

# FAIL-SAFE VALVE OPENING AND CLOSING SYSTEM

*Valves capable of controlling solid and liquid flow*

## Technological advantages

### Robust, failure-tolerant

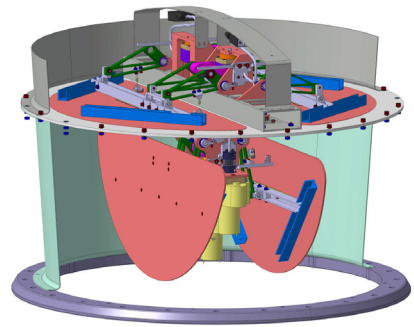
Since the system has built-in redundancy, it is extremely reliable.

It guarantees both the opening and closing of a valve under all circumstances, even after a failure.

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### Minimum complexity compared with existing systems

Improves existing systems



Fail-safe valve opening and closing system

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## Summary of the invention

A system for controlling the flow of gas or liquids. The invention is based on the principle of three clack valves ensuring the opening and closing of the system even if one of the valves remains either open or closed.

## Commercial advantages

**Moderate financial investment**

**Reasonable cost for unequalled robustness**

**Gain in productivity**

**Activity maintained even in the event of one valve failure**

**More robust**

## Potential applications

**Systems using clack valves for transferring high-value or dangerous gases or liquids**

**Example: suppliers of industrial gas, onboard nuclear-power systems, etc.**

*Patented invention available under licence*

*TRL : 5/6*