**Piston compressors** are used whenever gaseous, compressible media such as air have to be transported or compressed.

Piston compressors work economically at lower flow rates and medium to high pressure ranges. The maximum increase of pressure per single cylinder is limited. Multiple cylinders with graded volumes can be connected in series for higher total pressure. This is called multistage compression. The possible intermediate cooling, applied in case of multistage compressors, limits compression temperature rise and reduces required drive power.

GUNT offers a large programme of trainers for piston compressors, starting with simple air compressors with a pressure tank (ET 512) for basic demonstrations up to two-stage systems with intermediate cooling, complete instrumentation and data acquisition (ET 500).

The compressor used in trainer ET 512 is also recommended as assembly project MT 140.02. Repair, assembly, and service aspects are covered.

The combination of a single-stage compressor ET 513 and a drive and brake unit HM 365 enables measurement of mechanical drive power of the compressor at different speeds.

GUNT compressor trainers are mobile and only need an appropriate power supply for operation. They are equipped with high quality, industrial compressors, all prescribed safety devices and pre-tested pressure tanks.

The GUNT compressor simulator ET 508 helps students become familiar with typical properties of a two-stage compressor system. Contrary to real systems, the simulation provides a deeper insight into the processes occurring in compressor systems. This leads to a better understanding of the real measured values.

Unlike real systems, many of the parameters can be changed over a wide range, e.g. dead space or volume ratio of high and low pressure stage.

The conditions inside the system due to different states at the intake can also be shown. The concept of the simulated system is comparable to GUNT system ET 500. Using the simulator is the ideal way to prepare students for experiments with the real system.