



TECHNICAL DATA

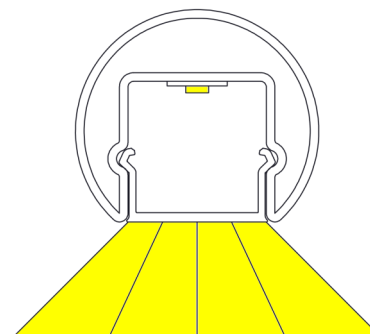
LUX GLENDER BASIC

LUX GLENDER - BASIC

Handrail material	AISI/SAE 304 or 316L
Handrail dimension	ø42,4, ø48,3, ø60,3, 40x40, 60x45mm
Light source	LED-Strip
Operating voltage	24 VDC
Power	6, 10, 15, 20 W/m
Light color temperature	2700, 3000, 4000 and 5000 K
CRI	> 80
Protection LED-Strip	IP20 or IP67
Operating temperatur	-40 ... 55°C
Life cicle	> 50.000 h
Dimmable	Yes (PWM)
Cover material	PMMA, opal
Light distribution	symmetrical
Vandals safety	No
Applications	Indoor, Outdoor

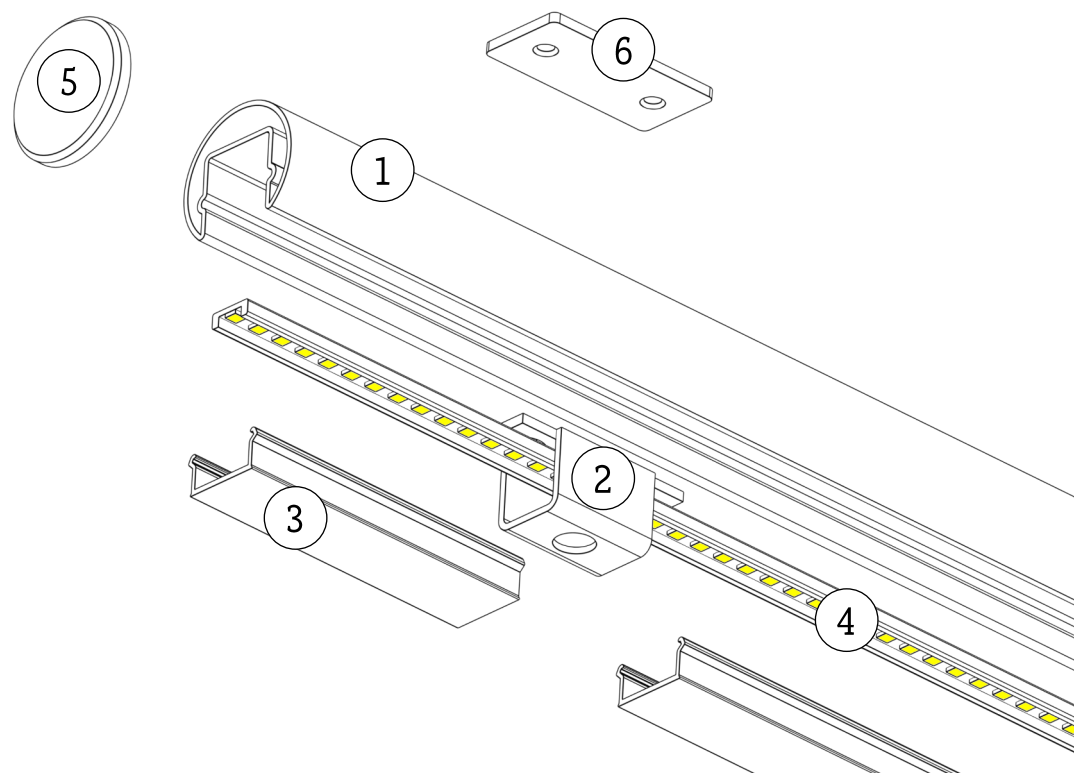
Application examples:

- Office, doctor's or law offices
- Retirement home
- Hospitals
- Privat housholders
- Privat gardens
- Hotels, bars, restaurants
- Schools, children daycare, kindergarten, universities



LUX GLENDER BASIC für ø 42,4 mm

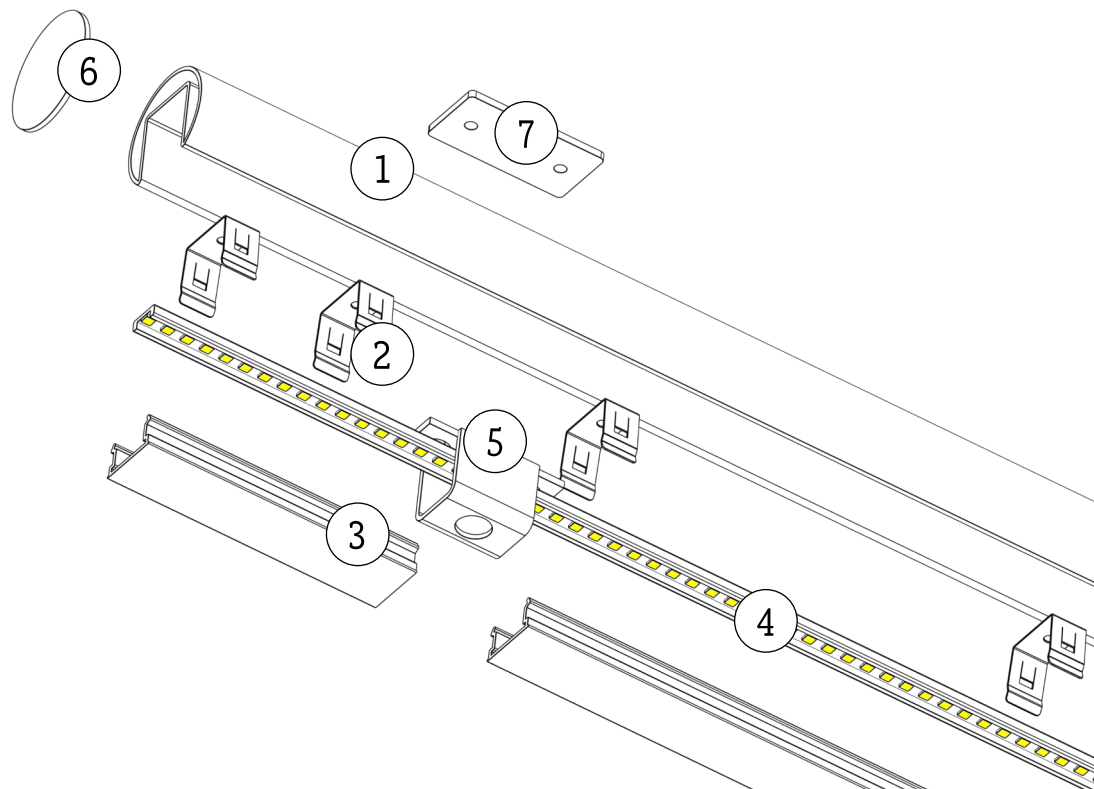
Pos.	Benennung	Beschreibung
1	Handrail profile	Stainless steel AISI/SAE 304 or 316L. Only in profile Lilly ø42,4 mm available
2	Support bracket	For welding in the nut or to bolt together with sliding block (6)
3	LED-Strip cover	Opal PMMA cover, symmetrical Light distribution
4	LED-Strip	IP00 for indoor oder IP67 for outdoor
5	End cap	For welding
6	Sliding block	For fixing of support bracket, if not welded



- Further informations regarding components you will find in the LED - Datasheet and in the area of system components description.
- The handrail profiles and PMMA covers will be delivered as a bar of 6 m length
- LED-Strips will custom-made assembled
- The planning needs to be made by customer
- Further services, colours, RGB, variants on request
- All components needs to be assembled and connected by qualified firm

LUX GLENDER BASIC für ø 48,3 mm - ø 60,3 mm - 40 x 40 mm - 60 x 45 mm

Pos.	Benennung	Beschreibung
1	Handrail profile	Stainless steel. AISI/SAE 304 or 316L Profile ø 48,3 mm, ø 60,3 mm, 40 x 40 mm, 60 x 45 mm
2	Holding clamp	To hold of LED-Strip cover
3	LED-Strip cover	Opal PMMA cover, symmetrical Light distribution
4	LED-Strip	IP00 for indoor oder IP67 for outdoor
5	Support bracket	For welding in the nut or to bolt together with sliding block (7)
6	End cap	For welding or screwing
7	Sliding block	For fixing of support bracket, if not welded



- Further informations regarding components you will find in the LED - Datasheet and in the area of system components description.
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LUX GLENDER Photometrical data for System BASIC - symmetrical light distribution

BASIC, IP20, symmetrical Light distribution, LED-Strip cover opal

Light color temperature [K]	Luminous flux [Lm/meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
2700	230	386	574	735
3000	230	386	574	735
4000	247	416	619	792
5000	247	416	619	792

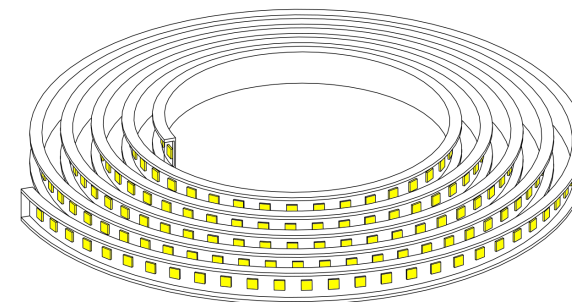
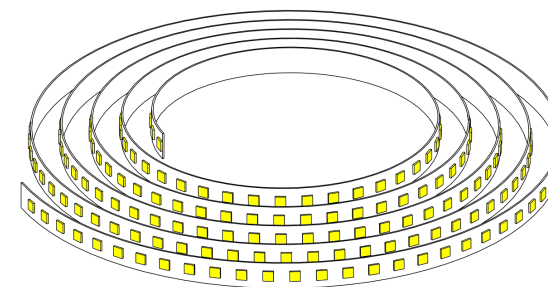
Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.

BASIC, IP67, symmetrical Light distribution, LED-Strip cover opal

Light color temperature [K]	Luminous flux [Lm/meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
ca. 2750	192	322	480	614
ca. 3050	209	352	523	670
ca. 3400	227	381	567	726
ca. 4000	227	381	567	726
ca. 5000	247	416	619	792

Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.

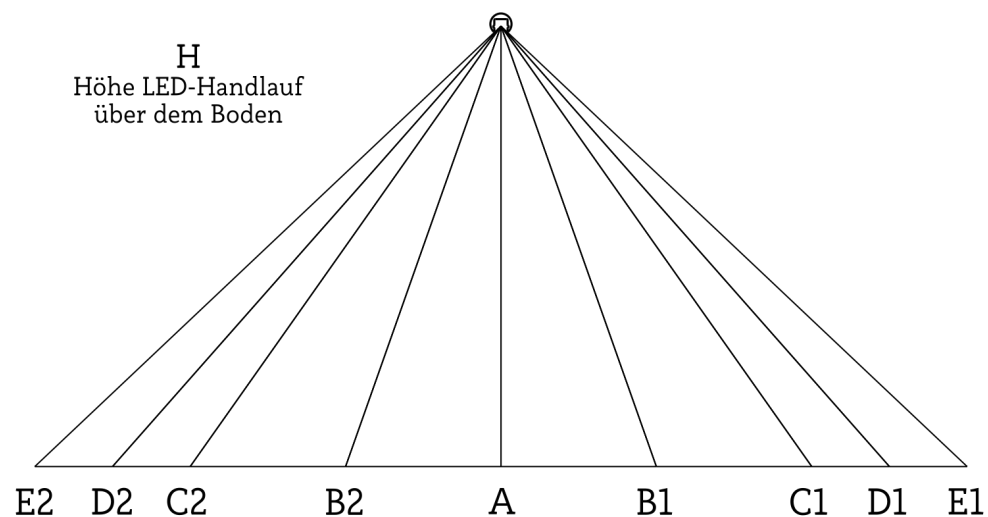
Further services, colours, RGB, variants on request



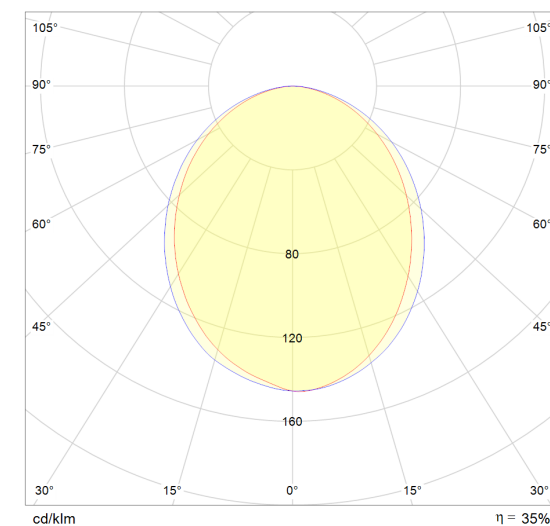
LUX GLENDER Photometrical data for System BASIC - symmetrical light distribution

BASIC, symmetrical light distribution
LED-Strip cover opal, power 10 W/m

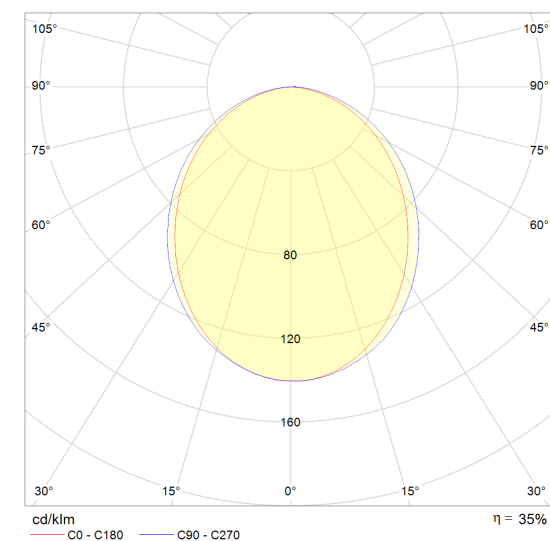
Point	H	Luminance intensity [lx]								
		E2	D2	C2	B2	A	B1	C1	D1	E1
Distance to A	[mm]	1800	1500	1200	600	0	600	1200	1500	1800
IP20 indoor	850	9	16	28	98	218	97	28	16	9
IP67 outdoor	850	9	15	27	96	211	97	28	16	9
IP20 indoor	1300	17	26	41	93	139	93	41	26	17
IP67 outdoor	1300	17	26	40	91	135	92	41	27	17



Note: Measuring point is in the middle of a 5 meter length lamp, without wall or balustrade. This data have been measured and generated by us and provide just a rough orientation. In individual cases are project-related photometrical subsequent measurement necessary. For subsequent measurement use our Eulumat data.



Polardiagramm: BAISC, IP20



Polardiagramm: BAISC, IP67

LUX GLENDER BASIC - Custom-made LED-Handrail



Custom-made LED-Handrail:

Especially the product-line BASIC suits perfectly for manufacturing of a custom-made LED-Handrail.

Just provide us your drawing or layout of your requested dimension, preferred power and light-color and we deliver you an completed Handrail.

Only one thing you need to do is to mount it on the wall and let it connect to the electricity by an electrician professional.

Our custom-made LED-Handrail is a perfect solution for firms, who doesn't has your own factory to build stainless steel, for example electrician craftsman or wholesale.

Feel free to contact us.

You can configure your custom-made LED-Handrail in our online-shop!

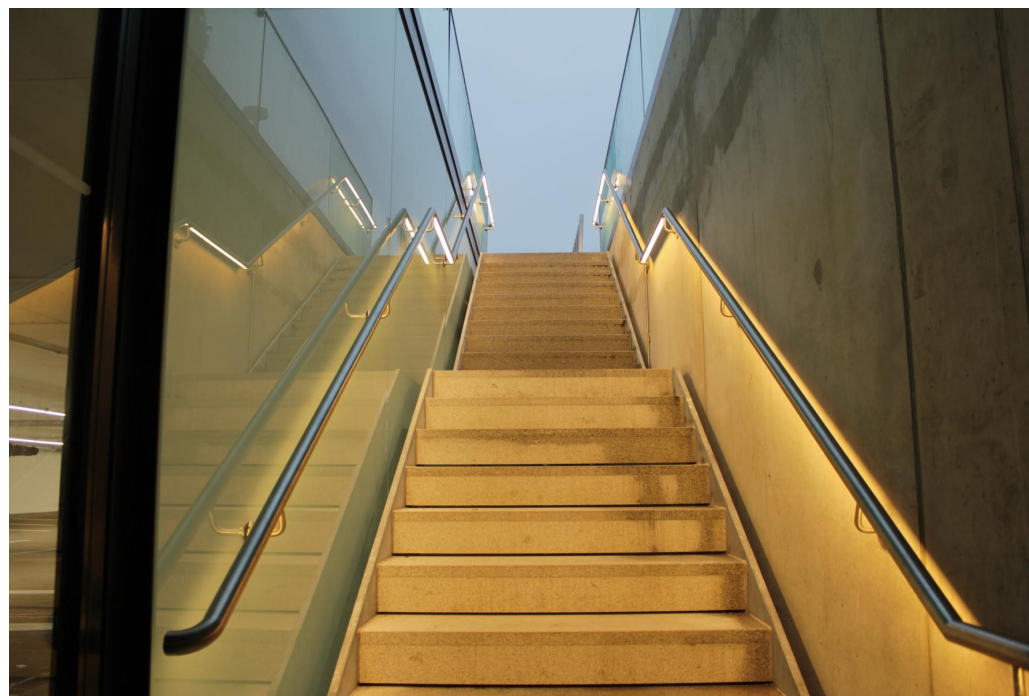
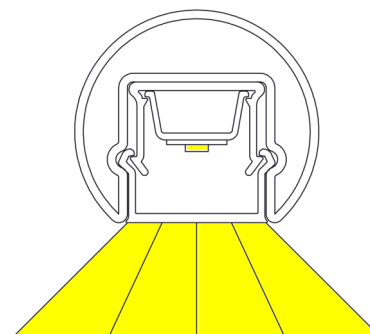
LUX GLENDER SAFE - symmetrical

LUX GLENDER - SAFE

Handrail material	AISI/SAE 304 or 316L
Handrail dimension	Ø 42,4 mm
Light source	LED-Strip
Operating voltage	24 VDC
Power	10 W/m
Light color temperature	2700, 3000 and 4000 K
CRI	> 80
Protection LED-Strip	IP20 oder IP67
Operating temperatur	-40 ... 55°C
Life cicle	> 50.000 h
Dimmable	Yes (PWM)
Cover material	PMMA, opal
Light distribution	symmetrical
Vandals safety	yes
Applications	Indoor, Outdoor

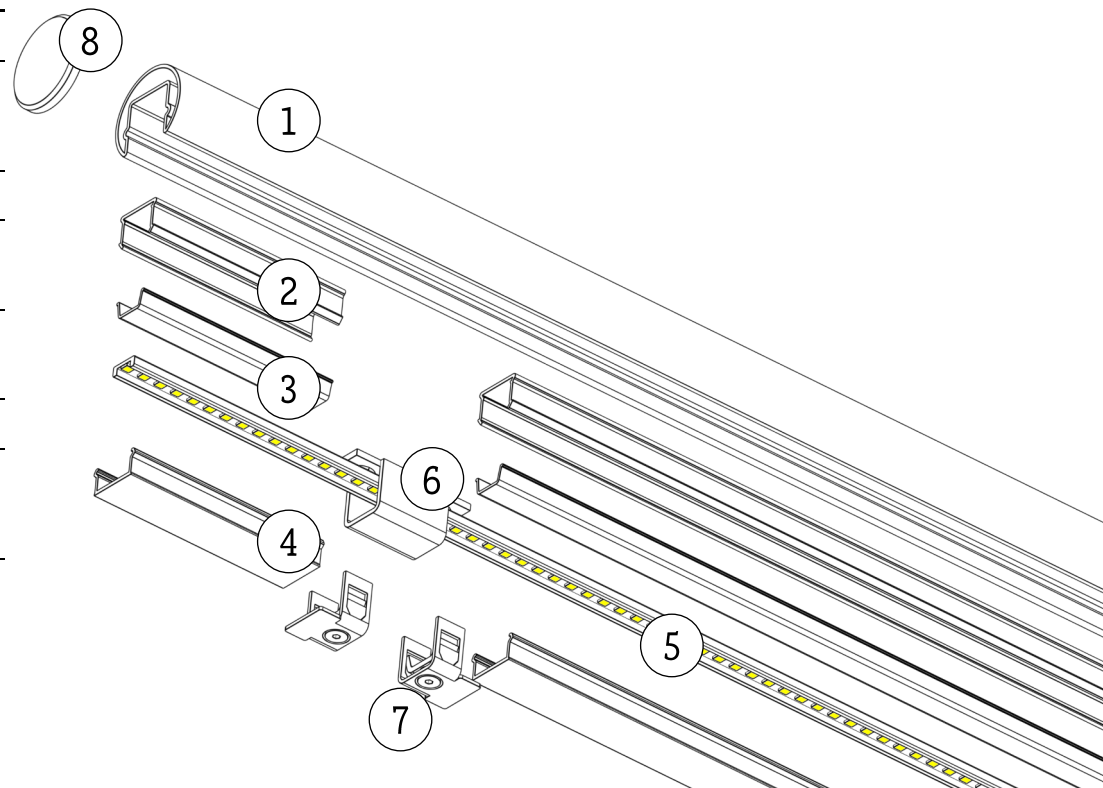
Application examples:

- Staircases in public sector
- Entrance to public buildings
- Parking deck
- Parks, garden area
- Schools, kindergarden, university
- All further public sectors



LUX GLENDER SAFE - symmetrical

Pos.	Benennung	Beschreibung
1	Handrail profile	Stainless steel. AISI/SAE 304 or 316L For the moment only for ø 42,4 mm
2	Safety profile	Plastic profile for clamping the cover
3	LED-carrier profile	Aluminium profile, for building cable trench (only together with safety profile)
4	Plastic cover	Opal, for symmetrical Light distribution And a homogen light
5	LED-Strip	IP00 for indoor oder IP67 for outdoor
6	Support bracket	For welding in the nut or to bolt together with sliding block
7	Lock	Prevents the access to the inner life of system and makes possible to remove the cover without destroying. The shorter cut of cover under the lock makes possible the expansion of cover caused by changing temperature and pro- tects against fly-in of insects.
8	End cap	For welding or screwing



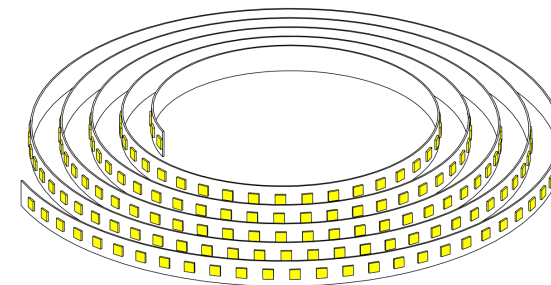
- Further informations regarding components you will find in the LED - Datasheet and in the area of system components description.
- The handrail profiles and PMMA covers will be delivered as a bar of 6 m length
- LED-Strips will custom-made assembled
- The planning needs to be made by customer
- Further services, colours, RGB, variants on request
- All components needs to be assembled and connected by qualified firm

LUX GLENDER Photometrical data for System SAFE - symmetrical light distribution

SAFE, IP20, symmetrical Light distribution, LED-Strip cover opal

Light color temperature [K]	Luminous flux [Lm/Meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
2700	338	568	845	1082
3000	338	568	845	1082
4000	364	612	910	1165
5000	364	612	910	1165

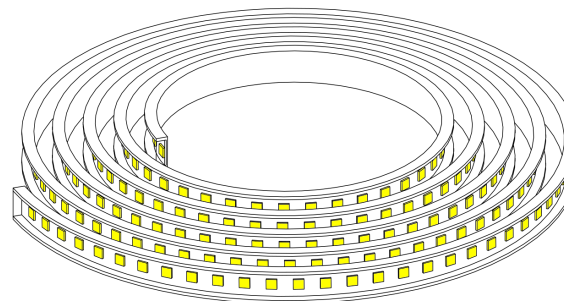
Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.



SAFE, IP67, symmetrical Light distribution, LED-Strip cover opal

Light color temperature [K]	Luminous flux [Lm/Meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
ca. 2750	267	448	667	854
ca. 3050	291	489	728	932
ca. 3400	315	530	789	1009
ca. 4000	315	530	789	1009
ca. 5000	315	530	789	1009

Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.

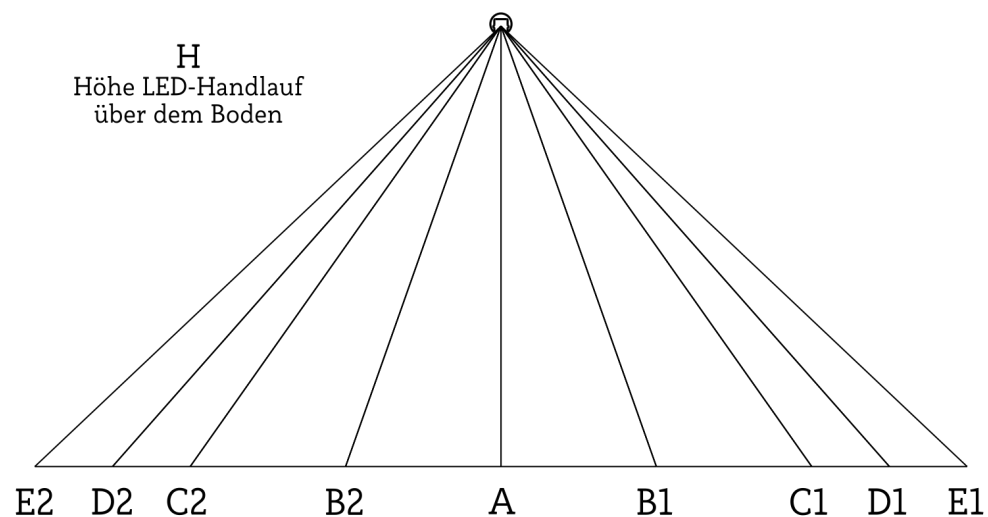


Further services, colours, RGB, variants on request

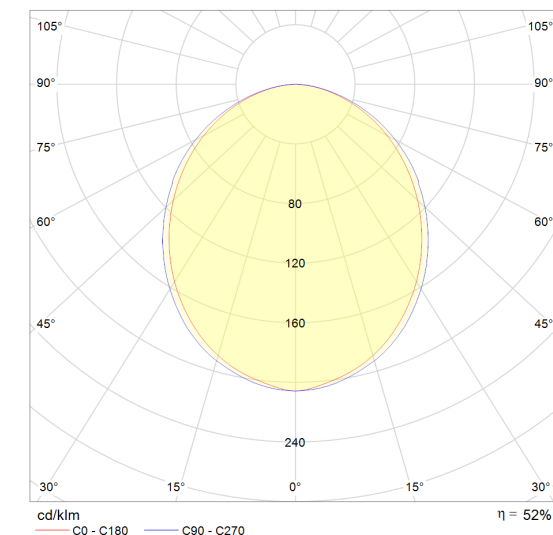
LUX GLENDER Photometrical data for System SAFE - symmetrical light distribution

SAFE, symmetrical light distribution, LED-Strip cover opal, power 10 W/m

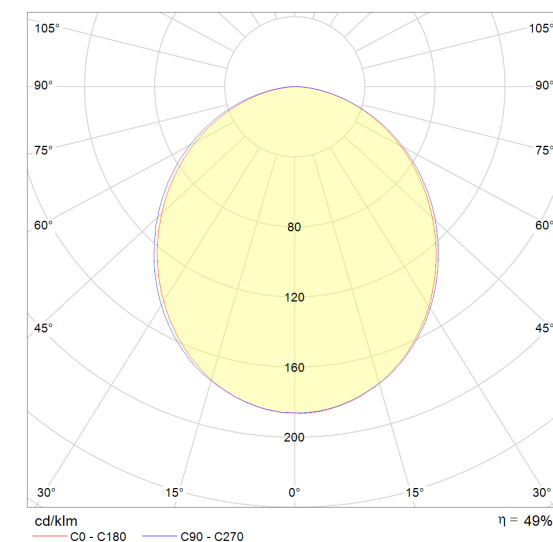
Point	H	Luminance intensity [lx]								
		E2	D2	C2	B2	A	B1	C1	D1	E1
Distance to A	[mm]	1800	1500	1200	600	0	600	1200	1500	1800
IP20 indoor	850	14	24	42	145	311	145	42	24	14
IP67 outdoor	850	13	22	39	134	282	137	41	24	14
IP20 indoor	1300	26	40	64	135	199	135	61	40	26
IP67 outdoor	1300	25	37	57	125	181	127	59	39	26



Note: Measuring point is in the middle of a 5 meter length lamp, without wall or balustrade. This data have been measured and generated by us and provide just a rough orientation. In individual cases are project-related photometrical subsequent measurement necessary. For subsequent measurement use our Eulumdat data.



Polardiagramm: SAFE, IP20, sym., opal



Polardiagramm: SAFE, IP67, sym., opal

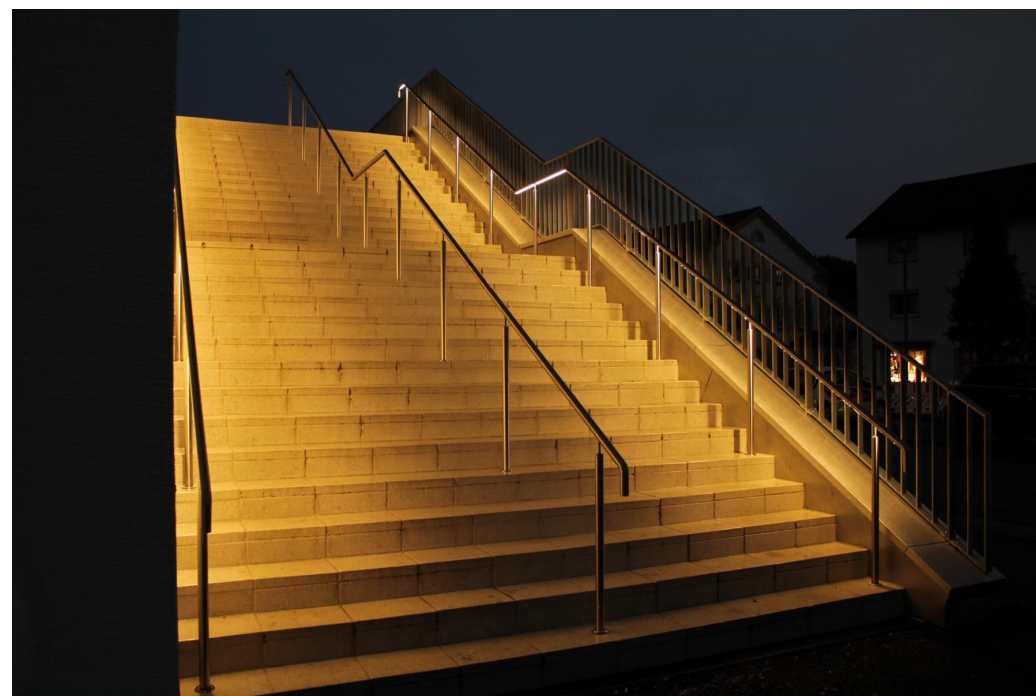
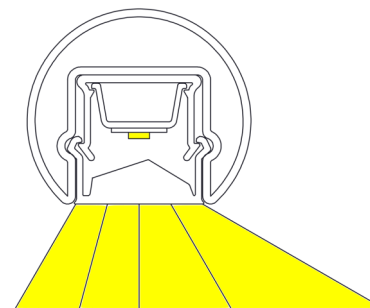
LUX GLENDER SAFE - asymmetrical

LUX GLENDER - SAFE asymmetrical

Handrail material	AISI/SAE 304 or 316L
Handrail dimension	Ø 42,4 mm
Light source	LED-Strip
Operating voltage	24 VDC
Power	10 W/m
Light color temperature	2700, 3000 and 4000 K
CRI	> 80
Protection LED-Strip	IP20 or IP67
Operating temperatur	-40 ... 55°C
Life cicle	> 50.000 h
Dimmable	Yes (PWM)
Cover material	PMMA, transparent
Light distribution	asymmetrical
Vandals safety	yes
Applications	Indoor, Outdoor

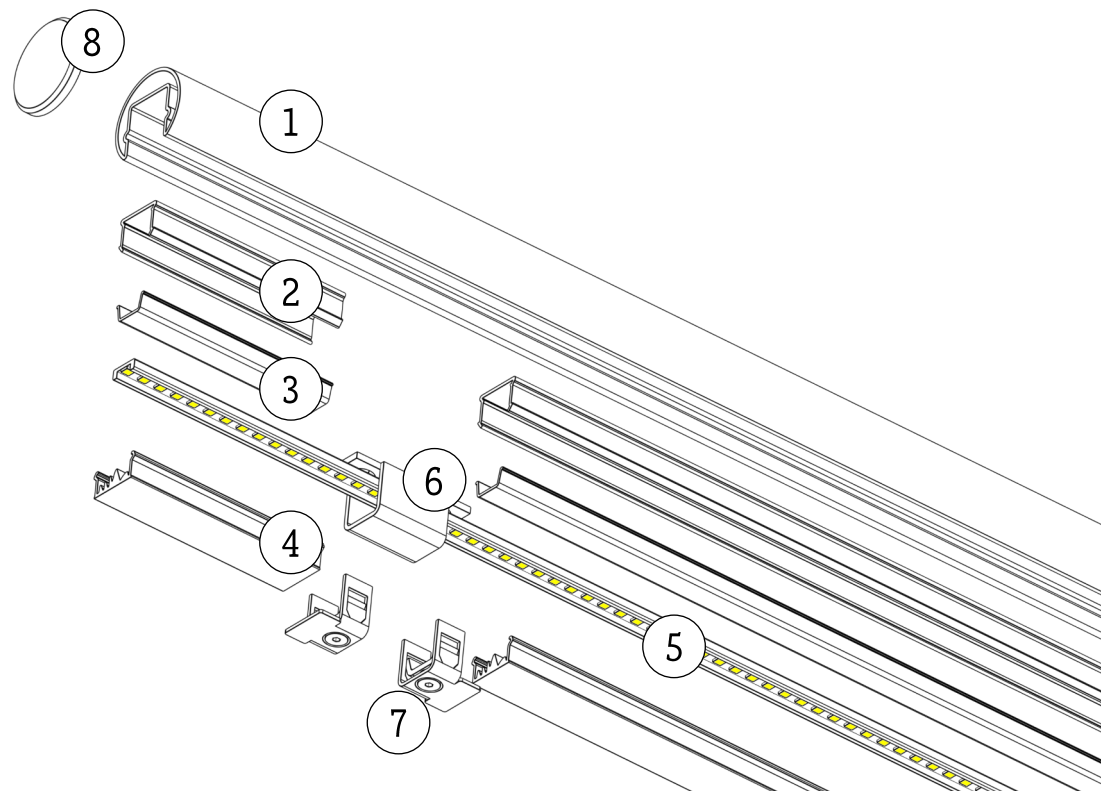
Application examples:

- Staircases in public sector
- Entrance to public buildings
- Parking deck
- Parks, garden area
- Schools, kindergarden, university
- All further public sectors



LUX GLENDER SAFE - asymmetrical

Pos.	Benennung	Beschreibung
1	Handrail profile	Stainless steel. AISI/SAE 304 or 316L For the moment only for ø 42,4 mm
2	Safety profile	Plastic profile for clamping the cover
3	LED-carrier profile	Aluminium profile, for building cable trench (only together with safety profile)
4	Plastic cover	Opal, for symmetrical Light distribution And a homogen light
5	LED-Strip	IP00 for indoor oder IP67 for outdoor
6	Support bracket	For welding in the nut or to bolt together with sliding block
7	Lock	Prevents the access to the inner life of system and makes possible to remove the cover without destroying. The shorter cut of cover under the lock makes possible the expansion of cover caused by changing temperature and protects against fly-in of insects.
8	End cap	For welding or screwing



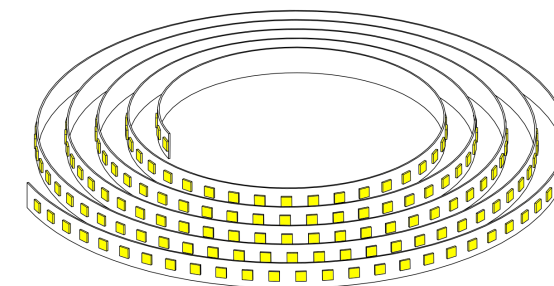
- Further informations regarding components you will find in the LED - Datasheet and in the area of system components description.
- The handrail profiles and PMMA covers will be delivered as a bar of 6 m length
- LED-Strips will custom-made assembled
- The planning needs to be made by customer
- Further services, colours, RGB, variants on request
- All components needs to be assembled and connected by qualified firm

LUX GLENDER Photometrical data for System SAFE - asymmetrical light distribution

SAFE, IP20, asymmetrical Light distribution, LED-Strip cover clear

Light color temperature [K]	Luminous flux [Lm/Meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
2700	358	601	894	1145
3000	358	601	894	1145
4000	385	647	963	1233
5000	385	647	963	1233

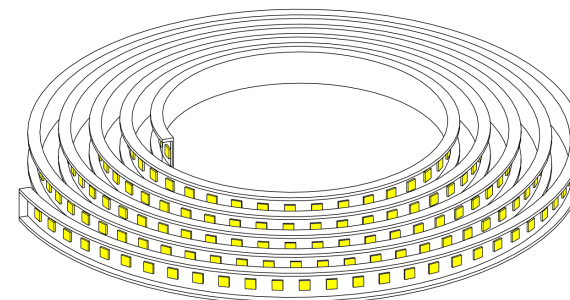
Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.



SAFE, IP67, asymmetrical Light distribution, LED-Strip cover clear

Light color temperature [K]	Luminous flux [Lm/Meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
ca. 2750	294	494	735	941
ca. 3050	321	539	802	1027
ca. 3400	348	584	869	1112
ca. 4000	348	584	869	1112
ca. 5000	348	584	869	1112

Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.

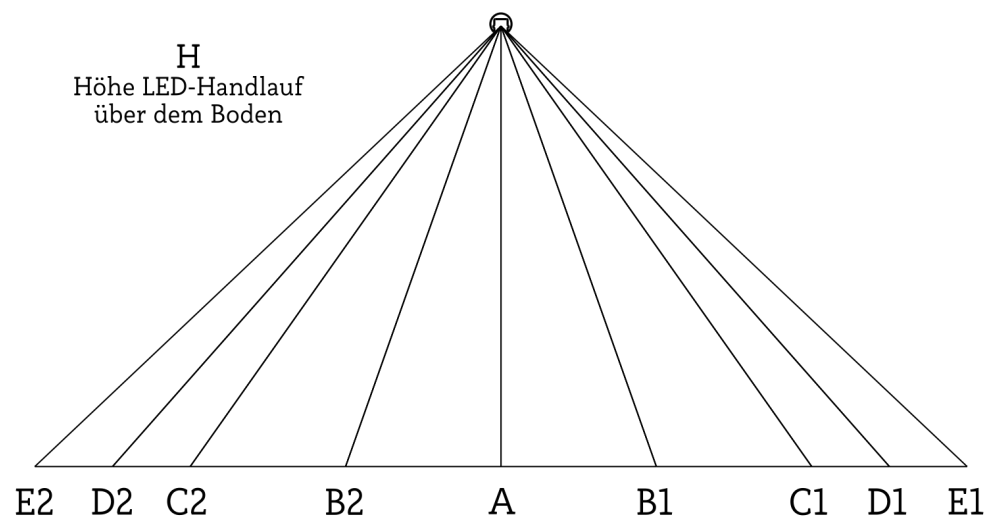


Further services, colours, RGB, variants on request

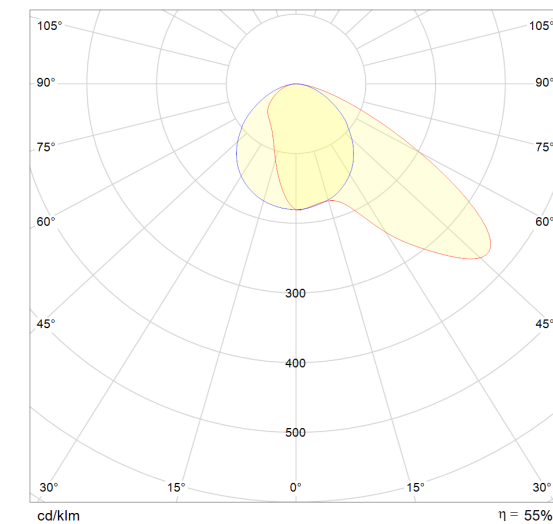
LUX GLENDER Photometrical data for System SAFE - asymmetrical light distribution

SAFE, asymmetrical light distribution, LED-Strip cover clear, power 10 W/m

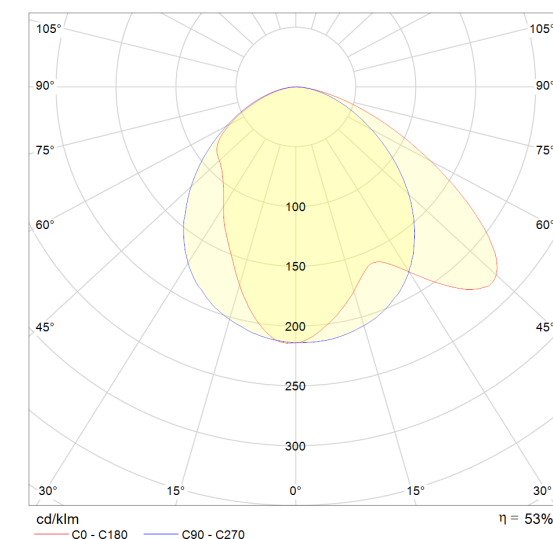
Point	H	Luminance intensity [lx]								
		E2	D2	C2	B2	A	B1	C1	D1	E1
Distance to A	[mm]	1800	1500	1200	600	0	600	1200	1500	1800
IP20 indoor	850	8	13	23	75	281	233	125	67	36
IP67 outdoor	850	12	20	35	111	326	169	74	41	24
IP20 indoor	1300	-	14	23	58	169	146	134	104	68
IP67 outdoor	1300	22	31	46	116	210	123	93	70	49



Note: Measuring point is in the middle of a 5 meter length lamp, without wall or balustrade. This data have been measured and generated by us and provide just a rough orientation. In individual cases are project-related photometrical subsequent measurement necessary. For subsequent measurement use our Eulumdat data.



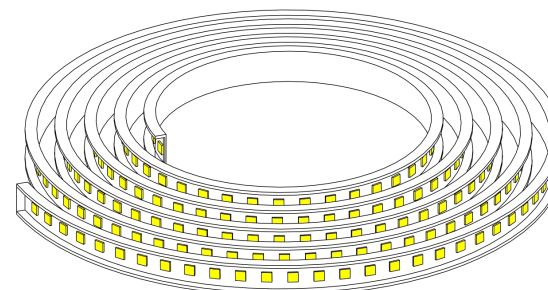
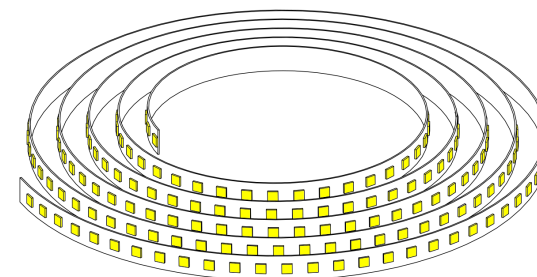
Polardiagramm: SAFE, IP20, asym.



Polardiagramm: SAFE, IP67, asym.

LUX GLENDER LED-Stripe - general information

Protection degree of LED-Strip	IP20	IP67
Operating voltage	24 VDC	
Voltage range	22,5 ... 26,0 VDC	
Quantity LEDs	120 pcs/m	
Divisible every	50 mm	
Width x Height	10.5 mm x 2 mm	14mm x 4,7mm
CRI	> 80	
Dimmable	Yes (PWM)	
Operating temperature	-40 ... 55°C	
Storage temperature	-40 ... 100°C	
Binning / Farbsortierung	MacAdams 3-step	
Reverse side	Double-sided 3M tape	



LUX GLENDER - LED-Stripes

- Luminous flux and all further photometrical data, please find attached in the respective data sheet of systems BASIC, SAFE, ULTRA SAFE
- We assemble our LED-Stripes custom-made for your specific project

Further services, colours, RGB, variants on request

LUX GLENDER LED-Strip Information

Tape length:

Our standard producing size of LED-Strip is 6m. As well we are able to produce longer tapes. The maximum length of the tape depends on the power of LED-Strip.

Please, find here the maximum length according to the power:

20 W/m - 6 m

15 W/m - 8 m

10 W/m - 10 m

For IP67 it is possible to encapsulate this length to one complete exemplar.

Feel free to ask us .

Light color/luminous flux/CRI :

The stated data regarding light color, luminous flux and CRI refer to the LED-Strip without encapsulation.

The LUX GLENDER plastic cover (transparent or opal) can influence this data.

Please take the respective information out of the photometrical data sheet.

IP67 encapsulated LED-Strip:

We tailor and encapsulate your IP67 custom-made LED-Strip.

Please, by placing the order give us the information about the exact length (rounded down to 5 cm) of your LED-Strip. After encapsulating is the cutting of strip not possible any more.

Dimensioning of power transformer / dimmer:

The power transformer should be approx. 20% higher powered, than the power of LED-Strip.

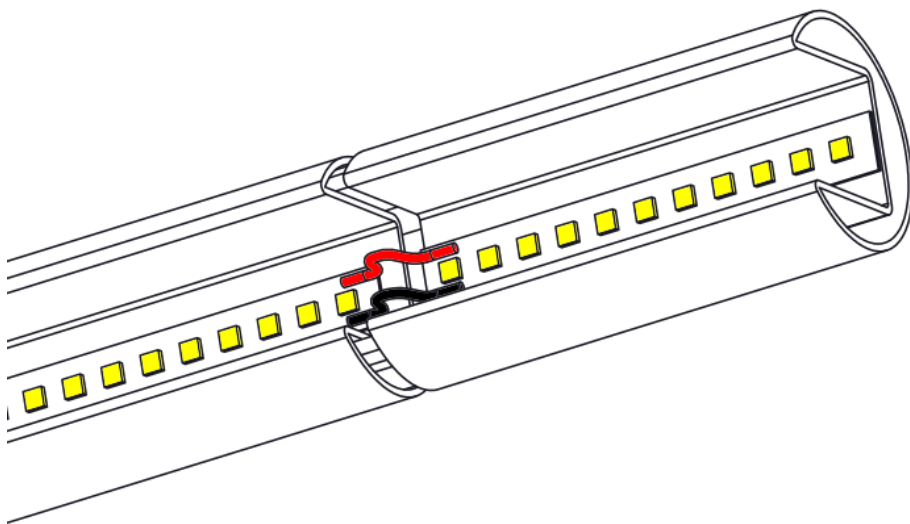
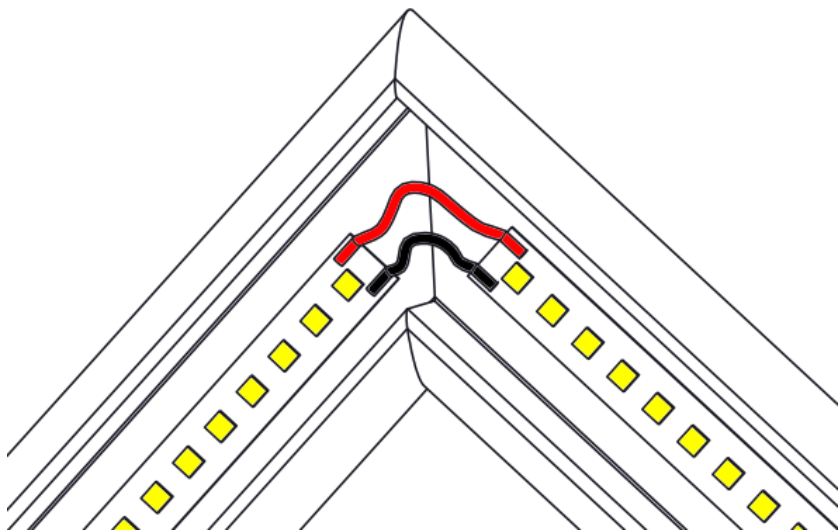
For Example: 5 m LED-strip with 10 W/m equates power of 50 W. The power transformer should be min. 60 W.

The housing of the trafo can be placed in a distribution-/control box. Also it is possible to place it in a in-wall box, under the floor, in the prop or even in the handrail. Depending on the distance from trafo to the handrail you need to make sure, you have an adequate cable cross-section.

The dimmer you can place near of the trafo. As alternative it is possible to use an universal-device.

Our LED-strips are dimmable by PWM dimmer.

LUX GLENDER LED-Strip Information



Instruction for installation:

- Please find the instruction for installation in detail in our installation sheet for LED-Strips.

Instruction for installation related to the LED-Handrail profile:

- After assembling and welding of the Handrail, you can insert the LED-strip.
- At first, please clean the nut. Then you can stick the LED-Strip.
- Please don't place the LED-Strip over the thermal-expansion-gap. The strip can be damaged. Please make a flexible connection between the strips—as you can see on the picture.
- It is not possible to pass the LED-Strip around the corner. So you need to separate the LED-Strip on the marked place and connect with a cable—as you can see on the picture.
- The bending top down or bottom-up can be realized without any problems.
- Beside of LED-Strip you can carry the cable in the nut to supply the further feeding for electricity.

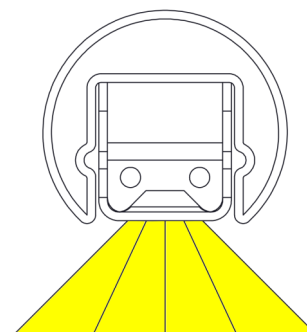
LUX GLENDER ULTRA SAFE

LUX GLENDER - ULTRA SAFE

Handrail material	AISI/SAE 304 or 316L
Handrail dimension	Ø 42,4 mm
Source of light	fully encapsulated LED-bar
Operating voltage	24 VDC
Power	3-20 W/m
Light color temperature	3000 and 4000 K
CRI	> 80
Protection degree	IP69
Resistance to impact	IK10
Operating temperature	-40 ... 80° C
Lifetime	> 50.000h
Dimmable	Ja (PWM)
Potting material	PU, transparent or opal
Housing material	Stainless 1.4401 (V4A)
Light distribution	symmetrical
Vandalism protection	yes
Applications	Outdoor, Bridges

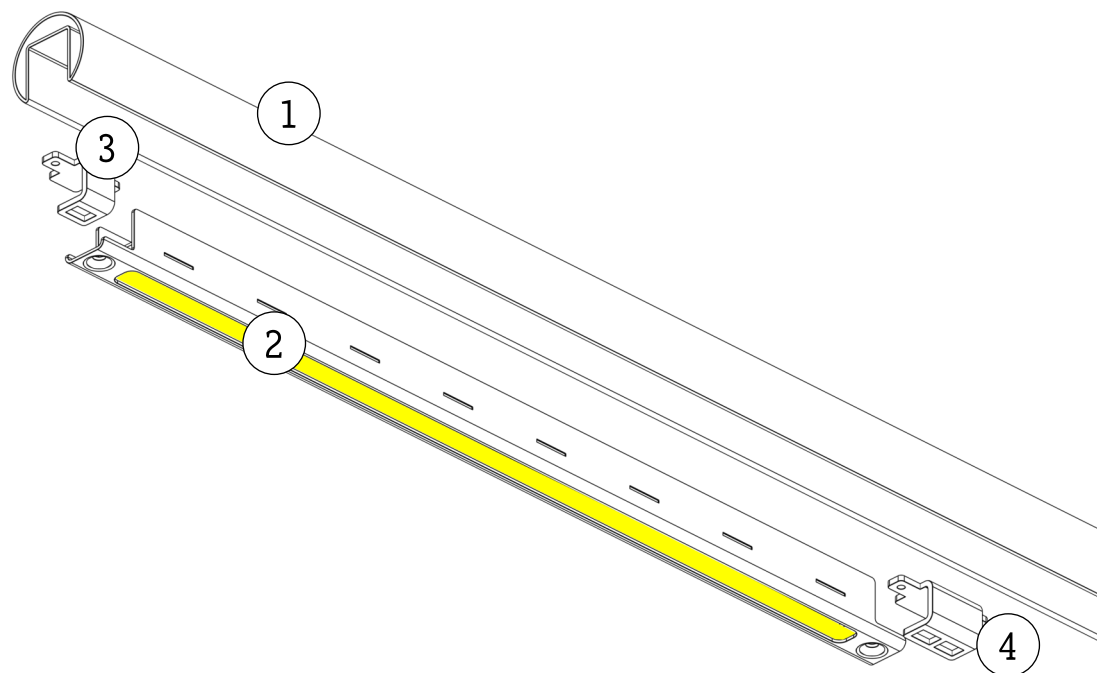
Application examples:

- Bridges
- Parking deck
- Parks
- Tunnel, Bridges
- Bicycle paths
- All public areas with a high requirement on vandalism security and robustness



LUX GLENDER ULTRA SAFE

Pos.	Benennung	Beschreibung
1	Handrail profile	Lilly, Paula, Nina, Emil or Ronny Stainless steel V2A or V4A
2	ULTRA SAFE LED Lamp	fully encapsulated LED-bar
3	End-holder	Fixation of the Lamp at the end of the handrail or of the Support bracket
4	Inter-holder	Fixation of the Lamp between of two lamps



- Further informations regarding components you will find in the LED - Datasheet and in the area of system components description.
- The handrail profiles and PMMA covers will be delivered as a bar of 6 m length
- The planning needs to be made by customer
- Further services, colours, RGB, variants on request
- All components needs to be assembled and connected by qualified firm

LUX GLENDER ULTRA SAFE - fully encapsulated LED-bar IP67

Operating voltage	24 VDC
Voltage range	21 ... 26,0 VDC
Protection degree	IP69
Resistance to impact	IK10
Protection class	III (*)
CRI	> 80
Lifetime	50.000 h
Dimmable	Yes (PWM)
Housing material	Stainless 1.4401 (V4A)
Potting material	PU
Connecting cable	0,5 mm ²
Operating temperature	-40 ... 55°C
Storage temperature	-40 ... 100°C



Item no.	For profile	Lenght
A000400	Lilly	250mm
A000401	Lilly	500mm
A000402	Lilly	750mm
A000403	Lilly	1000mm
A000404	Lilly	1250mm
A000405	Lilly	1500mm

Item no.	For profile	Lenght
A000406	Paula + Emil	250mm
A000407	Paula + Emil	500mm
A000408	Paula + Emil	750mm
A000409	Paula + Emil	1000mm
A000410	Paula + Emil	1250mm
A000411	Paula + Emil	1500mm

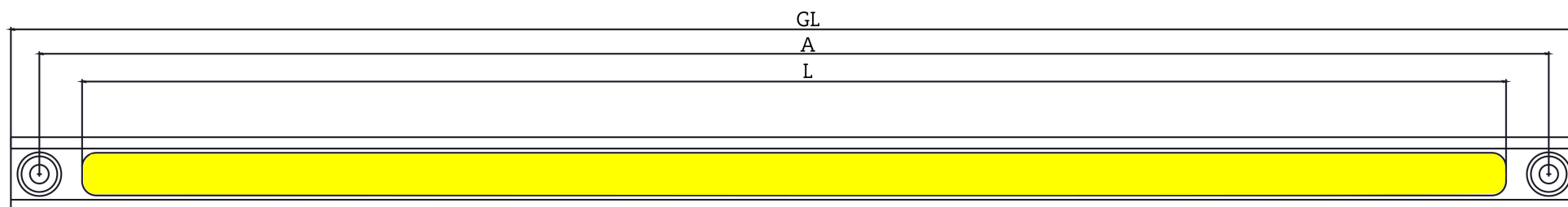
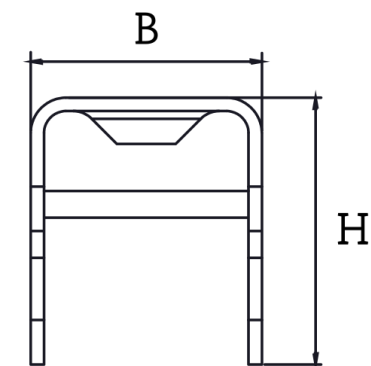
Item no.	For profile	Lenght
A000412	Nina + Ronny	250mm
A000413	Nina + Ronny	500mm
A000414	Nina + Ronny	750mm
A000415	Nina + Ronny	1000mm
A000416	Nina + Ronny	1250mm
A000417	Nina + Ronny	1500mm

(*) Schutzkleinspannung. Schutzklasse des Netzteils beachten (SELV)

LUX GLENDER ULTRA SAFE - fully encapsulated LED-bar IP67

For profile	Ø 42,4 mm Lilly	Ø48,3 mm Paula / 40 x 40 mm Emil	Ø60,3 mm Nina / 60 x 45 mm Ronny
B x H [mm]	23 x 24	26 x 30	34 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-bar, suitable for all handrailing profiles of LUX GLENDER GmbH
- Vandal proof

Further lenght on request

LUX GLENDER Photometrical data for System ULTRA SAFE - symmetrical light distribution

ULTRA SAFE 23mm, symmetrical light distribution, transparent socketing

Color temperature [K]	Luminous flux [Lm/Meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
ca. 2750	195	328	489	626
ca. 3050	213	358	533	682
ca. 3400	231	388	578	739
ca. 4000	231	388	578	739
ca. 5000	231	388	578	739



ULTRA SAFE 26 und 34mm, symmetrical light distribution, transparent socketing

Color temperature [K]	Luminous flux [Lm/Meter]			
	6 W/m	10 W/m	15 W/m	20 W/m
ca. 2750	224	377	561	718
ca. 3050	245	411	612	783
ca. 3400	265	445	663	848
ca. 4000	265	445	663	848
ca. 5000	265	445	663	848

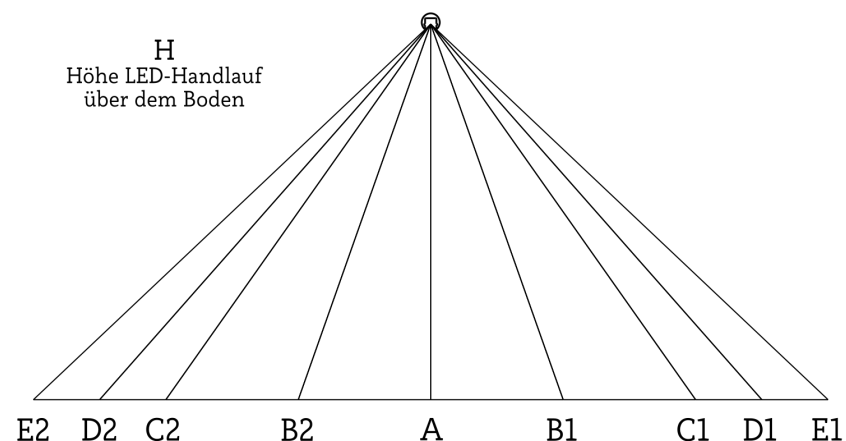
Total-System Data: The LED-handrail completely assembled and measures, without wall or balustrade.

Further services, colours, RGB, variants on request

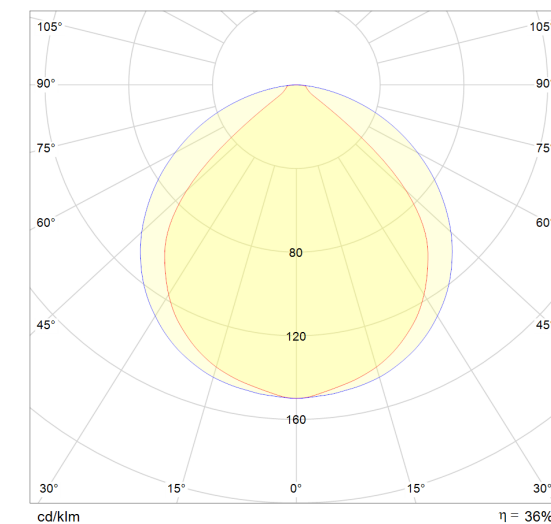
LUX GLENDER Photometrical data for System ULTRA SAFE - symmetrical light distribution

ULTRA SAFE, symmetrical light distribution, transparent socketing, power 6 W/m

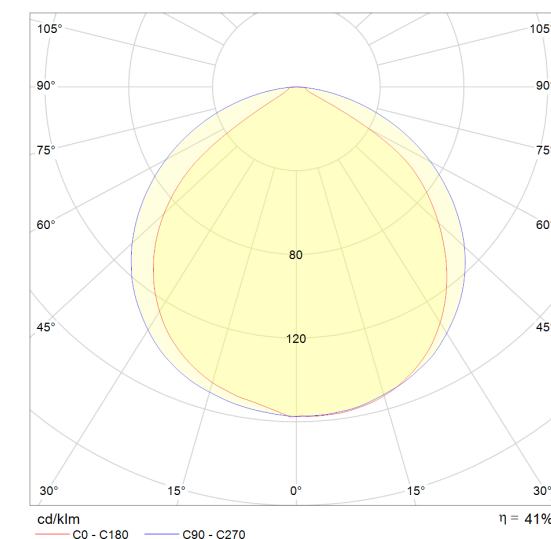
Point	H	Luminance intensity [lx]								
		E2	D2	C2	B2	A	B1	C1	D1	E1
Distance to A	[mm]	1800	1500	1200	600	0	600	1200	1500	1800
ULTRA SAFE 23mm	850	1	3	9	66	144	66	9	3	1
ULTRA SAFE 26mm and 34mm	850	2	5	17	73	153	75	20	9	3
ULTRA SAFE 23mm	1300	5	14	26	63	91	63	46	14	5
ULTRA SAFE 26mm and 34mm	1300	10	18	30	68	97	69	31	20	12



Note: Measuring point is in the middle of a 5 meter length lamp, without wall or balustrade. This data have been measured and generated by us and provide just a rough orientation. In individual cases are project-related photometrical subsequent measurement necessary. For subsequent measurement use our Eulumdat data.

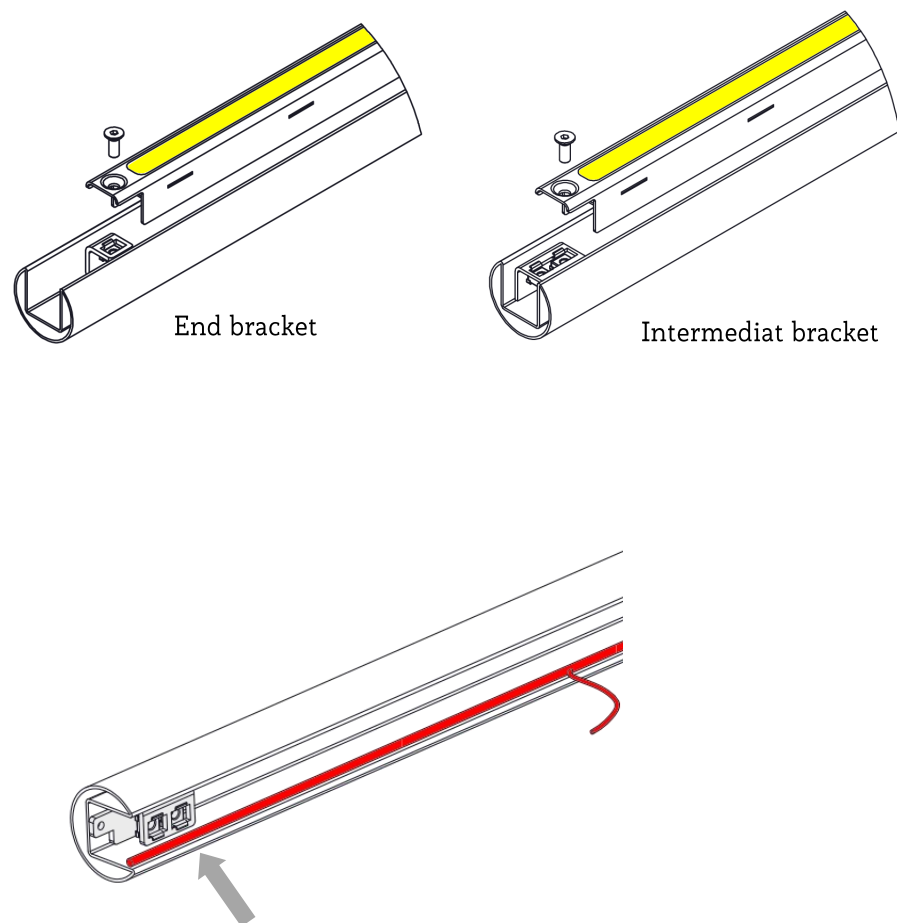


Polardiagramm: ULTRA SAFE 23mm, sym.



Polardiagramm: ULTRA SAFE 26 und 34mm, sym.

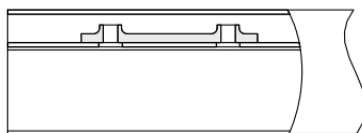
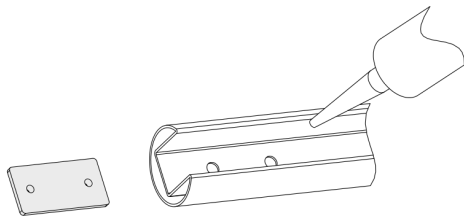
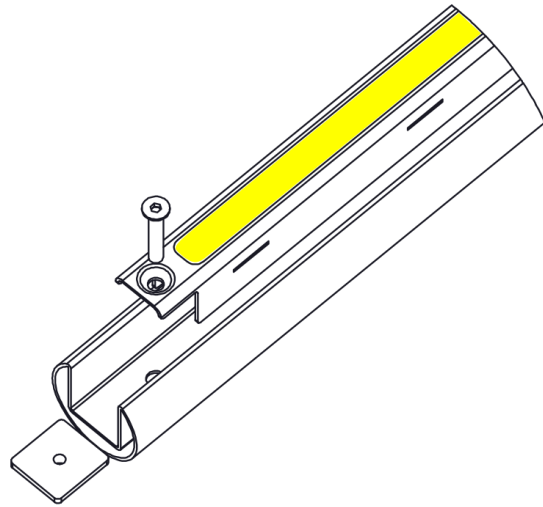
LUX GLENDER ULTRA SAFE - fixation - Variant 1



Installation instructions with the end and intermediate brackets:

- Installation instructions for 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 nuts allow a tolerance compensation of approx. +/- 2mm
- 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. Welding with the lowest possible current and as deep as possible in the groove reduces distortion.
- Until a wire cross section of up to 10mm² (10mm² in case of Nina ø60,3 and Ronny 60x45mm) 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, talk to us.

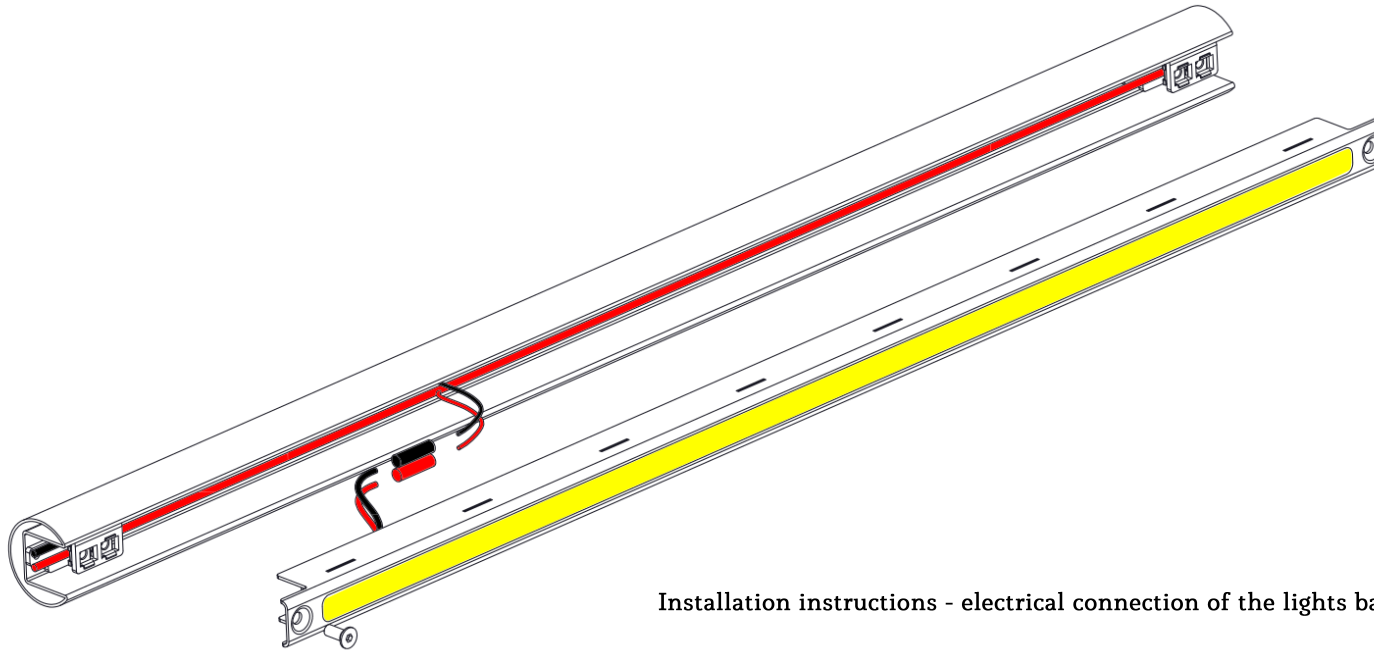
LUX GLENDER ULTRA SAFE - fixation - Variant 2



Installation instructions for the sliding block/nut:

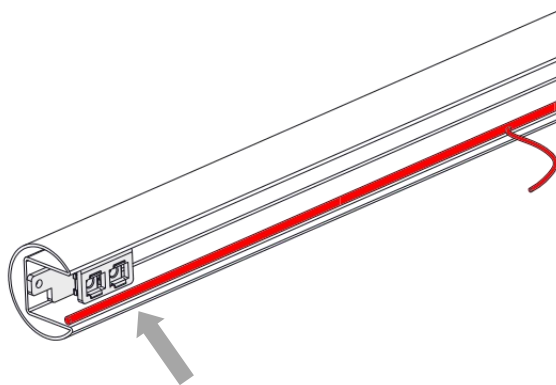
- Installation instructions for sliding blocks.
- Before installing the handrail, the sliding blocks/nuts must be pushed into the cavity of the handrail profile and positioned. After the handrail has been fully assembled, the sliding blocks can usually no longer be installed in the handrail.
- Pre-drill the mounting holes for the ULTRA SAFE light bars, insert the sliding nuts and secure them with silicone (only neutrally cross-linked) to prevent them from sliding. See the assembly instructions for the sliding nuts.
- The size of the hole in the groove base determines the tolerance compensation in the range +/- 2mm (e.g. M6 screw, hole $\varnothing 10\text{mm}$)
- Be careful of the cables as you insert the screws. The thread of the screws could damage the insulation of the cable. As protection, e.g. Plastic sleeves are used.
- 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, talk to us.

LUX GLENDER ULTRA SAFE - Electrical connection



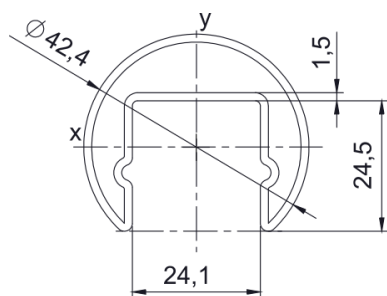
Installation instructions - electrical connection of the lights bars:

- After the metal construction work has been completed, the cables can be laid.
- We recommend using the pre-assembled cable harnesses for the respective project. We would be happy to supply you with pre-assembled cable harnesses for your project - talk to us.
- Until a wire cross section of up to 10mm² (10mm² in case of Nina ø60,3 and Ronny 60x45mm) cable can be hooked directly into the groove. It is not necessary to get them through from the beginning.
- Cabling work on the construction site is possible at any time.
- The connection of the lights to the wiring harness is carried out as standard with the help of shrink solder connectors with adhesive.
- Cable connectors are basically possible and can be implemented on a project-by-project basis.



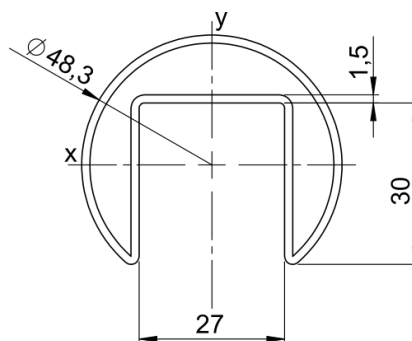
Stainless steel profiles in stock

LILLY - \varnothing 42,4 mm

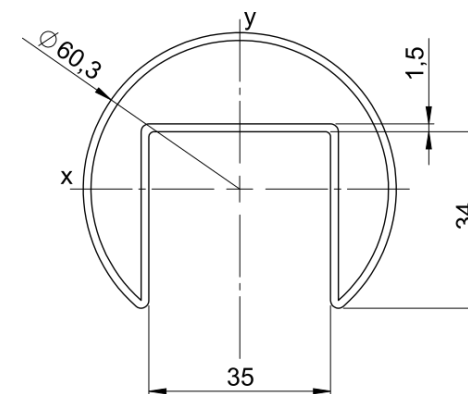


Suitable for barrier-free construction according to DIN

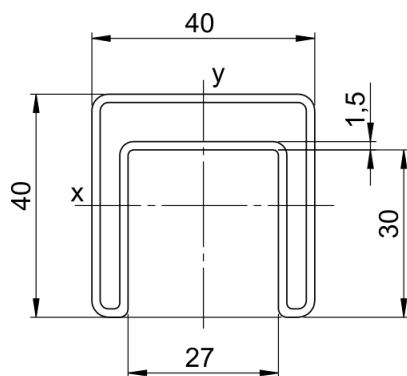
PAULA - \varnothing 48,3 mm



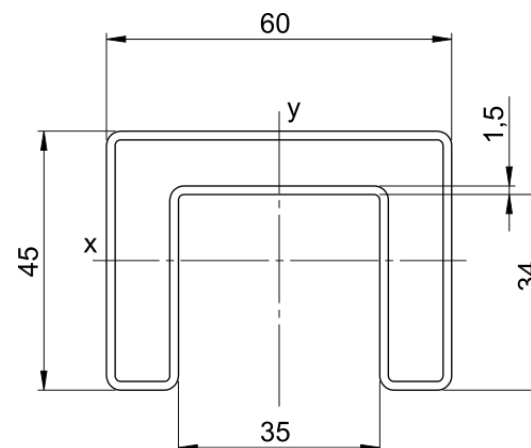
NINA - \varnothing 60,3mm



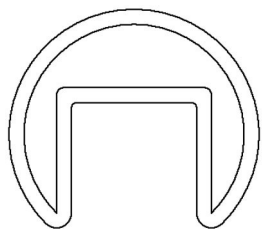
EMIL - 40 x 40 mm



RONNY - 60 x 45 mm



Project-related stainless steel - Handrail profiles

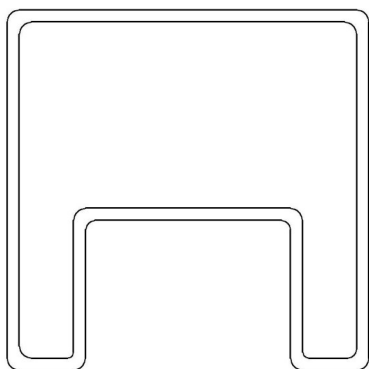
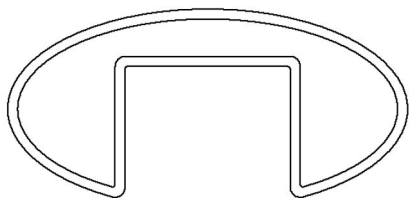


Special profile:

Beside our standard-stainless-handrail-profiles we can deliver project-related special profiles. The minimum quantity is 3000m.

Oval profile, profile with a bigger wall thickness (for example. $\varnothing 50 \times 3$ mm) and special sizes of round and square profile are available.

If desired, we support you in your planning.



LUX GLENDER Stainless handrail profile - Lilly - \varnothing 42,4 x 1,5 mm

Dimensions	
Outer diameter	\varnothing 42,4 mm
Wall thickness	1,5 mm
Groove B x T	24 x 24,5 mm
Delivery length	6010 mm
Handrail Brand	DAIDALOS®

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

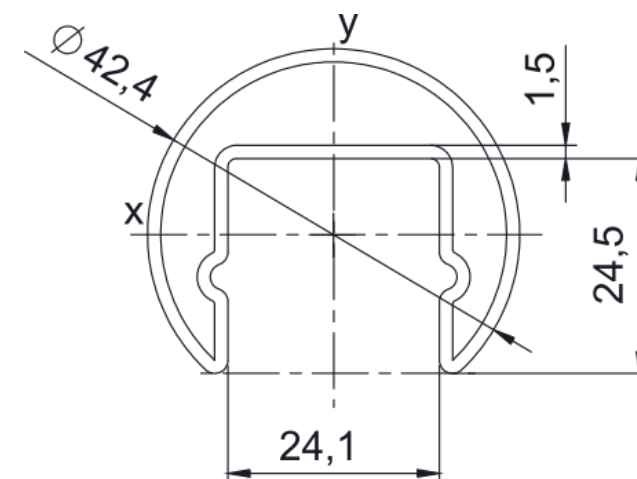
Further polishes, grains, surface coatings - on request

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

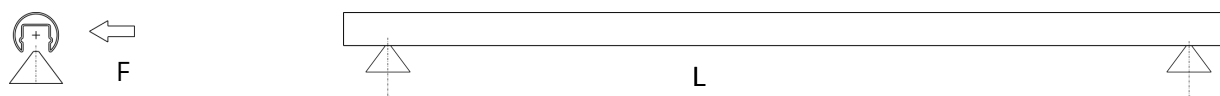
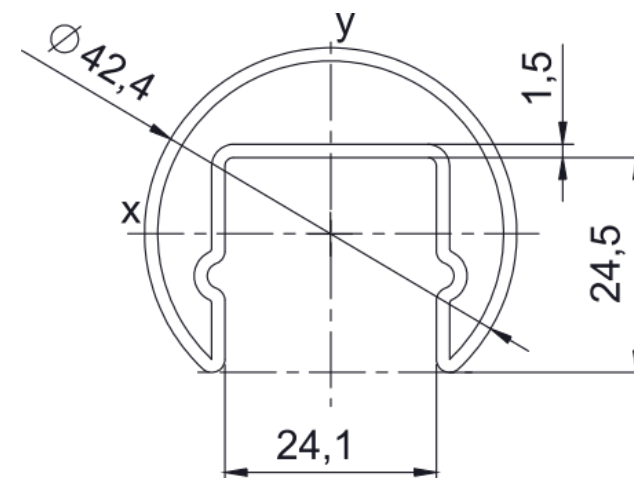
Switzerland: SN 521 500, SN 640 075, SN 640 238, SN 640 568



LUX GLENDER Stainless handrail profile - Lilly - $\varnothing 42,4 \times 1,5$ mm

Resistance- and area moment			
Wx	Wy	Ix	Iy
1,5 m 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	2,2 m	1,6 m	1,15 m



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

General information about the stainless handrail profile branded by DAIDALOS®

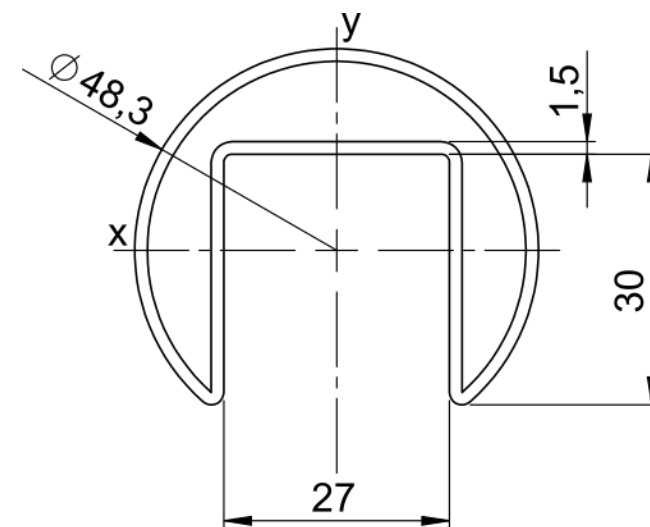
- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according to DIN EN 10162 und EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks caused by manufacturing process are not excluded, Finishing by customer is necessary.
- A side-cut from both sides is not excluded
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)

LUX GLENDER Stainless handrail profile - Paula - \varnothing 48,3 x 1,5 mm

Dimensions	
Outer diameter	\varnothing 48,3 mm
Wall thickness	1,5 mm
Groove B x T	27 x 30 mm
Delivery length	6010 mm
Handrail Brand	DAIDALOS®

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

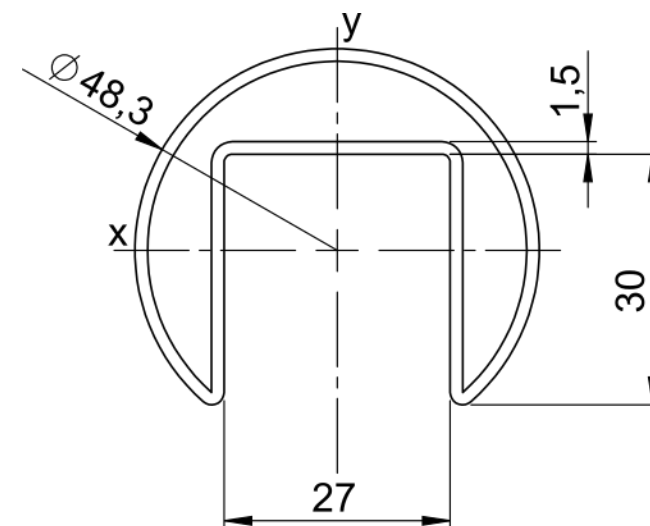
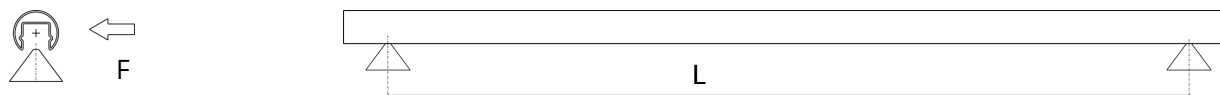
Further polishes, grains, surface coatings - on request



LUX GLENDER Stainless handrail profile - Paula - $\varnothing 48,3 \times 1,5$ mm

Resistance- and area moment			
W _x	W _y	I _x	I _y
2,0 m 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	3 m	2,1 m	1,5 m



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

General information about the stainless handrail profile branded by DAIDALOS®

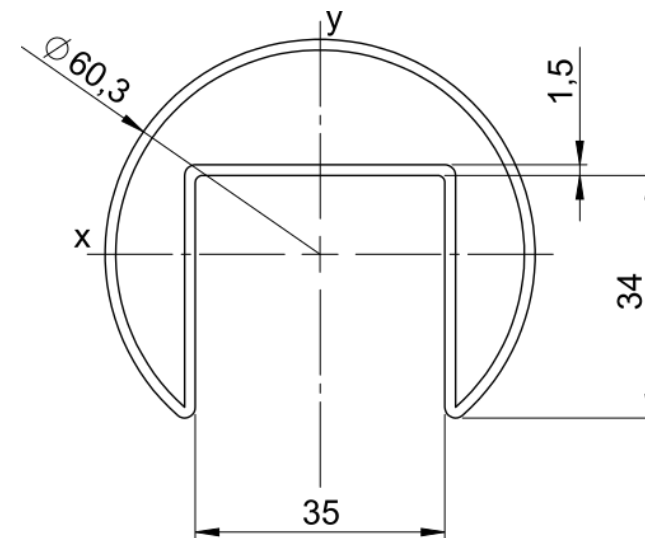
- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 und EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks caused by manufacturing process are not excluded, Finishing by customer is necessary.
- A side-cut from both sides is not excluded
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)

LUX GLENDER Stainless handrail profile - Nina - $\varnothing 60,3 \times 1,5\text{mm}$

Dimensions	
Outer diameter	$\varnothing 60,3 \text{ mm}$
Wall thickness	1,5 mm
Groove B x T	35 x 34 mm
Delivery length	6010 mm
Handrail Brand	DAIDALOS®

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

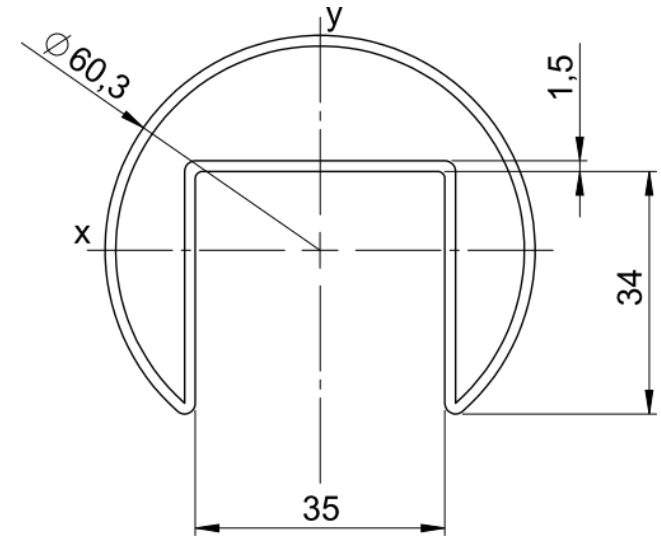
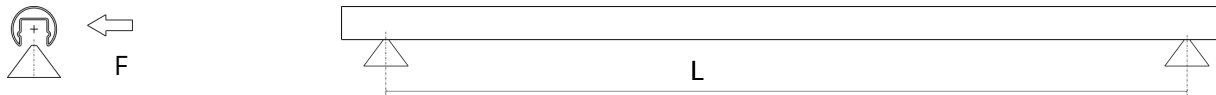
Further polishes, grains, surface coatings - on request



LUX GLENDER Stainless handrail profile - Nina - $\varnothing 60,3 \times 1,5$ mm

Resistance- and area moment			
Wx	Wy	Ix	Iy
3,1 m 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	3,7 m	2,6 m	1,8 m



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

General information about the stainless handrail profile branded by DAIDALOS®

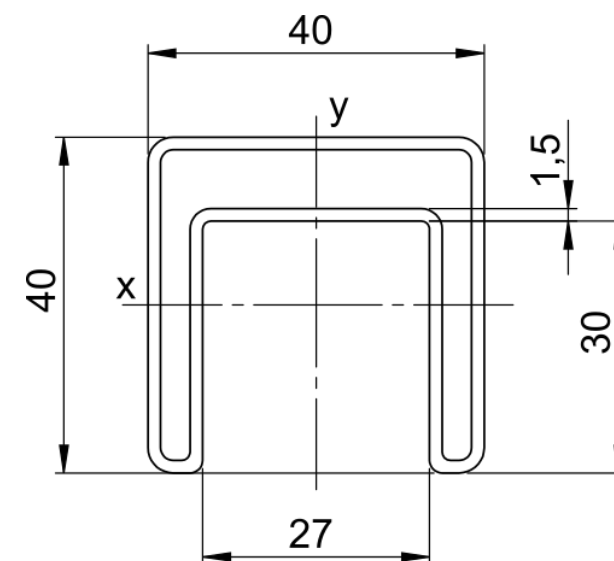
- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according to DIN EN 10162 und EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks caused by manufacturing process are not excluded, Finishing by customer is necessary.
- A side-cut from both sides is not excluded
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)

LUX GLENDER Stainless handrail profile - Emil - 40 x 40 x 1,5 mm

Dimensions	
Outer diameter	40 x 40 mm
Wall thickness	1,5 mm
Groove B x T	27 x 30 mm
Delivery length	6010 mm
Handrail Brand	DAIDALOS®

Item no.	Material	Surface	Weight
A000017	1.4301/07	K240 axial	2,47 kg/m
A000018	1.4401/04	K240 axial	2,50 kg/m

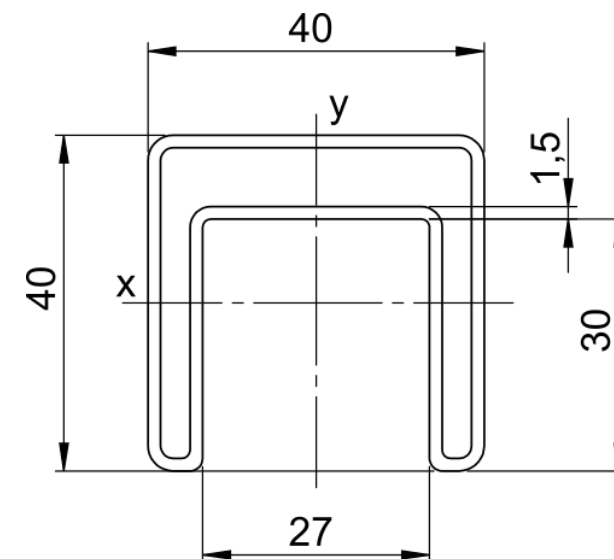
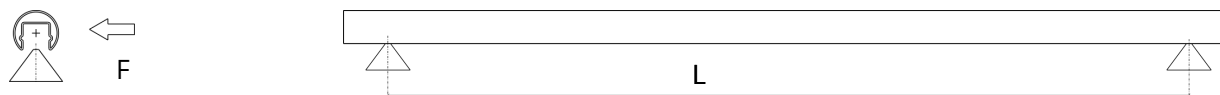
Further polishes, grains, surface coatings - on request



LUX GLENDER Stainless handrail profile - Emil - 40 x 40 x 1,5 mm

Resistance- and area moment			
Wx	Wy	Ix	Iy
2,2 m ³	3,6 cm ³	4,92 cm ⁴	7,25 cm ⁴

Maximum span			
Horizontal payload F	0,5 kN/m	1 kN/m	2 kN/m
Maximum profile span L	2,8 m	2 m	1,4 m



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

General information about the stainless handrail profile branded by DAIDALOS®

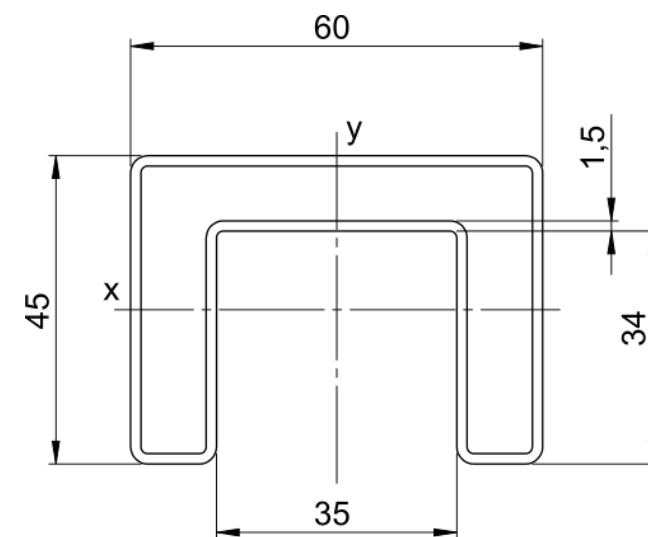
- Profile with cold rolled groove
- Laser beam welded with forming gas, weld seam brushed
- Manufacturing according to DIN EN 10088 T2, DIN EN ISO 9445T2, cold rolled, type 2B
- Dimensions according DIN EN 10162 und EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks caused by manufacturing process are not excluded, Finishing by customer is necessary.
- A side-cut from both sides is not excluded
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)

LUX GLENDER Stainless handrail profile - Ronny - 60 x 45 x 1,5 mm

Dimensions	
Outer diameter	60 x 45 mm
Wall thickness	1,5 mm
Groove B x T	35 x 34 mm
Delivery length	6010 mm
Handrail Brand	DAIDALOS®

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

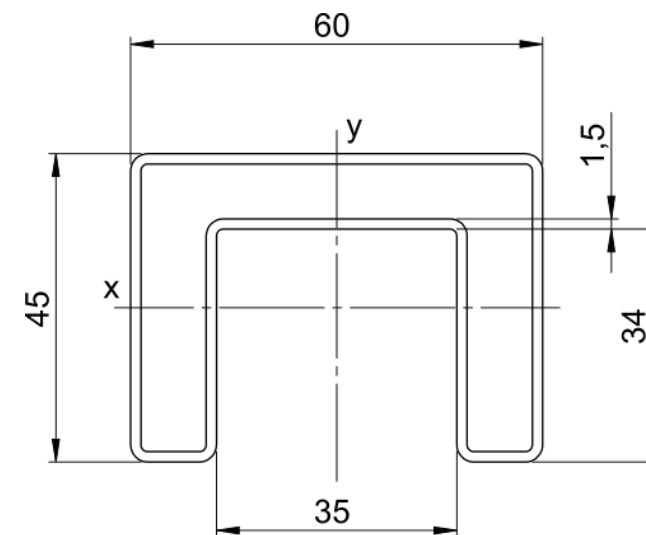
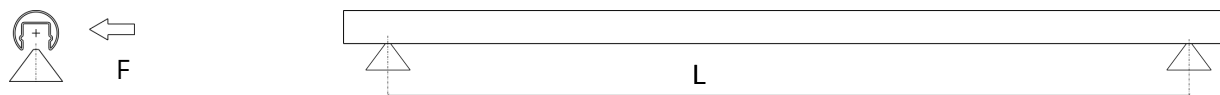
Further polishes, grains, surface coatings - on request



LUX GLENDER Stainless handrail profile - Ronny - 60 x 45 x 1,5 mm

Resistance- and area moment			
Wx	Wy	Ix	Iy
3,3 m 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	3,7 m	2,6 m	1,8 m



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

General information about the stainless handrail profile branded by DAIDALOS®

- 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 und EN 10021
- Manufacturers marks in the groove
- Inspection certificate 3.1 available
- Tracks caused by manufacturing process are not excluded, Finishing by customer is necessary.
- A side-cut from both sides is not excluded
- Manufacturing length 6010 mm -0/+20 (Cold saw-cut)

LUX GLENDER Plastic cover - symmetrical

Productline	Item no.	For groove	For profile	Color	Material	Weight	Delivery length
BASIC, SAFE	A000119	24 mm	Lilly ø 42,4 mm	opal	PMMA	0,09 kg/m	6010 mm
BASIC	A000081	27 mm	Paula ø 48,3 mm Emil 40 x 40 mm	opal	PMMA	0,11 kg/m	6010 mm
BASIC	A000087	35 mm	Nina ø 60,3 mm Ronny 60 x 45 mm	opal	PMMA	0,12 kg/m	6010 mm

Coefficient of expansion of PMMA cover $\alpha = \text{ca.} 85 \cdot 10^{-6} / \text{K}$ bei 20°C - please, note by installation

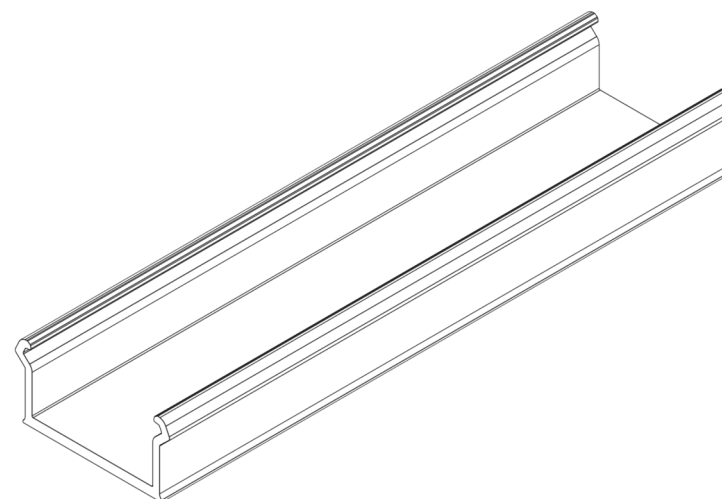
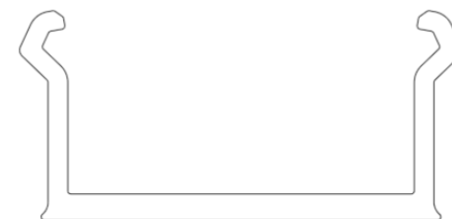
In case of initial length of 1m and a change in temperature of 40K makes a result of >> 3,4mm change in length

In case of initial length of 6m and a change in temperature of 40K makes a result of >> 20,4mm change in length

Further colors and forms - on request

Applies to all of our plastic covers

- With special additional particles for homogeneous and sparkling light distribution
- Excellent optical characteristics
- High light transmission, excellent transparency
- Flammability test according to DIN IEC 60695-2-12 up to 675 °
- High breaking strength and impact resistance
- Good surface hardness
- Very good UV-, weather and aging resistance
- Good recyclability



LUX GLENDER Plastic cover - asymmetrical

Productline	Item no.	For groove	For profile	Color	Material	Weight	Delivery length
SAFE	A000242	24 mm	Lilly ø 42,4 mm	klar	PMMA	0,09 kg/m	6010 mm

Coefficient of expansion of PMMA cover $\alpha = \text{ca.}85 \cdot 10^{-6} / \text{K}$ bei 20°C - please, note by installation

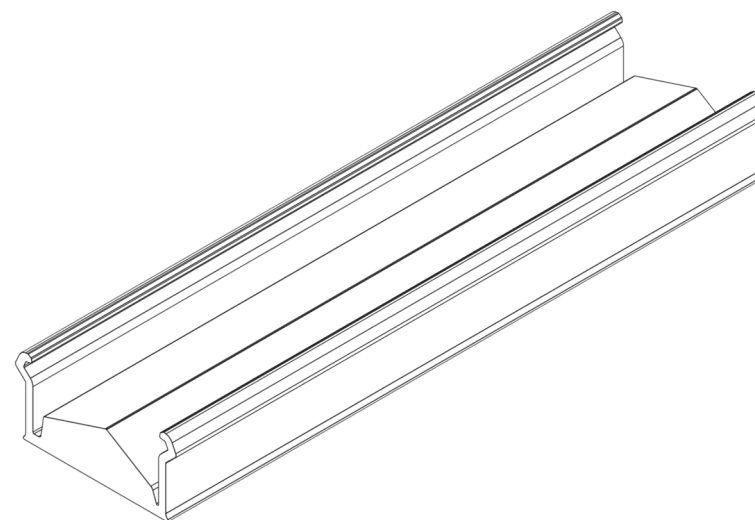
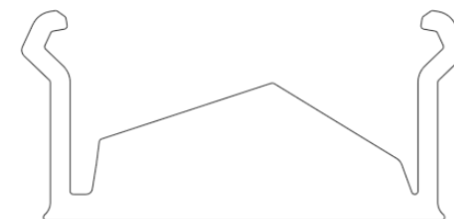
In case of initial length of 1m and a change in temperature of 40K makes a result of >> 3,4mm change in length

In case of initial length of 6m and a change in temperature of 40K makes a result of >> 20,4mm change in length

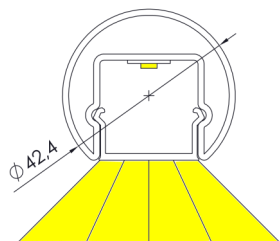
Further colors and forms - on request

Applies to all of our plastic covers

- With special additional particles for homogeneous and sparkling light distribution
- Excellent optical characteristics
- High light transmission, excellent transparency
- Flammability test according to DIN IEC 60695-2-12 up to 675 °
- High breaking strength and impact resistance
- Good surface hardness
- Very good UV-, weather and aging resistance
- Good recyclability



LUX GLENDER Instruction for installation - Cover plastic - BASIC

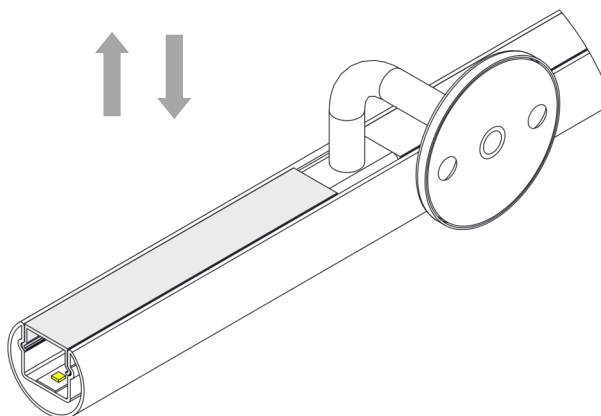
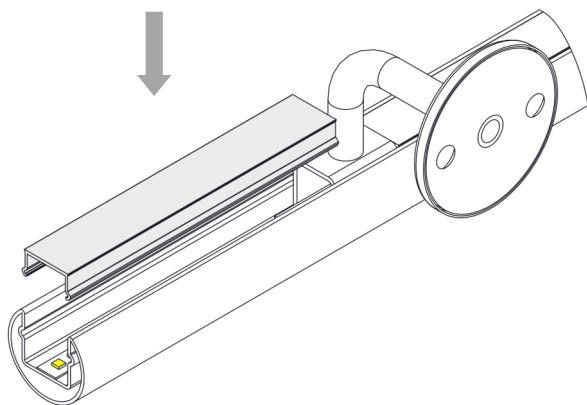


Instruction for installation:

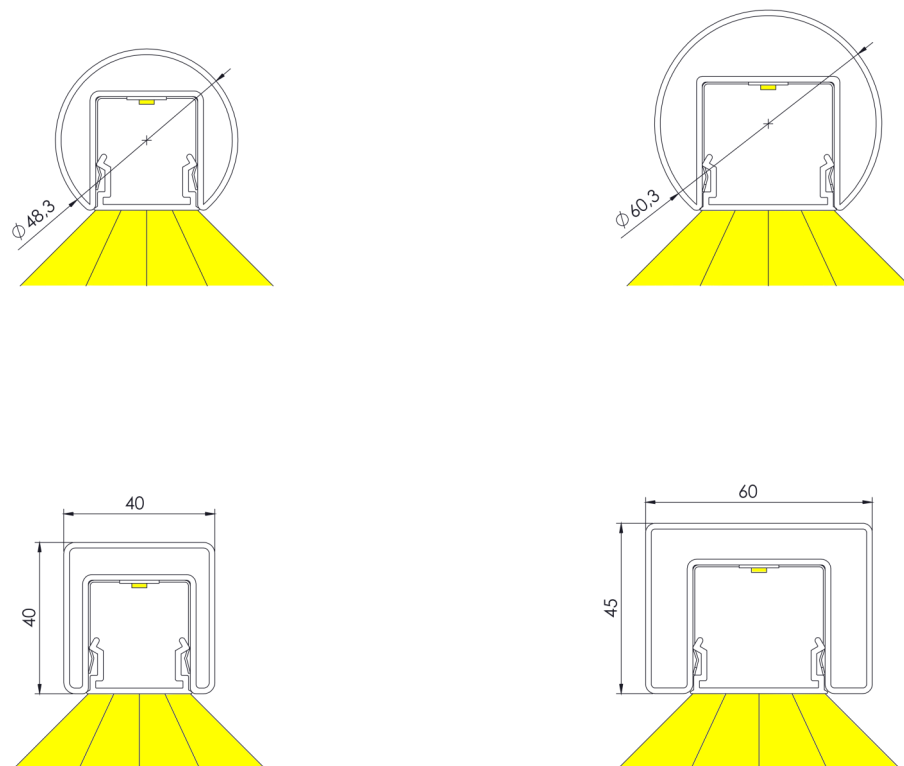
- In the case of handrail profiles with beads, the PMMA cover is clipped directly into the profile. No retaining clips are required for these profiles.
- When using outdoors, note the coefficient of thermal expansion of the PMMA cover .
- Currently only available in Ø42.4mm.

Disassembly instructions:

- In the BASIC product line, the cover can be removed without special tools.



LUX GLENDER Instruction for installation - Cover plastic - BASIC

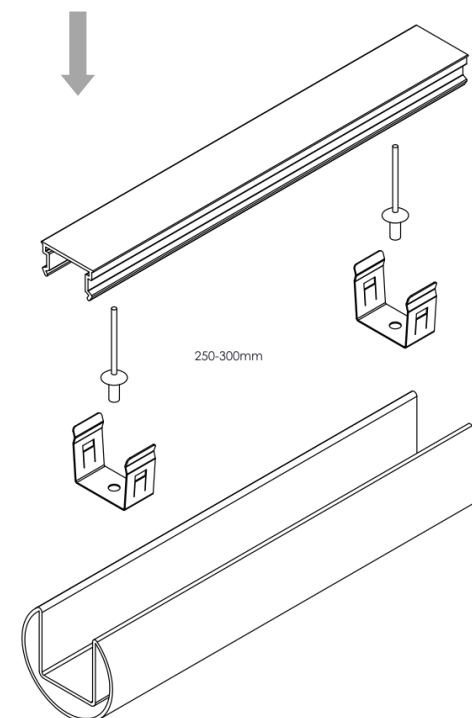


Instruction for installation:

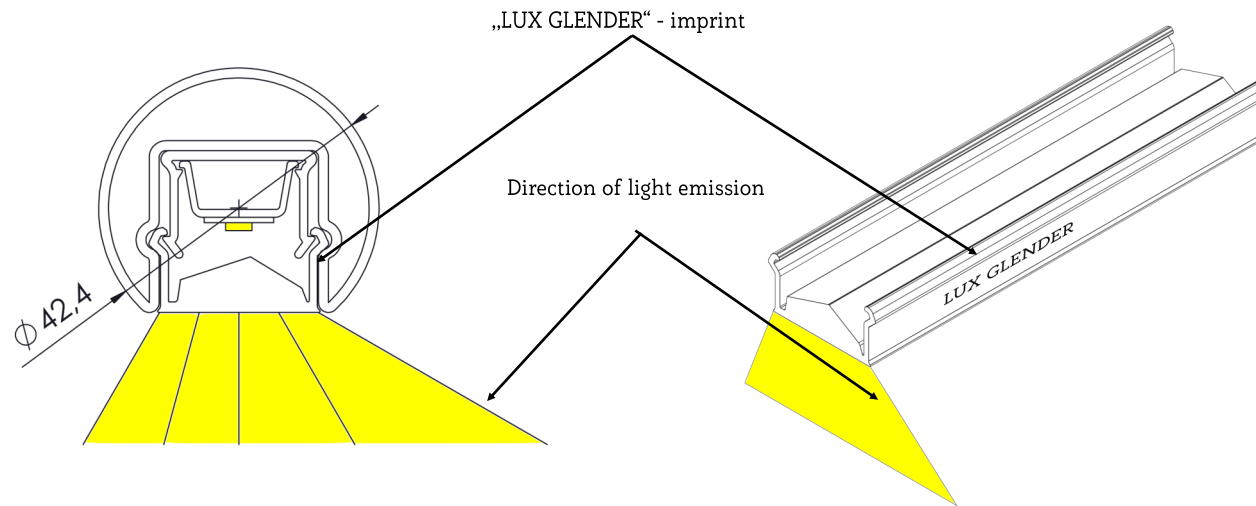
- For the handrail profiles listed, retaining clips must be used for the Keeping the PMMA cover used.
- For assembly instructions for the retaining clips, please refer to respective retaining clips.
- When using outdoors, note the coefficient of thermal expansion of the PMMA cover

Disassembly instructions:

- In the BASIC product line, the cover can be removed without special tools.



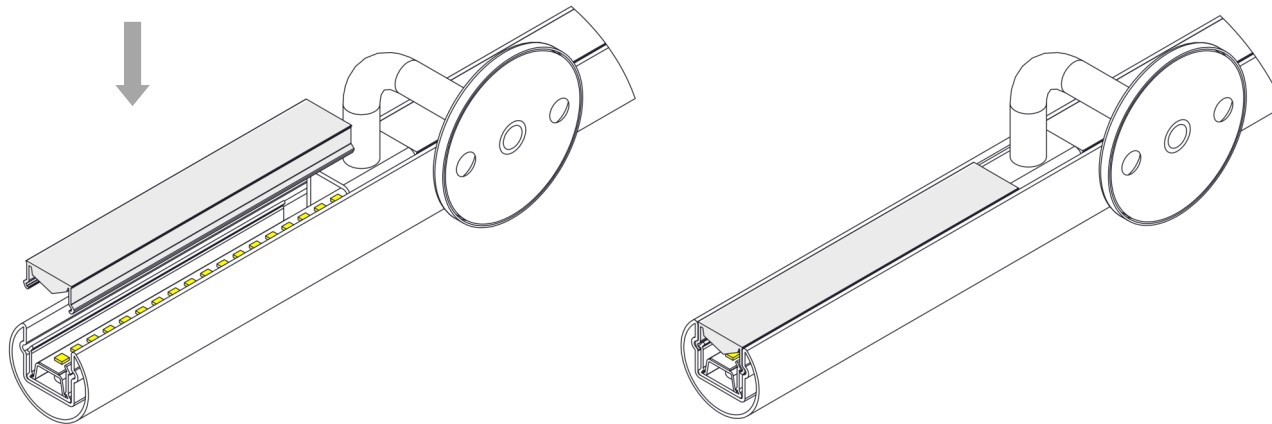
LUX GLENDER Instruction for installation - Cover plastic - SAFE asymmetrical



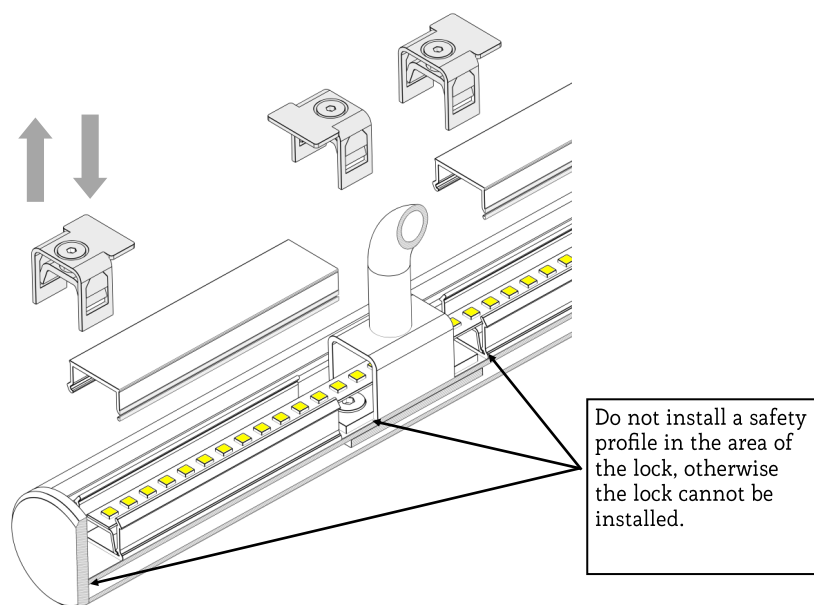
Instruction for installation:

- Prismatic cover can only be used in conjunction with the SAFE system.
- Insert the safety profile and LED carrier profile, lay the LED strip, glue in and connect.
- Finally clip in the asymmetrical cover.
- When using outdoors, note the Thermal expansion coefficient of the PMMA cover
- The direction of light emission is indicated by the print on the side of the prismatic cover. The light is on the side with the imprint "LUX GLENDER" steered.

"LUX GLENDER" = direction of light emission

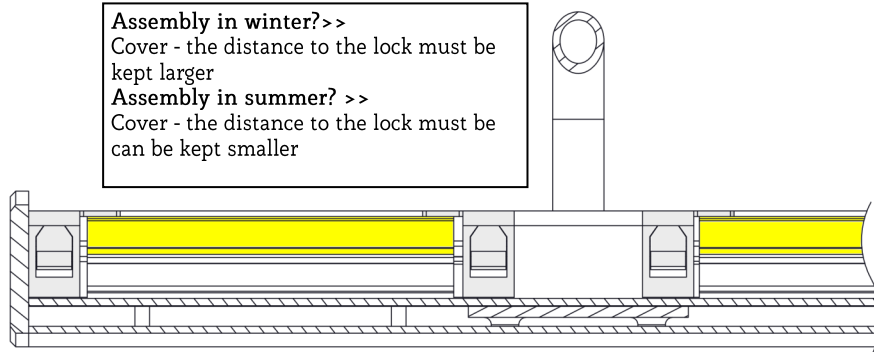


LUX GLENDER Montagehinweise - Abdeckung Kunststoff - SAFE



Thermal expansion of the cover is possible below the lock.

Assembly in winter? >>
Cover - the distance to the lock must be kept larger
Assembly in summer? >>
Cover - the distance to the lock must be kept smaller

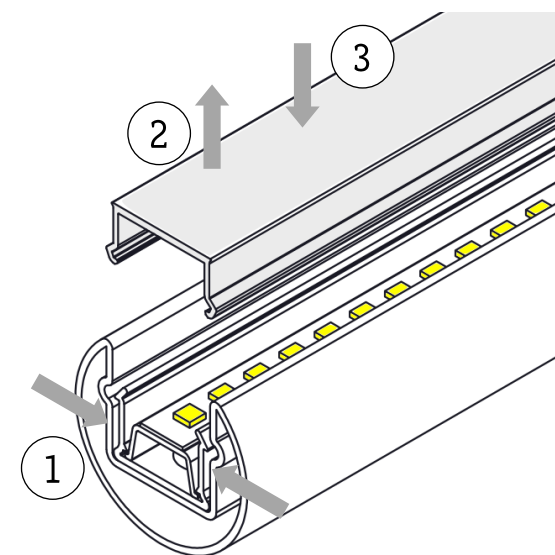


Instruction for installation:

- **IMPORTANT:** Either end-lock or intermediate-lock must be used on the end caps, on the support brackets and between two covers. Otherwise there is none Non-destructive removal of the cover possible.
- The cover of the SAFE system can be simply clipped in like the BASIC system.

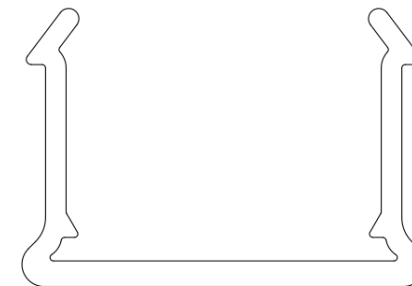
Disassembly instructions:

- Dismantling the cover of the SAFE product line is not straightforward because the safety profile secures the cover against unintentional pulling out.
- In the event of maintenance, the lock must first be removed. To do this, loosen the safety screw and pull the lock out of the groove using a flat screwdriver.
- The securing profile must then be pressed together on the two bars with the aid of "electrician pliers" or similar pliers with flat jaws (1). The plastic cover can then be carefully removed from the compressed end using a screwdriver, for example (2). The dismantling can only take place at the end of the profile or at a support bracket.
- After the maintenance work, the cover can be clipped in again (3).
- The safety function is thus restored.

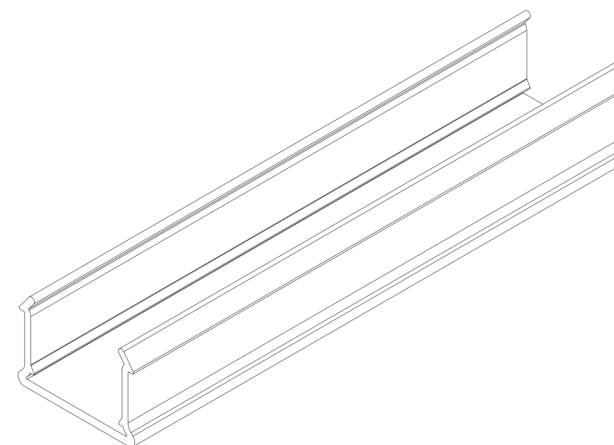


LUX GLENDER safety profile - SAFE

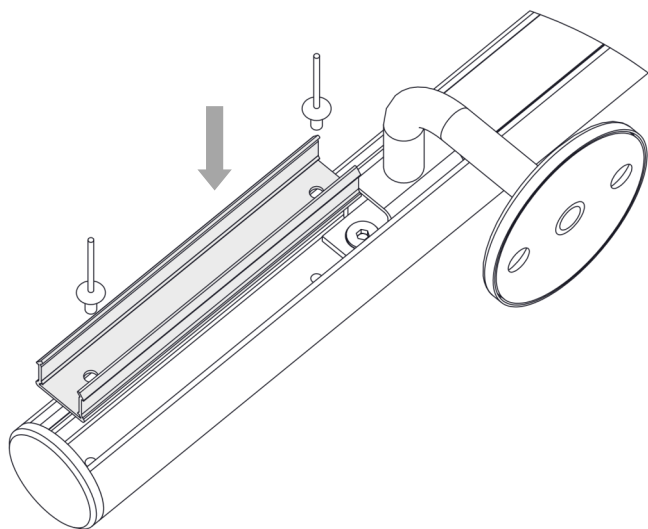
Productline	Item no.	For groove	For profile	Color	Material	Weight	Delivery length
SAFE	A000120	24mm	Lilly ø 42,4mm	white	ABS	0,09 kg/m	6010 mm



- Enables the SAFE function of the LED handrail. The cover is held securely by the safety profile.



LUX GLENDER Instruction for installation: - safety profile- SAFE

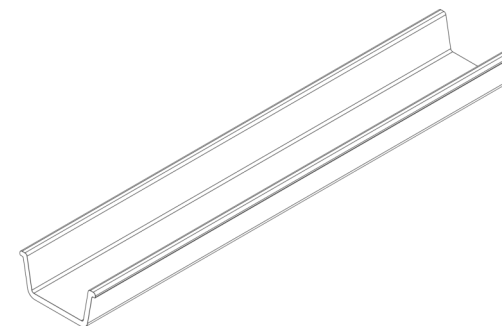


Instruction for installation:

- Insert the safety profile in the handrail groove and drill out together.
- In the outside area in particular, drill out the openings in the securing profile for thermal expansion or design the hole as an elongated hole. It is best to use blind rivets with a large head.
- Set blind rivets every 250 - 350 mm.
- Only lay the securing profile in one piece between support brackets, otherwise the cover cannot be removed without being destroyed later.

LUX GLENDER LED-carrier profile

Productline	Item no.	For groove	For profile	Color	Material	Weight	Delivery length
SAFE	A000121	24 mm	Lilly ø 42,4 mm	silver	Alu	0,09 kg/m	6010 mm



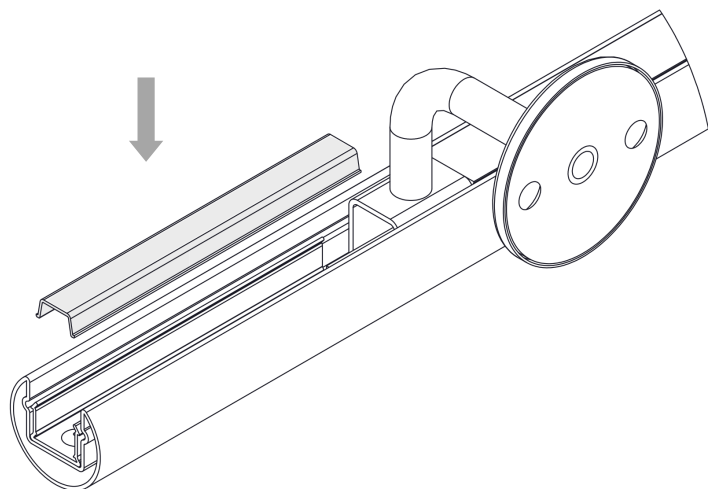
The LED carrier profile is necessary to hold the LED strip in the SAFE system.

LED carrier profile is clipped into the safety profile. Supply cables can be laid between the safety profile and the LED carrier profile.

Power cross-section max. 2x 6mm².

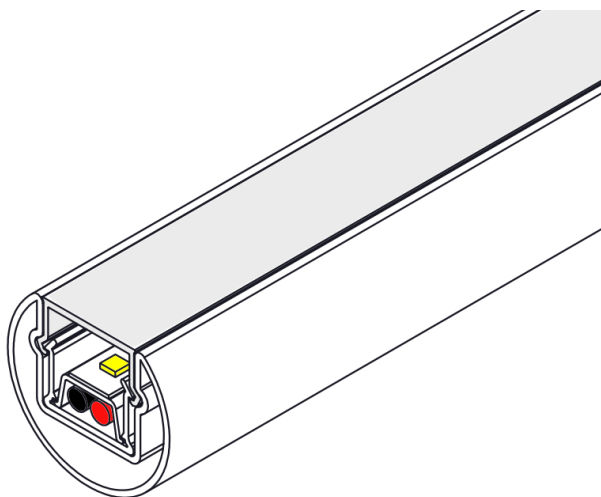
LED carrier profile is required when using the asymmetrical cover.

LUX GLENDER Instruction for installation - LED-carrier profile - SAFE



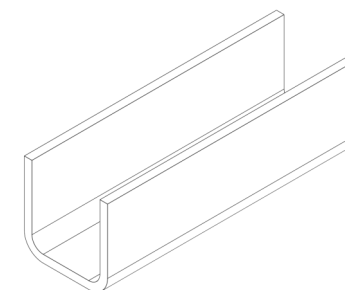
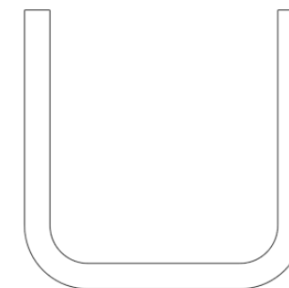
Instruction for installation:

- The LED carrier profile is clipped into the safety profile
- The LED strip can then be glued to the LED carrier profile
- The LED support profile can be cut out on the side, e.g. to lead through LED connection cables
- Supply cables can be placed between the fuse profile and the LED carrier profile be relocated. Power cross-section max. 2x 6mm².

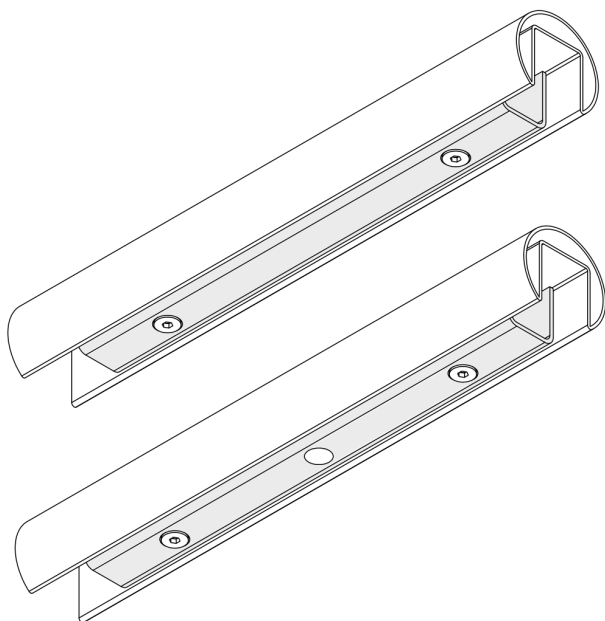


LUX GLENDER Nutverschlussprofil

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



LUX GLENDER Instruction for installation - Slot locking profile



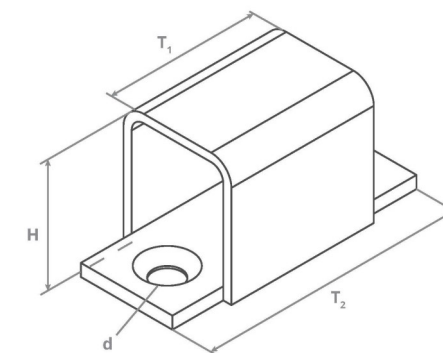
Instruction for installation:

- The slot locking profile is used to close the open spaces between the LED elements. Electrical plugs can also be accommodated below the slot closure profile.
- The slot locking profile is offered in 3 m bars and must be sawn to the desired length by the processor.
- Countersinks for the M6 countersunk head screws are created in the slot closure profile. The processor determines the distances according to his planning.
- When using Sliding block to reinforce the groove bottom, handrail holders or supports can be welded directly to the slot locking profile. With this variant, the support brackets can be dispensed with.

LUX GLENDER Support bracket for screwing

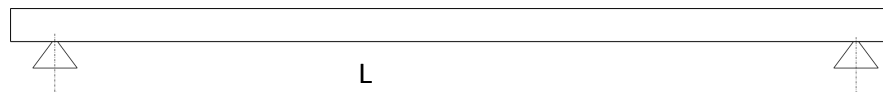
Item no.	For groove	For profile	Surface	Material	H	T ₁	T ₂
A000034	24 mm	Lilly ø 42,4 mm	K240	1.4401/04	24 mm	35	60
A000035	27 mm	Paula ø 48,3 mm Emil 40 x 40 mm	K240	1.4401/04	30 mm	35	60
A000036	35 mm	Nina ø 60,3 mm Ronny 60 x 45 mm	K240	1.4401/04	34 mm	35	60

d - 2x countersink for M6 countersunk screws. Distance 40mm.



Maximum span

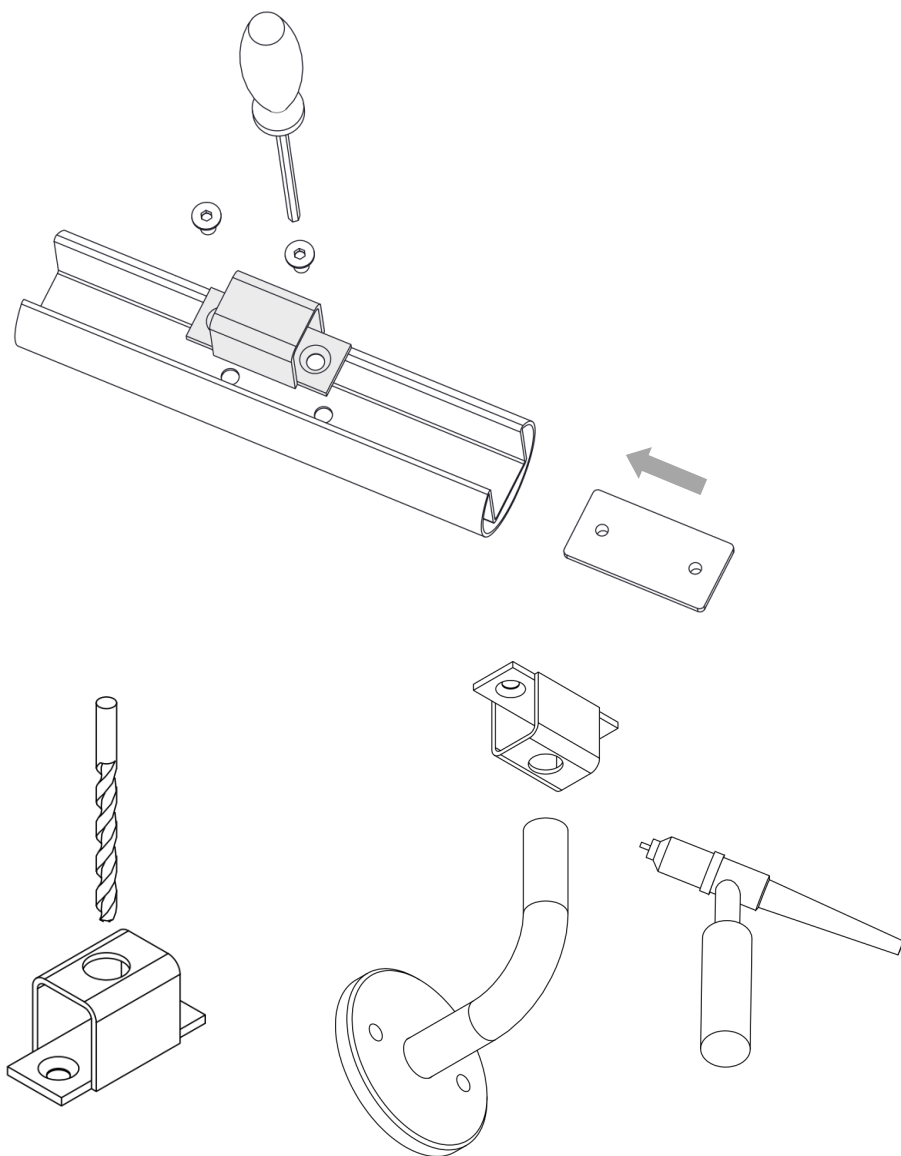
Horizontal payload F		0,5 kN/m	1 kN/m	2 kN/m
Maximum distance between two brackets L	A000034	2,2m	1,1 m	0,5 m
	A000035	2,2m	1,1 m	0,5 m
	A000036	2,2m	1,1 m	0,5 m



Note: This data applies to the support brackets only, agreeable to the DAIDALOS profiles. The information about distance of handrail holders with LUX GLENDER brackets see respective product data sheets.

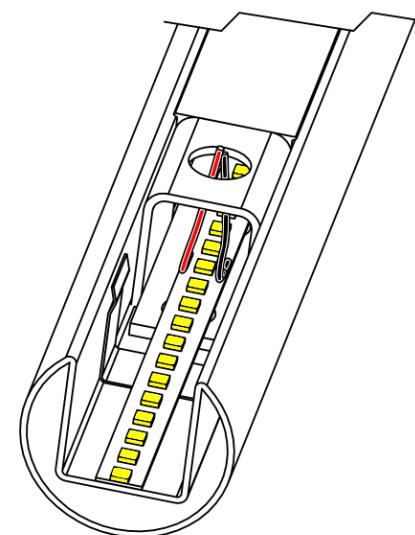
The holders, shorings, posts provided by customer must be calculated by customer.

LUX GLENDER Support brackets for screwing



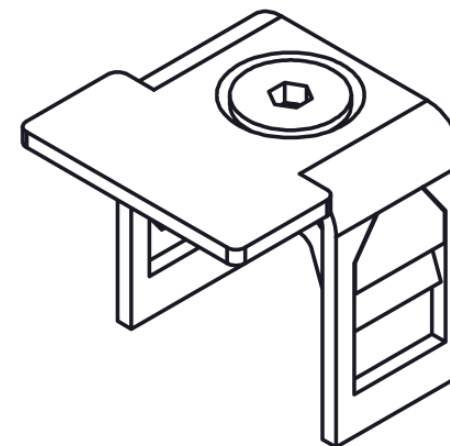
Instruction for installation:

- The support bracket is screwed to the profile in the groove. The small wall thickness of the profile of 1.5 mm is too thin for a sufficient number of M6 threads in the groove base. For this reason, the use of a sliding block is required. A permanently stable connection is not possible without a slot nut;
- The shape of the base holder allows electrical cables and LED strips to be fed through the groove without, for example, the LED strip having to be interrupted.
- The power feed / power supply line can take place through the base receptacle, for this purpose the base receptacle is drilled out. Use a hollow handrail bracket, pipe bend, or pipe support for this application. Make sure there is a sufficient cross-section for the cable inside the pipe and that there is good deburring.
- Please refer to the sliding block data sheet for information on how the sliding block is installed.



LUX GLENDER Lock SAFE

Item no.	For groove	Variant	For profile	Material
A000447	24 mm	End-Lock	Lilly ø 42,4 mm	1.4401/04
A000448	24 mm	Intermediate-Lock	Lilly ø 42,4 mm	1.4401/04

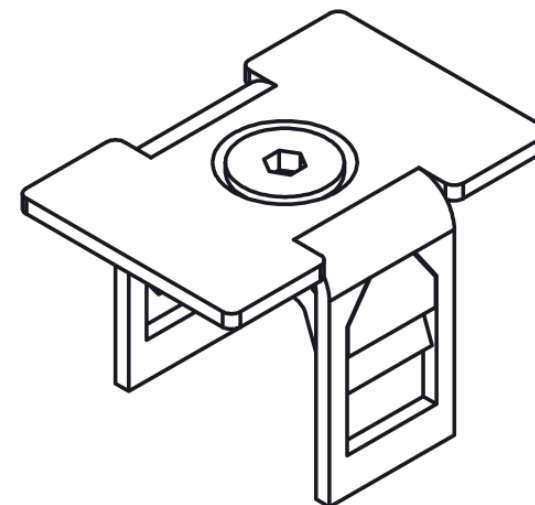


End-lock is used on the end pieces and support brackets.

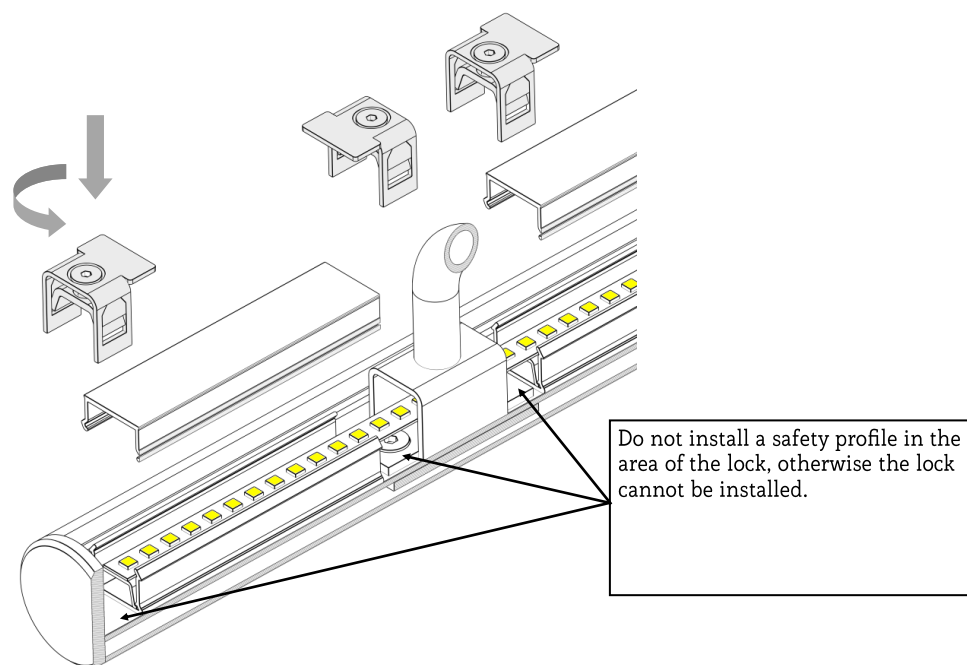
Intermediate lock is used between two covers.

The lock generally prevents access to the interior of the LED handrail. Below the closure, the cover can expand or contract when the temperature changes. The closure increases the insect protection. Fewer insects can get inside the handrail.

With the SAFE product line, the lock is required for the non-destructive removal of the cover.

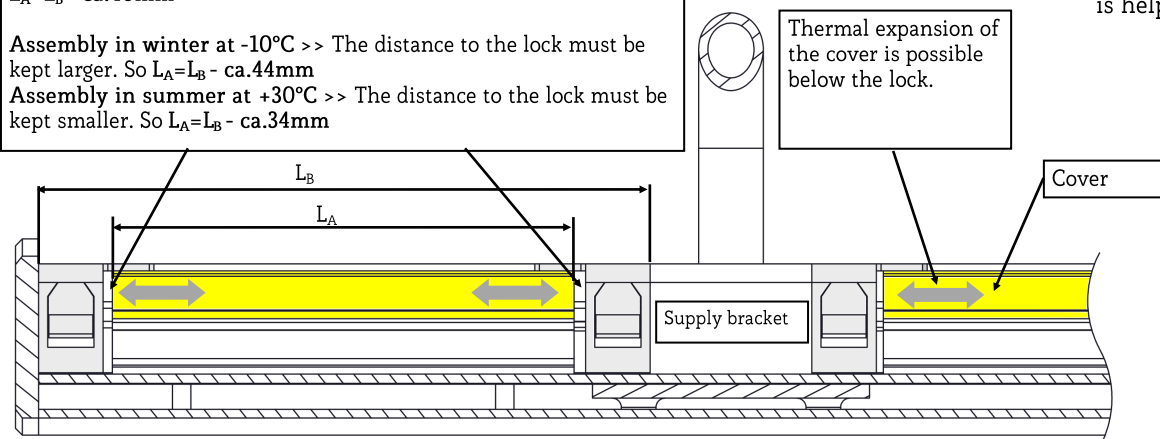


LUX GLENDER Instruction for installation - Lock SAFE



With an LB distance of approx. 1.2m applies as a guideline
 $L_A = L_B - \text{ca. } 40\text{mm}$

Assembly in winter at -10°C >> The distance to the lock must be kept larger. So $L_A = L_B - \text{ca. } 44\text{mm}$
 Assembly in summer at $+30^\circ\text{C}$ >> The distance to the lock must be kept smaller. So $L_A = L_B - \text{ca. } 34\text{mm}$

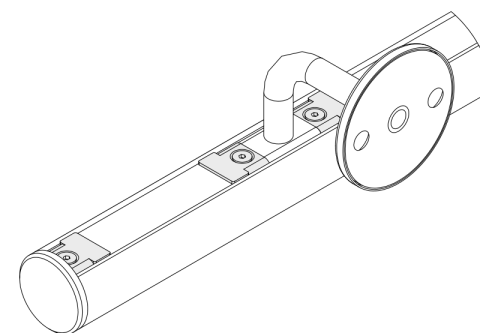


Instruction for installation:

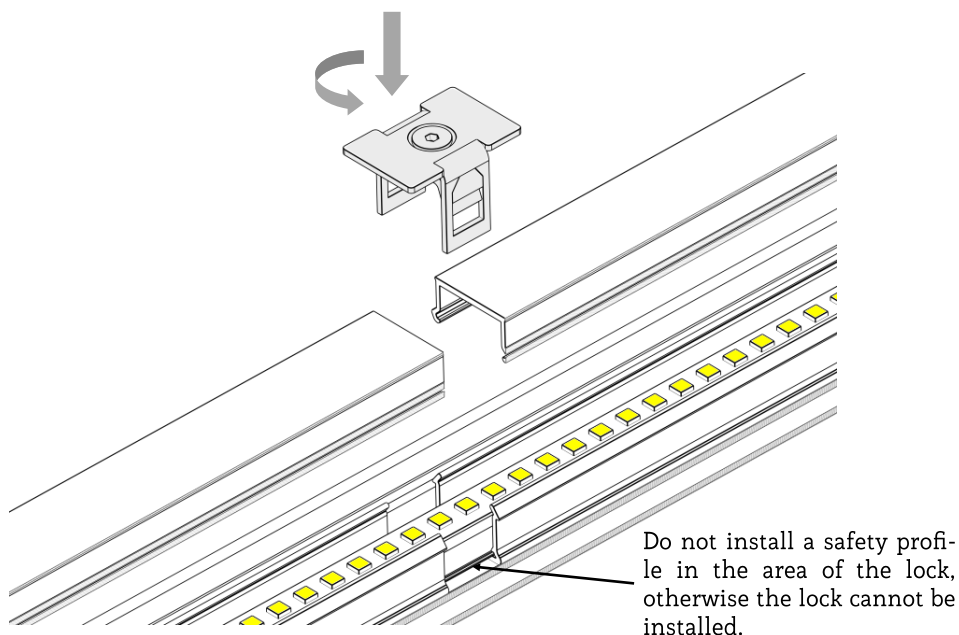
- The end-lock is simply placed in the profile groove and tightened with the help of Inbus-security screw bits. The fastening screw is included in the scope of delivery.
- Please press the lock down to the bottom of the groove so that it can be tightened properly.
- In order to be able to mount the lock, the securing profile must be cut out at the location of the lock.
- The lock can be used directly over the LED strip; it is not necessary to separate the LED strip. It is important to use only original parts from the closure so that the LED strip is not damaged.
- **Important** - expansion coefficient of the PMMA cover $\alpha = \text{about } 85 \cdot 10^{-6} / \text{K}$ at 20°C
- An initial length of 1m and a temperature change of 40K results in >> 3.4mm change in length
- An initial length of 6m and a temperature change of 40K results in >> 20.4mm change in length

Disassembly instructions:

- Loosen the safety screw and pull the lock out of the groove. A flat screwdriver is helpful during disassembly.



LUX GLENDER Instruction for installation - Lock SAFE



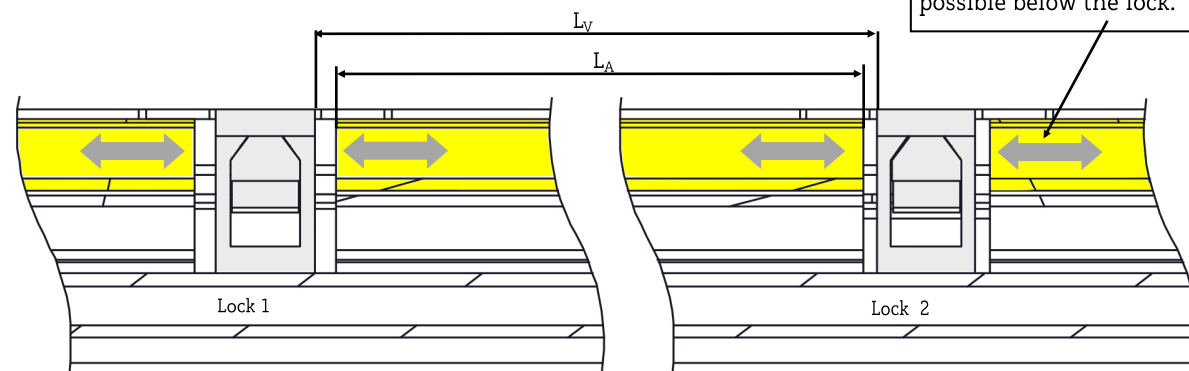
With a distance between two closures of 6m applies as a guide
 $L_A = L_V - \text{ca. } 10\text{mm}$

Assembly in winter at -10°C >> The distance to the lock must be kept larger.

So $L_A = L_B - \text{ca. } 20\text{mm}$

Assembly in summer at $+30^\circ\text{C}$ >> The distance to the lock must be kept smaller.

So $L_A = L_B - \text{ca. } 2\text{mm}$

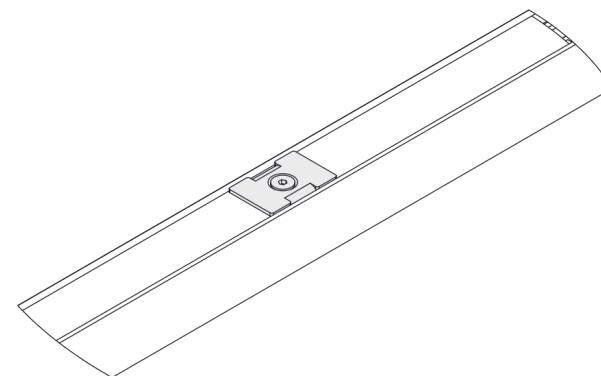


Instruction for installation:

- The intermediate lock is simply placed in the profile groove and tightened with the help of Allen security screw bits. The fastening screw is included in the scope of delivery.
- Please press the lock down to the bottom of the groove so that it can be tightened properly.
- In order to be able to mount the lock, the securing profile must be cut out at the location of the lock.
- The fastener can be inserted directly over the LED strip, it is not necessary to separate the LED strip. It is important to use only original parts from the fastener so that the LED strip is not damaged.
- Important - expansion coefficient of the PMMA cover $\alpha = \text{about } 85 \cdot 10^{-6} / \text{K}$ at 20°C
- An initial length of 1m and a temperature change of 40K results in >> 3.4mm change in length
- An initial length of 6m and a temperature change of 40K results in >> 20.4mm change in length

Disassembly instructions:

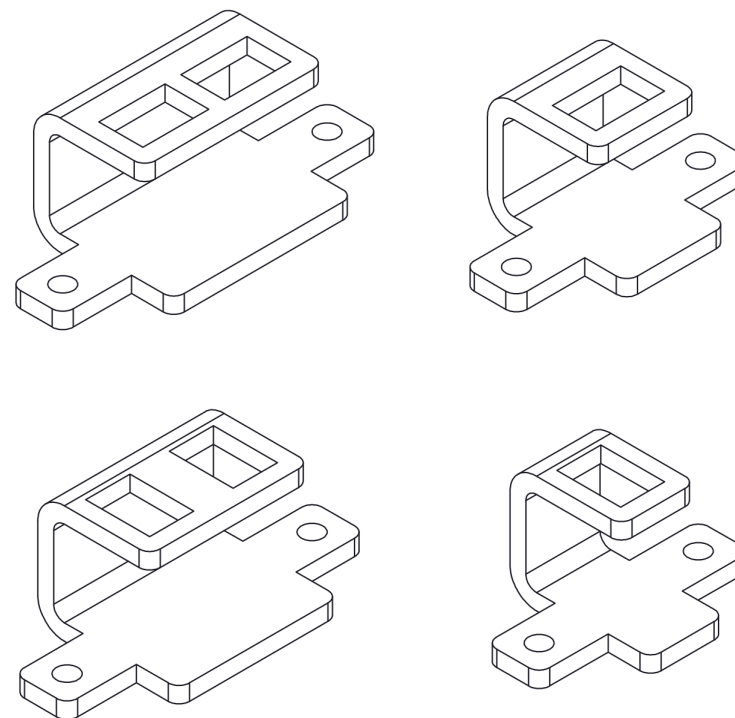
- Loosen the safety screw and pull the lock out of the groove. A flat screwdriver is helpful during disassembly.



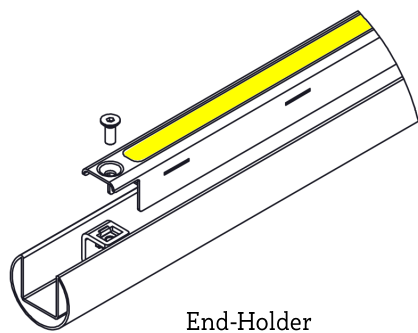
LUX GLENDER Holder for ULTRA SAFE Lamp

Item no.	Gor groove	Variant	Alignment	For profile	Material
A000497	24 mm	End-Holder	längs	Lilly ø 42,4 mm	1.4401/04
A000498	24 mm	Intermediate-Holder	längs	Lilly ø 42,4 mm	1.4401/04
A000499	27 mm	End-Holder	längs	Paula ø48,3mm Emil 40x40mm	1.4401/04
A000500	27 mm	Intermediate-Holder	längs	Paula ø48,3mm Emil 40x40mm	1.4401/04
A000501	27 mm	End-Holder	quer	Paula ø48,3mm Emil 40x40mm	1.4401/04
A000502	27 mm	Intermediate-Holder	quer	Paula ø48,3mm Emil 40x40mm	1.4401/04
A000503	35 mm	End-Holder	längs	Nina ø60,3mm Ronny 60x45mm	1.4401/04
A000504	35 mm	Intermediate-Holder	längs	Nina ø60,3mm Ronny 60x45mm	1.4401/04
A000505	35 mm	End-Holder	quer	Nina ø60,3mm Ronny 60x45mm	1.4401/04
A000506	35 mm	Intermediate-Holder	quer	Nina ø60,3mm Ronny 60x45mm	1.4401/04

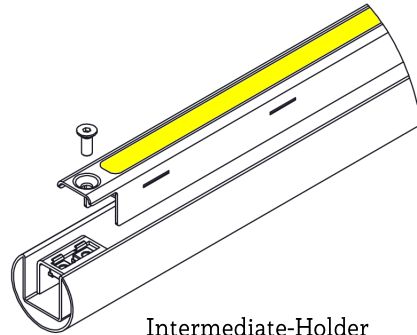
- "Longitudinal" design is used for straight handrails. Tolerance compensation along the groove approx. +/- 2.5mm
- The "transverse" design is required for curved handrails. Tolerance compensation across the groove approx. +/- 2.5mm



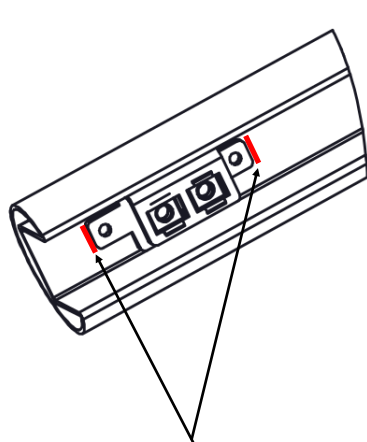
LUX GLENDER Instruction for installation - ULTRA SAFE Holder



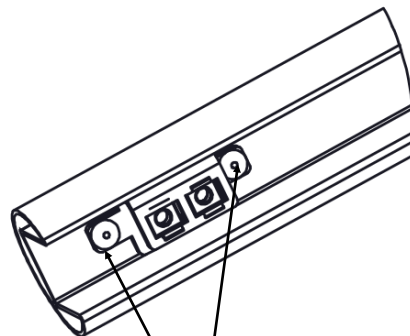
End-Holder



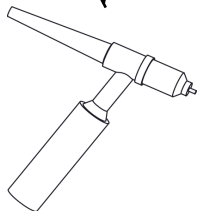
Intermediate-Holder



or



V2A / V4A
Blind rivets $\varnothing 4\text{mm}$



Instruction for installation with the End- and Intermediate-Holder

- End or intermediate holder are used for the ULTRA SAFE lamp-fixture.
- The end- and intermediate locks can also be installed after the handrail has been fully assembled.
- End locks with one nut are e.g. on the ends or on the thermal-expansion-gap used. Intermediate locks with two nuts are used between two lamps.
- The nuts in the holders allow tolerance compensation, from approx. $\pm 2.5\text{mm}$, lengthways or crossways depending on the type of holder.
- "Longitudinal" design is used for straight handrails. Tolerance compensation along the groove.
- The "transverse" design is required 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 in the groove. The profile may have to be straightened after welding.
- Up to a certain cross section 6mm^2 to 10mm^2 (with Nina $\varnothing 60.3$) cables can be inserted directly from the front. There is no need to pass the cables through.
- The ULTRA SAFE lamps must not be laid over the thermal-expansion-gap, the lamps could be damaged. Planning of the project is usually necessary here. Special solutions are possible.

We are happy to help!

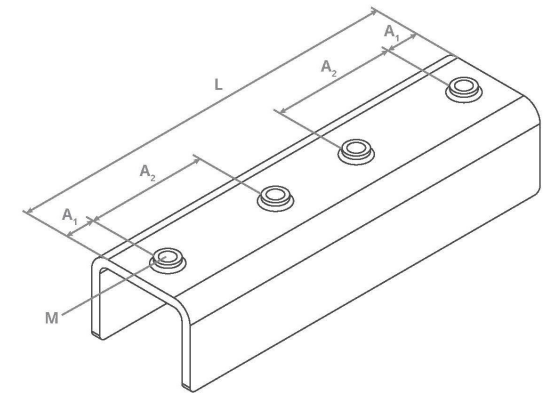
LUX GLENDER Universal fixing bolt

Item no.	For groove	For profile	Material	L	A ₁	A ₂	M
A000022	24 mm	Lilly ø 42,4 mm	1.4401/04	160 mm	10 mm	40 mm	M6
A000030	27 mm	Paula ø 48,3 mm Emil 40 x 40 mm	1.4401/04	160 mm	10 mm	40 mm	M6
A000021	35 mm	Nina ø 60,3 mm Ronny 60 x 45 mm	1.4401/04	160 mm	10 mm	40 mm	M6

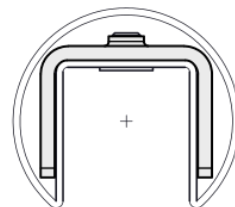
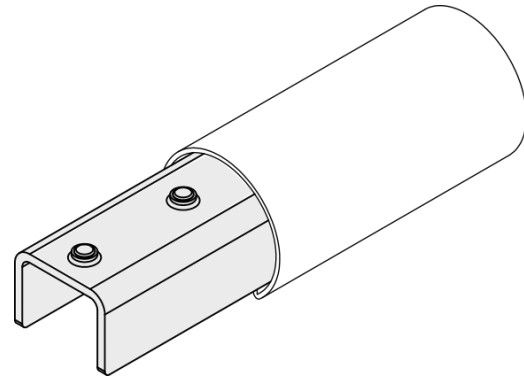
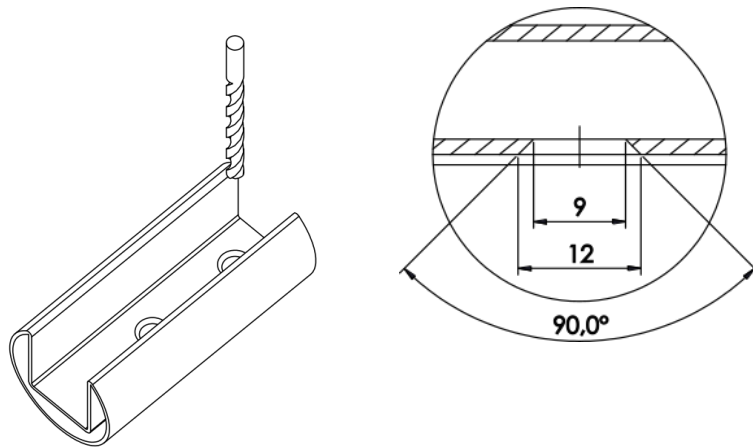
Incl. 4x countersunk screws ISO 10642 / DIN 7991 A4 M6x8

Universal connector enables hairpin joints without a waistband. Connection lies in the cavity of the profile and is invisible from the outside.

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

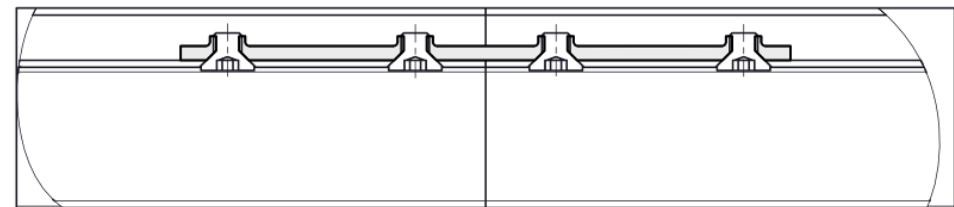
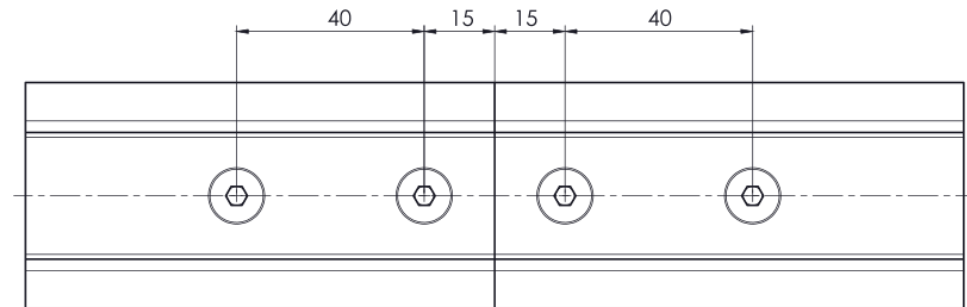


LUX GLENDER Universal fixing bolt



Instruction for installation:

- The profiles are drilled through and countersunk on the inside of the groove. Countersunk head screws are more space-saving and must be used with all-glass railings and LED applications. Flat head or pan head screws can also be used for other applications.
- Please refer to the sketch for the drilling distances or use our auxiliary template. The template makes your work easier, especially when working on the construction site.
- One side of the connector is pushed into one of the two profile pieces and screwed tight.
- Then the second tube is pushed in and screwed.

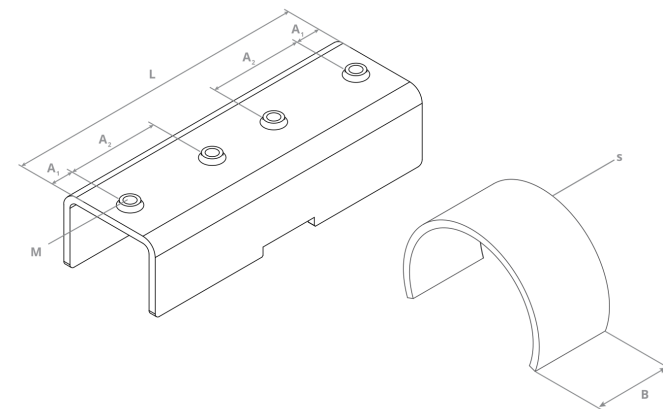


LUX GLENDER Universal fixing bolt with a clamp for expansion gap

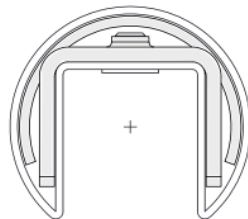
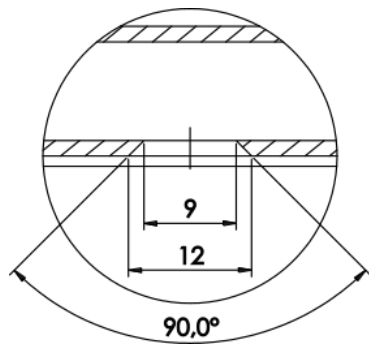
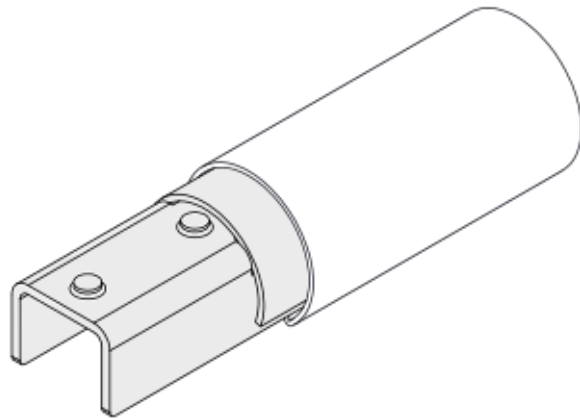
Item no.	For profile	Material	L	A ₁	A ₂	M	B	s
A000028	Lilly ø 42,4 mm	1.4401/04	160 mm	10 mm	40 mm	M6	23	2
A000029	Paula ø 48,3 mm	1.4401/04	160 mm	10 mm	40 mm	M6	23	2
A000031	Nina ø 60,3 mm	1.4401/04	160 mm	10 mm	40 mm	M6	23	2
A000033	Emil 40 x 40 mm	1.4401/04	160 mm	10 mm	40 mm	M6	23	2
A000032	Ronny 60 x 45 mm	1.4401/04	160 mm	10 mm	40 mm	M6	23	2

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

Universal fixing bolt with a clamp to adjust the gap caused by thermal expansion.

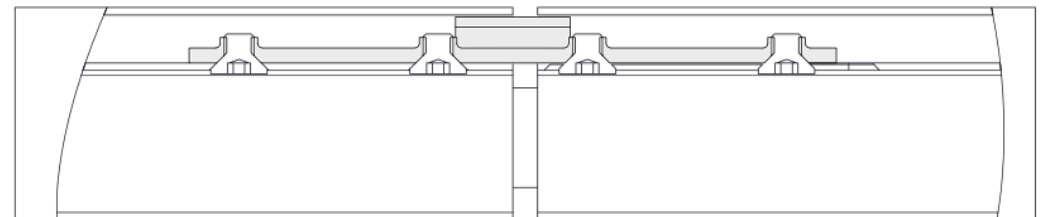
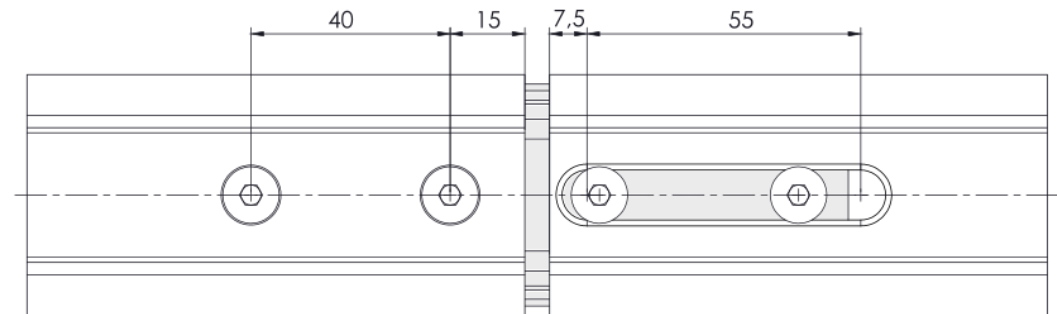


LUX GLENDER Universal connector with clamp



Instruction for installation:

- The tubes are drilled through and countersunk or milled on the inside of the groove. Countersunk head screws are more space-saving and must be used with all-glass railings and LED applications. Flat head or pan head screws can also be used for other applications.
- For the expansion joint, screw the universal connector tightly to one end of the profile, as with a hair pile. Then mill an elongated hole in the other end of the profile, which allows movement when the material expands.
- The clamp sits in a recess in the universal connector, but can also be be attached to one end of the profile.
- We recommend an expansion joint every 12 m.



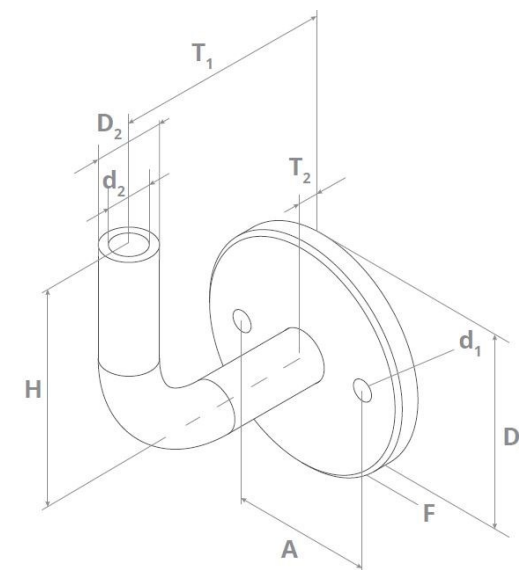
LUX GLENDER Handrail Holder - hollow

Item no.	For profile	H [mm]	T ₁ [mm]	T ₂ [mm]	A [mm]	F [mm]	D ₁ [mm]	d ₁ [mm]	D ₂ [mm]	d ₂ [mm]	Incl. rosette
A000247	All profiles	50	81	4	50	-	75	M6 countersunk	14	10	yes
A000155	All profiles	76	76	8	50	1x45°	80	7,5	18	12	no

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
	A000155	1,7 m	0,85 m	0,4 m



Note: This information only applies to LUX GLENDER handrail holders in conjunction with our supply brackets and handrail profiles.

Construction and assembly substrates or fastening materials are not taken into account for the maximum distances and must be designed and checked by the customer.

LUX GLENDER Handrail Holder - full

Item no.	For profile	H [mm]	T ₁ [mm]	T ₂ [mm]	A [mm]	F [mm]	D ₁ [mm]	d ₁ [mm]	D ₂ [mm]	Incl. rosette
A000248	Alle / all	50	81	4	50	-	75	M6 Senkung	14	yes
A000156	Alle / all	76	76	8	50	1x45°	80	7,5	18	no

Material: 1.4401/04

Maximum span

Horizontal payload F

0,5 kN/m

1 kN/m

2 kN/m

Maximum handrail holder span L

A000248

1,5 m

0,75 m

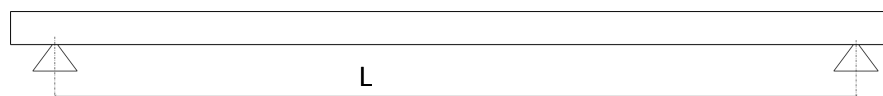
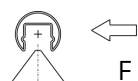
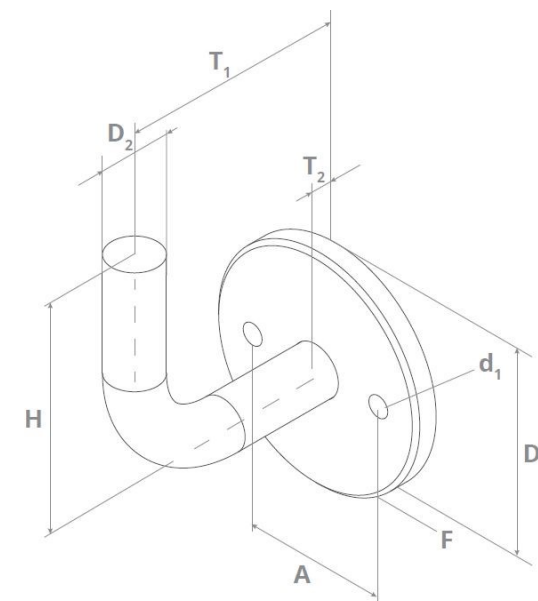
0,35 m

A000156

2,2 m

1,1 m

0,5 m

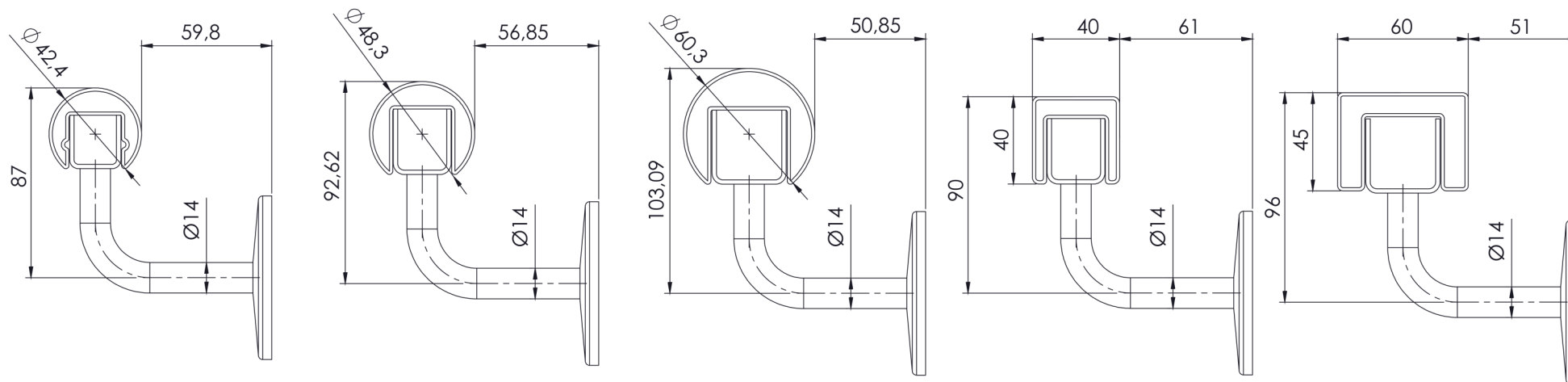


Note: This information only applies to LUX GLENDER handrail holders in conjunction with our supply brackets and handrail profiles.

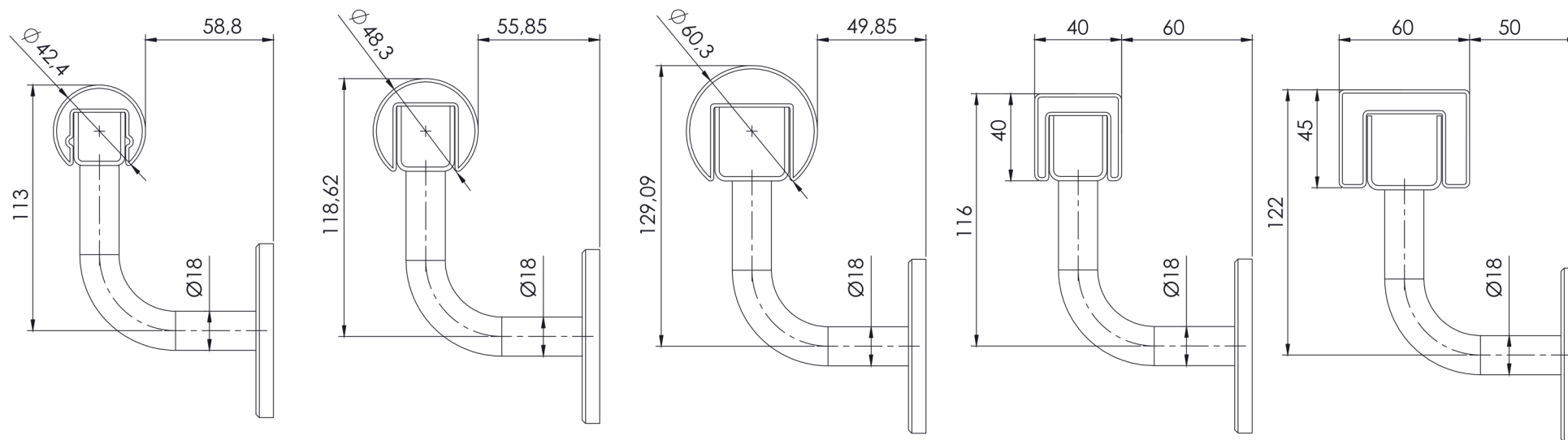
Construction and assembly substrates or fastening materials are not taken into account for the maximum distances and must be designed and checked by the customer.

LUX GLENDER Overview of handrail holder - wall-distance

Handrail holder $\varnothing 14\text{mm}$

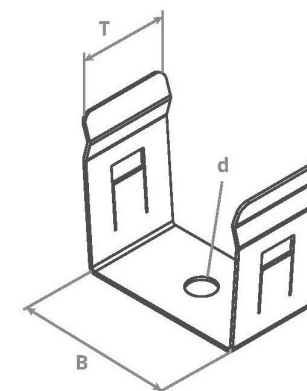


Handrail holder $\varnothing 18\text{mm}$



LUX GLENDER Retaining clips

Item no.	For groove	For profile	B	T	d	Type of clip
A000180	27mm	Paula ø 48,3 mm Emil 40 x 40 mm	27 mm	15 mm	4,2 mm	Reversibel
A000181	35mm	Nina ø 60,3 mm Ronny 60 x 45 mm	35 mm	15 mm	4,2 mm	Reversibel
A000182	27mm	Paula ø 48,3 mm Emil 40 x 40 mm	27 mm	15 mm	4,2 mm	Fest
A000183	35mm	Nina ø 60,3 mm Ronny 60 x 45 mm	35 mm	15 mm	4,2 mm	Fest

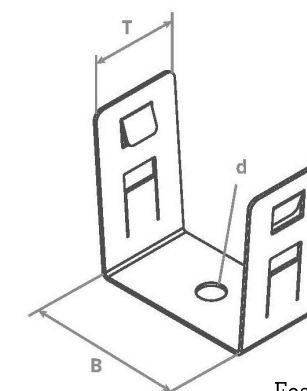


Revisibel

The retaining clips are used to fasten plastic cover profiles. With the **"Reversibel"** clip type the non-destructive removal of the cover is possible at any time. With the **"Fest"** type the non-destructive disassembly is not possible. This clip type protects the LED strip against vandalism and theft. All of the clips have two additional cable clamps as opening windows for carrying a cable harness.

The clips are necessary for all product lines DAIDALOS excepted Lilly.

We recommend to fasten the clips with blind rivets in the profile slot. You can also tack-weld, glue or use M3/M4 screws for fastening. We recommend to install 4 clips per meter of plastic cover, as well as one clip at the beginning and the end of cover profile.

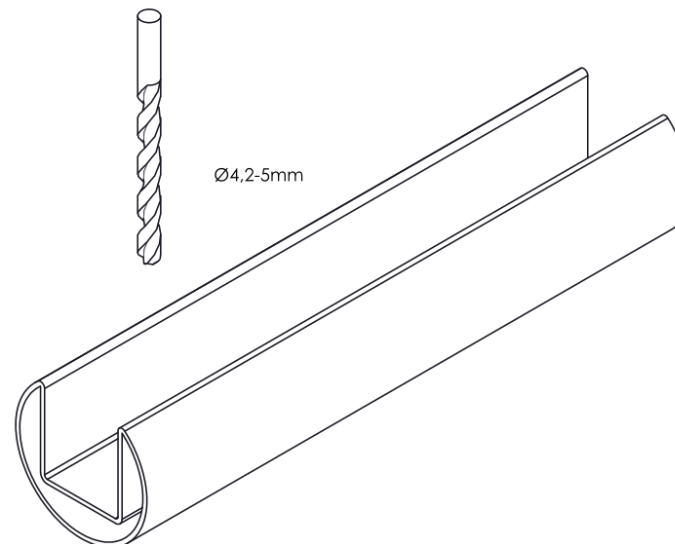
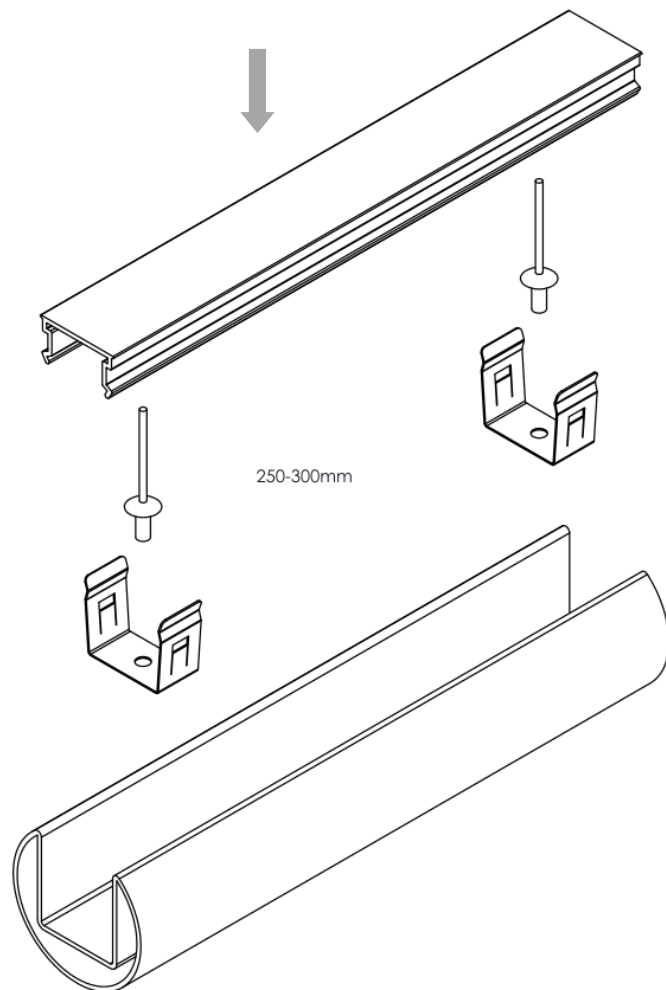


Fest

LUX GLENDER Instruction for installation - Retaining clips

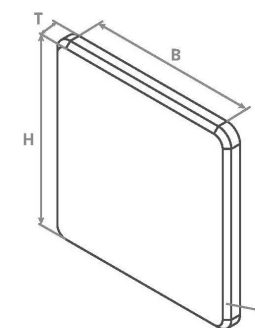
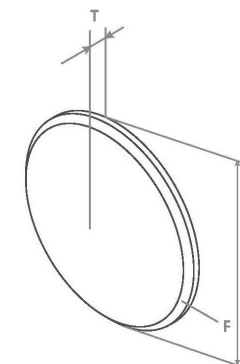
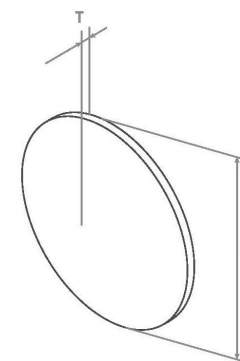
Instruction for installation:

- To attach the plastic groove cover in the profile without beading, you need retaining clips.
- We recommend that you fix the retaining clips in the profile groove tube with blind rivets. You can also attach, glue or fasten the retaining clips with M3 / M4 screws.
- We recommend installing 4 retaining clips per meter of plastic cover and one clip at the beginning and one at the end of a profile.
- After installing the retaining springs, the profile is simply clipped in.



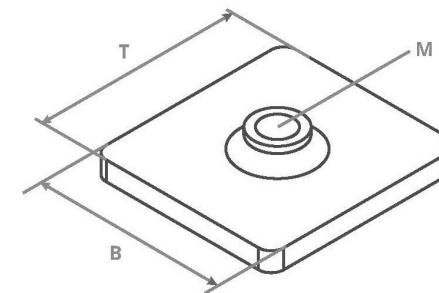
LUX GLENDER End cap for welding

Item no.	For profile	Material	Schape	T	D	B	H	F
A000092	Lilly ø 42,4 mm	1.4401/04	flat	5 mm	42,4 mm	-	-	1,5x45°
A000093	Paula ø 48,3 mm	1.4401/04	flat	3 mm	48,3 mm	-	-	1,5x45°
A000090	Paula ø 48,3 mm	1.4401/04	arched	7 mm	48,3 mm	-	-	M6
A000094	Nina ø 60,3 mm	1.4401/04	flat	3 mm	60,3 mm	-	-	1,5x45°
A000091	Nina ø 60,3 mm	1.4401/04	arched	7 mm	60,3 mm	-	-	M6
A000095	Emil 40 x 40 mm	1.4401/04	flat	3 mm	-	40 mm	40 mm	1,5x45°
A000096	Ronny 60 x 45 mm	1.4401/04	flat	3 mm	-	60 mm	45 mm	1,5x45°



LUX GLENDER Sliding block - simple

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

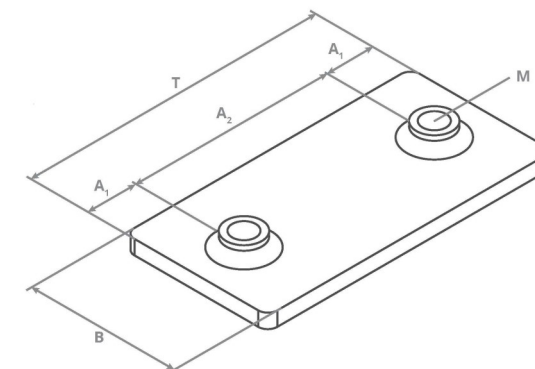


Sliding block enable a firm connection of handrail profiles and accessories, because the wall thickness of the handrail profiles does not even allow sufficient threads for M6 screws.

Sliding block should also be used if the accessories are not welded directly to the handrail.

LUX GLENDER Sliding block - double

Item no.	For profile	Material	B	T	A ₁	A ₂	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	45,75 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

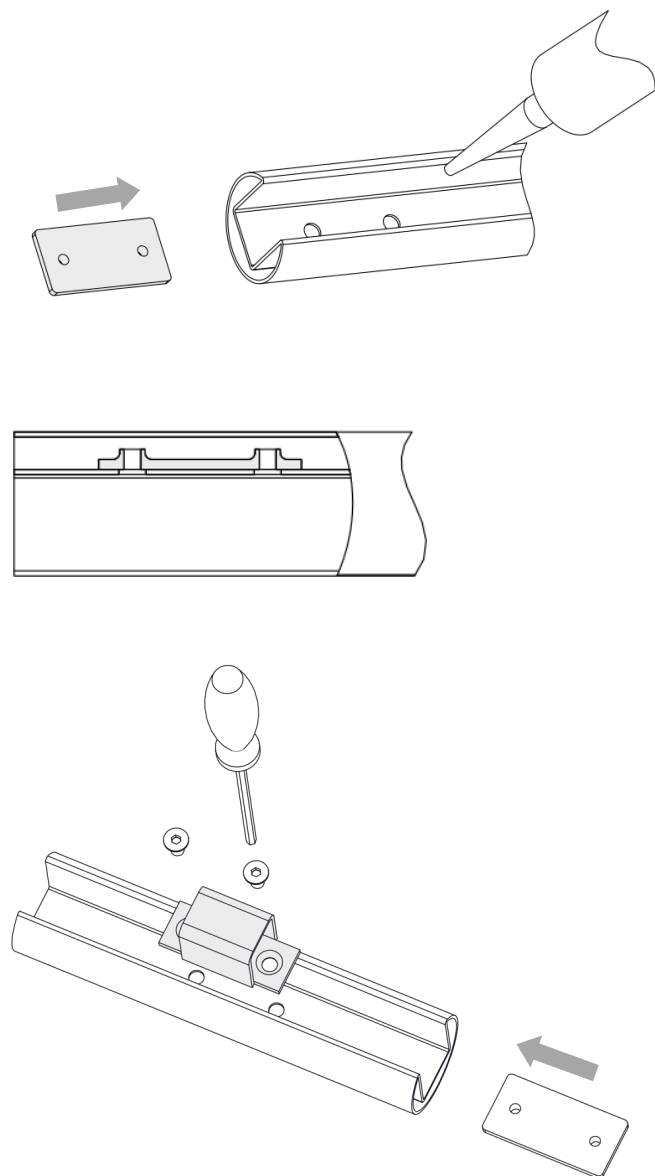


f the handrail profiles does not even allow sufficient threads for M6 screws.

Sliding block should also be used if the accessories are not welded directly to the handrail.

Suitable for our supply brackets

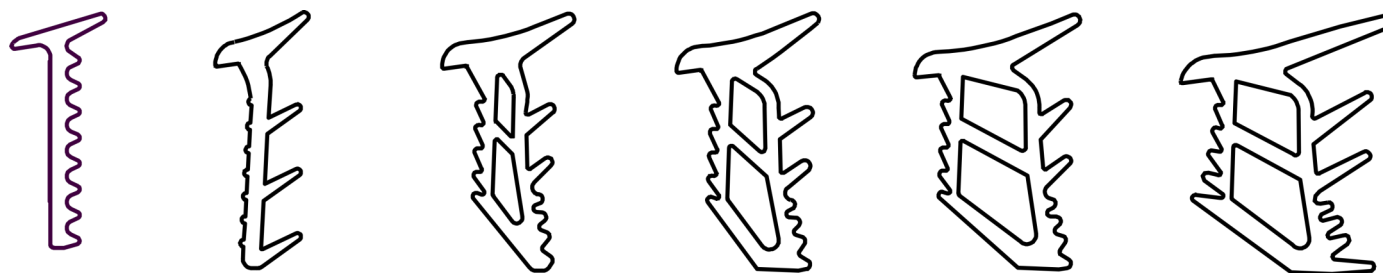
LUX GLENDER Instruction for installation - Sliding block



Instruction for installation:

- The wall thickness of the handrail profile is 1.5 mm, so that a stable screw connection with M6 screws is possible, the groove base must be reinforced with the aid of a slot nut will.
- To do this, place the profile on the work stands with the groove facing up.
- Drill 8 - 20 mm holes in the bottom of the groove. The larger holes of 20 mm allow the material to expand when the temperature changes.
- Insert a scribe or screwdriver into the first hole. So the sliding block is not pushed further than necessary.
- Then push the sliding block into the cavity with the help of a suitable insertion aid. For example with a wooden, plastic or stainless steel stick. If the screwdriver moves you are far enough.
- Take the screwdriver out of the hole and carefully push the sliding block a few centimeters further.
- Use the screwdriver to position the sliding block concentrically to the drilling. So that the sliding block does not slip in the cavity, we recommend using a neutral to inject cross-linking silicone, then screw in the screw and the silicone let dry. Then you can loosen the screw again, the sliding block maintains its position.
- Insert one sliding block after the other. Not all in a row. Start with the hole farthest away and work your way up to the hole closest to the end of the pipe.
- **IMPORTANT** - Please do not use vinegar-curing silicone, only neutral-curing silicone.

LUX GLENDER Seals for glass railings

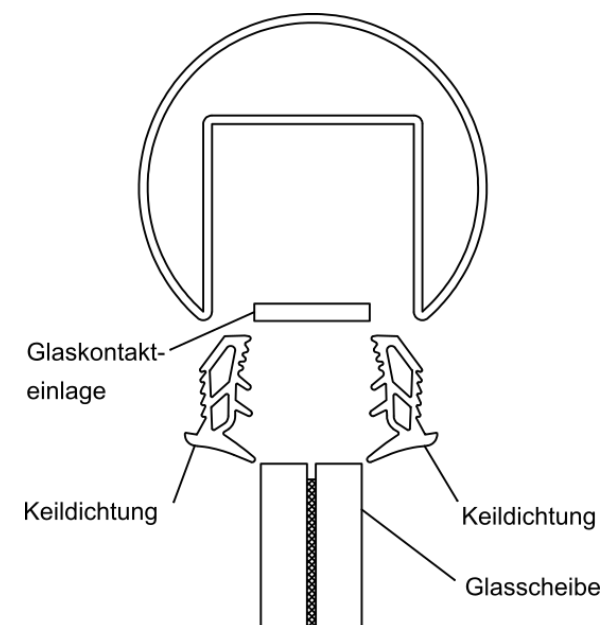


We offer you a diverse sealing system for glass railings, suitable for different glass thicknesses. Our sealing system allows you to easily assemble the handrail, load transferring profile or edge protection with little effort and without annoying twisting of the seals. Thanks to an optimized glass contact insert, LED strips can also be inserted into the groove base.

Just talk to us about the various options, we will be happy to advise you.

LUX GLENDER Seals for glass railings

Benennung	Artikelnummer	Überdeckung [mm] / *Abmessung [mm]	Rechenmaß [mm]	Werkstoff
Wedge seal (self-adhesive)	A000275	2,5	3	TPE-s
Wedge seal	A000276	2-4	3	TPE-s
Wedge seal	A000277	4-6	5	TPE-s
Wedge seal	A000278	6-8	7	TPE-s
Wedge seal	A000279	8-10	9	TPE-s
Wedge seal	A000280	10-12	11	TPE-s
Glass-contact-inserts (self-adhesive)	A000199	*22,6x3		TPE-s
Glass-contact-inserts (self-adhesive)	A000200	*25,5x3		TPE-s
Glass-contact-inserts (self-adhesive)	A000201	*33,5x3		TPE-s



The wedge seals of the DAIDALOS® brand are placed in the spaces between the panel and the handrail or another U-profile inserted by hand and do not have to be glued.

We offer the wedge seal A000275 especially for the use of 21.52 mm thick glass in a 27 mm groove (our Paula and Emil profiles). This seal is provided with adhesive strips on one side and is also suitable for others applications.

The glass-contact-inserts are also provided with adhesive strips for easier handling.

All seals are black, other colors are available on request.

LUX GLENDER Seals selection sheet

Füllungsmaß	Paula and Emil (Nut 27 mm)		Nina und Ronny (Nut 35 mm)	
	Seite 1	Seite 2	Seite 1	Seite 2
5	A000280	A000280	-	-
6	A000280	A000280	-	-
7	A000279	A000280	-	-
8	A000279	A000279	-	-
9	A000279	A000279	-	-
10	A000278	A000279	-	-
11	A000278	A000279	-	-
12	A000278	A000278	-	-
13	A000278	A000278	A000280	A000280
14	A000278	A000277	A000280	A000280
15	A000278	A000277	A000279	A000280
16	A000277	A000277	A000279	A000279
16,76	A000277	A000277	A000279	A000279
17	A000277	A000277	A000279	A000279
17,52	A000277	A000277	A000279	A000279
18	A000276	A000277	A000278	A000279
19	A000276	A000277	A000278	A000279
20	A000276	A000276	A000278	A000278
20,76	A000276	A000276	A000278	A000278
21	A000276	A000275	A000278	A000278
21,52	A000276	A000275	A000278	A000278
22	A000276	A000275	A000278	A000276
23	-	-	A000278	A000277
24	-	-	A000277	A000277
24,76	-	-	A000277	A000277
25	-	-	A000277	A000277
25,52	-	-	A000277	A000277
26	-	-	A000276	A000277
27	-	-	A000276	A000277
28	-	-	A000276	A000276
29	-	-	A000276	A000276
30	-	-	A000276	A000276

Seals selection:

The table lists the seals required for use with our stainless steel handrail profiles.

For further groove widths please use the following formula:
(Groove width - filling thickness) / 2 = overlap (here on the calculation dimension orientate)

For an almost symmetrical arrangement, choose the for both sides same seal. Thus, for 1m handrail, 2m wedge seal and 1m glass-contact-insert required.

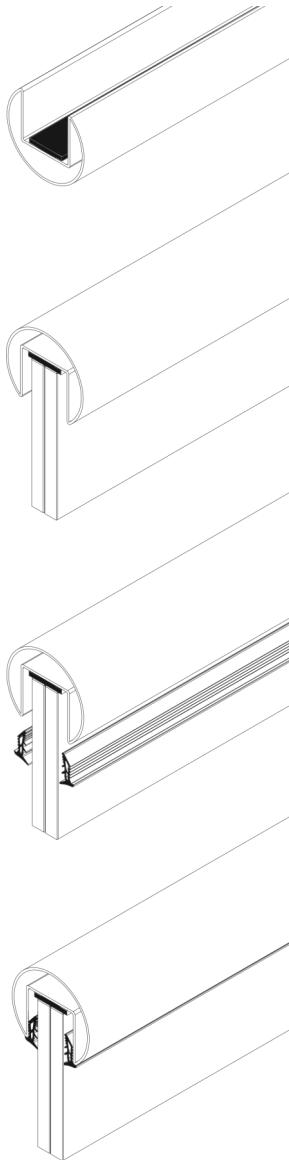
In some cases it is advisable to use two different seals to bridge the gap.

Example: Groove width 24mm, glass thickness 17.52mm results in an overlap of 3.24mm. Select a seal with a calculation dimension of 3 mm and order twice the length.

TRAV-Note

The glass-contact-insert is placed in the groove base or U-profile base. According to TRAV Annex B, the glass must be glued directly to the handrail or the U-profile. Simply inserting the adhesive between the glass and the glass-contact-insert is therefore not sufficient. Even the adhesive strip of the glass contact insert cannot replace the TRAV-compliant glass bonding. It is only intended for easier handling during assembly. For glass bonding in accordance with TRAV, the glass contact insert must be interrupted approximately every 300 mm for a 300 mm gap. The adhesive is applied in this space.

LUX GLENDER Instruction for installation - Seals



Instruction for installation:

- Insert the self-adhesive glass contact insert in the bottom of the groove.
- Place the handrail, load transfer profile or edge protection on the glass pane
- Insert wedge seals on both sides from below
- The wedge seals must be inserted from both sides at about the same time so that the seals hold due to the wedge effect. Alternatively, assembly wedges can be inserted from one side and the wedge seal from the other.

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