PRICES

ZEPHYR STAR GALVANIZED STEEL WINDMILL
BACK-GEARED, COMPLETE WITH BALL-BEARING TURNTABLE, TOWER CAP, SPIDER AND REEFING GEAR

<table>
<thead>
<tr>
<th>Diameter of Wheel</th>
<th>Length (Stroke)</th>
<th>Gear Ratio</th>
<th>Number of Arms</th>
<th>Number of Wheel Pans</th>
<th>Weight</th>
<th>Price Plain Bearings</th>
<th>Price Tapered Roller Bearings</th>
</tr>
</thead>
<tbody>
<tr>
<td>7&quot;</td>
<td>5, 6</td>
<td>3 1/2 to 1</td>
<td>4</td>
<td>12</td>
<td>285</td>
<td>$32.50</td>
<td>$46.00</td>
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<tr>
<td>8&quot;</td>
<td>6, 8</td>
<td>3 1/2 to 1</td>
<td>6</td>
<td>15</td>
<td>370</td>
<td>40.00</td>
<td>53.00</td>
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<tr>
<td>10&quot;</td>
<td>8, 10</td>
<td>2 to 1</td>
<td>6</td>
<td>18</td>
<td>515</td>
<td>72.50</td>
<td>77.00</td>
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<tr>
<td>12&quot;</td>
<td>8, 10, 12</td>
<td>2 1/2 to 1</td>
<td>8</td>
<td>24</td>
<td>900</td>
<td>134.50</td>
<td>140.00</td>
</tr>
</tbody>
</table>

PUMP POLE, SPLICES AND PULL-OUT WIRE

For Tower, Height | Price
For 5, 6, 7, 8 and 10-ft. Windmills
For 12-ft. Windmill
For 15-ft. Windmill

For repairs see pages 108-109.

IMPORTANT

In ordering or making inquiry about a Windmill outfit the following should be carefully observed:

The size and depth of well, and least depth of water in it, should always be clearly stated.

Quantity of water desired per hour.

Height water is to be elevated, and lateral distance to be conveyed.

The kind and size of windmill wanted: the height and kind of tower upon which the mill is to be erected.

Care should be taken to have mill placed at least fifteen feet above all buildings, trees or other obstructions in proximity to site of mill.

A rough sketch of the location where mill is to be erected, and the conditions, sent us with your inquiry in order, will be of great service in fulfilling your requirements.
THE NEW ZEPHYR STAR WINDMILL

FLINT & Walling offers this new mill as its greatest contribution to the windmill field in its more than 65 years of experience. It retains every proved feature which has made previous Star windmills so popular plus many new improvements, chief of which is a revolutionary new wheel design. This is an exclusive Flint & Walling feature, protected by U. S. Patent No. 2049655.

Patented Wheel Pumps 30% More Water in the Same Wind

This new wheel makes use of aero-dynamic principles discovered in recent years in the development of airplanes, stream-lined automobiles, buses and trains. Our engineers applied these principles to the windmill field. We built a special wind tunnel in our laboratories and carried on extensive experiments for many months. The result is this radically different windmill which under repeated tests developed 31% more power than old style wheels and has proved its ability to pump 30% more water in the same wind.

Wind Tunnel in Flint and Walling Laboratories
A GLANCE at the illustration on this page will show you that the blades or fans which make up this new wheel are entirely different in type from the old-style, rosette-type design. These old fans were widest at the outer edge and tapered in radially, sharply to the center. The fans in the new mill — on the contrary — are widest toward the center and curved and pitched to make each blade as effective as possible throughout its entire length. This is the same construction as used in modern airplane propellers.

In addition to the complete re-designing of the wind wheel fans the new Zephyr Star has a new type stream-lined arms. On old-style mills the wheel arms were placed between the fans and made extra resistance for the fans to wind against. Now they blend into the fans and are stream-lined, so that resistance is cut to the minimum.

This new wheel has each fan of the wheel fastened to the wheel rims by full size bracket on each rim for strength and to maintain proper position. The wheel arms now being placed on the fans leaves only two fans between arms instead of three as in all other windmills.

This new Zephyr Star mill also has a stream-lined rudder which has its control area located on end of rudder stem where it has leverage to easily maintain the wheel in working position to the wind currents. The rudder stem is electric welded into one piece and is very rigid.
NEW SUPER STAR WINDMILL BUILT TO HIGHEST FLINT & WALLING STANDARDS

We have retained every superior feature for which former Star windmills were famous, refining and improving wherever possible to add greater strength, longer life and care-free, trouble-proof service.

DIRECT CENTER LIFT, with load carried evenly on two pinions, gears and pitman eliminates all side strain and reduces friction which adds to efficiency.

GEARS AND PINIONS are cast of semi-steel and dip in oil. Pitmans are welded of cold rolled steel for perfect bearing surfaces at bottom end, and at top have short length of steel tubing to fit crookhead pin.

TIMKEN TAPERED ROLLER BEARINGS on both main shaft and crank shaft, carry the load and insures a long, satisfactory period of service.

COMPLETE AND CONTINUOUS LUBRICATION by oil in crank case in which moving parts operate, with automatic pump elevating oil at every stroke to crosshead, pitmans and guide rod.

EFFECTIVE BRAKE with steel band on turned cast drum. Brake is so designed that it applies only when reeled by hand, thus avoiding sudden shock and jar which would be caused by brake band being applied when wheel is fold-under high winds.

NEW RUDDER designed with large control area, properly located, which combined with ball bearing turntable with full complement of balls, maintains the mill in working position.

TRUSS-TYPE RUDDER STEM. Sturdier! Prevents sagging or crooked rudder. Rudder stem hinge-pin turns in self oiling bronze bushings.

Every SUPER STAR mill is galvanized AFTER completion by our own hot dip process, an effectual prevention of rust or corrosion.

GUARANTY

We absolutely and fully guarantee each and every Model 37 Super Star Windmill against all defects in material and workmanship, if properly erected and oilied with cold test oil, and to run for one year, without further oiling. We will furnish, free of charge at our factory, any part or parts found defective in either materials or workmanship within one year from the time of erection, destruction by excessive windstorm or tornado being excepted.

Above—Showing the automatic brake latch which applies the brake only when the mill is reeled by hand and does not apply when blown out by wind, avoiding sudden and severe shocks.