



# Product Description

## MASTER MHN-SA

Compact quartz metal halide lamps with double-pinch

### Benefits

- Allows compact and very efficient luminaire systems with high precision optics for good beam control and minimal spill light
- Very good colour rendering creates a pleasant ambience with high visual comfort for players and spectators
- Continuous spectral distribution offers a superior solution for (semi-) professional stadiums with regular TV coverage

### Features

- Very compact source (Short Arc) with high luminous efficacy and superior colour rendering
- Double-pinch concept results in long lifetime
- Natural white colour appearance, high colour rendering and good colour stability
- Daylight colour temperature eases transition from daylight to artificial lighting

### Application

- Professional sports lighting and floodlighting

### Warnings and Safety

- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- A lamp breaking is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a sealed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.

# MASTER MHN-SA

## Approval and Application

Energy Efficiency Label (EEL) A+

## Controls and Dimming

Dimmable No

## General Information

Operating Position P15

## Light Technical

Chromaticity Coordinate X (Nom) 330

Colour Code 956

Colour Designation Daylight

Correlated Colour Temperature (Nom) 5600 K

## Mechanical and Housing

Bulb Finish Clear

Bulb Shape TD40

## Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h	Mercury (Hg) Content (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	1980 kWh	92 mg
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	2035 kWh	250 mg
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	2244 kWh	225 mg
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	1980 kWh	92 mg
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	2305 kWh	215 mg

## Operating and Electrical (1/2)

Order Code	Full Product Name	Lamp			
		Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	17.3 A	130 V	110 V	120 V
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	10.5 A	220 V	185 V	205 V
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	11.3 A	220 V	185 V	205 V

Order Code	Full Product Name	Lamp			
		Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	17.3 A	130 V	110 V	120 V
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	11.8 A	220 V	185 V	205 V

## Operating and Electrical (2/2)

Order Code	Full Product Name	Power (Rated) (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	1800.0 W
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	1850.0 W
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	2040.0 W

Order Code	Full Product Name	Power (Rated) (Nom)
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	1800.0 W
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	2095.0 W

## General Information (1/2)

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	(P)SFC	2000 h	3200 h	6100 h
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	(P)SFC	2400 h	3600 h	6100 h

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	X830R	1400 h	2100 h	3700 h
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	X830R	2300 h	3000 h	5000 h

# MASTER MHN-SA

Order Code	Full Product Name	Cap-Base	Life To 10%	Life To 20%	Life To 50%
			Failures (Nom)	Failures (Nom)	Failures (Nom)
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	X830R	2300 h	3000 h	5000 h

## General Information (2/2)

Order Code	Full Product Name	Life To 5% Failures (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	1300 h
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	1700 h
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	1000 h

Order Code	Full Product Name	Life To 5% Failures (Nom)
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	1800 h
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	1700 h

## Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	980 °C
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	980 °C
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	980 °C

Order Code	Full Product Name	Bulb Temperature (Max)
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	980 °C
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	1015 °C

## Light Technical (1/2)

Order Code	Full Product Name	Chromaticity Coordinate Y (Nom)	Colour Rendering Index (Nom)		Lumen Maintenance (%)	
			Index	Index	1000 h (Nom)	2000 h (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	339	86	95 %	91 %	
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	339	86	90 %	81 %	
20079200	MASTER MHN-SA 2000W/956	362	85	88 %	79 %	

Order Code	Full Product Name	Chromaticity Coordinate Y (Nom)	Colour Rendering Index (Nom)		Lumen Maintenance (%)	
			Index	Index	1000 h (Nom)	2000 h (Nom)
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	339	86	92 %	80 %	
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	366	81	96.5 %	92.5 %	

## Light Technical (2/2)

Order Code	Full Product Name	Lumen Maintenance 5000 h (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Nom)
20075400	MASTER MHN-SA 1800W/956 (P)SFC 230V	76 %	86 lm/W	155000 lm

Order Code	Full Product Name	Lumen Maintenance 5000 h (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Nom)
20076100	MASTER MHN-SA 1800W/956 (P)SFC 400V	71 %	86 lm/W	160000 lm

## MASTER MHN-SA

Order Code	Full Product Name	Lumen Maintenance 5000 h (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Nom)
20079200	MASTER MHN-SA 2000W/956 400V XW UNP/1	70 %	98 lm/W	200000 lm
20106500	MASTER MHN-SA 1800W/956 230V XW UNP/1	60 %	86 lm/W	155000 lm

Order Code	Full Product Name	Lumen Maintenance 5000 h (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Nom)
24183600	MASTER MHN-SA 2000W/956 400V XW HO UNP/1	78 %	108 lm/W	226000 lm

