

Standard & Low Angle

Cooper Mine Special®
Standard - Angle



The Senninger Wobbler® has a unique off-center rotary-action. This design provides extremely uniform coverage over a large diameter at low operating pressures.

Features:

- Only one moving part for longer life
- Low evaporative loss at low pressures
- Inlet Sizes: 3/4" or 1/2" M NPT
- Flow rates: 0.78 to 6.97 gpm (177 to 1583 L/hr)
- One-year warranty on materials and workmanship

Specific low-angle features:

- Lower trajectory
- Reduced droplet size for a more gentle application

RECOMMENDATIONS

Copper Mine Special® (CMS)

Solution	high sulfuric acid copper solutions greater than 10/gpl H ₂ SO ₄
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pH Range	less than 3.0
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Gold/Silver Mining

Solution	gold & silver solutions
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pH Range	3.0 to 9.0
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CMS Low-Angle,
Gold/Silver Standard and
Low-Angle Also Available



Wobbler - (standard & low-angle)

Sprinkler Base Pressure (psi)	10	15	20	25	(bar)	0.69	1.03	1.38	1.72
#6 Nozzle - Gold (3/32")					#6 Nozzle - Gold (2.38 mm)				
Flow (gpm)	0.78	0.95	1.10	1.23	Flow (L/hr)	177	216	250	279
SA Diameter at 1.5 ft ht (ft)	34.0	39.0	41.5	43.5	SA Diameter at 0.46 m ht (m)	10.4	11.9	12.6	13.3
LA Diameter at 1.5 ft ht (ft)	29.0	34.5	38.0	40.5	LA Diameter at 0.46 m ht (m)	8.8	10.5	11.6	12.3
#7 Nozzle - Lime (7/64")					#7 Nozzle - Lime (2.78 mm)				
Flow (gpm)	1.06	1.30	1.50	1.68	Flow (L/hr)	241	295	341	382
SA Diameter at 1.5 ft ht (ft)	36.5	41.5	43.5	45.0	SA Diameter at 0.46 m ht (m)	11.1	12.6	13.3	13.7
MA Diameter at 1.5 ft ht (ft)	31.5	37.0	40.0	41.5	LA Diameter at 0.46 m ht (m)	9.6	11.3	12.2	12.6
#8 Nozzle - Lavender (1/8")					#8 Nozzle - Lavender (3.18 mm)				
Flow (gpm)	1.40	1.71	1.98	2.21	Flow (L/hr)	318	388	450	502
SA Diameter at 1.5 ft ht (ft)	38.5	43.5	45.0	46.5	SA Diameter at 0.46 m ht (m)	11.7	13.3	13.7	14.2
LA Diameter at 1.5 ft ht (ft)	34.0	39.0	41.5	42.5	LA Diameter at 0.46 m ht (m)	10.4	11.9	12.6	13.0
#9 Nozzle - Grey (9/64")					#9 Nozzle - Grey (3.57 mm)				
Flow (gpm)	1.80	2.20	2.54	2.84	Flow (L/hr)	409	500	577	645
SA Diameter at 1.5 ft ht (ft)	40.5	45.5	46.5	47.5	SA Diameter at 0.46 m ht (m)	12.3	13.9	14.2	14.5
LA Diameter at 1.5 ft ht (ft)	35.5	40.5	42.5	43.5	LA Diameter at 0.46 m ht (m)	10.8	12.3	13.0	13.3
#10 Nozzle - Turquoise (5/32")					#10 Nozzle - Turquoise (3.97 mmm)				
Flow (gpm)	2.22	2.72	3.14	3.51	Flow (L/hr)	504	618	713	797
SA Diameter at 1.5 ft ht (ft)	42.0	47.0	48.0	48.5	SA Diameter at 0.46 m ht (m)	12.8	14.3	14.6	14.8
LA Diameter at 1.5 ft ht (ft)	36.0	41.0	43.0	44.0	LA Diameter at 0.46 m ht (m)	11.0	12.5	13.1	13.4
#11 Nozzle - Yellow (11/64")					#11 Nozzle - Yellow (4.37 mm)				
Flow (gpm)	2.69	3.30	3.81	4.26	Flow (L/hr)	611	750	865	968
SA Diameter at 1.5 ft ht (ft)	43.0	48.0	49.0	49.5	SA Diameter at 0.46 m ht (m)	13.1	14.6	14.9	15.1
LA Diameter at 1.5 ft ht (ft)	36.5	42.0	43.5	44.5	LA Diameter at 0.46 m ht (m)	11.1	12.8	13.3	13.6
#12 Nozzle - Red (3/16")					#12 Nozzle - Red (4.76 mm)				
Flow (gpm)	3.23	3.96	4.57	5.11	Flow (L/hr)	734	899	1038	1161
SA Diameter at 1.5 ft ht (ft)	44.0	49.0	50.0	50.5	SA Diameter at 0.46 m ht (m)	13.4	14.9	15.2	15.4
LA Diameter at 1.5 ft ht (ft)	37.0	42.5	44.0	45.0	LA Diameter at 0.46 m ht (m)	11.3	13.0	13.4	13.7
#13 Nozzle - White (13/64")					#13 Nozzle - White (5.16 mm)				
Flow (gpm)	3.80	4.65	5.38	6.01	Flow (L/hr)	863	1056	1222	1365
SA Diameter at 1.5 ft ht (ft)	44.5	49.5	50.5	51.0	SA Diameter at 0.46 m ht (m)	13.6	15.1	15.4	15.5
LA Diameter at 1.5 ft ht (ft)	37.5	43.0	44.5	45.5	LA Diameter at 0.46 m ht (m)	11.4	13.1	13.6	13.9
#14 Nozzle - Blue (7/32")					#14 Nozzle - Blue (5.56 mm)				
Flow (gpm)	4.40	5.39	6.23	6.97	Flow (L/hr)	999	1224	1415	1583
SA Diameter at 1.5 ft ht (ft)	45.0	50.0	51.0	51.5	SA Diameter at 0.46 m ht (m)	13.7	15.2	15.5	15.7
LA Diameter at 1.5 ft ht (ft)	38.0	43.5	45.0	46.0	LA Diameter at 0.46 m ht (m)	11.6	13.3	13.7	14.0

SA= standard angle, LA= low angle. Sprinkler performance may vary with actual field conditions. Other nozzle sizes are available; consult factory for specific performance data.
Stream heights range from 2.5 to 5.5 ft (0.8 to 1.7 m) above nozzle based on pressure and nozzle size.

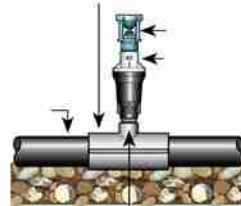
Mounting Options

The Wobbler can be mounted directly into a pressure regulator. A nipple connects it to the lateral.

Use carbon or stainless steel nipples in gold/silver mining.

Use stainless steel nipples in acid copper leaching.

Pre-Engineered Saddle or Fitting



Never Use Plastic Nipple Here

The Wobbler can be mounted directly into a saddle or pre-engineered plastic female fitting.

For minimizing evaporative loss, operate the Wobbler at 10 to 20 psi (0.69 to 1.38 bar).

Pre Engineered Saddle or Fitting

