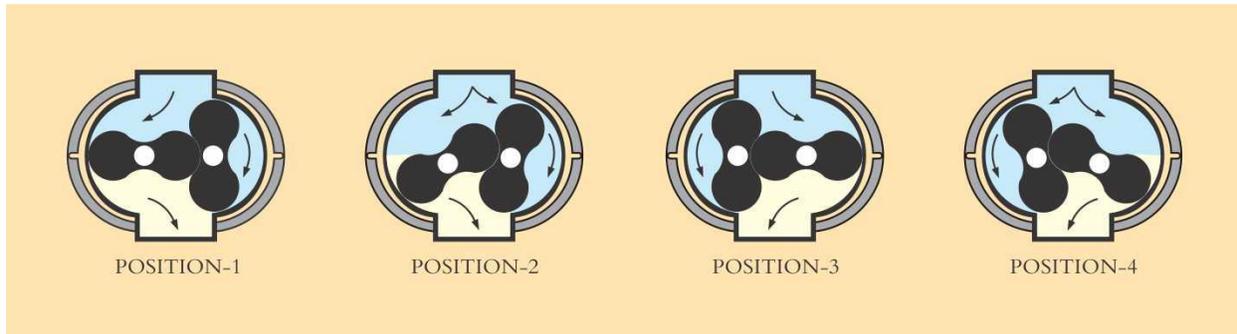


TWIN-LOBE ROTARY AIR BLOWERS

EVEREST, a leading manufacturer of Roots Blowers in India, offers a complete range of Twin Lobe Rotary Air Blowers (Roots Blowers), available for flow rates from 25m³/hr to 10,000 m³/hr in single stage and upto any capacity in parallel configuration, for working pressures upto 1 Kg/cm². They are available as package units, ready to install or as bare blower units for replacement.

WORKING PRINCIPLE



Everest Twin Lobe Rotary Compressors/Blowers are positive displacement units, whose pumping capacity is determined by size, operating speed and pressure conditions. It employs two Twin Lobe impellers mounted on parallel shafts, rotating in opposite direction within a casing closed at the ends by side plates. As the impellers rotate, air is drawn into one side of the casing and forced out of the opposite side against the existing pressures. The differential pressure developed, therefore, depends upon the resistance of the connected system. The Blowers, being positive displacement type, do not develop pressure within the casing but the discharge pressure depends upon the system resistance / back pressure. Effective sealing of the compressor inlet area from the discharge area is accomplished by use of very small operational clearance, eliminating the need of any internal lubrication of the lobes. A pair of accurately machined alloy steel, hardened and ground timing gears maintain clearances between the impellers, during rotation. The air, thus delivered, is 100% OIL FREE. The pumping capacity of a lobe compressor, operating at constant speed remains relatively independent of inlet and discharge pressure variations. These Blowers are constant volume machines, which deliver a fixed discharge against the system back pressure. It is, therefore, essential to ensure that minimum pipeline restrictions, at the inlet and discharge, are imposed. Adequate size piping and large radius bends ensure minimum line losses resulting in higher efficiency and low power consumption. Sudden change in pipeline cross section should also be avoided. To change capacity, it is necessary either to change speed (energy saving) or vent some of the air into atmosphere (not energy saving). The air must not be recirculated from the discharge to suction as it may result in overheating. No attempt should ever be made to control the capacity of compressor by means of throttle valves in the intake or discharge piping. This increases the power load on the motor and may seriously damage the compressor. There is an increase in the discharge air temperature due to heat of compression. As a thumb rule the discharge air temperature increases @ 100C for every 0.1 Kg/cm² of P above the inlet temperature.

FEATURES

- 100% oil free air delivery
- Factory engineered, Factory guaranteed, superior product
- Alloy steel hardened and ground timing gears, oil splash lubricated
- Anti-friction bearings
- Rotary Oil Sealing
- Rigid one piece CI casing & end plates
- Horizontal & Vertical configurations available
- Easy rotor timing setting
- Air Cooled & Water Cooled design available
- Fail safe labyrinth sealing
- Extended shaft design for cool running
- Dynamically balanced rotor shaft assembly (Grade 6.3 ISO 1940-1986)
- Large inlet & outlet connections for minimal loss
- Improved volumetric efficiency and reduced operating temperatures
- Alloy steel toughened shafts ground to close tolerances
- Performance testing as per standard test procedure STP-01 based on BS 1571-2:1975 and ISO 1217:2009
- All blowers are manufactured on state of the art, imported CNC machines, machined to close tolerances with high degree of accuracy on profile machining, ensuring high volumetric efficiency
- All major components are interchangeable making Everest the first and only manufacturer to attain the same
- Non-contact type labyrinth seals, with vent , offers lifelong sealing without any seal replacement need