

**SLOVENSKI STANDARD**  
**SIST EN 849:1999/A1:2000**  
**01-januar-2000**

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**Premične plinske jeklenke - Ventili za jeklenke - Specifikacije in tipski preskus -  
Dopolnilo A1**

Transportable gas cylinders - Cylinder valves - Specification and type testing -  
Amendment 1

Ortsbewegliche Gasflaschen - Gasflaschen-Ventile - Spezifikation und Typenprüfung -  
Änderung 1

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Bouteilles a gaz transportables - Robinets de bouteilles - Spécifications et essais de type  
- Amendement 1

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**Ta slovenski standard je istoveten z: EN 849:1996/A1:1999**

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**ICS:**

23.020.30	Tlačne posode, plinske jeklenke	Pressure vessels, gas cylinders
23.060.40	Tlačni regulatorji	Pressure regulators

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**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 849:1996/A1

April 1999

ICS 23.060.40

English version

## Transportable gas cylinders - Cylinder valves - Specification and type testing - Amendment 1

Bouteilles à gaz transportables - Robinets de bouteilles -  
Spécifications et essais de type - Amendement 1

Ortsbewegliche Gasflaschen - Gasflaschen-Ventile -  
Spezifikation und Typenprüfung - Änderung 1

This amendment A1 modifies the European Standard EN 849:1996; it was approved by CEN on 8 January 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

## Foreword

This Amendment EN 849:1996/A1:1999 to EN 849:1996 has been prepared by Technical Committee CEN/TC 23 "Transportable gas cylinders", the secretariat of which is held by BSI.

This Amendment to the European Standard EN 849:1996 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 1999, and conflicting national standards shall be withdrawn at the latest by October 1999.

This amendment to EN 849 has been prepared to clarify certain important parameters and aspects of testing cylinder valves in accordance with EN 849, 5.4.4.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

This European Standard has been submitted for reference into the RID and/or in the technical annexes of the ADR. Therefore in this context the standards listed in the normative references and covering basic requirements of the RID/ADR not addressed within the present standard are normative only when the standards themselves are referred to in the RID and/or in the technical annexes of the ADR.

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ALTERNATIVE STANDARD PREVIEW  
UNOFFICIAL TEXT  
This document is intended to provide  
a preliminary view of the standard  
and is not to be used for  
contractual purposes.  
SIST EN 849:1999/A1:2000  
SIST EN 849:1999/A1:2000



## 5. Prototype valve test

### 5.4.4 Endurance test

*Add a new paragraph to the end of 5.4.4 as follows :*

"For further details see annex C".

## Annex C

*Add the new annex C as follows :*

### Annex C (normative)

#### Endurance test

##### C.1. Test valves

Valves to be tested shall be at room temperature  $20\text{ °C} \pm 5\text{ °C}$ . They will have been aged in accordance with the procedure specified in table 1.

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##### C.2. Test medium

The endurance test shall be carried out with dry air or nitrogen filtered to at least  $20\text{ }\mu\text{m}$  and at a dew point of less than  $-40\text{ °C}$  at atmospheric pressure.

NOTE : if nitrogen is used the risks of asphyxiation should be considered if a major leak occurs.

Tests shall not be carried out in a waterbath or other liquid medium.

##### C.3. Test machine

###### C.3.1 Equipment

Figure C.1 shows a typical arrangement of test equipment.

###### C.3.2 Speed and application of torque

The test machine shall be able to open and close the test valves at a rotational speed between 10 and 30 revolutions per minute.

At the end of the closing part of the test cycle, overtorque due to dynamic effects shall be no more than 10 % of the set figure (ie. no more than twice the tolerance given in C.4.2).

### C.3.3 Alignment

The valve and the machine spindles shall be aligned in such a way that no significant side or axial load is put on the valve during the test.

### C.3.4 Calibration

The calibration of the machine shall be validated before commencing and after completion of each endurance test.

## C.4. Test cycle

### C.4.1 Stroke of the endurance test

The test valve shall be cycled through its full stroke minus no more than 45° and no less than 15° from the fully open position. This will ensure that the test machine does not apply torque in the fully open position.

### C.4.2 Endurance test

This test shall be carried out at an ambient temperature of 20 °C ± 5°C (see table 1).

The endurance test of 2 000 cycles shall be carried out with the closing torque specified in 5.4.4 with a tolerance of ± 5 % in the closing direction only. The valve inlet shall be pressurised throughout the whole test to  $p_{Vt}$  as defined in 3.3.

The valve outlet shall be connected to a venting device which remains closed during the closing and opening portions of the cycle.

After the valve has reached the closed position, the valve outlet shall be vented down to atmospheric pressure by opening the venting device. Once atmospheric pressure has been reached, the venting device shall be closed and the outlet pressure shall be measured to be no more than 1 % of  $p_{Vt}$  immediately before commencing the next cycle.

There shall be at least a 6 s pause at each fully open and fully closed position of the test valve, see figure C.2.

NOTE : These periods may be used to detect major leaks and terminate the test if appropriate.

The average frequency shall be no more than 3 cycles per minute and no less than 1 cycle per minute for the duration of the test. Any break during the duration of the 2 000 cycle test which is longer than 5 minutes shall be recorded in the test report.

### C.4.3 Record

The test cycle shall be recorded e.g. as a graphical illustration, see figure C.2.

**C.5. Tests after the endurance test**

The tests specified in table 1, test sequences 5, 6 and 7 shall be completed. For these tests, the torque used during the endurance test shall not be exceeded.

The test valves shall then be examined in accordance with sequence 8.

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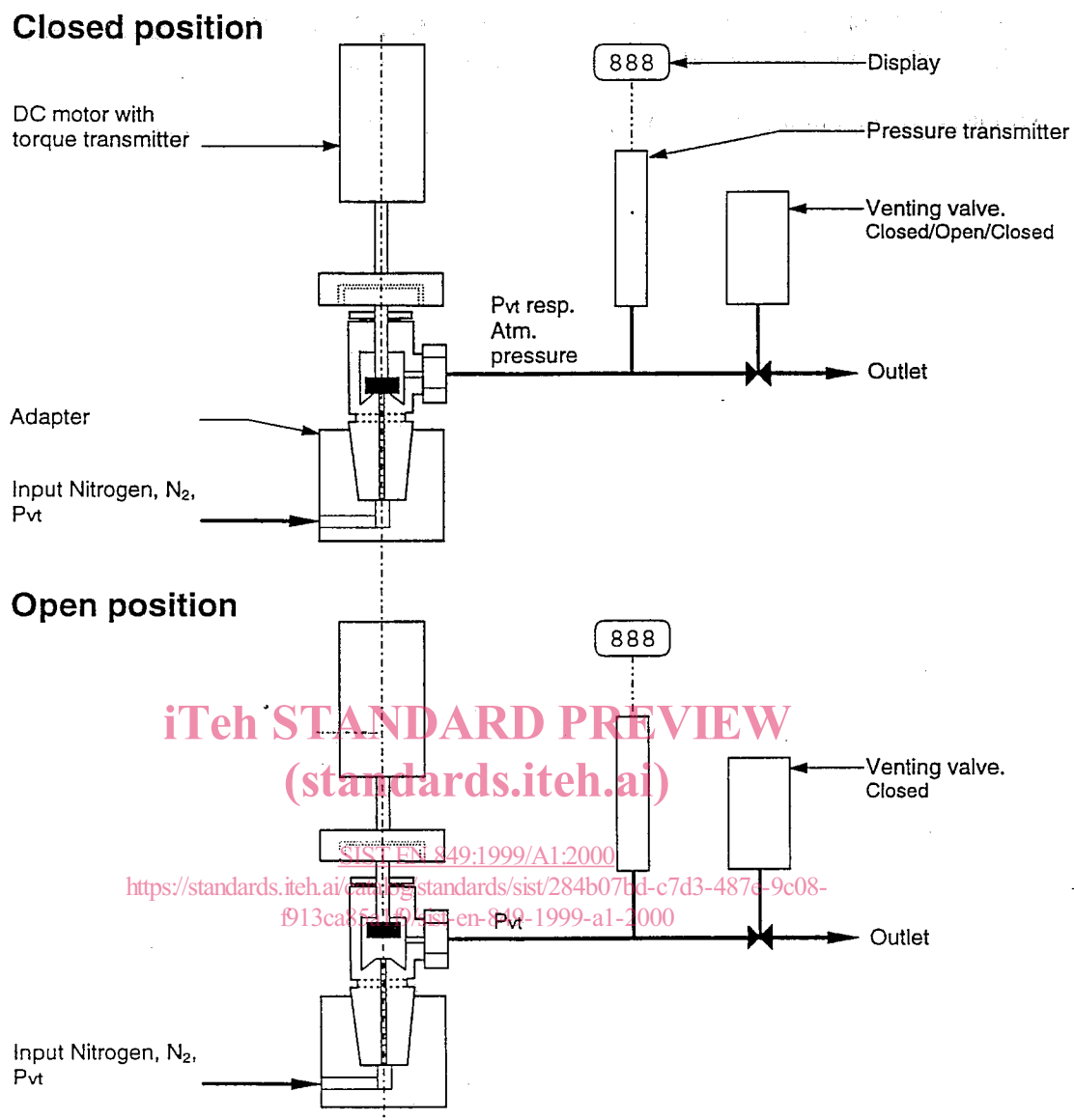


Figure C.1 : Typical arrangement of computer controlled equipment