

The "IXL" Steel Windmill

IS THE MOST COMPLETE WINDMILL ON EARTH.

Made for Durability and not to satisfy the craze for "something cheap."

The Wheel is made with Double Arms so that it is impossible to spring it out of shape.

The Rudder is Double Braced with Angle Steel.

The Main Casting is made adjustable so as to take up any wear that may ever come on the cog wheels. This feature alone makes it far superior to all other windmills.

Both Wheel and Rudder are made entirely of steel—no awkward castings to break or retard the motion of the Wheel.

It is made with three different lengths of stroke, making it especially adapted to either

under or tubular wells.

It will not flop out and into gear in an unsteady wind, being controlled by a constantly increasing tension of the governing spring.

It is Galvanized after completion giving a remarkably neat and durable finish.

SELF-GOVERNING.

There is a remarkable beauty about the governing principle which is characteristic of this Mill alone, it being constructed so that the wheel moves out of the wind in governing, and not the rudder as in most other mills. There is a proper amount of speed for the wheel, which it has in ordinary winds with the wheel directly facing the wind, but by its self-governing principle peculiar to this Mill, when the wind blows harder than the wheel ought to bear the tendency is to fold the wheel partially toward the rudder, and in this position it continues to work at its regular speed; then, as soon as the force of the wind abates, it resumes its normal position with the wheel squarely facing the wind. When the wind becomes very severe the wheel is folded around by the side of the rudder, thus presenting the edge of the wheel to the wind, and it remains still until the wind dies away when it returns to its original position and resumes its work. Thus the mill governs itself perfectly.

PLAINVILLE, N. Y.

Phelps & Bigelow Wind Mill Co., Kalamazoo, Mich.

Dear Sirs—Enclosed find draft for the three last Windmills shipped me. One of these Mills, as I told you in former letter, goes into an entirely new neighborhood. The party to whom I sold it bought a Mill and tilting vane; but it broke down and he sent for me, knowing that I was handling Windmills. After a long argument he had him the "IXL" Windmill, warranting it to be as good as any Mill made. Yesterday when we had the mill completed quite a number of neighbors gathered to see the new mill—the one which I had warranted to be as good as the _____, or the _____, or the _____, which are used in that neighborhood.

When I showed them the rubber cushion on brake and vane, they said that was a first-rate thing; and when I showed them the double turn-table and explained to them how the wheel came into the wind without the rudder turning at all, they were quite surprised; and when I showed them the adjustable parts of the main casting, how any wear that might ever come on the cog wheels can be taken up, they said that it was the best arrangement they ever saw on a Windmill.

It was quite amusing to see their surprise when I showed them the points of superiority in our Mill, as up to that time each one had supposed that he had the best Mill on the market.

Respectfully,

P. S. BRATT.

See further description on third page of cover.

Business Established 1873

"AA"



PRICE LIST Steel Windmills

We furnish these Windmills with cap for four post wood tower, cap for a solid mast, or cap for steel tower. If steel tower is ordered we send the Mill with cap to fit same. If no tower is ordered we send the Mill with Cap to attach to four post wood tower unless cap for solid mast is specified in order.

Price of windmill includes all bolts for putting it together and bolting it to Tower, and also the actuating rod which goes down to attach to pump.

In each box of bolts will be found plain instructions for putting Mill and Tower together.

Weight, Lbs.	Galvanized Steel Windmills	Price.
285	No. 0, 6 ft. Windmill, fitted with cap for Wood Tower, (back geared).	\$25 00
360	No. 1, 8 ft. Windmill, fitted with cap for Wood Tower, (back geared).	30 00
390	No. 2, 9 ft. Windmill, fitted with cap for Wood Tower, (back geared).	34 00
500	No. 3, 10 ft. Windmill, fitted with cap for Wood Tower, (back geared).	40 00
810	No. 4, 12 ft. Windmill, fitted with cap for Wood Tower, (back geared).	65 00
1095	No. 5, 14 ft. Windmill, fitted with cap for Wood Tower, (back geared).	100 00

Direct Motion Mills

The Windmills quoted above are back geared. We also make DIRECT MOTION Windmills which cost a little less, as stated below:

The 8 ft. direct motion	is \$1.00 less than the 8 ft. back geared.
The 9 ft. " "	is 1.00 less than the 9 ft. " "
The 10 ft. " "	is 2.00 less than the 10 ft. " "
The 12 ft. " "	is 2.00 less than the 12 ft. " "
The 14 ft. " "	is 3.00 less than the 14 ft. " "

If the direct motion Mill is wanted, it should be so stated in the order, otherwise the back geared Mill will be shipped.

It should be borne in mind that the back geared Mills have more power than the direct motion Mills of the same size.

The 12 ft. and 14 ft. back geared Mills named above are made very strong and heavy and have great power.

Galvanizing

The galvanizing of both Mill and Tower is done after all the cutting, punching and riveting is completed, thus covering all raw edges and thoroughly protecting from the weather.

Warranty

All our Mills and Towers are warranted—(when erected and anchored according to our printed instructions) against winds which do not damage other property in same vicinity. This warranty extends for one year, and any piece of the Mill or Tower which proves defective within said year will be furnished without charge on cars at Kalamazoo.

The Phelps & Bigelow Wind Mill Co., Kalamazoo, Mich.