

TECHNICAL DATA SHEET



High speed, high efficiency turbo blower provides energy efficient air delivery

Made in the USA by The Spencer Turbine Company, the AyrJet™ Series 400 is a high speed, high efficiency single-stage turbo blower, driven by a direct drive oil-free permanent magnet motor. It has an integrated variable frequency drive (VFD) with PLC controls.

The product expands Spencer's product offerings for the water and wastewater treatment industries. With flows to 8200 CFM and pressures to 15 PSIG, it handles applications ranging from 300 to 400 HP, includes built-in vibration and temperature monitoring, and features best-in-industry wire to air efficiencies. Built-in inlet filtration is standard, and externally mounted inlet filters are available.

The AyrJet's highly engineered, proven technology magnetic bearings monitor and manage shaft position for proactive protection against catastrophic failure.

Designed especially to meet continuous-duty aeration requirements with peak energy efficiency, the AyrJet™ Series 400 is the ideal solution for applications in municipal wastewater treatment plants.

Materials of Construction

- Casing material: Aluminum 356-T6
- Enclosure material: Carbon steel
- Finish: Powder coated

Product Features

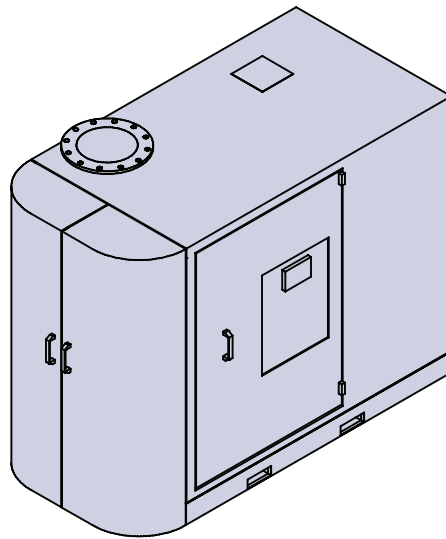
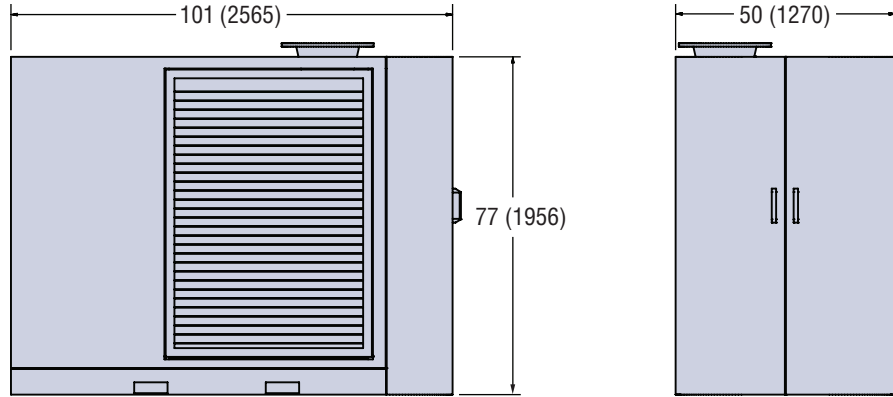
Technical Data

Number of stages: 1
Operating speed: Up to 20,000 RPM
Casing design pressure: 50 PSIG
Inlet connection: Integrated filter (standard); pipe flange (optional)
Outlet connection: 14" flange
Seals: Teflon labyrinth impeller seal
Bearings: <ul style="list-style-type: none"> • Magnetic • Self-monitoring • Non-contact • Built-in power failure back-up protection (UPS system) • 2 modes of fail safe (back-up roller bearing and auto shutdown on fault)
Lubrication: None
Impeller: Machined high strength forged aluminum – 7075-T6 alloy
Dual cooling system: <ul style="list-style-type: none"> • Integrated air cooling • Integrated closed loop 50/50 water-glycol cooling
Filters: Nominal retention 98% @ 15 microns
First critical speed: 20% over maximum operating
Vibration: 0.5 mils

Control System – UL Listed

- PLC based with touch-screen and interface to the plant SCADA system
- Blower system start/stop selection and status indicator
 - Blower control selection: Local or remote
 - Blower set-point entry (RPM or SCFM)
 - Remote signal set point for speed (RPM) and flow (SCFM)
 - Display status for:
 - Actual blower speed (RPM) and set point
 - Actual blower flow (SCFM) and set point
 - Blow-off valve
 - Blower discharge pressure
 - Magnetic bearing
 - Shaft position
 - Motor winding temperature indicator
 - VFD and alarm indicator
 - System vibration alarm indicator

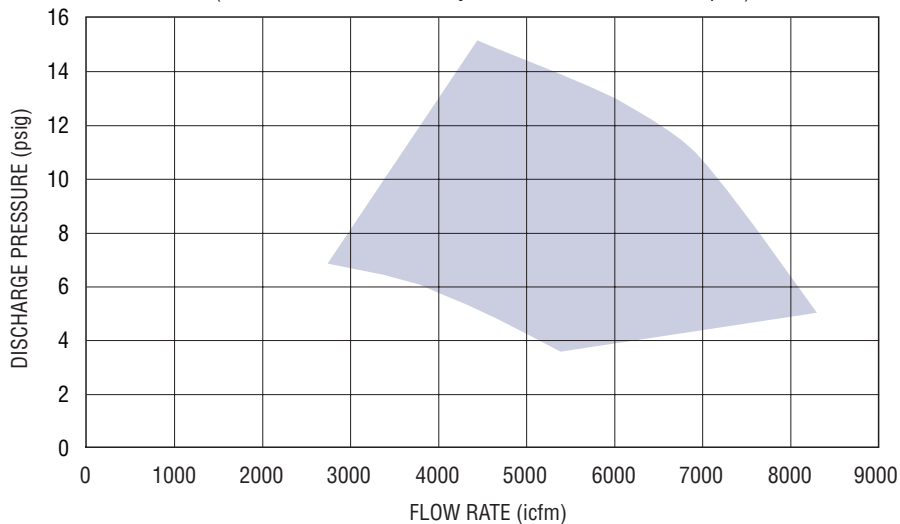
AyrJet by Spencer – The New American Way



Performance Range

Performance at Standard Density Conditions

(Air at 68 °F, Relative Humidity of 36%, Inlet Pressure 14.7 psia)



▶ Spencer may make improvements and dimensional changes to equipment designs based on market trends and requirements.

For product selection assistance, please email marketing@spencer-air.com or visit our website at www.spencerturbine.com to locate the Spencer representative in your area.

