TECHNICAL SPECIFICATION

ISO/TS 13399-3

Third edition
2021-11

Cutting tool data representation and exchange —

Part 3: Reference dictionary for tool items

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Reference number
ISO/TS 13399-3:2021(E)

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Published in Switzerland

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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 29, *Small tools*.

This third edition cancels and replaces the second edition (ISO/TS 13399-3:2014), which has been technically revised.

The main change is as follows:

— update of the classes and properties in line with the modifications in the cutting tool dictionary.

A list of all parts in the ISO 13399 series can be found on the ISO website.

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.

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Introduction

This document defines the terms, properties, and definitions for portions of a cutting tool that support one or more cutting items with defined cutting edges. Tool items include, but are not limited to, turning tools, milling tools, drilling tools, threading tools, etc. The purpose of this document is to provide a reference dictionary to support the use of the general information model defined in ISO 13399-1.

A cutting tool with defined cutting edges is used on a machine to remove material from a workpiece by a shearing action at the cutting edges of the tool. Cutting tool data that can be described by the ISO 13399 series include, but are not limited to, everything between the workpiece and the machine tool. Information about inserts (e.g. regular and irregular shaped replaceable cutting items), solid tools (e.g. solid drill and endmill), assembled tools (e.g. boring bars, indexable drills, and indexable milling cutters), adaptors (e.g. milling arbor and drilling chuck), components (e.g. shims, screws, and clamps), and their relationships can be represented by the ISO 13399 series. The principles of the ISO 13399 series are given in Annex A; and possible assemblies of the components of a cutting tool are illustrated in Figure A.1.

The objective of the ISO 13399 series is to provide the means to represent the information that describes cutting tools in a computer-sensible form that is independent from any particular computer system. The representation facilitates the processing and exchange of cutting tool data within and between different software systems and computer platforms and supports the application of this data in manufacturing planning, cutting operations, and the supply of tools. The nature of this description makes it suitable not only for neutral file exchange, but also as a basis for implementing and sharing product databases and for archiving. The methods used for these representations are those developed by ISO/TC 184/SC 4 for the representation of product data by using standardized information models and reference dictionaries.

An information model is a formal specification of types, ideas, facts, and processes which together describes a portion of interests of the real world and which provides an explicit set of interpretation rules. Information is knowledge of ideas, facts, and/or processes. Data are symbols or functions that represent information for processing purposes. Data are interpreted to extract information by using rules for how that should be done and a dictionary to define the terms that identify the data items. Everyone in a communication process is expected to use the same information model, the same set of explicit rules, and the same dictionary in order to avoid misunderstanding. If an information model and its dictionary are written in a computer-sensible language, then there is the additional benefit that they can be computer processable.

An engineering information model is therefore a specification for data that establishes the meaning of that data in a particular engineering context. A model has to be developed by formal methods to ensure that it meets the needs of the situation that it represents. An engineering information model defines the information objects that represent the concepts in an engineering application, the attributes of the objects, their relationships, and the constraints that add further meaning. An information model is an abstract concept that can be used repeatedly for any example of the real-world situation that it represents. An instance of the model is created when it is populated with the data items and their values that are applicable to a particular example of that situation.

This document uses the following International Standards developed by ISO/TC 184/SC 4 :

— the EXPRESS language defined in ISO 10303-11 for defining the information model in ISO 13399-1;

— the file format for data exchange derived from the model and defined in ISO 10303-21;

— the data dictionary defined in the ISO 13584 series.

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 human-readable definition, and with a computer-sensible identification. Identification of a dictionary entry allows unambiguous reference to it from any application that implements the information model defined in ISO 13399-1.

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Definitions and identifications of dictionary entries are defined by means of standard data that 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 and IEC SC3D, and in its extensions defined in ISO 13584-24 and ISO 13584-25.

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Cutting tool data representation and exchange —

Part 3:
Reference dictionary for tool items

1 Scope

This document specifies a reference dictionary for tool items, together with their descriptive properties and domains of values.

This document specifies a reference dictionary containing:

— definitions and identifications of the classes of tool items and their features, with an associated classification scheme;

— definitions and identifications of the data element types that represents the properties of tool items and their features;

— definitions and identifications of domains of values for describing the above-mentioned data element types.

The following are within the scope of this document:

— standard data that represent the various classes of tool items and tool item features;

— standard data that represent the various properties of tool items and tool item features;

— standard data that represent domains of values used for properties of tool items and tool item features;

— definition of cutting operations;

— definitions of reference systems for tool items and their properties;

— one implementation method by which the standard data defined in this document can be exchanged.

NOTE 1 The implementation method by which the standard data defined in this document can be exchanged is specified in ISO 10303-21.

The following are outside the scope of this document:

— specialized or expert knowledge in the design and use of cutting tools;

— rules to determine what information should be communicated;

— applications where these standard data can be stored or referenced;

— implementation methods other than the one defined in this document by which the standard data can be exchanged and referenced;

— information model for cutting tools;

— definitions of classes and properties for cutting items;

— definitions of classes and properties for adaptive items;

— definitions of classes and properties for assembly items;

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— definitions of classes and properties for connection systems;

— definitions of classes and properties for reference systems.

NOTE 2 The information model for cutting tools is defined in ISO 13399-1.

NOTE 3 The definitions of classes and properties for cutting items, adaptive items, and assembly items are provided in ISO/TS 13399-2, ISO/TS 13399-4, and ISO/TS 13399-5, respectively.

NOTE 4 The definitions of classes and properties for connection systems and reference systems are provided in ISO/TS 13399-50.

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/TS 13399-50, *Cutting tool data representation and exchange — Part 50: Reference dictionary for reference systems and common concepts*

ISO/TS 13399-100, *Cutting tool data representation and exchange — Part 100: Definitions, principles and methods for reference dictionaries*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/TS 13399-50, ISO/TS 13399-100 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
applicable property
property (3.17) that is defined for some family of items and that applies to any member of this family

[SOURCE: ISO 13584-24:2003, 3.3, modified — "family of parts" has been replaced by "family of items"; "shall apply" has been replaced by "applies"; "any part" has been replaced by "any member"; the EXAMPLE has been removed.]

3.2
basic semantic unit
entity (3.10) that provides an absolute and universally unique identification of a certain object of the application domain that is represented as a *dictionary* (3.9) element

[SOURCE: ISO 13584-42:2010, 3.4, modified — The 3 EXAMPLEs and note 1 to entry have been removed.]

3.3
chip
material removed from a *workpiece* (3.20) by a cutting process

3.4
cutting tool
device or assembly of items for removing material from a *workpiece* (3.20) through a shearing action at the defined cutting edge or edges of the device

Note 1 to entry: A cutting tool can be the assembly of one or more adaptive items, a tool item, and several cutting items on a tool item. See Figure A.1.

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[SOURCE: ISO 13399-1:2006, 3.1.]

3.5
data
representation of *information* (3.13) in a formal manner suitable for communication, interpretation, or processing by human beings or computers

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

3.6
data element type
unit of *data* (3.5) for which the identification, description, and value representation have been specified

[SOURCE: ISO 13584-42:2010, 3.13, modified — Note 1 to entry has been removed.]

3.7
data exchange
storing, accessing, transferring, and archiving of *data* (3.5)

[SOURCE: ISO 10303-1:2021, 3.1.31]

3.8
data type
domain of values

[SOURCE: ISO 10303-11:2004, 3.3.5]

3.9
dictionary
table consisting of a series of entries with one meaning corresponding to each entry in the dictionary and one dictionary entry identifying a single meaning

Note 1 to entry: In the ISO 13399 series, a dictionary is a formal and computer-sensible representation of an *ontology* (3.16).

[SOURCE: ISO 13584-511:2006, 3.1.9, modified — The original notes 1 to 3 to entry have been replaced by a new note 1 to entry.]

3.10
entity
class of *information* (3.13) defined by its attributes which establishes a domain of values defined by common attributes and constraints

3.11
entity data type
representation of an *entity* (3.10)

3.12
implementation method
means for computers to exchange *data* (3.5)

3.13
information
facts, concepts, or instructions

[SOURCE: ISO 10303-1:2021, 3.1.41]

3.14
information model
formal model of a bounded set of facts, concepts, or instructions to meet a specific requirement

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3.15
machine side
identification of a direction pointing towards the machine

3.16
ontology
explicit and consensual specification of concepts of an application domain independent of any use of these concepts

Note 1 to entry: In the ISO 13399 series, a *dictionary* (3.9) is the formal and computer-sensible representation of ontology.

[SOURCE: ISO 13584-511:2006, 3.1.20, modified — In note 1 to entry, the reference to "ISO 13584" has been replaced by "the ISO 13399 series".]

3.17
property
defined parameter suitable for the description and differentiation of products

[SOURCE: ISO 13584-42:2010, 3.37, modified — Notes 1 to 5 to entry have been removed.]

3.18
transient surface
part of the surface which is formed on the *workpiece* (3.20) by the cutting edge and removed during the following cutting stroke, during the following revolution of the tool or workpiece, or by the following cutting edge

[SOURCE: ISO 3002-1:1982, 3.1.3]

3.19
visible property
property (3.17) that has a definition meaningful in the scope of a given characterization class, but that does not necessarily apply to the various products belonging to this class

[SOURCE: ISO 13584-42:2010, 3.46]

3.20
workpiece
object on which a cutting action is performed

[SOURCE: ISO/TS 13399-2:2021, 3.21]

3.21
workpiece side
identification of a direction pointing towards the *workpiece* (3.20)

4 Abbreviated terms

BSU basic semantic unit

DET data element type

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5 Representation of the ontology concepts as dictionary entries

5.1 General

A concept in the ontology is identified by a name in lower-case characters. The name of a class that represents the concept in the dictionary is identified by lowercase characters with multiple words joined by an underscore character.

EXAMPLE “tool item type” is the name of a concept in the ontology. "tool_item_type" is the identifier of the class in the dictionary that represents the concept.

Data for tool items are grouped into two main classes: tool_item_feature and tool_item_type. The items in the classification of tool_item_type are identified by a label that is derived from the main application of a tool. However, it should be recognized that a tool can be used for more than one type of cutting operation. A tool_item_feature is an aspect of a tool_item_type that can not exist in isolation from the tool_item_type. A classification of cutting operations is also provided for completeness and to aid definitions.

Some of the definitions of properties that are applicable to tool items are defined in terms of a primary coordinate system. The coordinate system is the same for adaptive items, cutting items, and tool items and is defined in ISO/TS 13399-50. The applications of this coordinate system to tool items are described in this document. All functional dimensions of a tool item that uses replaceable cutting items are defined on the assembly of the tool item and the master insert. The convention followed is “the tool in hand”.

Each entry in the dictionary, either a class or a property is identified with a numerical code (BSU) that is generated at random when the dictionary is compiled. A BSU can be made unique by the addition of a code that is a reference to the supplier of the dictionary. Each classified item in 5.2, 5.3, and 5.4 is associated with its definition from the dictionary.

The ISO 13399 series shall follow the principles in Annex A. The structure of the classification is provided in Annex B. The definitions of the cutting item classes are provided in Annex C. The properties applicable to tool item classes are defined in Annex D.

5.2 Reference systems for tool items

5.2.1 General

The primary coordinate system used for tool items in this document is the same coordinate system as is defined in ISO/TS 13399-50. The additional reference entities relevant for tool items are as follows:

— coordinate_system_in_process;

— coordinate_system_workpiece_side;

— cutting_reference_point;

— dependency;

— feed_direction_primary;

— master_insert;

— mirror_plane;

— mounting_coordinate_system;

— primary_coordinate_system;

— prismatic_tool_item_position;

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— round_tool_item_position;

— tool_cutting_edge_plane;

— tool_feed_plane;

— tool_rake_plane;

— xy-plane;

— xyw-plane;

— xz-plane;

— xzw-plane;

— yz-plane;

— yzw-plane.

5.2.2 cutting_reference_point

Theoretical sharp point of the cutting tool from which the major functional dimensions are taken.

NOTE 1 For the calculation of this point the following cases apply:

Case 1: For a tool cutting edge angle less than or equal to 90°, the point is the intersection of the tool_cutting_edge_plane, the tool_feed_plane, and the tool_rake_plane.

Case 2: For a tool cutting edge angle greater than 90°, the point is the intersection of the tool_feed_plane, a plane perpendicular to the tool_feed_plane and tangential to the cutting corner, and the tool_rake_plane.

Case 3: For ISO tool styles D and V with only axial rake, the point is the intersection of a plane perpendicular to the primary feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point, and the tool_rake_plane.

Case 4a: For round inserts with one feed direction parallel to the tool axis, the point is the intersection of a plane perpendicular to the primary feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point, and the tool_rake_plane.

Case 4b: For round inserts with two feed directions, one parallel to the tool axis and one perpendicular to the tool axis with two cutting_reference_point, each point is the intersection of a plane perpendicular to its feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point, and the tool_rake_plane.

NOTE 2 In Case 3, the theoretical sharp corner of the insert and the cutting_reference_point are on the plane that is perpendicular to the tool_feed_plane.

5.2.3 feed_direction_primary

Direction of movement of a cutting tool to achieve the main cutting function of the tool.

5.2.4 master_insert

Nominal, replaceable cutting item that is used for defining the dimensions of a cutting tool.

NOTE 1 A master insert can substitute for either a regular or an irregular insert and uses the position of the item that it replaces.

NOTE 2 Definitions making use of a master insert also apply to solid or brazed tools.

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5.2.5 prismatic_tool_item_position

Identifies the location of a prismatic tool item where:

— the base of the tool item shall be coplanar with the XZ-plane;

— the normal for the base of the item shall be in the –Y direction;

— the rear backing surface shall be coplanar with the YZ-plane;

— the normal for the rear backing surface shall be in the –X direction;

— the end of the item shall be coplanar with the XY-plane;

— the normal for the end of the item shall be in the –Z direction; and

— the rake face of the primary cutting item shall be completely visible in the XZ quadrant.

NOTE 1 This definition applies to right-handed tool items. Left-handed tool items are as defined for right-handed items but mirrored through the YZ-plane.

NOTE 2 For cartridges, the top of the axial adjustment screw shall be coincident with the XY-plane.

5.2.6 round_tool_item_position

Identifies the location of a round tool item where:

— the axis of the tool item shall be colinear with the Z-axis;

— the vector of the shank that points in the Z direction shall also point towards the workpiece side;

— the drive slots or clamping flats, if present, shall be parallel with the XZ-plane;

— the contact surface of the coupling, the gauge plane, or the end of the cylindrical shank shall be coplanar with the XY-plane; and

— the rake face of the primary cutting item shall be visible in the XZ quadrant.

NOTE This definition applies to right-handed tool items. Left-handed tool items are as defined for right-handed tool items but mirrored through the YZ-plane.

If a bore is present, the vector of the bore of the item that points in the Z direction shall also point towards the workpiece side.

5.2.7 tool_cutting_edge_plane

Plane perpendicular to the xy-plane through the major cutting edge of a master insert or of a solid tool.

5.2.8 tool_feed_plane

Plane perpendicular to the xy-plane that is parallel to the primary feed direction of the tool item and that is tangential to the cutting corner of the master insert or of a solid tool.

5.2.9 tool_rake_plane

Plane that contains the cutting edges of a master insert or of a solid tool.

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5.3 Tool item feature

5.3.1 tool_item_feature

Generic family of characteristics of a tool item that cannot exist independently of the tool item. tool_item_feature has the following subclasses:

— chip_management;

— drill_point;

— guide_pilot_feature;

— pilot_drill_feature;

— tool_hub.

5.3.2 chip_management

Generic class of features of the tool body or assembly to control the direction of motion of the chip channel exit.

End of the chip channel on the machine side.

5.3.3 drill_point

Part of a drill that first makes contact with the workpiece.

5.3.4 guide_pilot_feature

Portion of a cylindrical tool in front of the cutting portion that acts to limit the sideways movement of the tool in operation.

5.3.5 pilot_drill_feature

Part of a larger drill for guiding the main cutting operation.

5.3.6 tool_hub

Central part of a disk-shaped tool item with increased thickness.

5.4 Tool item type

5.4.1 tool_item_type

Generic family of items that support or hold one or more cutting items in a cutting operation. tool_item_type has the following subclasses:

— broach;

— burr_tool;

— cartridge;

— drill;

— mill;

— ream;

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— rotating_borer;

— threading_die;

— threading_tap;

— turn.

5.4.2 broach

5.4.2.1 General

Family of items designed for use mainly in broaching operations. Broach has the following subclasses:

— cylindrical_broach;

— disk_broach;

— prismatic_broach;

— tapered_broach.

5.4.2.2 cylindrical_broach

Tool item used for changing the dimensions of an existing profile that has a constant circular cross section and cutting edges around the whole circumference.

5.4.2.3 disk_broach

Disk-shaped tool item used for changing the dimensions of an existing profile and that has the cutting edges on the periphery of the disk.

5.4.2.4 prismatic_broach

Tool item with a constant rectangular cross section used for changing the dimensions of an existing profile and that has cutting items on one side of the cross section.

5.4.2.5 tapered_broach

Tool item for changing the dimensions of an existing profile and that has continuously varying cross section with cutting edges surrounding the cross section.

NOTE The cross section can be rectangular, circular, or elliptical.

5.4.3 burr_tool

Small rotating tool for removing areas of roughness from a machined edge.

5.4.4 cartridge

Tool item that carries a solid cutting edge or locks a replaceable insert and is designed to be mounted onto either an adaptive item or a tool item.

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5.4.5 drill

5.4.5.1 General

Family of items designed for use mainly in drilling operations. drill has the following subclasses:

— centre_drill;

— chamfer_drill;

— conical_drill;

— core_drill;

— counterbore_drill;

— countersink_drill;

— deep_hole_drill;

— pilot_drill;

— step_drill;

— trepanning_drill;

— twist_drill.

5.4.5.2 centre_drill

Tool item for creating a hole for the location of a subsequent operation.

NOTE This drill is usually a solid drill.

5.4.5.3 chamfer_drill

Tool item for creating a chamfer in or on a hole.

5.4.5.4 conical_drill

Tool item for forming a cone-shaped hole.

NOTE This drill is usually a solid drill.

5.4.5.5 core_drill

Tool item without a central cutting point or means of starting a hole.

NOTE The tool is used to enlarge an existing hole, for example, in a casting and has the characteristics of a reamer.

5.4.5.6 counterbore_drill

Tool item for creating a counterbore section of a hole.

5.4.5.7 countersink_drill

Tool item for creating a countersink section of a hole.

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5.4.5.8 deep_hole_drill

Tool item for creating a hole usually deeper than 10 times the diameter of the tool item.

5.4.5.9 pilot_drill

Tool item that is added to a larger drill for guiding the main cutting operation.

5.4.5.10 step_drill

Tool item for creating a stepped hole.

5.4.5.11 trepanning_drill

Tool item used to cut a deep face groove leaving a plug of material equal to the inner diameter.

NOTE The tool can be small to leave a boss on a component or large to create a large hole but not produce all the material to swarf.

5.4.5.12 twist_drill

Solid drill with helical chip flutes.

5.4.6 mill

5.4.6.1 General

Family of rotating tool items intended mainly for use in milling operations. mill has the following subclasses:

— double_half_side_mill;

— end_mill;

— face_mill;

— half_side_mill;

— ring_mill;

— slab_mill;

— slotting_cutter;

— threading_grooving_mill.

5.4.6.2 double_half_side_mill

Milling cutter that cuts on both sides and part of the periphery and is used for enlarging an existing slot.

NOTE The Z-axis is perpendicular to the slot being enlarged; the cutting width is less than half the cutting diameter (CW < CD/2) and the mounting is normally a bore mount.

5.4.6.3 end_mill

Milling cutter with an integral shank.

NOTE The Z-axis is either perpendicular or parallel to the surface being machined and the tool has a cutting diameter of less than 150 mm (CD < 150 mm).

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5.4.6.4 face_mill

Milling cutter that produces a flat surface on the workpiece although the cutting edges on the periphery remove most of the workpiece material.

NOTE The Z-axis is perpendicular to the surface being machined; there is one row of inserts; the mounting is usually a bore with transverse keyways and the depth of cut is less than the cutting diameter (DOC < CD).

5.4.6.5 half_side_mill

Milling cutter that cuts on the periphery and one side.

NOTE The Z-axis is perpendicular to the main workpiece surface being produced; the depth of cut is less than half the cutting diameter (DOC < CD/2) and the mounting is normally a bore mount.

5.4.6.6 ring_mill

Milling cutter that cuts on the internal annular surface and both sides.

NOTE The Z-axis is perpendicular to the slot being produced and the cutting width is less than half the cutting diameter (CW < CD/2).

5.4.6.7 slab_mill

Milling cutter with cutting edges on the periphery for machining large surfaces.

NOTE The tool axis is parallel to the workpiece surface; the mounting surface is a bore and the useable length is greater than cutting diameter (LU > CD).

5.4.6.8 slotting_cutter

Milling cutter that cuts on the periphery and both sides.

NOTE The Z-axis is perpendicular to the slot being produced; the cutting width is less than half the cutting diameter (CW < CD/2) and the mounting is normally a bore mount.

5.4.6.9 threading_grooving_mill

Milling cutter that cuts on its periphery to produce a groove or a thread.

NOTE The Z-axis is parallel to the groove width or to the axis of thread being cut and the mill can either be designed with an integral shank or with a bore mount.

5.4.7 ream

5.4.7.1 General

Family of items designed for use mainly in reaming operations. ream has the following subclasses:

— cylindrical_reamer;

— profile_reamer;

— stepped_reamer;

— tapered_reamer.

5.4.7.2 cylindrical_reamer

Tool item used for reaming a cylindrical surface.

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5.4.7.3 profile_reamer

Tool item for reaming a non-regular surface.

5.4.7.4 stepped_reamer

Tool item for reaming a hole with more than one diameter.

5.4.7.5 tapered_reamer

Tool item for reaming a conical hole.

5.4.8 rotating_borer

Assembly of cutting item or items, tool item or items, and adaptive item or items to enlarge an existing hole.

5.4.9 threading_die

5.4.9.1 General

Family of items used for external threading operations. threading_die has the following subclasses:

— cylindrical_die;

— hexagonal_die.

5.4.9.2 cylindrical_die

Threading die whose outside shape is cylindrical.

5.4.9.3 hexagonal_die

Threading die whose outside shape is hexagonal.

5.4.10 threading_tap

5.4.10.1 General

Family of items designed to form an internal thread in an existing hole in a workpiece. threading_tap has the following subclasses:

— conical_tap;

— cylindrical_tap.

5.4.10.2 conical_tap

Tool item that creates tapered internal threads.

5.4.10.3 cylindrical_tap

Tool item that creates internal cylindrical threads.

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5.4.11 turn

5.4.11.1 General

Family of items designed for use mainly in turning and boring operations. turn has the following subclasses:

— boring_bar;

— prismatic_tool_holder;

— system_tool.

5.4.11.2 boring_bar

Tool item with cylindrical cross section shank mainly used for internal turning operations.

5.4.11.3 prismatic_tool_holder

Tool item with prismatic cross section shank mainly used for external turning operations.

NOTE The class includes, but is not limited to, square and rectangular shanks.

5.4.11.4 system_tool

Tool item with manufacturer-specific connection used for external and/or internal turning operations.

5.5 General feature types

— adjustment:
  — adjustment axial;
  — adjustment radial.
— bolt hole circle;
— coolant supply;
— cutting data association;
— flange;
— keyway;
— locking mechanism;
— runout axial;
— runout radial;
— tool thread external:
  — thread inch external;
  — thread metric external;
  — thread trapezoidal external.
— tool thread internal:
  — thread inch internal;

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— thread metric internal;

— thread trapezoidal internal.

5.6 Cutting item feature

Cutting item feature classes and related properties can be used for tool items. They are defined in ISO/TS 13399-2.

5.7 Connection item feature

Connection item feature classes and related properties can be used for tool items. They are defined in ISO/TS 13399-4.

6 Properties for tool item features and tool item types

The properties that are applicable to items defined in Clause 5 are defined in Annex D, where the association of a property with a class is also specified. In the compilation of the dictionary, all properties are visible properties at the root class of the dictionary and are made applicable properties at the class level where they apply. The names of properties that can be applicable to tool item features and tool item types, with their identification codes (BSU), are shown in Table 1. The order of the names in the table should be read in rows from left to right.

NOTE 1 Cutting item feature classes and related properties can be used for tool items. They are defined in ISO/TS 13399-2.

NOTE 2 The value domains for properties are specified in ISO/TS 13399-100.

NOTE 3 The BSU can be made unique by the addition of the code for the supplier of the dictionary as a prefix to the identification code.

EXAMPLE The unique BSU for a dimension on lf would be: 0112/1///13399__2–71D0793ECE F9A for version two of the dictionary.

Table 1 — Names of properties for tool items

Property name	Symbol	Identification code (BSU)
adjustability	ADJBY	71EBBA9E78025
adjustable unit assembly length	ADJUL	7272127597464
attachment length holder	LATTH	72721272EB288
axial groove outside diameter maximum	DAXX	71D07543FD182
axial groove outside diameter minimum	DAXN	71CF299354332
axial groove support direction	AXGSUP	726E2FC1D9392
balance quality code	BLQ	71DF151EA5CF1
balance weight outside diameter	BLWOD	727212760A318
balancing method code	BLMC	71EAC0CAB861F
blade reinforcement radius	BLRAD	71CF2992DBC44
body angle workpiece side	BAWS	72C4A71D1B94B
body clearance depth	BCDP	71EAC81F88336
body clearance depth axial	BCDPAX	726E2FCE55394
body clearance diameter	BCD	726E3725BB986
body diameter	BD	71ED6A9AF7D1D
body diameter maximum	BDX	71D08462F8185

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
body diameter reduced	BDRED	726E2FAEEEDE7
body half taper angle	BHTA	71EAC472BD116
body height	HTB	71EBB332C60EB
body length	LB	71ED6AA478A3D
body length maximum	LBX	71DCD3B16750B
body material code	BMC	71DF1523224D8
body section count	BSC	72C5C9C07963B
body width	WB	71EBB33230236
brand	BRAND	7285CFD658014
bridge height	BH	7272127ACA99C
cartridge outside diameter	CAOD	7272127B20A66
cartridge size code	CASC	71DF1523EE184
center point of the profile radius X-direction	CPRADX	72AC4750EEEF5
center point of the profile radius Z-direction	CPRADZ	72AC4750D3EE8
central flat	CF	72719B181D75D
centre drill style code	CTRSYC	7280553ACDD96
chip flute radius	RCF	7272127E28662
clamping length machine side	LSCMS	71EBAF896BE9A
clamping length maximum machine side	LSCXMS	71ED6E54B15C4
clamping length minimum machine side	LSCNMS	71EBB339ED2BD
clamping length minimum workpiece side	LSCNWS	72E33DEACC133
clamping length workpiece side	LSCWS	72996F3DC8E8A
clamping type code	MTP	71CF298EEB4F5
clamping width	WSC	71EBAF85006BD
clearance angle axial	ALP	71EAC83CD450B
clearance angle normal	ALN	71ED6E5CD0DAE
clearance angle orthogonal	ALO	71D08418C3B4D
clearance angle radial	ALF	71EAC83B73825
coating property	CTP	71DD703B84298
cogging style code	COGSC	72806055E5B54
collision diameter	CDIA	727212879692C
connection depth	CBDP	71EAC48CAD407
connection bore diameter (deprecated)	DCB	71E01D92C41E8
connection code form output side	CCFOP	727212846FDA5
connection code form type machine side	CCFMS	726E3E84DD902
connection code form type workpiece side	CCFWS	726E3E8558953
connection code machine side	CCMS	71D102AE3B252
connection code type machine side	CCTMS	726E3E82E53A6
connection code type output side	CCTOS	727212869DDE2
connection code type workpiece side	CCTWS	726E3E83D7357
connection code workpiece side	CCWS	71D102AE8A5A9
connection count workpiece side	CCONWS	71EDD2C17746F
connection diameter machine side	DCONMS	71EBDBF5060E6

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
connection diameter maximum workpiece side	DCONXWS	72807E35DE582
connection diameter minimum workpiece side	DCONNWS	72807E3576AAE
connection diameter workpiece side	DCONWS	7272379A5F325
connection protruding length	LPCON	726E3E863255C
connection retention knob thread size	CRKS	71CF298A76B66
connection size code (deprecated)	CZC	71FC193318002
connection size code machine side	CZCMS	727C2BCCC5596
connection size code maximum workpiece side	CZCXWS	72807E36B6C92
connection size code minimum workpiece side	CZCNWS	72807E366B041
connection size code workpiece side	CZCWS	727C2BCBC1684
connection thread nominal size machine side	THSZMS	727BE508AAB46
connection thread nominal size workpiece side	THSZWS	727BE5090F9AA
connection unit base precision machine side	CUBPMS	7280553C9A894
connection unit base precision maximum workpiece side	CUBPXWS	729A91AC5433F
connection unit base precision minimum workpiece side	CUBPNWS	729A91ABE3690
connection unit base precision workpiece side	CUBPWS	7280605902AD1
connection unit basis	CUB	71ED6E16D5978
contact surface diameter machine side	DCSFMS	71D087D97FCE3
coolant supply property	CSP	71EBB342CC751
counterbore depth connection bore	LCCB	726E2FCE0826C
counterbore diameter connection bore	DCCB	726E2FCF353DE
countersink angle	SIGCSK	726E2FCD1A3C4
cutting data association code	CDAC	72719B2427AED
cutting data association property	CDAP	72719B23A5008
cutting depth maximum	CDX	71CEAEBD5A66A
cutting diameter	DC	71D084653E57F
cutting diameter internal	DCIN	71D0846545C4E
cutting diameter internal maximum	DCINX	71D0846570977
cutting diameter internal minimum	DCINN	71D084655A2F7
cutting diameter maximum	DCX	71D084656CE32
cutting diameter minimum	DCN	71D0846556288
cutting diameter size code	DCSC	71DF1527D828C
cutting edge centre count	ZNC	71DCD0033973E
cutting edge length	L	71DD6C95DA49B
cutting edge sequence	CESEQ	726E3AABCE55D
cutting end count	NCE	71DCD00CBBC2A
cutting item count	CICT	71DF8C52B8926
cutting length at minimum bore diameter	CLMBS	71CF299287FD3
cutting part design style code	CDPSC	72719B101A1FD
cutting pitch density	CPDN	71DF15283219C
cutting pitch differential	CPDF	71DF152D8CF7D
cutting point translation X-direction	CTX	71FD1E2EDD973
cutting point translation Y-direction	CTY	71FD1E2F66B38

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
cutting width maximum	CWX	71D07569F8BC3
cutting width minimum	CWN	71D0756A28B42
damping property	DPC	71CED03D70452
data chip provision	DCP	71CF29869CA0F
depth of cut maximum	APMX	71D07576C0558
design configuration style code	DCC	71CF2993DC583
designation	DES	728ECFD4A0629
diameter hole tolerance class	DHTOLC	72C4A72599564
diameter hole tolerance lower	DHTOLL	72C4A7255D6CA
diameter hole tolerance upper	DHTOLU	72C4A7257B716
die chip hole count	DCHC	726E2FC5A2BA5
die chip hole diameter	DDCH	726E2FC4858CC
die chip hole diameter circle	DDCHC	726E2FC51A8C7
dimension a on lf	LFA	71D0793ECEF9A
dimension a on wf	WFA	71CF299431CAC
distance reference point PK	LDC	726E3AAAF99A3
drill back taper	DBT	71EAC81AD9AE1
drilling part length	LDP	727CE21EEC94F
drive angle	DRVA	71D08096F930C
drive count	DRVCT	71E0306423B2A
drive length	DRVL	72724DE6DABFF
drive size	DRVSC	71E03063ABD6E
drop head design	DHD	71EAC49F75413
end chamfer	EC	72724DE823AF8
end chamfer angle	ECA	72724DE89D232
end chamfer distance	ECD	72724DE99F0D4
face effective cutting edge count	ZEFF	71DCD00239812
face mounted insert count	ZNF	71DCD0029BBE7
flat width (deprecated)	FW	726E372B58657
flute count	NOF	71DCCFEBB883E
fluted land width	FLW	71EAC8210DF36
form type	FMT	71EBBE32903BD
functional diameter	DFC	7272379AD9C85
functional length	LF	71DCD39338974
functional length minimum	LFN	71EBC1EB8456A
functional length secondary	LFS	71D078F5BEDBE
functional width	WF	71CF29984CDA7
functional width 2	WF2	71D193F495583
functional width secondary	WFS	71CF299874B1E
grade application main	GRDAPPM	729A91AB4451E
grade application range max	GRDAPRX	729A91AAEB181
grade application range min	GRDAPRN	729A91A635147
grade identification	GRDID	729A919BF211A

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
grade main application group identification letter	GRDMAPID	729A919C3D239
grade manufacturers designation	GRDMFG	726E3EA930D39
grade standard designation main application	GRDPRIO	726E3EA8A9ED6
groove depth minimum bore diameter	GDMB	71CF298FB10E4
guide element property	GEP	71EE070696F08
guide pilot property	GPP	7280553614076
hand	HAND	71CF29872F0AB
head back offset length	HBKL	71D075730A82B
head back offset width	HBKW	71D075731F172
head bottom offset height	HBH	71CF298F073D3
head bottom offset length	HBL	71CF298F4E487
head diameter	HDD	71E03062EC034
head end angle	HEA	72724DEFB9646
head length	LH	71D07574A61E8
hole type	HTY	72719B167AE15
hub height	HHUB	726E37249379B
hub property	HBP	71DF5C078FF46
inclination angle	LAMS	71D075754F8A3
insert adjustable count	ZADJ	71DF1538E7378
insert included angle	EPSR	71CE7A96BC122
insert index count	NOI	71CE7AA1998FF
insert length	INSL	71CE7A9DFA23A
insert seat size code	SSC	71CEAEBF2A69F
insert shape code	SC	71CE7A9F0C79F
insert thickness	S	71CE7A9F5308C
insert width	W1	71CE7A9FB11C3
interference cutting diameter	DCINTF	726E2FCC0EC78
item style code	ISYC	726E424FE9EC2
keyway property	KYP	71DF5C0761888
main work angle of tool	MWAT	72C4A71C21F24
master insert identification	MIID	71CF298FDE0EF
maximum overhang	OHX	72C4A723AD619
minimum bore diameter	DMIN	71D07543367C5
mounting coordinate system distance	MCSD	72719B2173235
mounting hole angle	MHA	71EAC0F064E2D
mounting hole distance	MHD	71EAC0E9FA4CD
mounting hole distance 2	MHD2	71EAC0EF68BB7
mounting hole height	MHH	71EAC0EFA1BF3
neck diameter	DN	71EAC48EC5DE0
neck length	LN	71EBC1E026769
offset chip flute inner pocket	OFFCFIN	727BE4E8EB1D5
offset chip flute outer pocket	OFFCFEX	727BE4E83C904
overall height	OAH	71D078EB73E87

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
overall length	OAL	71D078EB7C086
overall length minimum (deprecated substituted by residual grinding length)	OALN	71EBC1E8857BE
overall width	OAW	71CF299257986
overhang minimum	OHN	72719B21DF5DB
overlapping capability	LCB	71DF1526AC952
peripheral effective cutting edge count	ZEFP	71DCCFF75E485
peripheral mounted insert count	ZNP	71DCD00054F65
plug angle	PLGANG	726F30BC507E3
plug length	PLGL	726E372E4FBE9
plunge depth maximum	AZ	71D08099F1DDC
premachined hole diameter	PHD	71DCCC5A4FD18
premachined hole type	PHT	72719B2280DBA
presetting cutting diameter greater	DCPSX	72723798609B4
presetting cutting diameter internal, greater	DCIPSX	7272379692AF6
presetting cutting diameter internal, smaller	DCIPSN	7272379632320
presetting cutting diameter smaller	DCPSN	72723798D9173
profile angle	PRFA	727BE4EA0BC27
profile included angle	PNA	71CEAEBF0C234
profile radius	PRFRAD	71E019EBAE1B1
profile specification	PRSPC	71DF8C5D91804
protruding length	LPR	71DCD394BB20E
qualified tool code	QTC	71D078ED2C21E
radial width of cut	AE	7280605D97D83
radius countersunk	RCSK	726E2FCCB7224
rake angle axial	GAMP	71CF29990C41F
rake angle normal	GAMN	71CF2998EBD46
rake angle orthogonal	GAMO	71D0808F8F719
rake angle radial	GAMF	71CF2998A1609
ramping angle maximum	RMPX	71DF1538632D9
reduced body diameter length	LDRED	727BE4DF14C62
rotational speed maximum	RPMX	71DF153A691F2
row count	NOR	726F30C2C3EEA
row identifier (deprecated)	RID	71CED04867743
seal	SALP	72719B2B51519
shank cross section shape code	SX	71CF2988A5874
shank diameter (deprecated)	DMM	71CF29862B277
shank height	H	71CF29883E014
shank length	LS	71CF298870946
shank width	B	71CF298751FCF
shim inclination angle	SHIAN	71FAE074D2EBD
side	SIDE	71EBDBF130AE6
standard letter	STDLET	72807E1CC4B50

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
standard number	STDNO	72719B17B907F
step count	NOS	71DCCC3BD1B96
step diameter length	SDL	71DCCC3DFA23A
step distance	SD	71DCCC47221E0
step included angle	STA	71DF151D6E547
stock removal maximum	SRX	71EBC1EC0BB22
stock removal minimum	SRN	71EBC1EBC839F
stock removal recommended	SRR	71EBC1EC3E8B6
support height	HSUP	72724DF094129
tangentially mounted insert	TMINS	71EAC496E7425
tap center tip angle	ANGTCT	726E2FCA7ECF0
tap center tip diameter	DTCT	726E2FC624810
tap chamfer length	TCL	726E3EB2AB5CB
tap chamfer point diameter	TCPD	71EBC1EA293DC
tap chamfer style	TCS	71E02C679DC6D
tap set code	TAPSC	726E3EB308CDD
tap type identifier	TTPID	71DF153B4ABCD
taper angle	TA	71EAC4A2B6544
taper diameter largest	DTAX	726E3AA6C4A1C
taper diameter smallest	DTAN	726E3AA639325
taper form barrel angle	TFBA	72E24F5BF9F16
taper gradient	TG	71CEAEC02FEBD
tapered	TPD	71EC659C9B3CE
thread cutting part length	THL	72550E426D771
thread diameter	TD	71E02C5C2EED3
thread diameter inch fraction	TDFR	726E3EACB6BE4
thread diameter inch measure	TDIN	726E3EA9B08AD
thread diameter minimum	TDN	726E2FC37D98A
thread diameter size	TDZ	71EBBAA3BCA70
thread tolerance class	TCTR	71DF153FA5F85
tolerance class connection diameter machine side	TCDCONMS	72719B2BD8041
tolerance class connection diameter maximum workpiece side	TCDCONXWS	729A91ADE068B
tolerance class connection diameter minimum workpiece side	TCDCONNWS	729A91AD69059
tolerance class connection diameter workpiece side	TCDCONWS	727ED91B5AA66
tolerance class machined hole diameter	TCDH	72719B197DA99
tool assembly height	HTA	728B074BFC2AD
tool assembly length	LTA	728B074A39EBC
tool assembly width	WTA	728B074B7B0B5
tool changer interference diameter maximum	DIX	71CF298A3A99A
tool changer interference length minimum	LIN	71CF2989AF0E0
tool cutting edge angle	KAPR	71D078F683C9B
tool cutting edge angle type code	CEATC	71D078F6E9893
tool holder shape code	THSC	71D078FD4E7BE

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Table 1 *(continued)*

Property name	Symbol	Identification code (BSU)
tool lead angle	PSIR	71D078F77616B
tool style code	TSYC	71D078FBF6C68
unit system	UST	71EBBA9ED6C0A
usable length	LU	71EBB33490FDA
usable length diameter ratio	ULDR	71DCCC62CD9EE
usable length maximum	LUX	71CF2992BDBCC
web taper	WBTP	71EAC823D95A7
web thickness	WBTHK	71EAC82313165
work piece parting diameter maximum	CUTDIA	71D0757C787B8

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Annex A
(normative)

Principles of the ISO 13399 series

A.1 General

The ISO 13399 series is intended for use by, among others, tool producers and vendors, manufacturers, and developers of manufacturing software. The ISO 13399 series provides a common structure for exchanging data about cutting tools with defined cutting edges. The ISO 13399 series is intended to provide for, or improve, several manufacturing activities, including:

— the integration and sharing of data for cutting tools and assemblies between different stages of the manufacturing cycle and between different software applications;

— the direct import of data from cutting tool suppliers into a customer's database;

— the management of cutting tool information from multiple sources and for multiple applications.

Different companies use different business models to determine their need for the communication of information about their products. For example, one cutting tool manufacturer can regrind its customers' tools while another can allow its customers to do the regrinding and provide the information to enable them to do so. Therefore, the two cutting tool manufacturers can have a different set of cutting tool properties to communicate using the information model and dictionaries provided in the ISO 13399 series.

The ISO 13399 series defines only the information that can be communicated, but does not specify what information shall be communicated.

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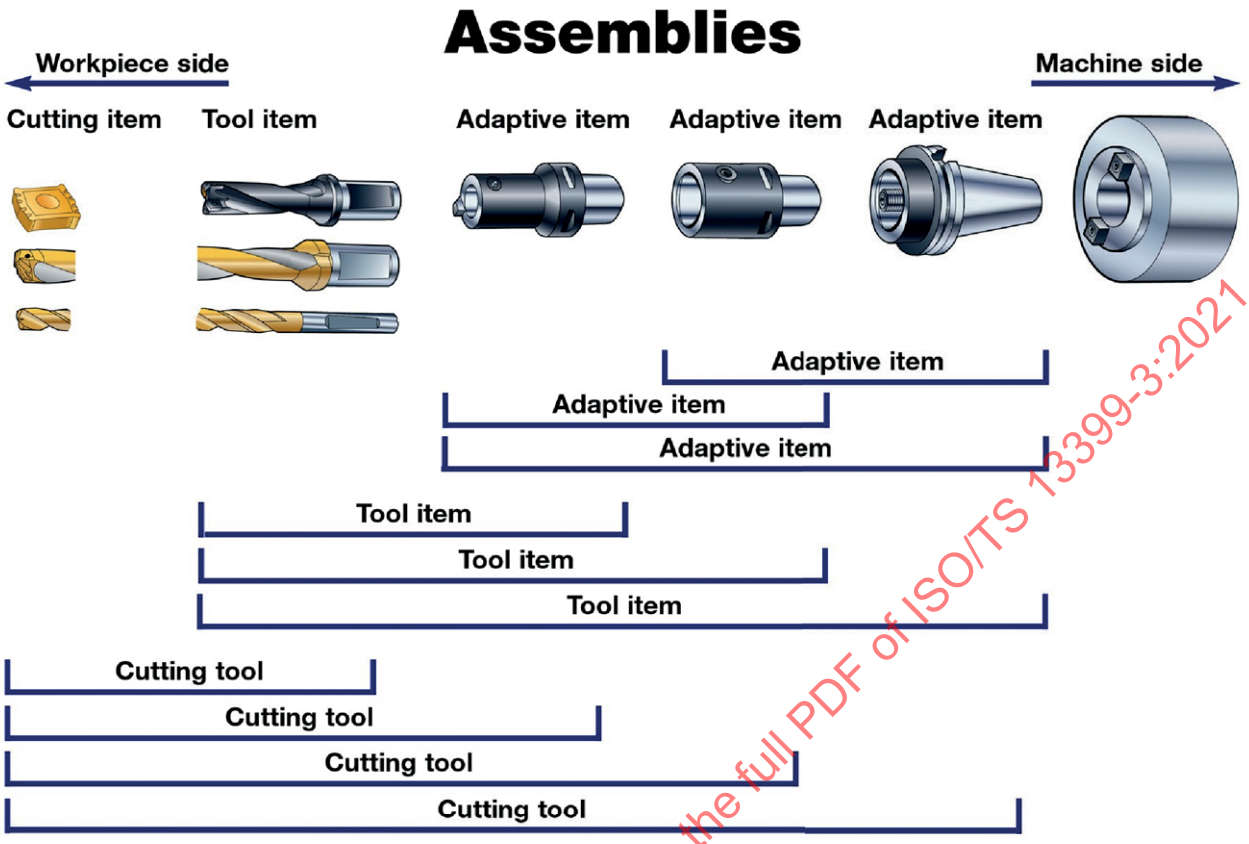


Figure A.1 — Possible assemblies of the components of a cutting tool

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Since the content of those dictionaries evolves according to industrial innovations and constant improvement of technology in cutting tools, a Maintenance Agency has been established for the purposes of:

— correcting errors in the entries of existing classes and properties;

— adding new properties to existing classes;

— adding new classes and their properties;

— managing the status of those properties and classes;

— migrating the dictionary to subsequent editions of the ISO 13399 series.

The name, address and contact information of the Maintenance Agency is available at: https://www.iso.org/maintenance_agencies.html.

The reference dictionaries are available in the form of EXPRESS files on the website of the Maintenance Agency. These files are considered complementary to this document; they can be freely downloaded and used for cutting tool data representation and exchange.

The following permission notice and disclaimer shall be included in all copies of this EXPRESS schema ("the Schema"), and derivations of the Schema:

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In addition, any modified copy of the Schema shall include the following notice:

THIS SCHEMA HAS BEEN MODIFIED FROM THE SCHEMA DEFINED IN THE ISO 13399 SERIES, AND SHOULD NOT BE INTERPRETED AS COMPLYING WITH THAT INTERNATIONAL STANDARD.

A.2 Information object registration

A.2.1 Document identification

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

{iso technical specification 13399 part (3) version (3)}

is assigned to this document. The meaning of this value is defined in ISO/IEC 8824-1 and is described in ISO 13584-1.

A.2.2 Dictionary identification

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

{iso technical specification 13399 part (3) version (3) object (2) tool items (2)}

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Annex B
(informative)

Classification table

Table B.1 shows the classification structure of the generic families in the dictionary with an expanded structure for the classes of connection interface feature, cutting operation, reference system, tool item feature, and tool item type. The purpose of Table B.1 is to show the relationships between the classes of cutting items and the other classes in the ISO 13399 series.

NOTE 1 Cutting item feature classes and related properties can be used for tool items. They are defined in ISO/TS 13399-2.

NOTE 2 Annex C contains the definition of all the classes that are relevant to tool items and definitions of those classes of reference systems that are used in the definition of the properties of tool item types.

Table B.1 — Classification table

Classification structure	Parent	BSU
cutting tool library	Root	71CE7A72B6DA7
adaptive item type	71CE7A72B6DA7	71EAD37F18F34
adjustment	71CE7A72B6DA7	71ED884159C90
assembly item type	71CE7A72B6DA7	71CE7A795C05C
bolt hole circle	71CE7A72B6DA7	71E02520881F1
connection interface feature	71CE7A72B6DA7	71DF8C37D9115
coolant supply	71CE7A72B6DA7	71DF8C3C065EB
cutting data association	71CE7A72B6DA7	72719B234F9E0
cutting item feature	71CE7A72B6DA7	71DD6C82F72DA
cutting item type	71CE7A72B6DA7	71D1AA6C8FC75
cutting operation	71CE7A72B6DA7	71DFF83D21D50
boring	71DFF83D21D50	71DFF83D3B0A4
broaching circular	71DFF83D21D50	71DFF83D551E3
broaching linear	71DFF83D21D50	71DFF83D6FA17
counterboring	71DFF83D21D50	71DFF83D897BB
countersinking	71DFF83D21D50	71DFF83DB5E40
drilling	71DFF83D21D50	71DFF83DD3EAA
drilling deep hole	71DFF83D21D50	71DFF83E498D2
drilling step	71DFF83D21D50	71DFF83E67286
grooving	71DFF83D21D50	71DFF83E92592
milling face	71DFF83D21D50	71DFF83EA9476
milling profile	71DFF83D21D50	71DFF83EE1225
milling shoulder	71DFF83D21D50	71DFF83EF5A57
milling slot	71DFF83D21D50	71DFF83F249B1
parting	71DFF83D21D50	71DFF83F56124
reaming cylindrical	71DFF83D21D50	71DFF83F6CC6E
reaming profile	71DFF83D21D50	71DFF83F888E5
slitting	71DFF83D21D50	71DFF83FA2ED7

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Table B.1 *(continued)*

Classification structure	Parent	BSU
threading external	71DFF83D21D50	71DFF83FB8E3A
threading internal	71DFF83D21D50	71DFF83FE65D6
trepanning	71DFF83D21D50	71DFF84016666
turning external	71DFF83D21D50	71DFF84041924
turning internal	71DFF83D21D50	71DFF8404F82C
cutting tool	71CE7A72B6DA7	71CE7A7A5038B
dependency	71CE7A72B6DA7	727CE22063F8E
flange	71CE7A72B6DA7	71EC5A767182E
keyway	71CE7A72B6DA7	71DF5C026BCE7
locking mechanism	71CE7A72B6DA7	71EBAB85BB5FA
reference system	71CE7A72B6DA7	71CF2968F7A9E
coordinate system in process	71CF2968F7A9E	72B87923CF339
coordinate system workpiece side	71CF2968F7A9E	71EF00655FB61
cutting reference point	71CF2968F7A9E	71CF29A40396A
feed direction primary	71CF2968F7A9E	71ED6A7959A34
irregular insert position	71CF2968F7A9E	71D1A2CB23A32
master insert	71CF2968F7A9E	71D0808DA853B
mirror plane	71CF2968F7A9E	71D19F532AC75
mounting coordinate system	71CF2968F7A9E	72B87923B9440
primary coordinate system	71CF2968F7A9E	71D188F129725
prismatic adaptive item position	71CF2968F7A9E	71D19F4A9D1AE
prismatic tool item position	71CF2968F7A9E	71D10668FA109
regrinding	71CF2968F7A9E	71EAC81A64368
regular insert position	71CF2968F7A9E	71D0181931BAE
round adaptive item position	71CF2968F7A9E	71DF0A33D2E7A
round tool item position	71CF2968F7A9E	71D19F4B58F60
theoretical sharp point	71CF2968F7A9E	71FAE7B6D87BC
tool cutting edge plane	71CF2968F7A9E	71DF0A34A8156
tool feed plane	71CF2968F7A9E	71DF0A38E1098
tool rake plane	71CF2968F7A9E	71DF0A3C6BB36
xy-plane	71CF2968F7A9E	71D188FC65486
xyw-plane	71CF2968F7A9E	71ED6E3F268C6
xz-plane	71CF2968F7A9E	71CF29A3CDE2F
xzw-plane	71CF2968F7A9E	71ED6E3E9AECB
yz-plane	71CF2968F7A9E	71D188F971983
yzw-plane	71CF2968F7A9E	71ED6E3F84723
runout axial	71CE7A72B6DA7	71EDD2B84143C
runout radial	71CE7A72B6DA7	71EDD2B858274
tool item feature	71CE7A72B6DA7	71DD70376771D
chip management	71DD70376771D	71DF8C3FD03AF
drill point	71DD70376771D	71DF8C5B8F7B5
guide pilot feature	71DD70376771D	71E019C497CDF
pilot drill feature	71DD70376771D	71EE070754DE2
tool hub	71DD70376771D	71DF5C02D0271

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Table B.1 *(continued)*

Classification structure	Parent	BSU
tool item type	71CE7A72B6DA7	71E01A004C775
broach	71E01A004C775	71E01A04C377D
cylindrical broach	71E01A04C377D	71E0250E32A07
disk broach	71E01A04C377D	71E01A082DE72
prismatic broach	71E01A04C377D	71E01A0838E9B
tapered broach	71E01A04C377D	71E01A081855D
burr tool	71E01A004C775	71E02C544BABE
cartridge	71E01A004C775	71D1066F279AD
drill	71E01A004C775	71E01A00BD93C
centre drill	71E01A00BD93C	71E01A073CA28
chamfer drill	71E01A00BD93C	71E01A069566C
conical drill	71E01A00BD93C	71E01A0751456
core drill	71E01A00BD93C	71FAE7AAE8247
counterbore drill	71E01A00BD93C	71E01A06BF88D
countersink drill	71E01A00BD93C	71E01A06A8A08
deep hole drill	71E01A00BD93C	71E01A065F635
pilot drill	71E01A00BD93C	71E01D8A88F65
step drill	71E01A00BD93C	71E01A067F73C
trepanning drill	71E01A00BD93C	71E01A0769982
twist drill	71E01A00BD93C	71E01A0608FE4
feed-out tool, machine operated	71E01A004C775	7272127CBD7B8
mill	71E01A004C775	71E01A008D13F
double half side mill	71E01A008D13F	71EF07DFC283C
end mill	71E01A008D13F	71E01A05D27A8
face mill	71E01A008D13F	71E01A05B627B
half side mill	71E01A008D13F	71E01A05EA320
ring mill	71E01A008D13F	71E01A0600702
slab mill	71E01A008D13F	71E01A0540BE7
slotting cutter	71E01A008D13F	71EF07E037025
threading grooving mill	71E01A008D13F	71EF07E083383
ream	71E01A004C775	71E01A04A8AEC
cylindrical reamer	71E01A04A8AEC	71E01A07BC535
profile reamer	71E01A04A8AEC	71E01A07ECCCF
stepped reamer	71E01A04A8AEC	71E01A07FF350
tapered reamer	71E01A04A8AEC	71E01A07D2A1B
rotating borer	71E01A004C775	71E0251F304E1
threading die	71E01A004C775	71E01A04F70F7
cylindrical die	71E01A04F70F7	71E01A0E4EE75
hexagonal die	71E01A04F70F7	71E01A0E79239
threading tap	71E01A004C775	71E01A04E0236
conical tap	71E01A04E0236	71E01A0E34C7F
cylindrical tap	71E01A04E0236	71E01A0A5355D
turn	71E01A004C775	71E01A05104CF
boring bar	71E01A05104CF	71E01A0E9CBA9

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Table B.1 *(continued)*

Classification structure	Parent	BSU
prismatic tool holder	71E01A05104CF	71E01A0E85121
system tool	71E01A05104CF	71E01A0EAF067
tool thread external	71CE7A72B6DA7	71FC1D22BF4CD
tool thread internal	71CE7A72B6DA7	71FC1D25097D7

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Annex C
(informative)

Class definitions

C.1 Content and presentation

The content of this annex is limited to the classes of connection interface feature, cutting operation, reference system, tool item feature, and tool item type.

The layout of the information for each class in this annex is:

BSU Code – version number Revision number

Preferred name Short name

Definition

NOTE

REMARKS

Subclasses:

Properties:

NOTE 1 Cutting item feature classes and related properties can be used for tool items. They are defined in ISO/TS 13399-2.

C.2 Classes

71DF8C37D9115-003 002

connection interface feature connect

Family of features of those parts of a tool item or adaptive item that forms a coupling to another tool item or adaptive item or machine tool

Properties:

71D102AE3B252 connection code machine side

71D102AE8A5A9 connection code workpiece side

71E03063ABD6E drive size

71EAC48CAD407 connection depth

71EBB342CC751 coolant supply property

71EBBE32903BD form type

71EBDBF130AE6 side

71ED6E16D5978 connection unit basis

71FC193318002 connection size code (deprecated)

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726E2FCE0826C counterbore depth connection bore

726E2FCF353DE counterbore diameter connection bore

726E3E82E53A6 connection code type machine side

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

72719B2BD8041 tolerance class connection diameter machine side

727212846FDA5 connection code form output side

727212869DDE2 connection code type output side

7272379A5F325 connection diameter workpiece side

7272379AD9C85 functional diameter

72724DE6DABFF drive length

727BE508AAB46 connection thread nominal size machine side

727BE5090F9AA connection thread nominal size workpiece side

727C2BCBC1684 connection size code workpiece side

727C2BCCC5596 connection size code machine side

7280553C9A894 connection unit base precision machine side

7280605902AD1 connection unit base precision workpiece side

72807E3576AAE connection diameter minimum workpiece side

72807E35DE582 connection diameter maximum workpiece side

72807E366B041 connection size code minimum workpiece side

72807E36B6C92 connection size code maximum workpiece side

729A91ABE3690 connection unit base precision minimum workpiece side

729A91AC5433F connection unit base precision maximum workpiece side

729A91AD69059 tolerance class connection diameter minimum workpiece side

729A91ADE068B tolerance class connection diameter maximum workpiece side

71DFF83D21D50-001 001

cutting operation ctp

Removal of material from a workpiece by a defined cutting edge or edges

Subclasses:

71DFF83FE65D6 threading internal

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71DFF83FB8E3A threading external

71DFF8404F82C turning internal

71DFF83D3B0A4 boring

71DFF83F249B1 milling slot

71DFF83EA9476 milling face

71DFF83F6CC6E reaming cylindrical

71DFF83E67286 drilling step

71DFF84041924 turning external

71DFF84016666 trepanning

71DFF83F56124 parting

71DFF83EE1225 milling profile

71DFF83EF5A57 milling shoulder

71DFF83F888E5 reaming profile

71DFF83DB5E40 countersinking

71DFF83E498D2 drilling deep hole

71DFF83D6FA17 broaching linear

71DFF83D551E3 broaching circular

71DFF83D897BB counterboring

71DFF83DD3EAA drilling

71DFF83FA2ED7 slitting

71DFF83E92592 grooving

71DFF83D3B0A4-001 001

boring brg

Changing the diameter of an existing hole in a workpiece with one or more passes of a cutting tool

71DFF83D551E3-001 001

broaching circular bchc

Changing the dimensions of an existing surface profile by a single circular motion of a cutting tool

71DFF83D6FA17-001 001

broaching linear bchl

Changing the dimensions of an existing surface profile by a single linear motion of a cutting tool

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71DFF83D897BB-001 001

counterboring ctbg

Creating an enlarged section of a hole to provide concentric holes with the transitory shoulder between the holes at 90 degrees to the axis of the holes

71DFF83DB5E40-001 001

countersinking cntsg

Creating an enlarged section of a hole to provide concentric holes with the transitory shoulder between the holes at an angle to the axis of the holes

71DFF83DD3EAA-001 001

drilling drg

Creating a new cylindrical hole in a workpiece where the depth of the hole is normally less than ten times the diameter of the hole

NOTE Either the cutting tool or the workpiece can rotate.

71DFF83E498D2-001 001

drilling deep hole dpdg

Creating a new cylindrical hole in a workpiece where the depth of the hole is normally more than ten times the diameter of the hole

71DFF83E67286-001 001

drilling step drlsp

Creating a new hole with more than one diameter by a single operation

71DFF83E92592-001 001

grooving gvg

Creating multiple connected surfaces on a circular section of a workpiece

71DFF83EA9476-001 001

milling face mlfc

Creating a single flat external surface on a workpiece by a rotating tool

NOTE The feed is achieved by the motion of the workpiece or by the motion of the cutting tool or by the combination of both motions.

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71DFF83EE1225-001 001

milling profile mlprf

Creating curved surfaces on a workpiece by a rotating cutting tool

NOTE The feed is achieved by the motion of the workpiece or by the motion of the cutting tool or by the combination of both motions.

71DFF83EF5A57-001 001

milling shoulder mlshd

Creating perpendicular connected surfaces on a workpiece by a rotating cutting tool

NOTE The feed is achieved by the motion of the workpiece or by the motion of the cutting tool or by the combination of both motions.

71DFF83F249B1-001 001

milling slot mlslt

Creating multiple connected surfaces in the workpiece by a rotating cutting tool

NOTE The feed is achieved by the motion of the workpiece or by the motion of the cutting tool or by the combination of both motions.

71DFF83F56124-001 001

parting part

Separating a rotating workpiece into two parts with a stationary cutting tool

71DFF83F6CC6E-001 001

reaming cylindrical rmcyl

Changing the diameter of an existing cylindrical hole to achieve a close tolerance on the diameter and to improve the surface finish

71DFF83F888E5-001 001

reaming profile rmprf

Changing the diameter of an existing profiled hole to achieve a close tolerance on the diameter and to improve the surface finish

71DFF83FA2ED7-001 001

slitting sltg

Separating a stationary workpiece into two parts with a rotating tool

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71DFF83FB8E3A-001 001

threading external thext

Creating a screw thread on the external surface of a workpiece with a cutting tool

NOTE This operation includes: die threading, thread turning, and thread milling operations.

71DFF83FE65D6-001 001

threading internal thint

Creating a screw thread on an internal surface of a workpiece with a cutting tool

NOTE This operation includes: tapping, thread turning and thread milling operations.

71DFF84016666-001 001

trepanning trpg

Creating a new annular hole that leaves the central portion of the hole intact

NOTE The central portion can be left attached to the workpiece or detached.

71DFF84041924-001 001

turning external trnext

Creation of a new external surface on a rotating workpiece with a stationary cutting tool

71DFF8404F82C-001 001

turning internal trnint

Creating a new internal surface on a rotating workpiece by a stationary cutting tool

727CE22063F8E-001 003

dependency dep

Feature class containing properties for dependency purposes

NOTE See ISO/TS 13399-150:2008, 3.17.

Properties:

727CE220F2360 index

727CE23A47ADB location

71EC5A767182E-001 001

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flange flange

Projecting rim or edge on the outside of an object

Properties:

71EC61D7F2071 flange diameter internal

71EC61D8A1771 flange diameter

71EEF53809764 flange thickness

71EEF5384E141 flange height

71EEF5387E914 flange width

71F90EA1ED67E flange location

71DF5C026BCE7-001 001

keyway kwy

Slot in which a shaped piece of metal can be inserted to transfer torque between two connected items

Properties:

71D0841ADC9E0 keyway width

71EBAB85BB5FA-001 001

locking mechanism lock

Device that can be actuated to secure the coupling of two items together

Properties:

71DF153B14F02 torque

71EBBA9B56D06 actuation force

71EBBA9BCB5F2 actuation method

71CF2968F7A9E-001 001

reference system refsys

Family of items that provide a reference basis for the definitions of properties

NOTE The convention for all the reference systems is the tool-in-hand system.

Subclasses:

71CF29A40396A cutting reference point

71D19F532AC75 mirror plane

71D188F971983 yz-plane

71DF0A38E1098 tool feed plane

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71DF0A34A8156 tool cutting edge plane

71ED6A7959A34 feed direction primary

71D0181931BAE regular insert position

71D188F129725 primary coordinate system

71D19F4B58F60 round tool item position

72B87923CF339 coordinate system in process

71ED6E3E9AECB xzw-plane

71ED6E3F84723 yzw-plane

71EF00655FB61 coordinate system workpiece side

71D1A2CB23A32 irregular insert position

71FAE7B6D87BC theoretical sharp point

72B87923B9440 mounting coordinate system

71EAC81A64368 regrinding

71CF29A3CDE2F xz-plane

71ED6E3F268C6 xyw-plane

71DF0A3C6BB36 tool rake plane

71DF0A33D2E7A round adaptive item position

71D0808DA853B master insert

71D188FC65486 xy-plane

71D10668FA109 prismatic tool item position

71D19F4A9D1AE prismatic adaptive item position

71CF29A3CDE2F-001 001

xz-plane xzp

Plane in the coordinate axis system that contains the X and Z axes with the normal of the plane in the positive Y direction

71CF29A40396A-001 001

cutting reference point crp

Theoretical point of the tool from which the major functional dimensions are taken

NOTE For the calculation of this point the following cases apply:

Case 1. Tool cutting edge angle <=90 - the point is the intersection of: the tool cutting edge plane, the tool feed plane, and the tool rake plane

Case 2. Tool cutting edge>90 - the point is the intersection of: the tool feed plane, a plane perpendicular to tool feed plane and tangential to the cutting corner, and the tool rake plane.

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Case 3. ISO tool styles D and V with only axial rake. The point is the intersection of: a plane perpendicular to the primary feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point , and the tool rake plane.

Case 4. Round inserts -

a) One feed direction parallel to the tool axis, primary used for turning tools. The point is the intersection of: a plane perpendicular to the primary feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point, and the tool rake plane;

b) One feed direction perpendicular to the tool axis, primarily used for milling tools. The point is the intersection of: a plane perpendicular to the primary feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point, and the tool rake plane;

c) Two feed directions, one parallel to the tool axis and one perpendicular to the tool axis with two cutting reference points. Each point is the intersection of: a plane perpendicular to its feed direction and tangential to the cutting edge (tangential point), a plane parallel to the feed direction through the tangential point, and the tool rake plane.

REMARKS In Case 3, the theoretical sharp corner of the insert and the cutting reference point are on the plane that is perpendicular to the tool feed plane.

71D0181931BAE-002 002

regular insert position ripos

Location of a reular cutting item on the primary coordinate system

NOTE 1 The cutting edges are placed on the XY plane of the primary coordinate system with the insert located in the XY quadrant; the major cutting edge is on the positive x axis; and the theoretical sharp point of the major cutting edge of the insert that is closer to the origin point on the Y axis.

NOTE 2 The definition applies to right-hand inserts. The position of left-hand inserts is as mirrored through the YZ-plane.

REMARKS The diagrams illustrate the positions for different shapes of inserts.

71D0808DA853B-003 002

master insert minst

Nominal replaceable cutting item used for defining the dimensions of a cutting tool

NOTE A master insert can substitute for either a regular or an irregular insert and uses the position of the item that it replaces.

REMARKS Definitions making use of a master insert also apply to solid and brazed tools.

Properties:

71CE7A96BC122 insert included angle

71CE7A9DFA23A insert length

71CE7A9F0C79F insert shape code

71CE7A9F5308C insert thickness

71CE7A9FB11C3 insert width

71CEAEBF2A69F insert seat size code

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71CF29872F0AB hand

71FD1E2EDD973 cutting point translation X-direction

71FD1E2F66B38 cutting point translation Y-direction

71D10668FA109-002 002

prismatic tool item position ptipos

Location on the primary coordinate system of a tool item with planar sides

NOTE Applies to right-handed tools. Left hand items are as defined for right hand items but mirrored through the YZ-plane.

REMARKS The base of the tool item shall be coplanar with the XZ-plane; the normal for the base of the item shall be in the -Y direction; the rear backing surface shall be coplanar with the YZ-plane; the normal for the rear backing surface shall be in the -X direction; the end of the item shall be coplanar with the XY-plane; the normal for the end of the item shall be in the -Z direction; the rake face of the primary cutting item shall be completely visible in the XZ quadrant for cartridges; the top of the axial adjustment screw shall be coincident with XY-plane.

71D188F129725-002 002

primary coordinate system pcs

Right-handed rectangular Cartesian system in three dimensional space with three principal axes labelled X, Y and Z

71D188F971983-001 001

yz-plane yzp

Plane in the primary coordinate system that contains the Y and Z axes with the normal of the plane in the positive X direction

71D188FC65486-001 001

xy-plane xyp

Plane in the primary coordinate system that contains the X and Y axes with the normal of the plane in the positive Z direction

71D19F4A9D1AE-002 001

prismatic adaptive item position paip

Location on the primary coordinate system of an adaptive item with planar sides

NOTE Applies to right-handed adaptive items. Left hand items are as defined for right hand items but mirrored through the YZ-plane.

REMARKS The base of the adaptive item shall be coplanar with the XZ-plane; the normal for the base of the item shall be in the -Y direction; the rear backing surface shall be coplanar with the YZ-

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plane; the normal for the rear backing surface shall be in the -X direction; the end of the item shall be coplanar with the XY-plane; the normal for the end of the item shall be in the -Z direction if with a bore; then the vector of the bore of the item that points in the Z direction shall also point towards the workpiece side.

71D19F4B58F60-002 002

round tool item position rtipos

Location on the coordinate axis system of a tool item with non-planar sided cross section

NOTE Applies to right-handed tools. Left hand items are as defined for right hand items but mirrored through the YZ-plane.

REMARKS The axis of the tool item shall be colinear with the Z-axis; the vector of the shank that points in the Z direction shall also point towards the workpiece side; the drive slots or clamping flats, if present, shall be parallel with the XZ-plane; the contact surface of the coupling, the gauge plane or the end of the cylindrical shank shall be coplanar with the XY-plane; the rake face of the primary cutting item shall be visible in the XZ quadrant if a bore is present; the vector of the bore of the item that points in the Z direction shall also point towards the workpiece side.

71D19F532AC75-003 002

mirror plane mplane

YZ-plane in the primary coordinate system

71D1A2CB23A32-002 002

irregular insert position irpos

Location of an irregular cutting item on the primary coordinate system

NOTE 1 The cutting edges are in the xy-plane with the insert located in the XY quadrant, the cutting profile is pointing in the negative Y direction, the physical extremity of the cutting profile is on the positive X axis and the extreme physical point of the insert is on the Y axis.

NOTE 2 The definition applies to right-hand inserts. The position of left-hand inserts is as mirrored through the YZ-plane.

71DF0A33D2E7A-003 002

round adaptive item position raip

Location on the primary coordinate system of an adaptive item with a non-planar sided cross section

NOTE Applies to right-handed adaptive items. Left hand items are as defined for right hand items but mirrored through the YZ-plane.

REMARKS The axis of the adaptive item shall be colinear with the Z axis; the vector of the shank that points in the Z direction shall also point towards the workpiece side; the drive slots or clamping flats, if present, shall be parallel with the XZ-plane the contact surface of the coupling; the gauge plane or the end of the cylindrical shank shall be coplanar with the XY-plane if with a bore; then the vector of the bore of the item that points in the Z direction shall also point towards the workpiece side.

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71DF0A34A8156-002 001

tool cutting edge plane tcep

Plane perpendicular to the XZ-plane through the major cutting edge of a master insert or of a solid tool

71DF0A38E1098-002 001

tool feed plane tfp

Plane perpendicular to the XZ-plane and that is parallel to the primary feed direction of the tool and that is tangential to the cutting corner of a master insert or of a solid tool

71DF0A3C6BB36-001 001

tool rake plane trp

Plane that contains the cutting edges of a master insert or of a solid tool

71ED6A7959A34-001 001

feed direction primary fdp

Direction of movement of a cutting tool to achieve the main cutting function of the tool

71ED6E3E9AECB-001 001

xzw-plane xzwp

Plane in the primary coordinate system related to the xz-plane in the primary coordinate system by the rotation angle KAPPA about the Z-axis in a counter-clockwise direction and a distance XZWD from the origin of the coordinate axis system

NOTE The xzw-plane, the xyw-plane and the yzw-plane are mutually perpendicular.

Properties:

71ED6E4A7EEBA kappa

71ED6E4F7A8CF xzw plane distance

71ED6E3F268C6-001 001

xyw-plane xywp

Plane in the primary coordinate system related to the xy-plane in the primary coordinate system by the rotation angle PHI about the X-axis in a counter-clockwise direction and a distance XYWD from the origin of the primary coordinate system

NOTE The xzw-plane, the xyw-plane and the yzw-plane are mutually perpendicular.

Properties:

71ED6E4AE850B phi

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71ED6E4F42626 xyw plane distance

71ED6E3F84723-001 001

yzw-plane yzwp

Plane in the primary coordinate system related to the yz-plane in the coordinate axis system by the rotation angle RHO about the Y-axis in a counter-clockwise direction and a distance YZWD from the origin of the coordinate axis system

NOTE The xzw-plane, the xyw-plane and the yzw-plane are mutually perpendicular.

Properties:

71ED6E4B254E5 rho

71ED6E4FA83F6 yzw plane distance

72B87923B9440-001 001

mounting coordinate system mcs

Axis system defining the assembly position of an item towards a coordinate system workpiece side (CSW) of another item

72B87923CF339-001 001

coordinate system in process cip

Axis system for a rotational tool as a reference for the tool path located on the center line at the most front cutting point of a tool item

71EF00655FB61-002 002

coordinate system workpiece side csw

Right-handed rectangular Cartesian system in three dimensional space with three axes labelled XW, YW and ZW that are the intersections of the xyw-plane, the xzw-plane and the yzw-plane respectively

71FAE7B6D87BC-002 001

theoretical sharp point tsp

Intersection in the tool rake plane of the two planes that are perpendicular to the XZ-plane through the major and the minor cutting edges of a cutting item

71EAC81A64368-002 002

regrinding rgnd

Modifying the shape of a component of a cutting tool to restore the original shape or to create a new shape

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Properties:

71EAC81AD9AE1 drill back taper

71EAC81F88336 body clearance depth

71EAC8210DF36 fluted land width

71EAC82313165 web thickness

71EAC823D95A7 web taper

71EAC828C8308 margin width

71EAC82ADE5EA chisel edge length

71EAC82B2A50E chisel edge angle

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBC1E8857BE overall length minimum (deprecated substituted by residual grinding length)

71DD70376771D-001 001

tool item feature tif

Characteristic of a tool item that cannot exist independently of the tool item

Subclasses:

71DF8C3FD03AF-001 chip management

71DF8C5B8F7B5-002 drill point

71E019C497CDF-001 guide pilot feature

71EE070754DE2-001 pilot drill feature

71DF5C02D0271-001 tool hub

71DF8C3FD03AF-001 001

chip management chpmg

Feature of the tool body or assembly to control the direction of motion of the chip

Properties:

71DCCFEC645BD-003 flute design code

71DCCFEC20115-003 flute helix angle

71DCCFF654756-003 flute helix hand

71DCCFF6A1A13-003 flute helix pitch

71DCCC27DEF53-003 length chip flute

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71DF8C5B8F7B5-002 001

drill point dpt

Part of a drill that first makes contact with the workpiece

Properties:

71DCCC4FEF366-003 point angle

71DCCFD064042-003 point length

71E019C497CDF-001 001

guide pilot feature gpy

Portion of a cylindrical tool in front of the cutting portion that acts to limit the sideways movement of the tool in operation

Properties:

71ED6A7A6E6A2-003 guide pilot diameter

72724DE9E999D-003 guide pilot length

71DCCFD24119E-003 pilot protruding length

71EE070754DE2-001 001

pilot drill feature pdrl

Part of a larger drill for guiding the main cutting operation

Properties:

72807E34EA4E2-003 pilot drill diameter

71EAC49030828-003 pilot drill protrusion

71DF5C02D0271-001 001

tool hub tihub

Central part of a disk-shaped tool item with increased thickness

Properties:

71D087D3B17B0-001 hub diameter

71D087D3F5E07-003 hub thickness

71E01A004C775-003 002

tool item type titp

Family of items that support or hold one or more cutting items in a cutting operation

NOTE Dimensions and properties of tool items assume the presence of at least one master insert.

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Subclasses:

71E01A00BD93C drill

71E01A008D13F mill

71E01A04F70F7 threading die

71E02C544BABE burr tool

71E0251F304E1 rotating borer

71E01A05104CF turn

71D1066F279AD cartridge

71E01A04C377D broach

7272127CBD7B8 feed-out tool, machine operated

71E01A04E0236 threading tap

71E01A04A8AEC ream

Properties:

71CE7AA1998FF insert index count

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298FDE0EF master insert identification

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71DD703B84298 coating property

71DF1523224D8 body material code

71DF8C52B8926 cutting item count

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

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726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

71E01A008D13F-003 003

mill mill

Family of rotating tool items intended mainly for use in milling operations

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Subclasses:

71E01A05B627B face mill

71E01A05EA320 half side mill

71E01A05D27A8 end mill

71E01A0600702 ring mill

71EF07E037025 slotting cutter

71EF07E083383 threading grooving mill

71EF07DFC283C double half side mill

71E01A0540BE7 slab mill

Properties:

71CE7AA1998FF insert index count

71CEAEBD5A66A cutting depth maximum

71CEAEBF0C234 profile included angle

71CED04867743 row identifier (deprecated)

71CF29862B277 shank diameter (deprecated)

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298870946 shank length

71CF2989AF0E0 tool changer interference length minimum

71CF298A3A99A tool changer interference diameter maximum

71CF298A76B66 connection retention knob thread size

71CF298EEB4F5 clamping type code

71CF298FDE0EF master insert identification

71CF2992BDBCC usable length maximum

71CF2998A1609 rake angle radial

71CF29990C41F rake angle axial

71D07576C0558 depth of cut maximum

71D078EB7C086 overall length

71D078F683C9B tool cutting edge angle

71D078F77616B tool lead angle

71D078FBF6C68 tool style code

71D08096F930C drive angle

71D08462F8185 body diameter maximum

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71D084653E57F cutting diameter

71D0846556288 cutting diameter minimum

71D084656CE32 cutting diameter maximum

71D087D97FCE3 contact surface diameter machine side

71D102AE8A5A9 connection code workpiece side

71DCCFEBB883E flute count

71DCCFF75E485 peripheral effective cutting edge count

71DCD00054F65 peripheral mounted insert count

71DCD00239812 face effective cutting edge count

71DCD0029BBE7 face mounted insert count

71DCD39338974 functional length

71DCD394BB20E protruding length

71DCD3B16750B body length maximum

71DD703B84298 coating property

71DF151EA5CF1 balance quality code

71DF1523224D8 body material code

71DF15283219C cutting pitch density

71DF152D8CF7D cutting pitch differential

71DF1538E7378 insert adjustable count

71DF153A691F2 rotational speed maximum

71DF8C52B8926 cutting item count

71E019EBAE1B1 profile radius

71EAC0CAB861F balancing method code

71EAC496E7425 tangentially mounted insert

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71EBDBF5060E6 connection diameter machine side

71ED6A9AF7D1D body diameter

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71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

726F30C2C3EEA row count

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

7280605D97D83 radial width of cut

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

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72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

72E24F5BF9F16 taper form barrel angle

71E01A00BD93C-003 002

drill drill

Family of items designed for use mainly in drilling operations

Subclasses:

71E01A065F635 deep hole drill

71FAE7AAE8247 core drill

71E01A073CA28 centre drill

71E01A069566C chamfer drill

71E01D8A88F65 pilot drill

71E01A0608FE4 twist drill

71E01A0751456 conical drill

71E01A06BF88D counterbore drill

71E01A06A8A08 countersink drill

71E01A067F73C step drill

71E01A0769982 trepanning drill

Properties:

71CE7AA1998FF insert index count

71CEAEBF2A69F insert seat size code

71CF29862B277 shank diameter (deprecated)

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298870946 shank length

71CF2989AF0E0 tool changer interference length minimum

71CF298A3A99A tool changer interference diameter maximum

71CF298A76B66 connection retention knob thread size

71CF298EEB4F5 clamping type code

71CF298FDE0EF master insert identification

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71CF2992BDBCC usable length maximum

71CF2998A1609 rake angle radial

71CF29990C41F rake angle axial

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71D08096F930C drive angle

71D08462F8185 body diameter maximum

71D084653E57F cutting diameter

71D0846556288 cutting diameter minimum

71D084656CE32 cutting diameter maximum

71D087D97FCE3 contact surface diameter machine side

71D102AE8A5A9 connection code workpiece side

71DCCFEBB883E flute count

71DCD00239812 face effective cutting edge count

71DCD0029BBE7 face mounted insert count

71DCD39338974 functional length

71DCD394BB20E protruding length

71DCD3B16750B body length maximum

71DD703B84298 coating property

71DF151EA5CF1 balance quality code

71DF1523224D8 body material code

71DF153A691F2 rotational speed maximum

71DF8C52B8926 cutting item count

71EAC0CAB861F balancing method code

71EAC496E7425 tangentially mounted insert

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71EBDBF5060E6 connection diameter machine side

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71ED6A9AF7D1D body diameter

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B197DA99 tolerance class machined hole diameter

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

7272127E28662 chip flute radius

727BE4E83C904 offset chip flute outer pocket

727BE4E8EB1D5 offset chip flute inner pocket

727CE21EEC94F drilling part length

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

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729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C4A7255D6CA diameter hole tolerance lower

72C4A7257B716 diameter hole tolerance upper

72C4A72599564 diameter hole tolerance class

72C5C9C07963B body section count

71E01A04A8AEC-003 003

ream ream

Family of items designed for use mainly in reaming operations

Subclasses:

71E01A07BC535 cylindrical reamer

71E01A07ECCCF profile reamer

71E01A07FF350 stepped reamer

71E01A07D2A1B tapered reamer

Properties:

71CE7AA1998FF insert index count

71CEAEBF2A69F insert seat size code

71CF29862B277 shank diameter (deprecated)

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298870946 shank length

71CF2989AF0E0 tool changer interference length minimum

71CF298A3A99A tool changer interference diameter maximum

71CF298A76B66 connection retention knob thread size

71CF298EEB4F5 clamping type code

71CF298FDE0EF master insert identification

71CF2992BDBCC usable length maximum

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71CF2998A1609 rake angle radial

71CF29990C41F rake angle axial

71D07574A61E8 head length

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71D08096F930C drive angle

71D08462F8185 body diameter maximum

71D084653E57F cutting diameter

71D0846556288 cutting diameter minimum

71D084656CE32 cutting diameter maximum

71D087D97FCE3 contact surface diameter machine side

71DCCC5A4FD18 premachined hole diameter

71DCCC62CD9EE usable length diameter ratio

71DCCFEBB883E flute count

71DCCFF75E485 peripheral effective cutting edge count

71DCD00054F65 peripheral mounted insert count

71DCD00239812 face effective cutting edge count

71DCD0029BBE7 face mounted insert count

71DCD39338974 functional length

71DCD394BB20E protruding length

71DCD3B16750B body length maximum

71DD6C95DA49B cutting edge length

71DD703B84298 coating property

71DF151EA5CF1 balance quality code

71DF1523224D8 body material code

71DF15283219C cutting pitch density

71DF152D8CF7D cutting pitch differential

71DF1538E7378 insert adjustable count

71DF153A691F2 rotational speed maximum

71DF5C0761888 keyway property

71DF8C52B8926 cutting item count

71E01D92C41E8 connection bore diameter (deprecated)

71EAC0CAB861F balancing method code

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71EAC472BD116 body half taper angle

71EAC48CAD407 connection depth

71EAC48EC5DE0 neck diameter

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9E78025 adjustability

71EBBA9ED6C0A unit system

71EBC1E026769 neck length

71EBC1EBC839F stock removal minimum

71EBC1EC0BB22 stock removal maximum

71EBC1EC3E8B6 stock removal recommended

71EBDBF5060E6 connection diameter machine side

71ED6A9AF7D1D body diameter

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71EE070696F08 guide element property

71FC193318002 connection size code (deprecated)

726E2FCC0EC78 interference cutting diameter

726E372E4FBE9 plug length

726E3AABCE55D cutting edge sequence

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

726F30BC507E3 plug angle

72719B167AE15 hole type

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72719B17B907F standard number

72719B181D75D central flat

72719B197DA99 tolerance class machined hole diameter

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B2280DBA premachined hole type

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C4A7255D6CA diameter hole tolerance lower

72C4A7257B716 diameter hole tolerance upper

72C4A72599564 diameter hole tolerance class

72C5C9C07963B body section count

71E01A04C377D-003 002

broach broach

Family of items designed for use mainly in broaching operations

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Subclasses:

71E01A082DE72 disk broach

71E01A0838E9B prismatic broach

71E01A081855D tapered broach

71E0250E32A07 cylindrical broach

Properties:

71CE7AA1998FF insert index count

71CEAEBF2A69F insert seat size code

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298EEB4F5 clamping type code

71CF298FDE0EF master insert identification

71CF2998A1609 rake angle radial

71CF29990C41F rake angle axial

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71D08096F930C drive angle

71D102AE8A5A9 connection code workpiece side

71DCCFEBB883E flute count

71DCD39338974 functional length

71DCD394BB20E protruding length

71DD703B84298 coating property

71DF1523224D8 body material code

71DF1523EE184 cartridge size code

71DF15283219C cutting pitch density

71DF152D8CF7D cutting pitch differential

71DF1538E7378 insert adjustable count

71DF5C0761888 keyway property

71DF8C52B8926 cutting item count

71EAC496E7425 tangentially mounted insert

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBAF896BE9A clamping length machine side

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71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9E78025 adjustability

71EBBA9ED6C0A unit system

71EBC1EBC839F stock removal minimum

71EBC1EC0BB22 stock removal maximum

71EBC1EC3E8B6 stock removal recommended

71EBDBF5060E6 connection diameter machine side

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

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728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C4A7255D6CA diameter hole tolerance lower

72C4A7257B716 diameter hole tolerance upper

72C4A72599564 diameter hole tolerance class

72C5C9C07963B body section count

71E01A04E0236-003 004

threading tap tap

Family of items designed to form an internal thread in an existing hole in a workpiece

Subclasses:

71E01A0E34C7F conical tap

71E01A0A5355D cylindrical tap

Properties:

71CE7AA1998FF insert index count

71CEAEBD5A66A cutting depth maximum

71CF29862B277 shank diameter (deprecated)

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298870946 shank length

71CF298FDE0EF master insert identification

71CF2992BDBCC usable length maximum

71CF2998A1609 rake angle radial

71CF29990C41F rake angle axial

71D07574A61E8 head length

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71D07576C0558 depth of cut maximum

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71DCCC5A4FD18 premachined hole diameter

71DCCFEBB883E flute count

71DCD00CBBC2A cutting end count

71DCD39338974 functional length

71DCD394BB20E protruding length

71DCD3B16750B body length maximum

71DD703B84298 coating property

71DF1523224D8 body material code

71DF153A691F2 rotational speed maximum

71DF153B4ABCD tap type identifier

71DF153FA5F85 thread tolerance class

71DF8C52B8926 cutting item count

71E02C5C2EED3 thread diameter

71E02C679DC6D tap chamfer style

71E03063ABD6E drive size

71EAC472BD116 body half taper angle

71EAC48EC5DE0 neck diameter

71EAC82313165 web thickness

71EAC823D95A7 web taper

71EBAF896BE9A clamping length machine side

71EBB332C60EB body height

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71EBBAA3BCA70 thread diameter size

71EBC1E026769 neck length

71EBC1EA293DC tap chamfer point diameter

71EBDBF5060E6 connection diameter machine side

71ED6AA478A3D body length

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71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

72550E426D771 thread cutting part length

726E2FC624810 tap center tip diameter

726E2FCA7ECF0 tap center tip angle

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E3EA9B08AD thread diameter inch measure

726E3EACB6BE4 thread diameter inch fraction

726E3EB2AB5CB tap chamfer length

726E3EB308CDD tap set code

726E424FE9EC2 item style code

72719B101A1FD cutting part design style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B2280DBA premachined hole type

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

72724DE6DABFF drive length

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

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728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

71E01A04F70F7-003 004

threading die die

Family of items used for external threading operations

Subclasses:

71E01A0E4EE75 cylindrical die

71E01A0E79239 hexagonal die

Properties:

71CE7AA1998FF insert index count

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298FDE0EF master insert identification

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71DD703B84298 coating property

71DF1523224D8 body material code

71DF153A691F2 rotational speed maximum

71DF153FA5F85 thread tolerance class

71DF8C52B8926 cutting item count

71E02C5C2EED3 thread diameter

71E03063ABD6E drive size

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71EBAF896BE9A clamping length machine side

71EBB332C60EB body height

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71EBBAA3BCA70 thread diameter size

71EBDBF5060E6 connection diameter machine side

71ED6AA478A3D body length

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

72550E426D771 thread cutting part length

726E2FC37D98A thread diameter minimum

726E2FC4858CC die chip hole diameter

726E2FC51A8C7 die chip hole diameter circle

726E2FC5A2BA5 die chip hole count

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E3EA9B08AD thread diameter inch measure

726E3EACB6BE4 thread diameter inch fraction

726E3EB2AB5CB tap chamfer length

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

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72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

71E01A05104CF-003 002

turn turn

Family of items designed for use mainly in internal and external turning operations

Subclasses:

71E01A0E9CBA9 boring bar

71E01A0EAF067 system tool

71E01A0E85121 prismatic tool holder

Properties:

71CE7AA1998FF insert index count

71CEAEBD5A66A cutting depth maximum

71CEAEBF2A69F insert seat size code

71CED03D70452 damping property

71CF29869CA0F data chip provision

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71CF29872F0AB hand

71CF2988A5874 shank cross section shape code

71CF298EEB4F5 clamping type code

71CF298F073D3 head bottom offset height

71CF298F4E487 head bottom offset length

71CF298FB10E4 groove depth minimum bore diameter

71CF298FDE0EF master insert identification

71CF299257986 overall width

71CF299287FD3 cutting length at minimum bore diameter

71CF2992DBC44 blade reinforcement radius

71CF299354332 axial groove outside diameter minimum

71CF299431CAC dimension a on wf

71CF29984CDA7 functional width

71CF299874B1E functional width secondary

71CF2998A1609 rake angle radial

71CF2998EBD46 rake angle normal

71CF29990C41F rake angle axial

71D07543FD182 axial groove outside diameter maximum

71D07569F8BC3 cutting width maximum

71D0756A28B42 cutting width minimum

71D075730A82B head back offset length

71D075731F172 head back offset width

71D07574A61E8 head length

71D075754F8A3 inclination angle

71D0757C787B8 work piece parting diameter maximum

71D078EB73E87 overall height

71D078EB7C086 overall length

71D078F5BEDBE functional length secondary

71D078F683C9B tool cutting edge angle

71D078F6E9893 tool cutting edge angle type code

71D078F77616B tool lead angle

71D078FBF6C68 tool style code

71D078FD4E7BE tool holder shape code

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71D0793ECEF9A dimension a on lf

71D0808F8F719 rake angle orthogonal

71D08418C3B4D clearance angle orthogonal

71D102AE8A5A9 connection code workpiece side

71D193F495583 functional width 2

71DCD39338974 functional length

71DD703B84298 coating property

71DF1523224D8 body material code

71DF153FA5F85 thread tolerance class

71DF8C52B8926 cutting item count

71EAC496E7425 tangentially mounted insert

71EAC49F75413 drop head design

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71EBDBF5060E6 connection diameter machine side

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71ED6E5CD0DAE clearance angle normal

71FAE074D2EBD shim inclination angle

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

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72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

72724DE823AF8 end chamfer

72724DE89D232 end chamfer angle

72724DE99F0D4 end chamfer distance

72724DEFB9646 head end angle

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

71D1066F279AD-002 001

cartridge cartridge

Tool item that carries a solid cutting edge or locks a replaceable insert and is designed to be mounted onto either an adaptive item or a tool item

Properties:

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71CE7AA1998FF insert index count

71CEAEBF2A69F insert seat size code

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298751FCF shank width

71CF29883E014 shank height

71CF298870946 shank length

71CF2988A5874 shank cross section shape code

71CF298EEB4F5 clamping type code

71CF298F073D3 head bottom offset height

71CF298F4E487 head bottom offset length

71CF298FDE0EF master insert identification

71CF299257986 overall width

71CF2992DBC44 blade reinforcement radius

71CF299354332 axial groove outside diameter minimum

71CF299431CAC dimension a on wf

71CF29984CDA7 functional width

71CF299874B1E functional width secondary

71CF2998A1609 rake angle radial

71CF2998EBD46 rake angle normal

71CF29990C41F rake angle axial

71D07543367C5 minimum bore diameter

71D07543FD182 axial groove outside diameter maximum

71D07569F8BC3 cutting width maximum

71D0756A28B42 cutting width minimum

71D075730A82B head back offset length

71D075731F172 head back offset width

71D07574A61E8 head length

71D075754F8A3 inclination angle

71D0757C787B8 work piece parting diameter maximum

71D078EB73E87 overall height

71D078EB7C086 overall length

71D078F5BEDBE functional length secondary

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71D078F683C9B tool cutting edge angle

71D078F6E9893 tool cutting edge angle type code

71D078F77616B tool lead angle

71D078FBF6C68 tool style code

71D078FD4E7BE tool holder shape code

71D0793ECEF9A dimension a on lf

71D0808F8F719 rake angle orthogonal

71D08418C3B4D clearance angle orthogonal

71D193F495583 functional width 2

71DCD39338974 functional length

71DD703B84298 coating property

71DF1523224D8 body material code

71DF1523EE184 cartridge size code

71DF8C52B8926 cutting item count

71EAC0E9FA4CD mounting hole distance

71EAC0EF68BB7 mounting hole distance 2

71EAC0EFA1BF3 mounting hole height

71EAC0F064E2D mounting hole angle

71EAC496E7425 tangentially mounted insert

71EAC83B73825 clearance angle radial

71EAC83CD450B clearance angle axial

71EBAF896BE9A clamping length machine side

71EBB33230236 body width

71EBB332C60EB body height

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9E78025 adjustability

71EBBA9ED6C0A unit system

71ED6AA478A3D body length

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71ED6E5CD0DAE clearance angle normal

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71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

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71E02C544BABE-003 002

burr tool burr

Small rotating tool item for removing areas of roughness from a machined edge

Properties:

71CE7AA1998FF insert index count

71CF29862B277 shank diameter (deprecated)

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298870946 shank length

71CF298FDE0EF master insert identification

71CF2992BDBCC usable length maximum

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71D084653E57F cutting diameter

71DCD39338974 functional length

71DD703B84298 coating property

71DF1523224D8 body material code

71DF1523869EE burr type code

71DF8C52B8926 cutting item count

71E019EBAE1B1 profile radius

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71ED6A9AF7D1D body diameter

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

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726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728E9088759B9 burr face design code

728E908921D8E burr cutting edge condition

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72AC4750D3EE8 center point of the profile radius Z-direction

72AC4750EEEF5 center point of the profile radius X-direction

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

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71E0251F304E1-003 002

rotating borer rotbor

Assembly of cutting item or items, tool item or items and adaptive item or items to enlarge an existing hole

Properties:

71CE7AA1998FF insert index count

71CEAEBF2A69F insert seat size code

71CF29862B277 shank diameter (deprecated)

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298A76B66 connection retention knob thread size

71CF298EEB4F5 clamping type code

71CF298FDE0EF master insert identification

71CF299287FD3 cutting length at minimum bore diameter

71CF2998A1609 rake angle radial

71CF29990C41F rake angle axial

71D07543367C5 minimum bore diameter

71D07576C0558 depth of cut maximum

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71D08096F930C drive angle

71D084653E57F cutting diameter

71D0846545C4E cutting diameter internal

71D0846556288 cutting diameter minimum

71D084655A2F7 cutting diameter internal minimum

71D084656CE32 cutting diameter maximum

71D0846570977 cutting diameter internal maximum

71D087D97FCE3 contact surface diameter machine side

71D102AE8A5A9 connection code workpiece side

71DCD394BB20E protruding length

71DCD3B16750B body length maximum

71DD703B84298 coating property

71DF151EA5CF1 balance quality code

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71DF1523224D8 body material code

71DF1538E7378 insert adjustable count

71DF153A691F2 rotational speed maximum

71DF5C0761888 keyway property

71DF8C52B8926 cutting item count

71E01D92C41E8 connection bore diameter (deprecated)

71EAC0CAB861F balancing method code

71EAC48CAD407 connection depth

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71EBDBF5060E6 connection diameter machine side

71ED6A9AF7D1D body diameter

71ED6AA478A3D body length

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71EDD2C17746F connection count workpiece side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

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72719B2427AED cutting data association code

72719B2B51519 seal

7272127597464 adjustable unit assembly length

727212760A318 balance weight outside diameter

7272127ACA99C bridge height

7272127B20A66 cartridge outside diameter

727212879692C collision diameter

7272379632320 presetting cutting diameter internal, smaller

7272379692AF6 presetting cutting diameter internal, greater

72723798609B4 presetting cutting diameter greater

72723798D9173 presetting cutting diameter smaller

72724DF094129 support height

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728ECFD4A0629 designation

728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C4A7255D6CA diameter hole tolerance lower

72C4A7257B716 diameter hole tolerance upper

72C4A72599564 diameter hole tolerance class

72C5C9C07963B body section count

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7272127CBD7B8-003 001

feed-out tool, machine operated feeouttoomacope

Type of tool item that shall be mainly used for rotating operations where cutting items mounted on to slides can be moved to different positions before or during the cutting process

NOTE The class contains manufacturer specific inserts.

Properties:

71CE7AA1998FF insert index count

71CF29869CA0F data chip provision

71CF29872F0AB hand

71CF298FDE0EF master insert identification

71D078EB7C086 overall length

71D078FBF6C68 tool style code

71DD703B84298 coating property

71DF1523224D8 body material code

71DF8C52B8926 cutting item count

71EBAF896BE9A clamping length machine side

71EBB33490FDA usable length

71EBB339ED2BD clamping length minimum machine side

71EBB342CC751 coolant supply property

71EBBA9ED6C0A unit system

71ED6E16D5978 connection unit basis

71ED6E54B15C4 clamping length maximum machine side

71FC193318002 connection size code (deprecated)

726E3E83D7357 connection code type workpiece side

726E3E84DD902 connection code form type machine side

726E3E8558953 connection code form type workpiece side

726E3E863255C connection protruding length

726E3EA8A9ED6 grade standard designation main application

726E3EA930D39 grade manufacturers designation

726E424FE9EC2 item style code

72719B167AE15 hole type

72719B17B907F standard number

72719B181D75D central flat

72719B2173235 mounting coordinate system distance

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72719B21DF5DB overhang minimum

72719B23A5008 cutting data association property

72719B2427AED cutting data association code

72719B2B51519 seal

7272127D369D0 centering flange length

727212879692C collision diameter

727233F45E8B1 control rotation direction

72724DE62E62C guide pipe diameter

72724DE698DDE drive diameter

72724DE6DABFF drive length

72724DE725029 drive size code

72724DE776556 drive type

72724DF094129 support height

727BE4E767FA0 control revolutions count

727BE4F2A7BF5 slide count

727BE4F353ACC slide direction

727BE4F3E9369 slide eccentricity

727BE4F471B60 slide setting angle

727BE4F4DF19D slide rotation angle

727BE4F54CB38 slide width

727BE4F5FAC9C stroke

727C7D881F466 centering flange diameter

727ED91B5AA66 tolerance class connection diameter workpiece side

72807E1CC4B50 standard letter

72807E21A51E6 attachment weight permissible

72807E2237273 slide design style code

72807E232B06B drive method

72807E304E8BA transmission of drive

728B074A39EBC tool assembly length

728B074B7B0B5 tool assembly width

728B074BFC2AD tool assembly height

728C565EDCACD connection code input side

728ECFD4A0629 designation

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728ECFD658014 brand

72996F3DC8E8A clamping length workpiece side

729A919BF211A grade identification

729A919C3D239 grade main application group identification letter

729A91A635147 grade application range min

729A91AAEB181 grade application range max

729A91AB4451E grade application main

72C4A71C21F24 main work angle of tool

72C4A71D1B94B body angle workpiece side

72C4A723AD619 maximum overhang

72C5C9C07963B body section count

71ED884159C90-001 001

adjustment adj

Device for making an alteration to achieve a different position

Subclasses:

71ED88419A97C-003 adjustment axial

71ED8841BA543-001 adjustment radial

Properties:

71EBBE66AA8A3-003 adjustment datum

71EBBE67E4BD6-003 adjustment deviation lower

71EBBE682E490-003 adjustment deviation upper

71EBBE6A5BF09-003 adjustment direction

71EBBE7266DA2-003 adjustment increment

71EBBE664BCBD-003 adjustment limit maximum

71EBBE668A8F3-003 adjustment limit minimum

71EBBE72A6287-003 adjustment range

71ED88419A97C-003 001

adjustment axial adjax

Device for making an alteration to achieve a different position in a direction parallel to the longitudinal axis of a component

Properties:

7272127429CCC-003 adjustment range axial

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72721274D0316-003 adjustment range radial

71ED8841BA543-001 001

adjustment radial adjra

Device for making an alteration to achieve a different position in a direction perpendicular to the longitudinal axis of the component

Properties:

7272127429CCC-003 adjustment range axial

72721274D0316-003 adjustment range radial

71E02520881F1-003 002

bolt hole circle bhcirc

Arrangement of holes in a circle to enable a bolted connection

Properties:

71ED6E58E5A62-003 bolt hole circle count

71EBB2F865924-003 diameter access hole

71EAC0DECE78F-003 diameter bolt circle

726E3E7863BBC-003 thread designation inside

726E3E73D1CF2-003 thread designation outside

71DF8C3C065EB-001 001

coolant supply cool

System of channels to supply a fluid to reduce the temperature of the cutting operation

NOTE The fluid can be a liquid or a gas.

Properties:

71EBDBF22CF58-003 coolant entry centre line distance

71CF2985AA87C-003 coolant entry diameter

71EBDBF2CEE6A-003 coolant entry inclination angle

71EBDBF289BB9-003 coolant entry rotation angle

71CF2985DCED3-003 coolant entry style code

71D07558CEF8A-003 coolant entry thread size

71CF298AA8D1F-003 coolant exit diameter

71CF2985FC5FC-003 coolant exit style code

71D075633189D-003 coolant exit thread size

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71EAC478A4164-003 coolant pressure

71CF298963036-003 coolant radial entry thread size

71CF298EB6D72-003 coolant ring seat width (deprecated)

71DD6C82F72DA-001 001

cutting item feature cif

Characteristic of a cutting item that cannot exist independently of the cutting item

Subclasses:

71DD6C870BCCA-001 chip breaker

71DD6C87BB5E1-001 cutting corner

71DD6C8B42A9E-001 cutting edge

71DD9D01038CF-001 cutting item coating

71DD703BE6B82-001 cutting item material

71DD70030304C-001 cutting item profile

71DD7014BF2A1-003 fixing hole

71DD70155A4B1-002 flank

72550A77D9DB9-001 gauge circle

71DD7032B51CD-001 inscribed circle

71EAC81A64368-002 regrinding

726E3AB882A33-003 top face

71DD6C87BB5E1-001 001

cutting corner corner

Transition between two cutting edges

Subclasses:

71DD6C884C4BD-001 chamfered corner

71DD6C8A9985E-001 rounded corner

Properties:

71DD6C8802580-002 corner identity

71DD6C884C4BD-001 001

chamfered corner chcc

Linear transition between two cutting edges

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Properties:

71DD6C88F9210-003 corner chamfer angle

71DD6C895C25B-003 corner chamfer length

71DD6C89A120F-003 corner chamfer width

71DD6C8A9985E-001 001

rounded corner rndc

Curved transition between two cutting edges

Properties:

71DD6C8ACA503-003 corner radius

72C4A7228B53D-001 corner radius lower tolerance

72C4A722B2E35-001 corner radius upper tolerance

71DD6C8B42A9E-001 001

cutting edge ctedg

Junction between two surfaces that performs the cutting operation

Subclasses:

71DD6C8C4F46C-001 cutting edge condition

71DD6C93E8F02-001 cutting edge interrupted

71DD6C9466F30-001 cutting edge major

71DD6C961D7FE-001 cutting edge minor

71DD6C9A21689-001 wiper edge

Properties:

71DD6C8B86265-003 cutting edge identity

71DD6C9332D2C-003 face land angle

71DD6C9371B86-003 face land size code

71DD6C9394F40-003 face land width

71DD6C8C4F46C-001 001

cutting edge condition ctec

The possession by the cutting edge of specific characteristics

Properties:

71DD6C90953D8-003 cutting edge condition code

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71DD6C93E8F02-001 001

cutting edge interrupted ceint

Cutting edge with discontinuities of sufficient magnitude to prevent chip formation at the point where they occur

REMARKS: The purpose of the discontinuities is to reduce the size of individual chips from certain types of tools.

71DD6C9466F30-001 001

cutting edge major cemj

Junction between the face and the main flank that performs the cutting action to create the transient surface on a workpiece

Properties:

71CE7AA3440B4-003 cutting edge angle major left hand

71CE7AA78C2F0-003 cutting edge angle major right hand

71DD6C950E7CC-003 cutting edge curvature

71DD6C958C615-003 cutting edge effective length

71DD6C95DA49B-003 cutting edge length

71DD6C961D7FE-001 001

cutting edge minor cemn

Junction between the face and the minor flank that does not contribute to the creation of the transient surface on the workpiece

71DD6C9A21689-001 002

wiper edge wpe

Cutting edge with a wiper configuration

Properties:

71DD7031A98E9-003 clearance angle wiper edge

71CE7AA02C1CC-003 cutting edge angle major

71CF30F9DFE37-003 insert lead angle

71CE7AA249F88-003 wiper edge length

71CE7AA2E50BE-003 wiper edge radius

71DD9D01038CF-001 001

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cutting item coating coating

Additional material deposited on the surface of a cutting item

NOTE A cutting item coating can consist of layers of several materials.

Properties:

72719B186A232-003 coating name

72719B18D1F27-003 coating process

71DD703BE6B82-001 001

cutting item material material

Substance from which a cutting item is made

71DD70030304C-001 001

cutting item profile ciprf

Shape traced out by the cutting edges of a cutting item

Subclasses:

71DD700BC8BE2-002 ball nosed profile

71DD700BE1D04-003 drilling profile

71DD700BFD9B9-003 grooving parting profile

71DD700C151B5-003 threading profile

71DD700BC8BE2-002 001

ball nosed profile bnprf

Shape of the perimeter of a cutting item that creates a semi-spherical profile

Properties:

71DD6C8802580-002 corner identity

71DD6C8ACA503-003 corner radius

71CE7A9DFA23A-003 insert length

71CE7A9F5308C-003 insert thickness

71CE7A9FB11C3-003 insert width

71DD9D00193A7-003 relief angle

71DD700BE1D04-003 002

drilling profile drprf

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Shape of the perimeter of a cutting item that creates a drilled hole

Properties:

71CEAE9B67E4C-003 corner count

71CF30F02C968-003 cutting diameter insert

72550E3BD998C-003 grind style code

71DD701175021-003 interrupted edge property

71DD7011A3D86-003 rounded corner property

71CE7AA1E3D75-003 tipped cutting edge code

71DD700BFD9B9-003 005

grooving parting profile gpprf

Shape of the perimeter of a cutting item that creates the profile of a groove

Properties:

72550DF97C965-003 chamfer corner property

71CE7A85CC4F9-003 chip breaker face count

71CEAE9B67E4C-003 corner count

71DD6C8802580-002 corner identity

726E3E65CBE4E-003 corner radius left hand

726E3E66CF011-003 corner radius right hand

71CEAEBE2B825-003 cutting width

72C4A721F1835-001 cutting width lower tolerance

72C4A72270CF9-001 cutting width upper tolerance

71D07576C0558-003 depth of cut maximum

71CEAEBEAB020-003 profile angle left hand

71CEAEBED837E-003 profile angle right hand

71CEAEBF0C234-003 profile included angle

71E019EBAE1B1-003 profile radius

71CEAEBDE5798-003 profile style code

71CE7E6520B87-003 relief angle left hand

71CE7E6569AB5-003 relief angle right hand

71DD7011A3D86-003 rounded corner property

71CE7AA1E3D75-003 tipped cutting edge code

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71DD700C151B5-003 004

threading profile thprf

Shape of the perimeter of a cutting item that creates a screw thread

Properties:

71CE7A85CC4F9-003 chip breaker face count

71CEAE9B67E4C-003 corner count

71DD6C8802580-002 corner identity

726E3E65CBE4E-003 corner radius left hand

726E3E66CF011-003 corner radius right hand

71CEAEBEAB020-003 profile angle left hand

71CEAEBED837E-003 profile angle right hand

71CEAEBFEF1B4-003 profile distance ex

71CEAEC0139BB-003 profile distance ey

71CEAEBF0C234-003 profile included angle

71CEAEBDE5798-003 profile style code

71DD7011A3D86-003 rounded corner property

71CEAEC02FEBD-003 taper gradient

71DF154901E44-003 taper thread count

72550E426D771-003 thread cutting part length

726E3E7863BBC-003 thread designation inside

726E3E73D1CF2-003 thread designation outside

71D1A69F60053-003 thread form type

71E033FCBB61C-003 thread hand

71DF5BE65F86F-003 thread height actual

71DF5BE617131-003 thread height difference

71DF5BE5BCEBE-003 thread height theoretical

71CEAEC08D4B0-003 thread pitch

71D1A6A283836-003 thread pitch maximum

71D1A6A247E1F-003 thread pitch minimum

71CEAEC114603-003 thread profile type

71D1A6A16E6ED-003 thread type

71D1A6AAC8707-003 threads per inch

71D1A6AB8F739-003 threads per inch maximum

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71D1A6AB6FB19-003 threads per inch minimum

71CE7AA1E3D75-003 tipped cutting edge code

71CEAEBF8A68E-003 tooth count

71EAC81A64368-002 002

regrinding rgnd

Modifying the shape of a component of a cutting tool to restore the original shape or to create a new shape

Properties:

71EAC81F88336-003 body clearance depth

71EAC82B2A50E-003 chisel edge angle

71EAC82ADE5EA-003 chisel edge length

71EAC83CD450B-003 clearance angle axial

71EAC83B73825-003 clearance angle radial

71EAC81AD9AE1-003 drill back taper

71EAC8210DF36-003 fluted land width

71EAC828C8308-003 margin width

71EBC1E8857BE-003 overall length minimum (deprecated substituted by residual grinding length)

71EAC823D95A7-003 web taper

71EAC82313165-003 web thickness

71FC1D22BF4CD-002 002

tool thread external thdex

Continuous and projecting helical ridge of uniform section on an external cylindrical surface

Subclasses:

71FC20991AEE8 thread inch external

71FC2098BC963 thread metric external

71FC209969F43 thread trapezoidal external

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

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71FC1D25097D7-002 002

tool thread internal thit

Continuous and projecting helical ridge of uniform section on a cylindrical or conical internal surface

Subclasses:

71FC209A5C7F3 thread metric internal

71FC209B39D51 thread trapezoidal internal

71FC209ACEA25 thread inch internal

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

71FC2098BC963-001 001

thread metric external thmtex

External tool thread with dimensions conforming to ISO 724

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

71FC20991AEE8-001 001

thread inch external thinex

External tool thread with dimensions conforming to ISO 725

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

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71FC209CD4A91 thread length

71FC209969F43-001 001

thread trapezoidal external thtzex

External tool thread with diensions conforming to ISO 2904

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

71FC209A5C7F3-001 001

thread metric internal thmtin

Internal screw thread with dimensions conforming to ISO 724

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

71FC209ACEA25-001 001

thread inch internal thinit

Internal screw thread with dimensions conforming to ISO 725

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

71FC209B39D51-001 001

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thread trapezoidal internal thtzin

Internal screw thread conforming to the dimensions in ISO 2904

Properties:

71D1A6AAC8707 threads per inch

71DF153FA5F85 thread tolerance class

71E02C5C2EED3 thread diameter

71FC06ABEA7D3 thread starts

71FC209CD4A91 thread length

71EDD2B84143C-001 001

runout axial rnoutax

Variation in the location of the end surface of the cutting reference point of a rotating tool item or the end surface of an adaptive item

Properties:

71D0845C77193 runout axial adjustment

71ED6A70807F7 runout axial

71EDD2B858274-001 001

runout radial rnoutrd

Variation in the location of the circumference of a rotating tool item or adaptive item

Properties:

71D0846298D19 runout radial adjustment

71DF8C660035E runout radial

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Annex D
(informative)

Tool item property definitions

D.1 Presentation

The layout of the entries in this annex is as follows:

BSU – version number **Revision number** **Value format**

data type group data type unit identifier

preferred name **short name** **SYMBOL**

synonymous name

definition

source of definition

BSU of condition property = name of condition property

Non-quantitative code = meaning of code

Source of code definition

NOTE

REMARKS

BSU of reference diagram

Illustration reference: Figure number

Visible class:

Applicable classes:

Allowed values: Available through the website of the Maintenance Agency.

NOTE 1 It is possible that an entry does not contain all the information specified.

NOTE 2 The value formats of properties are specified in ISO/TS 13399-100.

Some of the properties are illustrated in Annexes E and F.

D.2 Cutting item properties

71EBBA9E78025-002 **002** **NR1S..4**

Enumeration of integers

adjustability **adj** **ADJBY**

Indicator for if an item is adjustable

NOTE A value of 0 means that the item is not adjustable. A value of 1 means that the item is adjustable.

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1066F279AD-002 cartridge

71ED80E1EC9F6-001 nozzle

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

7272127597464-003 001 NR2S..4.6

Real measure mm

adjustable unit assembly length adjuniasslen ADJUL

Distance from the primary coordinate system of the component to that position where the following component of the assembled rotating borer shall be place for the first pre-setting

NOTE See also ISO/TS 13399-305:2017, Figures 20 and 22.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

72721272EB288-003 001 NR2S..4.6

Real measure mm

attachment length holder attlenhol LATTH

Distance between the gauge line or the end of the shank, if a gauge line does not exist to the bottom of the insert seat where the drilling insert or blade touches the body of the drilling tool

Illustration reference: Figure F.67.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0608FE4-002 twist drill

71D07543FD182-003 002 NR2S..4.6

Real measure mm

axial groove outside diameter maximum axigrooutdiamax DAXX

Maximum diameter of an axial groove that can be cut without interference between the workpiece and any part of the tool item on the first cut, measured on that point of the cutting edge that creates the outside diameter of the groove

Illustration reference: Figure E.6, Figure F.53, Figure F.54.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF299354332-003 002 NR2S..4.6

Real measure mm

axial groove outside diameter minimum axigrooutdiamin DAXN

Minimum diameter of an axial groove that can be cut without interference between the workpiece and any part of the tool item on the first cut, measured on that point of the cutting edge that creates the outside diameter of the groove

Illustration reference: Figure E.6, Figure F.53, Figure F.54.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

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726E2FC1D9392-003 001 NR1S..4

Enumeration of integers

axial groove support direction axigrosupdir AXGSUP

Identifier if the support beyond an axial groove cutting insert goes inside or outside

REMARKS: The support also is called sweep.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71DF151EA5CF1-003 002 X 17

String

balance quality code balquacod BLQ

Identifier for the residual out-of-balance effect of a rotating tool

NOTE See ISO 21940-11.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A0695 66C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

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71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71EAD3871D313-003 converter

71EEBDADB63BE-002 extender

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

727212760A318-003 001 NR2S..4.6

Real measure mm

balance weight outside diameter balweioutdia BLWOD

Diameter of that circle where the balance weight of an assembled single point rotating borer can collide with the workpiece or other objects

Illustration reference: Figure F.48, Figure F.49, Figure F.51, Figure F.52, Figure F.53.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71EAC0CAB861F-003 002 X 17

Enumeration of codes

balancing method code balmetcod BLMC

Identifier for the type of balancing of a tool item or an adaptive item

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71EAD3871D313-003 converter

71EEBDADB63BE-002 extender

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

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71E01A07D2A1B-003 tapered reamer

71CF2992DBC44-003 001 NR2S..4.6

Real measure mm

blade reinforcement radius blareirad BLRAD

Measure of the curve of the reinforced section of a tool item that determines the maximum diameter of a workpiece that can be parted or cut off

Illustration reference: Figure E.3.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

72C4A71D1B94B-001 001 NR2S..3.6

Real measure degree of angle

body angle workpiece side bodangworsid BAWS

Angle measured counter clockwise from the yz plane of the MCS to the yz plane of the CSW of an adaptive item

Angle due to change of body direction measured counter clockwise from the yz plane of the MCS of tool item and cutting item

NOTE Applicable to this document, ISO/TS 13399-2 and ISO/TS 13399-4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

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71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

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71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

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71E01A07D2A1B-003 tapered reamer

71EAC81F88336-003 002 NR2S..4.6

Real measure mm

body clearance depth bodcledep BCDP

The radial distance from the leading edge of the land to the portion of a fluted land reduced in diameter to provide diameter clearance

NOTE Twice the value of the body clearance depth subtracted from the cutting diameter equals the body clearance diameter.

REMARKS: See ISO 5419.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71FAE7AAE8247-003 core drill

71E01A05D27A8-003 end mill

71E01A069566C-002 chamfer drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71EAC81A64368-002 regrinding

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

726E2FCE55394-003 001 NR2S..4.6

Real measure mm

body clearance depth axial bodcledepaxi BCDPAX

Axial distance from the leading edge of the cutting corner to the portion of a tool body to provide clearance between the cutting edge and the tool body

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

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726E3725BB986-003 001 NR2S..4.6

Real measure mm

body clearance diameter bodcledia BCD

Diameter of the tool body measured from a point behind the leading cutting edge that provides the diameter clearance to the same point revolved by 180° around the tool axis

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71ED6A9AF7D1D-003 002 NR2S..4.6

Real measure mm

body diameter boddia BD

Distance between parallel tangents on the circular cross section of a tool item or an adaptive item

REMARKS: For an item with several changes in external form the multiple values of body diameter would be aggregated with indexable identifiers.

Illustration reference: Figure F.7, Figure F.25, Figure F.26, Figure F.29, Figure F.36, Figure F.44, Figure F.45, Figure F.55, Figure F.56, Figure F.57, Figure F.63, Figure F.64, Figure F.66, Figure F.68, Figure F.69, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.87, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.117, Figure F.122, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

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71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A082DE72-002 disk broach

71EAD3871D313-003 converter

71E01A081855D-003 tapered broach

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71D08462F8185-003 002 NR2S..4.6

Real measure mm

body diameter maximum boddiamax BDX

Largest diameter of the body of a tool item or an adaptive item

Illustration reference: Figure F.65, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A0E4EE75-001 cylindrical die

71E01A082DE72-002 disk broach

71EAD3871D313-003 converter

71E01A081855D-003 tapered broach

71EEBDADB63BE-002 extender

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E2FAEEEDE7-003 001 NR2S..4.6

Real measure mm

body diameter reduced boddiared BDRED

Diameter of that part of a tool item that is smaller than the head diameter as well as the system diameter of a system tool item and is located between the tool head and the shank or the flange of the tool item

REMARKS: Usually the reduced body diameter is applicable on internal turning tools.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71EAC472BD116-003 002 NR2S..3.6

Real measure degree of angle

body half taper angle bodhaltapang BHTA

Angle of the transition between two diameters of the body of a tool item or adaptive item measured from the item axis

NOTE This angle is not used for any connection taper.

REMARKS: Applicable for both tool items and adaptive items.

Illustration reference: Figure F.75.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71EAD3871D313-003 converter

71EEBDADB63BE-002 extender

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBB332C60EB-003 002 NR2S..4.6

Real measure mm

body height bodhei HTB

The distance measured along the Y-axis between the extremes of the body excluding any protrusion of the locking mechanisms

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71EAD388173EE-003 driver

71E01A082DE72-002 disk broach

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71EEBDADB63BE-002 extender

71E01A0E85121-003 prismatic tool holder

71EAD385E51A0-002 reducer

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71ED6AA478A3D-003 002 NR2S..4.6

Real measure mm

body length bodlen LB

Distance measured along the Z-axis from that point of the item closest to the workpiece, including the cutting item for a tool item but excluding a protruding locking mechanism for an adaptive item, to a defined change in the external form of a tool item or an adaptive item

REMARKS: For an item with several changes in external form the multiple values of body length would be aggregated with indexable identifiers.

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Illustration reference: Figure F.34, Figure F.46, Figure F.99, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A05B627B-003 face mill

71E0251F304E1-003 rotating borer

71E01A05D27A8-003 end mill

71EAD388173EE-003 driver

71E01A069566C-002 chamfer drill

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71EF07E083383-003 threading grooving mill

71E01A0838E9B-002 prismatic broach

71EF07DFC283C-003 double half side mill

71E01A07ECCCF-001 profile reamer

71E01A081855D-003 tapered broach

71E01A07FF350-001 stepped reamer

71EEBDADB63BE-002 extender

71E01A0540BE7-003 slab mill

71E01A0EAE067-003 system tool

71E01A06BF88D-003 counterbore drill

71EAD385E51A0-002 reducer

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

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71DCD3B16750B-003 002 NR2S..4.6

Real measure mm

body length maximum bodlenmex LBX

The distance measured along the Z axis from that point of the item closest to the workpiece, including the cutting item for a tool item but excluding a protruding locking mechanism for an adaptive item, to either the front of the flange on a flanged body or the beginning of the connection interface feature on the machine side for cylindrical or prismatic shanks

NOTE If a connection interface feature overlaps with the body of the item, then this dimension of the body length includes the overlapping portion of the connection interface feature.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71EAD388173EE-003 driver

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71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71EEBDADB63BE-002 extender

71E01A0EAF067-003 system tool

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DF1523224D8-003 002 X 17

Enumeration of codes

body material code bodmatcod BMC

Identifer for the main material constituent of the tool item or adaptive item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

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71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

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71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72C5C9C07963B-001 001 NR1..3

Integer

body section count bodseccou BSC

Number of body sections by which the item collision envelope is constructed

NOTE Applicable to this document and ISO/TS 13399-4.

REMARKS: The examples show how the adaptor body is being described by simple geometric shapes described by BD (body diameter), LB (body length) and BHTA (body half taper angle). BSC parameter defines the number of body sections starting from the workpiece sidemoving towards machine side. Each of the three properties shall be indexed in triplets accordingly (e.g. BD_1, LB_1, BHTA_1 - BD_2, LB_2, BHTA_2). There is no upper limit to how many body section counts can be applied and is defined by the product information provider.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

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71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

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71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBB33230236-003 002 NR2S..4.6

Real measure mm

body width bodwid WB

The distance measured along the X-axis between the extremes of the body excluding any protrusion of the locking mechanisms

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A0E79239-001 hexagonal die

71EEBDADB63BE-002 extender

71E01A0E85121-003 prismatic tool holder

71EAD385E51A0-002 reducer

728ECFD658014-003 001 X25

String

brand brn BRAND

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Name that describes the brand of an item

NOTE See ISO/TS 13399-2, ISO/TS 13399-4, ISO/TS 13399-5 and this document.

REMARKS: e.g. WalterTitex.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

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71CE7A795C05C-003 assembly item type

71EC56BBA9A2E-001 sleeve

71FAD519268DE-001 centre pin

71EC56BA16ACB-001 spring

71EC56E106606-001 flat wire compression spring

71EC56E165BC7-001 cup spring

71EC56E223664-001 leaf spring

71EC56E04199D-001 helical coil spring

71EC56E0D4D19-001 helical disk spring

71EC56E1C4C7D-001 gas spring

71EC56BD5DCD8-001 insert shim

71ED80DF6F976-002 insert clamp

71FAD54E5A5BF-001 floating wedge clamp

71FAD54E002D6-001 cantilever clamp

71FAD54EABA17-001 wedge clamp

71FAD54E2FE26-001 lever top clamp

72719B3479E49-003 retention knob

727CE214BF281-003 nut

727CE216A3092-001 adjustment nut

727CE21C733E3-001 lock nut

71EC56B608ADC-001 insert wedge

71ED80E1EC9F6-001 nozzle

71EC56BC68ED7-001 bearing

71EC56B51596E-001 driving key

71EC56B58A355-001 driving ring

71EC56BAC1A7E-001 insert clamping system

71EC56D6D0499-001 cantilever clamping

71EC56D828198-001 wedge clamping

71EC6588A8C9E-001 lever insert clamping

71EC56D8A655A-001 insert screw clamping

71EC56D7601AD-001 floating wedge clamping

71EC56D97E8B0-001 deflection screw clamping

71EC56D908782-001 eccentric screw clamping

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71FAD547E744B-001 integrated clamping

71EC56D71B815-001 lever top clamping

71EC56BA2E64E-001 screw thread lining

71EC61E259139-001 bush

71EC56B5B6465-001 pin

71EC5A6CFD68B-001 spacer

71EAD70F1B95A-001 nest

71ED80DFB6371-001 insert lever

71EC5A6E85D77-001 sealing ring

71EC5A6E9F6F0-001 retaining ring

71FA4B678C52A-002 externally threaded fastener component

71ED798F61BC2-002 insert screw

71FAE07C0A4A6-001 differential screw

71FAE07B90EEC-002 eccentric screw

71FC030E04050-002 deflection screw

71FAE07BCAC80-002 lever screw

71FC81BA3ECE9-002 shim screw

71ED80E62E75A-001 coolant deflector

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

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71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

7272127ACA99C-003 001 NR2S..4.6

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Real measure mm

bridge height brihei BH

Dimension of the height of the assembled bridge on to a rotating borer measured along the z-axis

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

7272127B20A66-003 001 NR2S..4.6

Real measure mm

cartridge outside diameter caroutdia CAOD

Largest outside diameter of the body of a cartridge that is used for axial grooving operations

Illustration reference: Figure F.53, Figure F.54.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71DF1523EE184-003 002 X 17

String

cartridge size code carsizcod CASC

Identifier for the size of a cartridge

NOTE See ISO 5608 and the ISO 5611 series.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

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72AC4750EEEF5-001 001 NR2..3.3

Real measure mm

center point of the profile radius X-direction cenpoiproradxdir CPRADX

Distance from the CIP to the center point of the profile radius in the X-direction

Illustration reference: Figure F.34.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E02C544BABE-003 burr tool

71E01A05D27A8-003 end mill

71E01A0540BE7-003 slab mill

72AC4750D3EE8-001 001 NR2..3.3

Real measure mm

center point of the profile radius Z-direction cenpoiproradzdir CPRADZ

Distance from the CIP to the center point of the profile radius in the Z-direction

Illustration reference: Figure F.34.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E02C544BABE-003 burr tool

71E01A05D27A8-003 end mill

71E01A0540BE7-003 slab mill

72719B181D75D-003 001 NR2S..4.6

Real measure mm

central flat cenfla CF

Dimension of that part of a cutting profile that is located perpendicular to the feed direction and machines the bottom of a groove within the cutting profile

REMARKS: The flat does not need to be in center.

Illustration reference: Figure F.40.

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

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71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DDA089C8D1E-003 specific profile insert

7280553ACDD96-003 001 X 2

Enumeration of codes

centre drill style code cendristycod CTRSYC

Label for the geometric design of a centre drill

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

7272127E28662-003 001 NR2S..4.6

Real measure mm

chip flute radius chiflurad RCF

Radius of that part of a chip flute where the cross section starts getting smaller and runs out of the tool body

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71EBAF896BE9A-003 003 NR2S..4.6

Real measure mm

clamping length machine side clalenmacsid LSCMS

Dimension of the length of that portion of a tool item or an adaptive item that can participate in a connection on the machine side

NOTE See this document and ISO/TS 13399-4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

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71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

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71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71ED6E54B15C4-002 002 NR2S..4.6

Real measure mm

clamping length maximum machine side clalenmaxmacsid LSCXMS

Greatest portion of the connection feature that is necessary to ensure the normal function of the tool item or the adaptive item

NOTE See this document and ISO/TS 13399-4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

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71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

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71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBB339ED2BD-003 003

Level mm

clamping length minimum machine side clalenminmacsid LSCNMS

Smallest portion of the connection feature on the machine side that is necessary to ensure that no damage is caused neither to the tool item nor to the adaptive item

NOTE See this document and ISO/TS 13399-4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

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71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

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71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72E33DEACC133-001 001 NR2 S..3.3

Real measure mm

clamping length minimum workpiece side clalenminworsid LSCNWS

Dimension of the minimum length of that portion of an adaptive item that can participate in a connection at workpiece side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

726F59BDC3B08-003 collet

71EAD3871D313-003 converter

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

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71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71D1066F279AD-002 cartridge

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07D2A1B-003 tapered reamer

71E01A07ECCCF-001 profile reamer

71E01A07BC535-001 cylindrical reamer

71E01A07FF350-001 stepped reamer

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72996F3DC8E8A-003 001 NR2S..4.6

Real measure mm

clamping length workpiece side clalenworsid LSCWS

Dimension of the length of that portion of an adaptive item that can participate in a connection at workpiece side

NOTE See this document and ISO/TS 13399-4.

Illustration reference: Figure F.66.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

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71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF298EEB4F5-003 002 X 1

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Enumeration of codes

clamping type code clatypcod MTP

Identifier for the type of clamping mechanism to hold the replaceable insert on the tool item

NOTE See ISO 5608.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

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71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBAF85006BD-003 002 NR2S..4.6

Real measure mm

clamping width clawid WSC

Dimension of the width of that portion of a tool item or an adaptive item that can participate in a connection

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A0E85121-003 prismatic tool holder

71EAD385E51A0-002 reducer

71EAC83CD450B-003 002 NR2S..3.6

Real measure degree of angle

clearance angle axial cleangaxi ALP

Angle between the flank of the major or minor cutting edge and a plane parallel to the XY-plane passing through that cutting edge measured in the YZ-plane

NOTE This property is applicable to tool items.

REMARKS: See ISO 3002-1.

Illustration reference: Figure E.8.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71EAC81A64368-002 regrinding

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

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71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71ED6E5CD0DAE-003 002 NR2S..4.6

Real measure mm

clearance angle normal cleangnor ALN

Angle between the major flank of the master insert and the tool cutting edge plane measured in a plane whose normal is parallel to the main cutting edge

NOTE This property is applicable to tool items.

Illustration reference: Figure E.8.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A0838E9B-002 prismatic broach

71D08418C3B4D-003 002 NR2S..3.6

Real measure degree of angle

clearance angle orthogonal cleangort ALO

Angle between the major flank of the master insert and the tool cutting edge plane measured in a plane perpendicular to the tool cutting edge plane

NOTE This property is applicable to tool items.

REMARKS: See ISO 3002-1:1982, 5.1.4.4.

Illustration reference: Figure E.8.

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A0838E9B-002 prismatic broach

71EAC83B73825-003 002 NR2S..3.6

Real measure degree of angle

clearance angle radial cleangrad ALF

Angle between the flank of the major or minor cutting edge and a plane parallel to the YZ-plane passing through that cutting edge measured in the XY-plane

NOTE This property is applicable to tool items.

REMARKS: See ISO 3002-1.

Illustration reference: Figure E.8.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

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71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71EAC81A64368-002 regrinding

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DD703B84298-003 003 B 1

Boolean type

coating property coapry CTP

Possession of a coating by a cutting item type

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

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71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

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71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72806055E5B54-003 001 X 3

Enumeration of codes

cogging style code cogstycod COGSC

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Identifier for the design of the cogging of a tool item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

727212879692C-003 001 NR2S..4.6

Real measure mm

collision diameter coldia CDIA

Diameter of a component, an assembly or a complete cutting tool, which can get into contact with a workpiece or a fixture device and cause malfunction

Illustration reference: Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.53, Figure F.54, Figure F.56, Figure F.142, Figure F.144, Figure F.146, Figure F.148.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

7272127CBD7B8-003 feed-out tool, machine operated

71EAC48CAD407-003 002 NR2S..4.6

Real measure mm

connection depth conbordep CBDP

Total depth of the connection hole in the centre of a tool or adaptive item used for making a connection

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E0251F304E1-003 rotating borer

71EAD388173EE-003 driver

71E01A082DE72-002 disk broach

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71EF07E037025-003 slotting cutter

71EAD3871D313-003 converter

71EF07DFC283C-003 double half side mill

71EEBDADB63BE-002 extender

71E01A0540BE7-003 slab mill

71E0250E32A07-002 cylindrical broach

71E01A06BF88D-003 counterbore drill

71EAD385E51A0-002 reducer

71E01A06A8A08-003 countersink drill

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71E01D92C41E8-003 002 NR2S..4.6

Real measure mm

connection bore diameter (deprecated) conbordia DCB

Diameter of the hole in the centre of a tool or adaptive item used for making a connection

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05EA320-003 half side mill

71E0251F304E1-003 rotating borer

71EAD388173EE-003 driver

71E01A082DE72-002 disk broach

71EF07E037025-003 slotting cutter

71EAD3871D313-003 converter

71EF07DFC283C-003 double half side mill

71EEBDADB63BE-002 extender

71E01A0540BE7-003 slab mill

71E0250E32A07-002 cylindrical broach

71E01A06BF88D-003 counterbore drill

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71EAD385E51A0-002 reducer

71E01A06A8A08-003 countersink drill

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

727212846FDA5-003 001 X 2

String

connection code form output side concodforoutsid CCFOP

Identifier for the more specific design of a connection on the output side on driven adaptive items

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD388173EE-003 driver

726E3E84DD902-003 001 X..2

String

connection code form type machine side concodfortypmacsid CCFMS

Identifier for the more specific design of a connection on the machine side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

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71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

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71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E3E8558953-003 001 X 2

String

connection code form type workpiece side concodfortypworsid CCFWS

Identifier for the more specific design of a connection on the workpiece side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

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71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

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71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D102AE3B252-003 002 X 14

String

connection code machine side concodmacsid CCMS

Identifier for the capability to connect a component of a cutting tool to another component on the machine side

NOTE 1 Example for a cylindrical shank conforming to ISO 3338-2 with shank diameter of 25 mm, with internal coolant would be: ZYL025010M1EXT.

NOTE 2 Two items can be connected together if they have the same value of the code.

NOTE 3 The connection code is not applicable to assembly items in general but is applicable to the collet class.

REMARKS: The value of a code shall be constructed from the combination of the item feature class short name and the values of connection size code, variant, connection unit's basis, coolant supply property and form type.

Illustration reference: Figure F.3, Figure F.5, Figure F.6, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.17, Figure F.18, Figure F.19, Figure F.20, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.35, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.43, Figure F.44, Figure F.45, Figure F.46, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.55, Figure F.56, Figure F.57, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.87, Figure F.88, Figure F.89, Figure F.90, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.122, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138,

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Figure F.139, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

726E3E82E53A6-003 001 X 3

String

connection code type machine side concodttypmacsid CCTMS

Identifier for the main type of a connection on the machine side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

727212869DDE2-003 001 X 3

String

connection code type output side concodtypoutsid CCTOS

Identifier for the main type of a connection on the output side of a driven adaptive item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD388173EE-003 driver

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726E3E83D7357-003 001 X 3

String

connection code type workpiece side concodtypworsid CCTWS

Identifier for the main type of connection on the workpiece side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

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71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D102AE8A5A9-003 002 X 14

String

connection code workpiece side concodworsid CCWS

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Identifier for the capability to connect a component to another component of a cutting tool on the workpiece side

NOTE 1 Example for a collet chuck adaptor fitting a collet conforming to DIN 6499 with a size of 16 mm without coolant would be: SZD016002M0INT.

NOTE 2 Two items can be connected together if they have the same value of the code.

NOTE 3 The connection code is not applicable to assembly items in general but is applicable to the collet class.

REMARKS: The value of a code shall be constructed from the combination of the item feature class short name and the values of connection size code, variant, connection unit's basis, coolant supply property and form type.

Illustration reference: Figure F.66.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71DF8C37D9115-003 connection interface feature

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71E0251F304E1-003 rotating borer

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71EDD2C17746F-003 002 NR1..4

Integer

connection count workpiece side concouworsid CCONWS

Effective numbers of connections that can participate in a connection between any component of a cutting tool, except cutting items and assembly items, on the workpiece side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71EAD3871D313-003 converter

71EBDBF5060E6-003 002 NR2S..4.6

Real measure mm

connection diameter machine side condiamacsid DCONMS

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Nominal dimension of the diameter of a cylindrical portion of a tool item or an adaptive item on the side of the item that points toward the machine side and can participate in a connection

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.18, Figure F.19, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.35, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.43, Figure F.44, Figure F.45, Figure F.46, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.87, Figure F.88, Figure F.89, Figure F.90, Figure F.91a, Figure F.92a, Figure F.93a, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.110a, Figure F.112a, Figure F.113a, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.122, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

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71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E0251F304E1-003 rotating borer

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72807E35DE582-003 001 NR2S..4.6

Real measure mm

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connection diameter maximum workpiece side condiamaxworsid DCONXWS

Dimension of the diameter of a cylindrical portion of a tool item or an adaptive item on the side of the item that points toward the workpiece and can participate in a connection

NOTE See ISO/TS 13399-60.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

72807E3576AAE-003 001 NR2S..4.6

Real measure mm

connection diameter minimum workpiece side condiaminworsid DCONNWS

Smallest dimension of the diameter of a cylindrical portion of a tool item or an adaptive item on the side of the item that points toward the workpiece and can participate in a connection

NOTE See ISO/TS 13399-60.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

7272379A5F325-003 001 NR2S..4.6

Real measure mm

connection diameter workpiece side condiaworsid DCONWS

Nominal dimension of the diameter of a cylindrical portion of a tool item or an adaptive item on the side of the item that points toward the workpiece and can participate in a connection

Illustration reference: Figure F.66.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

726E3E863255C-003 001 NR2S..4.6

Real measure mm

connection protruding length conprolen LPCON

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Dimension of the length of a connection that is visible while the item is connected to a cutting tool or is fixed on to a machine tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

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71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF298A76B66-003 002 X 17

String

connection retention knob thread size conretknothrsiz CRKS

Identifier for the size of the thread size of the device that pulls a cutting tool into the machine tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71EAD3871D313-003 converter

71E01A081855D-003 tapered broach

71EEBDADB63BE-002 extender

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71FC193318002-003 002 X 17

String

connection size code (deprecated) consizcod CZC

Identifer for the size of the connection between items of a cutting tool, excluding cutting items

NOTE The connection to the machine tool is included.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

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71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

727C2BCCC5596-003 001 X 4

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String

connection size code machine side consizcodmacsid CZCMS

Identifier for the size of the connection on the machine side of an item between items of a cutting tool, excluding cutting items

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

72807E36B6C92-003 001 X..4

String

connection size code maximum workpiece side consizcodmaxworsid CZCXWS

Identifier for the greatest size of the connection on the workpiece side of an item between items of a cutting tool, excluding cutting items

NOTE See ISO/TS 13399-60.

REMARKS: Property shall be used for the creation of a connection range code, describing the upper limit of the range.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

72807E366B041-003 001 X..4

String

connection size code minimum workpiece side consizcodminworsid CZCNWS

Identifier for the smallest size of the connection on the workpiece side of an item between items of a cutting tool, excluding cutting items

NOTE See ISO/TS 13399-60.

REMARKS: Property shall be used for the creation of a connection range code, describing the lower limit of the range.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

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727C2BCBC1684-003 001 X 4

String

connection size code workpiece side consizcodworsid CZCWS

Identifier for the size of the connection on the workpiece side of an item between items of a cutting tool, excluding cutting items

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

727BE508AAB46-003 001 X30

String

connection thread nominal size machine side conthrnomsizmacsid THSZMS

Complete description of a thread on the machine side of a connection that is used for a detachable connection of two components to create a complete tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

727BE5090F9AA-003 001 X 30

String

connection thread nominal size workpiece side conthrnomsizworsid THSZWS

Complete description of a thread on the workpiece side of a connection that is used for a detachable connection of two components to create a complete tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

7280553C9A894-003 001 X 1

Enumeration of codes

connection unit base precision machine side conunibaspremacsid CUBPMS

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Label for the coded range of a connection size code to identify the connection diameter on the machine side

NOTE See ISO/TS 13399-60.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

729A91AC5433F-001 001 X 1

Enumeration of codes

connection unit base precision maximum workpiece side conunibaspremaxworsid

CUBPXWS

Label for the maximum coded range of a connection size code to identify the connection diameter on workpiece side

NOTE See ISO/TS 13399-60.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

729A91ABE3690-001 001 X 1

Enumeration of codes

connection unit base precision minimum workpiece side conunibaspreminworsid

CUBPNWS

Label for the minimum coded range of a connection size code to identify the connection diameter on workpiece side

NOTE See ISO/TS 13399-60.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

7280605902AD1-003 001 X 1

Enumeration of codes

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connection unit base precision workpiece side conunibaspreworsid CUBPWS

Label for the coded range of a connection size code to identify the connection diameter on workpiece side

NOTE See ISO/TS 13399-60.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71ED6E16D5978-003 002 X 1

Enumeration of codes

connection unit basis conunibas CUB

Label to identify the system of units in which the design of the connection is defined

REMARKS: The C value of this property is used to identify the design basis of tapered shanks such as Steep taper.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9EE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

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71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

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71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D087D97FCE3-003 002 NR2S..4.6

Real measure mm

contact surface diameter machine side consurdiamacsid DCSFMS

Diameter of the surface on the machine side forming the contact between a tool item and an adaptor item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

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71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71EAD3871D313-003 converter

71EEBDADB63BE-002 extender

71E01A0EAF067-003 system tool

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBB342CC751-003 002 B 1

Boolean type

coolant supply property coosuppro CSP

Identification for whether a tool item, an adaptive item or a cutting item has a coolant supply

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

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71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

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71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E2FCE0826C-003 001 NR2S..4.6

Real measure mm

counterbore depth connection bore coudepconbor LCCB

Depth of the cylindrical counterbore of a hole in the centre of a tool item or adaptive item that is able to take in a head of a screw or a mandrel that carries drive keys to form a connection

Illustration reference: Figure F.35, Figure F.36, Figure F.37, Figure F.43, Figure F.44, Figure F.45, Figure F.82, Figure F.83, Figure F.84, Figure F.85.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

726E2FCF353DE-003 001 NR2S..4.6

Real measure mm

counterbore diameter connection bore coudiaconbor DCCB

Diameter of the cylindrical enlarged portion of a hole in the centre of a tool item or adaptive item that is able to take in a head of a screw to fasten a connection

Illustration reference: Figure F.35, Figure F.36, Figure F.37, Figure F.44, Figure F.45, Figure F.82, Figure F.83, Figure F.84, Figure F.85.

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

726E2FCD1A3C4-003 001 NR2S..4.6

Real measure mm

countersink angle csunkang SIGCSK

Angle between the cutting edge of a centre drill style B that is placed at the transition of cutting diameter 1 and the step included angle at the last step and the same cutting edge rotated by 180 degrees around the tool item axis

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

72719B2427AED-003 001 X 30

String

cutting data association code cutdatasscod CDAC

Label that provides an association to cutting data tables

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

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71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

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71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72719B234F9E0-003 cutting data association

72719B23A5008-003 001 B 1

Boolean type

cutting data association property cutdatasspro CDAP

Identifier whether an item has a cutting data association

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

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71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

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71E01A07D2A1B-003 tapered reamer

72719B234F9E0-003 cutting data association

71CEAEBD5A66A-003 003 NR2..3.3

Real measure mm

cutting depth maximum cutdepmax CDX

Maximum penetration of a cutting edge on the first infeed motion measured parallel to the feed direction

Illustration reference: Figure F.35, Figure F.36, Figure F.38, Figure F.39, Figure F.40, Figure F.42, Figure F.46, Figure F.53, Figure F.54, Figure F.71, Figure F.84, Figure F.86, Figure F.88, Figure F.89, Figure F.90, Figure F.94, Figure F.95, Figure F.101, Figure F.102, Figure F.108, Figure F.110a, Figure F.110b.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DDA089C8D1E-003 specific profile insert

71D084653E57F-003 002 NR2S..4.6

Real measure mm

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cutting diameter cutdia DC

Diameter of a circle created by a cutting reference point revolving around the tool axis of a rotating tool item

NOTE The normal of the machined peripheral surface points towards the axis of the cutting tool.

Illustration reference: Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.18, Figure F.19, Figure F.20, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.32, Figure F.33, Figure F.34, Figure F.35, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.43, Figure F.44, Figure F.45, Figure F.46, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.87, Figure F.88, Figure F.89, Figure F.90, Figure F.114, Figure F.115, Figure F.116, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139, Figure F.150.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

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71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

72550E1361C6C-003 drilling insert

71E01A082DE72-002 disk broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71DDA089C8D1E-003 specific profile insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D0846545C4E-003 002 NR2S..4.6

Real measure mm

cutting diameter internal cutdiaint DCIN

Internal cutting diameter of a circle created by a cutting reference point revolving around the tool axis of a rotating tool item

NOTE The normal of the machined peripheral surface points away from the axis of the cutting tool.

Illustration reference: Figure F.63, Figure F.64, Figure F.81, Figure F.117, Figure F.122.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71E01A0600702-003 ring mill

71E01A07ECCCF-001 profile reamer

71E01A0769982-002 trepanning drill

71D0846570977-003 002 NR2S..4.6

Real measure mm

cutting diameter internal maximum cutdiaintmax DCINX

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Largest adjustable internal diameter of a circle created by a cutting reference point revolving around the tool axis of a rotating tool item

NOTE The normal of the machined peripheral surface points away from the axis of the cutting tool.

Illustration reference: Figure F.51, Figure F.52, Figure F.142, Figure F.144, Figure F.146.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71E01A0600702-003 ring mill

71E01A07ECCCF-001 profile reamer

71E01A0769982-002 trepanning drill

71D084655A2F7-003 002 NR2S..4.6

Real measure mm

cutting diameter internal minimum cutdiaintmin DCINN

Smallest adjustable internal diameter of a circle created by a cutting reference point revolving around the tool axis of a rotating tool item

NOTE The normal of the machined peripheral surface points away from the axis of the cutting tool.

Illustration reference: Figure F.51, Figure F.52, Figure F.142, Figure F.144, Figure F.146.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71E01A0600702-003 ring mill

71E01A07ECCCF-001 profile reamer

71E01A0769982-002 trepanning drill

71D084656CE32-003 002 NR2S..4.6

Real measure mm

cutting diameter maximum cutdiamax DCX

Largest diameter of a circle created by a cutting edge revolving around the tool axis of a rotating tool item

NOTE The normal of the machined peripheral surface points towards the axis of the cutting tool.

REMARKS: Also used for adjustable tool items and for those tool items having a range of cutting diameters.

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Illustration reference: Figure F.13, Figure F.20, Figure F.25, Figure F.28, Figure F.29, Figure F.30, Figure F.32, Figure F.34, Figure F.43, Figure F.48, Figure F.49, Figure F.50, Figure F.55, Figure F.56, Figure F.57, Figure F.69, Figure F.72, Figure F.75, Figure F.79, Figure F.82, Figure F.139, Figure F.141, Figure F.143, Figure F.145, Figure F.147, Figure F.148, Figure F.149, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71E01A082DE72-002 disk broach

71E01A081855D-003 tapered broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D0846556288-003 002 NR2S..4.6

Real measure mm

cutting diameter minimum cutdiamin DCN

Smallest diameter of a circle created by a cutting edge revolving around the tool axis of a rotating tool item

NOTE The normal of the machined peripheral surface points towards the axis of the cutting tool.

REMARKS: Also used for adjustable tool items and for those tool items having a range of cutting diameters.

Illustration reference: Figure F.26, Figure F.44, Figure F.45, Figure F.48, Figure F.49, Figure F.50, Figure F.55, Figure F.56, Figure F.57, Figure F.70, Figure F.89, Figure F.126, Figure F.138, Figure F.141, Figure F.143, Figure F.145, Figure F.147, Figure F.148, Figure F.149, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

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71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71E01A082DE72-002 disk broach

71E01A081855D-003 tapered broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DF1527D828C-003 003 X 17

String

cutting diameter size code cutdiasizcod DCSC

Identifier for the cutting diameter of a tool item

REMARKS: For example, drill sizes can be identified by either letters or numbers

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0608FE4-002 twist drill

71E01A07D2A1B-003 tapered reamer

71DCD0033973E-003 002 NR1S..4

Integer

cutting edge centre count cutedgcencou ZNC

Number of cutting edges that are able to cut across the center of the tool item axis

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

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71DD6C95DA49B-003 003 NR2S..4.6

Real measure mm

cutting edge length cutedglen L

Theoretical length of the cutting edge of a cutting item over sharp corners

Illustration reference: Figure F.114, Figure F.115, Figure F.118, Figure F.119, Figure F.123.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71DD6C9466F30-001 cutting edge major

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E3AABCE55D-003 001 X 16

String

cutting edge sequence cutedgseq CESEQ

Identifier for the number of effective cutting edges on each cutting diameter

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REMARKS: Based on the property "step count", the value shall be as follows: 1. step count = 1 the value shall be e.g. "5" for five cutting edges. 2. step count = 5 the value shall be e.g. "3".

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DCD00CBBC2A-003 002 NR1S..4

Integer

cutting end count cutendcou NCE

Label that defines whether a tool item has cutting capabilities on one or both ends

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71E01A073CA28-003 centre drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DF8C52B8926-003 002 NR1S..4

Integer

cutting item count cutitecou CICT

Number of inserts (or edges for solid tool) per location (LOC)

REMARKS: The sum of CICT for all LOCATION gives the total number of cutting items of the tool.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

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71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

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71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF299287FD3-003 002 NR2S..4.6

Real measure mm

cutting length at minimum bore diameter cutlenatminbordia CLMBD

Distance on a cutting tool that defines how far the tool can cut from the start of the minimum bore diameter of a workpiece

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

72719B101A1FD-003 001 NR1S..1

Enumeration of integers

cutting part design style code cutpardesstycod CPDSC

Identifier for the more specific design of the cutting part of a tap

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

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71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DF15283219C-003 002 X 17

String

cutting pitch density cutpitden CPDN

Identifier for the density of inserts in a cutter

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DF152D8CF7D-003 002 B 1

Boolean type

cutting pitch differential cutpitdif CPDF

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Identifier for if the spacing of a sequence of cutting edges is not equal

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71FD1E2EDD973-003 002 NR2S..4.6

Real measure mm

cutting point translation X-direction cutpoitraxdir CTX

Difference in the direction of the X-axis between the cutting reference point and the theoretical sharp point

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

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71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

71FD1E2F66B38-003 002 NR2S..4.6

Real measure mm

cutting point translation Y-direction cutpoitraydir CTY

Difference in the direction of the Y-axis between the cutting reference point and the theoretical sharp point

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

7224CCDD587CF-003 non replaceable cutting item

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71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

71D07569F8BC3-003 002

Level mm

cutting width maximum cutwidmax CWX

Maximum width of the cut made by a particular combination of a tool item and cutting item(s)

REMARKS: This is a property of the tool item.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A082DE72-002 disk broach

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71D1066F279AD-002 cartridge

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71D0756A28B42-001 001

Level mm

cutting width minimum cutwidmin CWN

Minimum width of the cut made by a particular combination of a tool item and cutting item(s)

REMARKS: This is a property of the tool item.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A082DE72-002 disk broach

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71D1066F279AD-002 cartridge

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71CED03D70452-003 002 B 1

Boolean type

damping property dampro DPC

Ability to reduce the amplitude of vibrations

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A05D27A8-003 end mill

71EAD3871D313-003 converter

71EEBDADB63BE-002 extender

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71CF29869CA0F-003 002 B 1

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Boolean type

data chip provision datchipro DCP

Indication of provision for a data chip on a tool item or an adaptive item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

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71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D07576C0558-003 002

Level mm

depth of cut maximum depofcutmax APMX

Maximum engagement of the cutting edge or edges with the workpiece measured perpendicular to the feed motion

NOTE See ISO 3002-3:1984, 6.1.1.

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Illustration reference: Figure F.23, Figure F.24, Figure F.25, Figure F.26 ,Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.37, Figure F.43, Figure F.44, Figure F.45, Figure F.47, Figure F.68, Figure F.69, Figure F.70, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.87, Figure F.88, Figure F.89, Figure F.90, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71DD700BFD9B9-003 grooving parting profile

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71CF2993DC583-001 001 X 1

Enumeration of codes

design configuration style code desconstycod DCC

Identifier for the composition and features of a tool item

NOTE The values are constrained to be those in the source document

REMARKS: See ISO 5609-1:2012, 4.1.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

728ECFD4A0629-003 001 X40

String

designation des DES

Code of an item that describes the item without material specification

NOTE See ISO/TS 13399-2, ISO/TS 13399-4, ISO/TS 13399-5 and this document, and e.g. ISO 1832, ISO 11529.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

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71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71CE7A795C05C-003 assembly item type

71EC56BBA9A2E-001 sleeve

71FAD519268DE-001 centre pin

71EC56BA16ACB-001 spring

71EC56E106606-001 flat wire compression spring

71EC56E165BC7-001 cup spring

71EC56E223664-001 leaf spring

71EC56E04199D-001 helical coil spring

71EC56E0D4D19-001 helical disk spring

71EC56E1C4C7D-001 gas spring

71EC56BD5DCD8-001 insert shim

71ED80DF6F976-002 insert clamp

71FAD54E5A5BF-001 floating wedge clamp

71FAD54E002D6-001 cantilever clamp

71FAD54EABA17-001 wedge clamp

71FAD54E2FE26-001 lever top clamp

72719B3479E49-003 retention knob

727CE214BF281-003 nut

727CE216A3092-001 adjustment nut

727CE21C733E3-001 lock nut

71EC56B608ADC-001 insert wedge

71ED80E1EC9F6-001 nozzle

71EC56BC68ED7-001 bearing

71EC56B51596E-001 driving key

71EC56B58A355-001 driving ring

71EC56BAC1A7E-001 insert clamping system

71EC56D6D0499-001 cantilever clamping

71EC56D828198-001 wedge clamping

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71EC6588A8C9E-001 lever insert clamping

71EC56D8A655A-001 insert screw clamping

71EC56D7601AD-001 floating wedge clamping

71EC56D97E8B0-001 deflection screw clamping

71EC56D908782-001 eccentric screw clamping

71FAD547E744B-001 integrated clamping

71EC56D71B815-001 lever top clamping

71EC56BA2E64E-001 screw thread lining

71EC61E259139-001 bush

71EC56B5B6465-001 pin

71EC5A6CFD68B-001 spacer

71EAD70F1B95A-001 nest

71ED80DFB6371-001 insert lever

71EC5A6E85D77-001 sealing ring

71EC5A6E9F6F0-001 retaining ring

71FA4B678C52A-002 externally threaded fastener component

71ED798F61BC2-002 insert screw

71FAE07C0A4A6-001 differential screw

71FAE07B90EEC-002 eccentric screw

71FC030E04050-002 deflection screw

71FAE07BCAC80-002 lever screw

71FC81BA3ECE9-002 shim screw

71ED80E62E75A-001 coolant deflector

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

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71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

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71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72C4A72599564-001 001 X..4

String

diameter hole tolerance class diaholtolcla DHTOLC

Class for the tolerance of the hole, which is achievable

NOTE See this document and ISO/TS 13399-4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E0251F304E1-003 rotating borer

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72C4A7255D6CA-001 001 NR2S..3.3

Real measure mm

diameter hole tolerance lower diaholtollow DHTOLL

Lower limit for the tolerance of the hole, which is achievable

NOTE Applicable to this document.

REMARKS: The information is given for selection purposes, in reference to cutting diameter DC.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E0251F304E1-003 rotating borer

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72C4A7257B716-001 001 NR2S..3.3

Real measure mm

diameter hole tolerance upper diaholtolupp DHTOLU

Upper limit for the tolerance of the hole, which is achievable

NOTE Applicable to this document.

REMARKS: The information is given for selection purposes, in reference to cutting diameter DC.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E0251F304E1-003 rotating borer

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E2FC5A2BA5-003 001 NR1S..2

Integer

die chip hole count diechiholcou DCHC

Number of chip removal holes on a thread cutting die

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

726E2FC4858CC-003 001 NR2S..4.6

Real measure mm

die chip hole diameter diechiholdia DDCH

Diameter of an open space of a thread cutting die that can carry the chips during the cutting process

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

726E2FC51A8C7-003 001 NR2S..4.6

Real measure mm

die chip hole diameter circle diechiholdiacir DDCHC

The diameter of a circle on which the centers of die chip holes are placed

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

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71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71D0793ECEF9A-003 002 NR2S..4.6

Real measure mm

dimension a on lf dimalf LFA

Dimension from the cutting reference point in the direction of the lf dimension to the plane perpendicular to the feed direction and tangential to the secondary corner of the main cutting edge

Illustration reference: Figure F.91a, Figure F.91b, Figure F.97, Figure F.99, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF299431CAC-003 002 NR2S..4.6

Real measure mm

dimension a on wf dimawf WFA

Dimension from the cutting reference point in the direction of the f dimension to the plane perpendicular to the feed direction and tangential to the secondary corner of the main cutting edge

Illustration reference: Figure F.91a, Figure F.91b, Figure F.97, Figure F.99, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

726E3AAAF99A3-003 001 NR2S..4.6

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Real measure mm

distance reference point PK disrefpoipk LDC

Dimension measured from the most front point of the cutting edge to the point PK which defines the cutting diameter

NOTE The distance to the reference point PK is determined as the distance of the planes "LDCP" and "HEP". The reference coordinate system "CIP" is transferred onto the plane "LDCP". The properties "L", "LPR" and "OAL" are referenced to "HEP".

Illustration reference: Figure F.115, Figure F.120.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A07D2A1B-003 tapered reamer

71EAC81AD9AE1-003 002 X 17

String

drill back taper dribactap DBT

The reduction in diameter from the outer corners towards the shank expressed by the ratio of the reduction in diameter and the length of measurement

NOTE See ISO 5419.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0608FE4-002 twist drill

71EAC81A64368-002 regrinding

727CE21EEC94F-001 003 NR2S..4.6

Real measure mm

drilling part length driparlen LDP

Distance from the front point or chisel edge of the tool item to the point where the thread cutting part starts, measured parallel to the tool axis

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

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71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71D08096F930C-003 002 NR2S..3.6

Real measure degree of angle

drive angle driang DRVA

Angle between the driving mechanism locator on a tool item and the main cutting edge

Illustration reference: Figure E.4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

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71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71E0306423B2A-003 002 NR1S..1

Integer

drive count dricou DRVCT

Number of drives that are on an assembly item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

72724DE6DABFF-003 001 NR2S..4.6

Real measure mm

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drive length drilen DRVL

Length of the portion of an item on its least position that is used to move the item or parts of the item

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

72724DE725029-003 001 X..20

String

drive size code drisizcod DRVSC

Identifier for the non measure size of the portion of an item that is used to lock or unlock the item

Illustration reference: Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

7272127CBD7B8-003 feed-out tool, machine operated

71EAC49F75413-003 002 B 1

Boolean type

drop head design droheades DHD

Identifier for a dropped head design of a tool item or an adaptive item for upside down machining operations

REMARKS: 0 = no dropped head design 1 = dropped head design

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

72724DE823AF8-003 001 B 1

Boolean type

end chamfer endcha EC

Indicator for if an item has a chamfer at the rear backing of the head

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

72724DE89D232-003 001 NR2S..3.3

Real measure degree of angle

end chamfer angle endchaang ECA

Angle of the chamfer on the head of a tool item measured between the negative z axis and the chamfer

Illustration reference: Figure F.94, Figure F.95, Figure F.107, Figure F.109.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

72724DE99F0D4-003 001 NR2S..4.6

Real measure mm

end chamfer distance endchadis ECD

Projected width of the chamfer on the head of a tool item measured from the rear backing surface parallel to the functional width

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Illustration reference: Figure F.94, Figure F.95, Figure F.107, Figure F.109.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71DCD00239812-003 002 NR1S..4

Integer

face effective cutting edge count faceffcutedgcou ZEFF

Number of cutting edges that are effective on the face of a tool item

NOTE Used also for inside mounted inserts that do not produce a diameter

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FF4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

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71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DCD0029BBE7-003 002 NR1S..4

Integer

face mounted insert count facmouinscou ZNF

Total number of inserts mounted on the face of the tool item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

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71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E372B58657-003 001 NR2S..4.6

Real measure mm

flat width (deprecated) flawid FW

Dimension of the part of the cutting profile that is perpendicular to the feed direction and cuts the ground face of the profile

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05D27A8-003 end mill

71EF07E037025-003 slotting cutter

71DCCFEBB883E-003 002 NR1S..4

Integer

flute count flucou NOF

Number of chip removal paths on an item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

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71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71EAC8210DF36-003 003 NR2S..4.6

Real measure mm

fluted land width flulanwid FLW

Distance between the leading edge of the margin and the heel

NOTE See ISO 5419.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

72550E1361C6C-003 drilling insert

71FAE7AAE8247-003 core drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71EAC81A64368-002 regrinding

71E01A067F73C-002 step drill

71EBBE32903BD-003 002 X 17

Enumeration of codes

form type fortyp FMT

Identifier for whether a connection surface is internal or external

NOTE For the internal case, the normal of the connection surface points towards the Z-axis for machine side connections or towards the WZ-axis for workpiece side connections. For the external case, the normal of the connection surface points away from the Z-axis for machine side connections or away from the WZ-axis for workpiece side connections.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DE8C37D9115-003 connection interface feature

7272379AD9C85-003 001 NR2S..4.6

Real measure mm

functional diameter fundia DFC

Dimension on tapered connections that determines the main functional diameter for the ability to mount connections together

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71DCD39338974-003 002 NR2S..4.6

Real measure mm

functional length funlen LF

Distance from the gauge plane or from the end of the shank, if a gauge plane does not exist, to the cutting reference point determined by the main function of the tool on tool item types or to the gauge plane on the workpiece side or the seating surface on adaptive items, if a gauge plane does not exist

NOTE The functional length is multiplicated on stepped tools.

REMARKS: The positioning of LF can be different for cylindrical shanks according to ISYC 307-01 (cylindrical shanks), ISYC 307-02 (weldon shanks) and cylindrical shanks with planar contact surface.

Illustration reference: Figure E.1, Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.7, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.18, Figure F.20, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.43, Figure F.44, Figure F.45, Figure F.46, Figure F.47, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.55, Figure F.56, Figure F.57, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.88, Figure F.90, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.122, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139, Figure F.140, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

72550E1361C6C-003 drilling insert

71E01A05104CF-003 turn

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DDA089C8D1E-003 specific profile insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBC1EB8456A-003 002 NR2S..4.6

Real measure mm

functional length minimum funlenmin LFN

Least distance from the gauge plane or from the end of the shank, if a gauge plane does not exist, to the cutting reference point determined by the main function of the tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71EAD388173EE-003 driver

71EAD3871D313-003 converter

71EEBDADB63BE-002 extender

71E01A0E85121-003 prismatic tool holder

71EAD385E51A0-002 reducer

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71D078F5BEDBE-003 003 NR2S..4.6

Real measure mm

functional length secondary funlensec LFS

Distance from the gauge plane or from the end of the shank, if a gauge plane does not exist, to the second cutting corner on tool item types or to the second gauge plane on the workpiece side or the second seating surface on adaptive items, if a gauge plane does not exist

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF29984CDA7-003 002 NR2S..4.6

Real measure mm

functional width funwid WF

Distance between the cutting reference point and the rear backing surface of a turning tool or the axis of a boring bar

NOTE See ISO 5609-1 and ISO 5610-1.

Illustration reference: Figure F.47, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

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71EAD385E51A0-002 reducer

71DDA089C8D1E-003 specific profile insert

71D193F495583-003 002 NR2S..4.6

Real measure mm

functional width 2 funwid2 WF2

Distance between the cutting reference point and the front seating surface of a turning tool

NOTE See ISO 5608:2012, Clause 4.

Illustration reference: Figure E.2.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF299874B1E-003 002 NR2S..4.6

Real measure mm

functional width secondary funwidsec WFS

Distance between the YZ-plane and a plane tangential to the secondary cutting corner as determined by the main function of the tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

729A91AB4451E-001 001 X 3

Enumeration of codes

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grade application main graappmai GRDAPPM

Recommended value of hard cutting material range

NOTE See this document and ISO/TS 13399-2.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

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71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

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71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

729A91AAEB181-001 001 X 3

Enumeration of codes

grade application range max graappranmax GRDAPRX

Maximum value of hard cutting material application range

NOTE See this document and ISO/TS 13399-2.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

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71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

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71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

729A91A635147-001 001 X 3

Enumeration of codes

grade application range min graapprangmin GRDAPRN

Minimum value of hard cutting material application range

NOTE See this document and ISO/TS 13399-2.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

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72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

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71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

729A919BF211A-001 001 X 2

Enumeration of codes

grade identification graide GRDID

NOTE See this document and ISO/TS 13399-2.

REMARKS: Identification letter from ISO 513.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

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71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

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71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

729A919C3D239-001 001 X 1

Enumeration of codes

grade main application group identification letter gramaiappgroidelet GRDMAPID

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Group application of hard cutting materials

NOTE See this document and ISO/TS 13399-2.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

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71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

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71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E3EA930D39-003 001 X 10

String

grade manufacturers designation gramandes GRDMFG

Identifier for the manufacturer's designation of the basic material of the cutting part of a tool or the replaceable insert

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

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71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

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71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E3EA8A9ED6-003 001 X 10

String

grade standard designation main application grastadesmaiapp GRDPRIO

Identifier for the designation of the basic material of the cutting part of a tool or the replaceable insert that will be suitable for the main application

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

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71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF298FB10E4-003 002 NR2S..4.6

Real measure mm

groove depth minimum bore diameter grodepminbordia GDMB

Maximum groove depth that can be cut at the minimum bore diameter

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71EF07E083383-003 threading grooving mill

71EE070696F08-003 002 B 1

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Boolean type

guide element property guielepro GEP

Identifier for the existence of guide elements supporting the operation of the tool item or adaptive item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A065F635-002 deep hole drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

7280553614076-003 001 NR1S..1

Enumeration of integers

guide pilot property guipilpro GPP

Identifier for the existence of a guide pilot supporting the operation of a tool item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71FAE7AAE8247-003 core drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71CF29872F0AB-003 002 X 1

Enumeration of codes

hand han HAND

Identifier used for the direction of rotation of rotating tool items and rotating adaptive items and for the position of the cutting edge of a stationary tool item and for the position of the connection used for

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a tool item or adaptive item with respect to the axis of the item and for the orientation of a replaceable cutting item with respect to the insert reference system and for the orientation of a clamp

NOTE See ISO 3002-1.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

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71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EC56B608ADC-001 insert wedge

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71FAD54E2FE26-001 lever top clamp

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

71D075730A82B-003 002 NR2S..4.6

Real measure mm

head back offset length heabacofflen HBKL

Dimension of the length of the reinforced portion of the back of the head of a tool item measured from the cutting point

NOTE Mainly applicable to tool items of a rectangular cross section.

Illustration reference: Figure E.9.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71D075731F172-003 002 NR2S..4.6

Real measure mm

head back offset width heabacoffwid HBKW

Dimension of the width of the reinforced portion of the back of the head of a tool item measured from the rear backing surface

NOTE Only applicable to tool items of a rectangular cross section.

Illustration reference: Figure E.9.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

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71D1066F279AD-002 cartridge

71CF298F073D3-002 001 NR2S..4.6

Real measure mm

head bottom offset height heabotoffhei HBH

Distance from the XZ-plane of a tool item or adaptive item to the bottom of the head

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF298F4E487-003 002 NR2S..4.6

Real measure mm

head bottom offset length heabotofflen HBL

Dimension of the length of the reinforced portion of the bottom of the head of a tool item measured from the cutting point

NOTE Only applicable to tool items of a rectangular cross section.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E03062EC034-003 002 NR2S..4.6

Real measure mm

head diameter headia HDD

The distance between two parallel tangents of the circular cross section of a head

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71E01A065F635-002 deep hole drill

71E01A05D27A8-003 end mill

71E01A0EAF067-003 system tool

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

72724DEFB9646-003 001 NR2S..3.3

Real measure degree of angle

head end angle heaendang HEA

Angle of the transition between the head and the shank of a turning tool measured from the tool axis

Illustration reference: Figure F.107, Figure F.109, Figure F.110a, Figure F.110b.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D07574A61E8-003 002 NR2S..4.6

Real measure mm

head length healen LH

Length of the head of a tool item

NOTE See ISO 5610-1:2014, 4.2.

Illustration reference: Figure E.2, Figure F.13, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.29, Figure F.44, Figure F.45, Figure F.68, Figure F.70, Figure F.75, Figure F.79, Figure F.80, Figure F.81, Figure F.91a, Figure F.91b, Figure F.93a, Figure F.93b, Figure F.95, Figure F.96, Figure F.102, Figure F.104, Figure F.106, Figure F.107, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.137, Figure F.138, Figure F.139, Figure F.140.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A065F635-002 deep hole drill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71E01A05D27A8-003 end mill

71D1066F279AD-002 cartridge

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72719B167AE15-003 001 NR1S..4

Enumeration of integers

hole type holtyp HTY

Identifier for the capability to machine or to work in such kind of holes

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

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71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

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71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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726E37249379B-003 001 NR2S..4.6

Real measure mm

hub height hubhei HHUB

Dimension measured along the tool axis between the planar contact surface and that portion of the tool body that is larger than the hub diameter

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71DF5C078FF46-003 002 B 1

Boolean type

hub property hubpro HBP

Possession of a hub by a tool item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71D075754F8A3-003 002 NR2S..3.6

Real measure degree of angle

inclination angle incang LAMS

Angle between the tool rake plane and a plane parallel to the XZ-plane measured in the tool cutting edge plane

NOTE See ISO 3002-1:1982, 5.1.1.3.

Illustration reference: Figure E.8.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

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71DF1538E7378-003 002 NR1S..4

Integer

insert adjustable count insadjcou ZADJ

Number of inserts whose position at their location can be adjusted

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A065F635-002 deep hole drill

71E0251F304E1-003 rotating borer

71FAE7AAE8247-003 core drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A04A8AEC-003 ream

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71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CE7A96BC122-003 002 NR2S..3.6

Real measure degree of angle

insert included angle insincang EPSR

Angle between the major and the minor cutting edges of a cutting item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

71CE7AA1998FF-003 003 NR1S..4

Integer

insert index count insindcou NOI

Maximum recommended times an insert can be mounted until the tool is worn out

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REMARKS: Valid only for indexable tools

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

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71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DDA089C8D1E-003 specific profile insert

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71CE7A9DFA23A-003 002 NR2S..4.6

Real measure mm

insert length inslen INSL

Distance between two sides of an insert when the inscribed circle cannot be used because of the shape of the insert

REMARKS: Measured between the two minor cutting edges.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

71DD700BC8BE2-002 ball nosed profile

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

71CEAEBF2A69F-003 003 X 17

String

insert seat size code insseasizcod SSC

Identifier for the size of a replaceable cutting item and the seat on a tool item or an assembly item

NOTE The value of this identifier depends on both the shape of the cutting item and the size of the cutting item.

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E0251F304E1-003 rotating borer

72550E1361C6C-003 drilling insert

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71D0808DA853B-003 master insert

71EAD70F1B95A-001 nest

71DDA089C8D1E-003 specific profile insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71CE7A9F0C79F-001 001 X 17

Enumeration of codes

insert shape code insshacod SC

Identifier for the shape of a regular insert

NOTE See ISO 1832:2017, 5.1.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

71D0808DA853B-003 master insert

71EAD70F1B95A-001 nest

71CE7A9F5308C-003 002 NR2S..4.6

Real measure mm

insert thickness insthi S

Distance between the bottom and the cutting edge of a replaceable cutting item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

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71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

71DD700BC8BE2-002 ball nosed profile

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

71CE7A9FB11C3-003 002 NR2S..4.6

Real measure mm

insert width inswid W1

Distance between two sides of an insert when the inscribed circle cannot be used because of the shape of the insert

REMARKS: Measured between the two major cutting edges.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

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71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

71DD700BC8BE2-002 ball nosed profile

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D0808DA853B-003 master insert

71DDA089C8D1E-003 specific profile insert

726E2FCC0EC78-003 001 NR2S..4.6

Real measure mm

interference cutting diameter intcutdia DCINTF

Diameter that defines the transition from the non cutting part to the cutting part on the face of a cutting item

Illustration reference: Figure F.11, Figure F.18, Figure F.19, Figure F.21, Figure F.22, Figure F.60, Figure F.61, Figure F.64, Figure F.65, Figure F.81, Figure F.114, Figure F.116, Figure F.117, Figure F.122.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71FAE7AAE8247-003 core drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E424FE9EC2-003 001 X..6

Enumeration of codes

item style code itestycod ISYC

Identifier for the main design or shape of cutting item, tool item or adaptive item

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

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71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

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7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DF5C0761888-003 002 B 1

Boolean type

keyway property keypro KYP

Possession of a keyway by either a tool item or an adaptive item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E0251F304E1-003 rotating borer

71EAD388173EE-003 driver

71EF07E037025-003 slotting cutter

71EAD3871D313-003 converter

71EF07DFC283C-003 double half side mill

71EEBDADB63BE-002 extender

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A0540BE7-003 slab mill

71E01A06BF88D-003 counterbore drill

71EAD385E51A0-002 reducer

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71E01A06A8A08-003 countersink drill

71E01A0769982-002 trepanning drill

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72C4A71C21F24-001 001 NR2S..3.6

Real measure degree of angle

main work angle of tool maiworangtoo MWAT

Counter clockwise rotation around Y-axis at PCS to new orientation for the definition of "main cutting related properties"

NOTE Applicable to this document.

REMARKS: Properties defined at MWAT are CEATC, KAPR, APMX, RMPX.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

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71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF298FDE0EF-003 002 X 17

String

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master insert identification masinside MIID

Identifier for a nominal replaceable cutting item used for defining the dimensions of a cutting tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72C4A723AD619-001 001 NR2S..4.3

Real measure mm

maximum overhang maxove OHX

Maximum recommended distance from CRP on tool item or CSW on adaptive item to actual mounting position to avoid malfunction

NOTE Applicable to this document and ISO/TS 13399-4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

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71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

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71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D07543367C5-003 002 NR2S..4.6

Real measure mm

minimum bore diameter minbordia DMIN

Minimum diameter of a hole where a cutting process can be started without interference between the workpiece and any part of the cutting tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71E01A05B627B-003 face mill

71E0251F304E1-003 rotating borer

71E01A05D27A8-003 end mill

71D1066F279AD-002 cartridge

71E01A0EAF067-003 system tool

72719B2173235-003 001 NR2S..4.6

Real measure mm

mounting coordinate system distance moucoosysdis MCSD

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Displacement of the mxy-plane from that cutting reference point, CRP, that is furthest away from the primary coordinate reference system PCS for tool items or from that coordinate system workpiece side, CSW, that is furthest away from the primary coordinate reference system PCS for adaptive items

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EAC0F064E2D-003 002 NR2S..3.6

Real measure degree of angle

mounting hole angle mouholang MHA

Angle between the XZ-plane and the center of the mounting hole measured in the YZ-plane

NOTE See the ISO 5611 series.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1066F279AD-002 cartridge

71EAC0E9FA4CD-003 002 NR2S..4.6

Real measure mm

mounting hole distance mouholdis MHD

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Dimension measured from the end of a tool item, including any adjusting screw, to the center of the mounting hole

NOTE See the ISO 5611 series.

Illustration reference: Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1066F279AD-002 cartridge

71EAC0EF68BB7-003 002 NR2S..4.6

Real measure mm

mounting hole distance 2 mouholdis2 MHD2

Dimension measured from the center of the first mounting hole to the center of the second mounting hole

NOTE See the ISO 5611 series.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1066F279AD-002 cartridge

71EAC0EFA1BF3-003 002 NR2S..4.6

Real measure mm

mounting hole height mouholhei MHH

Distance from the base of the tool item to the intersection of the center of the mounting hole with the rear backing surface of the tool item

NOTE See the ISO 5611 series.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1066F279AD-002 cartridge

71EAC48EC5DE0-003 002 NR2S..4.6

Real measure mm

neck diameter necdia DN

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Diameter of that portion of a tool item body or adaptive item body that is smaller than the diameters on either side of it

NOTE A neck allows undercutting without interfering with the workpiece.

REMARKS: Used also for the neck diameter on retention knobs.

Illustration reference: Figure F.4, Figure F.5, Figure F.6, Figure F.12, Figure F.23, Figure F.24, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.68, Figure F.71, Figure F.114.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71E01A069566C-002 chamfer drill

72719B3479E49-003 retention knob

71EF07E083383-003 threading grooving mill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBC1E026769-003 002 NR2S..4.6

Real measure mm

neck length neclen LN

Length of that portion of a tool item body or adaptive item body where the diameter is smaller than the diameters on either side of it

NOTE A neck allows undercutting without interfering with the workpiece.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

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71E01A069566C-002 chamfer drill

71EF07E083383-003 threading grooving mill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

727BE4E8EB1D5-003 001 NR2S..4.6

Real measure mm

offset chip flute inner pocket offchifluinnpoc OFFCFIN

Distance of the flute for the inner pocket from the axis of the tool item to the theoretical sharp point of the intersection of the chip flute bottom and the chip flute wall, measured perpendicular to the axis

NOTE If the chip flute crosses the tool axis, the value shall be negative.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

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727BE4E83C904-003 001 NR2S..4.6

Real measure mm

offset chip flute outer pocket offchifluoutpoc OFFCFEX

Distance of the flute for the outer pocket from the axis of the tool item to the theoretical sharp point of the intersection of the chip flute bottom and the chip flute wall, measured perpendicular to the axis

NOTE If the chip flute crosses the tool axis, the value shall be negative.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A05D27A8-003 end mill

71D078EB73E87-003 002 NR2S..4.6

Real measure mm

overall height ovehei OAH

Largest dimension of an item in the direction of the Y-axis that would cause interference, including the master insert and clamping where applicable

Illustration reference: Figure E.1, Figure F.47, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

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71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71EC56E223664-001 leaf spring

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71D078EB7C086-003 002 NR2S..4.6

Real measure mm

overall length ovelen OAL

Largest dimension of an item in the direction of the Z-axis

Illustration reference: Figure E.2, Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.7, Figure F.9, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.18, Figure F.19, Figure F.20, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.43, Figure F.44, Figure F.45, Figure F.46, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.55, Figure F.56, Figure F.57, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.90, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.122, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139, Figure F.140, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

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71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71EC56E106606-001 flat wire compression spring

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

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71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EC56E223664-001 leaf spring

71EBC1E8857BE-003 003 NR2S..4.6

Real measure mm

overall length minimum (deprecated substituted by residual grinding length) ovelenmin

OALN

Least allowable length of an item after regrinding

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

72550E1361C6C-003 drilling insert

71EAC81A64368-002 regrinding

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71CF299257986-003 002 NR2S..4.6

Real measure mm

overall width ovewid OAW

Largest dimension of an item in the direction of the X-axis including the master insert where applicable

Illustration reference: Figure F.47, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

72719B21DF5DB-003 001 NR2S..4.6

Real measure mm

overhang minimum ovemin OHN

Minimum required overhang of a tool item or adaptive item to ensure functionality measured from that cutting reference point, CRP, that is furthest away from the primary coordinate reference system PCS for tool items or from that coordinate system workpiece side, CSW, that is furthest away from the primary coordinate reference system PCS for adaptive items

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

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727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

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71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DF1526AC952-003 003 B 1

Boolean type

overlapping capability ovecap LCB

Identifier for the capability to form assemblies of tool items that position cutting edges in sequence along a line or curve

REMARKS: Normally used for milling cutters.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

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71DCCFF75E485-003 002 NR1S..4

Integer

peripheral effective cutting edge count pereffcutedgcou ZEFP

Number of cutting edges that are effective around the periphery of the tool item

NOTE Used also for outside mounted inserts that produce a diameter.

REMARKS: It influences the calculation of the feed.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DCD00054F65-003 002 NR1S..4

Integer

peripheral mounted insert count permouinscou ZNP

Total number of inserts mounted on the periphery of the cutting profile

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

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71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726F30BC507E3-003 001 NR2S..3.3

Real measure degree of angle

plug angle pluang PLGANG

Angle of that part of the cutting part that is closest to the workpiece, which centers the tool item within the hole, measured between a plane parallel to this part of the cutting edge and the tool item axis

Illustration reference: Figure F.114, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.121, Figure F.122, Figure F.123.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

726E3AAC68D91-003 reaming insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726E372E4FBE9-003 001 NR2S..4.6

Real measure mm

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plug length plulen PLGL

Length of that part of the cutting part that has an uncompleted cutting diameter and gets first into contact with the workpiece to enlarge a premanufactured hole

Illustration reference: Figure F.114, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.121, Figure F.122, Figure F.123.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

726E3AAC68D91-003 reaming insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D08099F1DDC-003 002 NR2S..4.6

Real measure mm

plunge depth maximum pludepmax AZ

That portion of the maximum depth of cut that can be achieved without interference between the tool item and the workpiece when the plunging direction is perpendicular to the primary feed direction

Illustration reference: Figure E.5.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71DCCC5A4FD18-003 002 NR2S..4.6

Real measure mm

premachined hole diameter preholdia PHD

Minimum allowed hole diameter to avoid interference between the tool body and workpiece

NOTE To allow the use of a guide pilot.

Illustration reference: Figure F.11, Figure F.12, Figure F.13, Figure F.18, Figure F.19, Figure F.20, Figure F.21, Figure F.22, Figure F.60, Figure F.61, Figure F.62, Figure F.65, Figure F.114, Figure F.116.

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A069566C-002 chamfer drill

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72719B2280DBA-003 001 NR1S..4

Enumeration of integers

premachined hole type preholtyp PHT

Identifier whether the premachined hole is a blind hole or a through hole

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A065F635-002 deep hole drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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72723798609B4-003 001 NR2S..4.6

Real measure mm

presetting cutting diameter greater precutdiagre DCPSX

Largest preset cutting diameter that shall be used for the machining of a premachined hole

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

7272379692AF6-003 001 NR2S..4.6

Real measure mm

presetting cutting diameter internal, greater precutdiaintgre DCIPSX

Largest preset internal cutting diameter that shall be used for the machining of a pivot or plug

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

7272379632320-003 001 NR2S..4.6

Real measure mm

presetting cutting diameter internal, smaller precutdiaintsma DCIPSN

Smallest preset internal cutting diameter that shall be used for the machining of a pivot or plug

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

72723798D9173-003 001 NR2S..4.6

Real measure mm

presetting cutting diameter smaller precutdiasma DCPSN

Smallest preset cutting diameter that shall be used for the machining of a premachined hole

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

727BE4EA0BC27-003 001 NR2S..3.3

Real measure degree of angle

profile angle proang PRFA

Included angle from the major cutting edge of a tapered tool item to the same cutting edge rotated 180° around the tool axis

Illustration reference: Figure F.29, Figure F.32, Figure F.115, Figure F.120, Figure F.126, Figure F.130, Figure F.131, Figure F.134.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71CEAEBF0C234-003 004 NR2S..3.6

Real measure degree of angle

profile included angle proincang PNA

Angle subtended by the cutting edges of a cutting profile either on irregular insert or tool items

REMARKS: Mainly applies to threading profiles.

Illustration reference: Figure F.39, Figure F.40, Figure F.45, Figure F.133.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13E-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

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71DD700BFD9B9-003 grooving parting profile

71DDA089C8D1E-003 specific profile insert

71DD700C151B5-003 threading profile

71E019EBAE1B1-003 003 NR2S..4.6

Real measure mm

profile radius prorad PRFRAD

Radius of a cutting profile

Illustration reference: Figure F.30, Figure F.34, Figure F.41, Figure F.43, Figure F.128, Figure F.129, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71DD700BFD9B9-003 grooving parting profile

71DDA089C8D1E-003 specific profile insert

71DF8C5D91804-003 002 X 17

String

profile specification prospe PRSPC

Identifier for formal definition of the shape of a working face or cutting profile

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A07ECCCF-001 profile reamer

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71DCD394BB20E-003 002 NR2S..4.6

Real measure mm

protruding length prolen LPR

Distance from the MCS to the furthest point of a tool or adaptive item measured in the negative Z-axis direction

NOTE 1 For tool items the protruding length can be equal to the functional length if the furthest point is the cutting reference point.

NOTE 2 For adaptive items the protruding length can be equal to the functional length if the furthest point is the origin of the coordinate system workpiece side.

Illustration reference: Figure E.4, Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.7, Figure F.8, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.18, Figure F.19, Figure F.20, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.44, Figure F.45, Figure F.46, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.55, Figure F.56, Figure F.57, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.90, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.122, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

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71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

72550E1361C6C-003 drilling insert

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A0EAF067-003 system tool

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DDA089C8D1E-003 specific profile insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

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71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71D078ED2C21E-003 002 X 1

Enumeration of codes

qualified tool code quatoocod QTC

Identifier for a tool with dimensions F and LF or F2 and LF having tolerances of 0.08 mm

NOTE F is equivalent to f1 in the source document.

REMARKS: See ISO 5608:2012, Clause 4.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E85121-003 prismatic tool holder

7280605D97D83-003 001 NR2S..4.6

Real measure mm

radial width of cut radwidofcut AE

Maximum engagement of the cutting edge or edges with the workpiece measured perpendicular to the feed motion and the tool axis

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

726E2FCCB7224-003 001 NR2S..4.6

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Real measure mm

radius counters unk radcou RCSK

Dimension of a curved cutting edge that is able to create radiused countersink of a centre hole

Illustration reference: Figure F.17.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

71CF29990C41F-003 002 NR2S..3.6

Real measure degree of angle

rake angle axial rakangaxi GAMP

Angle between the tool rake plane and a plane parallel to the XZ-plane measured in a plane parallel to the YZ-plane

NOTE See ISO 3002-1:1982, 5.1.2.3.

Illustration reference: Figure E.10, Figure F.46, Figure F.90.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

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71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71CF2998EBD46-003 002 NR2S..3.6

Real measure degree of angle

rake angle normal rakangnor GAMN

Angle between the tool rake plane and a plane parallel to the XZ-plane, measured in a plane whose normal is the major cutting edge of the tool

NOTE See ISO 3002-1:1982, 5.1.2.1.

Illustration reference: Figure E.8.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71D0808F8F719-003 002 NR2S..3.6

Real measure degree of angle

rake angle orthogonal rakangort GAMO

Angle between the tool rake plane and a plane parallel to the XZ-plane measured in a plane perpendicular to the tool cutting edge plane

NOTE See ISO 3002-1:1982, 5.1.2.4.

Illustration reference: Figure E.10, Figure F.101.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF2998A1609-003 002 NR2S..3.6

Real measure degree of angle

rake angle radial rakangrad GAMF

Angle between the tool rake plane and a plane parallel to the XZ-plane measured in a plane parallel to the XY-plane

Illustration reference: Figure E.10.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

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71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

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71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DF1538632D9-002 002

Level degree of angle

ramping angle maximum ramangmax RMPX

Maximum angle for infeeding of a tool item to avoid interference with the workpiece

Illustration reference: Figure E.5.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05B627B-003 face mill

71E01A05D27A8-003 end mill

727BE4DF14C62-003 001 NR2S..4.6

Real measure mm

reduced body diameter length redboddialen LDRED

Length of that part of a tool item that is smaller than the head diameter as well as the system diameter of a system tool item and is located between the tool head and the shank or the flange of the tool item, measured from the cutting reference point

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71DF153A691F2-003 002

Level name_unknown

rotational speed maximum rotspemax RPMX

Maximum rotational speed allowed for an item

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E0251F304E1-003 rotating borer

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

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727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

726F30C2C3EEA-003 001 NR1S..2

Integer

row count rowcou NOR

Number of different rows where cutting edges are arranged to create the maximum cutting depth of the milling tool

REMARKS: The counting starts at the most front cutting edges and shall count every cutting part located on different distances measured from the face.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71CED04867743-003 002 X 1

Enumeration of codes

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row identifier (deprecated) rowide RID

Identifier for whether a tool item has cutting edges on one level or on multiple levels

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

72719B2B51519-003 001 B 1

Boolean type

seal sea SALP

Identifier whether a seal is existing to be used within a coolant, hydraulic or pneumatic system to prevent the media from flowing out of the system

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

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71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

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71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72719B234F9E0-003 cutting data association

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71CF2988A5874-003 003 X 2

Enumeration of codes

shank cross section shape code shacrosecshacod SX

Identifier for the cross sectional shape of the shank of the tool item and the number and location of flats on a cylindrical shank

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

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71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71CF29862B277-003 001 NR2S..4.6

Real measure mm

shank diameter (deprecated) dmm DMM

Dimension of the diameter of a cylindrical portion of a tool item or an adaptive item that can participate in a connection

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

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71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A081855D-003 tapered broach

71E01A0EAF067-003 system tool

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF29883E014-003 002 NR2S..4.6

Real measure mm

shank height shahei H

Dimension of the height of a shank

Illustration reference: Figure E.1, Figure F.91b, Figure F.92b, Figure F.93b, Figure F.94, Figure F.95, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110b, Figure F.111, Figure F.112b, Figure F.113b, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

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71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A0E85121-003 prismatic tool holder

71EAD385E51A0-002 reducer

71CF298870946-003 002 NR2S..4.6

Real measure mm

shank length shalen LS

Dimension of the length of a shank

Illustration reference: Figure E.1, Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.94, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.121, Figure F.122, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

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71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E01A0E85121-003 prismatic tool holder

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF298751FCF-003 002 NR2S..4.6

Real measure mm

shank width shawid B

Dimension of the width of a shank

Illustration reference: Figure E.1, Figure F.91b, Figure F.92b, Figure F.93b, Figure F.94, Figure F.95, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110b, Figure F.111, Figure F.112b, Figure F.113b, Figure F.140.

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A0E9CBA9-003 boring bar

71EAD388173EE-003 driver

71D1066F279AD-002 cartridge

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A0E85121-003 prismatic tool holder

71EAD385E51A0-002 reducer

71FAE074D2EBD-003 003 NR2S..3.6

Real measure degree of angle

shim inclination angle shiincang SHIAN

Angle between the top and bottom surfaces of a shim

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71EBDBF130AE6-003 002 X 17

Enumeration of codes

side sid SIDE

Identifier of a condition to assign the value of a property of a tool item or adaptive item to either the machine side or the workpiece side of the item

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

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71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

72807E1CC4B50-003 001 X..5

String

standard letter stalet STDLET

Label for the identification of different products or different designs of a product that is based on a standard referenced in the property "standard number"

REMARKS: If applicable, the property shall only be used in conjunction with the property "standard number" value. See this document, ISO/TS 13399-2 and ISO/TS 13399-4. For example, ISO 6462 contains forms A, B, C, D for a milling cutter. The valid value for a milling cutter with tenon drive and cutter retaining screw according to ISO 6462 is "B", in connection with the property "standard number" where the entry shall be "ISO6462".

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71D1AA6C8FC75-003 cutting item type

71D1AE120D96E-003 nonequilateral equiangular

71DD68D91938A-001 rectangular insert

71D1AA489FD6E-003 nonequilateral nonequiangular

71DD68D966F52-002 parallelogram insert

71D1AA486FF89-004 equilateral equiangular

71DD68D829217-001 square insert

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71DD68D7CB4FA-001 octagonal insert

71DD68D8446CE-001 triangular insert

71DD68D7A8E5F-001 hexagonal insert

71DD68D80B094-001 pentagonal insert

72550E1361C6C-003 drilling insert

7224CCDD587CF-003 non replaceable cutting item

71D1AE11B8B77-003 equilateral nonequiangular

71DD68D73218C-003 trigon insert

71DD68D301C30-001 rhombic insert

71D1AA6635E76-003 round insert

726E3AAC68D91-003 reaming insert

71DDA089C8D1E-003 specific profile insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

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71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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72719B17B907F-003 001 X 17

String

standard number stanum STDNO

Label for the identification of a standard that is the basis for a product, which is described

REMARKS: For a turing tool style "G" according to ISO 5610-6, the entry shall be "ISO5610-6".

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

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71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DCCC3BD1B96-003 003 NR1S..2

Integer

step count stecou NOS

Total number of different cutting diameters performed by the same tool in the same operation

NOTE Can be used to state the total number of steps when all steps are not described by other properties.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

71E01A07FF350-001 stepped reamer

71E01A067F73C-002 step drill

71DCCC3DFA23A-003 002 NR2S..4.6

Real measure cm

step diameter length stedialen SDL

Length of a portion of a stepped tool that is related to a corresponding cutting diameter measured from the cutting reference point of that cutting diameter to the point on the next cutting edge at which the diameter starts to change

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Illustration reference: Figure F.10, Figure F.15, Figure F.16, Figure F.17, Figure F.21, Figure F.22, Figure F.59, Figure F.62, Figure F.64, Figure F.65, Figure F.116, Figure F.117, Figure F.121, Figure F.122.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

71E01A07FF350-001 stepped reamer

726E3AAC68D91-003 reaming insert

71E01A067F73C-002 step drill

71DCCC47221E0-003 002 NR2S..4.6

Real measure mm

step distance stedis SD

Distance on stepped tools from a plane parallel to the XY-plane through the point on the cutting edge that is furthest from the origin of the coordinate system along the Z-axis to the cutting reference point of the corresponding step diameter

Illustration reference: Figure F.10, Figure F.13, Figure F.15, Figure F.16, Figure F.17, Figure F.20, Figure F.21, Figure F.22, Figure F.59, Figure F.62, Figure F.64, Figure F.65, Figure F.66, Figure F.116, Figure F.117, Figure F.121, Figure F.122.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

71E01A07FF350-001 stepped reamer

726E3AAC68D91-003 reaming insert

71E01A067F73C-002 step drill

71DF151D6E547-003 003 NR2S..3.6

Real measure degree of angle

step included angle steincang STA

Angle between a major cutting edge on a step of a stepped tool and the same cutting edge rotated 180 degrees about its tool axis

NOTE This property is an aggregate property for a multi-stepped tool.

Illustration reference: Figure F.10, Figure F.15, Figure F.16, Figure F.21, Figure F.22, Figure F.59, Figure F.62, Figure F.64, Figure F.65, Figure F.116, Figure F.117, Figure F.121, Figure F.122.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A073CA28-003 centre drill

71E01A07FF350-001 stepped reamer

71E01A067F73C-002 step drill

71EBC1EC0BB22-003 002

Level mm

stock removal maximum storemmax SRX

Greatest thickness of material that can be removed in a reaming operation

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBC1EBC839F-003 002

Level mm

stock removal minimum storemmin SRN

Least thickness of material that can be removed in a reaming operation

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

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71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBC1EC3E8B6-003 002

Level mm

stock removal recommended storemrec SRR

Thickness of material that is recommended to be removed in a reaming operation

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72724DF094129-003 001 NR2S..4.6

Real measure mm

support height suphei HSUP

Distance between the front surface of the basic body or the assembled bridge and the most front part of the tool item including any cutting item that is closest to the workpiece, measured parallel to the tool axis

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Illustration reference: Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.64, Figure F.81, Figure F.117, Figure F.122.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E0251F304E1-003 rotating borer

7272127CBD7B8-003 feed-out tool, machine operated

71EAC496E7425-003 002 B 1

Boolean type

tangentially mounted insert tanmouins TMINS

Identifier whether the replaceable insert is tangentially mounted or not

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

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71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

726E2FCA7ECF0-003 001 NR2S..3.3

Real measure degree of angle

tap center tip angle tapcentipang ANGTCT

Angle of a tapered feature at the face of a threading tool that can be used for centering the tool itself

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

726E2FC624810-003 001 NR2S..4.6

Real measure mm

tap center tip diameter tapcentipdia DTCT

Diameter of a tapered feature at the face of a threading tool that can be used for centering the tool itself

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

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71E01A0A5355D-001 cylindrical tap

726E3EB2AB5CB-003 001 NR2S..4.6

Real measure mm

tap chamfer length tapchalen TCL

Length of that part of the cutting item or tool item that has uncompleted thread pitches that gets first into contact with the workpiece to cut a thread

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

72EBC1EA293DC-003 003 NR2S..4.6

Real measure mm

tap chamfer point diameter tapchapoidia TCPD

Diameter of the cutting edge of the leading end of the chamfered section of a threading tap

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E02C679DC6D-003 003 X 17

Enumeration of codes

tap chamfer style tapchasty TCS

Identifier for the shape of the chamfer of a threading type

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Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

726E3EB308CDD-003 001 X 2

Enumeration of codes

tap set code tapsetcod TAPSC

Label for the kind of a tap and the number of taps belonging to a set

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DF153B4ABCD-003 002 X 1

Enumeration of codes

tap type identifier taptypide TTPID

Identifier for the type of a tapping tool

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71EAC4A2B6544-003 003 NR2S..3.6

Real measure degree of angle

taper angle tapang TA

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Included angle between generatrices in the axial plane section

NOTE See ISO 1119.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71E01A0E34C7F-002 conical tap

71EF07E037025-003 slotting cutter

726F59BDC3B08-003 collet

71E01A081855D-003 tapered broach

71E01A0751456-003 conical drill

71E01A0540BE7-003 slab mill

71E01A07D2A1B-003 tapered reamer

71E01A06A8A08-003 countersink drill

726E3AA6C4A1C-003 001 NR2S..4.6

Real measure mm

taper diameter largest tapdialar DTAX

Largest distance between to parallel tangents on a diameter that is measured at the end of a taper, which is the larger diameter

Illustration reference: Figure F.115, Figure F.120.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A07D2A1B-003 tapered reamer

726E3AA639325-003 001 NR2S..4.6

Real measure mm

taper diameter smallest tapdiasma DTAN

Smallest distance between two parallel tangents on a diameter that is measured at the start of a taper, which is the smaller diameter

Illustration reference: Figure F.115, Figure F.120.

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A07D2A1B-003 tapered reamer

72E24F5BF9F16-001 001 NR2S..3.6

Real measure degree of angle

taper form barrel angle tapforbarang TFBA

Angle which defines the main profile radius (PRFRAD) of the cutting edge

NOTE The first line is between the 2 connection points of the main profile radius which is tangential on its two ends. The first point is the connection between RE (corner radius at front) and PRFRAD (profile radius) and the second point is between PRFRAD (profile radius) and RE_2 (corner radius at start of shank). The second line is symmetrical to the first line along the tool axis.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05EA320-003 half side mill

71E01A05B627B-003 face mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E083383-003 threading grooving mill

71EF07E037025-003 slotting cutter

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71CEAEC02FE3D-003 003 NR2S..3.3

Real

taper gradient tapgra TG

Ratio of the difference between the diameters of two sections to the distance between these sections

NOTE See ISO 1119.

REMARKS: Also known as rate of taper.

Illustration reference: Figure F.31, Figure F.3, Figure F.4, Figure F.5, Figure F.6.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A07D2A1B-003 tapered reamer

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71DD700C151B5-003 threading profile

71EC659C9B3CE-003 003 B 1

Boolean type

tapered tap TPD

Indicator for whether an object becomes smaller in dimensions towards one end

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71E01A0E34C7F-002 conical tap

71EF07E037025-003 slotting cutter

71E01A081855D-003 tapered broach

71E01A0751456-003 conical drill

71E01A0540BE7-003 slab mill

71E01A07D2A1B-003 tapered reamer

71E01A06A8A08-003 countersink drill

72550E426D771-003 003 NR2S..4.6

Real measure mm

thread cutting part length thrcutparlen THL

Distance between the ends of a portion of an item that includes the full and incomplete profile of a thread

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DDA089C8D1E-003 specific profile insert

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71DD700C151B5-003 threading profile

71E02C5C2EED3-003 002 NR2S..4.6

Real measure mm

thread diameter thrdia TD

Diameter of an imaginary cylindrical surface tangential to the crests of an external thread or to the roots of an internal thread

NOTE This definition applies to both internal and external threads.

Illustration reference: Figure F.7, Figure F.8.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71FC1D22BF4CD-002 tool thread external

71FC20991AEE8-001 thread inch external

71FC2098BC963-001 thread metric external

71FC209969F43-001 thread trapezoidal external

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71FC1D25097D7-002 tool thread internal

71FC209A5C7F3-001 thread metric internal

71FC209B39D51-001 thread trapezoidal internal

71FC209ACEA25-001 thread inch internal

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

726E3EACB6BE4-003 001 X 15

String

thread diameter inch fraction thrdiaincfra TDFR

Nominal diameter of a thread as fraction value with the unit inch

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

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71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

726E3EA9B08AD-003 001 NR..S..3.4

Real measure inch

thread diameter inch measure thrdiaincmea TDIN

Nominal diameter of a thread as decimal value with the unit inch

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

726E2FC37D98A-003 002 NR2S..4.6

Real measure mm

thread diameter minimum thrdiamin TDN

Minimum diameter of a thread that can be produced with a thread milling cutter

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71EF07E083383-003 threading grooving mill

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71EBBAA3BCA70-003 002 X 17

String

thread diameter size thrdiasiz TDZ

Descriptor to identify the diameter of a threaded portion of an item

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.7, Figure F.8, Figure F.31.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DF153FA5F85-003 002 X 17

String

thread tolerance class thrtolcla TCTR

Identifier for the tolerances of a thread

NOTE See ISO 965-1, ANSI/ASME B1.13.

REMARKS: The value for an internal metric thread can be 4H. The value for an external metric thread can be 5 g.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71FC1D22BF4CD-002 tool thread external

71FC20991AEE8-001 thread inch external

71FC2098BC963-001 thread metric external

71FC209969F43-001 thread trapezoidal external

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

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71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71EF07E083383-003 threading grooving mill

71FC1D25097D7-002 tool thread internal

71FC209A5C7F3-001 thread metric internal

71FC209B39D51-001 thread trapezoidal internal

71FC209ACEA25-001 thread inch internal

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71DDA089C8D1E-003 specific profile insert

72719B2BD8041-003 002 X..5

String

tolerance class connection diameter machine side tolclacondiamacsid TCDCONMS

Label for the level and size for the tolerance of the connection diameter

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

729A91ADE068B-001 001 X..5

String

tolerance class connection diameter maximum workpiece side tolclacondiamaxworsid TCDCONXWS

Label for the maximum level and size for the tolerance of the connection diameter on the workpiece side

NOTE See ISO/TS 13399-60.

REMARKS: This property shall only be used for the creation of the connection code.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

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729A91AD69059-001 001 X..5

String

tolerance class connection diameter minimum workpiece side tolclacondiaminworsid TCDCONNWS

Label for the minimum level and size for the tolerance of the connection diameter on the workpiece side

NOTE See ISO/TS 13399-60.

REMARKS: This property shall only be used for the creation of the connection code.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71DF8C37D9115-003 connection interface feature

727ED91B5AA66-003 001 X..5

String

tolerance class connection diameter workpiece side tolclacondiaworsid TCDCONWS

Label for the level and size for the tolerance of the connection diameter on the workpiece side

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

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71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

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71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

72719B197DA99-003 001 X 17

String

tolerance class machined hole diameter tolclamacholdia TCDH

Label for the level and size of the tolerance of a hole that had been produced by a machining process

NOTE See ISO 286-1 and ISO 286-2 for preferred use.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

72550E1361C6C-003 drilling insert

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

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71E01A07D2A1B-003 tapered reamer

728B074BFC2AD-001 002 NR2S..4.6

Real measure mm

tool assembly height tooasshei HTA

Distance, measured in the Y-axis direction, from the MCS of an adaptive item or a tool item to the CSW of an adaptive item or to the CRP of a tool item

NOTE Tool assembly dimensions of multiple items can be used to calculate the functional height of assembled items as they are fitted together to create a multi-item cutting tool.

REMARKS: See this document and ISO/TS 13399-4.

Illustration reference: Figure F.47, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

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71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

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71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

728B074A39EBC-001 002 NR2S..4.6

Real measure mm

tool assembly length tooasslen LTA

Distance, measured in the Z-axis direction, from the MCS of an adaptive item or a tool item to the CSW of an adaptive item or to the CRP of a tool item

NOTE Tool assembly dimensions of multiple items can be used to calculate the functional length of assembled items as they are fitted together to create a multi-item cutting tool.

REMARKS: As an example, starting on the machine side with a tapered shank collet chuck adapter and fitting a solid drill into it, and adding the tool assembly lengths of each item, would provide a functional length of the assembled cutting tool.

Illustration reference: Figure F.3, Figure F.4, Figure F.5, Figure F.6, Figure F.7, Figure F.8, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.18, Figure F.20, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.30, Figure F.31, Figure F.32, Figure F.33, Figure F.34, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.41, Figure F.42, Figure F.43, Figure F.44, Figure F.45, Figure F.46, Figure F.47, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.55, Figure F.56, Figure F.57, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.64, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.81, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.88, Figure F.90, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.99, Figure F.100, Figure F.101, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.114, Figure F.115, Figure F.116, Figure F.117, Figure F.118, Figure F.119, Figure F.120, Figure F.121, Figure F.122, Figure F.123, Figure F.124, Figure F.125, Figure F.126, Figure F.127, Figure F.128, Figure F.129, Figure F.130, Figure F.131, Figure F.132, Figure F.133, Figure F.134, Figure F.135, Figure F.136, Figure F.137, Figure F.138, Figure F.139, Figure F.140, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

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71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

72550E1361C6C-003 drilling insert

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

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71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DDA089C8D1E-003 specific profile insert

728B074B7B0B5-001 002 NR2S..4.6

Real measure mm

tool assembly width tooasswid WTA

Distance, measured in the X-axis direction, from the MCS of an adaptive item or a tool item to the CSW of an adaptive item or to the CRP of a tool item.

NOTE Tool assembly dimensions of multiple items can be used to calculate the functional width of assembled items as they are fitted together to create a multi-item cutting tool.

REMARKS: See this document and ISO/TS 13399-4.

Illustration reference: Figure F.47, Figure F.91a, Figure F.91b, Figure F.92a, Figure F.92b, Figure F.93a, Figure F.93b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.98, Figure F.99, Figure F.100, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.108, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.140.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

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71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

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71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71DDA089C8D1E-003 specific profile insert

71CF298A3A99A-003 002

Level mm

tool changer interference diameter maximum toochaintdiamax DIX

Maximum diameter of a portion of a tool item or adaptive item body, that will not interfere with the tool changing operation

REMARKS: Shall be used in conjunction with tool changer interference length minimum.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

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71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71EAD3871D313-003 converter

71E01A0EAF067-003 system tool

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71CF2989AF0E0-003 002

Level mm

tool changer interference length minimum toochaintlenmin LIN

Minimum length of a portion of a tool item or adaptive item body that will not interfere with the tool changing operation

REMARKS: Shall be used in conjunction with tool interference diameter maximum.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71EAD3871D313-003 converter

71E01A0EAF067-003 system tool

71E0250E32A07-002 cylindrical broach

71EAD385E51A0-002 reducer

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

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71D078F683C9B-003 002 NR2S..3.6

Real measure degree of angle

tool cutting edge angle toocutedgang KAPR

Angle between the tool cutting edge plane and the tool feed plane measured in a plane parallel the XZ-plane

NOTE See ISO 3002-1:1982, 5.1.1.1.

Illustration reference: Figure E.1, Figure F.23, Figure F.24, Figure F.25, Figure F.26, Figure F.27, Figure F.28, Figure F.29, Figure F.32, Figure F.35, Figure F.36, Figure F.37, Figure F.38, Figure F.39, Figure F.40, Figure F.44, Figure F.45, Figure F.46, Figure F.47, Figure F.48, Figure F.49, Figure F.50, Figure F.51, Figure F.52, Figure F.53, Figure F.54, Figure F.55, Figure F.56, Figure F.57, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.82, Figure F.83, Figure F.84, Figure F.85, Figure F.86, Figure F.90, Figure F.91a, Figure F.91b, Figure F.94, Figure F.95, Figure F.96, Figure F.97, Figure F.99, Figure F.101, Figure F.102, Figure F.103, Figure F.104, Figure F.105, Figure F.106, Figure F.107, Figure F.109, Figure F.110a, Figure F.110b, Figure F.111, Figure F.112a, Figure F.112b, Figure F.113a, Figure F.113b, Figure F.124, Figure F.125, Figure F.126, Figure F.134, Figure F.140, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71D078F6E9893-003 003 X 1

Enumeration of codes

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tool cutting edge angle type code toocutedgangtypcod CEATC

Identifier for the direction of the cutting edge angle

NOTE See ISO 5608:2012, 3.3.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71D078FD4E7BE-003 002 X 1

Enumeration of codes

tool holder shape code tooholshacod THSC

Identifier for whether a tool item has a straight shank or an offset shank

NOTE Only applies to turning tools.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71D078F77616B-003 003 NR2S..3.6

Real measure degree of angle

tool lead angle tooleaang PSIR

Angle between the tool cutting edge plane and a plane perpendicular to the tool feed plane measured in a plane parallel the XZ-plane

NOTE See ISO 3002-1:1982, 5.1.1.2.

Illustration reference: Figure E.1.

Visible class:

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71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71D078FBF6C68-003 002 X 17

String

tool style code toostycod TSYC

Manufacturer specific identifier for the main design or shape of tool item or adaptive item

NOTE A tool can be used for applications other than its main use.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

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71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

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71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBBA9ED6C0A-003 002 X 1

Enumeration of codes

unit system unisys UST

Description of the system of units in which the characteristics of an item are defined

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71EAD37F18F34-003 adaptive item type

71EAD388173EE-003 driver

71EAD3871D313-003 converter

726F59BDC3B08-003 collet

727BE50E057F1-003 adaptive feature type

727BE50E9FE57-001 torque bracing

71EEBDADB63BE-002 extender

71EAD385E51A0-002 reducer

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

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71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

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7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EBB33490FDA-003 002 NR2S..4.6

Real measure mm

usable length usalen LU

Recommended length of a cutting tool that can be used in a particular cutting operation

Illustration reference: Figure F.4, Figure F.6, Figure F.9, Figure F.10, Figure F.11, Figure F.12, Figure F.13, Figure F.14, Figure F.15, Figure F.16, Figure F.17, Figure F.21, Figure F.22, Figure F.23, Figure F.24, Figure F.28, Figure F.31, Figure F.33, Figure F.34, Figure F.58, Figure F.59, Figure F.60, Figure F.61, Figure F.62, Figure F.63, Figure F.65, Figure F.66, Figure F.67, Figure F.68, Figure F.69, Figure F.70, Figure F.71, Figure F.72, Figure F.73, Figure F.74, Figure F.75, Figure F.76, Figure F.77, Figure F.78, Figure F.79, Figure F.80, Figure F.99, Figure F.114, Figure F.115, Figure F.116, Figure F.119, Figure F.121.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A004C775-003 tool item type

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

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71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E01A04F70F7-003 threading die

71E01A0E4EE75-001 cylindrical die

71E01A0E79239-001 hexagonal die

71E02C544BABE-003 burr tool

71E0251F304E1-003 rotating borer

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

71E01A04C377D-003 broach

71E01A082DE72-002 disk broach

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

7272127CBD7B8-003 feed-out tool, machine operated

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

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71E01A07D2A1B-003 tapered reamer

71DCCC62CD9EE-003 002 NR2S..3.3

Real

usable length diameter ratio usalendiarat ULDR

Ratio between usable length maximum and cutting diameter

Illustration reference: Figure F.56, Figure F.141, Figure F.142, Figure F.143, Figure F.144, Figure F.145, Figure F.146, Figure F.147, Figure F.148, Figure F.149, Figure F.150, Figure F.151, Figure F.152, Figure F.153.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A05D27A8-003 end mill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A0540BE7-003 slab mill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71CF2992BDBCC-003 003

Level mm

usable length maximum usalenmax LUX

Maximum length of a cutting tool that can be used in a particular cutting operation

NOTE The usable length may be limited by interference between the tool body and the workpiece.

Visible class:

71CE7A72B6DA7-003 cutting tool library

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Applicable classes:

71E01A00BD93C-003 drill

71E01A065F635-002 deep hole drill

71FAE7AAE8247-003 core drill

71E01A073CA28-003 centre drill

71E01A069566C-002 chamfer drill

71E01D8A88F65-002 pilot drill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71E01A06BF88D-003 counterbore drill

71E01A06A8A08-003 countersink drill

71E01A067F73C-002 step drill

71E01A0769982-002 trepanning drill

71E01A008D13F-003 mill

71E01A05B627B-003 face mill

71E01A05EA320-003 half side mill

71E01A05D27A8-003 end mill

71E01A0600702-003 ring mill

71EF07E037025-003 slotting cutter

71EF07E083383-003 threading grooving mill

71EF07DFC283C-003 double half side mill

71E01A0540BE7-003 slab mill

71E02C544BABE-003 burr tool

71EAD3871D313-003 converter

71E01A0838E9B-002 prismatic broach

71E01A081855D-003 tapered broach

71E0250E32A07-002 cylindrical broach

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71E01A04A8AEC-003 ream

71E01A07BC535-001 cylindrical reamer

71E01A07ECCCF-001 profile reamer

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71E01A07FF350-001 stepped reamer

71E01A07D2A1B-003 tapered reamer

71EAC823D95A7-003 002 X 17

String

web taper webtap WBTP

The increase in web thickness from the front end of a fluted tool item towards the shank expressed by the ratio of the reduction in diameter and the length of measurement

NOTE See ISO 5419.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71EAC81A64368-002 regrinding

71E01A067F73C-002 step drill

71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71EAC82313165-003 002 NR2S..4.6

Real measure mm

web thickness webthi WBTHK

Dimension of the web measured normal to the axis at the front end of a fluted tool item

NOTE See ISO 5419.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05D27A8-003 end mill

71E01A0608FE4-002 twist drill

71E01A0751456-003 conical drill

71EAC81A64368-002 regrinding

71E01A067F73C-002 step drill

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71E01A04E0236-003 threading tap

71E01A0E34C7F-002 conical tap

71E01A0A5355D-001 cylindrical tap

71D0757C787B8-003 002

Level mm

work piece parting diameter maximum worpiepardiamax CUTDIA

Maximum diameter of solid work piece in a cut-off operation that can be cut without interference with any part of the tool item

Illustration reference: Figure E.3, Figure F.94c.

Visible class:

71CE7A72B6DA7-003 cutting tool library

Applicable classes:

71E01A05104CF-003 turn

71E01A0E9CBA9-003 boring bar

71E01A0EAF067-003 system tool

71E01A0E85121-003 prismatic tool holder

71D1066F279AD-002 cartridge

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Annex E
(informative)

Illustrations of properties

The following Figures E.1 to E.13 illustrate properties that are defined in Annex D.

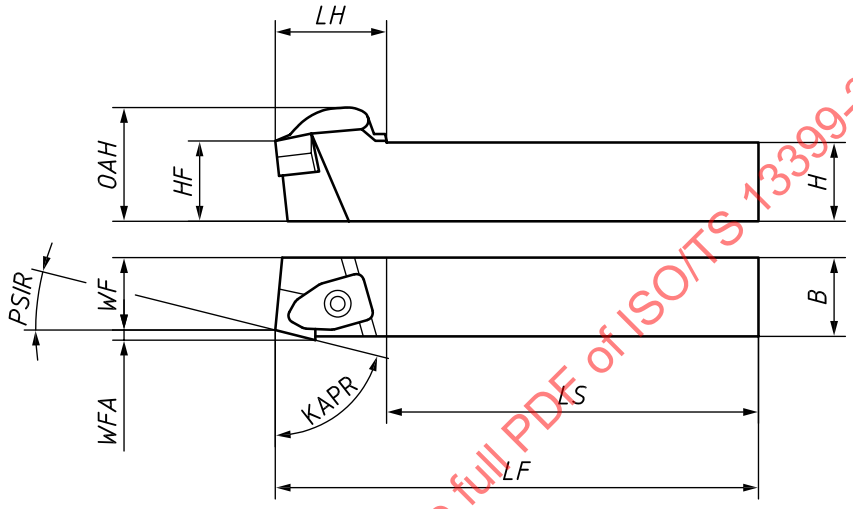


Figure E.1

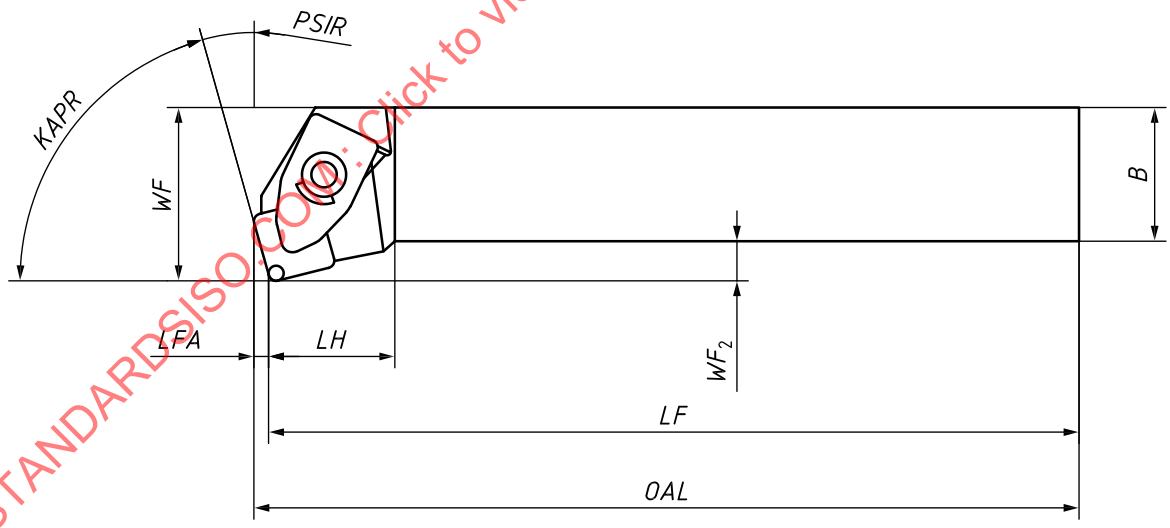


Figure E.2

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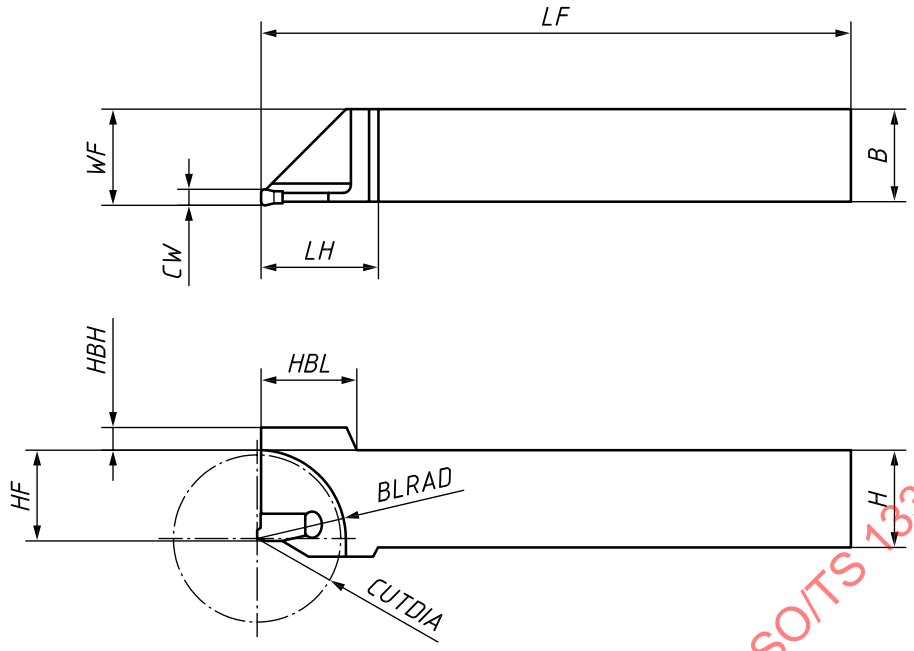


Figure E.3

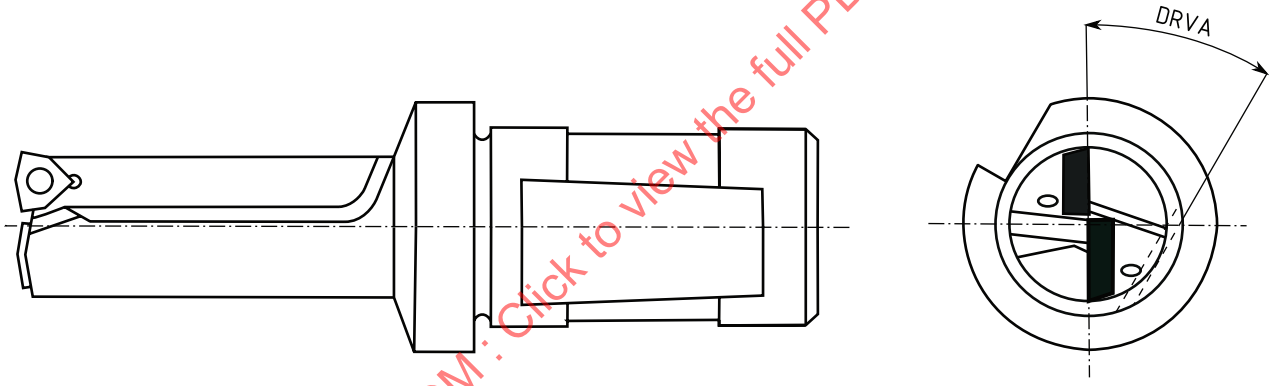


Figure E.4

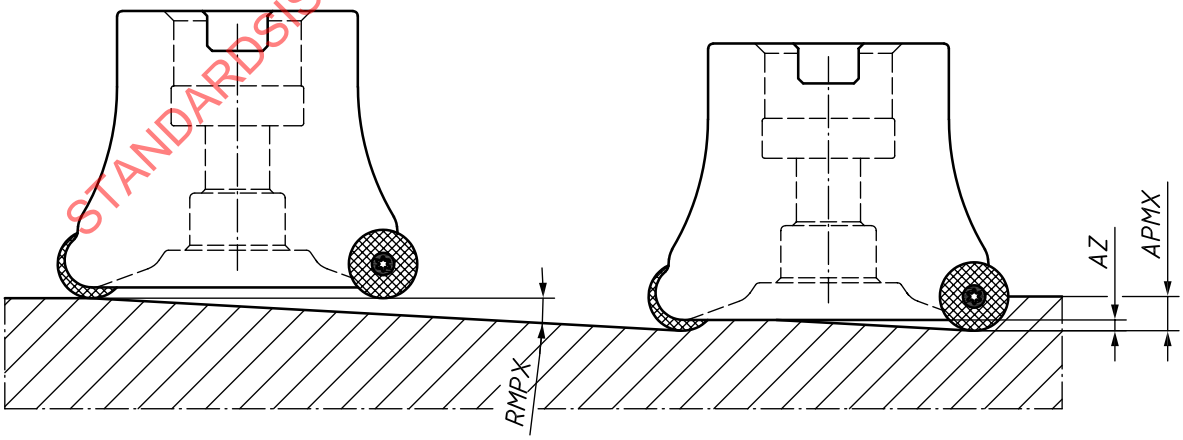


Figure E.5

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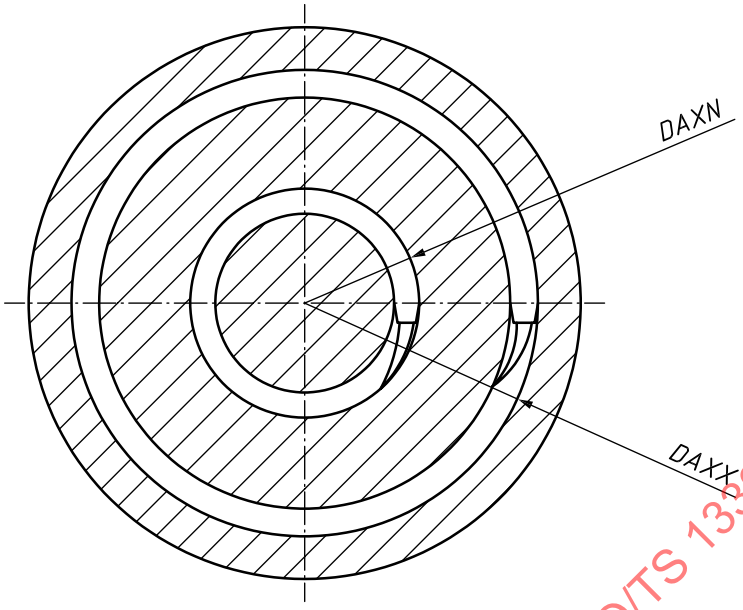


Figure E.6

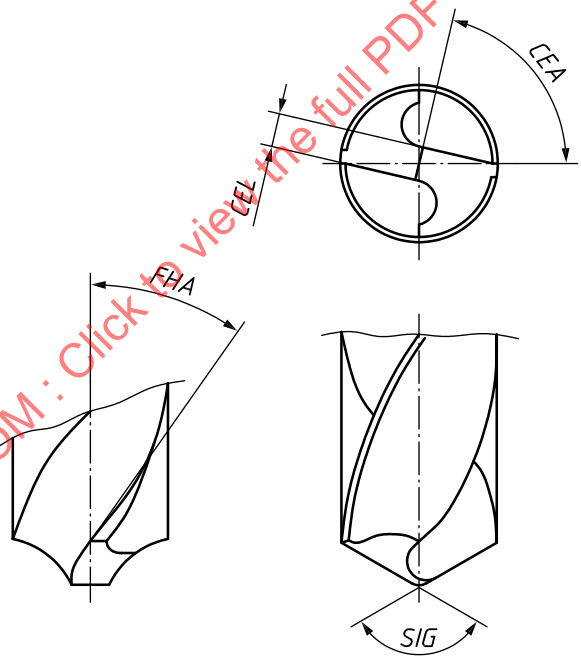


Figure E.7

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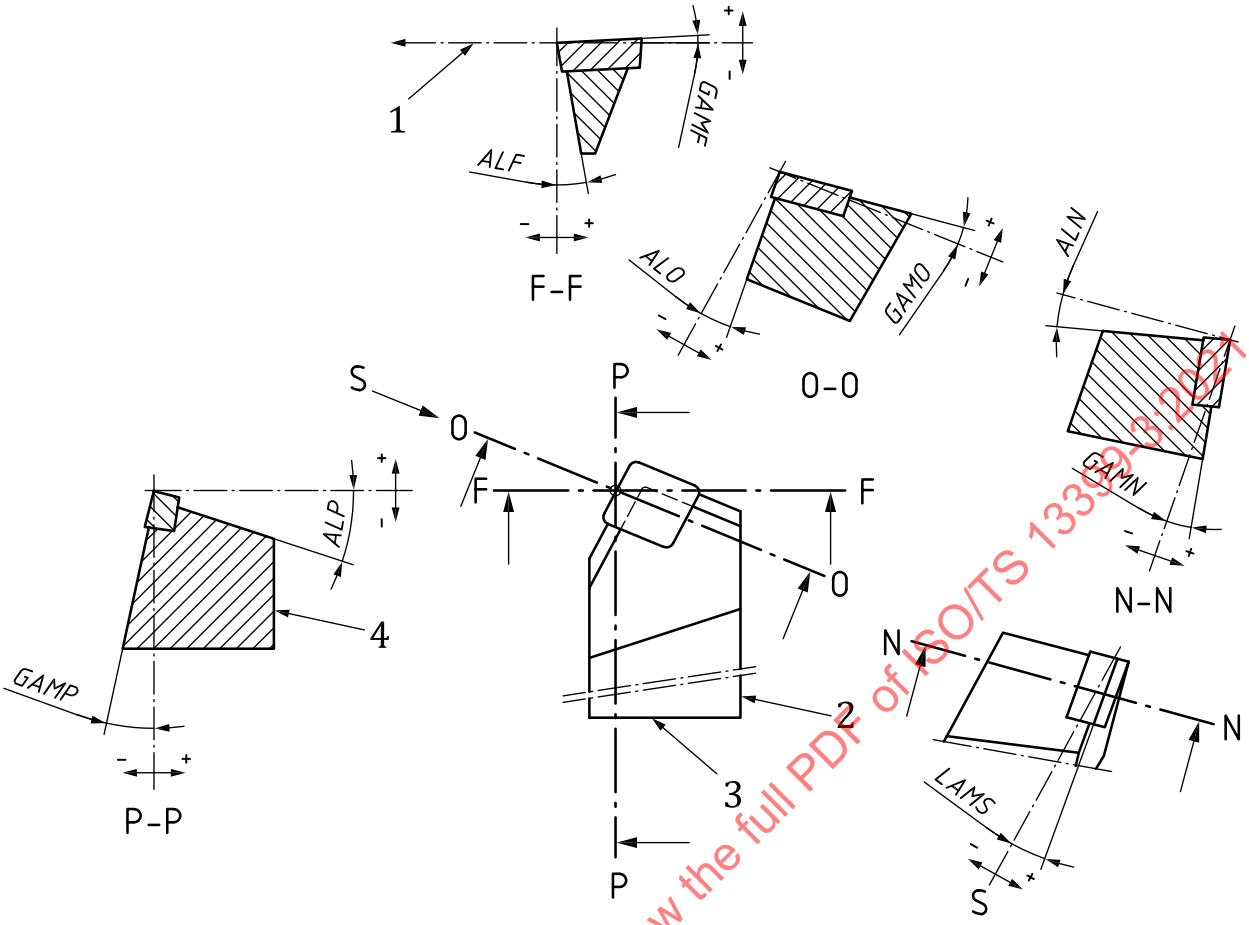


Figure E.8

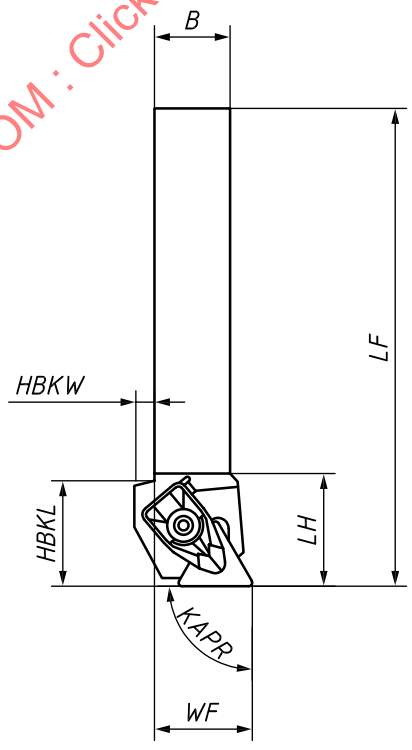


Figure E.9

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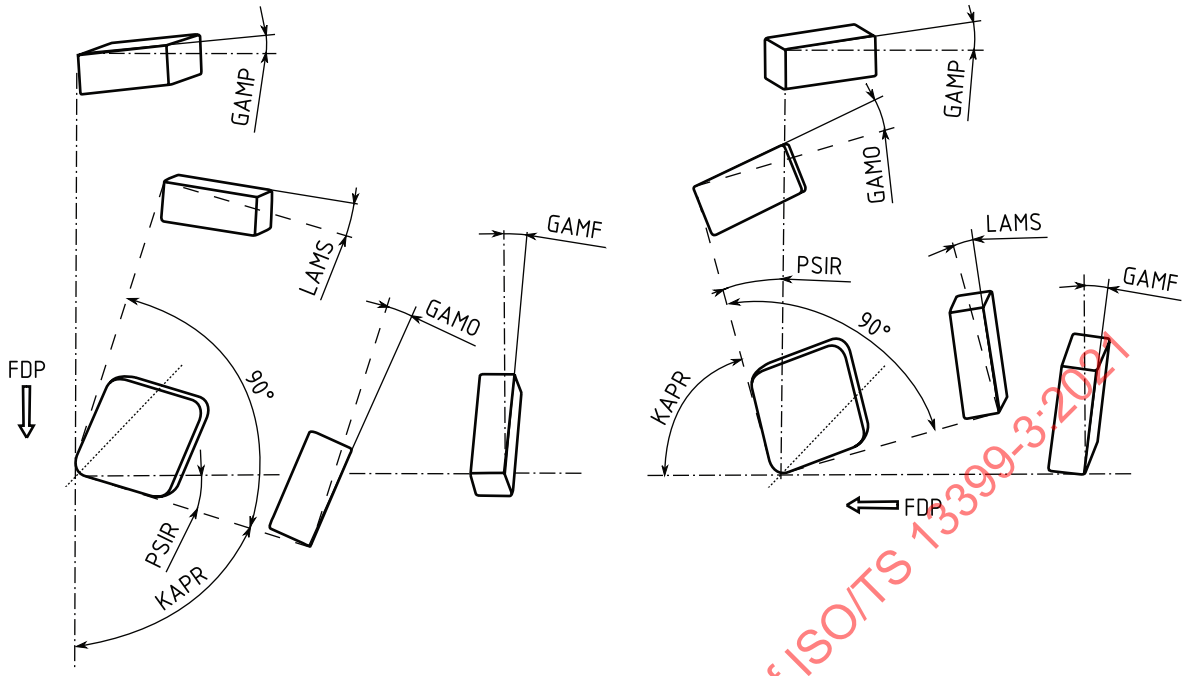


Figure E.10

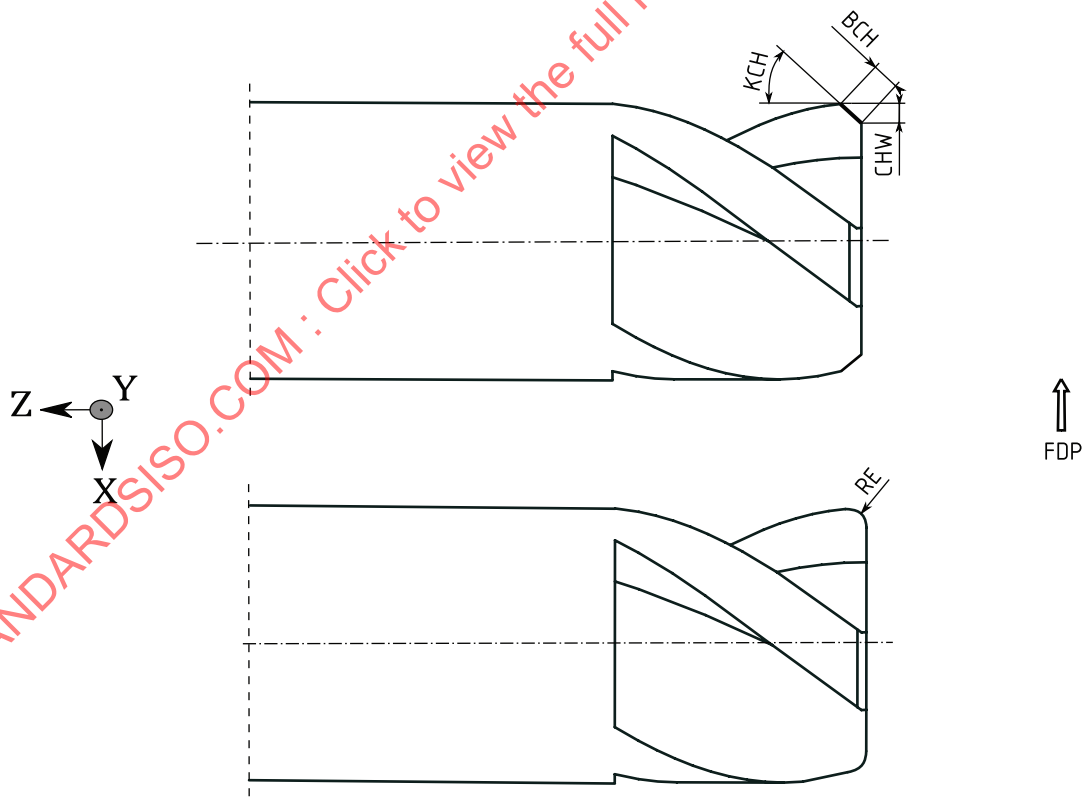


Figure E.11

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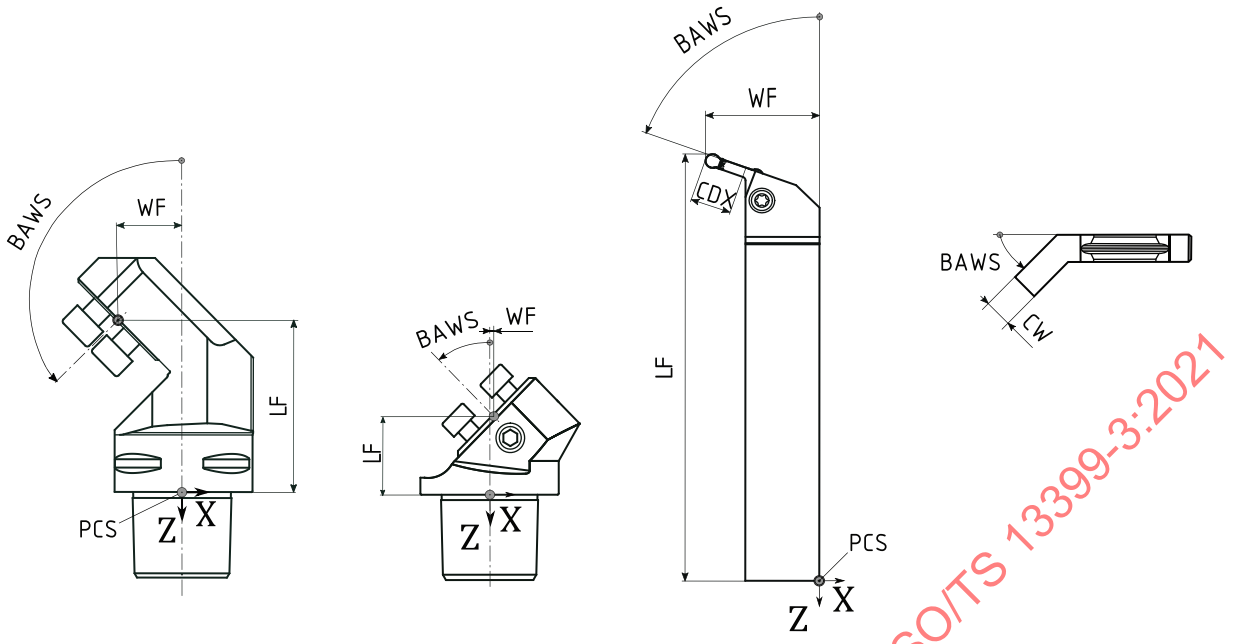


Figure E.12

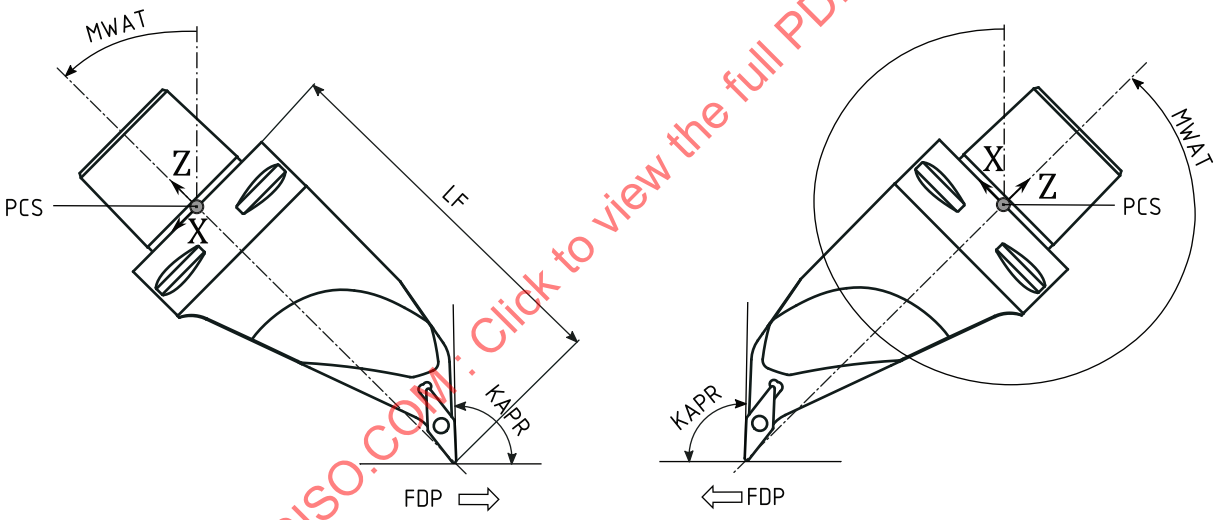


Figure E.13

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Annex F
(informative)

ISYC pictures

F.1 ISYC 202 series

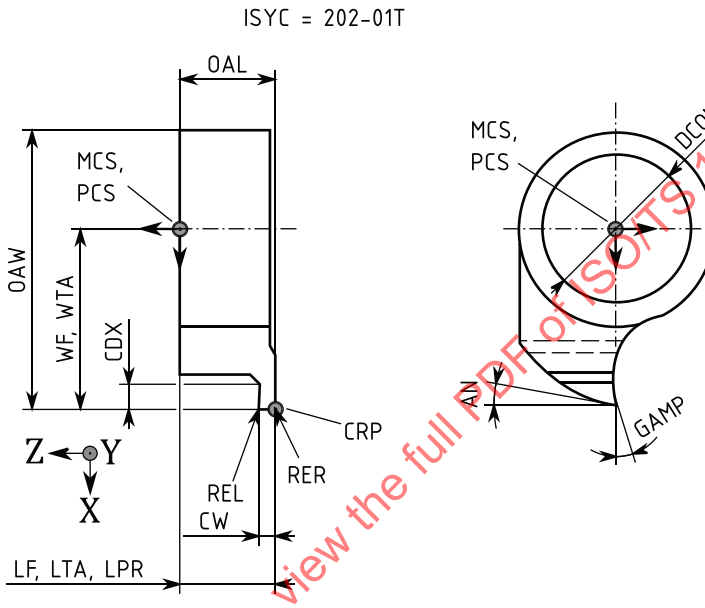


Figure F.1 — ISYC 202-01T – Solid tool, one cutting edge for grooving, screw mounting

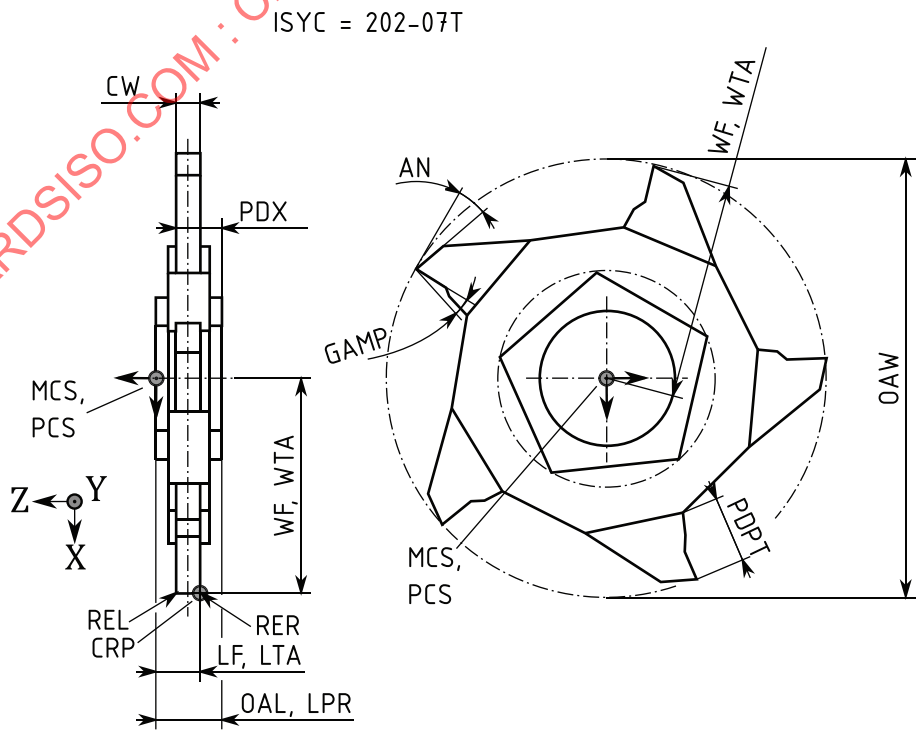


Figure F.2 — ISYC 202-07T – Solid tool, multiple cutting edges for grooving and parting

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F.2 ISYC 301 series - Tap and cutting die

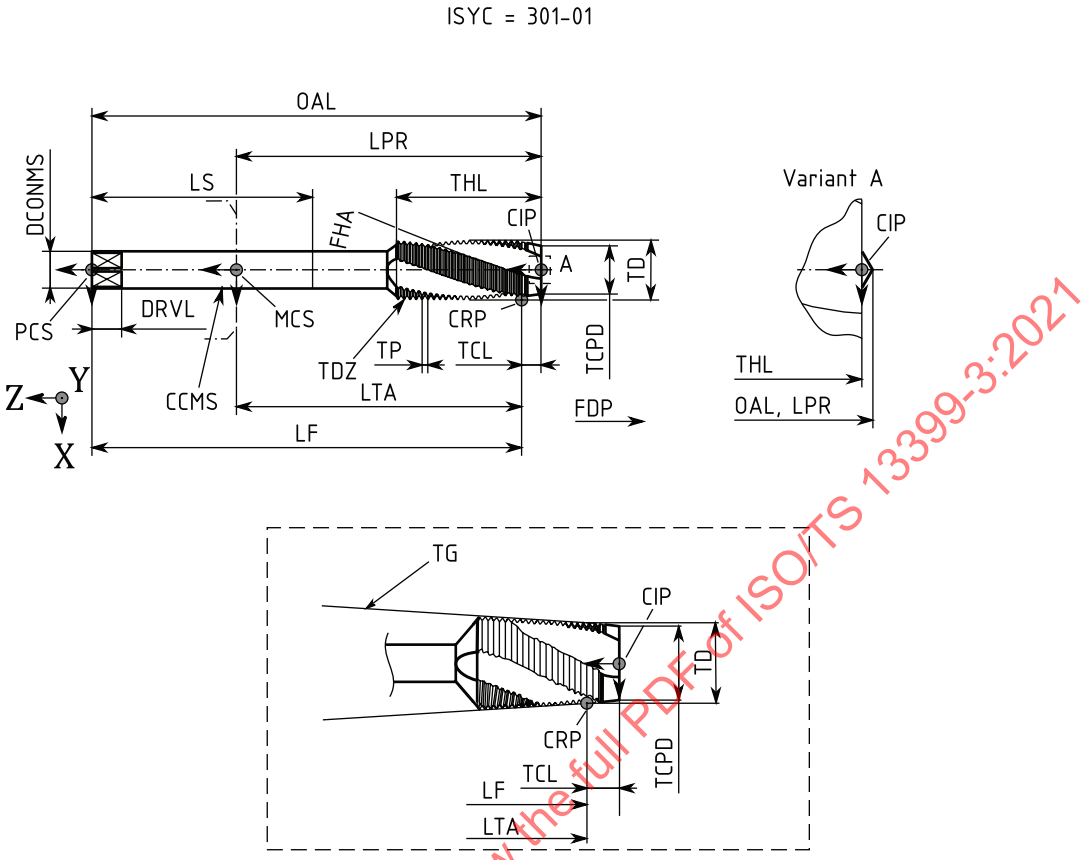


Figure F.3 — ISYC 301-01 - Thread cutting tap with cylindrical shank and drive key

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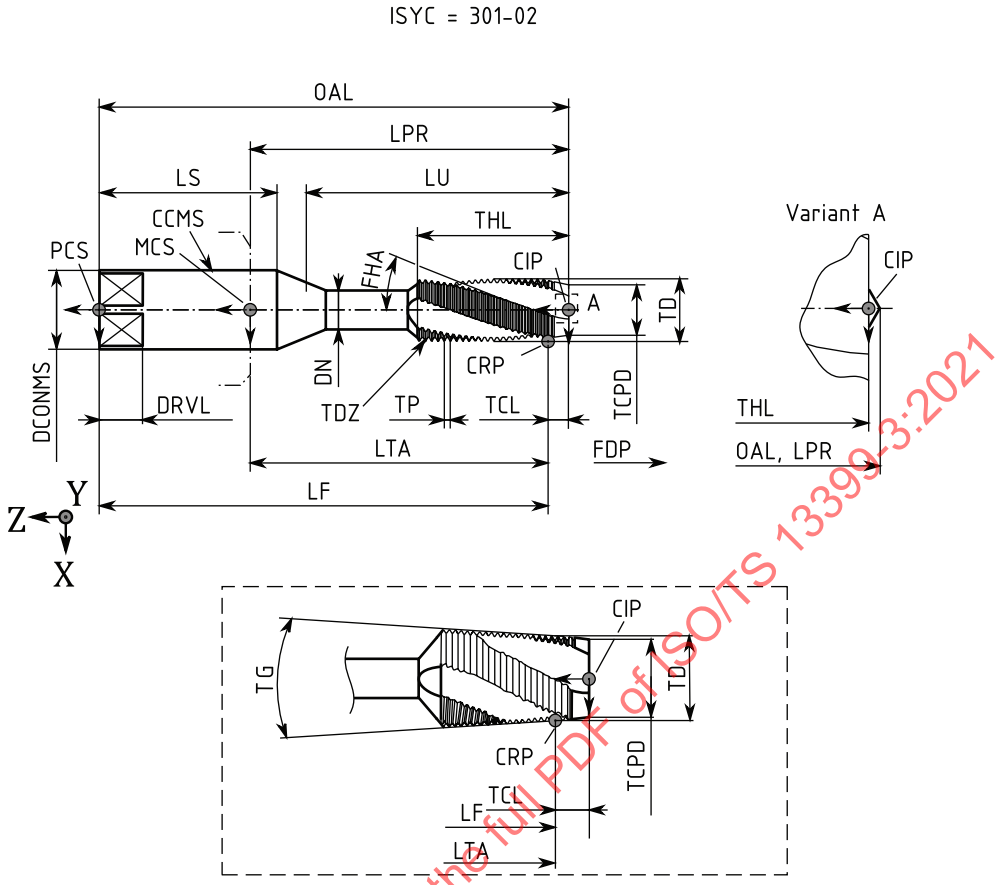


Figure F.4 — ISYC 301-02 - Thread cutting tap with cylindrical shank and drive key, with neck

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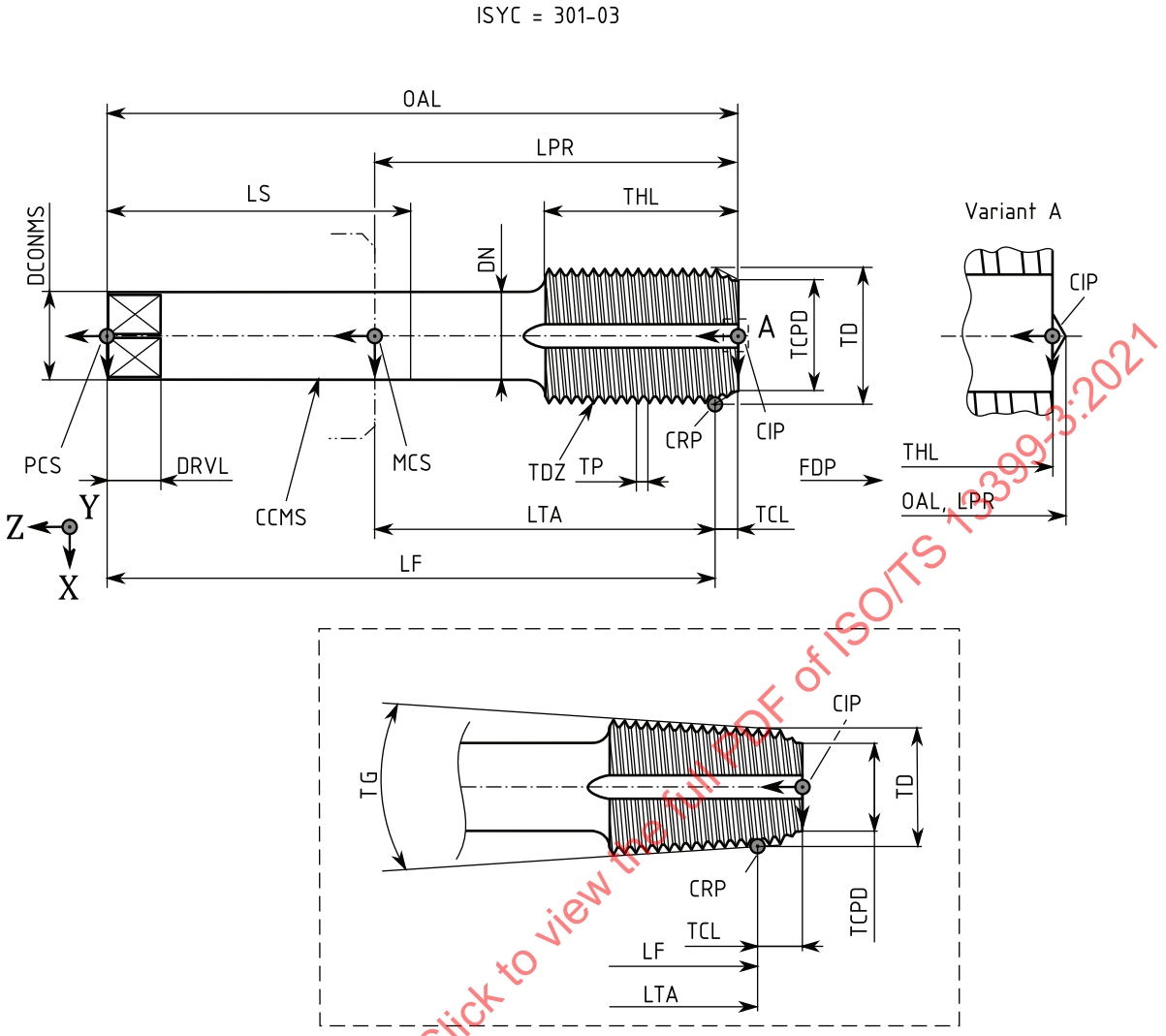


Figure F.5 — ISYC 301-03 - Thread forming tap with cylindrical shank and drive key

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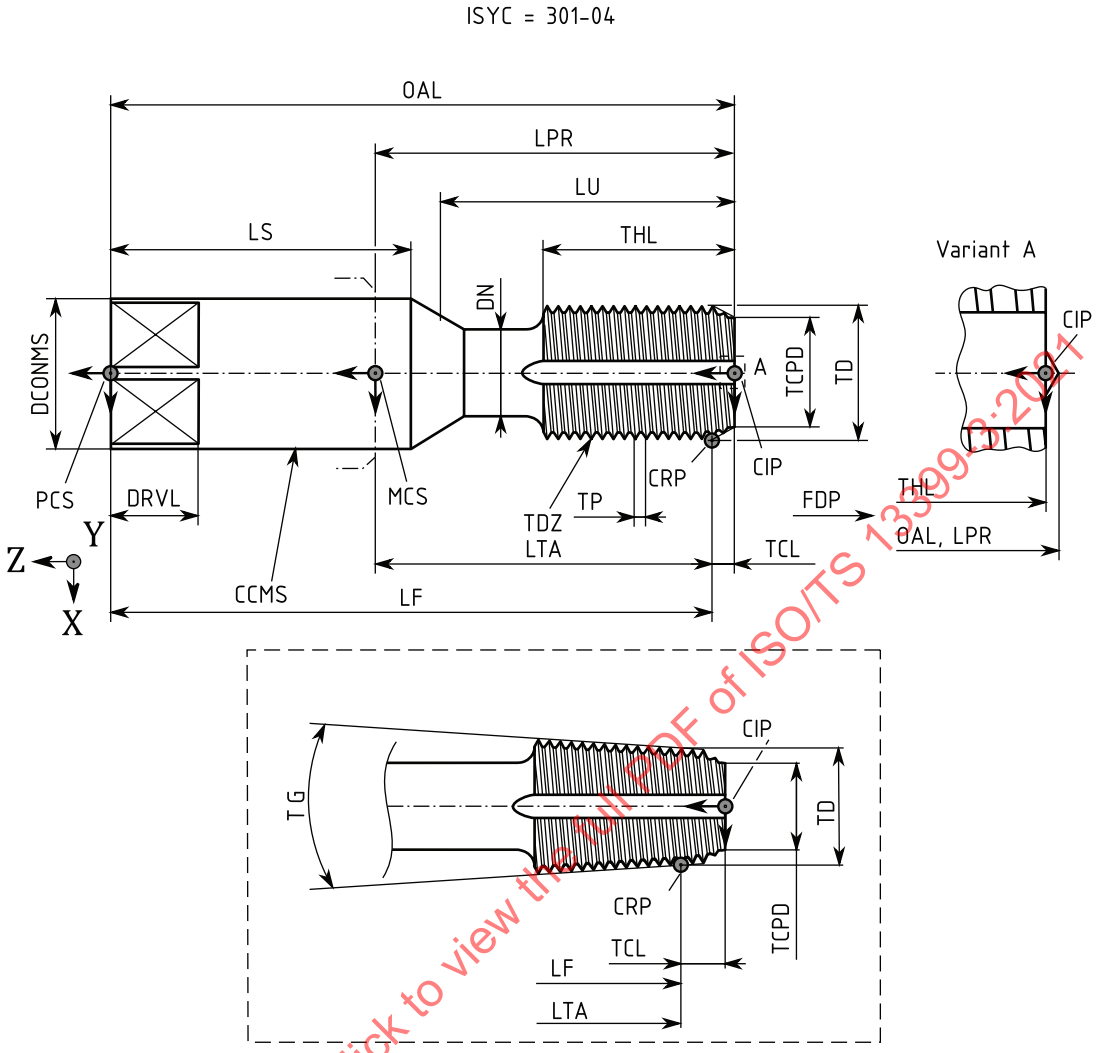


Figure F.6 — ISYC 301-04 - Thread forming tap with cylindrical shank and drive key, with neck

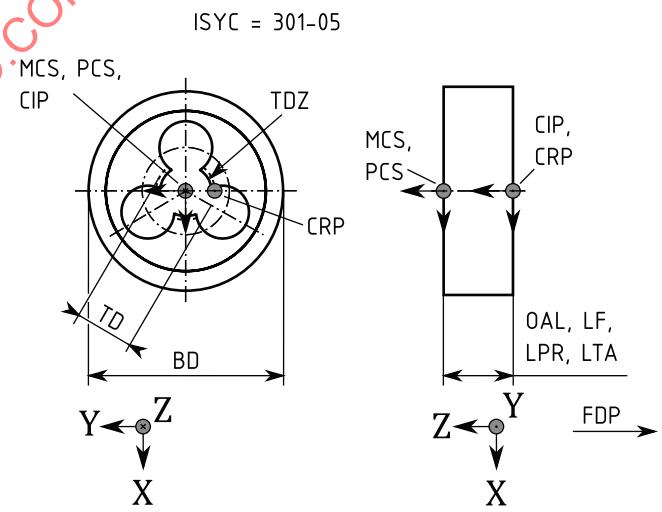


Figure F.7 — ISYC 301-05 - Thread cutting die, round shape

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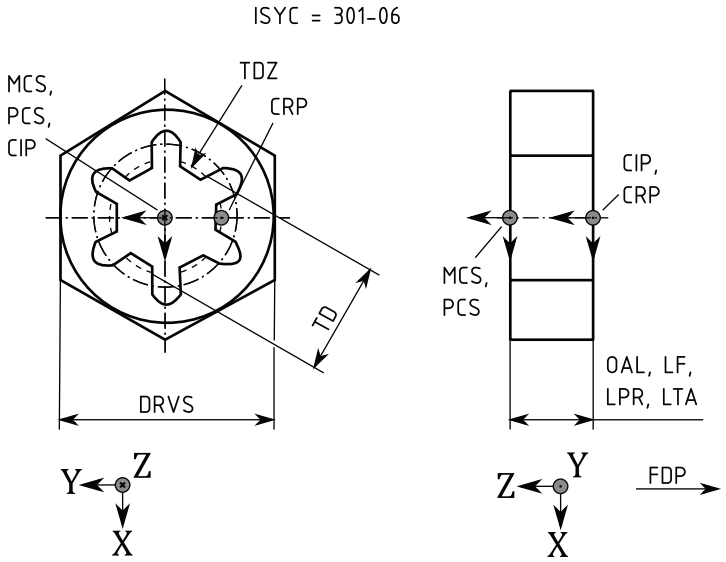


Figure F.8 — ISYC 301-06 - Thread cutting die, hexagonal shape

F.3 ISYC 302 series - Solid drill, counter bore, countersinking tool

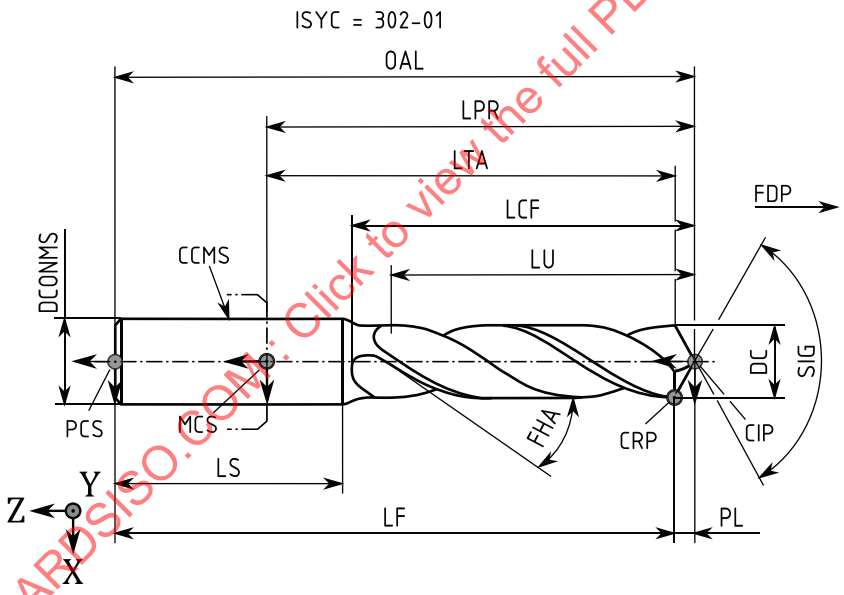


Figure F.9 — ISYC 302-01 - Twist drill, solid

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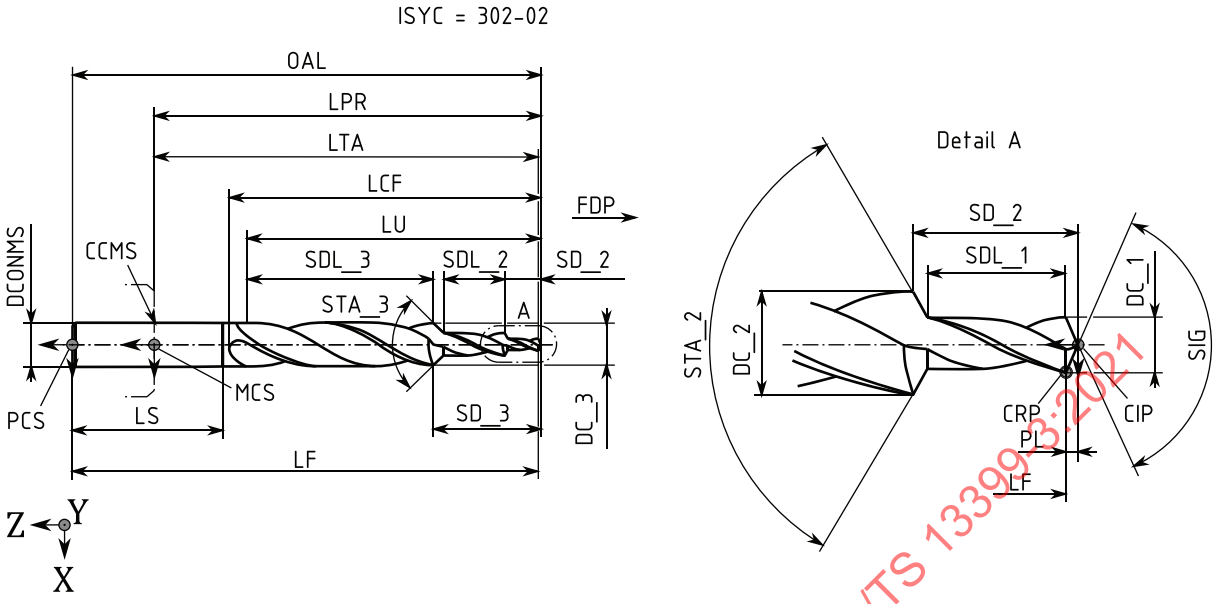


Figure F.10 — ISYC 302-02 - Step drill, solid

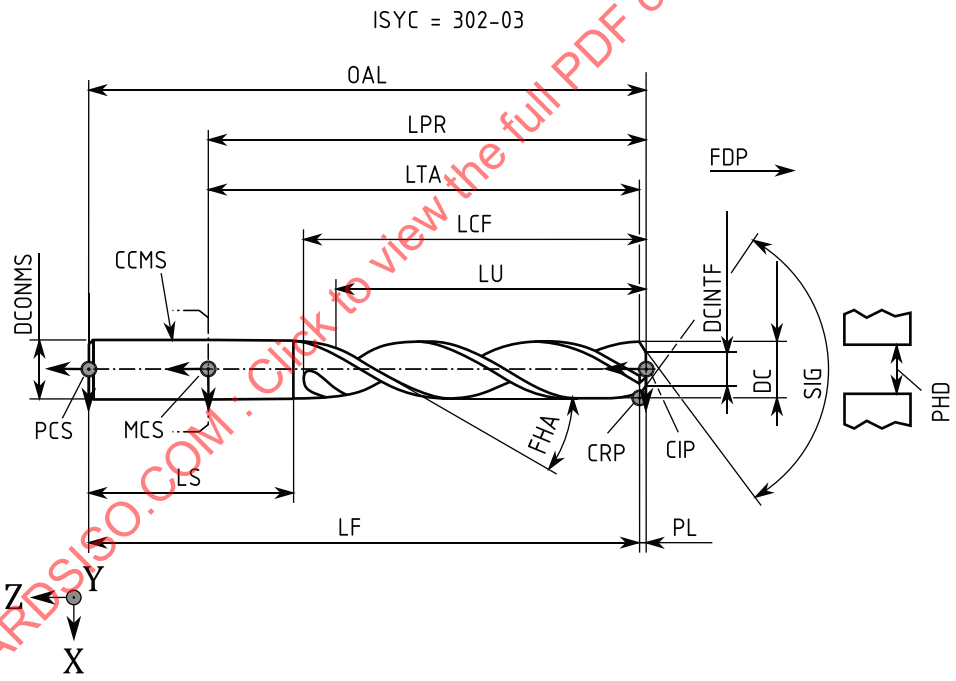


Figure F.11 — ISYC 302-03 - Core drill, non-centre cutting, cylindrical shank, solid

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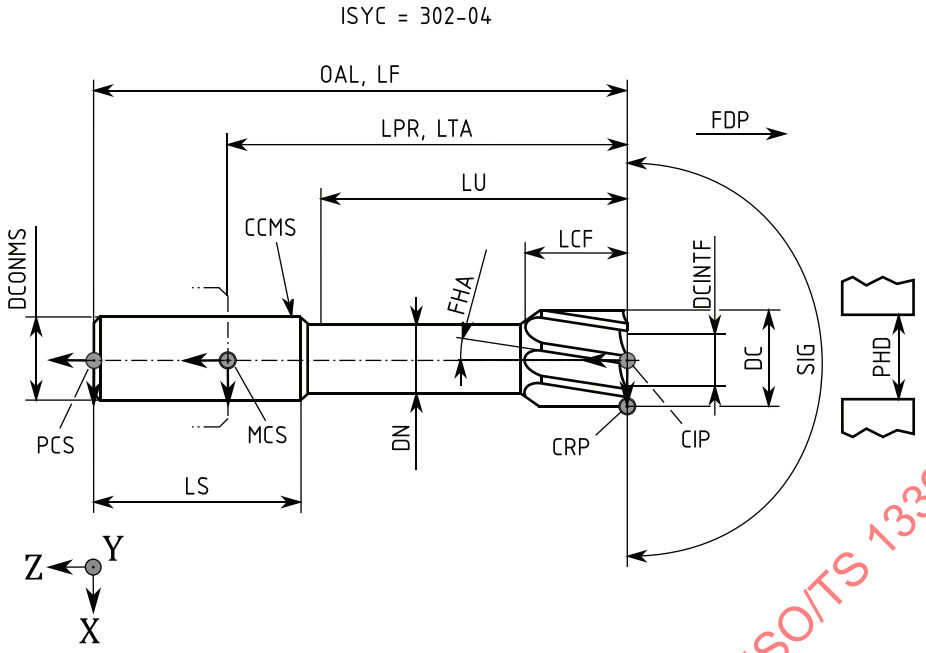


Figure F.12 — ISYC 302-04 - Counterbore, cylindrical shank, solid

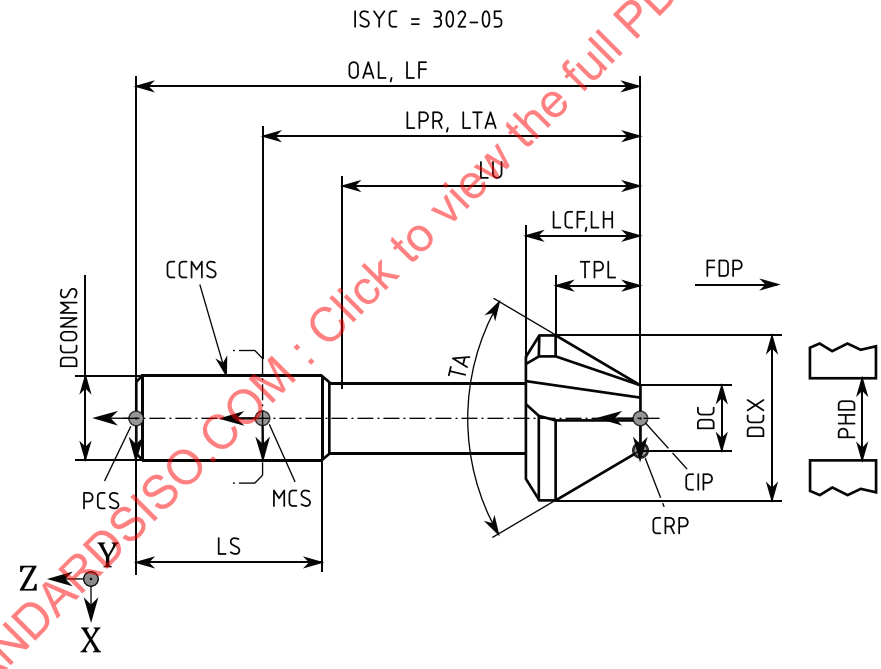


Figure F.13 — ISYC 302-05 - Tapered countersinking tool, cylindrical shank, solid

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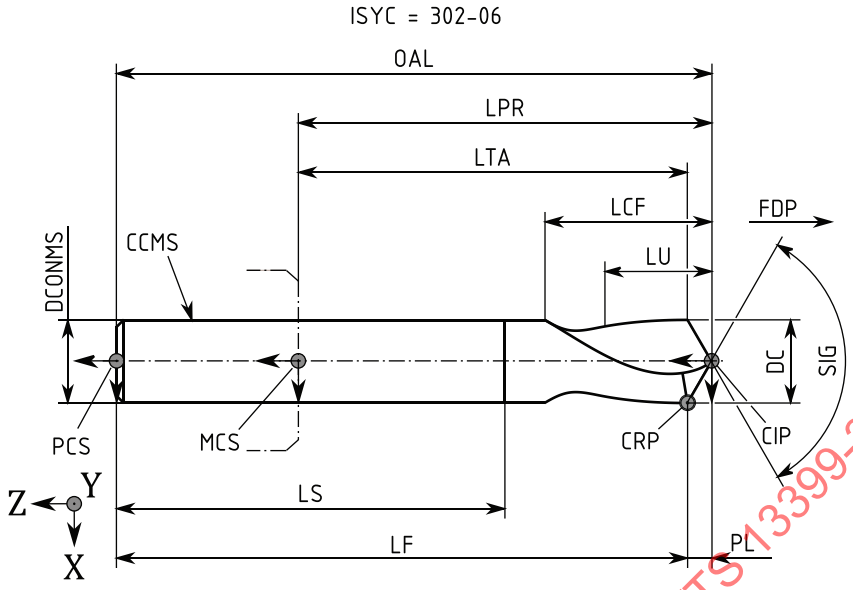


Figure F.14 — ISYC 302-06 - Spot drill, solid

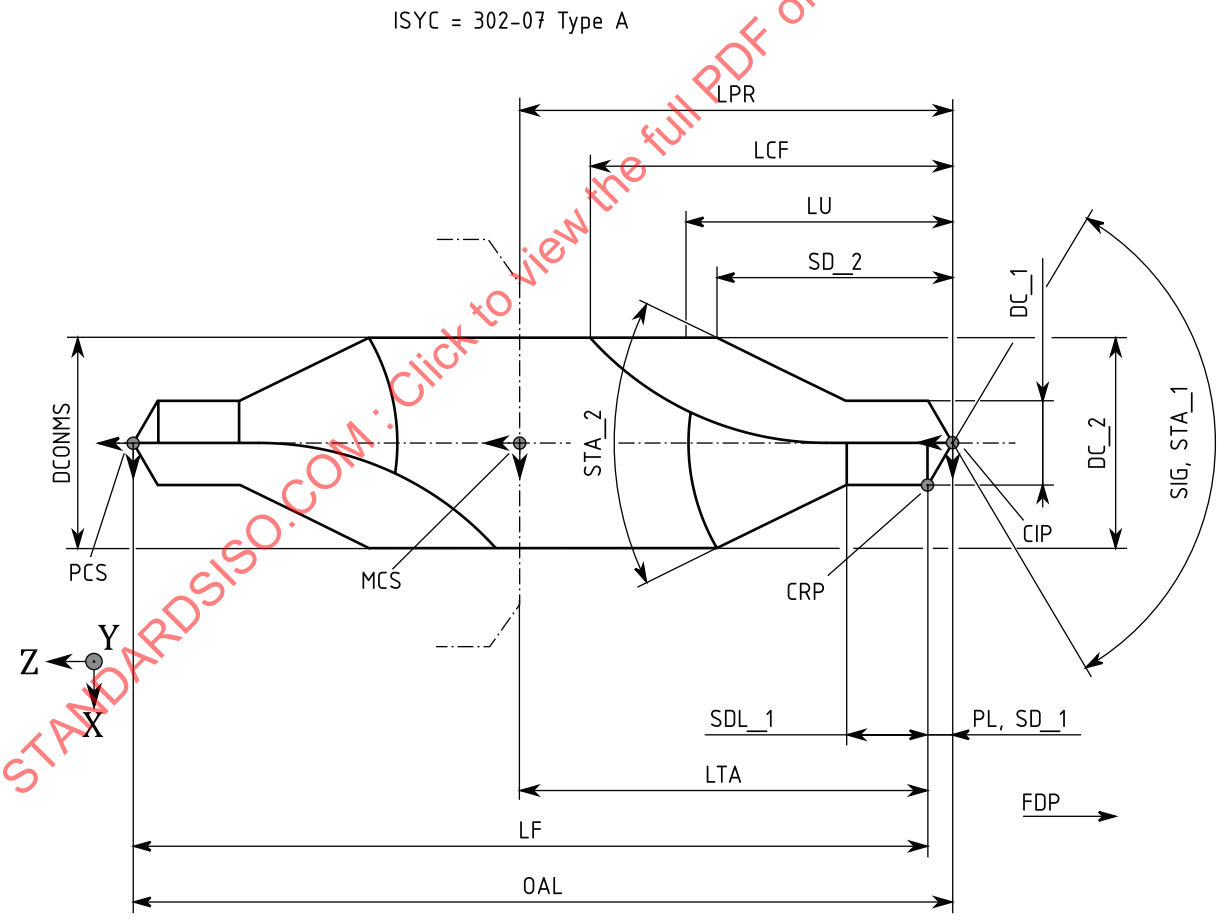


Figure F.15 — ISYC 302-07 - Centre drill, type A, solid

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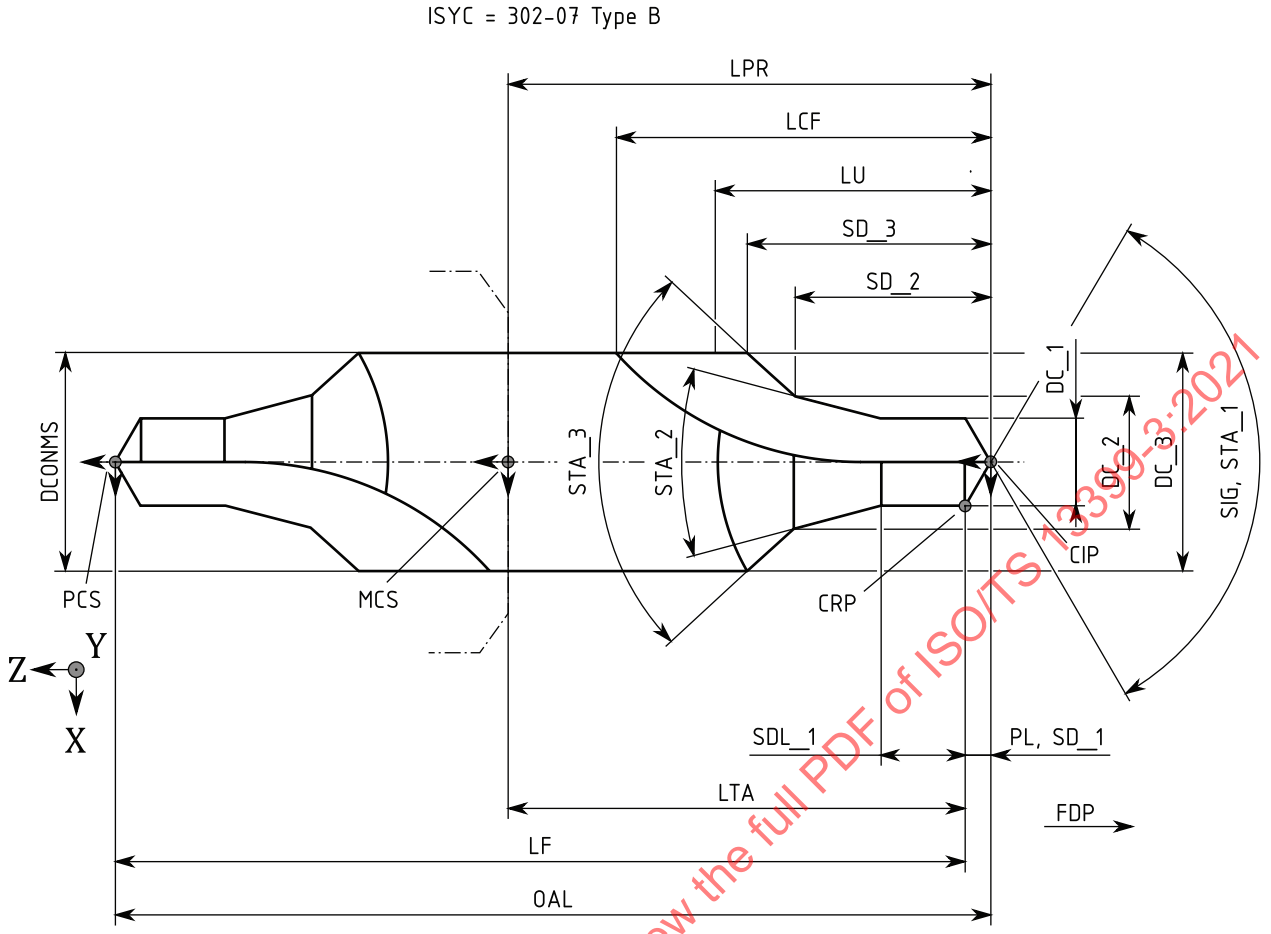


Figure F.16 — ISYC 302-07 - Centre drill, type B, solid

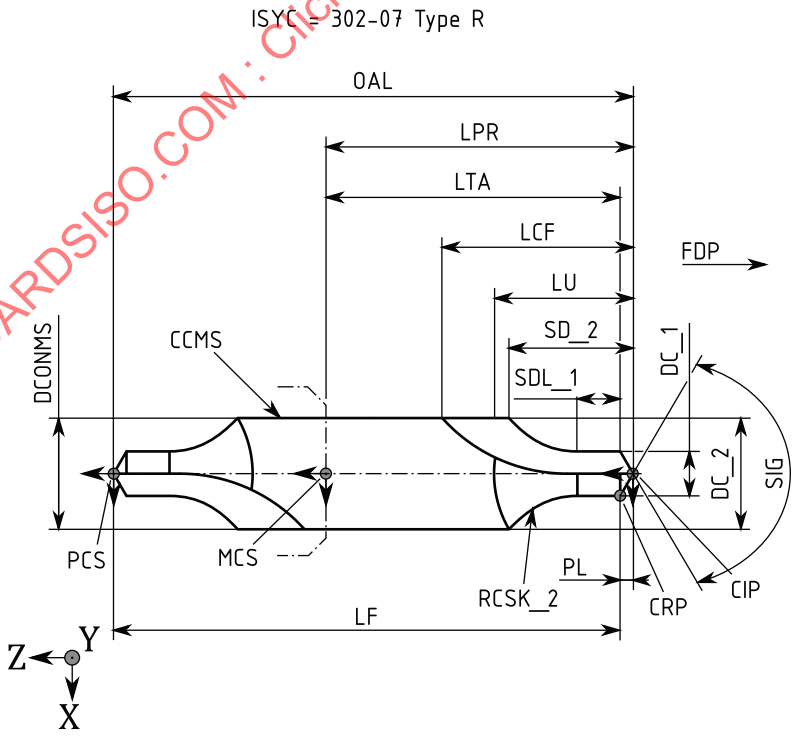


Figure F.17 — ISYC 302-07 - Centre drill, type R, solid

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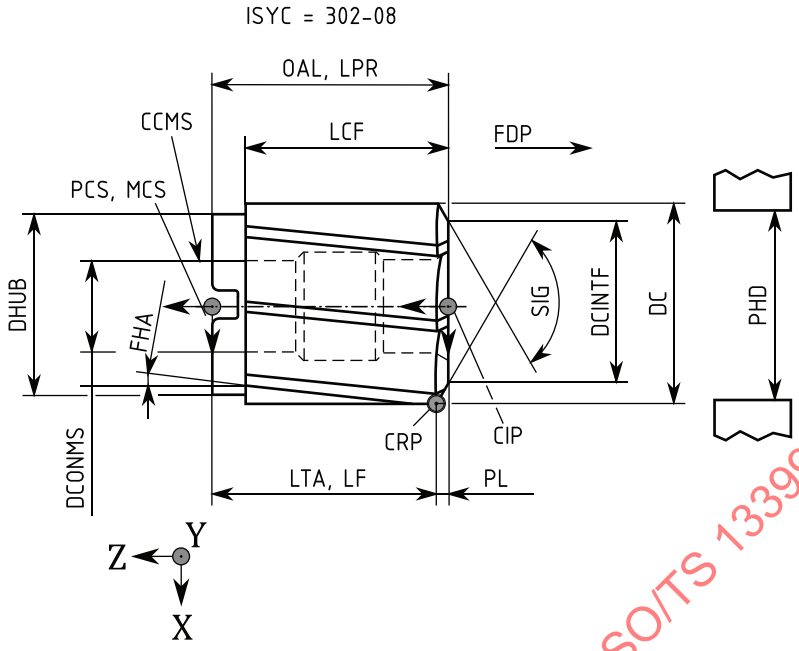


Figure F.18 — ISYC 302-08 - Core drill top, non-centre cutting, solid

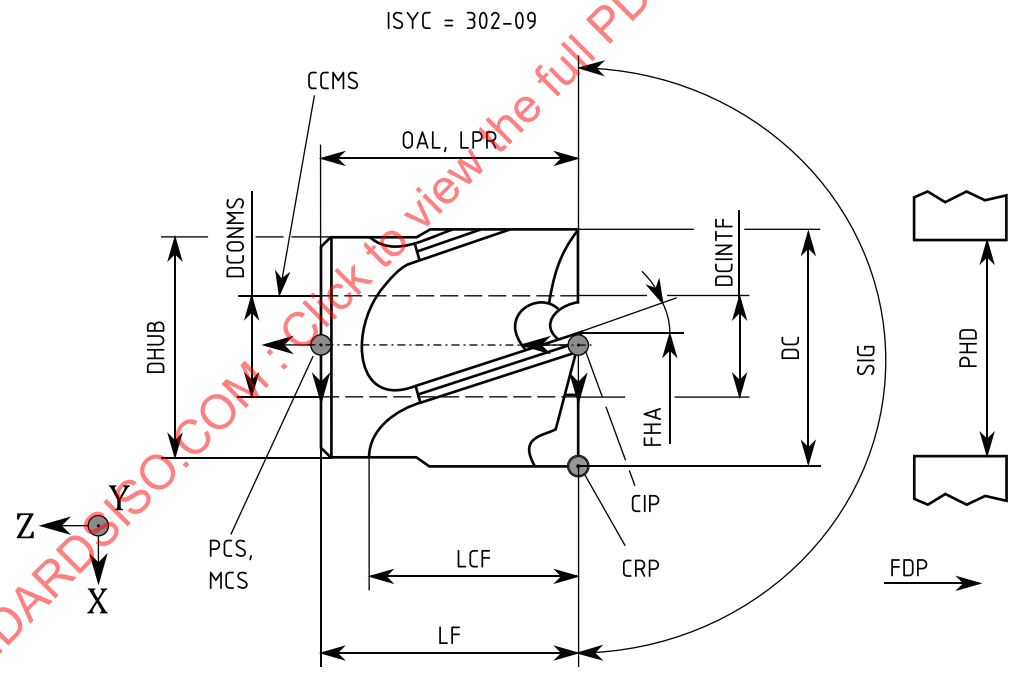


Figure F.19 — ISYC 302-09 - Shell counterbore top, solid

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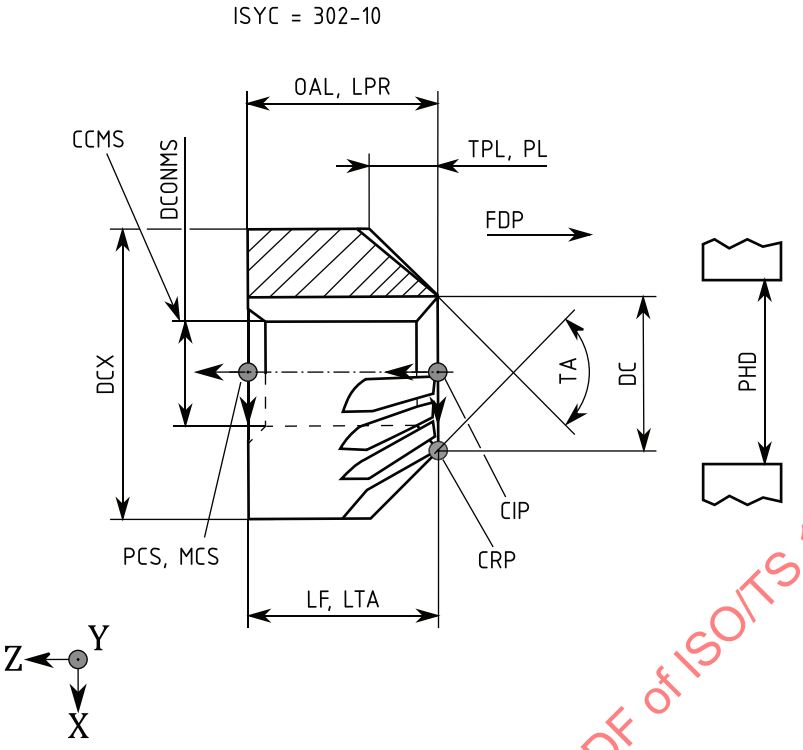


Figure F.20 — ISYC 302-10 - Tapered countersinking tool, top, solid

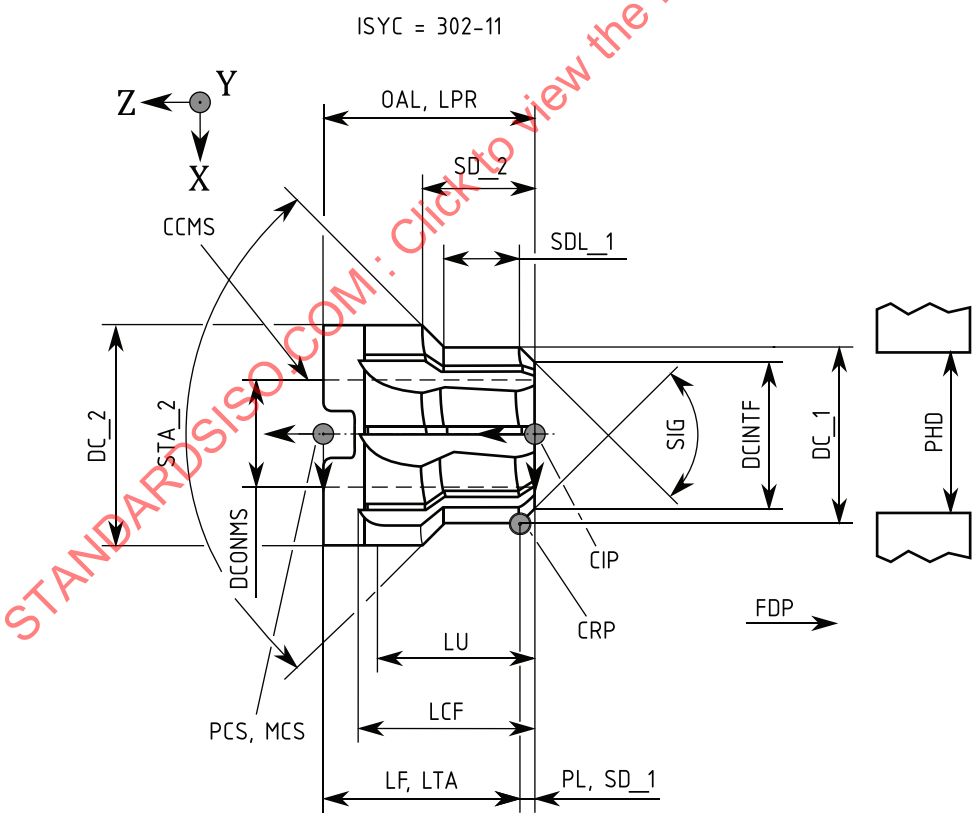


Figure F.21 — ISYC 302-11 - Stepped shell countersinking tool, top solid

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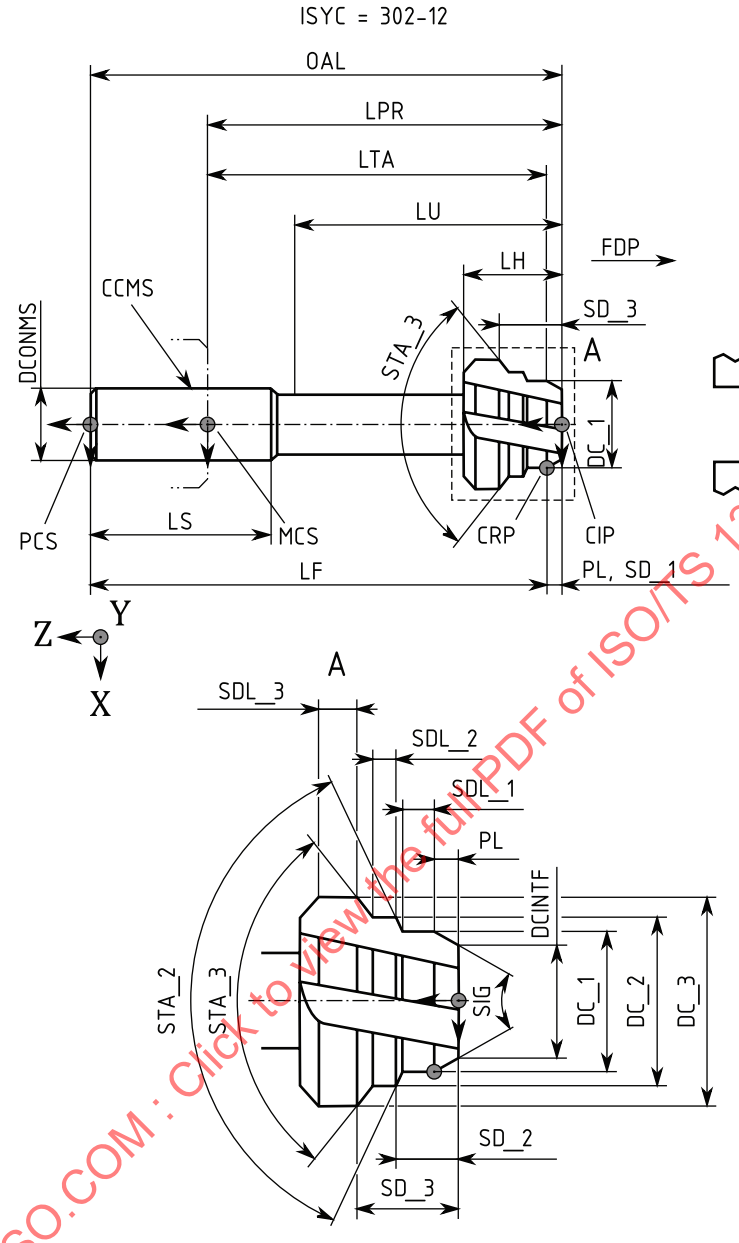


Figure F.22 — ISYC 302-12 - Stepped countersinking tool, cylindrical shank, solid

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F.4 ISYC 303 series - Solid end mill with shank type connection

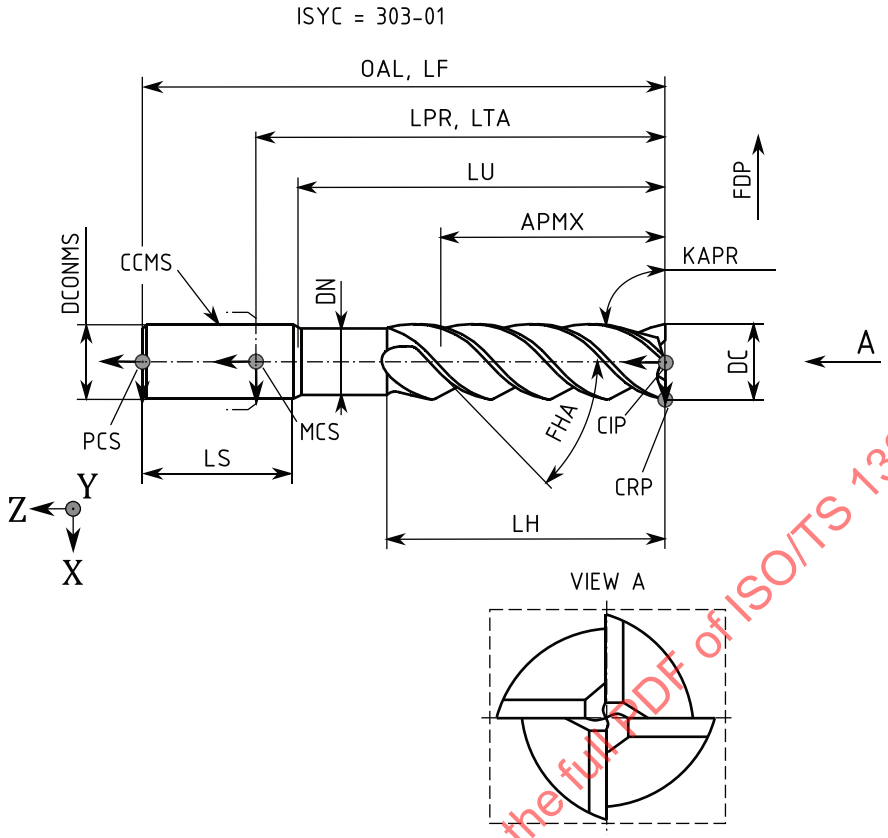


Figure F.23 — ISYC 303-01 - Non-centre cutting end mill, solid

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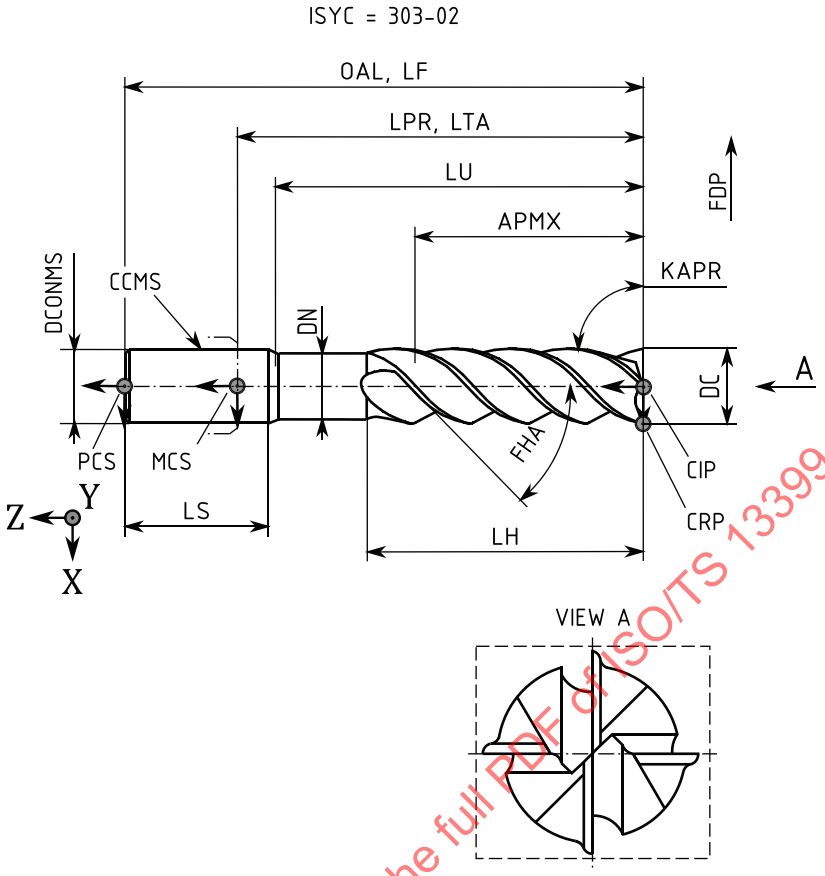


Figure F.24 — ISYC 303-02 - Centre cutting end mill, solid

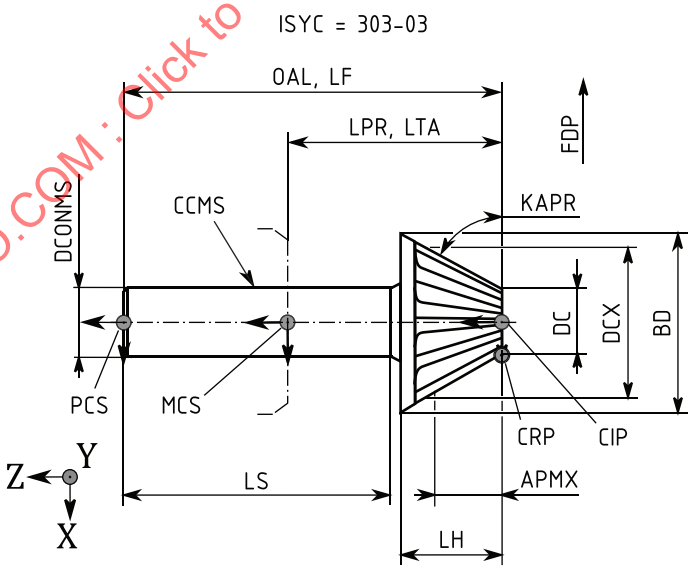


Figure F.25 — ISYC 303-03 - Angular end mill, V-groove, solid

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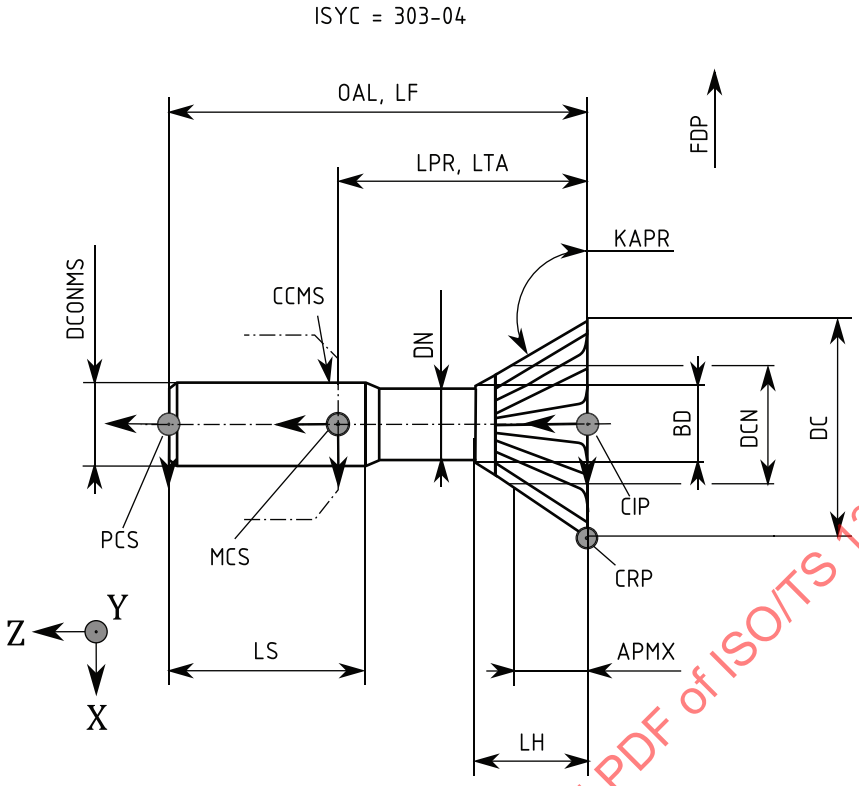


Figure F.26 — ISYC 303-04 - Dovetail end mill, solid

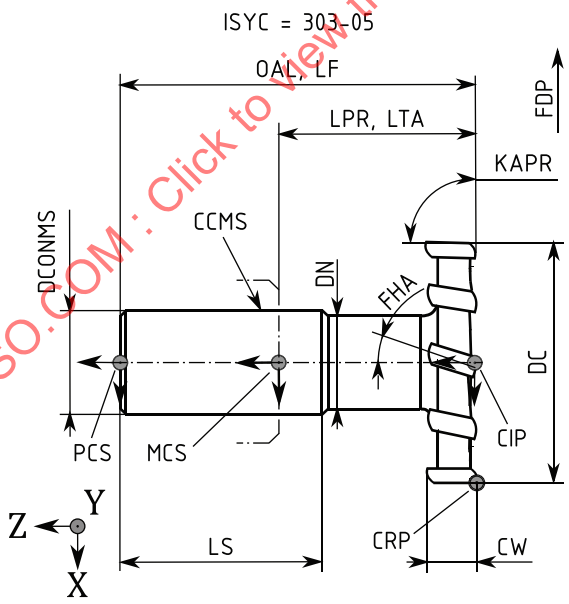


Figure F.27 — ISYC 303-05 - T-slot end mill, solid

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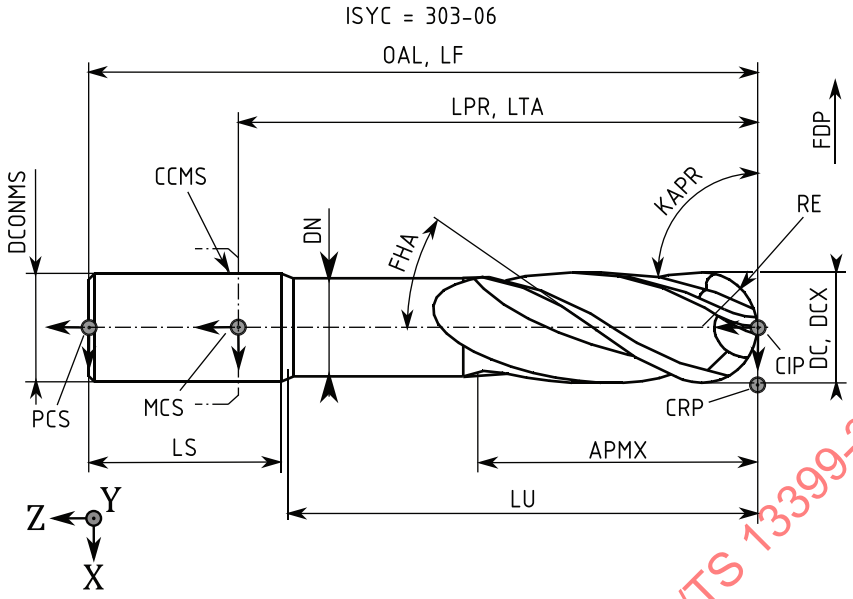


Figure F.28 — ISYC 303-06 - Ball-nosed end mill, solid

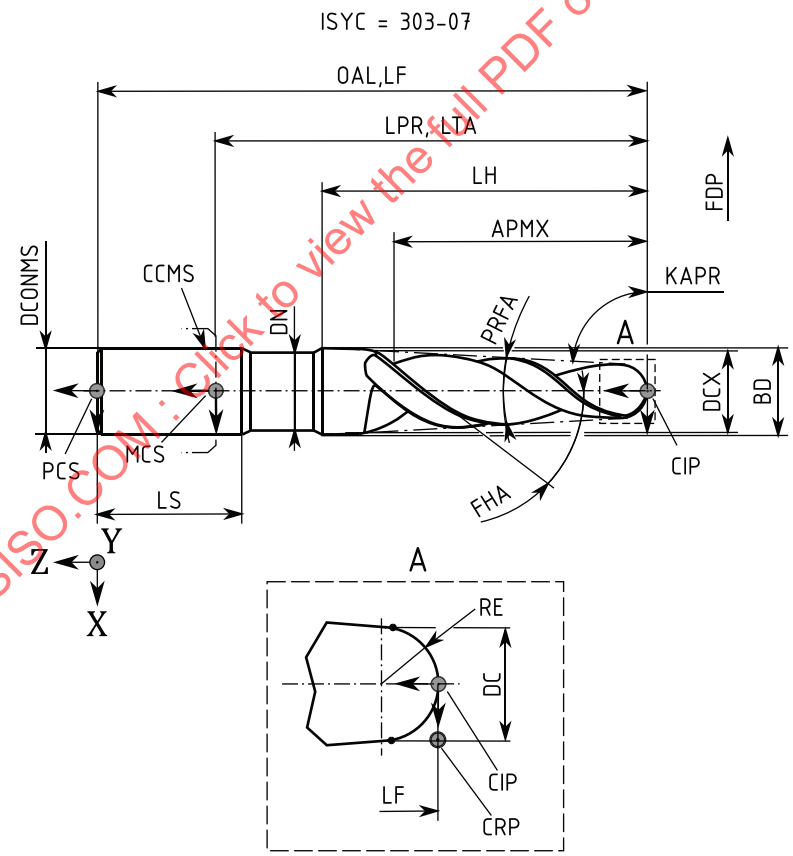


Figure F.29 — ISYC 303-07 - Tapered ball-nosed end mill, solid

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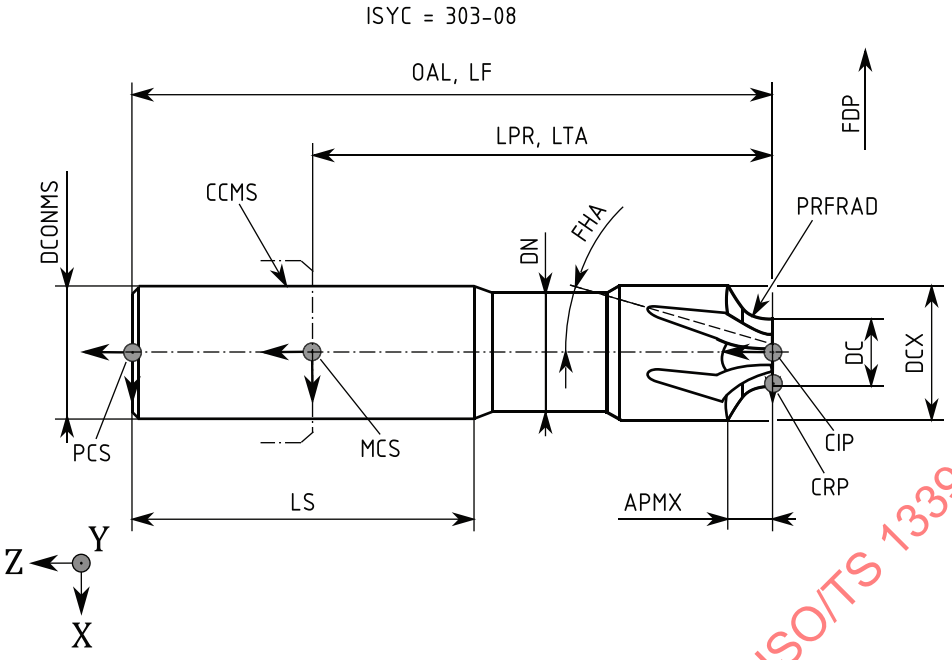


Figure F.30 — ISYC 303-08 - Rounded profile end mill, concave, solid

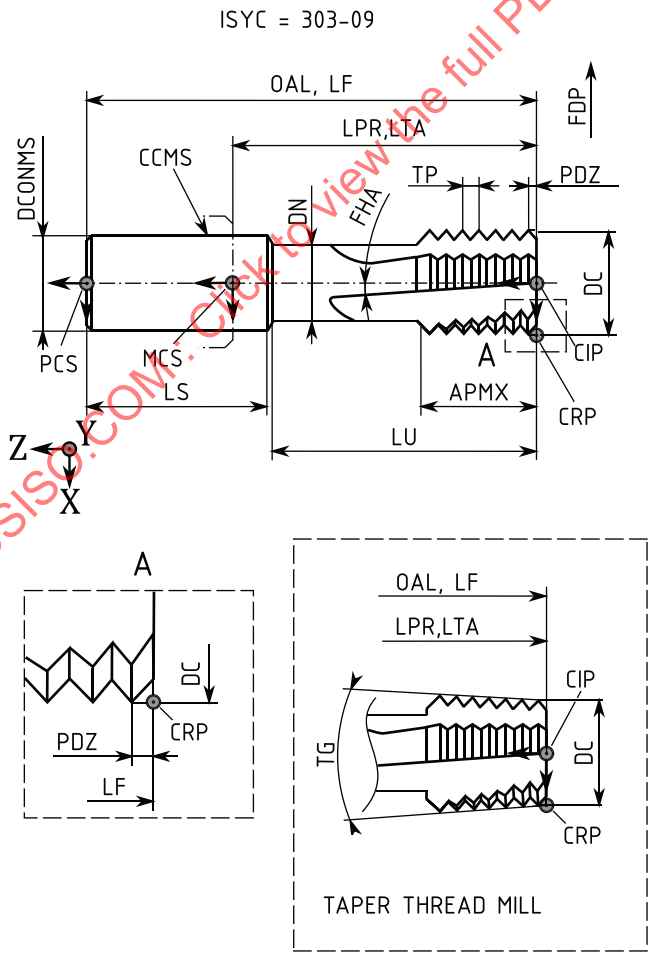


Figure F.31 — ISYC 303-09 - Thread end mill, solid

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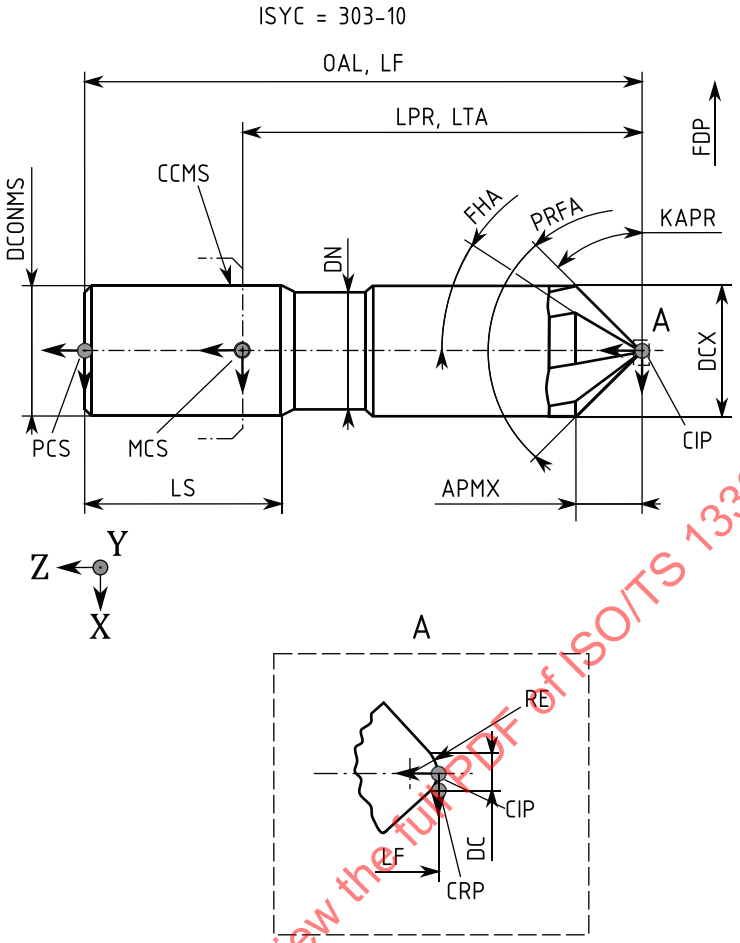


Figure F.32 — ISYC 303-10 - Cutting stylus, solid

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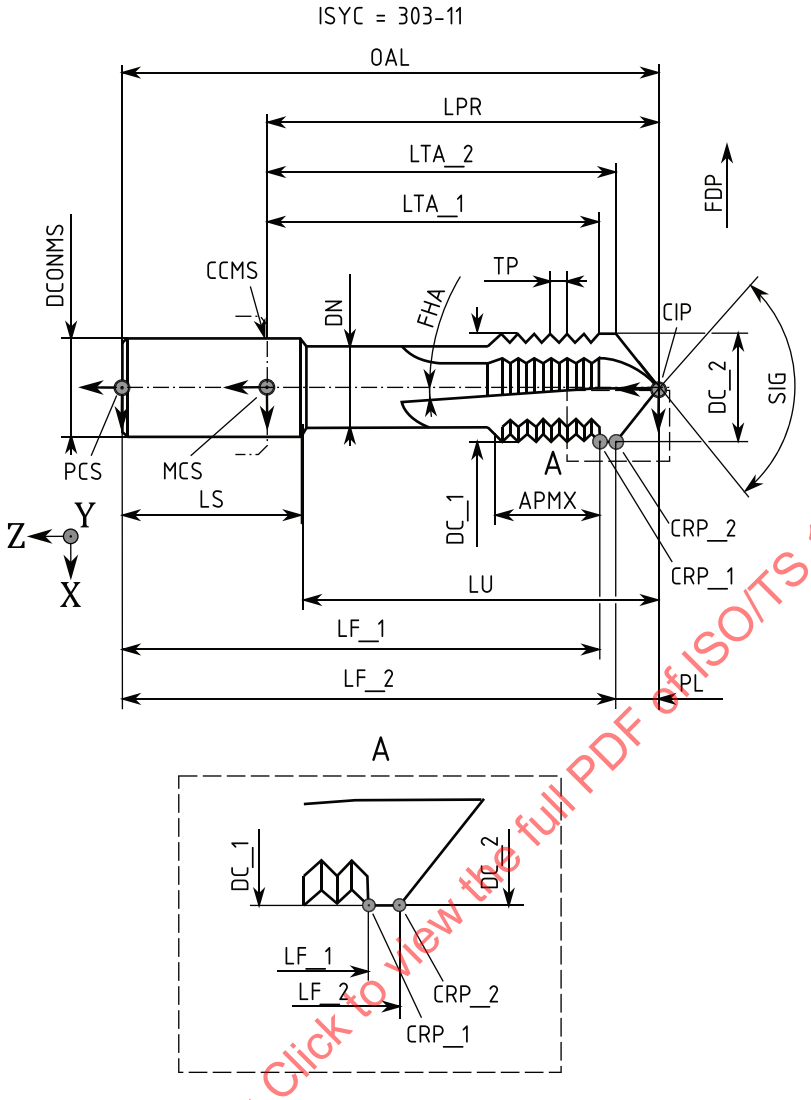
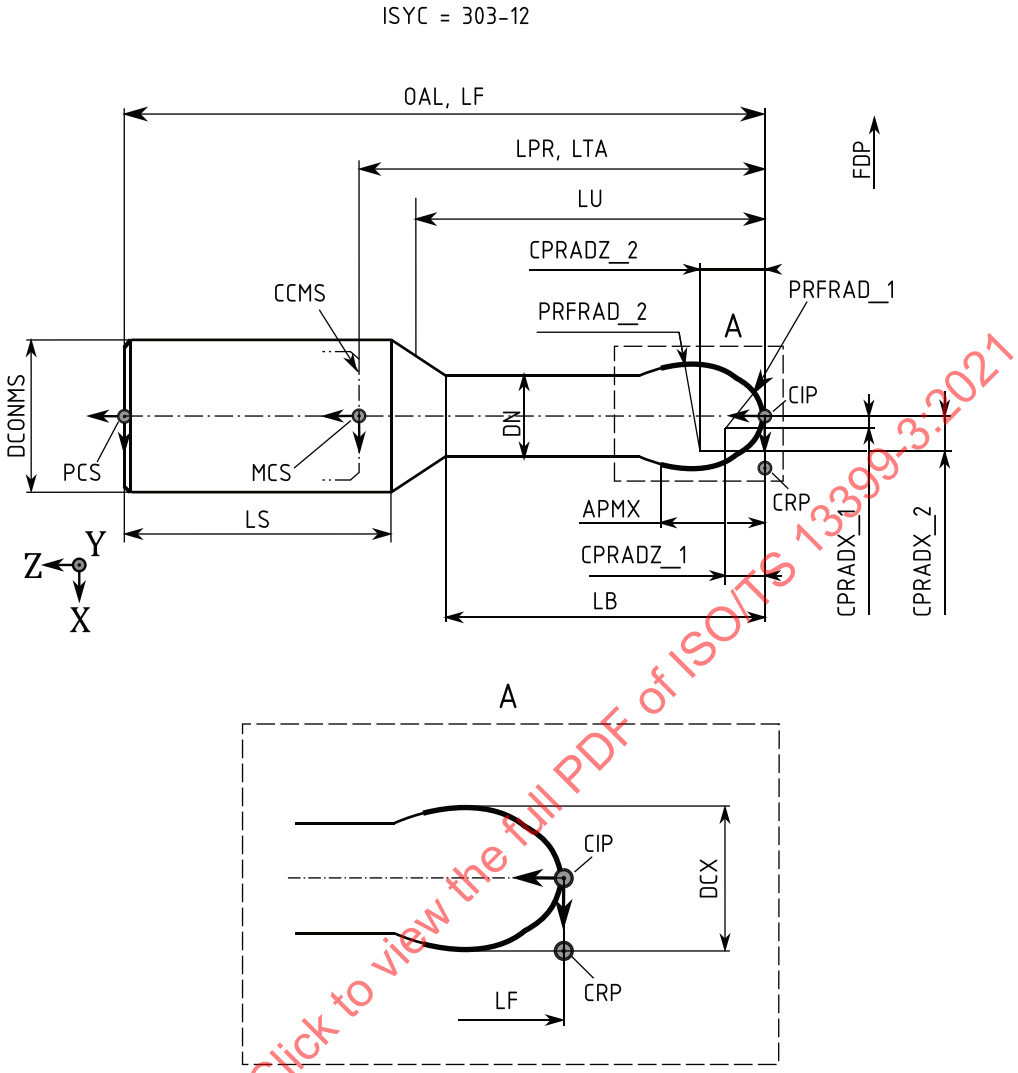


Figure F.33 — ISYC 303-11 - Thread end mill with drilling part, solid

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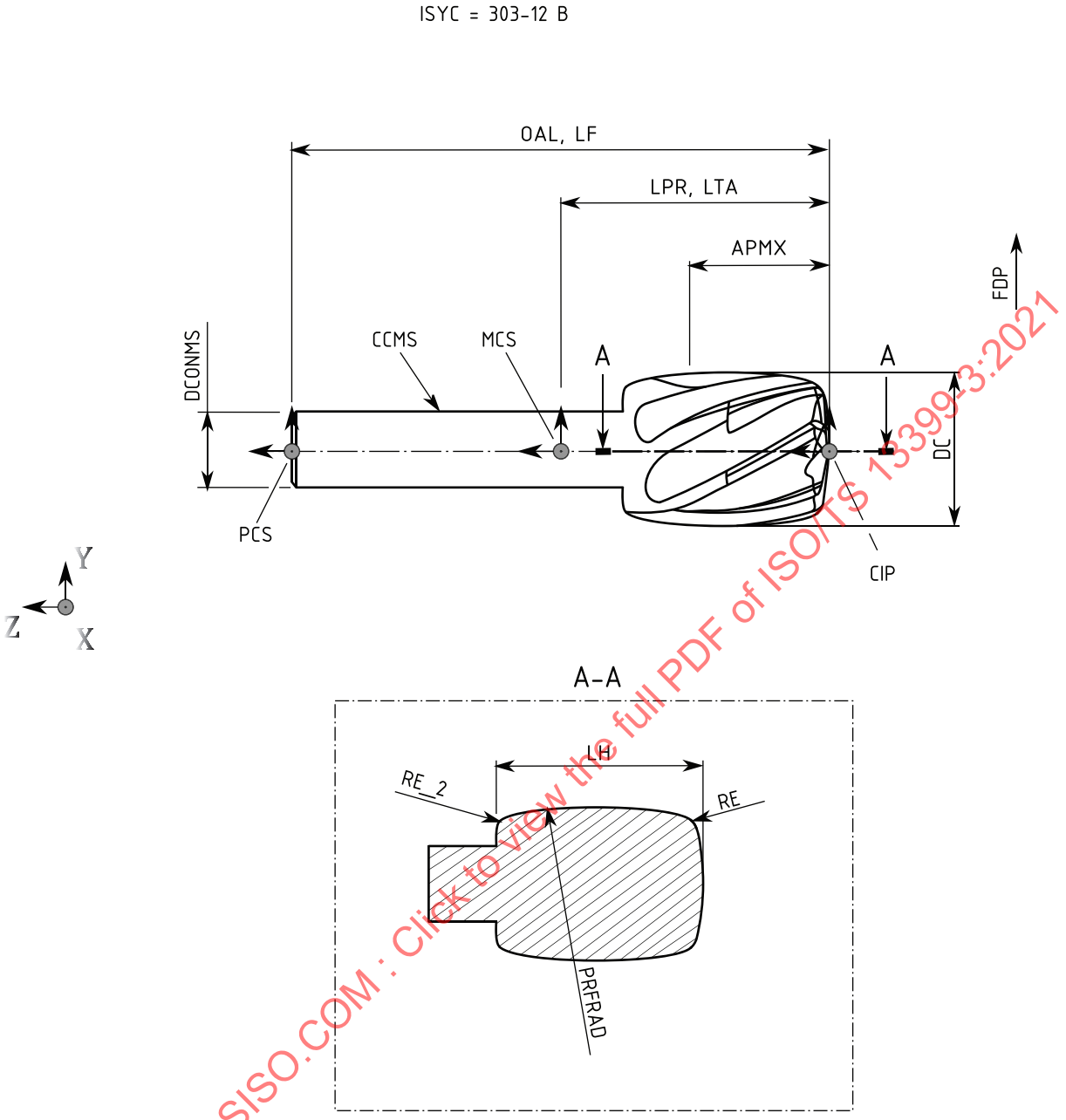
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a) Barrel mill, solid

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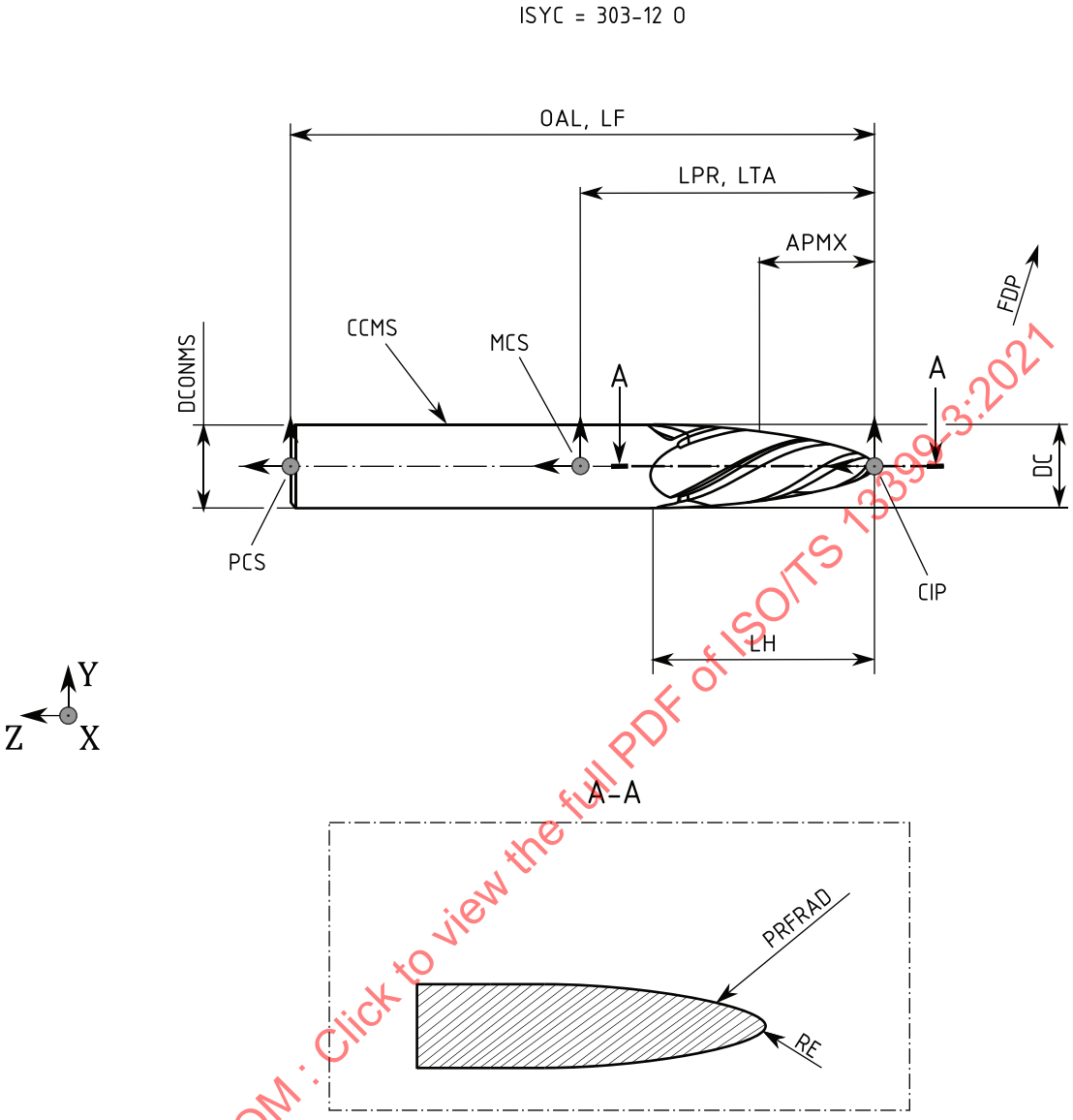
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b) Barell mill, solid, type B

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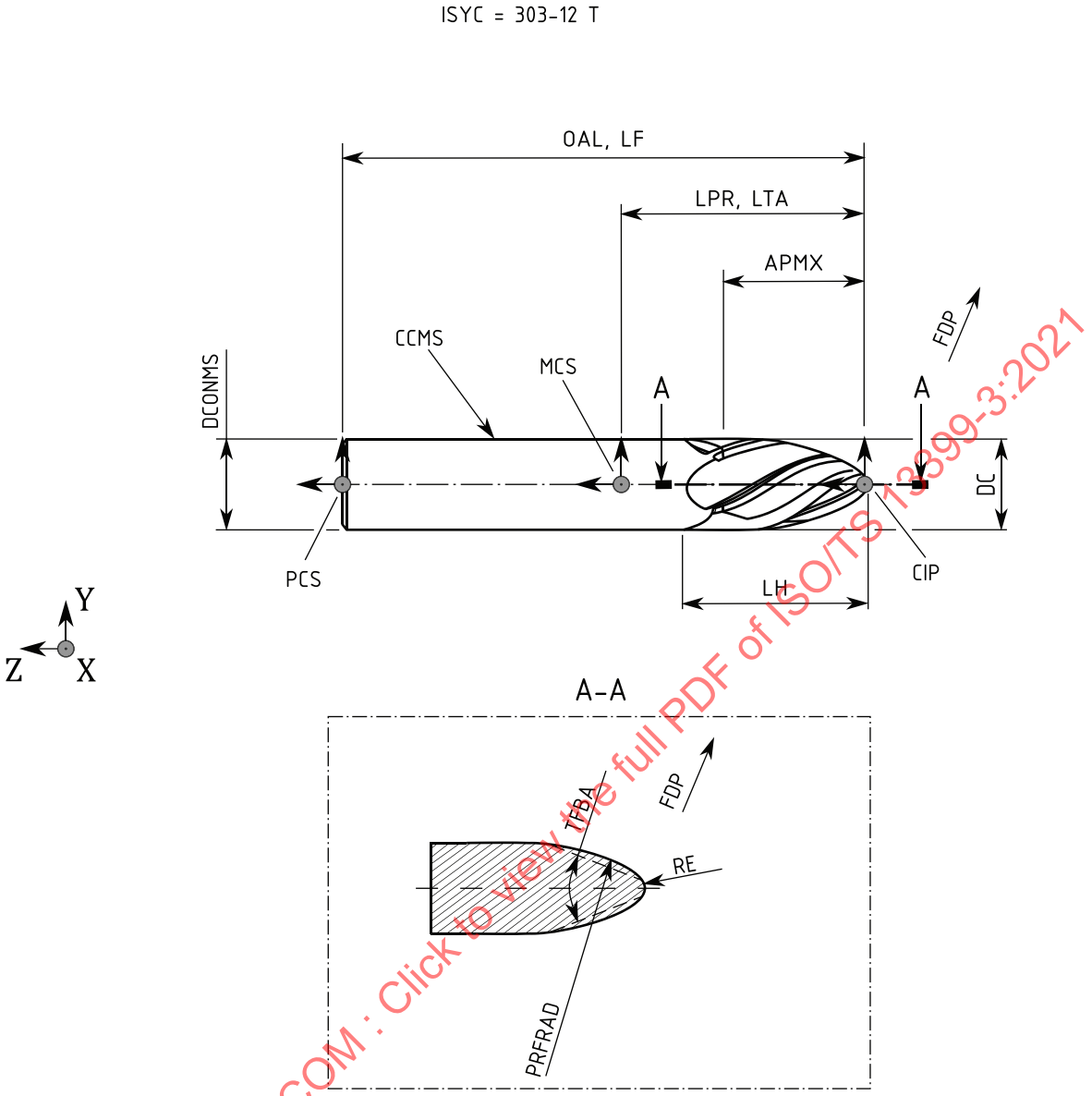
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c) Barell mill, solid, type 0

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d) Barell mill, solid, type T

Figure F.34 — ISYC 303-12 - Barrel mill, solid

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