

Bottom Up Valves at Aerzen.



The challenges

As an internationally operating OEM Aerzener Maschinenfabrik has to fulfil a many local, legal requirements as well as customer specifications, of e.g. pressure equipment. Every region has its own set of rules: For example in Europe applies the pressure equipment directive and in America the ASME Code.

In addition to the general requirement for global approval concepts, e.g. for pressure equipment according to PED or ASME, the trend among companies is towards modular systems. Planners are trying to use small, linkable systems in order to be able to work flexible and scalable. This makes it easier to coordinate plant capacities. This modularization considerably limits the installation space and freedom in the design or development of e.g. compressors.

In addition to the small installation space of the above-mentioned compressors, they should be completely covered by an acoustic enclosure to reduce noise emissions. In order to reduce the size of the very cost-intensive sound enclosure, AERZEN requires special valves that are adapted to the available small installation space. Compressors are discontinuous machines for pressure generation. In order to ensure that occurring pulsations do not impair the function of the safety valve, the set pressure of the valve is adjusted accordingly and an appropriate distance to the pressure line is ensured by design.



Facts and figures

Customer:

Aerzener
Maschinenfabrik

Industry / Application:

OEM for different
industries

LESER Products:

Type 441, 526



The LESER solution

As a renowned manufacturer of safety valves, it is advantageous to be able to react flexibly to the above-mentioned concerns, primarily to the small installation space, with its portfolio. Being able to change the installation position of safety valves is a clear advantage for the compressor designer. They are much more variable in their design and construction options and can also respond more flexibly to special customer specifications.

If the progressive modularization of compressors requires more compact designs, safety valves in different mounting positions, for example, can be an answer to the problem, unlike the classic upright position.

In addition, the spindle guide plays a special role here. The friction at the guiding points must be reduced as much as possible so that the spindle runs smoothly. Otherwise, a safety valve can only be installed vertically.

Why LESER safety valves?

For a global acting OEM like AERZEN, a specialist like LESER, who has not only the knowledge but also the necessary approvals, is an important component for success. LESER offers a global approval concept that allows safety valves to be used regardless of location. When ordering safety valves, only the applicable regulations must be specified in order to ensure appropriate labeling and material selection. In addition, LESER has tested and approved further installation positions in addition to the conventional installation situation, standing on the inlet pipeline. For example, some types of valves may be installed with a horizontal stem or even upside down, e.g. Types 526 and 441. For horizontal installation, care must be taken to align the outlet. Liquids, e.g. in the form of condensate, should be able to drain off downwards to avoid back pressures and even corrosion. When installed upside down, the inverted weight forces are corrected by correction factors.

LESER offers not only safety valves with basic documentation and accessories but also other special documentation and options. From the "Fugitive Emission Test" with helium up to 3.2 ship class castings and from back pressures up to more than 200 bar-g to high pressure heating jackets for up to 30 bar-g, LESER sales engineers develop solutions for customer specific applications as described above for AERZEN.

The customer

The Aerzener Maschinenfabrik is a global operating company with 150 years experience and tradition. 2500 employees at 50 locations supply customers with blowers and compressors.

The application of the equipment cover a range from pneumatic to chemical industry. The biggest share of compressors will be exported from Germany (apprx. 80%).