



Manley® Valve

licensed by Burckhardt Compression

Best for gases contaminated with particles or liquids – unparalleled in hydrogen applications

Application range

Industries

Oil refining, chemical and petrochemical industries, industrial gases

Processes

Hydrocracking, hydrodesulphurization, fluid catalytic cracking, reforming vent gas recovery, industrial gas production

Gases

H₂, C_nH_m pure, C_nH_m & TEAL (triethylaluminum), CO₂, CO/NO₂/N₂O/NO and gases containing oil and/or particles, condensate acid or condensate basic.

Why the Manley® valve?

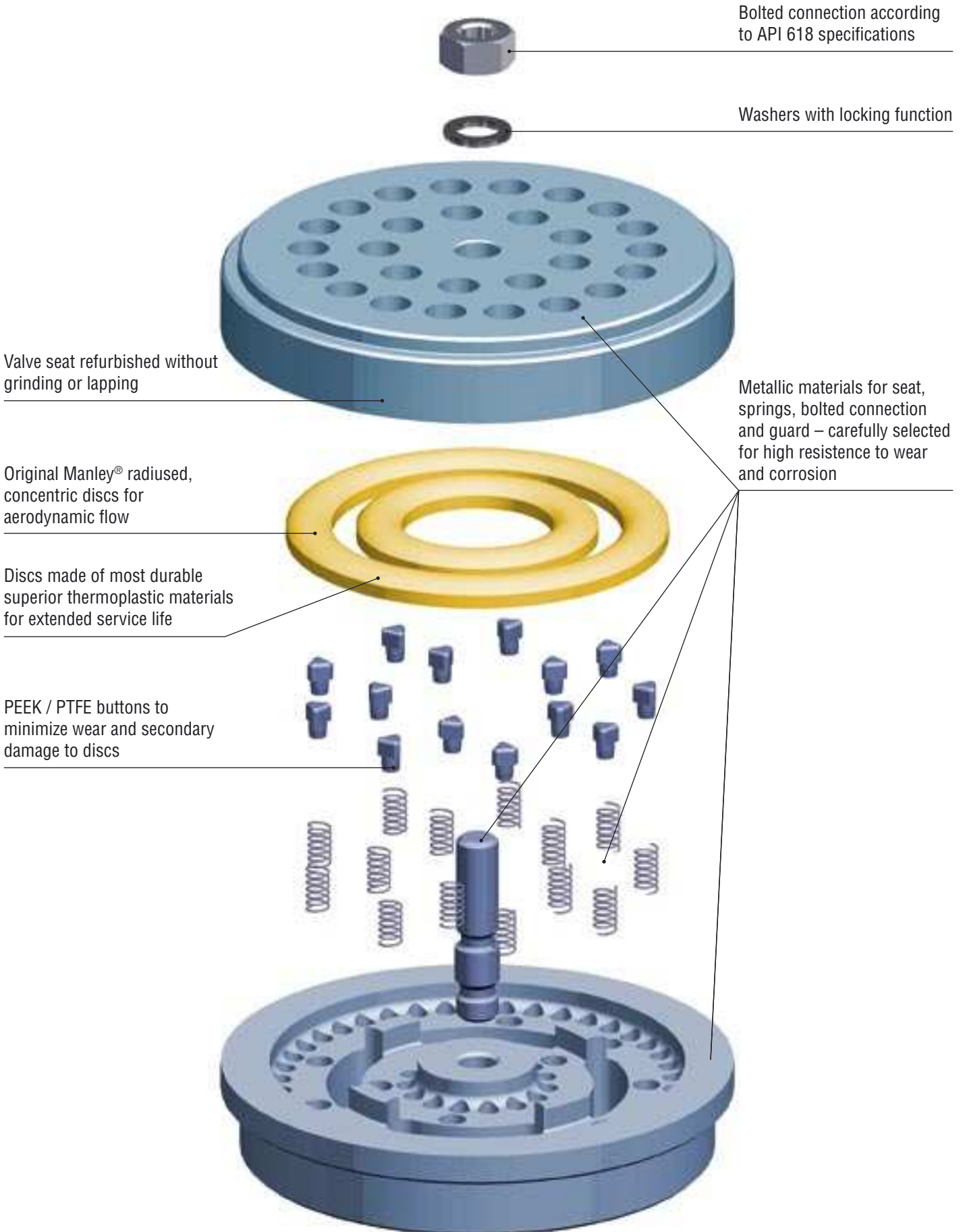
Manley® valves are efficient and reliable. The combination of aerodynamic flow, thermoplastic materials, and increased disc mass ensure a better resistance to impurities.

- The radiused thermoplastic discs and matching seat surfaces create a more streamlined flow path through the valve. This results in lower pressure drop and reduced compressor power consumption.
- Aerodynamic flow and the radiused disc surfaces deflect the particles, giving a better breakage resistance.

- The Manley® discs are inherently “self repairing”. The thermoplastics are pliable enough to conform foreign particles and still maintain an effective seal.
- Metallic materials for Manley® valve bodies, springs and center bolts are carefully selected for high resistance to wear and corrosion.

As a result, Manley® valves have the durability to extend run times and reduce maintenance costs in hostile operating environments where other valves suffer chronic failures.

Design features Manley® valve



Technical specification

Operating conditions

Compressor speed	max. 1800 rpm
Pressure difference	max. 200 bar / 2900 psi
Temperature range	from -50 to +220 °C / -58 to +428 °F
Compressor lube	lube and non-lube

Materials

Guard and seat	X12CrS13 / AISI 416
Discs	Nylon®, glass filled PEEK Chem Tuff Torlon

Dimensions

Min. diameter	68 mm / 2.68 inch
Max. diameter	323 mm / 12.72 inch

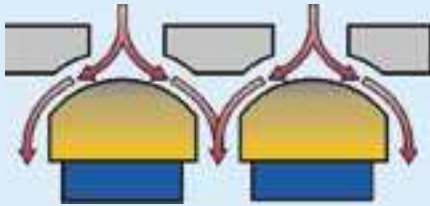
Capacity control

The Manley® valve is suitable for compressors with variable speed drive or in combination with valve unloaders. The following types are available:

- Standard unloading device
 - For suction valve with gas or oil-actuated unloading device
- Unloading device for explosive and toxic gases
 - Bellows type for suction valve with gas or oil-actuated unloading device
 - Hermetic sealed control unit
- Unloading device for low temperature applications
 - For suction valve with gas-actuated unloading device
 - Integrated control unit – no freezing problems

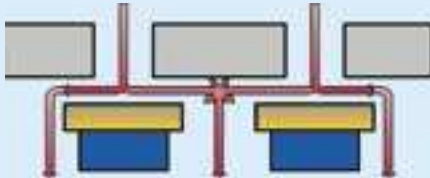
Design advantages

Manley® valve



- Radiused discs improve gas flow and deflect impact from foreign matter
- Matching radii for seal between disc and seat

Conventional valve



Advantages of non-metallic Manley® discs

- Lower mass results in reduced disc impact velocities
- Higher ductility results in much better impact properties
- Reduced wear on seat and guard during normal operating conditions
- If a failure occurs – greatly reduced damage to other cylinder components
- Maximum availability and reliability for gases bearing liquid or hard solid particles

Each valve is carefully selected and engineered for best efficiency in customer specific application.



**Burckhardt Compression:
compressors for a lifetime!**

Burckhardt Compression offers three types of custom-engineered valves for optimal performance in your application. These three types have proven successful over many decades:

- Burckhardt Plate Valves™
- Manley® valves, licensed by Burckhardt Compression
- Burckhardt Poppet Valves™

All three valve types have similar flow characteristics and are designed for full interchangeability if process operating conditions change.

**Burckhardt Compression has over 120 years experience in design
and manufacturing of compressor valves.**

**For best performance and longest service life –
Burckhardt Valve Service is a must.**

**Burckhardt Compression provides valves and valve service for all brands
of lubricated and non-lubricated compressors.**

Your local contact



Burckhardt Compression AG · CH-8404 Winterthur, Switzerland
Tel. +41 (0)52 262 55 00 · Fax +41 (0)52 262 00 51
24-Hour Emergency Tel. +41(0)52 262 53 53
info@burckhardtcompression.com · www.burckhardtcompression.com