

# Teknisk specifikation

## SIS-ISO/TS 13399-305:2018

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### **Skärande verktyg – Representation och utbyte av data – Del 305: Skapande och utbyte av 3D-modeller avseende modulsystem för ställbara inbyggnadshållare för uppborring**

### **Cutting tool data representation and exchange – Part 305: Creation and exchange of 3D models - Modular tooling systems with adjustable cartridges for boring**

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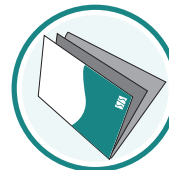
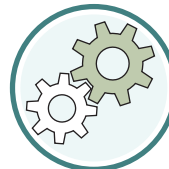
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# Contents

Page

<b>Foreword</b> .....	<b>vi</b>
<b>Introduction</b> .....	<b>vii</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Starting elements, coordinate systems, planes</b> .....	<b>2</b>
4.1 General.....	2
4.2 Reference system.....	2
4.3 Mounting coordinate system.....	3
4.4 Coordinate system at the cutting part.....	4
4.5 Planes.....	5
4.6 Adjustment coordinate system on workpiece side.....	6
4.6.1 General.....	6
4.6.2 Designation of the coordinate system workpiece side.....	7
4.6.3 Arrangement of coordinate system workpiece side.....	8
4.7 Design of the pocket seat and cutting reference point (CRP) of the insert.....	9
<b>5 Design of the model</b> .....	<b>13</b>
5.1 General.....	13
5.2 Necessary parameters for the connection interface feature.....	13
5.3 Necessary properties for insert and pocket seat.....	14
5.3.1 General.....	14
5.3.2 Properties for equilateral, equiangular and equilateral, non-equiangular inserts.....	14
5.3.3 Properties for non-equilateral, equiangular and non-equilateral, non-equiangular inserts.....	15
5.3.4 Properties for round inserts.....	15
5.3.5 Design of the pocket seat feature.....	16
<b>6 Basic shapes for extension bridges, adjustment and assembly parts</b> .....	<b>16</b>
6.1 Monoblock extension bridges with adaptor.....	16
6.1.1 General.....	16
6.1.2 Necessary properties.....	16
6.1.3 Basic geometry.....	17
6.2 Bridge tool adapter.....	19
6.2.1 General.....	19
6.2.2 Necessary properties.....	19
6.2.3 Basic geometry.....	19
6.3 Bridge tool.....	20
6.3.1 General.....	20
6.3.2 Necessary properties.....	21
6.3.3 Basic geometry.....	21
6.4 Slide for adjustable units.....	22
6.4.1 General.....	22
6.4.2 Necessary properties.....	22
6.4.3 Basic geometry of slides for adjustable units.....	22
6.5 Slide element.....	23
6.5.1 General.....	23
6.5.2 Necessary properties.....	24
6.5.3 Basic geometry of slide elements.....	24
6.6 Balance weight.....	25
6.6.1 General.....	25
6.6.2 Necessary properties.....	26
6.6.3 Basic geometry of balance weights.....	26

**SIS-ISO/TS 13399-305:2018 (E)**

<b>7</b>	<b>Basic shapes for cartridges and insert holders</b>	<b>27</b>
7.1	Adjustable unit	27
7.1.1	General	27
7.1.2	Necessary properties	28
7.1.3	Basic geometry of adjustable units	28
7.2	Boring head for adjustable units	29
7.2.1	General	29
7.2.2	Necessary properties	30
7.2.3	Basic geometry of boring heads for adjustable units	30
<b>8</b>	<b>Basic shapes of rotating boring systems</b>	<b>31</b>
8.1	General	31
8.2	Assembled single-point bridge tool	31
8.2.1	General	31
8.2.2	Necessary properties	32
8.2.3	Assembled model of single-point bridge tool	33
8.3	Assembled single-point bridge tool for reverse internal operations	35
8.3.1	General	35
8.3.2	Necessary properties	36
8.3.3	Assembled model of single-point bridge tool for reverse operations	36
8.4	Assembled multi-point bridge tool	37
8.4.1	General	37
8.4.2	Necessary properties	38
8.4.3	Assembled model of multi-point bridge tool	39
8.5	Assembled single-point bridge tool for external operations	40
8.5.1	General	40
8.5.2	Necessary properties	40
8.5.3	Assembled model of single-point bridge tool for external operations	41
8.6	Assembled multi-point bridge tool for external operations	42
8.6.1	General	42
8.6.2	Necessary properties	43
8.6.3	Assembled model of a multi-point bridge tool for external operations	43
8.7	Single-point bridge tool for axial grooving	44
8.7.1	General	44
8.7.2	Necessary properties	45
8.7.3	Assembled model of single-point bridge tool for axial grooving	46
8.8	Assembled multi-point bridge tool for axial grooving	47
8.8.1	General	47
8.8.2	Necessary properties	47
8.8.3	Assembled model of multi-point bridge tool for axial grooving	47
8.9	Boring head	48
8.9.1	General	48
8.9.2	Necessary properties	49
8.9.3	Assembled model of boring head	49
8.10	Fine boring head with boring bar	50
8.10.1	General	50
8.10.2	Necessary properties	50
8.10.3	Assembled model of fine boring head with boring bar	51
8.11	Boring head with adjustable unit	52
8.11.1	General	52
8.11.2	Necessary properties	52
8.11.3	Assembled model of boring head with adjustable unit	53
<b>9</b>	<b>Design of details</b>	<b>54</b>
9.1	Basis for modelling	54
9.2	Fixing threads for inserts	54
9.3	Contact/clamping surfaces — Orientation	54
9.4	Chamfers and roundings	54
<b>10</b>	<b>Attributes of surfaces — Visualization of model features</b>	<b>55</b>

<b>11</b>	<b>Data exchange model</b> .....	<b>55</b>
<b>Annex A</b> (informative)	<b>Information about nominal dimensions</b> .....	<b>67</b>
<b>Annex B</b> (informative)	<b>STP structure</b> .....	<b>68</b>
<b>Bibliography</b> .....		<b>73</b>

## SIS-ISO/TS 13399-305:2018 (E)

### Foreword

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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](http://www.iso.org/directives)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

The committee responsible for this document is ISO/TC 29, *Small tools*.

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



## **Introduction**

This document defines the concept, the terms and the definitions of how to design simplified 3D models of modular tooling systems with adjustable cartridges for boring that can be used for NC-programming, simulation of the manufacturing processes and the determination of collision within machining processes. It is not intended to standardize the design of the cutting tool itself.

A cutting tool is used in 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 ISO 13399 include, but are not limited to, everything between the workpiece and the machine tool. Information about inserts, solid tools, assembled tools, adaptors, components and their relationships can be represented by this document. The increasing demand providing the end user with 3D models for the purposes defined above is the basis for the development of the ISO 13399 series.

The objective of 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 will facilitate the processing and exchange of cutting tool data within and between different software systems and computer platforms and support 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 that are 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.

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/TC 3/SC 3D, and in its extensions defined in ISO 13584-24 and ISO 13584-25.



# Cutting tool data representation and exchange —

## Part 305:

# Creation and exchange of 3D models — Modular tooling systems with adjustable cartridges for boring

## 1 Scope

This document specifies a concept for the design of tool items, for all kinds of modular tooling systems with adjustable cartridges for boring, together with the usage of the related properties and domains of values.

This document specifies a common way of designing simplified models that contain the following:

- definitions and identifications of the design features of modular tooling systems with adjustable cartridges for boring, with an association to the used properties;
- definitions and identifications of the internal structure of the 3D model that represents the features and the properties of modular tooling systems with adjustable cartridges for boring.

The following are outside the scope of this document:

- a) applications where these standard data may be stored or referenced;
- b) concept of 3D models for cutting tools;
- c) concept of 3D models for cutting items;
- d) concept of 3D models for other tool items not being described in the scope of this document;
- e) concept of 3D models for adaptive items;
- f) concept of 3D models for assembly items and auxiliary items.

## 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 13399-80, *Cutting tool data representation and exchange — Part 80: Creation and exchange of 3D models — Overview and principles*

ISO/TS 13399-201, *Cutting tool data representation and exchange — Part 201: Creation and exchange of 3D models — Regular inserts*

ISO/TS 13399-202, *Cutting tool data representation and exchange — Part 202: Creation and exchange of 3D models — Irregular inserts*