

Double-eccentric Rotary Plug Valve Type 82.7

SMART IN FLOW CONTROL

BENEFITS AND FEATURES

Positioners and Accessories

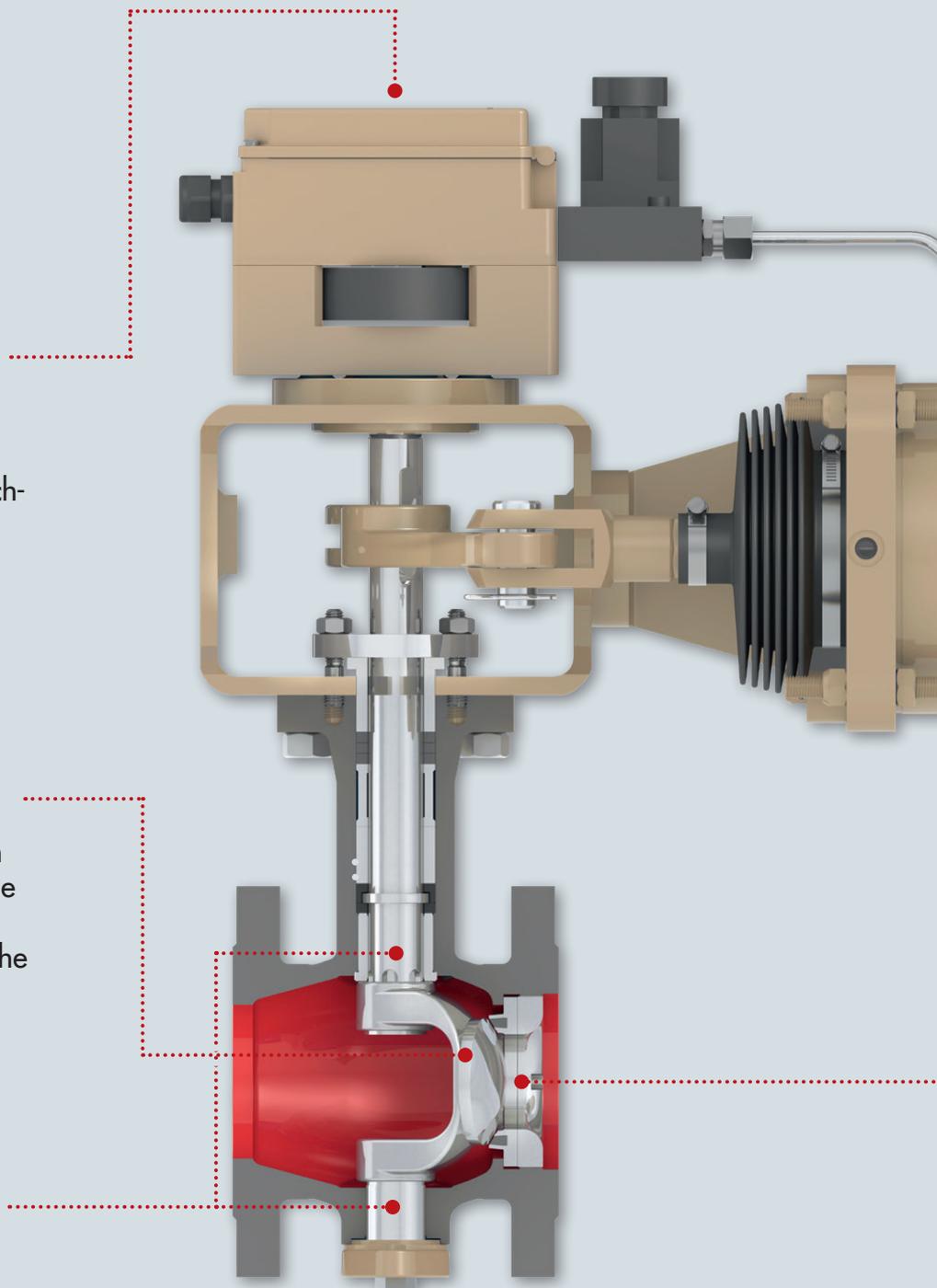
- SAMSON accessories designed for direct attachment
- NAMUR dimensions for easy attachment of third-party positioners or accessories

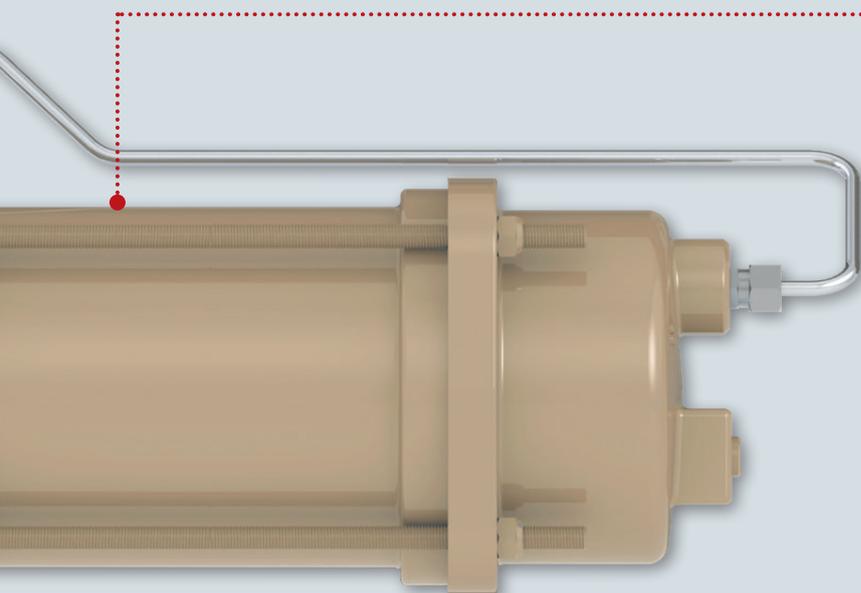
Less Flow Disturbance

- Thanks to the free flow path when open, there is less turbulence in the flow and therefore reduced noise as well as less wear and tear on the internal and guiding parts

Longer Service Life

- Only the highest grade materials are used for all internal components to ensure the longest possible service life





Various Actuator Options

- Spring-return diaphragm for the most accurate control
- Rack and pinion for low weight, compact design
- Scotch yoke for maximum shut-off against high differential pressures

Maximum Flow Capacity

- The straight-through flow path allows for much higher flow capacities (C_v) than standard globe control valves
- This also allows for a higher rangeability of up to 200:1

DOUBLE-ECCENTRIC ROTARY PLUG VALVES



Rotary Plug Valves

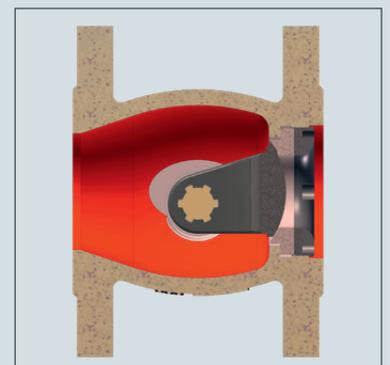
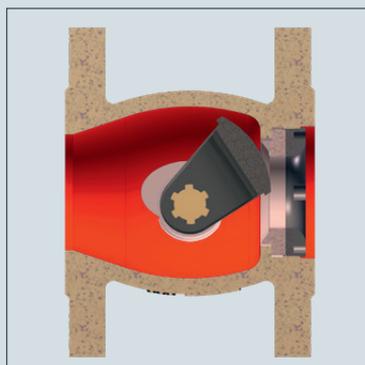
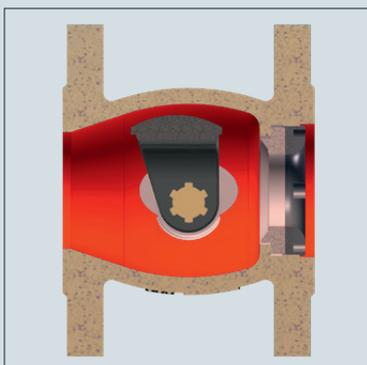
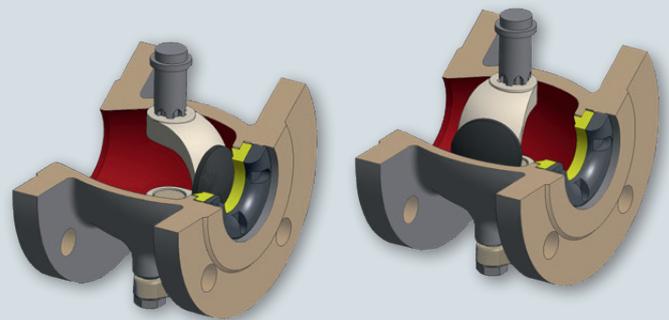
- The plug is rotated in and out of the flow path to control either the flow rate passing through the valve or the downstream pressure
- Rotary plug valves are typically used for throttling service due to their excellent control abilities; however, they may also be used for isolation (on/off) applications with tight shut-off
- Different types of pneumatic actuators, electric actuators, or manual handwheels/gears may be used to operate the valves

Double-eccentric Design

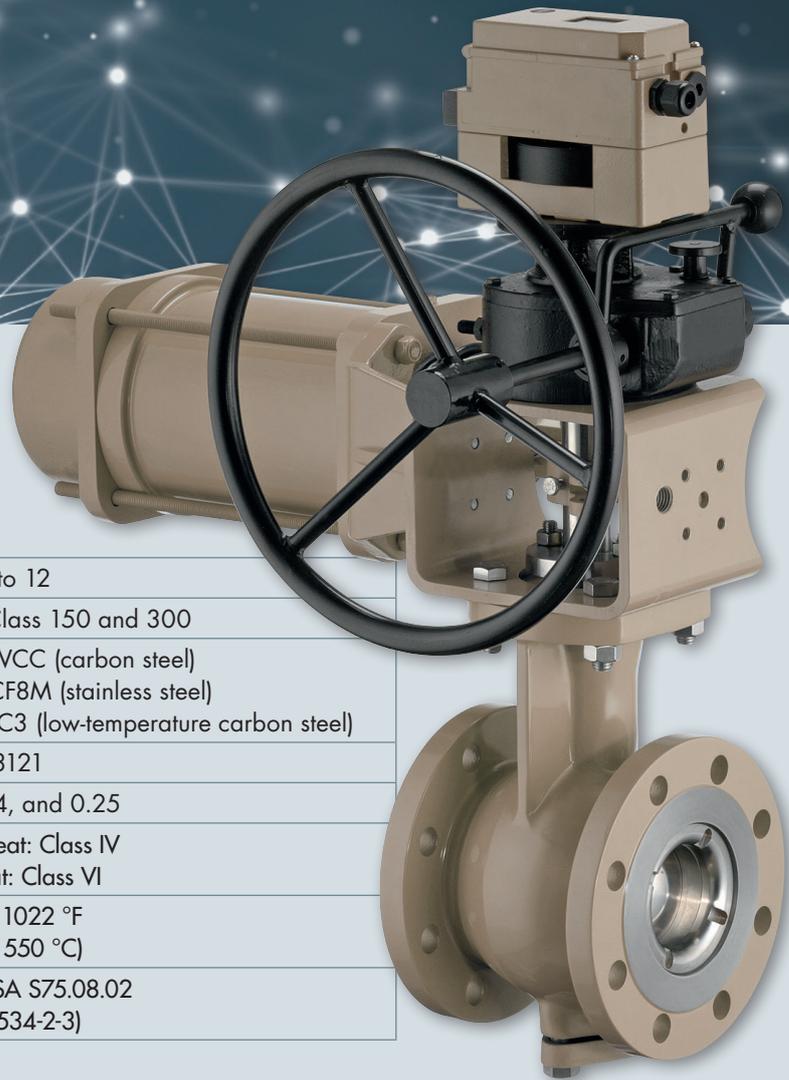
- The plug shaft is offset from the centerline of the valve
- The face of the plug is offset from the centerline of the plug shaft

Benefits

- Eliminates friction when the valve is opening or closing
- Reduces wear on internal parts
- Reduces the required breakaway torques
- Allows for more accurate control than other rotary valve types



TECHNICAL DATA



Valve size	NPS 1 to 12
Pressure rating	ANSI Class 150 and 300
Material	A216 WCC (carbon steel) A351 CF8M (stainless steel) A352 LC3 (low-temperature carbon steel)
Flow capacity (C_v)	4.6 to 3121
Reduced trim options	0.6, 0.4, and 0.25
Internal leakage rate (according to ANSI/FCI 70-2)	Metal seat: Class IV Soft seat: Class VI
Temperature range	-320 to 1022 °F (-196 to 550 °C)
Face-to-face dimensions	ANSI/ISA S75.08.02 (IEC 60534-2-3)

SPECIAL APPLICATIONS

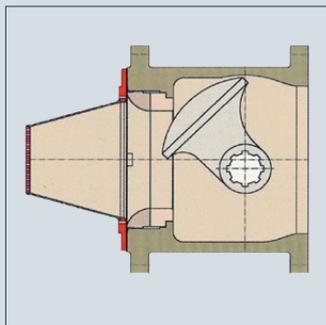
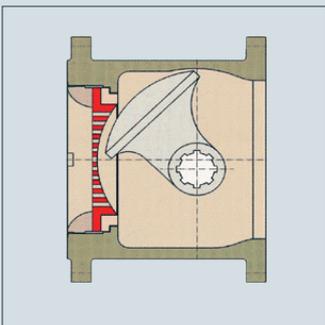


Cavitation and Flashings

- Cavitation and Flashing
- Industries: all
- Challenges: severe damage caused by the following phenomena
 - Cavitation: formation of vapor bubbles in a liquid flow during throttling
 - Flashing: phase change from liquid to vapor during throttling
- Solution: the straight-through flow path as well as the use of high-quality trim and guiding materials allow the VETEC Type 82.7 to withstand the effects of these phenomena and continue to offer superior service life

Special Trims for Noise Reduction

- Industries: all
- Challenges: high pressure drops in gaseous/vapor flow or cavitation in liquid flows can often cause severe noise emissions, particularly as flow rates get higher
- Solution: VETEC offers several low-noise and anti-cavitation options to reduce the sound pressure level (SPL) of the valves





Fire-safe

- Industries: oil and gas, chemical and petrochemical, refineries, and steel plants
- Challenges:
 - Increased risk of fire in certain areas
 - Control valves must be able to withstand fire without catastrophic failure
- Solution: the VETEC Type 82.7 is fire-safe certified according to API 607 and ISO 10497 for use in these areas

NACE/Sour Gas

- Industries: oil and gas, refineries
- Challenges: when oil and gas are first recovered, hydrogen sulfide (H₂S) may be present, which can cause hydrogen-induced cracking in certain metals
- Solution: the VETEC Type 82.7 NACE version only uses materials in compliance with NACE MR0175/ISO 15156 specifications certified for use with H₂S

Cryogenics

- Industries: oil and gas, LNG, industrial gas production, refineries, food and beverage
- Challenges: extremely low temperatures, typically below -238 °F (-150 °C), can stretch the material properties to their limits and pose many additional leakage challenges that would not exist at standard operating temperatures
- Solution: the strict machining tolerances and high-quality materials used in the VETEC Type 82.7 allow the valve to function as designed, even in low temperatures down to -320 °F (-196 °C). Additionally, the Type 82.7 has been type tested and certified according to EN 1626 for use in cryogenic applications

SAMSON AT A GLANCE



STAFF

- Worldwide 4,500
- Europe 3,700
- Asia 600
- Americas 200
- Frankfurt am Main, Germany 2,000

INDUSTRIES AND APPLICATIONS

- Chemicals and petrochemicals
- Food and beverages
- Pharmaceuticals and biotechnology
- Oil and gas
- Liquefied Natural Gas (LNG)
- Marine equipment
- Power and energy
- Industrial gases
- Cryogenic applications
- District energy and building automation
- Metallurgy and mining
- Pulp and paper
- Water technology
- Other industries

PRODUCTS

- Valves
- Self-operated regulators
- Actuators
- Positioners and valve accessories
- Signal converters
- Controllers and automation systems
- Sensors and thermostats
- Digital solutions

SALES SITES

- More than 50 subsidiaries
in over 40 countries
- More than 200 representatives

PRODUCTION SITES

- SAMSON Germany, Frankfurt, established in 1916
Total plot and production area: 150,000 m²
- SAMSON France, Lyon, established in 1962
Total plot and production area: 23,400 m²
- SAMSON Turkey, Istanbul established in 1984
Total plot and production area: 11,100 m²
- SAMSON USA, Baytown, TX, established in 1992
Total plot and production area: 20,000 m²
- SAMSON China, Beijing, established in 1998
Total plot and production area: 47,000 m²
- SAMSON India, Pune district, established in 1999
Total plot and production area: 28,000 m²
- SAMSON Russia, Rostov-on-Don, established in 2015
Total plot and production area: 24,000 m²
- SAMSON AIR TORQUE, Bergamo, Italy
Total plot and production area: 27,000 m²
- SAMSON CERA SYSTEM, Hermsdorf, Germany
Total plot and production area: 14,700 m²
- SAMSON KT-ELEKTRONIK, Berlin, Germany
Total plot and production area: 1,100 m²
- SAMSON LEUSCH, Neuss, Germany
Total plot and production area: 18,400 m²
- SAMSON PFEIFFER, Kempen, Germany
Total plot and production area: 20,300 m²
- SAMSON RINGO, Zaragoza, Spain
Total plot and production area: 19,000 m²
- SAMSON SED, Bad Rappenau, Germany
Total plot and production area: 10,400 m²
- SAMSON STARLINE, Bergamo, Italy
Total plot and production area: 27,000 m²
- SAMSON VDH PRODUCTS, the Netherlands
Total plot and production area: 12,000 m²
- SAMSON VETEC, Speyer, Germany
Total plot and production area: 27,100 m²

SAMSON AKTIENGESELLSCHAFT

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