

# Hollowcore plank

A beam is a horizontal, or nearly horizontal, structural member that is capable of withstanding load primarily by resisting bending. It can also simply be an architectural element which is non-load bearing.

A hollowcore plank is a wide often prestressed beam with a hollow-core profile that usually serves as a slab component.

## IFC 2x3 note

For IFC2x3 use the PredefinedType enumerator of USERDEFINED.

IfcElementType	IfcBeam	=IfcExportAs
IfcPredefinedType	HOLLOWCORE	=IfcExportType
Suggested Filename:	Beam_Hollowcore	
Suggested LOD (Design Model)	300	
Suggested Primary Discipline	Structural	

## Source

## Property Categories

## Classification

BIM Forum	Admin data	Masterformat	03 41 13 : Precast Concrete Hollow Core Planks
IFC 2x3	Code compliance data	NatspecWorksection	0321 Precast concrete
IFC4 Add2	Construction logistics data	Omniclass Table 21 Elements	21-02 10 10 20 : Floor Decks, Slabs, and Toppings
NATSPEC BIM	Cost data		21-02 10 20 20 : Roof Decks, Slabs, and Sheathing
NATSPEC Spec	Facilities management data	Omniclass Table 22 Work Results	22-03 41 13 : Precast Concrete Hollow Core Planks
	Geometric data	Omniclass Table 23 Products	23-13 35 19 17 13 : Precast Concrete Hollowcore Beams
	Manufacturer data	Uniclass Elements	EF_30_10 : Roofs
	Performance data		EF_30_20 : Floors
	Scheduling data	Uniclass Products	Pr_20_85_14_14 : Concrete hollow core slabs
	Spatial and location data		
	Specification data		
	Sustainability data		

Uniclass Systems

Ss\_30\_10\_30\_60 : Precast concrete roof structure systems

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Ss\_30\_12\_15 : Concrete plank floor systems

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Unifomat

B1020.20 : Roof Decks, Slabs, and Sheathing

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B1010.20 : Floor Decks, Slabs, and Toppings

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Property	Source	Description
Admin data		
CreatedBy	NATSPEC BIM	The name of the person, organisation or library provider that created the object.
CreatedByURL	NATSPEC BIM	URL hyperlink to the object creator's website.
ModifiedIssue	NATSPEC BIM	To record the last date of issue (version or revision) of the object within an object library. Add the date in the following format <yyyymmdd.no> where the 'no' suffix is equal to the number of times the object has been issued on that date. For example 20180316.01.
ObjectType	IfcBeam (IFC2x3)	Required for PredefinedType of USERDEFINED <b>Complete value with: HOLLOWCORE</b>
Reference	PSet_BeamCommon (IFC4) PSet_BeamCommon (IFC2x3)	Reference ID for a specified type in a project (e.g. type 'A-1'). Also known as Construction type. Provide as an alternative to the name of the object type, if software does not support object types.
Code compliance data		
FireMitigation	NATSPEC BIM	
FireRating	NATSPEC BIM PSet_BeamCommon (IFC4) PSet_BeamCommon (IFC2x3)	Fire rating of object. Also known as the FRL (Fire Resistance Level) e.g. 60/60/60.
Construction logistics data		
ConstructionMethod	NATSPEC BIM	
GrossWeight	Qto_BeamBaseQuantities (IFC4) NATSPEC BIM IfcBeam (IFC2x3)	
NetWeight	Qto_BeamBaseQuantities (IFC4) IfcBeam (IFC2x3)	Takes all openings or recesses into account.

ShippingWeight	NATSPEC BIM	
Status	PSet_BeamCommon (IFC4)	Status of the object, predominately used in renovation or retrofitting projects. <b>Complete value with:</b> NEW, EXISTING, DEMOLISH, TEMPORARY, OTHER, NOTKNOWN or UNSET
StoragePlacementOnSite	NATSPEC BIM	
Cost data		
AdditionalTax	NATSPEC BIM	
AssemblyCost	NATSPEC BIM	
AssetAccountingType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Asset type for accounting purposes. <b>Complete value with:</b> FIXED, NONFIXED, OTHER, NOTKNOWN or UNSET (PEnum_AssetAccountingType)
AssetInsuranceType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of insurance rating. <b>Complete value with:</b> PERSONAL, REAL, OTHER, NOTKNOWN or UNSET (PEnum_AssetInsuranceType)
AssetTaxType	Pset_Asset (IFC4)Pset_Asset (IFC2x3)	Type of taxation group. <b>Complete value with:</b> CAPITALISED, EXPENDED, OTHER, NOTKNOWN or UNSET (PEnum_AssetTaxType)
ConceptualCost	NATSPEC BIM	
CostOverRun	NATSPEC BIM	
FutureCostAssumptions	NATSPEC BIM	
InstallationCost	NATSPEC BIM	
InstalledCost	NATSPEC BIM	
PurchaseInformation	NATSPEC BIM	
RecordedActualCost	NATSPEC BIM	

ShippingCost	NATSPEC BIM	
TotalOwnershipCost	NATSPEC BIM	
Facilities management data		
AcquisitionDate	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Date the item was purchased (Format: YYYY-MM-DD).
AssessmentCondition	NATSPEC BIM Pset_Condition (IFC4)	Overall condition rating based on assessment. Rating scale to be agreed prior (e.g. Good, OK , Poor).
AssessmentDate	Pset_Condition (IFC4)	Date of overall condition assessment (Format: YYYY-MM-DD).
AssessmentDescription	Pset_Condition (IFC4)	Qualitative description of the condition.
ComponentID	NATSPEC BIM	
Exclusions	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Items, conditions or actions that may be excluded from the warranty or that may cause the warranty to become void.
ExpectedLife	NATSPEC BIM	Expected serviceable life of object.
InstallationDate	NATSPEC BIM	Format: YYYY-MM-DD.
IsExtendedWarranty	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
ReplacementCost	NATSPEC BIM	Cost to replace product.
WarrantyContent	Pset_Warranty (IFC4) NATSPEC BIM Pset_Warranty (IFC2x3)	Description of what is included in warranty.
WarrantyEndDate	Pset_Warranty (IFC4) NATSPEC BIM Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
WarrantyIdentifier	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Identifier assigned to warranty.

WarrantyPeriod	Pset_Warranty (IFC4)Pset_Warranty (IFC2x3)	
WarrantyStartDate	Pset_Warranty (IFC4)NATSPEC BIM Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
Geometric data		
Area	NATSPEC BIM	
Camber	BIM Forum	
ConcreteCover	NATSPEC Spec	Min cover to reinforcement.
CoreSize	NATSPEC BIMNATSPEC Spec	
CrossSectionArea	NATSPEC BIMQto_BeamBaseQuantities (IFC4)IfcBeam (IFC2x3)	
Depth	NATSPEC BIM	
DesignWidth	NATSPEC Spec	
GrossSurfaceArea	Qto_BeamBaseQuantities (IFC4)	
GrossVolume	NATSPEC BIMQto_BeamBaseQuantities (IFC4)IfcBeam (IFC2x3)	
Length	NATSPEC BIMQto_BeamBaseQuantities (IFC4)	
NetSurfaceArea	Qto_BeamBaseQuantities (IFC4)	Takes all openings or recesses into account.
NetVolume	Qto_BeamBaseQuantities (IFC4) IfcBeam (IFC2x3)	Takes all openings or recesses into account.
NominalLength	IfcBeam (IFC2x3)	Typically the primary or larger of the two perpendicular horizontal dimensions of the object.
	Qto_BeamBaseQuantities (IFC4)	

OuterSurfaceArea	IfcBeam (IFC2x3)	
Size	NATSPEC BIMNATSPEC Spec	
Slope	NATSPEC BIMPSet_BeamCommon (IFC4)PSet_BeamCommon (IFC2x3)	Slope relative to the horizontal.
Span	PSet_BeamCommon (IFC4) PSet_BeamCommon (IFC2x3)	
TotalSurfaceArea	IfcBeam (IFC2x3)	
Width	NATSPEC BIM	
Manufacturer data		
Accessories	NATSPEC BIM	Details of available accessories.
ArticleNumber	Pset_ManufacturerTypeInformation (IFC4) Pset_ManufacturerTypeInformation (IFC2x3)	Reference applied to product, according to scheme for article number definition defined by manufacturer. Often used as purchasing number.
AssemblyPlace	NATSPEC BIM Pset_ManufacturerTypeInformation (IFC4)	Defines where assembly is to take place. <b>Complete value with:</b> SITE, FACTORY or NOTDEFINED (IfcAssemblyPlaceEnum)
Availability	NATSPEC BIM	
BarCode	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Bar code given to occurrence of the product.
BatchReference	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Identity of the batch from which the occurrence of the product is taken.
Defects	NATSPEC BIM	To record any defects found.
GlobalTradeItemNumber	Pset_ManufacturerTypeInformation (IFC4)	GTIN is an identifier for trade items developed by GS1 (www.gs1.org).
	NATSPEC BIM	

Manufacturer	Pset_ManufacturerTypeInformation (IFC4) NATSPEC Spec Pset_ManufacturerTypeInformation (IFC2x3)	Name of the manufacturer (or assembler).
ManufacturerURL	NATSPEC BIM	URL hyperlink to the manufacturer's website.
ModelLabel	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM	The descriptive model name of the product model (or product line) as assigned by the manufacturer of the manufactured item.
ModelLabel	Pset_ManufacturerTypeInformation (IFC2x3)	The model number and/or unit designator assigned by the manufacturer of the manufactured item.
ModelReference	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM NATSPEC Spec	The model number or designator of the product model (or product line) as assigned by the manufacturer of the manufactured item.
ModelReference	Pset_ManufacturerTypeInformation (IFC2x3)	The name of the manufactured item as used by the manufacturer.
OrderNumber	NATSPEC BIM	
PointOfContact	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Organization that should be contacted for action under the terms of the warranty.
ProductInformation	NATSPEC BIM	A valid URL hyperlink to further product information, such as technical documentation, installation guides, etc.
ProductionYear	Pset_ManufacturerTypeInformation (IFC4) NATSPEC BIM Pset_ManufacturerTypeInformation (IFC2x3)	
SerialNumber	Pset_ManufacturerOccurrence (IFC4) NATSPEC BIM Pset_ManufacturerOccurrence (IFC2x3)	Serial number assigned to an occurrence of a product.
Performance data		
CapacityBendingMomentX	NATSPEC Spec	



CapacityBendingMomentY	NATSPEC Spec	
CapacityVerticalLoad	NATSPEC Spec	
ConcreteCompressiveStrength28Day	BIM ForumNATSPEC Spec	
DeadLoad	NATSPEC BIM	
Deflection	NATSPEC BIM	
DesignBendingMomentX	NATSPEC Spec	
DesignBendingMomentY	NATSPEC Spec	
DesignServiceabilityVerticalLoad	NATSPEC Spec	
DesignUltimateVerticalLoad	NATSPEC Spec	
LiveLoad	NATSPEC BIM	
PointLoadCapacity	NATSPEC BIM	
ThermalTransmittance	PSet_BeamCommon (IFC4)	Thermal transmittance coefficient (U-Value).
Scheduling data		
DeliverBy	NATSPEC BIM	
FabricationTime	NATSPEC BIM	
InstallationSequence	NATSPEC BIM	
InstallationTime	NATSPEC BIM	
LeadTime	NATSPEC BIM	
Spatial and location data		
FloorID	NATSPEC BIM	

GISTag	NATSPEC BIM	
GPSTag	NATSPEC BIM	
SpaceID	NATSPEC BIM	
Specification data		
BottomReinforcement	BIM Forum	
BottomStrands	NATSPEC Spec	
Cores	NATSPEC Spec	
ExposureClassification	NATSPEC Spec	
IsExternal	PSet_BeamCommon (IFC4) PSet_BeamCommon (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
LoadBearing	PSet_BeamCommon (IFC4) PSet_BeamCommon (IFC2x3)	Indicates if object is intended to carry loads. <b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
Material	NATSPEC BIM	
Roll	PSet_BeamCommon (IFC4)	Rotation against the longitudinal axis.
SpecificationCode	NATSPEC BIM	
SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
TopStrands	NATSPEC Spec	
Sustainability data		
CarbonFootprint	NATSPEC BIM	
ItemIsNew	NATSPEC BIM	

ItemIsPartiallyRecycled	NATSPEC BIM	
ItemIsRecycled	NATSPEC BIM	
PostConsumerRecycledContent	NATSPEC BIM	
PostIndustrialRecycledContent	NATSPEC BIM	
PreConsumerRecycledContent	NATSPEC BIM	
RecycledContent	NATSPEC BIM	