SLOVENSKI STANDARD
SIST EN 850:1999

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Plinske jeklenke - Objemni nastavki ventila s sistemom pin-index za uporabo v medicini

Transportable gas cylinders - Pin-index, yoke-type valve outlet connections for medical use

Ortsbewegliche Gasflaschen - Ventilseitenstutzen mit Anschlußbügel nach dem Pin-index-System für medizinische Anwendung

Bouteilles a gaz transportables - Raccords de sortie de robinets du type a étrier avec ergots de sécurité pour usage médical

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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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Descriptors: gas cylinders, medical equipment, medical gases, gas mixtures, gas valves, pipe fittings, valve yokes, safety devices, catches, equipment specifications, dimensions

English version

Transportable gas cylinders - Pin-index, yoke-type valve outlet connections for medical use

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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

Contents **Page**

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 23 "Transportable gas cylinders" the secretariat of which is held by BSI.

ISO 407: 1991 was used as the base document.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 1997, and conflicting national standards shall be withdrawn at the latest by January 1997.

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

1 Scope

This European Standard applies to pin-index, yoke-type valve outlet connections for medical use, up to a maximum working pressure of 250 bar at 15 °C.

These connections are for use with medical gas cylinders of water capacity below 5 L, for patient care, including therapeutic, diagonistic and prophylactic applications, in hospitals and for emergency treatment.

It specifies:

- basic dimensions;

- requirements for alternative designs of pin-index, yoke-type valve connections;

- dimension and positions for the holes and pins for the outlet connections for certain gases and gas mixtures.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

IS0 32 Gas cylinders for medical use - Marking for identification of cylinder content.

3 Valve

Basic dimensions of yoke-type, pin index valve bodies, are given in clause 5. Dimensions and positions of location holes and pins are given in clause 7.

The name or chemical symbol of the gas or gas mixture shall be clearly and indelibly marked on the valve.

Table 1 lists the allocated gases and gas mixtures, the chemical symbols and the corresponding outlet connection figure numbers.

Table 1: Allocated gases and gas mixtures

Gas or gas mixture	Chemical symbol	Outlet connection figure number
Oxygen	O_2	9
Oxygen/carbon dioxide ($CO_2 \leq 7\%$)	$O_2 + CO_2$	10
Oxygen/helium ($He \leq 80\ \%$)	$O_2 + He$	11
Ethylene	C_2H_4	12
Nitrous oxide (liquid draw off)	N_2O	table 3
Nitrous oxide (gas draw off)	N_2O	13
Cyclopropane	C_3H_6	14
Helium and helium/oxygen ($O_2 < 20\ \%$)	He $He + O_2$	15
Carbon dioxide (liquid draw-off)	CO_2	table 3
Carbon dioxide (gas draw off) and carbon dioxide/oxygen ($CO_2 > 7\ \%$)	CO_2 $CO_2 + O_2$	16
Medical air	Air	17
Nominal mixture 50 % oxygen/50 % nitrous oxide ($47{,}5\ \% < N_2O < 52{,}5\ \%$)	$O_2 + N_2O$	8
Nitrogen	N_2	18
Mixture of air, helium and carbon monoxide ($CO < 1\ \%$)	Air + He + CO	table 3

4 Yoke

The connecting yoke shall conform to the dimensions and requirements given in clauses 5 and 6. The yoke shall be fitted with pins, the dimensions and the positions of which corresponds to the holes in the valve, as indicated in clause 7, for the appropriate gas or gas mixture..

The name or chemical symbol of the gas or gas mixture shall be clearly and indelibly marked on the yoke (see table 1). If an identification colour is used, it shall be in conformity with IS0 32.

Examples of alternative designs, for the connecting yoke, are given in 6.2.

5 Basic dimensions

The basic requirements for pin-index, yoke-type valve connections are shown in figure 1. Figures 2, 3 and 4 show alternative pin arrangements. Table 2 gives the necessary dimensions.

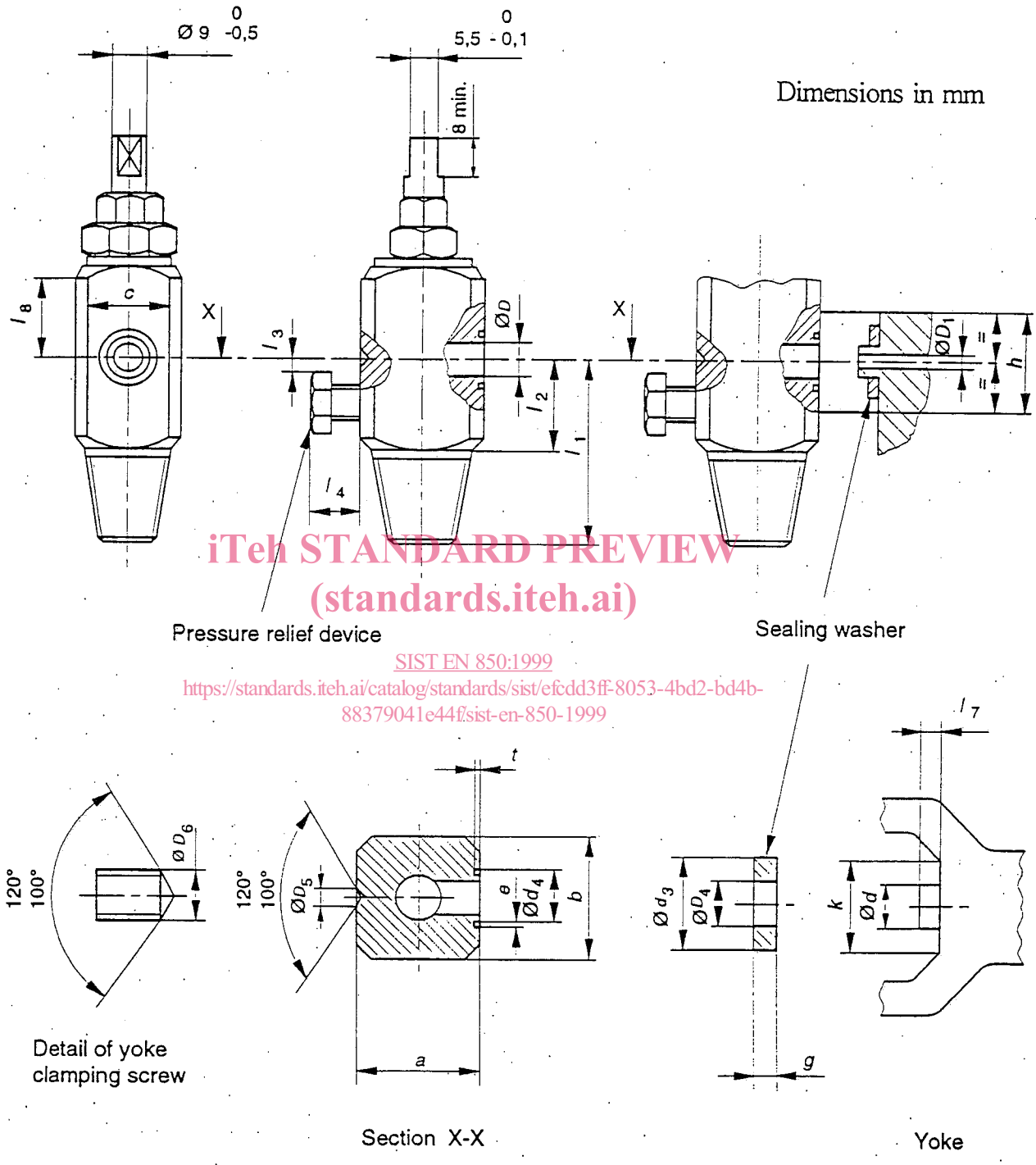


Figure 1: Pin-index, yoke-type valve body and yoke

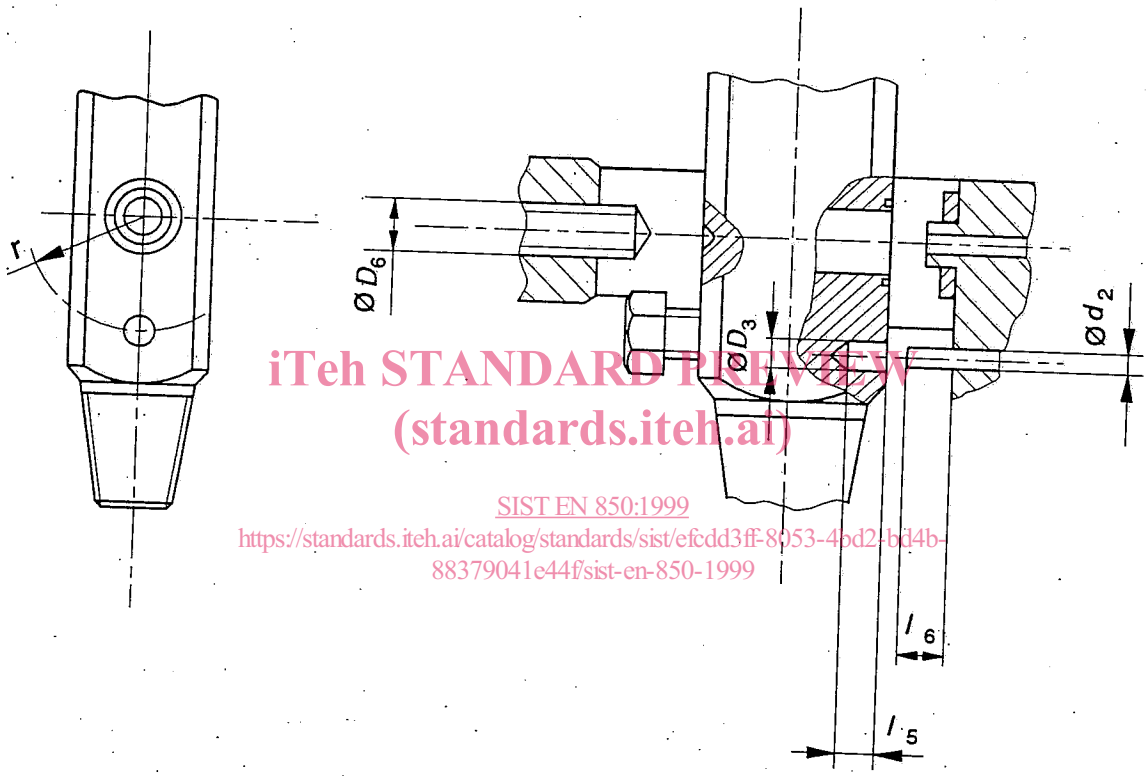
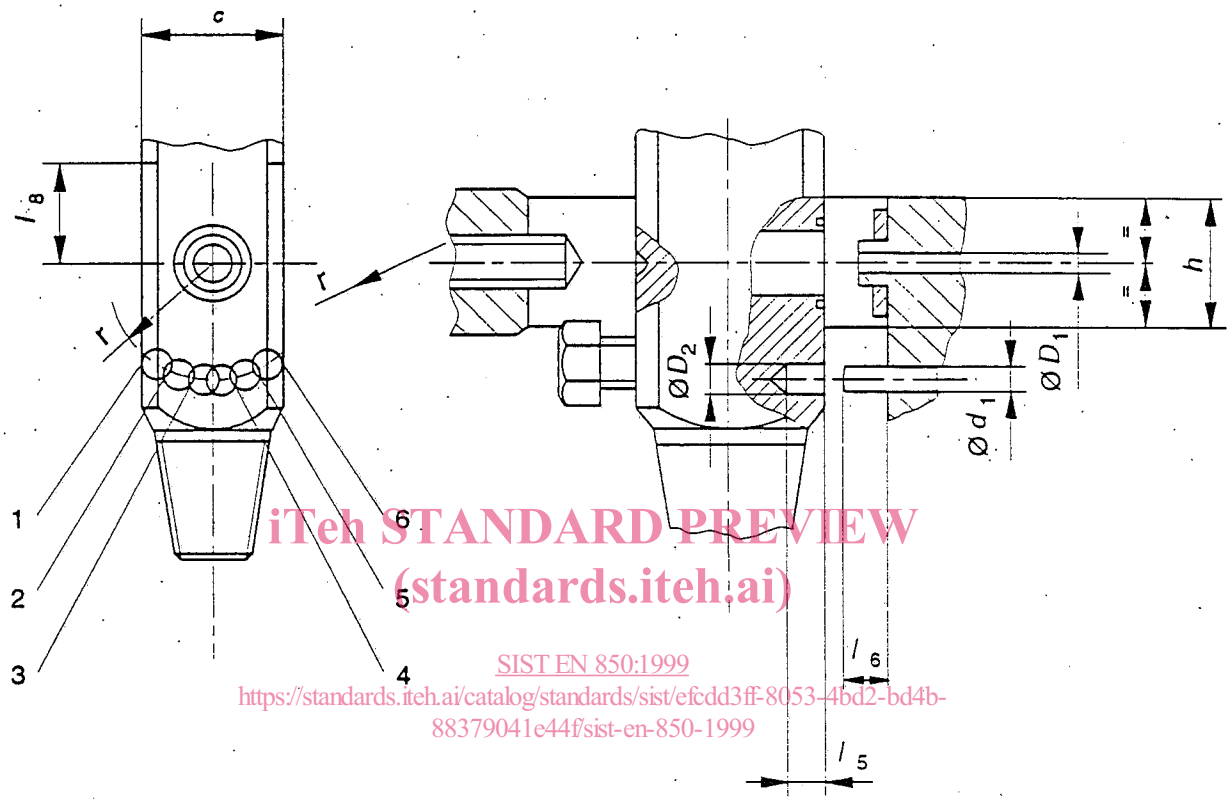
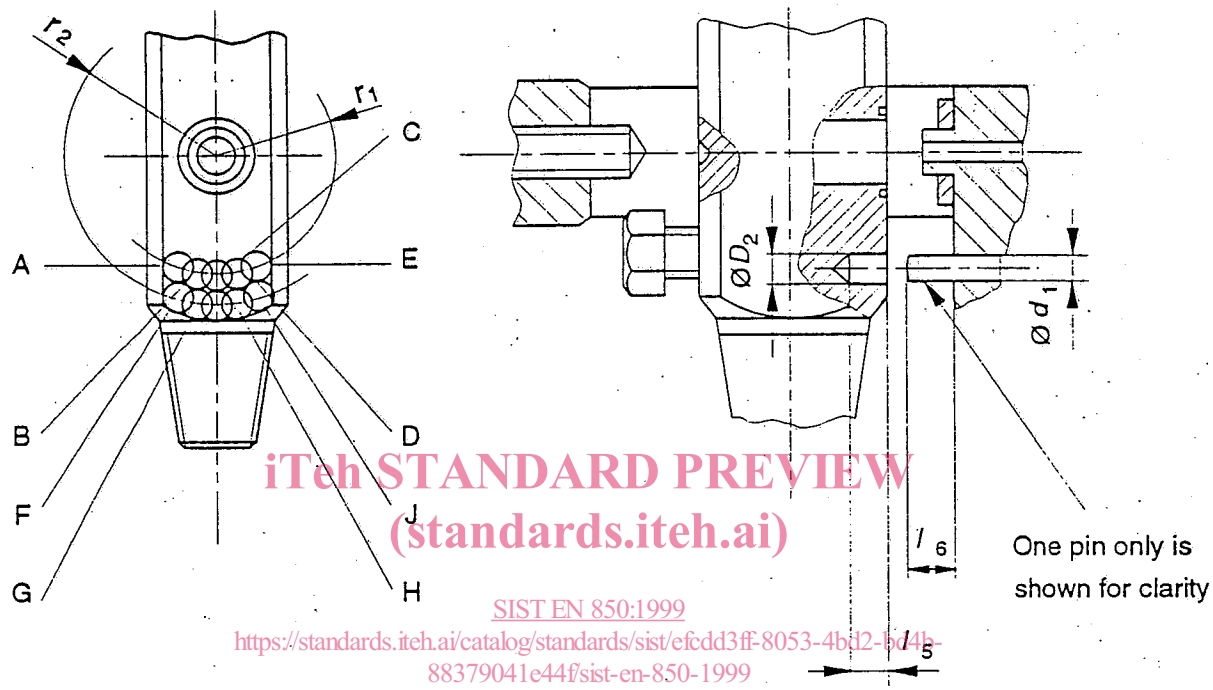


Figure 2: Pin-index, yoke-type valve connection - single pin



NOTE: Dimensional positions of holes and pins, numbered 1 to 6, are shown in figures 9 to 18.

Figure 3: Pin-index, yoke-type valve connection - two pins on a single arc



NOTE: Dimensional positions of holes and pins, identified by the letters A to J, are shown in table 3.

Figure 4: Pin-index, yoke-type valve connection - two pins on double arcs