

DURCON

THE RIGHT PRODUCT FOR YOUR APPLICATION



40 years

CHECK VALVE WITH QUICK ASSISTED CLOSURE, FOR STEAM TURBINE PROTECTION.

The best solution to prevent the reverse flow in the extraction of steam turbines that can damage the turbine rotor blades

Benefits:

- Valve closure assisted by pneumatic actuator, ensures the immediate closure of the valve (<1 second)
- Tight seal in the seating
- Anti-expulsion project of the shaft
- Inherently Fire Safe
- Robust and compact design
- Low maintenance
- Long service life
- Maximizes energy efficiency (low pressure drop)
- Permanent technical assistance.

Features:

- Design and construction according to ASME
- Pressure drop less than 0.03 bar
- International technology
- Tight sealing (Class V leakage)
- Sizes: 4" to 60"
- Pressure class: Up to 2500#
- Connections: Butt weld (BW) or Flanges ASME and DIN
- Manufactured 100% in Brazil



CHECK VALVE for steam turbine EXTRACTION

DURCON-VICE's swing type check valves with assisted quick closure have been designed to meet the specific technical requirements of the extractions in steam turbines used in co-generation units of industrial plants. The extractions are usually made out of the medium and low pressure sections of the steam turbine, to meet the various needs of steam of the industrial processes.

Since the steam turbine extractions are interconnected to the steam distribution lines, check valves, should be installed in the extraction lines, to prevent with absolute certainty and speed the steam reverse flow to the turbine as any steam or condensate counter-flow in the steam turbine will cause serious problems such as shaft break-out, breakage of blades, and considerable mechanical damage, which in turn will mean economic losses of Millions.

Standard check valves that **DO NOT HAVE** assisted quick closure are definitely not recommended because; being operated by counter-flow will allow reverse flow in its initial action.

This is NOT ACCEPTABLE, since ANY REVERSE FLOW can cause damage to the turbine

The quick closing of DURCON-VICE check valves for steam turbine extraction, is assisted by pneumatic or hydraulic actuator with spring return and/or counter-weight. The actuator mounted on the valve side is pressurized during normal operation of the valve, allowing the valve flap to operate normally due to the gravity and to the steam flow passing from the turbine to the process.

In case of steam turbine "TRIP" or momentary reduction in load, the control system depressurizes the actuator which in turn forces the closure of the valve flap, ensuring quick closing in less than 1 second.

INFORMATIONS NEEDED FOR SELECTION

Customer: _____ Reference: _____ TAG Number : _____

Contact: _____ Phone: _____ E-mail: _____

| | | Operation | | | Project | | | | |
|------------|---------|------------|----------------|-------------------|----------|-------|---------|-----------|--|
| | | Steam flow | Steam pressure | Steam temperature | Pressure | Temp. | Δp max. | Line Size | |
| Conditions | Maximum | | | | | | | | |
| | Normal | | | | | | | | |
| | Minimum | | | | | | | | |
| | Other | | | | | | | | |

Units: Flow: kg/h Temperature: °C Pressure: Mpa (g) or bar (g)

Connections: Flanged; Wafer; BW; Others (describe). Pressure Class: _____

Actuator(describe): _____

For Pneumatic or Hydraulic indicate: Max. and Min. pressure; Fail position; Communication standard; Control signal; Accessories

For Electric indicate: Power Supply voltage and phases; Communication standard; Control signal; Accessories

Installation: Horizontal.

HOW TO SPECIFY

Check valve with quick and assisted closure, especially designed for steam turbines extraction and sized to meet the operating and design conditions as per Selection Conditions above. The internal construction details must be such that a possible accumulation of condensate and/or debris in the valve bottom, will not pass to the steam turbine. The swing flap closing time, in case of turbine trip must be less than 1 second.

Choose the valve Actuator, describe the fail safe conditions and the desired accessories.

The right product for your application.

Fone: + 55 11 4447-7600 - Fax: + 55 11 4447-4164
 Av. Pedro Celestino Leite Penteado, 500
 07786-480 - Cajamar - SP - Brazil
 E-mail: sales@durcon-vice.com.br
 Web-page: www.durcon-vice.com.br

