

# Process Gas Applications



**Your ONE Solution for Blower Systems**

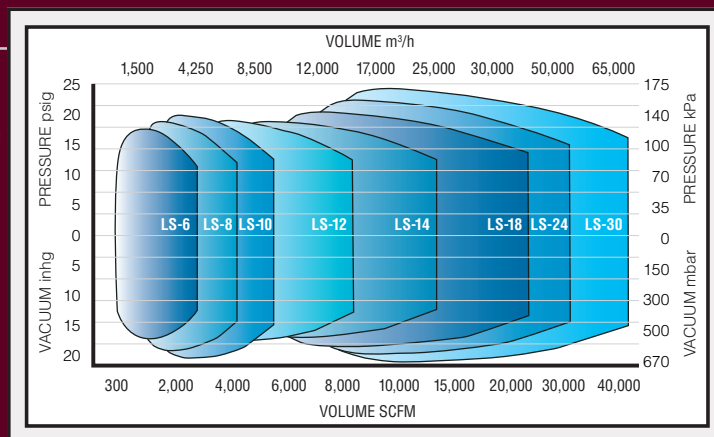
# Lone Star Knows Process Gas

Our GL Series Geared Turbo and LS Multistage Turbos were specifically designed with process gas applications in mind for both pressure and vacuum service. From saturated hydrogen sulfide to common biogas we can provide a solution to ensure long term reliability and performance.

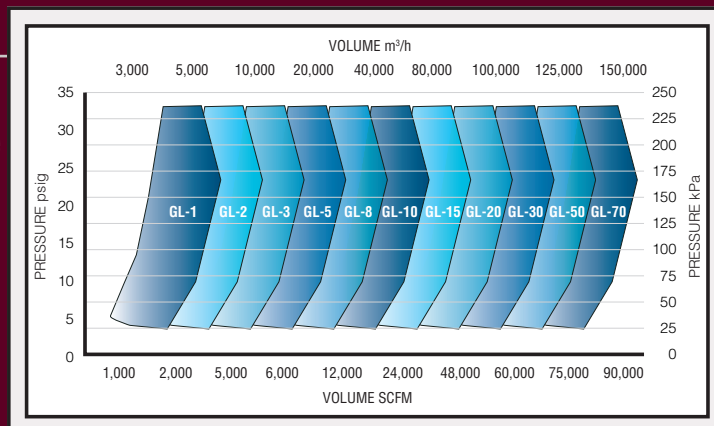
Our experienced staff can engineer a custom system to meet your application requirements for proper materials of construction, sealing options, system packaging, documentation and testing. In short, we will provide you with a complete solution.

Our world class ISO 9001 manufacturing and testing facility in Houston, Texas combined with our global network of companies can assist you wherever your application is located.

## LS Performance Range



## GL Performance Range



## Applications

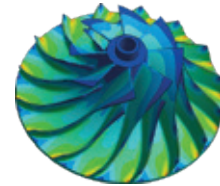
Landfill Gas  
Digester Gas  
Hydrogen Sulfide  
Pure Oxygen  
Steam  
Sour Gas  
Tail Gas Recovery  
Sulfur Dioxide  
Sulfur Recovery  
Offload Gas Recovery  
Gas Booster  
Vapor Control  
Thermal Oxidation  
Soil Vapor  
Remediation  
Coal Mine Venting  
Methane Gas  
Recovery  
Flare Systems  
Formaldehyde Gas  
Natural Gas  
Ammonia Gas  
Chlorine Gas  
Nitrogen  
Flue Gas  
Carbon Dioxide Gas



# Lone Star Engineering

Our engineering group uses the most advanced technologies to design and document each application. Specific materials of construction and coating/plating options can be specified per project according to NACE requirements or other publications. Let the experienced staff of Lone Star Blower provide recommendations and best practices on your next project.

Rotor Dynamics	CFD - Computational Fluid Dynamics
Torsional Analysis	FEA - Finite Element Analysis
3D Modeling and Design	PMI - Positive Material Analysis
XRF - X-ray Fluorescence	Optical Emissions Spectro Analysis
API, ISO, ASME Published Standards	



## GL Series Geared Turbo

The most proven design in many process gas applications, the GL Series is fully API 617/672 compliant and offers piece of mind. Force lubricated tilt pad sleeve bearings are standard and provide the longest service life with minimal maintenance.



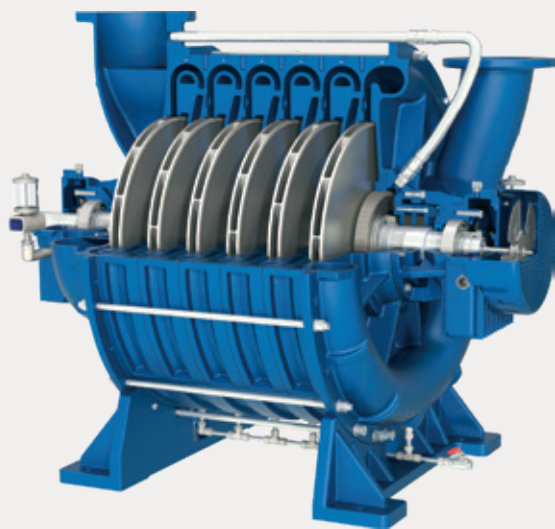
## LS Series Multistage Turbo

Simple and reliable, the LS Multistage Turbo is a strong asset in gas applications for both pressure and vacuum service. The Lone Star design offers higher process pressures and O-ring seals between cast housings to eliminate leaks, both of which are industry firsts.

## LS and GL Specifications



	LS Multistage Turbo	GL Geared Turbo
Delta Pressure/Vacuum	25 PSI / 1.7 Bar	35 PSI / 2.4 Bar
Case Pressure	35 PSI / 2.4 Bar	45 PSI / 3.1 Bar
Flow Range	300-45,000 SCFM 500 to 75,000 m3/h	1,000-88,000 SCFM 2,000 to 150,000 m3/h
Power	20-3,500 hp 15 to 2,500 kw	100-6,000 hp 75 to 4,500 kw
Gas	Gas/Air	Gas/Air
Control Types		
Variable Inlet Guide Vanes		X
Variable Diffuser Guide Vanes		X
Variable Speed	X	X
Inlet Throttle	X	X
Impeller Type	Closed	Open
API	API with exceptions	617/672
Bearings	Anti-friction Ball Bearings	Force Lubricated Sleeve Tilting Pad
Oil System	Splash or Mist	Standard or API 614
Coupling	Dry	Dry
Test Codes	ASME PTC10 / ISO 5389	ASME PTC10 / ISO 5389



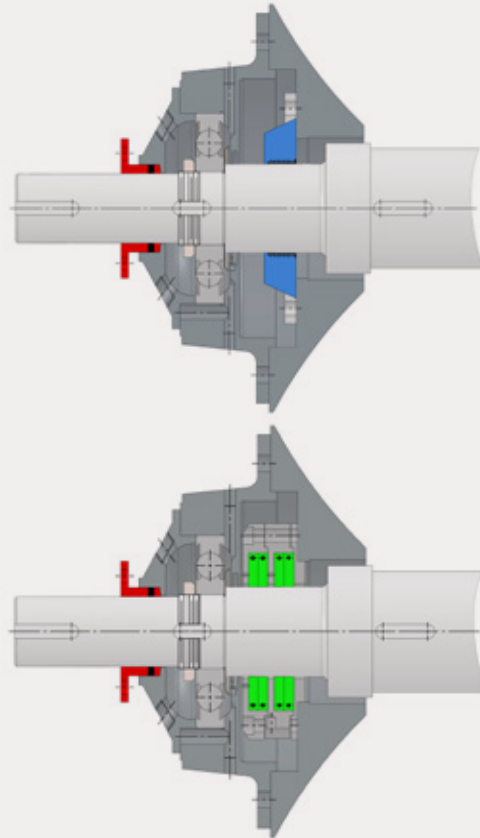
**LS Multistage Centrifugal Turbo Blower**



**GL Integrally Geared Single Stage Turbo Blower**

## Gas Sealing

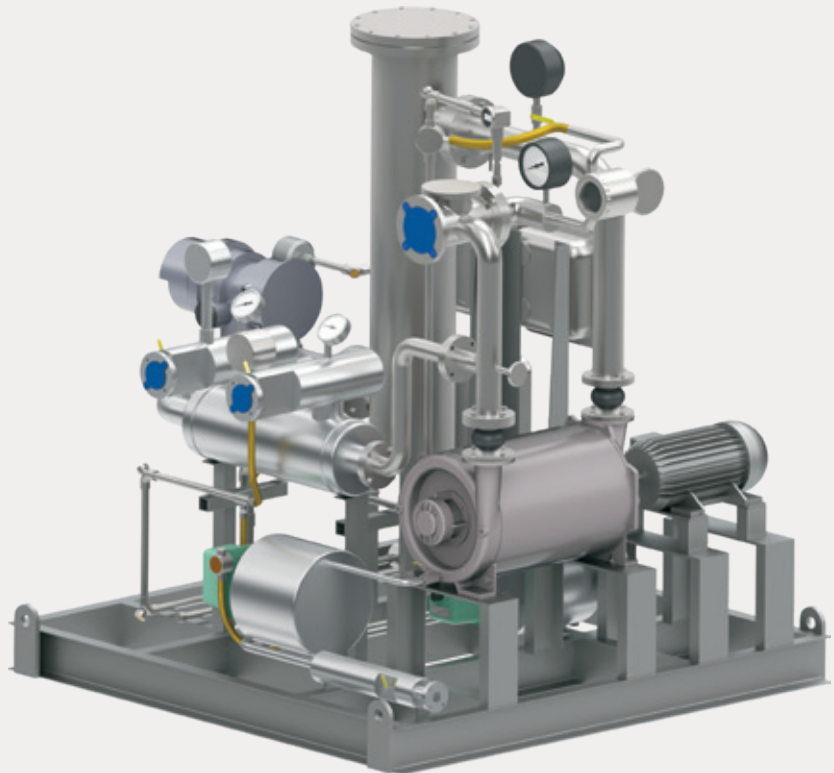
Gas sealing can be accomplished many different ways from dry type seals to a purge system. We offer every type of sealing option and can customize as required. Common seal types consist of **Carbon Ring**, **Labyrinth** or **Packing Gland**; with or without purge connections.



## Packaged Systems for Process Gas Application

Lone Star combines our core technologies and offers fully compliant packaged systems engineered for any area classification, including Class 1 Division 1, Zone 0, or ATEX.

Packages can be fully integrated with control systems pre-wired for easy installation and can include process instrumentation, filtration, cooling, recirculation, demisting and automatic drains.



## Lone Star is part of the GL-TURBO Global Network

We have locations around the world to serve you.



**We manufacture the most advanced line  
of turbo blowers in the world.**

Please visit our website at [www.lonestarblower.com](http://www.lonestarblower.com) or  
call us today regarding your next application.

**GL**

Geared Turbo



**LS**

Multistage Turbo



**DT**

Gearless Turbo



**CS**

Control Systems



**PS**

Packaged Systems



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