



VENTURY AIR BLOWER

Owner's Manual

JETBLAST Venturi Air Blowers are a perfect solution for ventilating or extracting hazardous and explosive vapors from tanks, as well as a variety of other functions. Additionally, it can be used to cool down machinery or workers. Its function is to take high pressure air volume (from a compressor), creating a Venturi action, which results in the inhalation of large volumes of air through base. Maximum air pressure: 140 PSI.

CONSTRUCTION:

- Constructed with galvanized steel
- Single piece cast aluminum inlet housing
- Sturdy steel galvanized steel diffuser
- Static ground attached to base of unit
- Steel handle
- Quick coupling inlet connection
- Multiple inlet ports

APPLICATIONS:

- Petroleum processing
- Refineries and chemical
- Power plants
- Steel industry
- Shipyards
- Marine industry
- Manhole operation, etc.

- No moving parts
- Static grounding lug is standard
- Lightweight cast aluminum base
- Galvanized steel horn (replaceable)
- Steel Handle
- Use in high heat locations

The GPF-3752 general purpose ventilation fan weighs only 22 lbs and has CFM ratings of 2770 @ 50 PSIG, 3340 @ 70 PSIG, and 3752 @ 90 PSIG. A steel handle provides convenient carrying and the aluminum base accepts standard adapters for compressed air lines. At Larson Electronics, we do more than meet your lighting needs. We also provide replacement, retrofit, and upgrade parts as well as industrial grade power accessories. Our craftsmen can custom build any lighting system and/or accessories to fit the unique demands of your operation. A commitment to honesty, quality, and dependability has made Larson Electronics a leader in the lighting and electronics business since 1973. Contact us today at 800-369-6671 or message for more information about our custom options tailored to meet your specific industry needs.

GPF-3752 Fan/Blower

Overall Length: 44"

Base Diameter: 11.16" flange, 6 inch opening

Diameter of Horn: 13"

NPT: 1-1/4"

Bolt Circle: 10.28"

Base Slot: 0.43"

Fan Type: Venturi Design Fan/Blower

CFM Rating : 2770 @ 50 PSIG, 3340 @ 70 PSIG, 3752

@ 90 PSIG

Power: Compressed Air- 38 CFM at 100 PSI

Materials: Galvanized Steel / Aluminum

Made in the USA : The Larson Electronics GPF-3752 General Purpose Ventilation Fan is designed for removing hazardous fumes from underground storage tanks and is powered by compressed air. This venturi style blower has no moving parts and is suitable for use in high heat locations.

This general purpose ventilation fan is designed with removing hazardous fumes and vapors from standard storage tanks and will accept a Petro-Vent™ adapter which allows it to thread directly onto the vent pipe on most common storage tanks. This ventilation fan is powered by compressed air and requires a compressor capable of providing 38 CFM at 100 PSI. This blower/fan has a cast aluminum base and galvanized steel horn for light weight and durability. The GPF-3752 utilizes the Venturi effect to create suction. The Venturi effect is the reduction in fluid pressure that results when a fluid flows through a constricted section of pipe. In the case of the GPF-3752, the fluid in question is the air moving through the system. Essentially, the Venturi effect uses scientific principles to create suction in a vertical shaft with compressed air or steam entering the shaft above the suction point. The use of this effect creates a fan/blower system that can be used in high heat locations and doesn't require any moving parts in the exhaust air stream. This creates a system that requires less maintenance and has a higher reliability than other systems due to having fewer moving parts.

Features

- Used to ventilate hazardous vapors or fumes



TANK VENTILATOR

This blower has been designed to meet ventilation requirements for underground storage tanks. A special flange adapter has been developed to thread directly on the 4-inch vent pipe found on most storage tanks.

Features:

- Durable Construction
- Utilizes the Venturi Effect
- Reduced Maintenance Requirements
- Increased System Reliability
- Special Orders- Requirements
- Contact us for special requirements
- Toll Free: 1-800-369-6671
- Intl: 1-903-498-3364
- E-mail: sales@larsonelectronics.com



OVERVIEW



Venturi style air blowers (air horns/movers) function by utilizing the Venturi principle in which a small volume of high velocity air is forced through small openings (e.g. nozzle jets in the base of the blowers) in order to produce large volumes of low velocity air (See: flow chart on page 3). A minimum $\frac{1}{2}$ " I.D. hose is recommended from the air supply source to the side inlet connection on the blower base. The maximum inlet pressure for these units is 140 psi (9.7 bar).

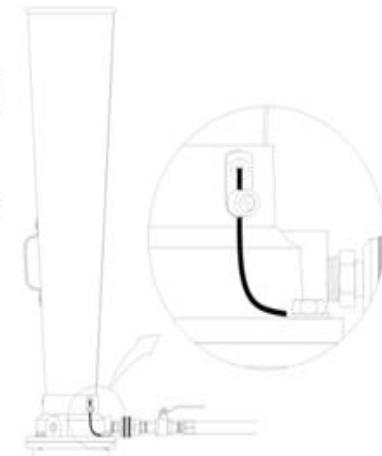
PRECAUTIONARY NOTES

Strict precautions must be taken when using Venturi style air blowers during applications that require gas freeing, tank entry, tank collapse prevention, or tank cleaning where volatile and/or toxic vapors are present. For informational purposes, please consult the American Petroleum Institute's (API) publications 2015 and 2016 prior to performing any of the aforementioned applications. These publications may be obtained from:

American Petroleum Institute
1220 L St. NW
Washington, D.C. 20005
(202) 682-8000

Venturi air blowers have no moving parts, making them ideal for ventilating hazardous areas. To remove static electricity, a grounding lug is attached to the base of all of our Venturi air blower models. When in use in a volatile atmosphere, connect a ground wire to discharge any static electricity that may develop. The Venturi bases are made of a high quality aluminum alloy. When aluminum is scraped across rusty steel, it may create a smear which has potential to cause an incendiary spark. Be sure to take precautions not drag the base along steel tanks or other steel surfaces.

All performance ratings in this manual were measured on a unit supplied with clean, filtered air, with nozzle jets of the proper diameter and with no clogs in any manner. Precautionary steps should be taken to prevent clogging of the nozzle jets. Periodic steam cleaning is recommended. NOTE: Brass bolts and nuts should be used when securing the base assembly to the blower if used in hazardous environments. Refer to the API guidelines on proper grounding procedures.



Install desired air inlet fitting (not supplied) and attach ground wire from ground lug to base.

SETUP PROCEDURE

When the Venturi air blower is used to supply fresh air in a confined space, the air supply compressor must use a Grade-D air filtration package with sufficient capacity (cfm). A carbon monoxide monitor with alarm should be installed inline. Consult factory for details:

1. Install desired inlet fitting no less than $\frac{1}{2}$ " in diameter.
2. Attach grounding wire between the base of the unit and the tank.
3. Tightly secure the air blower in place prior to turning on the air supply. Be sure not to restrict the internal diameter of the air blower base as severe output flow loss will result.
4. Attach compressed air source.

Note: Venturi style air blowers are NOT meant to be used with ducting on the inlet or outlet as severe flow loss will occur.



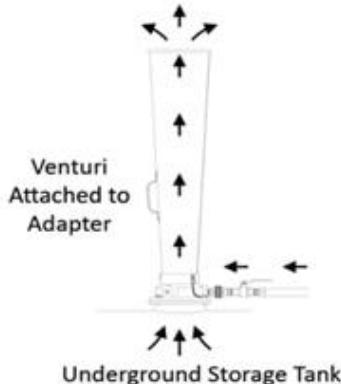
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www.jetblastintl.com



STORAGE TANK ADAPTER MODELS GPF-1422-SP9000 AND GPF-1580



This flange has been developed specifically to thread onto the 4" vent pipe found on most storage tanks. (NOTE: Model GPF-1422-SP9000 fits models GPF-1422 AND GPF-1580 Venturi style air blowers. Model GPF-1580 fits model GPF-3752 Venturi style air blower.)

1. Using the supplied hardware, bolt Venturi air blower onto adapter.
2. Attach grounding wire between the base of the unit and the tank.
Do not restrict the internal diameter of the air blower base as severe output flow loss will result.
3. Screw storage tank adapter into 4" vent pipe on tank, and tightly secure the air blower in place prior to turning on the air supply.
4. Attach compressed air source.

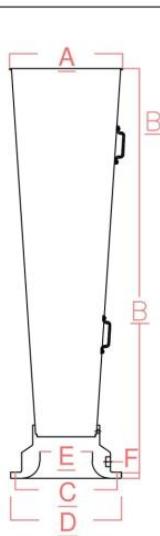
Note: Venturi style air blowers are NOT meant to be used with ducting on the inlet or outlet as severe flow loss will occur.

AMERICAN STANDARD MEASUREMENTS "VENTURI STYLE AIR BLOWERS" VARIOUS INLET PRESSURES

EFFICIENCY PERFORMANCE AT SELECT INLET PRESSURES								
INLET PRESSURE	MODEL	AIR FLOW		AIR CONSUMPTION		INDUCTION RATIO	BLOCK TIGHT STATIC PRESSURE	
		cfm	m ³ /hr	cfm	m ³ /hr		inch	mm
60 psig 4,2 kg/cm ²	JetX 2"	1,370	2,328	47	80	29.1	5.8	147
	JetX 3" & 4"	1,520	2,595	47	80	32.3	5.8	147
	JetX 6"	3,980	6,762	98	167	40.6	4.3	109
	JetX 8"	5,600	9,515	178	302	31.5	3.9	99
	JetX 10"	6,880	11,096	265	450	25.8	5.5	140
80 psig 5,6 kg/cm ²	JetX 2"	1,530	2,600	61	104	25.1	7.5	191
	JetX 3" & 4 "	1,700	2,888	61	104	27.8	7.5	191
	JetX 6"	4,500	7,645	126	214	35.7	5.6	132
	JetX 8"	6,250	10,620	233	396	26.8	5.2	132
	JetX 10"	8,000	13,592	366	571	23.8	6.8	173
100 psig 7 kg/cm ²	JetX 2"	1,660	2,820	72	122	23.0	8.9	224
	JetX 3" & 4"	1,860	3,160	72	122	25.8	8.9	224
	JetX 6"	4,870	8,274	153	260	31.8	6.7	170
	JetX 8"	6,750	11,469	282	479	23.9	6.2	157
	JetX 10"	8,900	15,121	410	697	21.7	7.7	196

PERFORMANCE VARIOUS FLEXIBLE DUCT HOSE 80 TO 110 PSI

MODEL	DUCT Diameter	FREE AIR	20 ft/6 m	30 ft/9 m	40 ft/12 m	50 ft/15 m
	in/mm	cfm/m³/hr	cfm/m³/hr	cfm/m³/hr	cfm/m³/hr	cfm/m³/hr
JetX 2 "3" & 4 "	8/203	1,700/2,888	1,550/2,634	1,480/2,515	1,410/2,396	1,350/2,294
JetX 6 "	12/305	4,500/7,645	4,020/6,830	3,860/6,558	3,715/6,312	3,580/6,083
JetX 8 "	14/356	6,250/10,620	5,550/9,431	5,280/8,972	5,050/8,581	4,850/8,241
JetX 10 "	14/356	8,000/13,592	6,850/11,640	6,550/11,130	6,250/10,620	6,000/10,195



VENTURY AIR BLOWER DIMENSION CHART

SIZE VENTURY BLOWER	A = CONE TOP DIAMETER	B = TOTAL HEIGHT	C = PCD , BOLT FIXING DIAMETER	D = BASE OUT SIDE DIAMETER	E = BASE INNER DIAMETER	F = AIR IN PORT THREAD
10"	365 MM	1160 MM	420 MM	440 MM	254 MM	1" BSPT AND 1X1/4 " BSPT
8"	350 MM	1150 MM	338 MM	360 MM	203 MM	1" BSPT
6"	305 MM	1120 MM	270 MM	295 MM	152 MM	1" BSPT
4"	200 MM	860 MM	180 MM	200 MM	101 MM	3/4 " BSPT
3"	180 MM	850 MM	160 MM	182 MM	76 MM	1/2 " BSPT
2"	160 MM	725 MM	125 MM	165 MM	50 MM	1/2 " BSPT

WE CAN MAKE ANY TYPE OF VENTURY BLOWER



SAFETY PRECAUTIONS

An electric ground or static ground is attached to the base of all air blowers. Any time you are using this air blower in a volatile atmosphere, attach a ground wire to discharge any static electricity, preventing a build-up of static electricity. Airblast pneumatic air blowers have no moving parts and are ideal for venting hazardous areas. The bases are made from a high quality aluminium alloy. Aluminium scraped across rusty steel can sometimes cause a smear. A heavy smear of aluminium on steel (being struck with some object) can cause an incendiary spark. Take precautions not to drag the base on steel tanks, etc.

While there are no moving parts to the air blowers, all of the performance ratings in this brochure are based on a unit that had a clean air reservoir and nozzle jets that are of the proper diameter and not plugged up in any way. Care should be taken to prevent clogging of the nozzle jets and a periodic cleaning with a steam cleaner would be appropriate maintenance. Secure the air blower in place prior to turning on the air supply or it will tend to move from its intended position.