TDM systems

TDM ISO-3D-Viewer

Tree

- C4-DCLNR-27050-12 (detail, tool item)
  - Documents
    - ☑ 3D model = C4-DCLNR-27050-12-633101755776083180-1.stp
    - 2D drawing = 0586607.DXF
  - Functional View Pos1
    - General Classifications
      - floating wedge clamping
      - locking mechanism
      - system tool
        - functional length=50
        - tool lead angle=-5
        - tool cutting edge angle=95
        - inclination angle=-6
        - rake angle normal =-6
        - functional width=27
        - master insert identification=CNMG 12 04 08
        - hand=R
        - cutting edge count=1
        - insert index count=400
      - coolant supply
    - Features
      - locking mechanism
        - torque=3.9
  - Functional View Body
    - General Classifications
      - variant 01 of CCS Coromant Capto System
      - system tool
        - contact surface diameter machine side=40
        - connection diameter=28
        - protruding length=50
        - weight of item=0.47
      - coolant supply
    - Properties
      - product family=T-Max P
    - Features
      - variant 01 of CCS Coromant Capto System
        - connection size code=C4
        - connection unit basis=C
        - side=mach
        - form type=Ext
      - coolant supply
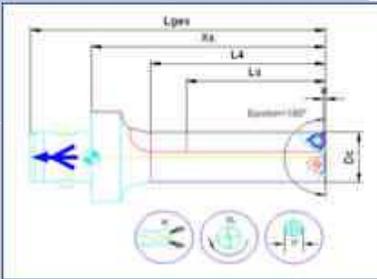   - coolant entry style code=1

Viewer

T24 STEP-Manufacturing
September 24 – September 25, 2009
University of Bath, UK

TDM Systems – your partner for Tool Data Management

- We supply software and data for organizing and managing tools, jigs and fixtures, inspection equipment, machine set-up and chucking devices as well as facilities and production equipment.
- We are the Sandvik Tooling Group's official Know-How Center for tool data management. Our unique pool of competence is reflected in our products. .
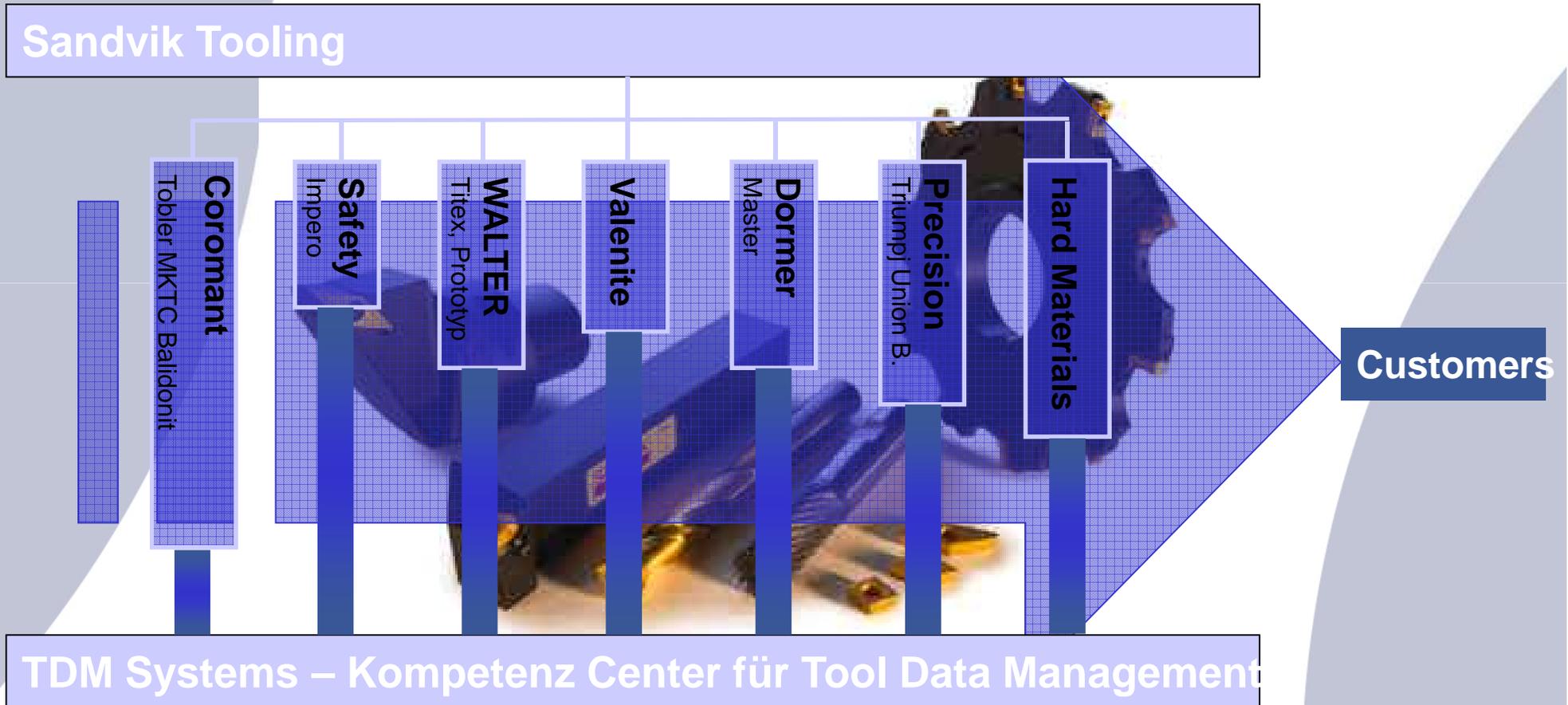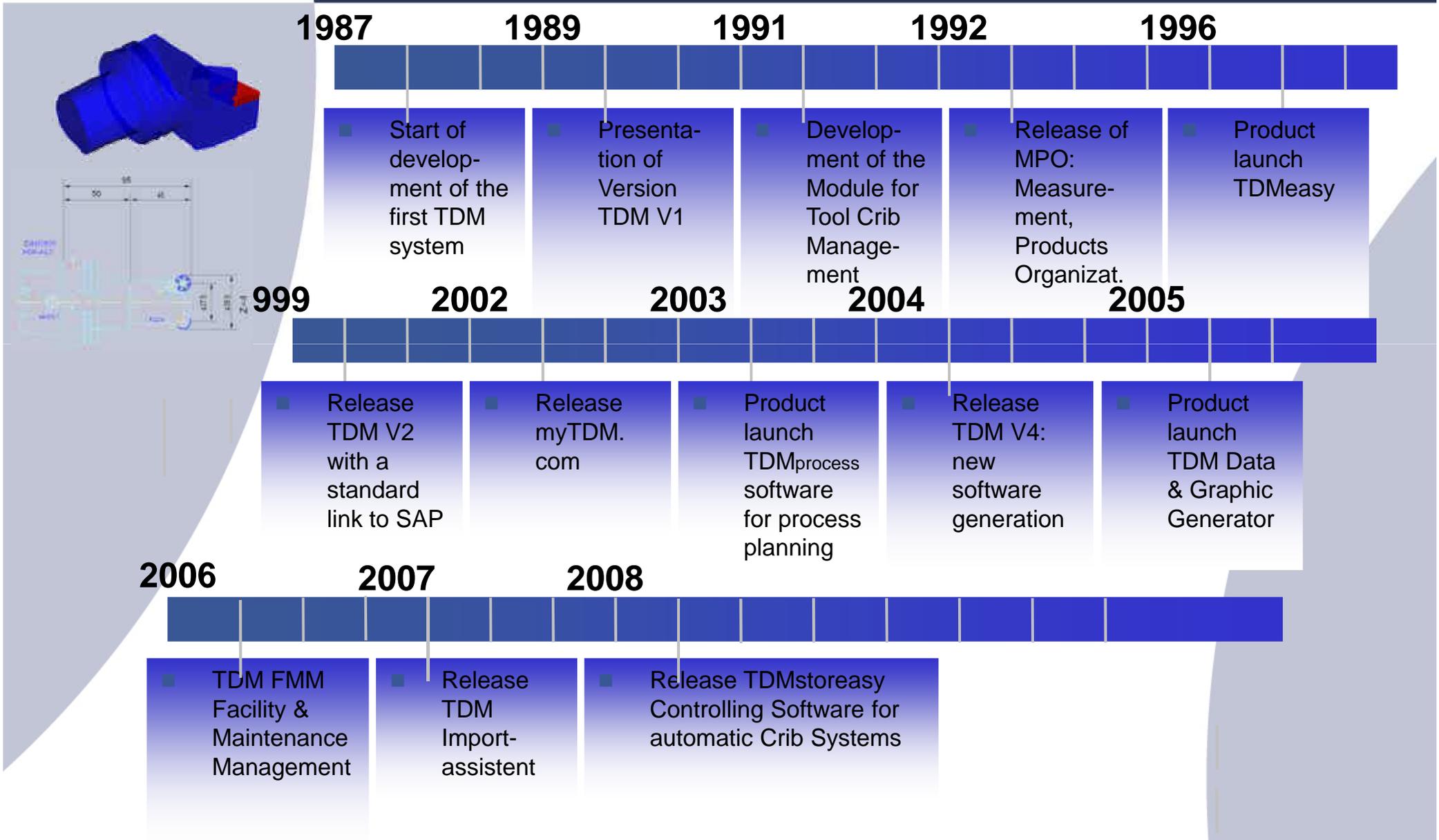
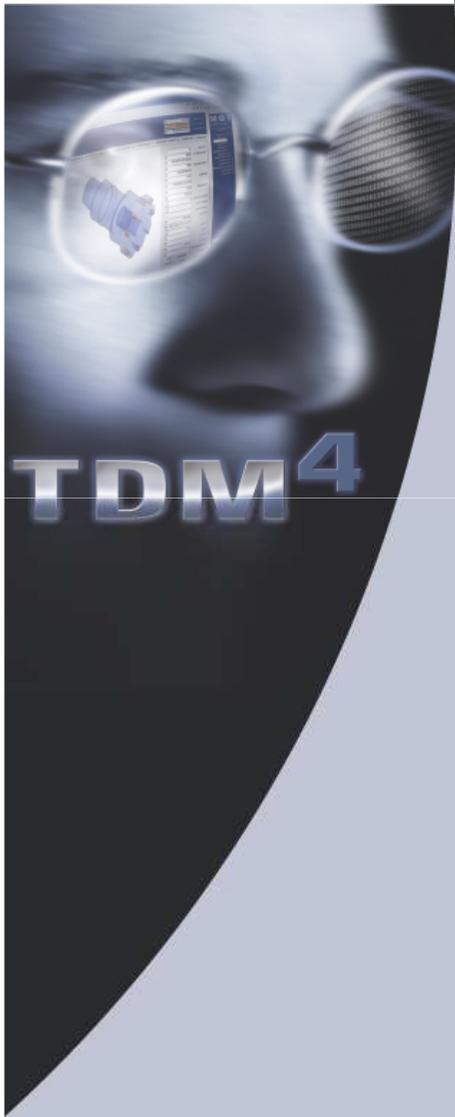**TDM Systems – specialists for increasing productivity**

- Headquarter: Tübingen, Germany
- Foundation: 1993 as
                      WALTER Informationssysteme GmbH
- Employees 2009:   52 (plus 9 apprentices)
- Products: TDM V4, myTDM.com, MPO,
                      TDM 3D, FMM
- Customers: approx. 650 worldwide
- User: 7.500 worldwide
- Markets: Europe, North- and South
                      America, Asia

Sandvik Tooling

Coromant
Tobler MKTC Balidonit

Safety
Impero

WALTER
Titex, Prototyp

Valenite

Dormer
Master

Precision
Triumpj Union B.

Hard Materials

Customers

TDM Systems – Kompetenz Center für Tool Data Management

History - Milestones in the progress of TDM

1987
- Start of development of the first TDM system

1989
- Presentation of Version TDM V1

1991
- Development of the Module for Tool Crib Management

1992
- Release of MPO: Measurement, Products Organizat.

1996
- Product launch TDMeasy

999
- Release TDM V2 with a standard link to SAP

2002
- Release myTDM.com

2003
- Product launch TDMprocess software for process planning

2004
- Release TDM V4: new software generation

2005
- Product launch TDM Data & Graphic Generator

2006
- TDM FMM Facility & Maintenance Management

2007
- Release TDM Import-assistent

2008
- Release TDMstoreasy Controlling Software for automatic Crib Systems

Products & Services

The software program which leads to higher transparency and increasing productivity

MPO
Management of
Measurement Products

TDM V4
Modular system for Tool
Data Management

myTDM.com
Internet based tool
management system

TDM Data and Graphic Generator
Data Base which creates tool data,
2D and 3D graphics for over 40.000 tools

TDM Facility and Maintenance
Management
Data Base which creates tool data,
2D and 3D graphics for over 40.000 tools

■ **Multiple possibilities for Integration**
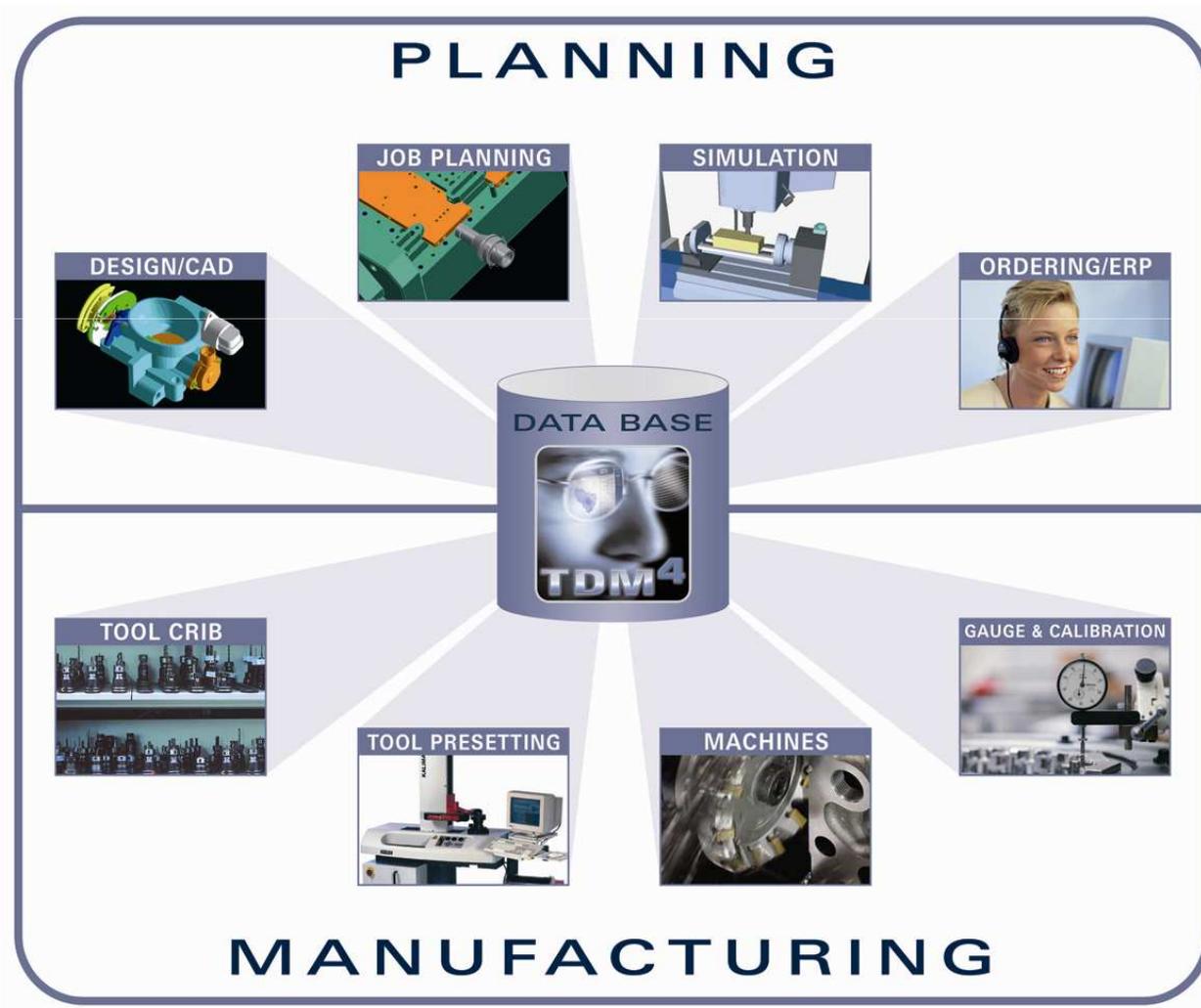
We guide you through all project phases

- Pre Sales Services of TDM Systems
  - Consulting
  - Specifications
  - Engineering
  - Cost Benefit Analysis
  - Project Management

- After Sales Services of TDM Systems
  - Software Training
  - Online Support
  - Technical Hotline
  - System Maintenance

Experience exchange and exclusive product information

- TDM Interessenverband: User group for German speaking TDM user (Germany, Austria, Switzerland)
- TDMclub: User group for European customers
- NAUG: North American User Group
- Exclusive communication of news about the TDM software and the company
- Experience and information exchange
- Club members can influence the further development of TDM with their ideas
- Annual user group meeting

How can ISO 13399 improve the production process?

- **Exchange of tool information between different partners (tool manufacturers, machine / control suppliers, CAD-/CAM suppliers, simulation systems, end users, …) will be much easier, as it is the case now.**

- **Expense:**
  One common format and accepted standard will reduce the expenses for data exchange.

- **Quality:**
  One common format and accepted standard will make sure, that no information is lost, when data are exchanged between different systems.

Customers and suppliers

WALTER

SANDVIK Coromant

DORMER

Tool manufacturers: Items

ISO 13399

TDM Tool Data Management and related products

ISO 13399

Customer: Assemblies, rotated

Different possibilities for Data Input

Manual

Maufacturer Catalogues

WALTER

WALTER TITEX

WALTER PROTOTYP

SECO

ph HOAN ph

SANDVIK Coromant

etc.

CIMSOURCE FormBase

External Data Base

TDM Software

ACCESS

Existing Data

TDM⁴

TDM V4

- is an innovate system for manufacturing resources
- simplifies organization
- makes operating processes more efficient as well as in a better quality

Product example: TDM 3D Viewer

ISO 13399

One common standard!

Different systems who support it.

<u>Example:</u>
TDM 3D Viewer

TDM systems
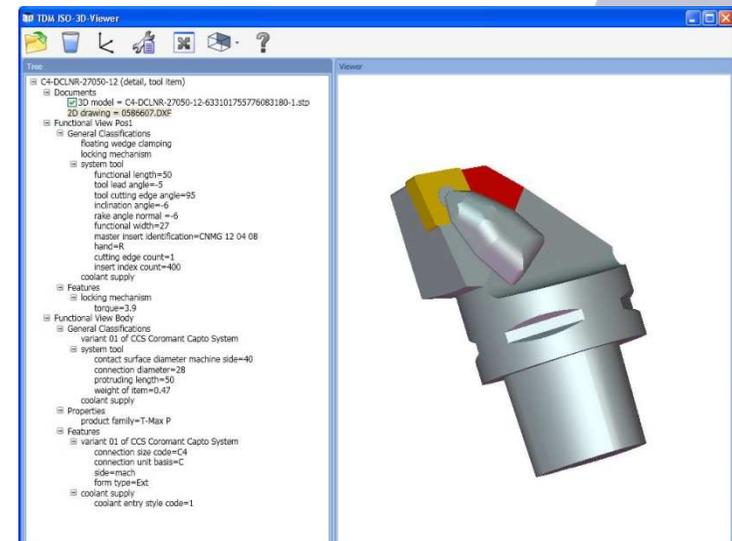
Functionality overview

Basic solid viewer

Open and view ISO10303-203 p21 file (stationary view for tool maintenance/information purpose).
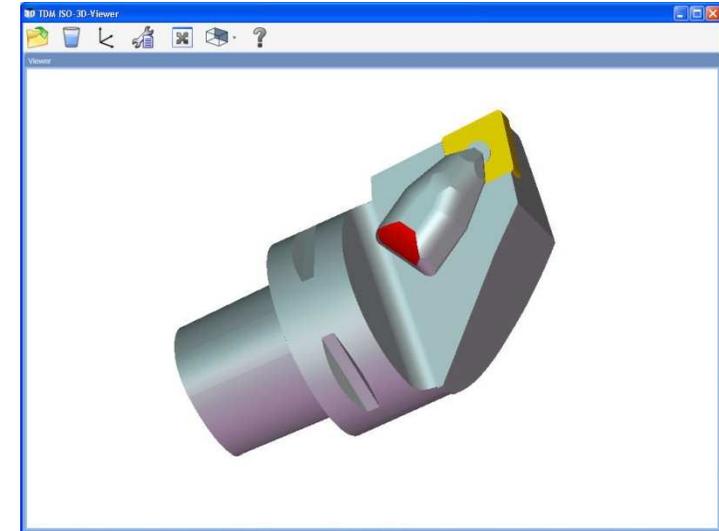
Extended solid viewer

- Possibility to open an ISO13399 p21 files of an item and view ISO13399 to the left and 3D view of referenced ISO10303-203 p21 file to the right.
- Possibility to view the 3D model or the information tree only or both.
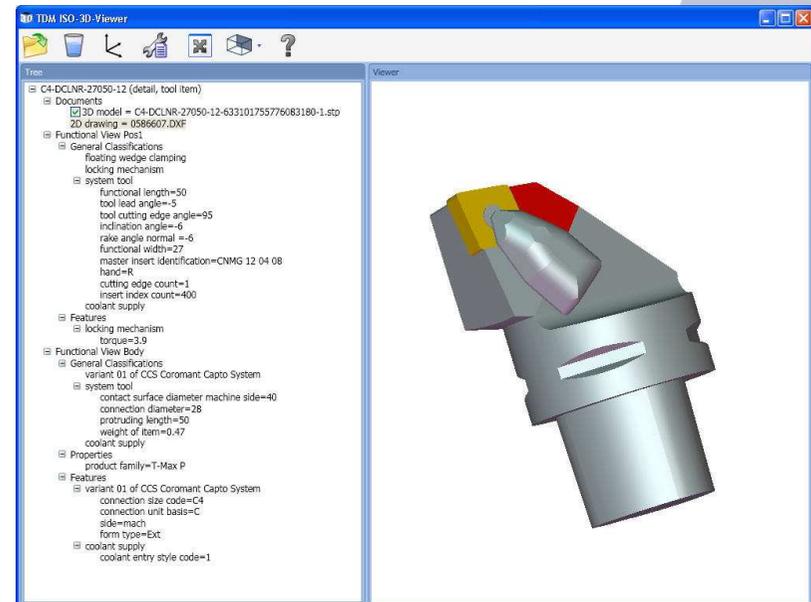
Functionality overview

Assembly solid viewer

- **Possibility to open an ISO13399 p21 file of an assembly and view the step geometries of the items which are part of the assembly and are stored in the file. The step file contains also the position of the items and their orientation according to ISO.**
- **The possibility to fade in or out single items of the components list exists as well.**
- **The creation of the assembly can be done for example via an external software system like TDM.**

Profile solid viewer

Possibility to build the rotated model of a stationary one.
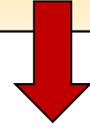
Translation solid viewer

Possibility to open sat, IGES and STL based 3D components for items and assemblies and save it as an ISO 10303-203 p21 file.

TDM systems

Creation of a cut profile from the ISO data

Example:
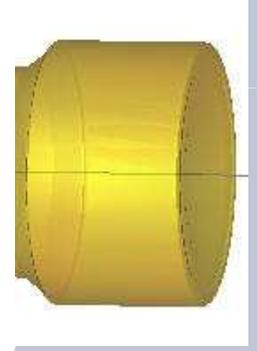**Cutting area; tool with inserts**
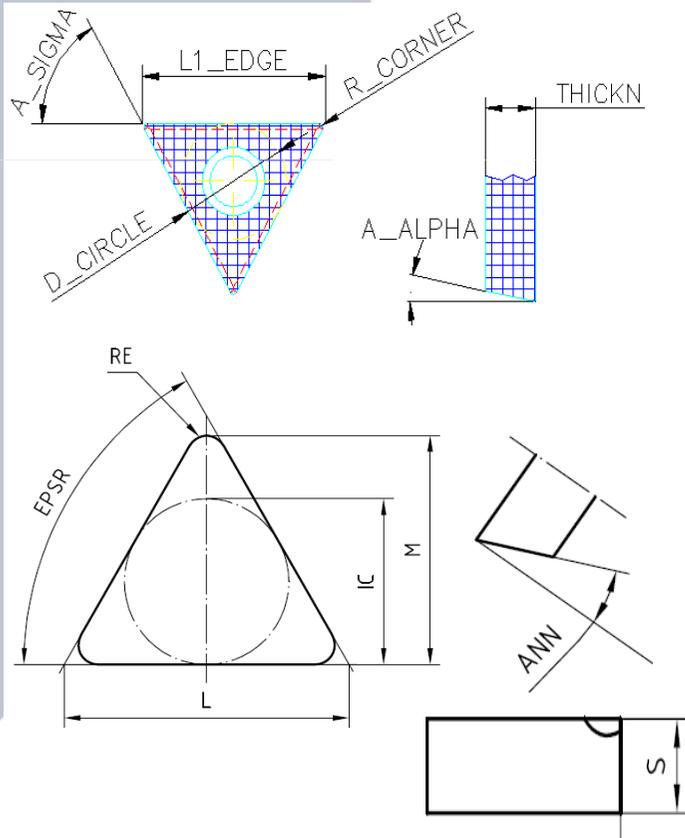
ISO-File

ISO-Parameters:
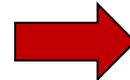
IC
L
EPSR
RE
ANN
S
SC (Insert shape code)

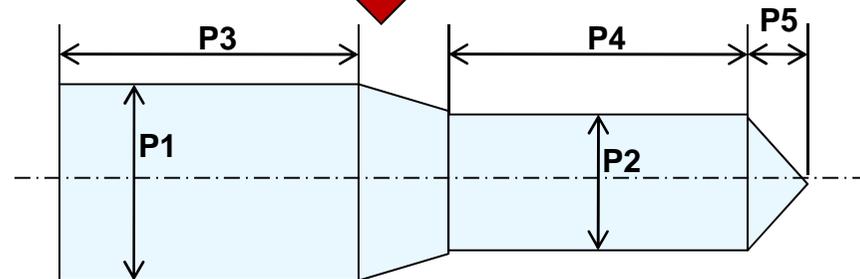**TDM 3D Engines**

Rotated 3D model

Creation of a cut profile from the ISO data

Example:
Cutting area; tool without inserts

ISO-File

P1
P2
P3
P4
P5

Object type, for example step drill

TDM 3D Engines

P3   P4   P5

P1   P2

Rotated 3D model

Creation of a cut profile from the ISO data

Rotation axis

Stationary 3D model

Cut surfaces

Rotating point:

Point with the biggest distance from the rotation axis in the respective cut surface.