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John Deere SDI products

To view an animated SDI system visit:
www.johndeerewater.com/sdi
Sub-Surface Drip Irrigation (SDI)

- More efficient water use, SDI saves water with decreased evaporation and deep percolation.
- Decreased groundwater contamination, SDI decreases leaching of nutrients carried by over irrigation and poor uniformity.
- SDI provides the most effective management tool delivering water and nutrients directly to the plant roots at the precise time and in the precise quantity needed.
- Maximizes irrigated acres, SDI irrigates fields from corner to corner and easily adapts to small and odd shaped parcels.
- Optimizes plant nutrition, the nutrients carried by the irrigation water are applied directly to the plant roots.
- Minimizes weed growth, SDI Irrigation produces drier soil surface and reduces weed germination.
- Enables the use of recycled water without adverse environmental impact. Complies with environmental and public health regulations which prohibit overhead irrigation of certain crops with recycled water.

Typical Applications
- Alfalfa
- Asparagus
- Cotton
- Corn
- Orchards
- Soybeans
- Sugar beets
- Tomatoes
- Vegetables
- Vineyards

Why use SDI?

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SDI Considerations

What you should consider before choosing an SDI System.

SDI Considerations

1. Field layout - Field shapes and sizes
2. Field Conditions - Soil type, depth of topsoil, subsoil type, slope, and topography
3. Water - Availability, quantity, and quality (performing a water quality test is essential)
4. Crops - Type, requirements, and rotation
5. Cultural practices - Seed germination, tillage practices, and harvesting
6. Drip line products - Diameter, wall thickness, emitter spacing, flow rate, and filtration requirements
7. Location of drip lines - Depth, distance between laterals, and relation to the crop
8. System components and location - Pumps, filters, control valves, lines (main lines, sub-main lines, and manifolds), air relief valves, and drip lines
9. Monitoring - System flow rates and pressures should be monitored to ensure peak performance and maximize system life.
10. Maintenance procedures - Routine maintenance is necessary for system longevity and optimal performance.

SDI System Types and Maintenance

SDI System Types (According to soil type and crop)

1. Short Term SDI
   - System life expectancy of 3 to 10 years.
   - Typically utilized for mid-valued crops
   - Drip tubing typically installed between 3’ and 10’ of surface
   - Designed to deliver peak ET demands of crop

2. Long Term SDI
   - System life expectancy 20+ years.
   - Typically utilized for commodity crops
   - Drip tubing typically installed between 12’ and 18’ of surface
   - Designed to utilize soil holding capacity and irrigation timing to deliver peak crop demand

Factors determining selection of short term SDI and long term SDI:

- Soil Types
- Crop Rooting Depth
- Seed Vigor
- Water Salinity
- Crop Rotation and Tillage Practices
- Water Efficiencies

Maintenance

1. Pressure & Flow Rate
   - Make sure the system operates according to the required pressures. System pressures and flows need to be monitored to ensure peak performance and maximum system life.

2. Filtration
   - Monitoring filtration performance is necessary. Filtration requirements vary with water quality, dropper specifications, and other factors. Maintenance requirements for filters vary with type of filter (screen, disk, media, etc.) and water quality.

3. Chemical Treatment
   - Acid injection can reduce the precipitation caused by chemical contaminants. Acid wash (check treatment) can reduce the build-up of contaminants in the drip lines.
   - Chlorine injection restricts the growth of biological / organic contaminants like algae, bacteria & slime.
   - Chlorine oxidizes iron & manganese, into insoluble salts which can be separated from water, and reduces sulfur bacteria.

4. Pest Management
   - Pest Management is an essential maintenance function throughout the season.
T-Tape Drip Tape

Industry leading drip tape

T-Tape Drip Tape

Most Trusted Brand

One of the most recognized and trusted drip tape brands in the world, T-Tape Drip Tape is used in a variety of crops around the world to help reduce water consumption, increase crop quality, and increase crop yields. T-Tape Drip Tape can be installed on the ground, under plastic, or sub-surface. And with the white stripe, it’s easy to see if the tape is installed correctly. Because of T-Tape’s material strength, design, and quality production standards, it’s the drip tape that you can count on year after year.

T-Tape is available in a wide assortment of configurations, including various lengths, wall thickness, emitter spacings and flow rates. Helping growers match individual growing situations with maximum yield benefits.

When ordering T-Tape Drip Tape, you will need to choose from the following features:

- Diameter of the hose: 5/8", 7/8", 1 1/8", and 1 3/8"
- Wall thickness: 5, 6, 8, 10, 12, 15
- Spacing between each dripper: 4, 6, 8, 12, 16, and 24 inch
- Flow rate per 100 feet: 0.15, 0.17, 0.22, 0.34, 0.47, 0.30, 0.45, 0.67, and 1.00 gpm
- Hose color: black

Hydro PC and PCND Flow Regulated Drip Lines

Consistent delivery of water on sloping ground or long runs

Hydro PC Flow Regulated Drip Line

Constant flow, at variable inlet pressures

Hydro PC is a drip line containing flow regulating cylindrical drippers which allow growers the ability to irrigate crops in a wide range of field conditions. Whether you’re irrigating on a slope or long runs, count on Hydro PC to deliver.

The Hydro PC drippers have the highly responsive floating diaphragms that regulate and maintain a consistent flow rate at variable inlet pressures. Hydro PC is ideal for fields with sloping terrain or long run lengths. Because Hydro PC has a large cross-sectional labyrinth and self-cleaning mechanism, it’s highly resistant to clogging. And with two outlets per dripper, Hydro PC will continue to deliver the right amount of water, throughout the entire field.

The Hydro PC is constructed with premium resins resistant to UV degradation and damage caused from commonly used chemicals and fertilizers.

When ordering Hydro PC Flow Regulated Drip Line, you will need to choose from the following features:

- Diameter of the hose: 12, 17, and 20 mm
- Wall thickness: 35, 45, 47 mil
- Spacing between each emitter: 6, 8, 12, 18, 24, 30, 36, 42, and 48 inch
- Flow rate of the dripper: 0.28, 0.32, 0.40, 0.58, and 0.95 gph
- Hose color: White or black

Hydro PCND Flow Regulated Drip Line

Added no-drain Feature

Hydro PCND is a drip line containing flow-regulating cylindrical drippers. Hydro PCND has a highly responsive floating diaphragm which regulates and maintains a constant flow rate at variable inlet pressures. In addition to the flow regulation, Hydro PCND also has a no-drain feature. The water stops flowing through the emitter when the pressure drops to 1.45 PSI. The no-drain feature protects drip lines from ingesting small soil particles at system shut down. And with two outlets per dripper, you can be sure that Hydro PCND will continue to deliver water to your crop.

The Hydro PCND is the ideal choice for subsurface drip irrigation systems. Like the standard Hydro PC, it has a high clogging resistance due to the design and size of the emitter channel. And with the self-cleaning mechanism, the dripper continuously flushes small particles from the dripper. Hydro PCND is an excellent choice for pulse irrigation.

The Hydro PCND is constructed with premium resins resistant to UV degradation and damage caused from commonly used chemicals and fertilizers.

When ordering Hydro PCND Flow Regulated Drip Line, you will need to choose from the following features:

- Diameter of the hose: 12, 17, and 20 mm
- Wall thickness: 35, 45, 47 mil
- Spacing between each emitter: 6, 8, 12, 18, 24, 30, 36, 42, and 48 inch
- Flow rate of the dripper: 0.28, 0.36, 0.42, 0.62, 0.46, 0.95, and 0.99 gph
- Hose color: White or black
With drip lines, manifolds, and fittings, we’ve got your drip irrigation needs covered. And because they’re John Deere products, you know you’ll be able to count on them.

Ask your John Deere Water Representative today about how sub-surface drip irrigation systems can help you improve your bottom line.

For more information visit JohnDeereWater.com, call 1.877.41.Water, or contact your local irrigation dealer.