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# MODERNISATION WITHOUT CEILING RENOVATION

Refresh of lighting systems  
with **TENTEC SL** LED Downlights



# JUST CHANGE

Modern LED solutions for lower energy consumption and better quality of light.

**Modernising a lighting system can result in considerable energy savings, improve well-being and make a valuable contribution to environmental protection. In addition, fulfilling the Eco-design and RoHS directives is an important step towards future-proofing.**

**There are various funding programmes for the refurbishment of non-residential buildings.**

Lighting accounts for up to 50% of electricity consumption in office properties and is particularly high in public buildings.

Energy-efficient LED technology saves up to 80% of energy and its lighting effect can be optimised according to the latest findings in terms of health and well-being.

In practice, however, refurbishment is often restricted by structural conditions. Design or functional challenges as well as monument protection requirements demand flexible and individual realisations.

SCHMITZ-WILA offers practical LED solutions for efficient lighting refurbishment, ranging from the targeted replacement of individual lighting components to complete lighting design.

TENTEC SL —

- ✓ SAVE ENERGY
- ✓ OPTIMISE LIGHT
- ✓ MINIMISE RENOVATION COSTS

## LED — Technology makes the difference

### **Energy saving and cost reduction:**

LED with intelligent lighting management system reduce energy consumption by up to 80%.

### **Longer service life:**

With up to 10,000 hours operating time, maintenance and procurement costs are significantly reduced.

### **Improved light quality:**

Optimised light distribution for greater well-being, safety and performance.

### **Environmental friendliness:**

LEDs do not contain any environmental harmful substances such as mercury. Their low energy consumption reduce the CO2 footprint.



**Do you need support with the refurbishment?** Scan the QR-Code and contact our specialists from SCHMITZ-WILA directly.



# TENTEC SL FLEXIBLE IN PRACTICE

## Replacement luminaire / Luminaire insert for compact fluorescent and HIT lamps

### The TENTEC SL offers:

- ✓ Replacement luminaire / Luminaire insert for compact fluorescent and HIT lamps
- ✓ Integrated diffusor cap for a homogeneous light distribution
- ✓ Colour consistency < 3 step MacAdams
- ✓ Robust housing made of die-cast aluminium, passive temperature management
- ✓ Safe assembly, threaded 3-point fixing, MS-3 mounting technique for a tool-free change of liteoptics
- ✓ Smart Lighting: State-of-the-art converter technology enables integration into DALI control systems



Scan the QR-Code for more information!



POINT  
Light



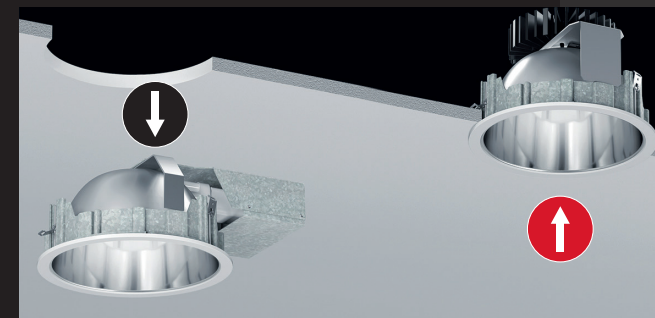
Easy  
switch



Smart  
Lighting

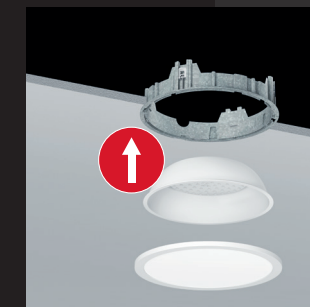
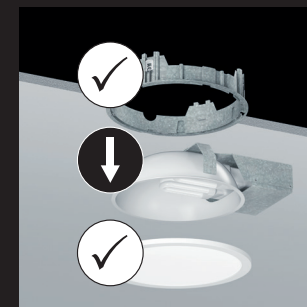
## Replacement of complete luminaires

LED-Downlights with quick-mounting ring for use in the existing ceiling opening, incl. driver.



## Replacement of luminaire insert

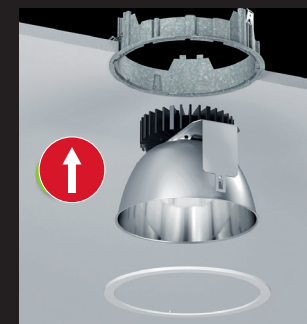
The existing mounting and cover ring / liteoptic (listed buildings) is used again. Only the luminaire insert is switched to LED.



## The conceal ring

The conceal ring is the ideal solution if you want to use the entire current variety of SCHMITZ-WILA luminaires.

The visual perception of the ceiling remains unchanged.



# TENTEC SL IN DETAIL

**Ceiling integration as standard** enables an unobtrusive installation thanks to 5 mm installation height

**Different luminaire versions possible for more luminosity**  
(POWER-VERSIONS with up to 10.000 lm (R15/R18))

**Support frame** in conjunction with diffuser or protective screens offers protection against splash water (IP44)

**Diffusing screen** made of single plate safety glass for soft diffusion



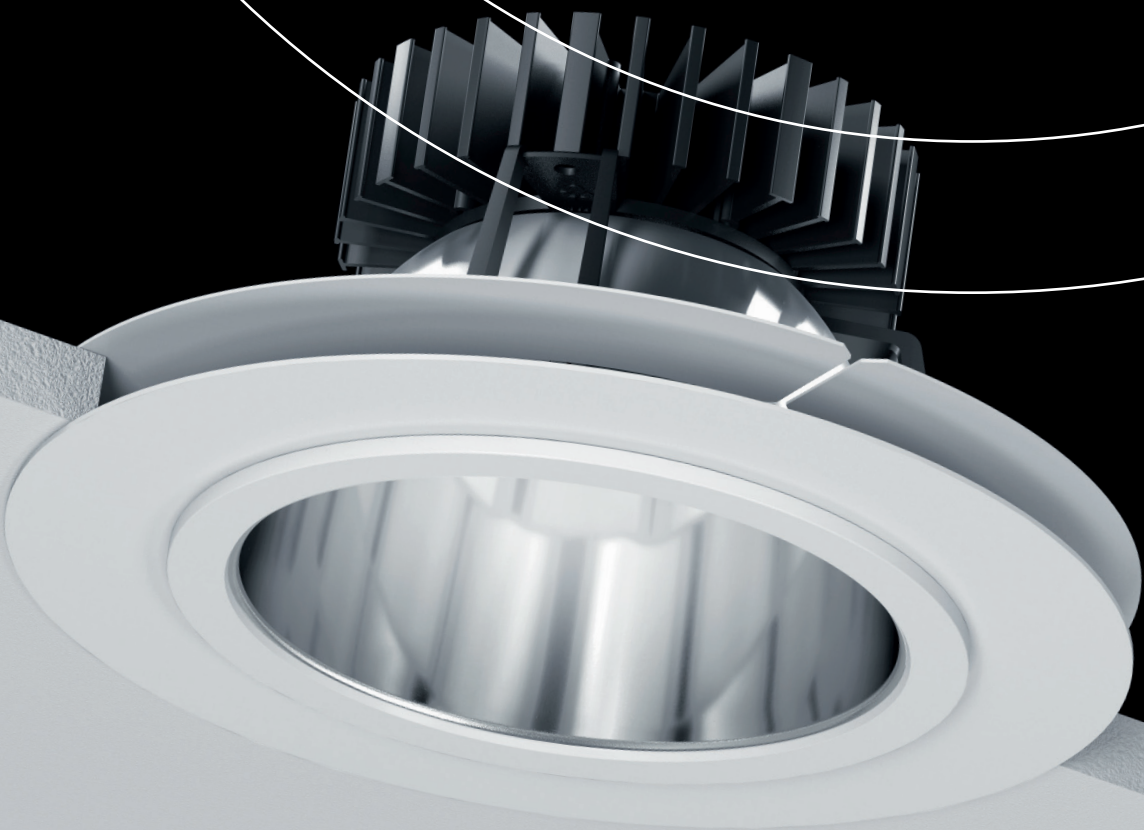
280 mm  
R27

240 mm  
R23

195 mm  
R18

165 mm  
R15

ceiling cut-outs  
DA



## Accessories: Conceal ring

SCHMITZ-WILA provides an extensive product portfolio of LED downlights for a wide range of requirements in the project.

The conceal ring allows the use of downlights even in larger ceiling cut-outs\*. The full scope of our portfolio can be planned.

LED	R23, DA/CO 240 mm	R27, DA/CO 280 mm
Luminaire size	D 260 mm	D 300 mm
R15 DA/CO 165 mm	612418R15	612518R15
R18 DA/CO 195 mm	612418R18	612518R18
R23 DA/CO 240 mm	—	612518R23

\*Further sizes are possible without additional costs



# MODERNISATION IN LISTED BUILDINGS

## Federal Constitutional Court Karlsruhe

According to the plans of architect Paul Baumgarten in 1969 the Federal Constitutional Court is still the seat of the highest judicial authority in Germany to this day. The complex consists of five pavilion-like, tiered structures with flat roofs and a square floor plan, symbolising the basic democratic order with its sober and transparent forms. The listed building required a comprehensive modernisation of its building services to reduce energy requirements and operating costs.

### The challenge

A sustainable and energy efficient overall renovation, but the appearance of the listed building should be retained.

### The lighting solution

During the refurbishment, the format and structure of the historic ceiling must be perfectly transferred to a modern chilled ceiling, and the new lighting must also be based on the existing monument protection requirements. In order to reduce operating and maintenance costs, efficient LED downlights are used instead of the previous downlights with compact fluorescent lamps.

Thanks to standardized diameters, the current LED downlights also fit into the existing ceiling cut-outs without any additional effort, in this case into the reconstruction of the ceiling system of the time.

### The result

The perfect combination of today's energy efficiency with the building's typical 1960s aesthetics.

The ceiling is visually preserved and equipped with energy-efficient lighting technology.



Scan the QR-Code for more information!

Bundesverfassungsgericht Karlsruhe  
Assem Architekten, Karlsruhe (Architecture)  
Lighting design Carpus & Partner, Aachen (Light planning)  
Stefan Baumann, Karlsruhe (Photos)

68 %  
Energy saving



-75 %  
Operating and maintenance costs



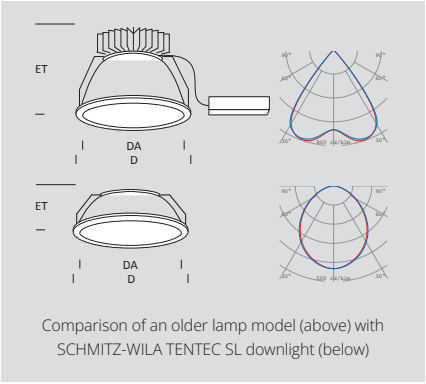
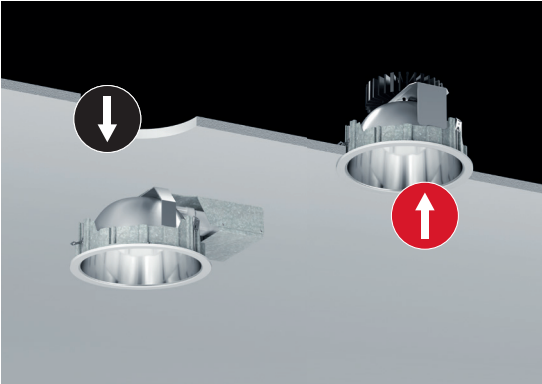
101 t or  
169.125 kWh  
CO<sub>2</sub> Saving



# TENTEC SL Downlights

**Complete luminaire**  
LED Downlight with quick mounting ring for use in existing ceiling opening, incl. driver.

- ✓ D 255 mm
- ✓ DA | CO 240 mm
- ✓ ET | RD 100-200 mm
- ✓ R23
- ✓ 4000 K
- ✓ CRI >90



**Downlight suitable for workstations**



Replacement		ET   RD	UGR	Driver	lm	lm/W	Item No.
TC-TEL(I)	LED						
2 x 18 W	13 W	170 mm	< 19	DALI	1700 lm	131 lm/W	652015-01-N-DD*
1 x 42 W	19 W	180 mm	< 19	DALI	2324 lm	122 lm/W	652015-02-N-DD*
2 x 26 W	27 W	190 mm	< 19	DALI	3100 lm	115 lm/W	652015-03-N-DD*
2 x 32 W	42 W	200 mm	< 19	DALI	4260 lm	101 lm/W	652015-04-N-DD*

HIT	LED	ET   RD	UGR	Driver	lm	lm/W	Item No.
70 W	49 W						
150 W	80 W	200 mm	21	DALI	9450 lm	118 lm/W	656015-02-N-DD*

**Downlight with diffusing screen IP44**



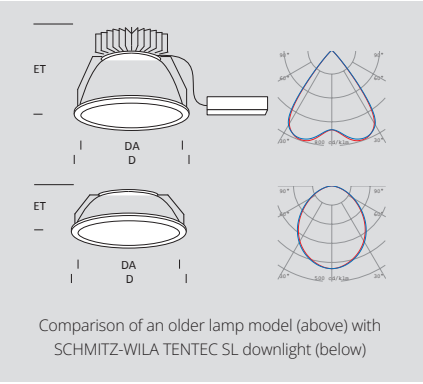
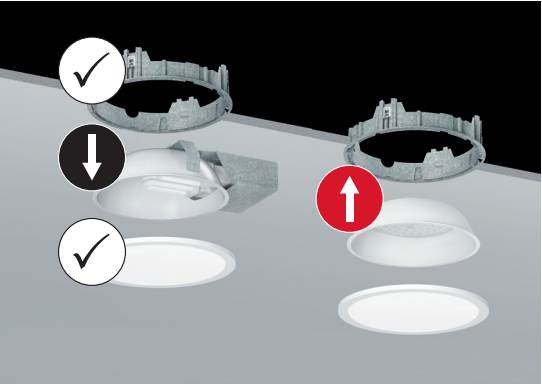
Replacement		ET   RD	UGR	Driver	lm	lm/W	Item No.
TC-TEL(I)	LED						
2 x 13 W	8 W	100 mm	22	DALI	910 lm	101 lm/W	650015-01-N-DD*
2 x 18 W	11 W	100 mm	22	DALI	1190 lm	99 lm/W	650015-02-N-DD*
1 x 42 W	17 W	100 mm	23	DALI	1660 lm	87 lm/W	650015-03-N-DD*
2 x 32 W	24 W	100 mm	24	DALI	2190 lm	84 lm/W	650015-04-N-DD*

\*Replace the Index N (4000 K) with W (3000 K)

# TENTEC SL Luminaire insert

**Luminaire insert incl. driver, the existing mounting / cover ring (Liteoptic) is used again. Only the luminaire insert is switched to LED.**

- ✓ D 300 mm
- ✓ DA | CO 280 mm
- ✓ ET | RD 80-200 mm
- ✓ R27
- ✓ 4000 K
- ✓ CRI >90



**Refurbishment insert suitable for workstations**



Replacement		ET   RD	UGR	Driver	lm	lm/W	Item No.
TC-TEL(I)	LED						
2 x 18 W	13 W	160 mm	< 19	DALI	1590 lm	122 lm/W	663015-01-N-DD*
1 x 42 W	19 W	160 mm	< 19	DALI	2195 lm	115 lm/W	663015-02-N-DD*
2 x 26 W	27 W	180 mm	< 19	DALI	2930 lm	108 lm/W	663015-03-N-DD*
2 x 32 W	42 W	190 mm	< 19	DALI	4010 lm	96 lm/W	663015-04-N-DD*

Variants							
3000 K	2700 K 6500 K	3000 K 1800 K	CRI >90	CASAMBI	1-10 V		

**Refurbishment insert with diffusing screen IP44**



Replacement		ET   RD	UGR	Driver	lm	lm/W	Item No.
TC-TEL(I)	LED						
2 x 13 W	8 W	80 mm	23	DALI	1040 lm	115 lm/W	664115-01-N-DD*
2 x 18 W	11 W	80 mm	24	DALI	1360 lm	113 lm/W	664115-02-N-DD*
2 x 26 W	17 W	80 mm	25	DALI	1880 lm	99 lm/W	664115-03-N-DD*
2 x 32 W	24 W	80 mm	26	DALI	2500 lm	96 lm/W	664115-04-N-DD*

Variants							
3000 K	2700 K 6500 K	CRI >80	CASAMBI	1-10 V			

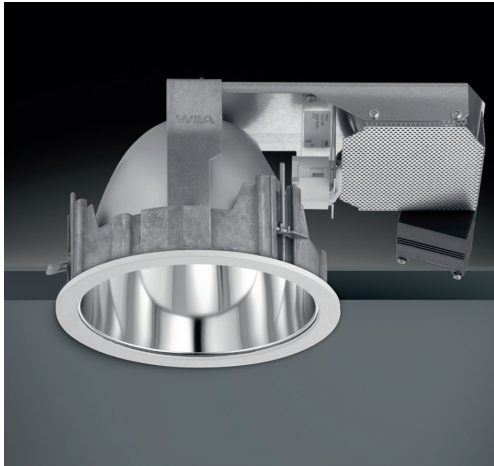
\*Replace the Index N (4000 K) with W (3000 K)



# Planning Aid

Easy switch to efficient lighting systems - state-of-the-art LED downlights that fit without extra effort into the ceiling cut-outs.

- ✓ OLD max. 50 lm/W
- ✓ NEW up to 146 lm/W
- ✓ Efficiency Increase up to 400 %
- ✓ DA|CO 165 - 280 mm
- ✓ ET|RD 140 - 180 mm
- ✓ R15 - R27
- ✓ 4000 K
- ✓ CRI >90



Luminaire size	Replacement		ET RD	Driver	lm	lm/W	Item No.
	TC-TEL(I)/System	LED					
<b>C21 / E21</b> <b>R15</b> <b>DA CO 165 mm</b>	1 x 18 W/21 W	9 W	115 mm	DALI	1310 lm	146 lm/W	TL-1151-12-40*
	1 x 26 W/29 W	9 W	115 mm	DALI	1310 lm	146 lm/W	TL-1152-12-40*
<b>C21 / E21</b> <b>R18</b> <b>DA CO 195 mm</b>	1 x 18 W/21 W	9 W	115 mm	DALI	1310 lm	146 lm/W	TL-1161-12-40*
	1 x 26 W/29 W	13 W	115 mm	DALI	1870 lm	144 lm/W	TL-1162-12-40*
	1 x 32 W/35 W	19 W	115 mm	DALI	2575 lm	135 lm/W	TL-1163-12-40*
	1 x 42 W/44 W	27 W	115 mm	DALI	3450 lm	128 lm/W	TL-1164-12-40*

<b>T26 / C26 / E26</b> <b>R15</b> <b>DA CO 165 mm</b>	1 x 18 W/21 W	9 W	115 mm	DALI	1310 lm	146 lm/W	TL-1151-12-40*
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<b>C32 / E32</b> <b>R23</b> <b>DA CO 240 mm</b>  <b>ATTENTION:</b> Louvre not possible!	2 x 18 W/42 W	13 W	160 mm	DALI	1700 lm	131 lm/W	652015-02-N-DD*
	2 x 26 W/58 W	19 W	160 mm	DALI	2315 lm	122 lm/W	652015-03-N-DD*
	2 x 32 W/70 W	27 W	170 mm	DALI	3100 lm	115 lm/W	652015-04-N-DD*
<b>C32 / E32</b> <b>R27</b> <b>DA CO 280 mm</b>  <b>ATTENTION:</b> Only luminaire insert, mounting ring and liteoptic / cover ring is used again!	2 x 18 W/42 W	13 W	160 mm	DALI	1600 lm	123 lm/W	663015-01-N-DD*
	2 x 26 W/42 W	19 W	160 mm	DALI	2195 lm	115 lm/W	663015-02-N-DD*
	2 x 32 W/58 W	27 W	170 mm	DALI	2950 lm	109 lm/W	663015-03-N-DD*
	2 x 42 W/70 W	42 W	180 mm	DALI	4015 lm	96 lm/W	663015-04-N-DD*

\*Replace the Index N (4000 K) with W (3000 K)

Luminaire size	Replacement		ET RD	Driver	lm	lm/W	Item No.
	TC-TEL(I)/System	LED					
<b>T26 / C26 / E26</b> <b>R18</b> <b>DA CO 195 mm</b>	1 x 18 W/21 W	9 W	115 mm	DALI	1310 lm	146 lm/W	TL-1161-12-40*
	1 x 26 W/29 W	13 W	115 mm	DALI	1870 lm	144 lm/W	TL-1162-12-40*
	2 x 18 W/42 W	13 W	115 mm	DALI	1870 lm	144 lm/W	TL-1162-12-40*
	1 x 32 W/35 W	19 W	115 mm	DALI	2575 lm	135 lm/W	TL-1163-12-40*
	1 x 32 W/35 W	19 W	115 mm	DALI	2575 lm	135 lm/W	TL-1163-12-40*
<b>T26 / E26</b> <b>R23</b> <b>DA CO 240 mm</b>	2 x 18 W/42 W	13 W	160 mm	DALI	1700 lm	131 lm/W	652015-02-N-DD*
	2 x 26 W/58 W	19 W	160 mm	DALI	2325 lm	122 lm/W	652015-03-N-DD*
	2 x 32 W/70 W	27 W	170 mm	DALI	3100 lm	115 lm/W	652015-04-N-DD*
<b>C26</b> <b>R27</b> <b>DA CO 280 mm</b>  <b>ATTENTION:</b> Only luminaire insert, mounting ring and liteoptic / cover ring is used again!	2 x 18 W/42 W	13 W	160 mm	DALI	1600 lm	123 lm/W	663015-01-N-DD*
	2 x 26 W/42 W	19 W	160 mm	DALI	2195 lm	115 lm/W	663015-02-N-DD*
	2 x 32 W/58 W	27 W	170 mm	DALI	2950 lm	109 lm/W	663015-03-N-DD*
	2 x 42 W/70 W	42 W	180 mm	DALI	4015 lm	96 lm/W	663015-04-N-DD*

TL-14xx Downlight with diffusing screen  
TL-16xx Downlight with safety screen

\*Replace the Index N (4000 K) with W (3000 K)

## Icons

- 3000 K; Colour temperature warm white
- 4000 K; Colour temperature neutral white
- 2700 — 6500 K; TunableWhite
- 3000 — 1800 K; Warm dim
- Colour Rendering Index
- Protection class
- Light control
- Driver
- Luminaire with emergency battery (3 h)

## Dimensions

- B** Width
- D** Diameter
- DA** Ceiling cut-out
- ET** Required Installation depth for recessed luminaires (F conditions)
- H** Height
- L** Length
- Q** Reflector size square
- R** Reflector size round

# REFURBISH EFFICIENTLY FOR TOMORROW

## Sparkasse, Gevelsberg-Witten

**The new light concept of the savings bank Gevelsberg-Witten was a result of the overall refurbishment of the customer lobby. The existing luminaires, primarily equipped with TC-TEL 2x26W fluorescent lamps no longer achieved the desired luminous effect and illuminance.**

Thanks to the quick installation system, the conversion to future-oriented LED technology is child's play: remove the previous WILA downlight with compact fluorescent lamp, insert the new LED downlight, connect and that's it - no further installation work is necessary thanks to the retention of the existing ceiling cut-outs (240 mm, R23/280mm, R27).



Kober Lichtplanung LDE (lighting design)  
Sylvia Landwehr (Photos)



# THE RIGHT FLAVOUR



Assmann Beraten + Planen (lighting design)  
Werner Huthmacher (Photos)



## Gruner + Jahr Kantine, Hamburg

**Company restaurants are no longer known for their cold, impersonal light, but should offer employees a place to recharge for the rest of the day.**

The cafeteria at Gruner + Jahr in Hamburg was recreated with just these thoughts in mind. SCHMITZ-WILA already has exactly the kind of products a designer needs for such a project, without having to invest extra time in new solutions. The utmost visual comfort of efficient ambient lighting with maximum economy.



# OUR FOCUS: THE BEST RESULT

SCHMITZ-WILA is the specialist for individual light in architecture. Our technical and high-quality lighting tools are perfectly suited for the implementation of sophisticated interior lighting concepts. The areas of application range from traffic to work and communication zones.

With high lighting and design expertise and a wide-ranging luminaire programme, SCHMITZ-WILA is a competent partner for planning and designing modern, energy efficient lighting solutions.

In addition to the presented TENTEC-family, we also offer refurbishment kits for the following products:

- ✓ All linear STRONG lighting systems
- ✓ Our wall and ceiling mounted luminaires CLEAR with compact fluorescent lamps



**Do you need support with the refurbishment?** Scan the QR-Code and contact our specialists from SCHMITZ-WILA directly.

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