

MAC 250 / MAC 250+



Martin 

The MAC 250 and MAC 250+ are compact moving head profile spot luminaires with an elegant contemporary design. Extremely flexible lighting tools, both luminaires successfully combine high light output with small lamp size.

Designed as a smaller version of the highly successful MAC 500, the MAC 250 offers advanced pattern illumination capabilities for beautiful mid-air effects.

The MAC 250+ is a dedicated projection version, well suited to a wide range of lighting applications and ideal wherever razor-sharp effect projection is a must.

Gobo Wheel



A motorized gobo wheel houses 8 easily replaceable metal and glass gobo patterns and rotates bi-directionally at various speeds. **Gobo patterns in the 250+ are indexible.**

MAC 250+ Color Wheel



The **MAC 250+** offers 12 replaceable dichroic color filters. Up to 40 different color options are available.

Prism and Focus

The 3-facet prism is smooth and rotates at variable-speeds, adding unique effects to gobo projection. Both luminaires are also equipped with a motorized focus, optional frost effect and various preset patterns.



MAC 250 Color Wheel



A motorized color wheel houses 12 dichroic color filters and offers split color possibilities.

Service Friendly

The compact shell is easy to remove. Modular construction makes components easily accessible and maintenance is simple.



Preprogrammed Macros



Preprogrammed macro sequences, for example a dimmer or strobe pulse, can be called up for automatic and quick programming.

Dimmer and Shutter



The full range dimmer allows for smooth color and effect transitions by varying the intensity of the light output. It is smooth and fast and provides both linear and tungsten dimming curves. The shutter allows for ultra fast strobe effects up to 20 Hz.

Lamp

An MSD 250-Watt lamp provides 2000 hours of lamp life. The standard 17° lens produces 3180 lumens of power.



Optics

The easy user-configurable lens system of the MAC 250 includes a 17° standard beam angle lens with 14° narrow angle and 23° wide field options. Tools are not required to change between them. **The MAC 250+ comes equipped with an 18.3° fixed beam plus achromatic high-quality lenses.**

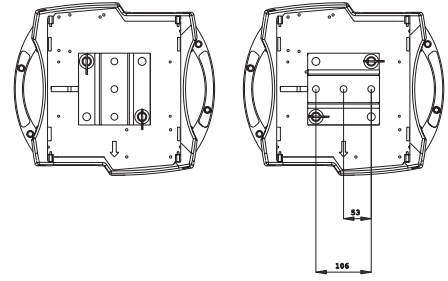


Clamps



Two separate Omega adapters and two different clamp types are available for easy rigging.

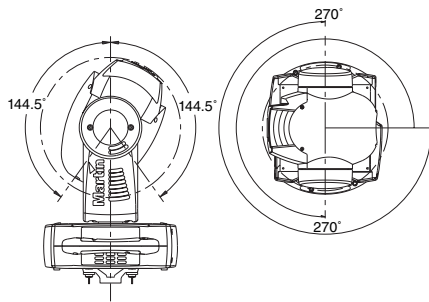
Rigging



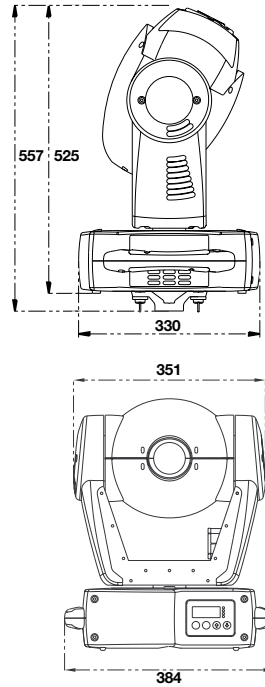
Dedicated anchoring points, safety wire attachment point, quarter-turn fastening system and mid-pan-range locator make for trouble free rigging.

Pan and Tilt

The lumination head has a radius of 540° horizontal pan and 289° vertical tilt at two different P/T speeds and works in all possible orientations.



Elevations

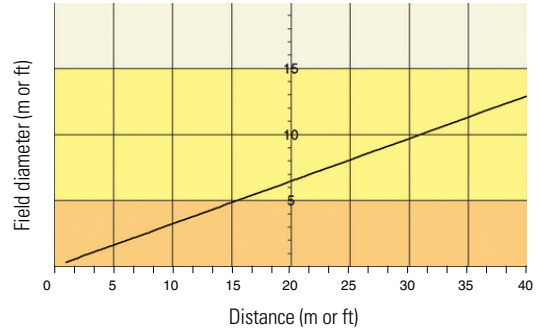
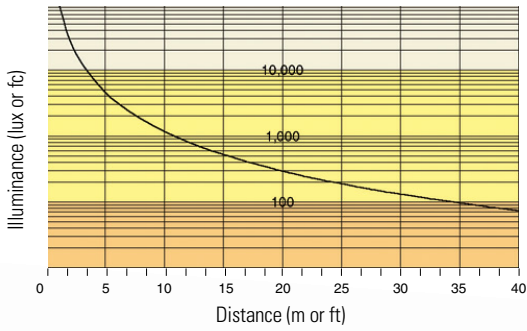
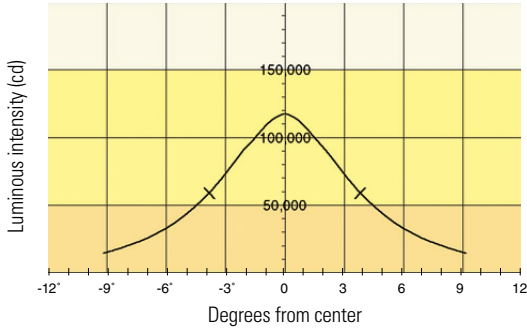


LED Display



A 4-digit LED readout allows the user to customize settings for easy programming. Error messages are easily understood, lamp and fixture usage is displayed and the readout flips for easy reading in any position.

MAC 250+ 18.3° configuration

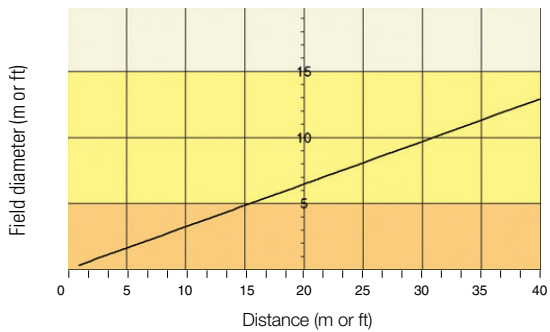
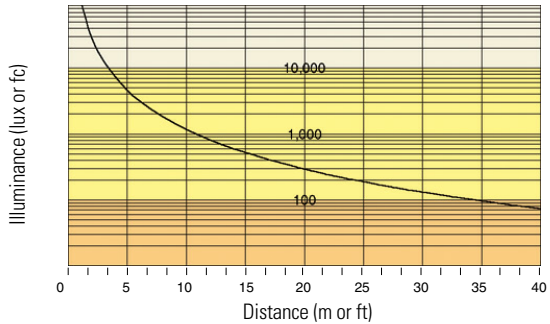
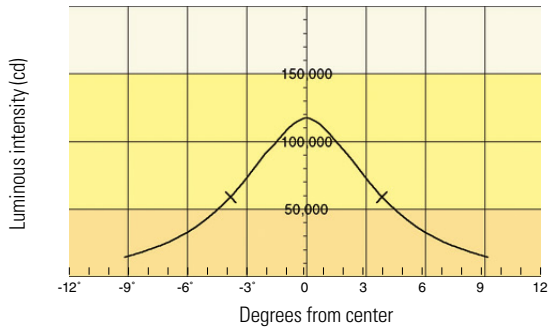


Illuminance (lux or fc)245,826 cd / distance² (m or ft)
 Diameter0.30 x distance
 Field angle18.3°
 Measurement conditions230 V, 50 Hz; no color or effects applied
 Measurement sourcePhilips MSD 250/2

MAC 250	MAC 250+
12 dichroic color filters	12 replaceable dichroic color filters
8 replaceable patterns	8 replaceable indexible patterns
17° standard beam angle with 14° narrow angle and 23° wide field options	18.3° fixed beam with achromatic lens

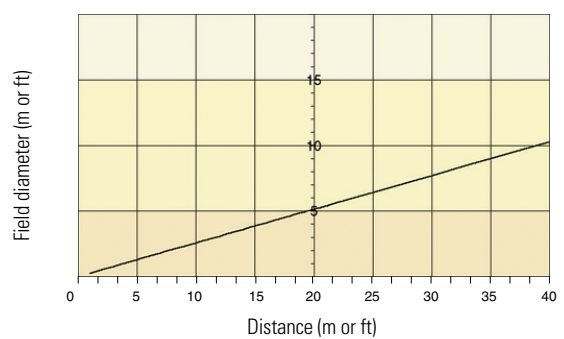
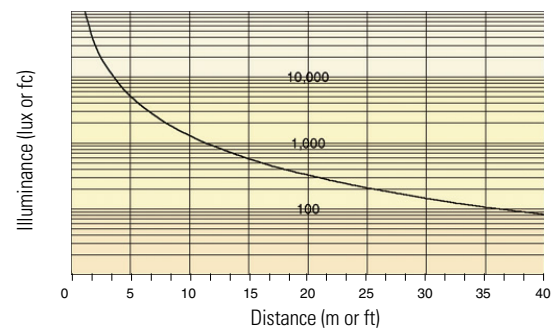
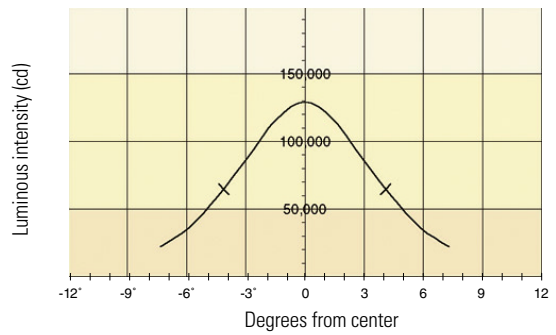


MAC 250 Standard 17° configuration



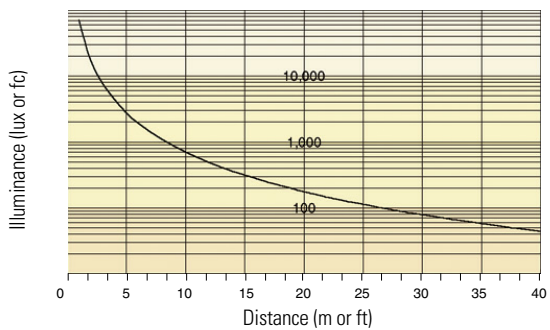
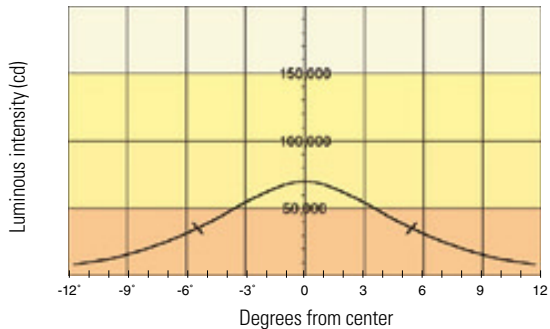
Illuminance (lux or fc)108.544 cd / distance² (m or ft)
 Field angle (10% intensity)17.5°
 Field diameter0.31 x distance
 Measurement conditions230 V, 50 Hz; diffuser installed, no effects
 Measurement sourcePhilips MSD 250/2

MAC 250 Optional 14.6° configuration

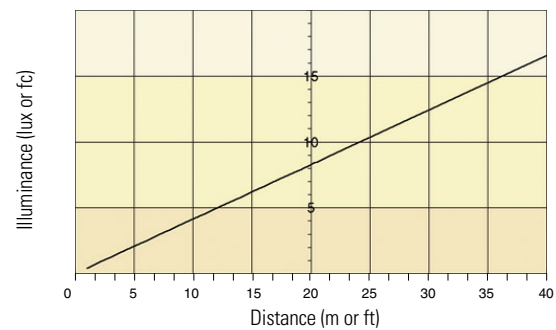


Illuminance (lux, fc)129.285 cd / distance² (m or ft)
 Field angle (10% intensity)14.6°
 Field diameter0.26 x distance
 Measurement conditions230 V, 50 Hz; diffuser installed, no effects
 Measurement sourcePhilips MSD 250/2

MAC 250 Optional 23.3° configuration



Illuminance (lux, fc)70.276 cd / distance² (m, ft)
 Field angle (10% intensity)23.3°
 Field diameter0.41 x distance
 Measurement conditions230 V, 50 Hz; diffuser installed, no effects
 Measurement sourcePhilips MSD 250/2



Specifications

Description

The MAC 250 and 250+ are automated yoke-mounted profile spotlights that employ a 250 watt discharge source. The MAC 250 provides 4 user-configurable beam angles from 12.1° to 23.3° (18.3° in 250+), 12 saturated dichroic colors (replaceable in 250+). They provide 8 easily replaceable rotating gobos, a fast 3-facet rotating prism, variable focus, strobe effects, 0 to 100% dimming, and accurate 16-bit movement. High performance optics, attractive design, and numerous touring friendly features combine to make the MAC 250 and 250+ well suited to a wide range of lighting applications.

Physical

- Length 330 mm (13.0 in)
- Width 384 mm (15.1 in)
- Maximum height (head down) 525 mm (20.7 in)
- Weight MAC 250: 21 kg (46.2 lbs)
MAC 250+: 22.0 kg (48.4 lbs)

Source

- Lamp: 200 or 250 W discharge
- Base: GY 9.5
- Approved models: MSD 250/2, Osram HSD 250
- Control: automatic and/or remote on/off

Performance

- Light output (17.5° configuration, diffuser installed) 3180 lumens
- MAC 250+: (18.3° focused beam, diffuser installed) 3180 lumens

Gobos

- Outside diameter: 22.5 mm +0/-0.3 mm (0.886 in. +0/-0.012 in)
- Maximum image diameter: 17 mm (0.669 in)
- Maximum thickness: 1.8 mm (0.071 in)
- Glass type: high temperature Borofloat or better
- Glass coating: dichroic or enhanced aluminum
- Orientation: coated side towards lamp
- Metal: aluminum (steel for short term use)

Thermal

- Maximum ambient temperature (Ta): 40° C (104° F)
- Maximum lamp-socket temperature: 150° C (302° F)
- Maximum shell surface temperature: 110° C (230° F)
- Total heat dissipation: 1262 Btu/hr

Control and programming

- Data pinout: pin 1 shield, pin 2 cold (-), pin 3 hot (+)
- Receiver: Opto-isolated RS-485
- Setting and addressing: LED control panel, MP-2 Uploader
- Protocols: USITT DMX-512 (1990), Martin RS-485
- Movement control: tracking and/or vector
- DMX Channels: 9 - 13
- Data input: Locking 3-pin XLR male socket
- Data output: Locking 3-pin XLR female socket

AC supply

- AC input: 3-pin IEC male socket
- Wiring options: 100/120/210/230/250 V, 50/60 Hz

Maximum power and current

Option	Watts	Amps
100 V, 50 Hz; 60 Hz	350	4.1
120 V, 50 Hz; 60 Hz	350	3.2
210 V, 50 Hz; 60 Hz	370	2.2
230 V, 50 Hz; 60 Hz	360	1.8
250 V, 50 Hz; 60 Hz	370	1.7

Design standards

- Canadian safety: CSA C22.2 NO 166
- EU EMC: EN 50 081-1, EN 50 082-1
- EU safety: EN 60598-1, EN 60598-2-17
- US safety: ANSI/UL 1573

Electromechanical

Effect	Range	Positions
pan	540°	40,192
tilt	289°	43,008
focus	2 m to infinity	256
3-facet prism	continuous	In/out
dimmer/shutter	0 - 100%	256
color wheel	continuous	12 + open, split
gobo wheel	continuous	8 + open
gobo rotation	continuous	n/a

Construction

- Housing: UV-resistant fiber-reinforced composite
- Finish: black, integral color
- Protection factor: IP 20

Installation

- Mounting points: 2 pairs of 1/4-turn locks, offset 90°
- Orientation: any
- Minimum installation distance, center-to-center: 378 mm (14.9 in)
- Minimum distance to combustible materials: 0.3 m (12 in)
- Minimum distance to illuminated surfaces: 0.3 m (12 in)

Ordering information

- MAC 250 in cardboard: 90225000
- MAC 250; flight case: 90225001
- MAC 250+ in cardboard: 90225200
- MAC 250+; flight case: 90225201

Included items

- Omega bracket, MAC 250/300, 1/4-turn: 91602000
- XLR cable, 5 m, black, 3-pin: 11820008
- Mains cable, 3 m, IEC 3-pin: 11501013
- User manual: 35000067

Accessories

- Flight case, 4 x MAC 250/300: 91510005
- Flight case, 2 x MAC 250/300: 91510004
- MP-2 Uploader: 90758420
- G-clamp: 91602003
- Half-coupler clamp: 91602005
- Outdoor Protection Dome: 90525010
- The Martin Wife: 91611038
- The Martin King Dome

Specification

General

The luminaire shall be an automated yoke-mounted profile spotlight employing a 250 Watt discharge lamp as the light source.

Mechanical effects

The luminaire has one wheel with 12 dichroic glass color filters (replaceable in 250+) and an open position. The color wheel rotates continuously clockwise and counterclockwise and is positionable between filters.

The luminaire has one wheel with eight rotating holders for insertable glass and metal gobos. The gobo wheel rotates continuously clockwise and counterclockwise at variable speeds and can be programmed with an oscillating "shake" function. The rotating holders turn continuously clockwise and counterclockwise at variable speed and accommodate gobos 22.5 mm (0.886 in) in diameter and up to 1.8 mm (0.071 in.) thick. (Gobo patterns in the 250+ are indexible.)

The luminaire has a variable focus system capable of focusing gobo patterns at a distance of 2 meters (6.5 ft.) to infinity.

The luminaire has a three-facet prism that rotates clockwise and counterclockwise at variable speeds sufficient to create harmonic interference effects when combined with gobo patterns.

The luminaire has a mechanical dimmer system that can vary the intensity of the light output from 0 to 100 percent in 256 steps and create stroboscopic

effect at speeds up to 20 flashes per second. The dimmer is capable of simulating the dimming curve of incandescent lamps. The luminaire pans 540° and tilts 289°. (The MAC 250+ employs an achromatic lens.)

Control

The luminaire responds to command signals conforming to either the USITT DMX512 (1990) standard or the Martin RS485 standard. All user-selected software settings are adjustable via an onboard control panel with LED display or via data cabling in conjunction with a remote control unit. The luminaire has two locking 3-pole XLR connectors for serial data transfer.

Performance

When fitted with a new MSD 250/2 discharge lamp, the luminaire emits a total luminous flux of 3180 lumens in a focused beam 17.5° wide (18° in 250+).

Housing

The exterior of the luminaire is constructed of high temperature UV-resistant fiberglass-reinforced nylon with integral black color. The housing provides a protection factor of IP 20.

Installation

The luminaire operates in any orientation. It is supplied with a bracket to which mounting clamps may be bolted. The bracket attaches to the base with quarter-turn fasteners such that the luminaire may be installed at any increment of 90° in a plane parallel to the structure. When installed above floor level, secondary attachment is fastened to an attachment point in the luminaire's base.

Electrical

The luminaire operates within a tolerance of five percent, on 50 and 60 Hz supplies at 100, 120, 210, 230, and 250 volts. It is fitted with a standard three-prong male IEC socket for connection to AC power. The luminaire must be electrically grounded.

The luminaire conforms with CE safety standards EN 60598-1 and EN 60598-2-17, and with CE electromagnetic compatibility standards EN 50 081-1 and EN 50 082-1. Units intended for use in North America are cETL certified for compliance with CSA standard C22.2 No.166, and ETL certified for compliance with ANSI/UL standard 1573. (Certification pending.)

Environmental

The luminaire must be located in a dry, well ventilated area in which the ambient temperature does not exceed 40° C (104° F).

Physical

Size (head at maximum tilt): 384 x 330 x 525 mm (13.0 x 15.1 x 20.7 in.)

Weight: 21 kg (46 lbs)

MAC 250+: 22.0 kg (48.4 lbs)

For a MAC 250/250+ specification quote, see the Service and Support page on the Martin website: www.martin.dk

Martin