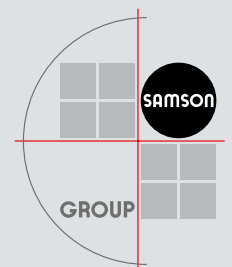
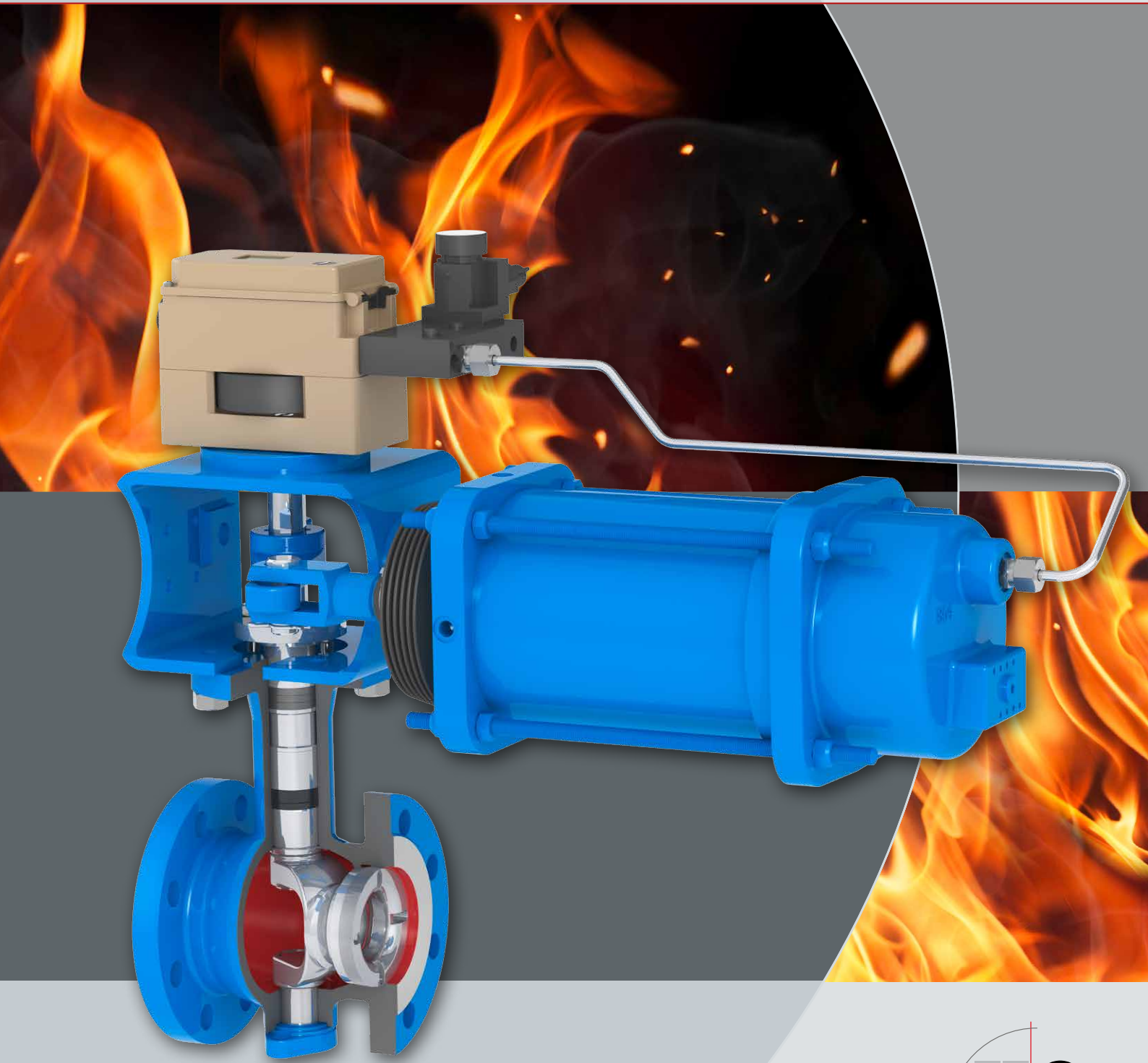


**MAXIFLUSS**  
Fire-safe Rotary Plug Valves



# Strong. Rugged. Reliable.

MAXIFLUSS rotary plug valves by VETEC have a double-eccentric design. They feature high flow capacities and an excellent control accuracy at an enormous resolution. Typically, their  $K_{vs}$  and  $C_v$  coefficients are two to three times higher than those of conventional globe control valves and higher than those of similar products. Their rangeability of 200:1 also exceeds that of conventional control valves and similar products. When the closure member starts to move from the closed position, the valve plug lifts off the seat immediately and moves to the desired position virtually without any initial break-away torque and without friction between the trim elements. As a result, the undesirable slip-stick effect is prevented. Very short transit times can be implemented without any problems. Thanks to their rugged double guiding, the rotary plug valves have an unobstructed cross-section of flow and do not need a shaft that would disrupt the flow path. As a result, detrimental flow turbulences are minimized and valves' service life is extended. The MAXIFLUSS rotary plug valves are suitable for handling all media: liquids, steam or gases. They master high pressure drops, handle severely contaminated, abrasive, caking or corrosive media, and are suitable for many areas of the process industry. For 50 years, the MAXIFLUSS rotary plug valves by VETEC have proven their worth in processes in the chemical, petrochemical, oil and gas industries, in refineries, the food and steel industries as well as in pulp and paper applications. In recent years, the valves have increasingly been used in water treatment as well.

## Fire-safe

In many of our customers' plants, e.g. in refineries or the petrochemical industry, there is a higher risk of fires. Special safety requirements apply. In case of fire and when they are directly exposed to flames, the valves must retain their proper functioning and prevent internal and external leakage for a certain period of time.

The VETEC Series 72.x, 73.x, 82.x were subjected to a type test for fire safety according to DIN EN ISO 10497 and API 607 4<sup>th</sup> Edition by an independent certified body. For fire-safe certification, the valves are subjected to leakage tests while exposed to flames during the heating up and the cooling down stage as well as when they have cooled down. The internal and external leakage rates are measured and functional tests are performed. Our successful fire-safe certification is based on a specially developed new seat design. This makes us at VETEC fit for fire-safe applications.



# Technical benefits

## Operation

- No getting jammed and smooth rotary motion, even after exposure to flames

## Packing system

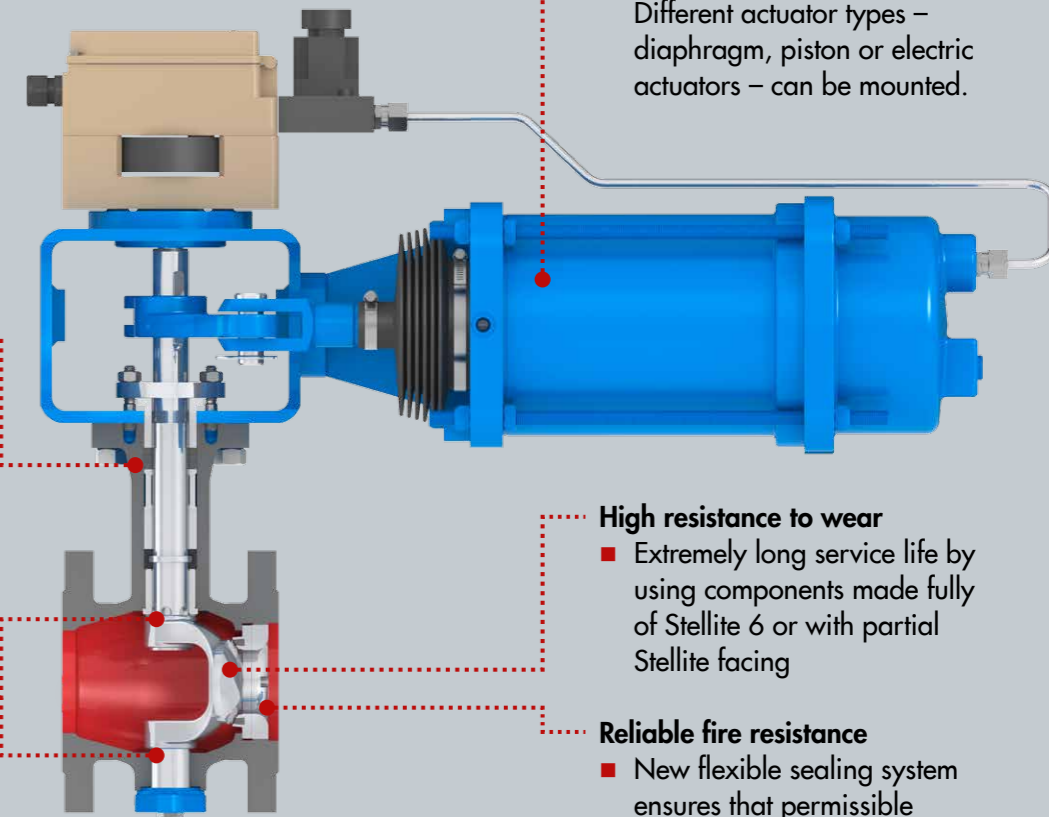
- The packing system prevents external leakage even at extreme temperature fluctuations. It is also available with an optional environmental seal according to VDI 2440.

## No vibration

- Rugged, low-wear double guiding for severe service and special sealing solutions to prevent media from getting into the guide bearings

## Various actuators, compact design

- Compact valve bodies and actuators with high torques are combined into space-saving assemblies. Different actuator types – diaphragm, piston or electric actuators – can be mounted.



## High resistance to wear

- Extremely long service life by using components made fully of Stellite 6 or with partial Stellite facing

## Reliable fire resistance

- New flexible sealing system ensures that permissible leakage rates are observed and temperature expansions compensated.

# Typical fire-safe applications

## Tank farm applications in the petrochemical industry

When filling tanks in tank farms with easily flammable media, the MAXIFLUSS valves help achieve quicker filling times, i.e. more filling runs per unit of time; at the same time, they reduce the volume tolerances to under 0.1 %. The same applies to tapping. Our customers benefit from the strengths of the MAXIFLUSS valves, i.e. high flow capacity, control accuracy and resolution.

## Fuel gas plants in refineries

MAXIFLUSS valves are used to control the fuel gas supply to the associated heaters. The fine soot particles contained in the gas can cake up. In centrally guided ball or segmented ball valves, they often cause the closure member to get jammed. The MAXIFLUSS rotary plug valves feature a double-eccentric design, which means that the seat and plug do not touch when the

valve is opened and closed. As a result, no particles can get caught in-between the trim elements. The inside of the body is basically free of cavities to ensure that no detrimental soot deposits can form. The benefits for our customers are an extremely long service life and low cost of service.

## Ethylene oxide plants in the chemical industry

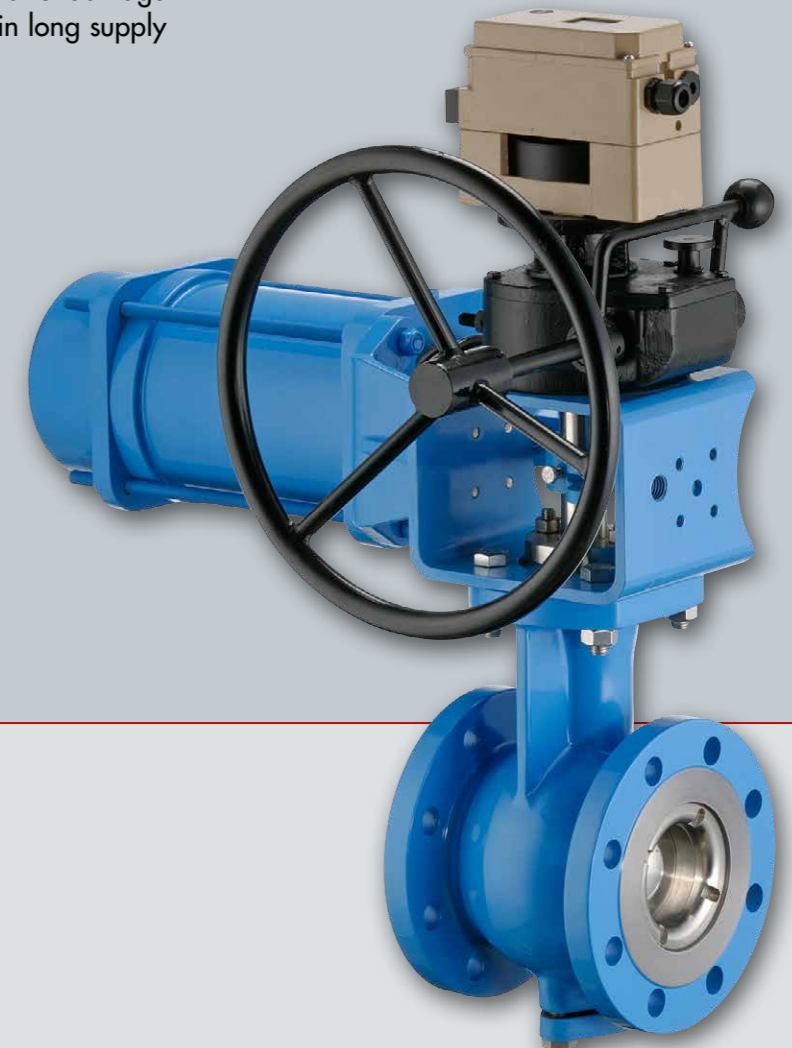
Ethylene oxide is highly flammable in combination with atmospheric oxygen, which is why valves with fire-safe certification must be used. MAXIFLUSS valves are particularly suitable to control the main product flow because of their higher flow capacities compared to other control valve types. As a result, high flow rates can be controlled at small pressure drops with smaller valve sizes to cut costs and save space.

## Midstream oil and gas applications

Valves with fire-safe certification are used in feeding and distributing processes, i.e. where crude oil or gas are transported through long-distance pipelines for further processing in refineries, loading ports or storage tanks. Strict fail-safe requirements apply to the costly supply networks. MAXIFLUSS rotary plug valves are well suited as flow control valves and as pressure control valves for tank filling or for consumption measurement. Our valves feature high  $C_v$  coefficients and an excellent control accuracy. In addition, the unobstructed flow path is resistant to wear caused by abrasive particles contained in the process media. Moreover, the double-eccentric design reduces the risk of damage caused by pressure surges (Joukowsky) in long supply pipelines.

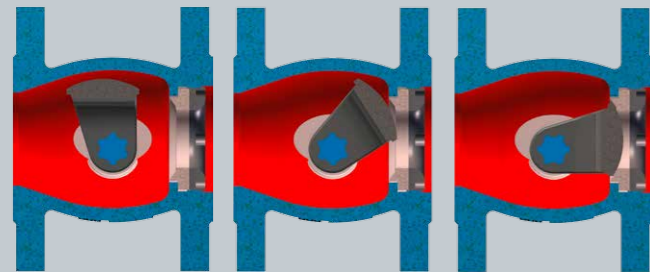
## Processes in steel production

During storage in cargo tanks, the carbon used in steel production is blanketed with nitrogen gas to maintain a non-explosive atmosphere caused by volatile carbon dust. In these applications, the MAXIFLUSS valves are used to control the nitrogen pressure. The drained nitrogen gas is contaminated with carbon. Optionally, our fire-safe rotary plug valves can be fitted with special seals that prevent any particles from getting inside the bearings. Their cavity-free bodies and the wear-resistant trim design with an unobstructed flow path guarantee a long service life.

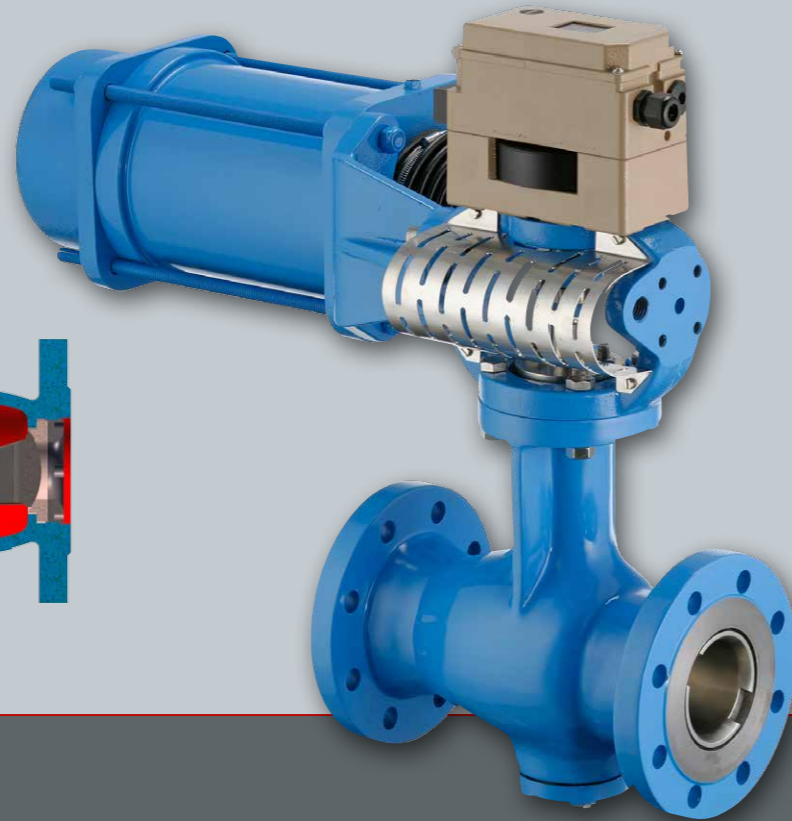


# Technical data

|                         |                              |                              |                          |
|-------------------------|------------------------------|------------------------------|--------------------------|
| Valve size              | DN 25 to 500                 | NPS 1 to 20                  |                          |
| Pressure rating         | PN 10 to 160                 | Class 150 to 900             |                          |
| Material                | 1.0619                       | A216 WCC                     |                          |
| Temperature range       | Up to 400 °C                 | Up to 750 °F                 |                          |
| Flow coefficients       | $K_{vs}$ 4 to 4,800          | $C_v$ 4.6 to 5,550           |                          |
| Fire-safe conformity    | DIN EN ISO 10497 and API 607 | DIN EN ISO 10497 and API 607 |                          |
| Face-to-face dimensions | Series 82.7<br>Short design  | EN 558-1, R36/ISA-S75.04     | EN 558-2, R36/ISA-S75.04 |
|                         | Series 72.3<br>Long design   | EN 558-1, R1, R15            | EN 558-2, R37, R38       |
|                         | Series 73.7<br>High pressure | EN 558-1, R2, R15            | EN 558-2, R15, R39       |



Double-eccentric design



# Our company

VETEC Ventiltechnik GmbH is a German company headquartered in Speyer on the river Rhine. Our roots date back to the original founding year, 1901. Since 1964, we have been developing and manufacturing control valves and actuators for the process industry.

In 1988, VETEC joined forces with SAMSON AKTIENGESELLSCHAFT, a leading manufacturer of control valves and valve accessories for all industrial processes. By cooperating with SAMSON, its subsidiaries and associated companies as well as its engineering and sales offices, we are represented all across the world. Within Germany, our own VETEC engineering and sales offices provide technical customer support and ensure sales of our products throughout the country. Proximity to our customers and flexibility contribute to our success.

Together with SAMSON, VETEC and other noted manufacturers of special valves, such as AIR TORQUE, CERA SYSTEM, LEUSCH, PFEIFFER, RINGO VÁLVULAS, SAMSOMATIC and STARLINE, form a strong union: the SAMSON GROUP, where product know-how and prime quality are accumulated in a one-stop shop for our customers.

VETEC develops and manufactures MAXIFLUSS rotary plug valves in all common materials and exotic alloys. Their modular design and wide variety of versions make them universally suitable for many applications. In addition, we offer special solutions for super-critical applications, such as the VNG high-pressure angle valve for natural gas or our newly developed Type 93.7 Axial Flow Valve.





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