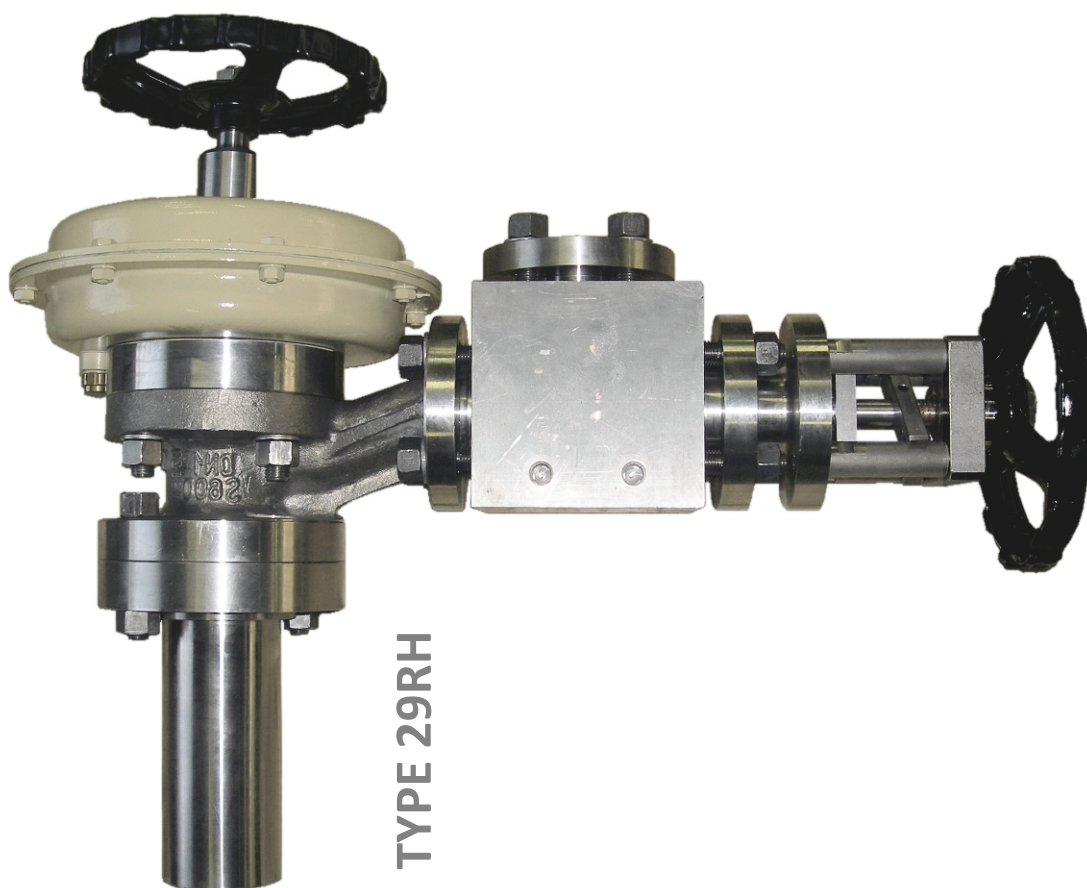


# **ISOTANK<sup>®</sup>**

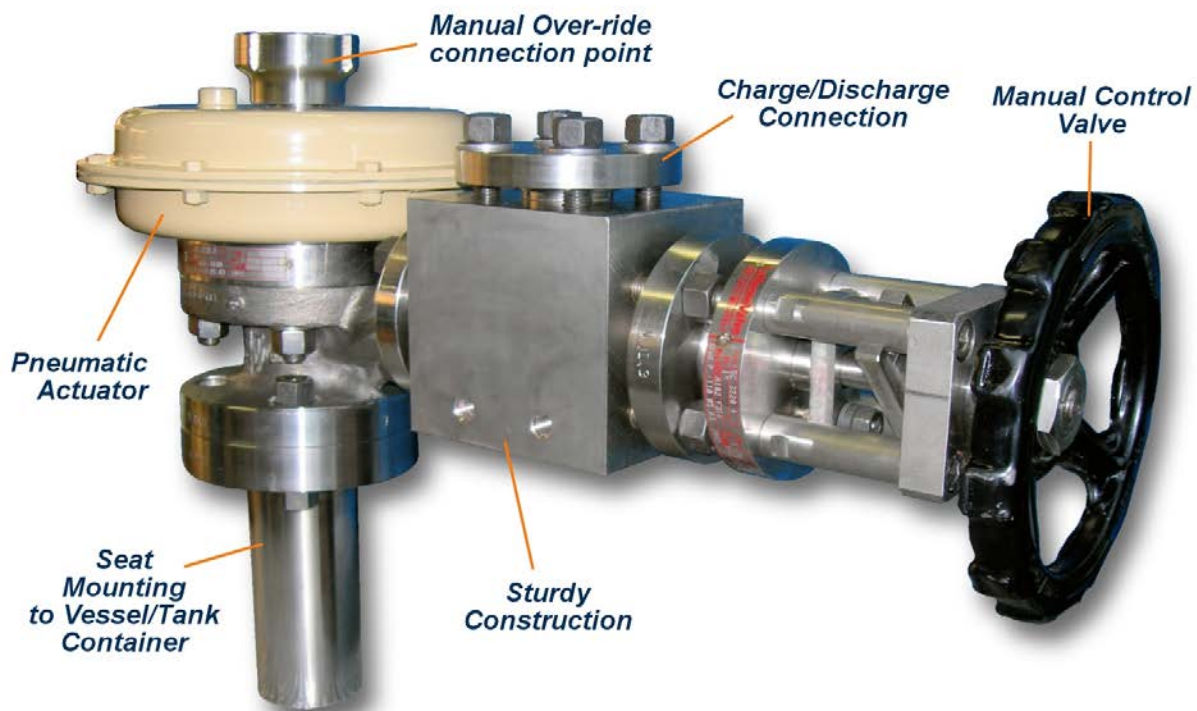
## **EXTERNAL TANK EMERGENCY SHUT-OFF (TESO) VALVES**



TYPE 29RH

## ISOTANK VALVES - Type 29RH

### External tank emergency shut-off valves



### Valves for Hazardous Media Tank Containers

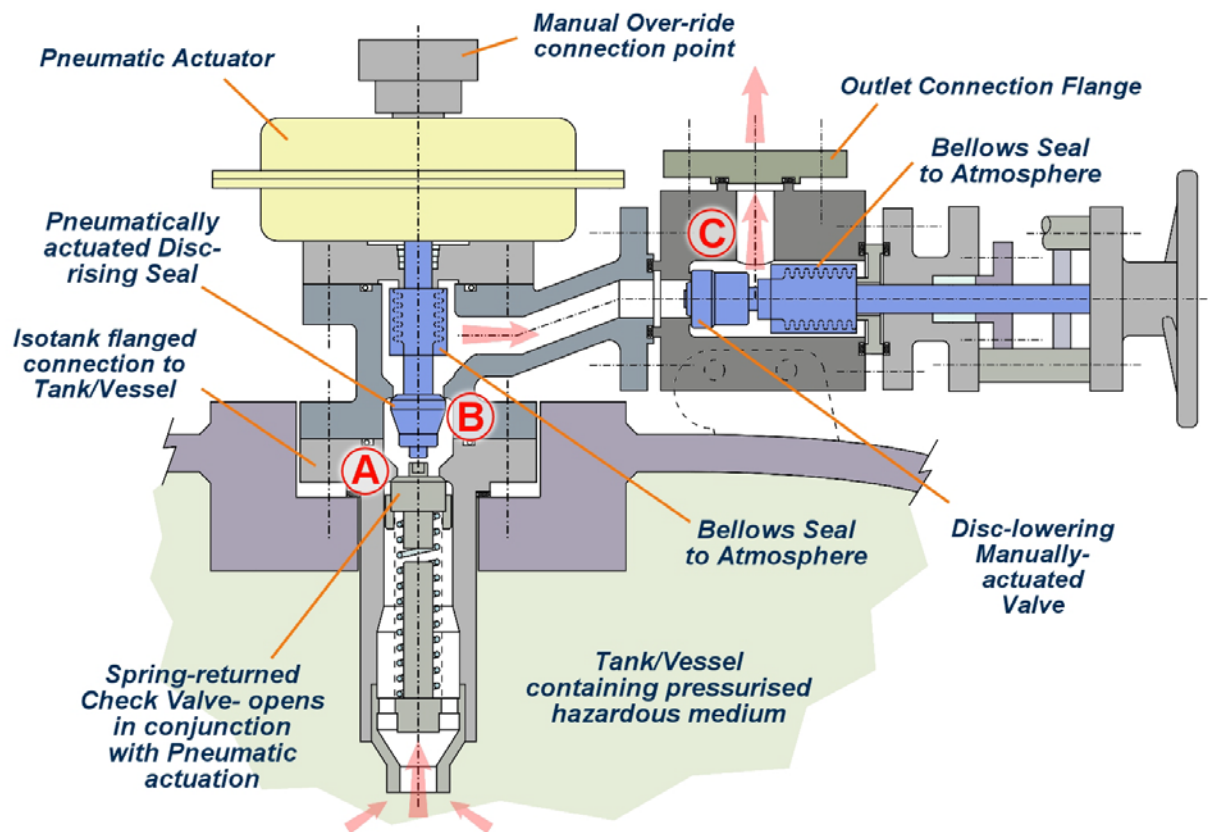
Road transportation of hazardous media e.g. chlorine, hydrofluoric acid and ammonia, is carried out using special safety containers. To charge, discharge and contain the medium inside these tanks, a special type of valve is required. The ISOTANK valve has been designed for this application, and incorporates three primary functions;

- Safely Charging and discharging the tank/container
- Safely containing the pressure during transportation
- In the event of a collision, avoid accidental discharge of the hazardous medium



### Key Features

- Tank safety valve in accordance with T-PED
- Double/triple sealing in one valve assembly construction.
- Double seal to atmosphere. Primary seal by means of a metallic bellows, Secondary seal by PTFE sealing Ring.
- Pneumatically actuated, Air fail Spring to Close.
- Detachable manual over-ride to reduce the overall valve height.
- Removable manual over-ride has the added safety feature that it also prevents accidental opening by an unskilled operator.
- Lockable in the closed position.
- Designs can be customized according to customer requirements.
- Robust construction
- Compact design



Because of the nature of road transportation, there is always danger of a collision which could see the valve being knocked off its mounting on top of, or below, the tank. Consequently, this is a very compact valve design where the profile of the valve is very low to the surface of the tank. A manual over-ride can be fitted but must be removed during transport to keep this minimum height profile.

*The valve shown above is effectively 3 valves in one;*

**A - 1 x spring-returned Check Valve with soft primary seal, and backup metal-to-metal seal in case of fire.**

**B - 1 x pneumatically operated Disc Rising Valve with metal bellows seal to atmosphere, air-fail spring to close.**

**C - 1 x manual Disc Lowering Valve with metal bellows seal to atmosphere for manual control of charging and discharging of the tank.**

- The Check Valve [A] is the primary seal between the medium and the atmosphere. It opens only when the pneumatic valve [B] is energized, and the disc rises.

The Check Valve is mounted onto a pad flange that is welded to the tank. In the event that the pneumatic valve is broken off due to collision- for example, if the truck passes under a low bridge, and the pneumatic valve is "removed" by the bridge structure- the check valve remains in place, because it is mounted flush to the tanks surface. The extension containing the Check Valve [A] that is seen in the drawing is internal to the vessel when mounted. Therefore the check valve remains closed and prevents any unwanted medium loss in the event of any accidental removal of the pneumatic valve.

- The second Disc Rising Valve [B] in the assembly is an actuated valve which serves two functions. The first function is that of a mechanical seal, and the second function is to open and close the Check Valve [A]. The actuated valve is a spring-return "normally-closed" valve- only when it is energized pneumatically does it open.
- The third valve in the assembly is a Disc Lowering Valve [C] that can be used to control the charging and discharging of the tank. To ensure the seal integrity of the valve during these operations, the primary seal to atmosphere is a metal bellows seal, backed up by a set of TA-Luft certified packing rings.

Materials of Construction			
Check Valve			
Body	SS	Nickel Alloy	Carbon Steel
Disc	Hastelloy	Hastelloy	Hastelloy
Soft Sealing Elements	PTFE	PTFE	PTFE
Spring	SS	SS	SS
Angle Valve			
Body	Cast SS	Nickel Alloy	Carbon Steel
Disc	Hastelloy	Hastelloy	Hastelloy
Stem	SS	SS	SS
Bellows	Hastelloy	Hastelloy	Hastelloy
Soft Sealing Elements	PTFE	PTFE	PTFE
Manual Valve			
Body	SS	Nickel Alloy	Carbon Steel
Disc	Hastelloy	Hastelloy	Hastelloy
Stem	SS	SS	SS
Bellows	Hastelloy	Hastelloy	Hastelloy
Soft Sealing Elements	PTFE	PTFE	PTFE



The valves are T-PED certified, 2012/45/UE, in accordance with the directive 2010/35/UE, certificate No.14/1005-ET5038, a European directive for these valves, which is specifically related to transportable pressure equipment.

