



Application Data

Bushings

For rotary vane air compressors

Description

A common style of air compressor is the rotary vane compressor. Available in various forms, this type of compressor consists of a rotor eccentrically placed in a cylinder.

The rotor includes a number of vanes which are flung outward against the cylinder wall by centrifugal force as the rotor turns. The movement of the vanes against the lining of the cylinder, assisted by lubrication, forms a seal.

Because the rotor is offset within the cylinder, air is taken in between the vanes at the point of maximum distance between the rotor and cylinder wall and is compressed toward a pressure chamber during rotation.

Single stage compressors are adequate for pressures up to 5 bars; higher pressures require two or more stages.

The bushings on the rotor shaft must maintain the shaft in its proper position to enable the compressor to operate efficiently.

Material

A35 leaded tin bronze

Advantages

The use of A35 continuous cast alloy, with a 13% higher yield strength than commercial bearing bronzes, assures longer operating life and less maintenance for the compressor. With excellent bearing characteristics and low coefficient of friction, A35 is an excellent choice for this application which is identified under SIC 3563 (Air and Gas Compressors).

