

Occupational Health & Safety Venturi Style Blowers For Use in Hazardous Locations

Issue: Underground chemical and petroleum storage tanks have to be periodically cleaned out and inspected for leaks or repainted. Once the fluid is removed from the tank a process called degassing is required to remove the toxic or explosive gases prior to workers entering the tank. A ventilation device must be used to perform the degassing operation and must be approved for work in hazardous locations. The device must also be grounded to the tank in order to remove potential static charges.

Application: The Venturi blower was developed in the 1940's to meet the petroleum industry's requirements for tank degassing. The base assembly of the Venturi is designed to meet API (American Petroleum Institute) standardized tank opening sizes. The Venturi is bolted to the top of the tank and a ground wire is installed from the blower to an approved ground connection on the tank. The blower operates on compressed air from a compressor or steam via a connect hose from a compressed air source. The Venturi creates a large volume (CFM) of air suction to extract gases and fumes from the tank and discharge the air out a large exhaust cone. The Venturi can also be used to blow positive pressure in a tank, however, the air being forced into the tank should be filtered breathing air if workers will be entering the tank. Installing a ventilation duct on the end of the Venturi will severely reduce the discharged air volume of the device as there is no blower wheel or moving parts to create static pressure.

Recommendation: Choose a Venturi size based on the size of the tank or confined space to be ventilated. Use the size chart below to select the correct blower for the confined space size. Review the air consumption chart to determine the size of the portable compressor needed to properly operate the Venturi. Always ground the Venturi to the tank or earth ground to remove the potential for static electricity build-up and possible ignition of the hazardous vapors or dust. When performing work on chemical or petroleum tanks, consult API Guidelines 2015 and 2016 for recommended safe work practices.



Note: Order air inlet fittings separately

Reference ANSI/API (American Petroleum Institute) 2015 and 2016 Procedures

	50 PSIG		70 PSIG		90 PSIG		
Model	Total Air Flow (CFM)		Total Air Flow (CFM)		Total Air Flow (CFM)		
ASI-1000	935		1274		1422		
ASI-1200	1211		1429		1580		
ASI-2900	2770		3340		3752		
ASI-4100	3785		4562		5041		
Model	Air Consumed (CFM)		Air Consumed (CFM)		Air Consumed (CFM)		
ASI-1000	38		53		64		
ASI-1200	38		53		64		
ASI-2900	76		99		127		
ASI-4100	117		152		197		
Model	Overall Length	Diameter of Base	Diameter of Horn	NPT	Bolt Circle	Base Slot	Weight
ASI-1000	16.31"	7.38"	6.19"	1/2"	6.75"	0.31"	5.3 lbs
ASI-1200	32.12"	7.38"	7.37"	1/2"	6.75"	0.31"	8.1 lbs
ASI-2900	44.00"	11.16"	13.00"	1"	10.28"	0.43"	22.1 lbs
ASI-4100	46.50"	14.31"	14.37"	1"	13.18"	0.56"	32.3 lbs

Venturi Style Blowers

Description	ASI Part #	Grainger Item #
Venturi Blower	ASI-1000	4YG44
Venturi Blower	ASI-1200	1C089
Venturi Blower	ASI-2900	1C093
Venturi Blower	ASI-4100	1C095