



A-T Controls, Inc.

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Oxygen Gas Service

Oxygen is an element that exists as diatomic molecule (O₂) in most conditions. Although Oxygen is necessary for life, it is very reactive at certain pressures and temperatures. Reactions with Oxygen can be minor like the production of rust, but they can also be major culminating into an explosion. Knowing these facts, careful selection of materials of construction and characteristics of valves is imperative to sustain a safe, stable Oxygen Gas system.

Anti-Static Device

The inherent dangers of Oxygen require a way to prevent an electro-static spark. A-T Controls provides a way to control electro-static potential with an Anti-Static Device. This Anti-Static device contains a spring and a 316 SST ball to ensure positive grounding. This is provided in two places to ensure grounding between the ball and stem along with stem to body. **An Anti-Static Device is required for Oxygen Gas Service.**

Cleaning and Lubrication

The reactivity of Oxygen requires the removal of materials that react with Oxygen such as hydrocarbon residue and organic combustible material imperative. These valves must undergo a thorough Oxygen Cleaning procedure per "Work Instruction for TRIAC Degreasing & Oxygen Cleaning Service, Rev. 3" in our Clean Room to ensure the valves can be used for Oxygen Service. A-T Controls is certified by Air Liquide for this cleaning. **A-T Controls thoroughly cleans all valve parts and lubricates the O-ring with a compatible lubricant. The valves are vacuum packed with desiccant and marked as cleaned for Oxygen Gas Service.**

Standard Material

Please consult A-T Controls for material selection for your Oxygen Gas application. These parameters are guidelines, and customers are responsible for materials of construction, preparation of the valves for service, and lubricants being compatible with their Oxygen Gas application:

Firesafe valves that are O₂ cleaned use new graphite gaskets/packing from repair kits. Graphite cannot be truly cleaned.

Delrin Seats cannot be used for Oxygen Service.

Auxiliary Stem Seal: PTFE (Teflon®), TFM™-1600, Viton®

Body: 316 SST¹, Carbon Steel²

Seats: PTFE (Teflon®), TFM, RTFE, PCTFE

Trim: 316 SST, 304 SST³, Monel⁴

1. Good to 100% concentration O₂ to 248°F
2. Good to 100% concentration O₂ to 150°F
3. Good to 100% concentration O₂ to 150°F
4. For high velocity applications. Good to 100% concentration O₂ to 120°F

Valve Packages (*Others Available*)

Series D9- Sizes 1/2"-6", 150# and 300# ANSI, Full Port Design, ISO5211 Actuator Mounting Pad, Anti-Static Device, Traceable Valve.

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Series 88- Sizes 1/4"-4", Direct Mounting Pad, Threaded, Socket Weld or Butt Weld, Anti-Static Device

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Series 90- Sizes 1/2"-4", 150# ANSI, Full Port Design, ISO5211 Actuator Mounting Pad, Anti-Static Device, Traceable Valve

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Manual and Automated Quarter Turn Valves
Complete Valve and Damper Automation

