

MOPPET® COMPRESSOR VALVES

Patented technology for superior reliability

Unmatched in durability, MOPPET valves also offer efficiency and inventory advantages for substantially lower life cycle costs

MOPPET valves provide outstanding reliability, even in the most demanding services. The revolutionary design incorporates key features of field-proven Manley® radiused-disc elements with the latest innovations in valve technology. The design is optimized for each application with extensive custom-engineering. The result is a valve that delivers consistently longer run times and reduces total life cycle costs.

ROBUST, RADIUSED-DISC ELEMENTS

A MOPPET valve consists of a series of small, identical, radiused-disc elements that operate independently of each other. Each element is made of durable, lightweight thermoplastic material.

The element design provides outstanding resistance to damage and wear from entrained debris.

The low mass of the thermoplastic disc reduces impact velocities, while the radiused sealing surface deflects debris.

Elements are thick (0.35 inch/8.89 mm) and have a centerline diameter of only one inch (25.4 mm), making them extremely stiff and resilient. They exhibit low bending stresses and withstand high impact forces caused by extreme pressure, gas mole weight, driver speed, or the presence of incompressible matter in the gas.



ADVANCED SPRING DESIGN

Springs and spring pockets in MOPPET valves are designed for extended performance in dirty service. Spring pockets have generous vent holes that eliminate the build-up of incompressible materials that can damage springs. High lifts and more space between the spring coils also allow debris to pass freely through the valve.

Spring stresses are lower in MOPPET valves than in typical plate valve springs. MOPPET springs have significantly taller free length, allowing for large wire diameter that reduces torsional stress. Larger wire also makes the springs more resistant to damage from debris.



ADVANTAGES

- Superior Reliability
- Rugged Construction
- High Efficiency
- Commonality of Parts from One Compressor to the Next
- Incremental Cartridge Replacement
- Wide Application Range
- Simple, On-Site Repair Using Only a Hydraulic Press
- Available with Finger and Plug Unloaders



MOPPET valves deliver outstanding results in the most challenging applications.

DURABLE IN ANY SERVICE

MOPPET valves meet NACE specifications and can be used in almost any service. MOPPET cartridges are precision-manufactured from 17-4 stainless steel, while the valve bodies are typically ductile iron (17-4 SST bodies also available). This provides exceptional corrosion resistance on critical seating surfaces without the high cost of an entirely corrosion-resistant valve. Thermoplastic internal components are injection-molded in-house from the highest grade raw materials.

EFFICIENT BY DESIGN

MOPPET valves offer excellent efficiency. Their low-mass elements can run at high lifts (when needed), increasing flow area and reducing horsepower consumption. A MOPPET element also flows gas over both the ID and OD of the disc to maximize flow area.

SIMPLE TO REPAIR

MOPPET valves make repairs simple and economical. Instead of lapping, grinding or machining, a MOPPET valve is reconditioned simply by replacing worn cartridges. Cartridges can be removed and replaced in minutes with a hydraulic press. No special training

is required and repairs can be performed in the field. Elements and springs are replaced each time a valve is serviced, but cartridges are replaced only when damaged or worn. Incremental replacement reduces costs and helps maximize the utility of each component.

COMMONALITY OF PARTS

MOPPET cartridges are identical and universally interchangeable – from valve to valve and compressor to compressor. This commonality of parts significantly reduces inventory costs.

Any compressor you have will use the same radiused-disc element and seat cartridge, plus one of a small number of color-coded springs. Repair technicians remain fully prepared with only a minimal number of spare parts on-hand. All items are stocked and readily available from Cook Compression.

WIDE APPLICATION

MOPPET valves have no gas, pressure, or speed limitations. They are

Convenient seat cartridge kit for MOPPET valve reconditioning



available in diameters ranging from 2.0 inches (50.0 mm) and up, and can be used in any model compressor where the valve envelope is sufficient to accept the design. They have been used in a wide variety of services and operating conditions, including pressures from 0 to 5,000 psi (0 to 350 bar) and with gases ranging from hydrogen and ethylene to flare and natural gas.

To learn how MOPPET compressor valves will extend run times, reduce costs, and boost production in your compressors, contact your Cook Compression representative.

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