

# Column

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A column is a vertical structural member which often is aligned with a structural grid intersection. It represents a vertical, or nearly vertical, structural member that transmits, through compression, the weight of the structure above to other structural elements below. It can also simply be an architectural element which is non-load bearing.

In this instance a column is a standard structural member, usually vertical, which resists vertical forces by compression but also sometimes lateral forces.

IfcElementType	IfcColumn =IfcExportAs
IfcPredefinedType	COLUMN =IfcExportType
Suggested Filename:	Column
Suggested LOD (Design Model)	300
Suggested Primary Discipline	Structural

Source	Property Categories	Classification	
BIM Forum	Admin data	Masterformat	03 41 00 : Precast Structural Concrete
IFC 2x3	Code compliance data		05 12 00 : Structural Steel Framing
IFC4 Add2	Construction logistics data		06 11 00 : Wood Framing
NATSPEC BIM	Cost data		03 30 00 : Cast-in-Place Concrete
NATSPEC Spec	Facilities management data	NatspecWorksection	0310 Concrete – combined
	Geometric data		0321 Precast concrete
	Manufacturer data		0341 Structural steelwork
	Performance data		0381 Structural timber
	Scheduling data	Omniclass Table 21 Elements	21-02 10 10 10 : Floor Structural Frame
	Spatial and location data		21-02 10 20 10 : Roof Structural Frame
	Specification data	Omniclass Table 22 Work	22-03 30 00 : Cast-in-Place Concrete
	Sustainability data	Results	22-03 41 00 : Precast Structural Concrete
			22-05 12 00 : Structural Steel Framing

	22-06 11 00 : Wood Framing
Omniclass Table 23 Products	23-13 35 11 : Structural Frames
Uniclass Elements	EF_20_30 : Columns
Uniclass Products	Pr_20_85_16 : Columns and column accessories
Uniclass Systems	Ss_20_30_75 : Structural column systems
Unifomat	B1020.10 : Roof Structural Frame
	B1010.10 : Floor Structural Frame

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.
Reference	PSet_ColumnCommon (IFC4) PSet_ColumnCommon (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_ColumnCommon (IFC4) PSet_ColumnCommon (IFC2x3)	Fire rating of object. Also known as the FRL (Fire Resistance Level) e.g. 60/60/60.
Fireproofed	BIM Forum	
Construction logistics data		
ConstructionMethod	NATSPEC BIM	
GrossWeight	Qto_ColumnBaseQuantities (IFC4) NATSPEC BIM IfcColumn (IFC2x3)	
NetWeight	Qto_ColumnBaseQuantities (IFC4) IfcColumn (IFC2x3)	Takes all openings or recesses into account.
ShippingWeight	NATSPEC BIM	

Status	PSet_ColumnCommon (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.
	Pset_Warranty (IFC4) Pset_Warranty	

WarrantyPeriod	(IFC2x3)	
WarrantyStartDate	Pset_Warranty (IFC4) NATSPEC BIM Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
Geometric data		
AISCShapeTypeSize	BIM Forum	
ConcreteCover	NATSPEC Spec	Min cover to reinforcement.
CrossSectionArea	NATSPEC BIM Qto_ColumnBaseQuantities (IFC4) IfcColumn (IFC2x3)	
Diameter	NATSPEC BIM NATSPEC Spec	
GrossSurfaceArea	Qto_ColumnBaseQuantities (IFC4)	
GrossVolume	NATSPEC BIM Qto_ColumnBaseQuantities (IFC4) IfcColumn (IFC2x3)	
Height	NATSPEC BIM	
Length	NATSPEC BIM Qto_ColumnBaseQuantities (IFC4)	
NetSurfaceArea	Qto_ColumnBaseQuantities (IFC4)	Takes all openings or recesses into account.
NetVolume	Qto_ColumnBaseQuantities (IFC4) IfcColumn (IFC2x3)	Takes all openings or recesses into account.
NominalLength	IfcColumn (IFC2x3)	Typically the primary or larger of the two perpendicular horizontal dimensions of the object.
OuterSurfaceArea	Qto_ColumnBaseQuantities (IFC4) IfcColumn (IFC2x3)	
Size	NATSPEC BIM NATSPEC Spec	

Slope	PSet_ColumnCommon (IFC4) PSet_ColumnCommon (IFC2x3)	Slope relative to the horizontal.
TotalSurfaceArea	IfcColumn (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.
FabricationSequenceNumber	BIM Forum	
GlobalTradeItemNumber	Pset_ManufacturerTypeInformation (IFC4)	GTIN is an identifier for trade items developed by GS1 (www.gs1.org).
Manufacturer	NATSPEC BIM Pset_ManufacturerTypeInformation (IFC4) Pset_ManufacturerTypeInformation (IFC2x3)	Name of the manufacturer (or assembler).

ManufacturerURL	NATSPEC BIM	URL hyperlink to the manufacturer's website.
ModelLabel	Pset_ManufacturerTypeInformation (IFC4)	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)	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.
ProductionYear	Pset_ManufacturerTypeInformation (IFC4) Pset_ManufacturerTypeInformation (IFC2x3)	
SerialNumber	Pset_ManufacturerOccurrence (IFC4) Pset_ManufacturerOccurrence (IFC2x3)	Serial number assigned to an occurrence of a product.
Performance data		
ConcreteCompressiveStrength28Day	BIM Forum NATSPEC Spec	
DeadLoad	NATSPEC BIM	
Deflection	NATSPEC BIM	
LiveLoad	NATSPEC BIM	
ThermalTransmittance	PSet_ColumnCommon (IFC4)	Thermal transmittance coefficient (U-Value).
Scheduling data		



DeliverBy	NATSPEC BIM	
FabricationTime	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		
AESSCategory	BIM Forum	
ASTMMaterialGrade	BIM Forum	
Coating	BIM Forum	
ConcreteSurfaceFinishClass	NATSPEC Spec	
ExposureClassification	NATSPEC Spec	
Finish	NATSPEC BIM	Specification of surface finish.
IsExternal	PSet_ColumnCommon (IFC4) PSet_ColumnCommon (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
LoadBearing	PSet_ColumnCommon (IFC4) PSet_ColumnCommon (IFC2x3)	Indicates if object is intended to carry loads. <b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
Material	NATSPEC BIM	

Reinforcement	NATSPEC Spec	
Roll	PSet_ColumnCommon (IFC4)	Rotation against the longitudinal axis.
ShearReinforcement	BIM Forum	
SpecificationCode	NATSPEC BIM	
SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
SteelCoating	NATSPEC Spec	
SteelGrade	NATSPEC Spec	
TimberDurabilityClass	NATSPEC Spec	
TimberSpecies	NATSPEC Spec	
TimberStressGrade	NATSPEC Spec	
TimberType	NATSPEC Spec	
TypicalWeldSpecifications	BIM Forum	
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	