



OXYMIX® Flowtrain. Measurement and control system for safe oxygen metering.



OXYMIX Flowtrain for use in a Claus plant

Air is used in numerous oxidation reactions in refineries and in petrochemical production. Enriching the oxidation air with pure oxygen can increase the capacity of existing plants, make plant operation more flexible, and reduces waste gas. Carefully controlling the addition of this oxygen is critical not only for safety.

Description Depending on the amount of process air, the OXYMIX® Flowtrain meters oxygen into the process air to reach the desired concentration. The installed OXYMIX Injector is dimensioned for the specific type of application. For installations with liquid oxygen supply, a pressure control valve is installed upstream.

Safety The OXYMIX Flowtrain units comply with the ATEX Directive and are approved for operation in ex-zone 1. The finished parts are made of stainless steel (grade 316 Ti) or equivalent. The attached control cabinet must be installed in a non-classified area.

To ensure a safe operation, "the block and bleed" concept is applied. When a shutdown occurs, two quick-action valves at the inlet and outlet are closed as well. The pipe section between these two valves is ventilated through an open/close valve. This ensures that the gas can neither flow from the air duct nor from the oxygen tank into the other area.

Performance OXYMIX Flowtrain units for test are available with an oxygen flow rate of 50 to 5,000 Nm³/h, to suit the oxygen demand and for permanent installation, OXYMIX Flowtrain is available with a flow rate up to 15,000 Nm³/h.

Automation The unit is fully automated with its own PLC and touch panel display, and alternatively can be operated by tying into an existing control system. Switching between manual and automatic operation is possible. For a permanent installation it is recommended to substitute the control cabinet by connection to the customers distributed control system (DCS).

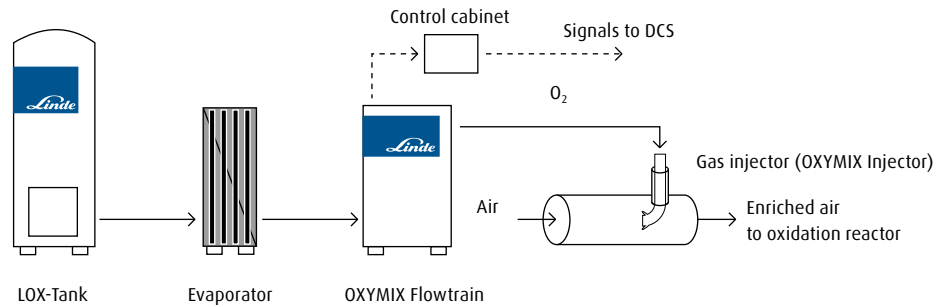
→ OXYMIX Flowtrain. Measurement and control system for safe oxygen metering.

Technical data (test units)

Flow rate	50 to 500 Nm ³ /h through 500 to 5000
Allowable operating pressure	18 bar(g) 30 bar(g) for available high pressure unit

System

The entire system consists of an oxygen source (e.g. a LOX tank with liquid oxygen), an evaporator, the OXYMIX Flowtrain with the control unit and a gas injector (OXYMIX Injector).



Characteristics

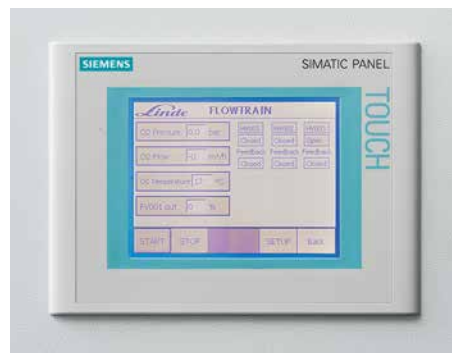
- Ex-Zone 1
- Safe and reliable oxygen metering
- Small footprint
- Can be switched between manual and automatic operation
- Automatic mass flow process control
- Safety shutoffs for process deviations

Range of services

- Experimental analyses with the OXYMIX Flowtrain at the customer's site
- Unit for rent for customers' tests
- Layout design for the OXYMIX Flowtrain and OXYMIX Injector
- P&I diagram
- Project planning
- Production
- Documentation
- Start-up
- Oxygen supply

Service and know-how

With decades of experience in oxygen supply and plant engineering, we facilitate an efficient and individual project development. High-performance process simulation programs as well as substance databases ensure an optimal design, safe operation and efficient oxygen application.



Touch panel of the control cabinet

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