

# Double return stair

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A stair is a vertical passageway allowing occupants to walk (step) from one floor level to another floor level at a different elevation. It may include a landing as an intermediate floor slab.

A double return stair is a stair has one straight flight with a wide quarterspace landing, and two side flights from that landing in opposite directions. The stair is making a 90° turn.

IfcElementType	IfcStair	=IfcExportAs
IfcPredefinedType	DOUBLE_RETURN_STAIR	=IfcExportType
Suggested Filename:	Stair_DoubleReturn	
Suggested LOD (Design Model)	300	
Suggested Primary Discipline	Architectural; Structural	

Source	Property Categories	Classification		
BIM Forum	Admin data	Masterformat	03 41 23 : Precast Concrete Stairs	
IFC 2x3	Code compliance data		05 51 00 : Metal Stairs	
IFC4 Add2	Construction logistics data		05 71 00 : Decorative Metal Stairs	
NATSPEC BIM	Cost data		06 43 13 : Wood Stairs	
NATSPEC Spec	Facilities management data		03 30 00 : Cast-in-Place Concrete	
	Geometric data		NatspecWorksection	0310 Concrete – combined
	Manufacturer data			0321 Precast concrete
	Performance data			0341 Structural steelwork
	Scheduling data			0551 Joinery
	Spatial and location data			0552 Metalwork – fabricated
	Specification data	Omniclass Table 21 Elements	21-02 10 80 : Stairs	
	Sustainability data		Omniclass Table 22 Work Results	22-03 30 00 : Cast-in-Place Concrete
		22-03 41 23 : Precast Concrete Stairs		
		22-05 51 00 : Metal Stairs		

	22-05 71 00 : Decorative Metal Stairs
	22-06 43 13 : Wood Stairs
Omniclass Table 23 Products	23-17 23 17 : Stairs
Uniclass Elements	EF_35_10 : Stairs
Uniclass Products	Pr_25_30_85 : Stair and ladder units
Uniclass Systems	Ss_35_10_85 : Structural stair and ramp systems
Unifomat	B1080 : Stairs

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_StairCommon (IFC4) PSet_StairCommon (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		
FireExit	PSet_StairCommon (IFC4) PSet_StairCommon (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
FireRating	NATSPEC BIM PSet_StairCommon (IFC4) PSet_StairCommon (IFC2x3)	Fire rating of object. Also known as the FRL (Fire Resistance Level) e.g. 60/60/60.
Fireproofed	BIM Forum	
HandicapAccessible	PSet_StairCommon (IFC4) PSet_StairCommon (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
RequiredHeadroom	PSet_StairCommon (IFC4) NATSPEC SpecPSet_StairCommon (IFC2x3)	Required headroom clearance according to the applicable building code or additional requirements.
Construction logistics data		
ConstructionMethod	NATSPEC BIM	

GrossWeight	NATSPEC BIM	
ShippingWeight	NATSPEC BIM	
Status	PSet_StairCommon (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.
IsExtendedWarranty	Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
ReplacementCost	NATSPEC BIM	Cost to replace product.
WarrantyContent	NATSPEC BIM Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Description of what is included in warranty.
WarrantyEndDate	NATSPEC BIM Pset_Warranty (IFC4) 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	NATSPEC BIM Pset_Warranty (IFC4) Pset_Warranty (IFC2x3)	Format: YYYY-MM-DD.
Geometric data		
GrossVolume	NATSPEC BIM	
Height	NATSPEC BIM	
Length	NATSPEC BIM	
NosingLength	PSet_StairCommon (IFC4) NATSPEC Spec	Horizontal distance from front of tread to riser underneath. The overhang of the tread.
RiserHeight	PSet_StairCommon (IFC4) NATSPEC Spec PSet_StairCommon (IFC2x3)	Vertical distance from tread to tread.
Slope	NATSPEC BIM	Slope relative to the horizontal.
TreadLength	PSet_StairCommon (IFC4) NATSPEC Spec PSet_StairCommon (IFC2x3)	Horizontal distance from front of tread to front of next tread.
TreadLengthAtInnerSide	PSet_StairCommon (IFC4)	Min length of treads at inner side of winder.
TreadLengthAtOffset	PSet_StairCommon (IFC4)	Length of treads at a given offset.
WaistThickness	PSet_StairCommon (IFC4) NATSPEC Spec	Min thickness of stair flight, measured perpendicular to slope of flight to inner corner of riser and tread.
WalkingLineOffset	PSet_StairCommon (IFC4)	Offset of walking line from inner side of flight.
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)
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	
ThermalTransmittance	PSet_StairCommon (IFC4)	Thermal transmittance coefficient (U-Value).
Scheduling data		
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		



AESSCategory	BIM Forum	
ASTMMaterialGrade	BIM Forum	
BottomReinforcement	BIM Forum	
Coating	BIM Forum	
Finish	NATSPEC BIM	Specification of surface finish.
HasNonSkidSurface	PSet_StairCommon (IFC4) PSet_StairCommon (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
IsExternal	PSet_StairCommon (IFC4) PSet_StairCommon (IFC2x3)	<b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
LoadBearing	PSet_StairCommon (IFC4)	Indicates if object is intended to carry loads. <b>Complete value with:</b> TRUE or FALSE (IfcBoolean)
Material	NATSPEC BIM	
NumberOfRiser	PSet_StairCommon (IFC4) NATSPEC SpecPSet_StairCommon (IFC2x3)	
NumberOfTreads	PSet_StairCommon (IFC4) NATSPEC SpecPSet_StairCommon (IFC2x3)	
PrimaryBottomReinforcement	NATSPEC Spec	
PrimaryTopReinforcement	NATSPEC Spec	
SecondaryBottomReinforcement	NATSPEC Spec	
SecondaryTopReinforcement	NATSPEC Spec	
ShearReinforcement	BIM Forum	
SpecificationCode	NATSPEC BIM	

SpecificationSystem	NATSPEC BIM	
SpecificationTitle	NATSPEC BIM	
TypicalWeldSpecifications	BIM Forum	
Sustainability data		
ItemIsPartiallyRecycled	NATSPEC BIM	
ItemIsRecycled	NATSPEC BIM	
PostConsumerRecycledContent	NATSPEC BIM	
PostIndustrialRecycledContent	NATSPEC BIM	
PreConsumerRecycledContent	NATSPEC BIM	
RecycledContent	NATSPEC BIM	