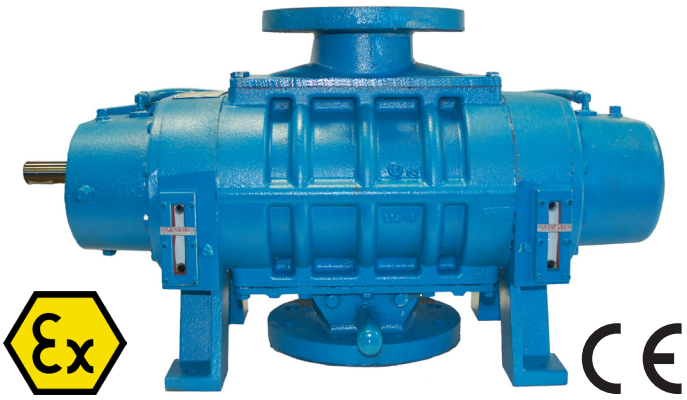
Tuthill

M-D Pneumatics™
EX Rotary Positive Displacement Blowers

# EX4000 ATEX Series Blowers

EX4000 ATEX Series heavy duty industrial blowers are designed for high performance applications, up to 18 PSI pressure or 17" Hg dry vacuum. ***



**External Classification:**
Zone: 1 or 2 I Gas Group: IIA, IIB, or IIB+H2
Temp Class: T3, T2, or T1

## Features

### Vertical Flow Double Envelope Gas Service
Built to standards where virtually complete sealing is required. Plugged vents can also accept an inert gas purge for positive containment of the process gas. The drive shaft is mechanically sealed and the oil sumps are plugged to provide an even higher degree of leakage protection.

### Cooling Coils
All EX4000 ATEX models come standard with copper cooling coils to provide cooling of lubricating oil. Stainless steel cooling coils are an available option for all units.

### Stainless Steel External Tubing
All units come standard with stainless steel external tubing for the cooling coil crossover.

### Instrumentation Ports
All units provide multiple instrumentation connection locations to allow for the installation of temperature, pressure and vibration monitoring equipment.

### Metric Drive Shaft and Ports Standard
All EX4000 Series units come standard with metric drive shaft and process connections.

### ATEX Performance
Tuthill's EX4000 ATEX Series was designed to be able to perform to high-quality standards specifically required for hazardous areas. A hazardous area is defined as an area in which potential or existing flammable medium atmospheres are present in quantities that require special precaution for the construction and use of equipment.

### Hydrogen or Oxygen Service Application Available
- ✓ Hydrogen content greater than 0.5% by volume and operating suction with discharge pressure >100 Torr
- ✓ Oxygen content greater than 23.5% by molar percentage.

## Applications

This series is utilized in multiple applications including pneumatic conveying, process gas handling, biogas treatment and compression, gas boosting, or elevated pressure applications up to 2.4 bar (35 psig) mawp differential discharge.

*** Tuthill's VBXpert Portal Conditions of Service print out is required with each PO submission.

## Material Specifications:

| | |
|---|---|
| **Housing:** | Cast iron |
| **End Plates:** | Cast iron |
| **End Covers:** | Gear end - Cast iron |
| | Free end - Cast iron |
| **Rotors:** | Ductile iron |
| **Shafts:** | Ductile iron cast integrally with rotor |
| **Bearings:** | Gear (drive) end - Double row ball |
| | Free (back) end - Cylindrical roller |
| | Drive shaft - Spherical roller |
| **Drive Shaft:** | SAE 4140 forged alloy steel |
| **Gears:** | Alloy steel, helical cut |
| **Seals:** | Double Envelope Gas Service - Mechanical and labyrinth type on rotor shafts plus mechanical sealing on the drive shaft. Oil Sumps are sealed. |
| **Lubrication:** | Oil splash system |

All EX units undergo 10.34 bar hydrostatic validation and performance testing before shipment.

### Special Materials Available
Standard construction materials include cast iron housing, end plates and port fittings with ductile iron rotors and shafts. In addition to standard construction, the following materials are available:

**Ductile Iron** - All models

*Note: Ductile Iron is required for Hydrogen Applications*

**Stainless Steel** - EX4009 only

### Additional Options:
- SST Vent To Drain
- Material Certification
- Stainless Steel Cooling Coils

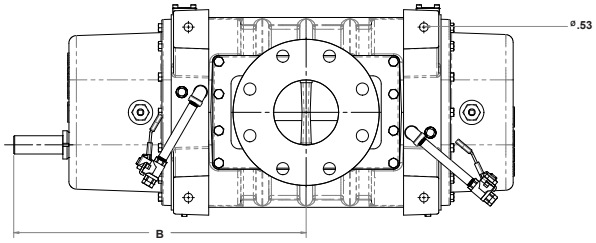
All blowers are factory tested to meet ISO and ATEX quality standards.

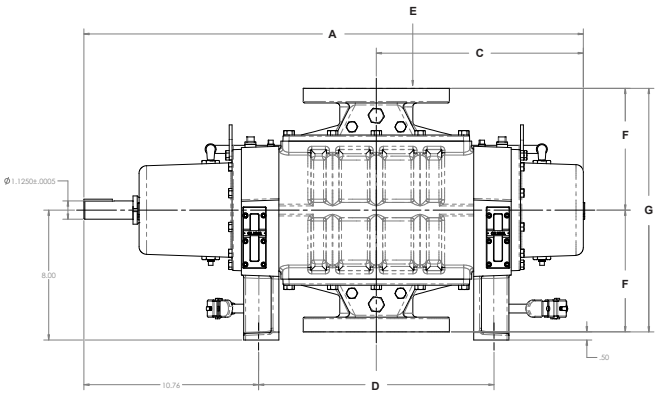
## ATEX Blower Dimensions

| Model | Series | A | B | C | D | Shaft Diameter | E | F | G | Net Weight* |
|---|---|---|---|---|---|---|---|---|---|---|
| | | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) | mm (in) | kg (lbs) |
| EX4009 | Standard Shaft | 705 (27.76) | 419 (16.51) | 286 (11.25) | 292 (11.50) | 28 (1.125) | 100DN (4) | 191 (7.50) | 394 (15.50) | 91 (200) |
| EX4012 | Standard Shaft | 781 (30.76) | 457 (18.01) | 324 (12.75) | 368 (14.50) | 28 (1.125) | 100DN (4) | 191 (7.50) | 394 (15.50) | 182 (225) |

*Approximate shipping weight.
Dimension values are approximate and should not be used for construction.
Certified prints are available through your local Tuthill Vacuum & Blower Systems Sales Professional.

## Bare Shaft




## Performance Tables

The data shown provides a sampling of the product performance capability. Our application software **VBXpert Portal** (available at www.tuthillvacuumblower.com) is required for all ATEX EX configurations. Create your own or request a VBXpert Portal quotation for your specific application.

| Unit Technical Data | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **Gear Size** | **Max Differential Pressure**** | **Maximum Vacuum** | **Max / Min RPM** | **Max Allowed Working Pressure** | **Port Size** | **Max Discharge Temp** | **Drive Shaft Diameter** Standard | **Rotor Shaft Material** | **Drive Shaft** |
| | mm (in) | Bar (PSIG) | mbar (in-Hg) | | Bar (PSIG) | DIN (Flange) | C° (F°) | mm (in) | Materials of Construction | |
| EX4009 | 101.6 (4.00) | 0.689 (10) | 508 (15) | 3600 / 1150 | 2.344 (34) | 100 (4) | 177° (350°) | 28 (1.125) | Ductile Iron* | Steel* |
| EX4012 | 101.6 (4.00) | 0.689 (10) | 508 (15) | | 2.344 (34) | 100 (4) | | 28 (1.125) | | |

* See VBXpert Portal for Ductile Iron and Stainless Steel materials of construction.
** See VBXpert Portal Conditions of Service for additional differential pressure values.
For air at 20°C (68°F) inlet temperature. Use VBXpert Portal sizing software for other conditions.


Your Local Tuthill Vacuum Blower Systems Sales Professional:

Northwest FLOW TECHNOLOGIES
Western Washington: 253-740-0530
Eastern Washington: 509-949-3368
Idaho & Montana: 208-360-3833
Oregon: 503-708-9609
info@nwflowtech.com

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**Tuthill Vacuum & Blower Systems**
4840 West Kearney Street
Springfield, Missouri USA 65803-8702
**o** 417.865.8715 800.825.6937 **f** 417.865.2950
**tuthillvacuumblower.com**


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