

W. F. Hirschman Co., Inc.

Buffalo, N.Y.

New York, N.Y., 525 Sixth Avenue BOSTON, MASS., 37 Pearl Street DETROIT, MICH., Builders-Trade Exchange

MANUFACTURERS ROOF VENTILATORS

"EFFICO" WIND-DRIVEN ROOF VENTILATORS:

The Effico Ventilator consists of a wind-driven head to which suction blades are permanently connected (on the underside) making an efficient exhaust fan. Rotation of the head creates an exhaust suction in the throat of the ventilator. There are no moving parts.

Bearings.—Effico Bearings are full ball bearings, are solidly enclosed and oil-flooded (also dust and acid proof). They are as sturdy as the best automobile bearings, and will run in a dry state for years, but we oil-flood them as an extra precaution.



Effico Rotary Ball Bearing Ventilator Installation, Wind Driven (only) The Effico Wind Electric Also as the Same Artistic Lines and Pleasing Appearance. Lowest in Height of Rotary Ventilators by Over 50 per cent Average.

All Efficos will draw considerable air at a 1-mile breeze (an apparent calm) without stack or heat assistance. The 30-in. size will rotate (standing start) at .7-in. pressure, 1/4-mile breeze. Cowl outlet is over 50 per cent larger than its stack area; this is ample, as no wind enters ventilator to gain the so-called siphonage effect. Suction fan is same size as rotating cowl. Thus each Effico is equipped with fan over 50 per cent greater in diameter than its stack area. Fan pulls air up stack at even the slowest turning movement and wind blowing across the outlet adds to its efficiency.

CAPACITIES OF EFFICO ROTARY BALL BEARING VENTILATORS
Both Wind Electric and Wind Driven (only)—Cubic Feet of Air Exhausted per Minute

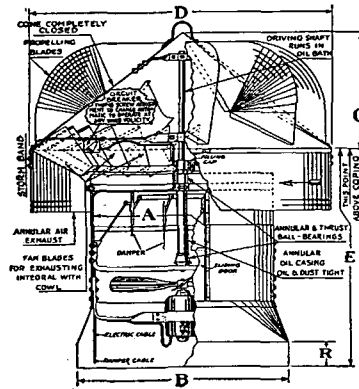
Wind Velocity, Miles per Hour	Cold Type is Regularly Furnished Wind-Electric Capacity											
	Temperature Difference in Degrees Fahrenheit in Building and Outside											
	0			10			20			30		
5	350			440			515			560		
10	430			525			600			625		
14	480			600			635			700		
5	1560			2300			2690			2900		
10	2300			3210			3490			3600		
14	2900			3650			3850			4020		
5	4000			5900			6700			7400		
10	5900			7900			8900			9050		
14	7000			9000			10000			10500		
5	5100			7300			8450			9500		
10	7850			9900			11000			11500		
14	9500			11800			12500			12800		
5	3150			4500			5010			5500		
10	4390			5700			6300			6800		
14	5600			6700			7400			7800		

Effico Wind Electric Ventilator Dimensions

Ventilator Sizes Corresponding to Those in Table Opposite	Dimensions in Inches—(See Diagram Above)					Thickness of Metal		H _p of Motor
	A	B	C	D	E	Gauge G. I.	Cop- per Oz.	
	Actual Size of Ventilator for Wind Elec. Type	Base	Height of Blades	Diam. of Storm Band	Height to Propeller Blades	Cowl	Base	
12	14	20	8	21 3/4	32	24	22	16
18	19	26	10	28 1/2	32	24	22	18
24	25	38	14	40	40	24	20	18
30	31	40	14	50	42	24	20	20
36	37	44	18	60	45	22	18	24
42	43	50	22	68	51	22	18	24
48	49	56	24	76	51	22	18	24
54	55	62	24	86	51	22	18	24
60	61	66	24	98	55	22	18	24

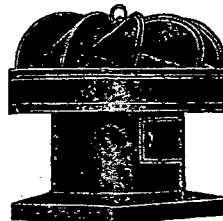
This apparatus is adjustable to exhaust various quantities of air within the limits of given sizes and is regularly supplied at capacities of 5 miles per hour wind and 10 deg. temperature difference rating. The Wind-Electric will exhaust minimum volume regardless of temperature difference or wind velocity.

Any other capacity can be supplied and the ventilator is adjustable to any constant capacity after installation.



Detail of Effico Wind Electric Rotary Ball Bearing Ventilator Full Automatic

NOTE.—Details of Wind Driven (only) Ventilator are Identical with Exception of Motor Unit.



Effico Wind Electric Ventilator, Automatic

Patented May 20, 1922; March 20, 1928; August 21, 1928.

The Effico Wind Electric Ventilator, Full Automatic

Recommended for those installations which require a definite minimum exhaust at all times or which may require an unusually heavy exhaust at intermittent periods. This is the regular Effico equipped with an auxiliary electrically operated fan placed in the ventilator throat just below the regular fan. The throat is slightly enlarged to allow for the motor.

Handsomely painted in red or any desired color and made of galvanized sheets. Also in copper, monel metal, lead clad, aluminum, Cop-r-loy, extra-refined Cop-r-loy.

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Principle of Operation of Wind Electric Ventilator.—When the wind is blowing sufficiently to remove the desired amount of air from the building being ventilated, the electric motor is still. Instantly, when the wind turbine moves below a previously determined number of revolutions, the electric motor starts automatically and carries the load. The entire apparatus is noiseless, the motor is of fully enclosed type, will run for six months without oiling, will not heat under constant running.

Special Advantages.—Besides the regular automatic operation, the motor may also be so connected as to give a maximum exhaust capacity (running full speed) by manual control, thus allowing a great volume of air to be exhausted at will.

Effico Internal Louver Unit Ventilators

The Effico internal louver unit comprises the Effico rotary ball bearing ventilator head constructed with a specially short base, or neck. In this base is built a circular multiple blade louver damper. The damper is carefully balanced and heavily constructed. The blades lap and are fitted in a circular frame. It is adaptable for manual control, but is intended for a thermostatic control system. The roof base is very low, is part of this unit and is supplied with either the square or round base.

The roof base and the ventilator head are connected by means of angle iron companion rings, which give solidity and facilitate the taking down of the ventilator when required. Each ventilator neck has also a tight fitting door to give free access to the louvers and to the operating motor. The operating motor is suspended underneath the damper to a cross brace. The object of the specially low base and the low roof base is to make the entire unit as low to the roof as possible.

Effico Louver Dampers

Made of stretcher leveled sheet steel. The pneumatic damper motor is supplied and installed with these units unless not desired. (Note specifications below).

Effico Louver Unit

Low height. The Effico louver unit sets very low (note dimensions at right).

Height above Coping

Louver Unit "C" dimension should be above coping.

Effico Rotary Ball Bearing Ventilator Head

The Effico rotary ball bearing ventilator head is already lower in height by 50 per cent than other rotary types of ventilator. By using the construction as outlined above, the entire unit is brought as low to the roof as is permissible to still allow the air free exhausting, and to maintain the outlets above the snowline. By adopting the circular multiple louvers, of which we are the inventors, we can standardize on sizes and build the round louver for considerably less than the square or rectangular styles, many of which we have built in the past years.

By installing same in the neck of the ventilator at our shop, we not only give a perfect fit, but also eliminate all indefiniteness as to the correct location and size of the damper and cut the installing cost to one-quarter. It is also easier to install the operating motor and makes it more accessible. The size of the damper is the full size of the stack, and yet is about 40 per cent smaller in area than those heretofore used in the square or rectangular louver, again reducing the cost considerably. By supplying the contractor with the complete unit the builder is assured of a well designed, uniform and complete apparatus.

Heretofore, the contractor purchased the ventilator from one manufacturer, probably built the roof base himself, and purchased the dampers elsewhere, or even the dampers were supplied and installed by another contractor. This added materially to the cost.

Heads only. Effico Heads without dampers are also supplied.

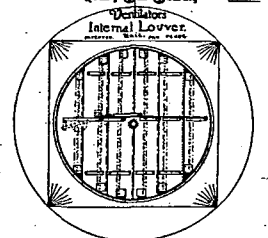
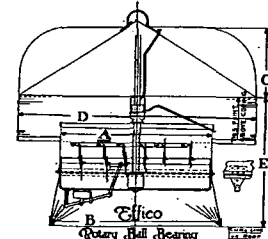
Suggested Specifications

The roof ventilators shall be of the sizes as shown in plans, [square base] [round base] style to be made of [galvanized steel] [Cop-r-loy] [copper]. [The pneumatic damper motor to be supplied with these units]. [Shall be supplied by the heating and ventilating contractor]. They shall be the Effico Internal Louver Unit Ventilators as manufactured by the W. F. HIRSCHMAN CO., INC., Buffalo, N.Y.

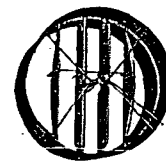
Effico Louver Unit Sizes and Dimensions

Dimensions, Inches					Galvanized Steel		Net Wt., Lb.	Copper, Oz.	Code for Telegraphy
A	B	C	D	E	Cowl	Base			
18	20	10	28 1/2	23	24	24	90	16	vale
24	30	14	40	30	22	22	140	18	valet
30	36	14	50	32	22	20	190	20	vive
36	42	18	60	32	22	18	225	24	varve
42	48	22	68	43	22	18	350	24	vetch
48	54	24	76	43	22	18	400	24	vax
54	60	24	86	43	22	18	600	24	vaid
60	66	24	98	43	20	18	710	24	valor
66	72	30	103 1/2	49	20	18	800	24	vamp
72	80	30	114	54	20	18	880	24	vane
84	92	36	130	54	18	16	1050	24	vang
96	116	45	153	54	18	16	1200	24	van

For round bases, "E" dimension remains the same. For capacities note preceding page.



Patented May 20, 1922; March 20, 1928.



Open



Closed

The Multiple Circular Louver Damper in Neck of Ventilator