CARDAN-SPRIRIT

Peerless in terms of flexibility for creative design using light
A ladies fashion store featuring contemporary design: CARDAN-SPirit blends almost weightlessly into the sophisticated design of the retail area.
Clear essence
Reduction and versatility

“IT was our intention to create a lighting frame that appeared as light and transparent as possible, in which the SPIRIT lighting heads would float freely, so to speak. At the same time we sought to accommodate the requisite electronic equipment inconspicuously while providing easy access to it.” Jean-Michel Wilmotte and Victor-Hugo Ciotti, Studio Wilmotte, Paris

CARDAN-SPIRIT harmoniously blends into sophisticated interiors. The pendant luminaire with the unmistakable lighting frame almost seems to float in the room. The lamp units based on the design of the SPIRIT spotlight range are in tune with the luminaire unit and make it possible to exploit various synergies.

www.zumtobelstaff.com/cardanspirit
The CARDAN-SPIRIT lighting frame is extremely versatile; yet it features an austere design. Variable arrangement of the lamp units and the numerous options for suspension from barely visible steel cords open up a wealth of design options for architects, lighting designers, interior designers and – thanks to ease of handling – also users.

This is emphasised even more by the possibility of fitting many different lamps ranging from QR 111 (up to 100 W) through to QT 12 (up to 100 W) and HIT (35 W and 70 W), each with narrow-beam and wide-angle reflectors. No matter how the lamp units are arranged, CARDAN-SPIRIT constitutes a veritable lighting power package – not least in the case of lighting frames with up to 4 x HIT 70 W!

What all CARDAN-SPIRIT lighting frames have in common is their light, almost weightless appearance. The slim frame made of aluminium in titanium colour is the unifying element that combines the compact luminaire traditionally suspended horizontally or in an inclined position from four points, or the version that floats vertically in the room. The lighting frame accommodates the lamp units which, in turn, seem to almost float inside the frame. Starkly standing out against the frame, not only in terms of colour, the black gear boxes which accommodate technical components such as electronic transformers and ballasts create an exciting contrast to this lightness. This further increases the scope for creative design, as no external electronic equipment needs to be used.

CARDAN-SPIRIT vertically arranged and suspended from only two points provides an interesting alternative to conventional horizontal suspension from four points, especially in high-ceilinged rooms in order to provide wide-area illumination of walls. This is an unusual alternative which also provides additional scope for creative design.

The floating nature of the lighting frame is especially striking in the FLAT version which is exclusively designed for QR 111 lamps. As the SPIRIT lamp units have been deliberately reduced to narrow rings, the frame appears even flatter. In the vertically suspended version, the flat lighting frame has a particularly delicate and unobtrusive look.
A matter of design
Directional light from the wall

The wall-mounted version of the lighting frame which can also be installed on the ceiling is an unconventional aspect of CARDAN-SPirit. A fastening bracket enables the lighting frame to be pivoted upwards or downwards through up to 45 degrees. As the lamp units can be pivoted as well, the range of applications is extremely wide. However, it is not possible to direct the fitting back towards the fixing wall, to avoid unnecessary heat build-up and adhere to the standards.
The big fixing wheel enables even non-professionals to align and fix wall- or ceiling-mounted CARDAN-SPRIT lighting frames easily without the use of tools. At the same time, the fixing wheel matches the unobtrusive, sleek luminaire design. Installing the bracket is the easiest thing imaginable using just two screws to fix the bracket on the wall or ceiling. An additional mounting plate to ensure uniform load distribution is available for difficult situations. Additional installation steps, e.g. electrical connection or fixing to the lighting frame are carried out without the use of any tools.
Pure and simple
Unobtrusive on the ceiling and in the room

The recessed version of CAR-DAN-SPRIT blends into interiors almost unnoticed. The frame and luminaire housing, both painted in a discreet titanium finish, form a delicate envelope for the SPIRIT lighting heads, which appear to float freely inside them. The individual lighting heads are separated by a narrow fin which emphasises the delicate lightness of the luminaire even more. Because the control gear is accommodated in the ceiling cavity, there is nothing to disturb this unfussy look. There is no often undesirable “black hole” in the ceiling, and the luminaire remains perfectly unobtrusive.

A wide range of models and a large number of lighting heads are available – from single-lamp to four-lamp, fitted with QR 111 (up to 100 W) or QT 12 (up to 100 W) as well as HIT (up to 70 W), narrow-beam and wide-angle – making CARDAN-SPRIT ideally suitable for many different applications. The consistent appearance of ceiling-recessed luminaires and suspended or wall-mounted lighting frames creates a calm ambience in the room. The same thing applies to the ceiling-recessed version, too: regardless of how the lighting heads are arranged, the CARDAN-SPRIT is a veritable lighting power package.
CARDAN-SPIRIT is installed without the use of any tools by simply using a mounting spring. This is inserted from inside through the slot in the luminaire housing that is appropriate to the ceiling thickness, and is then snapped in. The upright mounting spring securely fixes the luminaire in the ceiling.

Fitting CARDAN-SPIRIT with QR 111 lamps optionally permits a significant reduction in mounting height. The complete SPIRIT lighting head is no longer needed, only its narrow lighting ring. This greatly reduces the luminaire’s mounting height and also opens up new options for use. Nevertheless, the appearance of CARDAN-SPIRIT on the ceiling is maintained.
Potential synergies
Lighting heads with added value

By using SPIRIT lighting heads, CARDAN-SPRIT continues the success of this extensive spotlight range. This brings technical as well as design-related benefits, e.g. straightforward handling, extensive accessories and a consistent appearance when combining lighting frames and ceiling-recessed luminaires with spotlights.

The SPIRIT lighting heads have been slightly adapted and modified for use in CARDAN-SPRIT, e.g. by reducing them to a single component made of contemporary die-cast aluminium. This enables access to the lighting head from the front only, and makes handling and maintenance considerably easier.

The gimbal joint
Two joints, arranged at a right angle to each other, allow each of the lighting heads to pivot on two axes in all directions at an angle of up to 45 degrees. The U-shaped bracket allows the SPIRIT lighting head to rotate (joint axis 1), its central link with the luminaire housing allows rotation in the other direction (joint axis 2).

The new glass spring clip
This ensures that the reflector, protective glass panel and, optionally, other accessories are all securely fixed. By simply spreading the two springs apart, technical lighting accessories can be replaced without the use of tools. This offers maximum, self-explanatory convenience – even for inexperienced users.

Ventilation system
Bumps along the reflector edge and fins in the lighting head create a gap between the protective glass panel or filter and the edge of the lighting head, which enables the flow of air from inside to outside. This system noticeably reduces heat generation in the lighting head when using metal halide lamps with protective glass panels, thereby prolonging the lamps’ service life.
A wide range of accessories makes CARDAN-SPRINT a technical lighting all-rounder in shops. The extensive range in turn exploits synergies with SPI- RIT spotlights. Thanks to easy no-tool replacement of accessories (colour filters, protective glass panels, scattering discs, anti-glare rings or anti-glare blades), users, too, can easily adapt lighting solutions to suit individual situations.

**SPIRIT lighting head with attachment holder**
Because it is fitted using two pins, the distance between lighting head and attachment holder can be slightly varied. As shown in the illustration, an interference colour filter should preferably be used by fitting it in an attachment holder (instead of fitting it directly in the lighting head). This keeps the operating temperature lower and prolongs the lamp service life.

**Lighting head with HIT protective glass panel**
If required, the HIT protective glass panel – a safety glass panel fitted as standard – can be mounted on three delicate fins with an anti-glare cap directed towards the inside which ensures glare reduction.

**Honeycomb louvre**
The honeycomb louvre ensures soft distribution of light directly from the lighting head or attachment holder. If a colour filter is also used, it should be fitted in the attachment holder.
SPIRIT lighting ring for CAR-DAN-SPIRIT FLAT
As already shown for the lighting frames, in the FLAT version fitted with a QR 111 light source, the lamp is retained only by the lighting ring instead of the complete lighting head. Convenient direction of light is possible thanks to the anti-glare ring fitted directly for lateral screening as in this example. An attachment holder is required in order to use filters and other accessories.

Anti-glare blades or barn doors
Optimum glare reduction is provided by barn doors that can be fitted together with various filters. All four doors can be adjusted individually.

Glass filters
Interference colour filters filter out particular colour components of the light, letting only the desired colours pass. The colours filtered out are reflected to the back. Transparent filters such as protective glass panels for HIT metal halide lamps, infrared and UV blocking filters protect the goods illuminated against undesired effects, e.g. fading.

Oval outline lens
An oval outline lens is used to illuminate elongated objects – this is best fitted using an attachment holder for easy handling. The light is refracted by its wide grooves to form an elongated, narrow cone of light. The best effect is achieved using narrow-beam reflectors with lamps such as QR 111. Similarly, a soft outline lens can be used to “break up” the coarse structure of the light cone and make its edges blur.
Splendid colours
The dynamic interplay of coloured light
The use of colour filters provides fascinating variation. They turn CARDAN-SPRIT lighting frames into RGB spotlights which provide an interplay of light with variable colours. Active Light animations are thereby made possible without additional accessories or complicated programming, simply “plug & play” so to speak.

The secret of this special version is the fourth housing of the three-lamp lighting frame. A sequencer is installed here to control the programmed sequences of the red, green and blue lighting heads (RGB) via an internal bus line, thereby producing light with variable colours.

Basically two control options are provided:

- In the basic version, which is a closed system, the dynamically changing light follows a fixed program and the interplay of colours remains unchanged until it is reprogrammed. All that is required is connection to the mains supply (“plug & play” method).

- In a more sophisticated version, colour scenes can be individually changed externally using the LUXMATE EMOTION touch panel on whose touch-sensitive panel colour sequences can be altered extremely easily and conveniently. In this case, the bus line is extended to the ceiling rose or wall bracket in order to connect it to the touch panel there.
Mix it!
Perfect combination

For special tasks in retail areas or for shop window lighting, CARDAN-SPRIT lighting frames can be fitted with a mix of different lamps as needed in order to optimise the lighting effect. In this case the different light colours and specific benefits of individual lamps are exploited. The mix usually includes LV halogen (QT) and metal halide lamps (HIT). A special installation method allows lighting head units to be replaced “on site”. They are removed from the lighting frame upwards, and are refitted in the opposite direction after replacement and are simultaneously connected to the plug-in terminals.

Reflectors can also be replaced on site without the use of any tools – thereby making changeover from spotlighting to floodlighting child’s play.

The lighting head unit is fitted into the lighting frame from the top rear and is fixed there. Electrical connection is obtained by means of already prepared terminals.
CARDAN-SPRIT
System overview

CARDAN-SPRIT CS-R
- HIT-TC-CE
- QT 12
- QR 111
FLAT
- QR 111

CARDAN-SPRIT CS-E
- HIT-TC-CE
- QT 12
- QR 111
FLAT
- QR 111

CARDAN-SPRIT CS-E
- HIT-TC-CE
- QT 12
- QR 111
FLAT
- QR 111

Blocking filters
- Interference colour filter
- Oval outline lens
- Soft outline lens
- Honeycomb louvre

Anti-glare ring, black
Attachment holder

CARDAN-SPRIT CS-L
HORIZONTALLY SUSPENDED

WALL-MOUNTED

VERICALLY SUSPENDED

CARDAN-SPRIT CS-L
- HIT-TC-CE
- QT 12
FLAT
- QR 111

Anti-glare tube, black
Anti-glare ring, black
Attachment holder

Blocking filters
- Interference colour filter
- Oval outline lens
- Soft outline lens
- Honeycomb louvre

Anti-glare blades, black
**CARDAN-SPRIT CS ceiling-recessed luminaires**

### Round recessed luminaire with one SPIRIT lighting head
- Lighting head pivots on gimbals through approx. 2 x 38°
- Luminaire housing made of sheet steel, closed, with circular mounting frame, stove-enamelled in titanium
- Lighting head made of diecast aluminium, stove-enamelled, titanium; FLAT version: instead, lighting ring made of diecast aluminium as lamp support, stove-enamelled, titanium
- QT 12/HIT-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- QR111/QT-LP 12 connection: 2-pole connection box with strain relief; please order safety transformer separately
- HIT-TC-CE connection: with GST 18/3 Wieland plug; please order electronic ballast separately
- Recessed depth of FLAT version: 120 mm
- Installation on ceiling: with spring clips, for ceiling thickness 1–32 mm
- For control gear, please refer to the Downlights accessories section

### Square recessed luminaire, with one SPIRIT lighting head
- Lighting head pivots on gimbals through approx. 2 x 45°
- Luminaire housing made of sheet steel, closed, with mounting frame, stove-enamelled in titanium
- Lighting head made of diecast aluminium, stove-enamelled, titanium; FLAT version: instead, lighting ring made of diecast aluminium as lamp support, stove-enamelled, titanium
- QT 12/HIT-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- QR111/QT-LP 12 connection: 2-pole connection box with strain relief; please order safety transformer separately
- HIT-TC-CE connection: with GST 18/3 Wieland plug; please order electronic ballast separately
- Recessed depth of FLAT version: 120 mm
- Installation on ceiling: with spring clips, for ceiling thickness 1–32 mm
- For control gear, please refer to the Downlights accessories section

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### Single module

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>RD/R0</th>
<th>kg</th>
<th>Order no.</th>
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<tbody>
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<td>1/35 W, 1/70 W HIT-TC-CE G8.5 flood*</td>
<td>175/175</td>
<td>1.6</td>
<td>60 810 446</td>
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<tr>
<td>1/35 W, 1/70 W HIT-TC-CE G8.5 spot*</td>
<td>175/175</td>
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<td>60 810 445</td>
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<tr>
<td>1/100 W QR 111</td>
<td>175/175</td>
<td>1.6</td>
<td>60 810 444</td>
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<tr>
<td>1/100 W QR 111 FLAT</td>
<td>120/175</td>
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<td>60 810 486</td>
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<tr>
<td>1/100 W QT-LP 12 GY6.35 flood</td>
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<td>175/175</td>
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<td>60 810 442</td>
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</table>

*With HIT-TC-CE, may only be used with electronic ballast. With 100 W QT-LP 12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.*

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**To specify e.g.:** CARDAN-SPRIT CS-R1/round recessed, 1x

1/35 W, 1/70 W HIT-TC-CE G8.5 flood 60 810 446
CARDAN-SPIRIT CS ceiling-recessed luminaires

**CARDAN-SPIRIT CS-E2/recessed, 2x**

Rectangular recessed luminaire, with 2 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Luminaire housing made of sheet steel, closed, with mounting frame, stove-enamelled in titanium
- Lighting head made of diecast aluminium, stove-enamelled, titanium; FLAT version: instead, lighting ring made of diecast aluminium as lamp support, stove-enamelled, titanium
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- QR111/QT-LP 12 connection: one 2-pole connection box with strain relief for each lighting head; please order transformer separately
- HIT-TC-CE connection: with GST 18/3 Wieland plug for each lighting head; please order electronic ballast separately
- Recessed depth of FLAT version: 120 mm
- Installation on ceiling: with spring clips, for ceiling thickness 1–32 mm
- For control gear, please refer to the Downlights accessories section

**Dual module**
- 2/35 W, 2/70 W HIT-TC-CE G8.5 flood*
  - Cat. no.: 352/182/175
  - Order no.: 60 810 464
- 2/35 W, 2/70 W HIT-TC-CE G8.5 spot*
  - Cat. no.: 352/182/175
  - Order no.: 60 810 460
- 2/100 W QR 111 spot
  - Cat. no.: 352/182/175
  - Order no.: 60 810 448
- 2/100 W QR 111 FLAT
  - Cat. no.: 352/182/175
  - Order no.: 60 810 480
- 2/100 W QT-LP 12 GY6.35 flood
  - Cat. no.: 352/182/175
  - Order no.: 60 810 456
- 2/100 W QT-LP 12 GY6.35 spot
  - Cat. no.: 352/182/175
  - Order no.: 60 810 452

* With HIT-TC-CE, may only be used with electronic ballast.

With 100 W QT-LP 12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.

**CARDAN-SPIRIT CS-E3/recessed, 3x**

Rectangular recessed luminaire, with 3 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Luminaire housing made of sheet steel, closed, with mounting frame, stove-enamelled in titanium
- Lighting head made of diecast aluminium, stove-enamelled, titanium; FLAT version: instead, lighting ring made of diecast aluminium as lamp support, stove-enamelled, titanium
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- QR111/QT-LP 12 connection: one 2-pole connection box with strain relief for each lighting head; please order transformer separately
- HIT-TC-CE connection: with GST 18/3 Wieland plug for each lighting head; please order electronic ballast separately
- Recessed depth of FLAT version: 120 mm
- Installation on ceiling: with spring clips, for ceiling thickness 1–32 mm
- For control gear, please refer to the Downlights accessories section

**Triple module**
- 3/35 W, 3/70 W HIT-TC-CE G8.5 flood*
  - Cat. no.: 522/182/175
  - Order no.: 60 810 465
- 3/35 W, 3/70 W HIT-TC-CE G8.5 spot*
  - Cat. no.: 522/182/175
  - Order no.: 60 810 461
- 3/100 W QR 111 spot
  - Cat. no.: 522/182/175
  - Order no.: 60 810 449
- 3/100 W QR 111 FLAT
  - Cat. no.: 522/182/175
  - Order no.: 60 810 489
- 3/100 W QT-LP 12 GY6.35 flood
  - Cat. no.: 522/182/175
  - Order no.: 60 810 457
- 3/100 W QT-LP 12 GY6.35 spot
  - Cat. no.: 522/182/175
  - Order no.: 60 810 453

* With HIT-TC-CE, may only be used with electronic ballast.

With 100 W QT-LP 12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.

To specify e.g.: CARDAN-SPIRIT CS-E2/recessed, 2x
- 2/35 W, 2/70 W HIT-TC-CE G8.5 flood 60 810 464
CARDAN-SPIRIT CS ceiling-recessed luminaires

**CARDAN-SPIRIT CS-E4/recessed, 4x**

Square recessed luminaire, with 4 SPIRIT lighting heads

- Lighting heads pivot on gimbals through approx. 2 x 45°
- Luminaire housing made of sheet steel, closed, with mounting frame, stove-enamelled in titanium
- Lighting head made of diecast aluminium, stove-enamelled, titanium; FLAT version: instead, lighting ring made of diecast aluminium as lamp support, stove-enamelled, titanium
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- QR111/QT-LP 12 connection: one 2-pole connection box with strain relief for each lighting head; please order transformer separately
- HIT-TC-CE connection: with GST 18/3 Wieland plug for each lighting head; please order electronic ballast separately
- Recessed depth of FLAT version: 120 mm
- Installation on ceiling: with spring clips, for ceiling thickness 1–32 mm
- For control gear, please refer to the Downlights accessories section

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>Order no.</th>
<th>Accessories</th>
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<td>60 810 450</td>
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<tr>
<td>352/352/175</td>
<td>4.9</td>
<td>60 810 458</td>
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*With HIT-TC-CE, may only be used with electronic ballast. With 100 W QT-LP 12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.

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**CARDAN-SPIRIT CS-E accessories for recessed luminaires**

Accessories for CARDAN-SPIRIT lighting heads

- Can be fitted in lighting ring of lighting head or in clip-on attachment holder without use of any tools
- Removal of filter(s) by laterally hinging adjustment springs on lighting ring or attachment holder
- Please observe separately indicated restrictions with certain combinations

<table>
<thead>
<tr>
<th>Cat. no.</th>
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<tbody>
<tr>
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<tr>
<td>S7 003 190</td>
<td>Anti-glare ring, black (prevents lateral light exit)</td>
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<td>S7 003 200</td>
<td>Anti-glare tube, black (for shielding HIT-TC-CE lamp)</td>
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<td>S7 003 138</td>
<td>Attachment holder, titanium</td>
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<td>S0 546 160</td>
<td>Blocking filters (with QR111, only with attachment holder)*</td>
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<td>S0 546 140</td>
<td>IR/UVA</td>
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<tr>
<td>S0 546 150</td>
<td>Protective glass</td>
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<tr>
<td>S0 546 170</td>
<td>UVA Blocking Filter</td>
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<td>S0 546 180</td>
<td>Interference colour filters (with QR111 only with attachment holder)**</td>
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<tr>
<td>S0 546 190</td>
<td>blue</td>
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<td>S0 546 200</td>
<td>yellow</td>
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<td>S0 546 180</td>
<td>green</td>
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<td>S0 546 200</td>
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<td>S0 529 570</td>
<td>Oval/soft outline lens (with QR111 only with attachment holder)</td>
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<td>S0 529 580</td>
<td>Oval outline lens (recommended for spot reflector)</td>
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<td>Soft outline lens</td>
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<td>S7 003 220</td>
<td>Barn doors (restricted pivoting range of lamp module)</td>
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<td>S7 003 220</td>
<td>Anti-glare blades, black</td>
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<td>S7 003 210</td>
<td>Honeycomb louvre (with QR111 only with attachment holder)</td>
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<tr>
<td>S7 003 210</td>
<td>Black honeycomb mesh</td>
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* For 100 W QT-LP 12 use blocking filter IR/UVA in attachment holder.

** For 100 W QT-LP 12, it is recommended to use attachment holder (Blue filter only for use up to 90 W and in attachment filter).

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To specify e.g.: CARDAN-SPIRIT CS-E4/recessed, 4x

4/35 W, 4/70 W HIT-TC-CE G8.5 flood 60 810 466
CARDAN-SPIRIT CS-L2/double pendant, horizontal

Lighting frame luminaire with 2 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 2 gear housings with 1 SPIRIT lighting head (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version with type LDE (20–105 VA) transformers and integrated bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. steel cord suspension on 4 cords with patented suspension devices, length 1,500 mm each, can be cut to length infinitely, plus 2 ceiling roses, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

CARDAN-SPIRIT CS-L2/double pendant, vertical

Lighting frame luminaire with 2 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 2 gear housings with 1 SPIRIT lighting head (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version with type LDE (20–105 VA) transformers and integrated bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. steel cord suspension on 2 cords with patented suspension devices, length 1,500 mm each, can be cut to length infinitely, plus 1 ceiling rose, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

With 100 W QT-12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.

To specify e.g.: CARDAN-SPIRIT CS-L2/double pendant, horizontal
2/35 W HIT-TC-CE G8.5 flood 60 710 270
CARDAN-SPIRIT CS lighting frame

**CARDAN-SPIRIT CS-L2/wall-/ceiling-mounted, 2x**

**Lighting frame luminaire with 2 SPIRIT lighting heads**
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 2 gear housings with 1 SPIRIT lighting head (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version (available on request) with LDE type transformers and integrated bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. wall-mounted fitting with adapter box, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built-in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

**Double frame, installed on wall/ceiling**

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>L/W/H kg</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/35 W HIT-TC-CE G8.5 flood</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/35 W HIT-TC-CE G8.5 spot</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/70 W HIT-TC-CE G8.5 flood</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/70 W HIT-TC-CE G8.5 spot</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/100 W QR 111 FLAT</td>
<td>225/270/560</td>
<td>3.9</td>
</tr>
<tr>
<td>2/100 W QT-LP 12 GY6.35 flood</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/100 W QT-LP 12 GY6.35 flood, dimmable DALI</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/100 W QT-LP 12 GY6.35 spot</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
<tr>
<td>2/100 W QT-LP 12 GY6.35 spot, dimmable DALI</td>
<td>225/270/560</td>
<td>4.1</td>
</tr>
</tbody>
</table>

**CARDAN-SPIRIT CS-L3/triple pendant, horizontal**

**Lighting frame luminaire with 3 SPIRIT lighting heads**
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 3 gear housings (plus 1 empty housing) with 1 SPIRIT lighting head (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version (available on request) with LDE type transformers and built-in bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. steel cord suspension on 4 cords with patented suspension devices, length 1,500 mm each, can be cut to length infinitely, plus 2 ceiling roses, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built-in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

**Triple frame, horizontally suspended**

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>L/W/H kg</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/35 W HIT-TC-CE G8.5 flood</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/35 W HIT-TC-CE G8.5 spot</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/70 W HIT-TC-CE G8.5 flood</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/70 W HIT-TC-CE G8.5 spot</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/100 W QR 111 FLAT</td>
<td>890/225/50</td>
<td>6.7</td>
</tr>
<tr>
<td>3/100 W QR 111 FLAT, dimmable DALI</td>
<td>890/225/50</td>
<td>6.7</td>
</tr>
<tr>
<td>3/100 W QT-LP 12 GY6.35 flood</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/100 W QT-LP 12 GY6.35 flood, dimmable DALI</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/100 W QT-LP 12 GY6.35 spot</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
<tr>
<td>3/100 W QT-LP 12 GY6.35 spot, dimmable DALI</td>
<td>890/225/50</td>
<td>7.0</td>
</tr>
</tbody>
</table>

With 100 W QT-LP 12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.

To specify e.g.: CARDAN-SPIRIT CS-L2/wall-/ceiling-mounted, 2x 2/35 W HIT-TC-CE G8.5 flood 60 710 278
CARDAN-SPIRIT CS lighting frame

CARDAN-SPIRIT CS-L3/triple pendant, vertical

Lighting frame luminaire with 3 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 3 gear housings (plus 1 empty housing) with 1 SPIRIT lighting head (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version (available on request) with LDE type transformers and built-in bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. steel cord suspension on 2 cords with patented suspension devices, length 1,500 mm each, can be cut to length infinitely, plus 1 ceiling rose, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

To specify e.g.: CARDAN-SPIRIT CS-L3/triple pendant, vertical 3/35 W HIT-TC-CE G8.5 flood 60 710 286

CARDAN-SPIRIT CS-L3/wall-/ceiling-mounted, 3x

Lighting frame luminaire with 3 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 3 gear housings (plus 1 empty housing) with 1 SPIRIT lighting head (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version (available on request) with LDE type transformers and built-in bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. wall-mounted fitting with adapter box, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

To specify e.g.: CARDAN-SPIRIT CS-L3/wall-/ceiling-mounted, 3x 3/35 W HIT-TC-CE G8.5 flood 60 710 286

MODULAR LIGHTING SYSTEMS
CARDAN-SPIRIT CS lighting frame

Lighting frame luminaire with 4 SPIRIT lighting heads
• Lighting heads pivot on gimbals through approx. 2 x 45°
• Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
• 2 gear housings with 2 SPIRIT lighting heads (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
• Electronic ballasts included
• DALI version (available on request) with LDE type transformers and built-in bus line
• Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
• QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
• HIT-TC-CE: protective glass panel included
• Lampholder for QR111: flat plug 6.3
• Incl. steel cord suspension on 2 cords with patented suspension devices, length 1,500 mm each, can be cut to length infinitely, plus 2 ceiling roses, titanium stove-enamelled; incl. feed cable and terminals
• DALI version with built-in bus feed line
• Mains voltage: 230–240 V/50–60 Hz

To specify e.g.: CARDAN-SPIRIT CS-L4/quadruple pendant, horizontal

4/35 W HIT-TC-CE G8.5 flood 395/50/560 5.7 60 710 294
4/35 W HIT-TC-CE G8.5 spot 395/50/560 5.7 60 710 297
4/70 W HIT-TC-CE G8.5 flood 395/50/560 5.7 60 710 300
4/70 W HIT-TC-CE G8.5 spot 395/50/560 5.7 60 710 299
4/100 W OR 111 FLAT, dimmable DALI 395/50/560 5.3 60 710 230
4/100 W OR 111 FLAT, dimmable DALI 395/50/560 5.3 60 710 229
4/100 W OR 111 FLAT, dimmable DALI 395/50/560 5.3 60 710 227
4/100 W OR 111 FLAT, dimmable DALI 395/50/560 5.3 60 710 223

With 100 W QT-LP 12, IR/UVA blocking filter and blue colour filter may only be fitted in attachment holder.
CARDAN-SPRIT CS lighting frame

Accessories for CARDAN-SPRIT lighting heads
- Can be fitted in lighting ring of lighting head or in clip-on attachment holder without use of any tools
- Removal of filter(s) by laterally hinging adjustment springs on lighting ring or attachment holder
- Please observe separately indicated restrictions with certain combinations

CARDAN-SPRIT CS-L4/wall-/ceiling-mounted, 4x

Lighting frame luminaire with 4 SPIRIT lighting heads
- Lighting heads pivot on gimbals through approx. 2 x 45°
- Frame made of 2 extruded aluminium sections and 2 cross brackets made of die-cast aluminium, inside black stove-enamelled, outside titanium stove-enamelled
- 2 gear housings with 2 SPIRIT lighting heads (with QR 111, SPIRIT lighting ring) each, housing colour: black stove-enamelled
- Electronic ballasts included
- DALI version (available on request) with LDE type transformers and built-in bus line
- Lighting heads (lighting rings) made of die-cast aluminium, titanium stove-enamelled
- QT 12/HIT-TC-CE: faceted specular reflector made of highest-grade aluminium, silver anodised
- HIT-TC-CE: protective glass panel included
- Lampholder for QR111: flat plug 6.3
- Incl. wall-mounted fitting with adapter box, titanium stove-enamelled; incl. feed cable and terminals
- DALI version with built in bus feed line
- Mains voltage: 230–240 V/50–60 Hz

CARDAN-SPRIT CS-E accessories for recessed luminaires

Accessories
- Anti-glare ring, black (prevents lateral light exit) S7 003 190
- Anti-glare tube, black (for shielding HIT-TC-CE lamp) S7 003 200
- Attachment holder, titanium 60 800 138
- Blocking filters (with QR111, only with attachment holder)*
  - IR/UVA 50 546 160
  - Protective glass 50 546 140
  - UVA Blocking filter 50 546 150
- Interference colour filters (with QR111 only with attachment holder)**
  - blue 50 546 170
  - yellow 50 546 180
  - green 50 546 190
  - red 50 546 200
- Oval/soft outline lens (with QR111 only with attachment holder)
  - Oval outline lens (recommended for spot reflector) 50 529 570
  - Soft outline lens 50 529 580
- Barn doors (restricted pivoting range of lamp module)
  - Anti-glare blades, black S7 003 220
- Honeycomb louvre (with QR111 only with attachment holder)
  - Black honeycomb mesh S7 003 210

* For 100 W QT-LP 12 use blocking filter IR/UVA in attachment holder.
** For 100 W QT-LP 12, it is recommended to use attachment holder (Blue filter only for use up to 90 W and in attachment filter).
## Electronic safety transformers

**Electronic safety transformer**
- For 12 V halogen incandescent lamps
- Mains voltage: 230 V/50–60 Hz
- Output voltage: 11.3 V or 11.5 V
- Only externally dimmable if a dimmer for electronic transformers is used
- Connections: each connection space covered, with strain relief, primary: 2-pole terminal strip; secondary: 20–105 VA, 6-pole terminal strip
- Connections in case of speedy: on primary 2-pole terminal strip, on secondary 2-pole terminal strip 50 VA or 4-pole terminal strip in case of 70/105 VA
- Max. length of secondary cable 2 m

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>kg</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>S7 000 990</td>
<td>0.2</td>
<td>ETR 230 V/11.3 V; 20–105 W</td>
</tr>
<tr>
<td>S7 001 530</td>
<td>0.3</td>
<td>ETR 230 V/11.3 V; 210 W</td>
</tr>
</tbody>
</table>

### Electronic safety transformers speedy
- Transformer 230–240 V/11.5 V; 50/60 Hz; 50 W
- Transformer 230–240 V/11.5 V; 50/60 Hz; 70 W
- Transformer 230–240 V/11.5 V; 50/60 Hz; 105 W
- Speedy transformer with lamp-saving soft start, suitable for phase and reverse phase dimming.

### Safety transformers 60/105 W

**Safety transformers**
- Mains voltage: 230/250 V, 50–60 Hz
- Output voltage: 11.5 V AC
- For 12 V halogen incandescent lamps
- Reversible temperature switch, operating temperature 120 °C
- Can only be dimmed using dimmer for inductive loads
- Meets EN 60742

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>kg</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>S7 001 020</td>
<td>1.4</td>
<td>60 W</td>
</tr>
<tr>
<td>S7 001 030</td>
<td>2.2</td>
<td>105 W</td>
</tr>
</tbody>
</table>

### Safety transformers 200/300 W

**Safety transformers**
- Mains voltage: 230/250 V, 50–60 Hz
- Output voltage: 11.5 V AC
- For 12 V halogen incandescent lamps
- Short-circuit and overload protection with pushbutton release
- Can only be dimmed using dimmer for inductive loads
- Meets EN 60742

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>kg</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>S7 001 170</td>
<td>4.0</td>
<td>200 W</td>
</tr>
<tr>
<td>S7 001 180</td>
<td>4.1</td>
<td>300 W</td>
</tr>
</tbody>
</table>

### Ballast units (electronic ballast) HIT/HIT-DE

**Ballast units**
- Flicker-free light
- Colour stable due to constant output
- Lamp service life extended by up to 50 %
- Consumption reduced 10–20 %
- Mains voltage: 220/240 V
- Electrical connections: primary: 3-pole screw-terminals; secondary: 3-pole cable, length 0.5 m, with Wieland plug-in socket

<table>
<thead>
<tr>
<th>Cat. no.</th>
<th>kg</th>
<th>Order no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>86 450 807</td>
<td>0.4</td>
<td>HIT 35 W</td>
</tr>
<tr>
<td>86 450 816</td>
<td>0.4</td>
<td>HIT/HIT-DE 70 W</td>
</tr>
<tr>
<td>86 450 822</td>
<td>0.5</td>
<td>HIT/HIT-DE 105 W</td>
</tr>
</tbody>
</table>

### Ballast unit
- Ballast unit (electronic ballast) HIT 35 W
- Ballast unit (electronic ballast) HIT/HIT-DE 70 W
- Ballast unit (electronic ballast) HIT/HIT-DE 105 W

To specify e.g.: Electronic safety transformers Transformer ETR 230 V/11.3 V; 20–105 W S7 000 990
Throughout the world, Zumtobel Staff is the competent reliable partner for innovative lighting solutions in all areas of application of professional interior lighting:

- Industry and Engineering
- Sport and Leisure
- Transit areas and Car parks
- Offices and Education
- Presentation and Retail
- Hotels and Catering
- Art and Culture
- Health & Care
- Orientation and Safety
- Active Light

With production plants in Austria, Germany, Australia and the USA, and sales organisations in all major European markets as well as commercial agencies in most regions of the world, Zumtobel Staff is one of the biggest international enterprises in the lighting sector.

As a leader in innovation, we guarantee our customers global competence in lighting consulting and design assistance, superior product quality and future-proof technologies – from individual luminaires to electronic lighting management systems.

Corporate goal: We want to use light to create worlds of experience, make work easier and improve communications and safety while remaining fully aware of our responsibility to the environment.
CARDAN-SPIRIT

Peerless in terms of flexibility for creative design using light