SLOVENSKI STANDARD
oSIST prEN ISO 10628-2:2010

01-oktober-2010

Sheme za kemično in petrokemično industrijo - 2. del: Grafični simboli (ISO/DIS 10628-2:2010)

Diagrams for the chemical and petrochemical industry - Part 2: Graphical symbols (ISO/DIS 10628-2:2010)

Schemata für die chemische und petrochemische Industrie - Teil 2: Graphische Symbole (ISO/DIS 10628-2:2010)

Schémas de procédé pour l'industrie chimique et pétrochimique - Partie 2: Symboles graphiques (ISO/DIS 10628-2:2010)

Ta slovenski standard je istoveten z: **prEN ISO 10628-2**

ICS:

01.080.30	Grafični simboli za uporabo v risbah, diagramih, načrtih, zemljevidih v strojništvu in gradbeništvu ter v ustrezni tehnični proizvodni dokumentaciji	Graphical symbols for use on mechanical engineering and construction drawings, diagrams, plans, maps and in relevant technical product documentation
71.020	Proizvodnja v kemijski industriji	Production in the chemical industry
75.020	Pridobivanje in predelava nafte in zemeljskega plina	Extraction and processing of petroleum and natural gas

oSIST prEN ISO 10628-2:2010 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN ISO 10628-2

July 2010

ICS 75.020; 01.080.30; 71.020

Will supersede EN ISO 10628:2000

English Version

Diagrams for the chemical and petrochemical industry - Part 2: Graphical symbols (ISO/DIS 10628-2:2010)

Schémas de procédé pour l'industrie chimique et pétrochimique - Partie 2: Symboles graphiques (ISO/DIS 10628-2:2010)

Schemata für die chemische und petrochemische Industrie - Teil 2: Graphische Symbole (ISO/DIS 10628-2:2010)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/SS F01.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. prEN ISO 10628-2:2010: E

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Foreword

This document (prEN ISO 10628-2:2010) has been prepared by Technical Committee ISO/TC 10 "Technical product documentation".

This document is currently submitted to the parallel Enquiry.

This document will supersede EN ISO 10628:2000.

Endorsement notice

The text of ISO/DIS 10628-2:2010 has been approved by CEN as a prEN ISO 10628-2:2010 without any modification.

DRAFT INTERNATIONAL STANDARD ISO/DIS 10628-2

ISO/TC **10**/SC **10** Secretariat: **DIN**

Voting begins on: **2010-07-15**

Voting terminates on: **2010-12-15**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Diagrams for the chemical and petrochemical industry —

Part 2:
Graphical symbols

Schémas de procédé pour l'industrie chimique et pétrochimique —

Partie 2: Symboles graphiques

ICS 01.080.30; 71.020; 75.020

ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10628-2 was prepared by Technical Committee ISO/TC 10, *Technical product documentation*, Subcommittee SC 10, *Process plant documentation and tpd-symbols*.

This edition of ISO 10628-1 and ISO 10628-2 replace the first edition of ISO 10628:1997 of which has been technically revised.

ISO 10628 consists of the following parts, under the general title *Diagrams for chemical and petrochemical industry*:

Part 1: Specification of diagrams

Part 2: Graphical symbols

Diagrams for the chemical and petrochemical industry —

Part 2:
Graphical symbols

1 Scope

This International Standard defines graphical symbols for the preparation of flow diagrams for process plants.

This part of ISO 10628 is a collective application standard of the ISO 14617 series.

These diagrams represent the configuration and function of process plants and form integral parts of the complete technical documentation necessary for planning, mechanical engineering, erecting, managing, commissioning, operating, maintaining and decommissioning of a plant.

This International Standard does not apply to electrotechnical diagrams, see IEC 61617.

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 ab-c:199x, *General title of series of parts — Part c: Title of part*

ISO xyz (all parts), *General title of the series of parts*

3 Terms and definitions

For the purposes of this International Standard, the definitions given in ISO 14617, ISO 10628-1 and ISO 10209-1.

4 Structure of graphical symbols

The graphical symbols are grouped according to functional and/or design features. The first symbols are symbols of basic nature followed by application examples (see Table 1).

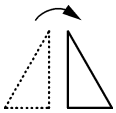
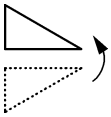
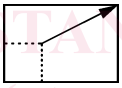
The registration numbers refer to ISO 14617.

The graphical symbols for modifications are given in Table 2.

Table 1

Clause	Group
5	Vessels and tanks
6	Columns with internals
7	Heat exchangers
8	Steam generators, furnaces, recooling device
9	Nuclear power plant
10	Cooling tower
11	Filters, liquid filters, gas filters
12	Screening devices, sieves and rakes
13	Separators
14	Centrifuges
15	Drier
16	Crushing/Grinding machines
17	Mixers/Kneaders
18	Shaping machines – processing in vertical direction
19	Shaping machines – processing in horizontal direction
20	Liquid pumps
21	Compressors, vacuum pumps
22	Blowers, fans
23	Lifting, conveying and transport equipment
24	Scales
25	Proportioners, feeders and distribution facilities
26	Engines
27	Valves
28	Check valve
29	Valves and Fittings with safety function
30	Fittings
31	Other graphical symbols for piping
32	Pipe work for power plant
50	Heating/cooling devices
51	Apparatus elements
52	Internals
53	Agitators, stirrers
54	Specifications
55	Measuring and control technology
56	Miscellaneous

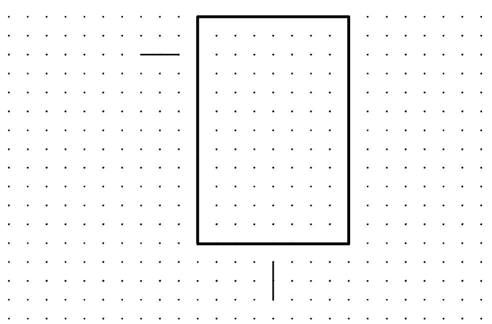
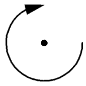
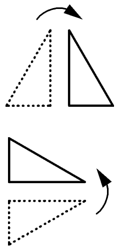
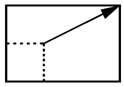
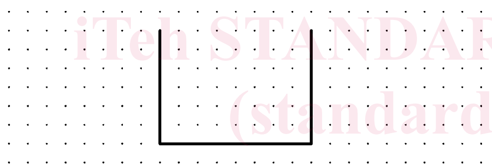
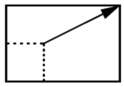
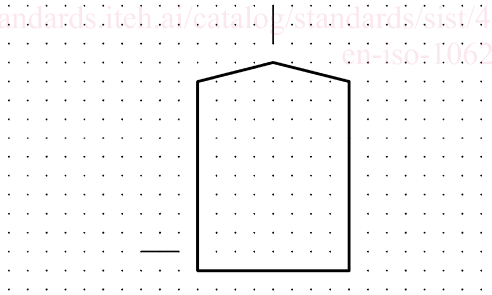
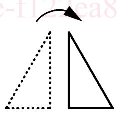
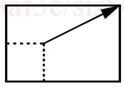
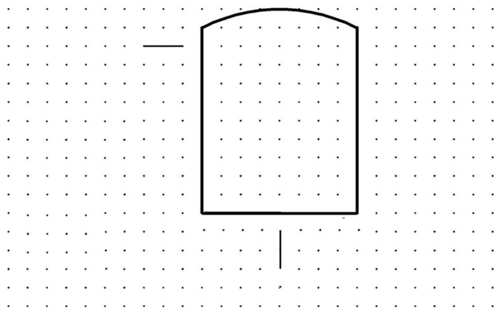
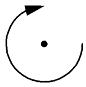
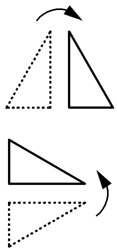
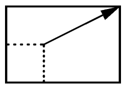
Table 2 — Graphical symbols for modifications

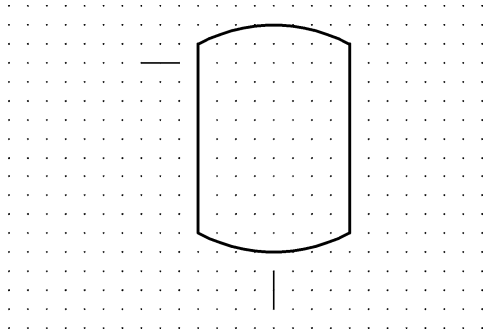
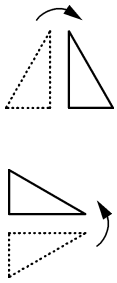
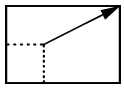
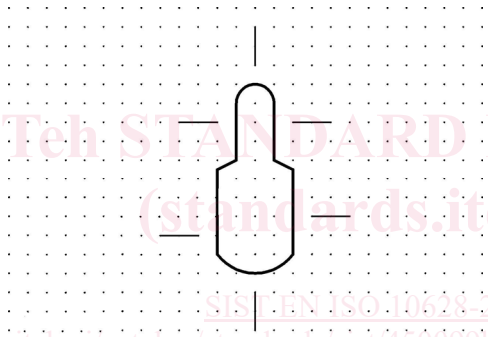
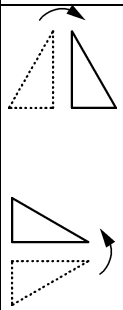
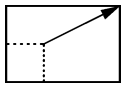
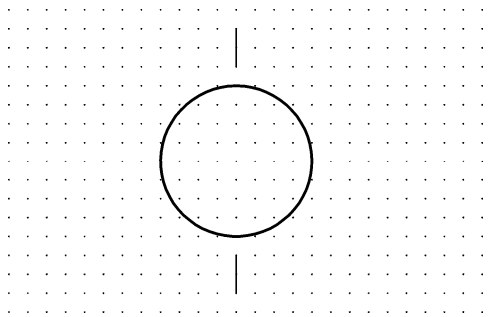
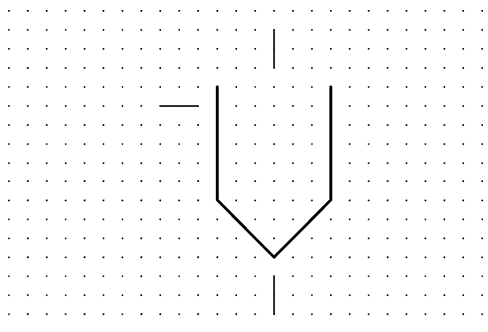
Symbol	Description
	rotatable
	horizontally mirroring
	vertically mirroring
	1:1 scaleable
	free scaleable
	conditioning permitted

5 Graphical symbols for diagrams used in chemical and petrochemical industry

Graphical symbols for equipment, machinery and piping are collected in Table 3.

Table 3 — Graphical symbols, classification, designation and coding

Clause	ISO 14617 Reg.-No.	Graphic	Description	Modifications			
				rotate	mirror	scale	modify
5	**Vessels and Tanks**						
5.1	**301**		Tank, Vessel				
5.2	**2061**		Container, tank, cistern for atmospheric pressure				
5.3	**X 2063**		tank, vessel with conical roof and flat bottom				
5.4	**X8200**		tank, vessel with dished roof and flat bottom				

Clause	ISO 14617 Reg.-No.	Graphic	Description	Modifications			
				rotate	mirror	scale	modify
5.5	**2062**		tank, vessel with dished ends				
5.6	**X8201**		Vessel with two different diameters				
5.7	**2063**		Spherical vessel				
5.8	**2064**		Open vessel with conical bottom, bunker