NOW COMES THE

STORM-SAFE

Monitor

WITH THE 3 VITAL STORM-SAFETY FEATURES

SERIES 4000-W SELF-OILING WINDMILL

BAKER MANUFACTURING COMPANY - EVANSVILLE, WISCONSIN

STORM-SAFE

In building a windmill to meet the severest test of the elements, Baker climaxes its 67-year record of [illegible] and manufacturing honesty.

Monitor NEW 4000-W LINE Self Oiling Windmills

NEW "PULL-IN" CONTROL

V TYPE BRAKE DRUM

WIND-GOVERNED STEADY PUMPING SPEED IN VARIABLE WINDS

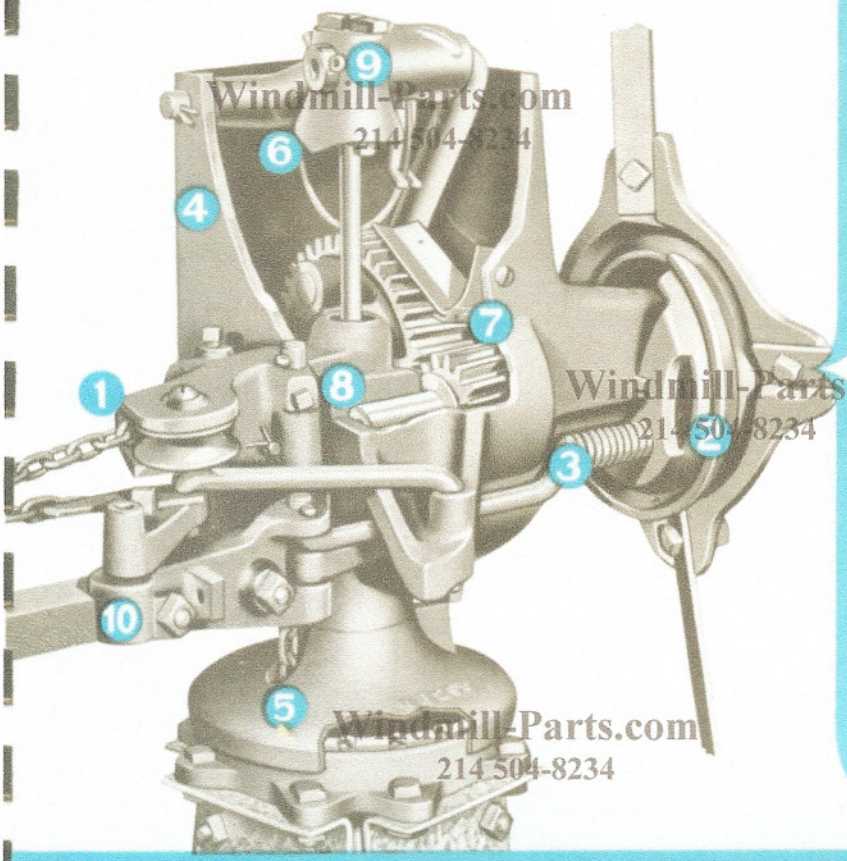
Monitor pioneers again! Now comes the windmill that is *storm safe* both in-the-wind and out-of-the-wind. Three important *Monitor* features give full control, from a gentle breeze to a stinging gale:

★ The new 4000-W series *Monitor* Windmill is a "Pull-*IN*" type. It is pulled into-the-wind instead of out-of-the-wind. The pulling strain of the Monitor control is much less than on the conventional "pull-out" mill.

The principle of holding the mill into-the-wind gives you a vital storm-safety factor, and relieves the severe strain and wear on the windmill swivel, because in most territories windmills are out-of-the-wind *three-fourths* of the time. (We can furnish the 4000 Series in the "pull-out" type for territories where mills run long periods.)

★ As modern as 4-wheel hydraulic brakes . . . is the cast iron Monitor V-brake, contrasted with ordinary flat band drums. V-type eliminates brake drag. For years the longest wearing windmill brake known. A vital *storm-safety* feature!

★ Always in the back of a farmer's mind there has been the fear of the windmill "racing" in a storm, out of control. Monitor sets his mind at ease with *Wind-governing*. Constant pumping speed in any velocity of wind goes a long way to relieve wear and tear on the mill.



1 NEW "PULL-IN" CONTROL

2 STORM-SAFE V-BRAKE

3 WIND GOVERNOR

4 "IRON VAULT" GEAR CASE

5 BALL-BEARING TURNTABLE

6 "ROLLER-RING" OILER

7 SPIRAL PINION and ANTI-OIL-LEAK INCLINED SHAFT

8 TOBIN BRONZE BEARINGS

9 LIFETIME PUMP ROD SWIVEL

10 SURE-LOCK VANE LATCH

WEATHERMAN, BRING ON YOUR WORST!

The Storm-Safe *Monitor* Windmill Head is "Sealed in an Iron Vault"

Here's a windmill head built like the turret of a battleship! The *Monitor* Windmill brings you this exclusive feature in windmill construction — a mill head that is dust-proof, storm-proof and bullet-proof.

The *Monitor* "Iron Vault" case has a bolted cast-iron cover fitted with a cork gasket. Only with a lifetime case like this can there be certainty that the cover will not be punctured by hunters' bullets or boys' guns.

Boys will be boys. The windmill head is a tempting bulls-eye for target practice. The twang of a bullet striking an ordinary steel case may easily mean a puncture and as a result permit moisture and dust to enter.

But "ringing the bell" with an ordinary small caliber rifle will not pierce the Monitor case. Nor does the "Iron Vault" case expand and contract with heat and cold as sharply as steel cases.

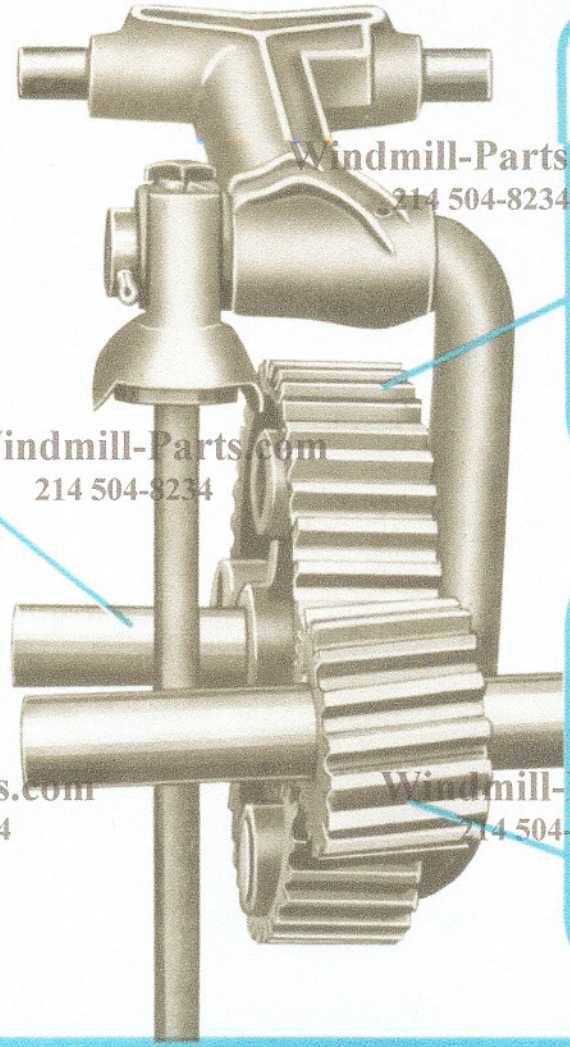
"OIL-CHURN" LUBRICATION

If oil were cream, the Monitor mill head would churn butter in no time. Oil is "churned" inside the case by gears and pitmans running in an oil bath. Fifty drops of oil per minute! That's the steady drip of oil supplied to the upper pitman bearing and pitman guide by an "oil ring" rolling on the large gear, which runs in oil. Surplus oil returns to the crankcase.

Once-a-year oiling is all the attention needed. Gear case cover need not be removed for oiling.

The large size wheel shaft is inclined upward one inch in sixteen — prevents oil leakage from the outer bearing. Brings the wheel one-fourth closer to the center of the tower and more perfectly balances the mill on the tower.

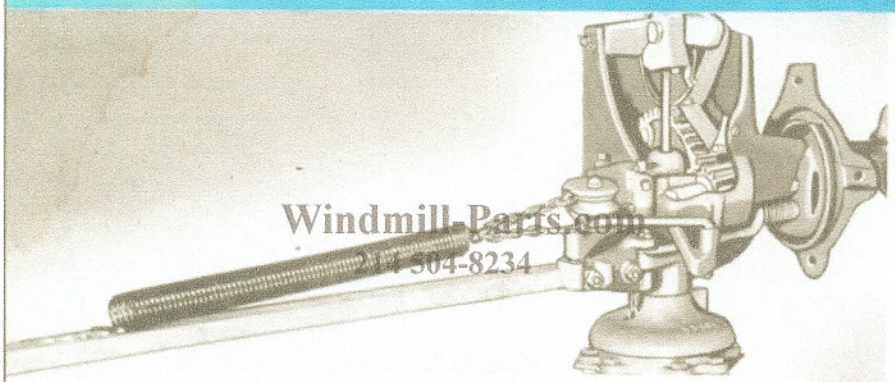
Means better regulation and greatly reduces the danger of damage to the vane and wheel in a storm. The wheel shaft is supported by tobin bronze bearings on *both* sides of the pinion. This simple arrangement reduces friction.



Wide, extra heavy, double size cut crank gear is twice the width and many times stronger than the light gears used in many "double geared" mills.

Heavy, wide pinion cut from solid steel with spiral teeth — will last at least three times as long as a cast iron pinion. Runs more quietly; allows for the slight shaft incline.

THESE FEATURES CROWN THE *Monitor* "QUEEN OF THE AIR"



"WIND-GOVERNOR" SPRING
GIVES CONSTANT PUMPING SPEED

Extra Heavy Coil Governing Spring insures constant speed in variable winds while the mill is running, a vital storm-safety factor. Saves wear and strain of spasmodic pumping speed on the pump and mill mechanism.

ONE-PIECE STEEL PITMAN
Eliminates Wrist Pin

The MONITOR 4000 "W" features this heavy, unbreakable and reversible steel pitman which is made of forged steel through our special design. This unique Monitor design eliminates the use of wrist pins.

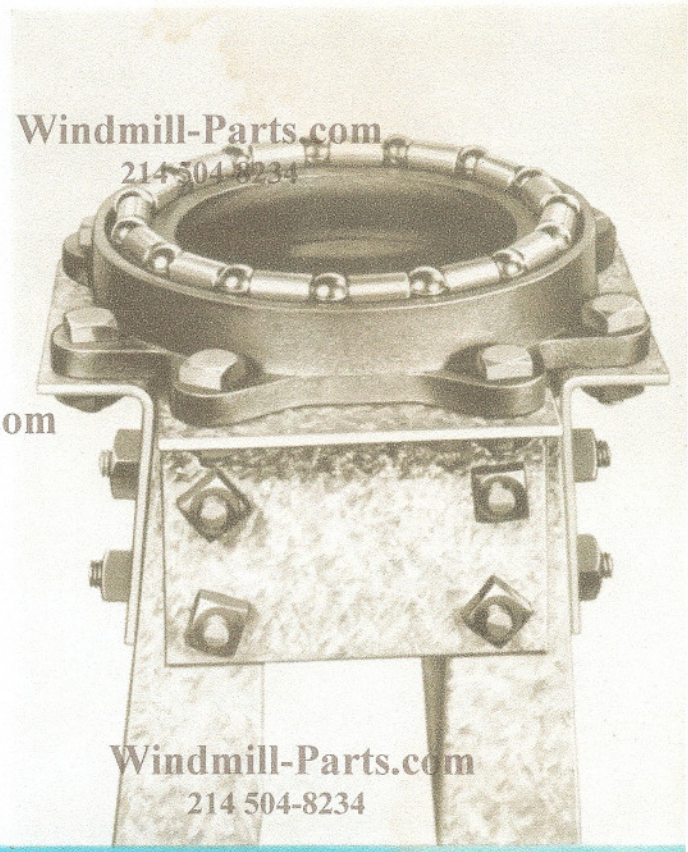
DIRECT LIFT FOR ECONOMICAL PUMPING

NEW Ball Bearing TURNTABLE

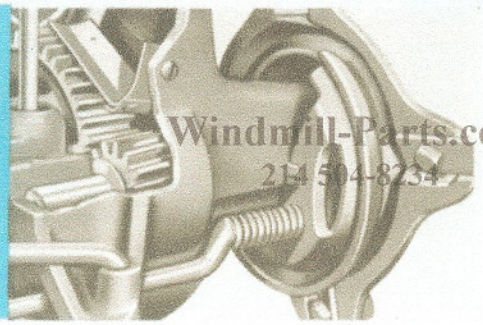
Here is an important new development that makes the new MONITOR 4000 sensitive to the slightest breeze. The mill head is lowered down on the top of the tower. It rests on a heavy upper ball race casting in a spherical seat which allows for any slight misalignment. Yet it retains the heavy swivel working *outside but close* to the mast pipe between the ball bearing and the lower tower casting.

This is made possible by a slot in the ball race casting through which the swivel chain runs. The tower top is spread slightly wider, making a very firm foundation for the ball bearing turntable, which is 7 inches in diameter.

The balls are set in a deep race filled with grease. The lower part of the ball race is held to tower plates by eight bolts. Both the upper and lower ball race are cast very hard from semi steel, which reduces wear from the balls. Spacers between each ball are hollow and filled with grease, giving a constant supply to the turntable bearing.

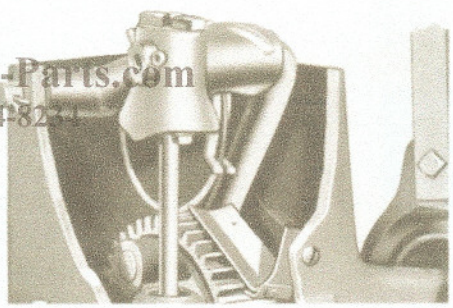


STORM-SAFE CIRCULAR V-BRAKE



The strong cast-iron circular V-Brake fits into a v-shaped groove in a heavy cast wheel hub. The v-brake is held in the groove under great pressure by the latch leverage all the time that the mill is out of the wind. The mill, therefore, *will not and cannot release the brake and run wild even if the pull wire breaks in a storm or the lever is jerked up.*

TRUE-GUIDE PISTON SWIVEL



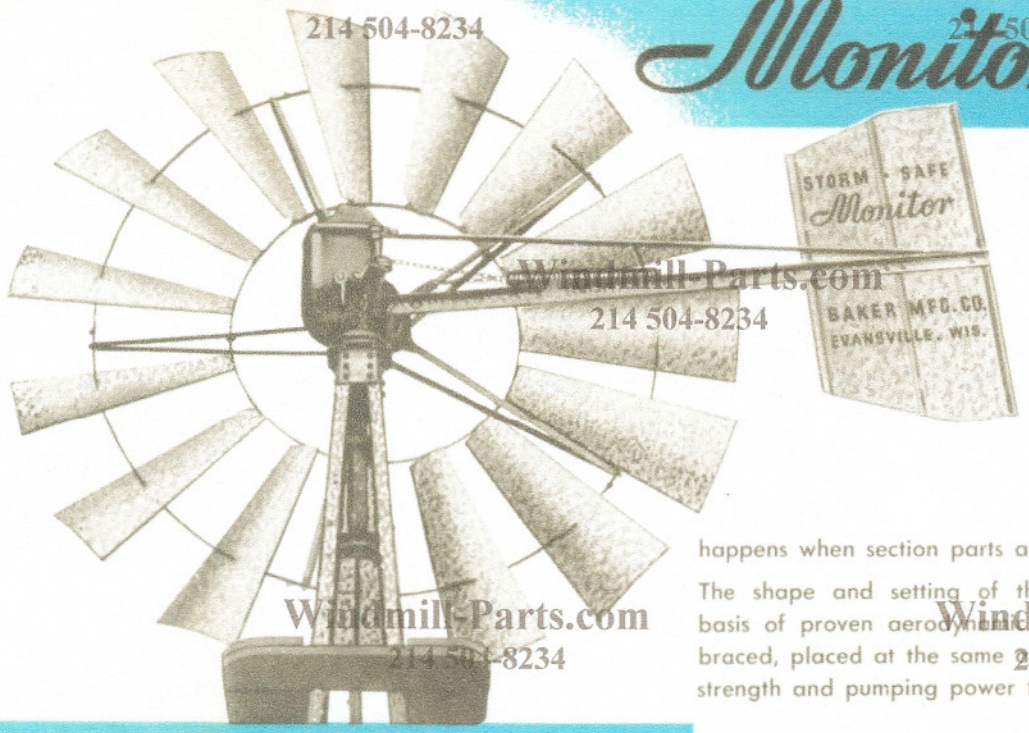
The strong piston swivel is located in the piston bearing where it provides a solid actuating rod from the mill head to the pump connection. This eliminates trouble often caused with a loose swivel joint in the rod between the mill and pump. It's the most durable pull wire swivel ever devised. The MONITOR pitman guide, strong, well-lubricated, reduces friction. Wide bearings prevent wear from twisting.

SURE-LOCK VANE LATCH

When the wheel is out of the wind the *Vane Latch* locks it parallel with the vane and automatically sets the brake. It is held firmly in that position until the latch is tripped by pulling the wire when the mill is pulled into the wind.

FEATURES THAT TAME THE WIND

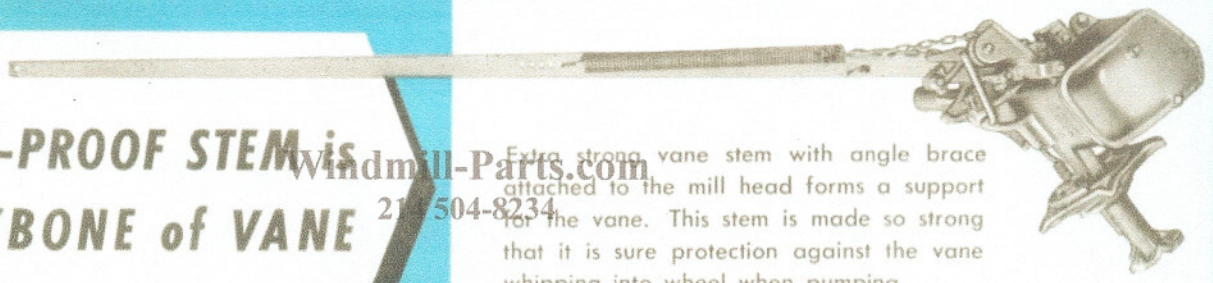
Monitor Wheels



Think how many windmill wheels you have seen that were twisted and bent, with crippled sails. Monitor wheels stand firm against the storm! Yet they develop the greatest amount of power in light winds. The steel is of proper weight for each size of mill. All parts are galvanized *separately*, then put together with galvanized rivets. This prevents loosening of the wheel from rusting surfaces not completely galvanized, as happens when section parts are galvanized after being put together.

The shape and setting of the sails has been determined on the basis of proven aerodynamic principles. The steel arms, flat and braced, placed at the same angle as the sails or fans give increased strength and pumping power to the wheel.

WHIP-PROOF STEM is BACKBONE of VANE



Extra strong vane stem with angle brace attached to the mill head forms a support for the vane. This stem is made so strong that it is sure protection against the vane whipping into wheel when pumping.

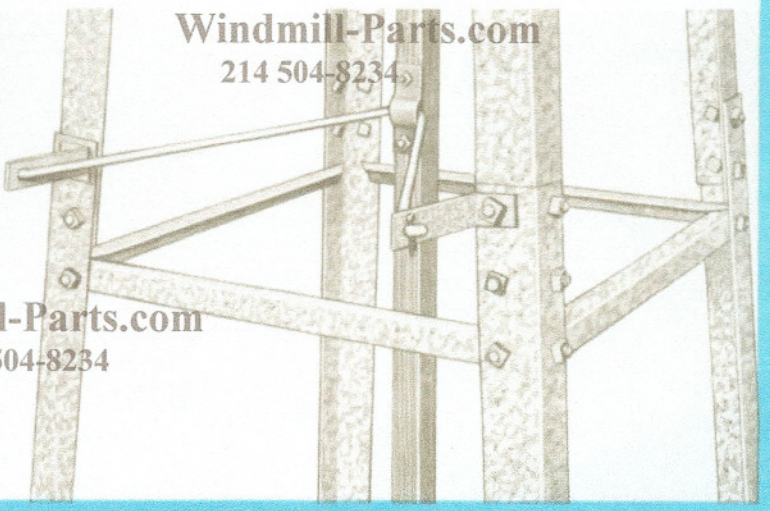
The new streamlined vane is stronger — made with three corrugated ribs running at right angles to the vane stem

Monitor Pump Pole Guides Prevent Wind-Whipping

Monitor pump pole guides hold the pump pole at center of tower so that its free working cannot be affected even by strong winds.

By this arrangement, there is no wear on the pump pole from rubbing on supports; it cannot bind and the pump pole cannot get out of line.

(One guide for each tower section. Top guide shown at right is furnished with mill head, other guides furnished with tower.)



Stock No.	Size	Style	Stroke	Use with Monitor Tower	Shipping Weight	Price
4060	6½ ft.	WB	4¾ in.	Series 68—No. 0	215 lbs.	$
4060S	6½ ft.	WB with Stub	4¾ in.	Series 68—No. 0	225 lbs.	$
*4061	6½ ft.	WB	4¾ in.	Series 68—No. 0	215 lbs.	$
*4061S	6½ ft.	WB with Stub	4¾ in.	Series 68—No. 0	225 lbs.	$
4080	8 ft.	WC	6 in.	Series 68—No. 1	319 lbs.	$
4080S	8 ft.	WC with Stub	6 in.	Series 68—No. 1	335 lbs.	$
*4081	8 ft.	WC	6 in.	Series 68—No. 1	319 lbs.	$
*4081S	8 ft.	WC with Stub	6 in.	Series 68—No. 1	335 lbs.	$
4100	10 ft.	WD	7½ in.	Series 68—No. 2	608 lbs.	$
4100S	10 ft.	WD with Stub	7½ in.	Series 68—No. 2	639 lbs.	$
*4101	10 ft.	WD	7½ in.	Series 68—No. 2	608 lbs.	$
*4101S	10 ft.	WD with Stub	7½ in.	Series 68—No. 2	639 lbs.	$
*4121	12 ft.	WE	9 in.	Series 68—No. 3	985 lbs.	$
*4121S	12 ft.	WE with Stub	9 in.	Series 68—No. 3	1045 lbs.	$

Above mills are furnished with tower plates and castings to fit Series 68 4-post towers, unless otherwise ordered. Special plates can be furnished to fit 5'6" girted towers.

WHEN ERECTING 4000-W MILLS ON OTHER MAKE TOWERS

When erecting 4000 "W" mills on other make towers, use regular MONITOR stub. It will fit all towers with not more punching than required with tower plates. It is priced low to avoid trouble with special tower plates or tower casting.

Data on Monitor Windmills . . . Pull-in type

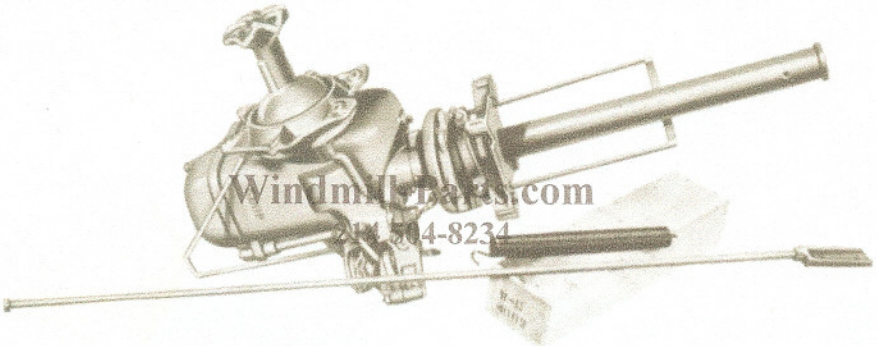
Diameter of Wheel	WB	WC	WD	WE
Size Mast Pipe	1½ in.	2 in.	2½ in.	3 in.
Number Wheel Sections	4	5	6	6
Number Sails in Wheel	12	15	18	18
Length Gin Pole Above Tower	6 ft.	6 ft.	7½ ft.	9 ft.
H. P. in 15 Mile Wind	.3	.4	.7	1.0
H. P. in 20 Mile Wind	.7	1.1	1.65	2.4
Shortest Practical Stroke Cylinder	8 in.	8 in.	10 in.	12 in.
MAXIMUM LIFT (Feet) With				
1-11/16 in. Cylinder	144	224	384	500
2 in. Cylinder	100	156	243	350
2½ in. Cylinder	70	108	169	243
3 in. Cylinder	48	75	117	169
3½ in. Cylinder	33	52	81	117
4 in. Cylinder	26	40	63	90
5 in. Cylinder	17	27	42	61
6 in. Cylinder	12	19	30	43

BE SURE THE WINDMILL IS EQUIPPED WITH THE *Monitor* STORM-SAFE TOWER

A tower of strength! No truer description could apply to the Monitor Storm Safe tower. Scientific tests of wind pressures on various sections of the tower show a wide margin of storm safety.

In ordering, state size of wheel and height of tower needed. Towers should clear by not less than 15 feet all surrounding buildings within 500 feet.

REPLACEMENT HEADS

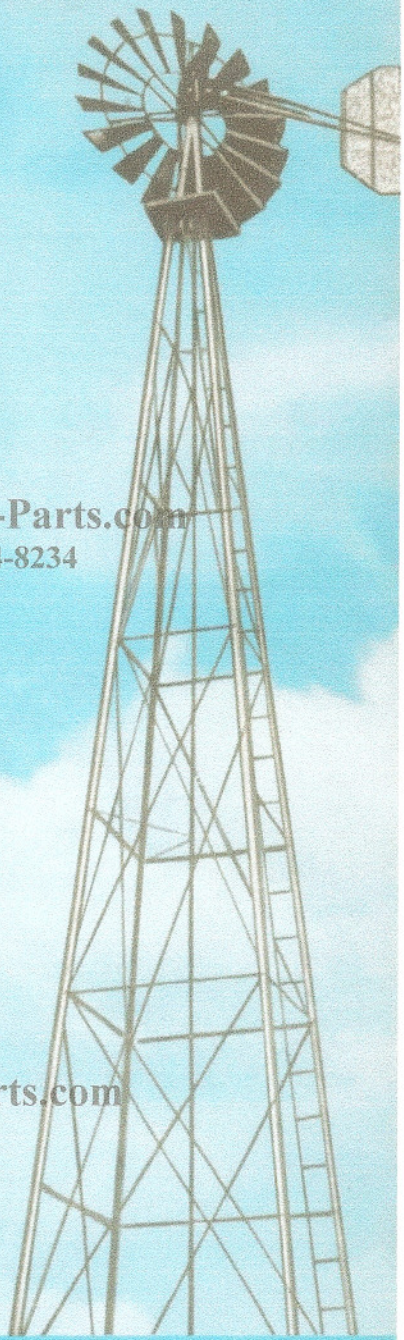


All the older types of steel wheel MONITOR windmills with open gears having good wheels and vanes can be easily rebuilt into the latest type of MONITOR self-oiling pull-in type windmills at a very nominal expense. The wheels, spokes, vanes and vane stems (if in good condition) can be attached to the new replacement head without punching any new holes. The vane truss (E-64) must be shortened ⅜ inch. Replacement assembly consists of the following parts:

1 Mill head (Self-Oiling) with tower castings.
1 Box fixtures and can of oil.
1 Governor spring, piston rod and pump pole casting.

PRICES ON REPLACEMENT HEADS

Stock No.	Size of Wheel	Style	To Rebuild Old Model	Shipping Wt.	Price
4082	8 Ft.	WC	K	195	$
4082/S	8 Ft.	WC	E	210	$
4102	10 Ft.	WD	J	332	$
4102/S	10 Ft.	WD	X	357	$



SEE YOUR *Monitor* SALESMAN FOR COMPLETE DETAILS

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