

ADVANTAGES OF INDUSTRIAL AIR TOOLS

The main advantage of the airmotor is its high performance density, which is only about 1/5th of the mass or 1/3rd of the size of an electric motor with a comparable performance. Due to this advantage, an air-motor is the preferred drive for power tools.

■ Power Characteristics

The power output performance of the air-motor is virtually constant over broad speed ranges. It can also be operated in a wide field of alternating loads. The power output can be easily adjusted by changing the operating-pressure and the speed is perpetually variable by the reduction of the air volume.

■ Load Capacity

The air-motor can easily be loaded to a full stand-still; it even tolerates a negative turn direction if the load is increased. The motor always reaches its full power output and there will be no damage to the motor!

■ Temperature behavior

Expanding air cools the motor when the load is increased. Only when idling, a rise in temperature may occur. The motor is therefore temperature insensitive and overheating through over-load is practically impossible.

■ Exhaust

The noise generated by the exhaust air is reduced by a specialized silencer. Additionally, the exhaust air is directed away from the operator through a coaxial pressure/exhaust-hose.

■ Vane Motor

All vane motors essentially consist of the rotor, which circulates in an eccentrically offset perforation of the rotor cylinder. Because of this eccentrically offset perforation, the vanes form working chambers, the volume of which increase in the turn direction. Because of the expansion of the compressed supply air, the pressure energy is converted into kinetic energy and therefore results into the rotation of the rotor.

■ Turbine Motor

Our turbine motors offer the ideal drive solution for high speed ranges. From turbine design and prototype production up to a series manufacturing, a tailor-made motor solution is available for your individual application.

Structure and function of the DEPRAG Turbine:

Conversion of pressure energy to kinetic energy in the jet nozzle. Most of the kinetic energy is transformed within the first rotor disc. The fixed guide wheel alters the air flow. The residual energy is transformed in the second rotor disc. The turbine is a turbo machine, which does not need tangential sealing. Turbine operates with oil-free air, therefore causes absolutely no wear. Turbo machines use pneumatic energy optimally, which reduces the air requirements to 1/3rd when compared with a standard vane motor. The performance-to-weight ratio (kg/kW) is only half as large.

