

# Axial Check Valve

## Product summary sheet

### 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 offer the following 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

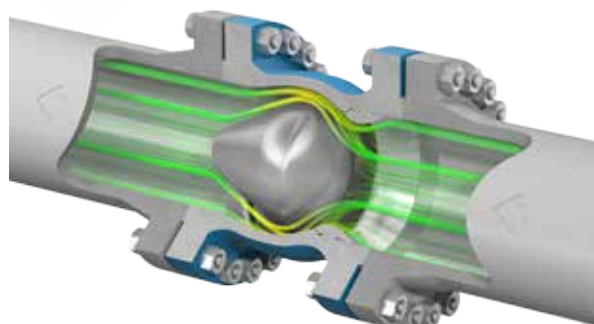
Tight shut-off is obtained by means of metal-to-metal sealing between the disk and the seat. This sealing is not affected by erosion and deformation of material (like with a soft seal).

### Low cracking pressure

The stability of a compressor system during start-up benefits from a low cracking pressure. This is achieved with a large disk 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, the axial check valve does 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.**

