

Indian Standard
**PRESSURE REGULATORS FOR USE WITH
MEDICAL GASES**
**PART 1 PRESSURE REGULATORS AND PRESSURE REGULATORS
WITH FLOW-METERING DEVICES**

1 Scope

1.1 This part of ISO 10524 is applicable to the types of pressure regulators listed in 1.3 intended for the administration of the following medical gases in the treatment, management, diagnostic evaluation and care of patients:

- | oxygen;
- | nitrous oxide;
- | air for breathing;
- | helium;
- | carbon dioxide;
- | xenon;
- | mixtures of the gases listed above;
- | air for driving surgical tools;
- | nitrogen for driving surgical tools.

1.2* These pressure regulators are intended to be fitted to cylinders with nominal filling pressures up to 25 000 kPa at 15 °C and can be provided with devices which control and measure the flow of the medical gas delivered.

1.3 The types of pressure regulators covered by this part of ISO 10524 are as follows:

- a) pressure regulators intended to be connected to cylinders by the operator;
- b) pressure regulators with integral flow-metering devices intended to be connected to cylinders by the operator;
- c) pressure regulators that are an integral part of medical equipment (e.g. anaesthetic workstations, lung ventilators, resuscitators).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 32:1977, *Gas cylinders for medical use — Marking for identification of content*

ISO 407:2004, *Small medical gas cylinders — Pin-index, yoke-type valve connections*

ISO 5145:2004, *Cylinder valve outlets for gases and gas mixtures — Selection and dimensioning*

ISO 5359:2000, *Low-pressure hose assemblies for use with medical gases*

ISO 9170-1:1999, *Terminal units for medical gas pipeline systems — Part 1: Terminal units for use with compressed medical gases and vacuum*

ISO 14971:2000, *Medical devices — Application of risk management to medical devices*

ISO 15001:2003, *Anaesthetic and respiratory equipment — Compatibility with oxygen*

EN 837-1:1996, *Pressure gauges — Part 1: Bourdon tube pressure gauges — Dimensions, metrology, requirements and testing*

EN 13544-2:2002, *Respiratory therapy equipment — Part 2: Tubing and connectors*

SS 01 91 02, *Colour Atlas*