

ported plate valves





ported plate valves

CPI ported plate valves provide operators with a comprehensive range of both metallic and non-metallic plate valve assemblies and internal components, manufactured to the highest quality, for air and process gas compressors operating in a range of different applications.

Achieving the optimum performance and reliability are key to most operators and CPI ported plate valves can deliver across the broad spectrum of applications and operating conditions required.

internal parts materials

Metallic sealing and dampening discs are manufactured using high quality stainless steel, which is heat treated and tempered to the appropriate hardness, to provide an economical material with excellent performance for a broad range of applications.

CPI materials technology is an integral part of the non-metallic sealing and dampening discs manufactured for CPI plate valves. Due to the properties of non-metallic materials, plate, disc and other internal components incorporated into CPI ported plate valves, are specifically selected to reliably perform in the operating conditions and gas properties of a particular application.

ported plate valves features and benefits

- > seats and guards manufactured from a variety of metallic materials suitable for a broad range of applications
- > integral guides are incorporated into the guard design, enabling effective ring sealing
- > CPI materials technology utilized to create non-metallic ring components
- > non-metallic materials provide excellent chemical resistance, high temperature tolerances and strong impact capabilities, in a wide variety of applications
- > springs and button materials are specifically selected for efficient performance in specific applications



ported plate valves

CPI ported plate valves are manufactured for certain types of lubricated and non lubricated reciprocating compressor applications, providing excellent performance in clean, dry gas service. With built-in dampening action CPI ported plate valves are suitable for many medium and high pressure compressors operating at high speed, high pressure and at varying degrees of capacity.

The seats and guards are machined with precision and of the highest quality stainless steel materials with differing grades for the more corrosive applications. Spring materials vary depending on the metallic or non-metallic materials used for the sealing and dampening discs.

replacement parts

To improve or restore the efficiency and performance of virtually all compressor valves, CPI stocks and supplies a comprehensive range of premium quality replacement valve parts. All replacement parts are engineered and manufactured to assure interchangeability and optimum effectiveness.

reconditioning services

The reconditioning and repair of valves to the highest quality is carried out at a number of CPI's manufacturing facilities and service centers, strategically located worldwide providing operators with easy accessibility and fast turnarounds.



radiused disc
Hi-Flo™
poppet
ring type
ported plate
unloaders
actuators
reconditioning
replacement parts
Valvealert™



CPI valve design

CPI compression engineers utilize sophisticated proprietary valve dynamics programs to carry out valve performance modeling and analysis of existing operations in order to accurately select the optimum valve design solution for a specific application. This is combined with R&D programs that are focused on all aspects of valve design detail, materials, reliability, efficiency, ease of installation and maintenance.

CPI compressor valve dynamics study

When designing new valves, CPI is able to study the predicted performance of their valves under known operating conditions and to derive suction and discharge valve motion, PV diagram, pressure drops, power loss, anticipated gas velocities, valve disc opening velocity, volumetric efficiency and piston loadings, to give the optimum design solution.

compressor valve trouble-shooting and performance analysis

By using its valve dynamics study capability, CPI is also able to look at existing installations and recommend improvements to existing compressor valves, either of a similar type or involving a change from other valve types, such as ported plate, concentric flat ring, poppet or channel, to the CPI preferred valve, with its emphasis on reliability, performance improvement and power savings.

CPI valves are backed by a wide range of field experience along with the insight and knowledge available from an effective valve dynamics program.

evolving solutions
around your world.



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