



# Super Spray®



## MECHANIZED IRRIGATION

Field proven technology - Introduced in 1979.  
The Super Spray offers a wide variety of deflector pads to customize angle and droplet size.



# Super Spray® UP3™ Easy Clean Nozzle



Senninger's UP3 (Universal Pivot Products Platform) has been applied to the proven technology of the Super Spray. The easy snap-in nozzle means there is no need to disassemble or remove the sprinkler to clean or change the nozzle.

Field-proven for more than 30 years, the Senninger Super Spray provides more versatility than any other spray nozzle on the market. It offers a wide variety of interchangeable deflector pad options to meet specific crop, climatic and soil requirements. The design makes it ideal for surface water due to the large distance between the nozzle and deflector and the bracket legs.

## Dual Nozzle Carrier (patent pending)

Utilizing two different flow rates in a center pivot (a lower rate for germination or chemigation and a higher rate for mature crop irrigation) provides an excellent way to save water and energy. The Dual Nozzle Carrier greatly simplifies renozzling for this purpose. Simply - pinch and pull the nozzle from the applicator; flip the carrier; then place and click to install the second nozzle. The carrier is marked to show the high and low flow nozzles. The flexible material provides the ability for in-canopy operation and improves durability from possible impact.



## Easy Clean - Easy Change Nozzle

### Nozzle Removal

**PINCH**



**PULL**



### Nozzle Installation

**PLACE**



**CLICK**



# Energy Savings Super Spray® UP3™

## Ultra Low Pressure

Senninger Irrigation's Super Spray can be used in low pressures of 6 to 20 psi (0.41 to 1.38 bar). Lower pressure translates to reduced horsepower requirements and reduced energy consumption. These low operating pressures offer irrigators a tremendous opportunity to lower total pumping costs. Products specifically designed to provide peak performance in this low pressure range offer a center pivot irrigator increased energy savings.



**Senninger Irrigation - Low Pressure Energy Saver**

**System Information**

Pump Flow: 1000 GPM  
 Pressure: 60 Psi  
 Pumping Plant Efficiency: 80 [%]  
 Hours of Operation per Year/Season: 1000

**Energy Type and cost**

Energy Type	Unit	Value	Cost
Electricity	kWh/acre-foot	0.965	.09
Diesel	Whip-hrs/gallon	12.5	2.5
Propane	Whip-hrs/gallon	6.88	
Natural Gas	Whip-hrs / 1000 Btu	66.7	

**High / Low - Pressure Cost Comparisons**

	High pressure	Low pressure
Pressure	60	35
Water Horsepower	34.99	20.41
Brake Horsepower	43.74	25.51
Water Pumped per Year/Season	184.13	acre-feet
Seasonal Energy Cost of Water	8748.0	5103.0

**Annual / Seasonal Savings: 3644.99**

Spanish

**LOW Pressure HIGH Performance**

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## Energy Savings Calculator

The Energy Saver program by Senninger Irrigation is another tool that reinforces the benefit of converting your system to LOW PRESSURE-HIGH PERFORMANCE. It gives you a first-hand look at the cost savings in lowering your pressure without sacrificing uniformity.

Available online at [www.senninger.com](http://www.senninger.com) as a link in the Literature & Software section tab.

# Super Spray® UP3™ Design Criteria

## Deflector Pads

The Super Spray's twenty-two deflector pads are identified by shape (flat, concave, or convex) and type of surface (smooth, medium-grooved, or deep-grooved). The shape and surface help control spray pattern and droplet size. Chemigation pads are available in high profile (corn) and low profile (cotton) to reach the underside of the foliage. These snap-in pads can be easily changed during the season to fit varying field and growing conditions.

	Flat	Concave	Convex	Chemigation
<b>Deep Groove</b>				
# of grooves	24    36    48	24    36    48	24    36    48	
<b>Medium Groove</b>				
# of grooves	36	36	36	<i>CORN</i> mini pad
<b>Smooth</b>				
	mini pad	mini pad	mini pad	<i>COTTON</i> mini pad

Mini deflector pads recommended for nozzles #4 through #9.5

Super Spray System Design Criteria			
	Flat (Black)	Concave (Blue)	Convex (Green)
<b>Nozzle sizes</b>			
Minimum	#4 1/16" (1.59 mm)		
Maximum*	#26 13/32" (10.32 mm)		
<b>Flows</b>			
Minimum	0.27 gpm (61 L/hr)		
Maximum	29.96 gpm (6805 L/hr)		
<b>Maximum Spacing</b>			
at 6 ft (1.8 m) ground clearance	11 ft (3.4 m)		10 ft (3.0 m)
<b>Pressure at the Nozzle</b>			
Minimum	6 psi (0.41 bar)		
Maximum	40 psi (2.76 bar)		

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



Smooth Pad



Deep Groove Pad

# Design Features Super Spray® UP3™

## Upright or Inverted

The Senninger Super Spray can be mounted upright or inverted



## Open-Bracket Design

The Senninger Super Spray is ideal for irrigating with poor quality water (unfiltered surface water, effluent solutions, etc.) due to the large distance between the nozzle and deflector pad and the deflector pad and the bracket. The two-legged bracket design minimizes build-up of water-borne solids.

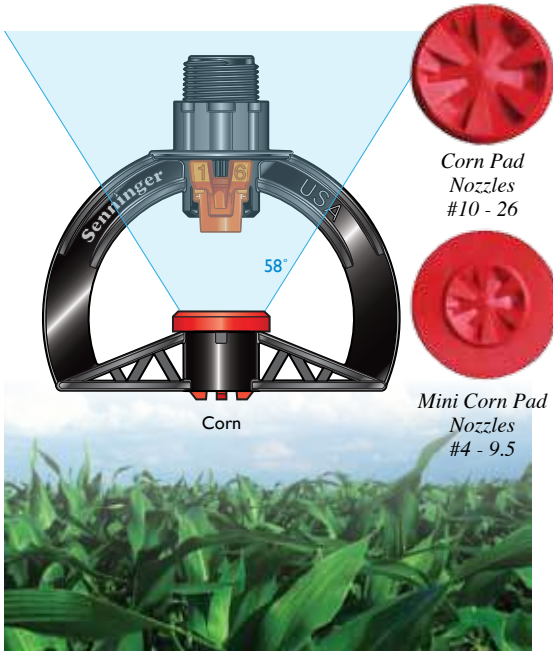


# Super Spray® UP3™ Chemigation & Weight

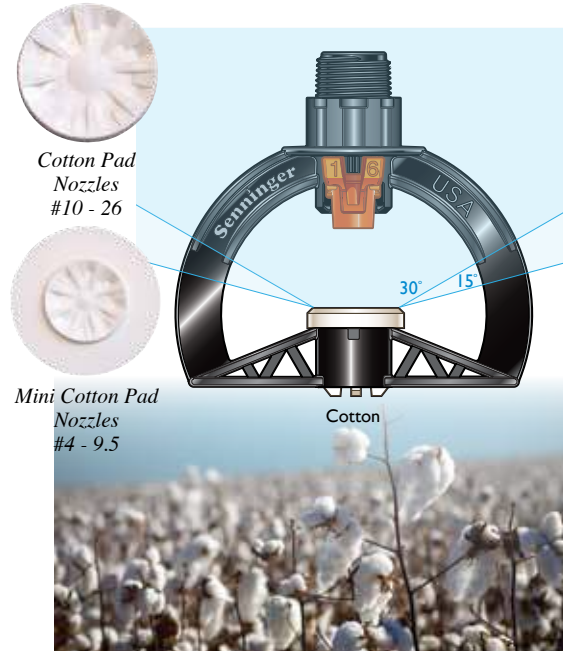
## Chemigation Options

The Super Spray also offers a chemigation deflector pad. The pads are designed to produce an upward spray under the crop canopy to wash the underside of a crop's leaves where pests hide eliminating or reducing the need for costly pesticides.

*Corn Chemigation Pad  
58° upward throw*



*Cotton Chemigation Pad  
15 - 30° upward throw*



## “The One”Weight

It's all that is needed to provide stability on drops for a number of pivot applicators. The design includes unique *fit technology* that allows the weight to fit securely onto the i-Wob, LDN and the Super Spray and even some other manufacturer's applicators.

The weight's easy-to-install design allows it to remain on the applicator during nozzle changes. The aerodynamic design resists uplift forces of high wind. **The One** weight



is constructed entirely of zinc alloy for strength and resistance to corrosion 0.85 lbs. (.30 kg).

# LEPA & Drag Hose Super Spray<sup>®</sup> UP3<sup>™</sup>

## Easy LEPA Conversion with Drag Hose Adapter

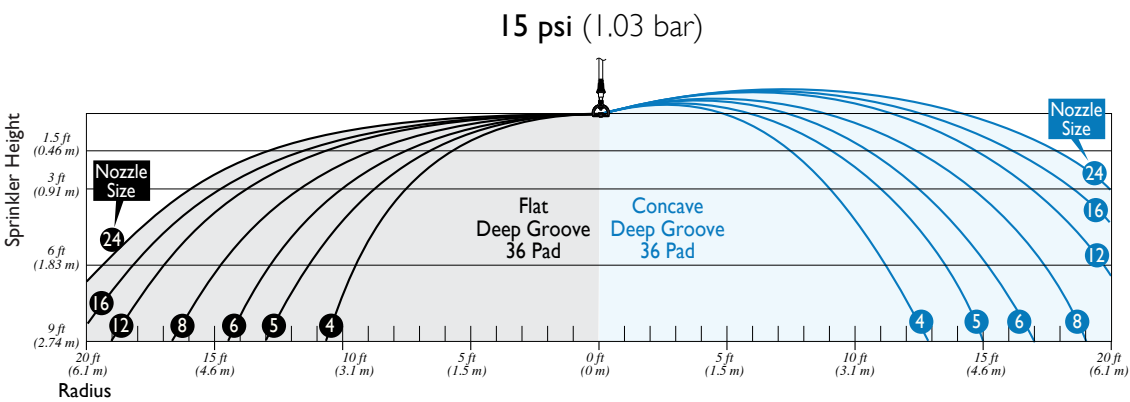
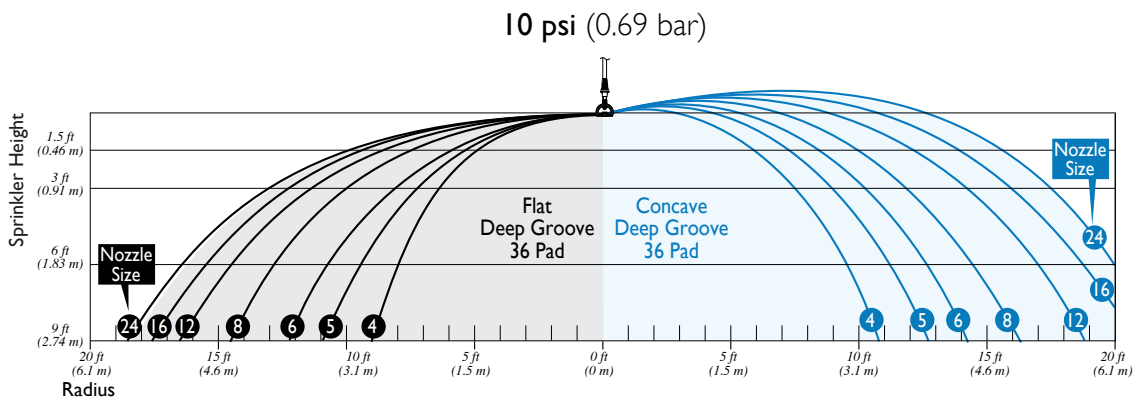
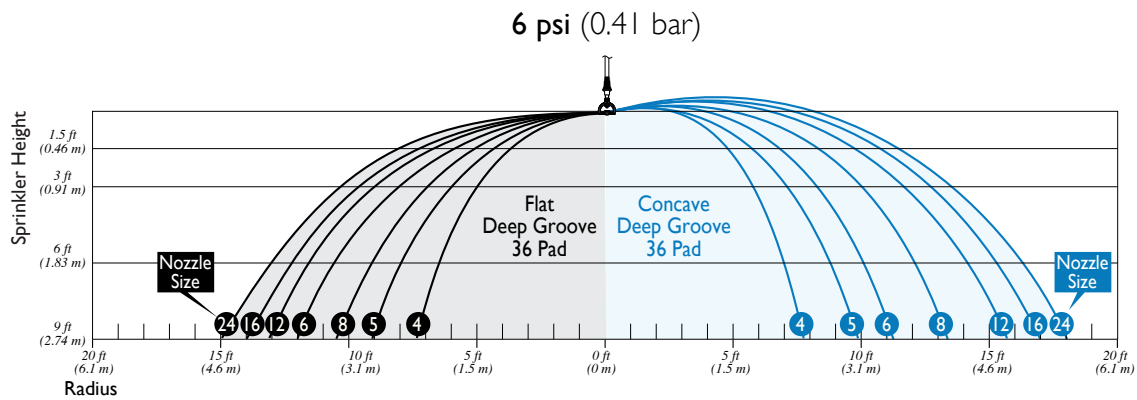
Conversion to direct furrow water application is easy with the Super Spray and the snap-in drag hose adapter. The adapter snaps right into the Super Spray, replacing the deflector pad. Simply snap out the deflector pad, align and snap in drag hose and adapter. Direct furrow application eliminates wind drift and evaporation.



**Drag Hose Adapter**



# Super Spray® UP3™ Maximum Nozzle Throw



Nozzle sizes are in 64th of an inch. For example: #12 nozzle = 12/64 inch = 3/16 inch.



# Components Super Spray® UP3™

## Integrated Base

Allows the applicator to be installed directly into a pressure regulator or onto a standard 3/4" NPT female connection with no special threads or fittings required.

## Component Assembly

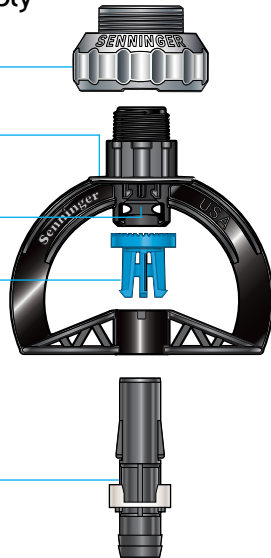
The One Weight

Bracket

UP3 Nozzle or Dual Nozzle Carrier

Deflector

Drag Hose Adapter (Optional)



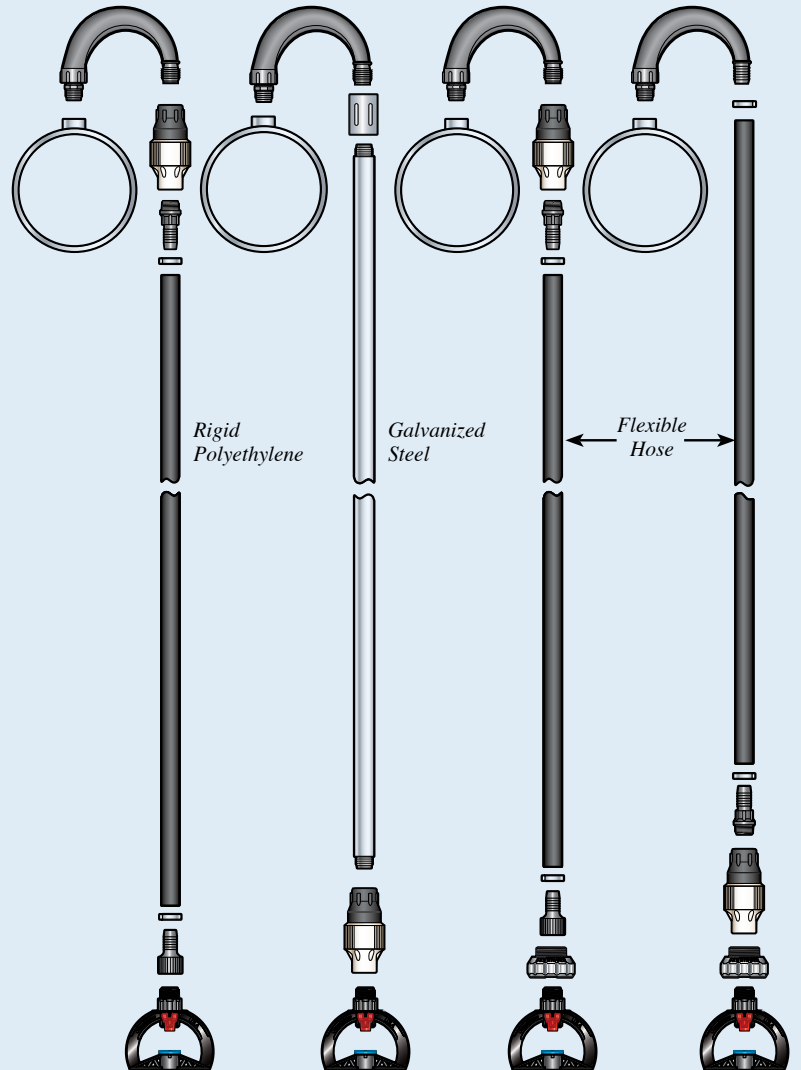
## Super Spray System Assembly

### Mounting

1. The Super Spray can be mounted on rigid drops or flexible hose drops.
2. When using flexible hose a weight is recommended.
3. When using Senninger's "The One" weight, use the internal "fit technology" to nest weight onto the base of the Super Spray.
4. Conventional slip over or threaded weights can be used with the Super Spray.
5. Mount the Super Spray no less than 1.5 - 9 ft. (0.46 - 2.74 m) above the ground.

## Installation Components

To maintain product warranty, and maximize drop component life, refer to the diagrams below...

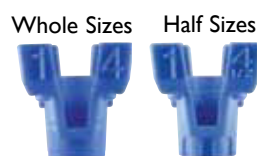


# Super Spray® UP3™ Nozzle Flows - U.S.

Sprinkler Base Pressure			6	10	15	20	25	30	35	40
Nozzle	Color	Orifice (in.)	Flow (gpm)							
4	Light Blue	1/16	0.27	0.35	0.43	0.50	0.56	0.61	0.66	0.70
4.5	Light Blue	9/128	0.35	0.45	0.55	0.63	0.71	0.77	0.84	0.89
5	Beige	5/64	0.43	0.55	0.68	0.78	0.87	0.96	1.04	1.11
5.5	Beige	1 1/128	0.52	0.67	0.82	0.95	1.06	1.16	1.26	1.34
6	Gold	3/32	0.62	0.80	0.98	1.13	1.26	1.38	1.50	1.60
6 1/2	Gold (notched)	13/128	0.73	0.94	1.15	1.33	1.49	1.63	1.76	1.88
7	Lime	7/64	0.85	1.09	1.34	1.54	1.73	1.89	2.04	2.18
7 1/2	Lime (notched)	15/128	0.97	1.26	1.54	1.77	1.98	2.17	2.35	2.51
8	Lavender	1/8	1.11	1.43	1.75	2.02	2.26	2.48	2.68	2.86
8 1/2	Lavender (notched)	17/128	1.25	1.62	1.98	2.29	2.56	2.80	3.02	3.23
9	Grey	9/64	1.40	1.81	2.22	2.56	2.87	3.14	3.39	3.63
9 1/2	Grey (notched)	19/128	1.57	2.02	2.48	2.86	3.20	3.50	3.78	4.04
10	Turquoise	5/32	1.74	2.24	2.75	3.17	3.55	3.88	4.20	4.49
10 1/2	Turquoise (notched)	21/128	1.92	2.47	3.03	3.50	3.91	4.29	4.63	4.95
11	Yellow	11/64	2.10	2.72	3.33	3.84	4.30	4.71	5.08	5.43
11 1/2	Yellow (notched)	23/128	2.30	2.97	3.64	4.20	4.70	5.15	5.56	5.94
12	Red	3/16	2.51	3.24	3.97	4.58	5.12	5.61	6.06	6.48
12 1/2	Red (notched)	25/128	2.72	3.52	4.31	4.97	5.56	6.09	6.58	7.03
13	White	13/64	2.95	3.81	4.66	5.38	6.02	6.59	7.12	7.61
13 1/2	White (notched)	27/128	3.18	4.11	5.03	5.81	6.49	7.11	7.68	8.21
14	Blue	7/32	3.42	4.42	5.41	6.25	6.99	7.65	8.27	8.84
14 1/2	Blue (notched)	29/128	3.67	4.74	5.81	6.71	7.50	8.21	8.87	9.48
15	Dark Brown	15/64	3.93	5.08	6.22	7.18	8.03	8.79	9.50	10.15
15 1/2	Dark Brown (notched)	31/128	4.20	5.42	6.64	7.67	8.57	9.39	10.14	10.84
16	Orange	1/4	4.48	5.78	7.08	8.17	9.14	10.01	10.81	11.56
16 1/2	Orange (notched)	33/128	4.76	6.15	7.53	8.69	9.72	10.65	11.50	12.30
17	Dark Green	17/64	5.06	6.53	7.99	9.23	10.32	11.31	12.21	13.06
17 1/2	Dark Green (notched)	35/128	5.36	6.92	8.47	9.78	10.94	11.98	12.94	13.84
18	Purple	9/32	5.67	7.32	8.96	10.35	11.57	12.68	13.69	14.64
18 1/2	Purple (notched)	37/128	5.99	7.73	9.47	10.93	12.22	13.39	14.46	15.46
19	Black	19/64	6.31	8.15	9.98	11.53	12.89	14.12	15.25	16.30
19 1/2	Black (notched)	39/128	6.65	8.58	10.51	12.14	13.57	14.86	16.05	17.16
20	Dark Turquoise	5/16	6.99	9.02	11.05	12.76	14.27	15.63	16.88	18.05
20 1/2	Dark Turquoise (notched)	41/128	7.34	9.47	11.60	13.40	14.98	16.41	17.72	18.95
21	Mustard	21/64	7.70	9.93	12.17	14.05	15.71	17.21	18.59	19.87
21 1/2	Mustard (notched)	43/128	8.06	10.40	12.74	14.71	16.45	18.02	19.46	20.80
22	Maroon	11/32	8.43	10.88	13.33	15.39	17.20	18.85	20.36	21.76
22 1/2	Maroon (notched)	45/128	8.81	11.37	13.92	16.08	17.98	19.69	21.27	22.74
23	Cream	23/64	9.19	11.87	14.54	16.78	18.77	20.56	22.20	23.74
23 1/2	Cream (notched)	47/128	9.58	12.37	15.15	17.49	19.56	21.43	23.14	24.74
24	Dark Blue	3/8	9.98	12.88	15.78	18.22	20.37	22.31	24.10	25.77
24 1/2	Dark Blue (notched)	49/128	10.38	13.40	16.41	18.95	21.18	23.20	25.06	26.79
25	Copper	25/64	10.78	13.92	17.05	19.69	22.01	24.11	26.04	27.84
25 1/2	Copper (notched)	51/128	11.19	14.45	17.69	20.43	22.84	25.02	27.03	28.89
26	Bronze	13/32	11.60	14.98	18.35	21.18	23.68	25.94	28.02	29.96

## 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.



# Nozzle Flows - Metric Super Spray® UP3™

Sprinkler Base Pressure (bar)			0.41	0.69	1.03	1.38	1.72	2.07	2.41	2.76
Nozzle	Color	Orifice (mm)	Flow (L/hr)							
4	Light Blue	1.59	61	79	98	114	127	139	150	159
4.5	Light Blue	1.79	79	102	125	143	161	175	191	202
5	Beige	1.98	98	125	154	177	198	218	236	252
5.5	Beige	2.18	118	152	186	216	241	263	286	304
6	Gold	2.38	141	182	223	257	286	313	341	363
6½	Gold (notched)	2.58	166	213	261	302	338	370	400	427
7	Lime	2.78	193	248	304	350	393	429	463	495
7½	Lime (notched)	2.98	220	286	350	402	450	493	534	570
8	Lavender	3.18	252	325	397	459	513	563	609	650
8½	Lavender (notched)	3.37	284	368	450	520	581	636	686	734
9	Grey	3.57	318	411	504	581	652	713	770	824
9½	Grey (notched)	3.77	357	459	563	650	727	795	859	918
10	Turquoise	3.97	395	509	625	720	806	881	954	1020
10½	Turquoise (notched)	4.17	436	561	688	795	888	974	1052	1124
11	Yellow	4.37	477	618	756	872	977	1070	1154	1233
11½	Yellow (notched)	4.56	522	675	827	954	1067	1170	1263	1349
12	Red	4.76	570	736	902	1040	1163	1274	1376	1472
12½	Red (notched)	4.96	618	799	979	1129	1263	1383	1494	1597
13	White	5.16	670	865	1058	1222	1367	1497	1617	1728
13½	White (notched)	5.36	722	933	1142	1320	1474	1615	1744	1865
14	Blue	5.56	777	1004	1229	1420	1588	1738	1878	2008
14½	Blue (notched)	5.75	834	1077	1320	1524	1703	1865	2015	2153
15	Dark Brown	5.95	893	1154	1413	1631	1824	1996	2158	2305
15½	Dark Brown (notched)	6.15	954	1231	1508	1742	1946	2133	2303	2462
16	Orange	6.35	1018	1313	1608	1856	2076	2274	2455	2626
16½	Orange (notched)	6.55	1081	1397	1710	1974	2208	2419	2612	2794
17	Dark Green	6.75	1149	1483	1815	2096	2344	2569	2773	2966
17½	Dark Green (notched)	6.95	1217	1572	1924	2221	2485	2721	2939	3143
18	Purple	7.14	1288	1663	2035	2351	2628	2880	3109	3325
18½	Purple (notched)	7.34	1360	1756	2151	2482	2775	3041	3284	3511
19	Black	7.54	1433	1851	2267	2619	2928	3207	3464	3702
19½	Black (notched)	7.74	1510	1949	2387	2757	3082	3375	3645	3897
20	Dark Turquoise	7.94	1588	2049	2510	2898	3241	3550	3834	4100
20½	Dark Turquoise (notched)	8.14	1667	2151	2635	3043	3402	3727	4025	4304
21	Mustard	8.33	1749	2255	2764	3191	3568	3909	4222	4513
21½	Mustard (notched)	8.53	1831	2362	2894	3341	3736	4093	4420	4724
22	Maroon	8.73	1915	2471	3028	3495	3907	4281	4624	4942
22½	Maroon (notched)	8.93	2001	2582	3162	3652	4084	4472	4831	5165
23	Cream	9.13	2087	2696	3302	3811	4263	4670	5042	5392
23½	Cream (notched)	9.33	2176	2810	3441	3972	4443	4867	5256	5619
24	Dark Blue	9.53	2267	2925	3584	4138	4627	5067	5474	5853
24½	Dark Blue (notched)	9.72	2358	3043	3727	4304	4811	5269	5692	6085
25	Copper	9.92	2448	3162	3872	4472	4999	5476	5914	6323
25½	Copper (notched)	10.12	2542	3282	4018	4640	5188	5683	6139	6562
26	Bronze	10.32	2635	3402	4168	4811	5378	5892	6364	6805

**Senninger**<sup>®</sup>  
**Irrigation Inc.**

Made in U.S.A.

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