

INDEX

- INTRODUCTION P_ 02
 - KIT P_ 10
- PROFILES AND ACCESSORIES P_ 20
 - LED P_ 30
 - TECHNICAL FILE P_ 32





Continuous glass canopy

Unrivalled performance and revolutionary design: with its many details, LUMIA offers the most advanced technological features for glass:

- Safety and resistance
- Versatility and functionality
- Aesthetics and comfort

Find the leading system for transparent canopies designed and produced in Italy.





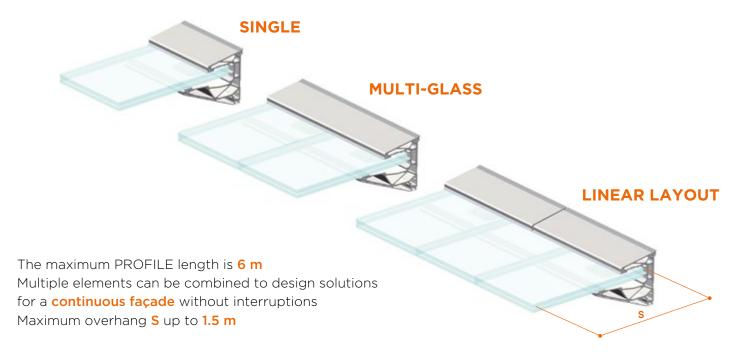




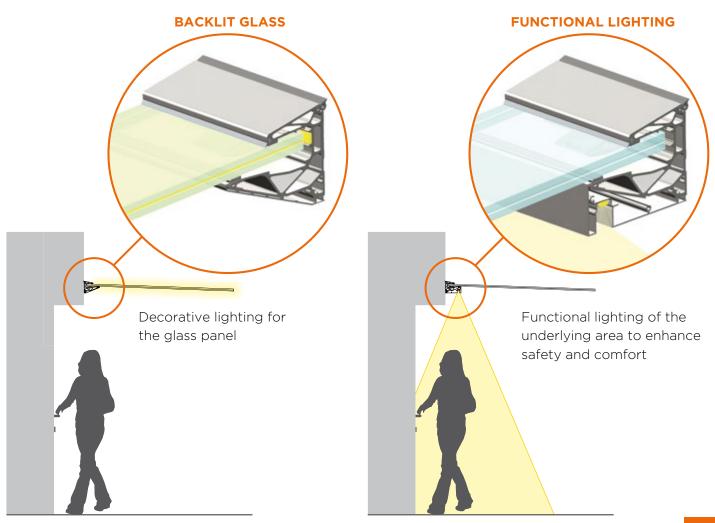




The technical solution that meets every need of installation, functional and application-related requirements



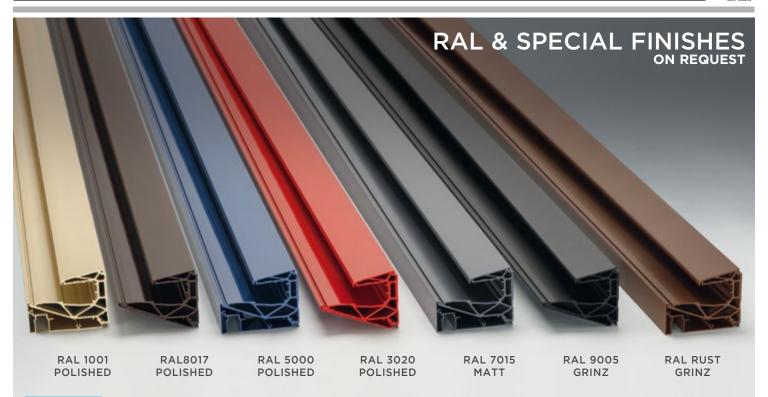
A versatile system, which makes use of light for impressive decorative effects, while also creating high comfort lighting solutions for living environments















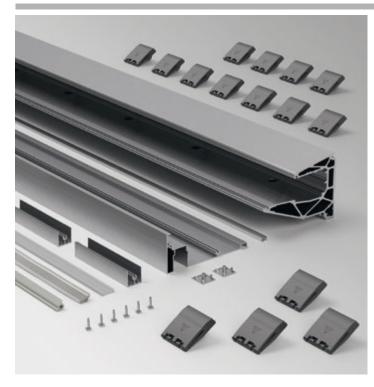
CLASS 20 Minimum anodization thickness 20 micron
Suitable for outdoor installations,
even in aggressive environments

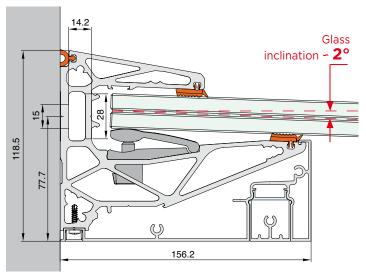
RAL COLOURS ON REQUEST





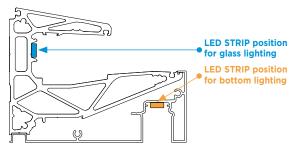






Notes:

- LED STRIP not included in the kits, articles and information on page 30 - Side caps not included in the kits; they must be ordered separately



KIT LUMIA - LUCE 1010

Kit for canopy with linear layout and functional lighting cover for glass 1010 for unprocessed glass panels

Features:

kit L= 6000 mm composed of:

1 pc. continuous "U" profile L= 6000 mm, predrilled Art. PENL.60
1 pc. lower finish cover lighting L= 6000 Art. PENLCOV05.60
2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01
2 pcs. lower finish cover for screws L= 3000 Art. LMU11.30
1 pc. matt plastic profile for lighting L= 6000 Art. PENALU.60
10 pcs. fixing screws with cover Art. PENLVIT
Kit 6 clamp set Art. PENLGRYKIT5
4 pcs. glazing bead gasket L=3000 grey Art. DFPG03.03
6 m TPE wall sealing gasket grey Art. PENG03
2 pcs. bottom caps for PENLCOV07 Art. METAP250

kit L = 3000 mm composed of:

1 pc. continuous "U" profile L= 3000 mm, predrilled Art. PENL.30
1 pc. lower finish cover lighting L= 3000 Art. PENLCOV05.30
2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01
1 pc. lower finish cover for screws L= 3000 Art. LMU11.30
1 pc. matt plastic profile for lighting L= 3000 Art. PENALU.30
6 pcs. fixing screws with cover Art. PENLVIT
Kit 3 clamp set Art. PENLGRYKIT5
2 pcs. glazing bead gasket L=3000 grey Art. DFPG03.03
3 m TPE wall sealing gasket grey Art. PENG03
2 pcs. bottom caps for PENLCOV07 Art. METAP250

kit L = 2000 mm composed of:

1 pc. continuous "U" profile L= 2000 mm, predrilled Art. PENL.20
1 pc. lower finish cover lighting L= 2000 Art. PENLCOV05.20
2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01
1 pc. lower finish cover for screws L= 2000 Art. LMU11.20
1 pc. matt plastic profile for lighting L= 2000 Art. PENALU.20
4 pcs. fixing screws with cover Art. PENLVIT
Kit 2 clamp set Art. PENLGRYKIT5
4 m TPE glazing bead gasket grey Art. DFPG03
2 m TPE wall sealing gasket grey Art. PENG03
2 pcs. bottom caps for PENLCOV07 Art. METAP250

kit L = 1498 mm composed of:

1 pc. continuous "U" profile L= 1498 mm, predrilled Art. PENL.15
1 pc. lower finish cover lighting L= 1498 Art. PENLCOV05.15
2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01
1 pc. lower finish cover for screws L= 1498 Art. LMU11.15
1 pc. matt plastic profile for lighting L= 1500 Art. PENALU.15
3 pcs. fixing screws with cover Art. PENLVIT
7 pcs. fixing clamps with adjustable grains Art. PENLGRY
3 m TPE glazing bead gasket grey Art. DFPG03
1.5 m TPE wall sealing gasket grey Art. PENG03
2 pcs. bottom caps for PENLCOV07 Art. METAP250

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

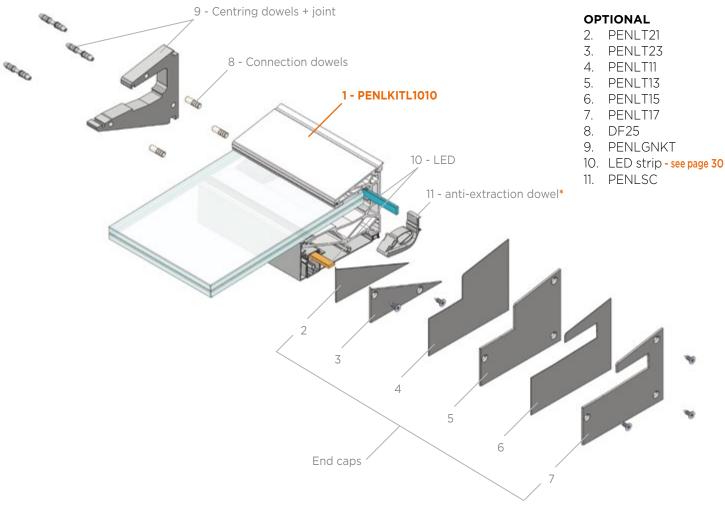
other colours with anodized or RAL finish

Art.	Description	Length	For glass	Q.ty
PENLKITL1010.60	Kit LUMIA LUCE 1010	6000 mm	20.76 / 23.04 mm	1 Kit
PENLKITL1010.30	Kit LUMIA LUCE 1010	3000 mm	20.76 / 23.04 mm	1 Kit
PENLKITL1010.20	Kit LUMIA LUCE 1010	2000 mm	20.76 / 23.04 mm	1 Kit
PENLKITL1010.15	Kit LUMIA LUCE 1010	1498 mm	20.76 / 23.04 mm	1 Kit



LUMIA **Luce 1010**

1. PENLKITL1010



* Installation with anti-extraction dowels Art. PENLSC requires processing on the bottom glass panel

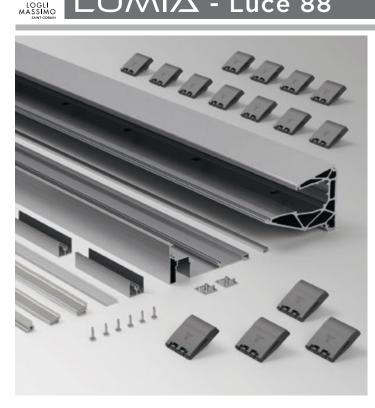


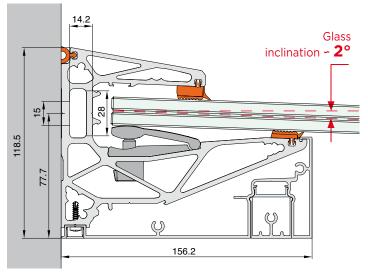
ANCHORING TO BEARING STRUCTURE IN REINFORCED CONCRETE canopy with functional lighting cover



ANCHORING TO BEARING STRUCTURE IN MASONRY WITH PARTITION PLATE canopy with functional lighting cover

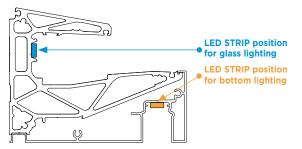






Notes:

- LED STRIP not included in the kits, articles and information on page 30 - Side caps not included in the kits; they must be ordered separately



KIT LUMIA - LUCE 88

Kit for canopy with linear layout and functional lighting cover glass 88 for unprocessed glass panels

Features:

kit L= 6000 mm composed of:

1 pc. continuous "U" profile L= 6000 mm, predrilled Art. PENL.60 1 pc. lower finish cover lighting L= 6000 Art. PENLCOV05.60 2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01 2 pcs. lower finish cover for screws L= 3000 Art. LMU11.30 1 pc. matt plastic profile for lighting L= 6000 Art. PENALU.60 10 pcs. fixing screws with cover Art. PENLVIT Kit 6 clamp set Art. PENLGRYKIT5 2 pcs. glazing bead gasket L=3000 grey Art. DFPG03.03 2 pcs. glazing bead gasket L=3000 grey Art. DFPG82.03 6 m TPE wall sealing gasket grey Art. PENG03

kit L = 3000 mm composed of:

1 pc. continuous "U" profile L= 3000 mm, predrilled Art. PENL.30 1 pc. lower finish cover lighting L= 3000 Art. PENLCOV05.30 2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01 1 pc. lower finish cover for screws L= 3000 Art. LMU11.30 1 pc. matt plastic profile for lighting L= 3000 Art. PENALU.30 6 pcs. fixing screws with cover Art. PENLVIT Kit 3 clamp set Art. PENLGRYKIT5 1 pc. glazing bead gasket L=3000 grey Art. DFPG03.03 1 pc. glazing bead gasket L=3000 grey Art. DFPG82.03

2 pcs. bottom caps for PENLCOV07 Art. METAP250

3 m TPE glazing bead gasket grey Art. PENGO3 2 pcs. bottom caps for PENLCOV07 Art. METAP250

kit L = 2000 mm composed of:

1 pc. continuous "U" profile L= 2000 mm, predrilled Art. APENL.20 1 pc. lower finish cover lighting L= 2000 Art. PENLCOV05.20 2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01 1 pc. lower finish cover for screws L= 2000 Art. LMU11.20 1 pc. matt plastic profile for lighting L= 2000 Art. PENALU.20 4 pcs. fixing screws with cover Art. PENLVIT Kit 2 clamp set Art. PENLGRYKIT5 2 m TPE glazing bead gasket grey Art. DFPG03 2 m TPE upper glazing bead gasket grey Art. DFPG82 2 m TPE wall sealing gasket grey Art. PENG03 2 pcs. bottom caps for PENLCOV07 Art. METAP250

kit L = 1498 mm composed of:

1 pc. continuous "U" profile L= 1498 mm, predrilled Art. PENL.15 1 pc. lower finish cover lighting L= 1498 Art. PENLCOV05.15 2 pcs. finish cover strip lighting L= 100 Art. PENLCOV07.01 1 pc. lower finish cover for screws L= 1498 Art. LMU11.15 1 pc. matt plastic profile for lighting L= 1500 Art. PENALU.15 3 pcs. fixing screws with cover Art. PENLVIT 7 pcs. fixing clamps with adjustable grains Art. PENLGRY 1.5 m TPE glazing bead gasket grey Art. DFPG03 1.5 m TPE top glazing bead gasket grey Art. DFPG82 1.5 m TPE wall sealing gasket grey Art. PENGO3 2 pcs. bottom caps for PENLCOV07 Art. METAP250 Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

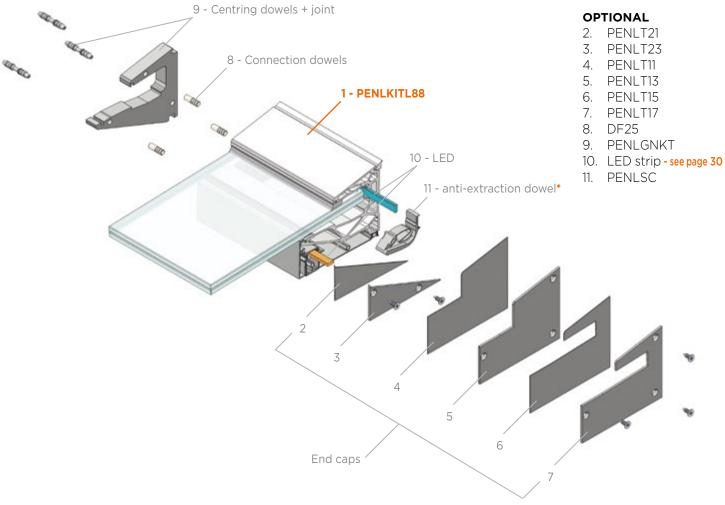
On request (not available in stock)

other colours with anodized or RALfinish

Art.	Description	Length	For glass	Q.ty
PENLKITL88.60	Kit LUMIA LUCE 88	6000 mm	16.76 / 17.52 mm	1 Kit
PENLKITL88.30	Kit LUMIA LUCE 88	3000 mm	16.76 / 17.52 mm	1 Kit
PENLKITL88.20	Kit LUMIA LUCE 88	2000 mm	16.76 / 17.52 mm	1 Kit
PENLKITL88.15	Kit LUMIA LUCE 88	1498 mm	16.76 / 17.52 mm	1 Kit

LUMIA Luce 88

1. PENLKITL88



* Installation with anti-extraction dowels Art. PENLSC requires processing on the bottom glass panel



ANCHORING TO BEARING STRUCTURE IN STEEL

canopy with functional lighting cover

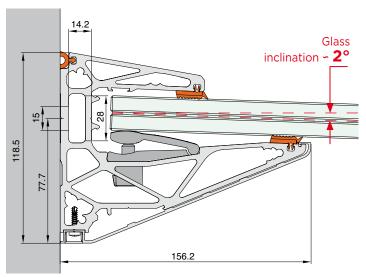


ANCHORING TO BEARING STRUCTURE IN WOOD WITH PARTITION PLATE

canopy with functional lighting cover

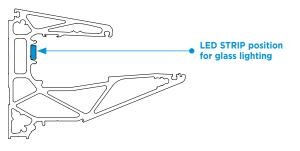






Notes:

- LED STRIP not included in the kits, articles and information on page 30 - Side caps not included in the kits; they must be ordered separately



KIT LUMIA - 1010

Kit for canopy with linear layout for glass 1010 for unprocessed glass panels

Features:

kit L= 6000 mm composed of:

1 pc. continuous "U" profile L= 6000 mm, predrilled Art. PENL.60 1 pc. long lower finish cover L= 6000 Art. PENLCOV03.60 2 pcs. lower finish cover for screws L= 3000 Art. LMU11.30 10 pcs. fixing screws with cover Art. PENLVIT Kit 6 clamp set Art. PENLGRYKIT5 4 pcs. glazing bead gasket L=3000 grey Art. DFPG03.03 6 m TPE wall sealing gasket grey Art. PENG03

kit L = 3000 mm composed of:

1 pc. continuous "U" profile L= 3000 mm, predrilled Art. PENL.30 1 pc. long lower finish cover L= 3000 Art. PENLCOV03.30 1 pc. lower finish cover for screws L= 3000 Art. LMU11.30 6 pcs. fixing screws with cover Art. PENLVIT Kit 3 clamp set Art. PENLGRYKIT5 2 pcs. glazing bead gasket L=3000 grey Art. DFPG03.03 3 m TPE wall sealing gasket grey Art. PENG03

kit L = 2000 mm composed of:

1 pc. continuous "U" profile L= 2000 mm, predrilled Art. PENL.20 1 pc. long lower finish cover L= 2000 Art. PENLCOV03.20 1 pc. lower finish cover for screws L= 2000 Art. LMU11.20 4 pcs. fixing screws with cover Art. PENLVIT Kit 2 clamp set Art. PENLGRYKIT5 4 m TPE glazing bead gasket grey Art. DFPG03 2 m TPE wall sealing gasket grey Art. PENG03

kit L= 1498 mm composed of:

1 pc. continuous "U" profile L= 1498 mm, predrilled Art. PENL.15
1 pc. long lower finish cover L= 1498 Art. PENLCOV03.15
1 pc. lower finish cover for screws L= 1498 Art. LMU11.15
3 pcs. fixing screws with cover Art. PENLVIT
7 pcs. fixing clamps with adjustable grains Art. PENLGRY
3 m TPE glazing bead gasket grey Art. DFPG03
1.5 m TPE wall sealing gasket grey Art. PENG03

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

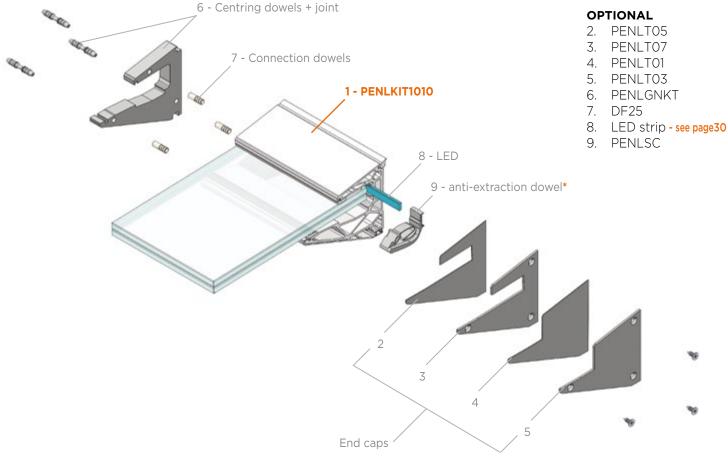
On request (not available in stock)

other colours with anodized or RAL finish

Art.	Description	Length	For glass	Q.ty
PENLKIT1010.60	Kit LUMIA 1010	6000 mm	20.76 / 23.04 mm	1 Kit
PENLKIT1010.30	Kit LUMIA 1010	3000 mm	20.76 / 23.04 mm	1 Kit
PENLKIT1010.20	Kit LUMIA 1010	2000 mm	20.76 / 23.04 mm	1 Kit
PENLKIT1010.15	Kit LUMIA 1010	1498 mm	20.76 / 23.04 mm	1 Kit

LUMIA 1010

1. **PENLKIT1010**



* Installation with anti-extraction dowels Art. PENLSC requires processing on the bottom glass panel

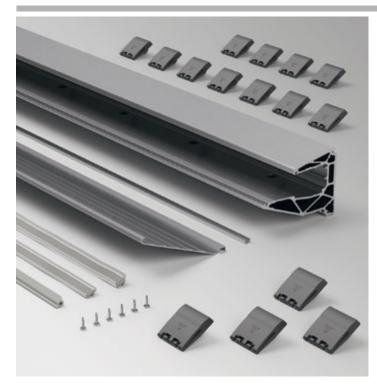


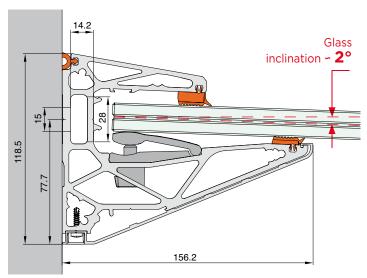
ANCHORING TO BEARING STRUCTURE IN REINFORCED CONCRETE canopy with long bottom cover



ANCHORING TO BEARING STRUCTURE IN MASONRY WITH PARTITION PLATE canopy with long bottom cover

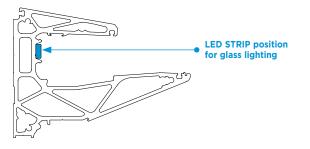






Notes:

- LED STRIP not included in the kits, articles and information on page 30 - Side caps not included in the kits; they must be ordered separately



KIT LUMIA - 88

Kit for canopy with linear layout for glass 88 for unprocessed glass panels

Features:

kit L= 6000 mm composed of:

1 pc. continuous "U" profile L= 6000 mm, predrilled Art. PENL.60
1 pc. long lower finish cover L= 6000 Art. PENLCOV03.60
2 pcs. lower finish cover for screws L= 3000 Art. LMU11.30
10 pcs. fixing screws with cover Art. PENLVIT
Kit 6 clamp set Art. ENLGRYKIT5

2 pcs. glazing bead gasket L=3000 grey Art. DFPG03.03 2 pcs. glazing bead gasket L=3000 grey Art. DFPG82.03 6 m TPE wall sealing gasket grey Art. PENG03

kit L = 3000 mm composed of:

1 pc. continuous "U" profile L= 3000 mm, predrilled Art. PENL.30
1 pc. long lower finish cover L= 6000 Art. PENLCOV03.30
1 pc. lower finish cover for screws L= 3000 Art. LMU11.30
6 pcs. fixing screws with cover Art. PENLVIT
Kit 3 clamp set Art. PENLGRYKIT5

1 pc. glazing bead gasket L=3000 grey Art. DFPG03.03 1 pc. glazing bead gasket L=3000 grey Art. DFPG82.03 3 m TPE wall sealing gasket grey Art. PENG03

kit L = 2000 mm composed of:

1 pc. continuous "U" profile L= 2000 mm, predrilled Art. PENL.20
1 pc. long lower finish cover L= 2000 Art. PENLCOV03.20
1 pc. lower finish cover for screws L= 2000 Art. LMU11.20
4 pcs. fixing screws with cover Art. PENLVIT
Kit 2 clamp set Art. PENLGRYKIT5

2 m TPE glazing bead gasket grey Art. DFPG03 2 m TPE top glazing bead gasket grey Art. DFPG82 2 m TPE wall sealing gasket grey Art. PENG03

kit L = 1498 mm composed of:

1 pc. continuous "U" profile L= 1498 mm, predrilled Art. PENL.15
1 pc. long lower finish cover L= 1498 Art. PENLCOV03.15
1 pc. lower finish cover for screws L= 1498 Art. LMU11.15
3 pcs. fixing screws with cover Art. PENLVIT
7 pcs. fixing clamps with adjustable grains Art. PENLGRY
1.5 m TPE glazing bead gasket grey Art. DFPG03
1.5 m TPE top glazing bead gasket grey Art. DFPG82
1.5 m TPE wall sealing gasket grey Art. PENG03

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

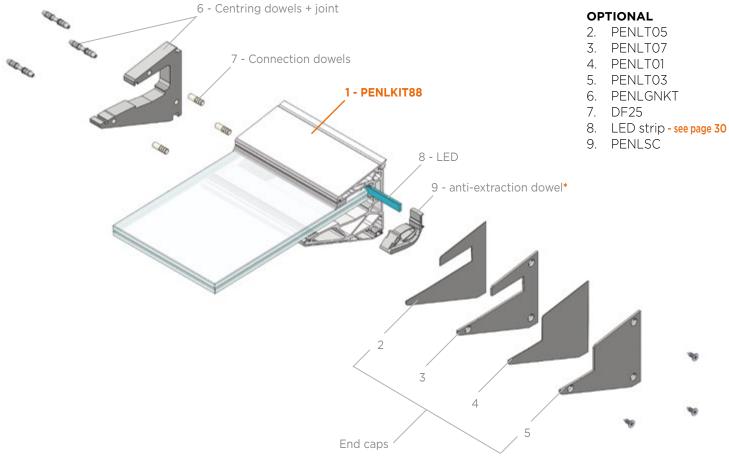
On request (not available in stock)

other colours with anodized or RAL finish

Art.	Description	Length	For glass	Q.ty
PENLKIT88.60	Kit LUMIA 88	6000 mm	16.76 / 17.52 mm	1 Kit
PENLKIT88.30	Kit LUMIA 88	3000 mm	16.76 / 17.52 mm	1 Kit
PENLKIT88.20	Kit LUMIA 88	2000 mm	16.76 / 17.52 mm	1 Kit
PENLKIT88.15	Kit LUMIA 88	1498 mm	16.76 / 17.52 mm	1 Kit

LUMIA

1. PENLKIT88



* Installation with anti-extraction dowels Art. PENLSC requires processing on the bottom glass panel



ANCHORING TO BEARING STRUCTURE IN STEEL

canopy with long bottom cover



ANCHORING TO BEARING STRUCTURE IN WOOD WITH PARTITION PLATE

canopy with long bottom cover









ALUMINIUM PROFILE CANOPY LUMIA

Material: aluminium (6063-T6)

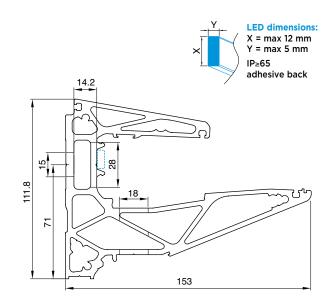
Finishes: Brushed steel-effect aluminium, matt aluminium,

RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: profiles are provided without gaskets



•				L			
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DRILLING DIAGRAM

Art.	Length	First hole X	Q.ty
PENL.60	L 6000 mm	100±5 mm	1 Pc
PENL.30	L 3000 mm	100±5 mm	1 Pc
PENL.20	L 2000 mm	100±5 mm	1 Pc
PENL.15	L 1498 mm	100±5 mm	1 Pc



KIT NO. 5 CLAMPS WITH ADJUSTMENT GRAIN

Material: Grivory*

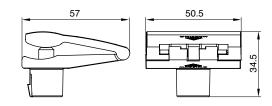
Art.	Description	Q.ty
PENLGRYKIT5	N.5 Modular clamps with grain	1 Kit





CLAMP WITH ADJUSTMENT GRAIN

Material: Grivory®

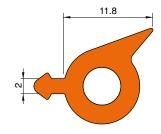


Art.	Description	Q.ty
PENLGRY	No. 1 Modular clamp with grain	1 Pc



WALL SEALING GASKET

Material: TPE Colour: grey

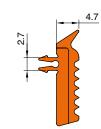


Art.	Length	Q.ty
PENG03	Per linear metre	Per m
PENG03.03	PROFILE 3 m	1 Pc
PENG03.60	ROLL 60 m	1 Pack



FLAT GASKET

Material: TPE Colour: black, grey

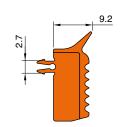


Art.	Length	Q.ty
DFPG03	Per linear metre	per m
DFPG03.03	PROFILE 3 m	1 Pc
DFPG03.60	ROLL 60 m	1 Pack



LARGER FLAT GASKET

Material: TPE Colour: black, grey



Art.	Length	Q.ty
DFPG82	Per linear metre	Per m
DFPG82.03	PROFILE 3 m	1 Pc
DFPG82.60	ROLL 60 m	1 Pack





LONG LOWER FINISH COVER FOR PENL

Material: aluminium

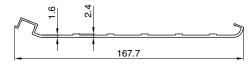
Finishes: Brushed steel-effect aluminium, matt aluminium,

RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by using PENLVIT fixing screws



Art.	Dimensions	Q.ty
PENLCOV03.60	167.7 x 13.5 x L 6000	1 Pc
PENLCOV03.30	167.7 x 13.5 x L 3000	1 Pc
PENLCOV03.20	167.7 x 13.5 x L 2000	1 Pc
PENLCOV03.15	167.7 x 13.5 x L 1498	1 Pc



LOWER FINISH COVER LIGHTING FOR PENL

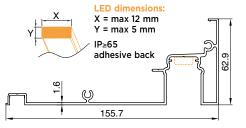
Material: aluminium

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by using PENLVIT fixing screws



Art.	Dimensions	Q.ty
PENLCOV05.60	155.7 x 62.8 x L 6000	1Pc
PENLCOV05.30	155.7 x 62.8 x L 3000	1Pc
PENLCOV05.20	155.7 x 62.8 x L 2000	1Pc
PENLCOV05.15	155.7 x 62.8 x L 1498	1 Pc



LOWER FINISH COVER STRIP LIGHTING FOR PENL

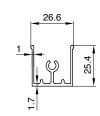
Material: aluminium

Finishes: Brushed steel-effect aluminium, matt aluminium,

RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish



Art.	Dimensions	Q.ty
PENLCOVO7.60	26.6 x 25.4 x L 6000	1 Pc
PENLCOVO7.30	26.6 x 25.4 x L 3000	1 Pc
PENLCOV07.20	26.6 x 25.4 x L 2000	1 Pc
PENLCOVO7.15	26.6 x 25.4 x L 1498	1 Pc



MATT PLASTIC LOWER PROFILE LIGHTING FOR PENL

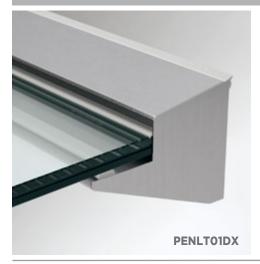
Material: PC

Finishes: matt transparent



Art.	Dimensions	Q.ty
PENALU.60	23 x 6 x L 6000	1 Pc
PENALU.30	23 x 6 x L 3000	1 Pc
PENALU.20	23 x 6 x L 2000	1 Pc
PENALU.15	23 x 6 x L 1500	1 Pc





FINISHING CAP FOR PENL

Material: aluminium

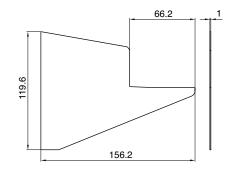
Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white),

raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by applying silicone on the entire edge of the finishing cap.



Art.	Dimensions	Q.ty
PENLTOIDX	119.6 x 156.2 mm - Th. 1 mm	1 Pc
PENLT01SX	119.6 x 156.2 mm - Th. 1 mm	1 Pc

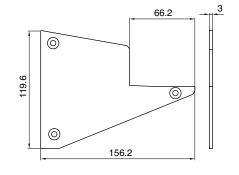


FINISHING CAP WITH SCREWS FOR PENL

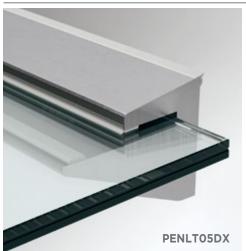
Material: aluminium, steel Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish



Art.	Dimensions	Q.ty
PENLT03DX	119.6 x 156.2 mm - Th. 3 mm	1 Set
PENLT03SX	119.6 x 156.2 mm - Th. 3 mm	1 Set



OPEN FINISHING CAP FOR PENL

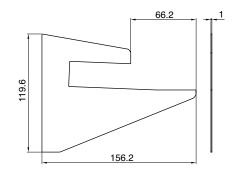
Material: aluminium

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

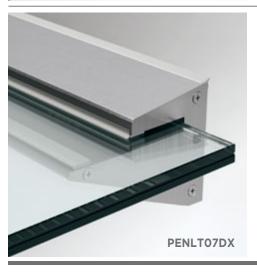
On request (not available in stock)

other colours with anodized or RAL finish

Note: install by applying silicone on the entire edge of the finishing cap.



Art.	Dimensions	Q.ty
PENLT05DX	119.6 x 156.2 mm - Th. 1 mm	1 Pc
PENLT05SX	119.6 x 156.2 mm - Th. 1 mm	1 Pc



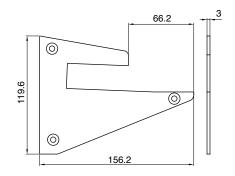
OPEN FINISHING CAP WITH SCREWS FOR PENL

Material: aluminium, steel

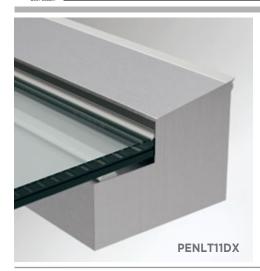
Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish



Art.	Dimensions	Q.ty
PENLT07DX	119.6 x 156.2 mm - Th. 3 mm	1 Set
PENLT07SX	119.6 x 156.2 mm - Th. 3 mm	1 Set



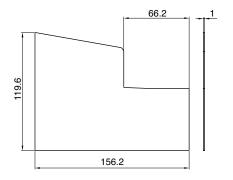
LED COVER FINISHING CAP FOR PENL

Material: aluminium Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by applying silicone on the entire edge of the finishing cap.



Art.	Dimensions	Q.ty
PENLT11DX	119.6 x 156.2 mm - Th. 1 mm	1Pc
PENLT11SX	119.6 x 156.2 mm - Th. 1 mm	1 Pc

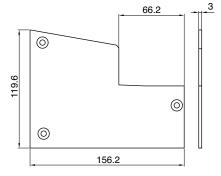


LED COVER FINISHING CAP WITH SCREWS FOR PENL

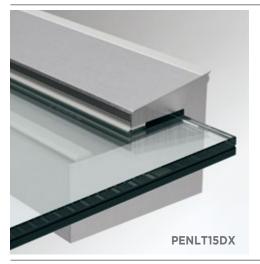
Material: aluminium, steel Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish



Art.	Dimensions	Q.ty
PENLT13DX	119.6 x 156.2 mm - Th. 3 mm	1 Set
PENLT13SX	119.6 x 156.2 mm - Th. 3 mm	1 Set



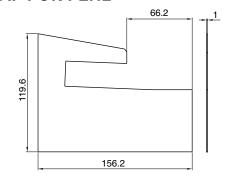
OPEN LED COVER FINISHING CAP FOR PENL

Material: aluminium Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by applying silicone on the entire edge of the finishing cap.



Art.	Dimensions	Q.ty
PENLT15DX	119.6 x 156.2 mm - Th. 1 mm	1Pc
PENLT15SX	119.6 x 156.2 mm - Th. 1 mm	1Pc



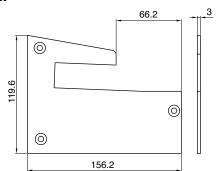
OPEN LED COVER FINISHING CAP WITH SCREWS FOR PENL

Material: aluminium, steel

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish



Art.	Dimensions	Q.ty
PENLT17DX	119.6 x 156.2 mm - Th. 3 mm	1 Set
PENLT17SX	119.6 x 156.2 mm - Th. 3 mm	1 Set



1 Set

1 Set



LOWER LED COVER FINISHING CAP FOR PENL

Material: aluminium

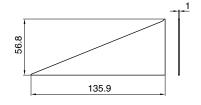
Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white),

raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by applying silicone on the entire edge of the finishing cap.



PENLT21SX	59.8 x 135.9 mm - Th. 1 mm	1 Pc
PENLT21DX	59.8 x 135.9 mm - Th. 1 mm	1Pc
Art.	Dimensions	Q.ty

Dimensions

59.8 x 135.9 mm - Th. 3 mm

59.8 x 135.9 mm - Th. 3 mm

56.8



LOWER LED COVER FINISHING CAP WITH SCREWS FOR PENL

Material: aluminium, steel

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: install by applying silicone on the entire edge of the finishing cap.

ļ	135.9	
		Q.ty



ANTI-EXTRACTION DOWEL

Material: POM

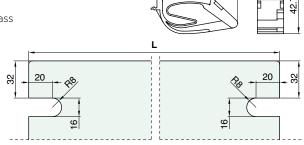
PENLT23DX

PENLT23SX

Art.

Note: for installation

create dedicated notches on the glass

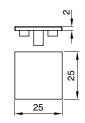


Art.	Dimensions	Q.ty
PENLSC	42.7 x 65.3 x 20 mm	1Cp



FINISHING CAP FOR PENLCOV07

Material: POM Finish: grey, black.



Art.	Dimensions	Q.ty
METAP250	25 x 25 x h 2 mm	1 Pc





SNAP-ON LOWER PROFILE FOR COVERING SCREWS **FOR PENL**

Material: aluminium

Finishes: Brushed steel-effect aluminium, matt aluminium, RAL 9010 (polished white), raw-finish aluminium

On request (not available in stock)

other colours with anodized or RAL finish

Note: matching profile for

Art. PENLCOV03 and PENLCOV05

Art.	Dimensions	Q.ty
LMU11.30	6.8 x 10.9 x L 3000	1 Pc
LMU11.20	6.8 x 10.9 x L 2000	1 Pc
LMU11.15	6.8 x 10.9 x L 1498	1 Pc



DF25 CENTRING DOWELS

Material: aluminium Finish: aluminium



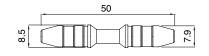
Art.	Dimensions	Q.ty
DF25	Ø8 x 25 mm	1 Pair



THERMAL EXPANSION JOINT WITH CENTRING DOWELS

Material: POM / EPDM Finish: black





22.5

66.3





120		
	159.2	

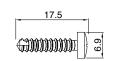
Art.	Dimensions	Q.ty
PENLGNKT	Dowels Ø8.5 x 50 mm Joint 120 x 159.2 mm - Th. 22.5 mm	1 Kit



SELF-DRILLING SCREWS

Material: steel

Note: recommended for anchoring with Art. PENLCOV03 and PENLCOV05



Art.	Dimensions	Q.ty
PENLVIT	17.5 x 6.9 PH2	1 Pc





FLEXIBLE SCREWDRIVER FOR ADJUSTMENTS

Art.	Description	Q.ty
DFFLEX06	Screwdriver with hexagon insert size CH4	1Pc



MAKITA GUN SCREWDRIVER

- Double speed - Release clutch - LED lighting - Reversible TIGHTENING TORQUE = 2.9 nm with ring in pos. 21 (recommended for tightening Defender 88 pressing devices)

Voltage: 7.2V	Dimensions: 218x44x142 mm
Capacity: 1.2Ah	Weight (EPTA): 0.55 kg
Vacuum velocity: 200 - 650 rpm	Metal drilling: 5 mm
Hard coupling tightening torque: 5.6 Nm	Wood drilling: 6 mm
Flexible coupling tightening torque: 3.6 Nm	Torque adjustment: 21

Art.	Q.ty
DFMAK21	1 Pc



FLEXIBLE EXTENSION FOR ELECTRIC SCREWDRIVER

Usable in combination with MAKITA electric screwdriver art. DFMAK21 or similar

Art.	Description	Q.ty
DFFLEX07	flexible extension with hexagon insert size CH4	1Pc
DFFLEX04	Hexagon insert size CH4	1 Pc



CUSTOM CUTTING FOR PEN / PENL PROFILES

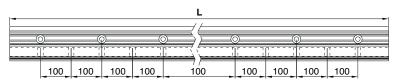


Art.	Description	Q.ty
PENTAGLIO	Custom cutting for PENL profile	1Pc



LUMIA ALUMINIUM PROFILE ADDITIONAL HOLE DRILLING FOR CLAMPS WITH DISTANCE 100 mm

Note: The articles only refer to processing, which needs to be added to the profiles with standard holes.



DRILLING DIAGRAM

Art.	Dimensions	No. holes	Q.ty
PENL.60FORO	L 6000	59	1 Pc
PENL.30FORO	L 3000	29	1 Pc
PENL.20FORO	L 2000	19	1 Pc
PENL.15FORO	L 1500	14	1Pc
PENL.FORO	Additional hole Ø18		1 Pc



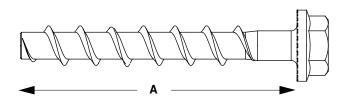
CONCRETE ANCHOR

Material: galvanised steel / A4 stainless steel Features: High performance mechanical anchor

for concrete with resistance class from C20/25 to C50/60,

cracked and non-cracked.

Package: 15 pcs.



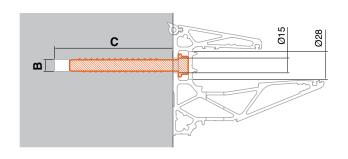












Art.	A - Anchor length	B - hole Ø	Hole depth	Tightening wrench	Material	Q.ty
DFFH10ZN	100 mm	10 mm	110 mm	SW16	Galvanised steel	1 Set
DFFH10A4	100 mm	10 mm	110 mm	SW16	A4 stainless steel	1 Set
DFFH12ZN	110 mm	12 mm	120 mm	SW17	Galvanised steel	1 Set
DFFH12A4	110 mm	12 mm	120 mm	SW17	A4 stainless steel	1 Set

	Recommended nominal tightening torque of impulse screwdriver [Nm]	Maximum tightening torque with dynamometric wrench or ratchet wrench [Nm]
DFFH10ZN	300	40
DFFH10A4	300	40
DFFH12ZN	450	60
DFFH12A4	450	60

	Cracked concrete				Non-cracke	ed concrete		
	Permissible traction load [kN]	Permissible shear load [kN]	Minimum anchor cen- tre distance [mm]	Minimum distance from edge [mm]	Permissible traction load [kN]	Permissible shear load [kN]	Minimum anchor cen- tre distance [mm]	Minimum distance from edge [mm]
DFFH10ZN	7.6	16.2	70	70	13.5	16.2	70	70
DFFH10A4	7.6	19.0	70	70	13.5	19.0	70	70
DFFH12ZN	12.3	20.0	80	80	17.2	20.0	80	80
DFFH12A4	12.3	23.3	80	80	17.2	23.3	80	80

Further technical information available on $\begin{cal}www.log limassimo.it\end{cal}$



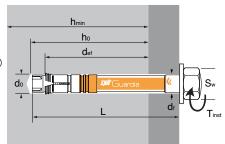
SPIT GUARDIA ANCHOR

 ${\it Material:}~ \textbf{A4} ~~ {\it stainless steel (for outdoors)} ~/~ {\it Zinc-electroplated steel}$

Features: torque control expansion anchor (with expansion shell)

Indications for use: compressed concrete (non-cracked): Ø12 - Concrete from C20/25 to C50/60







TECHNICAL FEATURES

SPIT GUARDIA	Anchor depth torque min. (mm)	Thickness of anchor (mm)	Anchor max hole depth (mm)	Anchor min. support thickness (mm)	Ø Total hole (mm)	Ø Pass through (mm)	Total length (mm)	Max tightening torque (Nm)
	h ef, min	t fix	ho	h _{min}	d o	df	L	Tinst
DFTASA4	70	20	100	150	12	14	110	25
DFTAS	70	20	95	150	12	14	104	35

MECHANICAL PROPERTIES OF THE ANCHOR

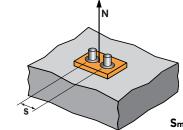
Cone	DFTASA4	DFTAS
fuk (N/mm²) Min. tensile strength	500	1000
Body	DFTASA4	DFTAS
fuk (N/mm²) Min. tensile strength	700	550
W el (mm³) Bending inertia module	50	50
M ^o Rk,s (Nm) Characteristic bending moment	26	33
M (Nm) Permissible bending moment	10.8	13.7

SPIT CC METHOD (VALUES DETECTED BY ETA)

INFLUENCE OF THE CENTRE DISTANCE ON THE TENSILE STRENGTH OF THE CONCRETE CONE

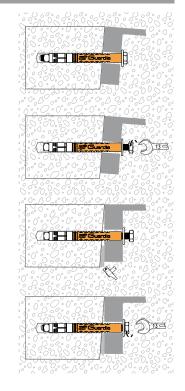
CENTRE DISTANCE S Coefficient Ψ_{S} Anchor depth min.

0.67
0.69
0.71
0.74
0.76
0.79
0.81
0.83
0.88
0.95
1.00



 $\Psi_S = 0.5 + \frac{s}{6.h_{ef}}$

INSTALLATION METHOD



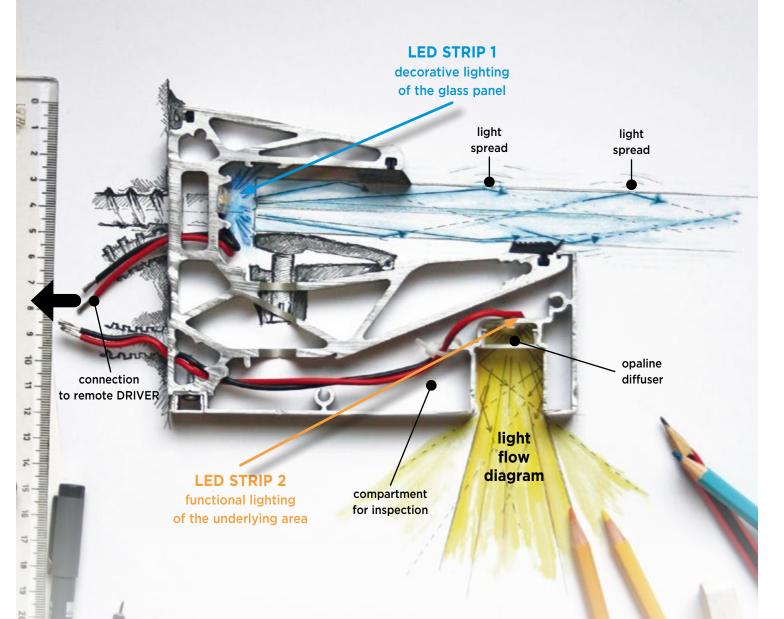
 $S_{min} < S < S_{cr,N}$ $S_{cr,N} = 3.h_{ef}$

 Ψ S evaluated in accordance with the centre distance

Art.	Description	Dimensions	Q.ty
DFTASA4	A4 - For indoor and outdoor installation	12x110/20	1 Pc
DFTAS	For indoor installation	12x105/20	1 Pc



LUMIA: TECHNOLOGY AT THE SERVICE OF LIGHTING



For applications in excess of 5 linear metres of LED STRIP, the use of multiple power supply units is recommended to reduce the effects of natural voltage drops. Applications with multiple derivations are allowed using DRIVERS with the appropriate size.

When appropriate, silicone for outdoor use is recommended to ensure adequate protection for cables against atmospheric agents.

The intervention of a qualified technician is recommended for the connection to the LED STRIP network.

LED STRIP 1: decorative lighting of the glass panel (recommended LEDST001)

The decorative lighting effect of glass can enhance the defects present on the surface and inside the panels, which generate the diffuse light effect. These defects become more evident as the light intensity increases. The utmost care is recommended during production and use of the LED STRIP with moderate light intensity.

Checking the function of every LED STRIP is recommended prior to installation.

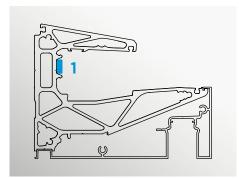
LED STRIP 2: functional lighting of the underlying area (recommended LEDST003)

The recommended LED STRIP allows to obtain correct lighting effect of the walking surface for installations at a height of ca. 3 m. Lighting intensity is lower if the installation height increases.

The lighting compartment and LED STRIP must be accessible for inspection.

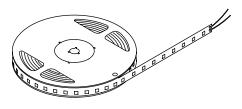


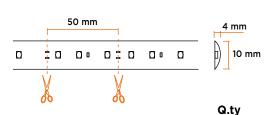
LED STRIP 1 24V DC IP66 FOR BACKLIT GLASS 9.6 W/m 140 LED/m



ALSO SUITABLE FOR OUTDOOR USE

LED strip 24V DC IP 66, wattage 9.6 W/m 140 LED/m CCT 4000K - $\mbox{Im/m}$ 922 - $\mbox{Im/W}$ 96



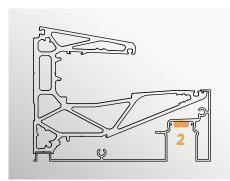


Art. LEDST001 Description

LED STRIP 24V DC IP66 for backlit glass 9.6 W/m 140 LED/m - L. 5000 mm

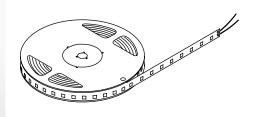
1Pc

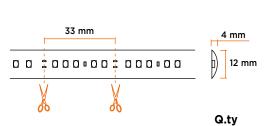
LED STRIP 2 24V DC IP66 FOR FUNCTIONAL LIGHTING 14.4 W/m 210 LED/m



ALSO SUITABLE FOR OUTDOOR USE

LED strip 24V DC IP 66, wattage 14.4 W/m 210 LED/m CCT 4000K - Im/m 1324 - Im/W 92



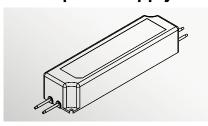


Art. LEDST002 Description

02 LED STRIP 24V DC IP66 for functional lighting 14.4 W/m 210 LED/m 5000 mm

1 Pc

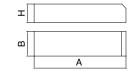
24Vdc power supply units



ALSO SUITABLE FOR OUTDOOR USE

Power supply unit 24Vdc 35W to 150W IP67

IN/OUT cables - Protection rating 2 Function 100-240V



Art.	Description	Dimensions	Q.ty
LED24035IP	Power supply unit 24Vdc 35W IP67	A=150 mm - B=40 mm - H=30 mm	1 Pc
LED24060IP	Power supply unit 24Vdc 60W IP67	A=162 mm - B=42 mm - H=32 mm	1 Pc
LED24100IP	Power supply unit 24Vdc 100W IP67	A=190 mm - B=52 mm - H=37 mm	1 Pc
LED24150IP	Power supply unit 24Vdc 150W IP67	A=222 mm - B=68 mm - H=38 mm	1 Pc

- Pay attention to the electric polarity of products.
- Only use stabilised power supply units with 24v dc voltage.
- After calculating the total absorption of devices to be installed, choose a power supply unit that always has a power margin, which is 15-20% higher than the one calculated.
- In case of maintenance, remove voltage.

Connecting multiple devices in parallel:

To avoid damaging the LED lights, complete all connections before switching on the power. Max continuous length $5\ \mathrm{m}$

Example: STRIP length 3 m

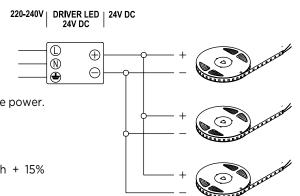
type LED STRIP 1 24 Vdc MAX 9.6 W/m (Art.LEDST001)

Choosing the power supply unit DRIVER: absorption type LED x LED length + 15%

(minimum increase due to voltage drop) 9.6 x 3 x 1.15 = 33.15 W (MIN)

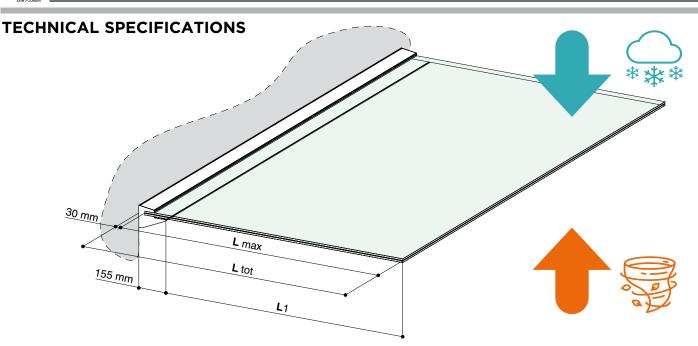
The power supply unit DRIVER to be chosen: 24 Vdc 35 W (Art. LED24035IP)

Complete list of items: LEDST0011 pc. - LED24035IP 1 pc.

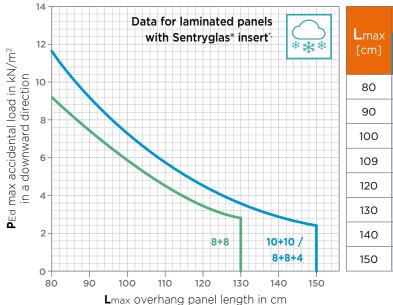


CONNECTION DIAGRAM - PARALLEL CIRCUIT

LUMIA - DESIGN ELEMENTS



PERFORMANCE - SNOW-LOADED OVERHANG

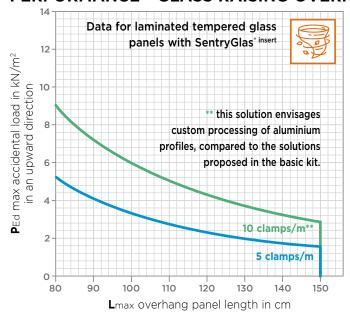


P _{Ed} [kl	N/m2]
10+10 8+8+4	8+8
11.6	9.26
8.77	7.02
6.83	5.46
5.43	4.34
4.39	3.51
3.59	2.86
2.97	
2.48	
	10+10 8+8+4 11.6 8.77 6.83 5.43 4.39 3.59 2.97

Lmax = panel length
Ltot = Lmax + 30 mm
L1= Ltot - 155 mm

The maximum load of project PEd refers to the combined sum of all the variable loads acting in a downward direction, including the relative safety and combination coefficients. Panel weight is already considered and must not be added. Results refer to tempered laminated EN 12150-1 standard glass with double layer 10+10 mm or 8+8 mm or triple layer 8+8+4 mm, laminated with 1.52 mm stiff SentryGlas" insert. In the triple layer configurations, the thinnest layer faces the top part of the installation. The results take into account the reduction in resistance generated by processing, if any, of the bottom panel to insert the safety dowel (art. PENLSC). Different inserts can be used, taking into account the reductions in performance and any limitations in the minimum height of overhead installation. Complete information for the system's detailed design can be found on the website www.loglimassimo.it or by contacting the Technical Customer Care Service of Logli Massimo Saint-Gobain (ufficio.tecnico@loglimassimo.it).

PERFORMANCE - GLASS RAISING OVERHANG

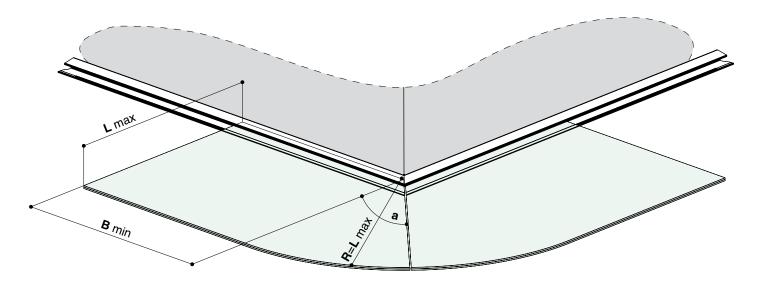


Lmax [cm]	5	10	
80	5.10	8.71	
90	4.12	6.93	
100	3.37	5.68	
109	2.84	4.76	
120	2.44	4.07	
130	2.13	3.54	
140	1.90	3.12	
150	1.71	2.79	

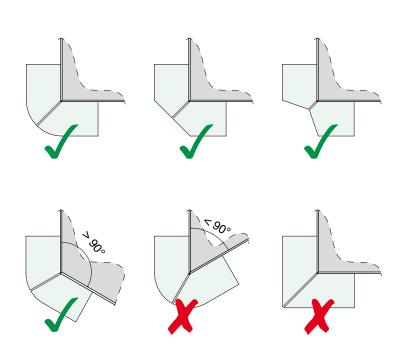
SentryGlas® trademark of Kuraray America, Inc. Trademarks may not be applied for or registered in all countries.

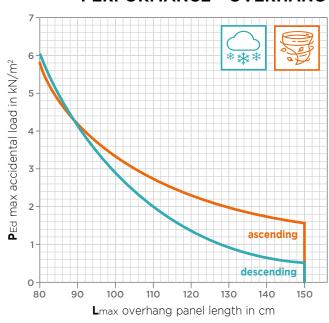


CORNER SOLUTIONS

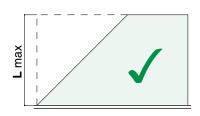


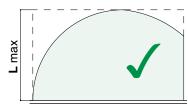
PERFORMANCE - OVERHANG



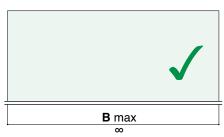


NON-STANDARD SOLUTIONS





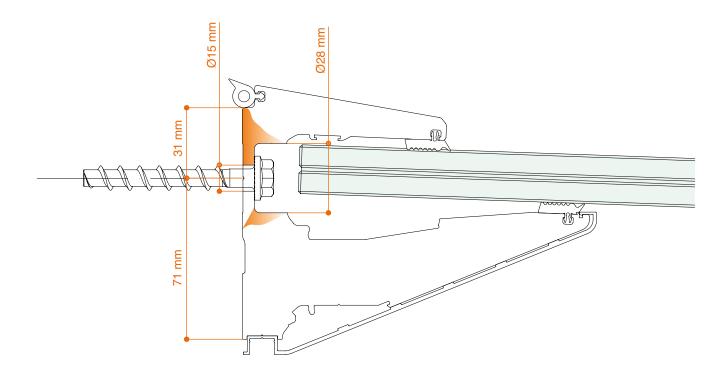


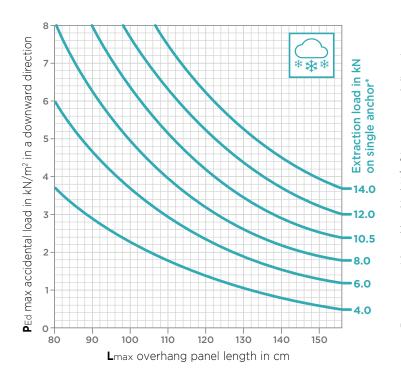


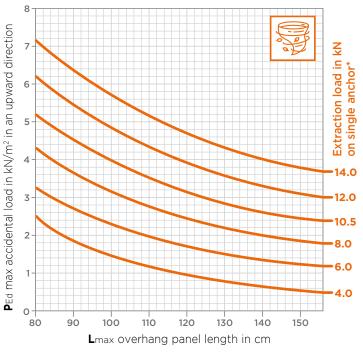
LUMIA - DESIGN ELEMENTS

CONNECTION TO THE STRUCTURE

ABACUSES FOR PRE-DIMENSIONING OF ANCHORING SYSTEMS





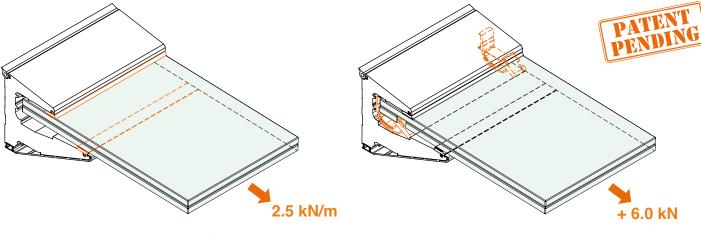


^{*} The extraction load at the single anchor point is stated for pre-dimensioning and identification of the most suitable anchor type for the structure. Values are stated taking into account a standard centre distance of the anchors of 200 mm (this corresponds to installing an anchor for each hole). The reference to the project load P_{Ed} stated is already inclusive of the weight of the panel. No abacuses relative to the evaluation of cutting forces on anchors are reported, as in most cases they are not dimensioning. The assessment of the type of anchors suitable for the structure, for the centre distance relative to project loads, and system compliance with the global safety requirements of the project shall be assigned to a qualified technician, who shall check the applicability of the data provided at the actual installation conditions (loads on the system, characteristics of the support, etc.). For installations in construction settings, which envisage the presence of insulation cladding with low structural impact, the utmost care is recommended when producing sub-structures with adequate characteristics for the division and transmission of loads from the system.



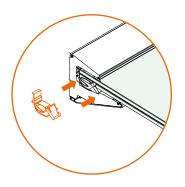
SAFETY DOWELS (OPTIONAL)

ANTI-EXTRACTION SAFETY DEVICE, REQUIRES DEDICATED PROCESSING OF THE LOWER PART OF THE OF THE LAMINATED GLASS

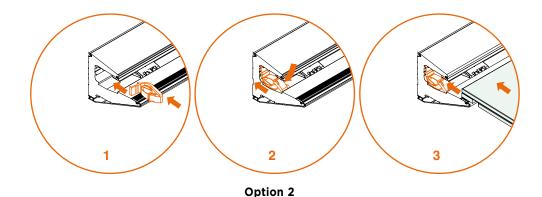


Standard kit 5 clamps/m

addition of 2 anti-extraction dowels (optional)

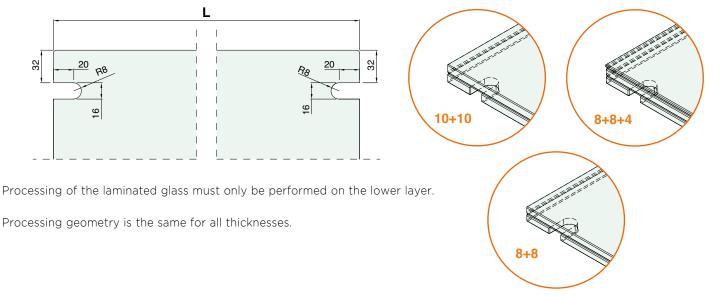


Option 1Lateral insert with glass already in its position



Front insert of glass with anti-extraction dowel in place

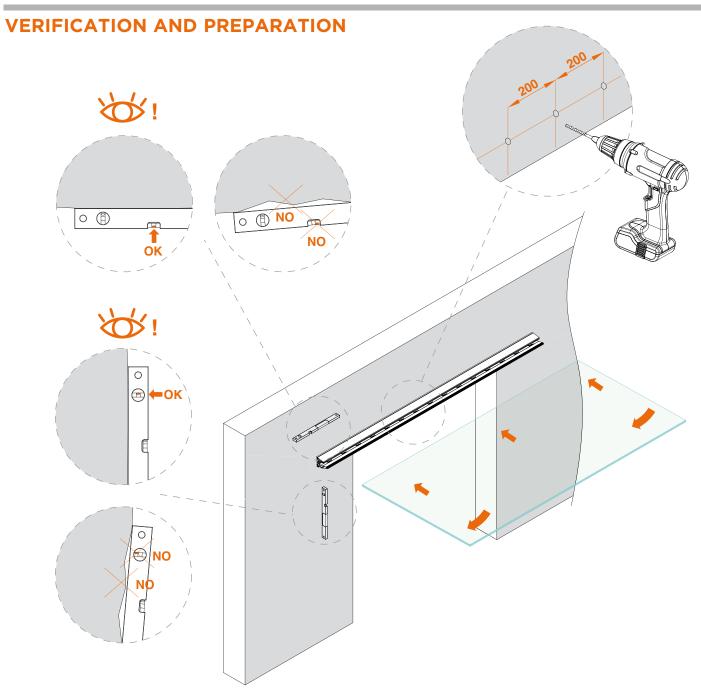
The innovative system with «spring» function of the safety dowel allows frontal insertion of the panels. This allows to use the anti-extraction device even when the lateral areas are not accessible due to the presence of an adjacent wall or previously installed panels.



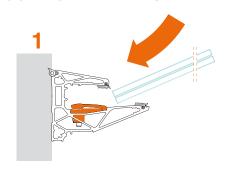
Resistance to panel removal from the system was evaluated experimentally with tests in accordance with EAD 220025-00-0401:2016 Annex B for BR.4 «Safety and accessibility during use». The experimental evaluation of extraction resistance was performed in cases of installations with and without the safety dowel. The values stated include safety coefficients applied to characteristic resistance values obtained during the test phase.

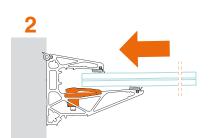


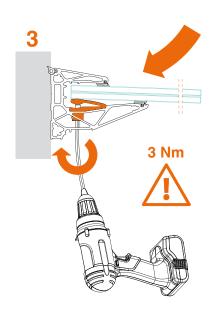
LUMIA - ASSEMBLY INSTRUCTIONS



GLASS INSTALLATION

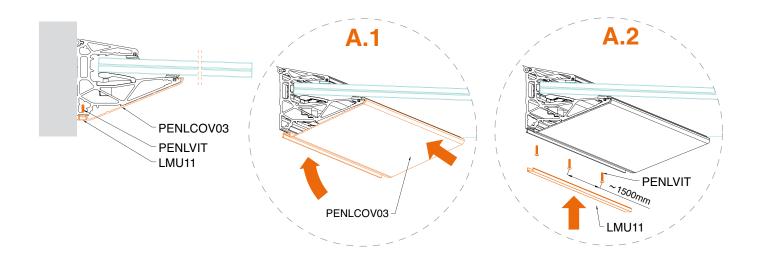




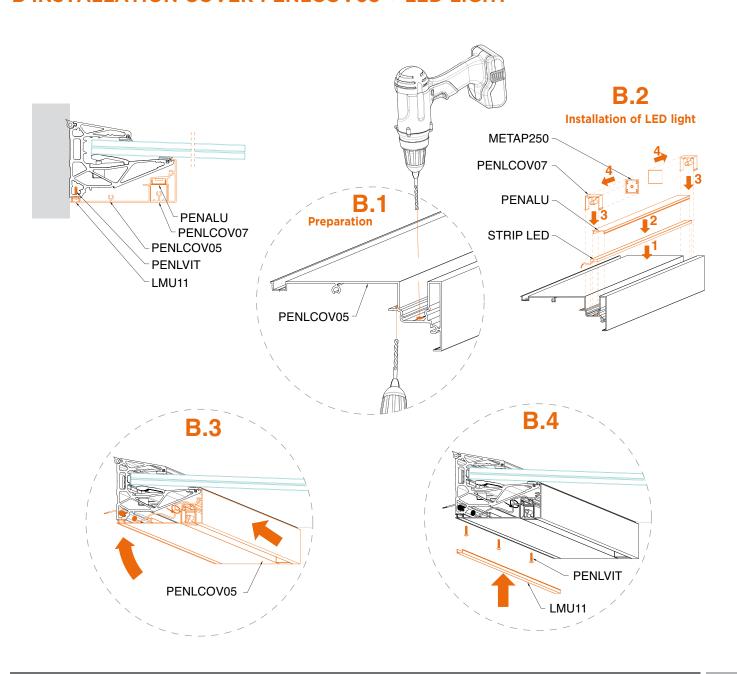




A INSTALLATION COVER PENLCOV03



B INSTALLATION COVER PENLCOV05 + LED LIGHT





LUMIA - CLEANING AND MAINTENANCE SERVICES



OUR SERVICES ARE AT YOUR DISPOSAL

CUSTOMISATION:



RAPID ORDER PROCESSING AND DISPATCH:







Disclaimer: the following is only for information purposes and is subject to revisions and updates.

INSTRUCTIONS FOR INSTALLATION

The following precautions are recommended during installation:

- Turpentine can be used to remove dirt, greasy stains and residue of adhesives. Never use abrasive materials.
- To protect slots and holes made after anodization from corrosion, use sealants (e.g., silicone or butyl), paints (e.g., metallic zinc spray) or other suitable inhibitors of corrosion.

If installation is performed in winter, it is recommended to take into account the thermal expansion that will take place in summer due to the increased temperature, providing appropriate expansion joints.

The thermal expansion coefficient of aluminium is 2.3×10^{-5} °C⁻¹: for example, if the increase in temperature is equal to 35°C, the dilation of a 3 m bar amounts to 2.3×10^{-5} °C-1 x 35°C x 3 m = 2.4×10^{-3} m or 2.4 mm.

ANODIZATION

Anodization (also called anodic oxidation) is an electro-chemical process by which the formation of oxide (alumina) is induced on the extruded aluminium surface. **This treatment provides the product with the following characteristics**:

• resistance to corrosion • surface hardness • resistance to abrasion

The colour applied on the products has a purely aesthetic impact and does not alter the protective action of anodization.

The raw-finish aluminium profiles, specifically without anodizing or painting, sold by Logli Massimo S.p.A. are intended for suitable coating to be applied by the customer. The customer exempts Logli Massimo S.p.A. from all liability for any problems resulting from using raw finish material. Furthermore, the customer accepts all liability regarding the finish applied by them to the raw finish profile.

Note: Galvanic corrosion: the phenomenon can develop at the interface between two different metals when there is an electrolyte (e.g., water, especially if salted). It is an electrochemical process that causes the metal with lower electric potential to dissolve. In the most common metal combinations, it is almost always aluminium that plays the role of anode and thus undergoes corrosion. Obviously this only occurs when aluminium is bare.

MAINTENANCE AND CLEANING

Regular cleaning of the product is decisive to preserve the original aspect. In a marine environment or in an urban environment (polluting emissions into the atmosphere), cleaning the surfaces at least once every three months is recommended. In relatively cleaner outdoor environments, washing every six months is recommended. Even for indoor installations, cleaning the product at least once a year is recommended. Washing can be performed with warm water and neutral soap. Use a soft cloth or a non-abrasive sponge. Rinse thoroughly with clean water. Dry with a soft cloth.

The information provided is for explanatory purposes only. Logli Massimo S.p.A. reserves the right to make changes at any time and without prior notice to one or more products, and even to cease their production.



