



»Highest quality and precision«

DIENES – Compressor Valves

NEW – Valve Laser Technique

NEW – Higher Efficiency

NEW – Energy Savings

NEW – Longer Service Life

DIENES

DIENES

High Speed Valves

with frictionless-guided plate parts for the installation into high speed machines, non-lubricated machines, standard compressors, for highest performance and operating reliability.



DIENES

Standard Plate Valves

for all types of reciprocating machines, such as compressors, pumps etc. These valves are made by us in milled, forged or cast-iron type.



DIENES High Lift Ported

Plate Valves

are designed as working valves for oil-free compressors, scavenge pump valves for large compressors in the chemical industry, mining etc. with frictionless, plane parallel three-point valve plate guidance

applicable in all axial positions.

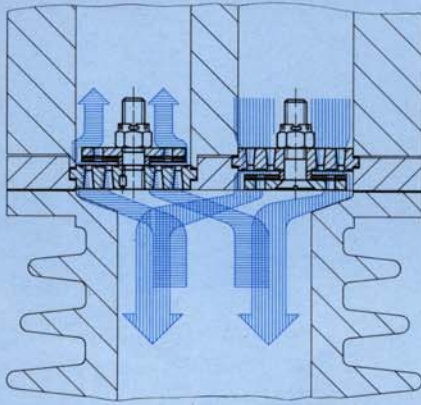
DIENES

Single Ring Valves

for high strain. The single light-weight ring plates and the dampening effect of the spring sets provide noiseless running.

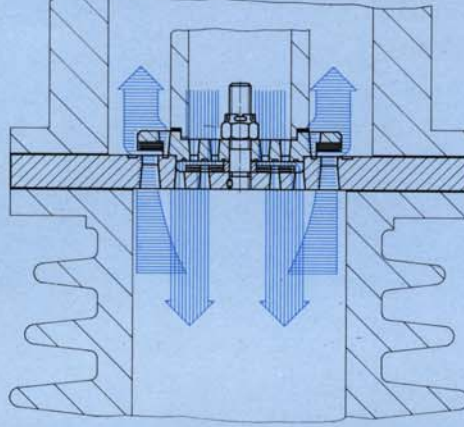


Single valves



Single-sided intake and exhaust. Increased loss and irregular loading of the valve plates by the alternation of direction of gas.

Concentric valves



Central intake and exhaust. No important alternation of direction of gas. Low rate of loss. Uniform loading of the valve plates.

DIENES

Concentric Valves

Advantages:

Large passage areas provide low air velocities.
 Small clearance volumes with excellent volumetric efficiency.
 Long service life of internal parts.

Reliability in service by the compact construction.
 Simple design of the cylinder head.

These advantages make the valves especially suitable for the installation into high speed compressors with small cylinder diameter compared with the piston stroke.

Valve determination and optimization by computer programming.



WHAT'S NEW!

Recent breakthroughs in manufacturing methods and equipment which we have incorporated, allow us to offer significant advantages over existing conventional designs on the market. The following are just some of the reasons why now, more than ever, DIENES means **QUALITY!**



DIENES DA-Valves

are frictionless guided plate valves designed especially for the demanding service conditions of high

speed and non-lubricated compressors. The radial placement of the three guide arms on an outer radius provides for reduced stress, stabilized plate motion, and increased free passage area.



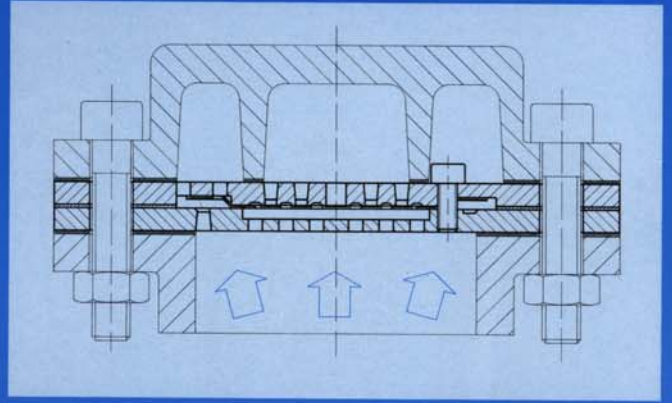


DIENES DA-Valves

utilize three mounting bolts, again radially positioned, to improve the bending strength of the housing.

This design also facilitates the use of a new, more reliable, frictionless unloader mechanism.





DIENES DK-Valves

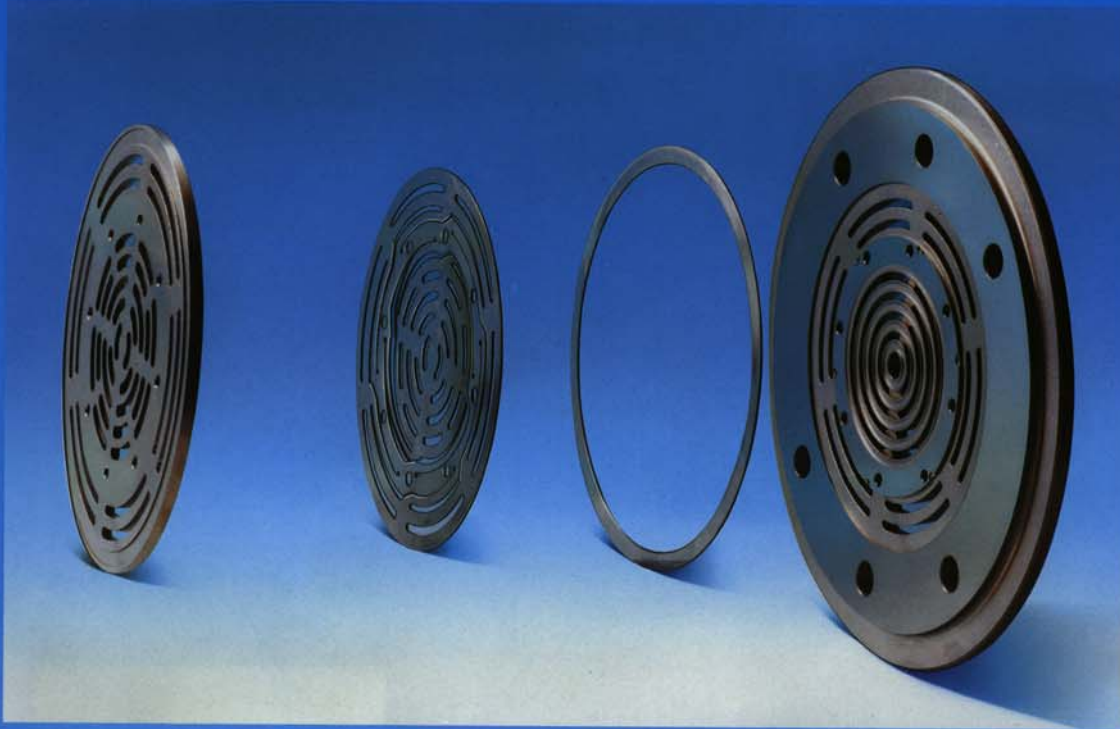
combine the advantages of concentric valves with the benefits of laser production, in particular with reference to the highly stressed internal parts.

DIENES DK-Valves

The key part of a DK type valve is the one-piece, laser machined valve plate, commonly used for the suction and discharge portion.

Advantages: frictionless in suction and discharge, increased service life.

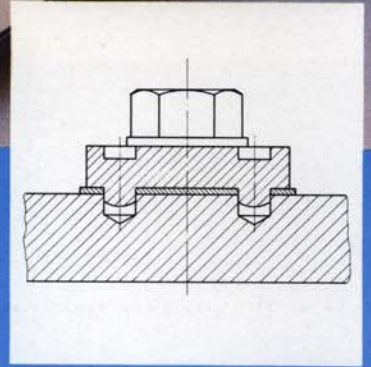




DIENES DK-Valves

their further advantages are:
simple design, small clearance
volume, perfect sealing between
suction and discharge portion,
little moving parts.





DIENES Reed Valves

have been redesigned to provide more accurate positioning and securing of the reeds and guards.

DIENES Reed Valves

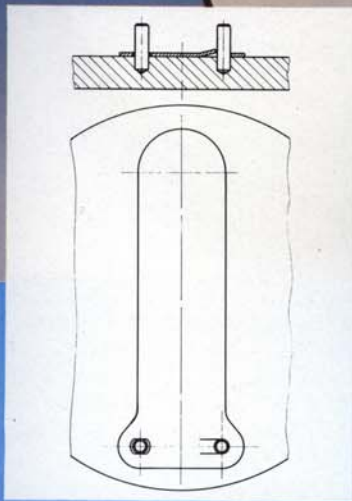
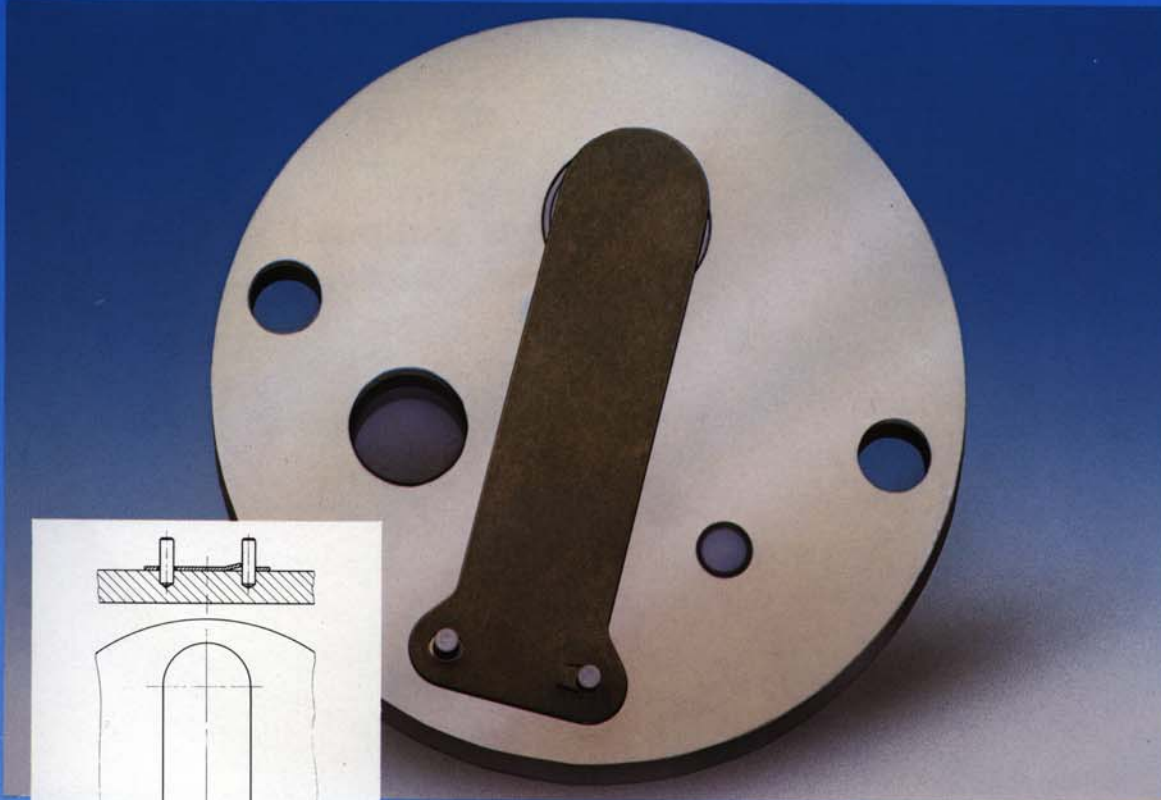
offer these features for all reed configurations. Single, double, even triple reed designs are

possible. No special tooling is required.

The positioning of reeds and guards with integral locating

bosses machined onto the guard has made obsolete the use of pins.





DIENES Reed Valves

through the use of advanced manufacturing methods also offer simultaneously a positioning and

securing of the reeds. Yet for field replacement, no special tooling is required.

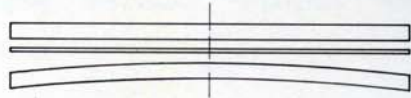
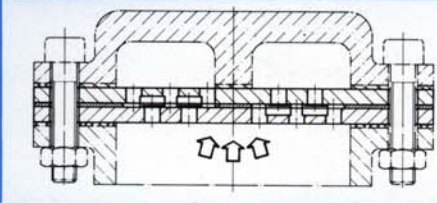
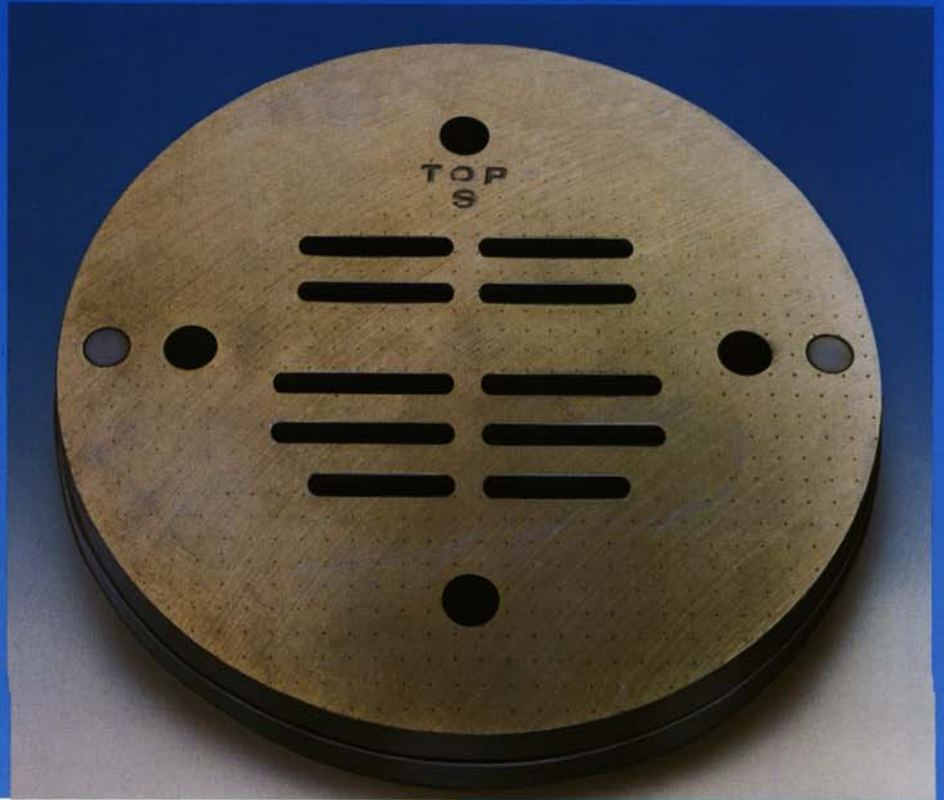
Reed valve designs of either type may be used in modular form to

offer both economic and functional benefits in a wide variety of applications.



DIENES Strip Valves

This design can be used in all small and medium size compressors with working pressures up to 30 bars. No special machining or cylinder head is required.

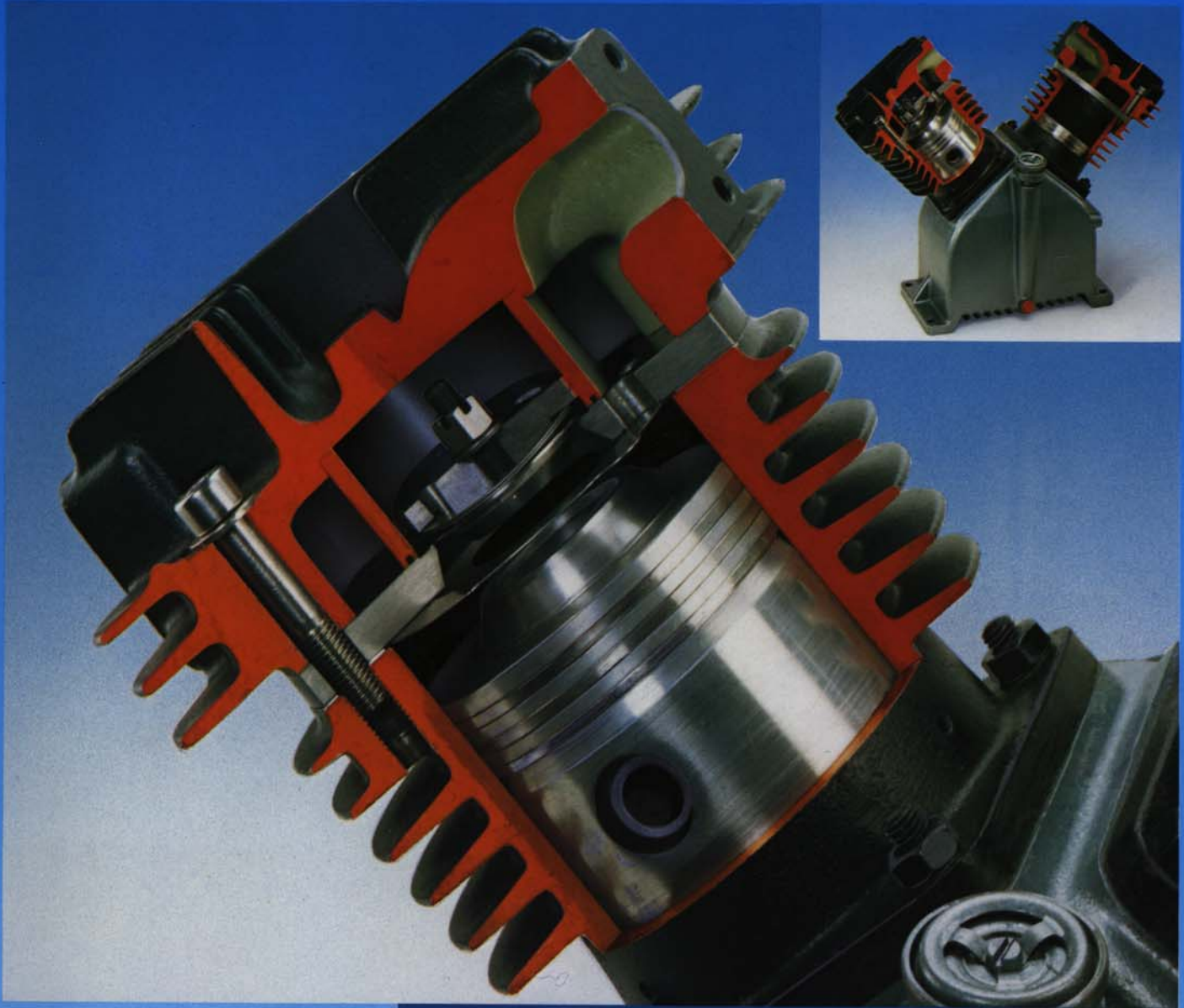


seat plate during manufacture. This stress coupled with the cylinder head clamping force effectively holds the membrane sealing gasket in place. No other design offers this unique feature.

DIENES Strip Valves

provide superior sealing between suction and discharge by means of an induced pre-stress of the valve



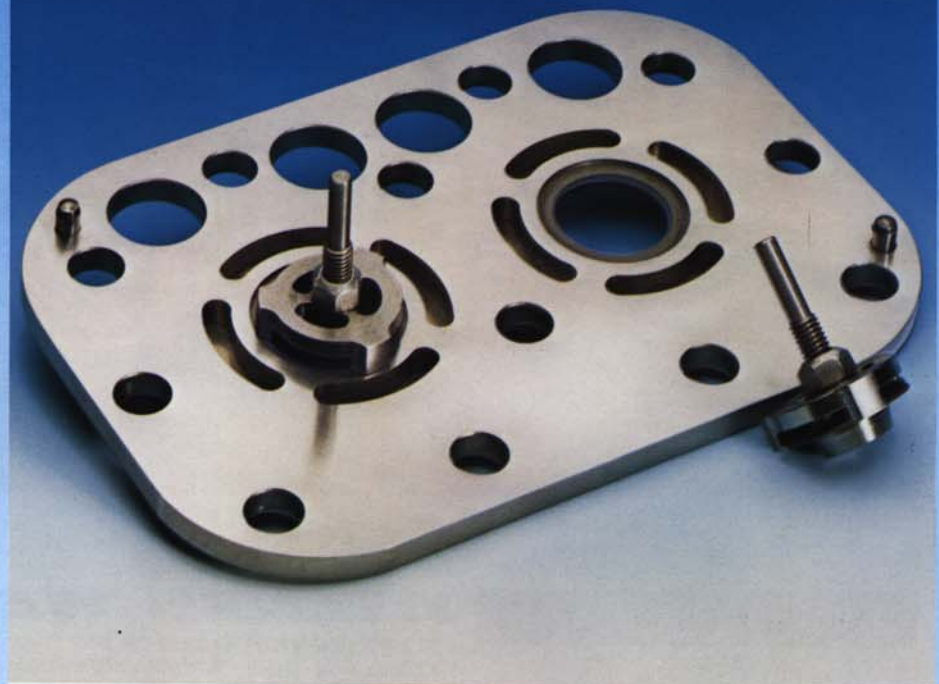


**DIENES Valves with
low clearance volume**

are especially suitable for high pressure ratio applications such as refrigeration compressors. Optimum use of available space and the utmost in flow pattern design provide superior efficiency and service life.

**DIENES Valves with
low clearance volume**

are spring loaded on the discharge side and thereby avoid damage normally caused by oil or condensate "slugging" with the resultant excessive forces.



DIENES Valves for

reciprocating compressors:

Slotted Plate Valves
Multi Ring Valves
Frictionless Plate Valves
Combined Suction and Discharge (Concentric) Valves
Reed Valves
Strip Valves
Reduced clearance volume valves
Piston Pump Valves
Plate type check Valves
Safety Valves
Compressor Control Systems
Valve plates, springs, parts of every type and size.

DIENES Valves for

rotary types of compressors:

Non-Return Valves
Minimum Pressure Valves
Oil Stop Valves
Relief Valves
Throttle Valves (Pilot operated)
Pressure Ratio Regulators
Suction Control Units
Control unit system assemblies



Precision since 1913

DIENES WERKE

FÜR MASCHINENTEILE GmbH & Co. KG
Postfach 1320 · Kölner Straße 7 · D-51484 Overath
Fon: +49 2206 605 0 · Fax: +49 2206 605 111
email: sales@dienes.de