



# K RAIN<sup>®</sup>

**Down here. Doing. It. Right**

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

(See page 92 for detailed information)



**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®         |
|--|----------|----------|----------|----------|-----------------------|-------------------|-------------------|-------------------|
| <b>Specifications</b>                    |          |          |          |          |                       |                   |                   |                   |
| 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          |
| <b>Features</b>                          |          |          |          |          |                       |                   |                   |                   |
| Operating Pressure range (PSI)           | 20-100   | 20-100   | 20-100   | 20-100   | 20-100                | 20-100            | 20-100            | 40-100            |
| Recommended Pressure Range (PSI)         | 30-50    | 30-50    | 30-70    | 30-70    | 30-50                 | 30-70             | 30-70             | 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                 |          |          | 11°      | 11°      |                       | 12°               | 11°               |                   |
| 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           |

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

## Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.8 – 3.8 GPM (3,0 – 14,4 LPM)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure Range: 30 – 50 PSI (2,1 – 3,4 bar)
- Precipitation Rate: 0.26 – 0.67 in/hr (7 – 17 mm/hr) (depending on spacing and nozzle used)
- 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®

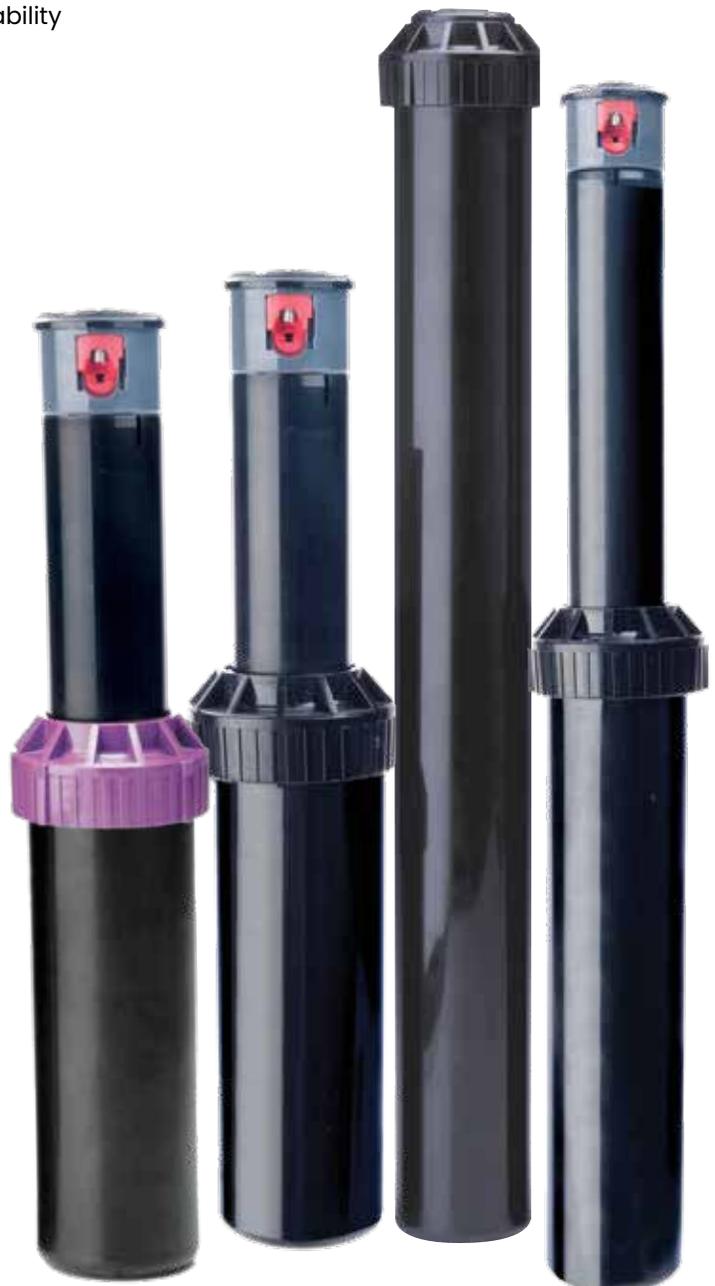
## Accessories

See page 26-27



## 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)     |



### Performance Data - U.S.

| NOZZLE                    | PRESSURE | RADIUS | FLOW | PRECIP in/hr |      |
|---------------------------|----------|--------|------|--------------|------|
|                           | PSI      | FEET   | GPM  | ■            | ▲    |
| #0.75                     | 30       | 18     | 0.8  | 0.48         | 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<br>Pre-<br>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  | 12           | 14 |
|                           | 2,8      | 5,8    | 3,0  | 11           | 13 |
|                           | 3,4      | 6,1    | 3,4  | 11           | 13 |
| #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<br>Pre-<br>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)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure Range: 30 – 50 PSI (2,1 – 3,4 bar)
- Precipitation Rate: 0.26 – 0.67 in/hr (7 – 17 mm/hr (depending on spacing and nozzle used)
- 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  | 0.48         | 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<br>Pre-<br>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  | 12           | 14 |
|                           | 2,8      | 5,8    | 3,0  | 11           | 13 |
|                           | 3,4      | 6,1    | 3,4  | 11           | 13 |
| #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<br>Pre-<br>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.

## 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)

### Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.7 – 8.3 GPM (2,6 – 31 LPM)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure Range: 30 – 70 PSI (2,1 – 4,8 bar)
- Precipitation Rate: .16 – 1.0 in/hr (4 – 25,4 mm/hr) (depending on spacing and nozzle used)
- 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



### 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) |



## Models

|                     |                            |
|---------------------|----------------------------|
| <b>RPS75</b>        | RPS™ 75 Rotor              |
| <b>RPS75-360</b>    | RPS™ 75 Rotor, 360°        |
| <b>RPS75-SH</b>     | RPS™ 75 Rotor, Shrub       |
| <b>RPS75-360-SH</b> | RPS™ 75 Rotor, 360°, Shrub |
| <b>RPS75-6INCH</b>  | 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<br>Pre-<br>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<br>Pre-<br>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     | 8.6  | 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 |

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



WATCH VIDEO

### 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    | 6  | 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<br>Pre-<br>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 | 16   |  |              |  |
|                           | 3,4      | 13,1   | 18,5   | 13 | 15   |  |              |  |
|                           | 4,1      | 14,0   | 18,5   | 13 | 15   |  |              |  |
|                           | 4,8      | 14,3   | 18,5   | 13 | 15   |  |              |  |
| #8.0                      | 2,8      | 13,7   | 22,7   | 14 | 17   |  |              |  |
|                           | 3,4      | 14,6   | 25,7   | 14 | 17   |  |              |  |
|                           | 4,1      | 14,9   | 25,7   | 15 | 18   |  |              |  |
|                           | 4,8      | 15,5   | 25,7   | 15 | 18   |  |              |  |

### PR Performance Data - Metric

| NOZZLE                    | PRESSURE |        | RADIUS |    | FLOW |  | PRECIP mm/hr |  |
|---------------------------|----------|--------|--------|----|------|--|--------------|--|
|                           | BAR      | METERS | L/M    | ■  | ▲    |  |              |  |
| #.75                      | 2,1      | 8,8    | 2,7    | 7  | 8    |  |              |  |
|                           | 2,8      | 9,1    | 3,0    | 7  | 8    |  |              |  |
|                           | 3,5      | 9,1    | 3,4    | 8  | 9    |  |              |  |
|                           | 4,1      | 9,1    | 3,4    | 8  | 9    |  |              |  |
| #1.0                      | 2,1      | 9,1    | 3,4    | 8  | 9    |  |              |  |
|                           | 2,8      | 9,4    | 3,8    | 8  | 9    |  |              |  |
|                           | 3,5      | 9,4    | 4,5    | 10 | 11   |  |              |  |
|                           | 4,1      | 9,4    | 4,5    | 10 | 11   |  |              |  |
| #1.5                      | 2,1      | 9,8    | 4,5    | 9  | 11   |  |              |  |
|                           | 2,8      | 10,1   | 5,3    | 10 | 12   |  |              |  |
|                           | 3,5      | 10,4   | 6,1    | 11 | 13   |  |              |  |
|                           | 4,1      | 10,4   | 6,1    | 11 | 13   |  |              |  |
| #2.0                      | 2,1      | 10,4   | 6,1    | 11 | 13   |  |              |  |
|                           | 2,8      | 11,0   | 6,8    | 11 | 13   |  |              |  |
|                           | 3,5      | 11,6   | 7,6    | 11 | 13   |  |              |  |
|                           | 4,1      | 11,6   | 7,6    | 11 | 13   |  |              |  |
| #3.0<br>Pre-<br>Installed | 2,1      | 11,0   | 7,6    | 12 | 14   |  |              |  |
|                           | 2,8      | 11,6   | 9,1    | 13 | 15   |  |              |  |
|                           | 3,5      | 12,2   | 10,2   | 13 | 15   |  |              |  |
|                           | 4,1      | 12,2   | 10,2   | 13 | 15   |  |              |  |
| #4.0                      | 2,1      | 11,0   | 9,9    | 16 | 18   |  |              |  |
|                           | 2,8      | 12,2   | 11,4   | 15 | 17   |  |              |  |
|                           | 3,5      | 12,8   | 12,9   | 15 | 17   |  |              |  |
|                           | 4,1      | 12,8   | 12,9   | 15 | 17   |  |              |  |
| #6.0                      | 2,8      | 11,6   | 15,9   | 23 | 26   |  |              |  |
|                           | 3,5      | 13,1   | 18,6   | 21 | 24   |  |              |  |
|                           | 4,1      | 13,1   | 18,6   | 21 | 24   |  |              |  |
|                           | 4,8      | 13,1   | 18,6   | 21 | 24   |  |              |  |
| #8.0                      | 2,8      | 13,7   | 22,7   | 23 | 27   |  |              |  |
|                           | 3,5      | 14,6   | 25,8   | 23 | 27   |  |              |  |
|                           | 4,1      | 14,6   | 25,8   | 23 | 27   |  |              |  |
|                           | 4,8      | 14,6   | 25,8   | 23 | 27   |  |              |  |

### 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   | 13,2   | 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   | 27,6   | 22 | 26   |  |              |  |
|        | 4,8      | 13,4   | 27,6   | 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    | 19 | 22   |  |              |  |
|        | 2,8      | 7,3    | 6,4    | 23 | 27   |  |              |  |
|        | 3,5      | 7,9    | 6,8    | 21 | 24   |  |              |  |
|        | 4,1      | 7,9    | 6,8    | 21 | 24   |  |              |  |
| #3.0   | 2,1      | 8,8    | 11,4   | 28 | 32   |  |              |  |
|        | 2,8      | 9,8    | 11,7   | 24 | 27   |  |              |  |
|        | 3,5      | 10,7   | 13,3   | 22 | 26   |  |              |  |
|        | 4,1      | 10,7   | 13,3   | 22 | 26   |  |              |  |
| #4.0   | 2,1      | 9,5    | 12,9   | 28 | 32   |  |              |  |
|        | 2,8      | 10,4   | 14,8   | 26 | 31   |  |              |  |
|        | 3,5      | 11,3   | 16,7   | 25 | 29   |  |              |  |
|        | 4,1      | 11,3   | 16,7   | 25 | 29   |  |              |  |
| #6.0   | 2,8      | 11,6   | 24,6   | 35 | 41   |  |              |  |
|        | 3,5      | 12,2   | 27,7   | 36 | 41   |  |              |  |
|        | 4,1      | 12,2   | 27,7   | 36 | 41   |  |              |  |
|        | 4,8      | 12,2   | 27,7   | 36 | 41   |  |              |  |

\*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)

### Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 0.6 – 9.7 GPM (2,3 – 36,7 LPM)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure RRange: 30 – 70 PSI (2,1 – 4,8 bar)
- Precipitation Rate: 0.22 – 1.40 in/hr (6 – 35 mm/hr)
- Radius: 18' – 48' (5,6 – 14,6 m)
- Nozzle Trajectory: 26°
- Low Angle Nozzle Trajectory: 11°
- Nozzles Included: 8 Standard, 4 Low Angle

### Models

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

### Accessories

See page 26-27



### Fast Facts

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



## 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                    | NO ADJUSTMENT |        |      |              |      | -30% ADJUSTMENT |      |              |      |
|---------------------------|---------------|--------|------|--------------|------|-----------------|------|--------------|------|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      | 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         | 0.52 |
|                           | 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<br>Pre-<br>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         | 0.65 |
| #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 | 32              | 5.5  | 1.06         | 1.22 |
|                           | 40            | 47     | 7.9  | 0.69         | 0.80 | 30              | 4.8  | 1.01         | 1.17 |
|                           | 50            | 48     | 8.8  | 0.74         | 0.85 | 33              | 5.5  | 0.98         | 1.14 |
|                           | 60            | 47     | 9.7  | 0.85         | 0.98 | 34              | 6.2  | 1.05         | 1.21 |
| #8.0                      | 60            | 47     | 9.7  | 0.85         | 0.98 | 33              | 6.8  | 1.21         | 1.39 |
|                           | 70            | 50     | 10.2 | 0.79         | 0.91 | 35              | 7.1  | 1.12         | 1.3  |

## PR Performance Data - U.S.

| NOZZLE                    | NO ADJUSTMENT |        |      |              |      | -30% ADJUSTMENT |      |              |      |
|---------------------------|---------------|--------|------|--------------|------|-----------------|------|--------------|------|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      | 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            | 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  | 0.38         | 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            | 35     | 2.0  | 0.31         | 0.36 | 25              | 1.4  | 0.45         | 0.52 |
| #2.0                      | 30            | 33     | 1.8  | 0.32         | 0.37 | 23              | 1.3  | 0.45         | 0.52 |
|                           | 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            | 36     | 2.4  | 0.36         | 0.41 | 27              | 1.9  | 0.51         | 0.59 |
| #2.5<br>Pre-<br>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            | 39     | 3.0  | 0.38         | 0.44 | 28              | 2.3  | 0.57         | 0.65 |
| #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     | 3.5  | 0.40         | 0.46 | 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     | 4.4  | 0.46         | 0.53 | 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            | 44     | 5.5  | 0.55         | 0.63 | 29              | 4.1  | 0.92         | 1.06 |
| #6.0                      | 30            | 40     | 5.0  | 0.60         | 0.69 | 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            | 43     | 6.6  | 0.69         | 0.79 | 31              | 5.1  | 1.04         | 1.20 |
| #8.0                      | 30            | 43     | 6.8  | 0.71         | 0.82 | 32              | 5.5  | 1.06         | 1.22 |
|                           | 40            | 47     | 7.9  | 0.69         | 0.80 | 30              | 4.8  | 1.01         | 1.17 |
|                           | 50            | 48     | 8.8  | 0.74         | 0.85 | 33              | 5.5  | 0.98         | 1.14 |
|                           | 60            | 48     | 8.8  | 0.74         | 0.85 | 34              | 6.2  | 1.05         | 1.21 |
| #8.0                      | 60            | 48     | 8.8  | 0.74         | 0.85 | 33              | 6.8  | 1.21         | 1.39 |
|                           | 70            | 48     | 8.8  | 0.74         | 0.85 | 35              | 7.1  | 1.12         | 1.3  |

## Low Angle Performance Data - U.S.

| NOZZLE | NO ADJUSTMENT |        |      |              |      | -30% ADJUSTMENT |      |              |      |
|--------|---------------|--------|------|--------------|------|-----------------|------|--------------|------|
|        | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      | RADIUS          | FLOW | PRECIP in/hr |      |
|        | PSI           | FEET   | GPM  | ■            | ▲    | FEET            | GPM  | ■            | ▲    |
| #1.0   | 30            | 26     | 0.9  | 0.25         | 0.29 | 18              | 0.6  | 0.37         | 0.42 |
|        | 40            | 27     | 1.0  | 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  | 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  | 0.59         | 0.69 | 25              | 2.8  | 0.85         | 0.98 |

## PR Low Angle Performance Data - U.S.

| NOZZLE | NO ADJUSTMENT |        |      |              |      | -30% ADJUSTMENT |      |              |      |
|--------|---------------|--------|------|--------------|------|-----------------|------|--------------|------|
|        | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      | RADIUS          | FLOW | PRECIP in/hr |      |
|        | PSI           | FEET   | GPM  | ■            | ▲    | FEET            | GPM  | ■            | ▲    |
| #1.0   | 30            | 26     | 0.9  | 0.26         | 0.26 | 18              | 0.6  | 0.37         | 0.42 |
|        | 40            | 27     | 1.0  | 0.26         | 0.26 | 19              | 0.7  | 0.38         | 0.44 |
|        | 50            | 27     | 1.2  | 0.32         | 0.32 | 19              | 0.8  | 0.45         | 0.52 |
|        | 60            | 26     | 1.2  | 0.34         | 0.34 | 18              | 0.8  | 0.49         | 0.56 |
| #1.5   | 30            | 28     | 1.3  | 0.32         | 0.32 | 20              | 0.9  | 0.46         | 0.53 |
|        | 40            | 29     | 1.5  | 0.34         | 0.34 | 20              | 1.1  | 0.49         | 0.57 |
|        | 50            | 30     | 1.7  | 0.36         | 0.36 | 21              | 1.2  | 0.52         | 0.60 |
|        | 60            | 30     | 1.7  | 0.36         | 0.36 | 21              | 1.2  | 0.52         | 0.60 |
| #2.0   | 30            | 29     | 1.9  | 0.43         | 0.43 | 20              | 1.3  | 0.62         | 0.72 |
|        | 40            | 32     | 2.2  | 0.41         | 0.41 | 22              | 1.5  | 0.59         | 0.68 |
|        | 50            | 33     | 2.5  | 0.44         | 0.44 | 23              | 1.8  | 0.63         | 0.73 |
|        | 60            | 33     | 2.5  | 0.44         | 0.44 | 23              | 1.8  | 0.63         | 0.73 |
| #3.0   | 30            | 32     | 2.5  | 0.47         | 0.47 | 22              | 1.8  | 0.67         | 0.78 |
|        | 40            | 34     | 3.0  | 0.50         | 0.50 | 24              | 2.1  | 0.71         | 0.82 |
|        | 50            | 35     | 3.5  | 0.55         | 0.55 | 25              | 2.5  | 0.79         | 0.91 |
|        | 60            | 35     | 3.5  | 0.55         | 0.55 | 25              | 2.5  | 0.79         | 0.91 |

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

### Performance Data – Metric

| NOZZLE                    | NO ADJUSTMENT |        |      |              |    | -30% ADJUSTMENT |      |              |    |
|---------------------------|---------------|--------|------|--------------|----|-----------------|------|--------------|----|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP mm/hr |    | RADIUS          | FLOW | PRECIP mm/hr |    |
|                           | BAR           | METER  | L/M  | ■            | ▲  | METER           | L/M  | ■            | ▲  |
| #1,0                      | 2,1           | 9,4    | 4,2  | 6            | 6  | 7               | 2,9  | 8            | 9  |
|                           | 2,8           | 9,8    | 5,3  | 7            | 8  | 7               | 3,7  | 10           | 11 |
|                           | 3,4           | 10,1   | 6,1  | 7            | 8  | 7               | 4,2  | 10           | 12 |
|                           | 4,1           | 10,4   | 6,8  | 8            | 9  | 7               | 4,8  | 11           | 12 |
| #1,5                      | 2,1           | 10,1   | 5,7  | 7            | 8  | 7               | 4,0  | 10           | 11 |
|                           | 2,8           | 10,7   | 6,8  | 7            | 8  | 8               | 4,8  | 10           | 12 |
|                           | 3,4           | 10,7   | 7,6  | 7            | 9  | 8               | 5,3  | 11           | 13 |
|                           | 4,1           | 11,0   | 8,3  | 8            | 10 | 8               | 5,8  | 12           | 14 |
| #2,0                      | 2,1           | 10,1   | 6,8  | 7            | 9  | 7               | 4,8  | 11           | 13 |
|                           | 2,8           | 10,4   | 7,9  | 7            | 10 | 7               | 5,6  | 13           | 15 |
|                           | 3,4           | 11,0   | 9,1  | 8            | 10 | 8               | 6,4  | 13           | 15 |
|                           | 4,1           | 11,6   | 10,2 | 8            | 11 | 8               | 7,2  | 13           | 15 |
| #2,5<br>Pre-<br>Installed | 2,1           | 10,7   | 8,3  | 7            | 10 | 8               | 5,8  | 12           | 14 |
|                           | 2,8           | 11,6   | 9,8  | 9            | 10 | 8               | 6,9  | 13           | 15 |
|                           | 3,4           | 11,9   | 11,4 | 10           | 11 | 8               | 7,9  | 14           | 16 |
|                           | 4,1           | 12,2   | 12,5 | 10           | 12 | 9               | 8,7  | 14           | 17 |
| #3,0                      | 2,1           | 11,6   | 10,2 | 9            | 11 | 8               | 7,2  | 13           | 15 |
|                           | 2,8           | 12,2   | 11,7 | 9            | 11 | 9               | 8,2  | 13           | 16 |
|                           | 3,4           | 12,5   | 13,3 | 10           | 12 | 9               | 9,3  | 14           | 17 |
|                           | 4,1           | 12,5   | 14,8 | 11           | 13 | 9               | 10,3 | 16           | 19 |
| #4,0                      | 2,1           | 11,6   | 13,3 | 12           | 14 | 8               | 9,3  | 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   | 18,5 | 13           | 15 | 9               | 13,0 | 19           | 21 |
| #5,0                      | 2,1           | 13,1   | 16,7 | 12           | 13 | 9               | 11,7 | 17           | 19 |
|                           | 2,8           | 13,1   | 18,9 | 13           | 15 | 9               | 13,2 | 19           | 22 |
|                           | 3,4           | 13,4   | 20,8 | 14           | 16 | 9               | 14,6 | 20           | 23 |
|                           | 4,1           | 12,8   | 22,3 | 16           | 19 | 9               | 15,6 | 23           | 27 |
| #6,0                      | 2,1           | 12,2   | 18,9 | 15           | 18 | 9               | 13,2 | 22           | 25 |
|                           | 2,8           | 13,1   | 22,3 | 16           | 18 | 9               | 15,6 | 22           | 26 |
|                           | 3,4           | 13,1   | 25,0 | 17           | 20 | 9               | 17,5 | 25           | 29 |
|                           | 4,1           | 13,4   | 27,6 | 18           | 21 | 9               | 19,3 | 26           | 30 |
| #8,0                      | 4,8           | 13,7   | 29,5 | 19           | 22 | 10              | 20,7 | 27           | 31 |
|                           | 2,1           | 13,1   | 25,7 | 18           | 21 | 9               | 18,0 | 26           | 30 |
|                           | 2,8           | 14,3   | 29,9 | 17           | 20 | 10              | 20,9 | 25           | 29 |
|                           | 3,4           | 14,6   | 33,3 | 19           | 22 | 10              | 23,3 | 27           | 31 |
| #8,0                      | 4,1           | 14,3   | 36,7 | 21           | 25 | 10              | 25,7 | 31           | 35 |
|                           | 4,8           | 15,2   | 38,6 | 20           | 23 | 11              | 27,0 | 29           | 33 |

### PR Performance Data – Metric

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

### Low Angle Performance Data – Metric

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

### PR Low Angle Performance Data – Metric

| NOZZLE | NO ADJUSTMENT |        |      |              |    | -30% ADJUSTMENT |      |              |    |
|--------|---------------|--------|------|--------------|----|-----------------|------|--------------|----|
|        | PRESSURE      | RADIUS | FLOW | PRECIP mm/hr |    | RADIUS          | FLOW | PRECIP mm/hr |    |
|        | BAR           | METER  | L/M  | ■            | ▲  | METER           | L/M  | ■            | ▲  |
| #1,0   | 2,1           | 7,9    | 3,4  | 7            | 8  | 5,5             | 2,4  | 9            | 11 |
|        | 2,8           | 8,2    | 3,8  | 7            | 8  | 5,8             | 2,6  | 9            | 10 |
|        | 3,5           | 8,2    | 4,5  | 8            | 9  | 5,8             | 3,2  | 12           | 13 |
|        | 4,1           | 7,9    | 4,5  | 9            | 10 | 5,5             | 3,2  | 14           | 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  | 14           | 15 |
|        | 3,5           | 9,1    | 6,4  | 9            | 11 | 6,4             | 4,5  | 13           | 15 |
|        | 4,1           | 9,1    | 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  | 11           | 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             | 7,9  | 18           | 21 |
|        | 3,5           | 10,7   | 13,2 | 14           | 16 | 7,5             | 9,3  | 20           | 23 |
|        | 4,1           | 10,7   | 13,2 | 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
- Includes 5 Free Check Valve Assemblies Per Box

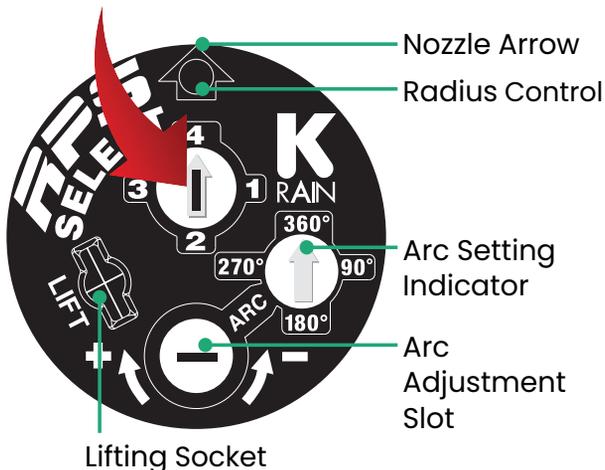
## Specifications

- Arc Adjustment Range: 40° – 360°
- Flow Range: 1.3 – 6.8 GPM (4,9 – 25,8 LPM)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure Range: 30 – 50 PSI (2,1 – 3,4 bar)
- Precipitation Rate: 0.21 – 0.69 in/hr (5 – 18 mm/hr) (depending on spacing and nozzle used)
- 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         | 0.27 |
|        | 35       | 34'    | 1.4  | 0.23         | 0.27 |
|        | 40       | 37'    | 1.5  | 0.21         | 0.24 |
|        | 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            | 7  |
|        | 2,4      | 10,4   | 5,3  | 6            | 7  |
|        | 2,8      | 10,4   | 5,7  | 5            | 6  |
|        | 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 | 14           | 16 |
|        | 2,4      | 12,2   | 15,5 | 13           | 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 | 17           | 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



**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
- Includes 5 Free Check Valve Assemblies Per Box

## Specifications

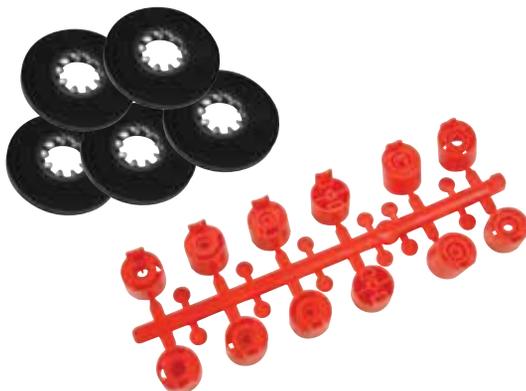
- Arc Adjustment Range: 40° to Continuous 360°
- Flow Range: 0.5 – 10.0 GPM (1,9 – 37,8 LPM)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure Range: 30 – 70 PSI (2,1 – 4,8 bar)
- Precipitation Rate: 0.12 – 0.88 in/hr (3 – 22 mm/hr) (depending on spacing and nozzle used)
- 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®

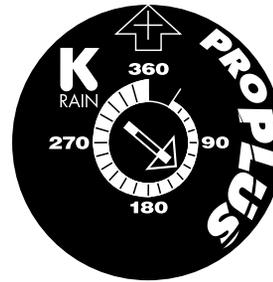
## Accessories

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                    | NO ADJUSTMENT |        |      |              |      |
|---------------------------|---------------|--------|------|--------------|------|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      |
|                           | PSI           | FEET   | GPM  | ■            | ▲    |
| #0.5                      | 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 |
| #0.75                     | 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 |
| #1.0                      | 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 |
| #2.0                      | 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         | 0.40 |
| #2.5<br>Pre-<br>Installed | 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 |
| #3.0                      | 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 |
| #4.0                      | 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                    | NO ADJUSTMENT |        |      |              |    |
|---------------------------|---------------|--------|------|--------------|----|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP mm/hr |    |
|                           | BAR           | METER  | L/M  | ■            | ▲  |
| #0.5                      | 2,1           | 8,5    | 1,9  | 3            | 4  |
|                           | 2,8           | 8,8    | 2,3  | 3            | 4  |
|                           | 3,4           | 8,8    | 2,6  | 4            | 5  |
|                           | 4,1           | 9,1    | 3,0  | 4            | 5  |
| #0.75                     | 2,1           | 8,8    | 2,6  | 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  |
| #1.0                      | 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  |
| #2.0                      | 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   | 12,5 | 9            | 10 |
| #2.5<br>Pre-<br>Installed | 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   | 13,2 | 10           | 12 |
| #3.0                      | 2,1           | 11,6   | 13,6 | 12           | 14 |
|                           | 2,8           | 11,9   | 15,9 | 14           | 16 |
|                           | 3,4           | 12,5   | 17,4 | 13           | 15 |
|                           | 4,1           | 12,8   | 18,9 | 14           | 16 |
| #4.0                      | 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   | 22,3 | 12           | 14 |
| #6.0                      | 2,8           | 13,7   | 22,3 | 14           | 16 |
|                           | 3,4           | 14,0   | 22,7 | 14           | 16 |
|                           | 4,1           | 14,6   | 23,8 | 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 | NO ADJUSTMENT |        |      |              |      |
|--------|---------------|--------|------|--------------|------|
|        | 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     | 8.6  | 0.86         | 0.99 |

### Low Angle Performance Data - Metric

| NOZZLE | NO ADJUSTMENT |        |      |              |    |
|--------|---------------|--------|------|--------------|----|
|        | PRESSURE      | RADIUS | FLOW | 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 | 17           | 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   | 27,6 | 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
- Includes 5 Free Check Valve Assemblies Per Box
- 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)
- Operating Pressure Range: 20 – 100 PSI (1,4 – 6,9 bar)
- Recommended Pressure Range: 30 – 70 PSI (2,1 – 4,8 bar)
- Precipitation rate: 0.21 – 1.50 in/hr (5 – 38 mm/hr) (depending on spacing and nozzle used)
- Radius: 26' – 46' (7,9 – 14,0 m)
- Nozzle trajectory: 26°
- Low angle nozzle trajectory: 11°
- Standard and low angle nozzles included

## Models

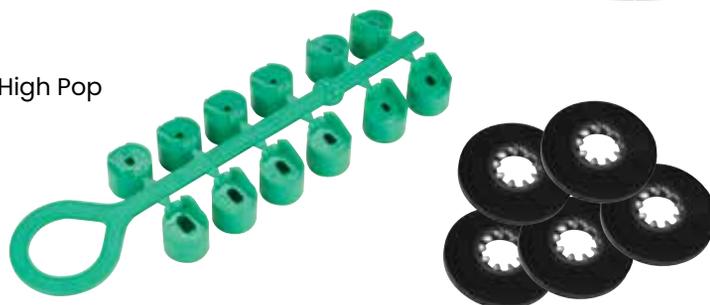
- 10003** SuperPro
- 10003-HP** SuperPro High Pop

## Accessories

See page 26–27

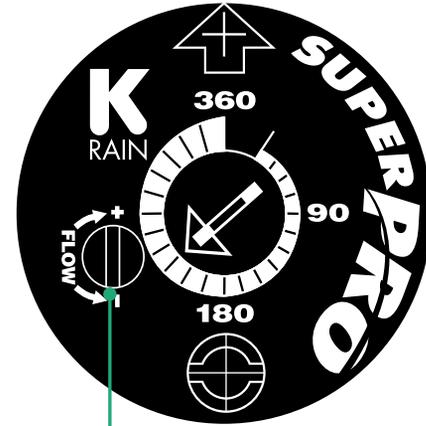
## Fast Facts

| 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)  |



## Performance Data - U.S.

| NOZZLE                    | NO ADJUSTMENT |        |      |              |      | -30% ADJUSTMENT |      |              |      |
|---------------------------|---------------|--------|------|--------------|------|-----------------|------|--------------|------|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      | RADIUS          | FLOW | PRECIP in/hr |      |
|                           | PSI           | FEET   | GPM  | ■            | ▲    | FEET            | GPM  | ■            | ▲    |
| #1.0                      | 30            | 29     | 0.9  | 0.21         | 0.24 | 20              | 0.6  | 0.29         | 0.34 |
|                           | 40            | 29     | 1.0  | 0.23         | 0.26 | 20              | 0.7  | 0.33         | 0.38 |
|                           | 50            | 30     | 1.1  | 0.24         | 0.27 | 21              | 0.8  | 0.34         | 0.39 |
|                           | 60            | 32     | 1.2  | 0.23         | 0.26 | 22              | 0.8  | 0.32         | 0.37 |
| #1.5                      | 30            | 33     | 1.3  | 0.23         | 0.27 | 23              | 0.9  | 0.33         | 0.38 |
|                           | 40            | 35     | 1.5  | 0.24         | 0.27 | 25              | 1.1  | 0.34         | 0.39 |
|                           | 50            | 37     | 1.7  | 0.24         | 0.28 | 26              | 1.2  | 0.34         | 0.39 |
|                           | 60            | 38     | 1.9  | 0.25         | 0.29 | 27              | 1.3  | 0.36         | 0.42 |
| #2.0                      | 30            | 33     | 1.4  | 0.25         | 0.29 | 23              | 1.0  | 0.35         | 0.41 |
|                           | 40            | 36     | 1.7  | 0.25         | 0.29 | 25              | 1.2  | 0.36         | 0.42 |
|                           | 50            | 37     | 2.0  | 0.28         | 0.32 | 26              | 1.4  | 0.40         | 0.46 |
|                           | 60            | 37     | 2.3  | 0.32         | 0.37 | 26              | 1.6  | 0.46         | 0.53 |
| #2.5<br>Pre-<br>Installed | 30            | 35     | 1.9  | 0.30         | 0.34 | 25              | 1.3  | 0.43         | 0.49 |
|                           | 40            | 36     | 2.2  | 0.33         | 0.38 | 25              | 1.5  | 0.47         | 0.54 |
|                           | 50            | 37     | 2.6  | 0.37         | 0.42 | 26              | 1.8  | 0.52         | 0.60 |
|                           | 60            | 38     | 2.9  | 0.39         | 0.45 | 27              | 2.0  | 0.55         | 0.64 |
| #3.0                      | 30            | 33     | 2.3  | 0.41         | 0.47 | 23              | 1.6  | 0.58         | 0.67 |
|                           | 40            | 34     | 2.7  | 0.45         | 0.52 | 24              | 1.9  | 0.64         | 0.74 |
|                           | 50            | 36     | 3.1  | 0.46         | 0.53 | 25              | 2.2  | 0.66         | 0.76 |
|                           | 60            | 38     | 3.4  | 0.45         | 0.52 | 27              | 2.4  | 0.65         | 0.75 |
| #4.0                      | 30            | 33     | 3.1  | 0.55         | 0.63 | 23              | 2.2  | 0.78         | 0.90 |
|                           | 40            | 34     | 3.7  | 0.62         | 0.71 | 24              | 2.6  | 0.88         | 1.02 |
|                           | 50            | 38     | 4.2  | 0.56         | 0.65 | 27              | 2.9  | 0.80         | 0.92 |
|                           | 60            | 39     | 4.6  | 0.58         | 0.67 | 27              | 3.2  | 0.83         | 0.96 |
| #5.0                      | 30            | 35     | 3.8  | 0.60         | 0.69 | 25              | 2.7  | 0.85         | 0.99 |
|                           | 40            | 37     | 4.6  | 0.65         | 0.75 | 26              | 3.2  | 0.92         | 1.07 |
|                           | 50            | 40     | 5.3  | 0.64         | 0.74 | 28              | 3.7  | 0.91         | 1.05 |
|                           | 60            | 42     | 5.8  | 0.63         | 0.73 | 29              | 4.1  | 0.90         | 1.04 |
| #6.0                      | 30            | 35     | 4.5  | 0.71         | 0.82 | 25              | 3.2  | 1.01         | 1.17 |
|                           | 40            | 40     | 5.3  | 0.64         | 0.74 | 28              | 3.7  | 0.91         | 1.05 |
|                           | 50            | 41     | 6.0  | 0.69         | 0.79 | 29              | 4.2  | 0.98         | 1.13 |
|                           | 60            | 42     | 6.7  | 0.73         | 0.84 | 29              | 4.7  | 1.04         | 1.21 |
|                           | 70            | 44     | 7.4  | 0.74         | 0.85 | 31              | 5.2  | 1.05         | 1.21 |
| #8.0                      | 30            | 35     | 5.9  | 0.93         | 1.07 | 25              | 4.1  | 1.32         | 1.53 |
|                           | 40            | 40     | 7.0  | 0.84         | 0.97 | 28              | 4.9  | 1.20         | 1.39 |
|                           | 50            | 42     | 8.0  | 0.87         | 1.01 | 29              | 5.6  | 1.25         | 1.44 |
|                           | 60            | 45     | 8.8  | 0.84         | 0.97 | 32              | 6.2  | 1.20         | 1.38 |
|                           | 70            | 45     | 9.6  | 0.91         | 1.05 | 32              | 6.7  | 1.30         | 1.51 |



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

## Low Angle Performance Data - U.S.

| NOZZLE | NO ADJUSTMENT |        |      |              |      | -30% ADJUSTMENT |      |              |      |
|--------|---------------|--------|------|--------------|------|-----------------|------|--------------|------|
|        | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      | RADIUS          | FLOW | PRECIP in/hr |      |
|        | PSI           | FEET   | GPM  | ■            | ▲    | FEET            | GPM  | ■            | ▲    |
| #1.0   | 30            | 25     | 0.9  | 0.28         | 0.32 | 18              | 0.6  | 0.40         | 0.46 |
|        | 40            | 26     | 1.0  | 0.28         | 0.33 | 18              | 0.7  | 0.41         | 0.47 |
|        | 50            | 27     | 1.1  | 0.29         | 0.34 | 19              | 0.8  | 0.41         | 0.48 |
|        | 60            | 28     | 1.2  | 0.29         | 0.34 | 20              | 0.8  | 0.42         | 0.49 |
| #1.5   | 30            | 27     | 1.0  | 0.26         | 0.30 | 19              | 0.7  | 0.38         | 0.44 |
|        | 40            | 29     | 1.2  | 0.27         | 0.32 | 20              | 0.8  | 0.39         | 0.45 |
|        | 50            | 27     | 1.3  | 0.34         | 0.40 | 19              | 0.9  | 0.49         | 0.57 |
|        | 60            | 28     | 1.5  | 0.37         | 0.43 | 20              | 1.1  | 0.53         | 0.61 |
| #2.0   | 30            | 29     | 1.6  | 0.37         | 0.42 | 20              | 1.1  | 0.52         | 0.60 |
|        | 40            | 32     | 1.9  | 0.36         | 0.41 | 22              | 1.3  | 0.51         | 0.59 |
|        | 50            | 33     | 2.1  | 0.37         | 0.43 | 23              | 1.5  | 0.53         | 0.61 |
|        | 60            | 33     | 2.4  | 0.42         | 0.49 | 23              | 1.7  | 0.61         | 0.70 |
| #3     | 30            | 29     | 2.2  | 0.50         | 0.58 | 20              | 1.5  | 0.72         | 0.83 |
|        | 40            | 33     | 2.7  | 0.48         | 0.55 | 23              | 1.9  | 0.68         | 0.79 |
|        | 50            | 34     | 3.0  | 0.50         | 0.58 | 24              | 2.1  | 0.71         | 0.82 |
|        | 60            | 36     | 3.3  | 0.49         | 0.57 | 25              | 2.3  | 0.70         | 0.81 |

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

## 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

## Performance Data - Metric

| NOZZLE                    | NO ADJUSTMENT |        |      |              |    | -30% ADJUSTMENT |      |              |    |
|---------------------------|---------------|--------|------|--------------|----|-----------------|------|--------------|----|
|                           | PRESSURE      | RADIUS | FLOW | PRECIP mm/hr |    | RADIUS          | FLOW | PRECIP mm/hr |    |
|                           | BAR           | METER  | L/M  | ■            | ▲  | METER           | L/M  | ■            | ▲  |
| #1,0                      | 2,1           | 8,8    | 3,4  | 5            | 6  | 6,2             | 2,4  | 7            | 9  |
|                           | 2,8           | 8,8    | 3,8  | 6            | 7  | 6,2             | 2,6  | 8            | 10 |
|                           | 3,4           | 9,1    | 4,2  | 6            | 7  | 6,4             | 2,9  | 9            | 10 |
|                           | 4,1           | 9,8    | 4,5  | 6            | 7  | 6,9             | 3,2  | 8            | 9  |
| #1,5                      | 2,1           | 10,1   | 4,9  | 6            | 7  | 7,1             | 3,4  | 8            | 10 |
|                           | 2,8           | 10,7   | 5,7  | 6            | 7  | 7,5             | 4,0  | 9            | 10 |
|                           | 3,4           | 11,3   | 6,4  | 6            | 7  | 7,9             | 4,5  | 9            | 10 |
|                           | 4,1           | 11,6   | 7,2  | 6            | 7  | 8,1             | 5,0  | 9            | 11 |
| #2,0                      | 2,1           | 10,1   | 5,3  | 6            | 7  | 7,1             | 3,7  | 9            | 10 |
|                           | 2,8           | 11,0   | 6,4  | 6            | 7  | 7,7             | 4,5  | 9            | 11 |
|                           | 3,4           | 11,3   | 7,6  | 7            | 8  | 7,9             | 5,3  | 10           | 12 |
|                           | 4,1           | 11,3   | 8,7  | 8            | 9  | 7,9             | 6,1  | 12           | 14 |
| #2,5<br>Pre-<br>Installed | 2,1           | 10,7   | 7,2  | 8            | 9  | 7,5             | 5,0  | 11           | 13 |
|                           | 2,8           | 11,0   | 8,3  | 8            | 10 | 7,7             | 5,8  | 12           | 14 |
|                           | 3,4           | 11,3   | 9,8  | 9            | 11 | 7,9             | 6,9  | 13           | 15 |
|                           | 4,1           | 11,6   | 11,0 | 10           | 11 | 8,1             | 7,7  | 14           | 16 |
| #3,0                      | 2,1           | 10,6   | 8,7  | 10           | 12 | 7,4             | 6,1  | 15           | 17 |
|                           | 2,8           | 10,4   | 10,2 | 11           | 13 | 7,3             | 7,2  | 16           | 19 |
|                           | 3,4           | 11,0   | 11,7 | 12           | 14 | 7,7             | 8,2  | 17           | 19 |
|                           | 4,1           | 11,6   | 12,9 | 12           | 13 | 8,1             | 9,0  | 16           | 19 |
| #4,0                      | 2,1           | 10,1   | 11,7 | 14           | 16 | 7,0             | 8,2  | 20           | 23 |
|                           | 2,8           | 10,4   | 14,0 | 16           | 18 | 7,3             | 9,8  | 22           | 26 |
|                           | 3,4           | 11,6   | 15,9 | 14           | 16 | 8,1             | 11,1 | 20           | 23 |
|                           | 4,1           | 11,9   | 17,4 | 15           | 17 | 8,3             | 12,2 | 21           | 24 |
| #5,0                      | 2,1           | 10,7   | 14,4 | 15           | 18 | 7,5             | 10,1 | 22           | 28 |
|                           | 2,8           | 11,3   | 17,4 | 16           | 19 | 7,9             | 12,2 | 23           | 27 |
|                           | 3,4           | 12,2   | 20,1 | 16           | 19 | 8,5             | 14,0 | 23           | 27 |
|                           | 4,1           | 12,8   | 22,0 | 16           | 19 | 9,0             | 15,4 | 23           | 27 |
| #6,0                      | 2,1           | 10,7   | 17,0 | 18           | 21 | 7,5             | 11,9 | 26           | 30 |
|                           | 2,8           | 12,2   | 20,1 | 16           | 19 | 8,5             | 14,0 | 23           | 27 |
|                           | 3,4           | 12,5   | 22,7 | 17           | 20 | 8,7             | 15,9 | 25           | 29 |
|                           | 4,1           | 12,8   | 25,4 | 19           | 21 | 9,0             | 17,8 | 27           | 31 |
|                           | 4,8           | 13,4   | 28,0 | 19           | 22 | 9,8             | 19,6 | 27           | 31 |
| #8,0                      | 2,1           | 10,7   | 22,3 | 24           | 27 | 7,5             | 15,6 | 34           | 39 |
|                           | 2,8           | 12,2   | 26,5 | 21           | 25 | 8,5             | 18,5 | 31           | 35 |
|                           | 3,4           | 12,8   | 30,3 | 22           | 26 | 9,0             | 21,2 | 32           | 37 |
|                           | 4,1           | 13,7   | 33,3 | 21           | 25 | 9,6             | 23,3 | 30           | 35 |
|                           | 4,8           | 13,7   | 36,3 | 23           | 27 | 10,7            | 25,4 | 33           | 38 |

## PR Low Angle Performance Data - Metric

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

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





Designed for sports turf and commercial applications.

## Features

- Patented Top Arc Set – Allows for 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 – 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)
- Operating Pressure Range: 40 – 100 PSI (2,8 – 6,9 bar)
- Recommended Pressure Range: 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)
- Radius: 43' – 77' (13,1 – 23,5 m)
- Nozzle Trajectory: 26°

## Model

- 14003** ProSport® Plastic
- 14003-6INCH** ProSport® Plastic 6 inch
- 14003-TC-6INCH** 6 inch, NPT, Turf Cup, ProSport®
- 14003-BSP-TC-6INCH** 6 inch, BSP, Turf Cup, ProSport®
- 14053** ProSport® High Speed Plastic
- 14053-6INCH** ProSport® High Speed Plastic 6 inch
- 14053-TC-6INCH** 6 inch, NPT, Turf Cup, ProSport® Hi-Speed
- 14053-BSP-TC-6INCH** 6 inch, BSP, Turf Cup, ProSport® Hi-Speed

## Fast Facts

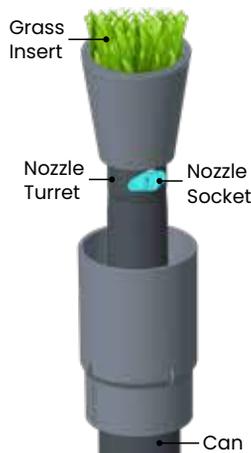
| ALL         | INLET: 1" (2,5 CM) FEMALE THREAD NPT OR BSP                        |
|-------------|--|
| 4"          | Retracted height: 7 1/2" (19 cm)<br>Riser height: 4 1/2" (11,4 cm) |
| 6"          | Retracted height: 12" (30,5 cm)<br>Riser height: 6 1/4" (15,9 cm)  |
| 6" Turf Cup | Retracted height: 15" (38,1 cm)<br>Riser height: 6 1/4" (15,9 cm)  |



## PROSPORT WITH TURF Cup



6" Model Only



### 14003 Performance Data - U.S.

| NOZZLE  | NO ADJUSTMENT |        |      |              |      |
|---|---------------|--------|------|--------------|------|
|   | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      |
|   | PSI           | FEET   | GPM  | ■            | ▲    |
|  | 40            | 43     | 5.5  | 0.57         | 0.66 |
|   | 50            | 44     | 6.0  | 0.60         | 0.69 |
|   | 60            | 45     | 7.0  | 0.67         | 0.77 |
|   | 70            | 46     | 8.0  | 0.73         | 0.84 |
|  | 50            | 49     | 11.8 | 0.95         | 1.09 |
|   | 60            | 52     | 12.8 | 0.91         | 1.05 |
|   | 70            | 53     | 13.8 | 0.95         | 1.09 |
|   | 80            | 54     | 14.5 | 0.96         | 1.11 |
|  | 50            | 52     | 14.0 | 1.00         | 1.15 |
|   | 60            | 54     | 16.0 | 1.06         | 1.22 |
|   | 70            | 56     | 17.0 | 1.04         | 1.20 |
|   | 80            | 58     | 18.0 | 1.03         | 1.19 |
|  | 60            | 56     | 19.8 | 1.22         | 1.40 |
|   | 70            | 58     | 21.0 | 1.20         | 1.39 |
|   | 80            | 59     | 21.5 | 1.19         | 1.37 |
|   | 90            | 60     | 22.0 | 1.18         | 1.36 |
|  | 60            | 62     | 23.5 | 1.18         | 1.36 |
|   | 70            | 66     | 26.5 | 1.17         | 1.35 |
|   | 80            | 67     | 28.0 | 1.20         | 1.39 |
|   | 90            | 68     | 29.0 | 1.21         | 1.39 |
|  | 60            | 65     | 25.0 | 1.14         | 1.32 |
|   | 70            | 72     | 30.0 | 1.11         | 1.29 |
|   | 80            | 73     | 31.5 | 1.14         | 1.31 |
|   | 90            | 75     | 33.5 | 1.15         | 1.32 |

### 14003 Performance Data - Metric

| NOZZLE  | NO ADJUSTMENT |        |       |              |    |
|---|---------------|--------|-------|--------------|----|
|   | PRESSURE      | RADIUS | FLOW  | PRECIP mm/hr |    |
|   | BAR           | METER  | L/M   | ■            | ▲  |
|  | 2,8           | 13,1   | 20,8  | 15           | 17 |
|   | 3,5           | 13,4   | 22,7  | 15           | 17 |
|   | 4,1           | 13,7   | 26,5  | 17           | 20 |
|   | 4,8           | 14,0   | 30,3  | 18           | 21 |
|  | 3,5           | 14,9   | 44,7  | 24           | 28 |
|   | 4,1           | 15,8   | 48,5  | 23           | 27 |
|   | 4,8           | 16,2   | 52,2  | 24           | 28 |
|   | 5,5           | 16,5   | 54,9  | 24           | 28 |
|  | 3,5           | 15,8   | 53,0  | 25           | 29 |
|   | 4,1           | 16,5   | 60,6  | 27           | 31 |
|   | 4,8           | 17,1   | 64,4  | 27           | 31 |
|   | 5,5           | 17,7   | 68,1  | 26           | 30 |
|  | 4,1           | 17,1   | 75,0  | 31           | 36 |
|   | 4,8           | 17,7   | 79,5  | 31           | 35 |
|   | 5,5           | 18,0   | 81,4  | 30           | 35 |
|   | 6,2           | 18,3   | 83,3  | 30           | 35 |
|  | 4,1           | 18,9   | 89,0  | 30           | 35 |
|   | 4,8           | 20,1   | 100,3 | 30           | 34 |
|   | 5,5           | 20,4   | 106,0 | 30           | 35 |
|   | 6,2           | 20,7   | 109,8 | 31           | 35 |
|  | 4,1           | 19,8   | 94,6  | 29           | 33 |
|   | 4,8           | 21,9   | 113,6 | 28           | 33 |
|   | 6,2           | 22,2   | 119,2 | 29           | 33 |
|   | 6,2           | 22,9   | 126,8 | 29           | 34 |

### 14053 Performance Data - U.S.

| NOZZLE  | NO ADJUSTMENT |        |      |              |      |
|---|---------------|--------|------|--------------|------|
|   | PRESSURE      | RADIUS | FLOW | PRECIP in/hr |      |
|   | PSI           | FEET   | GPM  | ■            | ▲    |
|  | 40            | 43     | 5.5  | 0.61         | 0.71 |
|   | 50            | 44     | 6.0  | 0.62         | 0.71 |
|   | 60            | 45     | 7.0  | 0.61         | 0.70 |
|   | 70            | 45     | 8.0  | 0.72         | 0.83 |
|  | 50            | 49     | 11.8 | 0.85         | 0.98 |
|   | 60            | 53     | 12.8 | 0.79         | 0.91 |
|   | 70            | 53     | 13.8 | 0.91         | 1.05 |
|   | 80            | 54     | 14.5 | 0.92         | 1.07 |
|  | 50            | 52     | 14.0 | 0.88         | 1.02 |
|   | 60            | 54     | 16.0 | 0.90         | 1.04 |
|   | 70            | 56     | 17.0 | 0.90         | 1.03 |
|   | 80            | 58     | 18.0 | 0.91         | 1.05 |
|  | 60            | 56     | 19.8 | 1.22         | 1.40 |
|   | 70            | 58     | 21.0 | 1.21         | 1.40 |
|   | 80            | 59     | 21.5 | 1.26         | 1.46 |
|   | 90            | 60     | 22.0 | 1.30         | 1.51 |
|  | 60            | 59     | 23.5 | 1.24         | 1.43 |
|   | 70            | 66     | 26.5 | 1.14         | 1.31 |
|   | 80            | 67     | 28.0 | 1.19         | 1.38 |
|   | 90            | 68     | 29.0 | 1.24         | 1.44 |
|  | 60            | 60     | 25.0 | 1.35         | 1.56 |
|   | 70            | 72     | 30.0 | 1.06         | 1.22 |
|   | 80            | 73     | 31.5 | 1.11         | 1.28 |
|   | 90            | 75     | 33.5 | 1.11         | 1.28 |

### 14053 Performance Data - Metric

| NOZZLE  | NO ADJUSTMENT |        |       |              |    |
|---|---------------|--------|-------|--------------|----|
|   | PRESSURE      | RADIUS | FLOW  | PRECIP mm/hr |    |
|   | BAR           | METER  | L/M   | ■            | ▲  |
|  | 2,8           | 13,1   | 20,8  | 15           | 18 |
|   | 3,5           | 13,4   | 22,7  | 16           | 18 |
|   | 4,1           | 13,7   | 26,5  | 15           | 18 |
|   | 4,8           | 13,7   | 30,3  | 18           | 21 |
|  | 3,5           | 14,9   | 44,7  | 22           | 25 |
|   | 4,1           | 15,8   | 48,5  | 20           | 23 |
|   | 4,8           | 16,1   | 52,2  | 23           | 27 |
|   | 5,5           | 16,5   | 54,9  | 23           | 27 |
|  | 3,5           | 15,8   | 53,0  | 22           | 26 |
|   | 4,1           | 16,5   | 60,6  | 23           | 26 |
|   | 4,8           | 17,1   | 64,4  | 23           | 26 |
|   | 5,5           | 17,1   | 68,1  | 23           | 27 |
|  | 4,1           | 17,1   | 75,0  | 31           | 36 |
|   | 4,8           | 17,7   | 79,5  | 31           | 36 |
|   | 5,5           | 18,0   | 81,4  | 32           | 37 |
|   | 6,2           | 18,3   | 83,3  | 33           | 38 |
|  | 4,1           | 18,0   | 89,0  | 31           | 36 |
|   | 4,8           | 20,1   | 100,3 | 29           | 33 |
|   | 5,5           | 20,4   | 106,0 | 30           | 35 |
|   | 6,2           | 20,7   | 109,8 | 31           | 37 |
|  | 4,1           | 18,3   | 94,6  | 34           | 40 |
|   | 4,8           | 22,0   | 113,6 | 27           | 31 |
|   | 6,2           | 22,2   | 119,2 | 28           | 33 |
|   | 6,2           | 22,9   | 126,8 | 28           | 33 |

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

Examples: 14003-BSP, 14053-RCW-NN

### Easy Arc Setting

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



WATCH VIDEO



Visit our Sport Field Designs.

### Accessories

See page 26-27

# 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

## ProSport®

**P14055130** Complete set of Nozzles (1 nozzle of each)

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

## Adjustment Tools

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

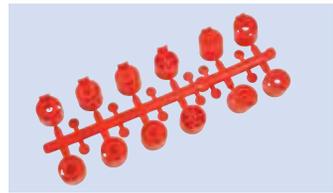
**P1000902** SuperPro®, RPS™ Select, ProSport® Adjustment Key

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

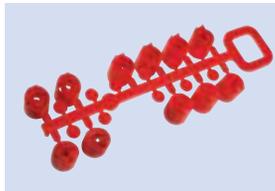
P52775



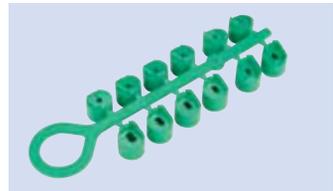
P51399



P16001101



P16001110



P90001102



P55519

5 GPM



10 GPM



15 GPM



20 GPM



25 GPM



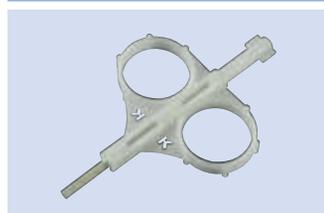
30 GPM



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
- SWPA060575** Swing Pipe Assembly, 6in, 1/2" Inlet x 3/4"
- SWPA067575** Swing Pipe Assembly, 6in, 3/4" Inlet x 3/4" Outlet
- SWPA120505** Swing Pipe Assembly, 12in, 1/2" Inlet x 1/2" Outlet
- SWPA120575** Swing Pipe Assembly, 12in, 1/2" Inlet x 3/4" 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
- SWPA187575** Swing Pipe Assembly, 18in, 3/4" Inlet x 3/4" Outlet



# 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              |
| <b>Specifications</b>           |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| Pop-up height                   | 11/2"              | 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"            |
| Operating 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 |
| Nozzle                          | female thread      | male thread        | male thread        | male thread        | male thread        |
| <b>Features</b>                 |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| Co-molded wiper seal            | •                  | •                  | •                  | •                  | •                  |                    |                    |                    |                    |                    |                    |
| Ratcheting riser                | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  |
| Heavy duty retraction spring    | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  | •                  |
| Side inlet                      |                    |                    |                    | •                  | •                  |                    |                    |                    |                    |                    | •                  |
| Narrow profile                  |                    |                    |                    |                    |                    | •                  | •                  |                    |                    |                    |                    |
| Warranty                        | 7 years            |
| <b>Options</b>                  |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
| 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

## Specifications

- Operating Pressure Range: 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

## Fast Facts

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



## 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](http://krain.com/watersense-certified) for a full list



### 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", 6" and 12" 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

- Operating Pressure Range: 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    | -CV ▶ Check Valve |
| NP4    |                   |

Examples: NP4-CV

## Accessories

See page 34



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

- Operating Pressure Range: 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)
- PFA** Shrub Adapter, Male Thread (for female nozzles)
- PSA-RCW** RCW Shrub adapter, Female Thread, (for male nozzles)
- PFA-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)



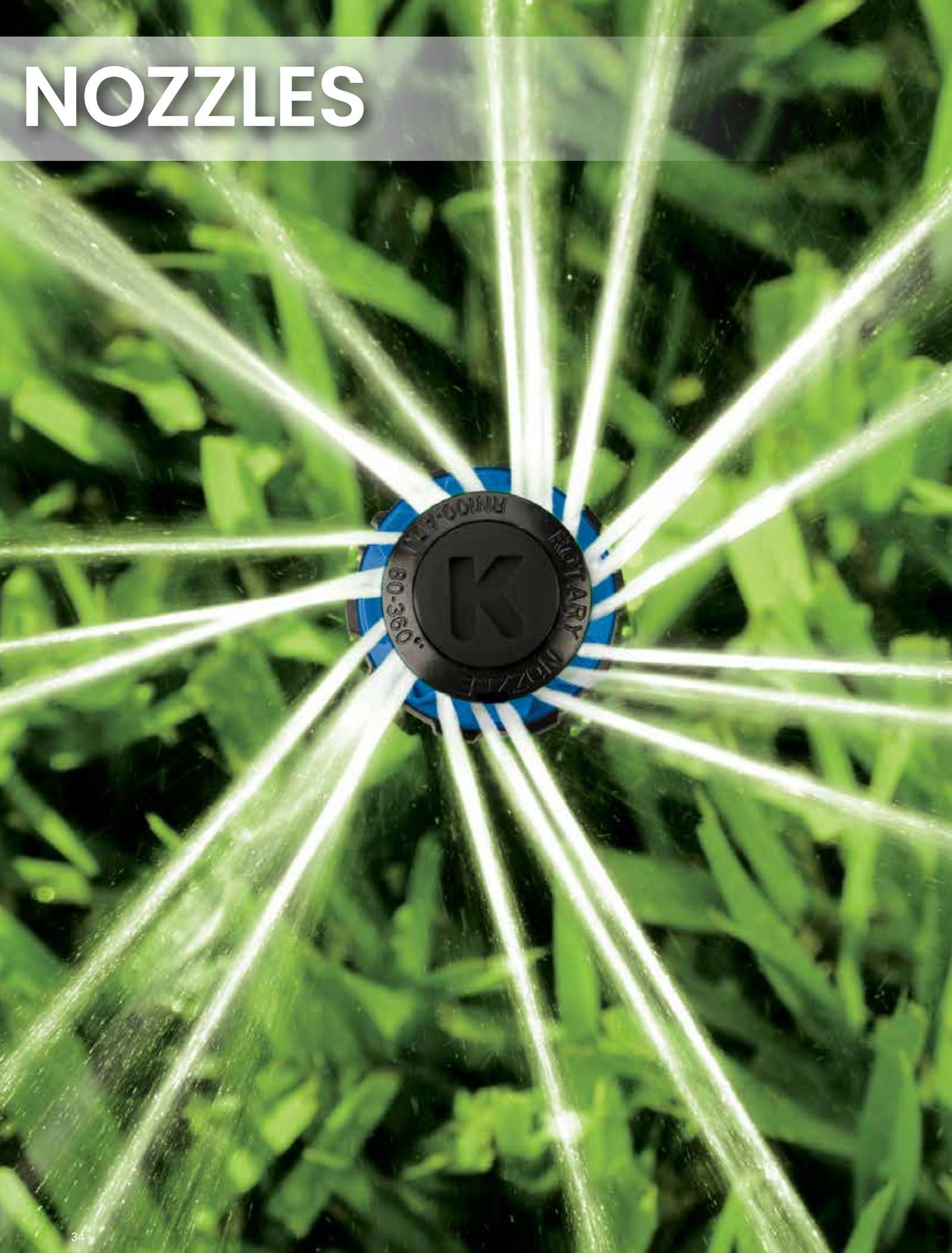
### SWING PIPE & FITTINGS

- 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
- SWPA060575** Swing Pipe Assembly, 6in, 1/2" Inlet x 3/4" Outlet
- SWPA067575** Swing Pipe Assembly, 6in, 3/4" Inlet x 3/4" Outlet
- SWPA120505** Swing Pipe Assembly, 12in, 1/2" Inlet x 1/2" Outlet
- SWPA120575** Swing Pipe Assembly, 12in, 1/2" Inlet x 3/4" 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
- SWPA187575** Swing Pipe Assembly, 18in, 3/4" Inlet x 3/4" Outlet





# 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
- **Recommended Operating Pressure** – 40 PSI (2,8 bar)



WATCH VIDEO



## 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-FIX360

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-FIX360

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-FIX360

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 | FT     | 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 | FT     | 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 | FT     | 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 | FT     | 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 | FT     | 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 | FT     | 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 | FT     | 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 | FT     | 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 | FT     | 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   | FT    | 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   | FT    | 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   | FT    | 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW | PRECIP mm/hr |    |
|------------|----------|--------|------|--------------|----|
|            | Bar      | METERS | L/M  | ■            | ▲  |
| 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 | RADIUS | FLOW  | PRECIP mm/hr |    |
|------------|----------|--------|-------|--------------|----|
|            | Bar      | METERS | L/M   | ■            | ▲  |
| 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 | RADIUS | FLOW  | PRECIP mm/hr |    |
|------------|----------|--------|-------|--------------|----|
|            | Bar      | METERS | L/M   | ■            | ▲  |
| 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 | W X L     | FLOW |
|-----------------|---|----------|-----------|------|
|                 |   | Bar      | METERS    | 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 | W X L     | FLOW |
|----------------|---|----------|-----------|------|
|                |   | Bar      | METERS    | 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 | W X L     | FLOW |
|------------|---|----------|-----------|------|
|            |   | Bar      | METERS    | 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)
- Recommended Operating Pressure – 30 PSI (2,1 bar)
- 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 – helps ensure consistent application speed over varying flow rates and pressures
- Multiple stream technology – for improved wind resistance
- Large filter – prolongs product life



## 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

### Performance Data - U.S.

#### RN100-ADJ



13' - 15' (4-4,6 m)

| NOZZLE | PRESSURE | RADIUS | FLOW | PRECIP in/hr |      |
|--------|----------|--------|------|--------------|------|
|        | PSI      | FEET   | GPM  | ■            | ▲    |
| 90°    | 30       | 13     | 0.22 | 0.50         | 0.58 |
|        | 40       | 14     | 0.25 | 0.49         | 0.57 |
|        | 50       | 15     | 0.30 | 0.51         | 0.59 |
| 180°   | 30       | 13     | 0.44 | 0.50         | 0.58 |
|        | 40       | 14     | 0.50 | 0.49         | 0.57 |
|        | 50       | 15     | 0.60 | 0.51         | 0.59 |
| 360°   | 30       | 13     | 0.90 | 0.51         | 0.59 |
|        | 40       | 14     | 1.00 | 0.49         | 0.57 |
|        | 50       | 15     | 1.20 | 0.51         | 0.59 |

### 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 |

### Performance Data - U.S.

#### RN200-ADJ



16' - 19' (4,9-5,8 m)

| 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 |

### Performance Data - U.S.

#### RN300-ADJ



26' - 30' (7,9-9,1 m)

| 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
- Recommended Operating Pressure – 30 PSI (2,1 bar)

## 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        |
|            | <b>30</b> | <b>6</b> | <b>0.50</b> | <b>5.35</b>  | <b>6.17</b> |
| 180°       | 20        | 5        | 0.60        | 4.61         | 5.33        |
|            | 25        | 5        | 0.66        | 5.07         | 5.86        |
|            | 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        |
|            | 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        |
|            | 40        | 6        | 1.62        | 4.33         | 4.99        |

### 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        |
|            | <b>30</b> | <b>10</b> | <b>0.50</b> | <b>1.93</b>  | <b>2.22</b> |
| 180°       | 20        | 9         | 0.75        | 1.78         | 2.06        |
|            | 25        | 9         | 0.85        | 2.02         | 2.33        |
|            | 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        |
|            | 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        |
|            | 40        | 10        | 2.30        | 2.21         | 2.56        |

### 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 |
|            | 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 |
|            | 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 |
|            | 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 |
|            | 40       | 12     | 2.80 | 1.87         | 2.16 |

### 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        |
|            | <b>2,07</b> | <b>1,8</b> | <b>1,89</b> | <b>136</b>   | <b>157</b> |
| 180°       | 1,38        | 1,5        | 2,27        | 117          | 135        |
|            | 1,72        | 1,5        | 2,50        | 129          | 149        |
|            | 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        |
|            | 2,76        | 1,8        | 4,54        | 108          | 125        |
| 360°       | 1,38        | 1,5        | 4,09        | 105          | 122        |
|            | 1,72        | 1,5        | 4,73        | 122          | 141        |
|            | 2,76        | 1,8        | 6,13        | 110          | 127        |

### 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        |
|            | <b>2,07</b> | <b>3,1</b> | <b>1,89</b> | <b>49</b>    | <b>56</b> |
| 180°       | 1,38        | 2,7        | 2,84        | 45           | 52        |
|            | 1,72        | 2,7        | 3,22        | 51           | 59        |
|            | 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        |
|            | 2,76        | 3,1        | 6,62        | 57           | 66        |
| 360°       | 1,38        | 2,7        | 5,68        | 45           | 52        |
|            | 1,72        | 2,7        | 6,44        | 51           | 59        |
|            | 2,76        | 3,1        | 8,71        | 56           | 65        |

### 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        |
|            | <b>2,07</b> | <b>3,7</b> | <b>2,35</b> | <b>42</b>    | <b>49</b> |
| 180°       | 1,38        | 3,1        | 3,41        | 44           | 51        |
|            | 1,72        | 3,4        | 4,16        | 44           | 51        |
|            | 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        |
|            | 2,76        | 3,7        | 7,95        | 47           | 55        |
| 360°       | 1,38        | 3,1        | 6,81        | 44           | 51        |
|            | 1,72        | 3,4        | 8,33        | 44           | 51        |
|            | 2,76        | 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        |
|            | <b>30</b> | <b>14</b> | <b>0.80</b> | <b>1.57</b>  | <b>1.81</b> |
|            | 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        |
|            | <b>30</b> | <b>14</b> | <b>1.60</b> | <b>1.57</b>  | <b>1.81</b> |
|            | 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        |
|            | <b>30</b> | <b>14</b> | <b>2.40</b> | <b>1.57</b>  | <b>1.81</b> |
|            | 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        |
|            | <b>30</b> | <b>14</b> | <b>3.10</b> | <b>1.52</b>  | <b>1.76</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,3</b> | <b>3,03</b>  | <b>40</b>    | <b>46</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,3</b> | <b>6,06</b>  | <b>40</b>    | <b>46</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,3</b> | <b>9,08</b>  | <b>40</b>    | <b>46</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,3</b> | <b>11,73</b> | <b>39</b>    | <b>45</b> |
|            | 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        |
|            | <b>30</b> | <b>15</b> | <b>0.95</b> | <b>1.63</b>  | <b>1.88</b> |
|            | 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        |
|            | <b>30</b> | <b>15</b> | <b>1.90</b> | <b>1.63</b>  | <b>1.88</b> |
|            | 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        |
|            | <b>30</b> | <b>15</b> | <b>2.80</b> | <b>1.60</b>  | <b>1.84</b> |
|            | 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        |
|            | <b>30</b> | <b>15</b> | <b>3.80</b> | <b>1.63</b>  | <b>1.88</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,6</b> | <b>3,60</b>  | <b>41</b>    | <b>48</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,6</b> | <b>7,19</b>  | <b>41</b>    | <b>48</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,6</b> | <b>10,60</b> | <b>41</b>    | <b>47</b> |
|            | 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        |
|            | <b>2,07</b> | <b>4,6</b> | <b>14,38</b> | <b>41</b>    | <b>48</b> |
|            | 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        |
|            | <b>30</b> | <b>18</b> | <b>1.05</b> | <b>1.25</b>  | <b>1.44</b> |
|            | 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        |
|            | <b>30</b> | <b>18</b> | <b>2.10</b> | <b>1.25</b>  | <b>1.44</b> |
|            | 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        |
|            | <b>30</b> | <b>18</b> | <b>3.15</b> | <b>1.25</b>  | <b>1.44</b> |
|            | 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        |
|            | <b>30</b> | <b>18</b> | <b>4.20</b> | <b>1.25</b>  | <b>1.44</b> |
|            | 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        |
|            | <b>2,07</b> | <b>5,5</b> | <b>3,97</b>  | <b>32</b>    | <b>37</b> |
|            | 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        |
|            | <b>2,07</b> | <b>5,5</b> | <b>7,95</b>  | <b>32</b>    | <b>37</b> |
|            | 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        |
|            | <b>2,07</b> | <b>5,5</b> | <b>11,92</b> | <b>32</b>    | <b>37</b> |
|            | 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        |
|            | <b>2,07</b> | <b>5,5</b> | <b>15,90</b> | <b>32</b>    | <b>37</b> |
|            | 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
- Recommended Operating Pressure – 30 PSI (2,1 bar)

### Performance Data – U.S.

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

| ARC DEGREE | PRESSURE  |             | RADIUS FEET | FLOW GPM    | PRECIP in/hr |             |
|------------|-----------|-------------|-------------|-------------|--------------|-------------|
|            | PSI       | BAR         |             |             | ■            | ▲           |
| 90°        | 20        | 1,38        | 7           | 0.30        | 2.36         | 2.72        |
|            | <b>30</b> | <b>2,07</b> | <b>8</b>    | <b>0.40</b> | <b>2.41</b>  | <b>2.78</b> |
|            | 40        | 2,76        | 8           | 0.40        | 2.41         | 2.78        |
|            | 50        | 3,45        | 9           | 0.40        | 1.9          | 2.2         |
| 180°       | 20        | 1,38        | 7           | 0.80        | 3.14         | 3.63        |
|            | <b>30</b> | <b>2,07</b> | <b>8</b>    | <b>0.90</b> | <b>2.71</b>  | <b>3.13</b> |
|            | 40        | 2,76        | 8           | 1.00        | 3.01         | 3.47        |
|            | 50        | 3,45        | 9           | 1.10        | 2.61         | 3.02        |
| 270°       | 20        | 1,38        | 7           | 1.20        | 3.14         | 3.63        |
|            | <b>30</b> | <b>2,07</b> | <b>8</b>    | <b>1.20</b> | <b>2.41</b>  | <b>2.78</b> |
|            | 40        | 2,76        | 8           | 1.30        | 2.61         | 3.01        |
|            | 50        | 3,45        | 9           | 1.50        | 2.38         | 2.74        |
| 360°       | 20        | 1,38        | 7           | 1.90        | 3.73         | 4.31        |
|            | 30        | 2,07        | 8           | 2.00        | 3.01         | 3.47        |
|            | 40        | 2,76        | 8           | 2.20        | 3.31         | 3.82        |
|            | 50        | 3,45        | 9           | 2.30        | 2.73         | 3.16        |

### Performance Data – Metric

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

| ARC DEGREE | PRESSURE    |           | RADIUS METERS | FLOW L/M    | PRECIP mm/hr |           |
|------------|-------------|-----------|---------------|-------------|--------------|-----------|
|            | BAR         | PSI       |               |             | ■            | ▲         |
| 90°        | 1,38        | 20        | 2,1           | 1,14        | 60           | 69        |
|            | <b>2,07</b> | <b>30</b> | <b>2,4</b>    | <b>1,51</b> | <b>61</b>    | <b>70</b> |
|            | 2,76        | 40        | 2,4           | 1,51        | 61           | 70        |
|            | 3,45        | 50        | 2,7           | 1,51        | 48           | 56        |
| 180°       | 1,38        | 20        | 2,1           | 3,03        | 80           | 92        |
|            | <b>2,07</b> | <b>30</b> | <b>2,4</b>    | <b>3,41</b> | <b>69</b>    | <b>79</b> |
|            | 2,76        | 40        | 2,4           | 3,79        | 76           | 88        |
|            | 3,45        | 50        | 2,7           | 4,16        | 66           | 77        |
| 270°       | 1,38        | 20        | 2,1           | 4,54        | 80           | 92        |
|            | <b>2,07</b> | <b>30</b> | <b>2,4</b>    | <b>4,54</b> | <b>61</b>    | <b>70</b> |
|            | 2,76        | 40        | 2,4           | 4,92        | 66           | 76        |
|            | 3,45        | 50        | 2,7           | 5,68        | 60           | 70        |
| 360°       | 1,38        | 20        | 2,1           | 7,19        | 95           | 109       |
|            | <b>2,07</b> | <b>30</b> | <b>2,4</b>    | <b>7,57</b> | <b>76</b>    | <b>88</b> |
|            | 2,76        | 40        | 2,4           | 8,33        | 84           | 97        |
|            | 3,45        | 50        | 2,7           | 8,71        | 69           | 80        |

### 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.

KV10 10' (3 m) Nozzle (Blue)

| ARC DEGREE | PRESSURE  |             | RADIUS FEET | FLOW GPM    | PRECIP in/hr |             |
|------------|-----------|-------------|-------------|-------------|--------------|-------------|
|            | PSI       | BAR         |             |             | ■            | ▲           |
| 90°        | 20        | 1,38        | 12          | 0.70        | 1.87         | 2.16        |
|            | <b>30</b> | <b>2,07</b> | <b>12</b>   | <b>1.10</b> | <b>2.94</b>  | <b>3.40</b> |
|            | 40        | 2,76        | 13          | 1.40        | 3.19         | 3.68        |
|            | 50        | 3,45        | 14          | 1.50        | 2.95         | 3.40        |
| 180°       | 20        | 1,38        | 11          | 1.40        | 2.23         | 2.57        |
|            | <b>30</b> | <b>2,07</b> | <b>11</b>   | <b>1.60</b> | <b>2.55</b>  | <b>2.94</b> |
|            | 40        | 2,76        | 12          | 1.80        | 2.41         | 2.78        |
|            | 50        | 3,45        | 13          | 2.00        | 2.28         | 2.63        |
| 270°       | 20        | 1,38        | 10          | 1.70        | 2.18         | 2.52        |
|            | <b>30</b> | <b>2,07</b> | <b>10</b>   | <b>2.00</b> | <b>2.57</b>  | <b>2.96</b> |
|            | 40        | 2,76        | 11          | 2.30        | 2.44         | 2.82        |
|            | 50        | 3,45        | 12          | 2.60        | 2.32         | 2.68        |
| 360°       | 20        | 1,38        | 10          | 2.20        | 2.12         | 2.45        |
|            | <b>30</b> | <b>2,07</b> | <b>10</b>   | <b>2.70</b> | <b>2.60</b>  | <b>3.00</b> |
|            | 40        | 2,76        | 11          | 3.00        | 2.39         | 2.76        |
|            | 50        | 3,45        | 12          | 3.50        | 2.34         | 2.70        |

### Performance Data – Metric

KV10 10' (3 m) Nozzle (Blue)

| ARC DEGREE | PRESSURE    |           | RADIUS METERS | FLOW L/M     | PRECIP mm/hr |           |
|------------|-------------|-----------|---------------|--------------|--------------|-----------|
|            | BAR         | PSI       |               |              | ■            | ▲         |
| 90°        | 1,38        | 20        | 3,7           | 2,65         | 47           | 55        |
|            | <b>2,07</b> | <b>30</b> | <b>3,7</b>    | <b>4,16</b>  | <b>75</b>    | <b>86</b> |
|            | 2,76        | 40        | 4,0           | 5,30         | 81           | 93        |
|            | 3,45        | 50        | 4,3           | 5,68         | 75           | 86        |
| 180°       | 1,38        | 20        | 3,4           | 5,30         | 56           | 65        |
|            | <b>2,07</b> | <b>30</b> | <b>3,4</b>    | <b>6,06</b>  | <b>65</b>    | <b>75</b> |
|            | 2,76        | 40        | 3,7           | 6,81         | 61           | 70        |
|            | 3,45        | 50        | 4,0           | 7,57         | 58           | 67        |
| 270°       | 1,38        | 20        | 3,1           | 6,44         | 55           | 64        |
|            | <b>2,07</b> | <b>30</b> | <b>3,1</b>    | <b>7,57</b>  | <b>65</b>    | <b>75</b> |
|            | 2,76        | 40        | 3,4           | 8,71         | 62           | 71        |
|            | 3,45        | 50        | 3,7           | 9,84         | 59           | 68        |
| 360°       | 1,38        | 20        | 3,1           | 8,33         | 54           | 62        |
|            | <b>2,07</b> | <b>30</b> | <b>3,1</b>    | <b>10,22</b> | <b>66</b>    | <b>76</b> |
|            | 2,76        | 40        | 3,4           | 11,36        | 61           | 70        |
|            | 3,45        | 50        | 3,7           | 13,25        | 59           | 69        |

### Performance Data – U.S.

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

| ARC DEGREE | PRESSURE  |             | RADIUS FEET | FLOW GPM    | PRECIP in/hr |             |
|------------|-----------|-------------|-------------|-------------|--------------|-------------|
|            | PSI       | BAR         |             |             | ■            | ▲           |
| 90°        | 20        | 1,38        | 12          | 1.10        | 2.94         | 3.40        |
|            | <b>30</b> | <b>2,07</b> | <b>13</b>   | <b>1.30</b> | <b>2.96</b>  | <b>3.42</b> |
|            | 40        | 2,76        | 14          | 1.50        | 2.95         | 3.40        |
|            | 50        | 3,45        | 15          | 1.70        | 2.91         | 3.36        |
| 180°       | 20        | 1,38        | 11          | 1.60        | 2.55         | 2.94        |
|            | <b>30</b> | <b>2,07</b> | <b>12</b>   | <b>1.80</b> | <b>2.41</b>  | <b>2.78</b> |
|            | 40        | 2,76        | 13          | 2.20        | 2.51         | 2.89        |
|            | 50        | 3,45        | 14          | 2.40        | 2.36         | 2.72        |
| 270°       | 20        | 1,38        | 11          | 1.90        | 2.02         | 2.33        |
|            | <b>30</b> | <b>2,07</b> | <b>12</b>   | <b>2.40</b> | <b>2.14</b>  | <b>2.47</b> |
|            | 40        | 2,76        | 12          | 2.60        | 2.32         | 2.68        |
|            | 50        | 3,45        | 13          | 3.20        | 2.43         | 2.81        |
| 360°       | 20        | 1,38        | 11          | 2.80        | 2.23         | 2.57        |
|            | <b>30</b> | <b>2,07</b> | <b>12</b>   | <b>3.10</b> | <b>2.07</b>  | <b>2.39</b> |
|            | 40        | 2,76        | 12          | 3.50        | 2.34         | 2.70        |
|            | 50        | 3,45        | 13          | 3.90        | 2.22         | 2.56        |

### Performance Data – Metric

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

| ARC DEGREE | PRESSURE    |           | RADIUS METERS | FLOW L/M     | PRECIP mm/hr |           |
|------------|-------------|-----------|---------------|--------------|--------------|-----------|
|            | BAR         | PSI       |               |              | ■            | ▲         |
| 90°        | 1,38        | 20        | 3,7           | 4,16         | 75           | 86        |
|            | <b>2,07</b> | <b>30</b> | <b>4,0</b>    | <b>4,92</b>  | <b>75</b>    | <b>87</b> |
|            | 2,76        | 40        | 4,3           | 5,68         | 75           | 86        |
|            | 3,45        | 50        | 4,6           | 6,44         | 74           | 85        |
| 180°       | 1,38        | 20        | 3,4           | 6,06         | 65           | 75        |
|            | <b>2,07</b> | <b>30</b> | <b>3,7</b>    | <b>6,81</b>  | <b>61</b>    | <b>70</b> |
|            | 2,76        | 40        | 4,0           | 8,33         | 64           | 73        |
|            | 3,45        | 50        | 4,3           | 9,08         | 60           | 69        |
| 270°       | 1,38        | 20        | 3,4           | 7,19         | 51           | 59        |
|            | <b>2,07</b> | <b>30</b> | <b>3,7</b>    | <b>9,08</b>  | <b>54</b>    | <b>63</b> |
|            | 2,76        | 40        | 3,7           | 9,84         | 59           | 68        |
|            | 3,45        | 50        | 4,0           | 12,11        | 62           | 71        |
| 360°       | 1,38        | 20        | 3,4           | 10,60        | 56           | 65        |
|            | <b>2,07</b> | <b>30</b> | <b>3,7</b>    | <b>11,73</b> | <b>53</b>    | <b>61</b> |
|            | 2,76        | 40        | 3,7           | 13,25        | 59           | 69        |
|            | 3,45        | 50        | 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        |  |              |  |
|            | <b>30</b> | <b>17</b> | <b>1.60</b> | <b>2.13</b> | <b>2.46</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>15</b> | <b>2.30</b> | <b>1.97</b> | <b>2.27</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>15</b> | <b>3.20</b> | <b>1.83</b> | <b>2.11</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>15</b> | <b>4.20</b> | <b>1.80</b> | <b>2.07</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>5,2</b> | <b>6,06</b>  | <b>54</b> | <b>62</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>4,6</b> | <b>8,71</b>  | <b>50</b> | <b>58</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>4,6</b> | <b>12,11</b> | <b>46</b> | <b>53</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>4,6</b> | <b>15,90</b> | <b>46</b> | <b>53</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>18</b> | <b>1.80</b> | <b>2.14</b> | <b>2.47</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>18</b> | <b>2.40</b> | <b>1.43</b> | <b>1.65</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>17</b> | <b>3.40</b> | <b>1.51</b> | <b>1.74</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>30</b> | <b>17</b> | <b>4.40</b> | <b>1.47</b> | <b>1.69</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>5,5</b> | <b>6,81</b>  | <b>54</b> | <b>63</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>5,5</b> | <b>9,08</b>  | <b>36</b> | <b>42</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>5,2</b> | <b>12,87</b> | <b>38</b> | <b>44</b> |  |              |  |
|            | 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        |  |              |  |
|            | <b>2,07</b> | <b>5,2</b> | <b>16,66</b> | <b>37</b> | <b>43</b> |  |              |  |
|            | 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
- Recommended Operating Pressure – 30 PSI (2,1 bar)

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

## Performance Data – U.S.

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

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

## Performance Data – U.S.

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

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

## Performance Data – U.S.

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

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

## Performance Data – Metric

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

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

## Performance Data – Metric

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

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

## Performance Data – Metric

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

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

## Performance Data – Metric

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

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

\*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.

PI2 12' (3,7 m) Nozzle, Male (Brown)

| ARC DEGREE    | PRESSURE  | RADIUS    | FLOW        | PRECIP in/hr |             |
|---------------|-----------|-----------|-------------|--------------|-------------|
|               | PSI       | FEET      | GPM         | ■            | ▲           |
| 90°<br>PI2Q   | 20        | 11        | 0.40        | 1.27         | 1.47        |
|               | 25        | 12        | 0.45        | 1.20         | 1.39        |
|               | <b>30</b> | <b>13</b> | <b>0.50</b> | <b>1.14</b>  | <b>1.32</b> |
|               | 40        | 14        | 0.60        | 1.18         | 1.36        |
| 180°<br>PI2H  | 20        | 11        | 0.80        | 1.27         | 1.47        |
|               | 25        | 12        | 0.90        | 1.20         | 1.39        |
|               | <b>30</b> | <b>13</b> | <b>1.00</b> | <b>1.14</b>  | <b>1.32</b> |
|               | 40        | 14        | 1.20        | 1.18         | 1.36        |
| 270°<br>PI2TQ | 20        | 11        | 1.20        | 1.27         | 1.47        |
|               | 25        | 12        | 1.35        | 1.20         | 1.39        |
|               | <b>30</b> | <b>13</b> | <b>1.50</b> | <b>1.14</b>  | <b>1.31</b> |
|               | 40        | 14        | 1.80        | 1.18         | 1.36        |
| 360°<br>PI2F  | 20        | 11        | 1.60        | 1.27         | 1.47        |
|               | 25        | 12        | 1.80        | 1.20         | 1.39        |
|               | <b>30</b> | <b>13</b> | <b>2.00</b> | <b>1.14</b>  | <b>1.32</b> |
|               | 40        | 14        | 2.40        | 1.18         | 1.36        |

### Performance Data – Metric

PI2 12' (3,7 m) Nozzle, Male (Brown)

| ARC DEGREE    | PRESSURE   | RADIUS     | FLOW       | PRECIP mm/hr |           |
|---------------|------------|------------|------------|--------------|-----------|
|               | BAR        | METERS     | L/M        | ■            | ▲         |
| 90°<br>PI2Q   | 1,4        | 3,4        | 1,5        | 32           | 37        |
|               | 1,7        | 3,7        | 1,7        | 31           | 35        |
|               | <b>2,1</b> | <b>4,3</b> | <b>1,9</b> | <b>29</b>    | <b>33</b> |
|               | 2,8        | 4,6        | 2,3        | 30           | 35        |
| 180°<br>PI2H  | 1,4        | 3,4        | 3,0        | 32           | 37        |
|               | 1,7        | 3,7        | 3,4        | 31           | 35        |
|               | <b>2,1</b> | <b>4,3</b> | <b>3,8</b> | <b>29</b>    | <b>33</b> |
|               | 2,8        | 4,6        | 4,6        | 30           | 35        |
| 270°<br>PI2TQ | 1,4        | 3,4        | 4,5        | 32           | 37        |
|               | <b>1,7</b> | <b>3,7</b> | <b>5,1</b> | <b>30</b>    | <b>35</b> |
|               | 2,1        | 4,3        | 5,7        | 29           | 33        |
|               | 2,8        | 4,6        | 6,9        | 30           | 34        |
| 360°<br>PI2F  | 1,4        | 3,4        | 6,1        | 32           | 37        |
|               | 1,7        | 3,7        | 6,8        | 31           | 35        |
|               | <b>2,1</b> | <b>4,3</b> | <b>7,6</b> | <b>29</b>    | <b>33</b> |
|               | 2,8        | 4,6        | 9,1        | 30           | 35        |

### Performance Data – U.S.

PI5 15' (4,6 m) Nozzle, Male (Black)

| ARC DEGREE    | PRESSURE  | RADIUS    | FLOW        | PRECIP in/hr |             |
|---------------|-----------|-----------|-------------|--------------|-------------|
|               | PSI       | FEET      | GPM         | ■            | ▲           |
| 90°<br>PI5Q   | 20        | 13        | 0.60        | 1.37         | 1.58        |
|               | 25        | 14        | 0.75        | 1.47         | 1.70        |
|               | <b>30</b> | <b>16</b> | <b>0.90</b> | <b>1.35</b>  | <b>1.56</b> |
|               | 40        | 17        | 1.10        | 1.47         | 1.69        |
| 180°<br>PI5H  | 20        | 13        | 1.20        | 1.37         | 1.58        |
|               | 25        | 14        | 1.50        | 1.47         | 1.70        |
|               | <b>30</b> | <b>16</b> | <b>1.80</b> | <b>1.35</b>  | <b>1.56</b> |
|               | 40        | 17        | 2.20        | 1.47         | 1.69        |
| 270°<br>PI5TQ | 20        | 13        | 1.80        | 1.36         | 1.57        |
|               | 25        | 14        | 2.25        | 1.47         | 1.70        |
|               | <b>30</b> | <b>16</b> | <b>2.70</b> | <b>1.35</b>  | <b>1.56</b> |
|               | 40        | 17        | 3.30        | 1.46         | 1.69        |
| 360°<br>PI5F  | 20        | 13        | 2.40        | 1.37         | 1.58        |
|               | 25        | 14        | 3.00        | 1.47         | 1.70        |
|               | <b>30</b> | <b>16</b> | <b>3.60</b> | <b>1.35</b>  | <b>1.56</b> |
|               | 40        | 17        | 4.40        | 1.47         | 1.69        |

### Performance Data – Metric

PI5 15' (4,6 m) Nozzle, Male (Black)

| ARC DEGREE    | PRESSURE   | RADIUS     | FLOW        | PRECIP mm/hr |           |
|---------------|------------|------------|-------------|--------------|-----------|
|               | BAR        | METERS     | L/M         | ■            | ▲         |
| 90°<br>PI5Q   | 1,4        | 4,0        | 2,3         | 35           | 40        |
|               | 1,7        | 4,3        | 2,8         | 37           | 43        |
|               | <b>2,1</b> | <b>4,9</b> | <b>3,4</b>  | <b>34</b>    | <b>40</b> |
|               | 2,8        | 5,2        | 4,2         | 37           | 43        |
| 180°<br>PI5H  | 1,4        | 4,0        | 4,5         | 35           | 40        |
|               | 1,7        | 4,3        | 5,7         | 37           | 43        |
|               | <b>2,8</b> | <b>4,9</b> | <b>6,8</b>  | <b>34</b>    | <b>40</b> |
|               | 3,4        | 5,2        | 8,3         | 37           | 43        |
| 270°<br>PI5TQ | 1,4        | 3,4        | 6,8         | 35           | 40        |
|               | 1,7        | 4,3        | 8,5         | 37           | 43        |
|               | <b>2,1</b> | <b>4,9</b> | <b>10,2</b> | <b>34</b>    | <b>40</b> |
|               | 2,8        | 5,2        | 12,5        | 37           | 43        |
| 360°<br>PI5F  | 1,4        | 3,4        | 9,1         | 35           | 40        |
|               | 1,7        | 4,3        | 11,4        | 37           | 43        |
|               | <b>2,8</b> | <b>4,9</b> | <b>13,6</b> | <b>34</b>    | <b>40</b> |
|               | 3,4        | 5,2        | 16,7        | 37           | 43        |

### Performance Data – U.S.

Special Patterns

| NOZZLE PATTERN | NOZZLE           | PRESSURE | W X L   | FLOW |
|----------------|------------------|----------|---------|------|
|                | Male #   Female# | PSI      | Feet    | GPM  |
| Center Strip   | PI5CS   FN-15cs  | 20       | 4 x 24  | 0.8  |
|                |                  | 30       | 4 x 30  | 1.0  |
| End Strip      | PI5ES   FN-15Es  | 20       | 4 x 12  | 0.4  |
|                |                  | 30       | 4 x 15  | 0.5  |
| Side Strip     | PI5SS   FN-15SS  | 20       | 4 x 28  | 1.1  |
|                |                  | 30       | 5 x 32  | 1.3  |
| High Strip     | PI5HL   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           | PRESSURE  | W X L     | FLOW |
|----------------|------------------|-----------|-----------|------|
|                | Male #   Female# | BAR       | Meters    | L/M  |
| Center Strip   | PI5CS   FN-15cs  | 1,5       | 1,2 x 7,3 | 3,0  |
|                |                  | 2,0       | 1,2 x 9,1 | 3,8  |
| End Strip      | PI5ES   FN-15Es  | 1,5       | 1,2 x 3,7 | 1,5  |
|                |                  | 2,0       | 1,2 x 4,6 | 1,9  |
| Side Strip     | PI5SS   FN-15SS  | 1,5       | 1,2 x 8,5 | 4,2  |
|                |                  | 2,0       | 1,5 x 9,8 | 4,9  |
| High Strip     | PI5HL   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.**



# 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

## 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

## Fast Facts

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



# 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

|                                |   |
|--------------------------------|---|
| <b>KA5-112P-CV</b>             | 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   |
| <b>KA5-212P-CV</b>             | 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  |
| <b>KA5-512P-CV</b>             | 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 |
| <b>KA5-2112P-CV</b>            | 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 |
| <b>KA5-2212P-CV</b>            | .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   |
| <b>KA5-2512P-CV</b>            | 0.67" (17 mm) 1.00 GPH (3,8 LPH), 500' (152,4 m)  |
| <b>KA1-118P-CV</b>             | 0.67" (17 mm) 1 GPH (3,8 LPH), 100' (30,5 m)  |
| <b>KA1-218P-CV</b>             | .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      |
| <b>KA1-518P-CV</b>             | 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  |
| <b>K15-040</b>                 | 0.67" (17 mm) barb coupling   |
| <b>K15-041</b>                 | 0.67" (17 mm) tee   |
| <b>K15-042</b>                 | 0.67" (17 mm) elbow   |
| <b>K15-043</b>                 | 0.67" (17 mm) barb x 1/2" (1,27 cm) NPT Tee   |
| <b>K15-046</b>                 | 0.67" (17 mm) barb x 1/2" (1,27 cm) NPT Adapter   |
| <b>K18-028</b>                 | 1/2" (1,27 cm) Air/Vacuum Relief Valve  |
| <b>KP11-155</b>                | 3/4" (1,9 cm) plastic filter with 155 m stainless steel screen & flush cap  |
| <b>KP11-374</b>                | 1" (2,5 cm) plastic LP 1 Y-filter stainless steel screen 150 mesh   |
| <b>KPR30YFI</b>                | Pressure regulated Y filter NPT, 30 PSI, 1", Low Flow   |
| <b>KPR30YFI-BSP</b>            | Pressure regulated Y filter BSP, 30 PSI, 1", Low Flow   |
| <b>KPR40YFI</b>                | Pressure regulated Y filter NPT, 40 PSI, 1", Low Flow   |
| <b>KPR40YFI-BSP</b>            | Pressure regulated Y filter BSP, 40 PSI, 1", Low Flow   |
| <b>KP7001-FPR30INT-KIT</b>     | Drip control zone kit NPT, 1", with 30 PSI pressure regulated Y filter  |
| <b>KP7001-FPR40INT-KIT</b>     | Drip control zone kit NPT, 1", with 40 PSI pressure regulated Y filter  |
| <b>KP7001-BSP-FPR30INT-KIT</b> | Drip control zone kit BSP 1", 30 PSI pressure regulated Y filter  |
| <b>KP7001-BSP-FPR40INT-KIT</b> | Drip control zone kit BSP 1", 40 PSI pressure regulated Y filter  |



Drip control zone kit with pressure regulator and filter

NEW

# 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.

| Item Number   | ProSeries 100 |          | ProSeries 150 |         |         | ProSeries 200 |         |         |
|---|---------------|----------|---------------|---------|---------|---------------|---------|---------|
|   | 7075          | 7001     | 7101          | 7115    | 7102    | 7201          | 7215    | 7202    |
| <b>Specifications</b>   |               |          |               |         |         |               |         |         |
| 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   |
| <b>Features</b>   |               |          |               |         |         |               |         |         |
| Flow control  | optional      | optional | optional      | •       | •       | •             | •       | •       |
| Tilt diaphragm/<br>piston assembly                                    | •             | •        |               |         |         |               |         |         |
| Manual external bleed screw   | •             | •        | •             | •       | •       |               |         |         |
| Manual operation<br>with solenoid                                     | •             | •        | •             | •       | •       | •             | •       | •       |
| Self-cleaning<br>metering screen                                      | •             | •        |               |         |         |               |         |         |
| Removable metering pin  |               |          | •             | •       | •       |               |         |         |
| Angle/Globe Option  |               |          | •             | •       | •       |               |         |         |
| Glass-filled nylon<br>construction and reinforced<br>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

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

## Accessories

See page 61

## Fast Facts

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

## Operating Specifications

| U.S.                 |              |     | Metric               |                |      |
|----------------------|--------------|-----|----------------------|----------------|------|
| Pressure Loss in PSI |              |     | Pressure Loss in bar |                |      |
| FLOW GPM             | 3/4"         | 1"  | FLOW LPM             | 3/4"           | 1"   |
| 1                    | 4.0          |     | 4                    | 0,28           |      |
| 5                    | 5.0          | 2.2 | 19                   | 0,34           | 0,15 |
| 10                   | 6.0          | 3.0 | 38                   | 0,41           | 0,21 |
| 15                   | 11.0         | 3.5 | 57                   | 0,76           | 0,24 |
| 20                   | 14.0         | 4.0 | 76                   | 0,97           | ,28  |
| 30                   |              | 5.0 | 114                  |                | 0,34 |
| Pressure Range       |              |     | Pressure Range       |                |      |
|                      | 3/4"         | 1"  |                      | 3/4"           | 1"   |
|                      | 20 - 150 PSI |     |                      | 1,4 - 10,3 bar |      |



## Models

|                     |  |
|---------------------|--|
| <b>7075</b>         | 3/4" Female NPT Thread                   |
| <b>7075-NFC</b>     | 3/4" Female NPT Thread, No Flow Control  |
| <b>7075-SL</b>      | 3/4" Female Slip                         |
| <b>7075-SL-NFC</b>  | 3/4" Female Slip, No Flow Control        |
| <b>7075-BSP</b>     | 3/4" Female BSP Thread                   |
| <b>7075-BSP-NFC</b> | 3/4" Female BSP Thread, No Flow Control  |
| <b>7001</b>         | 1" Female NPT Thread x Female NPT Thread |
| <b>7001-SL</b>      | 1" Female Slip                           |
| <b>7001-BSP</b>     | 1" Female BSP Thread                     |
| <b>7001-NFC</b>     | 1" Female NPT Thread No Flow Control     |
| <b>7001-SL-NFC</b>  | 1" Female Slip, No Flow Control          |

|                         |  |
|-------------------------|--|
| <b>7001-BSP-NFC</b>     | 1" Female BSP Thread, No Flow Control                    |
| <b>7001-MXB</b>         | 1" Male NPT Thread x 1" Male Barb                        |
| <b>7001-MXM</b>         | 1" Male NPT Thread x 1" Male Thread                      |
| <b>7001-BSP-MXM</b>     | 1" Male BSP Thread x 1" Male BSP Thread                  |
| <b>7001-MXM-NFC</b>     | 1" Male NPT Thread x 1" Male Thread, No Flow Control     |
| <b>7001-BSP-MXM-NFC</b> | 1" Male BSP Thread x 1" Male BSP Thread, No Flow Control |
| <b>7001-MXB-NFC</b>     | 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



### TILT DIAPHRAGM/PISTON ASSEMBLY

Allows water to flow straight through, reducing friction loss

### DEBRIS-TOLERANT DESIGN

Offers flexibility for use in potable or non-potable applications

### SELF-CLEANING DIAPHRAGM SCREEN

Enables automatic removal of debris and sediment during operation



### ▶ Manual Flow Control

Precisely adjust flow to the zone. Removable handle prevents tampering



### ▶ Captured Plunger Solenoid

Remove the solenoid without losing the internal plunger

### ▶ Versatility

These 1" models 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

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

## How to Specify 9 Volt solenoid

| MODELS | OPTIONS |
|--------|---------|
| 7101   | -9VDC   |

Examples: 7101-SL-9VDC

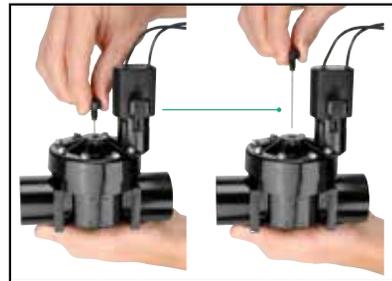
**Accessories** See page 61

## Fast Facts

|   |   |
|---|---|
| 7101 (1")<br>Models                     | Height: 5 1/4" (13,3 cm)<br>Width: 3 1/8" (7,95 cm)<br>Length: 5" (12,7 cm)     |
| 7101 (1")<br>with Flow Control          | Height: 5 7/8" (14,9 cm)<br>Width: 3 1/8" (7,95 cm)<br>Length: 5" (12,7 cm)     |
| 7101 (1")<br>Jar Top<br>Models          | Height: 5 1/4" (13,3 cm)<br>Width: 3" (7,6 cm)<br>Length: 4 3/8" (11,1 cm)      |
| 7101-Angle (1")<br>Models               | Height: 5 1/2" (13,97 cm)<br>Width: 3 1/8" (7,95 cm)<br>Length: 4" (10,6 cm)    |
| 7101-Angle-FC (1")<br>with Flow Control | Height: 6 3/4" (17,1 cm)<br>Width: 3 1/8" (7,95 cm)<br>Length: 4" (10,6 cm)     |
| 7115 (1.5")<br>Models                   | Height: 8" (20,3 cm)<br>Width: 4 1/4" (10,8 cm)<br>Length: 5 1/2" (14 cm)       |
| 7102 (2")<br>Models                     | Height: 8 7/8" (22,6 cm)<br>Width: 4 7/8" (12,4 cm)<br>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, high-pressure rated 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   | - 9VDC  |
| 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")<br>Models            | Height: 5 1/4" (13,3 cm)<br>Width: 3 1/8" (7,9 cm)<br>Length: 5 1/8" (13,0 cm)  |
| 7201 (1")<br>Jar Top<br>Models | Height: 5 3/4" (14,6 cm)<br>Width: 3 1/8" (8 cm)<br>Length: 4 3/4" (12,0 cm)    |
| 7215 (1.5")<br>Models          | Height: 6 3/4" (17,2 cm)<br>Width: 4 1/4" (10,8 cm)<br>Length: 6 1/4" (15,9 cm) |
| 7202 (2")<br>Models            | Height: 7" (17,8 cm)<br>Width: 4 1/4" (10,8 cm)<br>Length: 7 1/4" (18,4 cm)     |

## Accessories

See page 61

## Operating Specifications

| FLOW<br>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<br>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   |              |          |



## 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



### 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)



# CONTROLLERS



# Controller | Comparison Chart

K-Rain® offers a full range of controllers to meet the needs of any irrigation project. From conventional 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-EX3                 | PRO EX 2.0          | PRO-LC                   | BLUE-LTE         | K-Rain®<br>BLUE®  | RPS™46  |
|---|----------------|-------------------------|---------------------|--------------------------|------------------|-------------------|---------|
| Controller Type                               | 2-Wire Decoder | Hybrid Modular + 2-Wire | Modular Wi-Fi Ready | Conventional Wi-Fi Ready | BT + LTE + Solar | Bluetooth Battery | Mini    |
| <b>Specifications</b>                         |                |                         |                     |                          |                  |                   |         |
| Stations/zones                                | 1 to 99        | 40                      | Up to 28            | 4, 8, 12                 | 4                | 1, 2, 4           | 4, 6    |
| Programs                                      | 6              | 6                       | 3                   | 3, 6*                    | 3                | 6                 | 4       |
| Start times per program                       | 6              | 6                       | 4                   | 4                        | 8                | 8                 | 4       |
| <b>Features</b>                               |                |                         |                     |                          |                  |                   |         |
| Hand-held remote control compatible           |                |                         | ●                   |                          |                  | smart device      |         |
| App controlled                                |                | with Wi-Fi option       | with Wi-Fi option   | with Wi-Fi option        | ●                | ●                 |         |
| Wi-Fi capability                              |                | ●                       | optional            | optional                 |                  |                   |         |
| Full program display                          | ●              | ●                       | ●                   | ●                        | In app           | 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   | with Wi-Fi option        |                  |                   |         |
| Permanent memory                              | ●              | ●                       | ●                   | ●                        | ●                | ●                 |         |
| Max number of stations running simultaneously | 12             | 4                       | 1                   | 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          | 3 years           | 3 years |

\*When Bridge WiFi added

# SiteMaster

## 2-Wire decoder controller.



### ACCESSORIES



3401  
Single Station  
Decoder



3401-2  
Two Station  
Decoder



3402  
Surge  
Protector



3403  
2-WIRE MODULE



3404  
Network Module



Available in  
Stainless Steel  
Cases

## Expandable up to 99 ZONES

- **Patented Full-Program Display:** View all 99 zones on a single screen, including watering days, start times, stations, and special programming—no scrolling or guessing.
- **Dual Transformer Design:** Isolates the midbox from the two-wire output for added safety while maximizing power across the entire wire path.
- **Independent Wire Paths:** Two separate paths (two lines per path) simplify troubleshooting and allow one side of the system to operate even if the other is down.
- **Advanced Diagnostics:** Features an interactive fault log and real-time decoder signal strength and status.
- **Rain and Freeze Sensor Ready:** compatible with standard weather-sensing accessories.
- **Flexible Programming:** Six independent programs, each with up to six start times.
- **Full On-Screen Keyboard:** Simplifies naming and programming for faster setup.

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

### Fast Facts

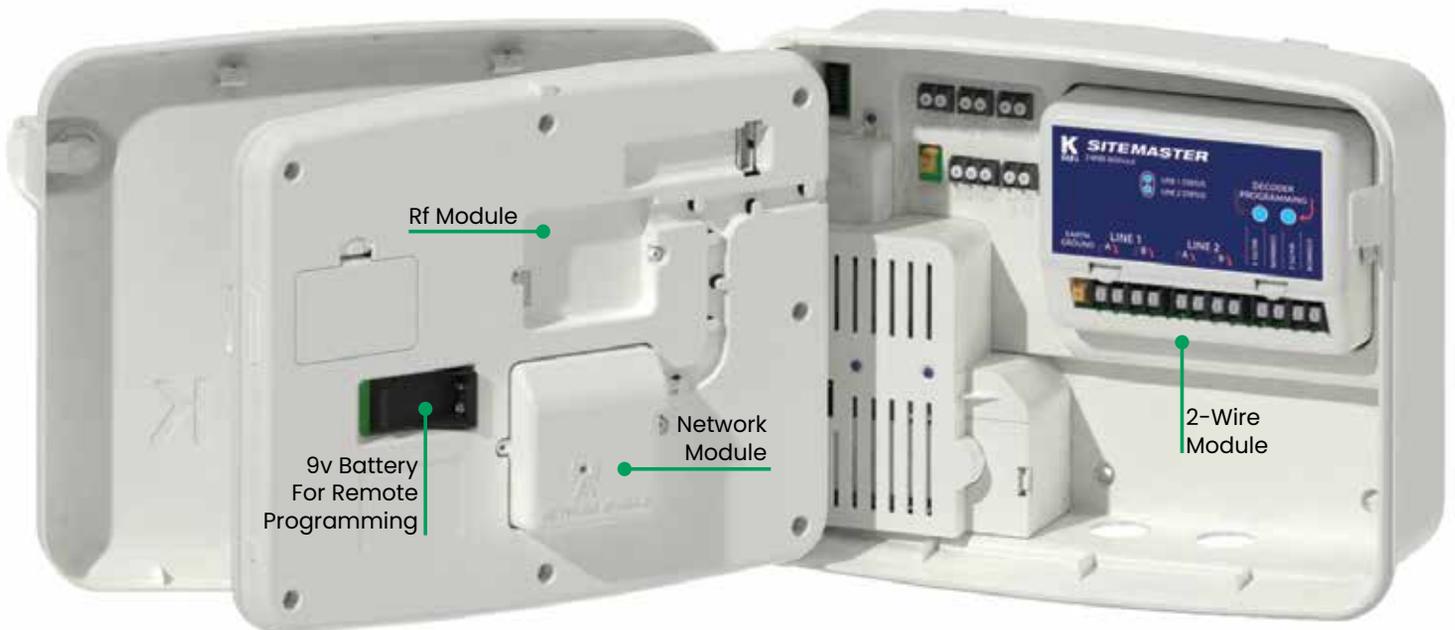
|      |  |
|------|--|
| 3400 | Height: 11.91" (30,3 cm)<br>Width: 15 1/2" (39,2 cm)<br>Depth: 6 1/2" (16,33 cm) |
| 3420 | Height: 16" (41,0 cm)<br>Width: 18 1/2" (47,0 cm)<br>Depth: 9 1/4" (23,5 cm)     |
| 3421 | Height: 38" (96,5 cm)<br>Width: 16 1/2" (41,9 cm)<br>Depth: 17 1/4" (43,8 cm)    |

### Models

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

### Accessories

See page 77



WATCH VIDEO

— BEST IN THE INDUSTRY —  
**WARRANTY**  
**3 YEARS**

# PRO-EX3

**HYBRID** ▶ *Modular + 2-Wire*

**NEW**



## ACCESSORIES



3322  
2-WIRE MODULE



3304  
4 STATION  
Module



3308  
8 STATION  
Module



3311  
SINGLE STATION DECODER

BEST IN THE INDUSTRY  
**WARRANTY**  
**3 YEARS**



3100-BRIDGE  
Wi-Fi Module

## Expandable up to 40 STATIONS



**HYBRID** ♦  
Modular + 2 Wire with  
RapidAssign™ Decoder Pairing



Full Program  
Backlit Display



6 Programs  
6 Start Times Per Program  
Up to 6 Hour Run Times



Smart Wi-Fi:  
With Water Management  
Capabilities



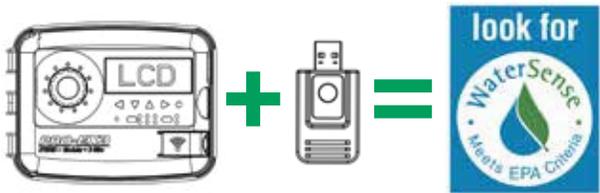
Adaptive  
Irrigation  
Mode



Buried Valve  
Locator

## Features

- Hybrid Irrigation Controller – Supports both conventional wiring modules (4- or 8-station) and 2-wire decoder technology
- Maximum 40 stations: 4 conventional base stations + up to 24 conventional stations (3 × 8-station modules) or up to 36 two-wire stations
- Smart Wi-Fi Capable – Add K-Rain Wi-Fi Bridge (3100-Bridge) for remote control and monitoring via smartphone, tablet, or web browser
- New AIM (Adaptive Irrigation Mode) – Advanced smart weather-based watering system with adjustable limits that automatically optimizes irrigation when equipped with Wi-Fi
- Patented Full Program Display – One screen shows watering days, number of start times, number of stations and special programming
- Flow Sensor and Rain Sensor or Rain/Freeze Sensor ready
- Diagnostic Circuit Breaker – Identifies and isolates stations/valves with wiring problems (shorts, faults) while the rest of the program continues
- Station Delay/Overlap Programming – Adjustable delay between stations or simultaneous operation for well recovery, slow-closing valves and water hammer prevention
- 2 Hard wired MV/PS terminals as well as 1 Remote MV/PS on the 2-wire system
- Permanent Memory – Non-volatile memory preserves programs during power outages
- Master Valve/Pump Start Ready – Programmable per station as needed
- Advanced Features: Looping Functionality, Cycle and Soak, Zone Grouping (Up to 4 stations plus a master valve), and Seasonal Adjust – Global adjustment from 10–200% in 10% increments, Permanent Day Off – Set any day of the week as a non-watering day regardless of programming
- Built-in Level – Ensures easy, accurate leveling during installation
- Robust enclosure design for maximum durability



## Fast Facts

|         |                   |
|---------|-------------------|
| Height: | 8" (20,3 cm)      |
| Width:  | 10 1/2" (26,7 cm) |
| Depth:  | 5 1/4" (13,3 cm)  |

## Specifications

### OPERATING SPECIFICATIONS

- Station Run Times: 1 minute to 6 hours for all stations
- Number of Programs: 6 (A–F)
- Number of Automatic Start Times: 6 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 60Hz  
240V AC, 50/60Hz
- Power Output: 24V AC 2A
- Power Backup: Lithium coin-cell battery maintains time and date

## Models

- **3302 Pro-EX3 110V** PRO-EX3 4-Station modular controller, 110V AC internal transformer with pigtail
- **3302-220 Pro-EX3 220V** PRO-EX3 4-Station modular controller, 220V AC internal transformer with pigtail

## PRO-EX3 Specific Accessories

- **3304** Pro-EX3 4 Station Module
- **3308** Pro-EX3 8 Station Module
- **3311** Pro-EX3 Single Station Decoder
- **3322** Pro-EX3 2 Wire Module

## Accessories See page 77



WATCH VIDEO



DOWNLOAD APP

# PRO EX 2.0

Modular Irrigation Controller.



Wi-Fi kit



220V AC plug pack  
(International use)



WATCH VIDEO



DOWNLOAD APP  
IOS



DOWNLOAD APP  
ANDROID

BEST IN THE INDUSTRY  
**WARRANTY**  
**3 YEARS**

## Expandable up to 28 STATIONS



Multiple Modular  
Combinations  
Up to 28 Stations



Full Program  
Backlit Display



3 Programs  
4 Start Times Per Program  
Up to 6 Hour Run Times



Smart Wi-Fi:  
With Water Management  
Capabilities



FlowLogic™ Intelligent  
Water Flow Monitoring  
and Protection



Buried Valve  
Locator

## 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
- 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
- Master Valve/Pump Start Ready – Programming for individual station(s) operation as needed
- 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)     |

## Accessories See page 77

## 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

## 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 (International only) |

### OUTDOOR MODELS

|                  |  |
|------------------|--|
| 3202             | PRO EX 2.0 4 station outdoor modular controller, 110V 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, 220V AC 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       |
|                  | 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



**Full Program Display:**  
Large, easy-to-read screen simplifies setup and diagnostics



**Contractor Tools:** Manage Unlimited Controllers with One Account



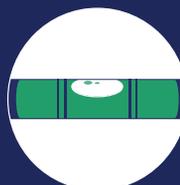
**Up to 6 Programs**  
4 Start Times Per Program  
Up to 6 Hour Run Times



**Buried Valve Locator**



**Smart Wi-Fi Capable:**  
Access the K-Rain App with Adaptive Irrigation Mode (AIM) and Water Management Capabilities



**Built-In Bubble Level**

## 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

## Models

### OUTDOOR MODELS

|                  |  |
|------------------|--|
| <b>3104W</b>     | 4 station, 110V AC internal transformer  |
| <b>3104W-220</b> | 4 station, 220V AC internal transformer  |
| <b>3108W</b>     | 8 station, 110V AC internal transformer  |
| <b>3108W-220</b> | 8 station, 220V AC internal transformer  |
| <b>3112W</b>     | 12 station, 110V AC internal transformer |
| <b>3112W-220</b> | 12 station, 220V AC internal transformer |

### INDOOR MODELS

|                    |   |
|--------------------|---|
| <b>3104WID-220</b> | 4 station, 220V AC plug pack transformer  |
| <b>3108WID-220</b> | 8 station, 220V AC plug pack transformer  |
| <b>3112WID-220</b> | 12 station, 220V AC plug pack transformer |

### ACCESSORIES

**3100-BRIDGE** BRIDGE Wi-Fi Module

## Fast Facts

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

## 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



220V AC plug pack  
(International use)

**Accessories** See page 77



DOWNLOAD APP  
IOS



DOWNLOAD APP  
ANDROID

### WATCH VIDEOS



Basic manual  
programming



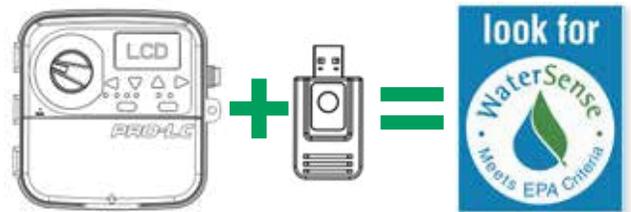
Advanced  
manual  
programming



Wi-Fi Irrigation  
Controller setup  
for homeowners



Wi-Fi Irrigation  
controller setup  
for contractors



BEST IN THE INDUSTRY  
**WARRANTY**  
**3 YEARS**

# BLUE-LTE

Modernize your city's irrigation system without trenching, wiring, or guesswork.

NEW



## FEATURES

- **Cellular Connectivity** – No Wi-Fi or wired infrastructure required
- **Cloud-Based Dashboard** – Real-time control and scheduling from any device
- **Expandable** – Add units across your city as needed
- **Fail-Safe Design** – Local backup schedule in case of connectivity loss

## Fast Facts

|         |                  |
|---------|------------------|
| Height: | 14" (35,6 cm)    |
| Width:  | 11" (27,9 cm)    |
| Depth:  | 6 1/2" (16,5 cm) |

## Specifications

### OPERATING SPECIFICATIONS

- 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 150' (45,7 m) with 18 AWG (.05" or 1,55 mm<sup>2</sup>)

## Models

**BLUE-LTE** 4 Station Irrigation Controller

**Accessories** See page 77



## Features and Applications

- ▶ **9V 4-Zone DC Latching Solenoid Controller:** Operates via secure 4G LTE cellular connectivity, perfect for remote sites without AC power—modernize any irrigation system
- ▶ **Fully Off-Grid:** Integrated cellular, with solar panel and internal battery, No Wi-Fi or wired infrastructure required
- ▶ **Weatherproof Enclosure:** Designed for long-term durability in harsh outdoor environments
- ▶ **Remote Management:** Monitor and control one or multiple controllers from any location
- ▶ **Grouping Capability:** Create custom controller groups for fast, centralized management

Median Strips



Parks



Athletic Fields



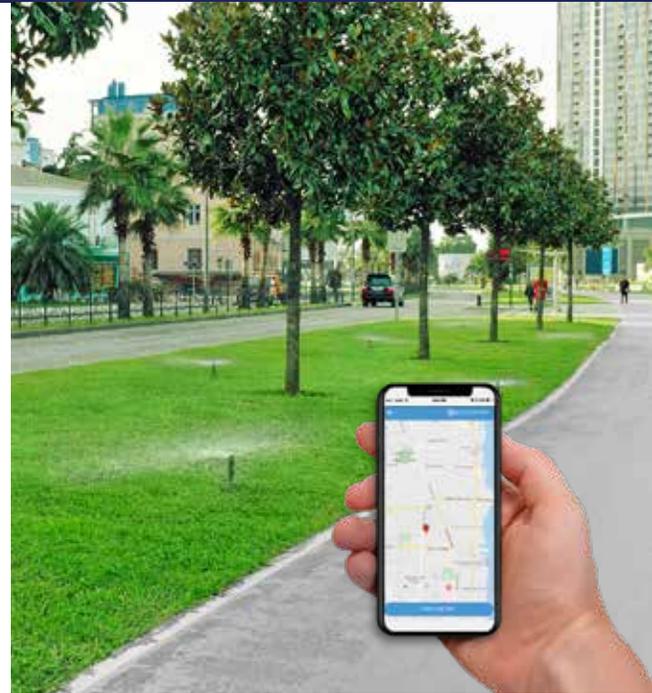
Community Gardens



Remote Sites



## 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
- Water Budget – 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

- 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 150' (45,7 m) with 18 AWG (.05" or 1,55 mm<sup>2</sup>)

### Models

|               |           |
|---------------|-----------|
| <b>BLUE-1</b> | 1 Station |
| <b>BLUE-2</b> | 2 Station |
| <b>BLUE-4</b> | 4 Station |

### Accessories See page 77



# 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
- Heavy Duty 1.0 Amp Transformer
- 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

### 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



220V AC plug pack  
(International use)

### Fast Facts

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



### 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 (International use)

**Accessories** See page 77

# 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



## Controller Compatability

| MODELS        | PRO-LC | PRO-EX 2.0 | PRO-EX3 |
|---------------|--------|------------|---------|
| 3208-HRS      | ●      | ●          | ●       |
| 3208-HRFS     | ●      | ●          | ●       |
| 3208-WRFS     |        | ●          |         |
| 3208-WRFS-KIT |        | ●          |         |
| 3208-UWRFS    | ●      | ●          | ●       |

## 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



# PRO-TAP 100

## One-Outlet Hose Faucet Timer

NEW



### Features

- Conserve Water - Automate your watering routine
- Oversized Features - Designed with a large digital display and an easy-to-use dial
- One Start Time - Program your timer to water at the optimal time when evaporation is at its lowest
- Timed Watering - Set your timer from 1-360 minutes (6 hrs)
- Watering Intervals - Water frequencies can be set to every 1-12 hours or every 1-7 days
- Manual Rain Delay - Ability to manually postpone watering between 1-7 days without interrupting your set program
- Manual Watering - Run water manually, between 1-360 minutes, with the press of a button
- Easy Attachment - The swivel coupling provides a quick and secure connection to your hose or faucet
- Battery Operated - Requires two AA batteries (not included)
- Product Specifications - For outdoor use with cold water only - Store indoors during winter time

### Technical Specifications

|                    |                           |
|--------------------|---------------------------|
| Connection         | 3/4 inch hose             |
| Watering duration  | 1 min - 6 hrs             |
| Watering Schedule  | 1-8 hrs, 12 hrs, 1-7 days |
| Operating Pressure | 10-100 PSI / 1-6 Bar      |
| Rain Delay         | Yes                       |
| Manual Watering    | Yes                       |
| Environment Temp   | 0-140°F / 0-60°C          |
| Water Temp         | 0-140°F / 0-60°C          |
| Batteries          | 2 AA (not Included)       |

### Models

|                        |                                 |
|------------------------|---------------------------------|
| <b>PRO-TAP100</b>      | Tap, Irrigation Controller, STD |
| <b>PRO-TAP100-BSP2</b> | Tap, Irrigation Controller, BSP |

### Fast Facts

|         |                  |
|---------|------------------|
| Height: | 5 1/2" (14,0 cm) |
| Width:  | 4 3/4" (12,1 cm) |
| Depth:  | 2 3/4" (7,0 cm)  |

BEST IN THE INDUSTRY  
**WARRANTY**  
**3 YEARS**



Replaceable Mesh Filter



Fits 3/4" Standard Hose



# Controller Accessories



|                    |  | SiteMaster | PRO-EX3 | PRO EX 2.0 | PRO-LC | BLUE-LTE | K-Rain®<br>BLUE® | RPS™46 |
|--------------------|--|------------|---------|------------|--------|----------|------------------|--------|
| <b>Accessories</b> |  |            |         |            |        |          |                  |        |
| 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                                |            |         | ●          |        |          |                  |        |
| 3304               | Pro-EX3 4 Station Module                 |            | ●       |            |        |          |                  |        |
| 3308               | Pro-EX3 8 Station Module                 |            | ●       |            |        |          |                  |        |
| 3311               | Pro-EX3 Single Station Decoder           |            | ●       |            |        |          |                  |        |
| 3322               | Pro-EX3 2 Wire Module                    |            | ●       |            |        |          |                  |        |
| 3401               | Single Station Decoder                   | ●          |         |            |        |          |                  |        |
| 3401-2             | 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                  | ●          |         | ●          |        |          |                  |        |

# 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

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

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

### 2200 SHORT DURATION SINGLE STATION CONTROLLERS

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

### 2500 RAINSWITCH-READY CONTROLLERS

|             |  |   |
|-------------|--|---|
| <b>2510</b> | Voltage<br>Input: 110V AC, 60 Hz<br>Output: 110V AC, 60 Hz | Rating<br>Double Pole, Single Throw<br>Relay Rated for up to 2 H.P. |
| <b>2514</b> | Voltage<br>Input: 110V AC, 60 Hz<br>Output: 24V AC, 30 VA  | Rating<br>Built-In Transformer                                      |
| <b>2520</b> | Voltage<br>Input: 220V AC, 60 Hz<br>Output: 220V AC, 60 Hz | Rating<br>Double Pole, Single Throw<br>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 as low as 10 GPM (38 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)
- P6107042** Two zone cam for four or six outlet valve
- P6107043** Three zone cam for four outlet valve
- P6107044** Four zone cam for four outlet valve
- P6107063** Three zone cam for six outlet valve
- P6107064** Four zone cam for six outlet valve
- P6107065** Five zone cam for six outlet valve
- P6107066** Six zone cam for six outlet valve

\*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 (1,7-5,2 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 (1,7-5,2 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 as low as 15 GPM (57 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)
- P8002902** Two zone, 4 outlet cam
- P8002903** Three zone, 4 outlet cam
- P8002904** Four zone, 4 outlet cam
- P8002905** Five zone, 6 outlet cam
- P8002906** Six zone, 6 outlet cam

\*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
- Glass Filled Nylon Cap – RPS™ Select, SuperPro®, ProPlus®.

#### RCW SPRAYS

- Purple cap positively identifies the use of reclaimed water reducing liability.
- Heavy-duty retraction spring – Strongest in the industry for complete retraction in all soil conditions.
- Ratcheting Riser – Allows for easy pattern alignment by turning the riser.
- Pre-installed flush cap.
- Accepts female threaded nozzles.

#### 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.
- 6000 RCW Indexing Valve – Metal die-cast body is capable of high pressure applications.



## Models

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

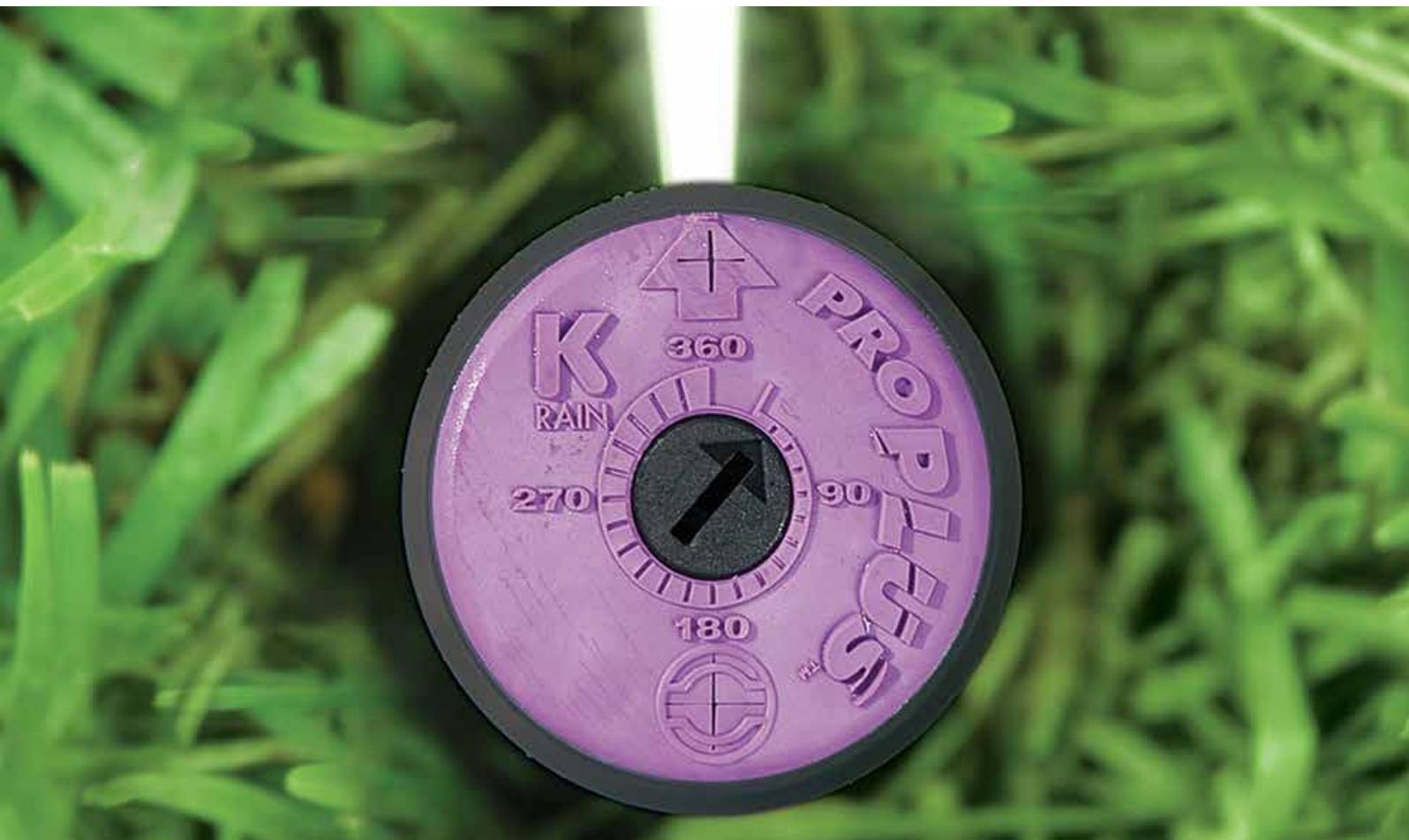
| PRODUCT                   | PAGE |
|---------------------------|------|
| <b>MiniPro®</b>           | 6    |
| <b>RPS™ 50</b>            | 8    |
| <b>RPS™ 75</b>            | 9    |
| <b>RPS™ 75i</b>           | 12   |
| <b>RPS™ Select</b>        | 16   |
| <b>ProPlus®</b>           | 18   |
| <b>SuperPro®</b>          | 20   |
| <b>ProSport®</b>          | 24   |
| <b>Pro-S™ Spray</b>       | 30   |
| <b>K-Spray™</b>           | 33   |
| <b>4000 Series Valves</b> | 74   |
| <b>6000 Series Valves</b> | 75   |



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 2.0  
Irrigation  
Controller**

Min: 1 case



**PRO EX3  
Irrigation  
Controller**

Min: 1 case



**SITEMASTER  
2-Wire Decoder  
Controller**

Min: Qty 1

**Give your  
business  
a shoutout**





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# Design Resources

## For irrigation Professionals

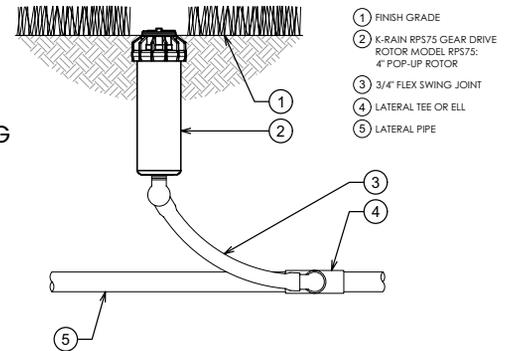
The K-Rain® website, [www.krain.com](http://www.krain.com), is a resource for product manuals, videos, FAQs, and other valuable information. Additionally our website has guides for designing with and installing K-Rain® products. Whether you are a landscape architect, irrigation designer, or other irrigation 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](http://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"

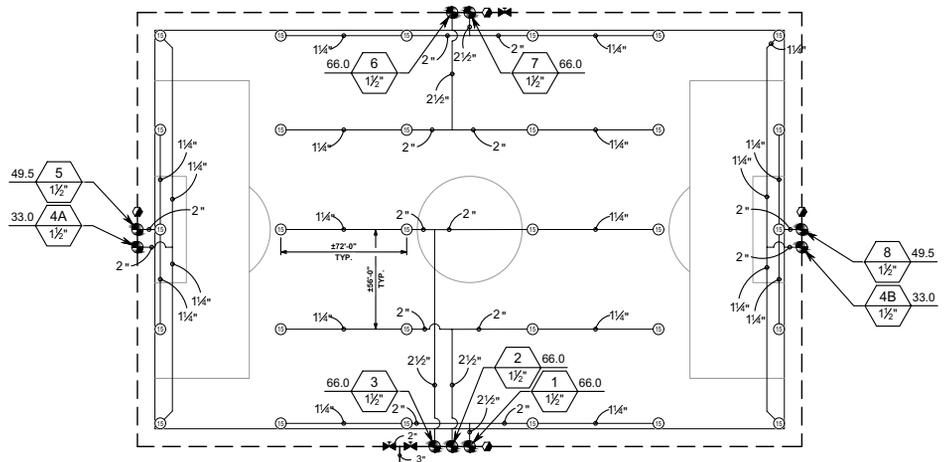
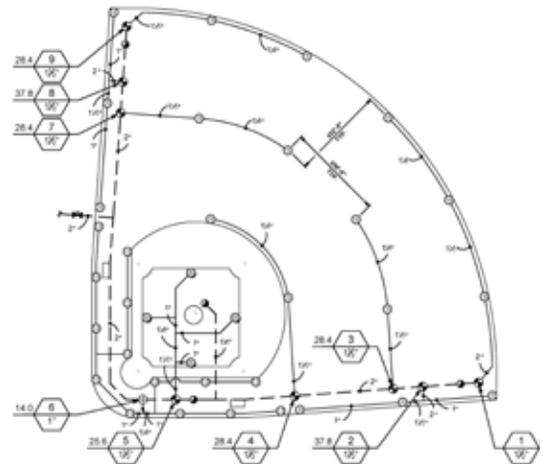
[www.krain.com](http://www.krain.com)

### IRRIGATION DESIGNS FOR SPORTS FIELDS

[WWW.KRAIN.COM/SPORTS-FIELD-DESIGN](http://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 (C° x 1.80) | + | 32°       | = | temp. in F°    |

| 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 F° - 32° | x | .5666     | = | temp. in C° |

|   |          |               |          |  |
|---|----------|---------------|----------|--|
| <b>Kilograms per cubic centimeter (kg/cm<sup>2</sup>)</b> | <b>x</b> | <b>14.223</b> | <b>=</b> | <b>Pounds per square inch (P.S.I.)</b> |
| <b>Cubic Foot (cu. ft.) x 28.316</b>                      |          |               | <b>=</b> | <b>Liters (l.)</b>                     |

| 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  |
|                                  |   |                                 |                                    |   | $\frac{144Q \text{ (flow in G.P.M.)}}{A1 \text{ (Pipe ID}^2\text{)}}$ |

# 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).

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

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) $\frac{(GPM \text{ of } 360) \times 96.25}{(\text{Head Spacing})^2 \times .866}$   | P.R.= (mm/hr) $\frac{m3/hr \text{ of } 360 \times 1000}{m2 \times .866}$   |
| Square/Rectangular Spacing                  | P.R.= (in/hr) $\frac{(GPM \text{ of } 360) \times 96.25}{\text{Head Spacing} \times \text{Row Spacing}}$                                 | P.R.= (mm/hr) $\frac{m3/hr \text{ of } 360 \times 1000}{\text{Head Spacing} \times \text{Row Spacing}}$                                    |
| Square/Rectangular Spacing for Specific Arc | P.R.= (in/hr) $\frac{3460 \times GPM \text{ (for any arc)}}{\text{Degrees of Arc} \times \text{Head Spacing} \times \text{Row Spacing}}$ | P.R.= (mm/hr) $\frac{m3/hr \text{ (for any arc)} \times 1000}{\text{Degrees of Arc} \times \text{Head Spacing} \times \text{Row Spacing}}$ |
| Horsepower                                  | H.P. = $\frac{GPM \times Ft \text{ of Head}}{3,960 \times \text{Pump Efficiency (expressed as a decimal)}}$                              |  |
| Station Run Time                            | S.R.T.= (min/wk) $\frac{\text{Total Weekly Req'd (inch/wk)} \times 60 \text{ (min/hr)}}{\text{Precipitation Rate (in/hr)}}$              | S.R.T.= (min/wk) $\frac{\text{Total Weekly Req'd (mm/wk)} \times 60 \text{ (min/hr)}}{\text{Precipitation Rate (mm/hr)}}$                  |
| Pipe Velocity                               | V= (ft/sec) $\frac{0.4085 \times \text{Flow (GPM)}}{(\text{Inside Pipe Diameter in Inches})^2}$  | V= (m/sec) $\frac{1273.24 \times \text{Flow (l/sec)}}{(\text{Inside Pipe Diameter in Millimeters})^2}$                                     |
| 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 |
| 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 |
| 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         | 0.12     | 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  $[hf = 0.2083 (100/C) 1.852 Q^{1.852}/d^{4.868}] \times .433$  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 |
| 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 |
| 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 |
| 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 |
| 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 |
| 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     | 2.12         | 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<br>G. P. M. | Velocity<br>FPS | psi<br>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 |
| 1             | 1.05         | 0.91     | 0.60         | 0.23     | 0.37         | 0.07     | 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

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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®.

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

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







**Down here. Doing. It. Right**

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