

Metal ball valves for petroleum, petrochemical and allied industries

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National foreword

This British Standard reproduces verbatim EN ISO 17292:2004 and implements it as the UK national standard. It supersedes BS 5351:1986 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee PSE/7, Industrial valves, to Subcommittee PSE/7/5, Industrial valves — Ball and plug valves, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii to v, a blank page, pages 1 to 22, an inside back cover and a back cover.

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English version

Metal ball valves for petroleum, petrochemical and allied industries (ISO 17292:2004)

Robinets à tournant sphérique pour les industries du pétrole, de la pétrochimie et les industries connexes (ISO 17292:2004)

This European Standard was approved by CEN on 22 July 2004.

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Foreword

This document (EN ISO 17292:2004) has been prepared by Technical Committee ISO/TC 153 "Valves" in collaboration with Technical Committee CEN/TC 69 "Industrial valves", 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of an identical text or by endorsement, at the latest by February 2005, and conflicting national standards shall be withdrawn at the latest by February 2005.

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

Endorsement notice

The text of ISO 17292:2004 has been approved by CEN as EN ISO 17292:2004 without any modifications.

INTERNATIONAL STANDARD

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Metal ball valves for petroleum, petrochemical and allied industries

*Robinets à tournant sphérique pour les industries du pétrole, de la
pétrochimie et les industries connexes*



Contents

Page

Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Terms and definitions.....	3
4 Pressure/temperature ratings.....	3
4.1 Valve rating.....	3
4.2 Shell rating.....	3
4.3 Seat and seal rating	4
5 Design	4
5.1 Flow passageway.....	4
5.2 Body	5
6 Materials.....	13
6.1 Shell.....	13
6.2 Shell material repair.....	13
6.3 Trim.....	13
6.4 Identification plate	13
6.5 Bolting	13
6.6 Seals	14
6.7 Threaded plugs	14
6.8 Low temperature service.....	14
7 Marking	14
7.1 Legibility	14
7.2 Body marking	14
7.3 Ring joint marking.....	15
7.4 Identification plate	15
7.5 Special marking for unidirectional valves	15
8 Testing and inspection	15
8.1 Pressure tests	15
8.2 Inspection	17
8.3 Examination	17
8.4 Supplementary examination	18
9 Preparation for despatch.....	18
Annex A (informative) Information to be specified by the purchaser	19
Annex B (informative) Identification of valve parts.....	20
Bibliography	22

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 17292 was prepared by Technical Committee ISO/TC 153, *Valves*, Subcommittee SC 1, *Design, manufacture, marking and testing* in collaboration with Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 6, *Processing equipment and systems*.

Introduction

The purpose of this International Standard is the establishment, in ISO format, of basic requirements and practices for flanged, butt-welding, socket welding, and threaded end steel ball valves having flow passageways identified as full bore, reduced bore, and double reduced bore seat openings suitable for petroleum, petrochemical and allied industries applications that parallel those given in American Petroleum Institute Standard API 608.

It is not the purpose of this International Standard to replace ISO 7121 or any other International Standard that is not identified with petroleum refinery, petrochemical or natural gas industry applications.

In this International Standard, flanged end Class-designated valves have flanges in accordance with ASME B16.5. Flanged end PN-designated valves have flanges in accordance with EN 1092-1. Valves with ends threaded may have threads to either ISO 7-1 or ASME B1.20.1.

Metal ball valves for petroleum, petrochemical and allied industries

1 Scope

This International Standard specifies the requirements for a series of metal ball valves suitable for petroleum, petrochemical, natural gas plants, and related industrial applications.

It covers valves of the nominal sizes DN

— 8; 10; 15; 20; 25; 32; 40; 50; 65; 80; 100; 150; 200; 250; 300; 350; 400; 450; 500

corresponding to nominal pipe sizes NPS

— $\frac{1}{4}$; $\frac{3}{8}$; $\frac{1}{2}$; $\frac{3}{4}$; 1; $1\frac{1}{4}$; $1\frac{1}{2}$; 2; $2\frac{1}{2}$; 3; 4; 6; 8; 10; 12; 14; 16; 18; 20;

and applies for pressure designations

- Class 150; 300; 600; 800 (Class 800 applies only for valves with reduced bore and with threaded and socket welding end);
- PN 16; 25; 40.

It includes provisions for testing and inspection and for valve characteristics as follows:

- flanged and butt-welded ends, in sizes $15 \leq DN \leq 500$ ($\frac{1}{2} \leq NPS \leq 20$);
- socket welding and threaded ends, in sizes $8 \leq DN \leq 50$ ($\frac{1}{4} \leq NPS \leq 2$);
- body seat openings designated as full bore, reduced bore and double reduced bore;
- materials.

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 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ISO 7-2, *Pipe threads where pressure-tight joints are made on the threads — Part 2: Verification by means of limit gauges*

ISO 261, *ISO general-purpose metric screw threads — General plan*