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Introduction

Glodon Takeoff for Architecture and Structure (TAS) is an efficient, professional, accurate and easy BIM application for quantity takeoff, built on the independent R&D platform of Glodon. With 3D models and built-in calculation methods of various countries and regions, it can calculate quickly and automatically the quantities of earthwork, masonry, concrete, formwork, scaffolds, steel structures, finishes, etc. and provide quantity surveyors with accurate calculation results.

TAS supports the import of IFC2x3 files. After the IFC files of drawings from the designers are imported into TAS, the quantities of the related projects can be calculated and obtained directly, making it convenient for quantity surveyors and cost estimators to determine bid prices.

TAS supports the export of IFC2x3 files. The files can be delivered to the downstream participants of AEC industry and used by contractors, constructors and so on directly.

Testlist

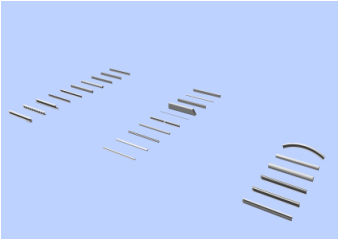
Name test	concepts total	manually checked		
BeamColumn 04 / 2x3	47	47		
Beam_02 / 2x3	12	11	1	
Beam_03 / 2x3	6	4	1	1
CharsetTest-01A / 2x3	2	2		
Column 01 / 2x3	11	11		
CoveringFurnishing-01 / 2x3	57	51		6
CurtainWall-01 / 2x3	29	25	3	1
Door 01 / 2x3	22	20		1
Grid 01 / 2x3	11	9		2
Member 01A / 2x3	10	9		1
Pile 01 / 2x3	19	15		
PlateFastener-01 / 2x3	67	62	3	2
RampRailing-01 / 2x3	28	25	2	
RandomArch-X1 AC16 / 2x3	53	48	4	1
RandomArch-X1 VW / 2x3	18	17	1	
RandomArch-X4 Allplan2013 / 2x3	14	13		1
RandomStruc-X1 RST / 2x3	11	6	4	1
RandomStruc-X2 Scia / 2x3	10	10		
Reinforcement-01 / 2x3	94	60		
Roof 01 / 2x3	15	13	1	1
Site 02 / 2x3	13	12		1
Slab 01A / 2x3	9	9		
Space 01A / 2x3	12	12		
StairSlab-01 / 2x3	19	19		
Wall 02 / 2x3	14	13	1	
WallStandardCase 02A / 2x3	11	9	1	1

Supported Restricted Not Supported

Name test	concepts total	manually checked		
		Supported	Restricted	Not Supported
Window 01 / 2x3	22	20		1

Concepts

Beam_02 / 2x3

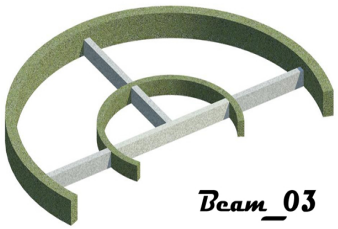


103 IfcBeam	*company statement*	*Beam_02 / 2x3*
010 Naming		
030 Geometry		
030-2 Geometry Axis	Geometry Axis is processed internally, but not visible.	
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
030-6-5 Geometry Explicit		
050 CAD Layer		
070 Voiding		
070-1 Voiding Geometry Explicit		
070-2 Voiding Geometry Mapped		
070-3 Voiding Geometry SweptSolid		
120 Spatial Containment		
200 Material		
200-1 Single Material		
General	*company statement*	*Beam_02 / 2x3*

Supported Restricted Not Supported

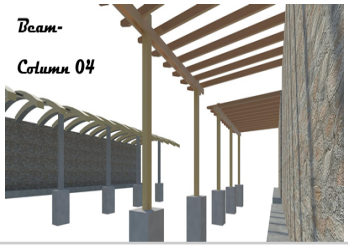
_G4 Remarks	

Beam_03 / 2x3



103 IfcBeam	*company statement*	*Beam_03 / 2x3*
030 Geometry		
030-1 Geometry Box	This concept is optional for this test case, and not included in the TAS import.	
030-2 Geometry Axis	Geometry Axis is processed internally, but not visible.	
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
300 Type		
300-5 Type Property Set		
General	*company statement*	*Beam_03 / 2x3*
_G4 Remarks		

BeamColumn 04 / 2x3



103 IfcBeam	*company statement*	*BeamColumn 04 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-9 Geometry Mapped		
070 Voiding		
070-1 Voiding Geometry Explicit		
070-2 Voiding Geometry Mapped		
070-3 Voiding Geometry SweptSolid		
130 Grouping		
130-1 Grouping General		
200 Material		
200-1 Single Material		

Supported Restricted Not Supported

210 Property Set		
210-1 Property Set IFC Common	■	
210-3 Property Set User Defined	■	
300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	
300-5 Type Property Set	■	
104 IfcColumn	*company statement*	*BeamColumn 04 / 2x3*
001 GUIDs	■	
002 History	■	
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-9 Geometry Mapped	■	
070 Voiding		
070-1 Voiding Geometry Explicit	■	
070-2 Voiding Geometry Mapped	■	
070-3 Voiding Geometry SweptSolid	■	
130 Grouping		
130-1 Grouping General	■	

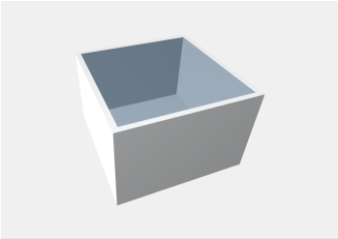
■ Supported ■ Restricted ■ Not Supported

200 Material		
200-1 Single Material	■	
210 Property Set		
210-2 Property Set IFC any	■	
300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	
300-5 Type Property Set	■	
403 IfcFooting	*company statement*	*BeamColumn 04 / 2x3*
001 GUIDs	■	
002 History	■	
010 Naming	■	
020 Placement		
020-1 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-9 Geometry Mapped	■	
130 Grouping		
130-1 Grouping General	■	
200 Material		
200-1 Single Material	■	
210 Property Set		
210-2 Property Set IFC any	■	

■ Supported ■ Restricted ■ Not Supported

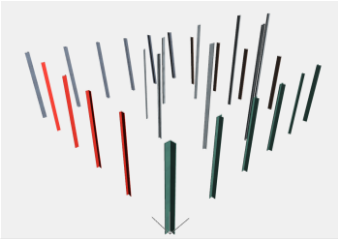
300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	
300-5 Type Property Set	■	
General	*company statement*	*BeamColumn 04 / 2x3*
_G4 Remarks	■	

CharsetTest-01A / 2x3



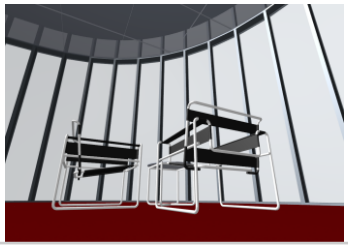
General	*company statement*	*CharsetTest-01A / 2x3*
_G1 Character sets		
_G4 Remarks		

Column 01 / 2x3



104 IfcColumn	*company statement*	*Column 01 / 2x3*
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-2 Geometry Clipping	■	
040 Presentation		
040-1 Geometric Presentation	■	
040-2 Material Presentation	■	
050 CAD Layer	■	
120 Spatial Containment	■	
200 Material		
200-1 Single Material	■	
210 Property Set		
210-1 Property Set IFC Common	■	
General	*company statement*	*Column 01 / 2x3*
_G4 Remarks	■	

CoveringFurnishing-01 / 2x3



210 IfcFlowTerminal	*company statement*	*CoveringFurnishing-01 / 2x3*
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
210 Property Set		
210-1 Property Set IFC Common		
210-6 Property Set IFC any		
210-9 Property Set User Defined		

Supported Restricted Not Supported

300 Type		
300-1 Type Geometry	Not Supported	Typed objects are not supported in TAS.
300-2 Type Naming	Supported	
300-3 Type Material	Supported	
300-5 Type Property Set	Supported	
303 IfcCovering	*company statement*	*CoveringFurnishing-01 / 2x3*
010 Naming	Supported	
020 Placement		
020-2 Placement Relative	Supported	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	Supported	
030-6-9 Geometry Mapped	Supported	
040 Presentation		
040-1 Geometric Presentation	Supported	
050 CAD Layer	Supported	
070 Voiding		
120 Spatial Containment	Supported	
200 Material		
200-1 Single Material	Supported	
200-3 Material Layer Set	Supported	
210 Property Set		
210-1 Property Set IFC Common	Supported	

Supported Restricted Not Supported

300 Type		
300-1 Type Geometry	Typed objects are not supported in TAS.	
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
304 IfcFurnishingElement	*company statement*	*CoveringFurnishing-01 / 2x3*
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		
200-5 Material List		
210 Property Set		
210-6 Property Set IFC any		
210-9 Property Set User Defined		

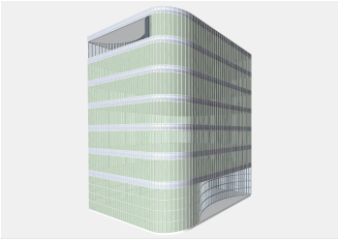
Supported Restricted Not Supported

300 Type		
300-1 Type Geometry	Typed objects are not supported in TAS.	
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
505 IfcSpace	*company statement*	*CoveringFurnishing-01 / 2x3*
030 Geometry		
030-3 Geometry FootPrint		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
120 Spatial Containment		
130 Grouping		
130-3 Grouping to Zones		
230 Classification	Access to Classification is irrelevant to quantity takeoff.	
508 IfcZone	*company statement*	*CoveringFurnishing-01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
130 Grouping		
130-5 Is Group		
210 Property Set		
210-1 Property Set IFC Common	This concept is irrelevant to quantity takeoff.	
210-9 Property Set User Defined	This concept is irrelevant to quantity takeoff.	

Supported Restricted Not Supported

General	*company statement*	*CoveringFurnishing-01 / 2x3*
_G4 Remarks		

CurtainWall-01 / 2x3



109 IfcCurtainWall	*company statement*	*CurtainWall-01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-1 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
030-9 Geometry By Components	Composition is lost, but elements can still be imported.	
040 Presentation		
040-1 Geometric Presentation	The curtain wall is imported as a whole, and the color of one of its aggregated parts is selected as the color of the whole curtain wall.	
050 CAD Layer		
100 Element Aggregation		
100-2 Element Decomposition	Composition is lost, but elements can still be imported.	
120 Spatial Containment		

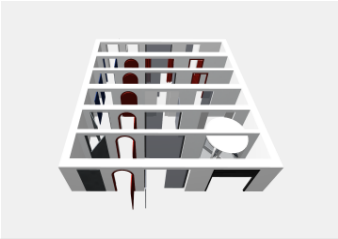
Supported Restricted Not Supported

200 Material			
200-1 Single Material	Supported		
200-5 Material List	Supported		
210 Property Set			
210-1 Property Set IFC Common	Supported		
210-3 Property Set User Defined	Supported		
300 Type			
300-1 Type Geometry	Not Supported	Typed objects are not supported in TAS.	
300-2 Type Naming	Supported		
300-3 Type Material	Supported		
300-5 Type Property Set	Supported		
501 IfcProject		*company statement*	*CurtainWall-01 / 2x3*
010 Naming	Supported		
502 IfcSite		*company statement*	*CurtainWall-01 / 2x3*
010 Naming	Supported		
060 Location			
060-1 Geographic Location	Supported		
060-2 Address	Supported		
503 IfcBuilding		*company statement*	*CurtainWall-01 / 2x3*
010 Naming	Supported		
020 Placement			
020-2 Placement Relative	Supported		
504 IfcBuildingStorey		*company statement*	*CurtainWall-01 / 2x3*
010 Naming	Supported		

Supported Restricted Not Supported

020 Placement			
020-2 Placement Relative	■		
060 Location			
060-4 Storey Elevation	■		
210 Property Set			
210-1 Property Set IFC Common	■		
General		*company statement*	*CurtainWall-01 / 2x3*
_G4 Remarks	■		

Door 01 / 2x3

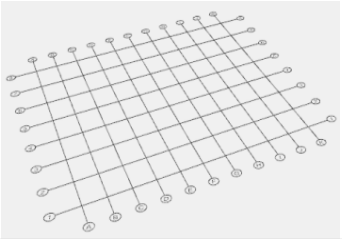


302 IfcDoor	*company statement*	*Door 01 / 2x3*
001 GUIDs	Supported	
002 History	Supported	
010 Naming	Supported	
020 Placement		
020-2 Placement Relative	Supported	
030 Geometry		
030-5 Geometry Profile	Restricted	
030-6 Geometry Body		
030-6-5 Geometry Explicit	Supported	
030-6-9 Geometry Mapped	Supported	
040 Presentation		
040-1 Geometric Presentation	Supported	
050 CAD Layer	Supported	
080 Filling		
080-2 Is Filling	Supported	
120 Spatial Containment	Supported	
200 Material		
200-1 Single Material	Supported	
200-5 Material List	Supported	

Supported Restricted Not Supported

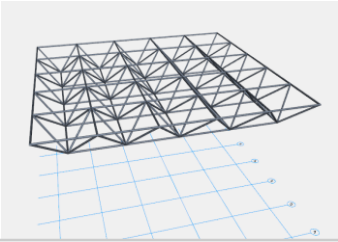
210 Property Set		
210-1 Property Set IFC Common		
210-2 Property Set IFC any		
210-3 Property Set User Defined		
300 Type		
300-1 Type Geometry		Typed objects are not supported in TAS.
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
300-6 Type Predefined Properties		
300-6-1 Type Predefined Properties Door		
General	*company statement*	*Door 01 / 2x3*
_G4 Remarks		

Grid 01 / 2x3



509 IfcGrid	*company statement*	*Grid 01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-3 Geometry FootPrint		
040 Presentation		
040-1 Geometric Presentation	The color of Axis Grid is red in TAS.	
050 CAD Layer		
120 Spatial Containment		
210 Property Set		
210-3 Property Set User Defined	Property Set is irrelevant to quantity takeoff.	
270 Grid Usage		
270-1 Grid Axes		
General	*company statement*	*Grid 01 / 2x3*
_G4 Remarks		

Member 01A / 2x3

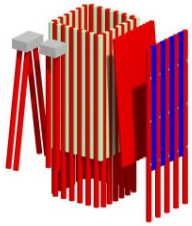


401 IfcMember	*company statement*	*Member 01A / 2x3*
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
040 Presentation		
040-1 Geometric Presentation		
040-2 Material Presentation		
120 Spatial Containment		
200 Material		
200-1 Single Material		
300 Type		
300-1 Type Geometry	Typed objects are not supported in TAS.	

General	*company statement*	*Member 01A / 2x3*
_G4 Remarks		

Supported Restricted Not Supported

Pile 01 / 2x3

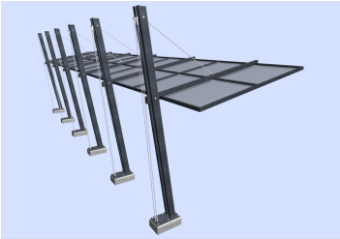


404 IfcPile	*company statement*	*Pile 01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-1 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
040-2 Material Presentation		
050 CAD Layer		
070 Voiding		
070-3 Voiding Geometry SweptSolid		
100 Element Aggregation		
100-2 Element Decomposition		
120 Spatial Containment		

Supported Restricted Not Supported

200 Material		
200-1 Single Material	■	
210 Property Set		
210-3 Property Set User Defined	■	
300 Type		
300-1 Type Geometry	■	
300-3 Type Material	■	
300-5 Type Property Set	■	
General	*company statement*	*Pile 01 / 2x3*
_G4 Remarks	■	

PlateFastener-01 / 2x3



103 IfcBeam	*company statement*	*PlateFastener-01 / 2x3*
001 GUIDs	■	
002 History	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-9 Geometry Mapped	■	

104 IfcColumn	*company statement*	*PlateFastener-01 / 2x3*
001 GUIDs	■	
002 History	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-9 Geometry Mapped	■	
100 Element Aggregation		
100-2 Element Decomposition	■ Composition is lost, but elements can still be imported.	
210 Property Set		
210-3 Property Set User Defined	■	

■ Supported ■ Restricted ■ Not Supported

300 Type		
300-1 Type Geometry	Typed objects are not supported in TAS.	
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
401 IfcMember	*company statement*	*PlateFastener-01 / 2x3*
001 GUIDs		
002 History		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
210 Property Set		
210-1 Property Set IFC Common		
210-3 Property Set User Defined		
300 Type		
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
402 IfcPlate	*company statement*	*PlateFastener-01 / 2x3*

Supported Restricted Not Supported

001 GUIDs	■
002 History	■
010 Naming	■
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	■
030-6-2 Geometry Clipping	■
030-6-5 Geometry Explicit	■
040 Presentation	
040-1 Geometric Presentation	■
050 CAD Layer	■
070 Voiding	
070-3 Voiding Geometry SweptSolid	■
120 Spatial Containment	■
200 Material	
200-2 Material Layer Set	■
210 Property Set	
210-1 Property Set IFC Common	■
210-3 Property Set User Defined	■

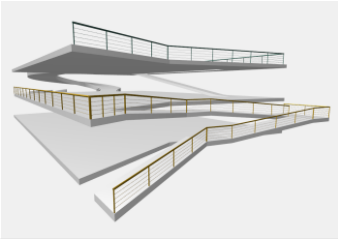
300 Type		
300-1 Type Geometry	Restricted	Typed objects are not supported in TAS.
300-2 Type Naming	Supported	
300-3 Type Material	Supported	
300-5 Type Property Set	Supported	
403 IfcFooting	*company statement*	*PlateFastener-01 / 2x3*
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	Supported	
030-6-2 Geometry Clipping	Supported	
405 IfcFastener	*company statement*	*PlateFastener-01 / 2x3*
010 Naming	Supported	
020 Placement		
020-2 Placement Relative	Supported	
030 Geometry		
030-2 Geometry Axis	Not Supported	Geometry Axis is not supported in TAS.
406 IfcMechanicalFastener	*company statement*	*PlateFastener-01 / 2x3*
001 GUIDs	Supported	
002 History	Supported	
010 Naming	Supported	
020 Placement		
020-2 Placement Relative	Supported	

Supported Restricted Not Supported

030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	Supported	
030-6-5 Geometry Explicit	Supported	
030-6-9 Geometry Mapped	Supported	
040 Presentation		
040-1 Geometric Presentation	Supported	
050 CAD Layer	Supported	
120 Spatial Containment	Supported	
200 Material		
200-1 Single Material	Supported	
210 Property Set		
210-6 Property Set IFC any	Supported	
210-9 Property Set User Defined	Supported	
300 Type		
300-1 Type Geometry	Restricted	Typed objects are not supported in TAS.
300-2 Type Naming	Supported	
300-3 Type Material	Supported	
300-5 Type Property Set	Supported	
General	*company statement*	*PlateFastener-01 / 2x3*
_G4 Remarks	Supported	

Supported Restricted Not Supported

RampRailing-01 / 2x3



107 IfcRamp	*company statement*	*RampRailing-01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-1 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
030-9 Geometry By Components	Composition is lost, but elements can still be imported.	
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
100 Element Aggregation		
100-2 Element Decomposition	Composition is lost, but elements can still be imported.	
120 Spatial Containment		
200 Material		
200-1 Single Material		

Supported Restricted Not Supported

210 Property Set			
210-1 Property Set IFC Common	■		
210-3 Property Set User Defined	■		
108 IfcRailing		*company statement*	*RampRailing-01 / 2x3*
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-5 Geometry Explicit	■		
030-6-9 Geometry Mapped	■		
040 Presentation			
040-1 Geometric Presentation	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
200-5 Material List	■		
210 Property Set			
210-1 Property Set IFC Common	■		
210-3 Property Set User Defined	■		
General		*company statement*	*RampRailing-01 / 2x3*

■ Supported ■ Restricted ■ Not Supported

_G4 Remarks	

RandomArch-X1 AC16 / 2x3

101 IfcWallStandardCase	*company statement*	*RandomArch-X1 AC16 / 2x3*
001 GUIDs		
002 History		
010 Naming		
030 Geometry		
030-2 Geometry Axis	Geometry Axis is processed internally, but not visible.	
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
050 CAD Layer		
070 Voiding		
070-1 Voiding Geometry SweptSolid		
080 Filling		
081 Has Filling		
081-2 Has Filling Window		
200 Material		
200-4 Material Layer Usage		
300 Type		
300-2 Type Naming		

102 IfcWall	*company statement*	*RandomArch-X1 AC16 / 2x3*
002 History		

Supported Restricted Not Supported

010 Naming		
030 Geometry		
030-2 Geometry Axis		Geometry Axis is processed internally, but not visible.
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
050 CAD Layer		
070 Voiding		
070-1 Voiding Geometry Explicit		
070-3 Voiding Geometry SweptSolid		
080 Filling		
080-1 Has Filling		
080-1-1 Has Filling Door		The relation is imported, but not displayable.
080-1-2 Has Filling Window		The relation is imported, but not displayable.
200 Material		
200-1 Single Material		
200-3 Material Layer Set		Only name and thickness values for IfcMaterialLayerSet are imported.
210 Property Set		
210-1 Property Set IFC Common		
300 Type		
300-2 Type Naming		
104 IfcColumn	*company statement*	*RandomArch-X1 AC16 / 2x3*
002 History		
010 Naming		

Supported Restricted Not Supported

030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
050 CAD Layer	■	
200 Material		
200-1 Single Material	■	
210 Property Set		
210-1 Property Set IFC Common	■	
300 Type		
300-2 Type Naming	■	
105 IfcSlab	*company statement*	*RandomArch-X1 AC16 / 2x3*
002 History	■	
010 Naming	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
050 CAD Layer	■	
070 Voiding		
070-3 Voiding Geometry SweptSolid	■	
200 Material		
200-2 Material Layer Set	■	
200-3 Material Layer Usage	■ Only name and thickness values for IfcMaterialLayerSet are imported.	
210 Property Set		
210-1 Property Set IFC Common	■	
301 IfcWindow	*company statement*	*RandomArch-X1 AC16 / 2x3*

■ Supported ■ Restricted ■ Not Supported

002 History		
010 Naming		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
050 CAD Layer		
200 Material		
200-1 Single Material		
300 Type		
300-1 Type Geometry		Typed objects are not supported in TAS.
300-2 Type Naming		
300-6 Type Predefined Properties		
302 IfcDoor	*company statement*	*RandomArch-X1 AC16 / 2x3*
002 History		
010 Naming		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
050 CAD Layer		
200 Material		
200-1 Single Material		

Supported Restricted Not Supported

300 Type		
300-2 Type Naming	■	
300-6 Type Predefined Properties		
300-6-1 Type Predefined Properties Door	■	
509 IfcGrid	*company statement*	*RandomArch-X1 AC16 / 2x3*
030 Geometry		
General	*company statement*	*RandomArch-X1 AC16 / 2x3*
_G4 Remarks	■	

RandomArch-X1 VW / 2x3

103 IfcBeam	*company statement*	*RandomArch-X1 VW / 2x3*
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit	■	
040 Presentation		
040-2 Material Presentation	■	
200 Material		
200-1 Single Material	■	
210 Property Set		
210-1 Property Set IFC Common	■	
104 IfcColumn	*company statement*	*RandomArch-X1 VW / 2x3*
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit	■	
040 Presentation		
040-2 Material Presentation	■	
200 Material		
200-1 Single Material	■	
210 Property Set		
210-1 Property Set IFC Common	■	
105 IfcSlab	*company statement*	*RandomArch-X1 VW / 2x3*

■ Supported ■ Restricted ■ Not Supported

030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
040 Presentation		
040-2 Material Presentation	■	
200 Material		
200-2 Material Layer Set	■	
200-3 Material Layer Usage	■	
110 IfcRoof	*company statement*	*RandomArch-X1 VW / 2x3*
100 Element Aggregation		
100-2 Element Decomposition	■ Composition is lost, but elements can still be imported.	
210 Property Set		
210-1 Property Set IFC Common	■	
503 IfcBuilding	*company statement*	*RandomArch-X1 VW / 2x3*
210 Property Set		
210-1 Property Set IFC Common	■	
509 IfcGrid	*company statement*	*RandomArch-X1 VW / 2x3*
030 Geometry		
030-3 Geometry FootPrint	■	
270 Grid Usage		
270-1 Grid Axes	■	
General	*company statement*	*RandomArch-X1 VW / 2x3*
_G4 Remarks	■	

■ Supported ■ Restricted ■ Not Supported

RandomArch-X4 Allplan2013 / 2x3

105 IfcSlab	*company statement*	*RandomArch-X4 Allplan2013 / 2x3*
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
050 CAD Layer		
070 Voiding		
070-3 Voiding Geometry SweptSolid		
200 Material		
200-2 Material Layer Set		
403 IfcFooting	*company statement*	*RandomArch-X4 Allplan2013 / 2x3*
010 Naming		
020 Placement		
020-1 Placement Relative		

Supported Restricted Not Supported

030 Geometry		
030-2 Geometry Axis	🟥	Geometry Axis is not supported by TAS.
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	🟩	
030-6-5 Geometry Explicit	🟩	
050 CAD Layer	🟩	
200 Material		
200-1 Single Material	🟩	
General	*company statement*	*RandomArch-X4 Allplan2013 / 2x3*
_G4 Remarks	🟩	

RandomStruc-X1 RST / 2x3

102 IfcWall	*company statement*	*RandomStruc-X1 RST / 2x3*
070 Voiding		
070-3 Voiding Geometry SweptSolid	Supported	
080 Filling		
080-1 Has Filling		
080-1-1 Has Filling Door	Supported	
080-1-2 Has Filling Window	Supported	
100 Element Aggregation		
100-2 Element Decomposition	Restricted	Composition is lost, but elements can still be imported.
210 Property Set		
210-1 Property Set IFC Common	Supported	
105 IfcSlab	*company statement*	*RandomStruc-X1 RST / 2x3*
100 Element Aggregation		
100-2 Element Decomposition	Restricted	Composition is lost, but elements can still be imported.
210 Property Set		
210-1 Property Set IFC Common	Supported	
110 IfcRoof	*company statement*	*RandomStruc-X1 RST / 2x3*

Supported Restricted Not Supported

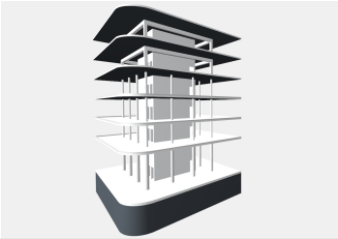
100 Element Aggregation		
100-1 Element Composition	Composition is lost, but elements can still be imported.	
100-2 Element Decomposition	Composition is lost, but elements can still be imported.	
210 Property Set		
210-1 Property Set IFC Common	The roof with aggregated parts cannot be imported.	
General	*company statement*	*RandomStruc-X1 RST / 2x3*
_G4 Remarks		

RandomStruc-X2 Scia / 2x3

411 IfcTendon	*company statement*	*RandomStruc-X2 Scia / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-4 Geometry AdvancedSweptSolid		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		
General	*company statement*	*RandomStruc-X2 Scia / 2x3*
_G4 Remarks		

Supported Restricted Not Supported

Reinforcement-01 / 2x3



101 IfcWallStandardCase	*company statement*	*Reinforcement-01 / 2x3*
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
120 Spatial Containment	■	
103 IfcBeam	*company statement*	*Reinforcement-01 / 2x3*
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
120 Spatial Containment	■	
104 IfcColumn	*company statement*	*Reinforcement-01 / 2x3*
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	

■ Supported ■ Restricted ■ Not Supported

120 Spatial Containment		
105 IfcSlab	*company statement*	*Reinforcement-01 / 2x3*
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
120 Spatial Containment		
403 IfcFooting	*company statement*	*Reinforcement-01 / 2x3*
010 Naming		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
210 Property Set		
210-3 Property Set User Defined		
407 IfcDiscreteAccessory	*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		

Supported Restricted Not Supported

030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		
210 Property Set		
210-9 Property Set User Defined		
300 Type		
300-1 Type Geometry		
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
408 IfcElementAssembly	*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-9 Geometry By Components		

Supported Restricted Not Supported

040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
100 Element Aggregation		
100-2 Element Decomposition		
120 Spatial Containment		
210 Property Set		
210-9 Property Set User Defined		
409 IfcReinforcingBar	*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-4 Geometry AdvancedSweptSolid		
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped	Mappeds are converted to breps.	
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		

Supported Restricted Not Supported

210 Property Set		
210-9 Property Set User Defined		
300 Type		
300-1 Type Geometry		
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
410 IfcReinforcingMesh	*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-4 Geometry AdvancedSweptSolid		
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		
210 Property Set		
210-9 Property Set User Defined		

Supported Restricted Not Supported

300 Type		
300-1 Type Geometry		
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
501 IfcProject	*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs		
002 History		
005 Project Units		
005-1 Project Metric Units		
008 Representation Context		
008-1 Representation Main Context		
008-2 Representation Sub Context		
008-2-2 Representation Sub Context 3D		
010 Naming		
150 Spatial Aggregation		
150-2 Spatial Decomposition		
503 IfcBuilding	*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-1 Placement Absolute		
060 Location		
060-2 Address		

Supported Restricted Not Supported

150 Spatial Aggregation			
150-1 Spatial Composition	■		
150-2 Spatial Decomposition	■		
504 IfcBuildingStorey		*company statement*	*Reinforcement-01 / 2x3*
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
060 Location			
060-4 Storey Elevation	■		
120 Spatial Containment	■		
150 Spatial Aggregation			
150-1 Spatial Composition	■		
150-2 Spatial Decomposition	■		
General		*company statement*	*Reinforcement-01 / 2x3*
_G4 Remarks	■		

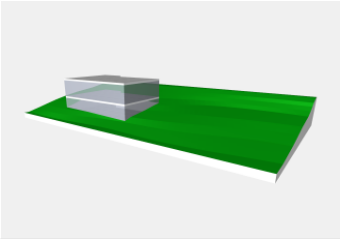
Roof 01 / 2x3

101 IfcWallStandardCase	*company statement*	*Roof 01 / 2x3*
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-2 Geometry Clipping	■	
105 IfcSlab	*company statement*	*Roof 01 / 2x3*
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-2 Geometry Clipping	■	
030-6-9 Geometry Mapped	■	
070 Voiding		
070-3 Voiding Geometry SweptSolid	■	
080 Filling		
080-1 Has Filling		
080-1-2 Has Filling Window	■	
200 Material		
200-2 Material Layer Set	■	
110 IfcRoof	*company statement*	*Roof 01 / 2x3*

■ Supported ■ Restricted ■ Not Supported

030 Geometry		
030-1 Geometry Box	🟥	Geometry Box is not supported by TAS.
040 Presentation		
040-1 Geometric Presentation	🟩	
040-2 Material Presentation	🟩	
100 Element Aggregation		
100-2 Element Decomposition	🟨	Composition is lost, but elements can still be imported.
120 Spatial Containment	🟩	
200 Material		
200-1 Single Material	🟩	
General	*company statement*	*Roof 01 / 2x3*
_G4 Remarks	🟩	

Site 02 / 2x3



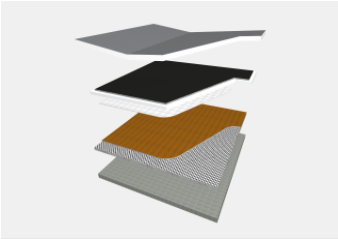
502 IfcSite	*company statement*	*Site 02 / 2x3*
010 Naming		
020 Placement		
020-1 Placement Absolute		
030 Geometry		
030-3 Geometry FootPrint	Access to footprint is irrelevant to quantity takeoff.	
030-6 Geometry Body		
030-6-5 Geometry Explicit		
150 Spatial Aggregation		
150-1 Spatial Composition		
150-2 Spatial Decomposition		
210 Property Set		
210-9 Property Set User Defined		

503 IfcBuilding	*company statement*	*Site 02 / 2x3*
010 Naming		
020 Placement		
020-2 Placement Relative		
150 Spatial Aggregation		
150-1 Spatial Composition		
150-2 Spatial Decomposition		

Supported Restricted Not Supported

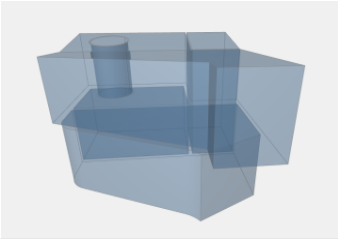
210 Property Set			
210-1 Property Set IFC Common	■		
General		*company statement*	*Site 02 / 2x3*
_G4 Remarks	■		

Slab 01A / 2x3



105 IfcSlab	*company statement*	*Slab 01A / 2x3*
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
030-6-2 Geometry Clipping	■	
050 CAD Layer	■	
200 Material		
200-2 Material Layer Set	■	
200-3 Material Layer Usage	■	
210 Property Set		
210-1 Property Set IFC Common	■	
General	*company statement*	*Slab 01A / 2x3*
_G4 Remarks	■	

Space 01A / 2x3

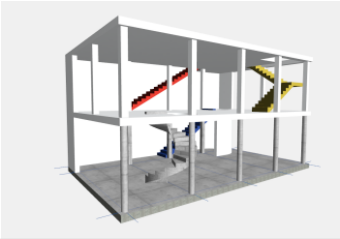


505 IfcSpace	*company statement*	*Space 01A / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
150 Spatial Aggregation		
150-1 Spatial Composition		
210 Property Set		
210-1 Property Set IFC Common		
210-6 Property Set IFC any		

General	*company statement*	*Space 01A / 2x3*
_G4 Remarks		

Supported Restricted Not Supported

StairSlab-01 / 2x3



105 IfcSlab	*company statement*	*StairSlab-01 / 2x3*
001 GUIDs	■	
002 History	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
040 Presentation		
040-1 Geometric Presentation	■	
040-2 Material Presentation	■	
070 Voiding		
070-3 Voiding Geometry SweptSolid	■	

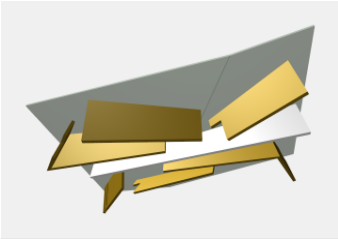
106 IfcStair	*company statement*	*StairSlab-01 / 2x3*
001 GUIDs	■	
002 History	■	
010 Naming	■	
020 Placement		
020-1 Placement Relative	■	

■ Supported ■ Restricted ■ Not Supported

030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit	■	
030-9 Geometry By Components	■	
040 Presentation		
040-1 Geometric Presentation	■	
050 CAD Layer	■	
100 Element Aggregation		
100-2 Element Decomposition	■	
120 Spatial Containment	■	
200 Material		
200-1 Single Material	■	
210 Property Set		
210-1 Property Set IFC Common	■	
General	*company statement*	*StairSlab-01 / 2x3*
_G4 Remarks	■	

■ Supported ■ Restricted ■ Not Supported

Wall 02 / 2x3

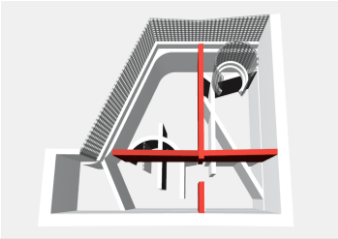


102 IfcWall	*company statement*	*Wall 02 / 2x3*
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-2 Geometry Axis	Geometry Axis is processed internally, but not visible.	
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
030-6-5 Geometry Explicit		
050 CAD Layer		
070 Voiding		
070-1 Voiding Geometry Explicit		
070-3 Voiding Geometry SweptSolid		
120 Spatial Containment		
130 Grouping		
130-1 Grouping General		
200 Material		
200-3 Material Layer Set		

Supported Restricted Not Supported

300 Type		
300-2 Type Naming	■	
General	*company statement*	*Wall 02 / 2x3*
_G4 Remarks	■	

WallStandardCase 02A / 2x3



101 IfcWallStandardCase	*company statement*	*WallStandardCase 02A / 2x3*
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-2 Geometry Axis	Geometry Axis is processed internally, but not visible.	
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
030-6-2 Geometry Clipping		
050 CAD Layer		
110 Connectivity		
110-2 Connectivity Path	Access to connectivity path is irrelevant to quantity takeoff.	
120 Spatial Containment		
200 Material		
200-4 Material Layer Usage		
210 Property Set		
210-1 Property Set IFC Common		
General	*company statement*	*WallStandardCase 02A / 2x3*
_G4 Remarks		

Supported Restricted Not Supported

Window 01 / 2x3

301 IfcWindow	*company statement*	*Window 01 / 2x3*
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-5 Geometry Profile		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
030-6-9 Geometry Mapped		
040 Presentation		
040-1 Geometric Presentation		
050 CAD Layer		
080 Filling		
080-2 Is Filling		
120 Spatial Containment		
200 Material		
200-1 Single Material		
200-5 Material List		

Supported Restricted Not Supported

210 Property Set		
210-1 Property Set IFC Common		
210-2 Property Set IFC any		
210-3 Property Set User Defined		
300 Type		
300-1 Type Geometry		Typed objects are not supported in TAS.
300-2 Type Naming		
300-3 Type Material		
300-5 Type Property Set		
300-6 Type Predefined Properties		
300-6-1 Type Predefined Properties Window		
General	*company statement*	*Window 01 / 2x3*
_G4 Remarks		