

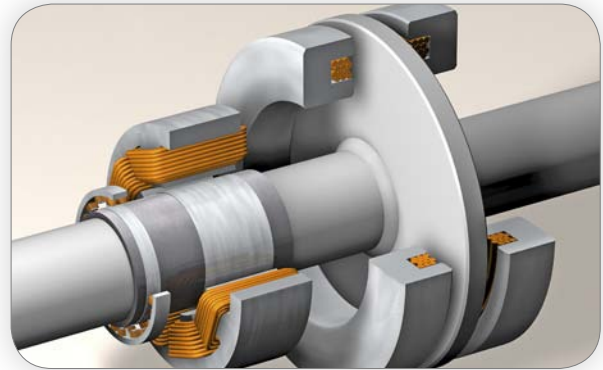


MAGNETIC BEARINGS

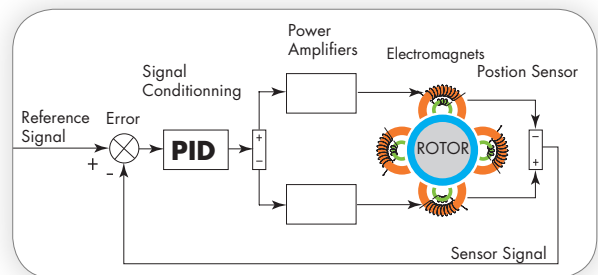
The radial bearing rotor is equipped with ferromagnetic laminations which are held in position by magnetic fields created by the electromagnets placed on the stator.

The axial bearing is based on the same principle. The rotor consists of a disk mounted perpendicular to the rotation axis, and opposite the electromagnets.

The rotor is levitated in the center without touching the stator. The rotor's position is monitored by variable inductive sensors. These sensors detect any deviation from nominal position, and emit signals which, command currents in the electromagnets in order to bring the rotor back to its nominal position.



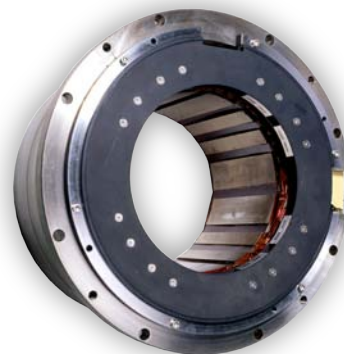
Radial bearing (left), axial bearing (right)



Basic diagram of the control system



Compressor equipped with magnetic bearings



Radial bearing for compressor
(shaft diameter 240 mm, load capacity 14 000 N)

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