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Introduction

BricsCAD is a software application for computer-aided design (CAD), developed by Bricsys. With BricsCAD BIM, users get a one stop solution, from sketch to detail. The intuitive interface of BricsCAD allows users to draw freely, and add BIM information only when needed. Geometric data is classified automatically, using AI algorithms that recognize BIM objects, such as wall, beam, column, etc. BricsCAD BIM comes with IFC import and export functionalities, which enable users to share design information using an open and neutral data format. The certified 'CV2.0-Arch IFC Export' has been available since the release of BricsCAD BIM v17.

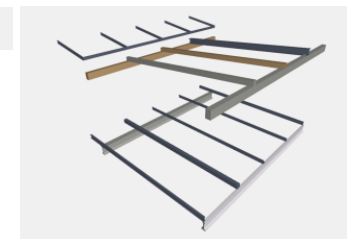
Testlist

Name test	concepts total	manually checked		
				
BeamColumn 04 / 2x3	47	37		10
Beam_01 / 2x3	10	9		1
Beam_02 / 2x3	12	8	1	3
Beam_03 / 2x3	6	3		3
CharsetTest-01A / 2x3	2	2		
Column 01 / 2x3	11	10		1
Column_02 / 2x3	6	4		2
CoveringFurnishing-01 / 2x3	57	42	2	13
CurtainWall-01 / 2x3	29	25		4
Door 01 / 2x3	22	20		2
DoorWindow-02 / 2x3	11	9	2	
Grid 01 / 2x3				11
Member 01A / 2x3	10	8		2
Pile 01 / 2x3	19	14	1	4
RampRailing-01 / 2x3	28	25	2	1
RandomArch-X1 / 2x3	43	42	1	
RandomArch-X2 / 2x3	54	50		4
RandomArch-X3 / 2x3	34	34		
RandomArch-X4 / 2x3	49	49		
RandomArch-X5 / 2x3	41	37		4
Roof 01 / 2x3	15	13		2
Roof 02 / 2x3	12	11	1	
Site 01 / 2x3	14	12		2
Site 02 / 2x3	13	11		2
Slab 01A / 2x3	9	9		
Slab 02A / 2x3	24	18		6

Name test	concepts total	manually checked		
				
Space 01A / 2x3	12	11		1
StairSlab-01 / 2x3	19	19		
UnitTest-01A / 2x3	3	3		
Wall 01 / 2x3	19	15		4
Wall 02 / 2x3	14	12		2
WallSlab 03 / 2x3	32	31	1	
WallStandardCase 01A / 2x3	15	14		1
WallStandardCase 02A / 2x3	11	9	1	1
WallStandardCase 03A / 2x3	9	8		1
WallStandardCase 04A / 2x3	8	6		2
Window 01 / 2x3	22	20		2

Concepts

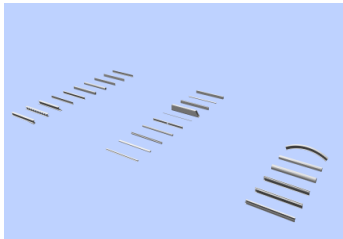
Beam_01 / 2x3



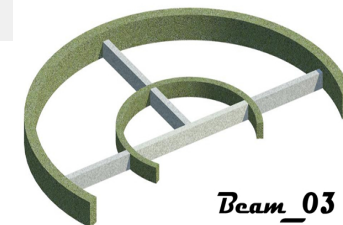
103 IfcBeam	company statement		Beam_01 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■	Clipped prisms with circular segments (fillets) are not recognized automatically and are exported with brep geometry.	
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
210 Property Set			
210-1 Property Set IFC Common	■		
General	company statement		Beam_01 / 2x3

_G4 Remarks



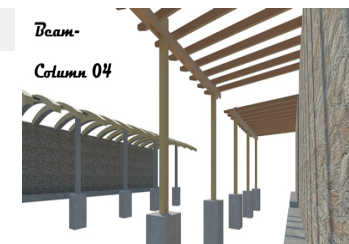
Beam_02 / 2x3			
103 IfcBeam	company statement		Beam_02 / 2x3
010 Naming			
030 Geometry			
030-2 Geometry Axis		Geometry axis for beams is not supported (optional concept).	
030-6 Geometry Body			
030-6-1 Geometry SweptSolid			
030-6-2 Geometry Clipping		Clipped prisms with circular segments (fillets) are not recognized automatically and are exported with brep geometry.	
030-6-5 Geometry Explicit			
050 CAD Layer			
070 Voiding			
070-1 Voiding Geometry Explicit		In this test file, there is no voiding geometry explicit (optional concept).	
070-2 Voiding Geometry Mapped		Voids that can be represented as single extrusion have swept solid representation.	
070-3 Voiding Geometry SweptSolid			
120 Spatial Containment			
200 Material			
200-1 Single Material			
General	company statement		Beam_02 / 2x3
_G4 Remarks			

Beam_03 / 2x3



103 IfcBeam	company statement	Beam_03 / 2x3
030 Geometry 030-1 Geometry Box 030-2 Geometry Axis 030-6 Geometry Body 030-6-1 Geometry SweptSolid 030-6-2 Geometry Clipping	■ Geometry box is not supported for beams (optional concept). ■ Geometry axis for beams is not supported (optional concept). ■ ■ In this test file, there is no clipping geometry.	
300 Type 300-5 Type Property Set	■	
General	company statement	Beam_03 / 2x3
_G4 Remarks	■	

BeamColumn 04 / 2x3



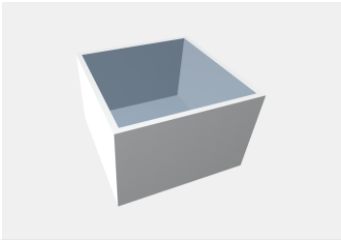
103 IfcBeam	company statement		BeamColumn 04 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-9 Geometry Mapped	■		
070 Voiding			
070-1 Voiding Geometry Explicit	■		
070-2 Voiding Geometry Mapped	■	The voids are modeled explicitly in this test file.	
070-3 Voiding Geometry SweptSolid	■	The voids are modeled explicitly in this test file.	
130 Grouping			
130-1 Grouping General	■		
200 Material			
200-1 Single Material	■		

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	■ In this test file, materials are assigned to the individual elements (optional concept).
300-5 Type Property Set	■ In this test file, properties are assigned to the individual elements (optional concept).
104 IfcColumn	<i>company statement</i> <i>BeamColumn 04 / 2x3</i>
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	■ The voids are modeled explicitly in this test file.
070-3 Voiding Geometry SweptSolid	■ The voids are modeled explicitly in this test file.
130 Grouping	
130-1 Grouping General	■

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	■ In this test file, materials are assigned to the individual elements (optional concept).
300-5 Type Property Set	■ In this test file, properties are assigned to the individual elements (optional concept).
403 IfcFooting	<i>company statement</i> <i>BeamColumn 04 / 2x3</i>
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	■

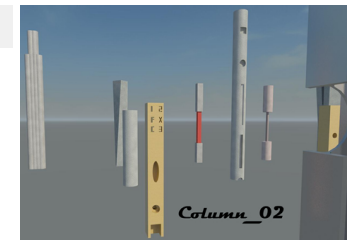
210 Property Set		
210-2 Property Set IFC any	■	
300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	In this test file, materials are assigned to the individual elements (optional concept).
300-5 Type Property Set	■	In this test file, properties are assigned to the individual elements (optional concept).
General	company statement	
_G4 Remarks	■	

CharsetTest-01A / 2x3

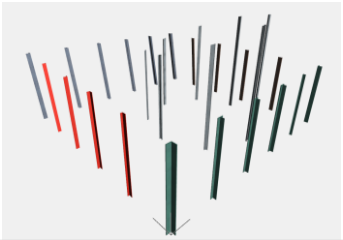


General	company statement		CharsetTest-01A / 2x3
_G1 Character sets		■	
_G4 Remarks		■	

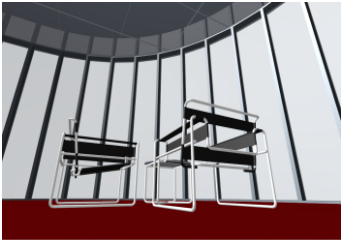
Column_02 / 2x3



104 IfcColumn		company statement	Column_02 / 2x3
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-5 Geometry Explicit		■	
070 Voiding			
070-1 Voiding Geometry Explicit		■ In this test file, there is no voiding geometry explicit (optional concept).	
070-2 Voiding Geometry Mapped		■ Voids that can be represented as single extrusion have swept solid representation.	
070-3 Voiding Geometry SweptSolid		■	
General		company statement	Column_02 / 2x3
_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	■	Clipped prisms with circular segments (fillets) are not recognized automatically and are exported with brep geometry.	
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



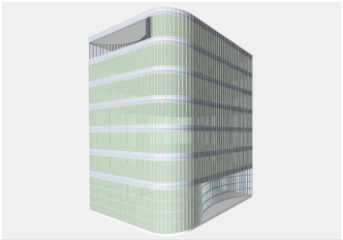
210 IfcFlowTerminal	company statement		CoveringFurnishing-01 / 2x3
001 GUIDs	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
030-6-9 Geometry Mapped	■		
040 Presentation			
040-1 Geometric Presentation	■		
050 CAD Layer	■		
120 Spatial Containment	■		
210 Property Set			
210-1 Property Set IFC Common	■	The property sets for all the subtypes of IfcFlowTerminal (such as Pset_SanitaryTerminalTypeBath, etc.) are not included in bricsCAD BIM.	
210-6 Property Set IFC any	■		
210-9 Property Set User Defined	■	User defined properties are exported to a property set "Custom properties".	

300 Type	
300-1 Type Geometry	■
300-2 Type Naming	■
300-3 Type Material	■ In this test file, materials are assigned to the individual elements.
300-5 Type Property Set	■ In this test file, properties are assigned to the individual elements.
303 IfcCovering	company statement CoveringFurnishing-01 / 2x3
010 Naming	■
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	■
030-6-9 Geometry Mapped	■ In this test file, coverings are modeled without mapped geometry (optional concept).
040 Presentation	
040-1 Geometric Presentation	■
050 CAD Layer	■
070 Voiding	
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
200-3 Material Layer Set	■
210 Property Set	
210-1 Property Set IFC Common	■

300 Type	
300-1 Type Geometry	■ In this test file, there is no type geometry (optional concept).
300-2 Type Naming	■
300-3 Type Material	■
300-5 Type Property Set	■ In this test file, properties are assigned to the individual elements.
304 IfcFurnishingElement	<i>company statement</i> 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	■ MaterialList is not supported (optional).
210 Property Set	
210-6 Property Set IFC any	■
210-9 Property Set User Defined	■ User defined properties are exported to a property set "Custom properties".

300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	In this test file, materials are assigned to the individual elements.
300-5 Type Property Set	■	In this test file, properties are assigned to the individual elements.
505 IfcSpace	company statement	
030 Geometry		CoveringFurnishing-01 / 2x3
030-3 Geometry FootPrint	■	IfcSpace has swept solid geometry or brep representation.
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
120 Spatial Containment	■	
130 Grouping		
130-3 Grouping to Zones	■	
230 Classification	■	Classification is not supported (optional concept).
508 IfcZone	company statement	
001 GUIDs	■	CoveringFurnishing-01 / 2x3
002 History	■	
010 Naming	■	
130 Grouping		
130-5 Is Group	■	
210 Property Set		
210-1 Property Set IFC Common	■	Property sets for IfcZone are not supported.
210-9 Property Set User Defined	■	Property sets for IfcZone are not supported.
General	company statement	
_G4 Remarks	■	CoveringFurnishing-01 / 2x3

CurtainWall-01 / 2x3

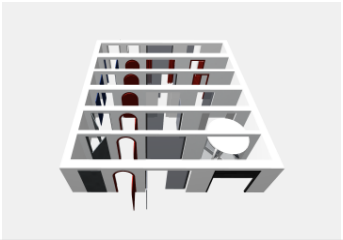


109 IfcCurtainWall	company statement		CurtainWall-01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	
030-9 Geometry By Components		■	
040 Presentation			
040-1 Geometric Presentation		■	
050 CAD Layer		■	
100 Element Aggregation			
100-2 Element Decomposition		■	
120 Spatial Containment		■	
200 Material			
200-1 Single Material		■	
200-5 Material List		■	MaterialList is not supported (optional).

210 Property Set		
210-1 Property Set IFC Common	■	
210-3 Property Set User Defined	■	User defined properties are not set in this test file.
300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-3 Type Material	■	In this test file, materials are assigned to the individual elements.
300-5 Type Property Set	■	In this test file, properties are assigned to the individual elements.
501 IfcProject		<i>company statement</i> CurtainWall-01 / 2x3
010 Naming	■	
502 IfcSite		<i>company statement</i> CurtainWall-01 / 2x3
010 Naming	■	
060 Location		
060-1 Geographic Location	■	
060-2 Address	■	
503 IfcBuilding		<i>company statement</i> CurtainWall-01 / 2x3
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
504 IfcBuildingStorey		<i>company statement</i> CurtainWall-01 / 2x3
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
060 Location		
060-4 Storey Elevation	■	

210 Property Set		
210-1 Property Set IFC Common	■	
General		company statement
__G4 Remarks	■	

Door 01 / 2x3



302 IfcDoor	company statement		Door 01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-5 Geometry Profile		■	Geometry profile is not supported.
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		■	MaterialList is not supported (optional).

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	■
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	<i>company statement</i>
_G4 Remarks	■

Door 01 / 2x3

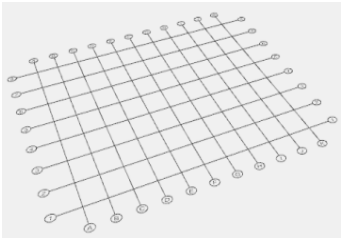
DoorWindow-02 / 2x3



301 IfcWindow	company statement		DoorWindow-02 / 2x3
001 GUIDs	■		
020 Placement			
020-2 Placement Relative	■	In this test file, there are openings that span multiple walls. A separate IfcOpeningElement is created for each wall/opening pair.	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
080 Filling			
080-2 Is Filling	■		
300 Type			
300-1 Type Geometry	■		
302 IfcDoor	company statement		DoorWindow-02 / 2x3
001 GUIDs	■		
020 Placement			
020-2 Placement Relative	■	In this test file, there are openings that span multiple walls. A separate IfcOpeningElement is created for each wall/opening pair.	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
080 Filling			
080-2 Is Filling	■		

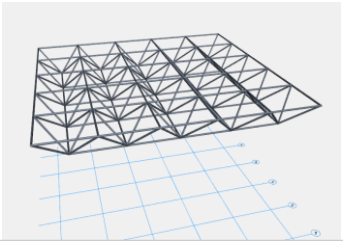
300 Type	
300-1 Type Geometry	
General	company statementDoorWindow-02 / 2x3
_G4 Remarks	

Grid 01 / 2x3



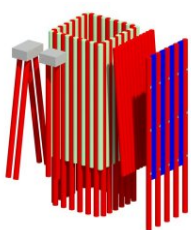
509 IfcGrid	company statement		Grid 01 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-3 Geometry FootPrint	■		
040 Presentation			
040-1 Geometric Presentation	■		
050 CAD Layer	■		
120 Spatial Containment	■		
210 Property Set			
210-3 Property Set User Defined	■		
270 Grid Usage			
270-1 Grid Axes	■		
General	company statement		Grid 01 / 2x3
_G4 Remarks	■	IfcGrid is not supported.	

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	■	Circular hollow profiles are exported with mapped geometry.	
030-6-2 Geometry Clipping	■	Circular hollow profiles are exported with mapped geometry.	
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	■		
General	company statement		Member 01A / 2x3
_G4 Remarks	■		

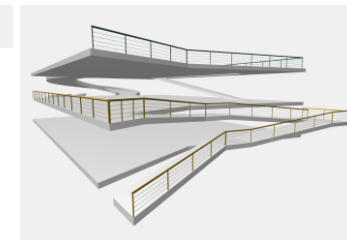
Pile 01 / 2x3



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	■	Clipped circular prisms are not recognized automatically and are exported with brep geometry.	
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	■	The voids are modeled explicitly in this test file.	
100 Element Aggregation			
100-2 Element Decomposition		■	
120 Spatial Containment		■	

200 Material	
200-1 Single Material	■
210 Property Set	
210-3 Property Set User Defined	■
300 Type	
300-1 Type Geometry	■ IfcPileType is not included in the IFC2x3 CV2.0.
300-3 Type Material	■ IfcPileType is not included in the IFC2x3 CV2.0.
300-5 Type Property Set	■ IfcPileType is not included in the IFC2x3 CV2.0.
General	company statement
_G4 Remarks	■

RampRailing-01 / 2x3



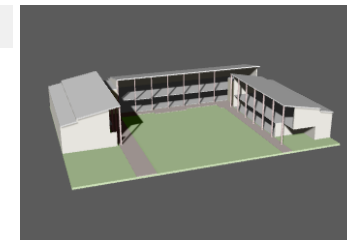
107 IfcRamp	company statement		RampRailing-01 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-1 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	
030-9 Geometry By Components		■	
040 Presentation			
040-1 Geometric Presentation		■	
050 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		
210-3 Property Set User Defined		User defined properties are exported to a property set "Custom properties".
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		MaterialList is not supported (optional).
210 Property Set		
210-1 Property Set IFC Common		
210-3 Property Set User Defined		User defined properties are exported to a property set "Custom properties".
General	company statement	
		RampRailing-01 / 2x3

_G4 Remarks



RandomArch-X1 / 2x3

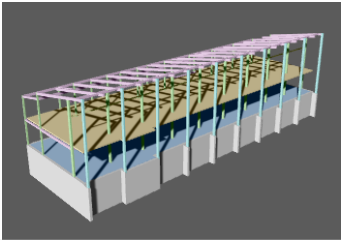


101 IfcWallStandardCase	company statement		RandomArch-X1 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-2 Geometry Clipping		■	
050 CAD Layer		■	
120 Spatial Containment		■	
105 IfcSlab	company statement		RandomArch-X1 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	

030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
050 CAD Layer	■	
120 Spatial Containment	■	
501 IfcProject	company statement RandomArch-X1 / 2x3	
001 GUIDs	■	
002 History	■	
005 Project Units		
005-1 Project Metric Units	■	
010 Naming	■	
502 IfcSite	company statement RandomArch-X1 / 2x3	
001 GUIDs	■	
002 History	■	
010 Naming	■	
020 Placement		
020-1 Placement Absolute	■	
050 CAD Layer	■	
060 Location		
060-1 Geographic Location	■	
150 Spatial Aggregation		
150-1 Spatial Composition	■	
150-2 Spatial Decomposition	■	
210 Property Set		
210-1 Property Set IFC Common	■	

503 IfcBuilding	company statement		RandomArch-X1 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
150 Spatial Aggregation			
150-1 Spatial Composition		■	
150-2 Spatial Decomposition		■	
210 Property Set			
210-1 Property Set IFC Common		■	
504 IfcBuildingStorey	company statement		RandomArch-X1 / 2x3
001 GUIDs		■	
002 History		■	
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
150 Spatial Aggregation			
150-1 Spatial Composition		■	
150-2 Spatial Decomposition		■	
210 Property Set			
210-1 Property Set IFC Common		■	
General	company statement		RandomArch-X1 / 2x3
_G4 Remarks		■	

RandomArch-X2 / 2x3



101 IfcWallStandardCase		company statement	RandomArch-X2 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
050 CAD Layer	■		
120 Spatial Containment	■		
200 Material			
200-4 Material Layer Usage	■		
210 Property Set			
210-1 Property Set IFC Common	■		
103 IfcBeam		company statement	RandomArch-X2 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		

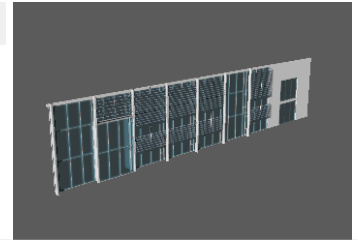
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-2 Geometry Clipping	■
030-6-9 Geometry Mapped	■
050 CAD Layer	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
300 Type	
300-1 Type Geometry	■
300-2 Type Naming	■
300-3 Type Material	■
104 IfcColumn	company statementRandomArch-X2 / 2x3
001 GUIDs	■
002 History	■
010 Naming	■
020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-2 Geometry Clipping	■
030-6-9 Geometry Mapped	■
050 CAD Layer	■

120 Spatial Containment		
130 Grouping		
130-1 Grouping General		
200 Material		
200-1 Single Material		
300 Type		
300-1 Type Geometry		
300-2 Type Naming		
300-3 Type Material		
401 IfcMember	company statement RandomArch-X2 / 2x3	
001 GUIDs		
002 History		
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		
403 IfcFooting	company statement RandomArch-X2 / 2x3	
001 GUIDs		
002 History		

010 Naming		
020 Placement		
020-1 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-9 Geometry Mapped		
050 CAD Layer		
120 Spatial Containment		
200 Material		
200-1 Single Material		
300 Type		
300-1 Type Geometry		
300-2 Type Naming		
General		<i>company statement</i>
_G4 Remarks		

RandomArch-X2 / 2x3

RandomArch-X3 / 2x3

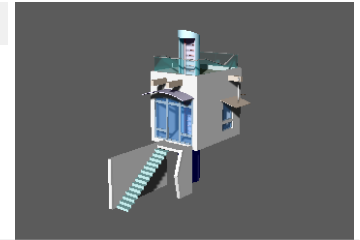


109 IfcCurtainWall	company statement		RandomArch-X3 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Relative	■		
030 Geometry			
030-9 Geometry By Components	■		
050 CAD Layer	■		
100 Element Aggregation			
100-2 Element Decomposition	■		
120 Spatial Containment	■		
130 Grouping			
130-1 Grouping General	■		
210 Property Set			
210-1 Property Set IFC Common	■		
301 IfcWindow	company statement		RandomArch-X3 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		

020 Placement	
020-2 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-9 Geometry Mapped	■
050 CAD Layer	■
080 Filling	
080-2 Is Filling	■
100 Element Aggregation	
100-1 Element Composition	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
300 Type	
300-1 Type Geometry	■
300-2 Type Naming	■
300-6 Type Predefined Properties	
300-6-1 Type Predefined Properties Window	■
401 IfcMember	<i>company statement</i>
	<i>RandomArch-X3 / 2x3</i>
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	■
050 CAD Layer	■
100 Element Aggregation	
100-1 Element Composition	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
General	company statementRandomArch-X3 / 2x3
_G4 Remarks	■

RandomArch-X4 / 2x3



103 IfcBeam	company statement		RandomArch-X4 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
040 Presentation			
040-1 Geometric Presentation	■		
120 Spatial Containment	■		
200 Material			
200-1 Single Material	■		
210 Property Set			
210-1 Property Set IFC Common	■		
104 IfcColumn	company statement		RandomArch-X4 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		

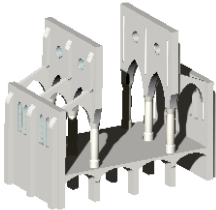
030 Geometry	
030-6 Geometry Body	
030-6-1 Geometry SweptSolid	■
030-6-5 Geometry Explicit	■
040 Presentation	
040-1 Geometric Presentation	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
210 Property Set	
210-1 Property Set IFC Common	■
106 IfcStair	company statement
010 Naming	■
020 Placement	
020-1 Placement Relative	■
030 Geometry	
030-6 Geometry Body	
030-6-5 Geometry Explicit	■
040 Presentation	
040-1 Geometric Presentation	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
210 Property Set	
210-1 Property Set IFC Common	■

108 IfcRailing	company statement		RandomArch-X4 / 2x3
010 Naming			
020 Placement			
020-2 Placement Relative			
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit			
120 Spatial Containment			
200 Material			
200-1 Single Material			
210 Property Set			
210-1 Property Set IFC Common			
110 IfcRoof	company statement		RandomArch-X4 / 2x3
010 Naming			
020 Placement			
020-2 Placement Relative			
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit			
040 Presentation			
040-1 Geometric Presentation			
120 Spatial Containment			
200 Material			
200-1 Single Material			

210 Property Set		
210-1 Property Set IFC Common	■	
301 IfcWindow	company statement RandomArch-X4 / 2x3	
010 Naming	■	
020 Placement		
020-2 Placement Relative	■	
030 Geometry		
030-6 Geometry Body		
030-6-9 Geometry Mapped	■	
080 Filling		
080-2 Is Filling	■	
120 Spatial Containment	■	
300 Type		
300-6 Type Predefined Properties		
300-6-1 Type Predefined Properties Window	■	
401 IfcMember	company statement RandomArch-X4 / 2x3	
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	■	
120 Spatial Containment	■	

200 Material	
200-1 Single Material	■
General	company statementRandomArch-X4 / 2x3
_G4 Remarks	■

RandomArch-X5 / 2x3



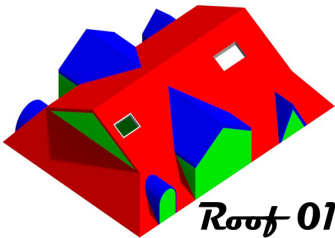
102 IfcWall	company statement		RandomArch-X5 / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit		■	
120 Spatial Containment		■	
200 Material			
200-1 Single Material		■	
300 Type			
300-1 Type Geometry		■	
300-2 Type Naming		■	
300-3 Type Material		■	
103 IfcBeam	company statement		RandomArch-X5 / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	

030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
120 Spatial Containment		
200 Material		
200-1 Single Material		
300 Type		
300-1 Type Geometry		
300-2 Type Naming		
300-3 Type Material		
104 IfcColumn	company statement RandomArch-X5 / 2x3	
010 Naming		
020 Placement		
020-2 Placement Relative		
030 Geometry		
030-6 Geometry Body		
030-6-5 Geometry Explicit		
120 Spatial Containment		
200 Material		
200-1 Single Material		
300 Type		
300-1 Type Geometry		
300-2 Type Naming		
300-3 Type Material		
105 IfcSlab	company statement RandomArch-X5 / 2x3	

010 Naming	
020 Placement	
020-2 Placement Relative	
030 Geometry	
030-6 Geometry Body	
030-6-5 Geometry Explicit	
120 Spatial Containment	
200 Material	
200-1 Single Material	
300 Type	
300-1 Type Geometry	
300-2 Type Naming	
300-3 Type Material	
301 IfcWindow	<i>company statement</i>
010 Naming	
020 Placement	
020-2 Placement Relative	
030 Geometry	
030-6 Geometry Body	
030-6-5 Geometry Explicit	
080 Filling	
080-2 Is Filling	
120 Spatial Containment	

300 Type		
300-1 Type Geometry	■	
300-2 Type Naming	■	
300-6 Type Predefined Properties		
300-6-1 Type Predefined Properties Window	■	
General	company statement RandomArch-X5 / 2x3	
_G4 Remarks	■	

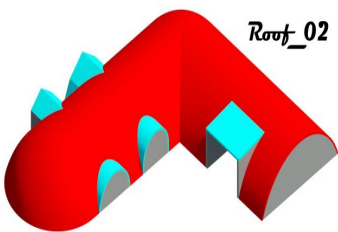
Roof 01 / 2x3



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		In this test file, there is no mapped geometry (optional concept).	
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
030 Geometry			
030-1 Geometry Box		Geometry box is not supported.	

040 Presentation	
040-1 Geometric Presentation	■
040-2 Material Presentation	■
100 Element Aggregation	
100-2 Element Decomposition	■
120 Spatial Containment	■
200 Material	
200-1 Single Material	■
General	company statement
_G4 Remarks	■

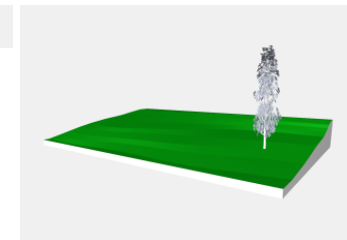
Roof 02 / 2x3



101 IfcWallStandardCase	company statement		Roof 02 / 2x3
010 Naming	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■		
050 CAD Layer	■		
110 IfcRoof	company statement		Roof 02 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
050 CAD Layer	■		
100 Element Aggregation			
100-2 Element Decomposition	■		
210 Property Set			
210-1 Property Set IFC Common	■		
210-3 Property Set User Defined	■	User defined properties are exported to a property set "Custom properties".	

General	company statement	Roof 02 / 2x3
_G4 Remarks		

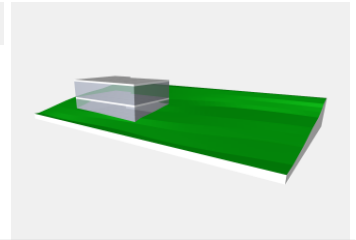
Site 01 / 2x3



502 IfcSite	company statement		Site 01 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Absolute	■		
030 Geometry			
030-1 Geometry Box	■	Geometry box is not supported (optional).	
030-3 Geometry FootPrint	■	Geometry footprint is not supported (optional).	
030-6 Geometry Body			
030-6-5 Geometry Explicit	■		
040 Presentation			
040-1 Geometric Presentation	■		
050 CAD Layer	■		
060 Location			
060-1 Geographic Location	■		
060-2 Address	■		
120 Spatial Containment	■		
210 Property Set			
210-1 Property Set IFC Common	■		

General	company statement	Site 01 / 2x3
_G4 Remarks		

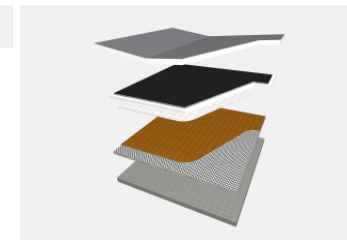
Site 02 / 2x3



502 IfcSite	company statement		Site 02 / 2x3
010 Naming	■		
020 Placement			
020-1 Placement Absolute	■		
030 Geometry			
030-3 Geometry FootPrint	■	Geometry footprint is not supported (optional).	
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	■	User defined properties are not supported for site, building, and building storey (optional concept).	
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	■		

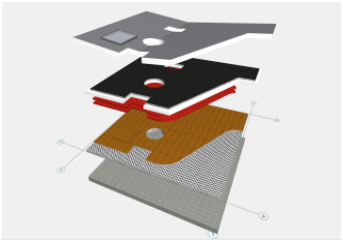
210 Property Set		
210-1 Property Set IFC Common	■	
General		company statement
Site 02 / 2x3		
_G4 Remarks	■	

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		■	

Slab 02A / 2x3

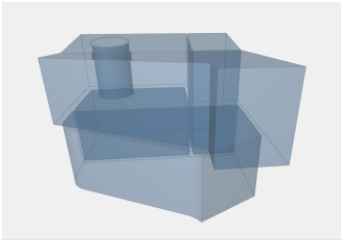


105 IfcSlab	company statement		Slab 02A / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-1 Geometry Box		■	
030-6 Geometry Body			
030-6-1 Geometry SweptSolid		■	
030-6-2 Geometry Clipping		■	
030-6-5 Geometry Explicit		■	
030-6-9 Geometry Mapped		■	In this test file, there is no mapped geometry (optional concept).
070 Voiding			
070-1 Voiding Geometry Explicit		■	
070-2 Voiding Geometry Mapped		■	Voids that can be represented as single extrusion have swept solid representation, and voids that cannot be represented as single extrusion have brep (explicit) representation.
070-3 Voiding Geometry SweptSolid		■	
080 Filling			
080-1 Has Filling			
080-1-1 Has Filling Door		■	
080-1-2 Has Filling Window		■	
120 Spatial Containment		■	

130 Grouping	
130-1 Grouping General	■
200 Material	
200-1 Single Material	■ Slabs have material layer set usage (optional concept).
200-2 Material Layer Set	■
210 Property Set	
210-1 Property Set IFC Common	■
210-2 Property Set IFC any	■ Propertyset "ManufacturerTypeInformation" cannot be added to IfcSlab.
210-3 Property Set User Defined	■
300 Type	
300-1 Type Geometry	■ In this test file, there is no type geometry (optional concept).
300-2 Type Naming	■
300-3 Type Material	■
300-5 Type Property Set	■ In this test file, properties are assigned to the individual elements.
General	company statement
_G4 Remarks	■

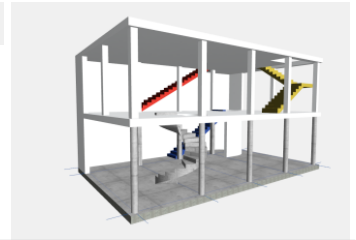
Slab 02A / 2x3

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	■	Spaces in this test file are exported with swept solid or brep representation.	
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	■		

StairSlab-01 / 2x3

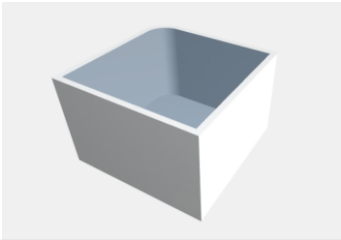


105 IfcSlab	company statement		StairSlab-01 / 2x3
001 GUIDs	■		
002 History	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
070 Voiding			
070-3 Voiding Geometry SweptSolid	■		
106 IfcStair	company statement		StairSlab-01 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Relative	■		

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
_G4 Remarks	■	

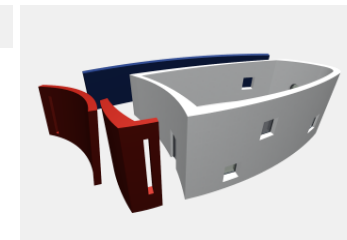
StairSlab-01 / 2x3

UnitTest-01A / 2x3



501 IfcProject		company statement	UnitTest-01A / 2x3
005 Project Units			
005-1 Project Metric Units	■		
005-2 Project Imperial Units	■		
General		company statement	UnitTest-01A / 2x3
_G4 Remarks	■		

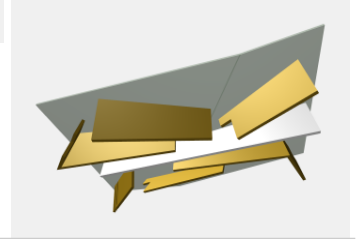
Wall 01 / 2x3



102 IfcWall	company statement		Wall 01 / 2x3
002 History	■		
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■	In this test file, all the walls have explicit geometry.	
030-6-2 Geometry Clipping	■	In this test file, all the walls have explicit geometry.	
030-6-5 Geometry Explicit	■		
040 Presentation			
040-1 Geometric Presentation	■		
040-2 Material Presentation	■		
070 Voiding			
070-1 Voiding Geometry Explicit	■	In this test file, there is no voiding geometry explicit (optional concept).	
070-3 Voiding Geometry SweptSolid	■		
080 Filling			
080-1 Has Filling			
080-1-1 Has Filling Door	■		
080-1-2 Has Filling Window	■		

200 Material		
200-1 Single Material	■	
210 Property Set		
210-1 Property Set IFC Common	■	
300 Type		
300-3 Type Material	■	
300-5 Type Property Set	■	In this test file, properties are assigned to the individual elements.
301 IfcWindow		<i>company statement</i> Wall 01 / 2x3
020 Placement		
020-2 Placement Relative	■	
302 IfcDoor		<i>company statement</i> Wall 01 / 2x3
020 Placement		
020-2 Placement Relative	■	
General		<i>company statement</i> Wall 01 / 2x3
_G4 Remarks	■	

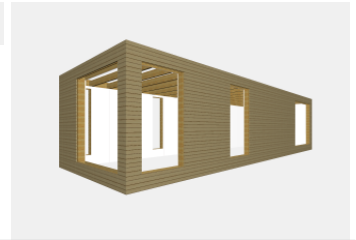
Wall 02 / 2x3



102 IfcWall	company statement		Wall 02 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■		
030-6-5 Geometry Explicit	■	In this test file, there is no explicit geometry.	
050 CAD Layer	■		
070 Voiding			
070-1 Voiding Geometry Explicit	■	All voids in this testfile are represented as single extrusions, and have swept solid representation.	
070-3 Voiding Geometry SweptSolid	■		
120 Spatial Containment	■		
130 Grouping			
130-1 Grouping General	■		
200 Material			
200-3 Material Layer Set	■		

300 Type		
300-2 Type Naming	■	
General		company statement
_G4 Remarks	■	

WallSlab 03 / 2x3

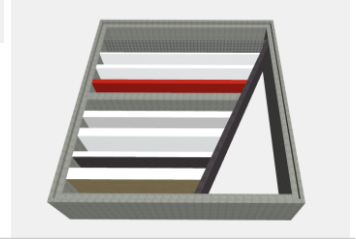


102 IfcWall	company statement		WallSlab 03 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-9 Geometry By Components	■		
070 Voiding			
070-3 Voiding Geometry SweptSolid	■	The voids are modeled explicitly in this test file.	
100 Element Aggregation			
100-2 Element Decomposition	■		
210 Property Set			
210-1 Property Set IFC Common	■		
105 IfcSlab	company statement		WallSlab 03 / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-9 Geometry By Components	■		
100 Element Aggregation			
100-2 Element Decomposition	■		

501 IfcProject		company statement	WallSlab 03 / 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	WallSlab 03 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		
020 Placement			
020-1 Placement Absolute	■		
150 Spatial Aggregation			
150-1 Spatial Composition	■		
150-2 Spatial Decomposition	■		
504 IfcBuildingStorey		company statement	WallSlab 03 / 2x3
001 GUIDs	■		
002 History	■		
010 Naming	■		

020 Placement		
020-2 Placement Relative	■	
150 Spatial Aggregation		
150-1 Spatial Composition	■	
150-2 Spatial Decomposition	■	
505 IfcSpace		<i>company statement</i> WallSlab 03 / 2x3
010 Naming	■	
030 Geometry		
030-6 Geometry Body		
030-6-1 Geometry SweptSolid	■	
General		<i>company statement</i> WallSlab 03 / 2x3
_G4 Remarks	■	

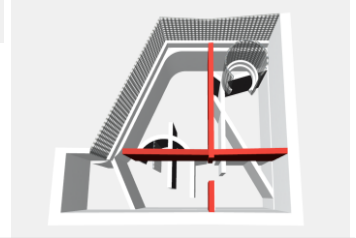
WallStandardCase 01A / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 01A / 2x3
010 Naming		■	
020 Placement			
020-2 Placement Relative		■	
030 Geometry			
030-2 Geometry Axis		■	
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		■	
110 Connectivity			
110-2 Connectivity Path	■	Connectivity path is not supported. The connection geometry is at the IfcWallStandardCase element.	
120 Spatial Containment		■	
200 Material			
200-4 Material Layer Usage		■	
210 Property Set			
210-3 Property Set User Defined		■	

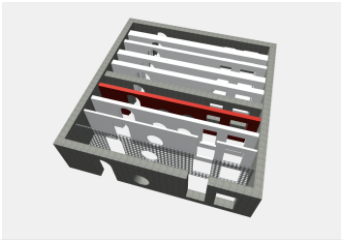
300 Type	
300-3 Type Material	■
300-5 Type Property Set	■
General	company statement
WallStandardCase 01A / 2x3	
_G4 Remarks	■

WallStandardCase 02A / 2x3



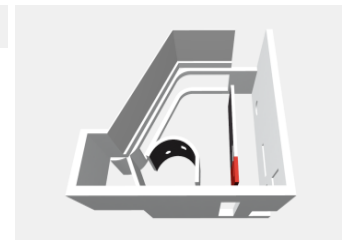
101 IfcWallStandardCase	company statement		WallStandardCase 02A / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
030-6-2 Geometry Clipping	■	Clipped circular prisms are not recognized automatically and are exported with brep geometry.	
050 CAD Layer	■		
110 Connectivity			
110-2 Connectivity Path	■	Connectivity path is not supported. The connection geometry is at the IfcWallStandardCase element.	
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	■		

WallStandardCase 03A / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 03A / 2x3
010 Naming	■		
020 Placement			
020-2 Placement Relative	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
070 Voiding			
070-1 Voiding Geometry SweptSolid	■		
070-2 Voiding Geometry Explicit	■		
070-3 Voiding Geometry Mapped	■	Voids that can be represented as single extrusion have swept solid representation, and voids that cannot be represented as single extrusion have brep (explicit) representation.	
120 Spatial Containment	■		
General	company statement		WallStandardCase 03A / 2x3
_G4 Remarks	■		

WallStandardCase 04A / 2x3



101 IfcWallStandardCase	company statement		WallStandardCase 04A / 2x3
010 Naming	■		
030 Geometry			
030-2 Geometry Axis	■		
030-6 Geometry Body			
030-6-1 Geometry SweptSolid	■		
070 Voiding			
070-1 Voiding Geometry SweptSolid	■		
070-2 Voiding Geometry Explicit	■	In this test file, there is no voiding geometry explicit (optional concept).	
070-3 Voiding Geometry Mapped	■	Voids that can be represented as single extrusion have swept solid representation, and voids that cannot be represented as single extrusion have brep (explicit) representation.	
120 Spatial Containment	■		
General	company statement		WallStandardCase 04A / 2x3
_G4 Remarks	■		

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	■	Geometry profile is not supported.	
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	■	MaterialList is not supported (optional).	

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	■
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
_G4 Remarks	■