



# BIM Families Turn Around family

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**Artemide®**

## INFORMATION

The type objects indicated by the specific term "Family" were created in BIM ambient through the use of Autodesk © Revit parametric BIM design software. The parameterization of dimensional criteria is based on the specific object and component type, whether numerical dimensional data, textual data, or unique UNICODE codes.

Families are based on the IFC shared import methodology and set to talk to modeling and analysis tools that support such file encoding.

The BIM objects provided are designed to support the operator in managing the architectural and lighting project for both the technical part and the computation of the number of items and accessories. Each BIM object (Family) presents a version parameter - v. xx - this figure marks the progressive upgrade to the latest version in relation to adaptation to native Revit© software and for any general alignments to the full catalog.

The families are based on a template of information prepared for Artemide S.p.A. in English, with CIBSE reference nomenclature (where possible).

This manual is intended to guide user to the proper use of the Family in the Autodesk© Revit environment, any attempt to modify the file in any form other than what is indicated by this document will invalidate the goodness of the 'BIM object and affect its proper functioning.

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# 1

## Guidelines BIM

### 1.1

#### Revisions and dates

Rev.	Description	Date	Designed by	Approved by
r01	First Emission	dd/mm/yy	Fabio Dante - OFFICINABIM	Artemide S.p.A.

### 1.2

#### Software and versions

Tipologia	Software	Formato
Famiglia BIM	Autodesk Revit 2022	.rfa
Catalogo Digitale	Autodesk Revit 2022	.rvt
Catalogo dei tipi	Notepad ++	.txt
Manualistica	Adobe InDesign 2023	.pdf
Fogli di calcolo; Tabelle	Microsoft Excel	.xlsx; .csv
Sorgente luminosa	Dialux	.ies
Fotometria	Dialux	.ldt

### 1.3

#### Structure of folders

ARTEMIDE-Series-Product	Revit family .rfa	
	Handbook .pdf	
	Digital Catalogue .rvt	
	Colorfun .adsklib	
	Type Folder	Revit family .rfa
		Type Catalogue .txt
	LDT Folder	ARTEMIDE-Series-LDT .rfa
		Photometric files .ies

Geometries and data type

Autodesk Revit native geometries have been used, other types of geometries that are non-native or generated via external applications and/or software will be noted in this manual.  
The data entered within the material type parameters will be those strictly necessary to enable the user to make an informed choice of product: specific data will be reachable through URL links to product sheets and/or on the manufacturer’s website.

Level of development and level of detail

The families under consideration are designed for professional use by the user from preliminary design to executive design. The geometries will be defined by LOD/LOIN:

	Level of Development	
Regulations	LOG	LOI
PAS 11992	from 100 to 400	400
UNI11337	da C a E	E
UNI EN ISO 19650	from B a E	E
US	from 10 to 50	50

Visibilità a seconda del livello di dettaglio (di Revit) delle parti 3D e/o dei dettagli

Objects	2D	3D	Low	Medium	High
Photometry	X	X	V	V	V
Main body	X	V	X	V	V
Fixings	X	V	X	X	V
Electric bodies	V	V	X	X	V
Footprint/Clearance	X	V	V	V	V
Wire-Frame Footprint	V	V	V	X	X
Fixings and accessories	X	V	X	X	V
...	tbd	tbd	tbd	tbd	tbd

1.6

Family structure

The Main Family is surface-based; nested families can be generic patterns, metric profiles, and luminaires. Within families, the maximum number of nested will be equal to two, otherwise it will be reported in this document.

1.7

File weight

Indicatively, the weight of the files is between 600 kb and 2,800 kb. Complex geometries or the use of multiple combinations of options can lead to increased file weight. The family is in fact a mini-project and contains within it the parts of the project database itself that are necessary for the definition of geometries, parameters, relationships and values: upon loading into the project this definition no longer necessary, as is the structure of the project, and therefore families even greater than 2MB often do not “impact” the size of the project file itself that much

1.8

Naming convention

The file name becomes, in the Autodesk®Revit® project, the family name that the user/designer sees and will be used to point to the object, search for it, select it, change it, count it, etc. Family type is a talking code to make the technical and physical characteristics of the type understood with alpha numeric characters. The various parts of the file/family name are separated by “-”; “\_”; “[ ]”; preceded by the manufacturer’s name “Artemide” to be recognized in tables and lists listed by Family/Type

FAMILY NAME				
Manufacturer “_”	Series “-” <i>Phyton</i>	Product “_” <i>Phyton</i>	Model “-.” <i>Phyton</i>	More <i>Camel/Case</i>
ARTEMIDE	NameSeries	Product	Model	description
...	tbd	tbd	tbd	tbd

ARTEMIDE-Series-Name-Product\_Model-Description

Combinations between dimensions and/or quality data and/or options and/or materials, generate different configurations within the same family. The user after choosing the family, selects the family from one or more types that define the specific characteristics of the object; size, photometry or the powers.

TYPE NAME					
Series “ _ ”	Model “ _ ” <i>Phyton</i>	Name “-” <i>Phyton</i>	“dim. ” _ ” <i>mm</i>	lumen “ _ ” <i>lm</i>	color “J” <i>K</i>
Series	Model	Type	1000	1000	3000
...	tbd	tbd	tbd	tbd	tbd

**Series\_Model\_Name-1000mm\_1000lm\_3000K**

1.9  
**Categories**

UNIQUE FAMILY SETTINGS			
Parameter	Value	Description/application	Notes
Part Type	Normal	Generic	-
Round Connector	Use Diameter		
Omniclass	23.80.70.11.14	General Luminaries Directional	Allocated specifically by type in the Parameter Shared of the family
Host	Face	Surface based	It might be different depending on the type of product
Cut with void	No		
Light Source	Yes	Active Light Source	
Shared	No	Shared by computation	
Room Calculation PT	Yes	Shares calculation with locals	Insertion point 1000 mm from the surface
Always vertical	No	Free XYZ orientation	It is based on surface

Subcategories

Main Family elements and nested Families are assigned to Revit Subcategories to ensure component traceability within the Visibility/Graphics Panel, enabling better On/Off management of individual Artemide products.

SUBCATEGORIES		
Manufacturer “ ” _	Name <i>Phyton</i>	Description
Artemide	Lighting	Lamp object components
Artemide	Electric	Electrical components (driver/supply etc.)
Artemide	LineCoarse	Wire frame footprint (visible at low detail and track placing)
Artemide	Axis	Reference (visible at low detail)
	Clearance	Mass of maximum footprint
	Light Source	Default Revit (light source)

Materials and Family Types

The main Family at its core consists of text parameters that indicated the name of Artemide's Library, this is to avoid inconvenience, change of materials by the User not approved by Artemide.

Family types

Families composed of Family Types pre-filled in all their parts and accompanied by an ascii ".txt" file containing all material and size combinations. Upon loading into the project the user, via the appropriate dialog box, can choose which types (combinations) to load.

Material Library

The Revit ".adsklib" library file is provided to accompany the BIM Family in order to transfer Materials and Textures to the user who, in case of file breakage (delete Materials), will be able to appropriately reconnect materials to the Family. Material grouping is defined with appropriate subfolders for each of the Categories and Material Types according to the Artemide catalog.

The graphic part of the material is predefined and is defined with a color similar to the actual Texture color, but matted and "pastel" so NOT macro, for proper color matching in print. The information part will be enhanced in **Identity/Mark** so as to be recognized by Revit's material abacuses.

MATERIAL			
Manufacturer “ ” _	Class “ ” _	Material code “ ” _	Description <i>Phyton</i>
Artemide	CLS	1000	BriefDescription
Artemide	tbd	tbd	tbd

1.12

**Photometry**

The Default Revit light source is varied depending on the type of emission and distribution according to the product type characteristics: Light Source Definition

In special cases where directional, direct/indirect light is present, the light source is imported as a nested Family with the name of “Artemide\_LDT\_(direct/indirect)”. This procedure to overcome the limitation of the Revit program. To ensure the correct LOI information level, the summation of photometric and electrical values are given as USERDEFINED in the typological parameters of the main Family. < 3 >

1.13

**Connectors**

The Main Family generated the electrical connector powering the luminaire as:

**Electrical Connector**

Setting of connectors in families according to the type of system to be connected that should NOT be removed, added, renamed, edited, changed.

CONNECTOR ELEMENT			
Parameter	Value	Description/application	Notes
System Type	Powered - Balanced	Connector type	-
Number of Poles	1	Number of poles	-
Power Factor State	Lagging	-	-
Load Classification	Lighting	Type of load	-
Voltage	Power Supply	Voltage	-
Apparent Load	Power Max	Machine consumption	-
Power Factor	1	Consumption coefficient	0 to 1
Room Calculation PT	Yes	Shares calculation with locals	Insertion point 1000 mm from the surface
Always vertical	No	Free XYZ orientation	It is based on surface



1.14

# Parameters

Parameters are entered within the Main Family:

TIPO DI PARAMETRO	USERDEFINED
Built-In	Ingombro massimo
Family Parameters	IFC
Shared Parameters	Artemide
	BuildingSmart Pset



The Family parameterization is associated with parameters composed of mathematical formulas sorted in the “Other” section that condition the proper functioning of the family and/or NOT indicated as USERDEFINED > MUST NOT BE CHANGED BY THE USER.

Nome Parametro	Natura	Disciplina	Tipo	Gruppo	T/I	Descrizione
<b>Construction</b>						
D_CableHeight	FamilyParameter	Common	Length	Construction	Instance	
<b>Materials and Finishes</b>						
M_Diffuser	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_ElectricCable	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_ElectricFixing	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_ElectricHousing	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_ElectricWire	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_Fixing	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_Gasket	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_Housing	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_Holder	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_Reflector	FamilyParameter	Common	Text	Materials and Finishes	Type	
M_Trim	FamilyParameter	Common	Text	Materials and Finishes	Type	
<b>Electrical</b>						
Current	SharedParameter	Electrical	Current	Electrical	Type	
Frequency	SharedParameter	Electrical	Frequency	Electrical	Type	
Number of Poles	SharedParameter	Electrical	Number of Poles	Electrical	Type	
Rated Wattage	SharedParameter	Electrical	Power	Electrical	Type	
Source Luminous Flux	SharedParameter	Electrical	Luminous Flux	Electrical	Type	
Supply Voltage	SharedParameter	Electrical	Electrical Potential	Electrical	Type	
Supply Voltage Max	SharedParameter	Electrical	Electrical Potential	Electrical	Type	
Supply Voltage Min	SharedParameter	Electrical	Electrical Potential	Electrical	Type	
Wattage Comments	Built-In	Electrical	Text	Electrical	Type	
Control Gear Location	SharedParameter	Electrical	Text	Electrical	Type	
Control Gear Required	SharedParameter	Electrical	Yes/No	Electrical	Type	
Control Gear Type	SharedParameter	Electrical	Text	Electrical	Type	
Integral Fuse or Circuit Protection	SharedParameter	Electrical	Yes/No	Electrical	Type	
Protection Class	SharedParameter	Electrical	Text	Electrical	Type	
Suitable Dimmer Type	SharedParameter	Electrical	Text	Electrical	Type	
Suitable for Dimming	SharedParameter	Electrical	Yes/No	Electrical	Type	
Lamp	Built-In	Electrical	Text	Electrical	Type	
Service Life	SharedParameter	Electrical	Text	Electrical	Type	
<b>Electrical - Lighting</b>						
Calculate Coefficient of Utilization	Built-In	Electrical	Yes/No	Electrical - Lighting	Type	
Coefficient of Utilization	Built-In	Electrical	Number	Electrical - Lighting	Type	
<b>Electrical - Loads</b>						
Power Factor	SharedParameter	Electrical	Number	Electrical - Loads	Type	
Apparent Load	SharedParameter	Electrical	Apparent Power	Electrical - Loads	Type	
Load Classification	Built-In	Electrical	Load Classification	Electrical - Loads	Type	
Total Power	SharedParameter	Electrical	Power	Electrical - Loads	Type	
<b>Dimensions</b>						
NominalLength	SharedParameter	Common	Length	Dimensions	Type	
NominalHeight	SharedParameter	Common	Length	Dimensions	Type	
NominalWidth	SharedParameter	Common	Length	Dimensions	Type	

IFC Parameters					
IFC Classification	SharedParameter	Common	Text	IFC Parameters	Type
IfcExportAs	SharedParameter	Common	Text	IFC Parameters	Type
IfcExportType	SharedParameter	Common	Text	IFC Parameters	Type
COBie Type Category	SharedParameter	Common	Text	IFC Parameters	Type
Uniclass Pr Code	SharedParameter	Common	Text	IFC Parameters	Type
Uniclass Pr Name	SharedParameter	Common	Text	IFC Parameters	Type
Unifomat Code	SharedParameter	Common	Text	IFC Parameters	Type
Unifomat Description	SharedParameter	Common	Text	IFC Parameters	Type
Masterformat Code	SharedParameter	Common	Text	IFC Parameters	Type
Masterformat Description	SharedParameter	Common	Text	IFC Parameters	Type
OmniClass Code	SharedParameter	Common	Text	IFC Parameters	Type
OmniClass Description	SharedParameter	Common	Text	IFC Parameters	Type

Photometrics					
LDT <Type>	FamilyParameter	Common	URL	Photometrics	Type
Colour Temperature	SharedParameter	Electrical	Color Temperature	Photometrics	Type
Luminous Efficacy	FamilyParameter	Electrical	Efficacy	Photometrics	Type
Delivered Luminous Flux	FamilyParameter	Electrical	Luminous Flux	Photometrics	Instance
Beam Angle	FamilyParameter	Common	Angle	Photometrics	Type
CRI	SharedParameter	Common	Text	Photometrics	Type
Lamp Count	FamilyParameter	Common	Integer	Photometrics	Type
Light Source Type	FamilyParameter	Common	Text	Photometrics	Type
Efficacy	FamilyParameter	Common	Number	Photometrics	Type
Luminous Intensity	FamilyParameter	Common	Number	Photometrics	Type
Illuminance	FamilyParameter	Common	Number	Photometrics	Type

General					
ART_Manufacturer	FamilyParameter	Common	Text	General	Type
ART_Designer name	FamilyParameter	Common	Text	General	Type
ART_Product year	FamilyParameter	Common	Text	General	Type
ART_SeriesName	FamilyParameter	Common	Text	General	Type
ART_Model name	FamilyParameter	Common	Text	General	Type
ART_Features	FamilyParameter	Common	Text	General	Type
ART_Product model number	FamilyParameter	Common	Text	General	Type
ART_Manufacturer Comment	FamilyParameter	Common	Text	General	Type
ART_BIM Designer name	FamilyParameter	Common	Text	General	Type
ART_BIM Product version	FamilyParameter	Common	Text	General	Type
ART_Date of publishing	FamilyParameter	Common	Text	General	Type
ART_Manufacturer contact mail	FamilyParameter	Common	Text	General	Type
ART_Manufacturer contact number	FamilyParameter	Common	Text	General	Type
ART_Manufacturer country	FamilyParameter	Common	Text	General	Type
ART_Manufacturer website	FamilyParameter	Common	URL	General	Type
ART_Warranty	FamilyParameter	Common	URL	General	Type
ART_Disclaimer	FamilyParameter	Common	Text	General	Type
ART_Product sheet URL	FamilyParameter	Common	URL	General	Type
ART_Product page URL	FamilyParameter	Common	URL	General	Type
ART_Installation note URL	FamilyParameter	Common	URL	General	Type
ART_IES page URL	FamilyParameter	Common	URL	General	Type
ART_LDT page URL	FamilyParameter	Common	URL	General	Type

Data					
Approval Mark	SharedParameter	Common	Text	Data	Type
Assembly Place	SharedParameter	Common	Text	Data	Type
Delivery Weigth	SharedParameter	Common	Mass	Data	Type
Delivery Volume	SharedParameter	Common	Volume	Data	Type
Reference	SharedParameter	Common	Volume	Data	Type
Status	SharedParameter	Common	Text	Data	Type
ContributedLuminousFlux	SharedParameter	Common	Luminous Flux	Data	Type
LightEmitterNominalPower	SharedParameter	Common	Apparent Power	Data	Type
LampMaintenanceFactor	SharedParameter	Common	Number	Data	Type
LampBallastType	SharedParameter	Common	Text	Data	Type
LampCompensationType	SharedParameter	Common	Text	Data	Type
ColorAppearance	SharedParameter	Common	Color Temperature	Data	Type
Spectrum	SharedParameter	Common	Number	Data	Type
ColorRenderingIndex	SharedParameter	Common	Text	Data	Type
GrossWeight	SharedParameter	Common	Mass	Data	Type

Visibility					
V_Driver	FamilyParameter	Common	Yes/No	Visibility	Instance
V_ErrorTag	FamilyParameter	Common	Yes/No	Visibility	Type
V_TrackPlacing	FamilyParameter	Common	Yes/No	Visibility	Type
V_Tag	FamilyParameter	Common	Yes/No	Visibility	Type
V_Link	FamilyParameter	Common	Yes/No	Visibility	Type
V_Clearance	FamilyParameter	Common	Yes/No	Visibility	Type

2

## 2.1

Labels linked to product information. Is a script with 3D text to be visible in plan and three-dimensional view. Visible by activating the check mark to the “V Tag” type parameter.

**Alphabet of Light StandAlone**  
**Alphabet of Light StandAlone Suspended Linear 1200mm 3000K**  
 ➤ Cert: EPD Italy 1204000APP Push&APP

ART_SeriesName	
ART_Model name	
C_Powered	
ART_Cert.	
ART_Product model name	
Suitable Dimmer Type	

Error label for incorrect compilation of USERDEFINED parameters according to the limitations of type variables indicated in product data sheet. Visible by activating the check mark on the parameter of type "V ErrorTag".

Attention excursion 500/1500 mm. Value positioned at Min = 500 mm  
Ok

> *USERDEFINED* Parameters  
Error message > Please check the parameters  
and Artemide Catalogue

## 2.2

## References

To facilitate the display of the side and vertex within the element, the type parameter “V\_TrackPlacing” can be activated. Visualization in plan/prospect/3D of the corresponding identification elements



Coarse contour line  
visible in 2D and 3D  
views

Axis of reference for positioning

Ground circle by 0,0,0  
family insertion point

# ARTEMIDE TurnAround Angle\_SMD

## Content

ARTEMIDE-TurnAround-Angle\_SMD.rfa  
Family Autodesk© Revit

ARTEMIDE-TurnAround-Angle\_SMD-Handbook.pdf  
BIM guide line



Front view



Side view



Ceiling



Low



Medium



High



Clearance



# ARTEMIDE-TurnAround\_Angle\_SMD

## FAMILY TEMPLATE

### Template

Host	Surface based - Face
Category	Lighting Fixtures
Cut with Void When Loaded	No
Mantain Annotation Orientation	No
Shared	No
Room Calculation Point	Yes
Light Source	No

### Type list

Family Name	Type Name
ARTEMIDE-TurnAround_Angle_SMD	Angle_SMD

## ARTEMIDE-TurnAround\_Angle\_SMD

## Construction

All parameters grouped under “Construction” can be modified by the user to interact with the Family object. Several parameters are controlled by formulas that condition their operation and block the entry of values that are incorrect and/or do not conform to the product data sheet. Always consult the product data sheet for correct entry of dimensional and typological values.

Parameters with indication of correct entry “Ok” indicated as “Parameter\_Note Name”. Or with alert message in case of incorrect entry.

CONSTRUCTION	
Parameter	Operation
C_Initial with joint	Set for joint another element at the start of track
C_Terminal with joint	Set for joint another element at the end of track

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