



Standard Specification for Minimum Performance and Safety Requirements for Anesthesia Breathing Systems¹

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1. Scope

1.1 This specification covers breathing systems and components employed with anesthesia gas machines for humans. This specification considers the circle system as a whole and some of its components individually. A particular emphasis is placed upon component arrangement in the circle absorber-type system, and submits a system of standard description and notation. Excluded are ventilators for use during anesthesia, Mapelson nonbreathing type systems, as well as breathing systems and related components of dental *analgesia* machines. (For rationale, see [Appendix X1](#).)

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.3 This specification is arranged as follows:

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2. Referenced Documents

2.1 ASTM Standards:²

F 1054 Specification for Conical Fittings³

F 1204 Specification for Anesthesia Reservoir Bags³

F 1205 Specification for Anesthesia Breathing Tubes

2.2 ANSI/ASME Standard:

ANSI/ASME B40.1M-1985 Standard for Pressure Gauge⁴

3. Terminology

3.1 Definitions:

3.1.1 *absorber assembly*—a container(s) for CO₂ absorbent, and may include, but need not be limited to, the inspiratory and expiratory unidirectional valves, APL valve, and bag mount.

3.1.2 *adjustable pressure limiting valve* (APL valve)—a user-adjustable valve which releases gas and is intended to provide control of the breathing system pressure.

3.1.3 *breathing system*—a gas pathway in direct connection with the patient through which gas flows occur at respiratory

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Withdrawn.

⁴ Available from the American National Standards Institute, 25 W. 43rd St., 4th Floor, New York, NY 10036.