

Xi-Wob[®]



MECHANIZED IRRIGATION

Senninger introduced Wobbler technology in 1978. Low application intensity, unmatched uniformity, large area of coverage at low pressure.



Xi-Wob® UP3™ Easy Clean Nozzle



The Senninger Xi-Wob provides the same ultra-low application intensity and uniform distribution pattern that has made the Senninger i-Wob the leading pivot sprinkler on the market. It utilizes patented counter balance technology, making it ideal for installation on:

- Semi-rigid PE drops
- Steel drops
- Flexible hose drops when used with The One Weight

Large Area of Coverage

The Xi-Wob provides the largest area of instantaneous coverage at a lower pressure. By applying water to a larger area of soil surface at any given instant of the sprinkler's operation, the impact of the sprinkler's pattern on the soil structure is reduced. Larger instantaneous coverage area reduces the rate at which the soil is required to take in water. Preservation of intake rate and increased soak times greatly reduce the potential for irrigation water run-off and wheel rutting.

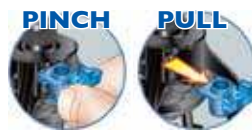
Ultra Low Pressure



The Xi-Wob is designed for peak performance at ultra-low pressures of 10 to 15 psi (0.69 to 1.03 bar). Lower operating pressures offer irrigators a tremendous opportunity to lower total pumping costs and increase their energy savings by reducing both horsepower requirements and energy consumption.

Easy Clean - Easy Change Nozzle

Nozzle Removal

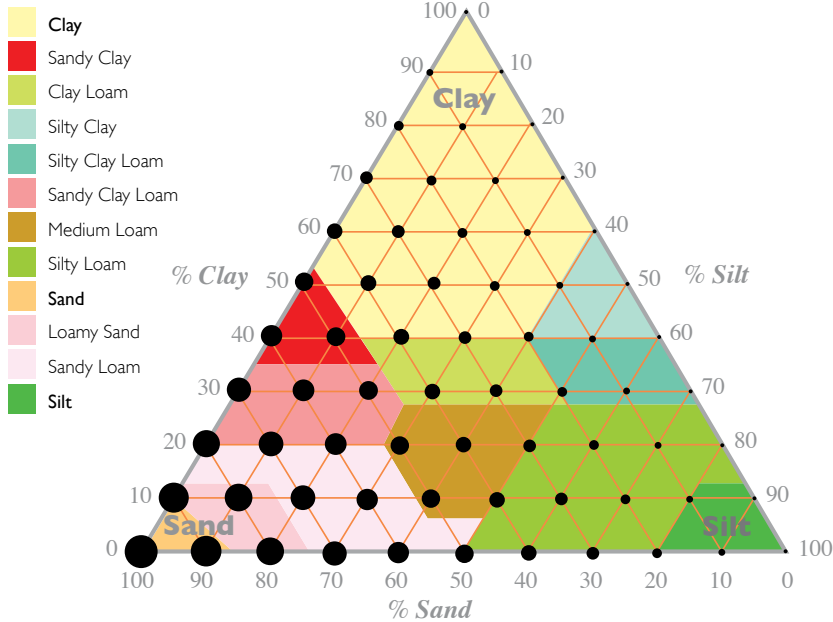


Nozzle Installation



- No need to disassemble or remove the sprinkler
- Easy snap-in nozzle To remove: pinch and pull. To install: place and click.
- Applicator can be installed directly into a pressure regulator - no special threads or fittings required.





Spray Nozzle Comparison **Xi-Wob® UP3™**



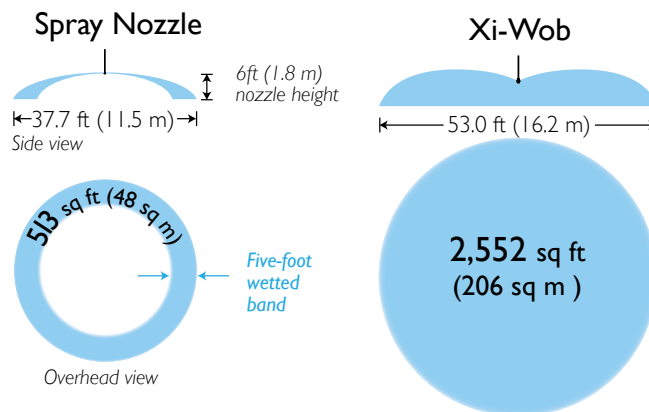
Droplet size needed for type of soil

All soils are made up three basic components: clay, sand and silt. The relative amounts of each component determines the soil type. The black dots spread over the triangle represent droplet sizes (small, medium, large) and suggest the ideal size for different type of soils. If you know your soil texture, look over the graph above to find the color and percentages of clay, sand and silt that best match the composition of your soil. Once you have located these percentages, you should be able to find the recommended droplet size for your specific soil type. Typically, tighter soils require smaller droplets and looser soils can accept larger droplets.

Xi-Wob Droplet Size

-  Model 610: Medium droplets
-  Model 615: Large droplets
-  Model 910: Smaller droplets
-  Model 605-TOP of Pipe: Medium droplets

Excellent Distance of Throw



In this example, the Xi-Wob is spreading the same amount of water over an area five times greater than the area covered by the spray nozzle. Nozzles are at 15 psi (1.03 bar) and at 6 ft (1.83 m) in height, using an 11/32 inch (8.73 mm) nozzle with a flow of 13.33 gpm (3028 L/hr) in no wind conditions.

Uniformity Affects Application Intensity

Some stream-driven applicators deliver water in a more concentrated ring. This more intense application can negatively impact the soil surface. The design of these applicators can also produce many small droplets that get evaporated or blown away by the wind. The Xi-Wob offers a gentle more uniform delivery and an even droplet size large enough to resist wind-drift, but not so large as to disrupt the soil.

Xi-Wob® UP3™ Models

The Xi-Wob is available with three different deflectors. This allows you to customize the droplet size and trajectory that best suits your installation, soil, and crop needs.



| Xi-Wob System Design Criteria | Model 610 (Blue) 6-Groove 10° Trajectory Medium Droplets | Model 615 (Black) 6-Groove 15° Trajectory Large Droplets | Model 910 (Grey) 9-Groove 10° Trajectory Smaller Droplets |
|----------------------------------|---|---|--|
| Nozzle sizes | | | |
| Minimum | #7 7/64" (2.78 mm) | #10 5/32" (3.97 mm) | #10 5/32" (3.97 mm) |
| Maximum* | #24 3/8" (9.53 mm) | #24 3/8" (9.53 mm) | #24 3/8" (9.53 mm) |
| Flows | | | |
| Minimum | 1.09 gpm (248 L/hr) | 2.24 gpm (509 L/hr) | 2.24 gpm (509 L/hr) |
| Maximum | 15.78 gpm (3584 L/hr) | 15.78 gpm (3584 L/hr) | 15.78 gpm (3584 L/hr) |
| Diameters | | | |
| Minimum at 3 ft (0.91 m) | 29.5 ft (9.0 m) | 38.0 ft (11.6 m) | 33.0 ft (10.1 m) |
| Maximum at 3 ft (0.91 m) | 40.0 ft (12.2 m) | 43.2 ft (13.2 m) | 36.4 ft (11.1 m) |
| Minimum at 6 ft (1.83 m) | 34.5 ft (10.5 m) | 43.0 ft (13.1 m) | 38.0 ft (11.6 m) |
| Maximum at 6 ft (1.83 m) | 44.6 ft (13.6 m) | 50.0 ft (15.2 m) | 42.8 ft (13.0 m) |
| Minimum at 9 ft (2.74 m) | 37.0 ft (11.3 m) | 45.6 ft (13.9 m) | 43.0 ft (13.1 m) |
| Maximum at 9 ft (2.74 m) | 48.6 ft (14.8 m) | 55.4 ft (16.9 m) | 49.6 ft (15.1 m) |
| Maximum Spacing | | | |
| at 6 ft (1.8 m) ground clearance | 18 ft (5.5 m) | 20 ft (6.1 m) | 18 ft (5.5 m) |
| Pressure at the Nozzle | | | |
| Minimum | 10 psi (0.69 bar) | 10 psi (0.69 bar) | 10 psi (0.69 bar) |
| Maximum | 15 psi (1.03 bar) | 15 psi (1.03 bar) | 15 psi (1.03 bar) |

*It is recommended that larger nozzle sizes be used only on soils and slopes that can handle higher application rates.

Note: When outlet spacing exceeds 10 ft (3 m), keep the Xi-Wobs above crop canopy level. This is especially important on high profile crops.

Not warranted for rigid installation on offsets or booms longer than 10.5 ft (3.2 m). Longer offsets and booms require a minimum 2 ft (0.61 m) reinforced flex hose.

Xi-Wob System Assembly

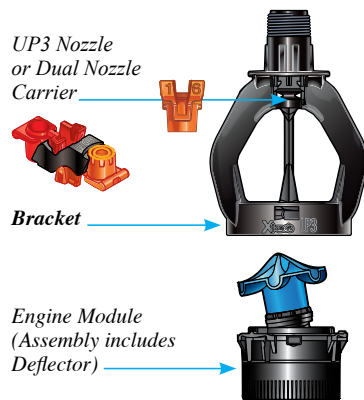
Mounting (semi-rigid drops)

- The Xi-Wob is designed for mounting on semi-rigid Polyethylene or steel drops. Do not use PVC.
- When using semi-rigid or steel drops, mount the Xi-Wob no more than 1 ft (0.3 m) below the truss rod.
- The Xi-Wob is also suitable for flexible hose installations when used with The One Weight.

Pressure Regulator Location

- Pressure regulators can be installed at the top of the drop or near the applicator.
- Follow your customized print out for proper pressure regulator placement.

Component Assembly



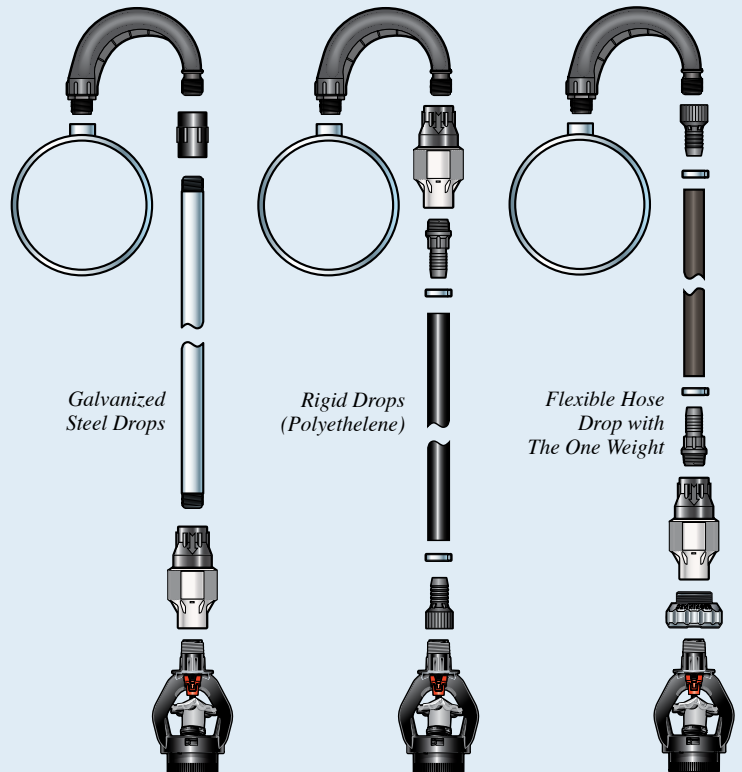
Integrated Base

With the UP3 design, the Xi-Wob base is now an integral part of the bracket. It can be installed directly into a pressure regulator or onto a standard 3/4" female NPT connection, increasing reliability and requiring fewer parts.



Installation

To maintain product warranty, refer to the diagrams below for proper installation:



Shown with Senninger's 180° Gooseneck and fittings.

The One Weight



It provides stability on drops for a number of pivot applicators. Its unique fit technology allows the weight to fit securely onto the i-Wob, Xi-Wob, LDN, Super Spray, and even some other manufacturer's applicators. The weight's easy-to-install design lets it remain on the applicator during nozzle changes. The One Weight is constructed entirely of zinc alloy. It weighs approximately 0.85 lbs (0.30 kg).

Xi-Wob® UP3™ Top of Pipe



The Xi-Wob 605-TOP is ideal for reducing overwatering. It allows wide spacing near the pivot point and provides a wind-resistant pattern with extremely uniform coverage. It is mounted on the top of the pipe along the length of a center pivot or other mechanical-move system.

Xi-Wob System Assembly

Mounting the Xi-Wob 605 TOP

- Only use with a 3/4" galvanized nipple or Senninger's impact-modified thermoplastic nipple into the mainline. PVC nipples are not recommended. Install at a maximum length of 2 feet.
- The Xi-Wob TOP must employ a 10 psi (0.69 bar) pressure regulator (PSR recommended).
- The Xi-Wob TOP must be installed on the top-of-pipe along a center pivot or other mechanical move system.
- Manifolding two or more Xi-Wob TOPs from a single outlet is not recommended.

Xi-Wob TOP System Design Criteria

605-TOP (White)
6-Groove
Medium Droplets
5° Trajectory

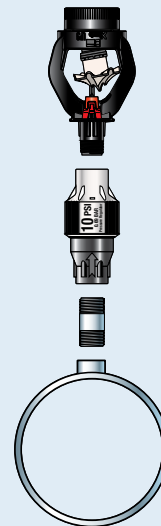
| Nozzle sizes | |
|------------------------------------|-----------------------|
| Minimum** | #10 5/32" (3.97 mm) |
| Maximum* | #24 3/8" (9.53 mm) |
| Flows | |
| Minimum | 2.24 gpm (509 L/hr) |
| Maximum | 12.88 gpm (2925 L/hr) |
| Diameters | |
| Minimum at 12 ft (3.66 m) | 45 ft (1.37 m) |
| Maximum at 12 ft (3.66 m) | 50 ft (15.2 m) |
| Maximum Spacing | |
| at 12 ft (3.66 m) ground clearance | 20 ft (6.1 m) |
| Pressure at the Nozzle | |
| Minimum | 10 psi (0.69 bar) |
| Maximum | 10 psi (0.69 bar) |

*It is recommended that larger nozzle sizes be used only on soils and slopes that can handle higher application rates.

** If using smaller nozzles than recommended for the 605-TOP, ask about our Xcel-Wobbler

Installation

To maintain product warranty, refer to the diagram below for proper installation:



Nozzle Flows **Xi-Wob® UP3™**

| Sprinkler Base Pressure | | psi | 10 | 15 | bar | 0.69 | 1.03 |
|-------------------------|--------------------------|----------------|------------|-------|--------------|-------------|------|
| Nozzle | Color | Orifice (inch) | Flow (gpm) | | Orifice (mm) | Flow (L/hr) | |
| 7 | Lime | 7/64 | 1.09 | 1.34 | 2.78 | 248 | 304 |
| 7½ | Lime (notched) | 15/128 | 1.26 | 1.54 | 2.98 | 286 | 350 |
| 8 | Lavender | 1/8 | 1.43 | 1.75 | 3.18 | 325 | 397 |
| 8½ | Lavender (notched) | 17/128 | 1.62 | 1.98 | 3.37 | 368 | 450 |
| 9 | Grey | 9/64 | 1.81 | 2.22 | 3.57 | 411 | 504 |
| 9½ | Grey (notched) | 19/128 | 2.02 | 2.48 | 3.77 | 459 | 563 |
| 10 | Turquoise | 5/32 | 2.24 | 2.75 | 3.97 | 509 | 625 |
| 10½ | Turquoise (notched) | 21/128 | 2.47 | 3.03 | 4.17 | 561 | 688 |
| 11 | Yellow | 11/64 | 2.72 | 3.33 | 4.37 | 618 | 756 |
| 11½ | Yellow (notched) | 23/128 | 2.97 | 3.64 | 4.56 | 675 | 827 |
| 12 | Red | 3/16 | 3.24 | 3.97 | 4.76 | 736 | 902 |
| 12½ | Red (notched) | 25/128 | 3.52 | 4.31 | 4.96 | 799 | 979 |
| 13 | White | 13/64 | 3.81 | 4.66 | 5.16 | 865 | 1058 |
| 13½ | White (notched) | 27/128 | 4.11 | 5.03 | 5.36 | 933 | 1142 |
| 14 | Blue | 7/32 | 4.42 | 5.41 | 5.56 | 1004 | 1229 |
| 14½ | Blue (notched) | 29/128 | 4.74 | 5.81 | 5.75 | 1077 | 1320 |
| 15 | Dark Brown | 15/64 | 5.08 | 6.22 | 5.95 | 1154 | 1413 |
| 15½ | Dark Brown (notched) | 31/128 | 5.42 | 6.64 | 6.15 | 1231 | 1508 |
| 16 | Orange | 1/4 | 5.78 | 7.08 | 6.35 | 1313 | 1608 |
| 16½ | Orange (notched) | 33/128 | 6.15 | 7.53 | 6.55 | 1397 | 1710 |
| 17 | Dark Green | 17/64 | 6.53 | 7.99 | 6.75 | 1483 | 1815 |
| 17½ | Dark Green (notched) | 35/128 | 6.92 | 8.47 | 6.95 | 1572 | 1924 |
| 18 | Purple | 9/32 | 7.32 | 8.96 | 7.14 | 1663 | 2035 |
| 18½ | Purple (notched) | 37/128 | 7.73 | 9.47 | 7.34 | 1756 | 2151 |
| 19 | Black | 19/64 | 8.15 | 9.98 | 7.54 | 1851 | 2267 |
| 19½ | Black (notched) | 39/128 | 8.58 | 10.51 | 7.74 | 1949 | 2387 |
| 20 | Dark Turquoise | 5/16 | 9.02 | 11.05 | 7.94 | 2049 | 2510 |
| 20½ | Dark Turquoise (notched) | 41/128 | 9.47 | 11.60 | 8.14 | 2151 | 2635 |
| 21 | Mustard | 21/64 | 9.93 | 12.17 | 8.33 | 2255 | 2764 |
| 21½ | Mustard (notched) | 43/128 | 10.40 | 12.74 | 8.53 | 2362 | 2894 |
| 22 | Maroon | 11/32 | 10.88 | 13.33 | 8.73 | 2471 | 3028 |
| 22½ | Maroon (notched) | 45/128 | 11.37 | 13.92 | 8.93 | 2582 | 3162 |
| 23 | Cream | 23/64 | 11.87 | 14.54 | 9.13 | 2696 | 3302 |
| 23½ | Cream (notched) | 47/128 | 12.37 | 15.15 | 9.33 | 2810 | 3441 |
| 24 | Dark Blue | 3/8 | 12.88 | 15.78 | 9.53 | 2925 | 3584 |

Dual Nozzle Carrier *(patent pending)*



Utilizing two different flow rates on a center pivot — a lower rate for germination or chemigation and a higher rate for mature crop irrigation — is an excellent way to save water and energy. The Dual Nozzle Carrier simplifies re-nozzling for this purpose. Simply pinch and pull the nozzle from the applicator, flip the carrier, then place and click to install. The carrier is marked to show the high and low flow nozzles.

UP3 Nozzle Visibility

The color-coded nozzles are highly visible and easy to identify. The nozzle numbers (corresponding to orifice size in 64ths of an inch) are visible on the ears, with half-sizes denoted beneath the second digit and notches on the lower edge of the nozzle.




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