Pressure Reducing Valve

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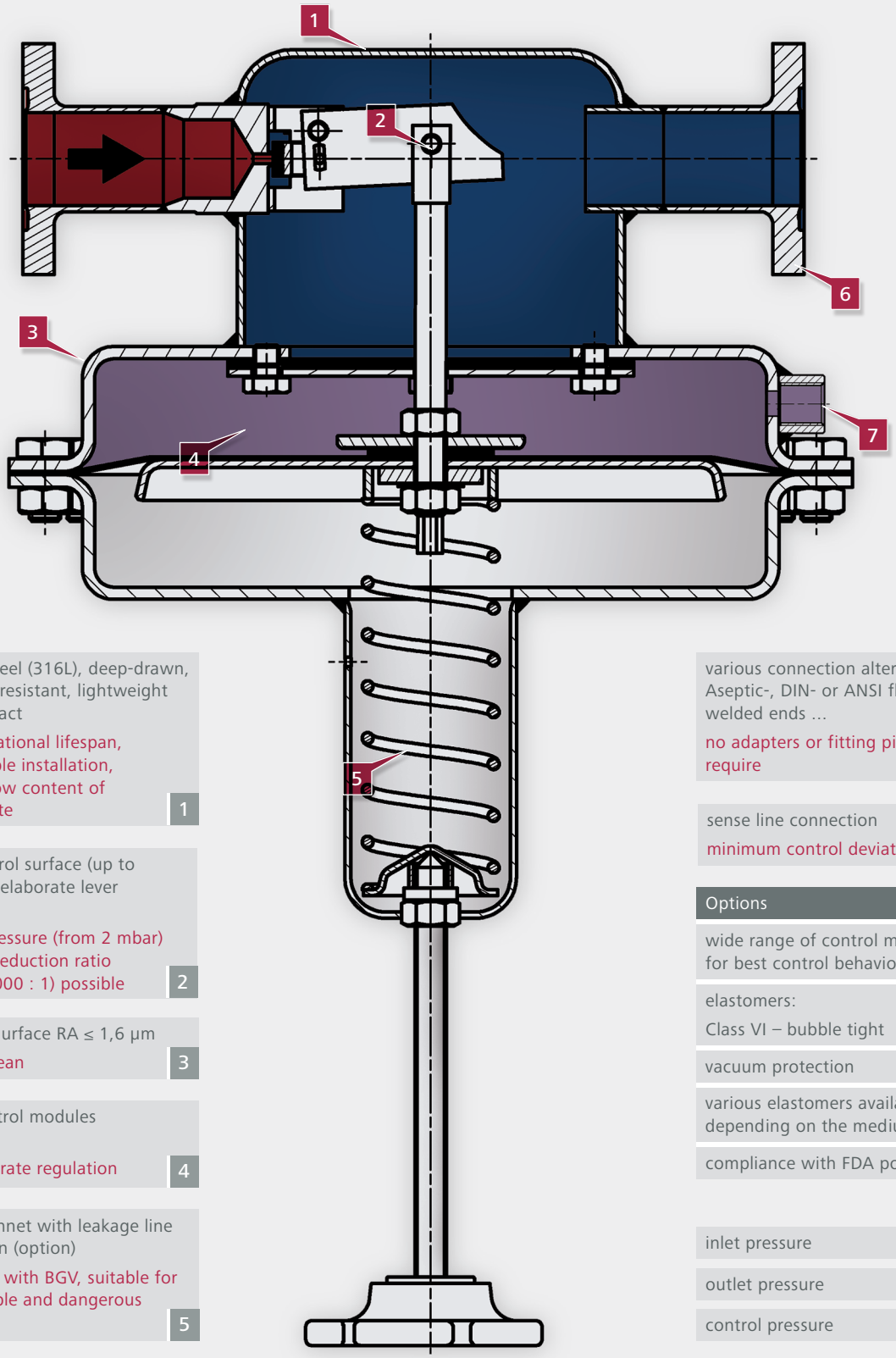

CrNiMo steel (316L), deep-drawn, corrosion-resistant, lightweight and compact
long operational lifespan, manageable installation, possibly low content of delta-ferrite **1**

large control surface (up to 500 mm), elaborate lever mechanic
low set pressure (from 2 mbar) and high reduction ratio (max. 15,000 : 1) possible **2**

standard surface RA ≤ 1,6 µm
easy-to-clean **3**

many control modules available
most accurate regulation **4**

sealed bonnet with leakage line connection (option)
compliant with BGV, suitable for inflammable and dangerous media **5**

various connection alternatives: Aseptic-, DIN- or ANSI flanges welded ends ...
no adapters or fitting pieces require **6**

sense line connection
minimum control deviation **7**

Options

wide range of control modules for best control behaviour

elastomers:
Class VI – bubble tight

vacuum protection

various elastomers available – depending on the medium

compliance with FDA possible

inlet pressure

outlet pressure

control pressure

Pressure Reducing Valve **DM 762**

Mankenberg Pressure Reducing Valve in Action

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Millibar Control Valve — DM 762

single-seat straight-way valve for medium flow rates, especially for the control of millibar ranges | usable for liquids and gases | completely made of deep-drawn CrNiMo-steel (316L) – surface finish of the body Ra ≤ 1.6 µm | corrosion-resistant, very lightweight and compact | very precise owing to large control surfaces and a large number of different control ranges, available in many different versions

DN	15 - 50	PN	16
G	½ - 2	T	130 °C
P_2	0.002 - 0.52 bar	K_{VS}	0.2 - 3.6 m^3/h

HIGH GRADE

Tank Blanketing in the Foodstuffs Industry

Brazil is among the worldwide leading producers and exporters of citrus fruit. However, the major part of the orange harvest is not shipped as a whole fruit but further processed to direct or concentrated juice in the country of origin. From the moment of their production those liquids degenerate very rapidly and must not be exposed to air or oxygen.

As a first measure against degeneration the juice or concentrated juice is pre-cooled to -12 °C immediately after the production process and then stored and transported in deep-frozen condition in specially dedicated cargo tanks. Freshness is not only maintained through continuous cooling but also by means of tank blanketing. In this process, the void volume in the tank head space is slightly pressurised with a gas cushion from nitrogen or other inert gases in order to prevent the product from getting into contact with oxygen. Thus oxidation reactions and the risk of contamination by harmful germs can be avoided so that product quality remains unchanged.

Using Mankenberg's pressure reducing valve DM 762 considerably reduces the costs for the customer's plant thanks to lower inert gas consumption. The one-seated straight-way valve is a diaphragm-controlled, spring-loaded proportional control valve for very small outlet pressures and medium flowrates. It regulates the downstream pressure without requiring pneumatic or electrical control elements and maintains a constant minimum pressure of 3 - 5 mbar within the cargo tank at an inlet pressure of 1.5 - 2 bar. The medium-wetted elastomers are FDA approved.

The high millibar control accuracy of the DM 762 is ensured by the large control surface and lever transmission. In many application cases the pressure reducer's large reduction ratio allows for single-stage control whilst other systems must often be operated in two stages. Consequently, no second pressure reducing valve is required with the use of the DM 762. As a protection against overpressure within the cargo tank a back pressure regulator UV 3.9 with highly sensitive response characteristics is employed.