33
	25	11	1.20	1.91	2.20
	30	**12**	**1.30**	**1.74**	**2.01**
270° FN-12TQ	20	10	1.58	2.03	2.34
	25	11	1.80	1.91	2.20
	30	**12**	**1.95**	**1.74**	**2.01**
360° FN-12F	20	10	2.10	2.02	2.33
	25	12	2.40	1.91	2.20
	30	**12**	**2.60**	**1.74**	**2.01**

Performance Data - Metric

FN-12 12' (3,7 m) Nozzle, Female (Brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90° FN-12Q	1,4	3,1	1,51	52	60
	1,7	3,4	1,70	48	56
	2,1	**3,7**	**2,27**	**44**	**51**
180° FN-12H	1,4	3,1	2,27	51	59
	1,7	3,4	3,03	48	56
	2,1	**3,7**	**3,79**	**44**	**51**
270° FN-12TQ	1,4	3,1	3,60	51	59
	1,7	3,4	3,79	48	56
	2,1	**3,7**	**4,92**	**44**	**51**
360° FN-12F	1,4	3,1	6,06	51	59
	1,7	3,4	6,81	48	56
	2,1	**3,7**	**7,95**	**44**	**51**

Performance Data - U.S.

FN-15 15' (4,6 m) Nozzle, Female (Black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90° FN-15Q	20	12	0.75	2.01	2.32
	25	14	0.82	1.61	1.86
	30	**15**	**0.92**	**1.57**	**1.82**
180° FN-15H	20	12	1.50	2.01	2.32
	25	14	1.65	1.62	1.87
	30	**15**	**1.85**	**1.58**	**1.83**
270° FN-15TQ	20	12	2.25	2.01	2.32
	25	14	2.48	1.62	1.88
	30	**15**	**2.78**	**1.59**	**1.83**
360° FN-15F	20	12	3.00	2.01	2.32
	25	14	3.30	1.62	1.87
	30	**15**	**3.70**	**1.58**	**1.83**

Performance Data - Metric

FN-15 15' (4,6 m) Nozzle, Female (Black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90° FN-15Q	1,4	3,7	2,80	51	59
	1,7	4,3	3,10	41	47
	2,1	**4,6**	**3,50**	**40**	**46**
180° FN-15H	1,4	3,7	5,70	51	59
	1,7	4,3	6,20	41	47
	2,1	**4,6**	**7,00**	**40**	**46**
270° FN-15TQ	1,4	3,7	8,50	51	59
	1,7	4,3	9,40	41	48
	2,1	**4,6**	**10,50**	**40**	**46**
360° FN-15F	1,4	3,7	11,40	51	59
	1,7	4,3	12,50	41	47
	2,1	**4,6**	**14,00**	**40**	**46**

**Data represents test results in zero wind. Radius may be reduced with the radius reduction screw.*
Bold = recommended pressure of 30 PSI.

Performance Data - U.S.

P12 12' (3,7 m) Nozzle, Male (Brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90° P12Q	20	11	0.40	1.27	1.47
	25	12	0.45	1.20	1.39
	30	**13**	**0.50**	**1.13**	**1.36**
	40	14	0.60	1.18	1.38
180° P12H	20	11	0.60	0.95	1.10
	25	12	0.80	1.07	1.23
	30	**13**	**0.80**	**0.91**	**1.13**
	40	14	1.00	0.98	1.19
270° P12TQ	20	11	0.95	1.01	1.16
	25	12	1.00	0.89	1.03
	30	**13**	**1.10**	**0.84**	**0.98**
	40	14	1.30	0.85	0.95
360° P12F	20	11	1.60	1.27	1.47
	25	12	1.80	1.20	1.39
	30	**13**	**1.90**	**1.08**	**1.36**
	40	14	2.10	1.18	1.38

Performance Data - Metric

P12 12' (3,7 m) Nozzle, Male (Brown)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90° P12Q	1,4	3,4	1,51	32	37
	1,7	3,7	1,70	30	35
	2,8	**4,3**	**2,27**	**30**	**35**
	3,4	4,6	2,65	30	35
180° P12H	1,4	3,4	2,27	24	28
	1,7	3,7	3,03	27	31
	2,8	**4,3**	**3,79**	**25**	**29**
	3,4	4,6	4,54	26	30
270° P12TQ	1,4	3,4	3,60	26	29
	1,7	**3,7**	**3,79**	**23**	**26**
	2,8	4,3	4,92	22	25
	3,4	4,6	5,49	21	24
360° P12F	1,4	3,4	6,06	32	37
	1,7	3,7	6,81	30	35
	2,8	**4,3**	**7,95**	**30**	**35**
	3,4	4,6	10,6	30	35

Performance Data - U.S.

P15 15' (4,6 m) Nozzle, Male (Black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP in/hr	
	PSI	FEET	GPM	■	▲
90° P15Q	20	13	0.60	1.37	1.58
	25	14	0.75	1.47	1.70
	30	**16**	**0.90**	**1.35**	**1.56**
	40	17	1.10	1.47	1.69
180° P15H	20	13	1.20	1.37	1.58
	25	14	1.35	1.33	1.53
	30	**16**	**1.60**	**1.20**	**1.39**
	40	17	1.90	1.27	1.46
270° P15TQ	20	13	1.85	1.40	1.62
	25	14	2.10	1.37	1.59
	30	**16**	**2.70**	**1.35**	**1.56**
	40	17	3.10	1.38	1.59
360° P15F	20	13	2.80	1.56	1.84
	25	14	3.20	1.57	1.81
	30	**16**	**4.20**	**1.58**	**1.82**
	40	17	4.60	1.30	1.77

Performance Data - Metric

P15 15' (4,6 m) Nozzle, Male (Black)

ARC DEGREE	PRESSURE	RADIUS	FLOW	PRECIP mm/hr	
	BAR	METERS	L/M	■	▲
90° P15Q	1,4	4,0	2,27	35	40
	1,7	4,3	2,84	37	43
	2,8	**4,9**	**3,41**	**34**	**40**
	3,4	5,2	4,16	37	43
180° P15H	1,4	4,0	4,54	35	40
	1,7	4,3	5,11	34	39
	2,8	**4,9**	**6,06**	**30**	**35**
	3,4	5,2	7,19	32	37
270° P15TQ	1,4	3,4	7,00	36	41
	1,7	4,3	7,95	35	40
	2,8	**4,9**	**10,22**	**34**	**40**
	3,4	5,2	11,73	35	40
360° P15F	1,4	3,4	10,60	40	47
	1,7	4,3	12,11	40	46
	2,8	**4,9**	**15,90**	**40**	**46**
	3,4	5,2	17,41	33	45

Performance Data - U.S.

Special Patterns

NOZZLE PATTERN	NOZZLE Male # | Female#	PRESSURE PSI	W X L Feet	FLOW GPM
Center Strip	P15CS | FN-15cs	20	4 x 24	0.8
		30	4 x 30	1.0
End Strip	P15ES | FN-15Es	20	4 x 12	0.4
		30	4 x 15	0.5
Side Strip	P15SS | FN-15SS	20	4 x 28	1.1
		30	5 x 32	1.3
High Strip	P15HL | FN-5HL	20 High:	14 x 28	2.5
		Low:	4 x 28	
		30 High:	15 x 32	3.0

Performance Data - Metric

Special Patterns

NOZZLE PATTERN	NOZZLE Male # | Female#	PRESSURE BAR	W X L Meters	FLOW L/M
Center Strip	P15CS | FN-15cs	1,5	1,2 x 7,3	3,0
		2,0	1,2 x 9,1	3,8
End Strip	P15ES | FN-15Es	1,5	1,2 x 3,7	1,5
		2,0	1,2 x 4,6	1,9
Side Strip	P15SS | FN-15SS	1,5	1,2 x 8,5	4,2
		2,0	1,5 x 9,8	4,9
High Strip	P15HL | FN-5HL	1,5 High:	4,3 x 8,5	9,5
		Low:	1,2 x 8,5	
		2,0 High:	4,6 x 9,8	11,4

**Data represents test results in zero wind. Radius may be reduced with the radius reduction screw.*

Bold = recommended pressure of 30 PSI.

Drip Irrigation

Efficient and trouble-free operation for non-turf areas.

Features

- Install Above or Below Grade

  Dripline:

  - Pressure-compensating Emitters – Ensure uniform output across the entire length of run
  - In-line Emitter Check Valves – Prevents drainage from the dripline when water pressure drops below 2.5 PSI, protecting against the siphoning of small sediment and soil particles into the drip emitter – ideal for sub-surface installation
  - Available in Two Flow Rates and 2 spacing sizes – Provides maximum design flexibility in a variety of applications

- Drip Control Zone Kit – Pre-assembled for quick installation, heavy duty, corrosion resistant, 150 mesh stainless steel filter

Specifications

- Flow rates: .58 GPH (2,3 L/H) color code - orange, 1 GPH (3,8 L/H) color code - gray
- Operating pressure: 12 – 50 PSI (0,8 – 3,5 bar)
- Check valve sealing pressure: 2.5 PSI (0,17 bar)
- Check valve opening pressure: 4.3 PSI (0,3 bar)
- Dripline color: brown
- Size: 1/2" (0.57" ID x 0.67" OD) (14,5 mm ID x 17 mm OD)
- Spacing: 12" or 18" (30,5 cm or 45,7 cm)
- Minimum bending radius: 1' (0,3 m)
- Filter requirement: minimum of 150 mesh

DRIP CONTROL ZONE KIT

- Pressure regulation 30 or 40 PSI (2,1 or 2,8 bar)
- Flow: 1 – 35 GPM (1,9 – 94,6 LPM)
- Operating pressure: 10 – 120 PSI (0,7 – 8,3 bar)
- Solenoid: 24V AC
- Inlet: 1" (2,5 cm) female thread NPT
- Outlet: 1" (2,5 cm) female thread NPT
- Dimensions: Height: 6 1/2" (16,5 cm), Width: 3" (7,6 cm), Length: 14 1/2" (36,8 cm)

Models

KA5-112P-CV	0.67" (17 mm) 0.58 GPH (2,2 LPH), 100' (30,5 m) CV drip line coil w/12" (0,30 m) spacing, 0.57" ID x .67" OD (14,5 mm ID x 17 mm OD), brown
KA5-212P-CV	0.67" (17 mm) 0.58 GPH (2,2 LPH), 250' (76,2 m) CV drip line coil w/12" (0,30 m) spacing, 0.57" ID x 0.67" OD (14,5 mm ID x 17 mm OD), brown
KA5-512P-CV	0.67" (17 mm) 0.58 GPH (2,2 LPH), 500' (152,4 m) CV drip line coil w/12" (0,30 m) spacing, 0.57" ID x 0.67" OD (14,5 mm ID x 17 mm OD), brown
KA5-2112P-CV	0.67" (17 mm) 1.00 GPH (3,8 LPH), 100' (30,5 m) CV drip line coil w/ 12" (0,30 m) spacing, 0.57" ID x 0.67" OD (14,5 mm ID x 17 mm OD), brown
KA5-2212P-CV	.67" (17 mm) 1.00 GPH (3,8 LPH), 250' (76,2 m) CV drip line coil w/ 12" (0,30 m) spacing, 0.57" ID x .67" OD (14,5 mm ID x 17 mm OD), brown
KA5-2512P-CV	0.67" (17 mm) 1.00 GPH (3,8 LPH), 500' (152,4 m) CV drip line coil w/ 12" (0,30 m) spacing, 0.57" ID x 0.67" OD (14,5 mm ID x 17 mm OD), brown
KA1-118P-CV	0.67" (17 mm) 1 GPH (3,8 LPH), 100' (30,5 m) CV drip line coil w/18" 0,45 m) spacing, 0.57" ID x 0.67" OD (14,5 mm ID x 17 mm OD), brown
KA1-218P-CV	.67" (17 mm) 1 GPH (3,8 LPH), 250' (76,2 m) CV drip line coil w/18" (0,45 m) spacing, 0.57" ID x 0.67" OD (14,5 mm ID x 17 mm OD), brown
KA1-518P-CV	0.67" (17 mm) 1.00 GPH (3,8 LPH), 500' (152,4 m) CV drip line coil w/ 18" (0,45 m) spacing, .57" ID x .67" OD (14,5 mm ID x 17 mm OD), brown
K15-040	0.67" (17 mm) barb coupling
K15-041	0.67" (17 mm) tee
K15-042	0.67" (17 mm) elbow
K15-043	0.67" (17 mm) barb x 1/2" (1,27 cm) NPT Tee
K15-046	0.67" (17 mm) barb x 1/2" (1,27 cm) NPT Adapter
K18-028	1/2" (1,27 cm) Air/Vacuum Relief Valve
KP11-155	3/4" (1,9 cm) plastic filter with 155 m stainless steel screen & flush cap
KP11-374	1" (2,5 cm) plastic LP 1 Y-filter stainless steel screen 150 mesh
KP7001-FPR30-KIT	Drip control zone kit with 30 PSI pressure regulator and filter
KP7001-FPR40-KIT	Drip control zone kit with 40 PSI pressure regulator and filter
KPR8030	1" (2,5 cm) pressure regulator, 30 PSI
KPR8040	1" (2,5 cm) pressure regulator, 40 PSI

Bubblers

Pressure compensating bubblers are ideal for non-turf areas.

Features

- Pressure compensation ensures consistent flow rates over different pressures
- Pressure compensating bubblers are ideal for tree and large shrub watering

Specifications

- Operating Pressure: 20 – 50 PSI (1,4 – 3,5 bar)
- Spacing: 1' – 3' (0,3 m – 0,9 m)
- Umbrella Pattern

Fast Facts

ALL	INLET: 1/2" (1,3 CM) FEMALE THREAD
TB-025	Flow Rate: 0.25 GPM (0,06 m3/h; 0,95 l/m)
TB-05	Flow Rate: 0.5 GPM (0,114 m3/h; 1,9 l/m)
TB-10	Flow Rate: 1.0 GPM (0,227 m3/h; 3,8 l/m)
TB-20	Flow Rate: 2.0 GPM (0,454 m3/h; 7,6 l/m)
TB-ADJ	Flow Rate: 0.1 – 4.5 GPM (0,31 – 1,34 m3/h; 5 – 22 l/m)

Models

TB-025 0.25 GPM (0,95 LPM) Bubbler, Pressure Compensating
TB-05 0.5 GPM (1,9 LPM) Bubbler, Pressure Compensating
TB-10 1.0 GPM (3,8 LPM) Bubbler, Pressure Compensating
TB-20 2.0 GPM (7,6 LPM) Bubbler, Pressure Compensating
TB-ADJ Adjustable Bubbler

VALVES

Valve | Comparison Chart

Versatile and heavy-duty, ProSeries valves deliver long life and reliable performance. Offering a wide array of features and benefits, the K-Rain® line is manufactured with the highest standards and provides exceptional functionality.

	ProSeries 100		ProSeries 150			ProSeries 200		
Item Number	7075	7001	7101	7115	7102	7201	7215	7202
Specifications								
Size	3/4"	1"	1"	1 1/2"	2"	1"	1 1/2"	2"
Flow range (GPM)	1-20	5-30	5-30	20-80	20-120	5-30	20-100	20-150
Pressure range (PSI)	20-150	20-150	10-150	20-150	20-150	6-200	6-200	6-200
Features								
Flow control	optional	optional	optional	●	●	●	●	●
Tilt diaphragm/ piston assembly	●	●						
Manual external bleed screw	●	●	●	●	●			
Manual internal bleed through solenoid			●	●	●	●	●	●
Self-cleaning metering screen	●	●						
Removable metering pin			●	●	●			
Angle/Globe Option			●	●	●			
Glass-filled nylon construction and reinforced rubber diaphragm						●	●	●
Warranty	7 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years

ProSeries 100 Valves

A straight-through flow pattern reduces the risk of trapped debris.

Features

- Heavy Duty, Corrosion and UV Resistant PVC Construction – Increases the life of the valve
- Tilt Diaphragm/Piston Assembly – Allows for a straight flow path of water, increasing the flow rate while reducing friction loss
- Debris Tolerant Design – Offers flexibility for use in potable or non-potable applications
- Manual External Bleed Screw – Provides for manual operation in system start up and easy valve maintenance
- Flow Control with Removable Handle – Delivers precise flow adjustment to the zone and allows you to remove the handle to prevent tampering (Except NFC)
- Self Cleaning Screen – Screen is in flow path of water for self-cleaning action during operation

Electrical Specifications

- Solenoid: 24V AC 60 Hz
- Inrush Current: .43 Amps
- Holding Current: .25 Amps

Accessories

See page 59

Fast Facts

7075 (3/4") Models	Height:	4" (10,2 cm)
	Width:	3" (7,6 cm)
	Length:	4 1/2" (11,4 cm)
7001 (1") Models	Height:	4" (10,2 cm)
	Width:	3" (7,6 cm)
	Length:	5 1/4" (13,3 cm)

Operating Specifications

U.S.

Pressure Loss in PSI

FLOW GPM	3/4"	1"
1	4.0	
5	5.0	2.2
10	6.0	3.0
15	11.0	3.5
20	14.0	4.0
30		5.0

Pressure Range	
3/4"	1"
20 - 150 PSI	

Metric

Pressure Loss in bar

FLOW LPM	3/4"	1"
4	0,28	
19	0,34	0,15
38	0,41	0,21
57	0,76	0,24
76	0,97	,28
114		0,34

Pressure Range	
3/4"	1"
1,4 - 10,3 bar	

Models

7075	3/4" Female NPT Thread
7075-NFC	3/4" Female NPT Thread, No Flow Control
7075-SL	3/4" Female Slip
7075-SL-NFC	3/4" Female Slip, No Flow Control
7075-BSP	3/4" Female BSP Thread
7075-BSP-NFC	3/4" Female BSP Thread, No Flow Control
7001	1" Female NPT Thread x Female NPT Thread
7001-SL	1" Female Slip
7001-BSP	1" Female BSP Thread
7001-NFC	1" Female NPT Thread No Flow Control
7001-SL-NFC	1" Female Slip, No Flow Control
7001-BSP-NFC	1" Female BSP Thread, No Flow Control
7001-MXB	1" Male NPT Thread x 1" Male Barb
7001-MXM	1" Male NPT Thread x 1" Male Thread
7001-BSP-MXM	1" Male BSP Thread x 1" Male BSP Thread
7001-MXM-NFC	1" Male NPT Thread x 1" Male Thread, No Flow Control
7001-BSP-MXM-NFC	1" Male BSP Thread x 1" Male BSP Thread, No Flow Control
7001-MXB-NFC	1" Male NPT Thread x 1" Male Barb, No Flow Control

How to Specify 9 Volt solenoid

MODELS	OPTIONS
7001	-9VDC

Examples: 7001-SL-9VDC

- **Flow Through**
  The unique tilted diaphragm creates a better flow path than traditional globe style electric valves by decreasing friction loss and increasing flow rate.

- **Self-Cleaning Screen**
  The straight flow path allows debris to move through and the water path flow cleans the diaphragm filter screen. This provides long life in applications using well or lake water.

- **Manual Flow Control**
  Precisely adjust flow to the zone. Removable handle prevents tampering.

- **Versatility**
  These 1" models can accept 1" PVC inside or 1 1/4" PVC fitting or bell end pipe outside
  - 7001
  - 7001-BSP
  - 7001-NFC
  - 7001-SL-NFC
  - 7001-BSP-NFC

WATCH VIDEO

ProSeries 150 Valves

Heavy Duty, Corrosion and UV Resistant PVC Construction.

Features

- Manual External Bleed Screw – Provides for manual operation in system start up
- Flow Control Option – For precise flow adjustment
- Removable Metering Pin – easily clean metering pin without disassembling

1-1/2" AND 2" MODELS

- Removable Inlet Cap – Allows for easy conversion from globe to angle-style valve
- Heavy Duty Diaphragm – Unique design improves durability of diaphragm
- Manual Internal Bleed through Solenoid – Provides for manual operation without discharging water outside the valve

JAR-TOP MODELS

- Threaded Jar-Top – Allows for quick removal of the cap for easy servicing after installation
- Glass-Filled Nylon Screw Cap – Increased durability
- Manual Internal Bleed through Solenoid – Provides for manual operation without discharging water outside the valve

Models

7101	1" Female NPT Thread
7101-SL	1" Female Slip
7101-BSP	1" Female BSP Thread
7101-BSP-FC	1" Female BSP Thread, with Flow Control
7101-FC	1" Female NPT Thread, with Flow Control
7101-SL-FC	1" Female Slip with Flow Control
7101-J	1" Female NPT Thread Jar-Top
7101-J-SL	1" Female Slip Jar-Top
7101-J-BSP	1" Female BSP Thread Jar-Top
7101-J-MXB	1" Male NPT Thread x 1" Barb Jar-Top
7101-ANGLE	1" Female NPT Thread
7101-ANGLE-FC	1" Female NPT Thread, with Flow Control
7101-ANGLE-SL	1" Female Slip
7101-ANGLE-SL-FC	1" Female Slip with Flow Control
7101-ANGLE-BSP	1" Female BSP Thread
7101-ANGLE-BSP-FC	1" Female BSP Thread, with Flow Control
7115	1 1/2" Female NPT Thread
7115-BSP	1 1/2" Female BSP Thread
7102	2" Female NPT Thread
7102-BSP	2" Female BSP Thread

How to Specify 9 Volt solenoid

MODELS	OPTIONS
7101	-9VDC

Examples: 7101-SL-9VDC

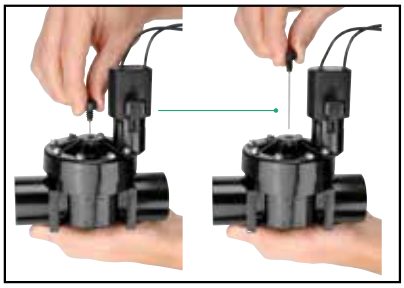
Accessories See page 59

Fast Facts

7101 (1") Models	Height:	5 1/4" (13,3 cm)
	Width:	3 1/8" (7,95 cm)
	Length:	5" (12,7 cm)
7101 (1") with Flow Control	Height:	5 7/8" (14,9 cm)
	Width:	3 1/8" (7,95 cm)
	Length:	5" (12,7 cm)
7101 (1") Jar Top Models	Height:	5 1/4" (13,3 cm)
	Width:	3" (7,6 cm)
	Length:	4 3/8" (11,1 cm)
7101-Angle (1") Models	Height:	5 1/2" (13,97 cm)
	Width:	3 1/8" (7,95 cm)
	Length:	4" (10,6 cm)
7101-Angle-FC (1") with Flow Control	Height:	6 3/4" (17,1 cm)
	Width:	3 1/8" (7,95 cm)
	Length:	4" (10,6 cm)
7115 (1.5") Models	Height:	8" (20,3 cm)
	Width:	4 1/4" (10,8 cm)
	Length:	5 1/2" (14 cm)
7102 (2") Models	Height:	8 7/8" (22,6 cm)
	Width:	4 7/8" (12,4 cm)
	Length:	6 1/3" (16,1 cm)

Manual External Bleed Screw

The 1", 1 1/2" and 2" models feature a removable external bleed screw and metering pin to simplify cleaning and maintenance. With the External Bleed Screw, manual operation during start up is easy.



Electrical Specifications

- Standard Solenoid: 24V AC 60 Hz
- Inrush Current: 0.43 Amps
- Holding Current: 0.25 Amps

System Flexibility

Removable inlet cap allows for easy conversion from globe to angle-style valve.

Operating Specifications

U.S.

Pressure Loss in PSI

Flow GPM	1″ Globe	1″ Jar Top	1″ Angle	1 1/2" Globe	1 1/2" Angle	2″ Globe	2″ Angle
5	2.9	3.3	2.5				
10	2.1	3.9	2.1				
15	1.8	2.9	2.1				
20	3.0	3.2	2.2	3.0	2.7	2.2	1.9
30	5.0	6.1	4.1	2.6	2.2	1.9	1.9
40				2.3	1.9	1.7	1.7
50				2.9	2.2	1.5	1.5
60				4.1	3.0	1.6	1.5
80				5.5	4.4	2.9	2.1
100						4.8	3.2
120						6.2	4.6

Pressure Range

1″ Globe	1″ Jar Top	1″ Angle	1 1/2" Globe	1 1/2" Angle	2″ Globe	2″ Angle
10-150 PSI			20-150 PSI			

Metric

Pressure Loss in bar

Flow LPM	1″ Globe	1″ Jar Top	1″ Angle	1 1/2" Globe	1 1/2" Angle	2″ Globe	2″ Angle
18	0,20	0,23	0,17				
38	0,14	0,27	0,14				
57	0,12	0,20	0,14				
76	0,21	0,22	0,15	0,21	0,19	0,15	0,13
114	0,34	0,42	0,28	0,18	0,15	0,13	0,13
151				0,16	0,13	0,12	0,12
189				0,20	0,15	0,10	0,10
227				0,28	0,21	0,11	0,10
303				0,38	0,30	0,20	0,14
379					0,33	0,33	0,22
454					0,43	0,43	0,32

Pressure Range

1″ Globe	1″ Jar Top	1″ Angle	1 1/2" Globe	1 1/2" Angle	2″ Globe	2″ Angle
0,7-10,3 bar			1,4-10,3 bar			

ProSeries 200 Valves

A durable, feature-packed electric valve engineered for systems up to 200 PSI.

Features

- Durable Glass-filled Nylon Construction and Reinforced Rubber Diaphragm – Ensures long life and reliable performance
- Flow Control – Adjust water flow as needed
- Water Flow Direction Indicator – Ensures proper installation every time
- Electric or Manual Operation

Models

7201 1" Female NPT Thread
7215 1 1/2" Female NPT Thread
7202 2" Female NPT Thread
7203-BSP 3" Female BSP Thread

How to Specify

MODELS	OPTIONS
7201	- BSP

Examples: 7201-BSP

Electrical Specifications

- Standard solenoid: 24V AC 50/60 Hz
- Inrush current: 0.43 amp
- Holding current: 0.25 amp

Fast Facts

7201 (1") Models	Height:	5 1/4" (13,3 cm)
	Width:	3 1/8" (7,9 cm)
	Length:	5 1/8" (13,0 cm)
7201 (1") Jar Top Models	Height:	5 3/4" (14,6 cm)
	Width:	3 1/8" (8 cm)
	Length:	4 3/4" (12,0 cm)
7215 (1.5") Models	Height:	6 3/4" (17,2 cm)
	Width:	4 1/4" (10,8 cm)
	Length:	6 1/4" (15,9 cm)
7202 (2") Models	Height:	7" (17,8 cm)
	Width:	4 1/4" (10,8 cm)
	Length:	7 1/4" (18,4 cm)

Accessories

See page 59

Operating Specifications

FLOW GPM	ProSeries 200 Pressure Loss in PSI - U.S. 1" Globe	1 1/2" Globe	2" Globe
5	0.4		
10	1.2		
15	2.5		
20	4.7	2.7	2.9
25	7.3	3	2.5
30	9.7	2.9	2.2
40		2.9	2.2
50		3.4	2.8
60		4.2	3.4
80		7.6	5.5
100		12.9	7.8
120			11.7
150			20
	Pressure Range		
	1" Globe	1 1/2" Globe	2" Globe
	6-200 PSI		

FLOW LPM	ProSeries 200 Pressure Loss in bar - Metric 1" Globe	1 1/2" Globe	2" Globe
19	0,03		
38	0,08		
57	0,17		
76	0,32	0,19	0,20
95	0,50	0,21	0,18
114	0,67	0,20	0,15
151		0,20	0,15
189		0,24	0,19
227		0,29	0,23
303		0,52	0,38
379		0,89	0,54
454			0,80
568			1,38
	Pressure Range		
	1" Globe	1 1/2" Globe	2" Globe
	0,4-13,8 bar		

Valve Accessories

Models

SOLENOIDS AND ADAPTERS

P3008113	24V AC Solenoid
P3008114	9V DC Latching Solenoid
P3004750	Replacement K-Rain®® Kit: 24V solenoid with Rain Bird® & Hunter® adapters (1 each)
P3004758	Replacement K-Rain®® Kit: 9V solenoid with Rain Bird® & Hunter® adapters (1 each)
P3004760	Rain Bird® & Hunter® adapter for K-Rain®® 24V or 9V solenoid (1 ea)
P3004770	K-Rain® 24V or 9V solenoid adapters for Rain Bird® (5 pack)
P3004780	K-Rain® 24V or 9V solenoid adapters for Hunter® (5 pack)
P3004810	24V Solenoid, 1 Signature Adapter
P3004815	9V Solenoid, 1 Signature Adapter
P3004820	5 pack Signature Adapters

24V AC Solenoid

9V DC Latching Solenoid

Rain Bird® Adapter

Hunter® Adapter

Signature Adapter

VALVE BOXES

VB60	K-Rain® Round Valve Box 6" (Box Black, Lid Green)
VB101	K-Rain® Round Valve Box 10" (Box Green, Lid Green)
VB121	K-Rain® Valve Box 12"x 17"x 12" (Box Green, Lid Green)
VB121-X	K-Rain® Valve Extension 12"x 17"x 6" (Box Green, Lid Green)
VB151	K-Rain® Valve Box 15"x 21"x 12" (Box Green, Lid Green)
VB151-X	K-Rain® Valve Extension 15"x 21"x 6" (Box Green, Lid Green)
VB103-RCW	K-Rain® Round Valve Box 10" (Box Purple, Lid Purple)
VB123-RCW	K-Rain® Valve Box 12"x 17"x 12" (Box Purple, Lid Purple)
VB123-X-RCW	K-Rain® Valve Extension 15"x 21"x 6" (Box Purple, Lid Purple)
VB153-RCW	K-Rain® RCW - Valve Box Extension 12"x 17"x 6" (Box Purple, Lid Purple)
VB153-X-RCW	K-Rain® Valve Extension 15"x 21"x 6" (Box Purple, Lid Purple)

K-Rain® Round Valve Box

K-Rain® Rectangular Valve Box

K-Rain® Rectangular Valve Box RCW

CONTROLLERS

Controller | Comparison Chart

K-Rain® offers a full range of controllers to meet the needs of any irrigation project. From the simplest timer to Wi-Fi, Bluetooth, or the most advanced 2-wire decoder controller, K-Rain® controllers are recognized as feature-packed yet easy to program.

	SiteMaster	PRO EX 2.0	PRO-LC	K-Rain® BLUE®	RPS™46
Controller Type	2-Wire Decoder	Modular Wi-Fi Ready	Conventional Wi-Fi Ready	Bluetooth Battery	Mini
Specifications					
Stations/zones	1 to 99	Up to 28	4, 8, 12	1, 2, 4	4, 6
Programs	6	3	3, 6*	6	4
Start times per program	6	4	4	8	4
Features					
Hand-held remote control compatible		●		smart device	
App controlled		with Wi-Fi option	with Wi-Fi option	●	
Wi-Fi capability		optional	optional		
Full program display	●	●	●	In app	
Backlit display	●	●			
Seasonal adjust	●	●	●	●	●
Buried valve locator		●	●		
Flow sensor ready	●	●			
Rain/freeze sensor ready	●	●	●	●	●
Weather station ready	●	with Wi-Fi option	with Wi-Fi option		
Permanent memory	●	●	●	●	
Max number of stations running simultaneously	12	1	1	1	1
Station delay	●	●	●		
Pump/MV programmable	Up to 5	●	●		●
Geo-locate function				●	
Battery Backup	●	●	●	●	●
Customizable	●	●	●		
Warranty	3 years	3 years	3 years	3 years	3 years

*When Bridge WiFi added

SiteMaster

2-Wire decoder controller.

Features

- Number of stations: Up to 99
- Weather station capable
- Connect up to 2 hard-wired flow meters
- Upgradeable to internet mode by adding the 3404 Network Module to be the interface between your router and the SiteMaster controller
- Rain sensor and rain/freeze sensor ready
- 6 independent programs with 6 start times each
- Full on-screen keyboard makes naming and programming easy and intuitive
- Advanced diagnostics include interactive fault log, decoder signal strength/status
- Patented Full Program Display – One screen shows watering days, number of start times, number of stations and special programming
- Two individually-fused wire lines with two independent wire paths per line
- Special features include seasonal adjust, station/zone grouping, program backup, and restore
- Station delay/overlap and pump pressurization allows dual operation and pressurization for each of 5 separate pump start locations
- Vandal-resistant lockable housing
- 2 independent transformers - One for the program control panel and one for the 2-wire path

Fast Facts

3400	Height:	11.91" (30,3 cm)
	Width:	15 1/2" (39,2 cm)
	Depth:	6 1/2" (16,33 cm)
3420	Height:	16" (41,0 cm)
	Width:	18 1/2" (47,0 cm)
	Depth:	9 1/4" (23,5 cm)
3421	Height:	38" (96,5 cm)
	Width:	16 1/2" (41,9 cm)
	Depth:	17 1/4" (43,8 cm)

Specifications

OPERATING SPECIFICATIONS

- Station Run Times: 1 second to 9:59:59
  Programs A, B, C, D, E, & F
- Start Times: 6 per program
- Watering Schedule: 7 Day Calendar (any day of the week), odd/even days, interval watering up to 31 days
- Operating Temperature: 0°–140° F (18°–60° C)
- Zone Capacity: 99 zones
- Zone Groups - Up to 12 zones per group (A and B total)
- Pump Start Requirements: Pump Starts wired directly to the controller require a K-Rain® 1520 or 1510 mini coil power relay. Remote pump start relays on the 2-wire path require the K-Rain® 3410 Optical Pump Start Relay in conjunction with a K-Rain® 1520 or 1510 mini coil power relay

ELECTRICAL SPECIFICATIONS

- 2-Wire transformer; Input: 120/240 50/60 Hz
  Max Output: 27 VAC 100VA 3.7 AMP
- Control Panel Transformer; Input: 120/240 50/60 Hz
  Max Output: 24 VAC 40VA 1.71 AMP
- Battery: 2032 Coin Cell (included)
  9V alkaline battery (optional, not included)

Models

3400	110 VAC 2-wire decoder controller
3400-220	220 VAC 2-wire decoder controller
3420	110 VAC 2-wire decoder controller in stainless steel cabinet
3420-220	220 VAC 2-wire decoder controller in stainless steel cabinet
3421	110 VAC 2-wire decoder controller on stainless steel pedestal
3421-220	220 VAC 2-wire decoder controller on stainless steel pedestal

*Above models include 3403 2-wire module

Accessories

See page 71

WATCH VIDEO

PRO EX 2.0

Modular Irrigation Controller.

Features

- Wi-Fi capable – Syncs with Wi-Fi to allow functionality through a smartphone, tablet or web browser. Weather IQ with adjustable limits. Remote access and alerts*
- Expandable up to 28 stations. Add hot-swappable 4 and 14 station expansion modules and run 4, 8, 12, 14, 16, 18, 22 or 28 stations
- Patented Full Program Display – One screen shows watering days, number of start times, number of stations and special programming
- Flow Sensor Ready – Connects directly. Has high/low flow abort settings and provides flow data capture up to 7 days on device and full history on web browser when configured as a Wi-Fi controller
- Rain sensor and rain/freeze sensor ready
- RF Module Connector – Allows for optional installation of wireless accessories: Handheld remote, wireless rain sensor and Wi-Fi hub
- Diagnostic Circuit Breaker – Identifies and isolates stations with valve or wiring problems (shorts, faults, valve location) while remaining program continues
- Advanced Diagnostics – Visual and/or audible alerts when programming errors or other conditions have been detected and are preventing operation
- Station Delay/Overlap Programming – Additional time between stations or dual operation for issues like well recovery, slow closing valves and water hammer
- Large Backlit LCD Screen – Best in class visualization for all installations
- Permanent Memory – Non-volatile memory saves program during power outages
- Removable Mid-Box - Can be programmed while disconnected from enclosure
- Buried Valve Locate Feature – Helps locate buried valves in field
- Sensor Bypass Switch – Global override of active sensor for all stations
- Master Valve/Pump Start Ready – Programming for individual station(s) operation as needed

* When Equipped with Wi-Fi kit

WATCH VIDEO

K RAIN PRO EX

DOWNLOAD APP IOS

DOWNLOAD APP ANDROID

- Default Programming – Allows program to be saved and recalled without having to reprogram
- Permanent Day Off – Set any day of the week, regardless of programming, as a non-watering day
- Seasonal Adjust – Quick, easy global adjustment of watering times from 10-200% conserves water
- Built-in Level – Makes leveling the unit easy during install

Fast Facts

Height:	7 3/4" (19,6 cm)
Width:	10" (25,4 cm)
Depth:	5" (12,7 cm)

Specifications

OPERATING SPECIFICATIONS

- Station Run Times:
  1 second to 6 hours for all stations
- Number of Programs: 3
- Number of Automatic Start Times:
  4 per program
- Program Watering Schedules:
  Custom (day of the week),
  Interval (1-31 days),
  Odd (odd calendar days),
  Even (even calendar days)

ELECTRICAL SPECIFICATIONS

- Power Input: 110V AC, 50/60Hz,
  240V AC, 50/60Hz
- Power Output: 24V AC 1.25Amp - Outdoor
  24V AC 1.0Amp - Indoor
- Power Backup:
  - Lithium coin-cell battery maintains time and date
  - 4 AAA batteries allow for mid-box programming

Wi-Fi kit shown

PRO EX 2.0

Modular irrigation controller.

Models

INDOOR MODELS

3202ID	PRO EX 2.0 4 station indoor modular controller, 110V AC plug pack transformer
3202ID-220	PRO EX 2.0 4 station indoor modular controller, 220V AC plug pack transformer
3202ID-WiFi-KIT	PRO EX 2.0 Wi-Fi enabled 4 station indoor modular controller, Wi-Fi hub, RF module, 110V AC plug pack transformer.
3202ID-220-WiFi-KIT	PRO EX 2.0 Wi-Fi enabled 4 station indoor modular controller, Wi-Fi hub, RF module, 220V AC plug pack transformer

OUTDOOR MODELS

3202	PRO EX 2.0 4 station outdoor modular controller, 110 AC internal transformer
3202-P	PRO EX 2.0 4 station indoor modular controller, with pigtail power cord, 110V AC internal transformer
3202-220	PRO EX 2.0, 4 station outdoor modular controller, 220 VAC internal transformer
3202-WiFi-KIT	PRO EX 2.0 Wi-Fi enabled 4 station outdoor modular controller, Wi-Fi hub, RF module
3202-P-WiFi-KIT	PRO EX 2.0 Wi-Fi enabled 4 station outdoor modular controller, with pigtail power cord, Wi-Fi hub, RF module
3202-220-WiFi-KIT	PRO EX 2.0 Wi-Fi enabled 4 station outdoor modular controller, Wi-Fi hub, RF module, 220V AC plug pack transformer

PRO-LC

Feature-packed, user friendly, and a Wi-Fi-Capable controller.

Features

- Number of stations: 4, 8, or 12
- Patented full program display feature shows days, start times, number of stations and special programming
- Easy to follow programming
- Large LCD display
- Wi-Fi requires the BRIDGE Wi-Fi Module, sold separately
- Rain sensor and rain/freeze sensor ready
- Seasonal Adjust – Quick, easy global adjustment of watering times from 10-200% conserves water
- Buried valve locator
- Built-in Level – Makes leveling the unit easy

Specifications

OPERATING SPECIFICATIONS

- Station Run Times: 1 minute to 6 hours
- Number of Programs: 3 (6 with Wi-Fi)
- Number of Automatic Start Times: 4 per program
- Program Watering Schedules:
  - Odd (odd calendar days)
  - Even (even calendar days)
  - Custom (day of the week)
  - Interval 1-31 days

ELECTRICAL SPECIFICATIONS

- Power Input:
  110V AC, 60Hz
  240V AC, 50Hz
- Power Output: 24V AC 1.0Amp
- Power Backup: Lithium coin-cell battery maintains time and date during primary power outages

Fast Facts

Height:	7" (17,8 cm)
Width:	7" (17,8 cm)
Depth:	3 1/2" (8,9 cm)

Models

OUTDOOR MODELS

3104W	4 station, 110V AC internal transformer
3104W-220	4 station, 220V AC internal transformer
3108W	8 station, 110V AC internal transformer
3108W-220	8 station, 220V AC internal transformer
3112W	12 station, 110V AC internal transformer
3112W-220	12 station, 220V AC internal transformer

INDOOR MODELS

3104WID-220	4 station, 220V AC plug pack transformer
3108WID-220	8 station, 220V AC plug pack transformer
3112WID-220	12 station, 220V AC plug pack transformer

ACCESSORIES

3100-BRIDGE	BRIDGE Wi-Fi Module

Bridge
Wi-Fi Module

WATCH VIDEOS

Basic manual programming

Advanced manual programming

Wi-Fi Irrigation Controller setup for homeowners

Wi-FI Irrigation controller setup for contractors

RPS™ 46

The easiest to use mini irrigation controller.

Features

- 4 & 6 Station Models – Perfect for residential lawn applications
- 4 Fully Independent Programs – Allowing up to 4 starts per program. Maximum 16 starts per day
- Seasonal Adjust – Quick, easy, global adjustment of watering times from 10-200% conserves water
- Rain sensor and rain/freeze sensor ready
- Flexible Manual Operation – Run a program, run a station, or test system
- Battery Back-Up – Saves program during power outages
- Indoor Models with External Transformer & Plug

Fast Facts

Height:	5 3/4" (14,5 cm)
Width:	4 1/2" (11,43 cm)
Depth:	1 3/4" (4,3 cm)

Specifications

OPERATING SPECIFICATIONS

- Station Run Times: 1 min. to 12 hrs. 59 min.
- Number of Programs: 4
- Number of Automatic Start Times: 4 per program
- Program Watering Schedules: 7 day calendar with individual day selection, 1 to 15 day interval, or ODD/EVEN day watering
- Master Valve/pump start terminal

ELECTRICAL SPECIFICATIONS

- Power Input: 110V AC, 50/60Hz, 240V AC, 50/60Hz
- Power Output: 24V AC, 1.0 AMP
- To Solenoid Valve: 24V AC, 0.5 AMPS max
- Overload protection: Standard 20mm 1.0 AMP fuse
- Power Failure: 9 Volt standard alkaline battery maintains clock and program up to 2 week

Models

3504	4 Station, 110V Plug Pack Transformer
3504-220	4 Station, 220V Plug Pack Transformer
3506	6 Station, 110V Plug Pack Transformer
3506-220	6 Station, 220V Plug Pack Transformer

Accessories

See page 71

K-Rain® BLUE®

Bluetooth battery powered controller.

Features

- Number of stations: 1, 2, and 4
- Ideal for areas where AC power is unavailable
- Change controller settings via smartphone, tablet or web browser
- Manage hundreds of controllers from one easy app
- Map feature – see every controller on a map
- CrewView™ feature allows program visibility anywhere
- Battery replacement indicator
- Rain sensor and rain/freeze sensor ready – Allows automated operation to be controlled by sensor
- IP68 certified fully waterproof enclosure installs right in the valve box
- Molded out of UV resistant, high impact ABS resin
- Ideal for isolated/remote valve boxes where running power is expensive or difficult
- Full virtual back up – back up program information & preferences to the cloud
- Seasonal Adjust – Quick, easy, global adjustment of watering times from 10-200% conserves water
- Manually start, stop or suspend your controller(s) from up to 35' away
- Add a passcode lock to each controller for added security

Fast Facts

Height:	2 1/8" (5,5 cm)
Width:	5 1/2" (14 cm)
Depth:	3 1/2" (9 cm)

Specifications

OPERATING SPECIFICATIONS

- 1, 2 and 4 stations
- 6 programs, 8 start times per program
- Bluetooth range; 35' (10 m)

ELECTRICAL SPECIFICATIONS

- Works with 9V DC latching solenoids
- Maximum distance between the timer and solenoid is 98' (30 m) with 18 AWG (.05" or 1,55 mm^2)

Models

BLUE-1	1 Station
BLUE-2	2 Station
BLUE-4	4 Station

Rain Sensor

Turn your irrigation controller into an expert water manager.

Features

UNIVERSAL RAIN SENSOR RECEIVER

- Flexibility - Allows a K-Rain® Wireless Rain/Freeze Sensor to be paired with any manufacturer's rain sensor terminal equipped controller
- Simplicity - Provides the advantage of extremely quick, easy installation and programming, along with simple pairing with a K-Rain® Rain Sensor
- Weather Resistant - Engineered with impact modified, UV resistant polymer for outdoor exposure
- Maintenance Free - No batteries to replace

RAIN/FREEZE SENSORS

- K-Rain® Rain Sensor products efficiently suspend watering during rain and/or freeze periods
- The K-Rain® wireless rain-freeze sensor can be paired with multiple K-Rain®PRO EX 2.0 Wi-Fi enabled controllers within range, providing an additional value for the end user. The wired rain sensors work with closed circuit timers.
- 2 in 1 Mounting. Provides flexible installation with standard flat & gutter mounting.
- Models 3208-WRFS and 3208-HRFS include a freeze sensor that prevents the irrigation system from starting when temperatures drop to 37°F or below

Models

3208-HRS	Hardwired Rain Sensor
3208-HRFS	Hardwired Rain-Freeze Sensor
3208-WRFS	Wireless Rain/Freeze Sensor for PRO EX 2.0 or PRO EX 2.0 Wi-Fi
3208-WRFS-KIT	Wireless Rain/Freeze Sensor and RF Module for PRO EX 2.0
3208-UWRFS	Universal Wireless Rain/Freeze Sensor

Controller Accessories

		SiteMaster	Pro EX 2.0	Pro-LC Wi-Fi	K-Rain® BLUE®	RPS46
Accessories						
3100-BRIDGE	Bridge Wi-Fi Module			●		
3203	Handheld Remote with batteries		●			
3203-KIT	Handheld Remote with antenna & RF module		●			
3205	4 Station Expansion Module		●			
3205-14	14 Station Expansion Module		●			
3206	RF module with short distance antenna		●			
3208-HRS	Hardwired Rain Sensor	●	●	●	●	●
3208-HRFS	Hardwired Rain/Freeze Sensor	●	●	●	●	●
3208-WRFS	Wireless Rain/Freeze Sensor		●			
3208-UWRFS	Universal Wireless Rain/ Freeze Sensor	●	●	●		●
3209	Wi-Fi Hub		●			
3401	Single Station Decoder	●				
3405	Two Station Decoder	●				
3402	Surge Protector	●				
3403	2-Wire Module	●				
3404	Network Module	●				
3410	Optical Pump Start Relay	●				
3414	Pro Weather Station	●				
FS228-15	1.5" Flow Sensor Assembly	●	●			
FS228-20	2" Flow Sensor Assembly	●	●			
FS228-30	3" Flow Sensor Assembly	●	●			
FS228-40	4" Flow Sensor Assembly	●	●			
FS735-10	1" Flow Sensor Assembly	●	●			

3203

3205

3208-UWRFS

3405

3414

3100

3206

FS735

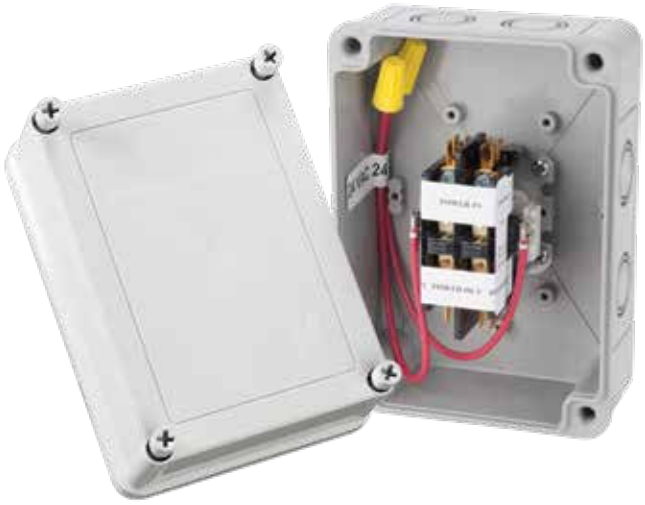
3209

Pump Start Relays

Commercial grade pump start relays in secure rain-tight enclosures are easy to install and simple to use.

Features

- The Pump Start Relay enclosure is constructed with a corrosion resistant, UV resistant, shockproof material



Models

1510	Coil Specifications 120V AC, 60 Hz Inrush: 35 VA Sealed: 7.0 VA Resistance (±10%): 237 OHMS Mini Coil 24V AC, 50/60 Hz Inrush: 52 mA	Double Pole, Single Throw Inductive: 20 AMP Resistive: 30 AMP Input: 120V AC - up to 2 H.P. UL Rated Sealed: 1.2 VA Resistance (±10%): 155 OHMS
1520	Coil Specifications 240V AC, 60 Hz Inrush: 35 VA Sealed: 7.0 VA Resistance (±10%): 946 OHMS Mini Coil 24V AC, 50/60 Hz Inrush: 52 mA	Double Pole, Single Throw Inductive: 20 AMP Resistive: 30 AMP Input: 240V AC - up to 3 H.P. UL Rated Sealed: 1.2 VA Resistance (±10%): 155 OHMS
1521	Coil Specifications 120V AC, 60 Hz Inrush: 42 VA Sealed: 8.5 VA, 3.6 Watts Resistance (±10%): 239.3 OHMS	Double Pole, Single Throw Inductive: 20 AMP Resistive: 30 AMP Input: 120V AC - up to 3 H.P. 240V AC - up to 3 H.P.
1522	Coil Specifications 24V AC, 60 Hz Inrush: 35 VA Sealed: 7 VA, 3 Watts Resistance (±10%): 11.5 OHMS	Double Pole, Single Throw Inductive: 20 AMP Resistive: 30 AMP Input: 120V AC - up to 3 H.P. 240V AC - up to 3 H.P.
1551	Coil Specifications 120V AC, 60 Hz Inrush: 77 VA Sealed: 10 VA, 4 Watts Resistance (±10%): 248.3 OHMS	Double Pole, Single Throw Inductive: 40 AMP Resistive: 50 AMP Input: 120V AC - up to 3 H.P. 240V AC - up to 5 H.P.
1552	Coil Specifications 24V AC, 60 Hz Inrush: 35 VA Sealed: 7 VA, 2.3 Watts Resistance (±10%): 11.5 OHMS	Double Pole, Single Throw Inductive: 40 AMP Resistive: 50 AMP Input: 120V AC - up to 3 H.P. 240V AC - up to 5 H.P.
1553	**Coil Specifications** 24V AC, 60 Hz Inrush: 60 VA Sealed: 7 VA, 2.7 Watts Resistance (±10%): 7 OHMS	**THREE PHASE OPERATION** Triple Pole, Single Throw Inductive: 40 AMP Resistive: 50 AMP Input: 120V AC - up to 3 H.P. 240V AC - up to 10 H.P.

Single Station Controllers

Time-tested reliable single station controllers in rain-tight enclosures.

Features

2100 MODELS

- 24 hour programmable time dial
- Multiple start times
- Wide variety of timing periods
- "Skip-A-Day" 14 day program

2200 MODELS

- Perfect for nursery and other mist applications
- 10 minute programmable dial
- Wide variety of timing periods
- Multiple start times

2500 MODELS

- Prewired for easy connection of a rain sensor. Manual override switch on the faceplate.

Models

2100 SINGLE STATION CONTROLLERS

2110	Voltage Input: 110V AC, 60 Hz Output: 110V AC, 60 Hz	Rating Single Pole, Single Throw Relay Rated for up to 1 H.P.
2112	Voltage Input: 110V AC, 60 Hz Output: 110V AC, 60 Hz	Rating Double Pole, Single Throw Relay Rated for up to 2 H.P.
2114	Voltage Input: 110V AC, 60 Hz Output: 24V AC, 30 VA	Rating Built-In Transformer
2120	Voltage Input: 220V AC, 60 Hz Output: 220V AC, 60 Hz	Rating Double Pole, Single Throw Relay Rated for up to 2 H.P.
2124	Voltage Input: 220V AC, 60 Hz Output: 24V AC, 20 VA	Rating Built-In Transformer

2200 SHORT DURATION SINGLE STATION CONTROLLERS

2210	Voltage Input: 110V AC, 60 Hz Output: 110V AC, 60 Hz	Rating Relay Rated for up to 1 H.P.
2214	Voltage Input: 110V AC, 60 Hz Output: 24V AC, 30 VA	Rating Built-In Transformer

2500 RAINSWITCH-READY CONTROLLERS

2510	Voltage Input: 110V AC, 60 Hz Output: 110V AC, 60 Hz	Rating Double Pole, Single Throw Relay Rated for up to 2 H.P.
2514	Voltage Input: 110V AC, 60 Hz Output: 24V AC, 30 VA	Rating Built-In Transformer
2520	Voltage Input: 220V AC, 60 Hz Output: 220V AC, 60 Hz	Rating Double Pole, Single Throw Relay Rated for up to 2 H.P.

4000 Series Indexing Valves

A reliable, economical way to automate multiple zoned residential and small commercial irrigation systems.

Features

- ABS Polymer Construction – High-strength, non-corrosive body for long product life
- Available in 4 and 6 Outlet Models – Can quickly and easily change from two to six watering zones
- Simplicity of Design – Valves are easily maintained and serviced for long product life
- Operates at a low 6 GPM (23 LPM) flow rate at Pressures of 25-75 PSI (1,7-5,2 bar) – Reliably automates multiple zoned residential and small commercial irrigation or wastewater systems

Models

FOUR OUTLET MODELS

4400	No Cam
4402	Cammed for 2 Zone Operation
4403	Cammed for 3 Zone Operation
4404	Cammed for 4 Zone Operation

SIX OUTLET MODELS

4600	No Cam
4602	Cammed for 2 Zone Operation
4603	Cammed for 3 Zone Operation
4604	Cammed for 4 Zone Operation
4605	Cammed for 5 Zone Operation
4606	Cammed for 6 Zone Operation

OTHER OPTIONS ADD TO PART NUMBER:

-RCW	Reclaimed Water Use

Accessories*

P7005507	Stem/disk Assembly Standard (.029-White) 10 GPM** (38 LPM)
P7005509	Stem/disk Assembly Light (.025-Blue) 6 GPM (23 LPM)
P7005511	Stem/disk Assembly Heavy (.032-Red) 15 GPM (57 LPM)

*Color code identified at the bottom of the disk
**Pre-installed

Fast Facts

Height	5 3/4" (14,6 cm)
Width	5 3/4" (14,6 cm)
4 Outlet Models	1 1/4" x 1 1/4" (3,2 cm x 3,2 cm)
6 Outlet Models	1 1/4" x 1" (3,2 cm x 2,5 cm)

Operating Specifications

4 OUTLET VALVE				
Flow Rate, GPM	10	20	30	40
PSI Loss	2	3	4.5	6.4
Pressure Range	25-75 PSI (0,7-3,4 bar)			
Flow Range	10-40 GPM (37,9-151,4 LPM)			

6 OUTLET VALVE			
Flow Rate, GPM	10	20	30
PSI Loss	2.5	4.5	7.5
Pressure Range	25-75 PSI (0,7-3,4 bar)		
Flow Range	10-30 GPM (37,9-113,6 LPM)		

6000 Series Indexing Valves

The 6000 line of indexing valves offers exceptional reliability and durability even under the dirtiest water conditions.

Features

- Metal Die-Cast Body – Durable, long lasting and capable of high pressure applications
- Available in 4 and 6 Outlet Models – Can quickly and easily change number of watering zones with a cam change
- Simplicity of Design – Valves are easily maintained & serviced for long product life
- Operates at 6 GPM (23 LPM) at Pressures of 25–150 PSI (1,7 to 10,3 bar)– Ideal for pump-fed systems or high-flow city water systems
- Built-in Atmospheric Vacuum Breaker – Releases any vacuum created between the pump and the valve on shut down

Models

FOUR OUTLET MODELS

6402 Cammed for 2 Zone Operation
6403 Cammed for 3 Zone Operation
6404 Cammed for 4 Zone Operation

SIX OUTLET MODELS

6605 Cammed for 5 Zone Operation
6606 Cammed for 6 Zone Operation

Other options add to part number:
-RCW Reclaimed Water Use

Accessories*

P8003050 Stem/disk Assembly Standard Heavy (.032-Red) 15 GPM** (57 LPM)

P8003051 Stem/disk Assembly Light (.028-White) 10 GPM (38 LPM)

P8003052 Stem/disk Assembly Extra Light (.025-Blue) 6 GPM (23 LPM)

*Color code identified at the bottom of the disk
**Pre-installed

Fast Facts

Valve Top/Housing	Die Cast Metal
Valve Outlets	High Strength ABS Polymer
Inlet	Threaded 1 1/2" (3,8 cm) NPT
Outlets	Slip & Glue Connections to 1 1/2" (3,8 cm) PVC Pipe
Height	7" (17,8 cm)
Width	8" (20,3 cm)

Operating Specifications

4 OUTLET VALVE					
Flow Rate, GPM	20	40	60	80	100
PSI Loss	2.5	3.5	5	7.5	10
Pressure Range	25 - 150 PSI (1,7 to 10,3 bar)				
Flow Range	15-150 GPM (57-568 LPM)				

6 OUTLET VALVE					
Flow Rate, GPM	20	40	60	80	100
PSI Loss	3	4	6	9	11
Pressure Range	25 - 150 PSI (1,7 to 10,3 bar)				
Flow Range	15-150 GPM (57-568 LPM)				

Reclaimed Water (RCW) Series

Rotors, Sprays and Indexing Valves for Reclaimed Water.

K-Rain® is a leading manufacturer of rotors, sprays and distribution valves for the reclaimed water industry.

The K-Rain® RCW series is designed specifically for use on reclaimed water systems. Flexibility in system design, achieved through a wide selection of nozzles, guarantees matched precipitation.

Features

RCW ROTORS

- Heavy Duty Rubber Cover (purple) – Seals out dirt and increases product durability, positively identifies the use of reclaimed water reducing liability. Not available on MiniPro® or RPS™50.
- Accepts Low Angle Nozzle – Ensures the correct trajectory of reclaimed water - Not available on MiniPro® or RPS™50

RCW INDEXING VALVES

- Available in 4 and 6 Outlet Models – Watering zones can be changed quickly and easily
- 4000 RCW Indexing Valve – Automates multiple zoned residential and small commercial wastewater systems

MiniPro® RPS™ 50 RPS™ 75 RPS™ 75i RPS™ Select SuperPro® ProPlus® ProSport® Pro-S™ K-Spray™

Models

Please refer to product pages for individual product model numbers and performance data.

4000 Series
Indexing Valves

6000 Series
Indexing Valves

Custom Products

Customizable Irrigation Products

Leave a lasting reminder of your company at each installation.
Add your logo, phone number, and/or website to select rotors, sprays and controllers.

Best part, it's FREE!
When you are enrolled in our Premier Contractor Loyalty Program.

SuperPro® Rotor
Min: 1 pallet
Subsequent purchases: 1/2 pallets

RPS™ 75 & 75i Rotors
Min: 1 pallet
Subsequent purchases: 1/2 pallets

Pro-S™ Spray Nozzle Guard
Min: 1 pallet of Sprays

Pro-S™ Spray Twist Cap
Min: 1 pallet of Sprays

PRO-LC Irrigation Controller
Min: 1 case

PRO EX Irrigation Controller
Min: 1 case

SITEMASTER 2-Wire Decoder Controller
Min: Qty 1

Contractor Loyalty Program

Are you getting CASH BACK on your K-Rain® Purchases?

As a member of the K-Rain® Premier Contractor Program, you earn cash rewards on all K-Rain® purchases from authorized distributors. You also receive other benefits such as homeowner referrals, free product customization, and training & certification.

From the moment you join the program, you start earning rewards.

Your rebate INCREASES each time you reach a new level:

4.0%	4.5%	5.0%	5.5%
BRONZE	**SILVER**	**GOLD**	**DIAMOND**
Purchases $1 - $14,999	Purchases $15,000 - $29,999	Purchases $30,000 - $74,999	Purchases $75,000 and above

Rewards can be redeemed for:
Distributor Credit, Visa Gift Cards, or Online Irrigation Training.

To Enroll:
Scan the QR code
or go to premier.krain.com

Design Resources

For irrigation Professionals

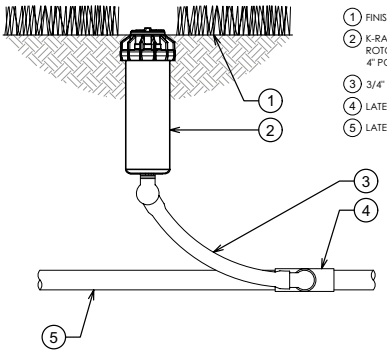
The K-Rain® website, www.krain.com, is a resource for product manuals, videos, FAQs, and other valuable information. Additionally our website has guides for designing with and installing K-Rain® products. Whether you are a landscape architect, irrigation designer, or other irrigation professional, K-Rain® has developed libraries to help you quickly find the information you need. Visit the site for CAD detail drawings, irrigation designs for sports fields, and more.

CAD DETAIL DRAWINGS

www.krain.com/CAD-DETAIL-DRAWINGS

Lay out your irrigation design effectively and efficiently. We offer 2 file formats for each part number for your convenience: PDF and DWG

- Irrigation Controllers & Rain Sensor
- Rotors
- Pro-S™ Sprays
- Pro-S™ Sprays with Rotary Nozzles
- Valves



00 K-RAIN RPS75 ROTOR WITH 4" POP-UP

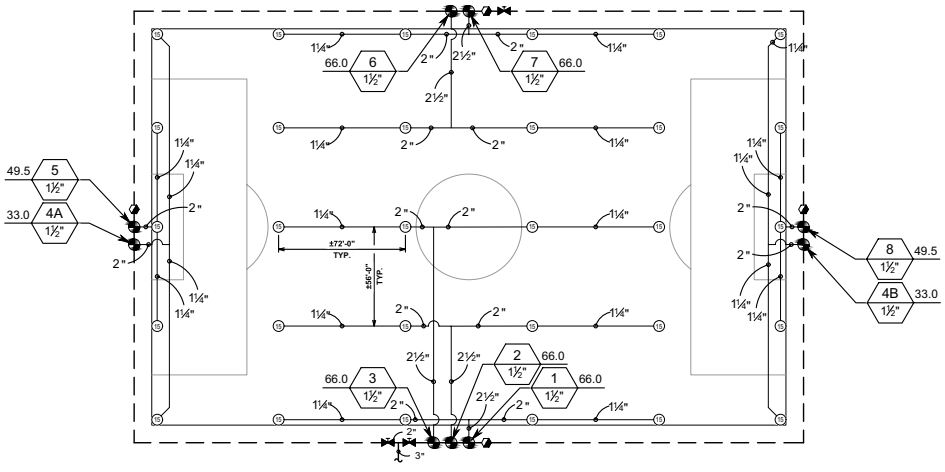
3" = 1'-0" www.krain.com

IRRIGATION DESIGNS FOR SPORTS FIELDS

WWW.KRAIN.COM/SPORTS-FIELD-DESIGN

Our Sports Field Irrigation Designs contain Irrigation Design Criteria for water source and head layouts. There you will find water pressure and flow requirements along with general head spacing by field type. A graphic scale is provided on each field type.

- Baseball
  - — Baseball Field-5 Row
- Football
  - — Football Field-4 Row
  - — Football Field-5 Row
- Little League Field
  - — Little League Field-3 Row
- Soccer
  - — Soccer Field-5 Row
  - — Soccer Field-6 Row (ProSport)
  - — Soccer Field-6 Row (RPS75i)
- Tennis
  - — Double Tennis Court-3 Row



Conversion Table for U.S. and Metric Systems

METRIC TO U.S.				
MULTIPLY				**TO OBTAIN**
Millimeters (mm)	x	.03937	=	inches
Centimeters (cm)	x	.3937	=	inches
Meters (m)	x	39.37	=	inches
Meters (m)	x	3.281	=	feet
Meters (m)	x	1.094	=	yards
Kilometers (km)	x	.62137	=	miles
Kilometers (km)	x	1093.62	=	yards
Kilometers (km)	x	3280.87	=	feet
Liters (l)	x	1.0567	=	quarts (liq.)
Liters (l)	x	.2642	=	gallons (U.S.)
Liters (l)	x	.455	=	pounds
Temp. in (Cº x 1.80)	+	32º	=	temp. in Fº

U.S. TO METRIC				
MULTIPLY				**TO OBTAIN**
Inches (in.)	x	25.4	=	millimeters
Inches (in.)	x	2.54	=	centimeters
Inches (in.)	x	.0254	=	meters
Feet (ft.)	x	.3048	=	meters
Yards (yds.)	x	.9144	=	meters
Miles (mi.)	x	1.6093	=	kilometers
Yards (yds.)	x	.0009143	=	kilometers
Feet (ft.)	x	.0003048	=	kilometers
Quarts (qts.)	x	.945	=	liters
Gallons	x	3.78	=	liters
Pounds	x	2.2	=	liters
Temp. in Fº - 32º	x	.5666	=	temp. in Cº

Kilograms per cubic centimeter (kg/cm²)	**x**	**14.223**	**=**	**Pounds per square inch (P.S.I.)**
Cubic Foot (cu. ft.) x 28.316			**=**	**Liters (1.)**

MISCELLANEOUS CONVERSION FACTORS

Feet head (ft. hd.) x .433	=	Pounds per square inch (P.S.I.)		Calorie x 3.968	=	British Thermal Unit (B.T.U.)	
Pounds per square inch x 2.31	=	Feet head		Foot pounds per second x .7373	=	Watts	
Meters x 3.28	=	Feet head		Kilowatts x 1.34	=	Horsepower	
Inches of mercury x1.133	=	Feet head		Square foot x 144	=	Square inches	
U.S. gallons per minute x .1337	=	Cubic feet per minute		Square yard x 9	=	Square feet	
Cubic feet per minute x 7.48	=	U.S. gallons per minute		Acre x 4.840	=	Square yards	
British Imperial gallon x 1.201	=	U.S. gallons		Acre x 43,560	=	Square feet	
Acre inches per hour x 453	=	G.P.M.		Square mile (section) x 640	=	Acres	
Acre foot per day x226	=	G.P.M.		Mile x 5280	=	Feet	
1,000,000 gallons per day	=	694 G.P.M.		Cubic yard x 27	=	Cubic Feet	
U.S. gallons x .833	=	British Imperial gallon		Circumference of circe x .3183	=	Diameter of circle	
U.S. gallon x 8.336	=	Pounds		Diameter of circe x 3.1416	=	Circumference of circle	
Acre foot x 325,850	=	U.S. gallons		Diameter of circle squared x .7854	=	Area of circle	
Gallons per day x 1,000,000	=	694 gallons per minute		Radius of circle squared x 3.1416	=	Area of circle	
U.S. gallons x 231	=	Cubic inches		Cubic Feet per second x 448.8	=	U.S. gallons per minute	
Horsepower (H.P.) x 746	=	Watts		Cubic feet per second	=	Gallons per minute - 449	
Horsepower x .746	=	Kilowatts		Velocity in feet per second	=	$\frac{.408 \times \text{U.S. g.p.m.}}{\text{Diam. of pipe squared}}$ or $\frac{144Q \text{ (flow in G.P.M.)}}{A1 \text{ (Pipe ID2)}}$	

Charts

Resistance and Valve Wire Sizing

Resistance Method

REQUIRED INFORMATION

- Actual one-way length of wire between the controller and the power source or between the controller and valve
- Allowable voltage loss along the wire circuit
- Accumulative current flowing through the wire section being sized in amperes

RESISTANCE IS CALCULATED USING FORMULA:

$$R = \frac{1000 \times AVL}{2L \times I}$$

R = Maximum Allowable Resistance of wire in ohms per 1000 feet

AVL = Allowable voltage loss

L = Wire length (one way)

I = Inrush current

AVL for controller power wire sizing is calculated by subtracting minimum operating voltage required by the controller from minimum available voltage at power source. AVL for valve wire sizing is calculated by subtracting minimum solenoid operating voltage from controller output voltage. This number will vary depending on the manufacturer and in some cases with line pressure.

Valve Wire Sizing Example:

Given: Distance from the controller to the valve is 1800 ft. Controller output is 24V. The valve has a minimum operating voltage of 20V and an inrush current of 370 mA (0.37Amps).

$$R = \frac{1000 \times 4}{2(1800) \times 0.37} \qquad R = \frac{4000}{1332} \qquad R = 3.00 \text{ ohms/1000 feet}$$

Wire resistance can not exceed 3.00 ohms per 1000 feet. Go to table #1 and select the proper wire size. Since 16 gauge wire has more resistance than 3.00 ohms per 1000 feet, choose 14 gauge wire. Table 2 is a quick reference and is set up to provide maximum wire runs given the information at the bottom of the table.

TABLE 1
Resistance of Copper Wire

WIRE SIZE AWG No.	Resistance at 20° C (68° F) ohms per 1000 Feet
18	6.39
16	4.02
14	2.52
12	1.59
10	1.00
8	0.63
6	0.40
4	0.25

TABLE 2
Valve Wire Sizing (Maximum One-Way Distance in Feet Between Controller and Valve)

GROUND WIRE	CONTROL WIRE						
	18	16	14	12	10	8	6
18	850	1040	1210	1350	1460	1540	1590
16	1040	1340	1650	1920	2150	2330	2440
14	1210	1650	2150	2630	3080	3450	3700
12	1350	1920	2630	3390	4170	4880	5400
10	1460	2150	3080	4170	5400	6670	7690
8	1540	2330	3450	4880	6670	8700	10530
6	1590	2440	3700	5400	7690	10530	13330

Solenoid: 24VAC, Pressure: 150 PSI, Voltage Drop: 4V, Min. Operating Voltage: 20V, Amperage Peak: .37A

FORMULAS

PRECIPITATION RATES	(U.S.)		(METRIC)	
Equilateral Triangular Spacing	P.R.= (in/hr)	$\frac{\text{(GPM of 360) x 96.25}}{\text{(Head Spacing)}^2 \text{ x .866}}$	P.R.= (mm/hr)	$\frac{\text{m3/hr of 360 x 1000}}{\text{m2 x .866}}$
Square/Rectangular Spacing	P.R.= (in/hr)	$\frac{\text{(GPM of 360) x 96.25}}{\text{Head Spacing x Row Spacing}}$	P.R.= (mm/hr)	$\frac{\text{m3/hr of 360 x 1000}}{\text{Head Spacing x Row Spacing}}$
Square/Rectangular Spacing for Specific Arc	P.R.= (in/hr)	$\frac{\text{3460 x GPM (for any arc)}}{\text{Degrees of Arc x Head Spacing x Row Spacing}}$	P.R.= (mm/hr)	$\frac{\text{m3/hr (for any arc) x 1000}}{\text{Degrees of Arc x Head Spacing x Row Spacing}}$
Horsepower	H.P. =	$\frac{\text{GPM x Ft of Head}}{\text{3,960 x Pump Efficiency (expressed as a decimal)}}$		
Station Run Time	S.R.T. = (min/wk)	$\frac{\text{Total Weekly Req'd (inch/wk) x 60 (min/hr)}}{\text{Precipitation Rate (in/hr)}}$	S.R.T.= (min/wk)	$\frac{\text{Total Weekly Req'd (mm/wk) x 60 (min/hr)}}{\text{Precipitation Rate (mm/hr)}}$
Pipe Velocity	V= (ft/sec)	$\frac{\text{0.4085 x Flow (GPM)}}{\text{(Inside Pipe Diameter in Inches)}^2}$	V= (m/sec)	$\frac{\text{1273.24 x Fl0flow (l/sec)}}{\text{(Inside Pipe Diameter in Millimeters)}^2}$
Scheduling Coefficient	S.C.=	$\frac{\text{Average Precipitation Rate (in/hr)}}{\text{Lowest PRecipitation Rate (in/hr)}}$	S.C.=	$\frac{\text{Average Precipitation Rate (mm/hr)}}{\text{Lowest Precipitation Rate (mm/hr)}}$
Slope	S=	$\frac{\text{Rise (Measure of Length)}}{\text{Run (Measure of Length)}}$		

PVC Schedule 40 IPS Plastic Pipe

SIZES: 1/2" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of tube (PSI/100 FT) **C =** 150 (1120, 1220)

SIZE	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	0.622		0.824		1.049		1.380		1.610		2.067		2.469		3.068		4.026		6.065	
WALL THK.	0.109		0.113		0.133		0.140		0.145		0.154		0.203		0.216		0.237		0.280	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	1.05	0.43	0.60	0.11	0.37	0.03	0.21	0.01	0.15	0.00										
2	2.11	1.55	1.20	0.39	0.74	0.12	0.42	0.03	0.31	0.02	0.19	0.00								
3	3.16	3.28	1.80	0.84	1.11	0.26	0.64	0.07	0.47	0.03	0.28	0.01	0.20	0.00						
4	4.22	5.60	2.40	1.42	1.48	0.44	0.85	0.12	0.62	0.05	0.38	0.02	0.26	0.01						
5	5.27	8.46	3.00	2.15	1.85	0.66	1.07	0.18	0.78	0.08	0.47	0.02	0.33	0.01	0.21	0.00				
6	6.33	11.86	3.60	3.02	2.22	0.93	1.28	0.25	0.94	0.12	0.57	0.03	0.40	0.01	0.26	0.01				
7	7.38	15.77	4.20	4.01	2.59	1.24	1.49	0.33	1.10	0.15	0.66	0.05	0.46	0.02	0.30	0.01				
8	8.44	20.20	4.80	5.14	2.96	1.59	1.71	0.42	1.25	0.20	0.76	0.06	0.53	0.02	0.34	0.01				
9	9.49	25.12	5.40	6.39	3.33	1.97	1.92	0.52	1.41	0.25	0.85	0.07	0.60	0.03	0.39	0.01				
10	10.55	30.54	6.00	7.77	3.70	2.40	2.14	0.63	1.57	0.30	0.95	0.09	0.66	0.04	0.43	0.01				
11	11.60	36.43	6.60	9.27	4.07	2.86	2.35	0.75	1.73	0.36	1.05	0.11	0.73	0.04	0.47	0.02				
12	12.65	42.80	7.21	10.89	4.44	3.36	2.57	0.89	1.88	0.42	1.14	0.12	0.80	0.05	0.52	0.02	0.30	0.00		
14	14.76	56.94	8.41	14.48	5.19	4.47	2.99	1.18	2.20	0.56	1.33	0.17	0.93	0.07	0.60	0.02	0.35	0.01		
16	16.87	72.92	9.61	18.55	5.93	5.73	3.42	1.51	2.51	0.71	1.52	0.21	1.07	0.09	0.69	0.03	0.40	0.01		
18	18.98	90.69	10.81	23.07	6.67	7.13	3.85	1.88	2.83	0.89	1.71	0.26	1.20	0.11	0.78	0.04	0.45	0.01		
20	21.09	110.23	12.01	28.04	7.41	8.66	4.28	2.28	3.14	1.08	1.90	0.32	1.33	0.13	0.86	0.05	0.50	0.01		
22			13.21	33.45	8.15	10.33	4.71	2.72	3.46	1.29	2.10	0.38	1.47	0.16	0.95	0.06	0.55	0.01		
24			14.42	39.30	8.89	12.14	5.14	3.20	3.77	1.51	2.29	0.45	1.60	0.19	1.04	0.07	0.60	0.02		
26			15.62	45.58	9.64	14.08	5.57	3.17	4.09	1.75	2.48	0.52	1.74	0.22	1.12	0.08	0.65	0.02		
28			16.82	52.28	10.38	16.15	5.99	4.25	4.40	2.01	2.67	0.60	1.87	0.25	1.21	0.09	0.70	0.02		
30			18.02	59.41	11.12	18.35	6.42	4.83	4.72	2.28	2.86	0.68	2.00	0.29	1.30	0.10	0.75	0.03		
35					12.97	24.42	7.49	6.43	5.50	3.04	3.34	0.90	2.34	0.38	1.51	0.13	0.88	0.04	0.38	0.00
40					14.83	31.27	8.56	8.23	6.29	3.89	3.81	1.15	2.67	0.49	1.73	0.17	1.00	0.04	0.44	0.01
45					16.68	38.89	9.64	10.24	7.08	4.84	4.29	1.43	3.01	0.60	1.95	0.21	1.13	0.06	0.49	0.01
50					18.53	47.27	10.71	12.45	7.87	5.88	4.77	1.74	3.34	0.73	2.16	0.26	1.25	0.07	1.55	0.01
55							11.78	14.85	8.65	7.01	5.25	2.08	3.68	0.88	2.38	0.30	1.38	0.08	0.61	0.01
60							12.85	17.45	9.44	8.24	5.72	2.44	4.01	1.03	2.60	0.36	1.51	0.10	0.66	0.01
65							13.92	20.23	10.23	9.56	6.20	2.83	4.35	1.19	2.81	0.41	1.63	0.11	0.72	0.02
70							14.99	23.21	11.01	10.96	6.68	3.25	4.68	1.37	3.03	0.48	1.76	0.13	0.77	0.02
75							16.06	26.37	11.80	12.46	7.16	3.69	5.01	1.56	3.25	0.54	1.88	0.14	0.83	0.02
80							17.13	29.72	12.59	14.04	7.63	4.16	5.35	1.75	3.46	0.61	2.01	0.16	0.88	0.02
85							18.21	33.26	13.37	15.71	8.11	4.66	5.68	1.96	3.68	0.68	2.13	0.18	0.94	0.02
90							19.28	36.97	14.16	17.46	8.59	5.18	6.02	2.18	3.90	0.76	2.26	0.20	0.99	0.03
95									14.95	19.30	9.07	5.72	6.35	2.41	4.11	0.84	2.39	0.22	1.05	0.03
100									15.74	21.22	9.54	6.29	6.69	2.65	4.33	0.92	2.51	0.25	1.10	0.03
110									17.31	25.32	10.50	7.51	7.36	3.16	4.76	1.10	2.76	0.29	1.22	0.04
120									18.88	29.75	11.45	8.82	8.03	3.72	5.20	1.29	3.02	0.34	1.33	0.05
130											12.41	10.23	8.70	4.31	5.63	1.50	3.27	0.40	1.44	0.05
140											13.36	11.74	9.37	4.94	6.06	1.72	3.52	0.46	1.55	0.06
150											14.32	13.33	10.03	5.62	6.50	1.95	3.77	0.52	1.66	0.07
160											15.27	15.03	10.70	6.33	6.93	2.20	4.02	0.59	1.77	0.08
170											16.23	16.81	11.37	7.08	7.36	2.46	4.27	0.66	1.88	0.09
180											17.18	18.69	12.04	7.87	7.80	2.74	4.53	0.73	1.99	0.10
190											18.14	20.66	12.71	8.70	8.23	3.02	4.78	0.81	2.10	0.11
200											19.09	22.72	13.38	9.57	8.66	3.33	5.03	0.89	2.21	0.12
225													15.05	11.90	9.75	4.14	5.66	1.10	2.49	0.15
250													16.73	14.47	10.83	5.03	6.29	1.34	2.77	0.18
275													18.40	17.26	11.92	6.00	6.92	1.60	3.05	0.22
300															13.00	7.05	7.55	1.88	3.32	0.26
325															14.08	8.17	8.18	2.18	3.60	0.30
350															15.17	9.38	8.81	2.50	3.88	0.34
375															16.25	10.65	9.43	2.84	4.15	0.39
400															17.33	12.01	10.06	3.20	4.43	0.44
425															18.42	13.43	10.69	3.58	4.71	0.49
450															19.50	14.93	11.32	3.98	4.99	0.54
475																	11.95	4.40	5.26	0.60
500																	12.58	4.84	5.54	0.66
550																	13.84	5.77	6.10	0.79
600																	15.10	6.78	6.65	0.92

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

Charts

PVC Schedule 80 IPS Plastic Pipe

SIZES: 1/2" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of tube (PSI/100 FT) **C =** 150 (1120, 1220)

SIZE	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	0.546		0.742		0.957		1.278		1.500		1.939		2.323		2.900		3.826		5.761	
WALL THK.	0.147		0.154		0.179		0.191		0.200		0.218		0.276		0.300		0.337		0.432	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	1.36	0.81	0.74	0.18	0.44	0.05	0.24	0.01	0.18	0.01	0.10	0.00								
2	2.73	2.92	1.48	0.66	0.89	0.19	0.49	0.05	0.36	0.02	0.21	0.01	0.15	0.00						
3	4.10	6.19	2.22	1.39	1.33	0.40	0.74	0.10	0.54	0.05	0.32	0.01	0.22	0.01						
4	5.47	10.54	2.96	2.37	1.78	0.69	0.99	0.17	0.72	0.08	0.43	0.02	0.30	0.01						
5	6.84	15.93	3.70	3.58	2.22	1.04	1.24	0.25	0.90	0.12	0.54	0.03	0.37	0.01	0.24	0.00				
6	8.21	22.33	4.44	5.02	2.67	1.46	1.49	0.36	1.08	0.16	0.65	0.05	0.45	0.02	0.29	0.01				
7	9.58	29.71	5.18	6.68	3.11	1.94	1.74	0.47	1.26	0.22	0.75	0.06	0.52	0.03	0.33	0.01				
8	10.94	38.05	5.92	8.56	3.56	2.48	1.99	0.61	1.45	0.28	0.86	0.08	0.60	0.03	0.38	0.01				
9	12.31	47.33	6.66	10.64	4.00	3.09	2.24	0.76	1.63	0.35	0.97	0.10	0.68	0.04	0.43	0.01				
10	13.68	57.52	7.41	12.93	4.45	3.75	2.49	0.92	1.81	0.42	1.08	0.12	0.75	0.05	0.48	0.02	0.27	0.00		
11	15.05	68.63	8.15	15.43	4.90	4.47	2.74	1.10	1.99	0.50	1.19	0.14	0.83	0.06	0.53	0.02	0.30	0.01		
12	16.42	80.63	8.89	18.13	5.34	5.26	2.99	1.29	2.17	0.59	1.30	0.17	0.90	0.07	0.58	0.02	0.33	0.01		
14			10.37	24.12	6.23	6.99	3.49	1.71	2.53	0.79	1.51	0.23	1.05	0.09	0.67	0.03	0.39	0.01		
16			11.85	30.88	7.12	8.95	3.99	2.19	2.90	1.01	1.73	0.29	1.20	1.12	0.77	0.04	0.44	0.01		
18			13.33	38.41	8.01	11.14	4.49	2.73	3.26	1.26	1.95	0.36	1.36	0.15	0.87	0.05	0.50	0.01		
20			14.82	46.69	8.90	13.54	4.99	3.31	3.62	1.52	2.17	0.44	1.51	0.18	0.97	0.06	0.55	0.02		
22			16.30	55.70	9.80	16.15	5.49	3.95	3.98	1.81	2.38	0.52	1.66	0.22	1.06	0.07	0.61	0.02		
24			17.78	65.44	10.69	18.97	5.99	4.64	4.35	2.13	2.60	0.61	1.81	0.25	1.16	0.09	0.66	0.02		
26			19.26	75.90	11.58	22.01	6.49	5.39	4.71	2.47	2.82	0.71	1.96	0.29	1.26	0.10	0.72	0.03		
28					12.47	25.24	6.99	6.18	5.07	2.83	3.03	0.81	2.11	0.34	1.35	0.11	0.78	0.03		
30					13.36	28.69	7.49	7.02	5.43	3.22	3.25	0.92	2.26	0.38	1.45	0.13	0.83	0.03	0.36	0.00
35					15.59	38.16	8.74	9.34	6.34	4.29	3.79	1.23	2.64	0.51	1.69	0.17	0.97	0.05	0.43	0.01
40					17.81	48.87	9.99	11. 96	7.25	5.49	4.34	1.57	3.02	0.65	1.94	0.22	1.11	0.06	0.49	0.01
45							11.24	14.88	8.16	6.83	4.88	1.96	3.40	0.81	2.18	0.28	1.25	0.07	0.55	0.01
50							12.49	18.09	9.06	8.30	5.42	2.38	3.78	0.99	2.42	0.34	1.39	0.09	0.61	0.01
55							13.73	21.58	9.97	9.90	5.96	2.84	4.15	1.18	2.66	0.40	1.53	0.10	0.67	0.01
60							14.98	25.35	10.87	11.63	6.51	3.33	4.53	1.38	2.91	0.47	1.67	0.12	0.73	0.02
65							16.23	29.40	11.78	13.49	7.05	3.87	4.91	1.61	3.15	0.55	1.81	0.14	0.79	0.02
70							17.48	33.72	12.69	15.47	7.59	4.44	5.29	1.84	3.39	0.63	1.95	0.16	0.86	0.02
75							18.73	38.32	13.59	17.58	8.13	5.04	5.67	2.09	3.63	0.71	2.09	0.18	0.92	0.03
80							19.98	43.19	14.50	19.81	8.68	5.68	6.04	2.36	3.88	0.80	2.22	0.21	0.98	0.03
85									15.41	22.16	9.22	6.36	6.42	2.63	4.12	0.90	2.36	0.23	1.04	0.03
90									16.32	24.64	9.76	7.07	6.80	2.93	4.36	1.00	2.50	0.26	1.10	0.04
95									17.22	27.23	10.30	7.81	7.18	3.24	4.60	1.10	2.64	0.29	1.16	0.04
100									18.13	29.95	10.85	8.59	7.56	3.57	4.85	1.21	2.78	0.31	1.22	0.04
110									19.94	35.73	11. 93	10.25	8.31	4.25	5.33	1.45	3.06	0.38	1.35	0.05
120											13.02	12.04	9.07	5.00	5.82	1.70	3.34	0.44	1.47	0.06
130											14.10	13.96	9.82	5.60	6.30	1.97	3.62	0.51	1.59	0.07
140											15.19	16.02	10.58	6.65	6.79	2.27	3.90	0.59	1.72	0.08
150											16.27	18.20	11.34	7.56	7.27	2.57	4.18	0.67	1.84	0.09
160											17.36	20.51	12.09	8.51	7.76	2.89	4.45	0.75	1.96	0.10
170											18.44	22.95	12.85	9.53	8.24	3.24	4.73	0.84	2.08	0.11
180											19.53	25.51	13.60	10.59	8.73	3.60	5.01	0.93	2.21	0.13
190													14.36	11.71	9.21	3.98	5.29	1.03	2.33	0.14
200													15.12	12.87	9.70	4.37	5.57	1.14	2.45	0.16
225													17.01	16.01	10.91	5.44	6.27	1.41	2.76	0.19
250													18.90	19.46	12.12	6.61	6.96	1.72	3.07	0.23
275															13.34	7.89	7.66	2.05	3.38	0.28
300															14.55	9.27	8.36	2.41	3.68	0.33
325															15.76	10.75	9.05	2.79	3.99	0.38
350															16.97	12.33	9.75	3.20	4.30	0.44
375															18.19	14.01	10.45	3.64	4.60	0.50
400															19.40	15.79	11.14	4.10	4.91	0.56
425																	11.84	4.59	5.22	0.63
450																	12.54	5.10	5.53	0.70
475																	13.23	5.64	5.83	0.77
500																	13.93	6.20	6.14	0.85
550																	15.32	7.40	6.76	1.01
600																	16.72	8.69	7.37	1.19

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

Velocity of flow rate values are computed from the general equation $V = .408\ Q/d^2$

Friction pressure loss values are computed from the equation $\left[hf = 0.2083\ (100/C)\ 1.852\ Q^{1.852}/d^{4.866}\right]$ x .433 for psi loss per 100' of pipe.

PVC Class 125 IPS Plastic Pipe

SIZES: 1" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of tube (PSI/100 FT) **C =** 150 (1120, 1220) SDR 32.5

SIZE	1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	1.211		1.548		1.784		2.229		2.699		3.284		4.224		6.217	
WALL THK.	0.052		0.056		0.058		0.073		0.088		0.108		0.138		0.204	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	0.27	0.02	0.17	0.01	0.12	0.00										
2	0.55	0.06	0.34	0.02	0.25	0.01	0.16	0.00								
3	0.83	0.13	0.51	0.04	0.38	0.02	0.24	0.01								
4	1.11	0.22	0.68	0.07	0.51	0.03	0.32	0.01	0.22	0.00						
5	1.39	0.33	0.85	0.10	0.64	0.05	0.41	0.02	0.28	0.01						
6	1.66	0.46	1.02	0.14	0.76	0.07	0.49	0.02	0.33	0.01						
7	1.94	0.62	1.19	0.19	0.89	0.09	0.57	0.03	0.39	0.01	0.26	0.00				
8	2.22	0.79	1.36	0.24	1.02	0.12	0.65	0.04	0.44	0.02	0.30	0.01				
9	2.50	0.98	1.53	0.30	1.15	0.15	0.73	0.05	0.50	0.02	0.34	0.01				
10	2.78	1.19	1.70	0.36	1.28	0.18	0.82	0.06	0.56	0.02	0.37	0.01				
11	3.06	1.42	1.87	0.43	1.41	0.22	0.90	0.07	0.61	0.03	0.41	0.01				
12	3.33	1.67	2.04	0.51	1.53	0.25	0.98	0.09	0.67	0.03	0.45	0.01	0.27	0.00		
14	3.89	2.22	2.38	0.67	1.79	0.34	1.14	0.11	0.78	0.05	0.52	0.02	0.32	0.01		
16	4.45	2.85	2.72	0.86	2.05	0.43	1.31	0.15	0.89	0.06	0.60	0.02	0.36	0.01		
18	5.00	3.54	3.06	1.07	2.30	0.54	1.47	0.18	1.00	0.07	0.68	0.03	0.41	0.01		
20	5.56	4.31	3.40	1.30	2.56	0.65	1.64	0.22	1.12	0.09	0.75	0.03	0.45	0.01		
22	6.12	5.14	3.74	1.56	2.82	0.78	1.80	0.26	1.23	0.10	0.83	0.04	0.50	0.01		
24	6.67	6.04	4.08	1.83	3.07	0.92	1.97	0.31	1.34	0.12	0.90	0.05	0.54	0.01		
26	7.23	7.00	4.42	2.12	3.33	1.06	2.13	0.36	1.45	0.14	0.98	0.05	0.59	0.02		
28	7.78	8.03	4.76	2.43	3.58	1.22	2.29	0.41	1.56	0.16	1.05	0.06	0.644	0.02		
30	8.34	9.13	5.10	2.76	3.84	1.39	2.46	0.47	1.68	0.18	1.13	0.07	0.68	0.02		
35	9.73	12.14	5.95	3.68	4.48	1.84	2.87	0.62	1.96	0.25	1.32	0.09	0.80	0.03	0.36	0.00
40	11.12	15.55	6.81	4.71	5.12	2.36	3.28	0.80	2.24	0.31	1.51	0.12	0.91	0.04	0.42	0.01
45	12.51	19.34	7.66	5.86	5.76	2.94	3.69	0.99	2.52	0.39	1.70	0.15	1.02	0.04	0.47	0.01
50	13.91	23.50	8.51	7.12	6.40	3.57	4.10	1.21	2.80	0.48	1.89	0.18	1.14	0.05	0.52	0.01
55	15.30	28.04	9.36	8.49	7.05	4.26	4.51	1.44	3.08	0.57	2.08	0.22	1.25	0.06	0.58	0.01
60	16.69	32.94	10.21	9.98	7.69	5.00	4.92	1.69	3.36	0.67	2.26	0.26	1.37	0.085	0.63	0.01
65	18.08	38.21	11.06	11.57	8.33	5.80	5.33	1.96	3.64	0.77	2.45	0.30	1.48	0.09	0.68	0.01
70	19.47	43.83	11.91	13.27	8.97	6.65	5.74	2.25	3.92	0.89	2.64	0.34	1.60	0.10	0.73	0.02
75			12.76	15.08	9.61	7.56	6.15	2.56	4.20	1.01	2.83	0.39	1.71	0.11	0.79	0.02
80			13.62	17.00	10.25	8.52	6.56	2.88	4.48	1.14	3.02	0.44	1.82	0.13	0.84	0.02
85			14.47	19.02	10.89	9.53	6.98	3.23	4.76	1.27	3.21	0.49	1.94	0.14	0.89	0.02
90			15.32	21.14	11.53	10.60	7.39	3.59	5.04	1.41	3.40	0.54	2.05	0.16	0.95	0.02
95			16.17	23.37	12.17	11.71	7.80	3.96	5.32	1.56	3.59	0.60	2.17	0.18	1.00	0.03
100			17.02	25.69	12.81	12.88	8.21	4.36	5.60	1.72	3.78	0.66	2.28	0.19	1.05	0.03
110			18.72	3.65	14.10	15.37	9.03	5.20	6.16	2.05	4.16	0.79	2.51	0.23	1.16	0.04
120					15.38	18.06	9.85	6.11	6.72	2.41	4.53	0.93	2.74	0.27	1.26	0.04
130					16.66	20.94	10.67	7.09	7.28	2.79	4.91	1.08	2.97	0.32	1.37	0.05
140					17.94	24.02	11.49	8.13	7.84	3.20	5.29	1.23	3.20	0.36	1.47	0.06
150					19.22	27.30	12.31	9.24	8.40	3.64	5.67	1.40	3.43	0.41	1.58	0.06
160							13.13	10.41	8.96	4.10	6.05	1.58	3.65	0.46	1.68	0.07
170							13.96	11.65	9.52	4.59	6.43	1.77	3.88	0.52	1.79	0.08
180							14.78	12.95	10.08	5.10	6.80	1.96	4.11	0.58	1.90	0.09
190							15.60	14.31	10.64	5.64	7.18	2.17	4.34	0.64	2.00	0.10
200							16.42	15.74	11.20	6.20	7.56	2.39	4.57	0.70	2.11	0.11
225							18.47	19.57	12.60	7.72	8.51	2.97	5.14	0.87	2.37	0.13
250									14.00	9.38	9.45	3.61	5.71	1.06	2.63	0.16
275									15.40	11.19	10.40	4.31	6.28	1.27	2.90	0.19
300									16.80	13.15	11.34	5.06	6.86	1.49	3.16	0.23
325									18.20	15.25	12.29	5.87	7.43	1.72	3.43	0.26
350									19.60	17.49	13.24	6.73	8.00	1.98	3.69	0.30
375											14.18	7.65	8.57	2.25	3.95	0.34
400											15.13	8.62	9.14	2.53	4.22	0.39
425											16.07	9.65	9.71	2.83	4.48	0.43
450											17.02	10.72	10.29	3.15	4.75	0.48
475											17.96	11.85	10.86	3.48	5.01	0.53
500											18.91	13.03	11.43	3.83	5.27	0.58
550													12.57	4.57	5.80	0.70
600													13.72	5.37	6.33	0.82

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

Charts

PVC Class 160 IPS Plastic Pipe

SIZES: 1" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of tube (PSI/100 FT) **C =** 150 (1120, 1220) SDR 26

SIZE	1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	1.195		1.532		1.754		2.193		2.655		3.230		4.154		6.115	
WALL THK.	0.060		0.064		0.073		0.091		0.110		0.135		0.173		0.225	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	0.28	0.02	0.17	0.01	0.13	0.00										
2	0.57	0.06	0.34	0.02	0.26	0.01	0.16	0.00								
3	0.85	0.14	0.52	0.04	0.39	0.02	0.25	0.01								
4	1.14	0.23	0.69	0.07	0.53	0.04	0.33	0.01	0.23	0.00						
5	1.42	0.35	0.86	0.11	0.66	0.05	0.42	0.02	0.28	0.01						
6	1.71	0.49	1.04	0.15	0.79	0.08	0.50	0.03	0.34	0.01	0.20	0.00				
7	1.99	0.66	1.21	0.20	0.92	0.10	0.59	0.03	0.40	0.01	0.27	0.01				
8	2.28	0.84	1.39	0.25	1.06	0.13	0.67	0.04	0.46	0.02	0.31	0.01				
9	2.57	1.05	1.56	0.31	1.19	0.16	0.76	0.05	0.52	0.02	0.35	0.01				
10	2.85	1.27	1.73	0.38	1.32	0.20	0.84	0.07	0.57	0.03	0.39	0.01				
11	3.14	1.52	1.91	0.45	1.45	0.23	0.93	0.08	0.63	0.03	0.43	0.01				
12	3.42	1.78	2.085	0.53	1.59	0.28	1.01	0.09	0.69	0.04	0.46	0.01	0.28	0.00		
14	3.99	2.37	2.43	0.71	1.85	0.37	1.18	0.12	0.81	0.05	0.54	0.02	0.33	0.01		
16	4.57	3.04	2.78	0.91	2.12	0.47	1.35	0.16	0.92	0.06	0.62	0.02	0.37	0.01		
18	5.14	3.78	3.12	1.13	2.38	0.58	1.52	0.20	1.04	0.08	0.70	0.03	0.42	0.01		
20	5.71	4.59	3.47	1.37	2.65	0.71	1.69	0.24	1.15	0.09	0.78	0.04	0.47	0.01		
22	6.28	5.48	3.82	1.64	2.91	0.85	1.86	0.29	1.27	0.11	0.86	0.04	0.52	0.01		
24	6.85	6.44	4.17	1.92	3.18	1.00	2.03	0.34	1.38	0.13	0.93	0.05	0.56	0.02		
26	7.42	7.47	4.51	2.23	3.44	1.15	2.20	0.39	1.50	0.15	1.01	0.06	0.61	0.02		
28	7.99	8.57	4.86	2.56	3.71	1.32	2.37	0.45	1.62	0.18	1.09	0.07	0.66	0.02		
30	8.57	9.74	5.21	2.91	3.97	1.50	2.54	0.51	1.73	0.20	1.17	0.08	0.70	0.02		
35	9.99	12.95	6.08	3.87	4.64	2.00	2.96	0.68	2.02	0.27	1.36	0.10	0.82	0.03	0.38	0.00
40	11.42	16.59	6.95	4.95	5.30	2.56	3.39	0.86	2.31	0.34	1.56	0.13	0.94	0.04	0.43	0.01
45	12.85	20.63	7.82	6.16	5.96	3.19	3.81	1.08	2.60	0.42	1.75	0.16	1.06	0.05	0.49	0.01
50	14.28	25.07	8.69	7.49	6.63	3.88	4.24	1.31	2.89	0.52	1.95	0.20	1.18	0.06	0.54	0.01
55	15.71	29.91	9.56	8.93	7.29	4.62	4.66	1.56	3.18	0.62	2.15	0.24	1.30	0.07	0.60	0.01
60	17.14	35.14	10.43	10.49	7.95	5.43	5.09	1.83	3.47	0.72	2.34	0.28	1.41	0.08	0.65	0.01
65	18.57	40.67	11.29	12.17	8.62	6.30	5.51	2.12	3.76	0.84	2.54	0.32	1.53	0.09	0.70	0.01
70	19.99	46.76	12.16	13.96	9.28	7.23	5.93	2.44	4.05	0.96	2.73	0.37	1.65	0.11	0.76	0.02
75			13.03	15.86	9.94	8.21	6.36	2.77	4.34	1.09	2.93	0.42	1.77	0.12	0.81	0.02
80			13.90	17.88	10.60	9.25	6.78	3.12	4.63	1.23	3.12	0.47	1.89	0.14	0.87	0.02
85			14.77	20.00	11.27	10.35	7.21	3.49	4.91	1.38	3.32	0.53	2.00	0.16	0.92	0.02
90			15.64	22.23	11.93	11.51	7.63	3.88	5.20	1.53	3.51	0.59	2.12	0.17	0.98	0.03
95			16.51	24.58	12.59	12.72	8.05	4.29	5.49	1.69	3.71	0.65	2.24	0.19	1.03	0.03
100			17.38	27.03	13.26	13.99	8.48	4.72	5.78	1.86	3.91	0.72	2.36	0.21	1.09	0.03
110			19.12	32.24	14.58	16.69	9.33	5.63	6.36	2.22	4.30	0.86	2.60	0.25	1.20	0.04
120					15.91	19.61	10.18	6.61	6.94	2.61	4.69	1.01	2.83	0.30	1.30	0.05
130					17.24	22.74	11.02	7.67	7.52	3.03	5.08	1.17	3.07	0.34	1.41	0.05
140					18.56	26.09	11.87	8.80	8.10	3.47	5.47	1.34	3.31	0.39	1.52	0.06
150					19.89	29.64	12.72	10.00	8.68	3.94	5.86	1.52	3.54	0.45	1.63	0.07
160							13.57	11.27	9.26	4.45	6.25	1.71	3.78	0.50	1.74	0.08
170							14.42	12.61	9.83	4.97	6.64	1.92	4.01	0.56	1.85	0.09
180							15.27	14.02	10.41	5.53	7.03	2.13	4.25	0.63	1.96	0.10
190							16.11	15.49	10.99	6.11	7.43	2.35	4.49	0.69	2.07	0.11
200							16.96	17.03	11.57	6.72	7.82	2.59	4.72	0.76	2.18	0.12
225							19.08	21.19	13.02	8.36	8.79	3.22	5.31	0.95	2.45	0.14
250									14.47	10.16	9.77	3.91	5.91	1.15	2.72	0.18
275									15.91	12.12	10.75	4.67	6.50	1.37	3.00	0.21
300									17.36	14.24	11.73	5.49	7.09	1.61	3.27	0.25
325									18.81	16.51	12.70	6.36	7.68	1.87	3.54	0.29
350											13.68	7.30	8.27	2.15	3.81	0.33
375											14.66	8.29	8.86	2.44	4.09	0.37
400											15.64	9.35	9.45	2.75	4.36	0.42
425											16.62	10.46	10.04	3.07	4.63	0.47
450											17.59	11.62	10.63	3.42	4.90	0.52
475											18.57	12.85	11.23	3.78	5.18	0.58
500											19.55	14.13	11.82	4.15	5.45	0.63
550													13.00	4.96	6.00	0.76
600													14.18	5.82	6.54	0.89

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

PVC Class 200 IPS Plastic Pipe

SIZES: 3/4" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of pipe (PSI/100 FT) **C =** 150 (1120, 1220) SDR 21

SIZE	3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	0.930		1.189		1.502		1.720		2.149		2.601		3.166		4.072		5.993	
WALL THK.	0.060		0.063		0.079		0.090		0.113		0.137		0.167		0.214		0.316	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	0.47	0.06	0.28	0.02	0.18	0.01	0.13	0.00										
2	0.94	0.22	0.57	0.07	0.36	0.02	0.27	0.01	0.17	0.00								
3	1.42	0.46	0.86	0.14	0.54	0.04	0.41	0.02	0.26	0.01	0.18	0.00						
4	1.89	0.79	1.15	0.24	0.72	0.08	0.55	0.04	0.35	0.01	0.24	0.01						
5	2.36	1.20	1.44	0.36	0.90	0.12	0.68	0.06	0.44	0.02	0.30	0.01						
6	2.83	1.68	1.73	0.51	1.08	0.16	0.82	0.08	0.53	0.03	0.36	0.01	0.24	0.00				
7	3.30	2.23	2.02	0.67	1.26	0.22	0.96	0.11	0.61	0.04	0.42	0.01	0.28	0.01				
8	3.77	2.85	2.30	0.86	1.44	0.28	1.10	0.14	0.70	0.05	0.48	0.02	0.32	0.01				
9	4.25	3.55	2.59	1.07	1.62	0.34	1.24	0.18	0.79	0.06	0.54	0.02	0.36	0.01				
10	4.72	4.31	2.88	1.30	1.80	0.42	1.37	0.22	0.88	0.07	0.60	0.03	0.40	0.01				
11	5.19	5.15	3.17	1.56	1.98	0.50	1.51	0.26	0.97	0.09	0.66	0.03	0.44	0.01				
12	5.66	6.05	3.46	1.83	2.17	0.59	1.65	0.30	1.06	0.10	0.72	0.04	0.48	0.02	0.29	0.00		
14	6.60	8.05	4.04	2.43	2.53	0.78	1.93	0.40	1.23	0.14	0.84	0.05	0.56	0.02	0.34	0.01		
16	7.55	10.30	4.61	3.11	2.89	1.00	2.20	0.52	1.41	0.17	0.96	0.07	0.65	0.03	0.39	0.01		
18	8.49	12.81	5.19	3.87	3.25	1.24	2.48	0.64	1.59	0.22	1.08	0.09	0.73	0.03	0.44	0.01		
20	9.43	15.58	5.77	4.71	3.61	1.51	2.75	0.78	1.76	0.26	1.20	0.10	0.81	0.04	0.49	0.01		
22	10.38	18.58	6.34	5.62	3.97	1.80	3.03	0.93	1.94	0.32	1.32	0.12	0.89	0.05	0.54	0.01		
24	11.32	21.83	6.92	6.60	4.34	2.12	3.30	1.09	2.12	0.37	1.44	0.15	0.97	0.06	0.59	0.02		
26	12.27	25.32	7.50	7.65	4.70	2.46	3.58	1.27	2.29	0.43	1.56	0.17	1.05	0.07	0.63	0.02		
28	13.21	29.04	8.08	8.78	5.06	2.82	3.86	1.46	2.47	0.49	1.68	0.19	1.13	0.07	0.68	0.02		
30	14.15	33.00	8.65	9.98	5.42	3.20	4.13	1.66	2.65	0.56	1.80	0.22	1.22	0.09	0.73	0.02	0.34	0.00
35	16.51	43.91	10.10	13.27	6.32	4.26	4.82	2.20	3.09	0.75	2.11	0.29	1.42	0.11	0.86	0.03	0.39	0.01
40	18.87	56.23	11.54	17.00	7.23	5.45	5.51	2.82	3.53	0.95	2.41	0.38	1.62	0.14	0.98	0.04	0.45	0.01
45			12.98	21.14	8.13	6.78	6.20	3.51	3.97	1.19	2.71	0.47	1.83	0.18	1.10	0.05	0.51	0.01
50			14.42	25.70	9.04	8.24	6.89	4.26	4.41	1.44	3.01	0.57	2.03	0.22	1.23	0.06	0.56	0.01
55			15.87	30.66	9.94	9.83	7.58	5.09	4.85	1.72	3.31	0.68	2.23	0.26	1.35	0.08	0.62	0.01
60			17.31	36.02	10.85	11.55	8.27	5.97	5.30	2.02	3.61	0.80	2.44	0.31	1.47	0.09	0.68	0.01
65			18.75	41.77	11.75	13.40	8.96	6.93	5.74	2.35	3.92	0.93	2.64	0.36	1.59	0.10	0.73	0.02
70					12.65	15.37	9.65	7.95	6.18	2.69	4.22	1.06	2.84	0.41	1.72	0.12	0.79	0.02
75					13.56	17.47	10.34	9.03	6.62	3.06	4.52	1.21	3.05	0.46	1.84	0.14	0.85	0.02
80					14.46	19.68	11.03	10.18	7.06	3.44	4.82	1.36	3.25	0.52	1.96	0.15	0.90	0.02
85					15.37	22.02	11.72	11.39	7.50	3.85	5.12	1.52	3.45	0.59	2.09	0.17	0.96	0.03
90					16.27	24.48	12.41	12.66	7.95	4.28	5.42	1.69	3.66	0.65	2.21	0.19	1.02	0.03
95					17.18	27.06	13.10	13.99	8.39	4.74	5.72	1.87	3.86	0.72	2.33	0.21	1.07	0.03
100					18.08	29.76	13.79	15.39	8.83	5.21	6.03	2.06	4.07	0.79	2.46	0.23	1.13	0.04
110					19.89	35.50	15.17	18.36	9.71	6.21	6.63	2.45	4.47	0.94	2.70	0.28	1.24	0.04
120							16.54	21.57	10.60	7.30	7.23	2.88	4.88	1.11	2.95	0.33	1.36	0.05
130							17.92	25.02	11.48	8.47	7.84	3.34	5.29	1.29	3.19	0.38	1.47	0.06
140							19.30	28.70	12.36	9.71	8.44	3.84	5.69	1.47	3.44	0.43	1.59	0.07
150									13.25	11.04	9.04	4.36	6.10	1.68	3.69	0.49	1.70	0.08
160									14.13	12.44	9.64	4.91	6.51	1.89	3.93	0.55	1.81	0.08
170									15.01	13.91	10.25	5.50	6.91	2.11	4.18	0.62	1.93	0.09
180									15.90	15.47	10.85	6.11	7.32	2.35	4.42	0.69	2.04	0.11
190									16.78	17.10	11.45	6.75	7.73	2.60	4.67	0.76	2.15	0.12
200									17.66	18.80	12.06	7.43	8.14	2.85	4.92	0.84	2.27	0.13
225									19.87	23.38	13.56	9.24	9.15	3.55	5.53	1.04	2.55	0.16
250											15.07	11.23	10.17	4.31	6.15	1.27	2.83	0.19
275											16.58	13.39	11.19	5.15	6.76	1.51	3.12	0.23
300											18.09	15.74	12.21	6.05	7.38	1.78	3.40	0.27
325											19.60	18.25	13.22	7.01	7.99	2.06	3.69	0.31
350													14.24	8.05	8.61	2.36	3.97	0.36
375													15.26	9.14	9.22	2.69	4.25	0.41
400													16.28	10.30	9.84	3.03	4.54	0.46
425													17.29	11.53	10.45	3.396	4.82	0.52
450													18.31	12.81	11.07	3.77	5.11	0.57
475													19.33	14.16	11.68	4.16	5.39	0.63
500															12.30	4.58	5.67	0.70
550															13.53	5.46	6.24	0.83
600															14.76	6.42	6.81	0.98

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

Charts

PVC Class 315 IPS Plastic Pipe

SIZES: 1/2" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of pipe (PSI/100 FT) **C =** 150 (1120, 1220) SDR 13.5

SIZE	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	0.716		0.894		1.121		1.414		1.618		2.023		2.449		2.982		3.834		5.643	
WALL THK.	0.062		0.078		0.097		0.123		0.141		0.176		0.213		0.259		0.333		0.491	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	0.79	0.22	0.51	0.07	0.32	0.02	0.20	0.01	0.15	0.00										
2	1.59	0.78	1.02	0.27	0.64	0.09	0.40	0.03	0.31	0.01	0.19	0.00								
3	2.38	1.65	1.53	0.56	0.97	0.19	0.61	0.06	0.46	0.03	0.29	0.01	0.20	0.00						
4	3.18	2.82	2.04	0.96	1.29	0.32	0.81	0.10	0.62	0.05	0.39	0.02	0.27	0.01						
5	3.97	4.26	2.55	1.45	1.62	0.48	1.02	0.16	0.77	0.08	0.49	0.03	0.34	0.01	0.22	0.00				
6	4.77	5.97	3.06	2.03	1.94	0.67	1.22	0.22	0.93	0.11	0.59	0.04	0.40	0.02	0.27	0.01				
7	5.57	7.95	3.57	2.70	2.27	0.90	1.42	0.29	1.09	0.15	0.69	0.05	0.47	0.02	0.32	0.01				
8	6.36	10.18	4.08	3.45	2.59	1.15	1.63	0.37	1.24	0.19	0.79	0.06	0.54	0.03	0.36	0.01				
9	7.16	12.66	4.59	4.30	2.92	1.43	1.83	0.46	1.40	0.24	0.89	0.08	0.61	0.03	0.41	0.01				
10	7.95	15.38	5.10	5.22	3.24	1.74	2.04	0.56	1.55	0.29	0.99	0.10	0.68	0.04	0.45	0.01	0.27	0.00		
11	8.75	18.35	5.61	6.23	3.57	2.07	2.24	0.67	1.71	0.35	1.09	0.12	0.74	0.05	0.50	0.02	0.30	0.01		
12	9.55	21.56	6.12	7.32	3.89	2.43	2.44	0.79	1.87	0.41	1.19	0.14	0.81	0.05	0.55	0.02	0.33	0.01		
14	11.14	28.69	7.14	9.74	4.54	3.24	2.85	1.05	2.18	0.54	1.39	0.18	0.95	0.07	0.64	0.03	0.38	0.01		
16	12.73	36.74	8.16	12.47	5.19	4.15	3.26	1.34	2.49	0.70	1.59	0.23	1.08	0.09	0.73	0.04	0.44	0.01		
18	14.32	45.69	9.18	15.51	5.84	5.16	3.67	1.67	2.80	0.87	1.79	0.29	1.22	0.12	0.82	0.04	0.49	0.01		
20	15.91	55.54	10.20	18.86	6.49	6.27	4.08	2.03	3.11	1.05	1.99	0.35	1.36	0.14	0.91	0.05	0.55	0.02		
22	17.50	66.26	11.23	22.50	7.14	7.48	4.48	2.42	3.42	1.25	2.19	0.42	1.49	0.17	1.00	0.06	0.61	0.02		
24	19.10	77.84	12.25	26.43	7.79	8.79	4.89	2.84	3.74	1.47	2.39	0.50	1.63	0.20	1.10	0.08	0.66	0.02		
26			13.27	30.65	8.44	10.19	5.30	3.29	4.05	1.71	2.59	0.58	1.76	0.23	1.19	0.09	0.72	0.03		
28			14.29	35.16	9.09	11.69	5.71	3.78	4.36	1.96	2.79	0.66	1.90	0.26	1.28	0.10	0.77	0.03	0.35	0.00
30			15.31	39.95	9.74	13.29	6.12	4.29	4.67	2.23	2.99	0.75	2.04	0.30	1.37	0.11	0.83	0.03	0.38	0.01
35			17.86	53.15	11.36	17.68	7.14	5.71	5.45	2.96	3.48	1.00	2.38	0.39	1.60	0.15	0.97	0.04	0.44	0.01
40					12.98	22.64	8.16	7.31	6.23	3.80	3.98	1.28	2.72	0.51	1.83	0.19	1.11	0.06	0.51	0.01
45					14.61	28.15	9.18	9.10	7.01	4.72	4.48	1.59	3.06	0.63	2.06	0.24	1.24	0.07	0.57	0.01
50					16.23	34.22	10.20	11.06	7.79	5.74	4.98	1.94	3.40	0.76	2.29	0.29	1.38	0.09	0.64	0.01
55					17.85	40.83	11.22	13.19	8.57	6.85	5.48	2.31	3.74	0.91	2.52	0.35	1.52	0.10	0.70	0.02
60					19.48	47.97	12.24	15.50	9.35	8.04	5.98	2.71	4.08	1.07	2.75	0.41	1.66	0.12	0.76	0.02
65							13.26	17.97	10.13	9.33	6.48	3.15	4.42	1.24	2.98	0.48	1.80	0.14	0.83	0.02
70							14.28	20.62	10.90	10.70	6.97	3.61	4.76	1.42	3.21	0.55	1.94	0.16	0.89	0.02
75							15.30	23.43	11.68	12.16	7.47	4.10	5.10	1.62	3.44	0.62	2.08	0.18	0.96	0.03
80							16.32	26.40	12.46	13.71	7.97	4.62	5.44	1.82	3.67	0.70	2.22	0.21	1.02	0.03
85							17.34	29.54	13.24	15.33	8.47	5.17	5.78	2.04	3.89	0.78	2.35	0.23	1.08	0.04
90							18.36	32.84	14.02	17.05	8.97	5.75	6.12	2.27	4.12	0.87	2.49	0.26	1.15	0.04
95							19.38	36.30	14.80	18.84	9.47	6.35	6.46	2.51	4.35	0.96	2.63	0.28	1.21	0.04
100									15.58	20.72	9.96	6.99	6.80	2.76	4.58	1.06	2.77	0.31	1.28	0.05
110									17.14	24.72	10.96	8.34	7.48	3.29	5.04	1.26	3.05	0.37	1.40	0.06
120									18.70	29.04	11.96	9.79	8.16	3.87	5.50	1.48	3.33	0.44	1.53	0.07
130											12.96	11.36	8.84	4.48	5.96	1.72	3.60	0.51	1.66	0.08
140											13.95	13.03	9.52	5.14	6.42	1.97	3.88	0.58	1.79	0.09
150											14.95	14.81	10.20	5.84	6.88	2.24	4.16	0.66	1.92	0.10
160											15.95	16.69	10.88	6.59	7.34	2.53	4.44	0.74	2.04	0.11
170											16.94	18.67	11.56	7.37	7.79	2.83	4.71	0.83	2.17	0.13
180											17.94	20.75	12.24	8.19	8.25	3.14	4.99	0.93	2.30	0.14
190											18.94	22.94	12.92	9.05	8.71	3.47	5.27	1.02	2.43	0.16
200											19.93	25.23	13.60	9.95	9.17	3.82	5.55	1.12	2.56	0.17
225													15.30	12.38	10.32	4.75	6.24	1.40	2.88	0.21
250													17.00	15.05	11.47	5.77	6.93	1.70	3.20	0.26
275													18.70	17.95	12.61	6.89	7.63	2.03	3.52	0.31
300															13.76	8.09	8.32	2.38	3.84	0.36
325															14.91	9.39	9.02	2.76	4.16	0.42
350															16.05	10.77	9.71	3.17	4.48	0.48
375															17.20	12.23	10.40	3.60	4.80	0.55
400															18.35	13.79	11.10	4.06	5.12	0.62
425															19.49	15.42	11.79	4.54	5.44	0.69
450																	12.49	5.05	5.76	0.77
475																	13.18	5.58	6.08	0.85
500																	13.87	6.14	6.40	0.94
550																	15.26	7.32	7.04	1.12
600																	16.65	8.60	7.68	1.31

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

Type K Copper Water Tube

SIZES: 1/2" – 3" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of tube (PSI/100 FT) **C =** 140

SIZE	1/2"		5/8"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"	
OD	0.625		0.750		0.875		1.125		1.375		1.625		2.125		2.625		3.125	
ID	0.527		0.652		0.745		0.995		1.245		1.481		1.959		2.435		2.907	
WALL THK.	0.049		0.049		0.065		0.065		0.065		0.072		0.083		0.095		0.109	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	1.45	1.09	0.95	0.39	0.73	0.20	0.41	0.05	0.26	0.02	0.18	0.01	0.10	0.00				
2	2.93	3.94	1.91	1.40	1.47	0.73	0.82	0.18	0.52	0.06	0.37	0.03	0.21	0.01				
3	4.40	8.35	2.87	2.974	2.20	1.55	1.23	0.38	0.78	0.13	0.55	0.05	0.31	0.01	0.20	0.00		
4	5.87	14.23	3.83	5.05	2.94	2.64	1.64	0.65	1.05	0.22	0.74	0.09	0.42	0.02	0.27	0.01	0.19	0.00
5	7.34	21.51	4.79	7.64	3.67	3.99	2.06	0.98	1.31	0.33	0.93	0.14	0.53	0.04	0.34	0.01	0.24	0.01
6	8.81	30.15	5.75	10.70	4.41	5.60	2.47	1.37	1.57	0.46	1.11	0.20	0.63	0.05	0.41	0.02	0.28	0.01
7	10.28	40.11	6.71	14.24	5.14	7.44	2.88	1.82	1.84	0.61	1.30	0.26	0.74	0.07	0.48	0.02	0.33	0.01
8	11.75	51.37	7.67	18.24	5.88	9.53	3.29	2.33	2.10	0.78	1.48	0.34	0.85	0.09	0.55	0.03	0.38	0.01
9	13.22	63.89	8.63	22.68	6.61	11.86	3.70	2.90	2.36	0.97	1.67	0.42	0.95	0.11	0.61	0.04	0.43	0.02
10	14.69	77.66	9.59	27.57	7.35	14.41	4.12	3.53	2.63	1.18	1.86	0.51	1.06	0.13	0.68	0.05	0.48	0.02
11	16.15	92.65	10.55	32.89	8.08	17.19	4.53	4.21	2.89	1.41	2.04	0.61	1.16	0.16	0.75	0.05	0.53	0.02
12	17.62	108.85	11.51	38.64	8.82	20.20	4.94	4.94	3.15	1.66	2.23	0.71	1.27	0.18	0.82	0.06	0.57	0.03
14			13.43	51.41	10.29	26.87	5.76	6.57	3.68	2.21	2.60	0.95	1.48	0.24	0.95	0.08	0.67	0.04
16			15.35	65.83	11.76	34.41	6.59	8.42	4.21	2.83	2.97	1.22	1.70	0.31	1.10	0.11	0.77	0.05
18			17.27	81.88	13.23	42.80	7.41	10.47	4.73	3.52	3.34	1.51	1.91	0.39	1.23	0.13	0.86	0.06
20			19.19	99.53	14.70	52.02	8.24	12.73	5.26	4.28	3.72	1.84	1.12	0.47	1.37	0.16	0.96	0.07
22					16.17	62.06	9.06	15.18	5.79	5.10	4.09	2.19	2.33	0.56	1.51	0.20	1.06	0.08
24					17.64	72.92	9.89	17.84	6.31	5.99	4.46	2.58	2.55	0.66	1.65	0.23	1.15	0.10
26					19.11	84.57	10.71	20.69	6.84	6.95	4.83	2.99	2.76	0.77	1.78	0.27	1.25	0.11
28							11.53	23.73	7.37	7.98	5.20	3.43	2.97	0.88	1.92	0.30	1.35	0.13
30							12.36	26.97	7.89	9.06	5.58	3.89	3.18	1.00	2.06	0.35	1.44	0.15
35							14.42	35.88	9.21	12.06	6.51	5.18	3.72	1.33	2.40	0.46	1.68	0.19
40							16.48	45.95	10.52	15.44	7.44	6.63	4.25	1.70	2.75	0.59	1.93	0.25
45							18.54	57.15	11.84	19.20	8.37	8.25	4.78	2.12	3.00	0.73	2.17	0.31
50									13.16	23.34	9.30	10.03	5.31	2.57	3.44	0.89	2.41	0.38
55									14.47	27.85	10.23	11.97	5.84	3.07	3.78	1.06	2.65	0.45
60									15.79	32.71	11.16	14.06	6.37	3.60	4.12	1.25	2.89	0.53
65									17.10	37.94	12.09	16.31	6.91	4.18	4..47	1.45	3.13	0.61
70									18.42	43.52	13.02	18.70	7.44	4.80	4.81	1.66	3.37	0.70
75									19.74	49.45	13.95	21.25	7.97	5.45	5.16	1.89	3.62	0.80
80											14.88	23.95	8.50	6.14	5.50	2.13	3.86	0.90
85											15.81	26.80	9.03	6.87	5.84	2.38	4.10	1.01
90											16.74	29.79	9.56	7.64	6.19	2.65	4.34	1.12
95											17.67	32.93	10.09	8.44	6.53	2.93	4.58	1.24
100											18.60	36.21	10.63	9.28	6.88	3.22	4.82	1.36
110													11.69	11.08	7.56	3.84	5.31	1.62
120													12.75	13.01	8.25	4.52	5.79	1.91
130													13.82	15.09	8.94	5.24	6.27	2.21
140													14.88	17.31	9.63	6.01	6.75	2.54
150													15.94	19.67	10.32	6.83	7.24	2.88
160													17.01	22.17	11.00	7.69	7.72	3.25
170													18.07	24.81	11.69	8.61	8.20	3.64
180													19.13	27.58	12.38	9.57	8.69	4.04
190															13.07	10.58	9.17	4.47
200															13.76	11.63	9.65	4.91
225															15.48	14.47	10.86	6.11
250															17.20	17.58	12.07	7.43
275															18.92	20.98	13.27	8.86
300																	14.48	10.41
325																	15.69	12.07
350																	16.89	13.85
375																	18.10	15.73
400																	19.31	17.73
425																		
450																		
475																		
500																		
550																		
600																		

Note: Shaded areas of the chart indicate velocities over 7 feet per second (FPS). **Use with caution.**

Charts

Polyethylene (PE) SDR-Pressure Rated Tube

SIZES: 1/2" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of tube (PSI/100 FT) **C =** 140 (2306, 3206, 3306) SDR 7, 9, 11.5, 15

SIZE	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
ID	0.622		0.824		1.049		1.380		1.610		2.067		2.469		3.068		4.026		6.065	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	1.05	0.49	0.60	0.12	0.37	0.04	0.21	0.01	0.15	0.00	0.09	0.00								
2	2.10	1.76	1.20	0.45	0.74	0.14	0.42	0.04	0.31	0.02	0.19	0.01								
3	3.16	3.73	1.80	0.95	1.11	0.29	0.64	0.08	0.47	0.04	0.28	0.01	0.20	0.00						
4	4.21	6.35	2.40	1.62	1.48	0.50	0.85	0.13	0.62	0.06	0.38	0.02	0.26	0.01						
5	5.27	9.60	3.00	2.44	1.85	0.76	1.07	0.20	0.78	0.09	0.47	0.03	0.33	0.01	0.21	0.00				
6	6.32	13.46	3.60	3.43	2.22	1.06	1.28	0.28	0.94	0.13	0.57	0.04	0.40	0.02	0.26	0.01				
7	7.38	17.91	4.20	4.56	2.59	1.41	1.49	0.37	1.10	0.18	0.66	0.05	0.46	0.02	0.30	0.01				
8	8.43	22.93	4.80	5.84	2.96	1.80	1.71	0.474	1.25	0.22	0.76	0.07	0.53	0.03	0.34	0.03				
9	9.49	28.52	5.40	7.26	3.33	2.24	1.92	0.59	1.41	0.28	0.85	0.08	0.60	0.03	0.39	0.01				
10	10.54	34.67	6.00	8.82	3.70	2.73	2.14	0.72	1.57	0.34	0.95	0.10	0.66	0.04	0.43	0.01				
11	11.60	41.36	6.00	10.53	4.07	3.25	2.35	0.86	1.73	0.40	1.05	0.12	0.73	0.05	0.47	0.02	0.27	0.00		
12	12.65	48.60	7.21	12.37	4.44	3.82	2.57	1.01	1.88	0.48	1.14	0.14	0.80	0.06	0.52	0.02	0.30	0.01		
14	14.76	64.65	8.41	16.46	5.19	5.08	2.99	1.34	2.20	0.63	1.33	0.19	0.93	0.08	0.60	0.03	0.35	0.01		
16	16.87	82.79	9.61	21.07	5.93	6.51	3.42	1.71	2.51	0.81	1.52	0.24	1.07	0.10	0.69	0.04	0.40	0.01		
18	18.89	102.97	10.81	26.21	6.67	8.10	3.85	2.13	2.83	1.01	1.71	0.30	1.20	0.13	0.78	0.04	0.45	0.01		
20			12.01	31.86	7.41	9.84	4.28	2.59	3.14	1.22	1.90	0.36	1.33	0.15	0.86	0.05	0.50	0.01		
22			13.21	38.01	8.15	11.74	4.71	3.09	3.46	1.46	2.10	0.43	1.47	0.18	0.95	0.06	0.55	0.02		
24			14.42	44.65	8.89	13.79	5.14	3.63	3.77	1.72	2.29	0.51	1.60	0.21	1.04	0.07	0.60	0.02		
26			15.62	41.79	9.64	16.00	5.57	4.21	4.09	1.99	2.48	0.59	1.74	0.25	1.12	0.09	0.65	0.02		
28			16.82	59.41	10.38	18.35	5.99	4.83	4.40	2.28	2.67	0.68	1.87	0.29	1.21	0.10	0.70	0.03		
30			18.02	67.50	11.12	20.85	6.42	5.49	4.72	2.59	2.86	0.77	2.00	0.32	1.30	0.11	0.75	0.03	0.33	0.00
35					12.97	27.74	7.49	7.31	5.50	3.45	3.34	1.02	2.34	0.43	1.51	0.15	0.88	0.04	0.38	0.01
40					14.83	35.53	8.56	9.36	6.29	4.42	3.81	1.31	2.67	0.55	1.73	0.19	1.00	0.05	0.44	0.01
45					16.68	44.19	9.64	11.64	7.08	5.50	4.29	1.63	3.01	0.69	1.95	0.24	1.13	0.06	0.49	0.01
50					18.53	53.71	10.71	14.14	7.87	6.68	4.77	1.98	3.34	0.83	2.16	0.29	1.25	0.08	0.55	0.01
55							11.78	16.87	8.65	7.97	5.25	2.36	3.68	1.00	2.38	0.35	1.38	0.09	0.61	0.01
60							12.85	19.82	9.44	9.36	5.72	2.78	4.01	1.17	2.60	0.41	1.51	0.11	0.66	0.01
65							13.92	22.99	10.23	10.86	6.20	3.22	4.35	1.36	2.81	0.47	1.63	0.13	0.72	0.02
70							14.99	26.37	11.01	12.46	6.68	3.69	4.68	1.56	3.03	0.54	1.76	0.14	0.77	0.02
75							16.06	29.97	11.80	14.16	7.16	4.20	5.01	1.77	3.25	0.61	1.88	0.16	0.83	0.02
80							17.13	33.77	12.59	15.95	7.63	4.73	5.35	1.99	3.46	0.69	2.01	0.18	0.88	0.03
85							18.21	37.79	13.37	17.85	8.11	5.29	5.68	2.23	3.68	0.77	2.13	0.21	0.94	0.03
90							19.28	42.01	14.16	19.84	8.59	5.88	6.02	2.48	3.90	0.86	2.26	0.23	0.99	0.03
95									14.95	21.93	9.07	6.50	6.35	2.74	4.11	0.95	2.39	0.25	1.05	0.03
100									15.74	24.12	9.54	7.15	6.69	3.01	4.33	1.05	2.51	0.28	1.10	0.04
110									17.31	28.77	10.50	8.53	7.36	3.59	4.76	1.25	2.76	0.33	1.22	0.05
120									18.88	33.80	11.45	10.02	8.03	4.22	5.20	1.47	3.02	0.39	1.33	0.05
130											12.41	11.62	8.70	4.90	5.63	1.70	3.27	0.45	1.44	0.06
140											13.36	13.33	9.37	5.62	6.06	1.95	3.52	0.52	1.55	0.07
150											14.32	15.15	10.03	6.38	6.50	2.22	3.77	0.59	1.66	0.08
160											15.27	17.08	10.70	7.19	6.93	2.50	4.02	0.67	1.77	0.09
170											16.23	19.11	11.37	8.05	7.36	2.80	4.27	0.75	1.88	0.10
180											17.18	21.24	12.04	8.95	7.08	3.11	4.53	0.83	1.99	0.11
190											18.14	23.48	12.71	9.89	8.23	3.44	4.78	0.92	2.10	0.12
200											19.09	25.81	13.38	10.87	8.66	3.78	5.03	1.01	2.21	0.14
225													15.05	13.52	9.75	4.70	5.66	1.25	2.49	0.17
250													16.73	16.44	10.83	5.71	6.29	1.52	2.77	0.21
275													18.40	19.61	11.92	6.82	6.92	1.82	3.05	0.25
300															13.00	8.01	7.55	2.13	3.32	0.29
325															14.08	9.29	8.18	2.48	3.60	0.34
350															15.17	10.65	8.81	2.84	3.88	0.39
375															16.25	12.10	9.43	3.23	4.15	0.44
400															17.33	13.64	10.06	3.64	4.43	0.50
425															18.42	15.26	10.69	4.07	4.71	0.55
450															19.50	16.97	11.32	4.52	4.99	0.62
475																	11.95	5.00	5.26	0.68
500																	12.58	5.50	5.54	0.75
550																	13.84	6.56	6.10	0.89
600																	15.10	7.70	6.65	1.05

Note: Shaded areas of the chart indicate velocities over 5 feet per second (FPS). **Use with caution.**

Schedule 40 Standard Steel Pipe

SIZES: 1/2" – 6" **FLOW:** 1 – 600 GPM **PSI LOSS:** Per 100' of pipe (PSI/100 FT) **C =** 100 15

SIZE	1/2"		3/4"		1"		1 1/4"		1 1/2"		2"		2 1/2"		3"		4"		6"	
OD	0.840		1.050		1.315		1.660		1.900		2.375		2.875		3.500		4.500		6.625	
ID	0.622		0.824		1.049		1.380		1.610		2.067		2.469		3.068		4.026		6.065	
WALL THK.	0.109		0.113		0.133		0.140		0.145		0.154		0.203		0.216		0.237		0.280	
FLOW G. P. M.	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss	Velocity FPS	psi Loss
1	1.05	0.91	0.60	0.23	0.37	007	0.21	0.02	0.15	0.01	0.09	0.00								
2	2.10	3.28	1.20	0.84	0.74	0.26	0.42	0.07	0.31	0.03	0.19	0.01	0.13	0.00						
3	3.16	6.95	1.80	1.77	1.11	0.55	0.64	0.14	0.47	0.07	0.28	0.02	0.20	0.01	0.13	0.00				
4	4.21	11.85	2.40	3.02	1.48	0.93	0.85	0.25	0.62	0.12	0.38	0.03	0.26	0.01	0.17	0.01				
5	5.27	17.91	3.00	4.56	1.85	1.41	1.07	0.37	0.78	0.18	0.47	0.05	0.33	0.02	0.21	0.01				
6	6.32	25.10	3.60	6.39	2.22	1.97	1.28	0.52	0.94	0.25	0.57	0.07	0.40	0.03	0.26	0.01				
7	7.38	33.40	4.20	8.50	2.59	2.63	1.49	0.69	1.10	0.33	0.66	0.10	0.46	0.04	0.30	0.01				
8	8.43	42.77	4.80	10.89	2.96	3.36	1.71	0.89	1.25	0.42	0.76	0.12	0.53	0.05	0.34	0.02	0.20	0.00		
9	9.49	53.19	5.40	13.54	3.33	4.18	1.92	1.10	1.41	0.52	0.85	0.15	0.60	0.06	0.39	0.02	0.22	0.01		
10	10.54	64.65	6.00	16.46	3.70	5.08	2.14	1.34	1.57	0.63	0.95	0.19	0.66	0.08	0.43	0.03	0.25	0.01		
11	11.60	77.13	6.60	19.63	4.07	6.07	2.35	1.60	1.73	0.75	1.05	0.22	0.73	0.09	0.47	0.03	0.27	0.01		
12	12.65	90.62	7.21	23.07	4.44	7.13	2.57	1.88	1.88	0.89	1.14	0.26	0.80	0.11	0.52	0.04	0.30	0.01		
14	14.76	20.56	8.41	30.69	5.19	9.48	2.99	2.50	2.20	1.18	1.33	0.35	0.93	0.15	0.60	0.05	0.35	0.01		
16	16.87	54.39	9.61	39.30	5.93	12.14	3.42	3.20	2.51	1.51	1.52	0.45	1.07	0.19	0.69	0.07	0.40	0.02		
18	18.89	92.02	10.81	48.88	6.67	15.10	3.85	3.98	2.83	1.88	1.71	0.56	1.20	0.23	0.78	0.08	0.45	0.02		
20			12.01	59.41	7.41	18.35	4.28	4.83	3.14	2.28	1.90	0.68	1.33	0.29	0.86	0.10	0.50	0.03		
22			13.21	70.88	8.15	21.90	4.71	5.77	3.46	2.72	2.10	0.81	1.47	0.34	0.95	0.12	0.55	0.03	0.24	0.00
24			14.42	83.27	8.89	25.72	5.14	6.77	3.77	3.20	2.29	0.95	1.60	0.40	1.04	0.14	0.60	0.04	0.26	0.01
26			15.62	96.57	9.64	29.83	5.57	7.86	4.09	3.71	2.48	1.10	1.74	0.46	1.12	0.16	0.65	0.04	0.28	0.01
28			16.82	110.8	10.38	34.22	5.99	9.01	4.40	4.26	2.67	1.26	1.87	0.53	1.21	0.18	0.70	0.05	0.31	0.01
30			18.02	125.9	11.12	38.89	6.42	10.24	4.72	4.84	2.86	1.43	2.00	0.60	1.30	0.21	0.75	0.06	0.33	0.01
35					12.97	51.74	7.49	13.62	5.50	6.44	3.34	1.91	2.34	0.80	1.51	0.28	0.88	0.07	0.38	0.01
40					14.83	66.25	8.56	17.45	6.29	8.24	3.81	2.44	2.67	1.03	1.73	0.36	1.00	0.10	0.44	0.01
45					16.68	82.40	9.64	21.70	7.08	10.25	4.29	3.04	3.01	1.28	1.95	0.44	1.13	0.12	0.49	0.02
50					18.53	100.2	10.71	26.37	7.87	12.46	4.77	3.69	3.34	1.56	2.16	0.54	1.25	0.14	0.55	0.02
55							11.78	31.47	8.65	14.86	5.25	4.41	3.68	1.86	2.38	0.65	1.38	0.17	0.61	0.02
60							12.85	36.97	9.44	17.46	5.72	5.18	4.01	2.18	2.60	0.76	1.51	0.20	0.66	0.03
65							13.92	42.88	10.23	20.25	6.20	6.00	4.35	2.53	2.81	0.88	1.63	0.23	0.72	0.03
70							14.99	49.18	11.01	23.23	6.68	6.89	4.68	2.90	3.03	1.01	1.76	0.27	0.77	0.04
75							16.06	55.89	11.80	26.40	7.16	7.83	5.01	3.30	3.25	1.15	1.88	0.31	0.83	0.04
80							17.13	62.98	12.59	29.75	7.63	8.82	5.35	3.72	3.46	1.29	2.01	0.34	0.88	0.05
85							18.21	70.47	13.37	33.29	8.11	9.87	5.68	4.16	3.68	1.44	2.13	0.39	0.94	0.05
90							19.28	78.33	14.16	37.00	8.59	10.97	6.02	4.62	3.90	1.61	2.26	0.43	0.99	0.06
95									14.95	40.90	9.07	12.13	6.35	5.11	4.11	1.78	2.39	0.47	1.05	0.06
100									15.74	44.97	9.54	13.33	6.69	5.62	4.33	1.95	2.51	0.52	1.10	0.07
110									17.31	53.66	10.50	15.91	7.36	6.7	4.76	2.33	2.76	0.62	1.22	0.08
120									18.88	63.04	11.45	18.69	8.03	7.87	5.20	2.74	3.02	0.73	1.33	0.10
130											12.41	21.68	8.70	9.13	5.63	3.17	3.27	0.85	1.44	0.12
140											13.36	24.87	9.37	10.47	6.06	3.64	3.52	0.97	1.55	0.13
150											14.32	28.26	10.03	11.90	6.50	4.14	3.77	1.10	1.66	0.15
160											15.27	31.84	10.70	13.41	6.93	4.66	4.02	1.24	1.77	0.17
170											16.23	35.63	11.37	15.01	7.36	5.22	4.27	1.39	1.88	0.19
180											17.18	39.61	12.04	16.68	7.80	5.80	4.53	1.55	1.99	0.21
190											18.14	43.78	12.71	18.44	8.23	6.41	4.78	1.71	2.10	0.23
200											19.09	48.14	13.38	20.28	8.66	7.05	5.03	1.88	2.21	0.26
225													15.08	25.22	9.75	8.76	5.66	2.34	2.49	0.32
250													16.73	30.65	10.83	10.65	6.29	2.84	2.77	0.39
275													18.40	36.57	11.92	12.71	6.92	3.39	3.05	0.46
300															13.00	14.93	7.55	3.98	3.32	0.54
325															14.08	17.32	8.18	4.62	3.60	0.63
350															15.17	19.87	8.81	5.30	3.88	0.72
375															16.25	22.57	9.43	6.02	4.15	0.82
400															17.33	25.44	10.06	6.78	4.43	0.92
425															18.42	28.46	10.69	7.59	4.71	1.03
450															19.50	31.64	11.32	8.43	4.99	1.15
475																	11.95	9.32	5.26	1.27
500																	12.58	10.25	5.54	1.40
550																	13.84	12.23	6.10	1.67
600																	15.10	14.37	6.65	1.96

Note: Shaded areas of the chart indicate velocities over 7 feet per second (FPS). **Use with caution.**

Warranty

It's our best warranty ever, and no one else offers anything better.

K-Rain® products are designed to stand the test of time. But should something happen, we've got you covered with our industry-leading 3/7 Warranty. **It's our best warranty ever, and no one else offers anything better.**

There's no trickery, no hidden fine print. It's honest and fair, plain and simple. Electronics, Rotary Nozzles and Drip have a 3-year warranty. Rotors, sprays, valves and everything else has a 7-year warranty.

That's not just a huge added value, that's a whole lot of peace of mind, right there.

3-Year Warranty: Electronics, rotary nozzles, and drip
7-year Warranty: Everything else

K-Rain® **professional** line of products purchased at authorized K-Rain® distributorships or online, carry a limited warranty from the date of manufacture as stated in the specified period of time on the opposite page. During this period, K-Rain® will repair or replace (at the discretion of K-Rain) the product or any part if the product is found to be defective as to workmanship or material.

This warranty does not extend to damage of a K-Rain® product resulting from misuse, neglect or abuse, normal wear and tear or accidents, to exterior appearance or color or due to improper installation.

This warranty extends only to an original user of a K-Rain® product.

IN NO EVENT SHALL K-RAIN® BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. ALL IMPLIED WARRANTIES ARE LIMITED IN DURATION OF THE SPECIFIED YEARS FOLLOWING THE DATE OF MANUFACTURE UNLESS INDICATED OTHERWISE.

Some U.S. states do not permit the exclusion or limitation of incidental or consequential damages or of implied warranties. Therefore, the above exclusions or limitations may not apply to you. If a defect arises in a K-Rain® product within the warranty period, you should promptly contact your K-Rain® installer, distributor or K-RAIN® MANUFACTURING CORPORATION.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. If you have any questions concerning the warranty or its application, please contact K-Rain®.

3 YEARS	**Controllers**	SiteMaster
		Pro EX 2.0
		PRO-LC
		RPS™46
		K-Rain® BLUE®
		Controller Accessories
	Rain Sensors	Hardwired Rain Sensor
		Hardwired Rain/Freeze Sensor
		Wireless Rain Sensors
		Wireless Rain/Freeze Sensors
		Universal Wireless Rain/Freeze Sensors
	Rotary Nozzles	Rotary Nozzle Series
		Fully Adjustable Rotary Nozzles
	Drip Irrigation	Dripline
		Drip Fittings
		Drip Control Zone Kits
		Pressure Regulators
	Single Station Controllers	2100 Single Station Controllers
		2200 Short Duration Single Station Controllers
		2500 Rain Switch Ready Controllers
	Pump Start Relays	Pump Start Relays

7 YEARS	**Rotors**	MiniPro®
		RPS™ 50
		RPS™ 75
		RPS™ 75i
		RPS™ Select
		ProPlus®
		SuperPro®
		ProSport®
		Rotor Accessories
	Sprays	Pro-S™
		NP Sprays
		K-Sprays
		Spray Accessories
	Nozzles	KV Nozzles
		KVF Nozzles
		Fixed Pattern Nozzles
		Bubblers
	Valves	ProSeries 100
		ProSeries 150
		ProSeries 200
		Valve Accessories
	Indexing Valves	4000 Series
		6000 Series

NOTES

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