

# 30, 40, 50 Series

CMS full-circle 3/4" impact sprinklers are available in three models based on their flow. These sprinklers deliver low application rates because of their large diameter of coverage.



## FEATURES

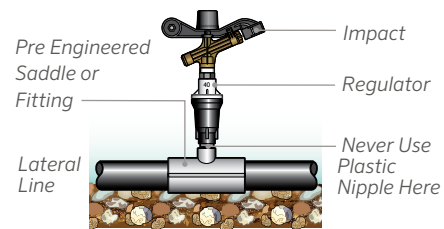
- Splash arm spring and bearing enclosed for better resistance to corrosion and environmental extremes
- Constructed of engineering-grade thermoplastics and specially selected stainless steel components for excellent corrosion resistance
- Wide range of nozzle/vane combinations for excellent distribution at all pressures
- Inlet size: 3/4" M NPT (3/4" F NPT and 1" F NPT also available)
- Flow range:
  - 3023 Model - 1.84 to 5.17 gpm (418 to 1174 L/hr)
  - 4023 Model - 3.82 to 10.1 gpm (868 to 2294 L/hr)
  - 5023 Model - 6.50 to 16.1 gpm (1476 to 3657 L/hr)
- One-year warranty on materials and workmanship

IMPACTS

3023-CMS SPRINKLER BASE PRESSURE-US	psi						3023-CMS SPRINKLER BASE PRESSURE-METRIC	bar					
	30	35	40	45	50	55		2.07	2.41	2.76	3.10	3.45	3.79
#7 Nozzle - Lime (7/64")							#7 Nozzle - Lime (2.78 mm)						
Flow (gpm)	1.84	1.99	2.12	2.25	2.37	2.51	Flow (L/hr)	418	452	482	511	538	570
Diameter at 1.5 ft ht (ft)	77	79	81	82	83	84	Diameter at 0.46 m ht (m)	23.5	24.1	24.7	25.0	25.3	25.6
#8 Nozzle - Lav. (1/8")							#8 Nozzle - Lav. (3.18 mm)						
Flow (gpm)	2.42	2.62	2.79	2.97	3.12	3.28	Flow (L/hr)	550	595	634	675	709	745
Diameter at 1.5 ft ht (ft)	79	81	83	84	85	86	Diameter at 0.46 m ht (m)	24.1	24.7	25.3	25.6	25.9	26.2
#9 Nozzle - Grey (9/64")							#9 Nozzle - Grey (3.57 mm)						
Flow (gpm)	3.08	3.33	3.56	3.78	3.98	4.16	Flow (L/hr)	700	756	809	859	904	945
Diameter at 1.5 ft ht (ft)	80	82	84	85	86	87	Diameter at 0.46 m ht (m)	24.4	25.0	25.6	25.9	26.2	26.5
#10 Nozzle - Turq. (5/32")							#10 Nozzle - Turq. (3.97 mm)						
Flow (gpm)	3.82	4.13	4.41	4.68	4.93	5.17	Flow (L/hr)	868	938	1002	1063	1120	1174
Diameter at 1.5 ft ht (ft)	81	83	85	86	87	88	Diameter at 0.46 m ht (m)	24.7	25.3	25.9	26.2	26.5	26.8

Stream heights range from 6.0 to 7.5 ft (1.8 to 2.3 m) above nozzle based on pressure and nozzle size.

## MOUNTING OPTIONS



Impact sprinklers can be mounted directly into a pressure regulator, which in turn, is mounted directly into a saddle or pre-engineered plastic female fitting. They can also be mounted directly into a saddle or pre-engineered plastic female fitting. Use carbon or stainless steel nipples in gold and silver mining installations. Use stainless steel nipples in acid copper leaching.

# 30, 40, 50 Series

IMPACTS

4023-CMS SPRINKLER BASE PRESSURE-US	psi						4023-CMS SPRINKLER BASE PRESSURE-METRIC	bar					
	30	35	40	45	50	55		2.07	2.41	2.76	3.10	3.45	3.79
#10 Nozzle - Turquoise (5/32")							#10 Nozzle - Turquoise (3.97 mm)						
Flow (gpm)	3.82	4.13	4.41	4.68	4.93	5.17	Flow (L/hr)	868	938	1002	1063	1120	1174
Diameter at 1.5 ft ht (ft)	86	89	91	93	95	96	Diameter at 0.46 m ht (m)	24.4	25.0	25.6	26.2	26.5	26.8
#11 Nozzle - Yellow (11/64")							#11 Nozzle - Yellow (4.37 mm)						
Flow (gpm)	4.63	5.00	5.34	5.67	5.98	6.27	Flow (L/hr)	1052	1136	1213	1288	1358	1424
Diameter at 1.5 ft ht (ft)	89	92	94	96	98	99	Diameter at 0.46 m ht (m)	25.0	25.6	26.2	26.8	27.1	27.4
#12 Nozzle - Red (3/16")							#12 Nozzle - Red (4.76 mm)						
Flow (gpm)	5.52	5.97	6.37	6.76	7.13	7.48	Flow (L/hr)	1254	1356	1447	1535	1619	1699
Diameter at 1.5 ft ht (ft)	92	95	97	99	101	102	Diameter at 0.46 m ht (m)	25.6	26.2	26.8	27.4	27.7	28.0
#13 Nozzle - White (13/64")							#13 Nozzle - White (5.16 mm)						
Flow (gpm)	6.50	7.02	7.49	7.95	8.38	8.80	Flow (L/hr)	1476	1594	1701	1806	1903	1999
Diameter at 1.5 ft ht (ft)	94	97	99	101	103	104	Diameter at 0.46 m ht (m)	26.2	26.8	27.4	28.0	28.7	29.3
#14 Nozzle - Blue (7/32")							#14 Nozzle - Blue (5.56 mm)						
Flow (gpm)	7.49	8.09	8.63	9.17	9.66	10.1	Flow (gpm)	1701	1837	1960	2083	2194	2294
Diameter at 1.5 ft ht (ft)	96	99	101	103	105	106	Diameter at 1.5 ft ht (ft)	27.1	28.0	28.7	29.3	29.9	30.5

Stream heights range from 6.5 to 10.0 ft (2.0 to 3.1 m) above nozzle based on pressure and nozzle size.

5023-CMS SPRINKLER BASE PRESSURE-US	psi						5023-CMS SPRINKLER BASE PRESSURE-METRIC	bar					
	30	35	40	45	50	55		2.07	2.41	2.76	3.10	3.45	3.79
#13 Nozzle - White (13/64")							#13 Nozzle - White (5.16 mm)						
Flow (gpm)	6.50	7.02	7.49	7.95	8.38	8.80	Flow (gpm)	1476	1594	1701	1806	1903	1999
Diameter at 1.5 ft ht (ft)	92	95	98	100	102	103	Diameter at 0.46 m ht (m)	27.4	28.0	28.7	29.3	29.9	30.5
#14 Nozzle - Blue (7/32")							#14 Nozzle - Blue (5.56 mm)						
Flow (gpm)	7.49	8.09	8.63	9.17	9.66	10.1	Flow (gpm)	1701	1837	1960	2083	2194	2294
Diameter at 1.5 ft ht (ft)	94	98	101	103	105	106	Diameter at 0.46 m ht (m)	27.7	28.3	29.0	29.6	30.2	30.8
#15 Nozzle - Dark Brown (15/64")							#15 Nozzle - Dark Brown (5.95 mm)						
Flow (gpm)	8.51	9.19	9.81	10.4	11.0	11.5	Flow (gpm)	1933	2087	2228	2362	2498	2612
Diameter at 1.5 ft ht (ft)	96	100	103	106	107	108	Diameter at 1.5 ft ht (ft)	28.0	28.7	29.3	29.9	30.5	31.1
#16 Nozzle - Orange (1/4")							#16 Nozzle - Orange (6.35 mm)						
Flow (gpm)	9.63	10.4	11.1	11.8	12.4	13.0	Flow (gpm)	2187	2362	2521	2680	2816	2953
Diameter at 1.5 ft ht (ft)	98	102	105	108	109	110	Diameter at 1.5 ft ht (ft)	28.3	29.0	29.6	30.2	30.8	31.4
#17 Nozzle - Dark Green (17/64")							#17 Nozzle - Dark Green (6.75 mm)						
Flow (gpm)	10.7	11.6	12.3	13.1	13.8	14.5	Flow (gpm)	2430	2635	2794	2975	3134	3293
Diameter at 1.5 ft ht (ft)	99	104	107	110	111	112	Diameter at 1.5 ft ht (ft)	28.7	29.3	29.9	30.5	31.1	31.7
#18 Nozzle - Purple (9/32")							#18 Nozzle - Purple (7.14 mm)						
Flow (gpm)	11.9	12.9	13.7	14.6	15.4	16.1	Flow (gpm)	2703	2903	3112	3316	3498	3657
Diameter at 1.5 ft ht (ft)	100	105	109	112	113	114	Diameter at 1.5 ft ht (ft)	29.0	29.6	30.2	30.8	31.4	32.0

Stream heights range from 7.0 to 11.5 ft (2.1 to 3.5 m) above nozzle based on pressure and nozzle size. Sprinkler performance may vary with actual field conditions. Diameters shown are for barrel vanes. Other vanes are available. Consult factory for specific performance data.

# Part-Circle

IMPACTS



**IDEAL FOR SIDE SLOPE**

Part-Circle EFF impact sprinklers are ideal for dust control. They are designed specifically for use where a directional impact sprinkler is required. Senninger's Part-Circle sprinklers are available in three models, each for different flows.



## FEATURES

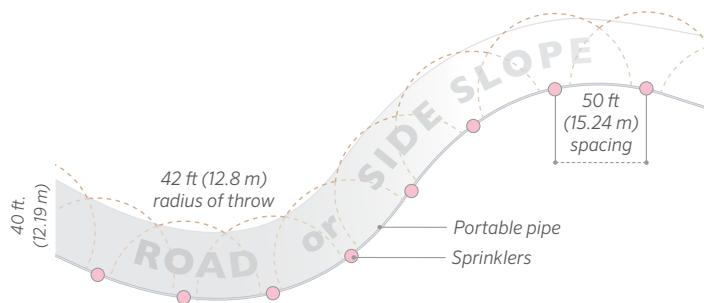
- Distributes water in a 60° to 360° pattern in 5° increments
- Enclosed stainless steel springs and fulcrum pin to resist contamination
- Constructed of engineering-grade thermoplastics and specific selected stainless steel components for excellent corrosion resistance
- Inlet size: ¾" NPT male (¾" NPT female and 1" NPT female also available)
- Flow ranges:  
 3123 Model - 2.42 to 5.17 gpm (550 to 1174 L/hr)  
 4123 Model - 3.82 to 8.80 gpm (868 to 1999 L/hr)  
 5123 Model - 6.50 to 16.1 gpm (1476 to 3657 L/hr)
- One year warranty on materials and workmanship

## DUST CONTROL

When coupled to a portable pipe system, the Part-Circle provides the best and most flexible option to keep dust under control.

## BENEFITS FOR SIDE SLOPE LEACHING

- Provides gold or silver leach solution application in hard to reach areas
- Eliminates costly mobile watering
- Conserves water
- Increases coverage efficiency
- Allows dust control automation
- Reduces traffic dust on mining roads



### SIDE SLOPE LAYOUT EXAMPLE

Sprinkler	indicated by ●
Model	3123 Part-Circle: nozzle #9 (9/64")
Note	Pressure regulator recommended at 40 psi (2.76 bar)
Radius	42 ft (12.8 m)
Flow	3.56 gpm (809 L/hr)

**3123-PC-EFF**  
SPRINKLER BASE  
PRESSURE-US

	psi					
	30	35	40	45	50	55
#8 Nozzle - Lav. (1/8")						
Flow (gpm)	2.42	2.62	2.79	2.97	3.12	3.28
Radius at 1.5 ft ht (ft)	38	39	40	41	42	42
#9 Nozzle - Grey (9/64")						
Flow (gpm)	3.08	3.33	3.56	3.78	3.98	4.16
Radius at 1.5 ft ht (ft)	40	41	42	43	43	44
#10 Nozzle - Turq. (5/32")						
Flow (gpm)	3.82	4.13	4.41	4.68	4.93	5.17
Radius at 1.5 ft ht (ft)	41	43	44	45	45	46

**3123-PC-EFF**  
SPRINKLER BASE  
PRESSURE-METRIC

	bar					
	2.07	2.42	2.76	3.11	3.45	3.80
#8 Nozzle - Lav. (3.18 mm)						
Flow (L/hr)	550	595	634	675	709	745
Radius at 0.46 m ht (m)	11.6	11.9	12.2	12.5	12.8	12.8
#9 Nozzle - Grey (3.57 mm)						
Flow (L/hr)	700	756	809	859	904	949
Radius at 0.46 m ht (m)	12.2	12.5	12.8	13.1	13.1	13.4
#10 Nozzle - Turq. (3.97 mm)						
Flow (L/hr)	868	938	1002	1063	1120	1174
Radius at 0.46 m ht (m)	12.5	13.1	13.4	13.7	13.7	14.0

**4123-PC-EFF**  
SPRINKLER BASE  
PRESSURE-US

	psi					
	30	35	40	45	50	55
#10 Nozzle - Turquoise (5/32")						
Flow (gpm)	3.82	4.13	4.41	4.68	4.93	5.17
Radius at 1.5 ft ht (ft)	42	43	44	45	45	46
#11 Nozzle - Yellow (11/64")						
Flow (gpm)	4.63	5.00	5.34	5.67	5.98	6.27
Radius at 1.5 ft ht (ft)	44	45	46	47	48	48
#12 Nozzle - Red (3/16")						
Flow (gpm)	5.52	5.97	6.37	6.76	7.13	7.48
Radius at 1.5 ft ht (ft)	45	46	48	49	50	51
#13 Nozzle - White (13/64")						
Flow (gpm)	6.50	7.02	7.49	7.95	8.38	8.80
Radius at 1.5 ft ht (ft)	45	47	48	50	51	51

**4123-PC-EFF**  
SPRINKLER BASE  
PRESSURE-METRIC

	bar					
	2.07	2.42	2.76	3.11	3.45	3.80
#10 Nozzle - Turquoise (3.97 mm)						
Flow (L/hr)	868	938	1002	1063	1120	1174
Radius at 0.46 m ht (m)	12.8	13.1	13.4	13.7	13.7	14.0
#11 Nozzle - Yellow (4.37 mm)						
Flow (L/hr)	1052	1136	1213	1288	1358	1424
Radius at 0.46 m ht (m)	13.3	13.7	14.0	14.3	14.5	14.6
#12 Nozzle - Red (4.76 mm)						
Flow (L/hr)	1254	1356	1447	1535	1619	1699
Radius at 0.46 m ht (m)	13.6	14.0	14.5	14.9	15.2	15.4
#13 Nozzle - White (5.16 mm)						
Flow (L/hr)	1476	1594	1701	1806	1903	1999
Radius at 0.46 m ht (m)	13.7	14.2	14.6	15.1	15.4	15.5

**5123-PC-EFF**  
SPRINKLER BASE  
PRESSURE-US

	psi					
	30	35	40	45	50	55
#13 Nozzle - White (13/64")						
Flow (gpm)	6.50	7.02	7.49	7.95	8.38	8.80
Radius at 1.5 ft ht (ft)	45	47	48	50	51	51
#14 Nozzle - Blue (7/32")						
Flow (gpm)	7.49	8.09	8.63	9.17	9.66	10.1
Radius at 1.5 ft ht (ft)	46	47	49	50	51	52
#15 Nozzle - Dark Brown (15/64")						
Flow (gpm)	8.51	9.19	9.81	10.4	11.0	11.5
Radius at 1.5 ft ht (ft)	46	48	50	51	52	53
#16 Nozzle - Orange (1/4")						
Flow (gpm)	9.63	10.4	11.1	11.8	12.4	13.0
Radius at 1.5 ft ht (ft)	47	50	51	53	54	55
#17 Nozzle - Dark Green (17/64")						
Flow (gpm)	10.7	11.6	12.3	13.1	13.8	14.5
Radius at 1.5 ft ht (ft)	47	50	52	54	55	56
#18 Nozzle - Purple (9/32")						
Flow (gpm)	11.9	12.9	13.7	14.6	15.4	16.1
Radius at 1.5 ft ht (ft)	47	50	53	55	56	57

**5123-PC-EFF**  
SPRINKLER BASE  
PRESSURE-METRIC

	bar					
	2.07	2.42	2.76	3.11	3.45	3.80
#13 Nozzle - White (5.16 mm)						
Flow (gpm)	1476	1594	1701	1806	1903	1999
Radius at 0.46 m ht (m)	13.7	14.3	14.6	15.2	15.5	15.5
#14 Nozzle - Blue (5.56 mm)						
Flow (gpm)	1701	1837	1960	2083	2194	2294
Radius at 0.46 m ht (m)	14.0	14.3	14.9	15.2	15.5	15.8
#15 Nozzle - Dark Brown (5.95 mm)						
Flow (gpm)	1933	2087	2228	2362	2498	2612
Radius at 0.46 m ht (m)	14.0	14.6	15.2	15.5	15.8	16.2
#16 Nozzle - Orange (6.35 mm)						
Flow (gpm)	2187	2362	2521	2680	2816	2953
Radius at 0.46 m ht (m)	14.3	15.2	15.5	16.2	16.5	16.8
#17 Nozzle - Dark Green (6.75 mm)						
Flow (gpm)	2430	2635	2794	2975	3134	3293
Radius at 0.46 m ht (m)	14.3	15.2	15.8	16.5	16.8	17.1
#18 Nozzle - Purple (7.14 mm)						
Flow (gpm)	2703	2903	3112	3316	3498	3657
Radius at 0.46 m ht (m)	14.3	15.2	16.2	16.8	17.1	17.4

Sprinkler performance may vary with actual field conditions. Radius shown is for standard straight bore nozzles and stream straightening vanes. Other nozzles and/or vane combinations are available. Consult factory for specific performance data. Stream heights range from 6.0 to 10.0 ft (1.8 to 3.1 m) above nozzle based on pressure nozzle size. Minimum recommended riser height is 1.5 ft (0.46 m).

# 80 Series

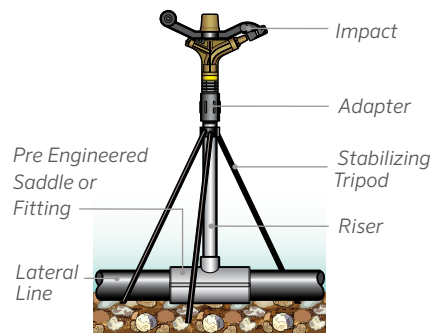
Senninger's 80 Series CMS impact sprinklers distribute water over a large diameter. They are designed for maximum efficiency at high flow rates.



## FEATURES

- Splash arm spring and bearing enclosed for better resistance to corrosion and environmental extremes
- Constructed of engineering-grade thermoplastics and specially selected stainless steel components for excellent corrosion resistance
- Heavy-duty design to withstand rugged mining conditions
- Single-nozzle design provides greater resistance to clogging
- Double-nozzle design also available for greater uniformity
- Inlet sizes: 1 ¼" NPT male, 1 ½" NPT male, 1 ¼" BSPT male (1 ¼" NPT female also available)
- 1" model (7025) also available for gold and silver. *Consult factory for specific flow and application rates*
- Flow range: 25.2 to 88.7 gpm (5724 to 20146 L/hr). *Consult factory for lower or higher flow rates*
- One year warranty on materials and workmanship

## MOUNTING OPTIONS



Impact sprinklers that are mounted onto a riser should be stabilized to counteract the sprinkler's thrust. When using risers in gold and silver mining, use carbon steel or stainless steel pipe. When using risers in acid copper leaching, use stainless steel pipe.

## 80 Series

8025-CMS SPRINKLER BASE PRESSURE-US					8025-CMS SPRINKLER BASE PRESSURE-METRIC				
	40	50	60	70		2.76	3.45	4.14	4.83
#24 Nozzle - (3/8")					#24 Nozzle - (9.53 mm)				
Flow (gpm)	25.2	28.2	30.9	33.3	Flow (L/hr)	5724	6405	7018	7563
Diameter at 1.5 ft ht (ft)	134	144	154	159	Diameter at 0.46 m ht (m)	41	44	47	48
#26 Nozzle - (13/32")					#26 Nozzle - (10.32 mm)				
Flow (gpm)	29.3	32.7	35.9	38.7	Flow (L/hr)	6655	7427	8154	8790
Diameter at 1.5 ft ht (ft)	142	152	161	166	Diameter at 0.46 m ht (m)	43	46	49	51
#28 Nozzle - (7/16")					#28 Nozzle - (11.11 mm)				
Flow (gpm)	33.9	38.0	41.6	44.9	Flow (L/hr)	7700	8631	9448	10198
Diameter at 1.5 ft ht (ft)	148	157	166	171	Diameter at 0.46 m ht (m)	45	48	51	52
#30 Nozzle - (15/32")					#30 Nozzle - (11.91 mm)				
Flow (gpm)	38.6	43.1	47.2	51.0	Flow (L/hr)	8767	9789	10720	11583
Diameter at 1.5 ft ht (ft)	153	162	170	175	Diameter at 0.46 m ht (m)	47	49	52	53
#32 Nozzle - (1/2")					#32 Nozzle - (12.7 mm)				
Flow (gpm)	43.9	49.0	53.7	58.0	Flow (L/hr)	9971	11129	12197	13173
Diameter at 1.5 ft ht (ft)	156	165	173	179	Diameter at 0.46 m ht (m)	48	50	53	55
#34 Nozzle - (17/32")					#34 Nozzle - (13.49 mm)				
Flow (gpm)	49.5	55.4	60.7	65.5	Flow (L/hr)	11243	12583	13786	14877
Diameter at 1.5 ft ht (ft)	159	168	176	183	Diameter at 0.46 m ht (m)	48	51	54	56
#36 Nozzle - (9/16")					#36 Nozzle - (14.29 mm)				
Flow (gpm)	55.5	62.1	68.0	73.5	Flow (L/hr)	12605	14104	15444	16694
Diameter at 1.5 ft ht (ft)	161	170	178	187	Diameter at 0.46 m ht (m)	49	52	54	57
#38 Nozzle - (19/32")					#38 Nozzle - (15.08 mm)				
Flow (gpm)	59.9	66.9	73.3	79.2	Flow (L/hr)	13605	15195	16648	17988
Diameter at 1.5 ft ht (ft)	163	172	180	190	Diameter at 0.46 m ht (m)	50	52	55	58
#40 Nozzle - (5/8")					#40 Nozzle - (15.88 mm)				
Flow (gpm)	67.1	75.0	82.1	88.7	Flow (L/hr)	15240	17034	18647	20146
Diameter at 1.5 ft ht (ft)	165	174	182	192	Diameter at 0.46 m ht (m)	50	53	55	59

Sprinkler performance may vary with actual field conditions. Diameters shown are for standard straight bore nozzles and stream-straightening vanes (black). Other nozzles are available. Consult factory for specific performance data. Stream heights range from 12.5 to 28.0 ft (3.8 to 8.5 m) above nozzle based on pressure and nozzle size.