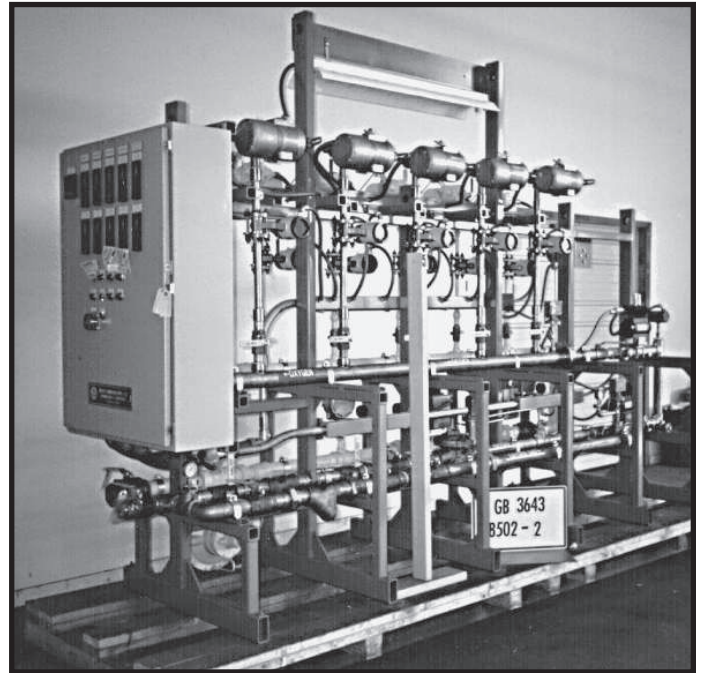


- **Multiple fluids - oxygen with fuel gas or oil**
- **Cost effective, single source responsibility**
- **Flow control components are fully integrated with process controls**
- **Customized to your process needs**
- **Designed with an emphasis on safety**
- **Fully tested / quality assured**
- **Fully documented**
- **Fastest delivery in the industry**



The 8502 Oxygen Control System is part of the large family of packaged fluid control systems produced by Fives North American.

Effective integration of the flow control components to each other and with the process control system is the key benefit of this line of high quality products.

"Normal" pipe design and construction standards are not suitable for high purity oxygen. Specific materials of construction, physical design, and assembly techniques are required to produce a reliable product.

Fives North American has the expertise and experience to sort through the hundreds of components and thousands of combinations to design the optimum system to meet your needs. While assuring conformance to NFPA guidelines, we take care of component specification, procurement, design layout, fabrication, assembly, testing, and documentation.

The result is a high quality product that saves you time and money by avoiding costly field piping and wiring.

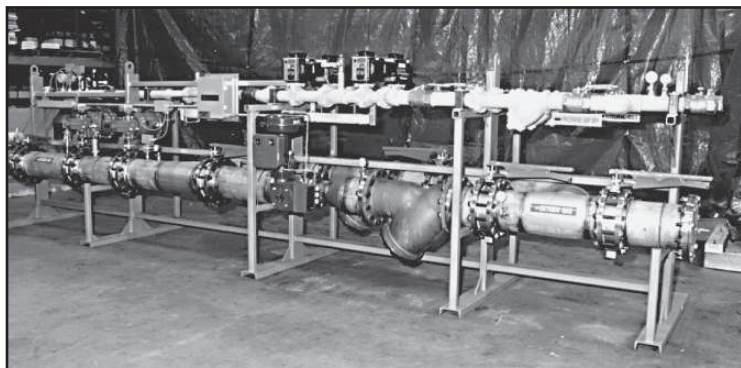
Our well-developed standards of design and construction, specifically designed for oxygen systems, are appropriate for most applications. See the next page for a list with options. Of course, we will also design to any specifications you require.

Fives North American has produced over 700 completely assembled fluid control systems for all types of industries—ask for photographs or assembly drawings to get an idea of how we can reduce field piping and wiring and save you time and money.

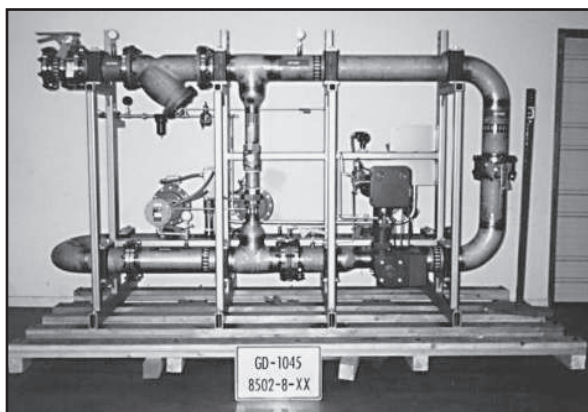
8502 Oxygen Control System Standard Features

- Process controls and flame supervision products are fully integrated, whether physically mounted to the "pipe train" or remotely located.
- 8502 systems handle oxygen and clean, non corrosive fuels, i.e. natural gas, light oil, propane.
- Oxygen components:
 - copper alloy or 304 SST, as appropriate
 - remote or hermetically sealed electrical components
 - approved for oxygen materials for seals, gaskets, etc.
- Fuel components:
 - as appropriate for service expected.
- Oxygen Piping: (cleaned and sealed per FivesNA and CGA standards)
 - Threaded 1½" and under: schedule 40 brass pipe with 150# brass fittings, special pipe sealant approved for oxygen service.
 - Welded systems: schedule 40 304 SST pipe with butt welded 150# flanges that meet ASME A31.2 code "quality". Optional full code compliance to B31.1 or 3 are available.
- Fuel piping:
 - Threaded systems: schedule 40 or 80 black iron pipe with 150# malleable iron fittings, Loctite PST sealant.
 - Welded systems: schedule 40 or 80 black iron pipe with butt welded 150# flanges and meet ASME A31.2 code "quality". Optional full code compliance to B31.1 or 3 are available.
- Component selection and configuration meet the appropriate sections of NFPA.
- Component procurement is accomplished by Fives North American.
- Physical size: as small as component requirements allow (i.e. meter "runs").
- Pipe support frames: rectangular structural tubing or structural channel.
- Configuration: as appropriate or specified.
- Production scheduling: documented in "bar chart" or "pert diagram" form.
- Electrical construction meets the National Electric Code, most recent edition.
- Electrical connections: wire: 14 GA, 19 strand MTW 600 volt with appropriate troughs, wireways etc.
- NEMA rating: 12 (3R, 4, 4x 7,9,11 also available).
- Paint: oxygen--unpainted with green "stickers"; fuel--OSHA color code.
- Shop adjustments made prior to shipment:
 - flow control throttling valve - static setting to 10% to 100% stroke
 - pressure reducing regulator set at 50% of range.
- All flow transmitters will be shop calibrated per customer instructions.
- Quality assurance:
 - leak free to 1.5X operating pressure (or to maximum of lowest rated component)
 - electrical continuity
 - components cycled by normal actuation.
- Documentation shipped with product: (operations manuals customized for your use are available)
 - mechanical general arrangement drawing (B size)
 - electrical ladder logic and filed wiring drawings (B size)
 - bill of materials for both mechanical and electrical systems
 - signed quality compliance form
 - list of "as shipped" settings of components with suggested settings for components that are field conditions sensitive
 - orifice flow rate chart (where appropriate)
 - product name tag with order #, product # date of construction
 - all literature for mechanical component parts.

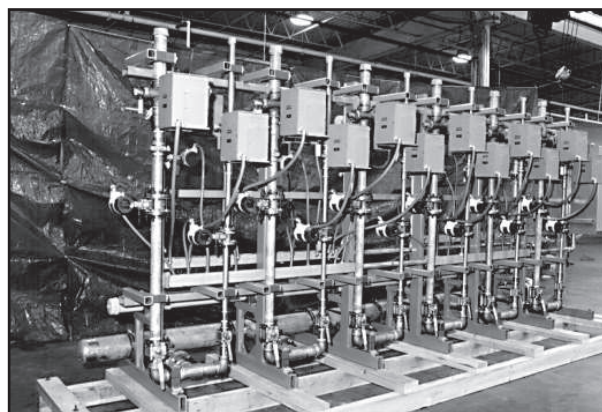
Contact your local Fives North American Combustion Specialist for more information or design assistance.



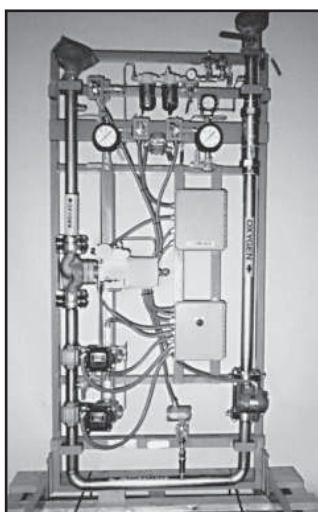
**Glass tank "main" assembly
(Natural gas and oxygen)**



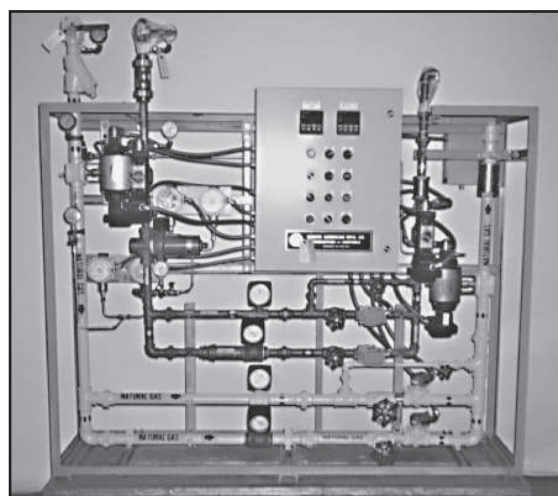
Steel mill oxy/gas system



**Glass tank zone/burner controls
(Natural gas and oxygen)**



**High pressure oxygen
control system**



Oxy/gas system with temperature controls

Oxy/Fuel control systems take many different forms to meet specific process needs.

From the single burner system for a steel mill ladle heater to the multi-burner glass tank, whether you have high or low supply pressure, we have the modular system to measure and control your oxygen efficiently and safely.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and insurance Underwriters recommendations, and care in operation.

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