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Product Name :
Experiments With A Radial Compressor

Product Code :
LBNY-0005-10300085



Description :

Radial compressors are used to compress gases. The experimental unit provides the basic experiments to get to know the operating behaviour and the important characteristic variables of radial compressors. A protective plate placed in front of the inlet of the intake pipe prevents larger objects from being sucked in or the clogging of the intake opening. The medium is sucked in axially to the drive shaft by the rotation of the impeller and flows through the impeller rotating at high speed. By means of centrifugal force, the medium is accelerated towards the outer edge and is compressed in this manner. The air flow is adjusted by a throttle valve at the end of the delivery pipe. The microprocessor-based measuring technique is well protected in the housing. The experimental unit is fitted with sensors for pressure, temperature and speed. The flow rate is determined via differential pressure measurement on the intake nozzle.

Technical Specification :

Display of differential pressures, flow rate, speed, electrical power consumption and hydraulic power output, temperatures and efficiency

Throttle valve for adjusting the air flow in the delivery pipe

Protecting plate at air inlet for undisturbed air flow

Microprocessor-based measuring technique

Determination of flow rate via intake nozzle

Functioning and operating behaviour of a radial compressor

Two-stage radial compressor with drive motor

Variable speed via frequency converter

Transparent intake and delivery pipes.

Technical Data:

Intake pipe

Length: L=84mm

Inner diameter: D=44mm

Delivery pipe

Length: L=200mm

Inner diameter: D=34mm

Two-stage radial compressor

Power consumption: 1.000W

Max. Flow rate: 180m/h

Max. Head: 235mbar

Speed: 1.000...16.000min⁻¹

Displayed / measuring ranges

Flow rate: 0...120m/h

Temperature: 2x 0...100C

Differential pressure (stage 1 / stage 2): 0...350mbar

Electrical power consumption: 0...1.000W

Speed (compressor): 0...21.000min⁻¹

Dimensions and Weight:

LxWxH: 670x340x530mm

Weight: 20kg.



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