
**Pressure regulators for use with
medical gases —**

**Part 3:
Pressure regulators integrated with
cylinder valves (VIPRs)**

Détendeurs pour l'utilisation avec les gaz médicaux —

*Partie 3: Détendeurs intégrés dans les robinets des bouteilles à gaz
(VIPR)*

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 121, *Anaesthetic and respiratory equipment, SC 6, Medical gas systems*.

This second edition cancels and replaces the first edition (ISO 10524-3:2005), which has been technically revised. It also incorporates the Amendment ISO 10524-3:2005/Amd 1:2013.

The main changes compared to the previous edition are as follows:

- a) introduction of the acronym VIPR for designating the valve with integrated pressure regulator as in ISO 10297 and ISO 22435[9];
- b) extension of the scope to include VIPRs with a nominal inlet pressure up to 30 000 kPa (300 bar);
- c) restructuring of the document to the new ISO template and associated renumbering;
- d) removal of the requirements for VIPRs fitted with flow-metering devices, flow gauges and adjustable pressure regulators;
- e) alignment with the common requirements of ISO 10524-1 and ISO 10524-2;
- f) addition of cross-reference to ISO 10297 for all requirements concerning the MAIN SHUT-OFF;
- g) rationalization of impact test requirements to comply with ISO 10297 and requirements for drop testing in alignment with ISO 11117;
- h) introduction of endurance testing on the flow selector, non-return valve and PRESSURE REGULATOR;
- i) introduction of type testing with the intended gas;
- j) introduction of a complete test schedule;
- k) review of all type tests;
- l) reference to ISO 15996 for *residual pressure device* (RPD);

- m) introduction of requirements for usability;
- n) consideration of avoidance of stainless steel for parts in contact with oxygen.

A list of all parts in the ISO 10524 series can be found on the ISO website.

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