DIN EN ISO 18777-1:2026-09 (E)

Transportable liquid oxygen systems for medical use - Part 1: Common requirements and particular requirements for base units (ISO 18777-1:2026)

Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 General requirements ... **2**
4.1 Risk management ... 2
4.2 Usability ... 3
4.3 Materials ... 3
4.4 Environmental conditions ... 3
4.4.1 Transport and storage ... 3
4.4.2 Operational ... 4

5 Design requirements ... **4**
5.1 Cryogenic vessels ... 4
5.2 Contents level indication ... 4
5.3 *Transfilling devices* and filling port connectors ... 4
5.4 Interoperability between the *base unit* and the *portable unit* ... 6
5.5 Flow outlets ... 6
5.6 Oxygen temperature at the flow outlet ... 6
5.7 *Flow control device* ... 6
5.8 Pressure at the flow outlet ... 6
5.9 Oxygen *conserving device* ... 6
5.10 Venting of gaseous oxygen ... 6
5.11 Pressure control ... 7
5.12 Evaporation rate ... 7
5.13 Leakage ... 7
5.14 Excessive temperatures of accessible surfaces ... 7
5.15 Electrical safety ... 7
5.16 Protection of components and controls ... 7
5.17 Stability ... 8
5.18 Battery compartments ... 8

6 Construction requirements ... **8**

7 Information to be supplied by the manufacturer ... **8**
7.1 General ... 8
7.2 Marking ... 8
7.3 Instructions for use for the intended user ... 9
7.3.1 General information ... 9
7.3.2 Safety information ... 9
7.3.3 Pre use checks ... 9
7.3.4 Filling instructions ... 9
7.3.5 General warning statements ... 10

Annex A (informative) **Rationale** ... **11**

Annex B (Normative) **Test Methods** ... **13**

Annex C (Normative) **Opening sequence between the *base unit transfilling device* and the *portable unit* filling port connector** ... **17**

Annex D (informative) **Guidance on the requirements in IEC 60601-1 that can be applicable** ... **18**

Annex E (informative) **Hazard identification for risk management assessment** ... **21**

Bibliography ... **22**