

Teamcenter Manufacturing Tooling Library

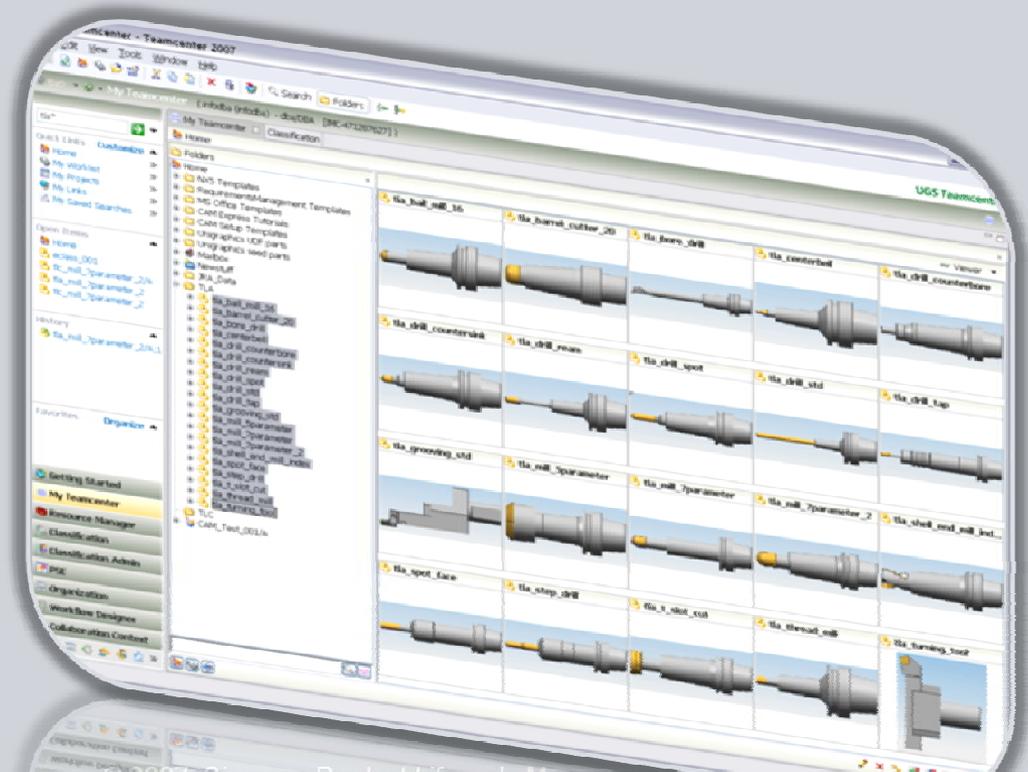
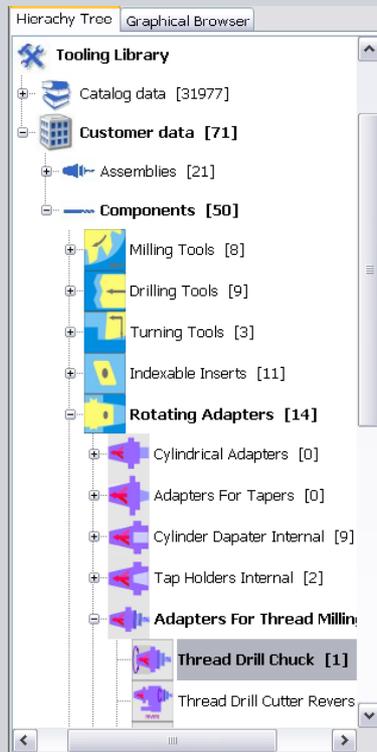
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future deliverables in this document**

Tom van 't Erve
Director NX CAM Development

June 2008

Agenda

- What is Teamcenter Classification
- What is Teamcenter Resource Manager
- The Partnership with TDM Systems



Teamcenter Classification User Interface

The screenshot displays the Teamcenter Classification User Interface. On the left is a tree view under 'Classification Root' with categories like 'Resource Management', 'Tools', and 'Components'. The 'Tools' category is expanded to show 'Face Mills with Round Inserts'. The main area features a 'Properties' table for the selected tool (Object ID: ugc020102_001) and two view windows: 'Face Mills with Round Inserts' showing 2D technical drawings (A-A and Detail Z) and 'No Instance loaded' showing a 3D model of the tool.

Properties		Table	
Object ID	ugc020102_001		
Insert Shape	IS	R Circular	
Flute Direction	N2	R Right	
Total Length	L1	050.000	mm
Length 2	L2	030.000	mm
Length 3	L3	020.000	mm
Length 4	L4	020.000	mm
Length 5	L5	010.000	mm
Cutting Depth	AP	008.000	mm
Corner Radius	R1	008.000	mm
Relief Angle	A2	11 (P)	degree
Insert Thickness	S	5.56 (05)	mm
Fixing Method for Insert	IT	C Top Cramped, without Bore Hole	
Seat Diameter	DS	022.000	mm
Diameter 4	D4	080.000	mm
Diameter 5	D5	035.000	mm
Tongue End Width	MB	008.400	mm
Perishable	P/D	1 No	
Identifies Tool	IT/A	1 No	
Description	M1	Face Mill D100	
Comments	M2		
Order# - Catalog#	M3		
Vendor	M4		

Teamcenter Classification Search Capabilities

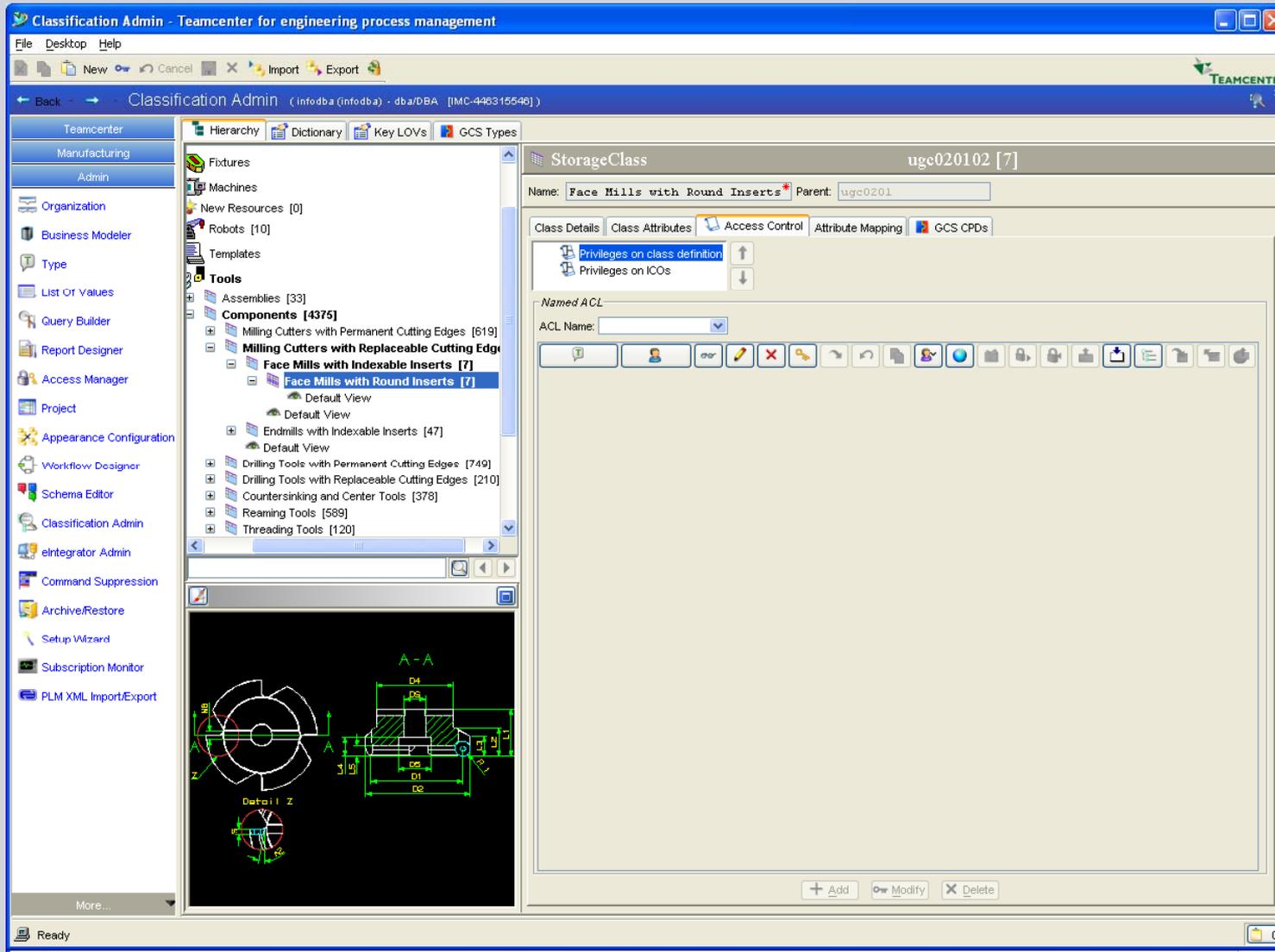
- Searches are performed within the scope of a class
- The values for the search criteria are specified in the form
- All Attributes can be used for search
- As many attributes as necessary can be used in one query (automatically combined by AND)
- Supported search criteria
 - Equal, not-equal, larger than, smaller than, etc.
 - Range
 - Wildcard (* _)
 - And (&)
 - Or (|)

Cutting Diameter	D1	>= 010.000	mm
Tool Material ID	MT		
Tool Material Name	MN		
Flute Length	B	< 012.000	mm
# of Cutting Edges	N1		
Flute Direction	N2	R Right	
Corner Radius 1	R1	02.500 003.000	mm
Corner Radius 2	R2		mm

Navigation bar: 1 of 7, Clear, Search, and other controls.

Classification Administration

Class definition (details, attributes & access control)



Classification Administration

View definition

- Views are used to configure the access to the class they belong to
- This can be used to
 - Hide attributes
 - Protect attributes
 - Reorder attributes
 - Enforce input of values for specific attributes
- The following types are currently supported
 - User-specific
 - Group-specific
 - Global (default view)

Classification Administration

View definition

The screenshot displays the 'Classification Admin' application window. The title bar reads 'Classification Admin - Teamcenter for engineering process management'. The interface is divided into several sections:

- Left Navigation Panel:** Contains a tree view with categories like 'Fixtures', 'Machines', 'New Resources [0]', 'Robots [10]', 'Templates', 'Tools', 'Assemblies [33]', 'Components [4375]', and 'Default View'. The 'Default View' under 'Components' is selected.
- Main Content Area:** Titled 'Default View' with ID 'ugc020102::defaultView [0]'. It includes:
 - Name:** Default View
 - Parent:** ugc020102
 - User 1:** (empty)
 - User 2:** (empty)
 - Multi-Site Collaboration:** Shared: No, Show sites... (button)
 - Owned by:** this site (button), Transfer ownership (button), Delete (button)
 - Attributes:** A table with 'Class Attributes' and 'View Attributes'.

Class Attributes	View Attributes
<input checked="" type="checkbox"/> -1200 Description M1	-2605 Cutting Diameter D1
<input checked="" type="checkbox"/> -1210 Comments M2	-10012 Diameter 2 D2
<input checked="" type="checkbox"/> -1220 Order# - Catalog# M3	-2603 # of Cutting Edges N1
<input checked="" type="checkbox"/> -1102 Vendor M4	-3930 Insert Shape IS
<input checked="" type="checkbox"/> -2690 Perishable P/D	-2619 Flute Direction N2
<input checked="" type="checkbox"/> -2691 Identifies Tool ITA	-2637 Total Length L1
	-10032 Length 2 L2
	-10033 Length 3 L3
	-10034 Length 4 L4
	-10035 Length 5 L5
	-2715 Cutting Depth AP
	-2653 Corner Radius R1
	-11031 Relief Angle A2
	-11032 Insert Thickness S
	-3164 Fixing Method/Infor Insert IT
	-4120 Seat Diameter DS
	-10014 Diameter 4 D4
	-10015 Diameter 5 D5
	-11161 Tongue End Width MB
	-2690 Perishable P/D
 - Layout Tags:** A list of tags including 'Separator', 'Start Block', 'End Block', 'Start Frame', 'End Frame', 'Start Horizontal Layout', 'End Horizontal Layout', and 'Start Column Layout'.
 - View Attribute Details:** Includes checkboxes for 'Mandatory', 'Unique', 'Protected', 'User Defined Button', 'Keep Width', and 'Array Length'. A 'Field Layout' dropdown is set to 'Default'.
 - User Data:** Fields for '1:' and '2:'.

Resource Management Build Tool Assemblies

The screenshot displays the Siemens Teamcenter Resource Manager interface for configuring a tool assembly. The main window is titled "Resource Manager - Teamcenter for engineering process management" and shows the configuration for a tool named "Face Mills Indexable".

Properties Panel:

UG tool type	UGTT	01,01 UG Milling Tool 5 Parameter
Standard Tool	ST	0 Metric
Tool Description	TD	Face Mill 100 mm
Extended Length	D3	0083.150 mm
Orientation Angle	A1	000.00 degree
Machining/Rot. Dir.	M1	03 Clockwise
Mounting Angle	D7	000.00 degree
Coolant	COL	02 External
Rotation Axis	RA	02 X -
Adapter Axis	AA	01 X +
Nomin. Setup X-value	R1	-0085.240 mm
Nomin. Setup Y-value	R2	0000.000 mm
AWV Parameter	AWV	
Lower Tolerance in X	L1	mm
Lower Tolerance in Y	L2	0103.100 mm
Measuring Instruction X	MIX	1 No Correction
Measuring Instruction Y	MiY	1 No Correction
Reference Measuring Point	RMP	1 Pt. 1
Measurement cycle	MC	
Constant Length	CL	0005.000 mm
Tool Status Oversize	OV	1 No
Warning Time	WT	05 Minutes
Max Tool Life	MTL	No date set.
UG Applicable	UG	0 Yes
Comments	CO	
Availability	S1	00 Free
Machine Adapter	MA	330 Steep Taper SKG50
Tool Material ID	MI	THCO_00003
Tool Material Name	MN	P20
Insert Shape	IS	R Circular
Cutting Diameter	D	100.000 mm

3D Views:

- The top view shows a green cylindrical tool with a yellow cutting edge and a blue end. Dimensions are indicated with red arrows and labels: 'A' for cutting diameter, 'D' for extended length, and 'X' for mounting angle.
- The bottom view shows a detailed 3D model of the tool assembly, including the machine adapter and the tool holder.

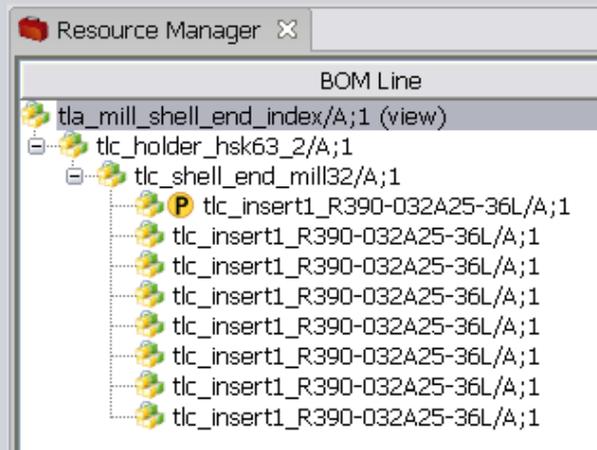
Navigation and Status:

- The interface includes a BOM Line tree on the left, a Properties panel in the center, and a 3D viewer on the right.
- The status bar at the bottom shows "Ready" and "1 of 1" pages.

Resource Manager

Working with Resource Structures

- Create a new manufacturing resource
- Classify the resource assembly
- Build the assembly hierarchy by adding components to your resource assembly
- Position and align the resource assembly components
- Add attributes to the assembly
- Create and delete propagation start points



Propagation Start Point	Attributes						
	1	2	3	4	5	6	7
Test Assembly 1			✓			✓	✓
Component 1	✓	✓					
Component 2	✓	✓	✓	✓	✓		✓
Component 3	✓		✓				
P Component 4				✓			
Propagation Start Point	C3	C1	C3	C4		A(1)	A(1)
Component 5							
Component 6							
P Component 7							

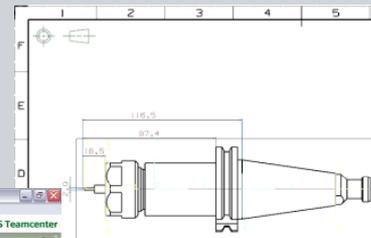
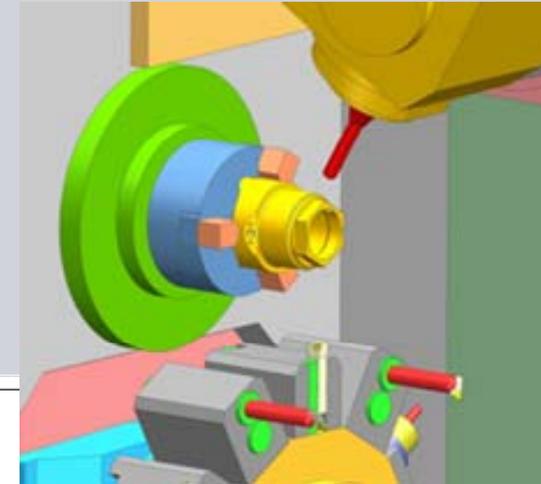
The Partnership with TDM Systems

Teamcenter Resource Manager Manufacturing Tooling Library

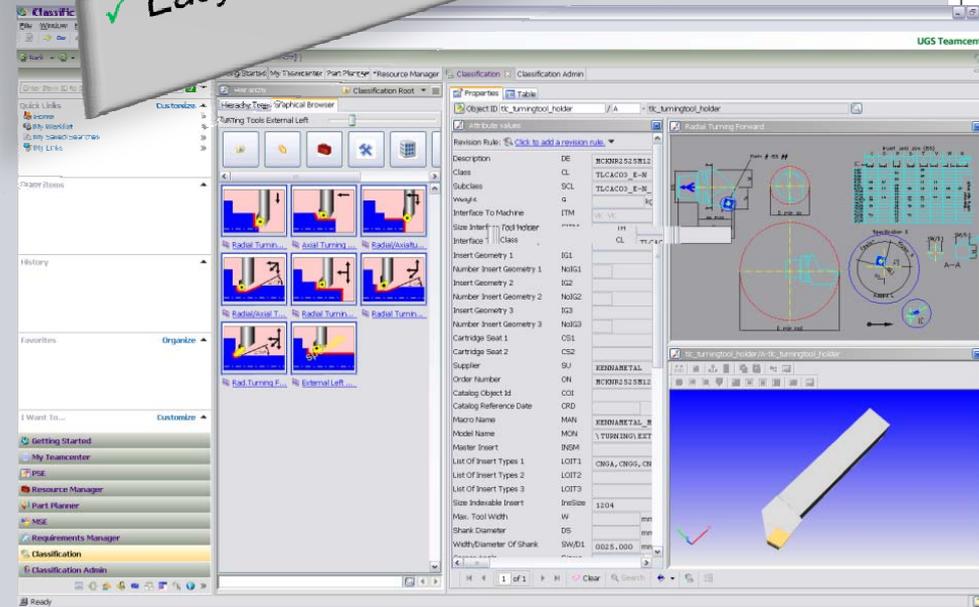
SIEMENS

- Key Features**
- ✓ OOTB Cutting Tool Library in Resource Manager
 - ✓ ANSI, ISO and DIN cutting tool standards
 - ✓ Full catalog and classification hierarchy
 - ✓ Easy access to tool vendor catalogs

Sandvik
Kennametal
Walter
Titex



Cutting tool content includes complete tool classification structure, tool items, images and NX CAM integration

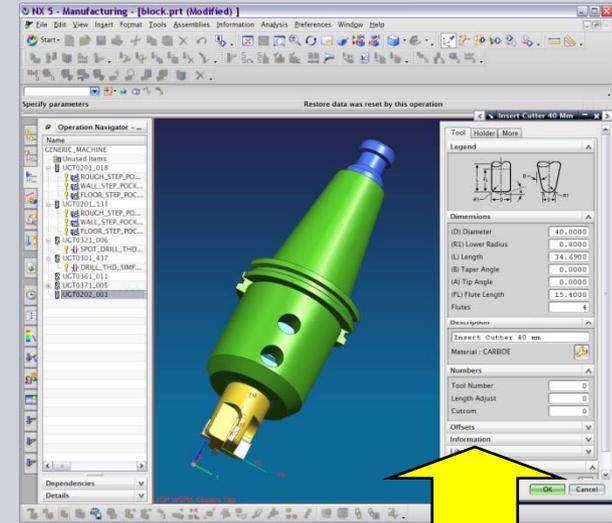


Teamcenter Resource Manager Manufacturing Tooling Library – Phase 1

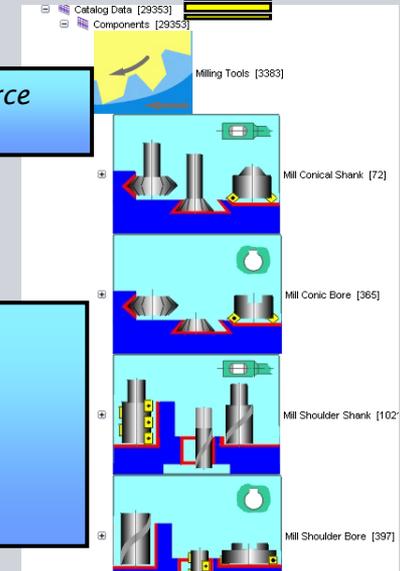


Delivering

- ✓ More than 30,000 turning, milling drilling tools in catalog library
- ✓ Automatic class and attribute mapping from vendor to customer classification (Teamcenter Only)
- ✓ NX CAM integration
- ✓ Free preview with Teamcenter
- ✓ Separately licensed product (DVD) with full content



Teamcenter Resource
Manager



*Released with Teamcenter 2007.1 MP3
NX CAM integration certified for NX 5 and NX 6
MLP integration available with upcoming MLP 8.2*

Teamcenter Resource Manager Manufacturing Tooling Library



Classification hierarchy with catalog and customer classification

Tooling library attributes

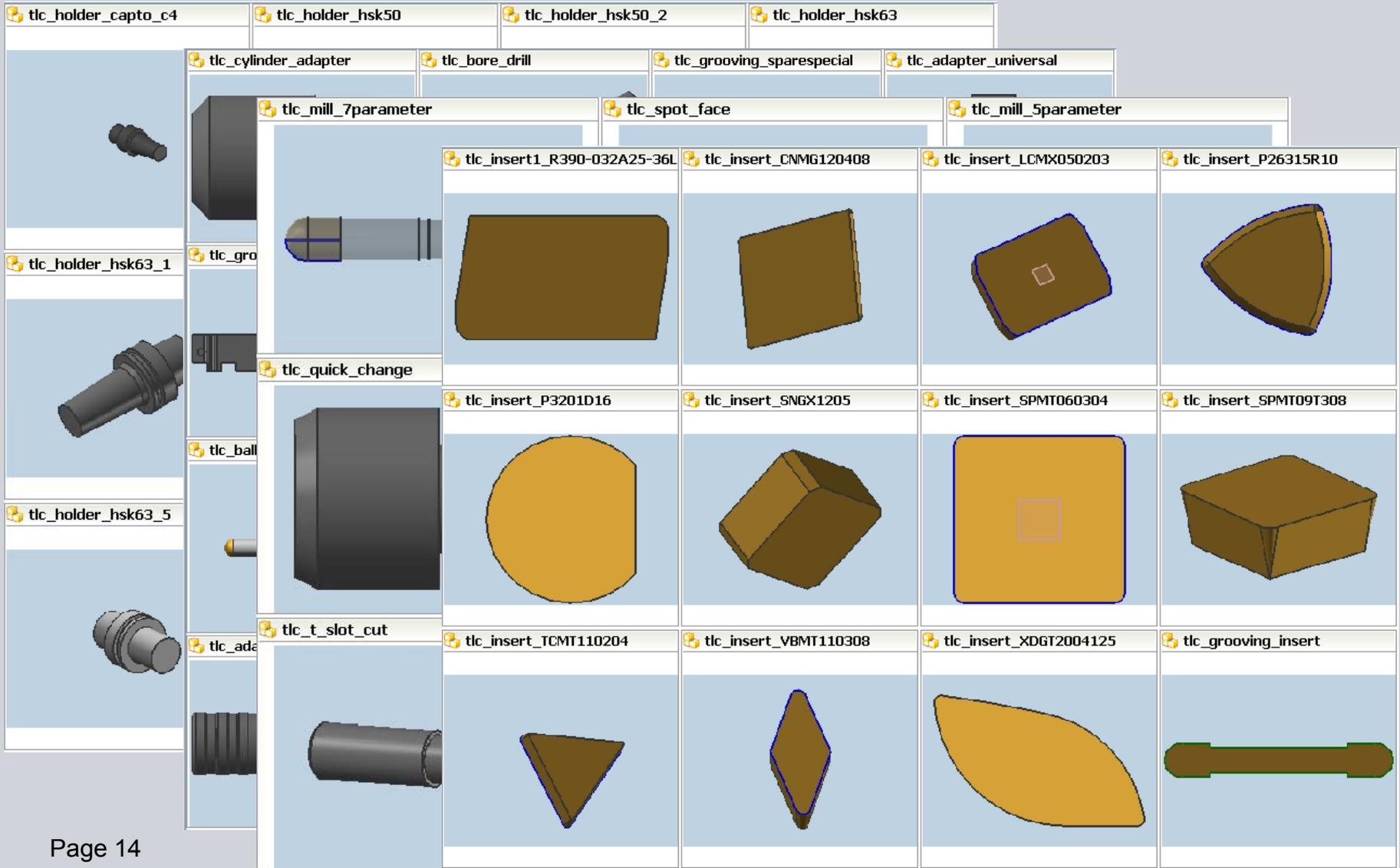
Library class images

Library instance image

MILLING TOOL 5 PARAMET	
Revision rule:	Click to add a revision rule.
Description	MILLING TOOL 5 PARAMET
NX Tool Type	
Gauge Length Component	xs
Gauge Length	Xs 00130.000 mm
Cutting Diameter	Dc 0040.000 mm
Total Length	Ltot 0162.000 mm
Cutting Edge Length	Ls 0006.500 mm
Body Diameter	DHB 0052.000 mm
Max. Machining Depth	L4 0040.000 mm
Setting Angle	Kappa 0045.0 °
Internal Coolant	IC 0 No internal coolant
Cutting Direction	CDL N Right
Construction Code	CC
Cutting Edge Radius 1	RE1
YS100 Powered	YS100
Cutting Diameter 2	Dc2
Height Of Milling Tools	Lh 0040.000 mm
Tip Angle	Dc2
Chamfer Cutting Edge	Lh
Cutting Edge Angle	Sigma
Tip Length	F
Cutting Depth Max.	KF 0006.500 mm
Gauge Length 2	a
Immersion Angle Sigma	ap max
Cutting Depth Min.	Xs2
Front-Face Inner Diameter	Alpha 3
Front-Face Depth	ap min
Shank Diameter	Df 0036.000 mm
Step Angle 1	Lf
Step Angle 2	DS
Taper Angle 3	
No. Teeth	08
No. Steps	
Gauge Length Component	xs 00040.000 mm
Total Length Component	ltot 0075.000 mm

Manufacturing Tooling Library

Example holder, adapter, cutter and insert classes



Example Component Classification

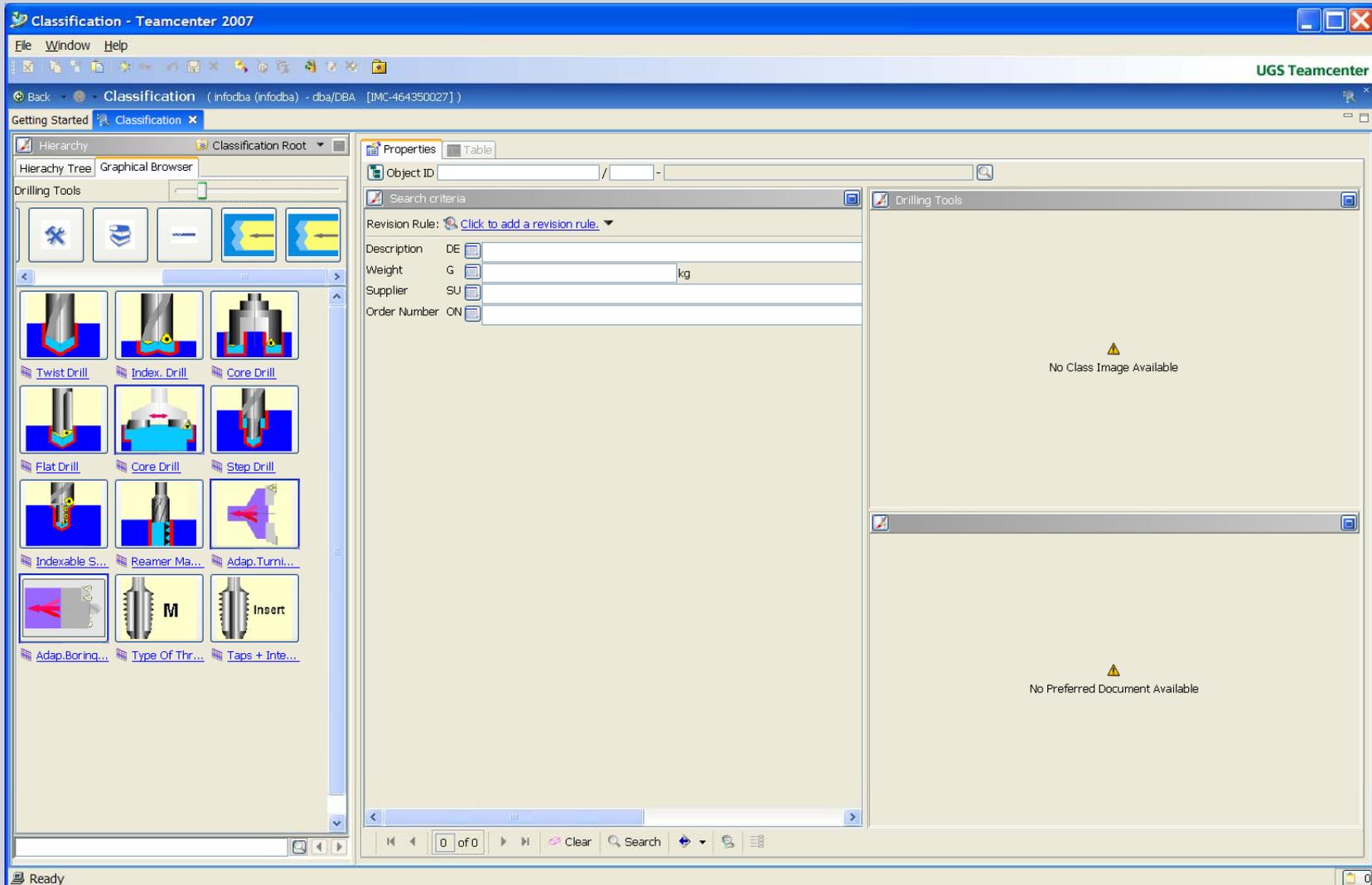
Drilling Tools

- {TOOLIB} Tooling Library
 - {TLCA} Catalog Data
 - {TLCU} Customer Data
 - {TLCUA} Assemblies
 - {TLCUC} Components
 - {TLCUC01} Milling Tools
 - {TLCUC02} Drilling Tools**
 - {TLCUC02_D01} Drill Center Drill**
 - {TLCUC02_D02} Drill General
 - {TLCUC02_D03} Deep Hole Drill Technic
 - {TLCUC02_D04} Drill Core Drill
 - {TLCUC02_D05} Drill Step Drill
 - {TLCUC02_D06} Profile Drill
 - {TLCUC02_D07} Drill Countersinks
 - {TLCUC02_D08} Drill Profile Countersink
 - {TLCUC02_D09} Drill Fine Threads
 - {TLCUC02_D10} Drill Fine Profile
 - {TLCUC02_D11} Drill Through Hole
 - {TLCUC02_D12} Drill Blind Hole
 - {TLCUC02_D13} Drill Through/Blind Hole
 - {TLCUC02_D14} Drill Forming Taps
 - {TLCUC02_D15} Threading Rings

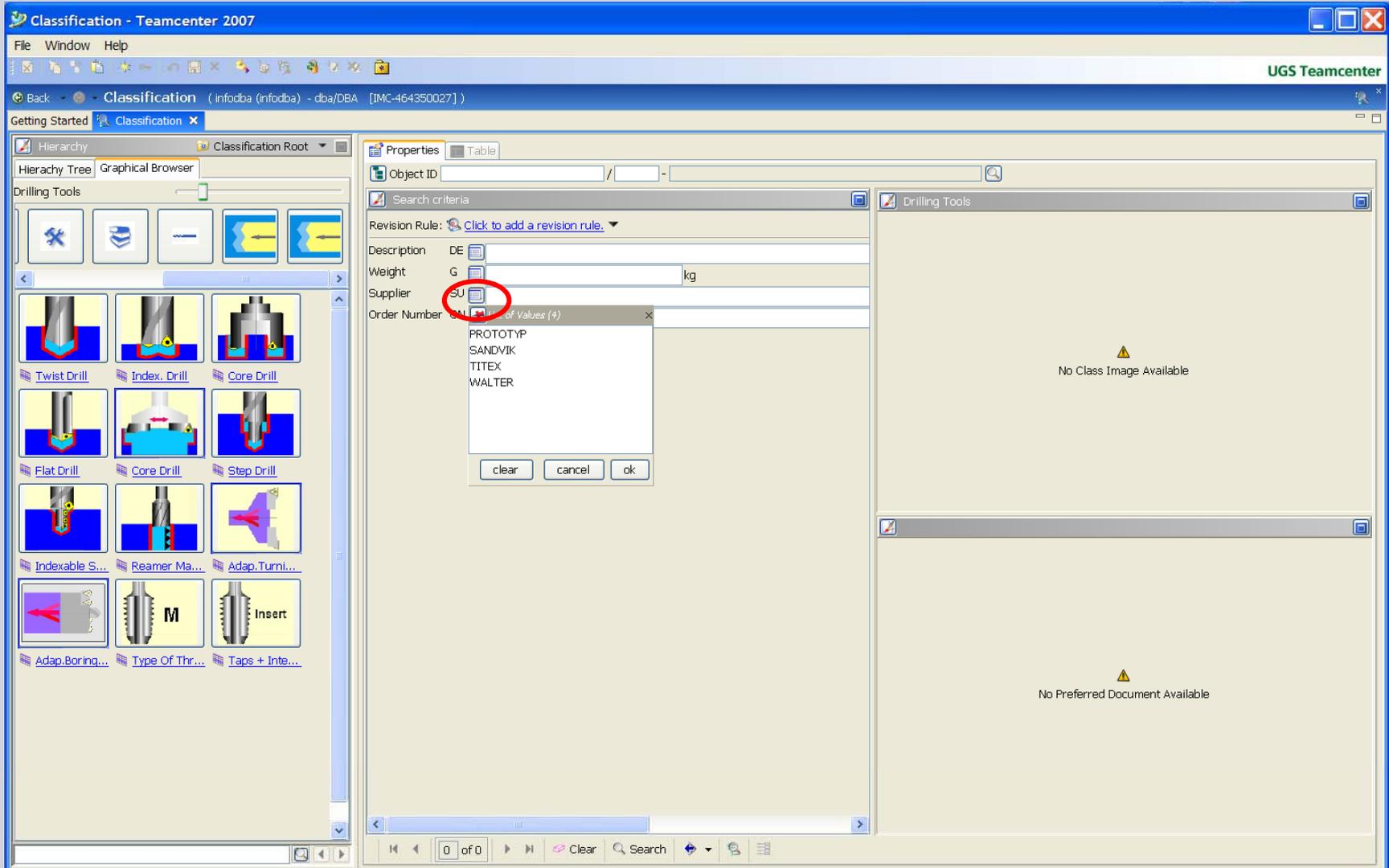
- {TLCUC02_D01} Drill Center Drill
 - {TLCUC02_D01_01} No Slot Drill**
 - {TLCUC02_D01_02} Center Drill Form-A
 - {TLCUC02_D01_03} Center Drill Form-B
 - {TLCUC02_D01_04} Center Drill Form-R
 - {TLCUC02_D01_05} Center Drill With Bead
 - {TLCUC02_D01_06} Center Drill Pilot
 - {TLCUC02_D01_99} Center Drill Special

Description	DE	<input type="text"/>
Cutting Diameter 1	Dc	<input type="text"/> mm
Gauge Length	Xs	<input type="text"/>
Cutting Edge Length	Ls	<input type="text"/> mm
Max. Machining Depth	Ld	<input type="text"/>
No. Teeth	NoT	<input type="text"/>
Total Len	No. Steps	NoS <input type="text"/>
Cutting Di	Weight	G <input type="text"/> kg
Cutting Ec	Interface To Machine	ITM <input type="text"/>
Cutting Di	Size Interface To Machine	SITM <input type="text"/>
Cutting Ec	Insert Geometry 1	IG1 <input type="text"/>
Form Rad	Number Insert Geometry 1	NoIG1 <input type="text"/>
Max. Diam	Insert Geometry 2	IG2 <input type="text"/>
Min. Diam	Number Insert Geometry 2	NoIG2 <input type="text"/>
Tip Angle	Insert Geometry 3	IG3 <input type="text"/>
Step Ang	Number Insert Geometry 3	NoIG3 <input type="text"/>
Step Ang	Insert Geometry 4	IG4 <input type="text"/>
Tip Length	Number Insert Geometry 4	NoIG4 <input type="text"/>
Twist Dire	Cartridge Seat 1	CS1 <input type="text"/>
Helix Ang	Cartridge Seat 2	CS2 <input type="text"/>
Cutting Di	Class	CL <input type="text"/>
Construct	Subclass	SCL <input type="text"/>
Internal C	Supplier	SU <input type="text"/>
Ys100 Po	Order Number	ON <input type="text"/>
Body Diam	Catalog Object Id	COI <input type="text"/>
Immersio	Catalog Reference Date	CRD <input type="text"/>
Shank Dia	Macro Name	MAN <input type="text"/>
	Model Name	MON <input type="text"/>
	Master Insert	INSM <input type="text"/>
	List Of insert Types 1	LOIT1 <input type="text"/>
	List Of insert Types 2	LOIT2 <input type="text"/>
	List Of insert Types 3	LOIT3 <input type="text"/>
	List Of insert Types 4	LOIT4 <input type="text"/>
	Size Indexable Insert	InsSize <input type="text"/>

Manufacturing Tooling Library Graphical Class Browser

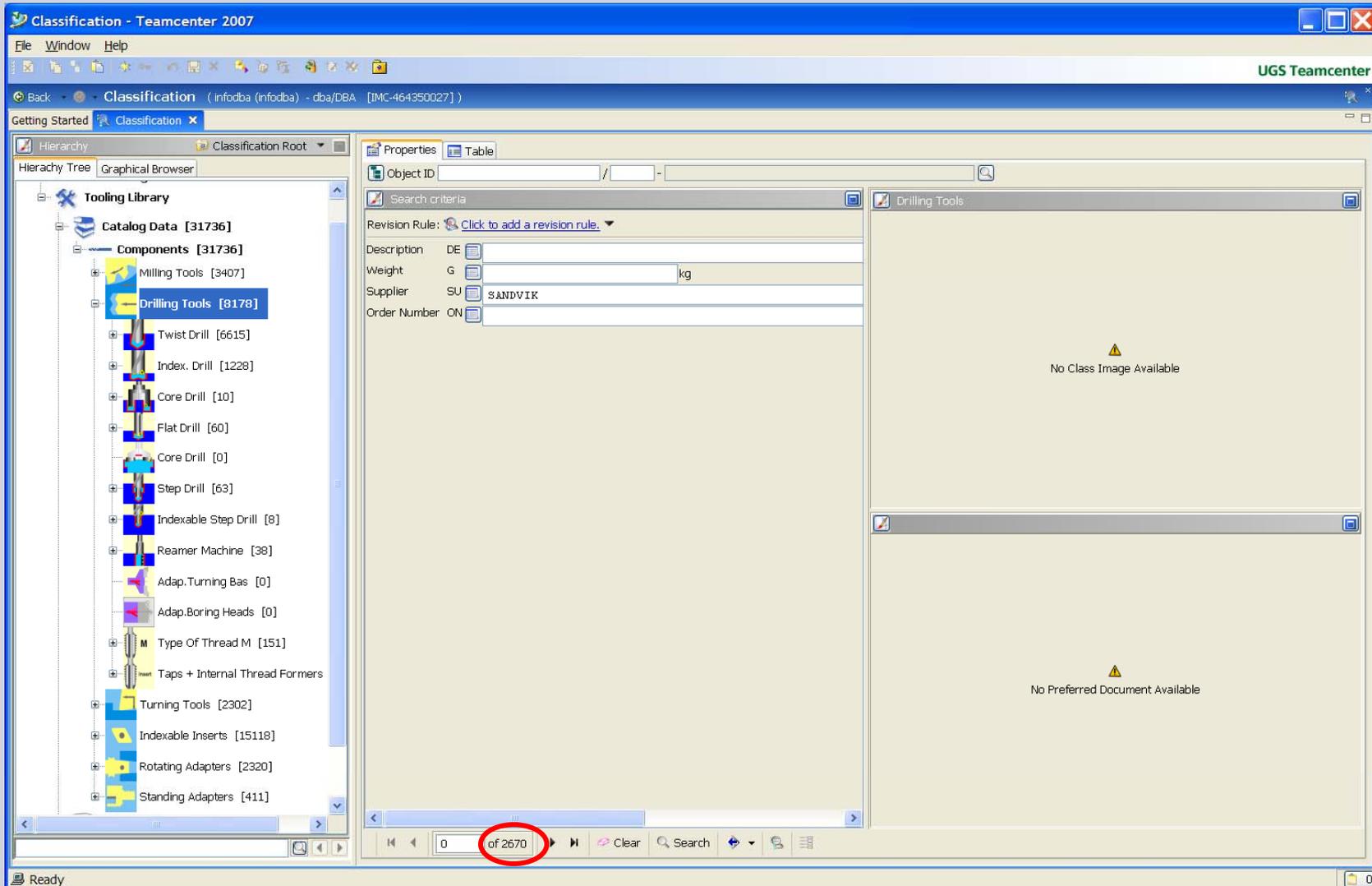


Manufacturing Tooling Library Auto Filter



Catalog Data example

2670 Drilling tool components from Sandvik



Customer Data Components & Assemblies

Classification - Teamcenter 2007

File Window Help

UGS Teamcenter

Back - Classification (infodba (infodba) - dba/DBA [IMC-464350U2/])

Getting Started Classification

Hierarchy Tree Graphical Browser

ICM Classification Root

Resource Management

Tooling Library

- Catalog Data [31736]
- Customer Data [64]
 - Assemblies [19]
 - Milling Tools [7]
 - Drilling Tools [9]
 - Drill Center Drill [1]
 - NC
 - Nc Slot Drill [0]
 - Center A [1]
 - Center Drill Form-A [1]
 - Center Drill Form-B [0]
 - Center Drill Form-R [0]
 - Center Drill With Bead [0]
 - Center Drill Pilot [0]
 - Center Drill Special [0]
 - Drill General [3]
 - Deep Hole Drill Technic [0]
 - Drill Core Drill [0]
 - Drill Step Drill [2]
 - Profile Drill [0]
 - Drill Countersinks [1]

Properties Table

Object ID tla_centerbell / A - tla_centerbell

Attribute values

Revision Rule: [Click to add a revision rule.](#)

Description	DE	CENTERBELL TOOL
Cutting Edge Length	Ls	<input type="text"/>
Max. Machining Depth	L4	<input type="text"/>
Form Radius 1	R1	<input type="text"/>
Max. Diameter	Dmax	<input type="text"/>
Min. Diameter	Dmin	<input type="text"/>
Tip Angle	Sigma	<input type="text"/>
Step Angle 1	Phi 1	<input type="text"/>
Step Angle 2	Phi 2	<input type="text"/>
Tip Length	a	<input type="text"/>
Twist Direction L / R / N Helix		<input type="text"/>
Helix Angle	Lambda	<input type="text"/>
Cutting Direction Left?	CDL	<input checked="" type="checkbox"/> Y/N
Construction Code	CC	<input type="text"/>
Internal Coolant	IC	<input type="text"/>
Body Diameter	DHB	<input type="text"/>
Immersion Angle Sigma	Alpha 3	<input type="text"/>
Shank Diameter	DS	<input type="text"/>
Cutting Diameter 1	Dc	0002.500 mm
Gauge Length	Xs	00100.000 mm
Total Length	Ltot	0125.000 mm
Cutting Diameter 2	Dc2	0008.000 mm
Cutting Edge Length 2	Ls2	0005.000 mm
Cutting Diameter 3	Dc3	<input type="text"/>
Cutting Edge Length 3	Ls3	<input type="text"/>
Cutting Edge Length 4	Ls4	<input type="text"/>
YS100 Powered	YS100	<input type="text"/>

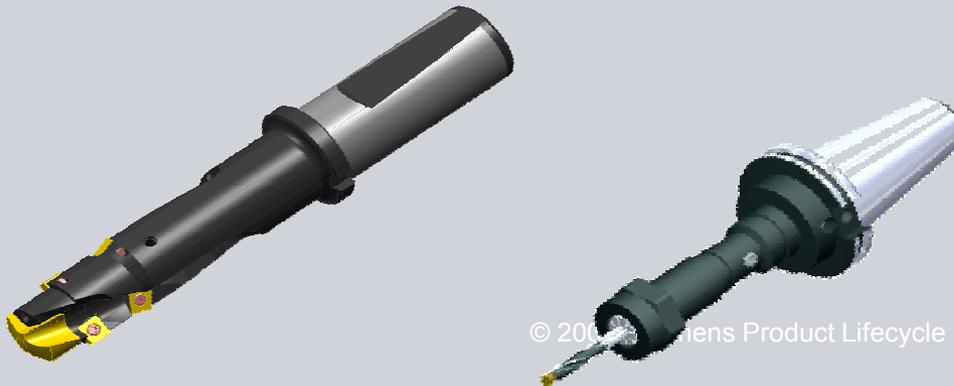
Center Drill Form-A

tla_centerbell/A-tla_centerbell

1 of 9

Customer Data Components & Assemblies

- Workflow
 - Search for a new component from the Catalog
 - “Map” the component from the Catalog to the Customer classification and add the new component to the Customer Library
 - Default mapping is provided where Customer classification is identical to Catalog classification
 - Customers can define their own mapping views to map onto their private Customer classification
 - Create a new Tool Assembly using Resource Manager and classifies it
 - The new Tool Assembly can now be used e.g. in NX CAM
- Regular updates to the Catalog do not impact the Customer Library



Classification Administration

Default mapping view example

Getting Started | Classification | Classification Admin

Hierarchy | Dictionary | Key LOVs | GCS Types

Hierarchy | Classification Root

- Components [49]
 - Milling Tools [8]
 - Mill Conical Shank [2]
 - Angle External Indexable Inserts
 - TLCAC01_M01_01** (defaultView)
 - Mill Shoulder Shank [2] (defaultView)
 - Mill Radius Shank [3] (defaultView)
 - Mill Slot Shank [1] (defaultView)
 - Drilling Tools [9]

Internal Mapping View: TLCUC01_M01_01::TLCAC01_M01_01 [0]

Name: TLCAC01_M01_01 | Parent: TLCUC01_M01_01

View Details | View Attributes | Access Control | Attribute Mapping

Attribute Mapping Definition

Source Class: Angle External Indexable Inserts {TLCUC01_M01_01}

ID	Name	Annotation	Format
-501018	Description		STRING(50)
-500104	Gauge Length ...		REAL(4,3)
-500060	Total Length C...		REAL(4,3)
-501012	Cutter Material		POPOP(-501012)
-501000	Tool Holder		POPOP(-501000)
-500118	Cutting Diameter		REAL(4,3)
-500067	Cutting Edge L...		REAL(4,3)
-500029	Body Diameter		REAL(4,3)
-500066	Max. Machining...		REAL(4,3)
-500007	Setting Angle		REAL(4,3)
-500055	Internal Coolant		POPOP(-500055)
-500080	Cutting Direction		POPOP(-500080)
-500095	Construction C...		POPOP(-500095)
-500075	Cutting Edge R...		REAL(3,3)
-500122	Ys100 Powered		REAL(4,3)
-500123	Cutting Diamet...		REAL(4,3)
-500052	Height Of Millin...		REAL(4,3)
-500011	Tip Angle		REAL(4,3)
-500048	Chamfer Cuttin...		REAL(2,2)
-500003	Cutting Edge A...		REAL(4,3)
-500056	Tip Length		REAL(4,3)
-500024	Cutting Depth ...		REAL(4,3)
-500107	Gauge Length 2		REAL(4,3)
-500010	Immersion Angl...		REAL(4,3)
-500044	Cutting Depth ...		REAL(4,3)
-500028	Front-Face Inn...		REAL(4,3)
-500058	Front-Face Depth		REAL(4,3)
-500036	Shank Diameter		REAL(4,3)
-500012	Step Angle 1		REAL(4,3)
-500013	Step Angle 2		REAL(4,3)
-501061	Cutter Material ...		STRING(50)
-501011	No. Teeth		INTEGER(2)
-501021	No. Steps		INTEGER(2)

Target Class: Angle External Indexable Inserts {TLCUC01_M01_01}

Mapping	ID	Name	Annotation	Format
#-501018	-501018	Description		STRING(50)
#-500104	-500104	Gauge Leng...		REAL(4,3)
#-500060	-500060	Total Lengt...		REAL(4,3)
#-501012	-501012	Cutter Mat...		POPOP(-50...
#-501000	-501000	Tool Holder		POPOP(-50...
#-500118	-500118	Cutting Dia...		REAL(4,3)
#-500067	-500067	Cutting Edg...		REAL(4,3)
#-500029	-500029	Body Diamo...		REAL(4,3)
#-500066	-500066	Max. Machi...		REAL(4,3)
#-500007	-500007	Setting Angle		REAL(4,3)
#-500055	-500055	Internal Co...		POPOP(-50...
#-500080	-500080	Cutting Dire...		POPOP(-50...
#-500095	-500095	Constructio...		POPOP(-50...
#-500075	-500075	Cutting Edg...		REAL(3,3)
#-500122	-500122	Ys100 Pow...		REAL(4,3)
#-500123	-500123			
#-500052	-500052			
#-500011	-500011			
#-500048	-500048			
#-500003	-500003			
#-500056	-500056			
#-500024	-500024			
#-500107	-500107			
#-500010	-500010			
#-500044	-500044			
#-500028	-500028			
#-500058	-500058			
#-500036	-500036			
#-500012	-500012			
#-500013	-500013			
#-501061	-501061			
#-501011	-501011			
#-501021	-501021			
#-501015	-501015			

Map | Auto | Clear | Help

Add Icon | Remove Icon

No Class Image Available

Resource Manager Tool assembly BOM

Resource Manager - Teamcenter 2007

File Edit View Graphics Tools Window Help

UGS Teamcenter

Back - Resource Manager tla_centerbell/A / Center Drill Form-A (infodba (infodba) - dba/DBA [IMC-464350027])

Getting Started Classification Resource Manager

BOM Line

- tla_centerbell/A;1 (view)
 - tc_holder_hsk50_2/A;1
 - tc_centerbell/A;1

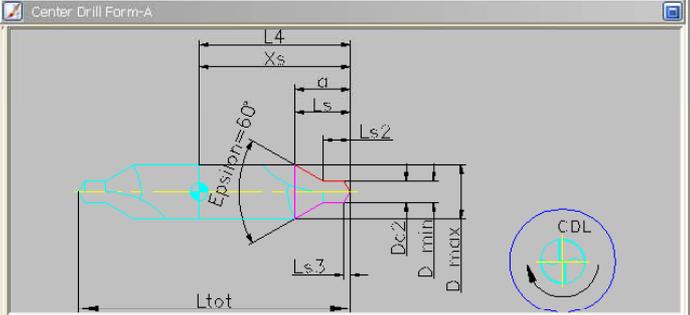
tla_centerbell/A;1 / Center Drill Form-A

Properties Viewer Attachments Referencers Report Work Instructions

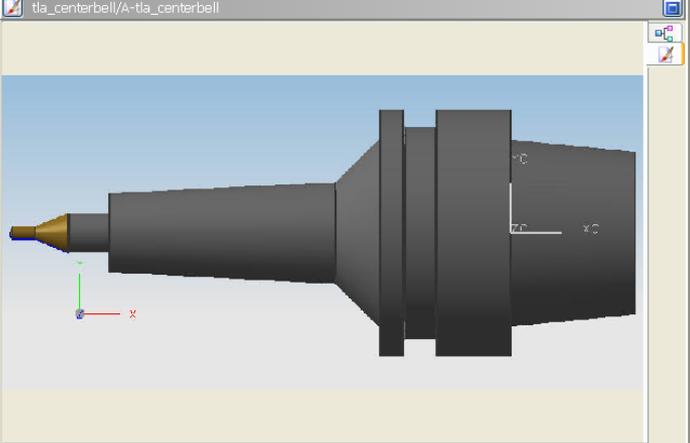
Description DE CENTERBELL TOOL

Cutting Edge Length	Ls	mm
Max. Machining Depth	L4	mm
Form Radius 1	R1	mm
Max. Diameter	Dmax	mm
Min. Diameter	Dmin	mm
Tip Angle	Sigma	°
Step Angle 1	Phi 1	°
Step Angle 2	Phi 2	°
Tip Length	a	mm
Twist Direction L / R / N Helix		
Helix Angle	Lambda	°
Cutting Direction Left?	CDL	Y/N
Construction Code	CC	
Internal Coolant	IC	
Body Diameter	DHB	mm
Immersion Angle Sigma	Alpha 3	°
Shank Diameter	DS	mm
Cutting Diameter 1	Dc	0002.500 mm
Gauge Length	Xs	00100.000 mm
Total Length	Ltot	0125.000 mm
Cutting Diameter 2	Dc2	0008.000 mm
Cutting Edge Length 2	Ls2	0005.000 mm
Cutting Diameter 3	Dc3	mm
Cutting Edge Length 3	Ls3	mm
Cutting Edge Length 4	Ls4	mm
Ys100 Powered	YS100	mm
Tool Holder	TH	
Cutting Grade	CG	

Center Drill Form-A



tla_centerbell/A-tla_centerbell

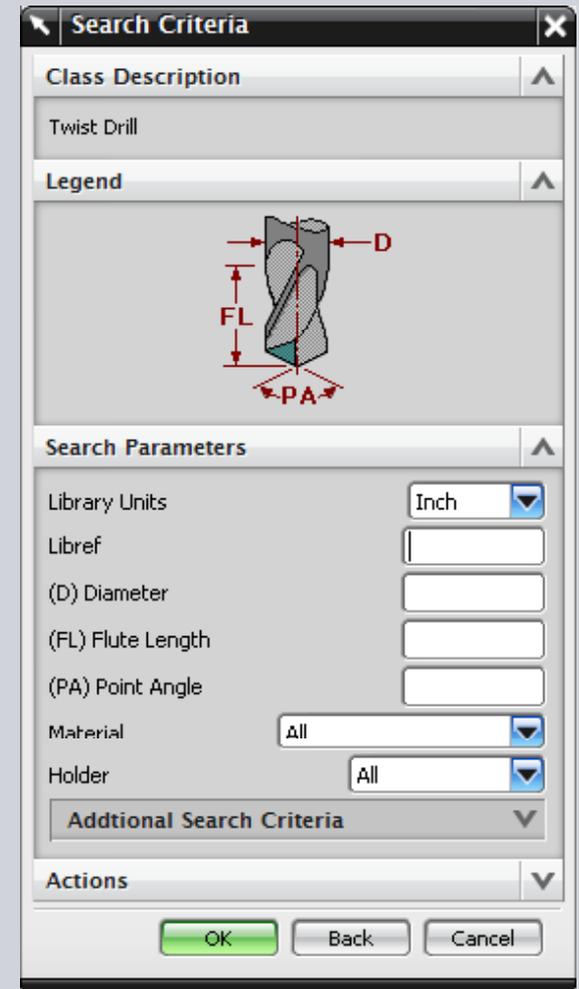
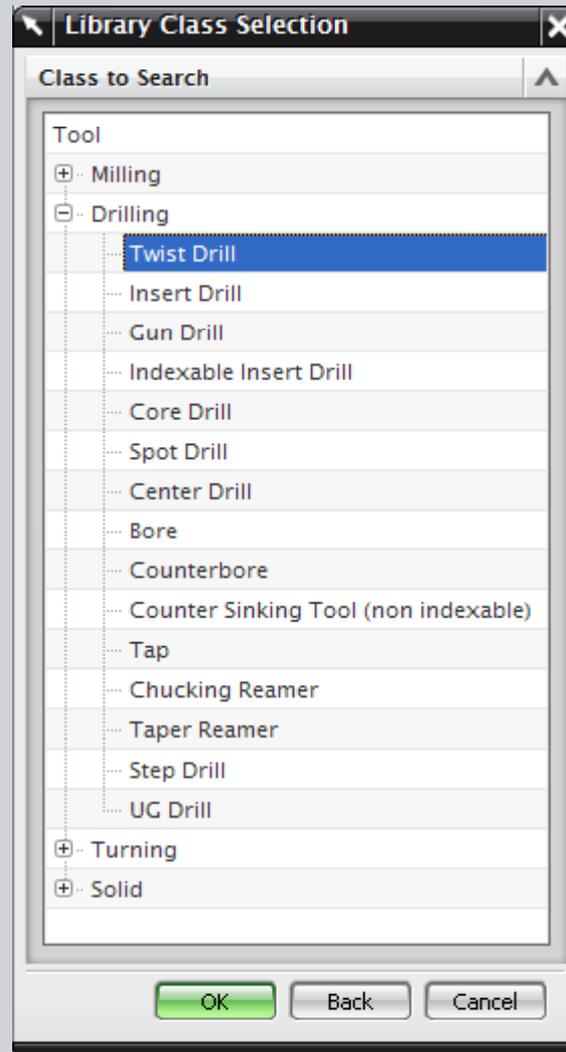
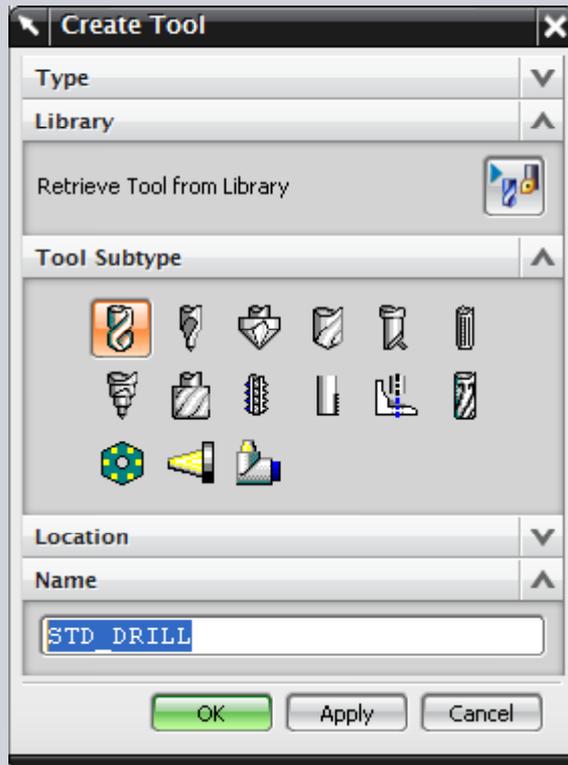


1 of 1

Ready reserved

NX CAM default (ASCII) tool library

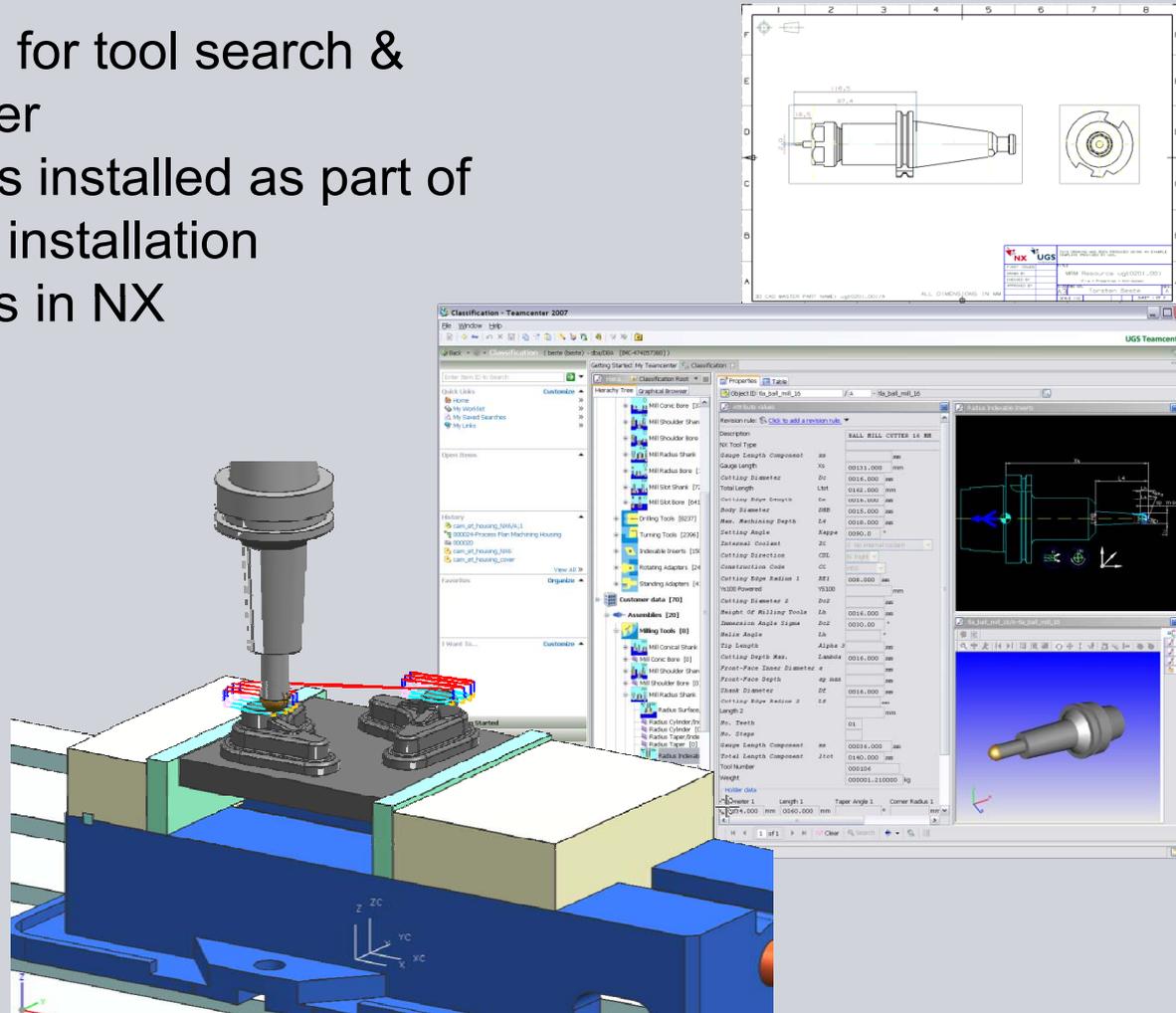
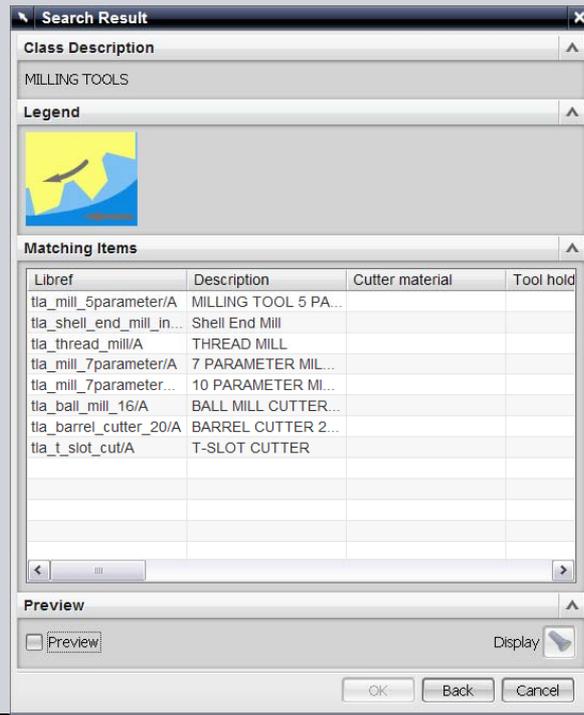
Retrieve Tool from Library



Teamcenter Resource Manager Manufacturing Tooling Library - NX CAM integration



- Integrated with NX CAM for tool search & retrieval from Teamcenter
- Mapping & definition files installed as part of the Teamcenter content installation
- Creation of tool drawings in NX

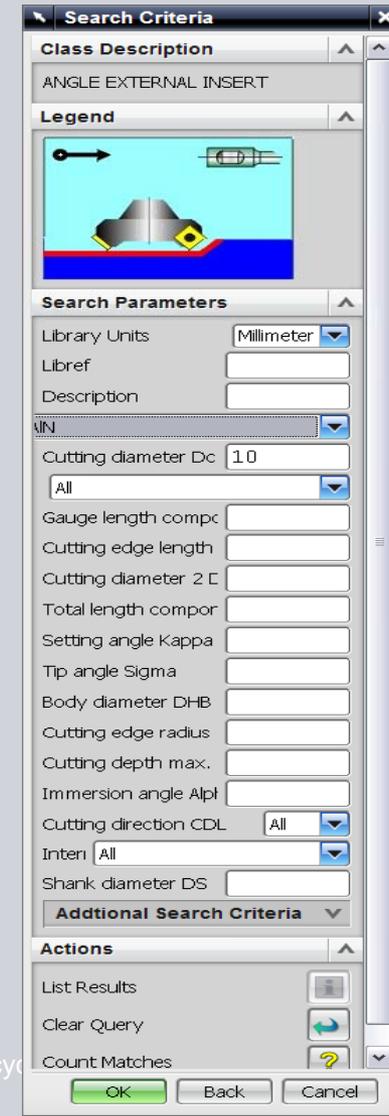
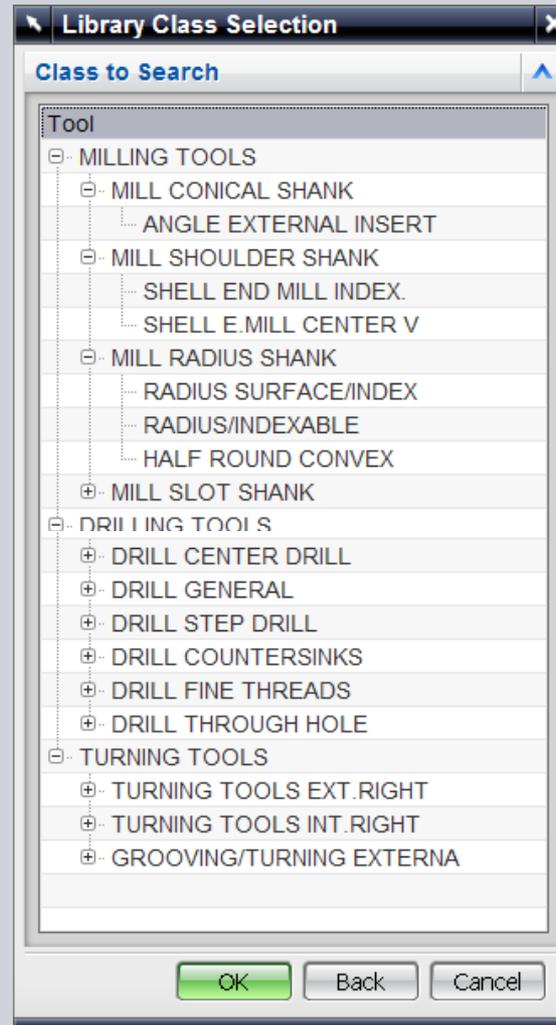
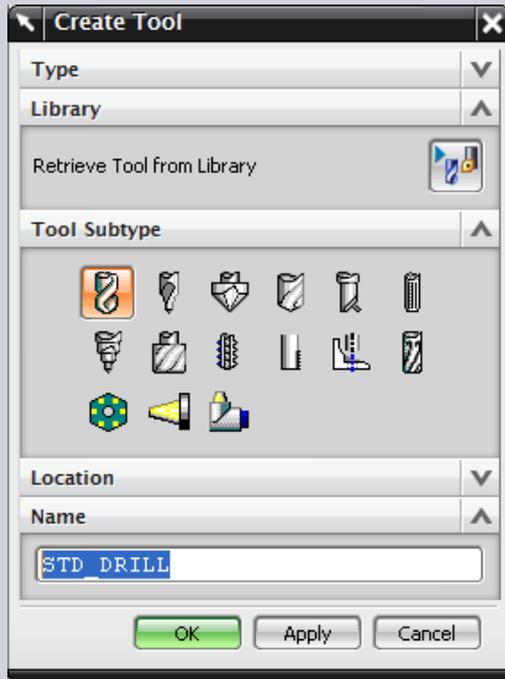


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Siemens PLM Software

NX CAM configured with Machine Tool Library

Retrieve Tool from Library



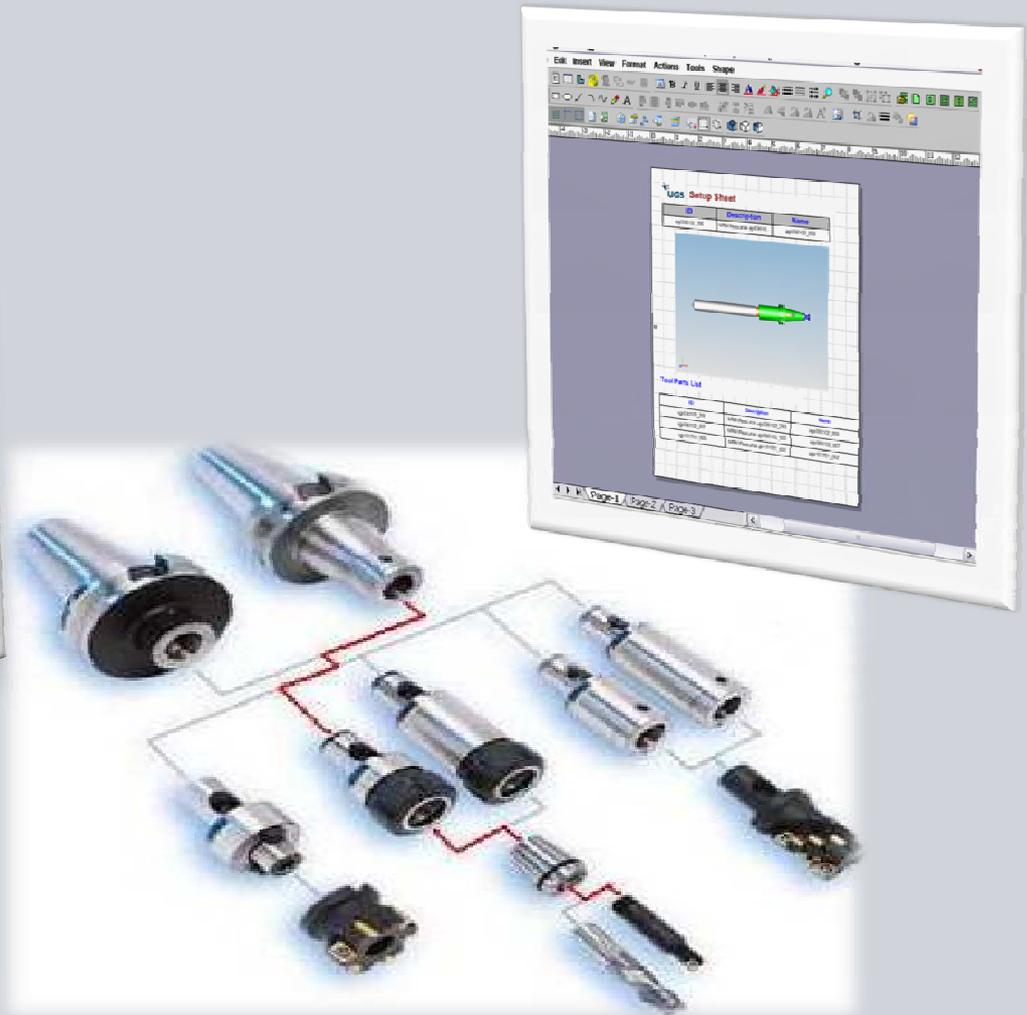
Teamcenter Resource Manager Manufacturing Tooling Library – Phase 2

Functionality

- ✓ Create graphics
- ✓ Guided component search
- ✓ Automatic assembly
- ✓ Update tool catalogs with new catalog items

Why is this important to you?

- ✓ Reduce deployment time for Tool Data Management solution



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