



Cleaning for Oxygen Service for Mechanical Pressure Gauges

Technical Information

Cleanliness Requirements for Oxygen and Medical Applications

Cleanliness requirements for pressure gauges in the United States are defined by the ASME (American Society of Mechanical Engineers) in their document ASME B40.1. Gauges used for oxygen or medical applications must meet Level IV cleanliness per Table 2. The CGA (Compressed Gas Association) also publishes similar oxygen cleaning requirements in its document CGA G-4.1. Both standards can be ordered directly from ASME or CGA (see below).

NOTE: This procedure only applies to gauges pulled from inventory. For gauges manufactured as Oxygen Clean, contact factory for part numbers, prices, and leadtimes.

Cleaning for Oxygen Service

(Applies to "off the shelf" gauges only)

Gauge Type	Quantity (per line item)	Part Number
1XX.XX	5 pcs. or less	4003744
	more than 5 pcs.	4003746
2XX.XX & 3XX.XX	5 pcs. or less	4003748
	more than 5 pcs.	4003750
712.XX	5 pcs. or less	4003752
	more than 5 pcs.	4003754

Procedure

WIKAL uses Trichlorethylene to remove all hydrocarbons and particulates from the wetted parts. An Infrared Spectrometer is used to verify hydrocarbon levels are below the minimum level specified by ASME B40.1 Level IV. After cleaning, all wetted parts are thoroughly dried to remove all moisture.

Packaging & Labeling

- The cleaned products have plastic caps applied to the connection to prevent recontamination.
- A label with "O2 Clean" is affixed to the gauge case.
- The cleaned products are sealed in a poly bag.
- The bagged gauges are put into individual cartons unless otherwise specified by the customer.

To order standards referenced in this document, contact:
ASME (www.asme.org) / 1-800-THE-ASME, or
CGA (www.cganet.com) / 703-412-0900

Table 2 - Cleanliness Levels for Oxygen / Medical Gauges per ASME B40.1 - 1991

Cleanliness Level	General Cleanliness Requirements	Allowable Size and Quantity				Hydrocarbon ppm [Note (3)], Maximum
		Particles		Fibers		
		Size (micrometers)	Max. Quantity [Note (2)]	Size (micrometers)	Max. Quantity [Note (2)]	
IV	Gauge shall be free of visually [Note (4)] (unaided eye) detectable moisture and foreign matter (chips, slivers, weld slag or splatter, shop soil, greases, oils, or other contaminants) that could be mechanically detrimental to proper function of gauge	Less than 100	No limit	Less than 700	No limit	50
		100/500	25	700/1000	10	
		Over 500	0	Over 1000	0	

NOTES:

- (2) Quantity = number by count per solvent flush
- (3) Ppm per solvent flush (approximately the volume contained by the wetted surface)
- (4) Excluding particle, fiber, and hydrocarbon detection procedures.

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Ordering Information:

State computer part number (if available) / model number / size / range / connection size and location / options required.

Specifications given in this price list represent the state of engineering at the time of printing.
Modifications may take place and the specified materials may change without prior notice



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