

Type 3598 High-pressure Top-entry Valve

SAMSON

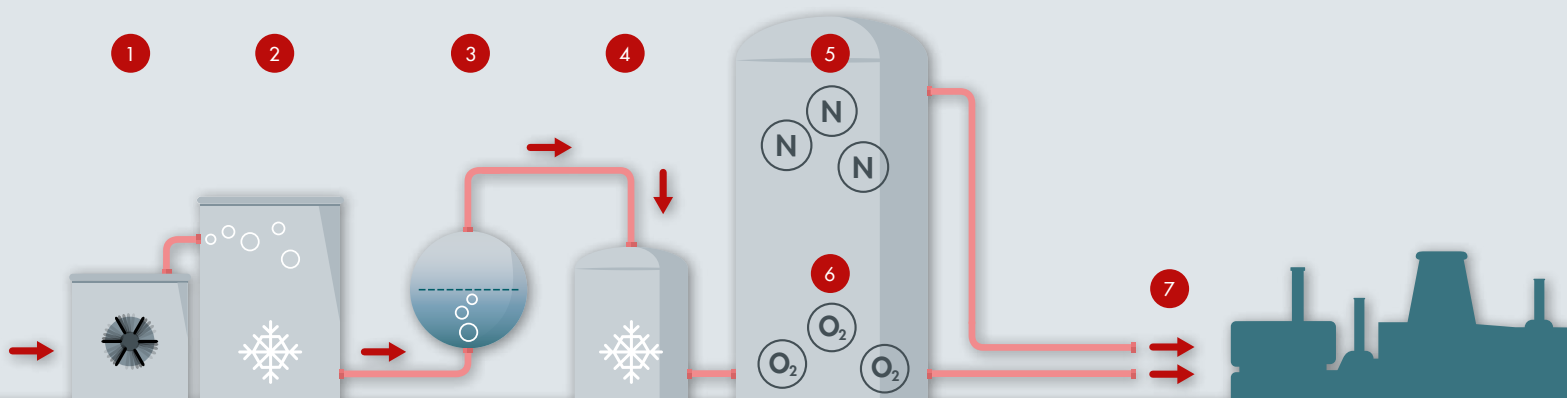
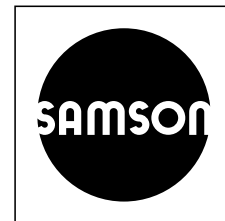


Developed for the future needs of our customers Cryogenic processes for air separation units (ASU)

- Top-entry design for high energy efficiency and low cost of operation
- Small actuator sizes thanks to the standard use of pressure balancing
- Cage guidance facilitates maintenance with SAMSON's own top-entry tool
- Special cage design for severe service and high pressure drops



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- 1 Ambient air is drawn in, compressed...
- 2 ... and pre-cooled with water.
- 3 Impurities are removed from the air.
- 4 The main heat exchanger cools air down to approx. $-175\text{ }^{\circ}\text{C}$.
- 5 In a physical separation process at low temperature, pure nitrogen occurs at the top...
- 6 ...and pure oxygen at the bottom.
- 7 Gaseous oxygen and nitrogen are transported by pipeline directly to the customers (e.g. steelworks).

Application: Industrial gases/air separation

Customer requirements	Challenges	Solutions
High energy efficiency	Large difference between operating and ambient temperatures	The design allows for a direct adaptation to the cold box. A cover plate ensures closure to the environment. Advantage: top-entry design
Quick and easy in-line service	Valve is completely enclosed/insulated	Top-entry design makes it possible to access all parts subject to wear without removal from the cold box
The smallest possible dimensions and weights of all components associated with the cold box that protrude from the cold box	High actuating forces required, especially at high pressures	Compact and lightweight actuators can be used thanks to their standard pressure balancing
Severe service conditions	Control severe service conditions, prevent vibration, wear etc.	Rugged cage design
Inclined mounting position	Cold medium rises into the insulating section	Circulation inhibitor prevents circulation of the medium in the cryogenic extension bonnet

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