

# 8FT to 16FT DIAMETER WINDMILL PUMPING CAPACITY

## IRON MAN WINDMILL™

SEE CHART BELOW FOR THE 20FT DIAMETER IRON MAN WINDMILL

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Pump Diameter (inch)	Amount Pumped Per Hour Gallons (US)	Amount Pumped Per Hour Liters	Pumping Elevation Feet – Meters		
			Diameter of Wind Wheel		
			Ø8ft – 2.4M	Ø12ft – 3.6M	Ø16ft – 4.8M
1 ¾	150	600	185 – 57	420 – 129	1000 – 308
1 7/8	180	700	175 – 54	390 – 120	920 – 283
2	190	700	140 – 43	320 – 98	750 – 231
2 ¼	260	1000	112 – 34	250 – 77	590 – 182
2 ½	325	1200	94 – 29	210 – 65	490 – 151
2 ¾	385	1500	80 – 25	180 – 55	425 – 131
3	470	1800	68 – 21	155 – 48	360 – 111
3 ¼	550	2100	56 – 17	130 – 40	305 – 94
3 ½	640	2400	50 – 15	115 – 35	265 – 82
3 ¾	730	2800	42 – 13	98 – 30	230 – 71
4	830	3100	39 – 12	86 – 26	200 – 62
4 ¼	940	3600	33 – 10	76 – 23	180 – 55
4 ½	1050	4000	30 – 9	68 – 21	160 – 49
4 ¾	1170	4400	26 – 8	61 – 19	140 – 43
5	1300	4900	25 – 8	55 – 17	130 – 40
5 ¾	1700	6400	18 – 6	40 – 12	100 – 31
6	1875	7100	17 – 5	38 – 12	85 – 26
7	2550	9700	12 – 4	28 – 9	65 – 20
8	3300	12,500	9 – 3	22 – 7	50 – 15

**Rated wind speed is 15 to 20 mph (24 to 32Kph or 6.7 to 8.9Mps) depending on the size of the Iron Man Windmill pump used. Pumping capacity in Medium Winds is about 55%. Pumping capacity in Light Winds is about 25%.**

**LIGHT WINDS** - 3.6 to 10Mph - 11 to 16Kph or 1.6 to 4.5Mps. Leaves and small branches move and wind is felt lightly on the face. Iron Man Windmills usually begin working in the lower light wind speed range.

**MEDIUM WINDS** - 11 to 17Mph - 17to 27Kph or 4.9 to 7.6Mps. Tree branches move, dust is raised and litter blows on the ground. Pumping capacity is about 50% of the amount shown.

**STRONG WINDS** - 18 to 20Mph - 28Kph to 32Mps or 8 to 8.9Mps. Small trees sway. Pumping capacity is 100% of the amount shown.

In winds over 20-25Mph (32-40Kph or 8.9-11.8Mps), the wind storm protection mechanism will allow the wind wheel to automatically turn out of the wind and thus control speed and protect the windmill.

Properly installed windmills using pump cylinders for the elevations listed will begin pumping in winds approximately 3 to 5mph (6.4 to 8Kph or 1.7 to 2.2Mps). To get the average daily or monthly capacity, multiply the hourly capacity by the number of hours of light, fair or strong winds as are common at your location. When Loaded according to the table, the windmill will reach its maximum pumping capacity in winds blowing steadily about 20mph (32Kph or 8.9Mps).

The amount of water pumped by a windmill depends on the strength of the usual wind and the exposure to the wind. The center of the wind wheel of a windmill should stand at least 20ft (6M) above all surrounding obstructions, like trees or buildings, within a 150ft (50M) radius so that good wind can get to it. In locations where light winds are common, it is recommended to select a pump one or two size smaller than shown to load the windmill lightly so that it will run easily in light winds. Where strong winds blow a sufficient amount of the time, a larger pump cylinder can be used to pump more water.

One Ton Metric = One Cubic Meter = 264 Gallons (US) = 2204 lbs = 1000kg = 1000 Liters

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## 20ft (6M) DIAMETER WINDMILL PUMPING CAPACITY

# IRON MAN WINDMILL™

SEE SEPARATE CHART ABOVE FOR THE 8ft, 12ft, and 16ft DIAMETER IRON MAN WINDMILL'S

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Pumping Elevation Ft. – M	LIGHT WINDS			MEDIUM WINDS			STRONG WINDS		
	Cylinder Diameter (inch)	Liters Per Hour	Gallons Per Hour	Cylinder Diameter (inch)	Liters Per Hour	Gallons Per Hour	Cylinder Diameter (inch)	Liters Per Hour	Gallons Per Hour
3 – 1	36	147,000	39,000	40	278,000	73,400	48	534,000	141,000
5 – 2	28	90,000	24,000	32	178,000	47,000	36	300,000	79,300
10 – 3	20	46,000	12,200	22	84,000	22,200	26	156,000	41,300
15 – 5	16	29,000	7,800	18	56,000	14,800	20	92,000	24,400
25 – 8	12	16,000	4,400	14	34,000	9,000	16	59,000	15,600
35 – 11	10	11,000	3,000	12	25,000	6,600	14	45,000	12,000
50 – 15	8	7,000	2,000	10	17,000	4,600	12	33,000	8,800
75 – 23	7	5,000	1,500	8	11,000	3,000	10	23,000	6,100
100 – 31	6	4,000	1,100	7	8,000	2,250	8	15,000	3,900
125 – 38	5	2,900	765	6	6,000	1,650	7	11,000	3,000
150 – 46	4 3/4	2,700	700	5 3/4	5,000	1,500	6	8,000	2,200
200 – 62	4 3/4	2,700	700	4 3/4	4,000	1,050	5 3/4	7,000	2,000
250 – 77	4 1/4	2,100	550	4 3/4	4,000	1,050	4 3/4	5,000	1,380
300 – 92	3 3/4	1,600	425	4 1/4	3,000	825	4 3/4	5,000	1,380
400 – 123	3 1/4	1,200	320	3 3/4	2,500	650	4 1/4	4,000	1,100
500 – 154	3 1/4	1,200	320	3 1/4	1,800	485	3 3/4	3,000	860
600 – 185	2 3/4	900	230	3 1/4	1,800	485	3 1/4	2,400	645
700 – 215	2 3/4	900	230	2 3/4	1,300	350	3 1/4	2,400	645
800 – 246	2 1/4	600	150	2 3/4	1,300	350	2 3/4	1,700	460
1000 – 308	2 1/4	600	150	2 1/4	900	225	2 3/4	1,700	460
1200 – 369	1 7/8	500	120	2 1/4	900	225	2 1/4	1,100	300

### PUMPING WITH WINDMILLS

The amount of water pumped by a windmill depends on the strength of the usual wind and the exposure to the wind. The center of the wind wheel of a windmill should stand at least 20ft (6M) above all surrounding obstructions, like trees or buildings, within a 400ft (120M) radius so that good wind can get to it. In locations where light winds are common, it is recommended to select a pump one or two size smaller than shown to load the windmill lightly so that it will run easily in light winds. Where strong winds blow a sufficient amount of the time, a larger pump cylinder can be used to pump more water.

The Iron Man windmill is normally run on the long stroke. The capacities shown in the tables are based on using the long stroke of the windmill. When the windmill is set on the short stroke, the capacity is reduced by about 25% but the ability to lift water to a higher elevation is increased by 33%. We do not recommend using a windmill on the short stroke except when it is found that a pump too large to allow pumping in the typical wind conditions has been installed.

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