Tailored Application Solutions

VALLEY®

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, or linear'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 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?

	Rank Importance to You	Impact of Selection		
		Type	Pad	Position
Water				
Conservation		Medium	Medium	High
Drift		Medium	Medium	High
Infiltration		High	High	Medium
Fertigation				
Placement		Medium	High	Medium
Uniformity		High	Medium	Low
Chemigation				
Herbicide		Medium	Medium	Low
Insecticide		Medium	High	High
Fungicide		Medium	Medium	Low
Other				
Energy Cost		High	Low	Low
Crop Cooling		Low	High	High
Soil Amendments		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.

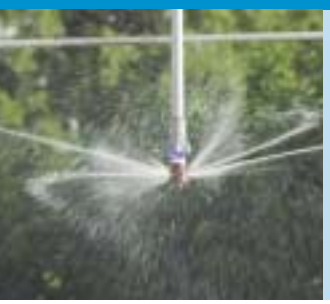
- No drift
- No water on foliage

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, 6, or 8 stream pads available
- Low-medium application rate
- 15-50 psi (1,0-3,4 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

Nelson Accelerator

- Improved water penetration in-canopy
- 10-15 psi (0.7-1.0 bars)
- 25-40' (7,6-12,2 m) wetted diamter

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®

- 6º 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

Part Circle Sprinklers

180º 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 Part Circle Spinner Rotator

- High uniformity
- 10-30 psi (0,7-2,0 bars)
- 20-40' (6,1-12,2 m) wetted radius

Senninger® LDN Part Circle Spray

- Concave groove
- 6-40 psi (,4-2,7 bars)
- 15-30' (4,6-9,1 m) wetted diameter

Nelson Part Circle Spray

- Concave medium groove
- 6-40 psi (,4-2,7 bars)
- 15-30' (4,6-9,1 m) wetted radius

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 stainless steel insert in thread area

Polyethylene

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

Boombacks

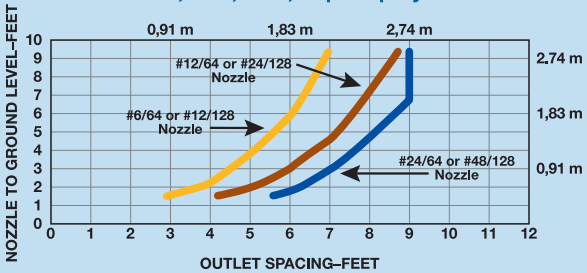
- Discharge water behind drive unit
- Utilized with part circle sprinklers to help keep wheel track dry
- Utilizes 6” (152,4 mm), 6 5/8” (168,3 mm), 8” (203,2 mm), 8 5/8” (219,1 mm) and 10” (254,0 mm) pipe clamps and 3/4” steel tubing for support

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

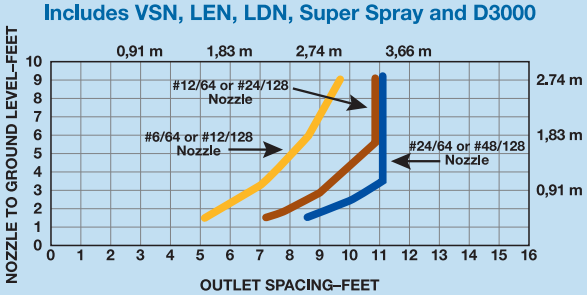
Step 4: Select Spacing

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



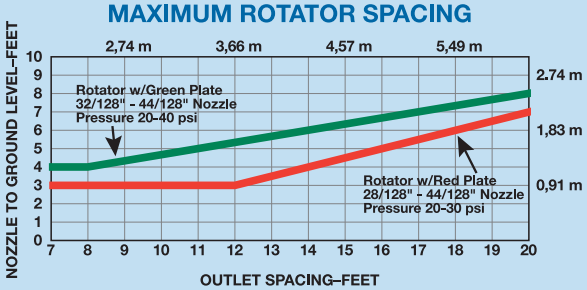
When nozzle is placed on drops
Flat Grooved Pad, no wind, 150% overlap
The drop height and spacing MUST BE coordinated with proper overlap and crop canopy

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 (0,4–2,0 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 175 gpm (11,0 lps)

7.5 HP

- 52 psi (3,5 bars) booster on end gun flows up to 230 gpm (14,5 lps)

Create Your Water Application System

Step 1: Determine your application needs

Step 2: Select application package

Step 3: Choose your application position and select drop

Step 4: Select spacing

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

Step 6: End Guns: ☐ **Yes or** ☐ **No**
If yes, then make a selection:

Step 7: Booster Pumps: ☐ **Yes or** ☐ **No**
If yes, then make a selection:

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