MANKENBERG

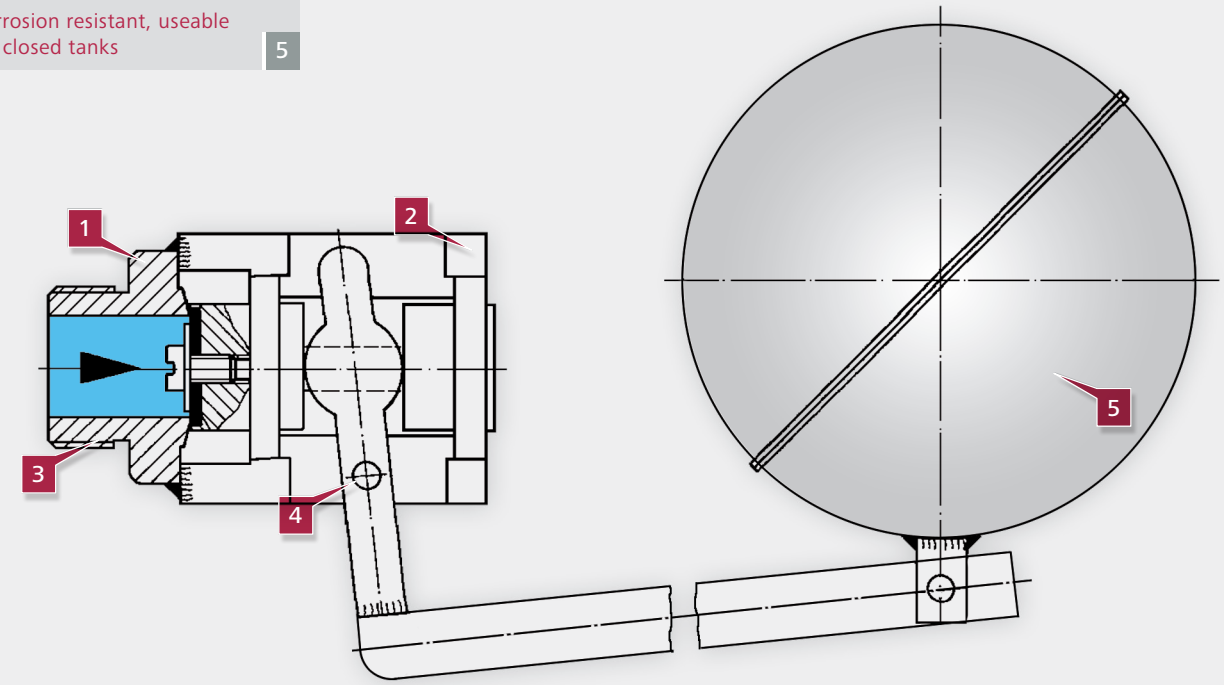
Completely made of stainless steel 316L
Corrosion resistant, low delta-ferrite content 1

Lightweight and compact
Minimum space required, manageable installation 2

Sleeve or flange connection available 3

Sturdy valve mechanism
Low maintenance 4

Float resistant to pressure, made of stainless steel 316L
Corrosion resistant, useable for closed tanks 5



Options
Suited lever mechanism and float size in accordance with the medium and application
Elastomers made of FKW, NBR, PTFE or others
Special materials such as Duplex, Superduplex or seawater resistant materials
Special connections (ANSI or JIS flanges, NPT, welding spigots …)

Compact Stainless Steel Valve for Installation in Tanks

NV 93, 94

Mankenberg Float Valves in Action

MANKENBERG

Compact Stainless Steel Valve for Installation in Tanks

MNV 93, 94

Single-seat feed or drain valve | suitable for nearly all liquids, also aggressive ones | completely made of CrNiMo-steel (316L) | incl. lever and ball float made of CrNiMo-steel | sturdy technology, smooth surfaces

DN	15 - 80	PN	16
G	$^{3}/_{8}$ A - $1^{1}/_{2}$ A	T	300 °C
P	0 - 8 bar	K_{VS}	0.5 - 21 m³/h

HIGH GRADE

Discharge of Condensate in a natural Gas Pipeline

In order to continue to respond to global demands for fossil fuels, natural gas is becoming increasingly important. It is a valuable source of energy and a feedstock for various production processes. Within the transport chain, large gas volumes must be conveyed from the exploitation site via the processing plant to the consumers. In doing so, the extracted gas is often transported hundreds of kilometers through pipelines to its destination.

A major energy supplier in Australia has built an over 400 km long, 42-inch underground natural gas transmission pipeline. The natural gas extracted from the coal seams in Queensland in north-eastern Australia is transported in the pipeline to a two-train LNG plant on Curtis Island near the port of Gladstone. The plant for the manufacture of liquefied natural gas (LNG) has a capacity of almost eight million tons per year. The LNG produced there is then pumped onto ships for resale on the world market.

Pressure and temperature differences require renewed compression of the natural gas during pipeline transport. For this purpose, compressor stations are provided at uniform distances from each other. The condensate arising during compression and back cooling flows into condensate pits in which a Mankenberg MNV 94 float valve is installed. As soon as the condensate level rises, the valve opens and, owing to the system pressure, the condensate is pushed through into a collection line. The valve closes again as the float falls. The functional unit (seat and cone) of the valve is permanently submerged in the condensate ensuring particular tightness as a protection against the escape of gas.

The MNV 94 is a single-seat tank valve and controls the liquid level self-actingly without requiring auxiliary energy. The float captures the condensate level and directly controls the valve through a lever. Since the condensate contains various salts, sulphur compounds as well as some proportions of methane and is highly aggressive, the body of the MNV 94 has been completely made of CrNiMo steel (1.4529). The float consists of CrNiMo steel (1.4539). The valve has been designed for an operating pressure of 0 - 8 bar and a nominal pressure of 16 bar.