

i-Wob[®]



MECHANIZED IRRIGATION

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



i-Wob® UP3™ Easy Clean Nozzle



The Senninger i-Wob combines its unique rotary action with the wobbling action of grooved deflectors to deliver a consistent droplet size and outstanding uniformity over a large area of coverage. This prevents wind-drift and provides a gentle, rain-like application of water to the soil.

Large Area of Coverage

The i-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.

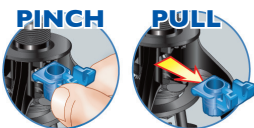
Ultra Low Pressure



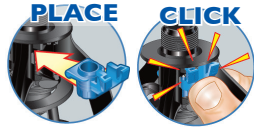
The i-Wob is designed for peak performance at ultra-low pressures of 10 to 20 psi (0.69 to 1.38 bar). Lower operating pressures offer irrigators a tremendous opportunity to lower total pumping costs and increase their energy savings by reducing both horsepower requirements and energy consumption.

Easy Clean - Easy Change Nozzle

Nozzle Removal

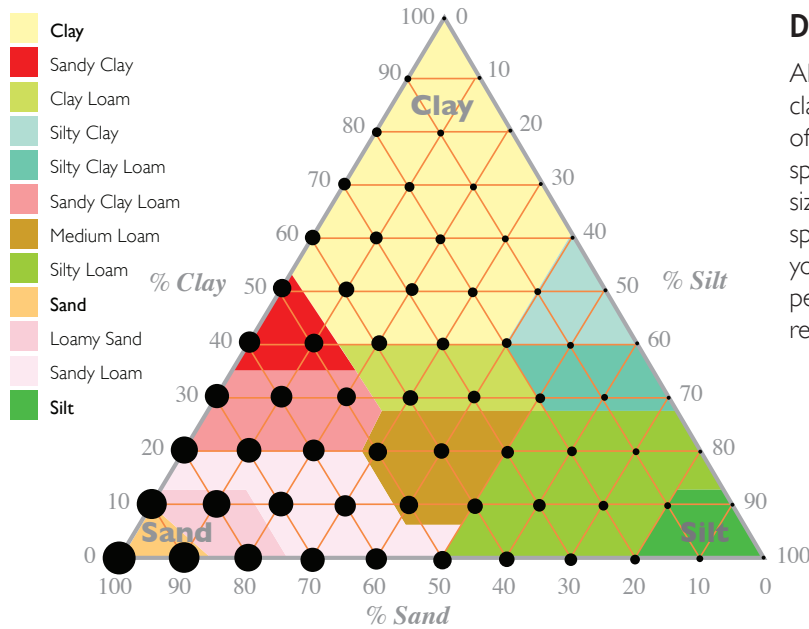


Nozzle Installation



- 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 i-Wob® UP3™



Droplet size needed for type of soil

All soils are made up three basic components: clay, sand and silt. The relative amount of each one of these determines the soil type. The black dots spread over the triangle represent the droplet sizes (small medium and large) matched to specific soil types. Use the key to the left to find your most common soil type and then locate the percentage of soil type on the triangle to find the recommended droplet size for your specific area.

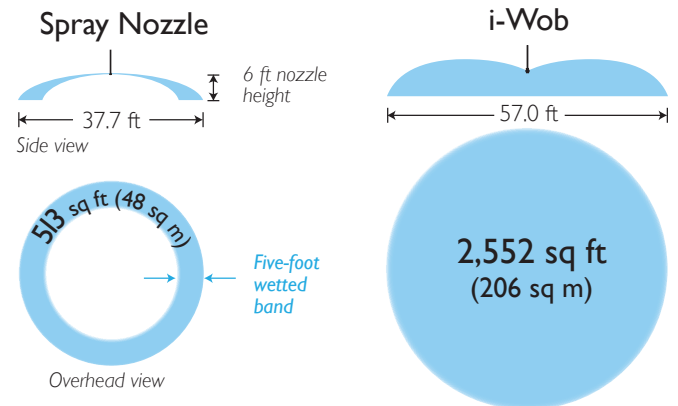
i-Wob Droplet Size

- SA6: Small droplets
- SA9: Medium droplets
- LA6: Medium droplets
- LA6: Largest droplets

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 i-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.

Excellent Distance of Throw



In this example, the i-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 20 psi (1.38 bar) and at 6 ft (1.83 m) in height, using an 11/32 inch (8.73 mm) nozzle, with a flow of 15.39 gpm (3495 L/hr) in no wind conditions.

i-Wob® UP3™ Models

The i-Wob is available with four different deflectors. This allows you to customize the droplet size and trajectory to best suit your installation, soil and crop needs.



i-Wob System Design Criteria	Standard-Angle (Grey) 6-Groove Small Droplets	Standard-Angle (Black) 9-Groove Medium Droplets	Low-Angle (Blue) 9-Groove Medium Droplets	Low-Angle (White) 6-Groove Largest Droplets
Nozzle Sizes				
Minimum	#10 5/23" (3.97 mm)	#6 3/32" (2.38 mm)	#6 3/32" (2.38 mm)	#12 3/16" (4.76 mm)
Maximum*	#26 13/32" (10.32 mm)	#26 13/32" (10.32 mm)	#26 13/32" (10.32 mm)	#26 13/32" (10.32 mm)
Flows				
Minimum	2.24 gpm (509 L/hr)	0.80 gpm (182 L/hr)	0.80 gpm (182 L/hr)	3.24 gpm (736 L/hr)
Maximum	18.4 gpm (4168 L/hr)	18.4 gpm (4168 L/hr)	18.4 gpm (4168 L/hr)	18.4 gpm (4168 L/hr)
Diameters				
Minimum at 3 ft (0.91 m)	36 ft (11.0 m)	31 ft (9.5 m)	31 ft (9.5 m)	40 ft (12.2 m)
Maximum at 3 ft (0.91 m)	46 ft (14.0 m)	53 ft (6.2 m)	47 ft (14.5 m)	49 ft (14.9 m)
Minimum at 6 ft (1.83 m)	35 ft (10.7 m)	34 ft (10.4 m)	35 ft (10.7 m)	44 ft (13.4 m)
Maximum at 6 ft (1.83 m)	50 ft (15.2 m)	57 ft (17.4 m)	50 ft (15.2 m)	53 ft (16.2 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)	15 ft (4.6 m)
Pressure at the Nozzle				
Minimum	10 psi (0.69 bar)	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)	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.

** For optimum performance Senninger recommends the use of maximum spacing for 1 to 2 spans only.

Note: Keep i-Wobs above crop canopy when outlet spacing exceeds 10 ft (3.0 m).

This is especially important on high profile crops.

Components i-Wob® UP3™

i-Wob System Assembly

Mounting

- Always mount the i-Wob on a minimum of 2 ft (0.6 m) reinforced flexible hose. The hose must be on the outlet end of any semi-rigid or rigid drop.
- Mount the i-Wob no less than 3 ft (0.91 m) above the ground.
- When using the Magnum Weight, always be sure it is tightly threaded to the bottom of the i-Wob. 140 inch-lbs torque recommended.
- When using the Magnum Weight, never use another weight above the i-Wob.
- If using a conventional drop weight, never use a threaded lower weight also.
- If using a conventional drop weight above the i-Wob, only use a threaded weight weighing at least 1.5 lbs (0.7 kg), but not exceeding 1 ft (0.38 m) in length.

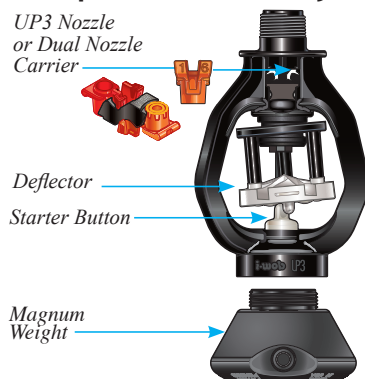
Please note that using a slip-over drop weight may cause premature failure of the drop tube assembly.

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.

Note: Selection of weight style (location) is based on application and preference. Only one style weight should be used per i-Wob.

Component Assembly



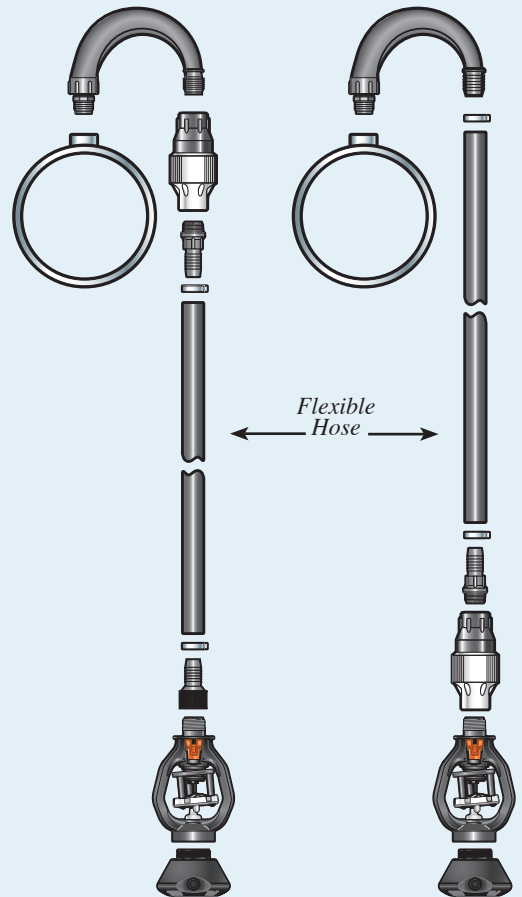
Magnum Weight



Helps keep the i-Wob and other pivot applicators stable on flexible hose drops. The filled weight's UV-resistant thermoplastic construction prevents corrosion and deters metal theft due to the weight's lack of metal parts. Its easy-to-install design allows it to remain on the applicator during nozzle changes. Weighs 0.85 lbs (0.30 kg)

Installation

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



Shown with Senninger 180° Goosenecks and fittings.

Integrated Base

With the UP3 design, the i-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.

i-Wob® UP3™ Nozzle Flows

Sprinkler Base Pressure (psi)			10	15	20	(bar)	0.69	1.03	1.38
Nozzle	Color	Orifice (in.)	Flow (gpm)			Orifice (mm)	Flow (L/hr)		
6	Gold	3/32	0.80	0.98	1.13	2.38	182	223	257
6½	Gold (notched)	13/128	0.94	1.15	1.33	2.58	213	261	302
7	Lime	7/64	1.09	1.34	1.54	2.78	248	304	350
7½	Lime (notched)	15/128	1.26	1.54	1.77	2.98	286	350	402
8	Lavender	1/8	1.43	1.75	2.02	3.18	325	397	459
8½	Lavender (notched)	17/128	1.62	1.98	2.29	3.37	368	450	520
9	Grey	9/64	1.81	2.22	2.56	3.57	411	504	581
9½	Grey (notched)	19/128	2.02	2.48	2.86	3.77	459	563	650
10	Turquoise	5/32	2.24	2.75	3.17	3.97	509	625	720
10½	Turquoise (notched)	21/128	2.47	3.03	3.50	4.17	561	688	795
11	Yellow	11/64	2.72	3.33	3.84	4.37	618	756	872
11½	Yellow (notched)	23/128	2.97	3.64	4.20	4.56	675	827	954
12	Red	3/16	3.24	3.97	4.58	4.76	736	902	1040
12½	Red (notched)	25/128	3.52	4.31	4.97	4.96	799	979	1129
13	White	13/64	3.81	4.66	5.38	5.16	865	1058	1222
13½	White (notched)	27/128	4.11	5.03	5.81	5.36	933	1142	1320
14	Blue	7/32	4.42	5.41	6.25	5.56	1004	1229	1420
14½	Blue (notched)	29/128	4.74	5.81	6.71	5.75	1077	1320	1524
15	Dark Brown	15/64	5.08	6.22	7.18	5.95	1154	1413	1631
15½	Dark Brown (notched)	31/128	5.42	6.64	7.67	6.15	1231	1508	1742
16	Orange	1/4	5.78	7.08	8.17	6.35	1313	1608	1856
16½	Orange (notched)	33/128	6.15	7.53	8.69	6.55	1397	1710	1974
17	Dark Green	17/64	6.53	7.99	9.23	6.75	1483	1815	2096
17½	Dark Green (notched)	35/128	6.92	8.47	9.78	6.95	1572	1924	2221
18	Purple	9/32	7.32	8.96	10.35	7.14	1663	2035	2351
18½	Purple (notched)	37/128	7.73	9.47	10.93	7.34	1756	2151	2482
19	Black	19/64	8.15	9.98	11.53	7.54	1851	2267	2619
19½	Black (notched)	39/128	8.58	10.51	12.14	7.74	1949	2387	2757
20	Drk Turquoise	5/16	9.02	11.05	12.76	7.94	2049	2510	2898
20½	Drk Turquoise (notched)	41/128	9.47	11.60	13.40	8.14	2151	2635	3043
21	Mustard	21/64	9.93	12.17	14.05	8.33	2255	2764	3191
21½	Mustard (notched)	43/128	10.40	12.74	14.71	8.53	2362	2894	3341
22	Maroon	11/32	10.88	13.33	15.39	8.73	2471	3028	3495
22½	Maroon (notched)	45/128	11.37	13.92	16.08	8.93	2582	3162	3652
23	Cream	23/64	11.87	14.54	16.78	9.13	2696	3302	3811
23½	Cream (notched)	47/128	12.37	15.15	17.49	9.33	2810	3441	3972
24	Dark Blue	3/8	12.88	15.78	18.22	9.53	2925	3584	4138
24½	Dark Blue (notched)	49/128	13.40	16.41	18.95	9.72	3043	3727	4304
25	Copper	25/64	13.92	17.05	19.69	9.92	3162	3872	4472
25½	Copper (notched)	51/128	14.45	17.69	20.43	10.12	3282	4018	4640
26	Bronze	13/32	14.98	18.35	21.18	10.32	3402	4168	4811

Nozzle Options i-Wob® UP3™



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.

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.

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