

Características Generales de los Extractores Atmosféricos + Gravitatorios, TwinTurbo.

Los Extractores Atmosféricos Gravitatorios + Eólicos, TwinTurbo VentDepot, son equipos industriales de alta duración y tienen una capacidad de extracción altísima, ya que cuentan con 2 turbinas muy efectivas al viento, fabricadas en 100% Aluminio.

Incluyen base de extracción, cuello y turbina.

Bases disponibles en Lámina Galvanizada, Lámina Pintro y Aluminio.

Ideales para instalarse en cumbrera a dos aguas, techo plano y a un agua.

Estos equipos ahorran energía eléctrica y están libres de mantenimiento.

Su base plana con pestaña para montaje permite adaptarse con facilidad a cualquier tipo de techumbre de hasta 3 pulgadas de peralte, simplemente cortando con unas tijeras para lámina y realizando el dobléz con la mano y/o martillo de goma.

Diseñado con las normas internacionales y aprobado por la I.V.S. (Industrial Ventilation Society).

Aplicaciones de los Extractores Atmosféricos + Gravitatorios, TwinTurbo.

Los Extractores Atmosféricos Gravitatorios + Eólicos TwinTurbo pueden extraer: Calor, vapor, humo, olores solventes y gases.

Para uso en: Naves industriales talleres, almacenes y/o lugares con alta salinidad o humedad, fabricas, ventilación general en bodegas de grandes dimensiones, entre otros.

Garantía de los Extractores Atmosféricos + Gravitatorios, TwinTurbo.

Los Extractores Atmosféricos Gravitatorios + Eólicos TwinTurbo, tienen una garantía de:

Base de Aluminio: 30 años.

Base de Lámina Pintro: 5 años.

Base de Lámina Galvanizada: 3 años.

Sujeto a las cláusulas de garantía de VentDepot.



Características Técnicas Específicas de los Extractores Atmosféricos + Gravitatorios, TwinTurbo.

Clave	Material de la Base	Garganta		Caudal		Tipo de Techo	Calibre	Turbinas	Peso Kg	Dimensiones en cm.
		mm	in	m ³ /hr	CFM					
MXTTB-001	Galvanizado	610x1270	24x50	13500	7941	A 2 aguas y/o cumbrera	22	2	37	82,106,219
MXTTB-002	Galvanizado	610x1270	24x50	13500	7941	A 1 agua y/o perpendicular a cumbrera	22	2	37	82,106,219
MXTTB-003	Pintro	610x1270	24x50	13500	7941	A 2 aguas y/o cumbrera	22	2	37	82,106,219
MXTTB-004	Pintro	610x1270	24x50	13500	7941	A 1 agua y/o perpendicular a cumbrera	22	2	37	82,106,219
MXTTB-005	Aluminio	610x1270	24x50	13500	7941	A 2 aguas y/o cumbrera	22	2	24	82,106,219
MXTTB-006	Aluminio	610x1270	24x50	13500	7941	A 1 agua y/o perpendicular a cumbrera	22	2	24	82,106,219

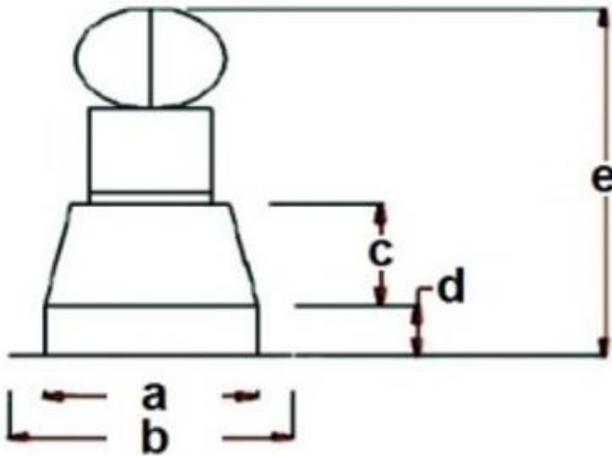




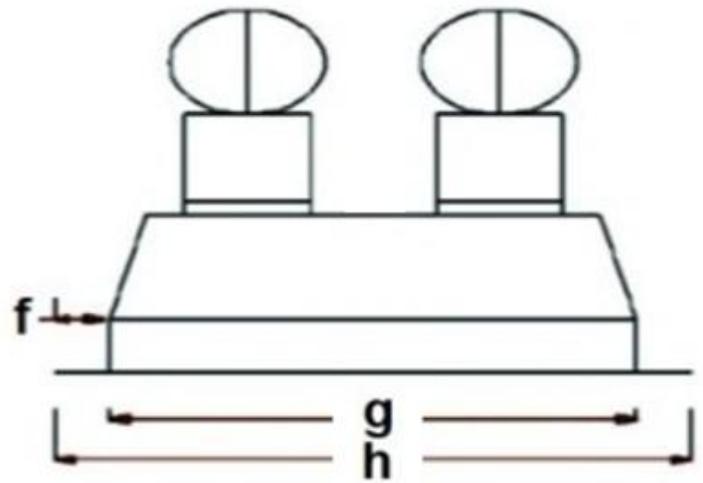
Dimensiones Específicas de los Extractores Atmosféricos + Gravitatorios, TwinTurbo en mm.

Clave	A	B	C	D	E	F	G	H	I	j	k
MXTTB-001	610	813	305	153	1055	153	1270	1559	102	1118	352
MXTTB-002	610	813	305	153	1055	153	1270	1559	102	1118	352
MXTTB-003	610	813	305	153	1055	153	1270	1559	102	1118	352
MXTTB-004	610	813	305	153	1055	153	1270	1559	102	1118	352
MXTTB-005	610	813	305	153	1055	153	1270	1559	102	1118	352
MXTTB-006	610	813	305	153	1055	153	1270	1559	102	1118	352

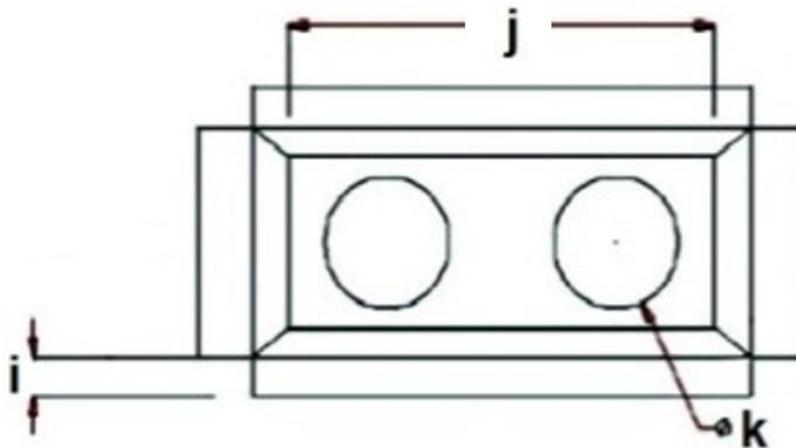
Vista Frontal



Vista Lateral



Vista Superior





Fórmula para Cálculo de Extracción de un TwinTurbo.

De las fórmulas siguientes elegir la fórmula del TwinTurbo correspondiente.

Capacidad de Extracción para modelo **MXTTB-001** al **MXTTB-004** Extracción* MXETN-001 = $(0.818 + [0.0303 \times A]) \times (121.5 + [103.4 \times V] + [11.6 \times G] + [5.6 \times T]) \times 4.18$.

A = Altura de montaje del **TwinTurbo** sobre el piso, en metros.

V = Velocidad del viento media anual, en km/hr.

G = Gradiente Térmico medio anual, en °C, (Temperatura Interior - Temperatura Exterior)

T = Temperatura Regional media anual, en °C. Ver Tabla.

*La capacidad de extracción de aire está dada en m³/hr.

*A continuación hemos elaborado tablas de capacidades de extracción en base a las fórmulas anteriores, facilitando los cálculos.

Criterio de Cálculo para para la Capacidad de Extracción de un Equipo.

En base a la tabla inferior ubicar la región donde se van a instalar los **TwinTurbo**, para obtener la velocidad de viento y temperatura media anual. Ejemplo: **Ciudad de México = Velocidad del Viento (15) Temperatura (18)**.

Tabla de Velocidades Medias Anuales y Temperaturas por Estado

Estado	Viento Km/Hr	Temperatura °C	Estado	Viento Km/Hr	Temperatura °C	Estado	Viento Km/Hr	Temperatura °C
Aguascalientes	10	19	Guerrero	11	27	Quintana Roo	13	28
Baja California norte	14	17	Hidalgo	16	15	San Luis Potosí	15	18
Baja California Sur	12	25	Jalisco	8	20	Sinaloa	11	27
Campeche	12	28	México	14	20	Sonora	13	24
Chiapas	18	22	Michoacán	10	24	Tabasco	11	29
Chihuahua	9	20	Morelos	7	20	Tamaulipas	10	26
Ciudad de México	15	18	Nayarit	10	12	Tlaxcala	11	15
Coahuila	11	19	Nuevo León	8	12	Veracruz	15	26
Colima	10	27	Oaxaca	10	21	Yucatán	12	26
Durango	12	13	Puebla	15	17	Zacatecas	11	26
Guanajuato	14	20	Querétaro	7	18			

Posteriormente evaluar la cantidad de calor que se siente o produce dentro de la nave, con las siguientes opciones:

Ejemplo: Nave Industrial donde tenemos hornos (Este caso sería un lugar donde se está acumulando mucho calor, entonces la tabla correspondiente sería: "**Área o lugar con Mucho Calor**", y en base a la ubicación regional del Estado de México la capacidad de Extracción de cada **TwinTurbo** instalado en zona sería de **9438* m3/Hr**).





Diferencial Térmico (Temperatura Interior - Exterior) de 0 a 15 °C .											
Temperatura de la Región (°C)											
		12	14	16	18	20	22	24	26	28	30
Velocidad de Viento (Km/hr)	7	4707	4753	4803	4853	4899	4949	4995	5045	5091	5141
	9	5601	5651	5697	5748	5793	5844	5894	5940	5990	6040
	11	6496	6546	6596	6642	6692	6738	6788	6838	6884	6935
	13	7394	7440	7491	7537	7587	7637	7683	7733	7779	7829
	15	8289	8339	8385	8435	8481	8531	8582	8628	8678	8724
	17	9183	9234	9280	9330	9376	9426	9476	9522	9572	9618
	18	9631	9681	9727	9777	9823	9873	9923	9969	10019	10065

En la capacidad de extracción de aire está dada en m3/hr.
 Las capacidades de extracción de aire están medidas a una altura de 7.2 metros.

Diferencial Térmico (Temperatura Interior - Exterior) de 16 a 24 °C.											
Temperatura de la Región (°C)											
		12	14	16	18	20	22	24	26	28	30
Velocidad de Viento (Km/hr)	7	5158	5208	5254	5334	5350	5401	5451	5497	5547	5593
	9	6053	6103	6149	6199	6245	6295	6345	6391	6441	6487
	11	6951	7002	7047	7098	7144	7194	7244	7290	7340	7386
	13	7846	7896	7942	7992	8038	8088	8138	8184	8235	8281
	15	8740	8791	8837	8887	8933	8983	9033	9079	9129	9175
	17	9635	9685	9731	9781	9827	9877	9928	9973	10024	10070
	18	10082	10132	10178	10228	10274	10325	10375	10421	10471	10517

En la capacidad de extracción de aire está dada en m3/hr.
 Las capacidades de extracción de aire están medidas a una altura de 7.2 metros.

Diferencial Térmico (Temperatura Interior - Exterior) de 25 °C											
Temperatura de la Región (°C)											
		12	14	16	18	20	22	24	26	28	30
Velocidad de Viento (Km/hr)	7	5710	5760	5806	5856	5902	5952	6002	6048	6099	6145
	9	6604	6655	6701	6751	6797	6847	6897	6943	6993	7039
	11	7503	7553	7599	7649	7695	7746	7796	7842	7892	7938
	13	8398	8448	8494	8544	8590	8640	8690	8736	8786	8832
	15	9292	9342	9388	9438*	9484	9535	9585	9631	9681	9727
	17	10191	10241	10287	10337	10383	10433	10483	10529	10580	10626
	18	10638	10688	10734	10784	10830	10881	10931	10977	11027	11073

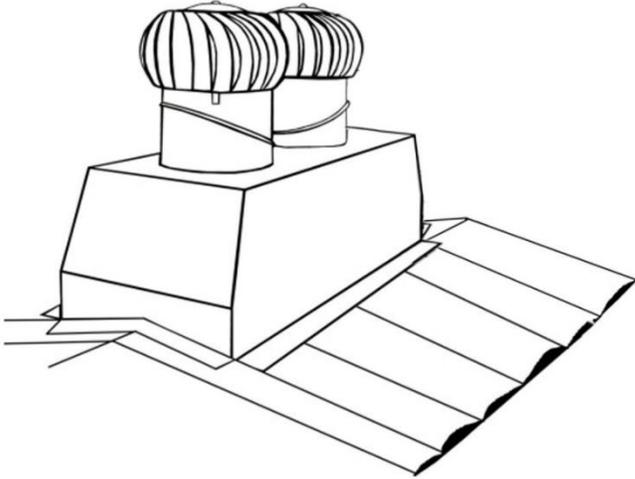
En la capacidad de extracción de aire está dada en m3/hr.
 Las capacidades de extracción de aire están medidas a una altura de 7.2 metros.



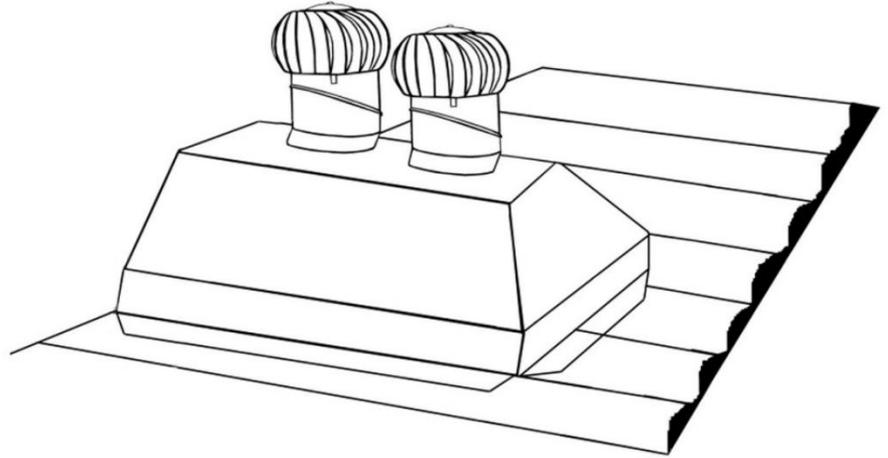


Aplicaciones de los Extractores Atmosfericos + Gravitatorios, TwinTurbo.

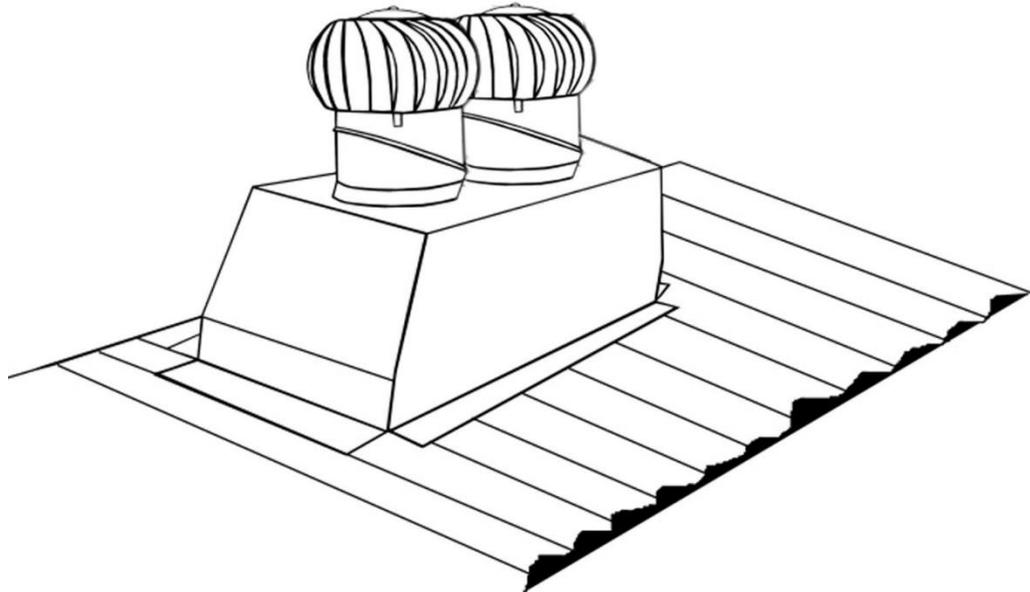
Montaje a dos aguas y/o cumbre



Montaje a un agua y/o perpendicular a cumbre

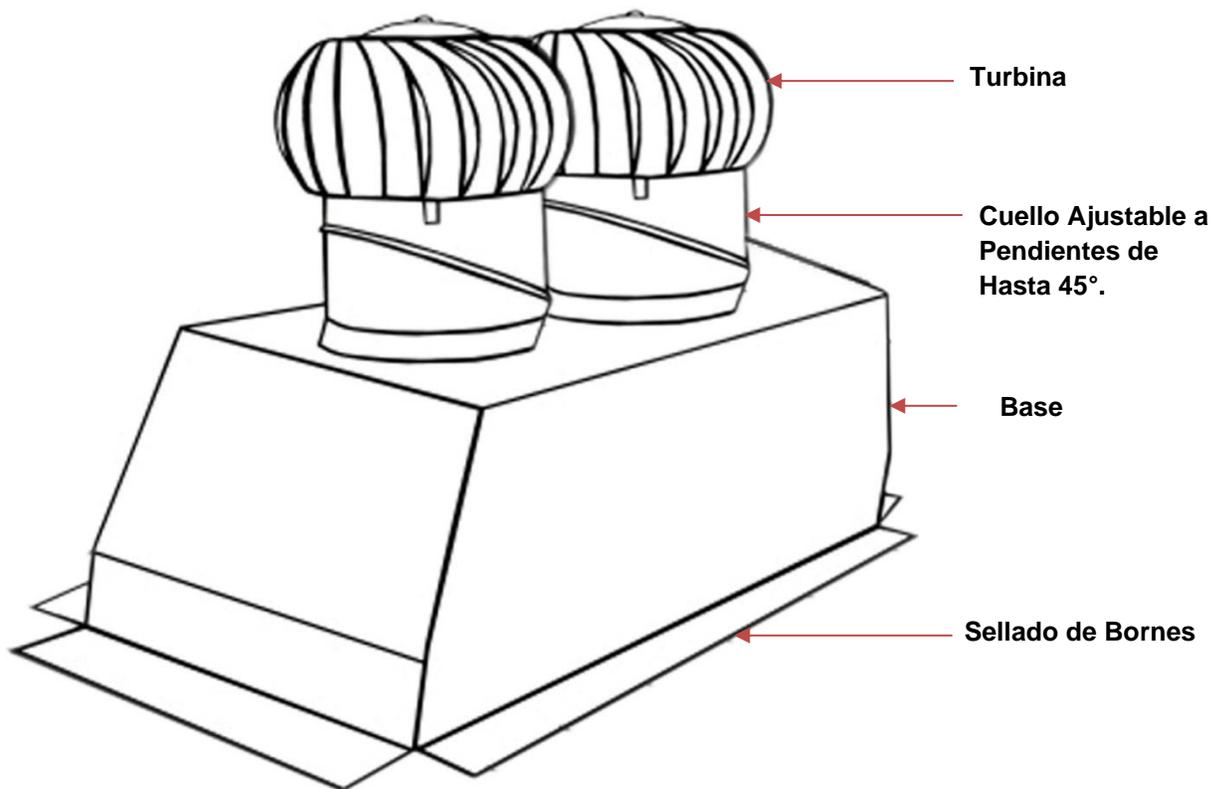


No recomendable





Descripción de los Extractores Atmosfericos + Gravitatorios, TwinTurbo.





VentDepot Inc. APPENDIX for NOTICE OF ACCEPTANCE (NOA) Supported by MIAMI-DADE COUNTY FLORIDA™ to LOMANCO, INC.™ accepted by the BOARD OF RULES AND APPEALS (BORA)™



BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION



NOA No.: 15-0831.08
Expiration Date: 12/22/20
Approval Date: 11/05/15

VentDepot, Inc.
233 S Cerritos Ave.
Azusa, CA 91702

This Appendix provides information about VentDepot, Inc. products, regarding the NOA issued for Lomanco, Inc. applicable rules and regulations governing the use of construction materials to VentDepot, Inc. official and only company that represents and distributes Lomanco, Inc.™ and its products in Mexico, Central America, South America and the Caribbean.

The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade Country) reserve the right to have this product or material tested for quality assurance purposes.

This product distributed by VentDepot, Inc. in representation for Lomanco, Inc. is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone of the Florida Building Code.

• DESCRIPTION:

- BIB-14/BEB14 WhirlyBird® Wind Turbine.
- VentDepot TurboVent USETTE-001
- VentDepot Turbo Extractor MXETE-001
- VentDepot TurboJoule MXTUJ-001, MXTUJ-002, MXTUJ-003
- VentDepot EcoTon MXTNT-001, MXTNT-002, MXTNT-003, MXTNT-004, MXTNT-005, MXTNT-006, MXTNT-007, MXTNT-008, MXTNT-009, MXTNT-010, MXTNT-011, MXTNT-012

Above VentDepot products are the equivalent on Lomanco BIB-14/BEB14 WhirlyBird® Wind Turbine.

Each product shall bear a permanent label with the manufacturer's name, Lomanco logo, state and the



following statement:





VentDepot Inc. APPENDIX for NOTICE OF ACCEPTANCE (NOA) Supported by MIAMI-DADE COUNTY FLORIDA™ to LOMANCO, INC.™ accepted by the BOARD OF RULES AND APPEALS (BORA)™



BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION



ROOFING COMPONENT APPROVAL

Category: Roofing
Sub-Category: Ventilation
Type: Turbine
Materials: Aluminum
Deck: Wood

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
BIB-14/BEB14 WhirlyBird®	22" wide at base 17-1/8" high Base 0.0253" thick Elbow & Dome 0.032" thick Vanes 0.19" thick Rotr Band 0.0305"thick Extrusions 0.125" thick	TAS 100(A)	14" diameter opening turbine ventilation system



VentDepot Inc. APPENDIX for NOTICE OF ACCEPTANCE (NOA) Supported by MIAMI-DADE COUNTY FLORIDA™ to LOMANCO, INC.™ accepted by the BOARD OF RULES AND APPEALS (BORA)™



BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY VentDepot, Inc. representative of Lomanco, Inc.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
USETE-001	22" wide at base 23" high 23" depth, 14"Ø Neck, 2bearings Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXETE-001	22" wide at base 23" high 23" depth, 14"Ø Neck, 2bearings Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTUJ-001	28" x 22" base 37" high 53" wide 47 depth Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTUJ-002	36" x 22" base 41" high 61" wide 47 depth Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTUJ-003	48" x 22" base 41" high 73" wide 47 depth Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-001	32" x 86" base 17" high 13" wide 34" depth 3 Neck 14"Ø, 2 slopes Galvanized	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-002	32" x 86" base 17" high 13" wide 34" depth 3 Neck 14"Ø, 1 slope Galvanized	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-003	32" x 86" base 17" high 13" wide 34" depth 3 Neck 14"Ø, 2 slopes Powder Coated paint	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-004	32" x 86" base 17" high 13" wide	TAS 100(A)	17" diameter opening turbine

VentDepot Inc. APPENDIX for NOTICE OF ACCEPTANCE (NOA) Supported by MIAMI-DADE COUNTY FLORIDA™ to LOMANCO, INC.™ accepted by the BOARD OF RULES AND APPEALS (BORA)™



BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY VentDepot, Inc. representative of Lomanco, Inc.

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
MXTNT-005	32" x 86" base 17" high 13" wide 34" depth 3 Neck 14"Ø, 2 slopes Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-006	32" x 86" base 17" high 13" wide 34" depth 3 Neck 14"Ø, 1 slopes Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-007	32" x 130" base 17" high 13" wide 34" depth 5 Neck 14"Ø, 2 slopes Galvanized	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-008	32" x 130" base 17" high 13" wide 34" depth 5 Neck 14"Ø, 1 slopes Galvanized	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-009	32" x 130" base 17" high 13" wide 34" depth 5 Neck 14"Ø, 2 slopes Powder Coated paint	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-010	32" x 130" base 17" high 13" wide 34" depth 5 Neck 14"Ø, 1 slopes Powder Coated paint	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-011	32" x 130" base 17" high 13" wide 34" depth 5 Neck 14"Ø, 2 slopes Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system
MXTNT-012	32" x 130" base 17" high 13" wide 34" depth 5 Neck 14"Ø, 1 slopes Aluminum	TAS 100(A)	17" diameter opening turbine ventilation system



VentDepot Inc. APPENDIX for NOTICE OF ACCEPTANCE (NOA) Supported by MIAMI-DADE COUNTY FLORIDA™ to LOMANCO, INC.™ accepted by the BOARD OF RULES AND APPEALS (BORA)™



BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION



LIMITATIONS:

1. Refer to applicable building codes for required ventilation.
2. This acceptance is for installations over asphaltic shingle or low slope roofing.
3. The BIB-14/BEB14 WhirlyBird[®] Wind Turbine, VentDepot TurboVent USETE-001, VentDepot Turbo Extractor MXETE-001, VentDepot TurboJoule MXTUJ-001, MXTUJ-002, MXTUJ-003, VentDepot EcoTon MXTNT-001, MXTNT-002, MXTNT-003, MXTNT-004, MXTNT-005, MXTNT-006, MXTNT-007, MXTNT-008, MXTNT-009, MXTNT-010, MXTNT-011, MXTNT-012 turbine roof ventilators shall not be installed on roof mean heights greater than 33ft.

DETAILED DRAWINGS:

The detailed drawings of BIB-14/BEB14 WhirlyBird[®] Wind Turbine, VentDepot TurboVent USETE-001, VentDepot Turbo Extractor MXETE-001, VentDepot TurboJoule MXTUJ-001, MXTUJ-002, MXTUJ-003, VentDepot EcoTon MXTNT-001, MXTNT-002, MXTNT-003, MXTNT-004, MXTNT-005, MXTNT-006, MXTNT-007, MXTNT-008, MXTNT-009, MXTNT-010, MXTNT-011, MXTNT-012 turbine roof ventilators are shown in page 4 to 5 of NOA No.: 10-0928.05 Expiration Date:





BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Lomanco, Inc.
2101 W. Main Street
Jacksonville, AR 72076

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: BIB-14/ BEB-14 WhirlyBird® Wind Turbine

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This renews NOA # 05-0823.06 consists of pages 1 through 5.
The submitted documentation was reviewed by Alex Tigera.





ROOFING COMPONENT APPROVAL

Category: Roofing
Sub-Category: Ventilation
Type: Turbine
Materials: Aluminum
Deck: Wood

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
BIB-14/ BEB-14 WhirlyBird®	22" wide at base 17-1/8" high Base 0.0253" thick Elbow & Dome 0.032" thick Vanes 0.019" thick Rotor Band 0.0305" thick Extrusions 0.125" thick	TAS 100(A)	14" diameter opening turbine ventilation system.

MANUFACTURING LOCATION

1 Jacksonville, AR

EVIDENCE SUBMITTED

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
PRI Asphalt Technologies, Inc.	LOM-019-02-01	TAS 100(A)	09/01/10



**APPROVED ASSEMBLY:**

System Type A: Mechanical attachment of turbine vent over composite shingles

Cutout: At chosen location (see Lomanco instructions for proper placement) and centered between two roof rafters, cut a 14" diameter hole through shingles and sheathing boards. Seal around top and sides of hole with approved roofing cement.

Installation Determine roof pitch in compliance with Lomanco instructions and align roof pitch number on elbow with indicator line on flashing. Place three short screws through holes that line up with pre-drilled holes in base.

Place mounting base unit flat on the shingles on its flashing, and coat underside of base flashing with roofing cement. In its pitch-adjusted position, carefully slide upper half of flashing up roof beneath shingles previously rolled back until base is centered over cutout. Rolling back the shingles where necessary, and rechecking pitch setting for vertical alignment, secure the base unit to the roof deck with a minimum of fourteen ring shank roofing nails, equally spaced, approximately 3/4" from edge of base per detail drawing "Base". Nails shall be of sufficient length to penetrate through roof sheathing a minimum of 1/2". Apply roofing cement to underside of shingles overlapping flashing, and press them down onto the flashing.

Rotate top of elbow to level position by turning counterclockwise. Place locking clamp across seam and tighten as shown in Lomanco instructions with approved sheet metal screw. Seal all seams and nails with approved roofing cement.

Position whirlybird on the base. Line up the pre-drilled holes in the brackets and base and fasten with approved long sheet metal screws.

After installation, verify that whirlybird turns freely. If necessary, minor adjustment may be made by gently prying lowest point of turbine upward to remove any wobble.

Net Free Area: Refer to manufacturers published literature.

Slope: Minimum 2" on 12"

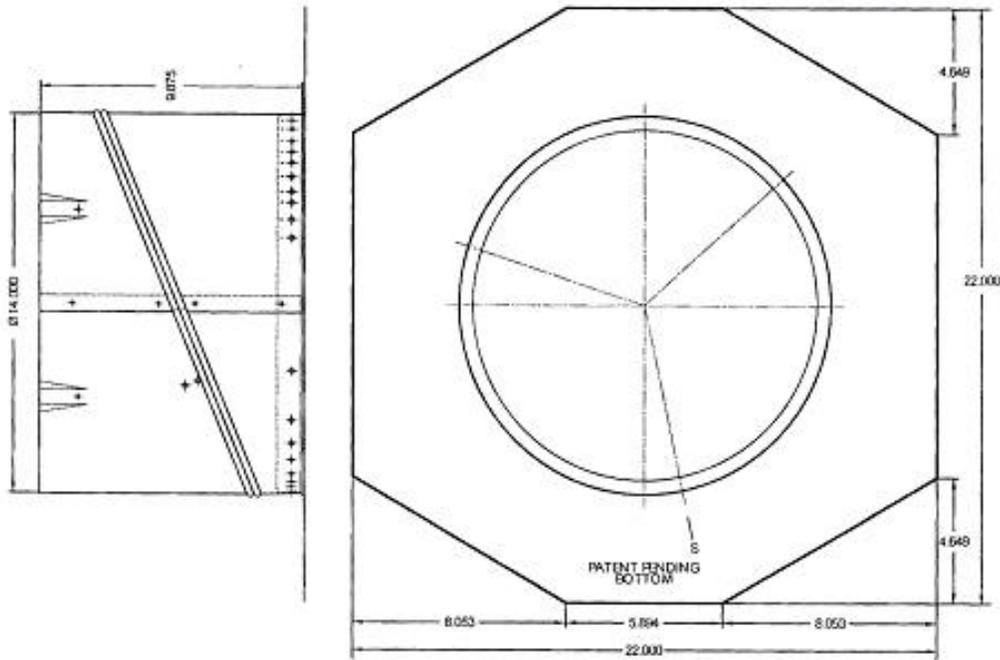
LIMITATIONS:

1. Refer to applicable building codes for required ventilation.
2. This acceptance is for installations over asphaltic shingle or low slope roofing.
3. BIB-14/BEB-14 Whirlybird® turbine roof ventilators shall not be installed on roof mean heights greater than 33 ft





DETAIL DRAWINGS

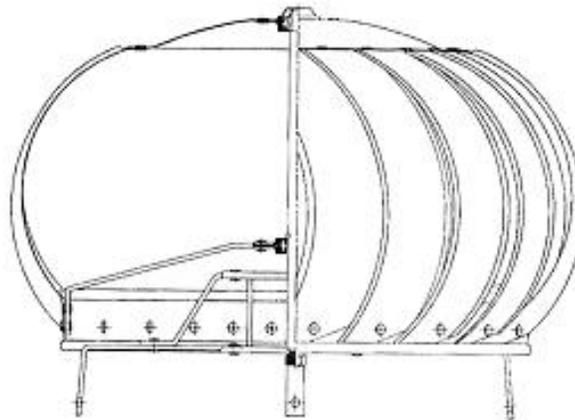
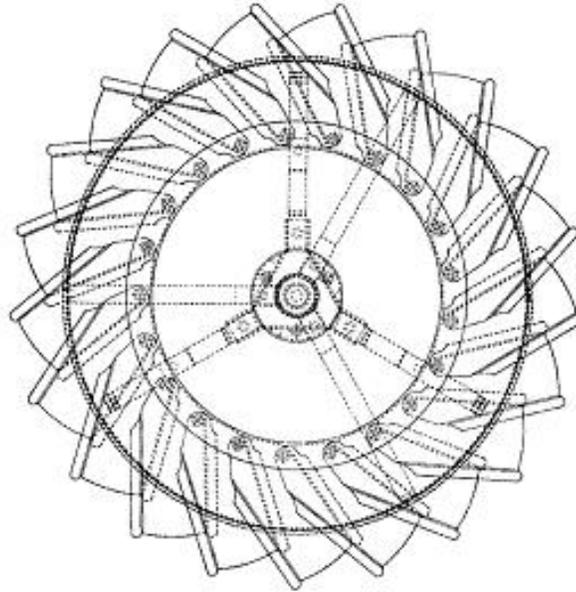


Base





DETAILED DRAWINGS (CONTINUED)

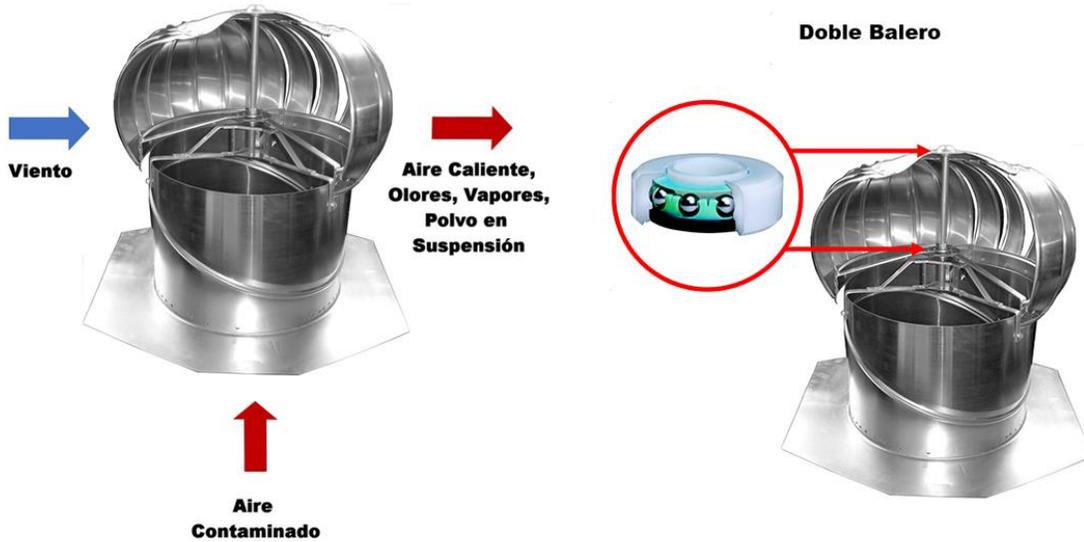


BIB-14, BEB-14
END OF THIS ACCEPTANCE





Galeríade imagenes de los Extractores Atmosfericos + Gravitatorios, TwinTurbo.



100 % Aluminio

