

85EHD Tough Bird®

1 1/4" 32 mm Full or Part Circle,
Brass Impact Sprinklers

- Heavy duty brass construction
- Stainless steel wear buttons, springs and fulcrum pin
- Locking stainless steel trip collars

Features

- Chemically resistant washers
- Full or Part Circle operation

Benefits

- Internal straightening vane increases distance of throw
- Stainless steel buttons protect trip mechanism from wear
- Corrosion and grit resistant
- Built to last
- Five-year Customer Satisfaction Policy

Specifications

- Bearing: 1 1/4" (32mm) Male NPT, Brass
- Trajectory Angle: 23°
- Operating Range: 25-100 psi (1.7-6.9 bar)
- Flow Rate: 17.1-127.7 gpm (3.88-29 m³/h)
- Radius: 61-116 ft. (18.6-35.4 meters)
- Nozzle Port: 3/4" Female NPT
- Spreader Nozzle Port: 1/8" Female NPT

Straight Bore Nozzle (SBN-5) with Plug Performance*

psi@ Nozzle	NOZZLE SIZE (Stream Height: 14 ft.)									
	11/32"	3/8"	13/32"	7/16"	15/32"	1/2"	17/32"	9/16"	5/8"	11/16"
	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)
25	61 17.10	62 20.30	64 23.40	66 26.70	66 30.30	66 33.80	66 37.10	66 42.30	66 51.50	66 61.90
30	64 18.80	65 22.30	68 25.70	69 29.30	72 33.20	73 37.10	73 40.80	73 46.40	73 56.50	73 68.10
35	67 20.30	68 24.10	72 27.80	74 31.70	77 35.90	79 40.10	79 44.10	79 50.20	79 61.10	79 73.80
40	69 21.80	71 25.80	75 29.70	77 33.90	80 38.50	83 42.90	83 47.20	86 53.70	86 65.40	86 79.20
45	71 23.10	73 27.40	77 31.60	79 36.00	82 40.80	85 45.60	88 50.10	90 57.10	92 69.50	92 84.20
50	73 24.40	75 28.90	79 33.30	81 38.00	84 43.10	87 48.10	90 52.90	94 60.20	95 73.30	97 88.90
55	75 25.50	77 30.30	81 34.90	83 39.70	86 45.30	89 50.30	92 55.60	96 63.20	99 77.30	100 93.50
60	77 25.80	79 30.80	83 35.90	86 41.60	88 47.40	91 53.00	94 58.80	97 65.50	101 80.10	104 97.80
65	79 26.90	81 32.00	84 37.40	87 43.30	90 49.90	93 55.30	96 61.20	99 69.40	102 84.40	106 102.00
70	81 28.10	83 33.30	86 38.90	89 45.10	91 51.40	94 57.50	98 63.50	101 72.20	104 87.80	108 106.00
75	82 29.20	84 34.50	87 40.30	90 46.80	93 53.30	96 59.60	99 65.80	102 74.90	105 91.00	109 109.90
80	83 30.40	86 35.70	89 41.80	92 48.40	94 55.10	97 61.60	101 68.10	104 77.50	107 91.10	110 113.70
85	85 31.50	87 37.00	90 43.20	93 50.00	96 56.90	99 63.50	102 70.30	105 80.00	108 97.10	112 117.30
90	86 32.70	89 38.30	92 44.60	95 51.50	97 58.50	100 65.30	104 72.40	106 82.20	110 99.90	113 120.90
95	87 33.90	90 39.50	93 46.00	96 53.00	98 60.00	101 67.10	105 74.40	108 84.30	111 102.60	115 124.30
100	88 34.00	91 40.70	94 47.40	97 54.50	99 61.50	102 68.90	106 76.40	109 87.20	112 105.20	116 127.70

Straight Bore Nozzle (SBN-5) and Spreader (LAN-1-20) Performance*

psi@ Nozzle	NOZZLE SIZE (Stream Height: 14 ft.)				
	11/32" x 7/32-20"	3/8" x 7/32-20"	13/32" x 7/32-20"	7/16" x 7/32-20"	15/32" x 7/32-20"
	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)	Rad. Flow (ft.) (gpm)
25	61 23.30	62 26.50	64 29.60	66 32.90	66 36.40
30	64 25.60	65 29.10	68 32.40	69 36.10	72 40.00
35	67 27.70	68 31.40	72 35.10	74 39.00	77 43.30
40	69 29.60	71 33.60	75 37.60	77 41.80	80 46.30
45	71 31.50	73 35.70	77 39.90	79 44.40	82 49.20
50	73 33.20	75 37.70	79 42.10	81 46.80	84 51.90
55	75 34.90	77 39.70	81 44.30	83 49.10	86 54.70
60	77 36.50	79 41.40	83 46.60	86 51.50	88 57.20
65	79 38.00	81 43.20	84 48.60	87 53.80	90 59.80
70	81 40.10	83 44.90	86 50.40	89 55.90	91 62.10
75	82 41.00	84 46.70	87 52.40	90 57.90	93 64.30
80	83 42.60	86 48.30	89 54.30	92 60.00	94 66.70
85	85 43.80	87 49.80	90 56.00	93 62.00	96 68.80
90	86 45.70	89 51.40	92 57.90	95 63.90	97 70.70
95	87 46.60	90 53.00	93 59.60	96 65.80	98 72.80
100	88 47.90	91 54.50	94 61.20	97 67.50	99 74.80



* Nozzles must be purchased separately. See Chart below.

Part Numbers and Ordering Information

Sprinkler Only	
Sprinkler without Nozzle without Plug	A23600

Nozzle Only		XX = Nozzle Size											
U.S. Standard		7/32"	11/32"	3/8"	13/32"	7/16"	15/32"	1/2"	17/32"	9/16"	5/8"	11/16"	
Metric		5.56mm	8.7mm	9.5mm	10.3mm	11.1mm	11.9mm	12.7mm	13.5mm	14.3mm	15.9mm	17.5mm	
Brass Straight Bore Nozzle	SBN-5	103043-XX	–	22	24	26	28	30	32	34	36	40	44
Brass 20° Low Angle Spreader Nozzle	LAN-1-20	100226-XX	14	–	–	–	–	–	–	–	–	–	–
1/8" Male NPT Plug for Spreader port		100255											

Bold nozzle size number denotes the most common nozzle choice.

Straight Bore Nozzle (SBN-5) with Plug Performance* **METRIC**

bar @ Nozzle	NOZZLE SIZE (Stream Height: 4.3m)														
	8.7 mm (11/32")			9.5 mm (3/8")			10.3 mm (13/32")			11.1 mm (7/16")			11.9 mm (15/32")		
	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)
1.7	18.6	1.08	3.88	18.9	1.28	4.61	19.5	1.48	5.31	20.1	1.68	6.06	20.1	1.91	6.88
2.0	19.3	1.16	4.19	19.6	1.38	4.97	20.5	1.59	5.73	20.8	1.82	6.53	21.6	2.06	7.41
2.5	20.6	1.30	4.69	21.0	1.55	5.57	22.2	1.78	6.42	22.8	2.03	7.32	23.7	2.31	8.30
3.0	21.5	1.43	5.16	22.1	1.70	6.11	23.3	1.96	7.05	23.9	2.23	8.03	24.8	2.53	9.11
3.5	22.3	1.55	5.58	22.9	1.84	6.61	24.2	2.12	7.62	24.8	2.41	8.69	25.7	2.74	9.86
4.0	23.2	1.62	5.83	23.8	1.93	6.95	25.1	2.24	8.06	25.8	2.58	9.27	26.6	2.94	10.57
4.5	24.1	1.70	6.12	24.7	2.02	7.28	25.6	2.36	8.51	26.5	2.74	9.85	27.4	3.15	11.35
5.0	24.8	1.81	6.51	25.4	2.14	7.70	26.4	2.50	8.99	27.3	2.90	10.43	28.0	3.30	11.89
5.5	25.3	1.91	6.89	26.2	2.25	8.09	27.1	2.63	9.47	28.0	3.05	10.97	28.6	3.47	12.49
6.0	26.0	2.02	7.26	26.8	2.37	8.52	27.7	2.76	9.94	28.6	3.19	11.49	29.4	3.63	13.07
6.5	26.5	2.13	7.66	27.4	2.48	8.93	28.3	2.89	10.40	29.2	3.33	11.98	29.8	3.77	13.57
6.9	26.8	2.15	7.72	27.7	2.57	9.24	28.7	2.99	10.77	29.6	3.44	12.38	30.2	3.88	13.97

bar @ Nozzle	NOZZLE SIZE (Stream Height: 4.3m)														
	12.7 mm (1/2")			13.5 mm (17/32")			14.3 mm (9/16")			15.9 mm (5/8")			17.5 mm (11/16")		
	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)
1.7	20.1	2.13	7.68	20.1	2.34	8.43	20.1	2.67	9.61	20.1	3.25	11.70	20.1	3.91	14.06
2.0	21.8	2.30	8.27	21.8	2.53	9.10	21.8	2.87	10.35	21.8	3.50	12.60	21.8	4.22	15.18
2.5	24.4	2.57	9.26	24.4	2.83	10.19	24.6	3.22	11.60	24.6	3.92	14.12	24.6	4.74	17.06
3.0	25.7	2.83	10.17	26.4	3.11	11.18	27.1	3.54	12.73	27.5	4.31	15.50	27.5	5.22	18.78
3.5	26.6	3.05	11.00	27.5	3.36	12.10	28.7	3.83	13.77	29.1	4.66	16.78	29.7	5.65	20.34
4.0	27.5	3.27	11.79	28.4	3.63	13.06	29.4	4.07	14.66	30.5	4.98	17.93	31.2	6.06	21.82
4.5	28.4	3.49	12.58	29.3	3.87	13.92	30.2	4.39	15.79	31.1	5.33	19.20	32.3	6.45	23.21
5.0	29.0	3.69	13.29	30.0	4.08	14.68	30.9	4.64	16.70	31.8	5.64	20.30	33.1	6.81	24.51
5.5	29.5	3.88	13.96	30.7	4.29	15.44	31.7	4.88	17.57	32.6	5.93	21.33	33.5	7.16	25.77
6.0	30.3	4.05	14.58	31.3	4.49	16.15	32.1	5.10	18.37	33.2	6.20	22.30	34.3	7.49	26.96
6.5	30.7	4.22	15.17	32.0	4.67	16.83	32.8	5.30	19.07	33.8	6.45	23.21	35.0	7.81	28.11
6.9	31.1	4.35	15.65	32.3	4.82	17.35	33.2	5.50	19.81	34.1	6.64	23.89	35.4	8.06	29.00

Straight Bore Nozzle (SBN-5) and Spreader (LAN-1-20) Performance* **METRIC**

bar @ Nozzle	NOZZLE SIZE (Stream Height: 4.3m)														
	8.7 mm x 5.56 mm (11/32" x 7/32") 20°			9.5 mm x 5.56 mm (3/8" x 7/32") 20°			10.3 mm x 5.56 mm (13/32" x 7/32") 20°			11.1 mm x 5.56 mm (7/16" x 7/32") 20°			11.9 mm x 5.56 mm (15/32" x 7/32") 20°		
	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)	Rad. (m)	Flow (l/s)	Flow (m ³ /h)
1.7	18.6	1.47	5.29	18.9	1.67	6.02	19.5	1.87	6.72	20.1	2.08	7.47	20.1	2.30	8.27
2.0	19.3	1.59	5.71	19.6	1.80	6.49	20.5	2.01	7.23	20.8	2.24	8.05	21.6	2.48	8.92
2.5	20.6	1.78	6.40	21.0	2.02	7.25	22.2	2.25	8.11	22.8	2.50	9.01	23.7	2.78	10.00
3.0	21.5	1.95	7.02	22.1	2.21	7.96	23.3	2.47	8.90	23.9	2.75	9.90	24.8	3.05	10.97
3.5	22.3	2.11	7.60	22.9	2.40	8.63	24.2	2.68	9.63	24.8	2.97	10.71	25.7	3.30	11.88
4.0	23.2	2.26	8.14	23.8	2.57	9.25	25.1	2.88	10.37	25.8	3.19	11.48	26.6	3.54	12.76
4.5	24.1	2.40	8.65	24.7	2.73	9.83	25.6	3.07	11.06	26.5	3.40	12.24	27.4	3.78	13.60
5.0	24.8	2.56	9.21	25.4	2.89	10.40	25.5	3.24	11.67	27.3	3.59	12.92	28.0	3.99	14.35
5.5	25.3	2.68	9.65	26.2	3.04	10.95	27.0	3.42	12.31	28.0	3.78	13.60	28.6	4.20	15.12
6.0	26.0	2.81	10.12	26.8	3.18	11.45	27.7	3.58	12.89	28.6	3.96	14.25	29.4	4.39	15.79
6.5	26.5	2.93	10.55	27.4	3.33	11.98	28.3	3.74	13.48	29.2	4.13	14.88	29.8	4.57	16.46
6.9	26.8	3.02	10.88	27.7	3.44	12.38	28.7	3.86	13.90	29.6	4.26	15.33	30.2	4.72	16.99

* Nozzles must be purchased separately. See chart on previous page.