

# Tailored Application Solutions



Performance. Period.

## A Step-By-Step Guide



# What are Your Needs?

## Step 1: Determine Your Application Needs

Deciding on the correct water application solution is vital to your pivot's performance. First, determine your needs with this step-by-step guide and choose the best solution for your field.

Tailored application packages offer you water management, fertilizer application and/or pesticide control. Selecting the right application package can reduce your energy costs and save water. Your options are practically limitless, but the results are the same: providing you the best water application solutions to increase your productivity and profitability.





## Selecting an Application System

When you're selecting an application system, there are several things to think about. First, what kind? The choices are a fixed pad, a rotating pad, impact sprinklers or LEPA. Each has its distinct set of uses and advantages. If you decide to use a system with pads, then you need to choose the style of pad, which affects the flow of water onto the field. Your choices here involve the shape of the pad, the kind of grooves it contains and the depth of the grooves. You'll also decide just where the water's coming from. It can come from the top of the pipe, the top of the crop canopy, down in the canopy or right on the ground.

## How important are the following to meeting your needs?

Water	Rank Importance to You	Impact of Selection		
		Type	Pad	Position
Conservation Drift Infiltration	<input type="text"/>	Medium	Medium	High
	<input type="text"/>	Medium	Medium	High
	<input type="text"/>	High	High	Medium
<b>Fertigation</b>				
Placement Uniformity	<input type="text"/>	Medium	High	Medium
	<input type="text"/>	High	Medium	Low
<b>Chemigation</b>				
Herbicide Insecticide Fungicide	<input type="text"/>	Medium	Medium	Low
	<input type="text"/>	Medium	High	High
	<input type="text"/>	Medium	Medium	Low
<b>Other</b>				
Energy Cost Crop Cooling Soil Amendments	<input type="text"/>	High	Low	Low
	<input type="text"/>	Low	High	High
	<input type="text"/>	Medium	Medium	Low

## Chemigation/Fertigation Equipment

enables you to apply agricultural crop protection products and fertilizer uniformly and efficiently, above or below the crop canopy. You save on labor, application costs and up to 25% on some products.



# The Right Package

## Step 2: Select Application Package



### Fixed Pad

Simple in design, yet offers precision water delivery. Choose from various groove designs to offer you the best water droplet characteristic for your field.

- Efficient
- Lower cost
- Targeted water placement

### Senninger® LDN®

- Low cost water and energy saver
- Medium-high application rate
- 6-40 psi (,4-2,8 bars)
- 24-36' (7,3-11 m) wetted diameter

### Valley® Low-Energy Nozzles (LEN)

- Wide variety of available pads
- Unique shape for movement through crop
- Only pivot company with exclusive sprinklers
- 6-40 psi (,4-2,8 bars)
- 24-36' (7,3-11 m) wetted diameter

### Nelson D3000

- Flip-over dual spray cap
- Crop-guarded body for low energy, in canopy application
- 6-40 psi (,4-2,8 bars)
- 28-40' (8,5-12,2 m) wetted diameter



### Low Energy Precision Application (LEPA)

A complete water management system with low-energy requirements that eliminates drift and offers advanced placement with its drop-tube design.

- No drift
- No water on foliage

### Sock

- Minimize erosion to furrow blocks
- Least cost
- 6-15 psi (,4-1,0 bar)

### Senninger® Quad Spray®

- Very high application rate
- Two bubble modes eliminate misting and reduce soil redistribution
- 6-15 psi (,4-1,0 bar)





## Rotating Pad

Offers better infiltration with a wider wetted diameter (40') and larger drops, reducing drift and evaporation.

- Better infiltration
- Less drift

### Nelson Rotators

- 4 or 6 stream pads available
- Low-medium application rate
- 20-50 psi (1,4-3,4 bars)
- 50-60' (15,2-18,3 m) wetted diameter

### Nelson Spinners

- High flow capacity
- High uniformity
- 10-20 psi (,7-1,4 bars)
- 45-55' (13,7-16,8 m) wetted diameter

### Senninger® I-Wob®

- Gentle application
- Low-medium application rate
- 10-20 psi (,7-1,4 bars)
- 50-55' (15,2-16,8 m) wetted diameter



## Impact

Delivers the best soil infiltration through the largest wetted diameter.

- Best Infiltration
- Saves water formerly lost to wind drift
- High angle, low angle or part circle

### Nelson

- High angle
- Sturdy brass drive arm
- 25-60 psi (1,7-4,1 bars)
- 100' (30,5 m) wetted diameter

### Senninger®

- 6° trajectory fights wind drift and evaporation
- Plastic body
- 25-60 psi (1,7-4,1 bars)
- 70-95' (21,3-29,0 m) wetted diameter



## Directional Sprays

180° spray pattern keeps wheels dry for better traction and minimized wheel tracks.

- Dry wheel tracks
- Several options available to help reduce wheel track depths

### Nelson

- Rotator or spray available
- 6-40 psi (,4-2,8 bars)
- 30-50' (9,1-15,2 m) wetted diameter

### Senninger®

- Wide variety of deflector pads for a choice of spray patterns
- 6-40 psi (,4-2,8 bars)
- 40' (12,2 m) wetted diameter

# Step 3: Choose Your Application Position

## Drops

- Minimizes water drift and evaporation

## Hose

- Seven year proven track record
- Non-corrosive-can be installed with PVC U-pipe
- Flexible-designed to be drug through crop
- Reduces spray and drift losses caused by wind, low humidity and high temperatures
- Can be installed when building span
- Utilizes 3/4" reinforced hose

## Galvanized

- Available for truss rod height (8.5") applications
- Rigid drop works well with rotators, spinners and spray nozzles
- Utilizes schedule 40, 3/4" galvanized steel

## PVC

- Non-corrosive
- Semi-rigid drops work well with rotators, spinners and spray nozzles
- Multiple lengths available down to ground clearance (5.5")
- Utilizes schedule 80, 3/4" sunlight resistant material with s.s. insert in thread area



## Polyethylene

- Corrosion resistant
- Semi rigid, to hang straight but will flex

## Boombacks

- Discharge water behind drive unit
- Utilized with directional sprays to help keep wheel track dry
- Utilizes 6" (152,4 mm), 6 5/8" (168,3 mm), 8" (203,2 mm), 8 5/8" (219,1 mm) and 10" (254,0 mm) pipe clamps and 3/4" steel tubing for support

## Remote Drains

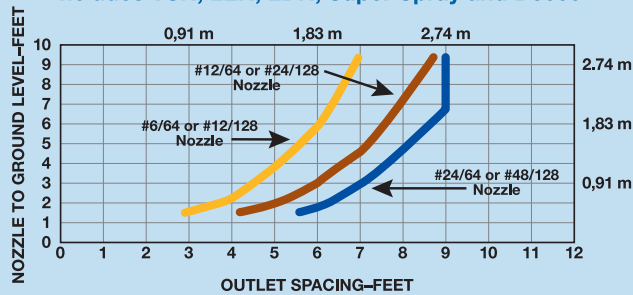
- Minimize wheel tracks in the field with standard drains placed off to the side or through one of the drop tubes for the sprinkler package





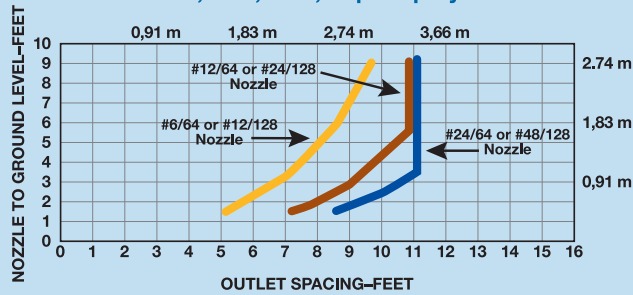
## Step 4: Select Spacing

### SPRAY NOZZLE SPACING at 6 psi (0,41 bars) Includes VSN, LEN, LDN, Super Spray and D3000



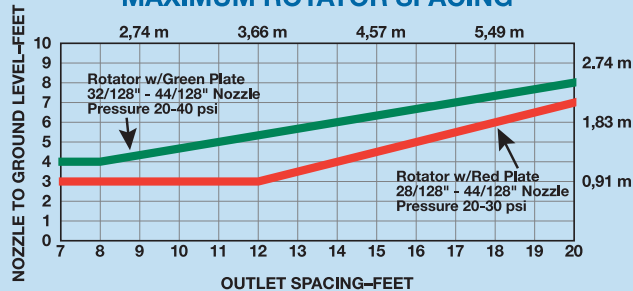
When nozzle is placed on drops  
Flat Grooved Pad, no wind, 150% overlap  
The drop height and spacing MUST BE coordinated with proper overlap and crop canopy

### SPRAY NOZZLE SPACING at 15 psi (1,03 bars) Includes VSN, LEN, LDN, Super Spray and D3000



When nozzle is placed on drops  
Flat Grooved Pad, no wind, 150% overlap  
The drop height and spacing MUST BE coordinated with proper overlap and crop canopy

### MAXIMUM ROTATOR SPACING



Spacing for maximum width should not exceed approximately 15% of machine length  
The drop height and spacing MUST BE coordinated with proper overlap and crop canopy

## Step 5: Pressure Regulator

Ensure uniform water application, even on hilly or rolling terrain. A properly selected pressure regulator at the base of each sprinkler or spray nozzle will provide a constant flow rate over wide variations in elevation.

If there is a variation of 10% or more due to field elevation, pressure regulators are recommended.

### Valley "All Range" Regulators

- 0.5 to 15 gpm (,03–,95 lps) capability
- Available in 6 to 30 psi (0,4–2,1 bar) outlet pressures
- Valley offers the proper regulator application to meet your requirements

## Step 6: End Gun

- Komet SR101
- Komet Twin Max
- Nelson SR100
- Nelson SR75
- 85 Rainbird
- 65 Rainbird

## Step 7: Booster Pump

Boost end gun pressure on low-pressure machines to improve end gun performance.

### 2 HP

- 28 psi (1,9 bars) booster on end gun flows up to 130 gpm (8,2 lps)

### 5 HP

- 35 psi (2,4 bars) booster on end gun flows up to 180 gpm (11,3 lps)

### 7.5 HP

- 52 psi (3,6 bars) booster on end gun flows up to 190 gpm (12,0 lps)

# Create Your Water Application System

**Step 1: Determine your application needs**

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**Step 2: Select application package**

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**Step 3: Choose your application position and select drop**

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**Step 4: Select spacing**

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**Step 5: Pressure Regulators:**  Yes or  No

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**Step 6: End Guns:**  Yes or  No

**If yes, then make a selection:**

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**Step 7: Booster Pumps:**  Yes or  No

**If yes, then make a selection:**

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