

3.) **Protection Against Bearing Currents** – Currents are induced in motors when used with inverter drives. If not addressed properly, the currents will flow through the motor bearings and create pitting and premature failure. These are high frequency current pulses generated by high speed switching, causing migration of metal from the rolling elements and races in to the lubricant. This leads to EDM craters and causes premature bearing failure if no inbuilt protection is provided.

Look for Built-in features that prevents bearing current damage

Motor side bearings

- Insulated motor bearings
- Brushes to carry away the currents

Compressor side bearings

- Flex couplings - no metal contact between motor side and compressor side couplings

Other measures

- HF straps or armour around the cables to carry away induced currents on the motor frames and as an anti emissions measure.

4.) **Harmonic Control** - Atlas Copco VSD compressor with integrated choke will limit the voltage harmonic distortion to 3...4% on most electrical networks.

5.) **Electromagnetic Compliance** - We meet or exceed Directive 89/336/EEC of the EC, which defines very stringent levels of emission and immunity. Advanced electronics and filters minimize losses and control Emissions and harmonic distortions to within the relevant EC standards. Emissions can disturb other equipment, while immunity protects our equipment from emission from other equipment. In order to comply with this directive, all Atlas Copco packages are fitted with a RFI filter.

6.) **Maximum turndown** - proper design and selection of components allow for maximum turndown. This is proven by our performance numbers. This means that the torques are sustained at lower speeds. Heating up of the windings is avoided at lower speeds by the provision of an over-sized fan. The efficiency is maintained at a relatively high level even at low speeds. Maximum turndown equals more energy savings!

7.) **Drive and Microprocessor are linked** - complete communication between the drive and our Elektronikon allows for the best possible operation of the controls and the compressor with complete monitoring and troubleshooting. Also allows for two programmable pressure settings (real-time clock) to enable a lower pressure setting can be utilized. Lower average operating pressure means less energy consumption.

8.) **Warranty** - one year on the package...five years on the drive and motor...extended warranty (guidelines followed) five years on major components, including the drive.

Things to look for in competitive units

- 1.) Hybrid controls – motor isn't matched with drive. Motors are not inverter duty. Parts aren't readily available.
- 2.) Line Reactor and EMC Filters – often an option – Standard on Atlas Copco.
- 3.) More CFM, less energy – Atlas Copco produces more cfm than competitors.
- 4.) Noise level - Atlas Copco has the quietest machines on the market