Axial Check Valve
Fast acting non-slam protection for critical applications

Type designation
Check or non-return valve

Mokveld model
TKZ-Y

Size and pressure ratings
• Sizes 2” - 84”
• Rating ASME Class 150 - 2500
  or API 3000 - 10 000
• Higher pressure ratings upon request

In preference to
• Swing check valve
  (including controlled closure devices)
• Dual-plate check valve
• Piston check valve

Typical applications
• Transmission pipeline compressor discharge
• LNG compressor train
• Cooling water system (Ethylene, LNG)
• Multiphase pumping
• Subsea pump and flowline application
Mokveld axial check valves main features:

**Axial flow**
Streamlined flow path through expanded body avoids turbulence and prevents erosion and vibration. Process downtime and maintenance costs are eliminated.

**Low pressure loss**
The full opening flow passage and high-pressure recovery of the venturi-shaped body result in very low pressure loss which results in reduced operating cost of pumps and compressors.

**Tight shut-off**
Tight shut-off is obtained by means of metal-to-metal sealing between the disc and the seat. This sealing is not affected by erosion and deformation of material (like with a soft seal).

**Low cracking pressure**
The stability of a compressor system during start-up benefits from a low cracking pressure. This is achieved with a large disc that has identical effective pressure areas on both sides (line contact sealing).

**Easy opening and stable operation**
The low static pressure in the venturi-shaped throat area creates a pressure differential over the disc, resulting in easy opening. The axial check valve responds smoothly to changes in flow and remains stable when it is supposed to be.

**Non-slam operation**
The spring-assisted design ensures ultra-fast closing with virtually no backflow and pressure surges in critical applications such as multi-pump systems or LNG trains.

**Maintenance free**
Internal construction is based on the application of sound basic mechanical engineering principles. Consequently Mokveld axial check valves do not require any maintenance.

**Reliable performance prediction**
Both the pressure drop and the dynamic behaviour can be predicted with great accuracy, based on full-scale laboratory flow tests and a mathematical model developed in cooperation with a recognized fluid hydraulic laboratory.

**Special features**
- Custom-designed valve to meet the clients specific process conditions.
- Fire-safe, cryogenic and subsea design.

*For more information, please contact Mokveld.*