SLOVENSKI STANDARD
SIST EN 13007:2001

01-februar-2001

Jekleni sodi - Sodi z nesnemljivim pokrovom (ozka odprtina) z nazivno prostornino od 20 do 60 l

Steel drums - Non-removable head (tight head) drums with a nominal capacity of 20 l to 60 l

Stahlfässer - Spundfässer mit einem Nennvolumen von 20 l bis 60 l

Futs en acier - Tonnelets a ouverture partielle d'une capacité nominale de 20 l a 60 l

Ta slovenski standard je istoveten z: **EN 13007:1999**

ICS:

55.140 Sodi. Kovinski sodi. Roļ ke Barrels. Drums. Canisters

SIST EN 13007:2001 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13007

December 1999

ICS 55.140

English version

Steel drums - Non-removable head (tight head) drums with a nominal capacity of 20 l to 60 l

Fûts en acier - Tonnelets à ouverture partielle d'une capacité nominale de 20 l à 60 l

Stahlfässer - Spundfässer mit einem Nennvolumen von 20 l bis 60 l

This European Standard was approved by CEN on 23 October 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a 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 European Standard 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.

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

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by June 2000, and conflicting national standards shall be withdrawn at the latest by June 2000.

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 standard is one of a series of standards on steel drums of 17 l to 230 l and closures.

Efficient packaging is of great importance for the distribution and the protection of goods. Insufficient or inappropriate packaging can lead to damage or wastage of the contents of the package.

1. Scope

This European Standard specifies the characteristics and dimensions of non-removable head (tight head) drums, manufactured from steel sheet, having a nominal capacity of 20 l to 60 l.

2. Normative references

This European Standard incorporates by dated and 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.

EN 10111:1998	Continuously hot-rolled low carbon steel sheet and strip for cold forming — Technical delivery conditions
EN 10130+A1:1998	Cold rolled low carbon steel flat products for cold forming - Technical delivery conditions.
EN 10131:1991	Cold rolled uncoated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape.
prEN 12928:1999	Inserted flange type closure systems for steel drums with a total capacity of 17 l to 230 l.
prEN 13029:1997	Packaging — Light-gauge metal containers — Apertures for plug-in plastic closures.
EN ISO 90-2 : 1999	Light gauge metal containers - Definitions and determination of dimensions and capacities — Part 2: General use containers (ISO 90-2:1997).

3. Terms and definitions

For the purposes of this standard, the following terms and definitions apply.

3.1
non-removable head (tight head) drum (TH)
cylindrical packaging made of steel, the ends of which are permanently fixed to the body, with openings for filling, emptying and venting in the head

3.2
nominal capacity (NC)
capacity in litres which, by convention, is used to represent a class of drums of similar brimful capacities

3.3
brimful capacity (BC)
volume of water in litres held by the drum when filled through the filling orifice to the point of overflowing

NOTE Annex A specifies the method for measuring brimful capacity.

3.4
total capacity (TC)
volume of water held by the drum when filled completely, i.e. following the removal of any air trapped in the drum

NOTE Annex A specifies the method for measuring total capacity.

3.5
overall height (h_o)
height of the finished drum from the base to the highest point (see Figure 1)

3.6
stacking height (h_s)
effective height of the drum in a stack, i.e. the height from the base of a drum to the base of a similar drum above it in a stack (see Figure 1)

3.7
external diameter (d_e)
maximum dimension of a drum diameter (see Figure 1)

3.8
internal diameter (d_i)
internal diameter of the drum body shell (see Figure 1)

4. Dimensions

The dimensions of non-removable head (tight head) drums with a nominal capacity of 20 l to 60 l shall be as given in Table 1 and as shown in Figure 1. In addition the steel thickness shall be between 0,5 mm and 1,0 mm, with tolerances as specified in EN 10131:1991 (normal tolerances).

5. Material

The body and ends of the drums shall be made of steel DC 01, in accordance with EN 10130+A1:1998, hot-rolled steel DD11 in accordance with EN 10111:1998, or steel of a higher strength.

6. Construction

6.1 The longitudinal seam of the body shall be welded. The body and ends shall be combined by seaming or other joining methods (e.g. welding).

NOTE The drum body can be straight-sided and in addition have bead(s) and/or corrugations.

6.2 Closures shall be positioned in the top end of the drum. Inserted flange closures shall be in accordance with prEN 12928:1999. Metal or plastics plugs shall be fitted with washers of suitable material, compatible with the contents of the drum.

NOTE The insertion of the closure should be such that its centre line is as close as possible to the vertical.

6.3 Other types of closures, e.g. flexible plastic spout closures inserted after filling, can also be fitted. The aperture dimensions of such plug-in closures shall conform to prEN 13029:1997.

NOTE The insertion of the closure should be such that its centre line is as close as possible to the vertical.

7. Finish

The nature of the internal and external finish shall be appropriate to the physical and chemical requirements of their intended use.

NOTE The nature of the internal and external finish should be agreed between the purchaser and the manufacturer.

8. Draining

8.1 The drum shall be designed so as to minimize the residual volume of the liquid left in the drum after drainage. The residue shall be not more than 0,2 % of total capacity or 100 ml , whichever is the smaller when tested according to either **B.3** (procedure A) or **B.4** (procedure B).

8.2 The residue obtained when the drum is tested according to procedure B is more dependent on the area and condition of the internal surface of the drum than procedure A and therefore may be in excess of that for procedure A.

NOTE The maximum permitted figure should be agreed between the purchaser and the supplier.

9. Designation

A non-removable head (tight head) (TH) drum manufactured in accordance with this standard with a nominal capacity (NC) of 20 l to 60 l and an external diameter (d_e) of 290 mm to 400 mm shall be designated:

Steel drum TH EN 13007 NC - 20 l to 60 l. d_e 290 mm to 400 mm.

For example, a steel drum with a nominal capacity of 30 l, having an external diameter of 290 mm would be designated:

Steel drum TH EN 13007 NC-30 l. d_e-290 mm

NOTE Where the drums are intended to be used for the transport of dangerous goods, attention is drawn to the regulatory requirements which govern the transport of those goods in the countries concerned. In Europe, depending upon the mode of transport, this means meeting the requirements of:

European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR);

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID);

Technical Instructions for the Safe Transport of Dangerous Goods by Air, Document 9284-AN/905 published by the Council of the International Civil Aviation Organization (ICAO);

The International Maritime Dangerous Goods Code (IMDG-Code) published by the International Maritime Organization (IMO).

TABLE 1 - Dimensions of non-removable head (tight head) drums with a nominal capacity of 20 l to 60l (as shown in Figure 1)

Nominal Capacity (NC) l	Minimum total capacity (TC) l	Internal diameter (d_i) ±2 mm	Maximum external diameter (d_e) mm	Maximum Overall height (h_o) mm	Maximum stacking height (h_s) mm
20	21,2	279 286 305	290 294 314	387[a)] 372 325	377[a)] 362 315
25	26,2	279 286 305	290 294 316	467[a)] 450 395	457[a)] 440 385
30	32	279 286 305	290 294 319	560 500 496	550 490 486
50	52,5	356 360 380	375 377 400	550 568 490	540 558 480
57	59	356 360 380	375 377 400	640 638 560	630 628 550
60	63	356 360 380	380 377 400	700 670 593	690 660 583

[a)] For interrupted chimb drum with self-draining tops for agricultural use, heights h_o and h_s can be increased by 10 mm.

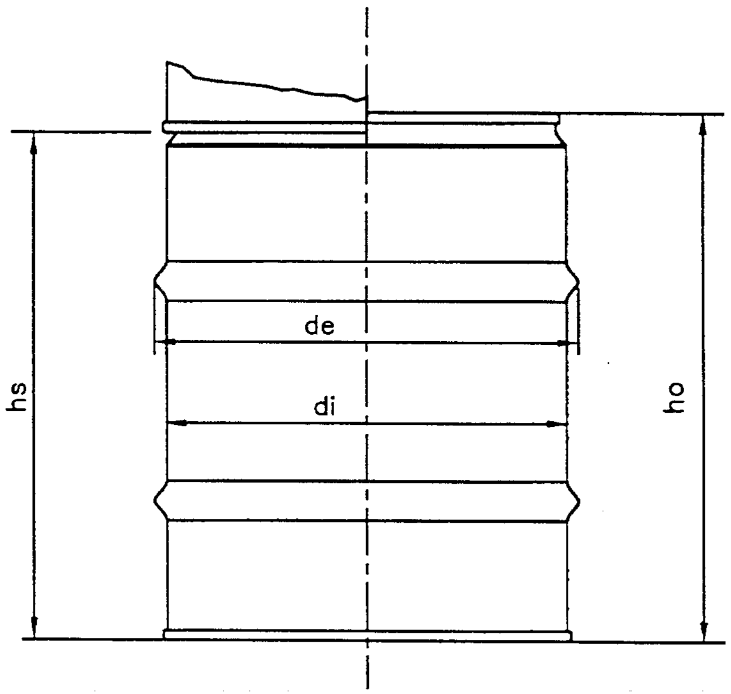

FIGURE 1 - Non-removable head (tight head) drum with a nominal capacity of 20 l to 60 l