



# OPTIMA™ SERIES PLATE VALVES

*Engineered for optimum performance and reliability*

*Cook Compression custom-engineers plate valves and components for any reciprocating compressor*

Cook Compression offers a complete range of Optima Series plate valve assemblies and internal components for air and process gas compressors, as well as for compressors in refrigeration, marine, locomotive brake, and specialty applications.

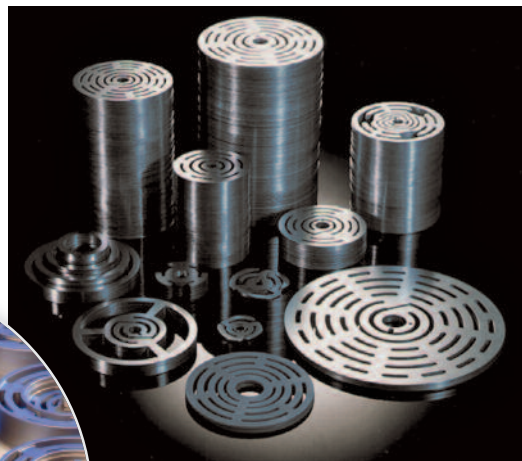
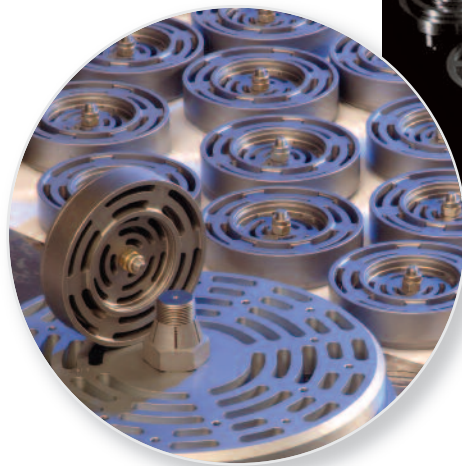
## A HIGHER LEVEL OF PERFORMANCE

Optima Series plate valves are 100% interchangeable with valves supplied by original equipment manufacturers. Unlike ordinary replacement parts, however, Optima Series valves and components are custom-engineered to deliver maximum value in operation. Application-specific engineering, together with precision manufacturing, produce products that enhance compressor availability, solve chronic valve problems, and reduce overall costs of operation.

## SOLUTIONS FOR ANY PLATE VALVE

Cook Compression designs and manufactures all types of plate valve assemblies, including centrally guided, frictionless guide arm type, multi-ported, damped, undamped, and combination designs. Cook also provides a full line of internal parts, such as slotted valve plates, damper plates, discs, rings, buttons, poppets, spring plates, helical or leaf springs, and other metallic and non-metallic components for any compressor make or valve type.

**Application-specific engineering and precision manufacturing deliver maximum value**

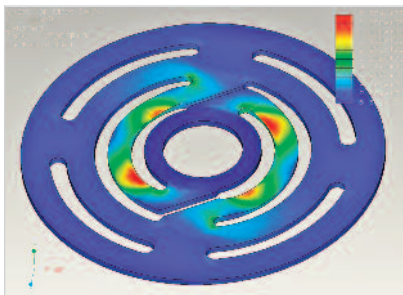


## ADVANTAGES

- Replacement plate valve assemblies and internal parts for any application
- Custom-engineering for optimum performance
- Metallic and non-metallic materials
- ISO 9001:2008 certified manufacturing centers
- Advanced design and materials development
- Highly experienced valve engineering staff
- Sophisticated valve dynamics simulation, 3-D CAD modeling, linear and non-linear Finite Element Analysis
- Valve analysis, design, upgrades, conversion, and reconditioning services

### ENGINEERING SERVICES

Cook Compression offers extensive technical support with experienced, in-house engineering teams backed by CFD, 3-D modeling, FEA, valve dynamics simulation systems, and other proprietary tools. These resources enable Cook to effectively analyze your application and propose cost-effective solutions.



### Valve Modifications

Relatively minor enhancements – such as changes in materials, lift, or springing – may result in significant improvements in valve durability and performance.

### New Designs

Based on pocket sizes, speed, bore, pressure, gas composition, and other input, Cook designs and manufactures plate valves in a full range of materials to solve specific problems and meet unique requirements.

### Upgrades and Material Conversions.

Cook specialists analyze your metallic plate applications and engineer valve designs incorporating thermoplastic (reinforced polymer) plates. Metal-to-Plastic conversions can greatly improve run-times in problem applications.

### STATE-OF-THE ART MANUFACTURING

Optima series products are produced in ISO 9001:2008 certified manufacturing centers in the United States and Europe. These facilities are equipped with the most advanced automated CNC lathes and mills for high precision, consistency and cost-efficiency.

Cook uses the latest laser profiling machinery, which produces stress-free metallic plates and discs that help extend valve life. We also perform



in-house molding of thermoplastic components. To assure the purity and performance of finished parts, we use only 100% virgin material (no regrind) of the highest quality base resins.

### RECONDITIONING

Expert plate valve repair services are available worldwide through Cook Compression Service Centers and our network of **Aftermarket Service Solutions** factory-certified service providers.

Each facility is staffed with Cook-trained technicians and backed by our engineering resources. The service life of our reconditioned valves meets or exceeds that of a new valve. All components we replace – from seats and guards to springs and buttons – are genuine Cook parts guaranteed to provide optimum reliability and performance.

To learn more about the enhanced performance of Optima Series plate valves in your applications, contact your Cook Compression representative.

## COOK NOW

YOUR ASSURANCE OF INNOVATIVE  
TECHNOLOGY, COMPREHENSIVE SERVICE  
AND RESPONSIVE SUPPORT.



**For a look at what's next,  
see Cook Now**

**CookCompression.com**

Compressor Valves | Capacity Control | Valve Restraining Systems | Rod Rings | Packing Cases | Piston Rings | Rider Rings

Pistons | Rods | Cylinder Liners | Compressor and Engine Repair Services | Diagnostics and Analysis Services | Online Monitoring

and Response Systems | Lubrication Systems and Services | Control and Automation | Engineering and Technical Support