
**Rolling bearings — Parts library
— Reference dictionary for rolling
bearings**

*Roulements — Bibliothèque de composants — Dictionnaire de
référence des roulements*

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 4, *Rolling bearings*.

This first edition cancels and replaces ISO/TS 23768-1:2011, which has been technically revised.

The main changes are as follows:

- the part number of this document has been deleted as no further parts will be being developed;
- the scope has been clarified to clearly state that linear motion rolling bearings and spherical plain bearings are out of the scope;
- this document has been made compatible with ISO 13584-42:2010;
- this document has been aligned with the classes and properties with ISO 21107:2015;
- some figures have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Rolling bearing data consist of entities of the rolling bearing application domain together with their descriptive properties and domains of values. Descriptive properties specified by this document include, but are not limited to, geometrical and dimensional data, identification and designation data, miscellaneous and spare part data, and material data.

Each entity, property or domain of values defines an entry of the rolling bearing reference dictionary. The rolling bearing reference dictionary constitutes the formal and computer-sensible representation of the rolling bearing data. Each rolling bearing datum is associated with a computer-sensible and human-readable definition, and with a computer-sensible identification. Identification of a dictionary entry allows for unambiguous reference from any application. Definitions and identifications of dictionary entries consist of instances of the EXPRESS entity data types defined in the common dictionary schema, resulting from a joint effort between ISO/TC 184/SC 4/WG 2 and IEC SC 3D, or in its extensions defined in the logical series of parts of ISO 13584.

This document is intended for use, among others, by manufacturers, rolling bearing vendors or producers, and developers of manufacturing software. This document is intended to allow or improve several capabilities, including:

- the provision of a common set of definitions for use in describing rolling bearings,
- the integration and sharing of rolling bearing data between software applications,
- the direct import of vendor rolling bearing data into customer databases or applications, and
- a reduction of the level of effort required for manufacturers to maintain accurate and current rolling bearing information from multiple sources and for multiple applications.

Some of the definitions of classes and properties of rolling bearings are taken from International Standards on rolling bearings and from Reference [12].

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Rolling bearings — Parts library — Reference dictionary for rolling bearings

1 Scope

This document establishes the means to achieve an electronic representation of rolling bearing data by providing a reference dictionary needed to describe various data about rolling bearings together with their descriptive properties and domains of values in various International Standards relevant to rolling bearings.

This document is intended to facilitate the use, manipulation and exchange of rolling bearing data, for example, manufacturing, distribution and usage.

This document specifies a reference dictionary that contains:

- a definition of a general class of bearings intended to be further extended by reference dictionaries specifying bearings in other International Standards;
- definitions and identifications of the classes of rolling bearings as they are described in the various International Standards relevant to rolling bearings, with associated classification scheme;
- definitions and identifications of data element types that represent properties of rolling bearings;
- definitions and identifications of domains of values that prove useful for describing the above-mentioned data element types.

Each class, property or domain of values of this application domain constitutes an entry of the reference dictionary defined in this document. It is associated with a computer-sensible and a human-readable definition, and with a computer-sensible identification. Identification of a dictionary entry allows for unambiguous reference from any application.

Definitions and identifications of dictionary entries are defined by means of standard data, which consist of instances of the EXPRESS entity data types defined in the common dictionary schema and in their extensions defined in ISO 13584-25.

Identification dictionary is given in [Annex A](#).

The following are within the scope of this document:

- standard data that represent the classes of rolling bearings;
- standard data that represent the properties of rolling bearings;
- standard data that represent domains of values used for properties of rolling bearings.

The following are outside of the scope of this document:

- methodology for structuring parts families used for specifying standard data defined in this document;
- an implementation method by which the standard data defined in this document can be exchanged.

NOTE 1 The structure of the physical file used for exchanging the standard data defined in this document is specified in ISO 10303-21.

NOTE 2 The physical file used for exchanging the standard data is compliant with ISO 13584-42:2010.

NOTE 3 It is intended to provide an OntoML-based (XML) representation of the standard data when ISO 13584-32 (OntoML) is published.

This document does not establish the reference dictionaries for linear motion rolling bearings and spherical plain bearings.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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/IEC Guide 77-2, *Guide for specification of product properties and classes — Part 2: Technical principles and guidance*

ISO 286-1, *Geometrical product specifications (GPS) — ISO code system for tolerances on linear sizes — Part 1: Basis of tolerances, deviations and fits*

ISO 1998-1, *Petroleum industry — Terminology — Part 1: Raw materials and products*

ISO 3096, *Rolling bearings — Needle rollers — Boundary dimensions, geometrical product specifications (GPS) and tolerance values*

ISO 5593, *Rolling bearings — Vocabulary*

ISO/IEC 8824-1, *Information technology — Abstract Syntax Notation One (ASN.1) — Part 1: Specification of basic notation*

ISO 10303-1, *Industrial automation systems and integration — Product data representation and exchange — Part 1: Overview and fundamental principles*

ISO 10303-11, *Industrial automation systems and integration — Product data representation and exchange — Part 11: Description methods: The EXPRESS language reference manual*

ISO 13584-1, *Industrial automation systems and integration — Parts library — Part 1: Overview and fundamental principles*

ISO 13584-42:2010, *Industrial automation systems and integration — Parts library — Part 42: Description methodology: Methodology for structuring parts families*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC Guide 77-2, ISO 286-1, ISO 1998-1, ISO 3096, ISO 5593, ISO 10303-1, ISO 10303-11, ISO 13584-1, ISO 13584-42 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1.1**abstract class****ABS**

class (3.1.6) of which all members are also members of one of its *subclasses* (3.1.37)

[SOURCE: ISO 13584-42:2010, 3.1, modified — the abbreviation has been added and Notes 1, 2 and 3 to entries have been deleted.]

3.1.2**applicable property of a class****AP**

applicable *property* (3.1.34) necessarily possessed by each *part* (3.1.28) that is a member of a *characterization class* (3.1.32)

EXAMPLE For a roller bearing *generic family of parts* (3.1.21), the bore diameter is an applicable property: this characteristic applies to any bearing.

[SOURCE: ISO 13584-42:2010, 3.2, modified — the abbreviation and the example have been added, and Notes 1, 2, 3, 4 and 5 to entries have been deleted.]

3.1.3**attribute**

data (3.1.10) element for the computer-sensible description of a *property* (3.1.34), a relation or a *class* (3.1.6)

[SOURCE: ISO 13584-42:2010, 3.3, modified — the example and Note 1 to entry have been deleted.]

3.1.4**basic semantic unit****BSU**

entity (3.1.18) that provides an absolute and universally unique identification of a certain object of the application domain that is represented as a *dictionary element* (3.1.16)

[SOURCE: ISO 13584-42:2010, 3.4, modified — the abbreviation has been added, and the examples and Note 1 to entry have been deleted.]

3.1.6**class**

abstraction of a set of similar *products* (3.1.30)

[SOURCE: ISO 13584-42:2010, 3.6, modified — the example and Notes 1, 2, 3, 4 and 5 to entries have been deleted.]

3.1.7**class inclusion relationship**

relationship between *classes* (3.1.6) that means inclusion of *class members* (3.1.8): if A is a *superclass* (3.1.38) of A1 this means that, in any context, any member of A1 is also member of A

[SOURCE: ISO 13584-42:2010, 3.7, modified — Examples 1 and 2, and Notes 1, 2, 3 and 4 to entries have been deleted.]

3.1.8**class member**

product (3.1.30) that complies with the abstraction defined by a *class* (3.1.6)

[SOURCE: ISO 13584-42:2010, 3.8]

3.1.9

common ISO 13584/IEC 61360 dictionary model

data (3.1.10) model for *product ontology* (3.1.33), using the information modelling language EXPRESS, resulting from a joint effort between ISO TC 184/SC 4/WG 2 and IEC SC 3D

Note 1 to entry: The common *dictionary* (3.1.14) schema is specified in IEC 61360-2 and its content is provided in ISO 13584-42:2010, Annex D.

[SOURCE: IEC 61360-2:2012 3.10, modified — the reference "ISO 13584-42:1998" has been replaced with "ISO 13584-42:2010" in Note 1 to entry.]

3.1.10

data

representation of information in a formal manner suitable for communication, interpretation, or processing by human beings or computers

[SOURCE: ISO 10303-1:2021, 3.1.29]

3.1.11

data element type

DET

unit of *data* (3.1.10) for which the identification, the description and value representation have been specified

[SOURCE: ISO 13584-42:2010, 3.13, modified — the abbreviation has been added and Note 1 to entry has been deleted.]

3.1.13

data type

DT

domain of values

[SOURCE: ISO 10303-11:2004, 3.3.5, modified — the abbreviation has been added.]

3.1.14

dictionary

table consisting of a series of entries

Note 1 to entry: One meaning corresponds to each entry in the dictionary and one dictionary entry identifies one single meaning.

Note 2 to entry: In the ISO 13584 series, a dictionary is the formal and computer-sensible representation of an ontology.

Note 3 to entry: In the ISO 13584 series, the kinds of meaning intended to constitute dictionary entries are

- supplier,
- *class* (3.1.6),
- *property* (3.1.34),
- program library,
- type,
- table, and
- document.

Note 4 to entry: In the ISO 13584 series, the information that represents a dictionary entry is split into three entities:

- a **basic_semantic_unit** (BSU), that provides for reference,

- a **dictionary_element** that describes the dictionary entry by means of attributes, and
- possibly, a **content_item entity** (3.1.18) that describes the dictionary entry by describing its content.

Note 5 to entry: The link available in [Annex E](#) shall be used to access the official version of the reference dictionary for rolling bearings.

[SOURCE: ISO 13584-1:2001, 3.1.2, modified — Notes 2, 3, 4 and 5 to entry have been added.]

3.1.16

dictionary element

set of *attributes* (3.1.3) that constitutes the *dictionary* (3.1.14) description of certain objects of the application domain

EXAMPLE *Classes* (3.1.6), *data* (3.1.10) element types.

[SOURCE: ISO 13584-42:2010, 3.15, modified — Example 1 has been replaced and Example 2 has been deleted.]

3.1.17

dictionary identification

unique character string that identifies the *dictionary* (3.1.14)

Note 1 to entry: The reference dictionary for rolling bearings given in [Annex A](#) shall be referred to.

3.1.18

entity

class (3.1.6) of information defined by common properties

[SOURCE: ISO 10303-11:2004, 3.3.6]

3.1.19

entity data type

representation of an *entity* (3.1.18)

Note 1 to entry: An *entity data type* (3.1.19) establishes a domain of values defined by common *attributes* (3.1.3) and constraints.

[SOURCE: ISO 10303-11:2004, 3.3.7]

3.1.20

feature

aspect of a *product* (3.1.30) that can be described by a *characterization class* (3.1.32) and a set of property-value pairs

[SOURCE: ISO 13584-42:2010, 3.17, modified — Notes 1, 2 and 3 to entries and Examples 1 and 2 have been deleted.]

3.1.21

generic family of parts

grouping of simple or generic *parts* (3.1.28) done for purposes of classification or for factoring common information

3.1.22

implementation method

technique used by computers to exchange *data* (3.1.10) that is described using the EXPRESS data specification language

3.1.23

is-a relationship

class inclusion relationship (3.1.7) associated with inheritance: if A1 is-a A, then each *product* (3.1.30) belonging to A1 belongs to A, and all what is described in the context of A is automatically duplicated in the context of A1

[SOURCE: ISO 13584-42:2010, 3.23, modified — Notes 1 and 2 to entries have been deleted.]

3.1.24

is-case-of relationship

property (3.1.34) importation mechanism: if A1 is case-of A, then the definition of A *products* (3.1.30) also covers A1 products, thus A1 can import any property from A

[SOURCE: ISO 13584-42:2010, 3.24, modified — Notes 1, 2, 3 and 4 to entries have been deleted.]

3.1.25

item

thing that can be characterized by means of a *characterization class* (3.1.32) to which it belongs and a set of *property* (3.1.34) value pairs

Note 1 to entry: This definition supersedes the definition given in ISO 13584-24:2003, that was the following: "a thing that can be captured by a class structure and a set of properties".

Note 2 to entry: In ISO 13584 (all parts), both products and *features* (3.1.20) of products that correspond to composite properties are items.

[SOURCE: ISO 13584-42:2010, 3.25]

3.1.26

leaf characterization class

characterization class (3.1.32) that is not further subdivided into more precise characterization classes

[SOURCE: ISO 13584-42:2010, 3.26, modified — "specialized" has been replaced with "subdivided" in the definition and the example has been deleted.]

3.1.27

non-leaf characterization class

characterization class (3.1.32) that is further subdivided into more precise characterization classes

[SOURCE: ISO 13584-42:2010, 3.27, modified — "specialized" has been replaced with "subdivided" in the definition and the example has been deleted.]

3.1.28

part

material or functional element that is intended to constitute a component of different *products* (3.1.30)

[SOURCE: ISO 13584-1:2001, 3.1.16]

3.1.29

parts library

computer-sensible *product ontology* (3.1.33) and computer-sensible description of a set of *products* (3.1.30) by means of references to this ontology

[SOURCE: ISO 13584-42:2010, 3.30, modified — Note 1 to entry has been deleted.]

3.1.30

product

thing or substance produced by a natural or artificial process

[SOURCE: ISO 13584-42:2010, 3.31, modified — Note 1 to entry has been deleted.]

3.1.31**product categorization**

part categorization

categorization

recursive partition of a set of products into subsets for a specific purpose

[SOURCE: ISO 13584-42:2010, 3.32, modified — the example and Notes 1, 2, 3, 4 and 5 to entries have been deleted.]

3.1.32**characterization class****product characterization class****part characterization class***class* (3.1.6) of products that fulfil the same function and that share common properties

[SOURCE: ISO 13584-42:2010, 3.35, modified — the example and Note 1 to entry has been deleted.]

3.1.33**product ontology**

part ontology

ontology

model of product knowledge, done by a formal and consensual representation of the concepts of a product domain in terms of identified *characterization classes* (3.1.32), of *class* (3.1.6) relations and of identified properties

[SOURCE: ISO 13584-42:2010, 3.36, modified — the example and Notes 1, 2, 3, 4, 5, 6 and 7 to entries have been deleted.]

3.1.34**property**

defined parameter suitable for the description and differentiation of products

[SOURCE: ISO 13584-42:2010, 3.37, modified — Notes 1, 2, 3, 4 and 5 to entries have been deleted.]

3.1.35**property data type**allowed set of values of a *property* (3.1.34)

[SOURCE: ISO 13584-42:2010, 3.38]

3.1.36**visible property**

property (3.1.34) that has a definition meaningful in the scope of a given *characterization class* (3.1.32), but that does not necessarily apply to the various products belonging to this *class* (3.1.6)

EXAMPLE For a generic family of bearings, contact angle is a visible property: it is clearly defined for any rolling bearing, but only thrust angular contact ball bearing, angular contact ball bearing or tapered roller bearing have a value for this property. Contact angle would then be a visible (it has a clear meaning for all the rolling bearings) and applicable (it may be used to describe any kind of rolling bearing) property.

Note 1 to entry: The code of the *class* (3.1.6) where a property is defined as visible is *part* (3.1.28) of the identification of the *data element type* (3.1.11) that represents this property.

[SOURCE: ISO 13584-42:2010, 3.46, modified — the example and Note 1 to entry have been modified, and Notes 2, 3, 4 and 5 to entries have been deleted.]

3.1.37**subclass***class* (3.1.6) that is one step below another class in a class inclusion hierarchy

[SOURCE: ISO 13584-42:2010, 3.43]

3.1.38

superclass

class (3.1.6) that is one step above another class in class inclusion hierarchy

Note 1 to entry: In the *common ISO 13584/IEC 61360 dictionary model* (3.1.9), a class has at most one superclass specified by means of an *is-a relationship* (3.1.23).

[SOURCE: ISO 13584-42:2010, 3.44, modified — Note 1 to entry has been deleted.]

3.2 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply.

AP	Applicable property
BSU	Basic semantic unit
CD	Class definition
CST	Constraints
DC	Definition class
DCR	Date of current revision
DCV	Date of current version
DER	Derived value
DET	Data element type
DOD	Date of original definition
DT	Data type
PLS	Preferred letter symbol
SDD	Source document of definition
VF	Value format

4 Representation of ontology concepts as dictionary entries

4.1 Identification of data element type

In order to identify a data element type uniquely within the ISO/TS 23768 reference dictionaries and for electronic information exchange, a language-independent combination of characters as described in [Annex C](#) and [Annex D](#) shall be used.

4.2 Bearing classes

4.2.1 Modelled classes

The bearing class is classified in a single subclass in this document (see [Figure 1](#)): rolling bearing.

NOTE The role of this classification level allows for the extension of the bearing reference dictionary by adding other subclasses to the bearing class.

The classification of rolling bearings shall correspond to the classification provided in [Annex B](#).

EXAMPLE The bearing reference dictionary does not represent plain bearings. It can be extended by creating a new subclass of the bearing class.

The rolling bearing class is classified into the following eight subclasses (see [Figure 1](#)):

- ball bearing;
- roller bearing;
- combined bearing;
- insert bearing, unit housing and accessory;
- rolling bearing part;
- bearing housing element;
- bearing accessory;
- track roller.

All modelled classes defined in this document are shown in [Annex C](#).

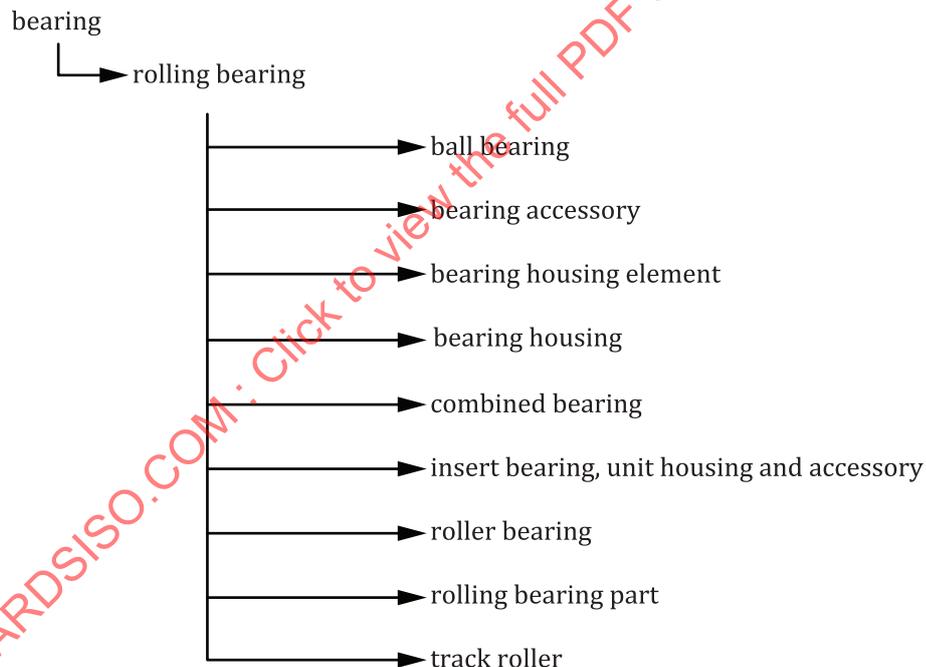
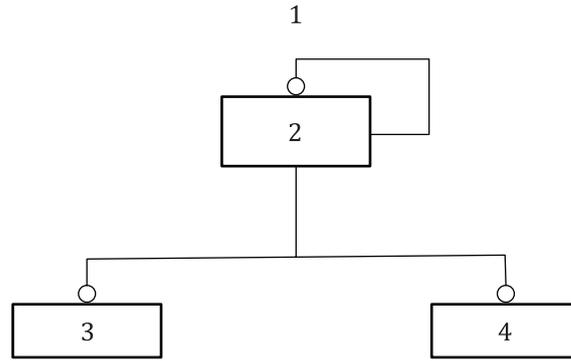


Figure 1 — Subclasses of the bearing and the rolling bearing classes in this document

4.2.1.1 Class constructor

The **category_class** and the **item_class** classes specified in **ISO13584_IEC61360_dictionary_schema** are used for describing the rolling bearing data dictionary defined in this document (see [Figure 2](#)).

NOTE 1 Words in bold letters and words linked with possible underscores stand for names given to the items declared in the underlying ISO 13584/IEC 61360 series reference model for describing data dictionaries.



Key

- | | | | |
|---|-------------------------|---|----------------------|
| 1 | (DER) subclasses S[0:?] | 3 | categorization_class |
| 2 | (ABS) Class | 4 | item_class |

Figure 2 — Class used in this document

EXAMPLE 1 In this document, *ball bearing* is a **categorization_class**.

Thus, in this document, three kinds of classes are distinguished (see [Figure 3](#)).

- Categorization classes: they are not associated to properties and are structured hierarchically through a superclass/subclass relationship denoting an inclusion.

EXAMPLE 2 *Bearing housing element* and *bearing accessory* are categorization classes.

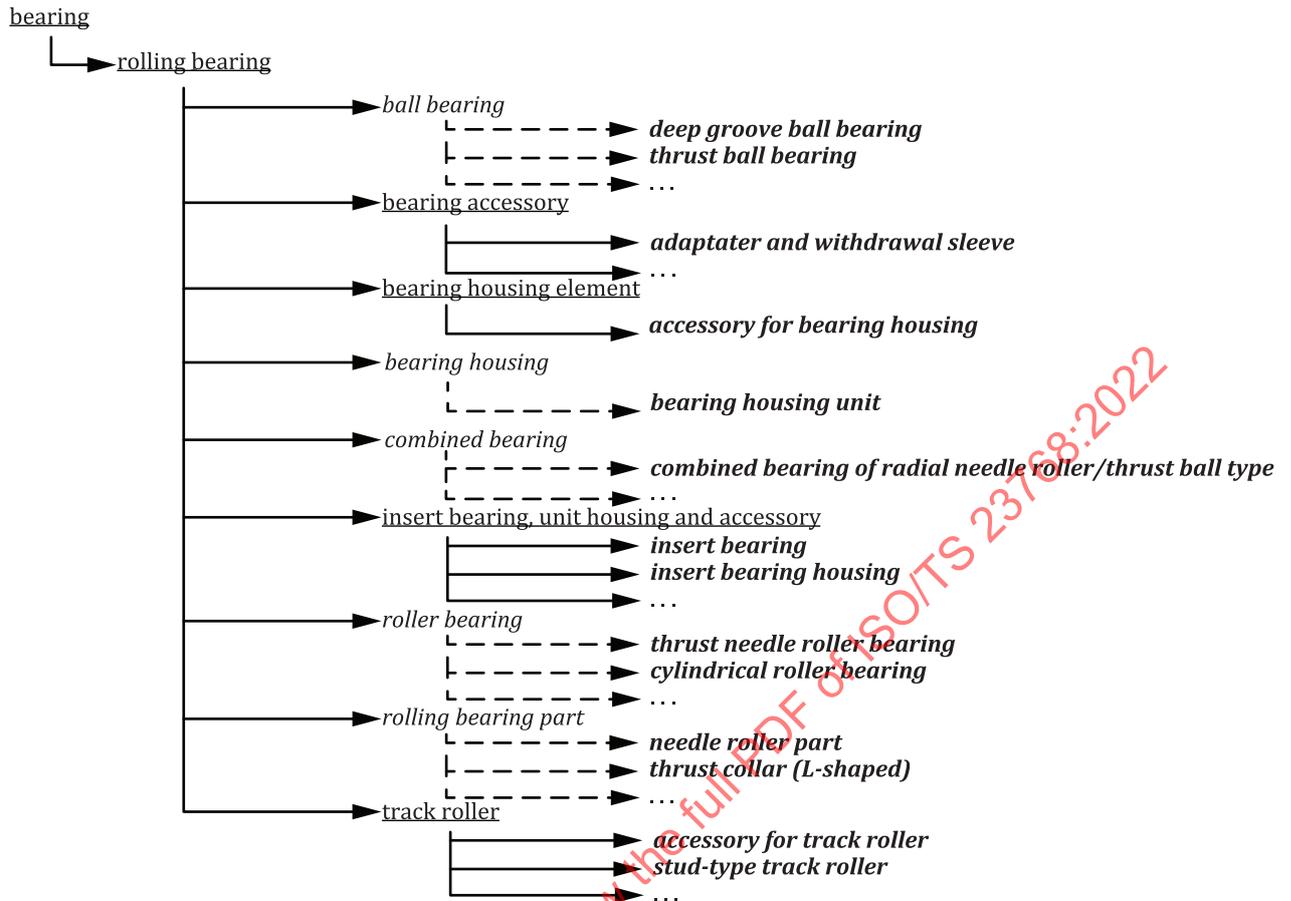
- Non-leaf characterization classes: they define an abstraction of a set of products that fulfil the same function and that share a number of common properties. They can be subdivided into more precise characterization classes. They can be linked either to some categorization classes through a superclass/subclass relationship denoting inclusion, or to others non-leaf characterization classes through a superclass/subclass relationship denoting a generalization/specialization relationship allowing properties inheritance.

EXAMPLE 3 *Roller bearing* and *ball bearing* are non-leaf characterization classes.

- Leaf characterization classes: they define characterization classes that are not further subdivided into more precise characterization classes. They can be linked either to some categorization classes through a superclass/subclass relationship denoting inclusion, or to non-leaf characterization classes through a superclass/subclass relationship denoting a generalization/specialization relationship allowing properties inheritance.

NOTE 2 Leaf characterization classes inherit the properties that are defined in their super (categorization or characterization) classes, and when required, set properties as being applicable.

EXAMPLE 4 *Adapter sleeve* and *deep groove ball bearing* are examples of leaf characterization classes.



Key

categorization class

non-leaf characterization class

leaf characterization class

—> includes

- -> is a generalisation of

Figure 3 — Structure of the reference dictionary for rolling bearings

The role of the upper section of a standardized characterization hierarchy is to organize the various aspects of a product domain using class inclusion relationships. This may lead to defining abstract classes that gather items that are different in nature, for example, part classes and feature classes provided that some visible properties need to be shared at these levels. Such classes are said to be abstract because all members of such classes are necessarily also members of some of their subclasses.

Below the upper section of the hierarchy, a characterization class of parts shall be created only when it is possible and advisable either:

- to order or to search for a part by characterizing it as a member of this characterization class, or
- to associate a functional model to such a characterization class of parts, i.e. when a user can reasonably choose a part of such a characterization class to represent a significant state (phase) of his/her design process.

The classification of *rolling bearings* is presented in [Annex B](#).

4.2.2 Referenced class

Most reference dictionaries need properties, such as *part number* and *manufacturer name*. These properties are non-technical properties and should not be created again and again in each domain specific data dictionary but shall be referenced from a reference source.

NOTE 1 It is likely for such a reference source to be a reference dictionary of non-technical properties.

NOTE 2 The reference mechanism used is based on the is-case-of relationship defined in ISO 13584-42.

The *bearing* class, root of the reference dictionary described in this document, references the *mechanical components for general use* defined in ISO 13584-511.

NOTE 3 In this document, no property is imported from ISO 13584-511. Reference to the *mechanical components for general use* is, nevertheless, in preparation for future use of non-technical properties, which this class defines.

4.2.3 Attributes used

In this document, classes are defined by means of the following information elements specified in ISO 13584-42:

- a) code;
- b) superclass;
- c) preferred name;
- d) subclass selection properties;
- e) visible properties;
- f) applicable properties;
- g) class value assignment;
- h) definition;
- i) source document of definition;
- j) date of current version;
- k) date of current revision;
- l) date of original definition;
- m) note;
- n) remark;
- o) version number;
- p) revision number;
- q) simplified drawing.

The following information elements, specified in ISO 13584-42:2010, are not used for defining the classes specified in this document:

- short name;
- synonymous name;
- visible types;

- applicable types;
- deprecation information;
- deprecation interpretation;
- administrative data.

4.2.4 Layout

Definition classes of all bearing parts, including all their attributes, are listed in [Annex C](#).

[Figure 4](#) shows the documentation style of bearing class definitions.

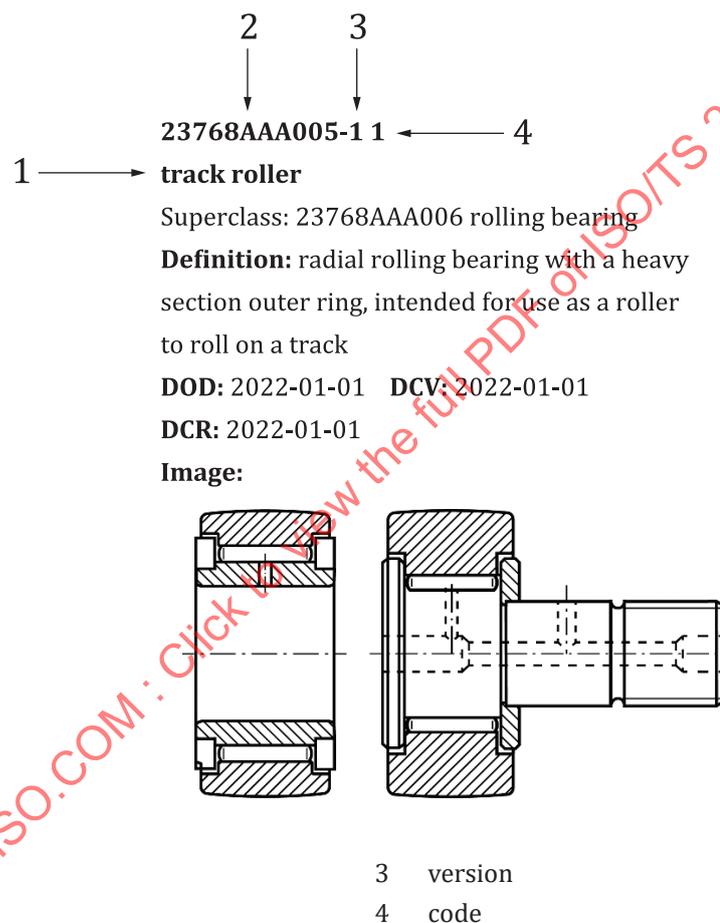


Figure 4 — Layout of class definitions

The class definition layout is according to the following principles:

- abbreviated terms defined in [3.2](#) are used for the corresponding attribute names;
- mandatory attributes shall appear in the definition list;
- optional attributes are omitted when empty;
- each class indicated in **superclass**, or property indicated in **AP** shall include both its code and its preferred name;
- all the properties applicable to a class (either applicable at the level of the class or inherited as applicable from a superclass) are listed.

4.3 Bearing property definitions

4.3.1 Modelled data types

In this document, properties play the role of characterization properties.

4.3.2 Imported properties

In this document, no property is imported.

4.3.3 Attributes used

In this document, properties are defined by means of the following information elements specified in ISO 13584-42:

- a) code;
- b) definition class;
- c) data type;
- d) preferred name;
- e) definition;
- f) preferred letter symbol;
- g) unit;
- h) format;
- i) note;
- j) remark;
- k) unit;
- l) source document of definition;
- m) value format;
- n) date of original definition;
- o) date of current version;
- p) date of current revision;
- q) version number;
- r) revision number.

The following information elements, specified in ISO 13584-42, are not used for defining properties specified in this document:

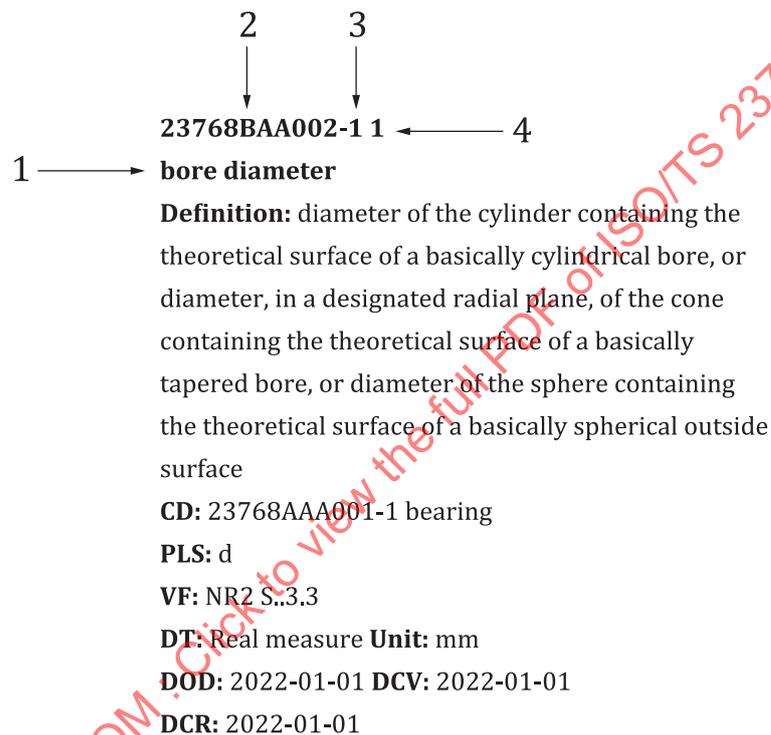
- condition;
- short name;
- formula;
- synonymous letter symbols;
- synonymous name;

- property type classification;
- deprecation information;
- deprecation interpretation;
- administrative data.

4.3.4 Layout

Properties definitions, including all their attributes, are listed in [Annex D](#).

[Figure 5](#) shows the documentation style of bearings property definitions.



Key

1	preferred name	3	version
2	code	4	code

Figure 5 — Layout of properties

The property definition layout is according to the following principles:

- abbreviated terms defined in 3.3 are used for the corresponding attribute names;
- mandatory attributes shall appear in the definition list;
- optional attributes are omitted when empty;
- the class indicated in the DC shall include its code followed by its preferred name.

4.4 Property data types

4.4.1 Data types used

Five data types are used for the properties modelled in this document. They are:

- **real_measure_type** for physical properties (a real value associated to a unit);
- **string_type** for properties describing a string of characters;
- **int_type** for numbering properties;
- **non_quantitative_code_type** (enumeration of string codes) and **non_quantitative_int_type** (enumeration of integer codes) for all the others characteristic properties.

4.4.2 Attributes used

This document does not use attributes for the data type definitions.

5 Classification principles

5.1 Connection to pre-existing classifications

This document has no connection to pre-existing classifications.

5.2 Class hierarchy

The class hierarchy has been constructed from classes defined in ISO 21107. These classes have been organized hierarchically according to the structuration rules defined in ISO 13584-42:2010 (RULE 1 to RULE 8).

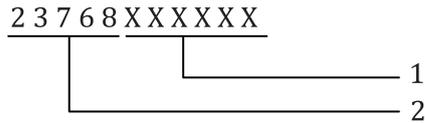
NOTE 1 Rules are guidelines used when creating a standardized (or supplier) characterization hierarchy.

In addition to RULE 1 to RULE 7 defined in ISO 13584-42, the following rules are also applicable to this document.

- **Additional rule 1:** Define lower level classes only when needed for properties definitions. The role of non-leaf (non-property) classes of the lower section (“generic families of parts”) is only to precisely define the meaning of each property. Thus, in the lower level of the hierarchy, introduce a new subclass if and only if it is required to define the domain of meaning of a property. No class shall exist which is distinguished from another class only by the values of some properties.

NOTE 2 Non-leaf component is allowed for the potential user extension in this document.

- **Additional rule 2:** All the properties defined in ISO 21107 are defined in this data dictionary.
- **Additional rule 3:** The coding style for this document (see [Figure 6](#)) is the following:
 - eleven characters in total, divided into two sections;
 - the first section is a five-character constant string “23768” identifying the bearings dictionary defined in this document;
 - the second section is a sequence of six characters without defined meaning.

**Key**

- 1 second section
- 2 first section

Figure 6 — Coding style

6 Computer-sensible description**6.1 External file**

In the rolling bearings dictionary, an external file is referenced by the **external_graphics** entity data type, which is a subtype of the **graphics** entity data type, to specify the **simplified_drawing** attribute of the simple family of parts. The domain of the **representation** attribute of the **external_graphics** is the **graphic_files** entity data type. A **graphic_files** entity data type references a file that contains a picture and specifies the protocol used to process it.

NOTE 1 In this document, all graphics are provided in the PNG format.

NOTE 2 The protocol used to process the files containing the pictures is the HTTP protocol.

6.2 Information model and conformance class

This document conforms to the long form schema defined in ISO 13584-42:2010. This long form schema is called **ISO13584_P42_2_LONG_FORM_SCHEMA**. This long form can be downloaded at the following address:

<http://www.steptools.com/stds/archive/PLIB/Part42/Part42e2-IS/>

Annex A (normative)

Information object registration

A.1 Document identification

In order to provide for unambiguous identification of an information object in an open system, the object identifier:

{ iso standard 23768 version (1) }

is assigned to this document. The syntax and the meaning of this value shall be as defined in ISO/IEC 8824-1.

A.2 Dictionary identification

The dictionary defined in this document is assigned to object identifier:

{ iso standard 23768 version (1) object (1) bearings (1) }

STANDARDSISO.COM : Click to view the full PDF of ISO/TS 23768:2022

Annex B (normative)

Classification of rolling bearings

B.1 General

This annex specifies the classification structure and codes of each class defined in this document.

B.2 Rolling bearings classification

The classification structure is defined as follow (see [Table B.1](#)).

Table B.1 — Classification structure of classes

Classification structure		Code	Superclass
bearing		23768AAA001	
	rolling bearing	23768AAA006	23768AAA001
	ball bearing	23768AAA023	23768AAA006
	angular contact radial ball bearing	23768AAA033	23768AAA023
	angular contact thrust ball bearing	23768AAA032	23768AAA023
	deep groove ball bearing	23768AAA035	23768AAA023
	self-aligning ball bearing	23768AAA034	23768AAA023
	thrust ball bearing	23768AAA031	23768AAA023
	bearing accessory	23768AAA002	23768AAA006
	adapter and withdrawal sleeve	23768AAA007	23768AAA002
	locknuts and locking devices	23768AAA008	23768AAA002
	bearing housing element	23768AAA004	23768AAA006
	accessory for bearing housing	23768AAA015	23768AAA004
	bearing housing	23768AAA017	23768AAA004
	bearing housing unit	23768AAA016	23768AAA004
	combined bearing	23768AAA021	23768AAA006
	combined bearing of radial needle roller / thrust ball type	23768AAA025	23768AAA021
	combined bearing of radial needle roller / thrust roller type	23768AAA026	23768AAA021
	insert bearing, unit housing and accessory	23768AAA022	23768AAA006
	insert bearing (bearing only)	23768AAA030	23768AAA022
	insert bearing accessory	23768AAA027	23768AAA022
	insert bearing housing	23768AAA029	23768AAA022
	insert bearing unit	23768AAA028	23768AAA022
	roller bearing	23768AAA024	23768AAA006
	cylindrical roller bearing	23768AAA043	23768AAA024
	needle roller bearing	23768AAA040	23768AAA024
	spherical roller bearing	23768AAA041	23768AAA024
	tapered roller bearing	23768AAA042	23768AAA024
	thrust cylindrical roller bearing	23768AAA039	23768AAA024

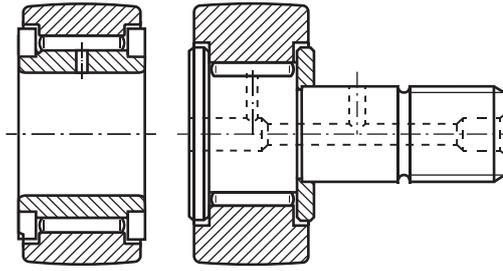
Table B.1 (continued)

Classification structure			Code	Superclass
		thrust needle roller bearing	23768AAA036	23768AAA024
		thrust spherical roller bearing	23768AAA037	23768AAA024
		thrust tapered roller bearing	23768AAA038	23768AAA024
		rolling bearing part	23768AAA003	23768AAA006
		aligning seat washer	23768AAA013	23768AAA003
		ball	23768AAA012	23768AAA003
		cylindrical roller	23768AAA014	23768AAA003
		inner ring for needle roller bearings	23768AAA011	23768AAA003
		needle roller	23768AAA009	23768AAA003
		thrust collar (L-shaped)	23768AAA010	23768AAA003
		track roller	23768AAA005	23768AAA006
		accessory for track roller	23768AAA018	23768AAA005
		stud-type track roller	23768AAA020	23768AAA005
		yoke-type track roller	23768AAA019	23768AAA005

Annex C (normative)

Definition of rolling bearing class

<p>23768AAA001-1 1 bearing Definition: mechanical component by means of which a moving part in relative motion is supported and/or guided with respect to other parts of a mechanism DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768AAA002-1 1 bearing accessory Superclass: 23768AAA006 rolling bearing Definition: element for the mounting or the locking of a bearing on its seating DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768AAA003-1 1 rolling bearing part Superclass: 23768AAA006 rolling bearing Definition: one of the individual parts comprising a rolling bearing but excluding all accessories AP: 23768BAA047-1 material 23768BAA110-1 coating DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768AAA004-1 1 bearing housing element Superclass: 23768AAA006 rolling bearing Definition: equipped bearing housing or housing part DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768AAA005-1 1 track roller Superclass: 23768AAA006 rolling bearing Definition: radial rolling bearing with a heavy section outer ring, intended for use as a roller to roll on a track DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01 Image:</p>



23768AAA006-1 1

rolling bearing

Superclass: 23768AAA001 bearing

Definition: bearing operating with rolling (rather than sliding) motion between the parts supporting load and moving in relation to each other

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768AAA007-1 1

adapter and withdrawal sleeve

Superclass: 23768AAA002 bearing accessory

Definition: axially slotted sleeve with a cylindrical bore, a tapered outside surface and an external screw thread at its small end

AP:

23768BAA002-1 bore diameter

23768BAA031-1 thread designation

23768BAA032-1 length

23768BAA033-1 holes for oil injection

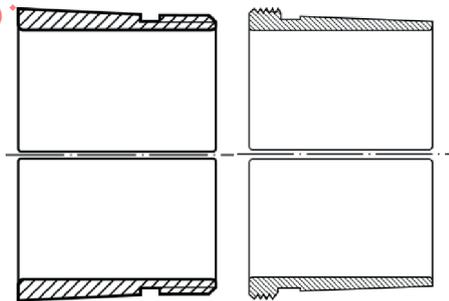
23768BAA034-1 sleeve type

23768BAA111-1 taper

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA008-1 1

locknuts and locking devices

Superclass: 23768AAA002 bearing accessory

Definition: Devices used for axial location of rolling bearings

AP:

23768BAA004-1 outside diameter

23768BAA035-1 thread designation

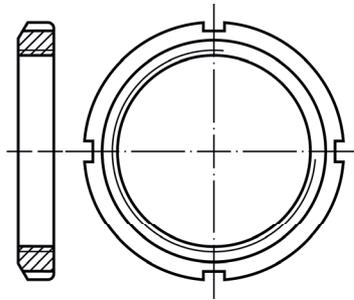
23768BAA036-1 locking device

23768BAA037-1 width
 23768BAA038-1 for use with sleeve
 23768BAA039-1 nut for hydraulic mounting

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA009-1 1

needle roller

Superclass: 23768AAA003 rolling bearing part

Definition: cylindrical roller of small diameter with a large ratio of length to diameter

AP:

23768BAA040-1 diameter

23768BAA041-1 length

23768BAA043-1 needle roller end type

23768BAA047-1 material

23768BAA101-1 needle roller grade

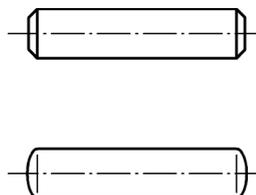
23768BAA110-1 coating

Note: it is generally accepted that the length is between three and ten times the diameter, which does not usually exceed 6 mm. The ends of a needle roller may be one of several shapes.

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA010-1 1

thrust collar (L-shaped)

Superclass: 23768AAA003 rolling bearing part

Definition: separable ring having an L-shaped section, the outer part of which serves as an inner ring rib for a radial cylindrical roller bearing

AP:

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA022-1 for use with bearing

23768BAA044-1 width in bore

23768BAA047-1 material
23768BAA110-1 coating
23768BAA112-1 width on outside diameter

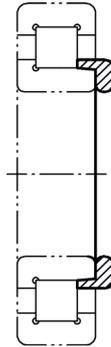
CST:

23768BAA110(coating)={1}
23768BAA047(material)={1, 2}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA011-1 1

inner ring for needle roller bearings

Superclass: 23768AAA003 rolling bearing part

Definition: bearing ring incorporating the raceway(s) on its outside surface

AP:

23768BAA002-1 bore diameter
23768BAA004-1 outside diameter
23768BAA006-1 relubrication feature
23768BAA012-1 radial internal clearance
23768BAA016-1 width, inner ring
23768BAA023-1 tolerance class
23768BAA046-1 special raceway feature
23768BAA047-1 material
23768BAA110-1 coating

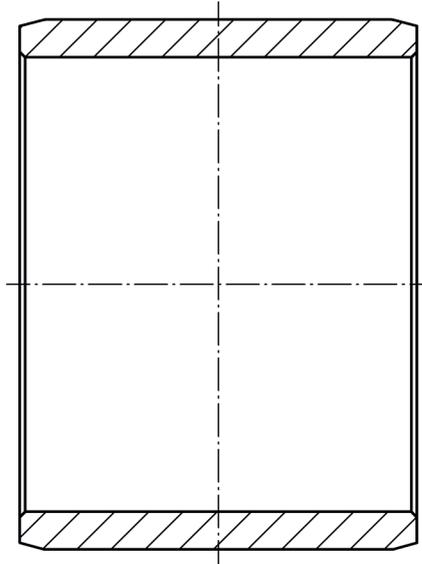
CST:

23768BAA110(coating)={2}
23768BAA047(material)={1, 2}
23768BAA012(radial internal clearance)={CN, C2, C3, C4}
23768BAA006(relubrication feature)={1, 2}
23768BAA023(tolerance class)={PN, P6, P5}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:

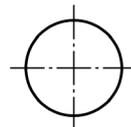
**23768AAA012-1 1****ball****Superclass:** 23768AAA003 rolling bearing part**Definition:** spherical rolling element**AP:**

23768BAA010-1 ball grade

23768BAA040-1 diameter

23768BAA047-1 material

23768BAA110-1 coating

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**Image:****23768AAA013-1 1****aligning seat washer****Superclass:** 23768AAA003 rolling bearing part**Definition:** washer used between an aligning housing washer and the thrust-supporting surface of a housing, one face of which has a concave spherical surface matching the spherical back face of the aligning housing washer**AP:**

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA022-1 for use with bearing

23768BAA047-1 material

23768BAA048-1 height

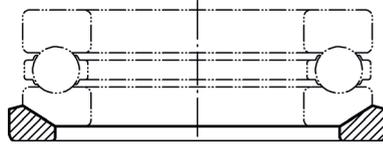
23768BAA108-1 centre height of aligning seat

23768BAA110-1 coating

CST:

23768BAA110(coating)={2}
23768BAA047(material)={1, 2}
DOD: 2022-01-01 **DCV:** 2022-01-01
DCR: 2022-01-01

Image:



23768AAA014-1 1

cylindrical roller

Superclass: 23768AAA003 rolling bearing part

Definition: roller where the generatrix of the outside surface is a basically straight line parallel with the roller axis

AP:

23768BAA040-1 diameter
23768BAA041-1 length
23768BAA047-1 material
23768BAA110-1 coating
23768BAA113-1 cylindrical roller grade

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA015-1 1

accessory for bearing housing

Superclass: 23768AAA004 bearing housing element

Definition: bearing housing additional element for protection or positioning purposes

AP:

23768BAA004-1 outside diameter
23768BAA052-1 special outside diameter feature
23768BAA053-1 housing designation
23768BAA054-1 accessory type

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768AAA016-1 1

bearing housing unit

Superclass: 23768AAA004 bearing housing element

Definition: unit composed of a bearing housing, of one or two bearings, and of mounting or locking accessories, ready to be integrated in an installation

AP:

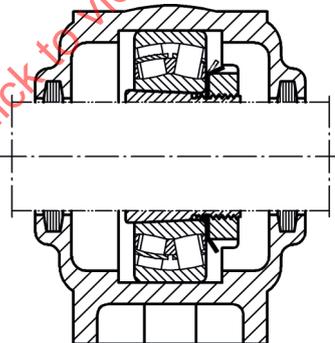
23768BAA002-1 bore diameter
 23768BAA005-1 pitch diameter of bolt holes
 23768BAA009-1 centre distance of pillow type bolt holes, square and oval flange type housing
 23768BAA011-1 centre height (plummer block)
 23768BAA019-1 material, housing
 23768BAA021-1 number of bolt holes
 23768BAA026-1 bearing housing seal type
 23768BAA027-1 housing type
 23768BAA028-1 fastening bolt hole type
 23768BAA049-1 housing configuration
 23768BAA050-1 bearing configuration
 23768BAA051-1 mounting arrangement
 23768BAA055-1 bearing insert
 23768BAA115-1 locating ring
 23768BAA124-1 end cover

CST:

23768BAA027(housing type)={1, 2, 3}
 23768BAA019(material, housing)={1, 2, 3}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:**23768AAA017-1 1****bearing housing**

Superclass: 23768AAA004 bearing housing element

Definition: part of a bearing mounting, surrounding the bearing and having an inside surface matching the outside surface of the bearing outer ring or housing washer or of the aligning housing ring or aligning seat washer

AP:

23768BAA005-1 pitch diameter of bolt holes
 23768BAA009-1 centre distance of pillow type bolt holes, square and oval flange type housing
 23768BAA011-1 centre height (plummer block)
 23768BAA019-1 material, housing
 23768BAA021-1 number of bolt holes
 23768BAA026-1 bearing housing seal type
 23768BAA027-1 housing type

23768BAA028-1 fastening bolt hole type
23768BAA042-1 seating diameter
23768BAA049-1 housing configuration
23768BAA050-1 bearing configuration
23768BAA051-1 mounting arrangement

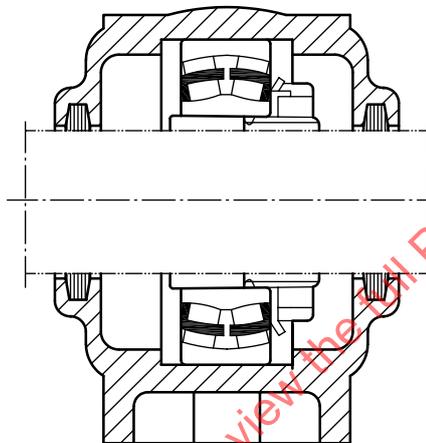
CST:

23768BAA028(fastening bolt hole type)={1, 2, 5}
23768BAA027(housing type)={1, 2, 3}
23768BAA019(material, housing)={1, 2, 3}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA018-1 1

accessory for track roller

Superclass: 23768AAA005 track roller

Definition: element allowing the lubrication, the protection or the tightening of a track roller

AP:

23768BAA058-1 for use with track roller
23768BAA059-1 accessory type

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768AAA019-1 1

yoke-type track roller

Superclass: 23768AAA005 track roller

Definition: track roller rolling bearing intended for mounting in a yoke

AP:

23768BAA002-1 bore diameter
23768BAA006-1 relubrication feature
23768BAA012-1 radial internal clearance
23768BAA013-1 sealing
23768BAA015-1 width, outer ring
23768BAA017-1 lubricant
23768BAA020-1 number of rows

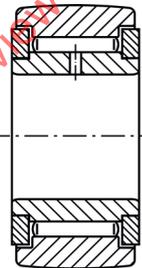
23768BAA023-1 tolerance class
 23768BAA029-1 bearing part
 23768BAA030-1 rolling element radial part
 23768BAA056-1 number of flanges on outer ring
 23768BAA057-1 outer ring profile
 23768BAA060-1 application
 23768BAA061-1 width, total
 23768BAA062-1 axial guidance of outer ring

CST:

23768BAA029(bearing part)={12, 13}
 23768BAA001(cage)={4}
 23768BAA109(coating)={1}
 23768BAA017(lubricant)={1, 2}
 23768BAA012(radial internal clearance)={CN, C2, C3, C4}
 23768BAA006(relubrication feature)={1, 2}
 23768BAA030(rolling element radial part)={1, 2, 3}
 23768BAA013(sealing)={1, 11, 14}
 23768BAA023(tolerance class)={PN, P6, P5}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:

23768AAA020-1 1
stud-type track roller

Superclass: 23768AAA005 track roller

Definition: track roller rolling bearing in which the inner member is extended on one side in the form of a shaft for cantilever mounting of the bearing

AP:

23768BAA006-1 relubrication feature
 23768BAA012-1 radial internal clearance
 23768BAA013-1 sealing
 23768BAA015-1 width, outer ring
 23768BAA017-1 lubricant
 23768BAA020-1 number of rows
 23768BAA023-1 tolerance class
 23768BAA030-1 rolling element radial part
 23768BAA056-1 number of flanges on outer ring
 23768BAA057-1 outer ring profile
 23768BAA063-1 feature for tightening

23768BAA104-1 stud alignment
23768BAA105-1 functional outside diameter
23768BAA106-1 stud diameter
23768BAA116-1 length, total

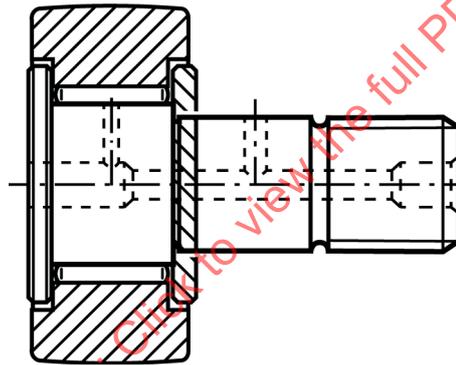
CST:

23768BAA001(cage)={4}
23768BAA109(coating)={1, 6}
23768BAA017(lubricant)={1, 2}
23768BAA018(material, bearing)={1, 2}
23768BAA012(radial internal clearance)={CN, C2}
23768BAA006(relubrication feature)={3, 4, 5}
23768BAA030(rolling element radial part)={1, 2, 3}
23768BAA013(sealing)={1, 11, 14}
23768BAA023(tolerance class)={PN, P6, P5}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA021-1 1

combined bearing

Superclass: 23768AAA006 rolling bearing

Definition: rolling bearing which has two sets of rolling elements in a bearing individually supporting radial load and axial load respectively

AP:

23768BAA002-1 bore diameter
23768BAA004-1 outside diameter
23768BAA012-1 radial internal clearance
23768BAA023-1 tolerance class
23768BAA030-1 rolling element radial part
23768BAA065-1 axial load capability
23768BAA068-1 width
23768BAA071-1 thrust part
23768BAA072-1 special feature
23768BAA073-1 rolling bearing type
23768BAA117-1 rolling element (thrust part)

CST:

23768BAA012(radial internal clearance)={CN, C2, C3, C4, C5}

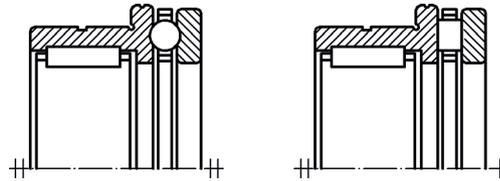
23768BAA030(rolling element radial part)={1}

23768BAA023(tolerance class)={PN, P6, P5, P4, P2}

DOD: 2022-01-01 DCV: 2022-01-01

DCR: 2022-01-01

Image:



23768AAA022-1 1

insert bearing, unit housing and accessory

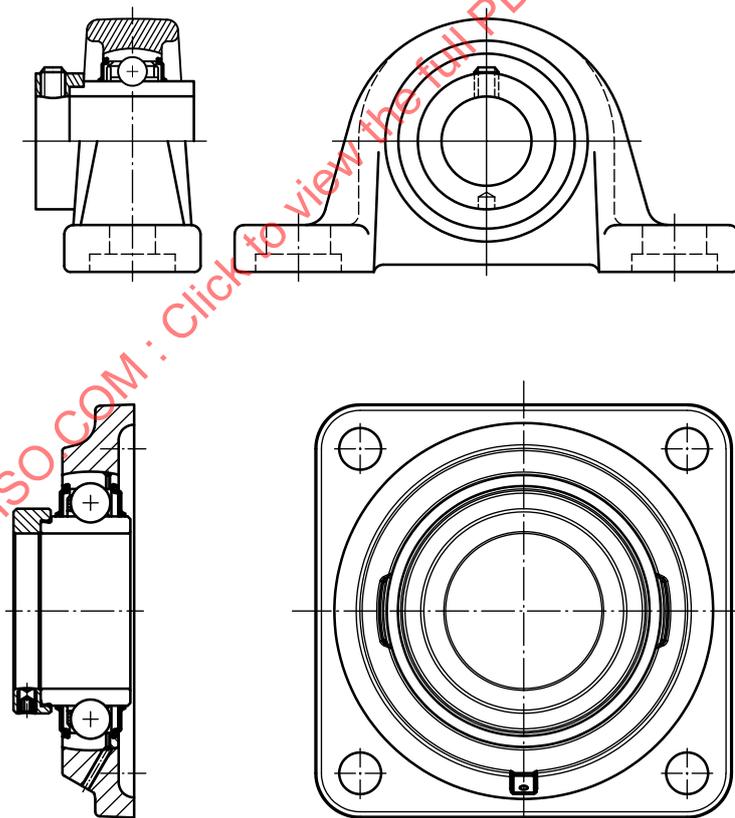
Superclass: 23768AAA006 rolling bearing

Definition: insert bearing unit or insert bearing (unit) parts (insert bearing, housing and accessory)

DOD: 2022-01-01 DCV: 2022-01-01

DCR: 2022-01-01

Image:



23768AAA023-1 1

ball bearing

Superclass: 23768AAA006 rolling bearing

Definition: rolling bearing with balls as rolling elements

AP:

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA023-1 tolerance class

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768AAA024-1 1

roller bearing

Superclass: 23768AAA006 rolling bearing

Definition: rolling bearing with rollers as rolling elements

AP:

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

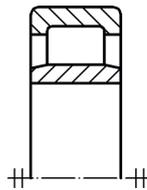
23768BAA018-1 material, bearing

23768BAA109-1 coating

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA025-1 1

combined bearing of radial needle roller / thrust ball type

Superclass: 23768AAA021 combined bearing

Definition: bearing of which radial and axial functions are respectively separated by a needle roller bearing and a thrust ball bearing

AP:

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA012-1 radial internal clearance

23768BAA023-1 tolerance class

23768BAA030-1 rolling element radial part

23768BAA065-1 axial load capability

23768BAA068-1 width

23768BAA071-1 thrust part

23768BAA072-1 special feature

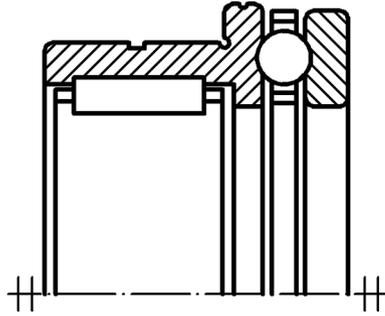
23768BAA073-1 rolling bearing type

23768BAA117-1 rolling element (thrust part)

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:

**23768AAA026-1 1****combined bearing of radial needle roller / thrust roller type****Superclass:** 23768AAA021 combined bearing**Definition:** bearing of which radial and axial functions are respectively separated by a needle roller bearing and a thrust roller bearing**AP:**

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA012-1 radial internal clearance

23768BAA023-1 tolerance class

23768BAA030-1 rolling element radial part

23768BAA065-1 axial load capability

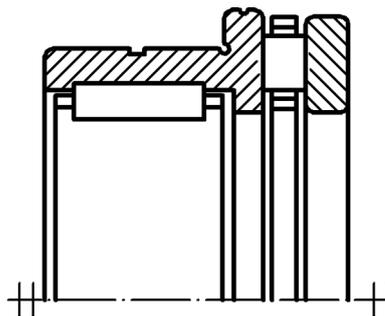
23768BAA068-1 width

23768BAA071-1 thrust part

23768BAA072-1 special feature

23768BAA073-1 rolling bearing type

23768BAA117-1 rolling element (thrust part)

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**Image:****23768AAA027-1 1****insert bearing accessory****Superclass:** 23768AAA022 insert bearing, unit housing and accessory**Definition:** element allowing vibrations damping or the insert bearing protection**AP:**

23768BAA002-1 bore diameter

23768BAA005-1 pitch diameter of bolt holes

23768BAA021-1 number of bolt holes

23768BAA077-1 outside locating diameter

23768BAA078-1 width
23768BAA079-1 insert bearing accessory material
23768BAA080-1 accessory type

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768AAA028-1 1

insert bearing unit

Superclass: 23768AAA022 insert bearing, unit housing and accessory

Definition: assembly unit comprising an insert ball bearing and a housing

AP:

23768BAA005-1 pitch diameter of bolt holes
23768BAA007-1 retaining feature, inner ring
23768BAA009-1 centre distance of pillow type bolt holes, square and oval flange type housing
23768BAA011-1 centre height (plummer block)
23768BAA013-1 sealing
23768BAA014-1 width, housing
23768BAA017-1 lubricant
23768BAA018-1 material, bearing
23768BAA019-1 material, housing
23768BAA021-1 number of bolt holes
23768BAA024-1 bore type
23768BAA025-1 sealing type
23768BAA027-1 housing type
23768BAA028-1 fastening bolt hole type
23768BAA074-1 flanged housing type
23768BAA075-1 relubrication nipple
23768BAA076-1 relubrication hole
23768BAA081-1 unit sealing
23768BAA082-1 overall width, insert bearing
23768BAA107-1 shaft diameter
23768BAA109-1 coating

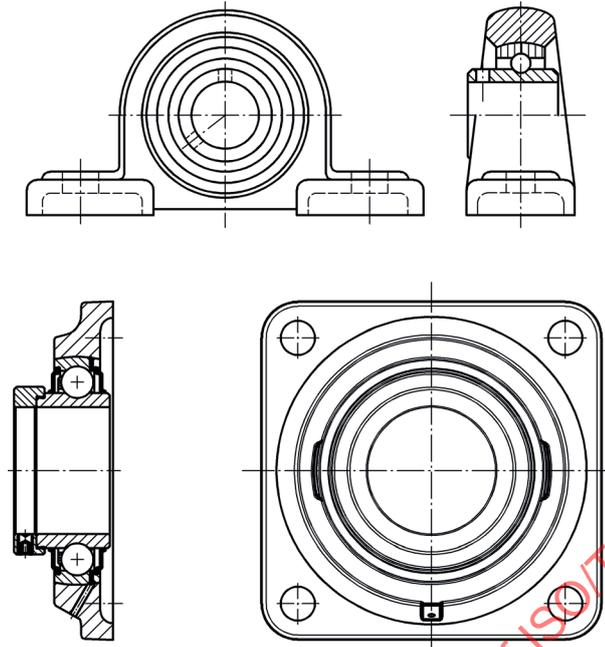
CST:

23768BAA024(bore type)={1, 2, 3, 4}
23768BAA109(coating)={1}
23768BAA028(fastening bolt hole type)={3, 4}
23768BAA027(housing type)={1, 2, 3, 4, 5}
23768BAA017(lubricant)={2, 3}
23768BAA018(material, bearing)={1, 2, 5}
23768BAA019(material, housing)={1, 2, 3, 4, 5}
23768BAA013(sealing)={4, 5, 6, 10}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:

**23768AAA029-1 1****insert bearing housing**

Superclass: 23768AAA022 insert bearing, unit housing and accessory

Definition: part of a bearing mounting, surrounding the bearing and having an inside spherical surface matching the outside surface of the bearing outer ring

AP:

23768BAA003-1 spherical seating diameter

23768BAA005-1 pitch diameter of bolt holes

23768BAA009-1 centre distance of pillow type bolt holes, square and oval flange type housing

23768BAA011-1 centre height (plummer block)

23768BAA014-1 width, housing

23768BAA019-1 material, housing

23768BAA021-1 number of bolt holes

23768BAA027-1 housing type

23768BAA028-1 fastening bolt hole type

23768BAA074-1 flanged housing type

23768BAA075-1 relubrication nipple

23768BAA076-1 relubrication hole

CST:

23768BAA028(fastening bolt hole type)={3, 4}

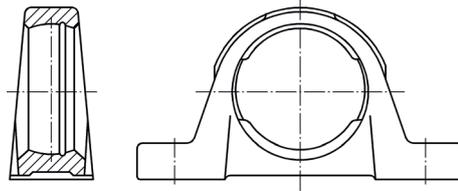
23768BAA027(housing type)={1, 2, 3, 5}

23768BAA019(material, housing)={1, 2, 3, 4, 5, 6}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA030-1 1

insert bearing (bearing only)

Superclass: 23768AAA022 insert bearing, unit housing and accessory

Definition: radial rolling bearing with a spherical outside surface and an extended inner ring with a locking device

AP:

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA006-1 relubrication feature

23768BAA007-1 retaining feature, inner ring

23768BAA013-1 sealing

23768BAA015-1 width, outer ring

23768BAA016-1 width, inner ring

23768BAA017-1 lubricant

23768BAA018-1 material, bearing

23768BAA024-1 bore type

23768BAA025-1 sealing type

23768BAA030-1 rolling element radial part

23768BAA083-1 rubber collar

23768BAA084-1 outside diameter type

23768BAA109-1 coating

CST:

23768BAA024(bore type)={1, 2, 3, 4}

23768BAA001(cage)={1, 2, 3}

23768BAA109(coating)={1, 6}

23768BAA017(lubricant)={2, 3}

23768BAA018(material, bearing)={1, 2, 5}

23768BAA006(relubrication feature)={1, 2}

23768BAA030(rolling element radial part)={1, 5}

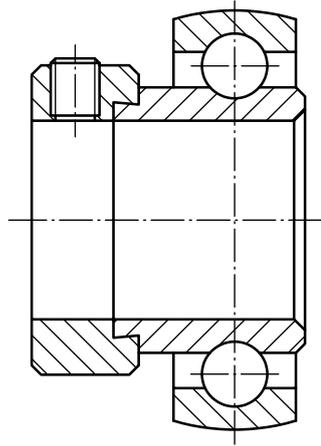
23768BAA013(sealing)={4, 5, 6, 10, 12}

Note: bearing originally designed for being used in insert bearing units

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:

**23768AAA031-1 1****thrust ball bearing****Superclass:** 23768AAA023 ball bearing**Definition:** thrust rolling bearing with balls as rolling elements designed to primarily support axial load**AP:**

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA018-1 material, bearing

23768BAA020-1 number of rows

23768BAA023-1 tolerance class

23768BAA065-1 axial load capability

23768BAA067-1 height

23768BAA087-1 housing washer type

23768BAA109-1 coating

23768BAA118-1 radius of aligning surface

CST:

23768BAA001(cage)={1, 2, 3}

23768BAA109(coating)={1, 2, 6}

23768BAA087(housing washer type)={3, 4}

23768BAA018(material, bearing)={1, 2, 3, 4, 5}

23768BAA023(tolerance class)={PN, P6, P5, P4}

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**Image:****23768AAA032-1 1****angular contact thrust ball bearing****Superclass:** 23768AAA023 ball bearing**Definition:** thrust ball bearing, designed to support primarily a combined radial and axial load

AP:

- 23768BAA001-1 cage
- 23768BAA002-1 bore diameter
- 23768BAA004-1 outside diameter
- 23768BAA006-1 relubrication feature
- 23768BAA008-1 matched arrangement
- 23768BAA013-1 sealing
- 23768BAA017-1 lubricant
- 23768BAA020-1 number of rows
- 23768BAA023-1 tolerance class
- 23768BAA025-1 sealing type
- 23768BAA064-1 contact angle
- 23768BAA065-1 axial load capability
- 23768BAA067-1 height
- 23768BAA069-1 number of bearings in matched set
- 23768BAA070-1 locating feature, bearing outer ring
- 23768BAA085-1 matched condition (axial clearance/preload)
- 23768BAA087-1 housing washer type
- 23768BAA109-1 coating
- 23768BAA119-1 single bearing, universally matchable (delivered individually)
- 23768BAA120-1 preload bearing (double-row angular contact thrust ball bearing)

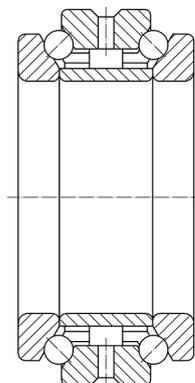
CST:

- 23768BAA001(cage)={1, 2, 3, 4}
- 23768BAA087(housing washer type)={1, 2}
- 23768BAA017(lubricant)={1, 2, 3}
- 23768BAA006(relubrication feature)={1, 2}
- 23768BAA013(sealing)={1, 2, 3, 4, 5, 6}
- 23768BAA023(tolerance class)={PN, P6, P5, P4, P2}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA033-1 1

angular contact radial ball bearing

Superclass: 23768AAA023 ball bearing

Definition: ball bearing designed to support primarily a combined radial and axial load

AP:

23768BAA001-1 cage
 23768BAA002-1 bore diameter
 23768BAA004-1 outside diameter
 23768BAA006-1 relubrication feature
 23768BAA008-1 matched arrangement
 23768BAA012-1 radial internal clearance
 23768BAA013-1 sealing
 23768BAA017-1 lubricant
 23768BAA018-1 material, bearing
 23768BAA020-1 number of rows
 23768BAA023-1 tolerance class
 23768BAA025-1 sealing type
 23768BAA064-1 contact angle
 23768BAA066-1 arrangement of contact angle (double-row bearing)
 23768BAA068-1 width
 23768BAA069-1 number of bearings in matched set
 23768BAA070-1 locating feature, bearing outer ring
 23768BAA085-1 matched condition (axial clearance/preload)
 23768BAA086-1 universal matching bearing
 23768BAA088-1 axial internal clearance
 23768BAA089-1 ring type
 23768BAA090-1 angular contact type
 23768BAA109-1 coating

CST:

23768BAA109(coating)={1, 2, 6}
 23768BAA070(locating feature, bearing outer ring)={1, 2, 3, 4, 5}
 23768BAA008(matched arrangement)={1, 2, 3, 4, 5, 6}
 23768BAA018(material, bearing)={1, 2, 3, 4, 5}
 23768BAA006(relubrication feature)={1, 2}
 23768BAA013(sealing)={1, 2, 3, 4, 5, 6}
 23768BAA023(tolerance class)={PN, P6, P5, P4, P2}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:

23768AAA034-1 1

self-aligning ball bearing

Superclass: 23768AAA023 ball bearing

Definition: ball bearing having a spherical raceway in the outer ring enabling angular alignment within the raceway

AP:

- 23768BAA001-1 cage
- 23768BAA002-1 bore diameter
- 23768BAA004-1 outside diameter
- 23768BAA006-1 relubrication feature
- 23768BAA012-1 radial internal clearance
- 23768BAA013-1 sealing
- 23768BAA017-1 lubricant
- 23768BAA018-1 material, bearing
- 23768BAA023-1 tolerance class
- 23768BAA024-1 bore type
- 23768BAA025-1 sealing type
- 23768BAA068-1 width
- 23768BAA070-1 locating feature, bearing outer ring
- 23768BAA109-1 coating

CST:

- 23768BAA024(bore type)={1, 2}
- 23768BAA001(cage)={1, 2, 3}
- 23768BAA109(coating)={1, 2, 6}
- 23768BAA070(locating feature, bearing outer ring)={1, 2, 3, 4}
- 23768BAA017(lubricant)={1, 2, 3}
- 23768BAA018(material, bearing)={1, 2, 3, 4, 5}
- 23768BAA012(radial internal clearance)={C1, C2, C3, C4, C5}
- 23768BAA006(relubrication feature)={1, 2}
- 23768BAA013(sealing)={1, 2, 3, 4, 5}
- 23768BAA023(tolerance class)={PN, P6, P5, P4, P2}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA035-1 1

deep groove ball bearing

Superclass: 23768AAA023 ball bearing

Definition: radial ball bearing in which each ring has uninterrupted raceway grooves with a cross-section matching about one-third of the ball circumference

AP:

23768BAA001-1 cage
 23768BAA002-1 bore diameter
 23768BAA004-1 outside diameter
 23768BAA006-1 relubrication feature
 23768BAA008-1 matched arrangement
 23768BAA012-1 radial internal clearance
 23768BAA013-1 sealing
 23768BAA017-1 lubricant
 23768BAA018-1 material, bearing
 23768BAA020-1 number of rows
 23768BAA023-1 tolerance class
 23768BAA024-1 bore type
 23768BAA025-1 sealing type
 23768BAA068-1 width
 23768BAA070-1 locating feature, bearing outer ring
 23768BAA092-1 filling slot
 23768BAA109-1 coating

CST:

23768BAA024(bore type)={1, 2}
 23768BAA001(cage)={1, 2, 3, 4}
 23768BAA109(coating)={1, 2, 6}
 23768BAA017(lubricant)={1, 2, 3, 5}
 23768BAA008(matched arrangement)={1, 2, 3, 4}
 23768BAA018(material, bearing)={1, 2, 3, 4, 5}
 23768BAA012(radial internal clearance)={CN, C2, C3, C4, C5}
 23768BAA006(relubrication feature)={1, 2}
 23768BAA013(sealing)={1, 2, 3, 4, 5, 6}
 23768BAA023(tolerance class)={PN, P6, P5, P4, P2}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:**23768AAA036-1 1****thrust needle roller bearing**

Superclass: 23768AAA024 roller bearing

Definition: thrust roller bearing with needle rollers as rolling elements

AP:

23768BAA001-1 cage

- 23768BAA002-1 bore diameter
- 23768BAA004-1 outside diameter
- 23768BAA018-1 material, bearing
- 23768BAA029-1 bearing part
- 23768BAA067-1 height
- 23768BAA101-1 needle roller grade
- 23768BAA109-1 coating

CST:

- 23768BAA029(bearing part)={1, 6, 7, 8, 10, 11}
- 23768BAA001(cage)={1, 2}
- 23768BAA109(coating)={2, 3, 6}
- 23768BAA018(material, bearing)={1, 2, 3, 4, 5}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA037-1 1

thrust spherical roller bearing

Superclass: 23768AAA024 roller bearing

Definition: rolling bearing, having convex rollers as rolling elements, allowing angular displacement of the raceway axis due to the spherical form of the housing washer raceway and designed primarily to support axial load

AP:

- 23768BAA001-1 cage
- 23768BAA002-1 bore diameter
- 23768BAA004-1 outside diameter
- 23768BAA018-1 material, bearing
- 23768BAA023-1 tolerance class
- 23768BAA067-1 height
- 23768BAA070-1 locating feature, bearing outer ring
- 23768BAA109-1 coating

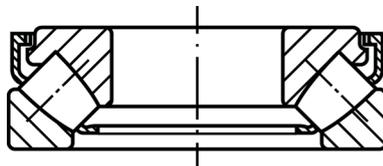
CST:

- 23768BAA001(cage)={1, 2, 3}
- 23768BAA109(coating)={1, 2, 6}
- 23768BAA070(locating feature, bearing outer ring)={1, 4}
- 23768BAA023(tolerance class)={PN, P6, P5}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA038-1 1**thrust tapered roller bearing****Superclass:** 23768AAA024 roller bearing**Definition:** thrust roller bearing with tapered rollers as rolling elements**AP:**

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA013-1 sealing

23768BAA017-1 lubricant

23768BAA018-1 material, bearing

23768BAA020-1 number of rows

23768BAA023-1 tolerance class

23768BAA029-1 bearing part

23768BAA065-1 axial load capability

23768BAA067-1 height

23768BAA109-1 coating

CST:

23768BAA029(bearing part)={1, 6, 7, 8}

23768BAA001(cage)={1, 2, 3, 4}

23768BAA109(coating)={1, 2, 6}

23768BAA017(lubricant)={1, 2}

23768BAA013(sealing)={1, 7, 8, 9}

23768BAA023(tolerance class)={PN, P6, P5}

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**Image:****23768AAA039-1 1****thrust cylindrical roller bearing****Superclass:** 23768AAA024 roller bearing**Definition:** thrust roller bearing with cylindrical rollers as rolling elements**AP:**

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA018-1 material, bearing

23768BAA020-1 number of rows

23768BAA023-1 tolerance class

23768BAA029-1 bearing part

23768BAA065-1 axial load capability

23768BAA067-1 height
23768BAA109-1 coating

CST:

23768BAA029(bearing part)={1, 6, 7, 8, 9}
23768BAA001(cage)={2, 3}
23768BAA109(coating)={1, 2, 6}
23768BAA023(tolerance class)={PN, P6, P5, P4}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA040-1 1

needle roller bearing

Superclass: 23768AAA024 roller bearing

Definition: radial roller bearing with needle rollers as rolling elements

AP:

23768BAA001-1 cage
23768BAA002-1 bore diameter
23768BAA004-1 outside diameter
23768BAA006-1 relubrication feature
23768BAA012-1 radial internal clearance
23768BAA013-1 sealing
23768BAA017-1 lubricant
23768BAA018-1 material, bearing
23768BAA020-1 number of rows
23768BAA023-1 tolerance class
23768BAA025-1 sealing type
23768BAA029-1 bearing part
23768BAA068-1 width
23768BAA093-1 number of ribs, outer ring
23768BAA094-1 aligning feature
23768BAA095-1 outer ring type
23768BAA109-1 coating
23768BAA121-1 bore diameter of needle roller complement
23768BAA122-1 outside diameter of needle roller complement

CST:

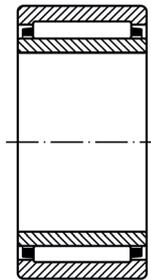
23768BAA029(bearing part)={1, 2, 5, 6, 16}
23768BAA001(cage)={4}
23768BAA109(coating)={1, 6}
23768BAA017(lubricant)={1, 2, 3}
23768BAA018(material, bearing)={1, 2, 6}

23768BAA093(number of ribs, outer ring)={1, 3, 4}
 23768BAA012(radial internal clearance)={CN, C2, C3, C4, C5}
 23768BAA006(relubrication feature)={1, 2}
 23768BAA013(sealing)={1, 2, 3}
 23768BAA023(tolerance class)={PN, P6, P5}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA041-1 1

spherical roller bearing

Superclass: 23768AAA024 roller bearing

Definition: radial rolling bearing with convex rollers as rolling elements and having a spherical raceway in the outer ring enabling angular alignment within the raceways

AP:

23768BAA001-1 cage
 23768BAA002-1 bore diameter
 23768BAA004-1 outside diameter
 23768BAA006-1 relubrication feature
 23768BAA012-1 radial internal clearance
 23768BAA013-1 sealing
 23768BAA017-1 lubricant
 23768BAA018-1 material, bearing
 23768BAA020-1 number of rows
 23768BAA023-1 tolerance class
 23768BAA024-1 bore type
 23768BAA025-1 sealing type
 23768BAA068-1 width
 23768BAA070-1 locating feature, bearing outer ring
 23768BAA109-1 coating

CST:

23768BAA024(bore type)={1, 2, 5}
 23768BAA001(cage)={1, 2, 3}
 23768BAA109(coating)={1, 2, 6}
 23768BAA070(locating feature, bearing outer ring)={1, 2, 3, 4}
 23768BAA017(lubricant)={1, 2, 3}
 23768BAA012(radial internal clearance)={CN, C2, C3, C4, C5}
 23768BAA006(relubrication feature)={1, 2}

23768BAA013(sealing)={1, 2, 3, 4, 5, 6}

23768BAA023(tolerance class)={PN, P6, P5, P4}

Note: in the case of convex rollers, the outer ring has a spherical raceway in the case of concave rollers, the inner ring has a spherical raceway

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



23768AAA042-1 1

tapered roller bearing

Superclass: 23768AAA024 roller bearing

Definition: angular contact radial rolling bearing with tapered rollers as rolling elements designed to support combined loads

AP:

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA006-1 relubrication feature

23768BAA008-1 matched arrangement

23768BAA012-1 radial internal clearance

23768BAA013-1 sealing

23768BAA015-1 width, outer ring

23768BAA016-1 width, inner ring

23768BAA017-1 lubricant

23768BAA018-1 material, bearing

23768BAA020-1 number of rows

23768BAA023-1 tolerance class

23768BAA024-1 bore type

23768BAA025-1 sealing type

23768BAA029-1 bearing part

23768BAA064-1 contact angle

23768BAA066-1 arrangement of contact angle (double-row bearing)

23768BAA069-1 number of bearings in matched set

23768BAA070-1 locating feature, bearing outer ring

23768BAA096-1 width, total

23768BAA097-1 single-row bearing for matching, pre-adjusted

23768BAA098-1 single-row bearing

23768BAA109-1 coating

23768BAA123-1 design variant designation

CST:

23768BAA029(bearing part)={1, 14, 15}

23768BAA024(bore type)={1, 2}

23768BAA109(coating)={1, 2, 6}

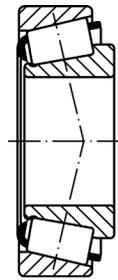
23768BAA070(locating feature, bearing outer ring)={1, 3, 4, 5}

23768BAA017(lubricant)={1, 2, 3}

23768BAA006(relubrication feature)={1, 2}

23768BAA013(sealing)={1, 2, 3, 4, 5, 6}

23768BAA023(tolerance class)={PN, P5, P4, P2, P6X}

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**Image:****23768AAA043-1 1****cylindrical roller bearing****Superclass:** 23768AAA024 roller bearing

Definition: radial roller bearing with cylindrical rollers as rolling elements

AP:

23768BAA001-1 cage

23768BAA002-1 bore diameter

23768BAA004-1 outside diameter

23768BAA006-1 relubrication feature

23768BAA012-1 radial internal clearance

23768BAA013-1 sealing

23768BAA017-1 lubricant

23768BAA018-1 material, bearing

23768BAA020-1 number of rows

23768BAA023-1 tolerance class

23768BAA024-1 bore type

23768BAA025-1 sealing type

23768BAA029-1 bearing part

23768BAA068-1 width

23768BAA070-1 locating feature, bearing outer ring

23768BAA093-1 number of ribs, outer ring

23768BAA099-1 number of ribs, inner ring

23768BAA100-1 loose rib

23768BAA109-1 coating

CST:

23768BAA029(bearing part)={1, 2, 3, 4, 5, 6}

23768BAA024(bore type)={1, 2}

23768BAA001(cage)={1, 2, 3, 4}

23768BAA109(coating)={1, 2, 6}

23768BAA070(locating feature, bearing outer ring)={1, 2, 3, 4, 5}

23768BAA017(lubricant)={1, 2, 3}

23768BAA093(number of ribs, outer ring)={1, 2, 3, 4}

23768BAA012(radial internal clearance)={CN, C2, C3, C4, C5}

23768BAA006(relubrication feature)={1, 2}

23768BAA013(sealing)={1, 2, 3, 4, 5, 6}

23768BAA023(tolerance class)={PN, P6, P5, P4, P2}

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

Image:



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Annex D (normative)

Definition of rolling bearing properties

23768BAA001-1 1
cage

Definition: bearing part which partly surrounds all or several of the rolling elements and moves with them

CD: 23768AAA001-1

VF: X 17

DT: Enumeration of codes

1=sheet metal

2=non metallic

3=machined metal

4=without

SDD: ISO 5593 3.2.1.19

DOD: 2022-01-01

DCR: 2022-01-01

23768BAA002-1 1
bore diameter

Definition: diameter of the cylinder containing the theoretical surface of a basically cylindrical bore, or diameter, in a designated radial plane, of the cone containing the theoretical surface of a basically tapered bore, or diameter of the sphere containing the theoretical surface of a basically spherical outside surface

CD: 23768AAA001-1 bearing

PLS: d

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA003-1 1
spherical seating diameter

Definition: diameter of the spherical surface of a housing in which an insert bearing is mounted

CD: 23768AAA029-1 insert bearing housing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA004-1 1
outside diameter

Definition: diameter of the cylinder containing the theoretical surface of a basically cylindrical bore (cylindrical outside surface), or diameter, in a designated radial plane, of the cone containing the theoretical surface of a basically tapered bore, or diameter of the sphere containing the theoretical surface of a basically spherical outside surface

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA005-1 1

pitch diameter of bolt holes

Definition: diameter of the circle passing through the centre of the bolt holes

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA006-1 1

relubrication feature

Definition: means which allows lubricant to reach the rolling or sliding surface

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=with

2=without

3=centre of stud at the ribbed end

4=centre of stud at the ribbed and threaded ends

5=radial hole in stud shank

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA007-1 1

retaining feature, inner ring

Definition: means of fastening of the inner ring on the shaft

CD: 23768AAA022-1 insert bearing, unit housing and accessory

VF: X 17

DT: Enumeration of codes

1=eccentric locking collar

2=grub screw locking

3=concentric locking collar

4=adapter sleeve

5=slot in inner ring

6=none

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA008-1 1

matched arrangement

Definition: several rolling bearings which have been selected or manufactured to have predetermined characteristics (for example preload or clearance) when mounted together in a specific way

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=no

2=face-to-face (X)

3=back-to-back (O)

4=tandem

5=combination of back-to-back (O) and tandem

5=combination of back-to-back (O) and tandem

6=combination of face-to-face (X) and tandem

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA009-1 1**centre distance of pillow type bolt holes, square and oval flange type housing**

Definition: distance between the centres of the fixing holes

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure Unit: mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA010-1 1**ball grade**

Definition: specific combination of dimensional, form, surface roughness and sorting tolerances for balls

CD: 23768AAA012-1 ball

VF: X 17

DT: Enumeration of codes

G3=grade 3

G5=grade 5

G10=grade 10

G16=grade 16

G20=grade 20

G24=grade 24

G28=grade 28

G40=grade 40

G60=grade 60

G100=grade 100

G200=grade 200

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA011-1 1**centre height (plummer block)**

Definition: distance from mounting face (or base) to centreline of seating diameter

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA012-1 1

radial internal clearance

Definition: arithmetical mean of the radial distances through which one of the rings may be displaced relative to the other, from one eccentric extreme position to the diametrically opposite extreme position, in different angular directions and without being subjected to any external load

CD: 23768AAA001-1 bearing

VF: X..2

DT: Enumeration of codes

CN=group N

C1=group 1

C2=group 2

C3=group 3

C4=group 4

C5=group 5

6=other

SDD: ISO 1132-1 8.1.1

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA013-1 1

sealing

Definition: circular closure comprising one or several parts, affixed to one bearing ring or bearing washer and extending towards the other ring or washer, with which it makes contact or forms a narrow labyrinth-shaped gap, for the purpose of preventing leakage of lubricant or ingress of foreign substances

Note: sealing bearing for insert bearing

CD: 23768AAA001-1 bearing

VF: X 17

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DT: Enumeration of codes

- 1=without
- 2=seal on one side
- 3=shield on one side
- 4=seal on both sides
- 5=shield on both sides
- 6=seal on one side, shield on the other
- 7=with cap
- 8=with contact seal
- 9=with cap and contact seal
- 10=seal and flinger on both sides
- 11=contact seals
- 13=dust cover on both sides
- 12=shield and flinger on both sides
- 14=shield

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA014-1 1

width, housing

Definition: distance between the two side faces of a housing

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

SDD: ISO 1132-1 05.03.01 modified

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA015-1 1

width, outer ring

Definition: distance between the two side faces of a rolling bearing outer ring

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

SDD: ISO 1132-1 5.3.1 modified

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA016-1 1

width, inner ring

Definition: distance between the two side faces of a rolling bearing inner ring

CD: 23768AAA001-1 bearing

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

SDD: ISO 1132-1 05.03.01 modified

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA017-1 1

lubricant

Definition: any substance which, when interposed between two surfaces in relative motion, reduces friction increases wear resistance

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=none (only mineral oil based preservation film)

4=grease

5=solid oil

6=MoS₂

7=solid lubricant

2=none (only synthetic oil based preservation film)

3=none (only dry preservation)

SDD: ISO 1998-1 1.60.011

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA018-1 1

material, bearing

Definition: material which can be used for bearing

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=bearing steel

2=stainless steel

3=ceramic

4=hybrid

5=high temperature steel

6=case carburised steel

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA019-1 1

material, housing

Definition: material which can be used for housings

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=cast iron

2=spheroidal graphite cast iron

3=cast steel

4=composite

5=sheet metal

6=stainless steel

7=die cast aluminium

8=casting zinc alloy

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA020-1 1

number of rows

Definition: number of rows of rolling elements

CD: 23768AAA001-1 bearing

VF: NR1 S.4

DT: Integer

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA021-1 1

number of bolt holes

Definition: number of holes allowing the fixation of the bearing by means of bolts or screws

CD: 23768AAA001-1 bearing

VF: NR1 S.4

DT: Integer

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA022-1 1

for use with bearing

Definition: bearing designation to which the part is intended to be used

CD: 23768AAA001-1 bearing

VF: X 17

DT: String

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA023-1 1

tolerance class

Definition: tolerance classes for radial bearings as defined in ISO 492 and for thrust bearings as defined in ISO 199

CD: 23768AAA001-1 bearing

VF: X..3

DT: Enumeration of codes

PN=normal (PN)

P6=class 6 (P6)

P5=class 5 (P5)

P4=class 4 (P4)

P2=class 2 (P2)

P6X=class 6X (P6X)

7=other

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA024-1 1

bore type

Definition: form of the bore of the inner ring of rolling bearing

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=cylindrical

2=tapered 1:12

3=square

4=hexagonal

5=tapered 1:30

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA025-1 1

sealing type

Definition: contact or non-contact sealing design

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

1=contact

2=non-contact

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA026-1 1**bearing housing seal type****Definition:** type of seal design for housings**CD:** 23768AAA004-1 bearing housing element**VF:** X 17**DT:** Enumeration of codes

1=felt seal

2=lip seal

3=V-ring seal

4=labyrinth seal

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA027-1 1****housing type****Definition:** housing design**CD:** 23768AAA001-1 bearing**VF:** X 17**DT:** Enumeration of codes

1=plummer block (pillow block)

2=take-up housing

3=flanged housing

4=cartridge housing

5=flanged housings with spigot joint

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA028-1 1****fastening bolt hole type****Definition:** design of bolt hole**CD:** 23768AAA001-1 bearing**VF:** X 17**DT:** Enumeration of codes

1=cast holes

2=drilled holes

3=plain holes

4=threaded holes

5=without holes

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**Definition:** design of bolt hole**CD:** 23768AAA001-1 bearing**VF:** X 17

DT: Enumeration of codes

- [1] 1=cast holes
- 2=drilled holes
- 3=plain holes
- 4=threaded holes
- 5=without holes

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA029-1 1

bearing part

Definition: one of the individual parts comprising a rolling bearing but excluding all accessories

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

- 1=complete bearing
- 2=bearing without inner ring
- 3=bearing without outer ring
- 4=outer ring
- 5=inner ring
- 7=shaft washer
- 8=housing washer
- 9=central washer
- 10=thrust washer
- 11=roller and cage assembly with washer having centering feature
- 12=complete track roller
- 13=track roller without inner ring
- 14=inner ring, cage and roller assembly
- 15=outer ring (cup)
- 16=needle roller and cage assembly

SDD: ISO 5593 3.2.1.1

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA030-1 1

rolling element radial part

Definition: bearing component which rolls between raceways

CD: 23768AAA001-1 bearing

VF: X 17

DT: Enumeration of codes

- 1=balls
- 2=needle rollers
- 3=cylindrical rollers
- 4=spherical rollers
- 5=convex roller

SDD: ISO 5593 3.2.1.18

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA031-1 1

thread designation

Definition: tapered sleeve thread consisting of a type code, nominal diameter and pitch

CD: 23768AAA007-1 adapter and withdrawal sleeve

VF: X 17

DT: String

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA032-1 1

length

Definition: distance between the two radial planes in contact with the two element ends

CD: 23768AAA007-1 adapter and withdrawal sleeve

VF: NR2 S..3.3

DT: Real measure **Unit:** mm

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA033-1 1

holes for oil injection

Definition: hole intended to inject oil facilitating the rolling bearing withdrawal

CD: 23768AAA007-1 adapter and withdrawal sleeve

VF: X 17

DT: Enumeration of codes

1=without

2=with

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

23768BAA034-1 1

sleeve type

Definition: type of sleeve, adapter sleeve or withdrawal sleeve

CD: 23768AAA007-1 adapter and withdrawal sleeve

VF: X 17

DT: Enumeration of codes

1=adapter sleeve

2=withdrawal sleeve

DOD: 2022-01-01 **DCV:** 2022-01-01

DCR: 2022-01-01

<p>23768BAA035-1 1 thread designation Definition: thread consisting of a type code, nominal diameter and pitch CD: 23768AAA008-1 locknuts and locking devices VF: X 17 DT: String DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA036-1 1 locking device Definition: element to avoid nut rotation CD: 23768AAA008-1 locknuts and locking devices VF: X 17 DT: Enumeration of codes 1=lockwasher 2=locking clip 3=incorporated in the locknut 4=without DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA037-1 1 width Definition: distance between the two radial planes in contact with the two element ends CD: 23768AAA008-1 locknuts and locking devices VF: NR2 S..3.3 DT: Real measure Unit: mm DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA038-1 1 for use with sleeve Definition: adapter sleeve designation to which the accessory is intended to be used CD: 23768AAA008-1 locknuts and locking devices VF: X 17 DT: String DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>

<p>23768BAA039-1 1 nut for hydraulic mounting Definition: nut for mounting rolling bearing by oil pressure CD: 23768AAA008-1 locknuts and locking devices VF: X 17 DT: Enumeration of codes 1=yes 2=no DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA040-1 1 diameter Definition: distance between two parallel planes tangential to the surface of a ball, or distance between two parallel planes tangential to the cylindrical surface of a roller CD: 23768AAA003-1 rolling bearing part VF: NR2 S..3.3 DT: Real measure Unit: mm SDD: ISO 5593 3.4.4.5 and 3.4.4.6 DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA041-1 1 length Definition: distance between the two radial planes which just contain the extremities of a roller CD: 23768AAA003-1 rolling bearing part VF: NR2 S..3.3 DT: Real measure Unit: mm SDD: ISO 5593 3.4.4.7 DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA042-1 1 seating diameter Definition: nominal bearing seating diameter CD: 23768AAA017-1 bearing housing VF: NR2 S..3.3 DT: Real measure Unit: mm DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>

<p>23768BAA043-1 1 needle roller end type Definition: shape at the end of a needle roller CD: 23768AAA009-1 needle roller VF: X 17 DT: Enumeration of codes 1=flat ends 2=rounded ends DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA044-1 1 width in bore Definition: width of thrust collar protruding beyond inner ring face CD: 23768AAA010-1 thrust collar (L-shaped) VF: NR2 S..3.3 DT: Real measure Unit: mm DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA046-1 1 special raceway feature Definition: special feature of the surface of a load supporting part of a rolling bearing, suitably prepared as a rolling track for the rolling elements CD: 23768AAA011-1 inner ring for needle roller bearings VF: X 17 DT: Enumeration of codes 1=none 2=without lead chamfer 3=for use with seals 4=with allowance for finish grinding DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA047-1 1 material Definition: material type which can be used for bearing parts CD: 23768AAA003-1 rolling bearing part VF: X 17 DT: Enumeration of codes 1=bearing steel 2=stainless steel 3=ceramic DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA048-1 1</p>

height**Definition:** axial distance between the two outermost faces of a aligning seat washer**CD:** 23768AAA013-1 aligning seat washer**VF:** NR2 S..3.3**DT:** Real measure **Unit:** mm**DOD:** 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA049-1 1****housing configuration****Definition:** number of parts of which the housing is constituted**CD:** 23768AAA004-1 bearing housing element**VF:** X 17**DT:** Enumeration of codes

1=one-piece

2=two-piece

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA050-1 1****bearing configuration****Definition:** bearing mounting nature**CD:** 23768AAA004-1 bearing housing element**VF:** X 17**DT:** Enumeration of codes

1=adapter sleeve

2=cylindrical bore

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA051-1 1****mounting arrangement****Definition:** mounting position of a housing or housing unit at the end of a shaft or not at the end of a shaft**CD:** 23768AAA004-1 bearing housing element**VF:** X 17**DT:** Enumeration of codes

1=through shaft

2=shaft end

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA052-1 1****special outside diameter feature****Definition:** special feature of the outside diameter surface of an inner ring, prepared e.g. as a raceway for rolling bearing and/or for seals**CD:** 23768AAA015-1 accessory for bearing housing**VF:** NR2 S..3.3**DT:** Real measure **Unit:** mm

<p>DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA053-1 1 housing designation Definition: housing designation to which the accessory can be used CD: 23768AAA015-1 accessory for bearing housing VF: X 17 DT: String DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA054-1 1 accessory type Definition: accessory type CD: 23768AAA015-1 accessory for bearing housing VF: X 17 DT: Enumeration of codes 1=end cover 2=locating ring DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA055-1 1 bearing insert Definition: type of bearing inserted in the bearing housing CD: 23768AAA016-1 bearing housing unit VF: X 17 DT: Enumeration of codes 1=spherical roller bearing 2=self-aligning ball bearing 3=cylindrical roller bearing 4=angular contact ball bearing 5=deep groove ball bearing DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA056-1 1 number of flanges on outer ring Definition: number of flanges on the outside of a bearing outer ring for axial guidance CD: 23768AAA005-1 track roller VF: X 17 DT: Enumeration of codes 1=none 2=two 3=one DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>

23768BAA057-1 1**outer ring profile****Definition:** profile shape of the outer diameter surface of the track roller**CD:** 23768AAA005-1 track roller**VF:** X 17**DT:** Enumeration of codes

1=crowned

2=cylindrical

3=U-profil

4=V-profil

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA058-1 1****for use with track roller****Definition:** accessory to be used with track roller**CD:** 23768AAA018-1 accessory for track roller**VF:** X 17**DT:** String**DOD:** 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA059-1 1****accessory type****Definition:** accessory type**CD:** 23768AAA018-1 accessory for track roller**VF:** X 17**DT:** Enumeration of codes

1=locknut

2=lubrication nipple

3=lubrication adapter

4=closing plug

DOD: 2022-01-01 **DCV:** 2022-01-01**DCR:** 2022-01-01**23768BAA060-1 1****application****Definition:** recommendation of usage**CD:** 23768AAA019-1 yoke-type track roller**VF:** X 17**DT:** Enumeration of codes

1=support roller

2=lift mast roller

3=chain guide roller

4=back-up roller

DOD: 2022-01-01 **DCV:** 2022-01-01

<p>DCR: 2022-01-01</p> <p>23768BAA061-1 1 width, total Definition: overall width of inner ring and side washers of yoke-type track roller CD: 23768AAA019-1 yoke-type track roller VF: NR2 S..3.3 DT: Real measure Unit: mm SDD: ISO 7063 DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA062-1 1 axial guidance of outer ring Definition: presence of a guidance of the outer ring in axial direction CD: 23768AAA019-1 yoke-type track roller VF: X 17 DT: Enumeration of codes 1=yes 2=no DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA063-1 1 feature for tightening Definition: indication of the tightening tool recess CD: 23768AAA020-1 stud-type track roller VF: X 17 DT: Enumeration of codes 1=screw driver slot 2=hexagon socket DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA064-1 1 contact angle Definition: angle between a plane perpendicular to a bearing axis (a radial plane) and the line of action [the nominal line of action] of the resultant of the forces transmitted by a bearing ring or washer to a rolling element CD: 23768AAA006-1 rolling bearing VF: NR2 S..3.3 DT: Real measure Unit: XRad = PI / 180 * YDegree DOD: 2022-01-01 DCV: 2022-01-01 DCR: 2022-01-01</p>
<p>23768BAA065-1 1 axial load capability Definition: capability of a bearing to carry load acting in a direction parallel to the bearing axis CD: 23768AAA006-1 rolling bearing</p>