

The logo consists of a red square with a white 'N' inside, followed by the text '-SERIES' in blue.

N-SERIES

PENTALED

The first one, the original one!

The logo features the word 'RIMSA' in blue, with a red triangle pointing down above the 'I' and a red triangle pointing up below the 'A'.

RIMSA



The art of innovating

Right from its earliest days, RIMSA has always had a clear goal: to satisfy surgeons' needs. RIMSA is fully aware that the key to meeting this goal is INNOVATION.

Cutting-edge solutions designed by our engineers combine revolutionary new technology with consolidated concepts, such as "WHITE LIGHT" and "INDIRECT LIGHT", as used in the RIMSA PentaLED series.

Designers of the world's first scialytic lamp using **LED** technology (patented in September 2002), RIMSA

now applies the experience it has gained over the years to its new **PENTALED N-Series**.

N-Series (PentaLED**63N**, PentaLED**30N**) is a highly innovative and superior performance line of scialytic lamps and is a natural evolution of the acclaimed PENTALED series.

RIMSA remains true to its origins, over seventy years later: the first, the only and the most original when it comes to **bright new ideas**.

PENTALED N-Series

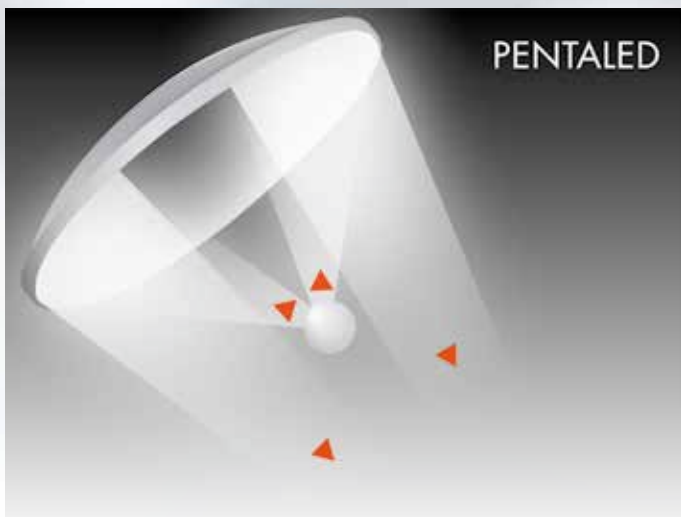


RIMSA  PENTALED 63N

RIMSA  PENTALED 30N



- The use of indirect light makes for:
- 3D illumination of the operating field
 - no shadows
 - no risk of dazzling



The **indirect light** provided by all PentaLED lamps guarantees cold light, depth and no stress or dazzling for the surgeon. This is due to especially calculated parabolic dishes that reflect the entire spectrum of light emitted by each LED lamp in a punctiform manner, without dispersion.

This means:

- fewer LEDs are needed,
- lower irradiated heat in the operating field.

Thanks to the physical principle of indirect light, the surgeon and his/her assistants are never disturbed by the light and can operate without stress to the eyes and, most importantly, without becoming dazzled.



Manual focus

The manual focalization inside the sterile area grants a precise and immediate control of the light field.

The Focus function is activated by the surgeon rotating the sterile central handle.

The possibility of adjusting the focalization every time the lamp is moved, allows to optimize the light flux and adapt the light field diameter according to the different surgeries.

Precise and immediate control of the light field

Professionalism and quality distinguish all RIMSA products



White light

Nature has always inspired man's every discovery! The sun is the light source par excellence and its rays emit monochromatic light, i.e. identical colour. Using this as a starting point, RIMSA has designed lamps that use only "white light" LEDs to avoid the risk of surgeons perceiving variations in the colour temperature (°K) within the operating field and to prevent unnecessary coloured shadows.

Indirect light

The use of indirect light makes for:

- 3D illumination of the operating field
- no shadows
- no risk of dazzling

Manual focus

The manual focalization inside the sterile area grants a precise and immediate control of the light field. The Focus function is activated by the surgeon rotating the sterile central handle. The possibility of adjusting the focalization every time the lamp is moved, allows to optimize the light flux and adapt the light field diameter according to the different surgeries.



Cold light

Any increase in thermal irradiation in the operating field is proportional to the number and power of the LEDs used. RIMSA uses a reduced number of LEDs thanks to the concept of "Indirect Light".

5000°K – 4500°K

By simply pressing the digital key "K" on the membrane keyboard, the surgeon can choose between two different "white light" temperatures – 5000°K and 4500°K – without altering the light intensity.



E-glass

The light source is protected by "E-Glass", a light diffusing screen made from clear tempered glass and coated with a special high strength film to avoid shards falling into the operating field in the unlikely event that it shatters.

The glass is non static, scratchproof and does not yellow with age, unlike conventional polycarbonate screens.

Endoled

The "EndoLed" function provides comfortable lighting during endoscopic surgery. When enabled, this function lights up a single module whose light intensity and colour temperature can be adjusted at will.



Laminar flow

The domed shape and, most especially, the ultra-low surface heat of the aluminium housing guarantee free flowing air without obstacles or any disturbance of the laminar flow. In fact, very hot surfaces lead to convection which transforms streamline air flow into turbulence causing drag.



Mechanical testing and safety

Aluminium structure made to an exclusive RIMSA design. The vertical multi-movement arm has been subjected to mechanical testing involving 40,000 continuous movements to guarantee the surgeon total safety during use. The absence of any holes and apertures means the lamp is safe, hygienic and easy to clean.

Italian components, service and spare-parts

Carefully selected distributors guarantee full availability of spare-parts and technical service. Professionalism and quality distinguish all RIMSA products: the result of more than seventy years' experience in the field.

RIMS PENTALED 63N

PENTALED**63N** is a hi-tech product designed to guarantee excellent performance levels

PENTALED**63N** has 72 elliptical reflectors split into 8 modules, each containing 9 LEDs. The modules are mechanically focused rotating the sterilizable handle. The multiplicity of the luminous sources and the elliptical geometry of the parabolas studied to reflect in the depth the light beams generated by the Leds, grant scialytic light for a three-dimensional illumination without shadows.

PENTALED**63N** does not dazzle: thanks to the principle of indirect light, the lamp oriented towards different positions does not dazzle the surgeon and the assistants.

The size of the lit field is adjusted mechanically through handle according to the kind of light required by the surgical speciality.

The adjustment of the light field is one of the primary requirements for a surgery lamp. Obviously the handle can be sterilized.

The reduced dimensions and the light reflector give extremely manoeuvrability and stability.

The controls on the membrane keyboard activate the following functions:

- selection of the colour temperature 5000°K and 4500°K
- adjustment of the light intensity up to 160 Klx
- on/off
- Endoled light with color selection (comfortable light for endoscopy intervention)

The colour temperature of 5000°K, similar to sunlight at Zenith, stimulates the surgeon's concentration,

does not strain their sight, reproduces the colour of the tissues faithfully and increases the definition of the edges.

The modular construction of the electronic board that feeds the LEDs guarantees continuous light, even in the unlikely event that a LED or board component should fail.

The lighting body is protected by tempered glass screen, covered by a special film that avoid any fallen down of splinters in case of break.

Smooth 360° rotation with slip-ring contacts for power transmission.

PENTALED**63N** boast an aluminium tubing structure which facilitates installation and permits easier manoeuvrability. The extremely lightness

of the structure, the bar in aluminium treated and attached to the upper front of the cupola, the ultra-thin dome (only 13 cm) allow simplicity in movements. Every lamp can be equipped with an emergency battery set. The autonomous duration of the battery is elevated.

PENTALED**63N** is a secondary lamp for surgery, classed as a system in the two-satellite version. Complies with European Directives 93/42/EEC and 2007/47/EC and bears the 'Class I - Medical Device' CE marking.



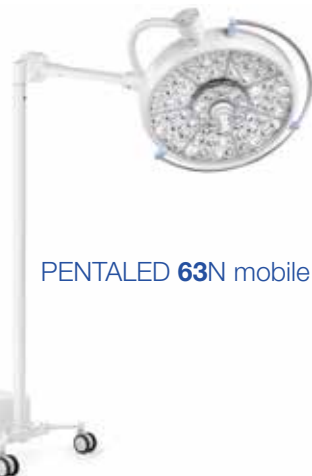


 N-WHITE

 N-COMFORT

 F-FOCUS

Available versions:



PENTALED **63N** mobile



PENTALED **63N + 63N**



PENTALED **63N + 30N**

RIMS PENTALED 30N

PENTALED30N: high performances in reduced dimensions

PENTALED30N is especially recommended for operating theatres where the surgeon needs a small lamp to avoid interference with other overhead equipment. Excellent for oral and maxillofacial surgery and aesthetic plastic surgery. It has 30 elliptical reflectors split into 6 modules, each containing 5 LEDs, providing 130,000 Lux. An aluminium ring runs around the dome for easier positioning.

A central sterilizable handle facilitate positioning of the lamp. Focalization and light field diameter can be easily adjusted moving the central handle inside the sterile area.

The controls on the membrane keyboard activate the following functions:

- selection of the colour temperature 5000°K and 4500°K
- adjustment of the light intensity up to 130 Klx - on/off
- **Endoled** light with color selection (comfortable light for endoscopy intervention)

The modular construction of the electronic board that feeds the LEDs guarantees continuous light, even in the unlikely event that a LED or board component should fail.

The lighting body is protected by tempered glass screen. Smooth 360° rotation with slip-ring contacts for power transmission.

PENTALED30N is a secondary lamp for surgery, classed as a system in the two-satellite version. Complies with European Directives 93/42/EEC and 2007/47/EC and bears the 'Class I - Medical Device' CE marking.



 N-WHITE

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Available versions:



PENTALED 30N mobile



PENTALED 30N + 30N



PENTALED 30N + 63N

Optional solutions

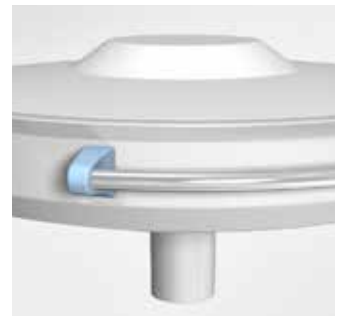
Integrated solutions for the surgery of the future

By operating with the most prestigious international hospital complexes, RIMSA has acquired extensive know-how in the surgical field, designing innovative solutions aimed at satisfying customer demands.

That is why we are also able to offer optional solutions such as: monitor holding arms, TV shooting systems with TVCC HD and SD,

remote-control interfaces both by means of cable and IR (infra-red) remote control and UPS units.

We also devise personalised solutions for installing our lamps in operating theatres and mobile hospitals with very low ceilings – up to heights of 220 cm.



Support monitor arm



IR remote control



Wall control panel



TVCC camera

63N 30N

Performances

Light intensity at 1m distance (Ec)	160 Klx	130 Klx
Color temperature: double selection	4500 / 5000° K	4500 / 5000° K
Color rendering index (CRI)	96 Ra	96 Ra
R9	≥ 90	≥ 90
No. of Leds	72	30
Diameter and focus adjustment	Manual	Manual
Light field diameter adjustable from – to – (cm)	21 – 42	18 – 22
d10 light field diameter where illuminance reaches 10% of Ec (small ø)	210 mm (160 klx)	180 mm (130 klx)
d10 light field diameter where illuminance reaches 10% of Ec (big ø)	420 mm (40 klx)	220 mm (85 klx)
d50 light field diameter where illuminance reaches 50% of Ec (small ø)	120 mm (160 klx)	90 mm (130 klx)
d50 light field diameter where illuminance reaches 50% of Ec (big ø)	260 mm (40 klx)	130 mm (85 klx)
Depth of illumination IEC 60601-2-41 (L1+L2) at 60%	46 cm	55 cm
Depth of illumination IEC 60601-2-41 (L1+L2) at 20%	115 cm	108 cm
Control of the illuminance (%)	25 - 100	25 - 100
Total radiated energy Ee where the illuminance reaches max level (W/m2)	399	263
Ratio between radiated energy Ee and illuminance Ec (mW/m2.lx)	2,61	2,7
Radiated UV energy with wavelength less than 400nm (W/m2)	0,001	0,001
Average Led life	> 50.000 hours	> 50.000 hours
EndoLED light intensity min-max	5.000 – 20.000 lux	9.000 – 25.000 lux

Electrical data

Primary alternating voltage (V a.c.)	100 ÷ 240	100 ÷ 240
Secondary continue voltage (V d.c.)	24	24
Frequency (Hz)	50/60	50/60
Absorbed power (VA)	145	70

General Data

Colour	RAL 9003	RAL 9003
Directive	2007/47/EC	2007/47/EC
Standards	IEC60601-2-41	IEC 60601-2-41
Classification of product (Medical Device)	Class I	Class I

Dimensions

Out reflector diameter (cm)	63	40
Useful lighting surface (cm2)	1.710	712
Weight (Kg)	45 Kg.	35 Kg.

Optional

Battery group with automatic charger	Optional	Optional
SD camera	Optional	-
HD camera	Optional	-
IR remote control	Optional	Optional
Wall control panel	Optional	Optional
Arm and TFT Video	Optional	Optional

All lighting values are subjected to a tolerance of $\pm 5\%$ due to manufacturing and metrological reasons.

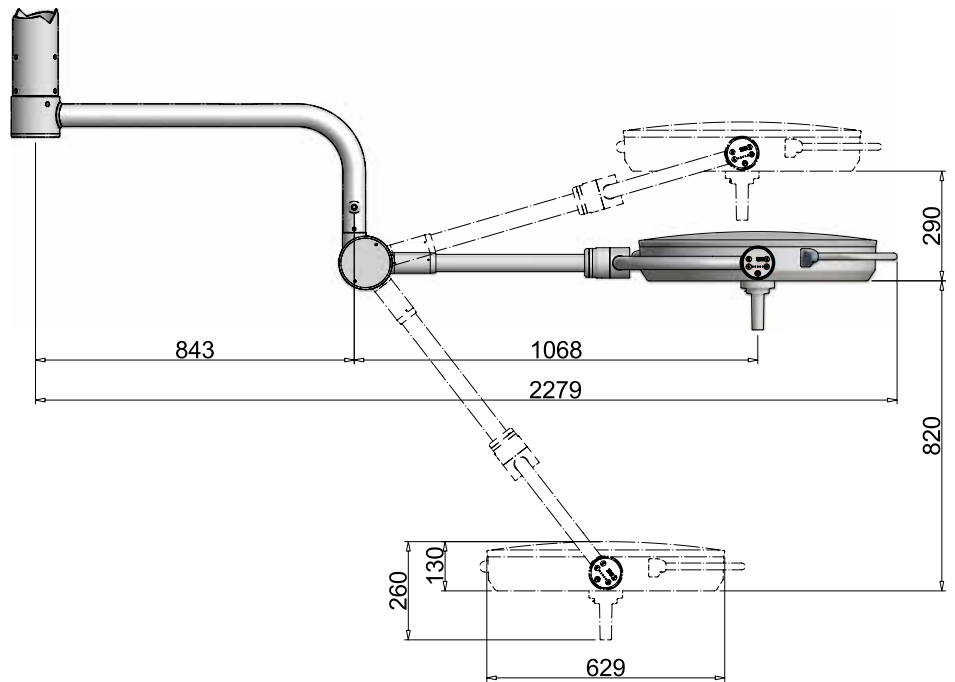
Versions

RIMSA PENTALED 63N

N-WHITE

N-COMFORT

F-FOCUS

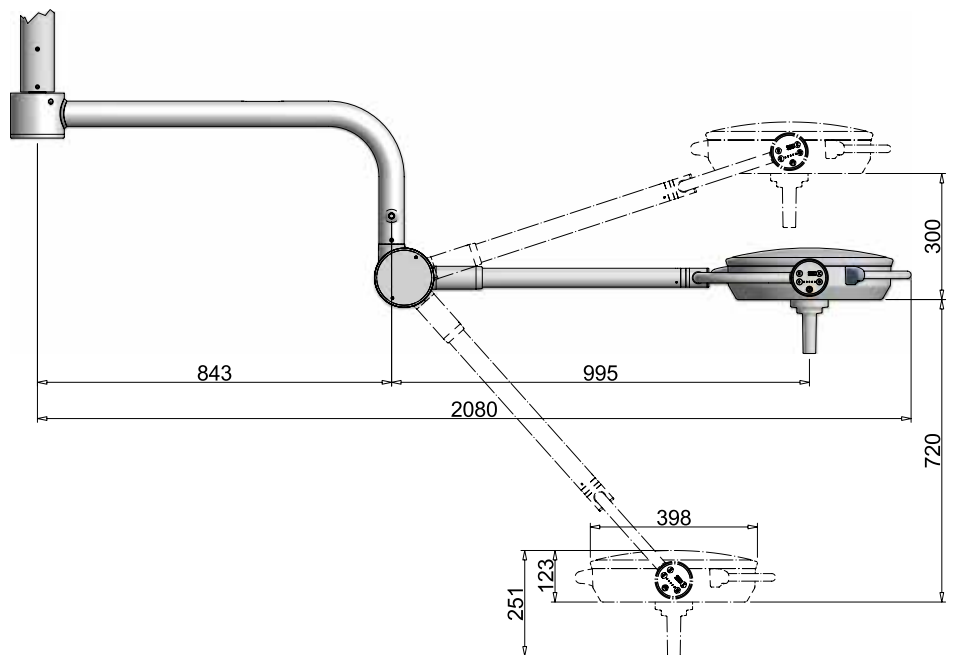


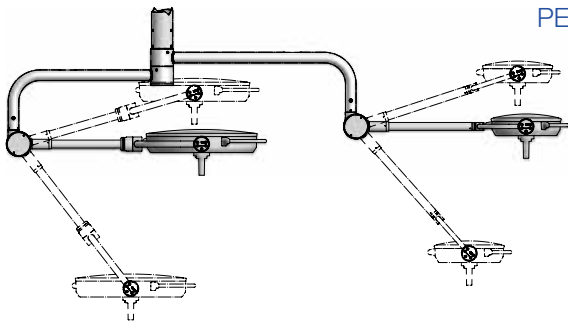
RIMSA PENTALED 30N

N-WHITE

N-COMFORT

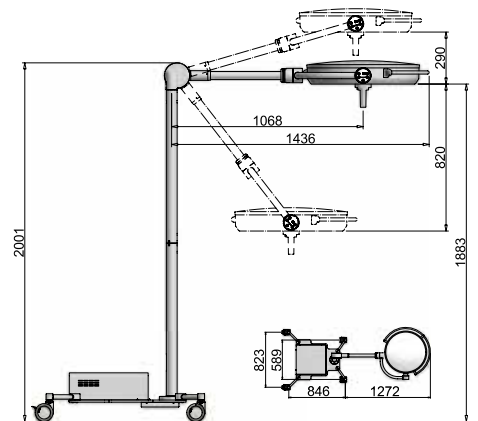
F-FOCUS



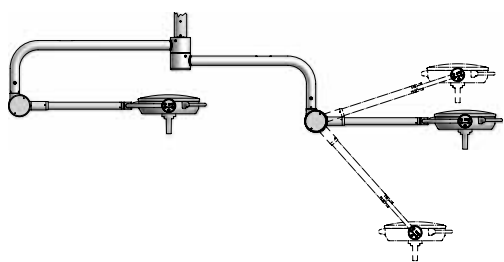
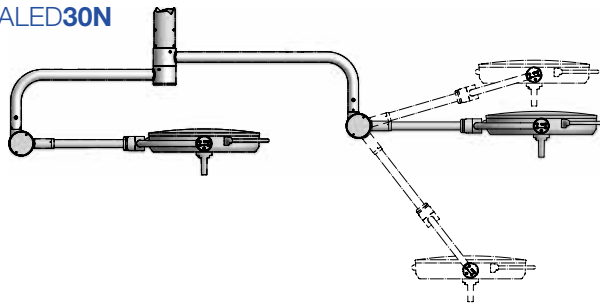


PENTALED**63N** + PENTALED**63N**

PENTALED**63N** mobile

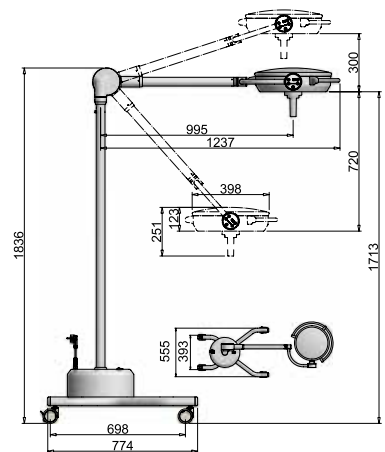


PENTALED**63N** + PENTALED**30N**

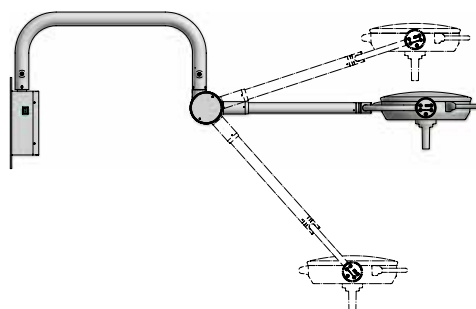


PENTALED**30N** + PENTALED**30N**

PENTALED**30N** mobile



PENTALED**30N** wall-mounted





Rif. February 2013

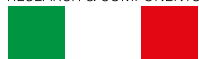
RIMSA

Via Monterosa, 18/22
20831 Seregno (MB) - Italy
Phone + 39 0362 325709
Fax + 39 0362 328559
E-mail: info@rimsa.it

www.rimsa.it

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RESEARCH & COMPONENTS



HAND-MADE IN ITALY

