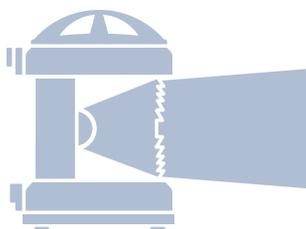


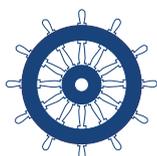
# TECHNICAL MANUAL

DHR70N



*SINCE 1922*

**Den Haan Rotterdam**





# DISCLAIMER

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# TECHNICAL DATA

## Application:

- As Navigation light for all sea-going vessels with a length of more than 20 metres
- As Navigation light for all vessels in Rhine and European inland navigation
- As general signalling light

## In compliance with:

- International Regulations for Preventing Collisions at Sea; COLREG 72 and latest amendments
- [EU] Rhine and European inland navigation rules
- [EU] The Directives 96/98/EC and 82/714/EC, following the European standard: EN 14744 (2005) AC(2006), Inland navigation vessels and sea-going vessels - navigation light
- [RUS] RS Rules, part XVII, item 7.11.2.2
- [RUS] The Technical Regulation on the Safety on Sea Transport Items TR-620
- [CHINA] Guidline: S-01 Marine Electric Lights

## Approvals



MED 2014/90/EU



LT13Q00001



No.17.20007.271

## Materials:

- Housing, mat black, high-gride of polyamide, reinforced with fibre glass
- Cover, mat black, polycarbonate, reinforced with fibre glass
- Screen and mounting materials, stainless steel 316, seawater resistant, non-magnetic
- Fresnel lens, UV and shock resistant polycarbonate
- Internal wiring, silicone 2 x 1,5 mm<sup>2</sup>

## Min. visibility:

### Sector lights

|                    |     |
|--------------------|-----|
| Starboard - bright | 3NM |
| Port - bright      | 3NM |
| Masthead - bright  | 6NM |
| Stern - bright     | 3NM |
| Towing - bright    | 3NM |

### All-round

|                 |     |
|-----------------|-----|
| White - bright  | 3NM |
| Manoeuvring     | 5NM |
| Red - bright    | 3NM |
| Green - bright  | 3NM |
| Yellow - bright | 3NM |

## Electrical insulation class:

III, (double insulated)

## Protection class:

IP 56

## Bulb:

- P28S 230V 65W 60cd
- P28S 115V 60W 60cd
- P28S 24V 40W 60cd

## Operation temperature:

-25°C up to +55°C (MED)  
-40°C up to +55°C (RMRS)

## Mounting:

Base

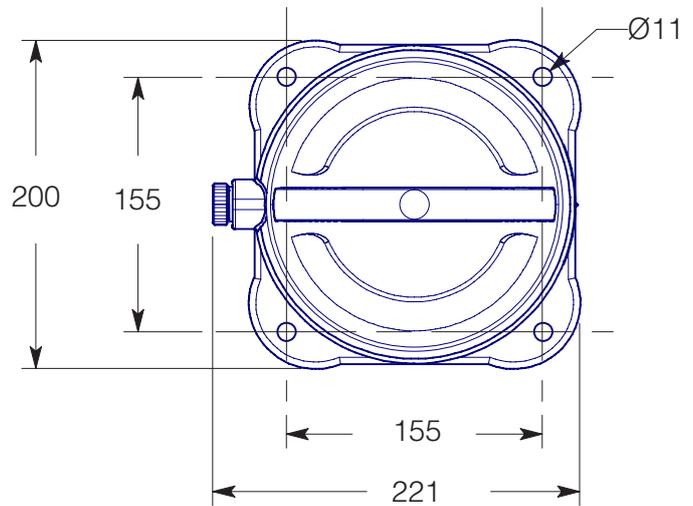
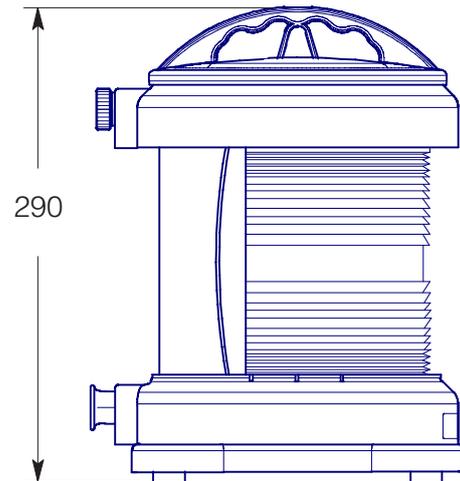
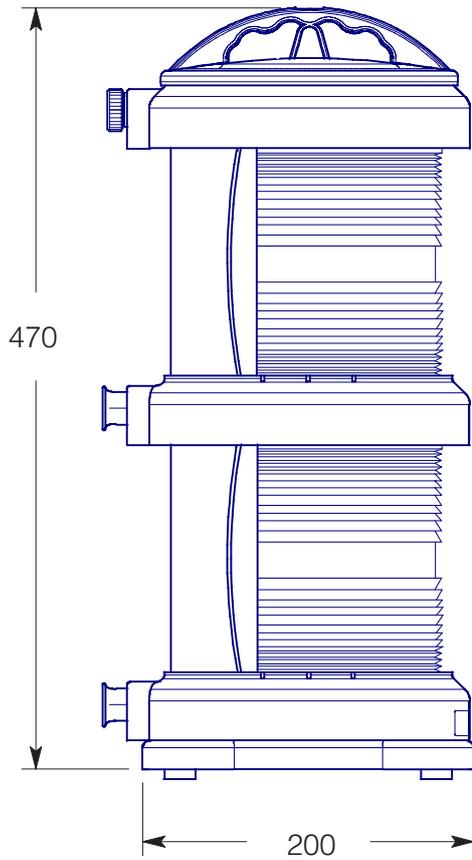
## External wiring:

- Single, 1 x 1,5 metre H07 RN-F 2X1,5
- Duplex, 2 x 1,5 metre H07 RN-F 2X1,5

# PRODUCT PHOTOS



# DIMENSIONS



All dimensions in mm.

# AVAILABLE MODELS

## DHR70N Single

| Sector lights | Min. Visibility | Lamp cap | Art. Code   |
|---------------|-----------------|----------|-------------|
| Starboard     | 3 NM            | P28s     | 70.11.00.00 |
| Port          | 3 NM            | P28s     | 70.12.00.00 |
| Masthead      | 6 NM            | P28s     | 70.13.00.00 |
| Stern         | 3 NM            | P28s     | 70.14.00.00 |
| Towing        | 3 NM            | P28s     | 70.15.00.00 |

| Special sector lights    | Min. Visibility | Lamp cap | Art. Code   |
|--------------------------|-----------------|----------|-------------|
| Stern - Red (Suez light) | 3 NM            | P28s     | 70.14.07.00 |

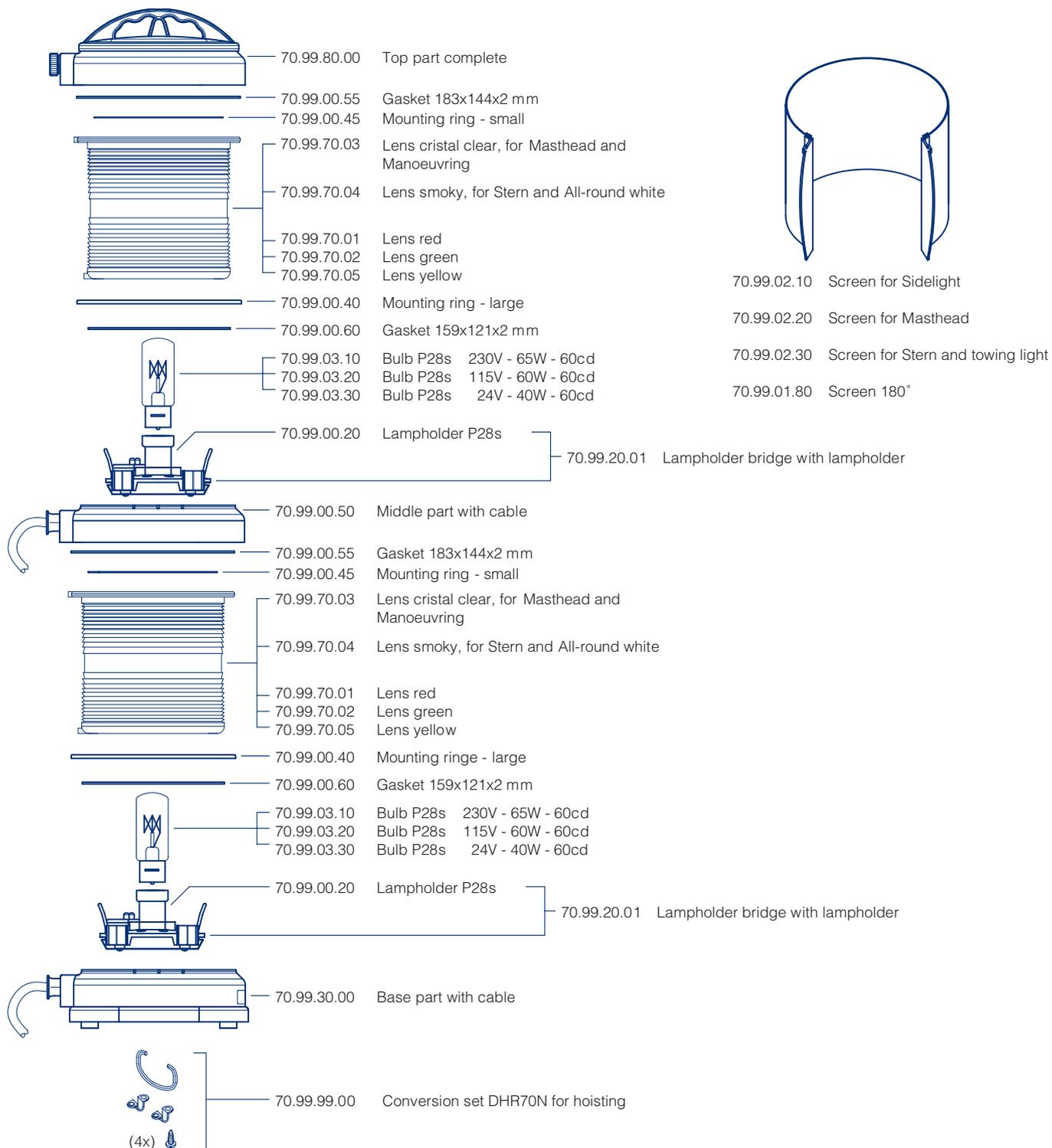
| All-round lights | Min. Visibility | Lamp cap | All-round   | 180° Screened |
|------------------|-----------------|----------|-------------|---------------|
| White            | 3 NM            | P28s     | 70.16.00.00 | 70.16.01.80   |
| Manoeuvring      | 5 NM            | P28s     | 70.16.10.00 | -             |
| Red              | 3 NM            | P28s     | 70.17.00.00 | 70.16.01.80   |
| Green            | 3 NM            | P28s     | 70.18.00.00 | 70.16.01.80   |
| Yellow           | 3 NM            | P28s     | 70.19.00.00 | 70.19.01.80   |

## DHR70N Duplex

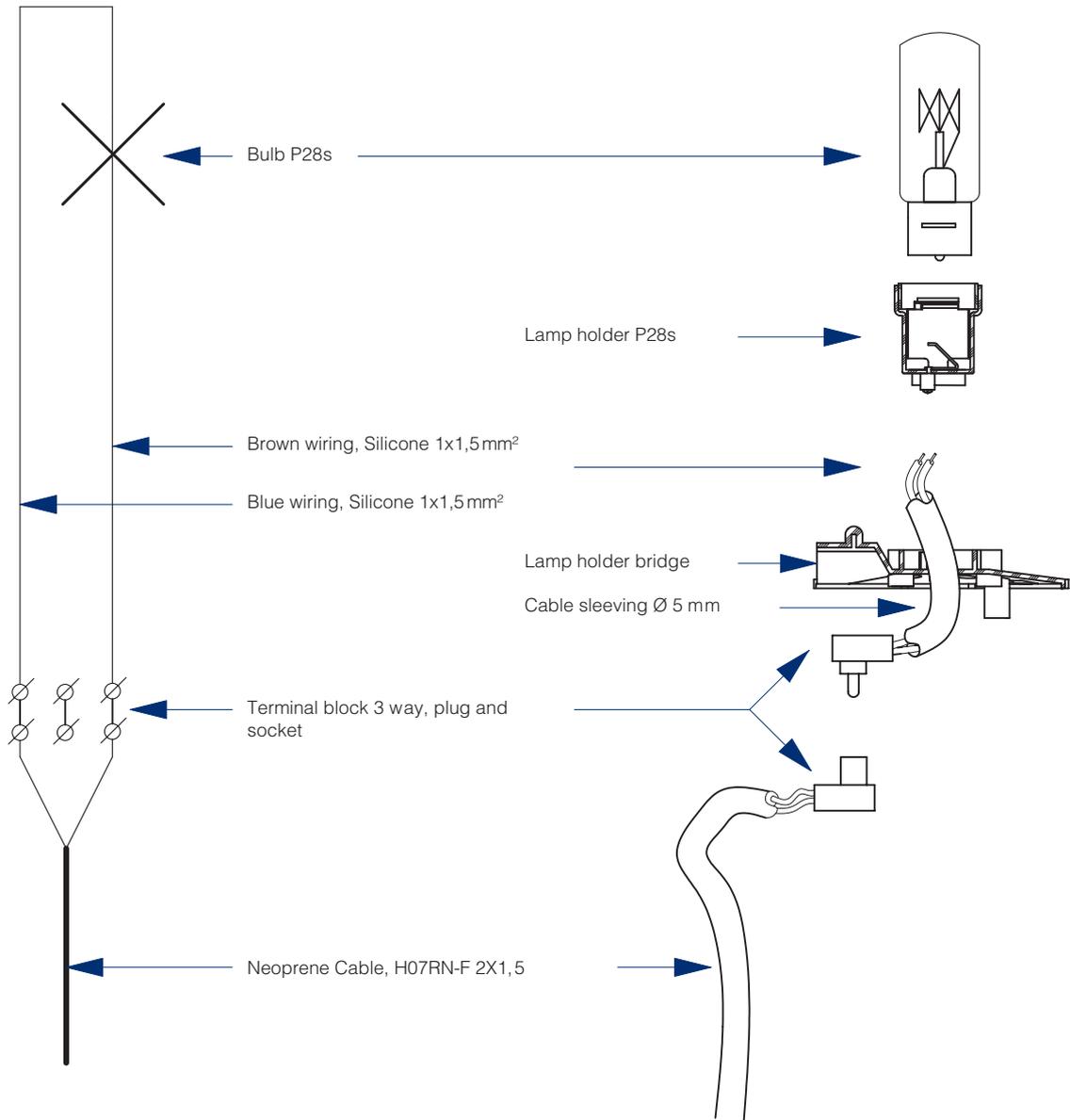
| Sector lights | Min. visibility | Lamp cap | Article code |
|---------------|-----------------|----------|--------------|
| Starboard     | 3 NM            | P28s     | 70.21.00.00  |
| Port          | 3 NM            | P28s     | 70.22.00.00  |
| Masthead      | 6 NM            | P28s     | 70.23.00.00  |
| Stern         | 3 NM            | P28s     | 70.24.00.00  |
| Towing        | 3 NM            | P28s     | 70.25.00.00  |

| All round light | Min. visibility | Lamp cap | All-round   | 180° Screened |
|-----------------|-----------------|----------|-------------|---------------|
| White           | 3 NM            | P28s     | 70.26.00.00 | 70.26.01.80   |
| Manoeuvring     | 5 NM            | P28s     | 70.26.10.00 | -             |
| Red             | 3 NM            | P28s     | 70.27.00.00 | 70.27.01.80   |
| Green           | 3 NM            | P28s     | 70.28.00.00 | 70.28.01.80   |
| Yellow          | 3 NM            | P28s     | 70.29.00.00 | 70.29.01.80   |
| Red over green  | 3 NM            | P28s     | 70.17.18.00 | -             |
| Green over red  | 3 NM            | P28s     | 70.18.17.00 | -             |
| White over red  | 3 NM            | P28s     | 70.16.17.00 | -             |
| Red over white  | 3 NM            | P28s     | 70.17.16.00 | -             |

# EXPLODED VIEW



# ELECTRICAL SPECIFICATION



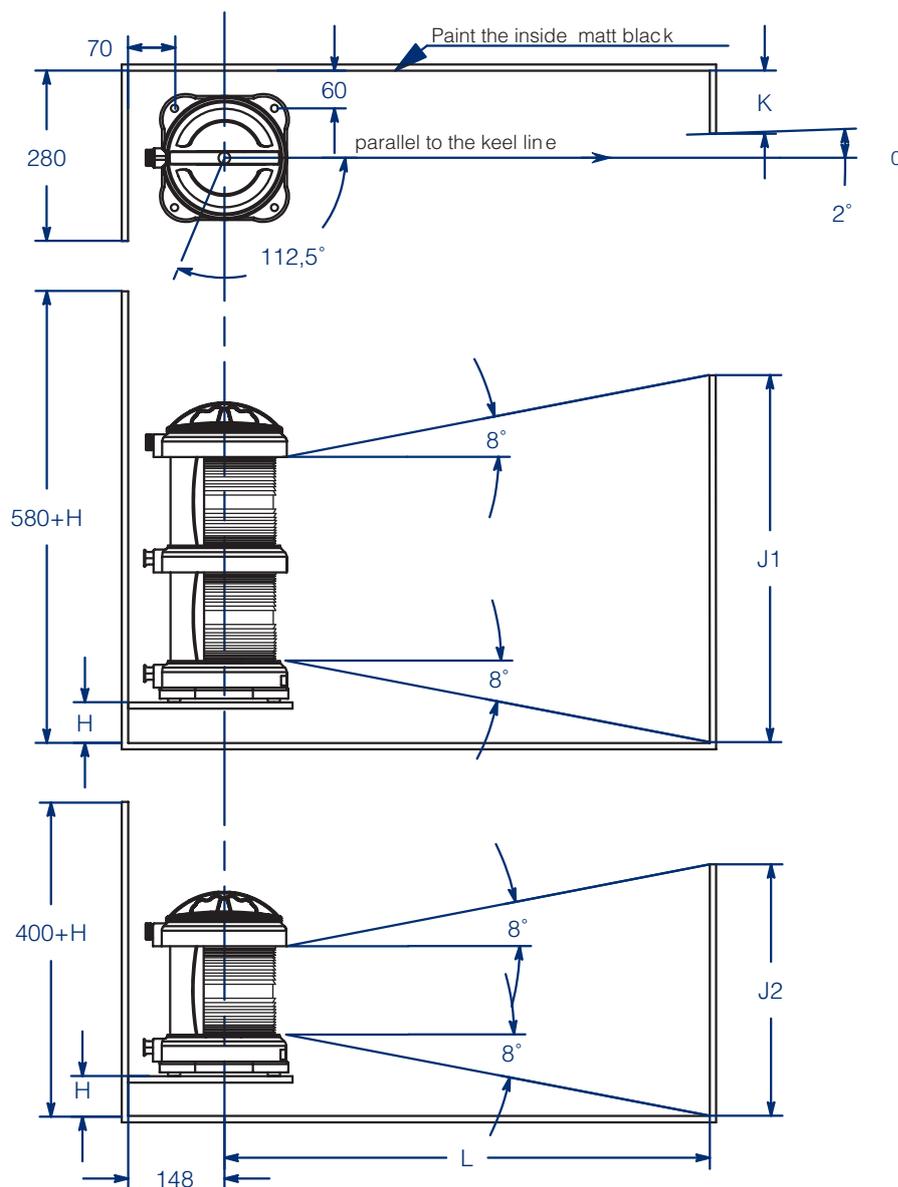


# LIFETIME CONTROL

Measurements of the navigation light and specifications, show a conformity with the minimum requirements of COLREG 72. To guarantee a proper use of the Navigation lights, we as a manufacturer advise the following:

- Use the navigation light in combination with a DHR-specified control system, which monitors the status of the individual navigation light
- Use only an approved normalized bulbs P28s - 60cd
- Each navigation light needs to undergo a quality check at least every 5 years of use to verify it still meets the requirements of COLREG 72

# POSITIONING SIDE LIGHTS



| L   | H  | K   | J1  | J2  |
|-----|----|-----|-----|-----|
| 460 | 0  | 122 | 440 | 260 |
| 500 | 6  | 121 | 455 | 270 |
| 600 | 20 | 118 | 480 | 300 |
| 700 | 34 | 113 | 510 | 330 |
| 800 | 48 | 109 | 540 | 360 |
| 910 | 63 | 105 | 570 | 390 |

## Disclaimer:

- The minimum luminous intensity requirements in the forward direction are only guaranteed if the side-lights are mounted in accordance with this drawing and table.
- This is an illustration to indicate the dimensions of the inboard screens, relative to the keel line of the vessel. By no means may this image be used to determine the position of the sidelights on the vessel. For positioning the lights at the vessel always check for compliance with COLREG 72 or local rules.

# POSITIONING ALL-ROUND LIGHTS

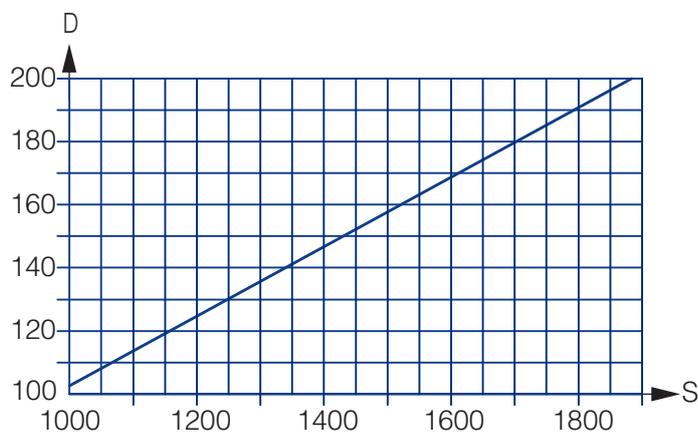
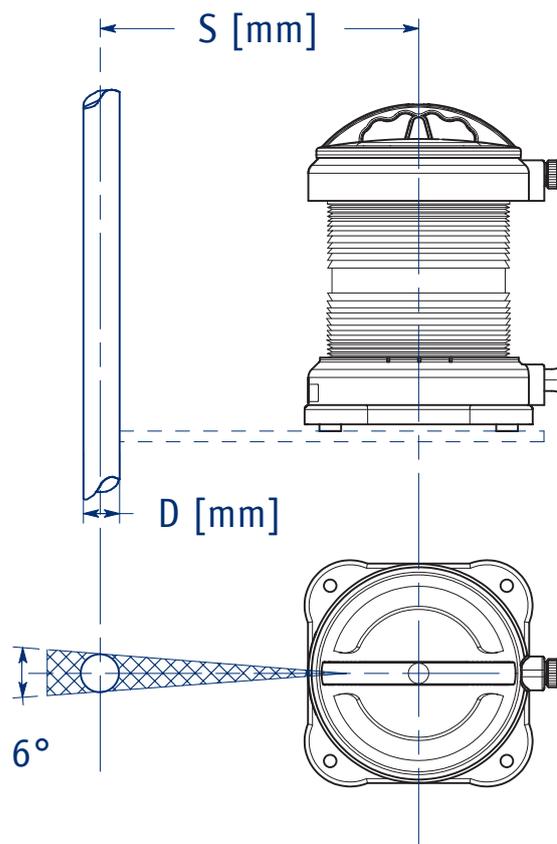
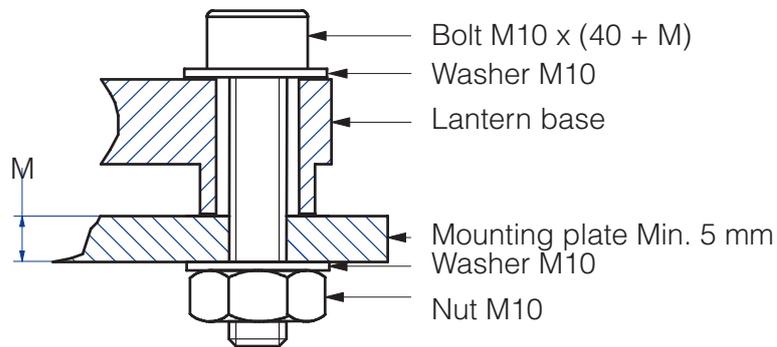


Diagram for choosing the minimum distance between obstacle and mounting plate.

## Disclaimer:

This is an illustration to indicate the position of the all-round light so not to be obscured by mast, topmasts or structures within the angular sector of more than 6 degrees. By no means may this image be used to determine the position of the all-round lights on the vessel. For positioning the lights on the vessel always check for compliance with COLREG 72 or local rules.

# MOUNTING INSTRUCTIONS



All dimensions in mm

## Mounting plate

The mounting plate for navigation lights should be at least 5 mm thick and should not exceed a parallelism of // 00,5.

## Fasteners

- The permissible torque should be 8 Nm
- Use only A4-grade stainless steel

## Important

Do not paint or use any other chemical for the lanterns, clean only with fresh water.

# ADVANCED MARITIME SIGNALLING SOLUTIONS



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