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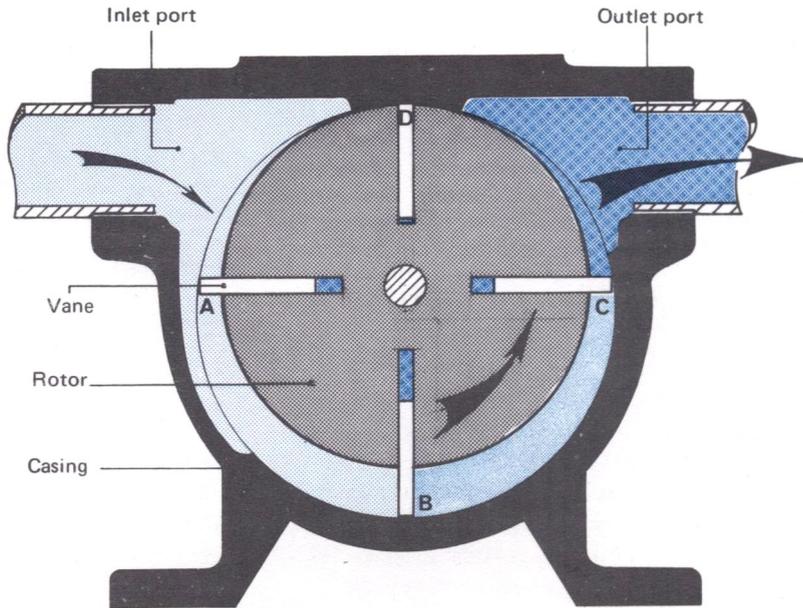


Fig III 2. Diagrammatic cross section of an oil sealed vacuum pump showing the principal components. Light blue represents air at inlet vacuum; dark blue, air being compressed and ejected to atmosphere.

demanding task and several types of pump are suitable. The positive displacement rotary pump is the type most commonly used. It is compact, robust and requires comparatively little maintenance.

#### *Oil lubricated vacuum pumps*

Fig III 2 shows a cross-section of a typical rotary vacuum pump. It consists of a horizontal cylindrical casing, with a rotor mounted eccentrically so that it is virtually in contact with the casing at one point of the circumference. The space between the rotor body and the casing is thus crescent shaped, and communicates through the elongated inlet port with the vacuum pipeline, and through the elongated outlet port with the exhaust pipe. The rotor has longitudinal slots, usually four, which house vanes free to slide radially as the rotor turns. The vanes, which are usually made of asbestos fibre composition, are kept in contact with the casing by centrifugal force. In some designs the vanes slide tangentially, the purpose being to reduce frictional losses.

As the rotor turns, pockets of air are enclosed between the vanes and transferred from the inlet to the outlet. In the diagram the space between vanes

# DIRECTIONS TO CONTRIBUTORS

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