

DATASHEET

ULTRA SAFE

LUX GLENDER - ULTRA SAFE

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LUX GLENDER - ULTRA SAFE

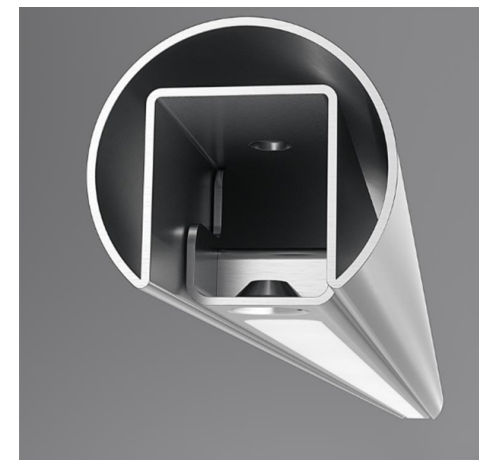
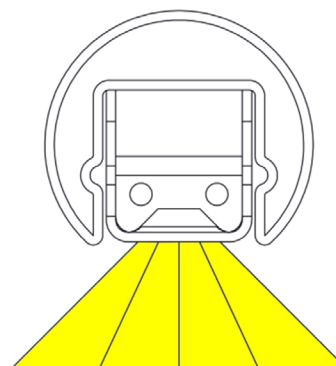
Technical data

LUX GLENDER - ULTRA SAFE

Handrail material	V2A or V4A
Handrail dimension	ø42,4, ø48,3, ø60,3 40 x 40 and 60 x 45 mm
Source of light	fully encapsulated LED-bar
Operating voltage	24 VDC (20,5...26,0VDC)
Power	3, 6, 10 W/m
Light color temperature	ca. 1800K, 2600K, 2900K, 3200K, 3500K, 4200K and more
CRI	> 80
Protection LED-Strip / Impact resistance	IP69 / IK10 (vandalism-proof)
Protection Class	III (SELV), Safety Extra Low Voltage
Operating temperatur	-25 ... 45°C
Storage temperature	-25 ... 55°C
Life cicle	> 60.000h
Dimmable	yes (PWM)
Connecting cable	0.5 mm², approximately 0.5m, open cable ends
Standards	Lighting fixtures in sizes 24 and 27 according to EN 60598-2-22
Fixture potting compound	PU, clear or frosted
Fixture housing material	Stainless steel 1.4401 (V4A)
Light distribution	symmetrical or asymmetrical

APPLICATION EXAMPLES:

- Staircase entrances for indoor and outdoor areas
- Tunnels, bridges, parks, garden facilities, building entrances, parking garages
- Schools, daycares, kindergartens, universities
- **Suitable for installation in emergency lighting systems according to EN 60598-2-22**

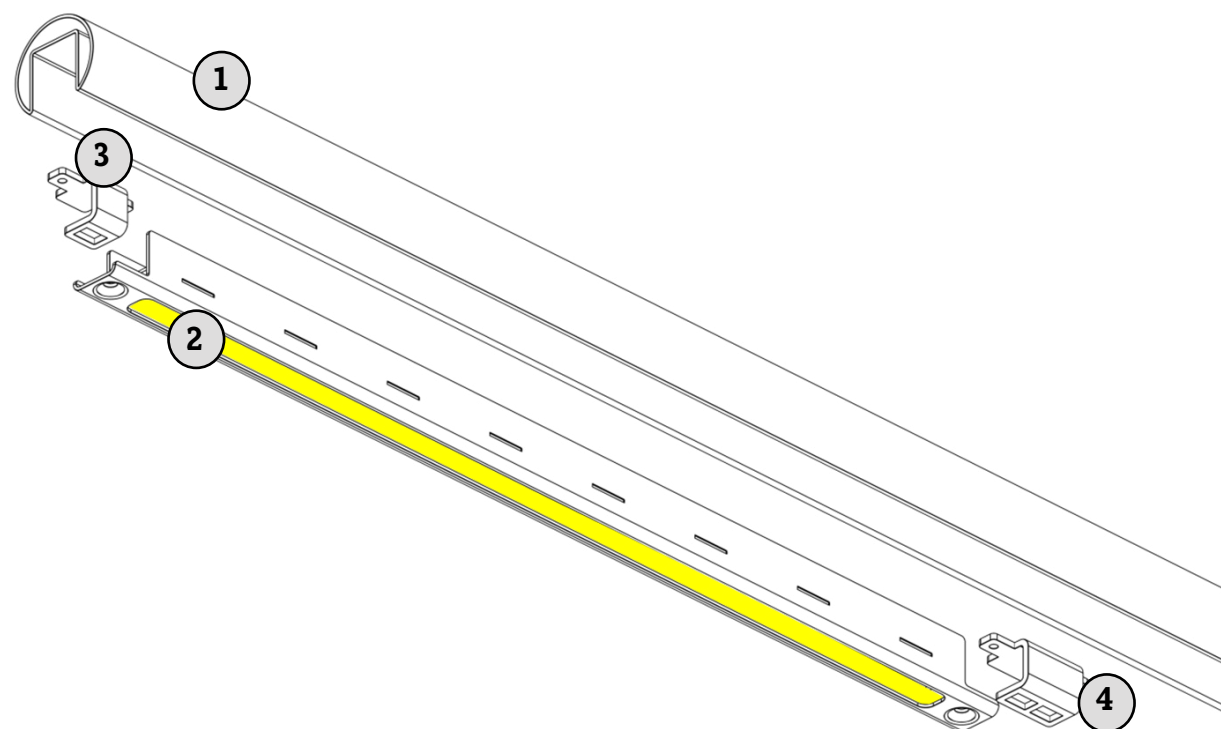


LUX GLENDER - ULTRA SAFE

System set up

Item	Naming	Notes
1	Handrail profile	Lilly, Paula, Nina, Emil or Ronny Stainless steel ASI 304 or ASI 316
2	ULTRA SAFE LED luminaire	Fully encapsulated LED-luminaire
3	End bracket	The lamp can be fixed at either the end of the handrail or on the support bracket
4	Intermediat bracket	The lamp can be fixed between two other lamps.

- Further informations regarding components you will find in the LED - datasheet and in the area of system components description.
- The handrail profiles are delivered as a bar of 6 m length.
- Customization i.e. RGB, Colors, etc. available upon request.
- All components needs to be assembled and connected by qualified firm.



LUX GLENDER - ULTRA SAFE

Fully encapsulated LED luminaire - Technical data

ULTRA SAFE luminaires with symmetrical light distribution				
Item no.	For profile	Width	Lenght	According to EN 60598-2-22
A000400	Lilly + Emil	24mm	250 mm	x
A000401	Lilly + Emil	24mm	500 mm	x
A000402	Lilly + Emil	24mm	750 mm	x
A000403	Lilly + Emil	24mm	1000 mm	x
A000404	Lilly + Emil	24mm	1250 mm	x
A000405	Lilly + Emil	24mm	1500 mm	x
A000406	Paula	27mm	250 mm	x
A000407	Paula	27mm	500 mm	x
A000408	Paula	27mm	750 mm	x
A000409	Paula	27mm	1000 mm	x
A000410	Paula	27mm	1250 mm	x
A000411	Paula	27mm	1500 mm	x
A000412	Nina + Ronny	35mm	250 mm	-
A000413	Nina + Ronny	35mm	500 mm	-
A000414	Nina + Ronny	35mm	750 mm	-
A000415	Nina + Ronny	35mm	1000 mm	-
A000416	Nina + Ronny	35mm	1250 mm	-
A000417	Nina + Ronny	35mm	1500 mm	-

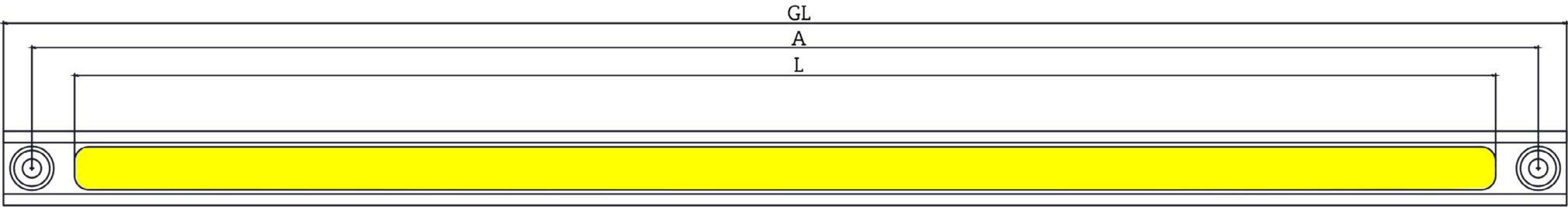
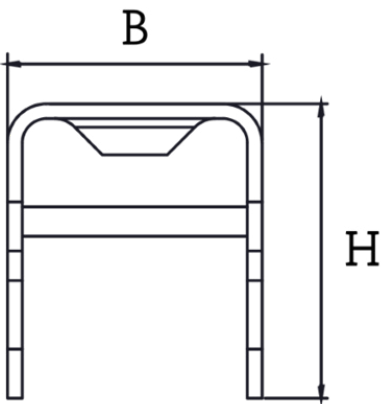
ULTRA SAFE luminaires with asymmetrical light distribution				
Item no.	For profile	Width	Lenght	According to EN 60598-2-22
A000826	Lilly + Emil	24mm	250mm	x
A000827	Lilly + Emil	24mm	500mm	x
A000828	Lilly + Emil	24mm	750mm	x
A000829	Lilly + Emil	24mm	1000mm	x
A000830	Lilly + Emil	24mm	1250mm	x
A000831	Lilly + Emil	24mm	1500mm	x
A000832	Paula	27mm	250mm	x
A000833	Paula	27mm	500mm	x
A000834	Paula	27mm	750mm	x
A000835	Paula	27mm	1000mm	x
A000836	Paula	27mm	1250mm	x
A000837	Paula	27mm	1500mm	x
A000838	Nina + Ronny	35mm	250mm	-
A000839	Nina + Ronny	35mm	500mm	-
A000840	Nina + Ronny	35mm	750mm	-
A000841	Nina + Ronny	35mm	1000mm	-
A000842	Nina + Ronny	35mm	1250mm	-
A000843	Nina + Ronny	35mm	1500mm	-

LUX GLENDER - ULTRA SAFE

Fully encapsulated LED luminaire - dimensions

For profile	Ø 42,4 mm Lilly	Ø 48,3 mm Paula	Ø 60,3 mm Nina / 60 x 45 mm Ronny
40 x 40 mm Emil	Ø 60,3 mm Nina / 60 x 45 mm Ronny	27 x 30	35 x 34

Housing lenght GL [mm]	250	500	750	1000	1250	1500
Light bar lenght L [mm]	200	450	700	950	1200	1450
Distance A [mm]	230	480	730	980	1230	1480



- ULTRA SAFE fully encapsulated LED-luminaire, suitable for all handrailing profiles of LUX GLENDER GmbH
- Vandal proof

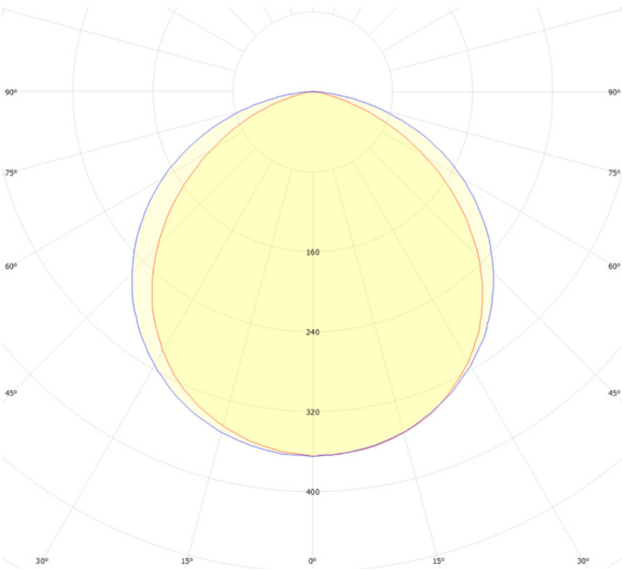
Further lenght on request.

LUX GLENDER - ULTRA SAFE

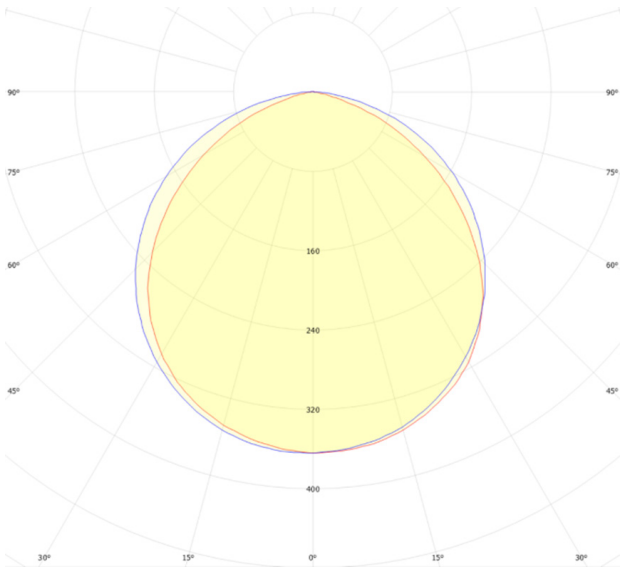
Photometric technical data - symmetrical light distribution

ULTRA SAFE 1000 mm, symmetrical light distribution transparent potting			
Luminous flux [Lm/meter]			
	3 W/m	5 W/m	10 W/m
ULTRA SAFE 24	145	240	480
ULTRA SAFE 27	145	240	480
ULTRA SAFE 35	145	240	480

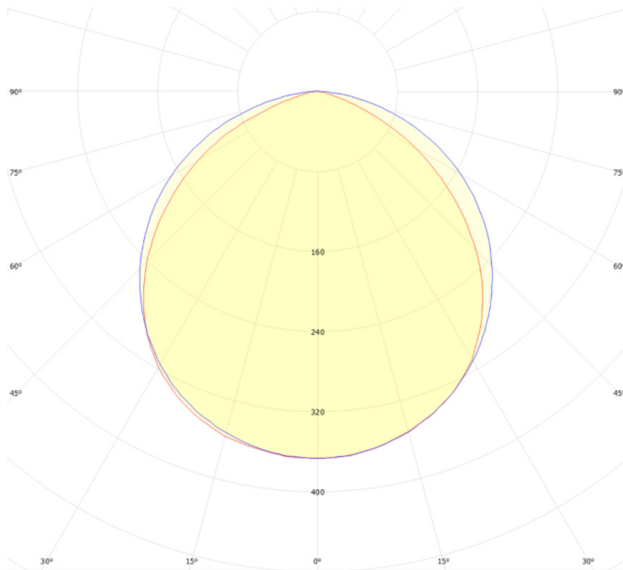
Total-system data: The LED handrail, fully assembled and measured, excluding the dimensions of the wall or balustrade.



Polar diagram: ULTRA SAFE 24mm, sym.



Polar diagram: ULTRA SAFE 27mm, sym.



Polar diagram: ULTRA SAFE 35mm, sym.

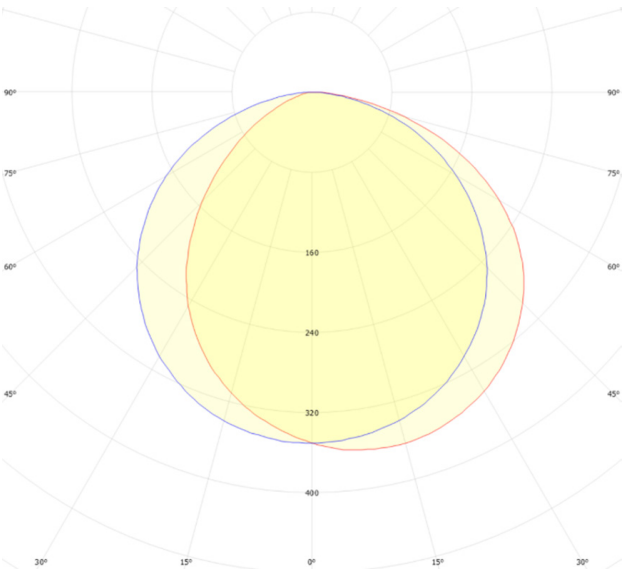
Additional services, colors, and variants available upon request

LUX GLENDER - ULTRA SAFE

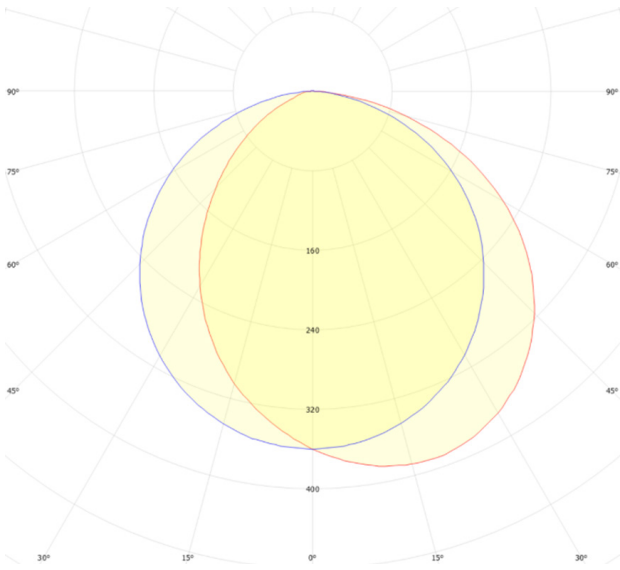
Photometric technical data - asymmetrical light distribution

ULTRA SAFE 1000 mm, asymmetrical light distribution transparent potting			
Luminous flux [Lm/meter]			
	3 W/m	5 W/m	10 W/m
ULTRA SAFE 24	145	240	480
ULTRA SAFE 27	135	220	440
ULTRA SAFE 35	130	212	425

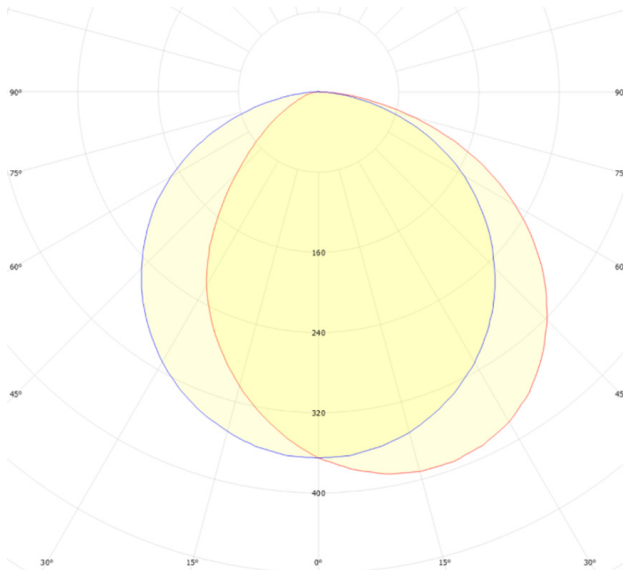
Total-system data: The LED handrail, fully assembled and measured, excluding the dimensions of the wall or balustrade.



Polar diagram: ULTRA SAFE 24mm, asym.



Polar diagram: ULTRA SAFE 27mm, asym.

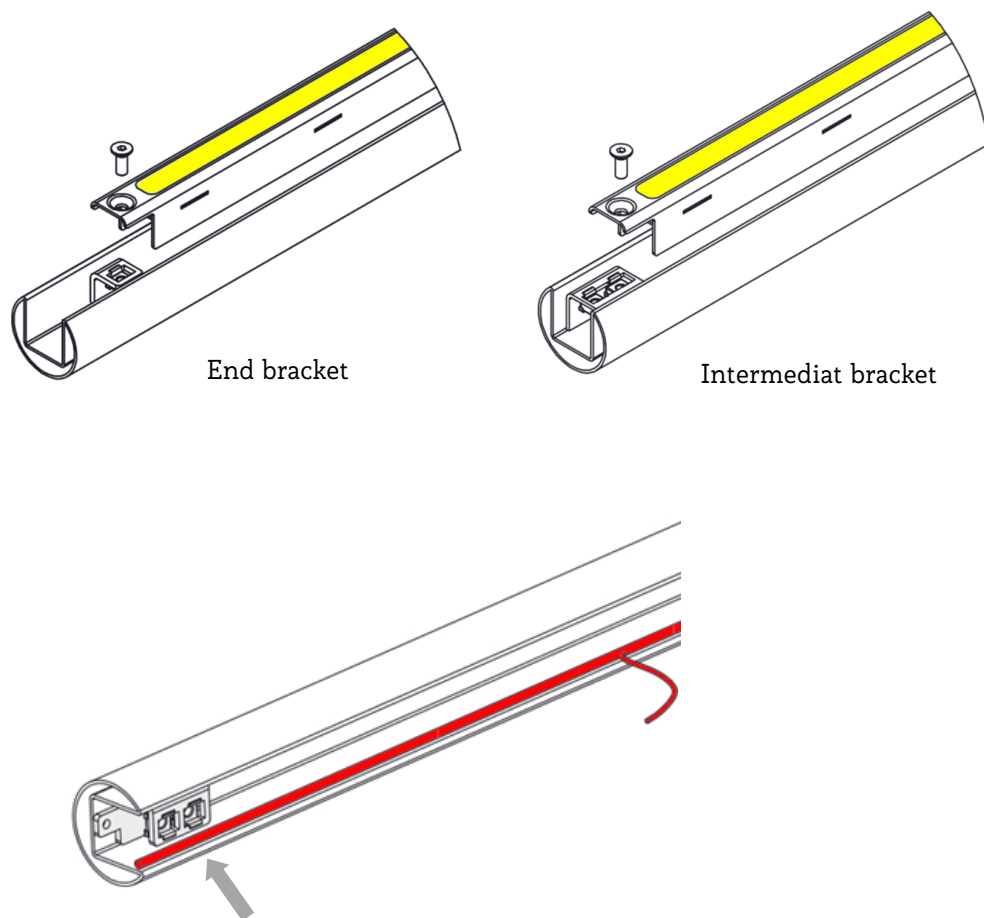


Polar diagram: ULTRA SAFE 35mm, asym.

Additional services, colors, and variants available upon request

LUX GLENDER - ULTRA SAFE

Fixation - option 1



Installation instructions for the end and intermediate brackets:

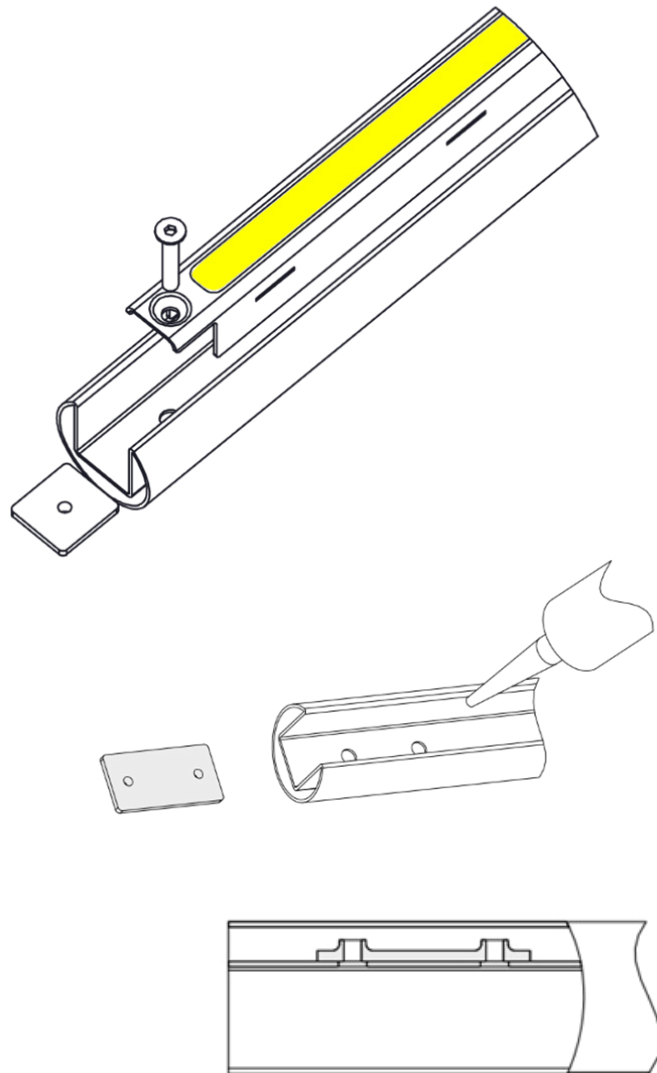
- The end and intermediate brackets can be installed after the handrail has been fully assembled.
- End brackets with one nut are made for the ends or at the thermal expansion joint. Intermediate brackets with two nuts are used between two light bars.
- The bracket allow a tolerance compensation of approx. +/- 2,5 mm
- The brackets are welded or riveted with a blind rivet into the groove.
- When welding, attention should be paid to the distortion in the groove. The profile may have to be straightened after welding.
- Until a wire cross section of up to 10 mm² (10 mm² in case of Nina ø 60,3 and Ronny 60x45 mm) cabel can be hooked directly into the groove. It is not necessary to get them through from the beginning.
- The ULTRA SAFE light bars must not be laid over the thermal expansion joints, the lights could be damaged. Planning of the project is usually necessary. Special solutions are possible - contact us for further assistance.

Customization i.e. RGB, Colors, etc. available upon request.

All specifications also apply to LED handrails with aluminum WOOD profile.

LUX GLENDER - ULTRA SAFE

Fixation - option 2

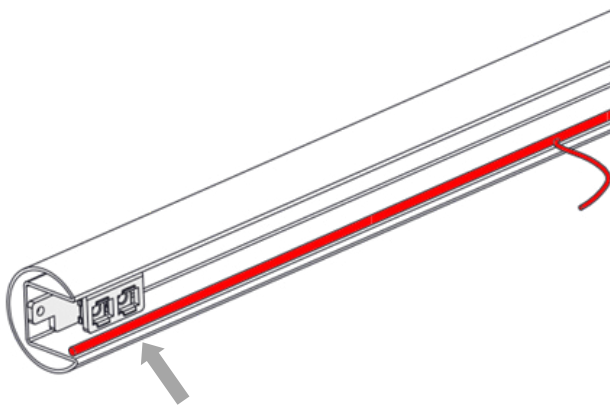
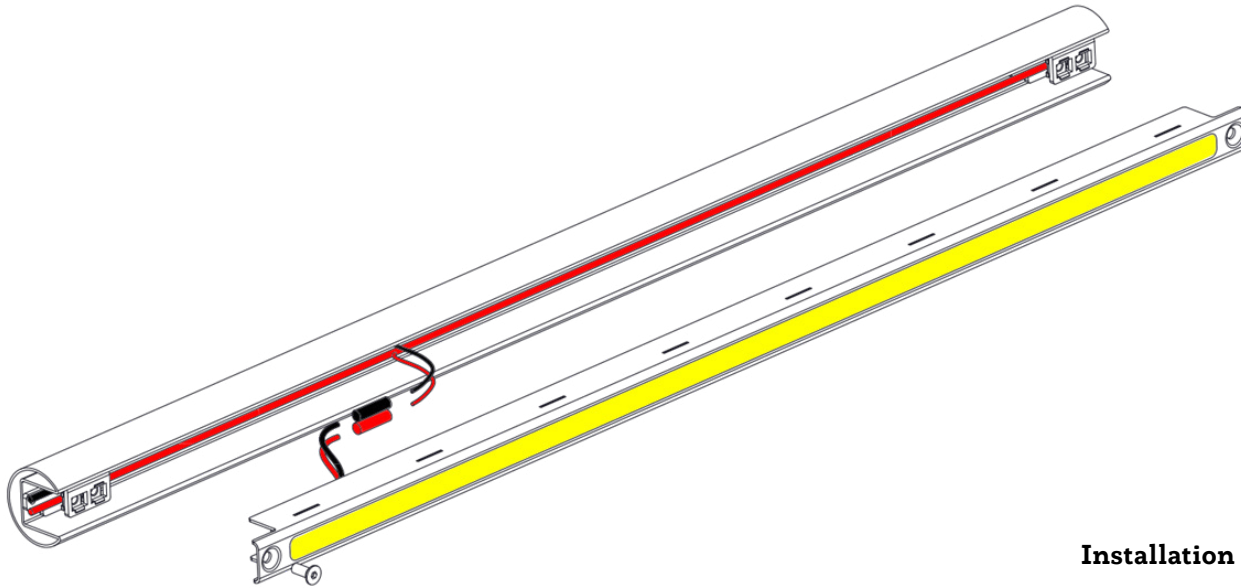


Installation instructions for the sliding block/nut:

- **Before installing the handrail, push the sliding blocks/nuts into the cavity of the handrail profile and position them. Once the handrail has been fully assembled, the sliding blocks can usually no longer be installed in the handrail.**
- Pre-drill the mounting holes for the ULTRA SAFE light bars, insert the sliding nuts, and secure them with neutral cross-linked silicone to prevent sliding
- Refer to the assembly instructions for the sliding nuts.
- The size of the hole in the groove base determines the tolerance compensation, typically within the range of +/- 2mm (e.g., M6 screw, hole $\varnothing 10$ mm). Be careful of the cables as you insert the screws. The thread of the screws could damage the insulation of the cable.
- ULTRA SAFE light bars should not be placed over thermal expansion joints to avoid potential damage. Project planning is typically necessary, and special solutions are available.

LUX GLENDER - ULTRA SAFE

Electrical connection



Installation instructions - electrical connection of the lights bars:

- After the metal construction work is finished, the cables can be laid.
- We recommend utilizing pre-assembled cable harnesses tailored to your specific project. Feel free to reach out to us for the supply of pre-assembled cable harnesses tailored to your needs – we're here to assist you.
- Wire cross-sections of up to 10 mm² (10 mm² for Nina ø60.3 and Ronny 60x45 mm) can be directly hooked into the groove. It is not necessary to get them through from the beginning.
- Cabling work can be carried out on the construction site at any time.
- The lights are typically connected to the wiring harness using shrink solder connectors with adhesive as standard.
- Cable connectors are also possible and can be implemented on a project-by-project basis.

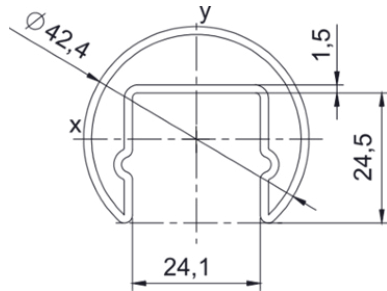
LUX GLENDER - ULTRA SAFE

Stainless steel slotted pipes

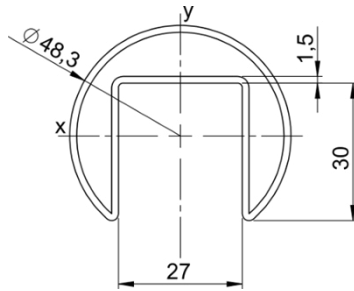
Stainless steel slotted pipes on stock

Project-related stainless steel - slotted pipes

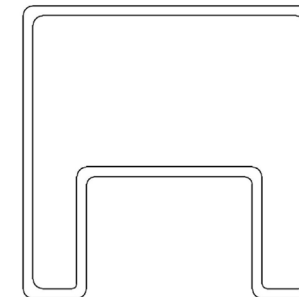
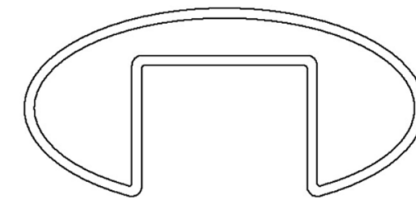
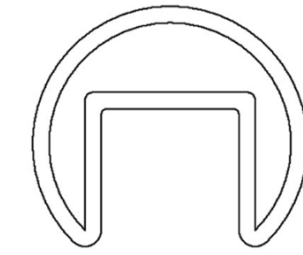
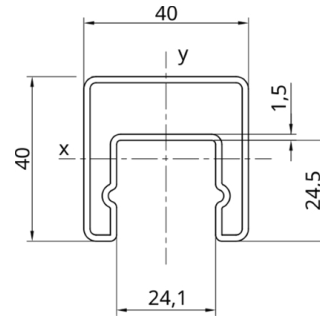
LILLY - \varnothing 42,4 mm



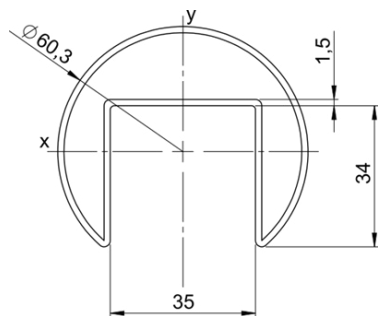
PAULA - \varnothing 48,3 mm



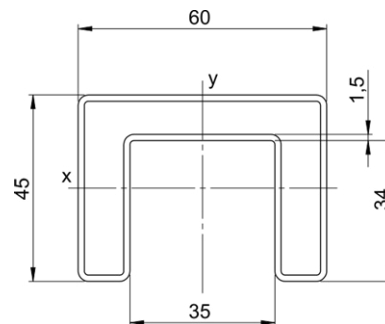
EMIL - 40 x 40 mm



NINA - \varnothing 60,3mm



RONNY - 60 x 45 mm



Special profile:

Alongside our standard stainless steel handrail profiles, we also offer project-specific special profiles. The minimum order quantity is 3000 meters. We provide options such as oval profiles, profiles with larger wall thicknesses (e.g., \varnothing 50 x 3 mm), and special sizes for both round and square profiles.

If desired, we support you in your planning.

LUX GLENDER - ULTRA SAFE

Stainless steel slotted pipe - Lilly - \varnothing 42,4 x 1,5 mm

Dimensions

Outer diameter	\varnothing 42,4 mm
Wall thickness	1,5 mm
Slot B x T	24 x 24,5 mm
Delivery length	6010 mm

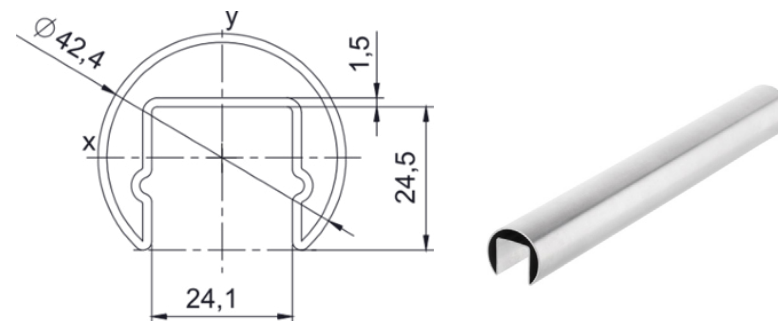
Item no.	Material	Surface	Weight
A000003	1.4301/07	Blank IIIc 2B	2,1 kg/m
A000004	1.4301/07	K240	2,1 kg/m
A000202	1.4401/04	Blank IIIc 2B	2,1 kg/m
A000203	1.4401/04	K240	2,1 kg/m

This profile meets following accesibility standards:

Germany:	DIN 18040, DIN 18024, DIN 18025
Austria:	ÖNORM B 1600:2011, ÖNORM B 1601:1994, ÖNORM B 1602:2001, ÖNORM B 1603:2005
Switzerland:	SN 521 500, SN 640 075, SN 640 238, SN 640 568

General information about the stainless handrail profile in \varnothing 42,4 x 1,5 mm

- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 and EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks made by the roll-forming process are normal
- Site finishing by installer may be necessary
- Double-sided cutting cannot be ruled out
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)
- Further polishes, grits, powder coating or sandblasting on request



Ideal for stairs, footbridges, balconies and bridges - barrier-free constructions.

Resistance- and area moment

Wx	Wy	Ix	Iy
1,5 cm ³	2,5 cm ³	2,92 cm ⁴	5,28 cm ⁴

Maximum span

Horizontal payload F	0,5 kN/m	1 kN/m	2 kN/m
Maximum profile span L	2,1 m	1,5 m	1,0 m



Note: This data applies only to the profile. The respective connection points must be calculated separately. For post/support distances in connection with LUX GLENDER brackets, please refer to the respective product data sheets.

LUX GLENDER - ULTRA SAFE

Stainless steel slotted pipe - Paula - \varnothing 48,3 x 1,5 mm

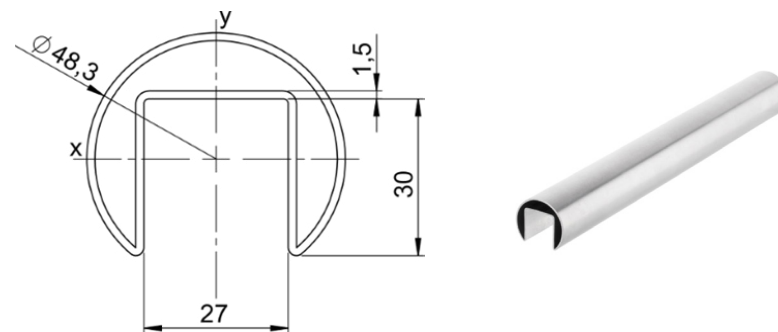
Dimensions

Outer diameter	\varnothing 48,3 mm
Wall thickness	1,5 mm
Slot B x T	27 x 30 mm
Delivery length	6010 mm

Item no.	Material	Surface	Weight
A000006	1.4301/07	Blank IIIC 2B	2,4 kg/m
A000008	1.4301/07	K240	2,4 kg/m
A000009	1.4401/04	Blank IIIC 2B	2,43 kg/m
A000253	1.4401/04	K240	2,43 kg/m
A000011	1.4001	Blank IIIC 2B	2,4 kg/m
A000012	1.4001	K240	2,4 kg/m

General information about the stainless handrail profile in \varnothing 48,3 x 1,5mm

- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 and EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks made by the roll-forming process are normal
- Site finishing by installer may be necessary
- Double-sided cutting cannot be ruled out
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)
- Further polishes, grits, powder coating or sandblasting on request



Ideal for stairs, footbridges, balconies and bridges.

Resistance- and area moment

W _x	W _y	I _x	I _y
2,0 cm ³	3,2 cm ³	4,6 cm ⁴	7,74 cm ⁴

Maximum span

Horizontal payload F	0,5 kN/m	1 kN/m	2 kN/m
Maximum profile span L	2,3 m	1,7 m	1,0 m



Note: This data applies only to the profile. The respective connection points must be calculated separately. For post/support distances in connection with LUX GLENDER brackets, please refer to the respective product data sheets.

LUX GLENDER - ULTRA SAFE

Stainless steel slotted pipe - Nina - \varnothing 60,3 x 1,5mm

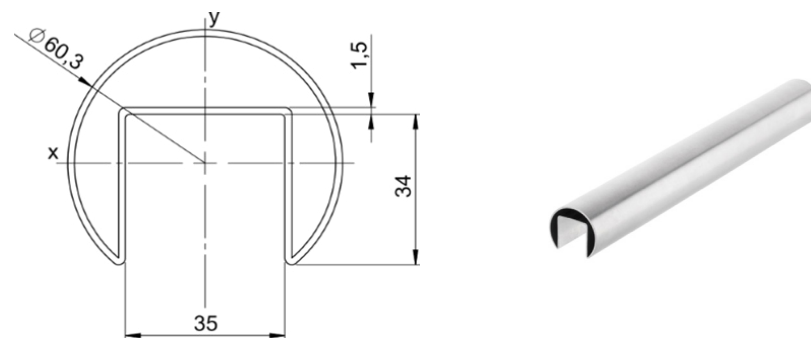
Dimensions

Outer diameter	\varnothing 60,3 mm
Wall thickness	1,5 mm
Slot B x T	35 x 34 mm
Delivery length	6010 mm

Item no.	Material	Surface	Weight
A000013	1.4301/07	Blank IIIC 2B	2,9 kg/m
A000014	1.4301/07	K240	2,9 kg/m
A000015	1.4401/04	Blank IIIC 2B	2,93 kg/m
A000016	1.4401/04	K240	2,93 kg/m

General information about the stainless handrail profile

- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 and EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks made by the roll-forming process are normal
- Site finishing by installer may be necessary
- Double-sided cutting cannot be ruled out
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)
- Further polishes, grits, powder coating or sandblasting on request



Ideal for footbridges, balconies and bridges.

Resistance- and area moment

W _x	W _y	I _x	I _y
3,1 cm ³	5,0 cm ³	8,44 cm ⁴	15,05 cm ⁴

Maximum span

Horizontal payload F	0,5 kN/m	1 kN/m	2 kN/m
Maximum profile span L	3,1 m	2,15 m	1,6 m



Note: This data applies only to the profile. The respective connection points must be calculated separately. For post/support distances in connection with LUX GLENDER brackets, please refer to the respective product data sheets

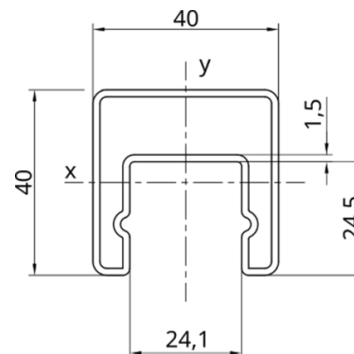
LUX GLENDER - ULTRA SAFE

Stainless steel slotted pipe - Emil - 40 x 40 x 1,5 mm

Dimensions

Outer diameter	40 x 40 mm
Wall thickness	1,5 mm
Slot B x T	24 x 24,5 mm
Delivery length	6010 mm

Item no.	Material	Surface	Weight
A000017	1.4301/07	K240 axial	2,35 kg/m
A000018	1.4401/04	K240 axial	2,38 kg/m



Ideal for stairs, footbridges, balconies and bridges

Resistance- and area moment

W _x	W _y	I _x	I _y
2,28 cm ³	3,39 cm ³	4,85 cm ⁴	6,79 cm ⁴

Maximum span

Horizontal payload F	0,5 kN/m	1 kN/m	2 kN/m
Maximum profile span L	2,25 m	1,75 m	1,05 m

Note: This data applies only to the profile. The respective connection points must be calculated separately. For post/support distances in connection with LUX GLENDER brackets, please refer to the respective product data sheets.

General information about the stainless handrail profile

- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 and EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks made by the roll-forming process are normal
Site finishing by installer may be necessary
- Double-sided cutting cannot be ruled out
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)
- Further polishes, grits, powder coating or sandblasting on request

LUX GLENDER - ULTRA SAFE

Stainless steel slotted pipe - Ronny - 60 x 45 x 1,5 mm

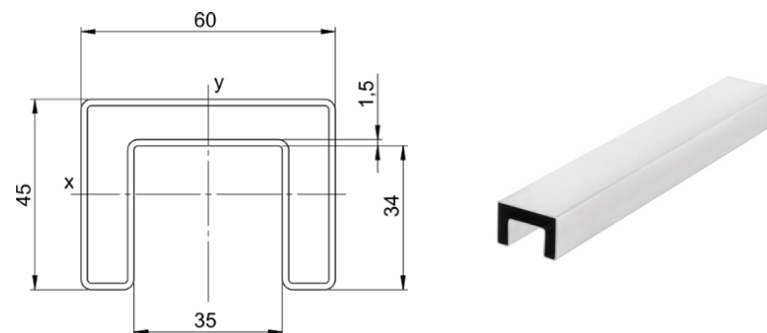
Dimensions

Outer diameter	60 x 45 mm
Wall thickness	1,5 mm
Slot B x T	35 x 34 mm
Delivery length	6010 mm

Item no.	Material	Surface	Weight
A000019	1.4301/07	K240 axial	3,13 kg/m
A000020	1.4401/04	K240 axial	3,17 kg/m

General information about the stainless handrail profile

- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 and EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks made by the roll-forming process are normal
- Site finishing by installer may be necessary
- Double-sided cutting cannot be ruled out
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)
- Further polishes, grits, powder coating or sandblasting on request



Ideal for terraces, balconies, bridges and all-glass railings with LED luminaire.

Resistance- and area moment

W _x	W _y	I _x	I _y
3,3 cm ³	6,3 cm ³	8,85 cm ⁴	18,9 cm ⁴

Maximum span

Horizontal payload F	0,5 kN/m	1 kN/m	2 kN/m
Maximum profile span L	2,55 m	1,8 m	1,3 m

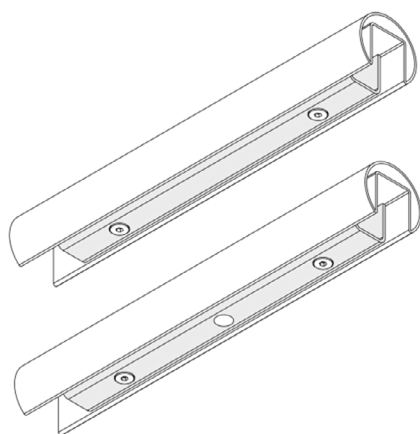
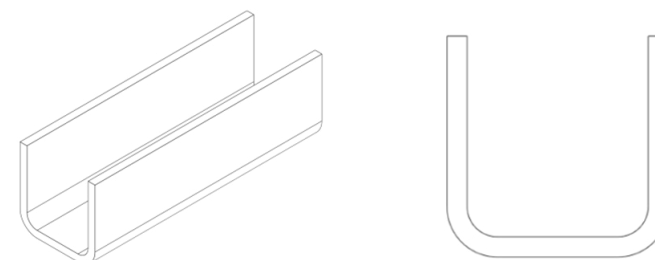


Note: This data applies only to the profile. The respective connection points must be calculated separately. For post/support distances in connection with LUX GLENDER brackets, please refer to the respective product data sheets.

LUX GLENDER - ULTRA SAFE

Slot closure profile

Item no.	For groove	For profile	Surface	Material	Weight	Deliverlenght
A000204	24 mm	Lilly ø 42,4 mm Emil 40 x 40 mm	K240	1.4301/07	1,10 kg/m	2990 mm
A000113	24 mm	Lilly ø 42,4 mm Emil 40 x 40 mm	K240	1.4401/04	1,10 kg/m	2990 mm
A000205	27 mm	Paula ø 48,3 mm	K240	1.4301/07	1,25 kg/m	2990 mm
A000053	27 mm	Paula ø 48,3 mm	K240	1.4401/04	1,25 kg/m	2990 mm
A000206	35 mm	Nina ø 60,3 mm Ronny 60 x 45 mm	K240	1.4301/07	1,48 kg/m	2990 mm
A000054	35 mm	Nina ø 60,3 mm Ronny 60 x 45 mm	K240	1.4401/04	1,48 kg/m	2990 mm



Installation Instructions:

- The slot locking profile is utilized to seal the open gaps between the LED elements. Additionally, electrical plugs can be accommodated beneath the slot closure profile.
- The slot locking profile is available in 3-meter and must be cut to the desired length by the processor.
- Countersinks for the M6 countersunk head screws are made in the slot closure profile.
- When utilizing sliding blocks to reinforce the groove bottom, handrail holders or supports can be welded directly onto the slot locking profile. This option eliminates the need for support brackets.

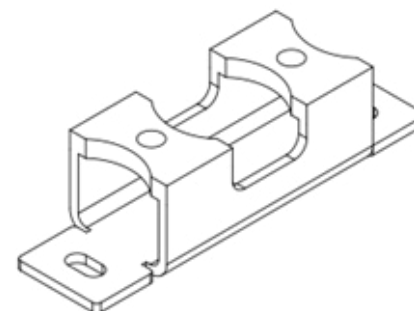
LUX GLENDER - ULTRA SAFE

Seperation base

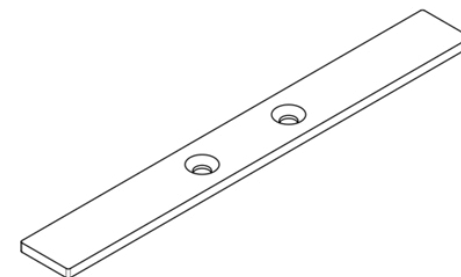
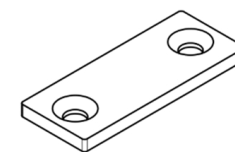
Item no.	For slot	For profile	Surface	Material	Length	High	Distance countersink M6	Distance for Blind rivets
A000806	24 mm	Lilly ø 42,4 mm Emil 40 x 40 mm	blank	1.4401/04	80 mm	20	34	66 + 1x center
A000807	27 mm	Paula ø 48,3 mm	blank	1.4401/04	80 mm	26	34	66 + 1x center
A000808	35 mm	Nina ø 60,3 mm Ronny 60 x 45 mm	blank	1.4401/04	80 mm	30	34	66 + 1x center

2x countersink for M6 countersunk screws. Distance 34 mm

Item no.	For groove	Surface	Material	Length	High	Distance countersink
A000809	24 mm	polished	1.4401	50 mm	4	34
A000810	27 mm	polished	1.4401	50 mm	4	34
A000811	35 mm	polished	1.4401	50 mm	4	34
A000812	24 mm	polished	1.4401	200 mm	4	34
A000813	27 mm	polished	1.4401	200 mm	4	34
A000814	35 mm	polished	1.4401	200 mm	4	34
A000815	24 mm	blank	steel	50 mm	4	34
A000816	27 mm	blank	steel	50 mm	4	34
A000817	35 mm	blank	steel	50 mm	4	34
A000818	24 mm	blank	steel	200 mm	4	34
A000819	27 mm	blank	steel	200 mm	4	34
A000820	35 mm	blank	steel	200 mm	4	34

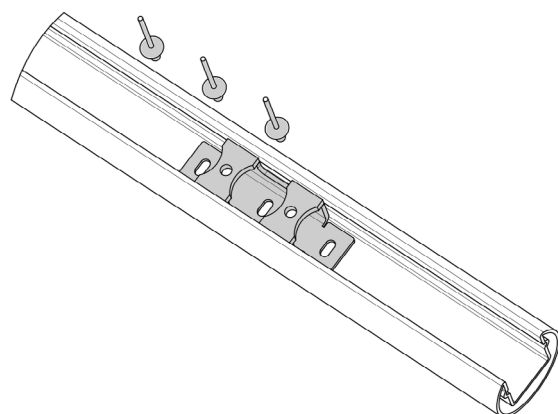
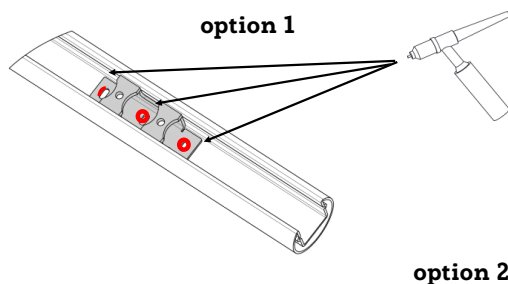


For seperation steel and stainless steel components

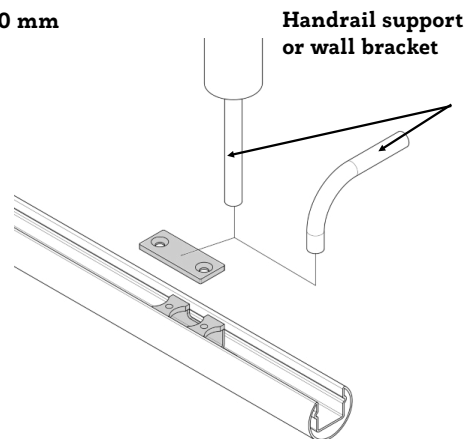


LUX GLENDER - ULTRA SAFE

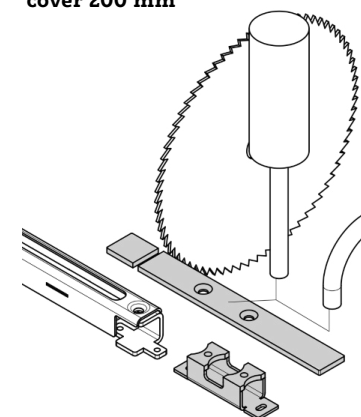
Installation Instructions - separation base



cover 60 mm



cover 200 mm



Installation Instructions:

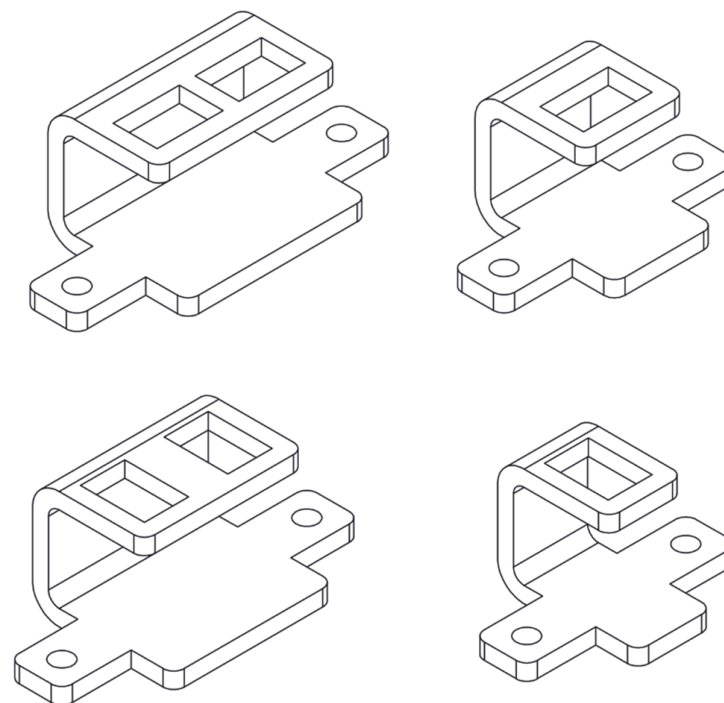
- Option 1: The separation base is welded to the handrail profile at the marked areas in the slot.
- Option 2: The separation base is secured in the slot with three stainless steel Ø4mm blind rivets. The cover plate is then attached to the separation base using M6x8 or M6x10 countersunk screws.
- The cover plate, with a length of 200 mm, can be adjusted as needed. It is available in stainless steel or steel versions. Choose the appropriate material based on the material of the support element.
- The shape of the separation base allows electric cables and LED strips to pass through the bracket without interrupting the LED tape.
- The power feed or power supply can be routed through the separation base by drilling out the corresponding cover plate. Utilize a hollow handrail holder, pipe bend, or pipe support for this purpose, ensuring adequate cross-section for the cable inside the pipe and proper deburring.

LUX GLENDER - ULTRA SAFE

Holder for ULTRA SAFE luminaire

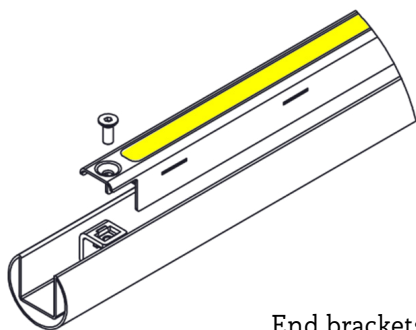
Item no.	For slot	Option	Direction	For profile	Material
A000497	24 mm	End-holder	lengthwise	Lilly ø 42,4 mm Emil 40x40 mm	1.4401/04
A000498	24 mm	Inter-holder	lengthwise	Lilly ø 42,4 mm Emil 40x40 mm	1.4401/04
A000499	27 mm	End-holder	lengthwise	Paula ø48,3 mm	1.4401/04
A000500	27 mm	Inter-holder	lengthwise	Paula ø48,3 mm	1.4401/04
A000501	27 mm	End-holder	crosswise	Paula ø48,3 mm	1.4401/04
A000502	27 mm	Inter-holder	crosswise	Paula ø48,3 mm	1.4401/04
A000503	35 mm	End-holder	lengthwise	Nina ø60,3 mm Ronny 60x45 mm	1.4401/04
A000504	35 mm	Inter-holder	lengthwise	Nina ø60,3 mm Ronny 60x45 mm	1.4401/04
A000505	35 mm	End-holder	crosswise	Nina ø60,3 mm Ronny 60x45 mm	1.4401/04
A000506	35 mm	Inter-holder	crosswise	Nina ø60,3 mm Ronny 60x45 mm	1.4401/04

- The 'lengthwise' type is used for straight handrails, with tolerance compensation along the groove approximately +/- 2.5mm.
- The 'crosswise' type is used for curved handrails, with tolerance compensation across the groove also approximately +/- 2.5mm.

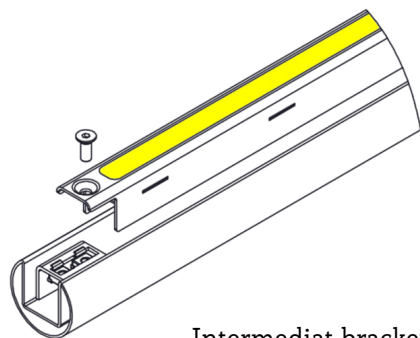


LUX GLENDER - ULTRA SAFE

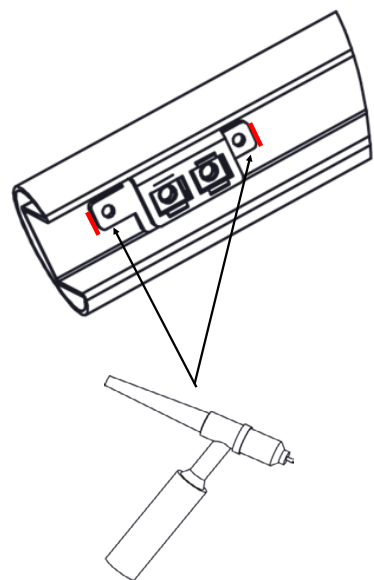
Installation Instructions - ULTRA SAFE brackets



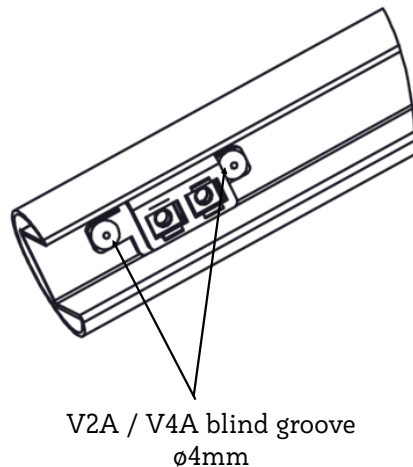
End brackets



Intermediate brackets



or



V2A / V4A blind groove
ø4mm

Installation Instructions with end- and intermediate brackets:

- End or intermediate brackets are used for ULTRA SAFE luminaire mounting.
- The end and intermediate brackets can also be fitted after the final assembly of the handrailing.
- End brackets with one nut are used at the ends or at the thermal expansion joint. Intermediate holders with two nuts are used between two lights.
- The nuts in the holders allow tolerance compensation of approximately $\pm 2.5\text{mm}$, either longitudinally or transversely, depending on the design of the holder.
- Type "longitudinal" is used for straight handrails. Tolerance compensation along the groove.
- Type "transverse" is used for curved handrails.
- Tolerance compensation across the groove.
- The holders are welded into the groove or fastened with blind rivets.
- When welding, attention should be paid to the distortion of the groove. It may be necessary to straighten the profile after welding.
- Cables with cross-sections ranging from 6mm^2 to 10mm^2 (for Nina $\varnothing 60.3$) can be inserted directly from the front up to a certain point. No need to feed the cables through.
- ULTRA SAFE luminaires should not be placed across thermal expansion joints, as this could result in damage to the luminaires. In such cases, project planning is typically required, and special solutions may be implemented.

If you need any advice or assistance, feel free to ask!

LUX GLENDER - ULTRA SAFE

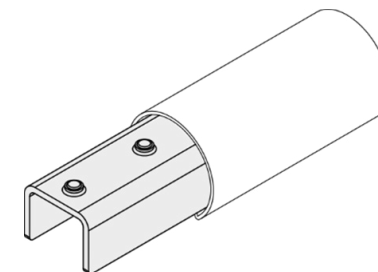
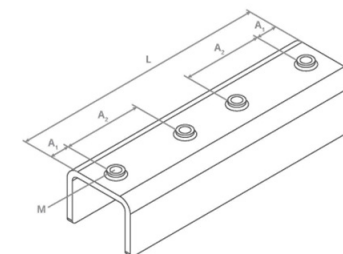
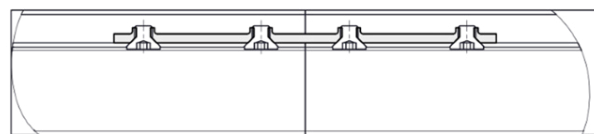
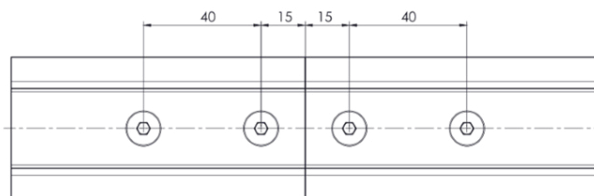
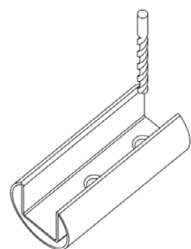
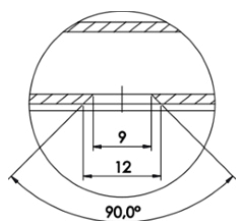
Universal connector

Item no.	For groove	For profile	Material	L	A1	A2	M
A000022	24 mm	Lilly ø 42,4 mm	1.4401/04	130 mm	10 mm	40 mm	M6
		Emil 40 x 40 mm					
A000030	27 mm	Paula ø 48,3 mm	1.4401/04	130 mm	10 mm	40 mm	M6
A000021	35 mm	Nina ø 60,3 mm	1.4401/04	130 mm	10 mm	40 mm	M6
		Ronny 60 x 45 mm					

Incl. 4x countersunk screws ISO 10642 / DIN 7991 A4 M6x8

The universal connector enables hairpin joints without a waistband. The connection is concealed within the cavity of the profile and remains invisible from the outside.

The universal connector was dimensioned as a load-bearing component and successfully tested by the LGA (Landesgewerbeanstalt Bayern) for static loads of up to 19 kN. If the joint is between two profiles, the universal connector can absorb forces of up to 19 kN without breaking.



Installation Instructions:

- The profiles are drilled through and countersunk on the inside of the groove. Countersunk head screws are preferred for all-glass railings and LED applications due to their space-saving design. Alternatively, flat head or pan head screws can be used for other applications.
- Refer to the sketch for drilling distances, or use our auxiliary template for convenience, especially when working on-site.
- To assemble, insert one side of the connector into one of the profile pieces and tighten the screw.
- Then, insert the second tube and secure it with a screw.

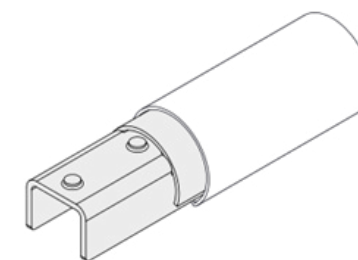
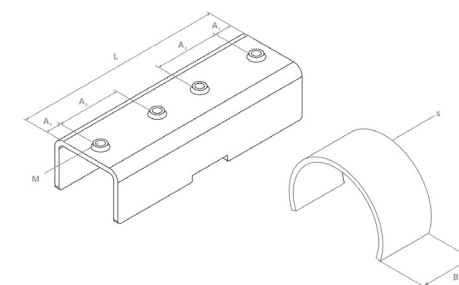
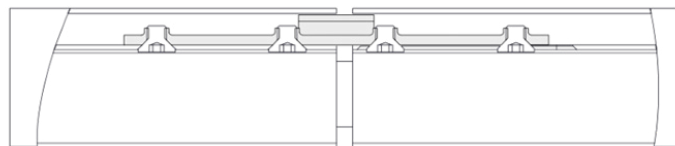
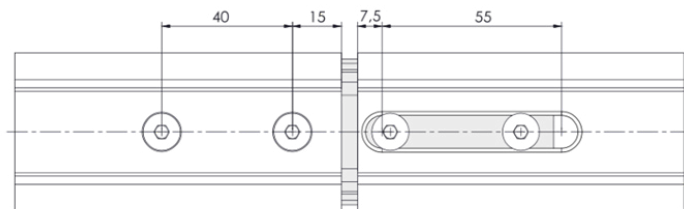
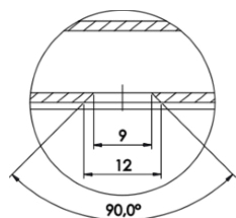
LUX GLENDER - ULTRA SAFE

Universal connector with a clamp for expansion gap

Item no.	For profile	Material	L	A1	A2	M	B	s
A000028	Lilly ø 42,4 mm	1.4401/04	130 mm	10 mm	40 mm	M6	23	2
A000029	Paula ø 48,3 mm	1.4401/04	130 mm	10 mm	40 mm	M6	23	2
A000031	Nina ø 60,3 mm	1.4401/04	130 mm	10 mm	40 mm	M6	23	2
A000033	Emil 40 x 40 mm	1.4401/04	130 mm	10 mm	40 mm	M6	23	2
A000032	Ronny 60 x 45 mm	1.4401/04	130 mm	10 mm	40 mm	M6	23	2

Incl. 4x countersunk screws ISO 10642 / DIN 7991 A4 M6x8.

An universal connectort with a clamp is used to adjust the gap caused by thermal expansion.

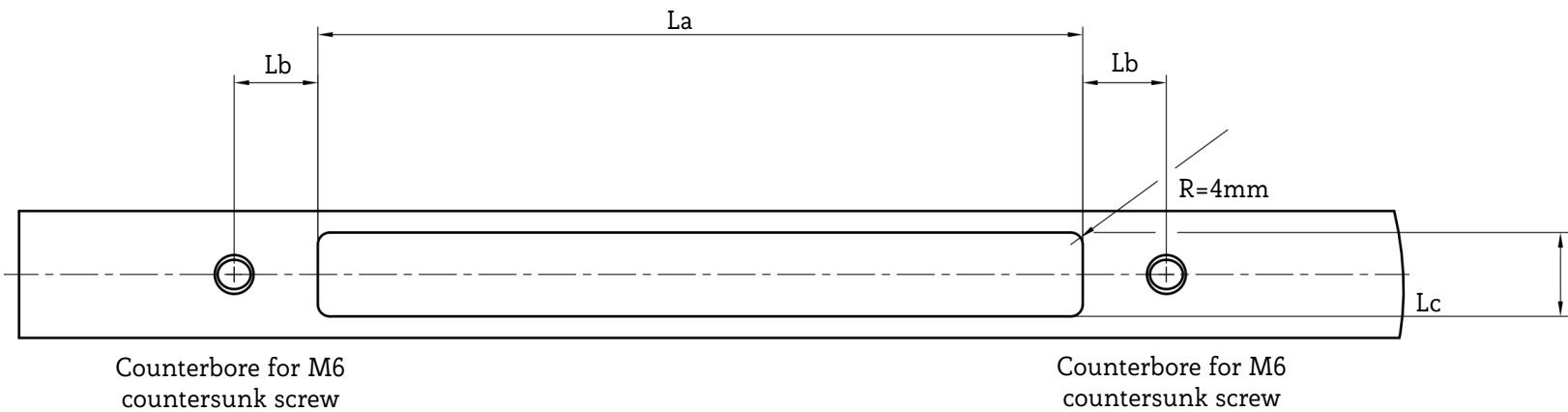


Installation Instructions:

- The tubes are drilled through and countersunk or milled on the inside of the groove. Countersunk head screws are preferred for all-glass railings and LED applications due to their space-saving design. Alternatively, flat head or pan head screws can be used for other applications.
- For the expansion joint, securely screw the universal connector to one end of the profile, similar to a hairpin. Next, mill an elongated hole in the other end of the profile, allowing for movement when the material expands.
- The clamp is positioned in a recess in the universal connector but can also be attached to one end of the profile.
- We recommend installing an expansion joint every 12 meters.

LUX GLENDER - ULTRA SAFE

Luminaire cutout for round tube installation



Dimensions for luminaire cutout			
For luminaire	Lenght La	Distance Lb	Width Lc
250 x 27 mm	256 mm	27 mm	28 mm
500 x 27 mm	506 mm	27 mm	28 mm
750 x 27 mm	756 mm	27 mm	28 mm
1000 x 27 mm	1006 mm	27 mm	28 mm
1250 x 27 mm	1256 mm	27 mm	28 mm
1500 x 27 mm	1506 mm	27 mm	28 mm

Installation instructions - Luminaire cutout

- Hole drilling for countersinking M6 screws.
- After milling the cutout, the edges must be deburred.

Other luminaire sizes available upon request.

LUX GLENDER - ULTRA SAFE

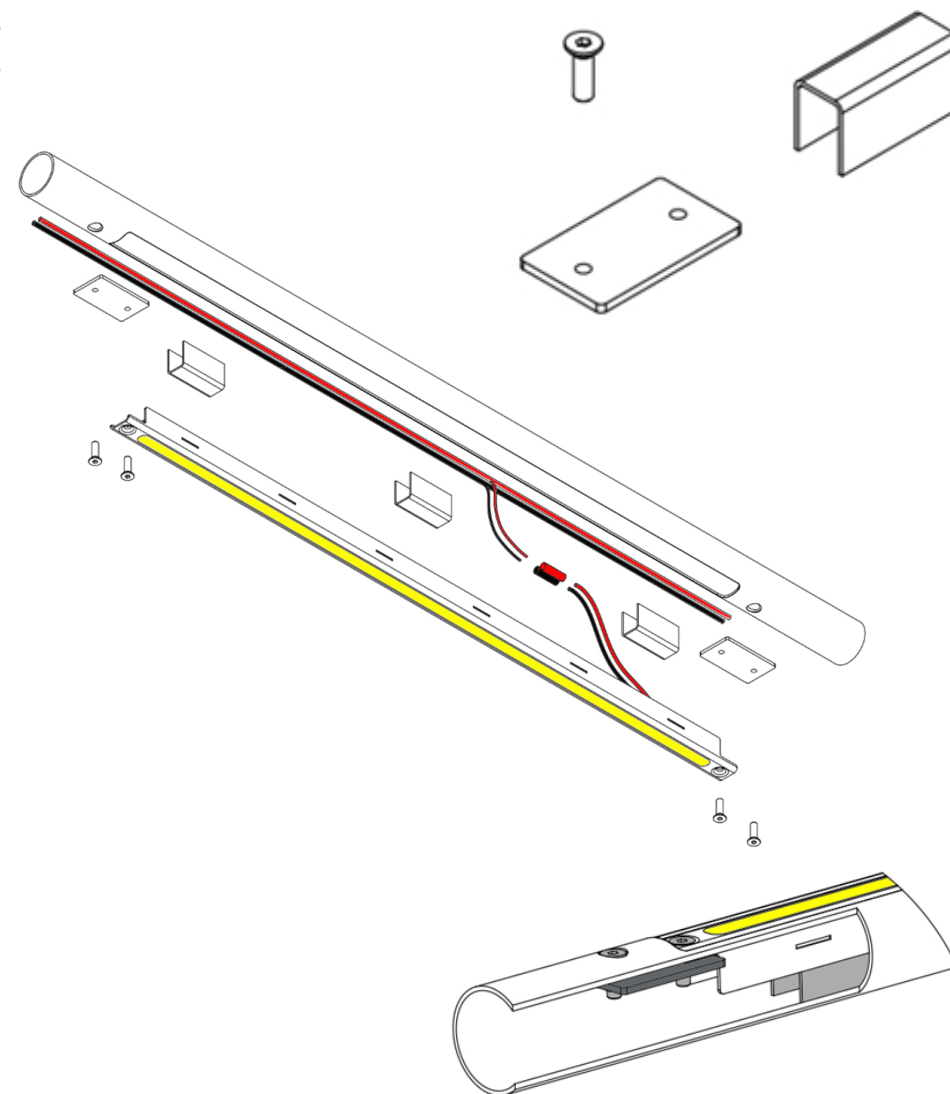
Round tube installation kit

Item no.	For round tubes	ULTRA SAFE luminaires	Material
A000314	Ø 42.4 - 60,3	24 mm, 27 mm and 35 mm	1.4401/04

The set is customized and offered according to the respective diameter and wall thickness of the round tube and ULTRA SAFE luminaire.

Installation instructions - Round tube installation:

- After the luminaire cutout has been made and deburred, the cables can be installed (see electrical connection).
- Insert the nut into the tube according to the drawing.
- Use the screws from the installation kit to screw the nut into the round tube.
- Connect the luminaire cables and the wiring harness with the connectors from the connection set.
- Insert the luminaire into the luminaire cutout and screw it in place.



LUX GLENDER - ULTRA SAFE

Handrail holder hollow and full

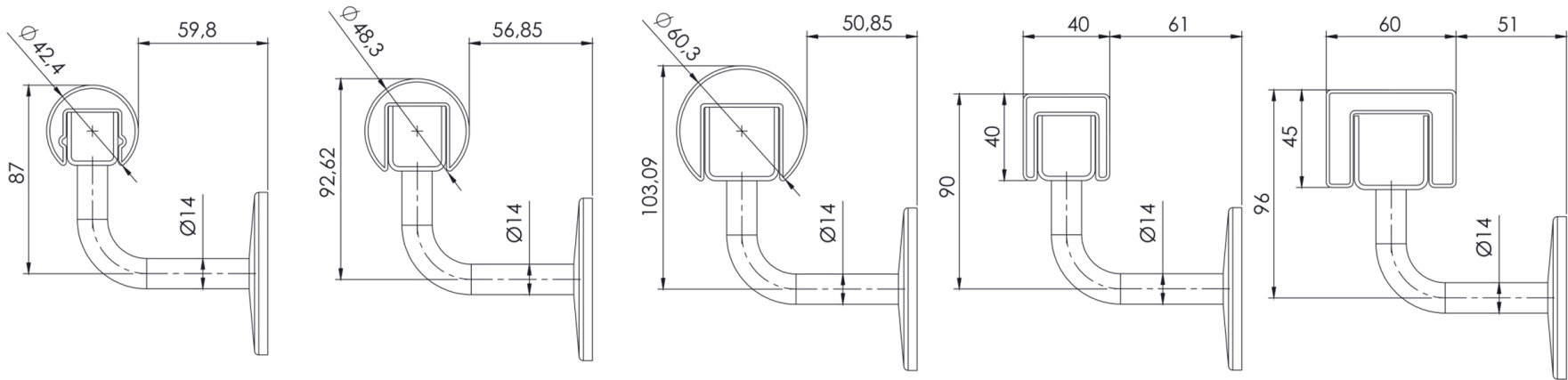
Item no.	For profile
A000247	all More variations and dimensions
A000248	all available in our online shop!

Material: 1.4401/04

Maximum span				
Horizontal payload F		0,5 kN/m	1 kN/m	2 kN/m
Maximum handrail holder span L	A000247	1,1 m	0,55 m	0,25 m
	A000248	1,5 m	0,75 m	0,35 m



Note: This information specifically pertains to LUX GLENDER handrail holders in conjunction with our supply brackets and handrail profiles. Maximum distances provided do not account for construction and assembly substrates or fastening materials and must be designed and checked by the customer.

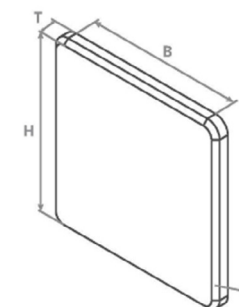
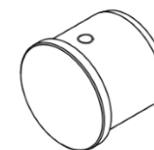
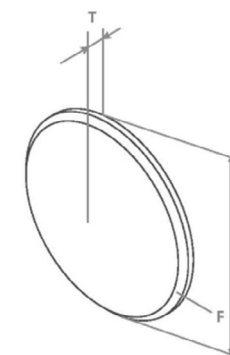
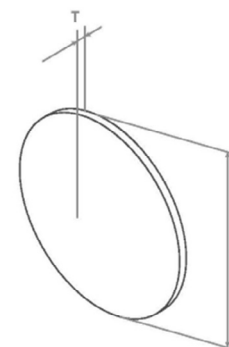


LUX GLENDER - ULTRA SAFE

End cap for welding and screwing

Item no.	For profile	Material	Schape	Form	D	B	H
A000092	welding	Lilly ø 42,4 mm	1.4401/04	flat	42,4 mm	-	-
A000093	welding	Paula ø 48,3 mm	1.4401/04	flat	48,3 mm	-	-
A000090	welding	Paula ø 48,3 mm	1.4401/04	arched	48,3 mm	-	-
A000094	welding	Nina ø 60,3 mm	1.4401/04	flat	60,3 mm	-	-
A000091	welding	Nina ø 60,3 mm	1.4401/04	arched	60,3 mm	-	-
A000095	welding	Emil 40 x 40 mm	1.4401/04	flat	-	40 mm	40 mm
A000096	welding	Ronny 60 x 45 mm	1.4401/04	flat	-	60 mm	45 mm
A000214	screwing/ sticking	Lilly ø 42,4 mm	1.4401/04	flat	42,4 mm		
A000299	screwing	Paula ø 48,3 mm	1.4401/04	flat	48,3 mm		
A000300	screwing	Paula ø 48,3 mm	1.4401/04	arched	48,3 mm		
A000301	screwing	Nina ø 60,3 mm	1.4401/04	flat	60,3 mm		
A000302	screwing	Nina ø 60,3 mm	1.4401/04	arched	60,3 mm		
A000303	screwing/ sticking	Emil 40 x 40 mm	1.4401/04	flat		40 mm	40 mm

End cap options may vary.



LUX GLENDER - ULTRA SAFE

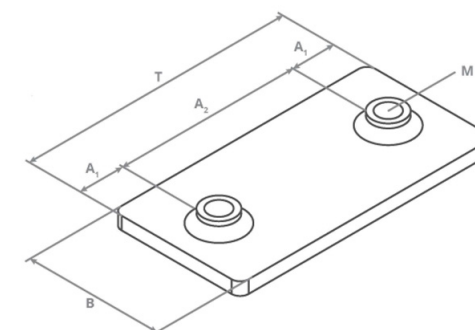
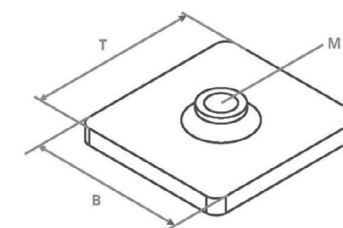
Sliding block - simple and dual

Item no.	For profile	Material	B	T	M
A000130	Lilly ø 42,4 mm Paula ø 48,3 mm	1.4571	28 mm	30 mm	M6
A000131	Nina ø 60,3 mm	1.4571	45,75 mm	25 mm	M6
A000132	Emil 40 x 40 mm	1.4571	35 mm	30 mm	M6
A000133	Ronny 60 x 45 mm	1.4571	55 mm	25 mm	M6

Item no.	For profile	Material	B	T	A1	A2	M
A000138	Lilly ø 42,4 mm	1.4571	28 mm	60 mm	10 mm	40 mm	M6
A000134	Paula ø 48,3 mm	1.4571	30 mm	60 mm	10 mm	40 mm	M6
A000135	Nina ø 60,3 mm	1.4571	46 mm	60 mm	10 mm	40 mm	M6
A000136	Emil 40 x 40 mm	1.4571	35 mm	60 mm	10 mm	40 mm	M6
A000137	Ronny 60 x 45 mm	1.4571	55 mm	60 mm	10 mm	40 mm	M6

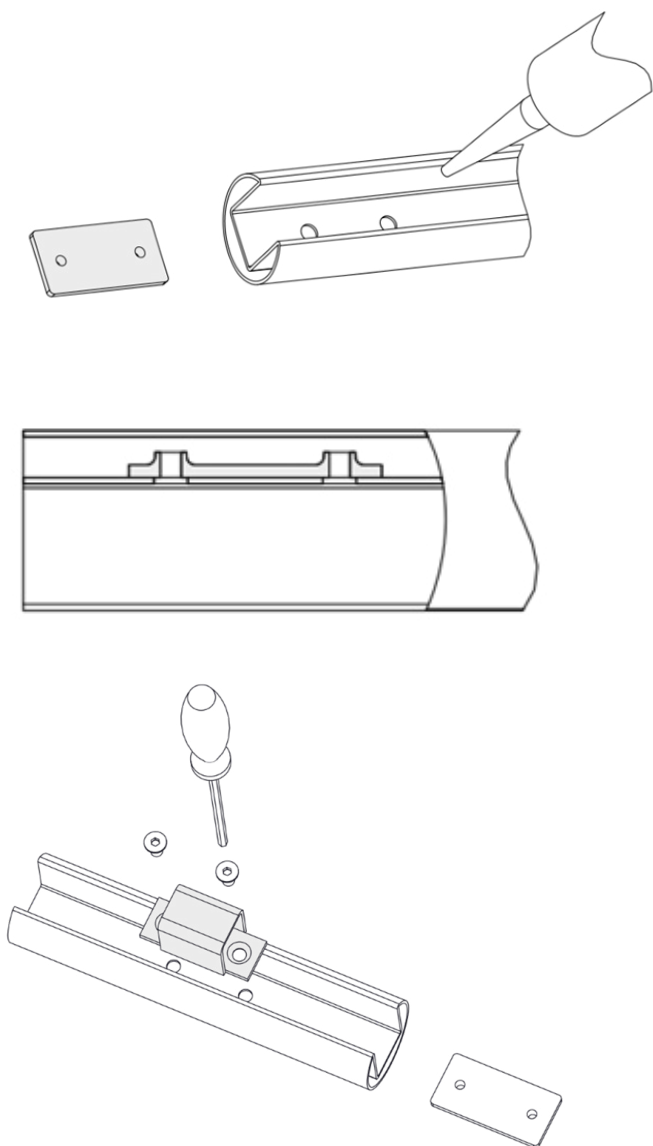
Notes

Sliding blocks enable a secure connection of handrail profiles and accessories, as the limited wall thickness of the handrail profiles may not provide sufficient threads for M6 screws. It is recommended to use sliding blocks when accessories are not directly welded to the handrail.



LUX GLENDER - ULTRA SAFE

Installation Instructions - sliding block



Installation Instructions:

- The wall thickness of the handrail profile is 1,5 mm. A stable screw connection with M6 screws is only possible, if the bottom of the groove is reinforced with the help of a sliding block.
- Place the profile on the work stands with the groove facing upward.
- Drill holes in the bottom of the groove ranging from 8 to 20 mm. The larger 20 mm holes are essential for accommodating material expansion due to temperature changes.
- Insert a scriber or screwdriver into the first hole to ensure that the sliding block is not pushed further than necessary.
- Next, use a suitable insertion aid, such as a wooden, plastic, or stainless steel stick, to push the sliding block into the cavity. Continue pushing until the screwdriver placed in the first hole no longer moves.
- Remove the screwdriver from the hole and gently push the sliding block a few centimeters further.
- Use the screwdriver to position the sliding block concentrically to the drilling. To prevent the sliding block from slipping in the cavity, we recommend applying a neutral, cross-linking silicone. Once the silicone is applied, screw in the screw and allow the silicone to dry. Afterward, you can loosen the screw again, and the sliding block will maintain its position.
- Insert each sliding block individually rather than all at once in a row.
- Begin by inserting the sliding block into the hole farthest away, then proceed to the hole closest to the end of the pipe.
- **IMPORTANT** - Only use neutral-curing silicone. Do not use vinegar-curing silicone.

LUX GLENDER - ULTRA SAFE

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Technical modifications are subject to reservation.
05-2024