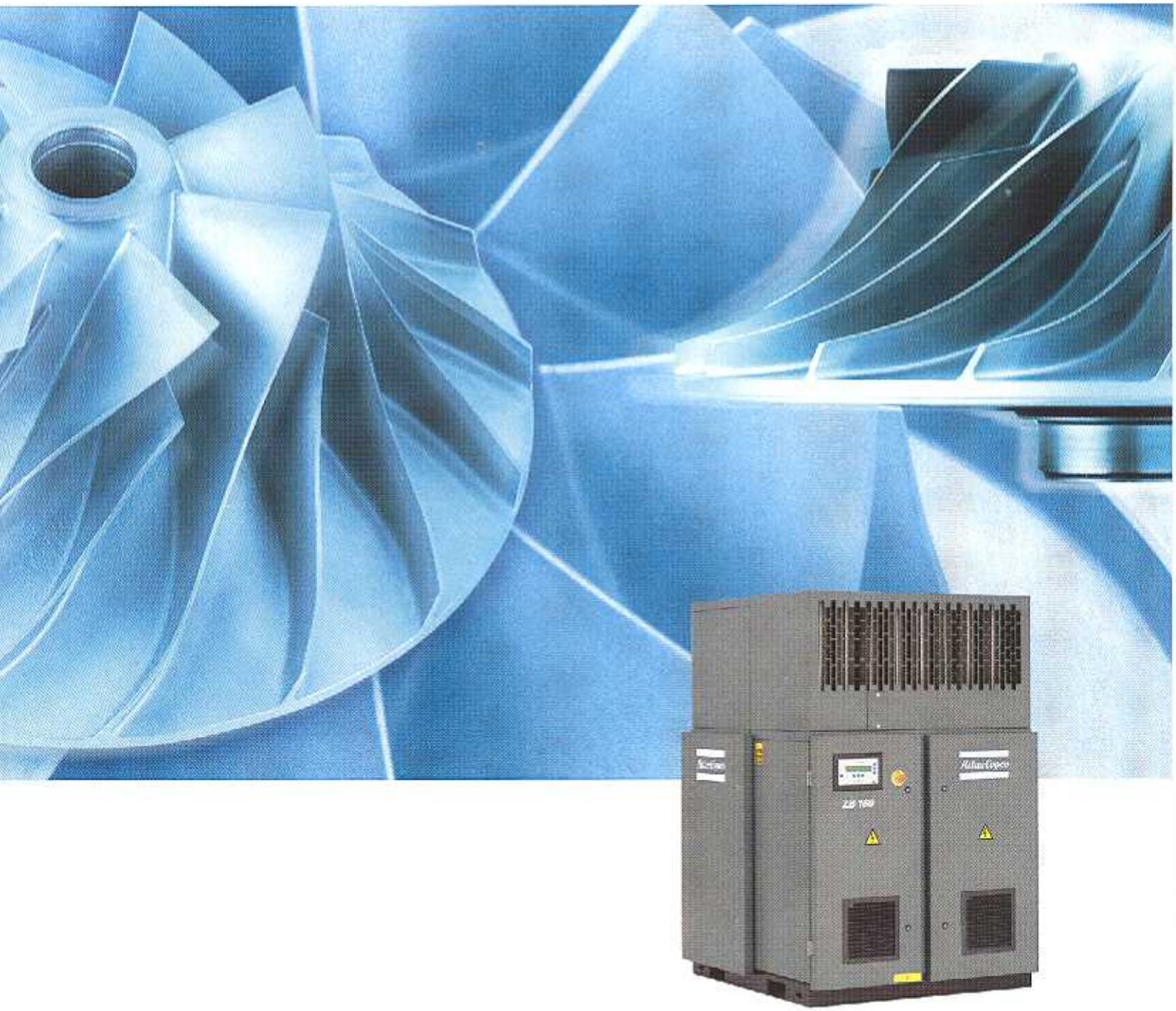
# **Atlas Copco** Air Blowers

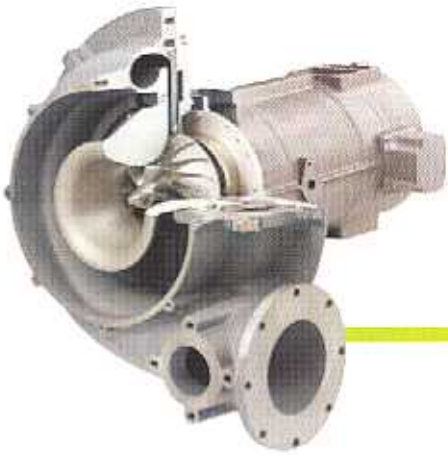
ZB-HSD range
High Speed Drive oil-free centrifugal blower units



EFFICIENCY
MATTERS

Atlas Copco

# Saving costs Safeguarding the environment



The Atlas Copco ZB-HSD ( High Speed Drive ) Air Blower units guarantee an extremely low life cycle cost. The efficiency level is in a class of its own and maintenance cost is almost non-existent. Installation of this all-in machine is reduced to connecting power cables and pushing the start button.

Environmental care was a prime design criterion as well: noise levels are the lowest in the industry, oil is simply not present and the superior efficiency reduces power consumption to an absolute minimum.

- **Total absence of oil**
  *The impeller is directly mounted onto the motor shaft. Because of the absence of a gearbox, this single stage machine is totally oil-free, which excludes traditional oil-pump losses or oil-induced environmental issues.*

- **Higher speed, more compact**
  *The permanent magnet motor is superior to conventional types: it reduces energy losses and cooling requirements, and offers a higher speed in a more compact design.*

- **No friction, no wear**
  *The magnetic bearings are totally trouble and maintenance free, because of their contactless operation; there is no friction, no wear, no vibrations.*

# Complete package

**Standard version**

- Air inlet system (incl. filters)
- Sound enclosure
- Outlet check valve
- Blow-off valve (incl. silencer)
- Electronic controller
- Ready-to-start electric equipment

**Options**

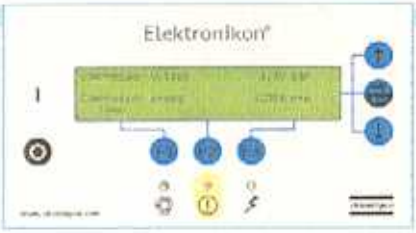
- LAN or Internet control/monitoring
- Air cooled version (ZB 80 HSD)
- Aftercooler (water cooled)

- **Extremely low noise**
  *The standard baffled sound enclosure, in combination with the vibration free operation results in the lowest noise level in the industry – less than 67 dB(A).*

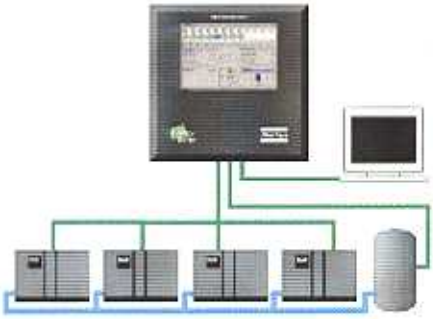
- **Highest efficiency**
  *The unique stainless-steel backward lean impeller is a proprietary Atlas Copco design with labyrinth seals for highest efficiency with minimal air leakage.*

- **Failsafe Elektronikon® monitoring & control**
  *Operating modes:*
  - *constant pressure mode (flow range: 50 - 100 %)*
  - *constant flow mode*

  *Functions:*
  - *speed regulation*
  - *surge control*
  - *machine safety (communication with frequency converter and magnetic bearing controller)*




- **Multiple compressor energy savings**
  *In multiple compressor installations, the ES Millennium central controller will ensure significant power savings and the optimal compressor mix. The total system can be monitored locally or remotely, via the network or from anywhere in the world.*



- **Plug and play electronics**
  *The control cubicle houses the Elektronikon® and the magnetic bearing controller.*

*The High Speed Drive (HSD) cubicle houses a state-of-the-art fast switching frequency converter and efficient electric filters.*

# Modular expansion

- *For larger flow volumes, multiple units can be connected in parallel. The tight coupling of two, three or four units offers the advantages of a modular concept:*
  - *high availability*
  - *extendibility*
  - *wide operating range*
  - *small footprint*

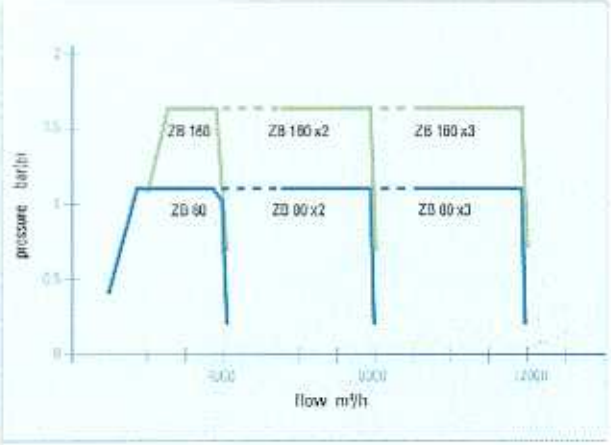
# Technical data

ZB 80 HSD - ZB 160 HSD RANGE

| Rated data | ZB 80 HSD | ZB 160 HSD |
|---|---|---|
| Maximum flow | 3600 m³/h | 3600 m³/h |
| Power supply | 400 V, 50 Hz | 400 V, 50 Hz |
| Rated current | 170 A | 330 A |
| Rated input power | 90 kW | 175 kW |
| Maximum pressure | 1.1 bar(e) | 1.7 bar(e) |
| Noise level | < 66 dB(A) | < 67 dB(A) |

| Dimensions | length | width | height |
|---|---|---|---|
| Standard | 1400 mm | 1350 mm | 2000 mm |
| Incl. aftercooler | 1900 mm | 1350 mm | 2000 mm |

| Weight | |
|---|---|
| Standard | 1180 kg |
| Incl. aftercooler | 1400 kg |




**Connections:**

- Discharge connection: DN150
- Power cables: 3 x 185 + 95 mm² (ZB 160 HSD)
  3 x 95 + 50 mm² (ZB 80 HSD)
- Fuses (gL/gG): 400 A (ZB 160 HSD)
  200 A (ZB 80 VSD)
- Water-inlet/outlet Ø: 22 mm

**Operating conditions:**

- Temperature: 0 °C – 40 °C
- Cooling water temperature: max 30 °C

2933 (443 10 - Printed in Belgium - Subject to alteration without prior notice.

Atlas Copco

www.atlascopco.com