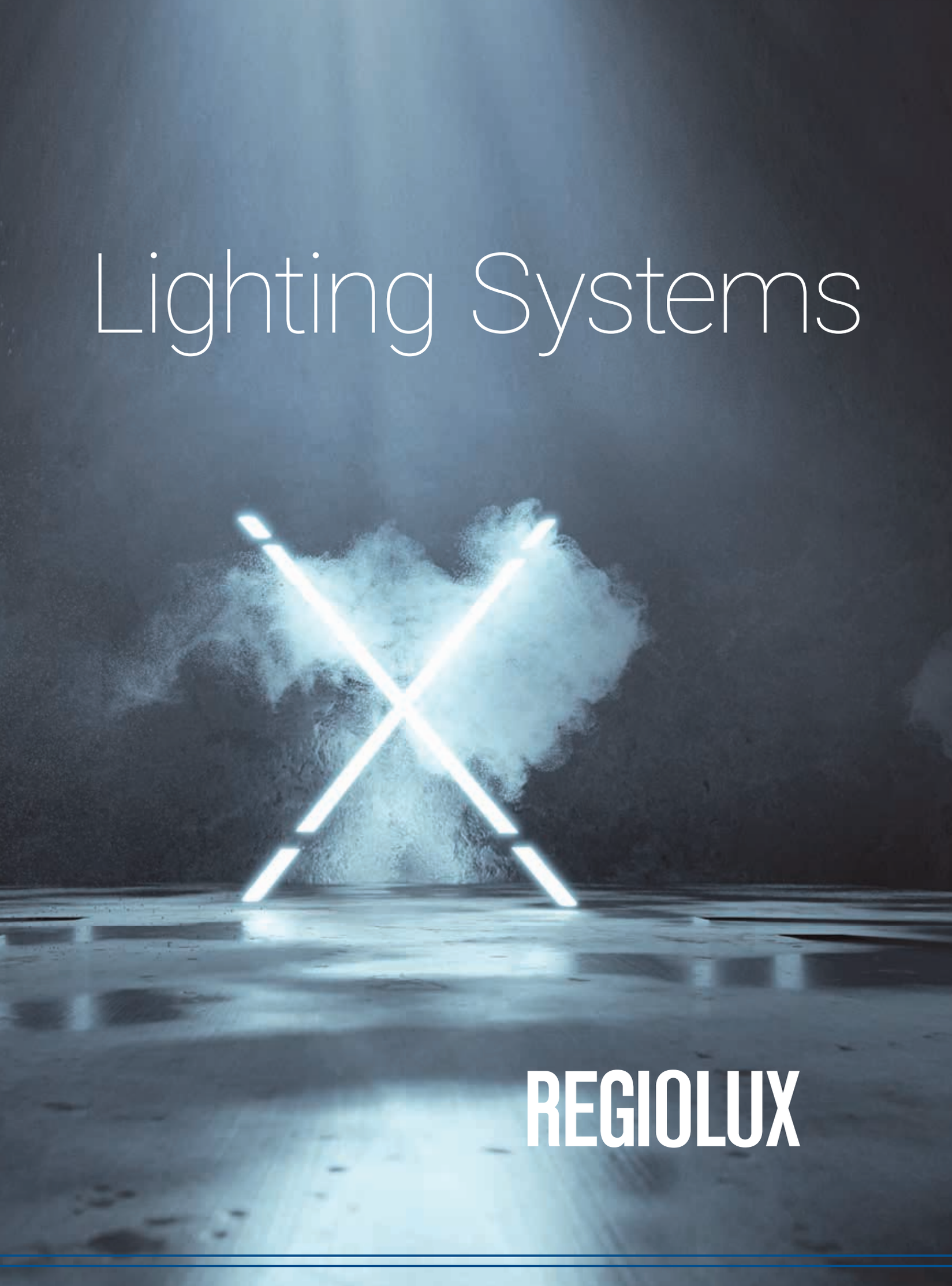
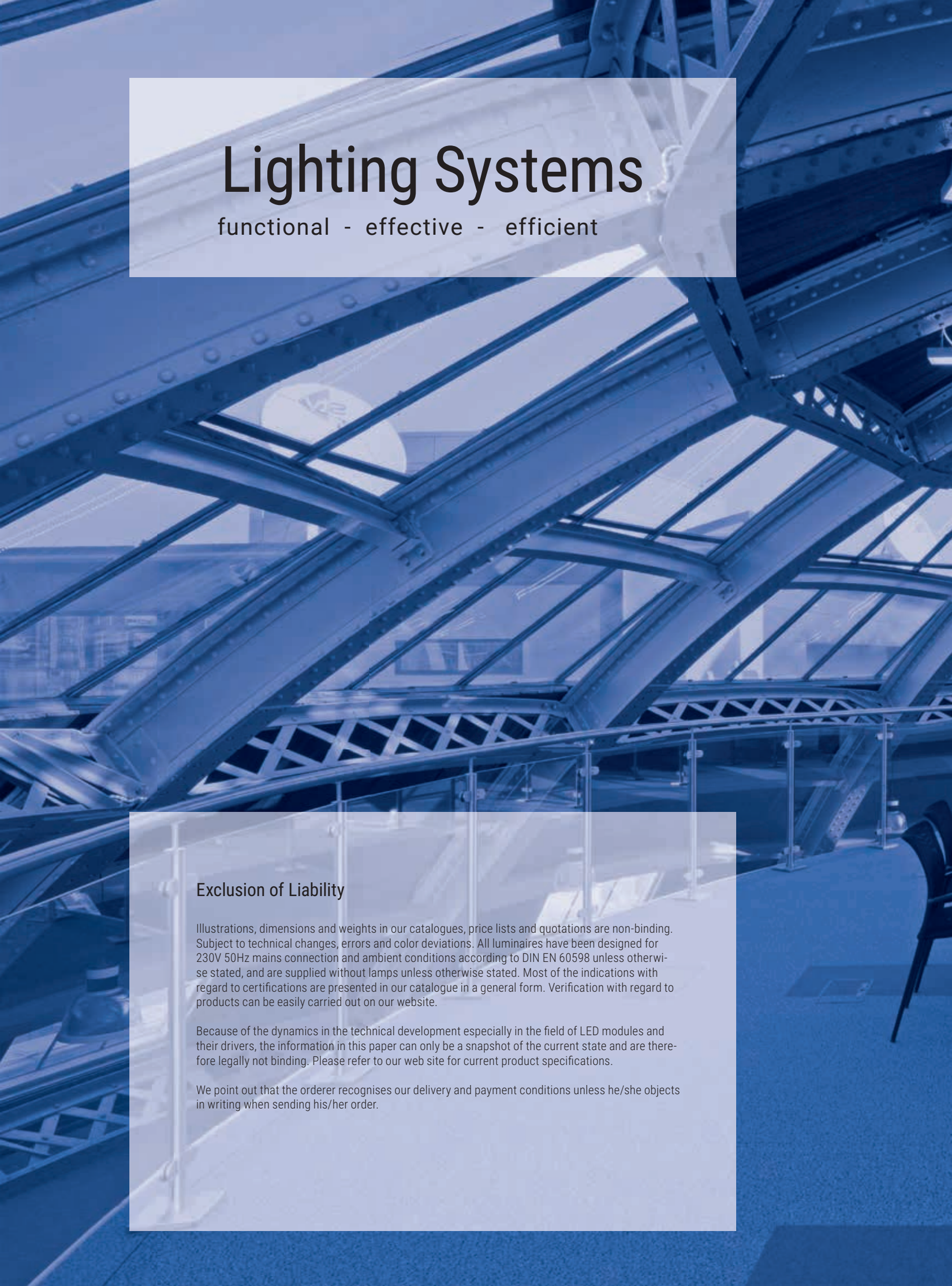
Lighting Systems



REGIOLUX



Lighting Systems

functional - effective - efficient

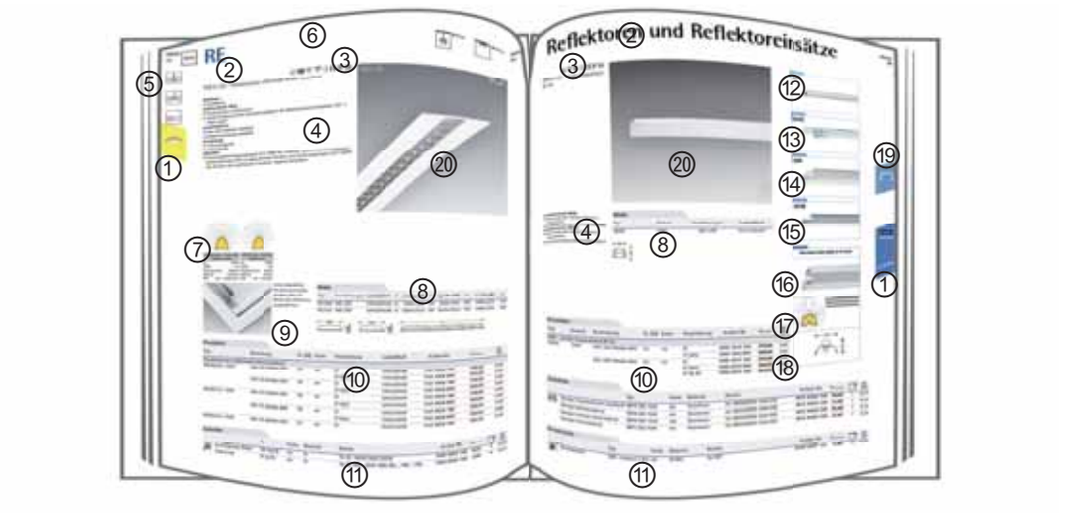
Exclusion of Liability

Illustrations, dimensions and weights in our catalogues, price lists and quotations are non-binding. Subject to technical changes, errors and color deviations. All luminaires have been designed for 230V 50Hz mains connection and ambient conditions according to DIN EN 60598 unless otherwise stated, and are supplied without lamps unless otherwise stated. Most of the indications with regard to certifications are presented in our catalogue in a general form. Verification with regard to products can be easily carried out on our website.

Because of the dynamics in the technical development especially in the field of LED modules and their drivers, the information in this paper can only be a snapshot of the current state and are therefore legally not binding. Please refer to our web site for current product specifications.

We point out that the orderer recognises our delivery and payment conditions unless he/she objects in writing when sending his/her order.

Description of page layout



① Product group

② Luminaire family, type

③ Certification: Overview and explanation in Technical information chapter 8: 8.6 Certification, insulation class and protection rating

④ Description with regard to lighting technology, housing, miscellaneous

⑤ Indications with regard to ceiling systems

⑥ Reference to accessories pages and products in other product groups

⑦ Light distribution curve (LVK) with data with regard to lighting technology of the reference product.
Explanations in the following area Explanations

⑧ Dimensional table and sectional drawings: Explanations of the variables in the following area Explanations

⑨ Detail image with explanation

⑩ Product table: Explanations of the abbreviations in the following area Explanations

⑪ Table with spare parts / accessories (if available): Explanations of the abbreviations in the following area Explanations

⑫ Combination quick-fit mounting system: Component mounting rail

⑬ Combination quick-fit mounting system: Component device mount

⑭ Combination quick-fit mounting system: Component light direction

⑮ Combination quick-fit mounting system: Component light direction insert

⑯ Quick-fit mounting system: Combination

⑰ Quick-fit mounting system: Light distribution curve of the combination, explanations in the following area Explanations

⑱ Quick-fit mounting system: Dimensioned drawing of the combination

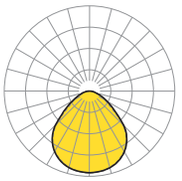
⑲ Indication to the product area mounting rail / device mount / light direction

⑳ Product image with icons and indication for functions and features

Explanations

Explanation of lighting technological data

① PNEMP/625 IP54 LED 4400 lm 840



②	η_{LB}	100 % ③
	lm/W	51 ④
	direct/indirect	100/0 % ⑤
	UGR lat./long	18,3/18,0 ⑥
	VDU	65° < 3000cd/m² ⑦

1. Configuration
Possible deviations of luminous flux between magnetic ballasts (Llb) and electronic ballasts (ECG) are not considered.

2. Luminous intensity distribution
Luminous intensity distribution curves shown in the catalogue are represented according to DIN 5032. Only both primary planes are displayed: 0°/180° planes (at right angles to luminaire axis) as a continuous line and 90°/270° (parallel to luminaire axis) as a dotted line. Curves are scaled to represent 1000 lumens of lamp luminous flux.

3. Light output ratios η_{LB}
Light output ratios specified for each luminaire are calculated from the relation of luminous flux Φ_L (τ_L) emitted from the luminaire with an ambient luminaire temperature τ_L = 25° C and further standardised conditions to the sum of measured luminous flux of the lamps with open distribution transferred individually to the luminaire ballast.
In the case of LED luminaires, the principle of absolute photometry is increasingly applied. In this case, the light output ratio is indicated with 100%. Additionally, the luminous flux is indicated in the form of the measured luminous flux of the luminaire.

4. Luminous efficiency
The luminous efficiency is the luminous flux of a bulb or luminaire related to its electrical power consumption.
In the case of LED luminaires presented according to the principle of absolute photometry (light output ratio 100%), the indication refers to the lumen output of the luminaire which is described by the ratio between luminous flux of the luminaire and system performance of the luminaire.

5. Direct and indirect light components
For evaluating the efficiency and lighting effect of a lighting system within a room, specification of the direct and indirect beam components is helpful.

6. Glare reduction according to UGR method
According to DIN EN 12464-1, not only is reflected glare considered but also direct glare within a specific room. As a standard evaluation system the UGR (Unified Glare Rating) method was introduced in Europe as part of the DIN EN 12464-1 standard. Details concerning the UGR method are described in the CIE 117 publication. The UGR values (lat. and long) of a lighting installation, determined according a table for the position of a standard viewer, are not permitted to exceed the value specified by the standard. In order to compare the direct glare of various luminaires, UGR values of a number of manufacturers are specified with reference to a so-called standard room. Please note that a correct comparison is only possible if all room conditions are identical. In addition it must be noted that UGR values for a real installation may significantly differ to those of the standard room.

Values given are based upon the following definitions.
Room dimensions:
Distance of eye level to luminaire level: H
Room width X = 4H
Room length Y = 8H
Standard reflection factors (0,7 ceiling; 0,5 walls; 0,2 floor)
Luminaire arrangement parallel to Y axis Luminaire distances:
Distance of luminaire to luminaire (spacing) S = 0,25H
Distance of luminaire to wall ½ S = 0,125H

Explanation of lighting technological data

7. Suitability for VDU workstations
Here, the suitability of luminaires for VDU workstations according to DIN EN 12464-1 is specified. The degree number means that the luminance in all luminaire planes beyond that angle does not exceed certain limitation values. Depending on screen quality and screen visualisation, the norm specifies different limitation values. In case of a positive display on screens with an own luminance (< 200 cd/m²), a maximum of 1500 cd/m² and in case of screens with a high luminance (> 200 cd/m²), a maximum of 3000 cd/m² is permissible.

Control gear

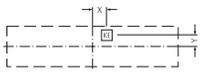
Abbr.	Description
ECG	Electronic ballast
Llb	Low-loss ballast
ind	Inductive, must be compensated on-site
multi	Multiwatt T5
ED	Electronic driver, not dimmable
EDM	Electronic driver Multi, not dimmable (8 or 16 adjustable lighting levels)
DALI	Electronic driver, DALI, dimmable
DALI DT8	Electronic driver, DALI, dimmable, change of light color (Tunable white)
LC.	Device with integrated LC components of special type
M.	Master unit Typ 1-N
S.	Sensor unit Typ 1-N
NL-B1, NL-B3	Emergency light single battery; 1=1h, 3=3h

Explanations

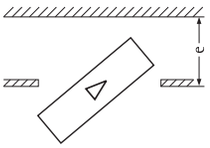
Definition of measurement table variables

Abbr.	Description
A	Distance between the individual luminaires
A1	Fixing distance in case of single mounting
A2	Fixing distance for first or last luminaire in case of light run mounting
A3	Fixing distance for the middle luminaires or between the luminaires in case of light run mounting
A4	Fixing distance (width)
B	Width
D	Diameter
DA	Diameter of cut for recessed luminaires
DA_B	Width of cut for recessed luminaires
DA_L	Length of cut for recessed luminaires
DS min	Minimum ceiling thickness with suspended ceiling
DS max	Maximum ceiling thickness with suspended ceiling
Db	Sensor detection diameter
Dr	Sensor detection diameter ideal movement towards the sensor
Ds	Sensor detection diameter seated activity
Dt	Sensor detection diameter tangential movement parallel towards the sensor
Et	Mounting depth (necessary depth for luminaire mounting)
Et min	Minimum mounting depth (necessary depth for luminaire mounting during celing construction)
FB	Width of luminaire groundplate
FD	Diameter of luminaire groundplate
FL	Length of luminaire groundplate
H	Height
HS	Installation height of sensor
KB	Width of luminaire head or ballast box
KD	Diameter of luminaire head or ballast box
KE	Cable infeed
KH	Hight of luminaire head or ballast box
KL	Length of luminaire head or ballast box
L	Length
L2	Additional length
MB	Modul (axes) width
ML	Modul (axes) length
P	Suspension length
Pmin	Minimum suspension length
Pmax	Maximum suspension length
P_{Sys}	Luminaire system performance
T	Depth
W	Wall distance
X	Distance from middel of the luminaire to the electrical feed in (X direction = length)
Y	Distance from middel of the luminaire to the electrical feed in (Y direction = width)

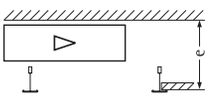
Description of measurement table variables



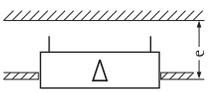
1. Positioning of electrical feed in.



2. Required installation depth "Et" for swivelling of luminaire in visible T rail constructions (lay-in luminaires). Required installation depth "Et" for swivelling luminaire and control gear (if applicable) through ceiling cut-out (clamp mounting).



3. Reduced installation depth "Et min" with aligning of luminaire above T rail construction (during ceiling construction).



4. Required installation depth "Et" for swivelling of mounting bracket (clamp mounting).

Ceiling systems

	Ceilings with visible T-rails
	For concealed symmetrical rail constructions
	For concealed asymmetrical rail constructions
	For recessed ceilings
	For panel ceilings, module 100, 150, 200

Cross references

	Reference accessories
	Reference mounting rail installation
	Reference mounting note
	Reference product groups

Icons / functions features

	Configuraton with sensor available
	Configuraton with emergency light unit available
	Luminaires for HCL (human Centric Lighting)
	Luminaires suitable for Advanced Services
	Luminaires suitable for IoT (Internet of Things)
LED	LED (included)
α	Beam angle

Explanations

Materials

Abbr.	Description
A03S-U	Recognised national cable type: measurement voltage 300 V to 300 V; Silicone rubber isolation material, heat-resistant to +180° C; Single-wire conductor, round
ABS	Acrylonitrile Butadiene Styrene Copolymerisate
Al	Aluminium
AlMgSi	Aluminium magnesium silicon (extruded section)
Cu	Copper
EPDM	Synthetic rubber
Glass	Glass
Glass matt	Matt glass
Glass (ESG)	Tempered single-pane safety glass
H03VV-F	Harmonised cable: measurement voltage 300 V to 300 V; Isolation material PVC, heat-resistant to +70° C; sheathing material PVC, heat-resistant to +70 °C; fine-strand conductor, flexible
H05HH-F	Harmonised cable: measurement voltage 300 V to 500 V; Isolation material flat, divisible cable; sheathing material flat, divisible cable; fine-strand conductor, flexible
H05S-U	Harmonised cable: measurement voltage 300 V to 500 V; silicone rubber isolation material, heat-resistant to +180° C; single-wire conductor, round
H05V2-U	Harmonised cable: measurement voltage 300 V to 500 V; Isolation material PVC, heat-resistant to +90° C; single-wire conductor, round
H05VV-F	Harmonised cable: measurement voltage 300 V to 500 V; isolation material PVC, heat-resistant to +70° C; sheathing material PVC, heat-resistant to +70 °C; fine-strand conductor, flexible
H07V2-U	Harmonised cable: measurement voltage 450 V to 750 V; isolation material PVC, heat-resistant to +90° C; single-wire conductor, round
Inox	Stainless steel
Inox V2A	Stainless steel (alloy type 1.4301 or X5CrNi18-10)
Inox V4A	Stainless steel (alloy type 1.4401 or X5CrNiMo17-12-2)
Mix	Diverse materials
PA	Polyamide
PC	Polycarbonate
PMMA	Polymethylmethacrylate (acrylic glass)
Polymer	plastic (not defined specifically)
Polymer clear	Plastic (crystal clear)
Reinforced polymer	Plastic (with admixture of reinforcing materials)
PS	Polystyrene
PVC	Polyvinyl chloride
St	Steel
StZn	Steel with zinc coating

Colour code

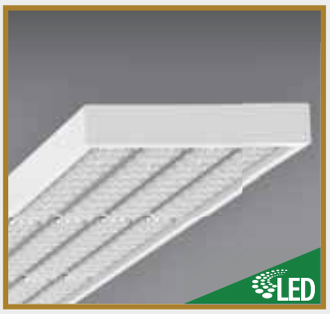
Abbr.	Colour
al	aluminium
aeh	aluminium high gloss
aes	aluminium matt gloss
aen	aluminium natural anodized
ap	aluminium plate finish
am	anthracite metallic
bl	blue
bl/cr	blue chrome
ce	cream
cr	chrome
eg	brushed stainless steel
ge	yellow
ge/cr	yellow chrome
ga	grey
gr	green
hg	light grey
hgl	high gloss
kg	pebble grey, RAL 7032
kgm	pebble grey metallic, RAL 7032
kl	clear
me	metallike
op	opal white
og	orange
ro	red
sw	black, RAL 9005
si	silver
sg	silver-grey, RAL 9006
tz	translucent
tp	transparent
vw	traffic white, RAL 9016
ws	white
wa	white-aluminium, RAL 9006

High bay and large area luminaires

cake

▸421
- 424 CKHLB LED
- 424 CKHLTB LED
- 424 CKHLT LED
- 424 CKHSB LED

worker



▸429
- 432 WOHSTB LED
- 434 WOHB LED
- 434 WOHT LED
- 434 WOHTB LED

cake

cake – a shining delight

- Extremely robust (IK 08) die-cast aluminium housing
- 2 output levels from approx. 14,000 to approx. 24,000 lumen
- Lighting technology for every application ranging from extra-wide to narrow distribution
- Single-point suspension, with IP65 protection rating with D-marking
- Refractor and mounting bracket available as accessories

LED 5 years warranty

Type overview

- CKHLB LED lens optics direct wide distribution IP 65
- CKHLTB LED lens optics direct narrow/wide distribution IP 65
- CKHLT LED lens optics direct narrow distribution IP 65
- CKHSB Cover pane, clear direct wide distribution IP 65

cake LED

cake LED Highlights

- Luminous fluxes of 14,000 lm to approx. 24,000 lm
- Energy efficiency up to 149 lm/W
- LED service life of 50,000 hours (L80B10 or L80B50)
- Ta -30° C to +45° or +50° C
- IK08 for standard variant with safety glass pane (ESG) and lens variant
- Excellent price-performance ratio
- Single-point suspension
- 45° mounting angle
- D-marking – Luminaire with restricted surface temperature
- Refurbishment luminaire and one-to-one replacement for old HME + HIT + HIE

Refurbishment solution

The single point suspension of the cake greatly simplifies the one-to-one replacement of old luminaires with modern LED technology. The savings in energy costs are immediately apparent when replacing old 400W metal halide lamps. The same goes for the perfect lighting quality. In combination with the minimized expenses for installation, investment costs for renovation are kept to a minimum.

LED replaces HIE	HIE 400W	cake LED 24000
Luminous flux	34000 lm gross	24000 lm net
System output	480 W	160 W
Relative electricity costs	100 %	33%
Savings		67%

LED replaces HME	HME 400W	cake LED 14000
Luminous flux	22000 lm gross	14000 lm net
System output	440 W	96 W
Relative electricity costs	100%	22%
Savings		78%

NEW

cake LED

▶426

IP 65

Mounting:
- Suspended
- Ceiling surface

Housing:
- Housing frame made of die-cast aluminium, black powder-coated

Lighting technology CKHSB:
- Cover pane, clear; safety glass pane
- Beam angle 120°
- Lighting characteristic direct wide distribution

Lighting technology CKHLB:
- LED lens optics; PC plastic
- Beam angle 120°, 90°
- Lighting characteristic direct wide distribution

Lighting technology CKHLTB:
- LED lens optics; PC plastic
- Beam angle 90°, 60°
- Lighting characteristic direct narrow/wide distribution

Lighting technology CKHLT:
- LED lens optics; PC plastic
- Beam angle 50°, 30°
- Lighting characteristic direct narrow distribution
- Glare evaluation UGR ≤ 19

Lamp:
- LED 50000h L80/B10 resp. LED 50000h L80/B50
- CRI ≥ 80 / 4000K
- Risk group 0

Switching:
- 1 Controller
- Electronic driver
- 230V 50Hz

Miscellaneous:
- Electrical connection via connection cable 1,5 m
- Freely suspended luminaires weighing over 5 kg must be secured with two mutually independent suspension systems (in accordance with VDE 0100-718.559.4.1)

Accessories:
- Suspension set CKH-AS and node chain KK for chain suspension, assembly bracket CKH-AB and CKH-AB 45°, to be ordered separately.

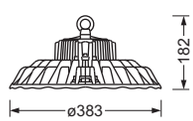
CKHLT IP 65 LED 14000 lm 840		CKHLTB IP 65 LED 24000 lm 840	
η_{LB}	100 %	η_{LB}	100 %
lm/W	145	lm/W	147
direct/indirect	100/0 %	direct/indirect	100/0 %
UGR lat./long.	18,6/18,6	UGR lat./long.	22,9/23,1

Dimensions

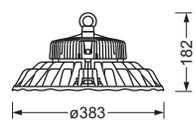
Type	Versions	LxBxH/DxH
CKH. ED	LED	383 x 182
CKH. DALI	LED	383 x 244

Suspended mounting

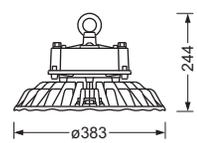
14000lm ED



21000lm ED



14000/24000lm DALI



ED version with attachment bracket

DALI version

cake-CKHLB LED

cake-CKHSB LED + CKH-R, CKH-RS

Products

Type	Lamps		lm/W	P_{Sys} [W]	Colour	Ballast	LxBxH/DxH	Art. no.	kg
Cover pane, clear direct wide distribution IP 65									
cake-CKHSB IP 65	LED 14000 840	120	138	96	sw	ED	383 x 182	3713 1114 104	5,12
						DALI[1)]	383 x 244	3713 1116 604	6,58
	LED 21000 840	120	147	140	sw	ED	383 x 182	3713 2114 104	5,56
	LED 24000 840	120	146	160	sw	DALI[1)]	383 x 244	3713 2116 604	6,99
LED lens optics direct wide distribution IP 65									
cake-CKHLB IP 65	LED 14000 840	120	146	96	sw	ED	383 x 182	3713 1114 114	4,93
						DALI[1)]	383 x 244	3713 1116 614	6,40
	LED 21000 840	90	149	140	sw	ED	383 x 182	3713 2114 194	5,50
	LED 24000 840	90	148	160	sw	DALI[1)]	383 x 244	3713 2116 694	6,80
LED lens optics direct narrow/wide distribution IP 65									
cake-CKHLTB IP 65	LED 14000 840	90	147	96	sw	ED	383 x 182	3713 1114 194	4,93
						DALI	383 x 244	3713 1116 694	6,40
	LED 21000 840	60	149	140	sw	ED	383 x 182	3713 2114 164	5,50
	LED 24000 840	60	147	160	sw	DALI[1)]	383 x 244	3713 2116 664	6,80
LED lens optics direct narrow distribution IP 65									
cake-CKHLT IP 65	LED 14000 840	50	145	96	sw	ED	383 x 182	3713 1114 154	4,93
						DALI[1)]	383 x 244	3713 1116 654	6,40
	LED 21000 840	30	139	140	sw	ED	383 x 182	3713 2114 134	5,50
	LED 24000 840	30	138	160	sw	DALI[1)]	383 x 244	3713 2116 634	6,80

[1)] : Luminaires suitable for IoT (Internet of Things)

Mounting accessories

CKH-R

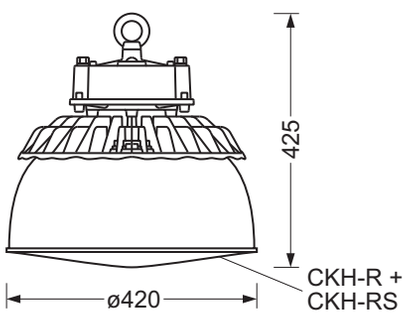
CKH-RS

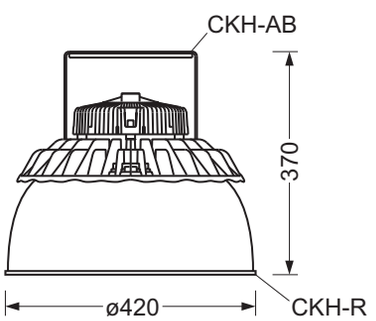
CKH-AS

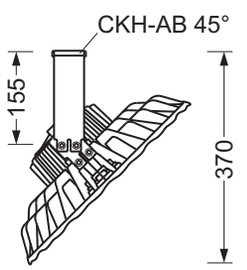
KK

CKH-AB

CKH-AB 45°

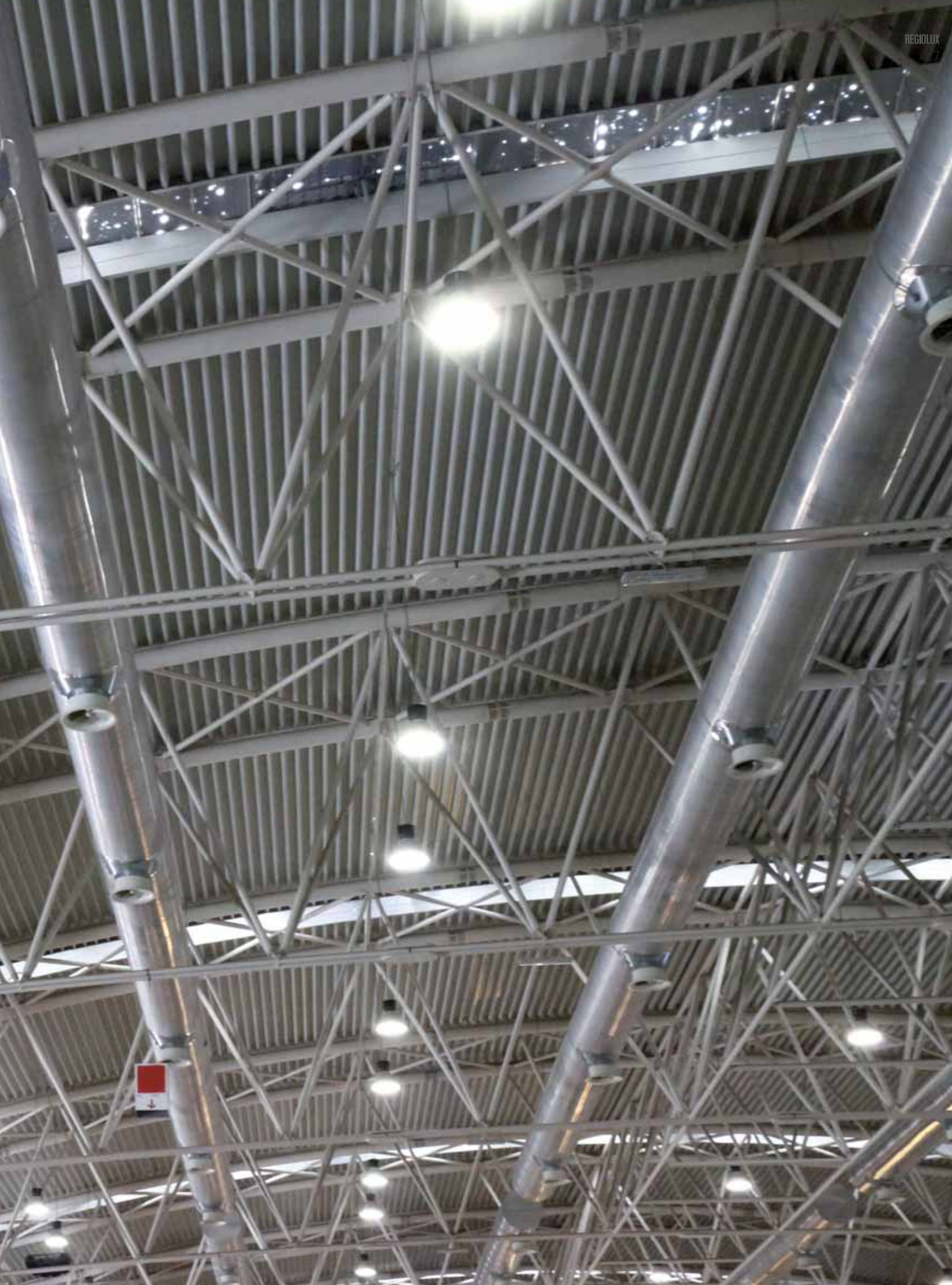




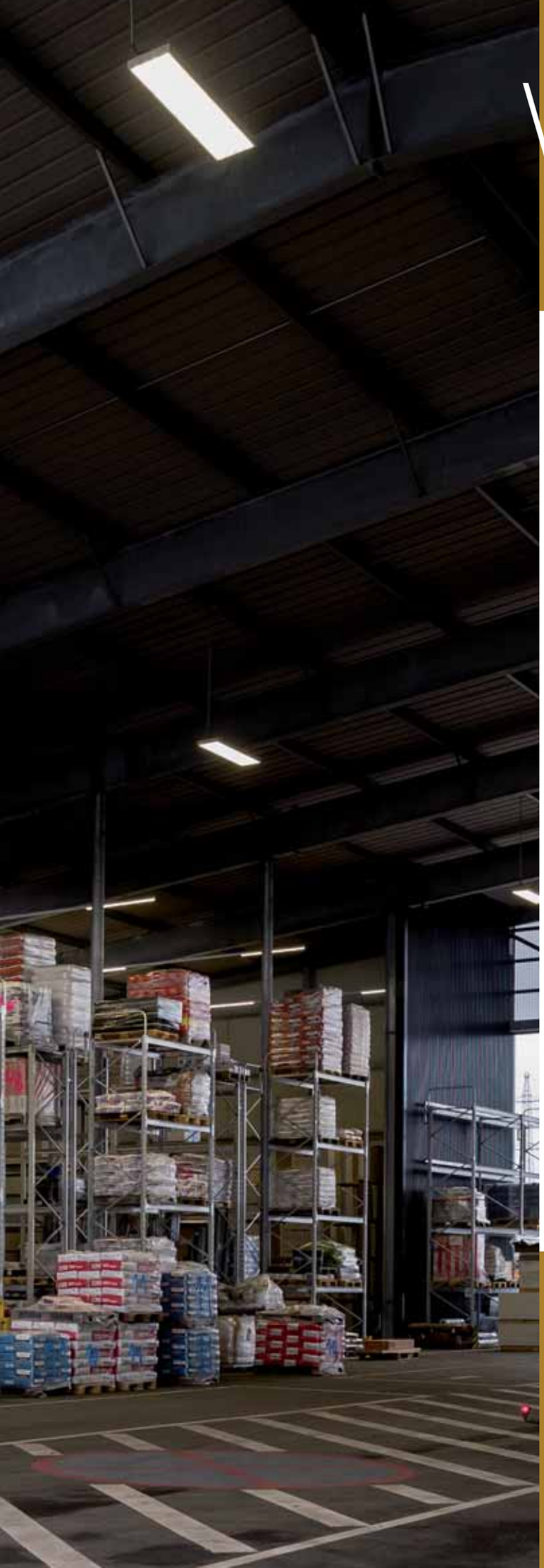


Accessories

	Type	Colour	Material	Details	Art. no.		kg
Lighting technology							
Refractor	CKH-R	tz	PC	for cake up to Ta 45°C	3713 9210 100	1	0,62
	CKH-RS	tz	PC	for cake refractor	3713 9211 100	1	0,37
Mounting							
Chain suspension	CKH-AS	me	St	Chain carabiner for CKH	3713 9241 100	1	0,14
	KK	me	St	Node chain l=30m, for SDT, SDT Basic, ATS, pendant luminaires	9282 9300 100	1	4,60
Mounting-ceiling	CKH-AB	sw	St	Fix attachment bracket for cake	3713 9220 100	1	0,66
	CKH-AB 45°	sw	St	45° adjustable attachment bracket for cake	3713 9221 100	1	0,81




BAY 3199
20



worker

worker – the energy bar for hard work

- Robust high bay surface luminaire with protection rating IP54 or IP65 with D-marking
- Efficient, anti-glare lighting technology with Individual.Lens.Optic
- Lighting characteristics from wide through wide/narrow to narrow distribution
- Output levels from 14,200 to 29,500 lumen
- Suitable for ambient temperatures of -20°C to +45 °C

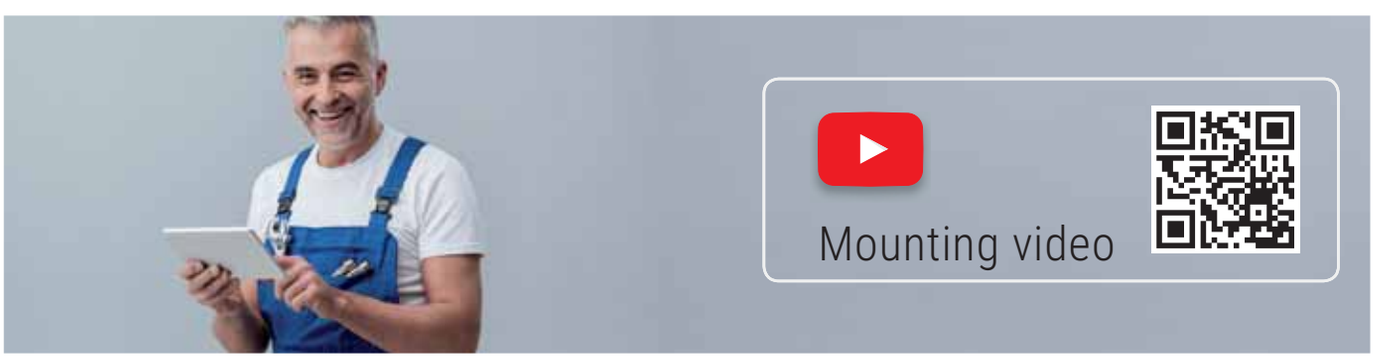
LED 5 years warranty

Type overview

- WOHSTB Individual.Lens.Optic direct narrow/wide distribution IP 65
- WOHT Individual.Lens.Optic direct narrow distribution IP 54
- WOHB Individual.Lens.Optic direct wide distribution IP 54
- WOHTB Individual.Lens.Optic direct narrow/wide distribution IP 54

worker

The best possible solution for demanding tasks
the worker can do it



The product line with a clear goal:

IFS

For the food and beverage industry

Service life

High LED service life
50.000 h at max. Ta
L80 B10
5 years warranty

Protection class

IP65 and IP54
D-marking

Temperature range

Suitable for
ambient temperatures
of -20°C to +45 °C

Lighting technology

Individual.Lens.Optic
Lighting characteristic:
- wide distribution
- narrow/wide distribution
- narrow distribution
UGR ≤ 19

Power stages

From 14.200 to 29.500 lumen
To 151 lm/W

Accessories

Surface mounting kit for ceiling mounting
Suspension set for chain suspension
Accessories for trunking installation
B3 emergency lighting surface-mounting set
Surface-mounting set sensor for
presence and daylight control
Roof hood

NEW

worker LED

▶-438

LED A++ 9 IK03 CE IP 65

Mounting:
- Suspended
- Ceiling surface
- Mounting rail

Housing:
- Sheet steel housing, powder-coated

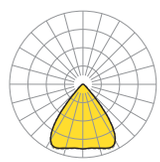
Lighting technology WOHSTB:
- Individual.Lens.Optic; PMMA plastic
- Lighting characteristic direct narrow/wide distribution
- Glare evaluation UGR ≤ 19

Lamp:
- LED 50000h L80/B10
- CRI ≥ 80 / 4000K

Switching:
- Various switching modes available
- The number of control gears varies according to the version
- Electronic driver
- 230V 50Hz

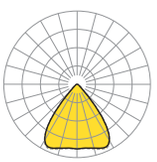
Miscellaneous:
- Electrical connection via connection cable 2.3 m.
- Other lighting technology on request

Accessories:
- Surface mounting kit DW 235/80 for ceiling mounting and suspension kit KSH 4 or KKH 4 for chain suspension, B3 emergency lighting surface-mounting set up to Ta 40°C, sensor surface-mounting set for presence and daylight control must be ordered separately



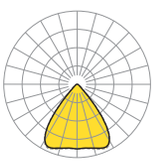
WOHSTB/0700 IP65
LED 14200 lm 840

η_{LB}	100 %
lm/W	145
direct/indirect	100/0 %
UGR lat./long.	18,3/18,9



WOHSTB/1000 IP65
LED 21300 lm 840

η_{LB}	100 %
lm/W	145
direct/indirect	100/0 %
UGR lat./long.	18,3/18,9

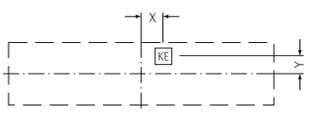


WOHSTB/1300 IP65
LED 28400 lm 840

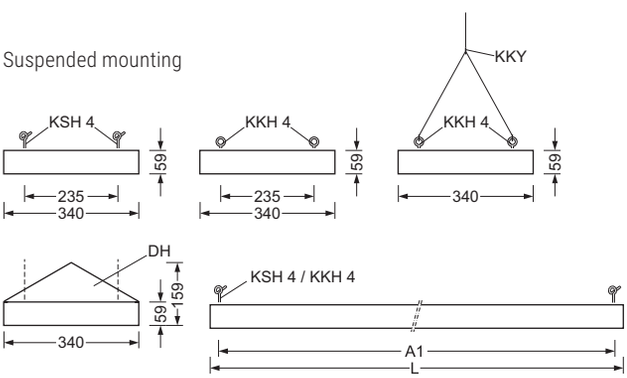
η_{LB}	100 %
lm/W	145
direct/indirect	100/0 %
UGR lat./long.	18,3/18,9

Dimensions

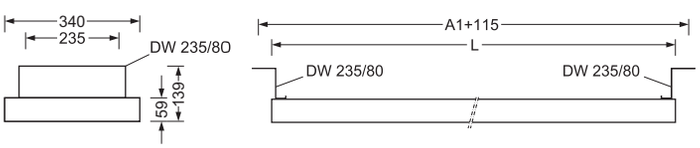
Type	Versions	LxBxH/DxH	A1	A4	KE X/Y
WOH./0700	LED	688 x 340 x 59	655	235	261 / 0
WOH./1000	LED	1013 x 340 x 59	980	235	423,5 / 0
WOH./1300	LED	1338 x 340 x 59	1305	235	586 / 0



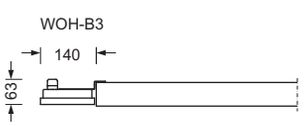
Suspended mounting



Surface mounting



Luminaire surface-mounting set



Products

Type	Lamps	lm/W	P_{Sys} [W]	Colour	Ballast	LxBxH/DxH	Art. no.	kg
Individual.Lens.Optic direct narrow/wide distribution IP 65								
worker-WOHSTB/0700 IP65	LED 14200 840	145	98	vw	ED	688 x 340 x 59	3745 0124 130	7,30
					DALI[1)]	688 x 340 x 59	3745 0126 630	7,30
worker-WOHSTB/1000 IP65	LED 21300 840	145	147	vw	ED	1013 x 340 x 59	3745 0224 130	10,30
					DALI[1)]	1013 x 340 x 59	3745 0226 630	10,30
worker-WOHSTB/1300 IP65	LED 28400 840	145	196	vw	ED	1338 x 340 x 59	3745 0324 130	13,10
					DALI[1)]	1338 x 340 x 59	3745 0326 630	13,10

[1)] IoT: Luminaires suitable for IoT (Internet of Things)

Accessories

	Type	Colour	Material	Details	Art. no.		kg
Electrical technology							
Emergency lighting surface-mounting set	WOH-B3	ws	St	for worker, with emergency lighting battery 3h, incl. LED 520lm 857, for max. Ta 40°C	3729 5223 100	1	1,02
Protection							
Roof hood	DH /0700	vw	St	for sportler, worker	3729 0700 100	1	1,50
	DH /1000	vw	St	for sportler, worker	3729 1000 100	1	2,20
	DH /1300	vw	St	for sportler, worker	3729 1300 100	1	2,80
Mounting							
Chain suspension	KK	me	St	Node chain l=30m, for SDT, SDT Basic, ATS, pendant luminaires	9282 9300 100	1	4,60
	KKH 4	me	St	Chain carabiner suspension kit for worker, sportler	3729 0004 100	4	0,11
	KKY 2	me	St	Chain carabiner set for Y suspension	3729 0005 100	2	0,03
	KSH 4	me	St	Chain hook suspension kit for worker	3729 0002 100	4	0,09
Mounting-ceiling	DW 235/80	vw	St	Ceiling brackets fix for sportler, worker	3729 0001 100	2	1,00

worker LED

▶-438

LED A++ IK03 IP 54

Mounting:
- Suspended
- Ceiling surface
- Mounting rail

Housing:
- Sheet steel housing, powder-coated

Lighting technology WOHB:
- Individual.Lens.Optic; PMMA plastic
- Lighting characteristic direct wide distribution

Lighting technology WOHTB:
- Individual.Lens.Optic; PMMA plastic
- Lighting characteristic direct narrow/wide distribution

Lighting technology WOHT:
- Individual.Lens.Optic; PMMA plastic
- Lighting characteristic direct narrow distribution

Lamp:
- LED 50000h L80/B10
- CRI ≥ 80 / 4000K

Switching:
- Various switching modes available
- The number of control gears varies according to the version
- Electronic driver
- 230V 50Hz

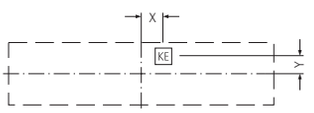
Miscellaneous:
- Electrical connection via connection cable 2.3 m.
- Other lighting technology on request

Accessories:
- Surface mounting kit DW 235/80 for ceiling mounting and suspension kit KSH 4 or KKH 4 for chain suspension, B3 emergency lighting surface-mounting set up to TA40°, sensor surface-mounting set for presence and daylight control must be ordered separately.

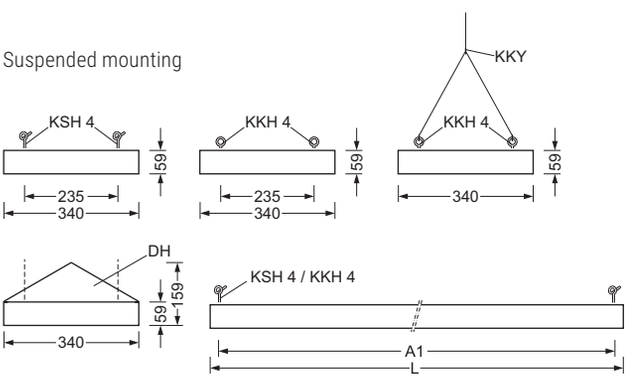
WOHB/0700 IP54 LED 14600 lm 840		WOHTB/1300 IP54 LED 29200 lm 840		WOHT/1000 IP54 LED 22100 lm 840	
η_{LB}	100 %	η_{LB}	100 %	η_{LB}	100 %
lm/W	149	lm/W	149	lm/W	151
direct/indirect	100/0 %	direct/indirect	100/0 %	direct/indirect	100/0 %
UGR lat./long.	22,1/22,3	UGR lat./long.	19,1/19,4	UGR lat./long.	20,2/21,3

Dimensions

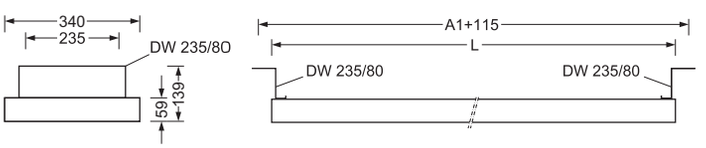
Type	Versions	LxBxH/DxH	A1	A4	KE X/Y
WOH./0700	LED	688 x 340 x 59	655	235	261 / 0
WOH./1000	LED	1013 x 340 x 59	980	235	423,5 / 0
WOH./1300	LED	1338 x 340 x 59	1305	235	586 / 0



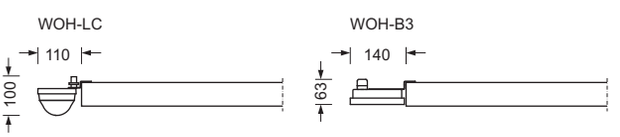
Suspended mounting



Surface mounting



Luminaire surface-mounting set



Products

Type	Lamps	lm/W	P_{Sys} [W]	Colour	Ballast	LxBxH/DxH	Art. no.	kg
Individual.Lens.Optic direct wide distribution IP 54								
worker-WOHB/0700 IP54	LED 14600 840	149	98	vw	ED	688 x 340 x 59	3744 0124 110	6,40
					DALI[1)]	688 x 340 x 59	3744 0126 610	6,40
worker-WOHB/1000 IP54	LED 21900 840	149	147	vw	ED	1013 x 340 x 59	3744 0224 110	9,00
					DALI[1)]	1013 x 340 x 59	3744 0226 610	9,00
worker-WOHB/1300 IP54	LED 29100 840	149	196	vw	ED	1338 x 340 x 59	3744 0324 110	11,40
					DALI[1)]	1338 x 340 x 59	3744 0326 610	11,40
Individual.Lens.Optic direct narrow/wide distribution IP 54								
worker-WOHTB/0700 IP54	LED 14600 840	149	98	vw	ED	688 x 340 x 59	3744 0124 130	6,40
					DALI[1)]	688 x 340 x 59	3744 0126 630	6,40
worker-WOHTB/1000 IP54	LED 21900 840	149	147	vw	ED	1013 x 340 x 59	3744 0224 130	9,00
					DALI[1)]	1013 x 340 x 59	3744 0226 630	9,00
worker-WOHTB/1300 IP54	LED 29200 840	149	196	vw	ED	1338 x 340 x 59	3744 0324 130	11,40
					DALI[1)]	1338 x 340 x 59	3744 0326 630	11,40
Individual.Lens.Optic direct narrow distribution IP 54								
worker-WOHT/0700 IP54	LED 14700 840	151	98	vw	ED	688 x 340 x 59	3744 0124 120	6,40
					DALI[1)]	688 x 340 x 59	3744 0126 620	6,40
worker-WOHT/1000 IP54	LED 22100 840	151	147	vw	ED	1013 x 340 x 59	3744 0224 120	9,00
					DALI[1)]	1013 x 340 x 59	3744 0226 620	9,00
worker-WOHT/1300 IP54	LED 29500 840	151	196	vw	ED	1338 x 340 x 59	3744 0324 120	11,40
					DALI[1)]	1338 x 340 x 59	3744 0326 620	11,40

[1)] IoT: Luminaires suitable for IoT (Internet of Things)

Accessories

	Type	Colour	Material	Details	Art. no.		kg
Electrical technology							
Sensor lighting surface-mounting set	WOH-LC ET	ws		Switching sensor LC12-IP54 for motion detection; remote control 8450 6006 100 or 8450 6021 100 required	3729 0007 100	1	1,00
	WOH-LC DALI	ws		LC-07-IP54 DALI sensor for daylight control and motion detection; remote control for up to 8m 8450 6028 100 and over 8m 8450 6021 100 required for the control	3729 0008 100	1	1,00
Light Control	LC-BEG IR-PD-DALI-E			Remote control and programming tool for LC07 to mounting height 8 m	8450 6028 100	1	0,03
	LC-BEG IR-PD4-GH			Remote control and programming tool for LC12	8450 6006 100	1	0,04
	LC-BEG IR-RC			Remote control and programming adapter for smart phones	8450 6021 100	1	0,04
Emergency lighting surface-mounting set	WOH-B3	ws	St	for worker, with emergency lighting battery 3h, incl. LED 520lm 857, for max. Ta 40°C	3729 5223 100	1	1,02
Protection							
Roof hood	DH /0700	vw	St	for sportler, worker	3729 0700 100	1	1,50
	DH /1000	vw	St	for sportler, worker	3729 1000 100	1	2,20
	DH /1300	vw	St	for sportler, worker	3729 1300 100	1	2,80
Mounting							
Chain suspension	KK	me	St	Node chain l=30m, for SDT, SDT Basic, ATS, suspended luminaires	9282 9300 100	1	4,60
	KKH 4	me	St	Chain carabiner suspension kit for worker, sportler	3729 0004 100	4	0,11
	KKY 2	me	St	Chain carabiner set for Y suspension	3729 0005 100	2	0,03
	KSH 4	me	St	Chain hook suspension kit for worker	3729 0002 100	4	0,09
Mounting-ceiling	DW 235/80	vw	St	Ceiling brackets fix for sportler, worker	3729 0001 100	2	1,00

Planning parameters for complete sensor set

WOH-LC07-DALI IP54

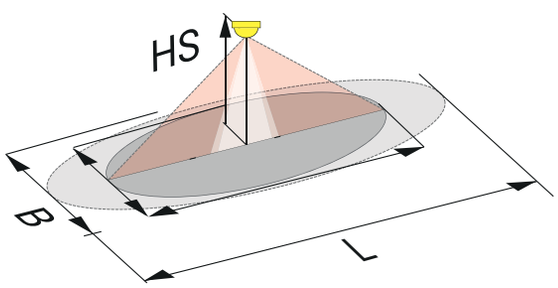
Art. no. 3729 0008 100

Oval detection range, can be rotated through 90°
Installation height up to 16m
Daylight and movement detection (can be switched off)
Up to 50 DALI elements, orientation light
Incl. 2.3 m connecting cable and mounting bracket

WOH-LC12-ET IP54

Art. no. 3729 0007 100

Oval detection range, can be rotated through 90°
Installation height up to 16m
Time setting 15s-30min
Motion-dependent switch up to 2300W, 1150VA
Motion-dependent dimming with corridor function devices
Incl. 2.3m connecting cable and mounting bracket



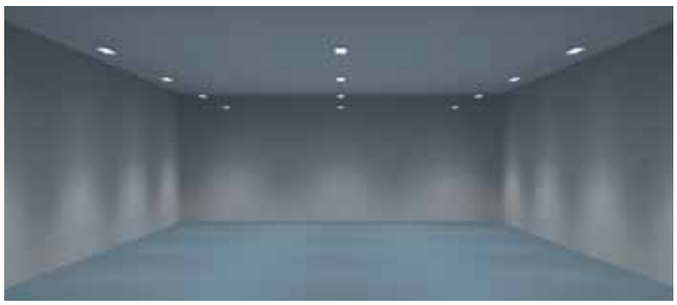
HS	L	B
5,00 m	26,00 m	18,00 m
6,00 m	26,00 m	18,00 m
7,00 m	28,00 m	19,00 m
8,00 m	28,00 m	19,00 m
9,00 m - 16,00 m	30,00 m	19,00 m

Planning example

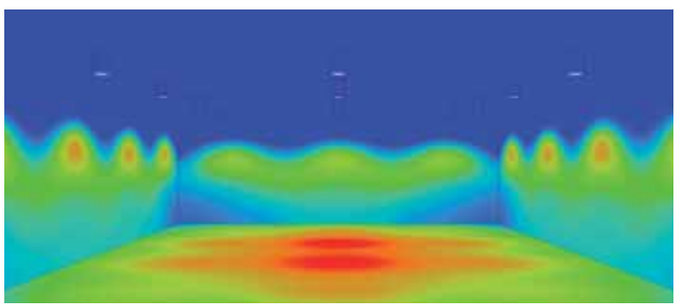
Industrial, commercial halls

HIE 1/400

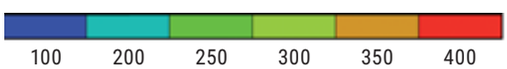
worker/1000



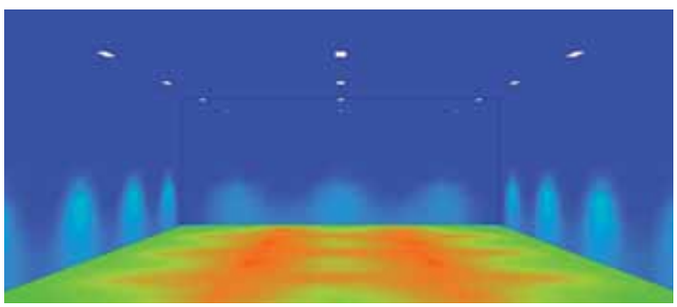
General parameters:
Industrial hall for metalworking, 30m x 20m x 8m, installation height 7m, utilization plane 0.75m



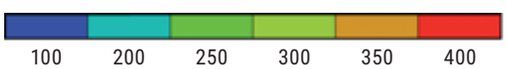
Illuminance (lx)



Average illuminance:
Utilization plane 344 lx
UGR=29



Illuminance (lx)



Average illuminance:
Utilization plane 350 lx
UGR=19

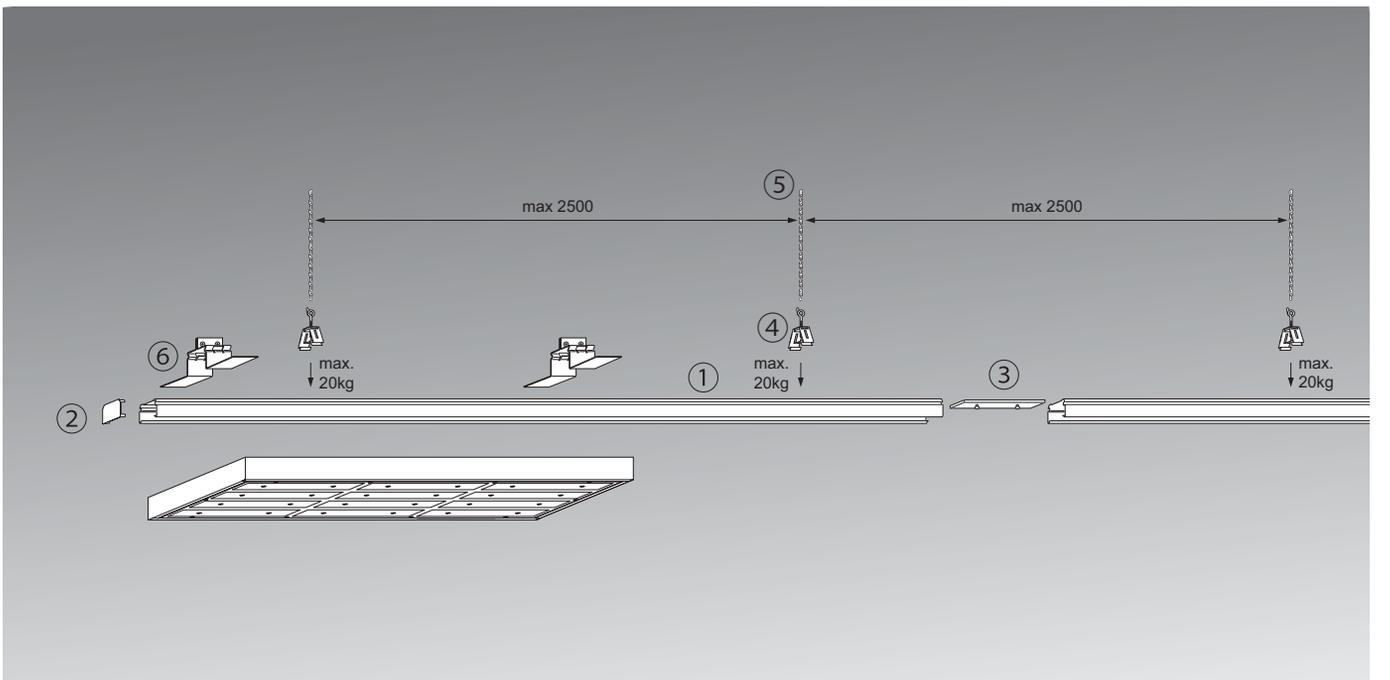
Planning

Luminaire	cooky-COHA HIE 1/400 IP40	worker-WOHTB/1000 LED 21900 840 IP54
Quantity of luminaires	12	12
Performance per luminaire (W)	480	147
Performance per facility (kW)	5,76	1,77
Average illuminance (lux)	344	350
Performance per area (W/sqm)	9,60	2,94
Efficiency indicator (W/sqm/100lux)	2,79	0,84
Efficiency gains		ca. 69 %

≤ 20%

further savings through control and regulation technology

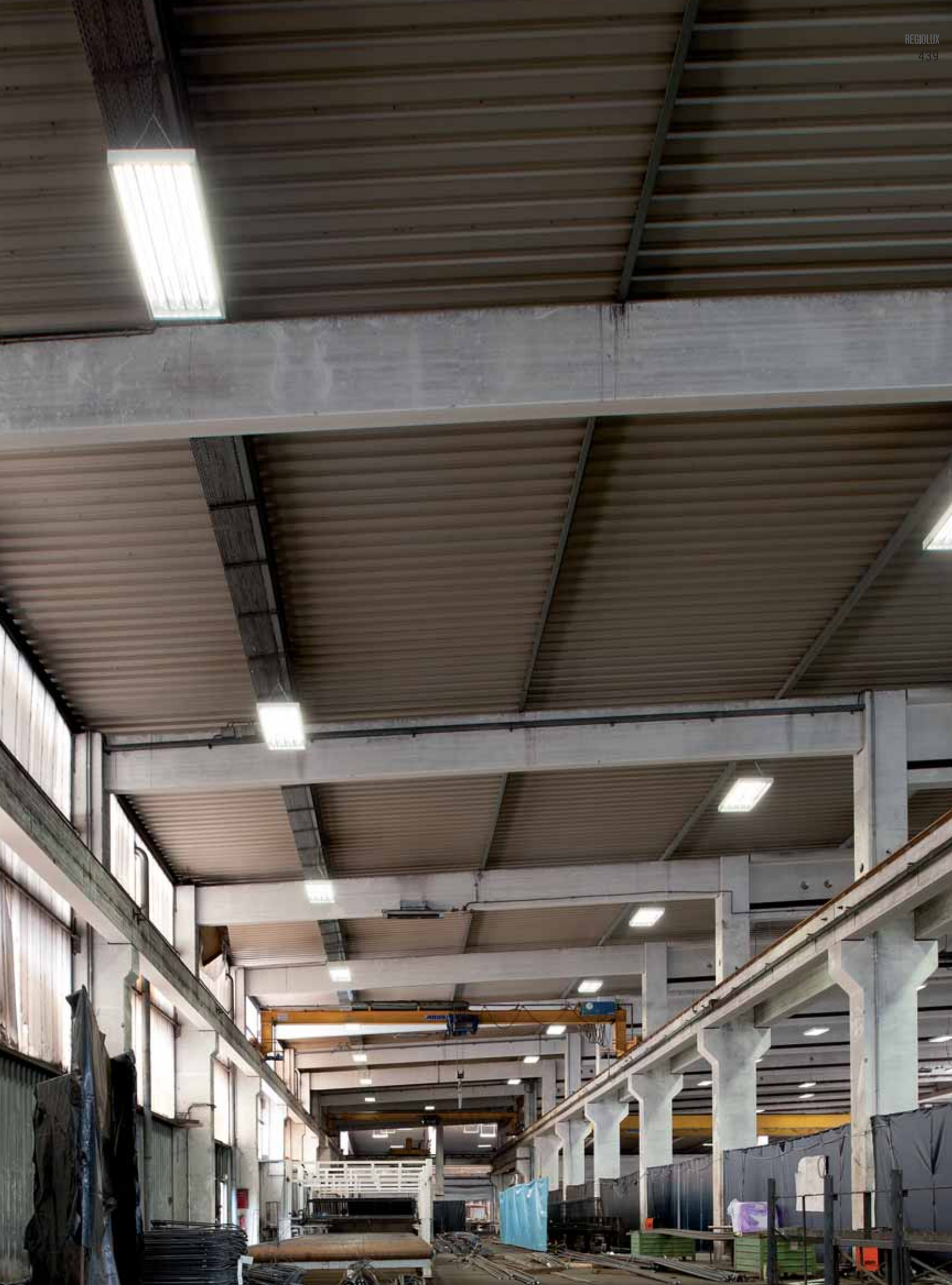
Accessories mounting rail installation worker



① SDT basic unwired mounting rail
② SDTE mounting rail protective cover (end face)
③ SDTSV mounting rail connector
④ Mounting rail fixing / suspension SDH/SDT-ZA/SDT-AP
⑤ Suspension (chain)
⑥ Luminaire fixing BW-SDT

Accessories

	Type	Colour	Material	Details	Art. no.		kg
Design							
Section cover	SDBAV 1500	vw	St	l=7x219=1533mm for SDT Basic	1884 5580 101	1	0,85
	SDBK 1500	vw	PVC	for SDT 1500, ATS	1883 7580 100	1	0,24
Protection							
Protective cover IP20	SDTE	vw	PC	End face for SDT, ATS	1890 0231 100	2	0,02
Mounting							
Single wire suspension	SDCS	ws	Inox+mix	l=2000mm for SDT	1890 0034 100	1	0,07
	SDCSE	ws	Inox+mix	Canopy D=123mm, rope D=1.5mm, L=2200mm, incl. electrical connection cable 3x1.5mm² for SDT	1890 0044 100	1	0,30
Chain suspension	KK	me	St	Node chain l=30m, for SDT, SDT Basic, ATS, suspended luminaires	9282 9300 100	1	4,60
	KP 80	me	St+PC	Canopy and chain l=800mm for suspended luminaires	9282 9080 100	1	0,27
	SDH	me	Inox	Chain suspension for SDT, ATS	1890 0039 100	1	0,04
	SDT -AP	me	St	Suspension profile, mounting rail connector for SDT; suspension spacing up to 4.5 m	1890 0022 100	1	0,93
	SDT -ZA	me	St	Central bracket for SDT	6820 9300 110	1	0,20
Structure							
Luminaires fixing	BW-SDT	vw	St	SDT mounting set for sportler, worker	3729 0009 100	2	0,88
Mounting rail	SDT Basic 1500/II	vw	St.galv.	l=3070mm 2.6kg for surface-mounted luminaires	1825 2580 150	1	2,60
	SDT Basic 1500/III	vw	St.galv.	l=4605mm 3.9kg for surface-mounted luminaires	1825 3580 150	1	3,90
Mounting rail connector	SDTSV	me	St.galv.	for SDT...Basic, ATS	1890 0092 100	1	0,30



Application pictures

Photographer	Project	Page
Paul Zanre, Milton Bridge UK	South Rotunda, Glasgow UK	1
Boris Golz, Arnsberg DE	IGS - Integrierte Gesamtschule Nienburg, Nienburg, DE	8
Inga Paas, Köln DE	Werner-Wicker-Klinik, Bad Wildungen-Reinhardshausen, DE	10
Jana Wenderoth, Kassel DE	Firmenzentrale medDV, Fernwald, DE	12
Hermann Kaufmann, Euro Unitech GmbH, Wien AT	Vienna-City-Marathon, Wien, AT	17
Inga Paas, Köln DE	Goldener Ring, Düsseldorf, DE	18
denisismagilov	fotolia.com	22
Jeff Baumgart	fotolia.com	25
Frank Freihofer, Kitzingen DE	KÄFER Stahlhandel, Gochsheim, DE	26
Christian Tech, Fulda DE	Autohaus Herold, Heiligenstadt Ofr. DE	29
Jana Wenderoth, Kassel DE	Einkaufsmarkt, Sandershausen DE	29
Christian Tech, Fulda DE	ZEE - Zentrum für Elektromobilität und Energieeffizienz, Barleben DE	29
Hermann Kaufmann, Euro Unitech GmbH Wien AT	Steuerkanzlei Emsenhuber, Melk, AT	30
Frank Freihofer, Kitzingen DE	ESN Deutsche Tischtennis Technologie GmbH, Hofheim, DE	37
Frank Freihofer, Kitzingen DE	BayWa AG, Großwallstadt, DE	38
Jan-Eric Winkelmann, Rostock DE	Evangelische Stiftung Michaelshof, Rostock, DE	44
Boris Golz, Arnsberg DE	IGS - Integrierte Gesamtschule Nienburg, Nienburg, DE	48
Christian Tech, Fulda DE	ZEE - Zentrum für Elektromobilität und Energieeffizienz, Barleben, DE	50
Frank Freihofer, Kitzingen DE	Volksschule Oberhaid, Oberhaid, DE	55
Tridonic GmbH und Co.KG, Dornbirn AT	Sparkasse Mainfranken, Würzburg, DE	56
Michael Meschede, Kaufungen DE	Pop-Akademie, Mannheim, DE	59
Daithi Taylor, Enfield IE	Hewlett Packard Enterprise, Dublin, IE	61
Hermann Kaufmann, Euro Unitech GmbH Wien AT	Wertheim, Gutramsdorf, AT	66
Inga Paas, Köln DE	Goldener Ring, Düsseldorf, DE	68
Alex	fotolia.com	72
Robert Endres, Regiolux GmbH, Königsberg DE	Regiolux GmbH, Königsberg, DE	75
Jens Schumann, Berlin DE	KiTa Farbklecks, Berlin, DE	78
Ingrid Fiebak-Kremer, Leer DE	AIDAluna, Papenburg, DE	81
Frank Freihofer, Kitzingen DE	Christian-von-Bomhard-Schule Uffenheim, Uffenheim, DE	82
Frank Freihofer, Kitzingen DE	TGZ Würzburg, Würzburg, DE	86
Gerhard Hagen, Bamberg DE	Georg Hartmann Realschule, Forchheim, DE	88
Gerhard Hagen, Bamberg DE	Georg Hartmann Realschule, Forchheim, DE	92
Frank Freihofer, Kitzingen DE	Staatliche Realschule, Ebern, DE	95
Tom Gundelwein, Saarbrücken DE	Friedrich Wilhelm Gymnasium, Trier, DE	96
Dan Ax, Frankfurt/Main DE	Musikhaus Six und Four, Sulzbach/Saar, DE	98
G. Bogardi, Budapest HU	BME Building Q Budapest Lágymányos, Budapest, HU	103
Mila Hacke, Berlin DE	Schweizerhof Grundschule, Berlin, DE	104
Mila Hacke, Berlin DE	Schweizerhof Grundschule, Berlin, DE	107
Dan Ax, Frankfurt/Main DE	Musikhaus Six und Four, Sulzbach/Saar, DE	108
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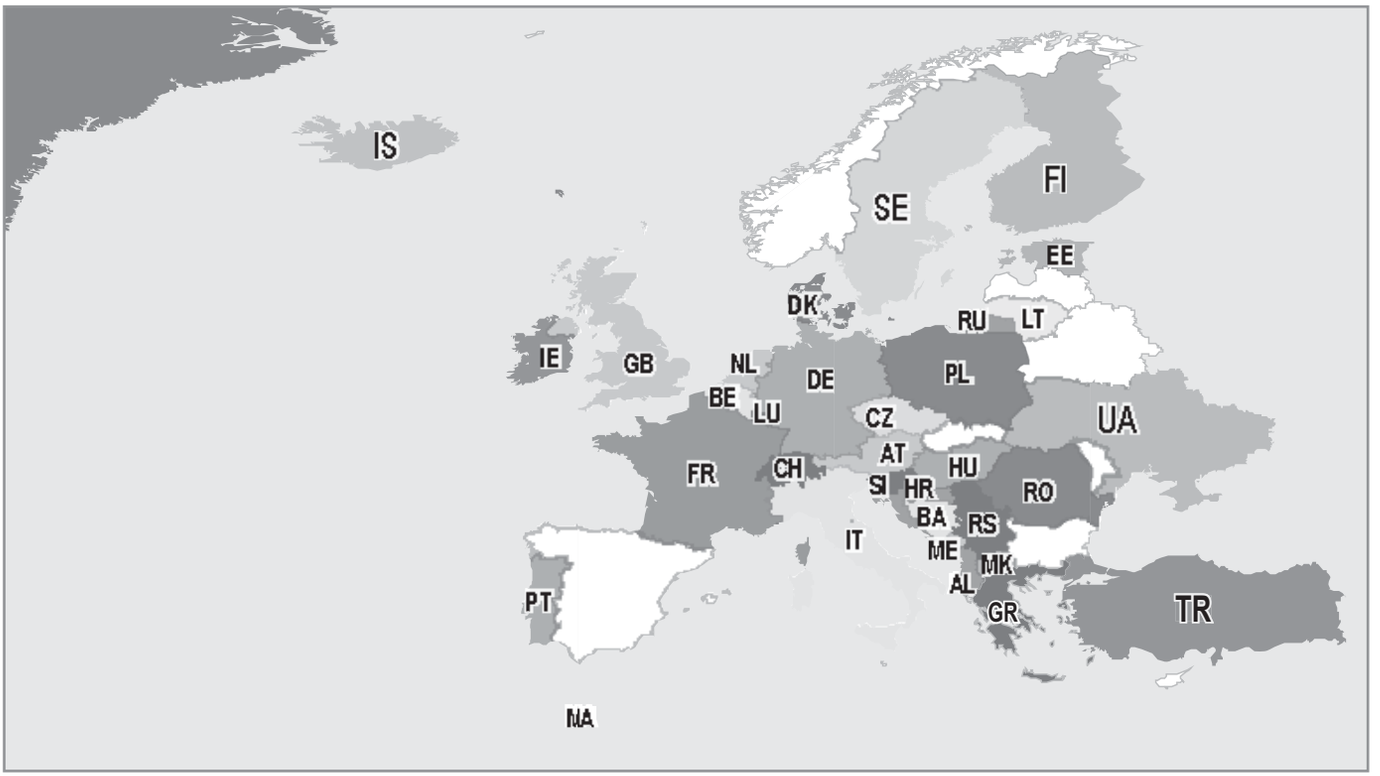
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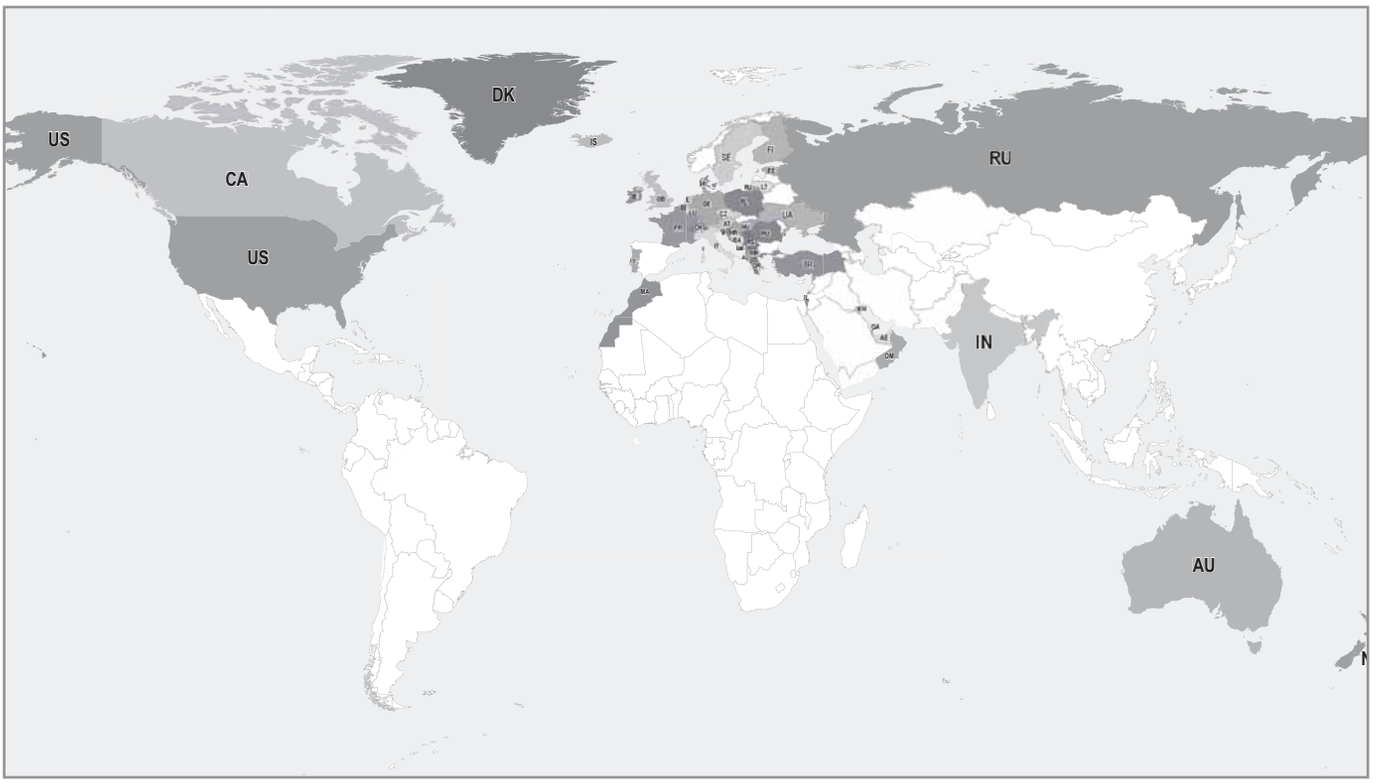
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