

CE 810

Gas booster in hydrogen technology



Additional information on the gas booster via QR code

Description

- industrial gas booster in H₂ technology
- high pressure equipment
- online access via QR code to digital information on the gas booster
- supported by augmented reality

The production, transport and processing of hydrogen requires high pressure equipment. Special attention must be paid to plant safety. Hydrogen technology is essential for many industries and their path to sustainability.

Volume reduction is crucial for reduced storage volumes and higher transport capacities. CE 810 is an industrial gas booster for hydrogen compression. The single-stage booster is equipped with a pneumatic drive. Due to the hazardous nature of hydrogen, an explosion-protected environment is required (ATEX), which is why pneumatic actuators are often used in such environments.

Extensive technical information is available as didactic multimedia teaching materials in the GUNT Media Center, such as sectional views, data sheets, a complete set of drawings and functional principle. Sectional views are also displayed directly on the device.

An augmented reality interface (Vuforia View) for mobile devices is available for visualising the processes and functions in a gas booster.

Learning objectives/experiments

- familiarization with high pressure components
 - ▶ connection
 - ▶ sealing
 - ▶ required wall thickness
- familiarization with pneumatic piston drive
- functional principle of a single-stage gas booster
- read and understand engineering drawings
- develop digital skills
 - ▶ retrieve information from digital networks
 - ▶ use digital learning media
 - ▶ use visualisation systems, e.g. augmented reality, QR codes

Specification

- [1] gas booster in H₂ technology
- [2] high pressure rating
- [3] single-stage gas booster with pneumatic drive
- [4] multimedia instructional materials online in GUNT Media Center: PDF, DXF files, STEP files, video
- [5] augmented reality: visualising the processes and functions in a gas booster

Technical data

Gas booster, single-stage, single-acting

- transmission ratio: 1:5
- compression ratio: 1:15
- pressure drive fluid inlet: 1...10bar
- pressure operating fluid inlet: 2...50bar
- displacement: 373cm³

Material

- PTFE, FKM: seal
- stainless steel
 - ▶ compressor head: 1.4404
 - ▶ high pressure cylinder: 1.4542
 - ▶ high pressure piston: 1.4305
 - ▶ fittings: 1.4404/1.4305
 - ▶ balls: 1.4043
 - ▶ springs: 1.4310

LxWxH: 575x260x290mm

Weight: approx. 20kg

Required for operation

PC or online access recommended

Scope of delivery

gas booster, online access to the GUNT Media Center