



OPERATING INSTRUCTIONS

SEARCHLIGHT
SW 200/ SW200A

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1. About these instructions

1.1 Symbols and guidance signs in these instructions



Danger! There is a risk to life and limb if the warning is not followed.



Risk of electric shock! There is a risk to life and limb from electricity if the warning is not followed.



Use disposable gloves! Use disposable gloves for the following work to protect the material and your health.



Attention! There is a risk to the environment and the device if the warning is not followed.

1, 2, 3, ...

Operating steps, that should take place in a certain order, are numbered sequentially.

- **Operating steps**, that only consist of one step or that don't have to be followed in a certain sequence, are marked with a point.



Feedback from executed actions begins with an arrow.



Enumerations begin with an enumeration line.

1.2 Who are these instructions for?

These instructions are intended for the personnel, that are assigned with the assembly, operation and maintenance of the searchlight.



Danger of electric shock and short circuit! All electrical installation and repair work may only be carried out by a qualified electrician!

2. Safety

The following safety instructions have to be strictly followed! Otherwise you put yourself and others in danger.

2.1 General information

Intended use

The SW 200/ SW200A searchlight is designed for lighting large and far away objects. The range of the searchlight is up to 848 m. Because of its intense light power the searchlight may not be used to illuminate persons in the nearby surroundings. It is not suitable for illuminating, spaces on the ship or in buildings.



Danger! Unauthorised conversions and changes to the searchlight are not allowed, since this can endanger persons and may damage the unit. Disregard will result in the loss of the operating licence and warranty for the device. Only original spare parts may be used.



Risk of getting burned! Never touch the searchlight during operation without protection. The casing can reach 140 °C. Always allow the searchlight to cool down before maintenance and repair work. In case of burns cool the injured area immediately and seek medical help.



Risk of glare! Never look into the light source during operation. This is dangerous for the eyes. Never point the searchlight directly at anyone.



Risk of crushing! Risk of shearing! Before rotating or tilting the searchlight using the optional remote control: Make sure that there is nobody right beside it. A persons limbs can get trapped between the searchlight and the moving mechanism and sustain serious injured.

2.2 How to handle halogen lamps

Strictly follow the safety instructions below when handling halogen lamps:

Transport



- Always store and transport halogen lamps in such a way that the glass bulb cannot break.
- Leave the lamp in its packing until it will be used.
- Use the packing when transporting the lamp.
- Never touch the lamp with your fingers.

Operation



- Check the lamp before installation for fingerprints and dirt. Remove fingerprints on the lamp before installation with an alcohol solution and a soft lint-free cloth.
- Use disposable gloves when handling the lamp. Every fingerprint or other contamination on the glass bulb of the lamp greatly reduces its lifetime.
- Check the lamp for scratches, cracks or other damage. Don't continue using damaged lamps.

Lifetime

- The average lifetime of the halogen lamp is between 300 and 3000 hours, depending on the lamp manufacturer and on the frequency and duration of switch-on of the lamp.
Average lifetime of the halogen lamp: Time interval after which the failure of a single burning lamp can be expected.

Disposal

- Dispose of the defective halogen lamps properly. Special disposal requirements are not specified.
- Consider national disposal regulations if applicable.

2.3 Safety devices

Radiation/escape of dangerous particles

- Halogen lamps radiate UV light that is harmful to the eyes.
- If the halogen lamp explodes during operation, the casing remains intact and contains any heated glass splinters.

Overload protection

- Electrical means of overload protection, such as fuses have to be provided by the customer. Refer to chapter 3.2 Technical specifications regarding the power of the unit.

Temperature

- In order to protect the optional electric pan/tilt unit for the searchlight against freezing in cold ambient temperatures, it can be equipped with a thermostatically controlled heater.

2.4 Operating conditions

Installation location of the searchlight

Under normal use conditions the casing surface temperatures can go up to 140 °C. Only install the searchlight close to heat resistant material. To eliminate any dangers: Never store any explosive or highly flammable materials right beside the searchlight. These include petrol, paper and paint for example.

2.5 Maintenance / Cleaning

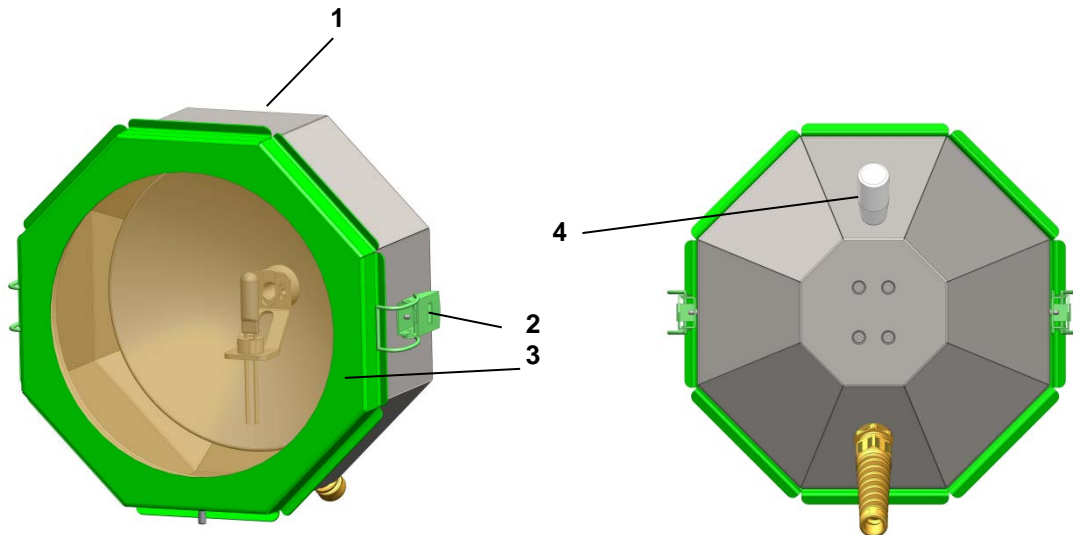
Before carrying out maintenance or cleaning work:

1. Turn the main switch to OFF.
2. Make sure that the complete electrical system is de-energised.
3. Wait until the searchlight has cooled down.

3. An overview of the unit

3.1 Layout drawing

Basic configuration of searchlight head



- 1 Searchlight head SW 200
- 2 Quick release lock
- 3 Front frame and front glass
- 4 Handle

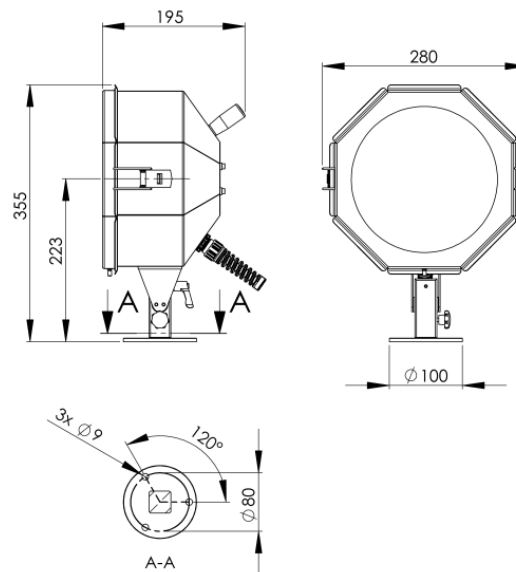
3.2 Technical data

Type: SW 200/ SW 200A 24V AC/DC
 Manufacturer: WISKA Hoppmann & Mulsow GmbH

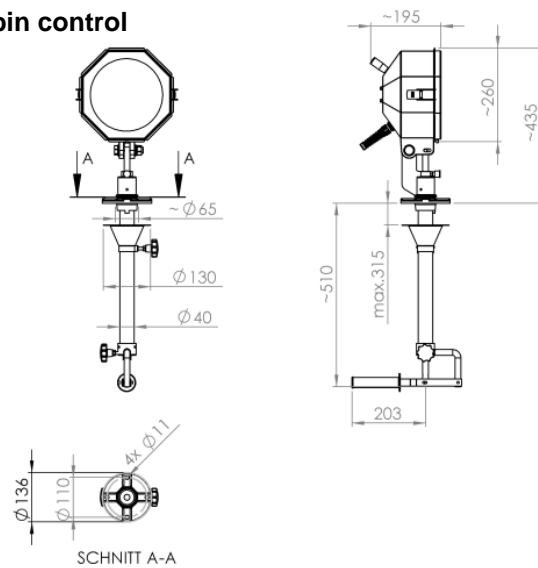
	SW 200A			SW 200		
Lamp:	Halogen lamp					
Operating voltage [V]	24 AC / DC					
Diffusion angle	4.0°	6.0°	7.0°	3.5°	5.5°	6.5°
Luminous intensity [cd]	0.35 x 10 ⁶	0.4 x 10 ⁶	0.6 x 10 ⁶	0.42 x 10 ⁶	0.48 x 10 ⁶	0.72 x 10 ⁶
Range [m]	590	630	775	648	692	848
Lamp power [W]	100	150	250	100	150	250
Average lamp lifetime [h]	3000	300	300	3000	300	300
Reflector	Aluminium reflector 200 mm			Glass mirror reflector 200 mm		
Casing:						
Material	Stainless steel 1.4301					
Colour	RAL 9016					
Diameter	280 mm					
Depth	195 mm					
Weight	3 kg					
Protection rating	IP 56					

3.3 Dimensions

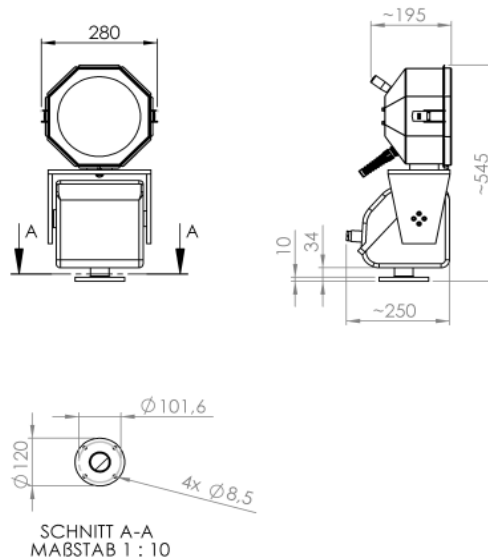
a) Searchlight head on fixing foot element



b) Searchlight head with cabin control

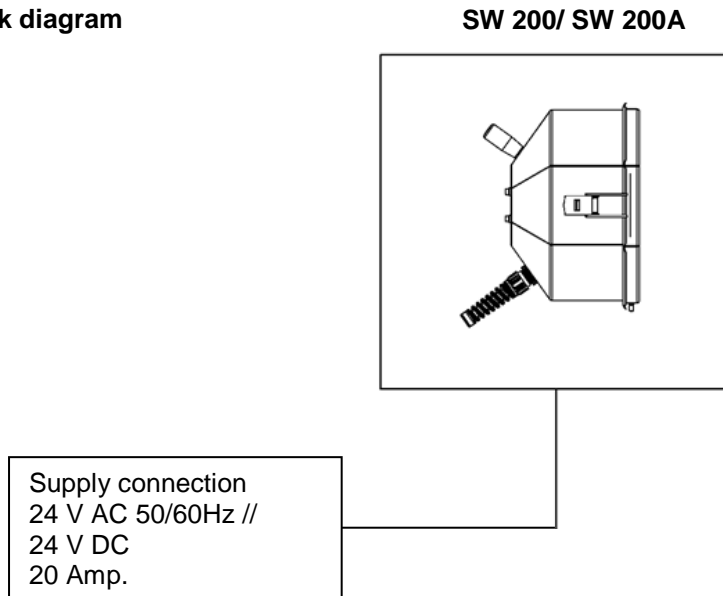


c) Searchlight head with pan/tilt unit



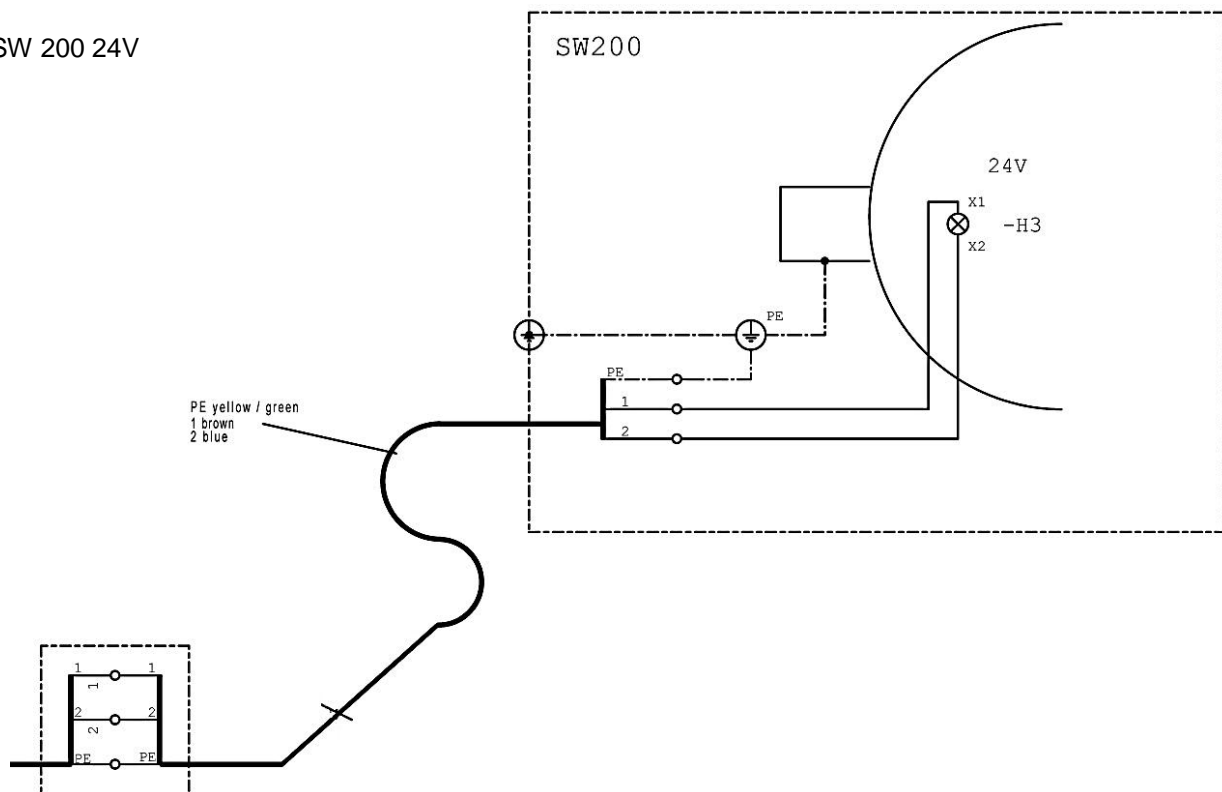
3.4 Circuit diagram

Block diagram



Circuit diagram

SW 200 24V



1. Ein Hauptschalter und Maßnahmen gegen Überlastung sind bauseitig vorzusehen.
Main switch and protective measure against overload have to be provided
2. Flexible Kabel sind am SW 200 und FL 20 (optional) fest angeschlossen.
Flexible Cables are connected at SW 200 and FL 20 (optional).

4. Installation

4.1 Unpacking

Check the delivery. Don't start the unit if there is transport damage or missing parts! Contact WISKA or our sales partner in your country. The address can be found at the back of these instructions or on the internet under www.wiska.de.

Think about the environment and send the packing for recycling!

4.2 Mounting

a) Mounting the searchlight with the fixing foot element

Alternatively the searchlight can be mounted on a matching foot.

1. Three holes have to be drilled here for fixing:
see chapter 3.3 *Dimensions a*.
2. Fit the movement unit and bolt it on.
3. Connect the earth cable

b) Mounting the searchlight with a cabin control

If equipped with a manual cabin control, the linkage must be fed downwards, for which a central hole is required in addition to the fixings. See chapter 3.3 *Dimensions b*.

c) Mounting the searchlight with an FL20 pan/tilt unit

1. Four holes have to be drilled in a circle for fixing:
see chapter 3.3 *Dimensions c*.
2. Fit the movement unit and bolt it on.
3. Connect the earth cable

4.3 Electrical connections



Danger of electric shock and short circuit! Electrical connections may only be carried by a qualified electrician. Please ensure that the mains connection is off and that nobody can accidentally energise the connections during installation!

The circuit diagram is also included separately or can be found in chapter 3.5 *Circuit diagram*.

Electrical connected loads for the searchlight head

Mains voltage: 24 V AC, 50/60 Hz // 24V DC (min. 250 VA / Watt).

Device fuse: 1 x 20 A (not included in the scope of supply)

Mains connection

- Observe the relevant national and international regulations!

Prior to commissioning

- Check for correct installation. Wrong connections can destroy the halogen lamp or the searchlight.
- Check for correct connection of the earth / ground!
- Insert the lamp.
- Insert the fuse.

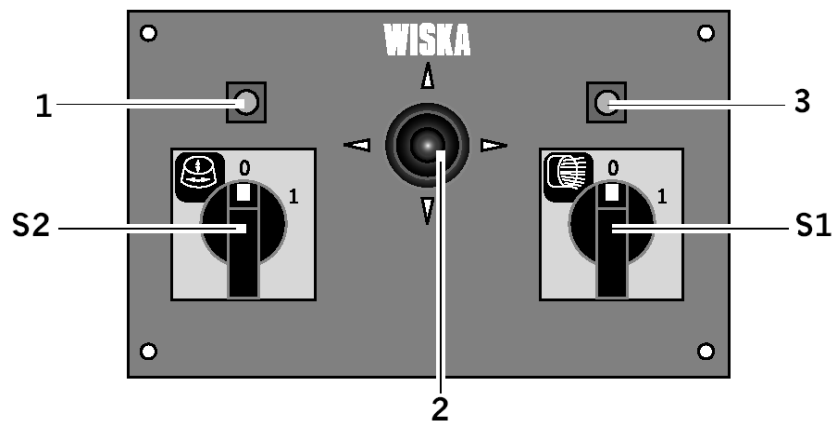
5. Operation



- Only use the control knob provided for setting up the searchlight. Never touch the searchlight casing during operation since there is a **risk of getting burned!**
- Make sure that nobody is in front of the searchlight when switching on or during operation, - **Risk of glare!**
- The searchlight is switched on via a separately installed switch. Switch S1 for switching on the searchlight, as described in 5.2, is found on the RCU only if a pan/tilt unit with a control unit exists. If no electromechanical movement unit exists, switch S2 and the control lever are also absent.
- Now read on from item 5.2 *Switching on*.

5.1 Operation with pan/tilt unit via RCU (optional)

The operation of the searchlight with the pan/tilt unit and associated RCU controller is shown below.



- 1 Drive indicator lamp
- S2 Drive on/off switch
- 2 Drive control lever
- S1 Searchlight on/off switch
- 3 Searchlight indicator lamp

5.2 Switching on



Risk of getting burned! Never touch the searchlight during operation without protection. The casing can reach 140 °C. In case of burns cool the injured area immediately and seek medical help.



Risk of glare! Never look into the light source during operation. This is dangerous for the eyes. Never point the searchlight directly at anyone. Before switching on make sure that nobody is near the searchlight.

1. Turn switch S1 on. The lamp should light up immediately.
2. If the lamp does not light up, please refer to chapter 7.3 *Lamp replacement* and replace the lamp.
3. If a pan/tilt unit is fitted, switch this on as well with switch S2 on the RCU controller. The movement unit is now also ready for use and can be moved with the control lever.

5.3 Switching off

1. Switch the searchlight off with the lamp switch. If you are using an RCU (remote control unit), this is switch S1 on the RCU.
2. If you are using a pan/tilt unit, you can now also switch this off with switch S2 on the RCU. This prevents control using the joystick.

6. Maintenance

6.1 Cleaning

Clean the front glass on the outside as needed. When doing so check the function of the fixing clamps and inspect them for rust. Cleaning the inside of the searchlight is not necessary. A coloured film develops on the mirror surface over time. This is harmless and does not affect the light power.



Risk of glare! Ensure that the searchlight cannot be switched on during cleaning work.

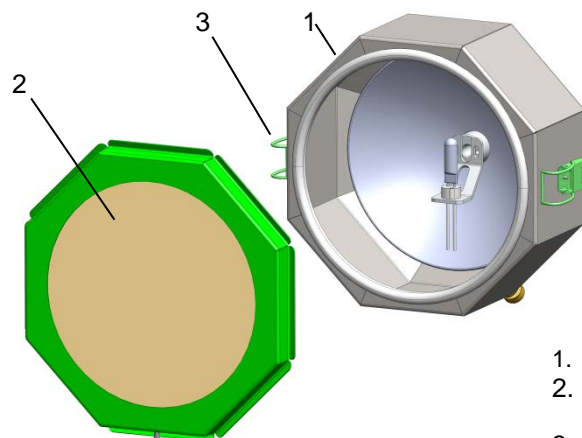
7. Replacement of defective parts

7.1 Before starting work

1. Make sure that the complete electrical system is de-energised and that it cannot be switched on again accidentally.
2. Wait until the searchlight has cooled down.
3. Read chapter 2.2 *How to handle halogen lamps*.
4. Make sure that the halogen lamp does not get damaged during handling.

7.2 Assembly overview

The following illustrations should help you to better understand the design of the searchlight, before starting with the replacement work. Follow the instructions on the following pages for carrying out the replacement work!



1. Casing
2. Front frame and front glass
3. Quick release lock

7.3 Lamp replacement

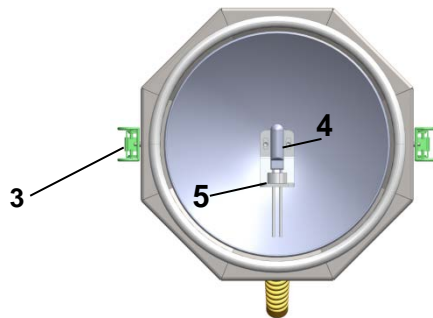
The lamp is defective, if

- it does not light up after switching on;
- the lamp filaments are damaged;
- the glass bulb is black.

Also replace the lamp if it has reached the average lifetime specified by the lamp manufacturer.



Danger! Persons who have to carry out these repairs, have to be instructed by a trained professional and also made aware of the dangers and necessary protective measures to be taken! Be sure to read chapter 7.1 *Before starting work!*



Removal

1. Undo the quick release locks 3 on the front side and carefully set the front frame and front glass aside.
Note: The lamp 4 is fixed vertically in the lamp holder 5. Handle the lamp in accordance with paragraph 2.2 when fitting and removing it.
2. Loosen the defective lamp until it can be removed without force in an upward direction out of the holder 5.
3. Put the defective lamp down so that the glass bulb does not get damaged.

Installation



Attention! Check the new lamp before installation for fingerprints or damage such as scratches or cracks. Don't start the lamp if there is visible damage. Remove any fingerprints with an alcohol solution and a soft lint-free cloth.

1. Open the protective packaging of the new lamp. Make sure not to touch the glass bulb with your fingers during installation. Use disposable gloves when handling the lamp to avoid leaving fingerprints.
2. Insert the lamp as far as it will go into the receptacle slit of the lamp holder 5.
3. Put the front part of the searchlight back in place and fix it with the quick releases.
4. Dispose of the defective lamp properly.

8. Disposal

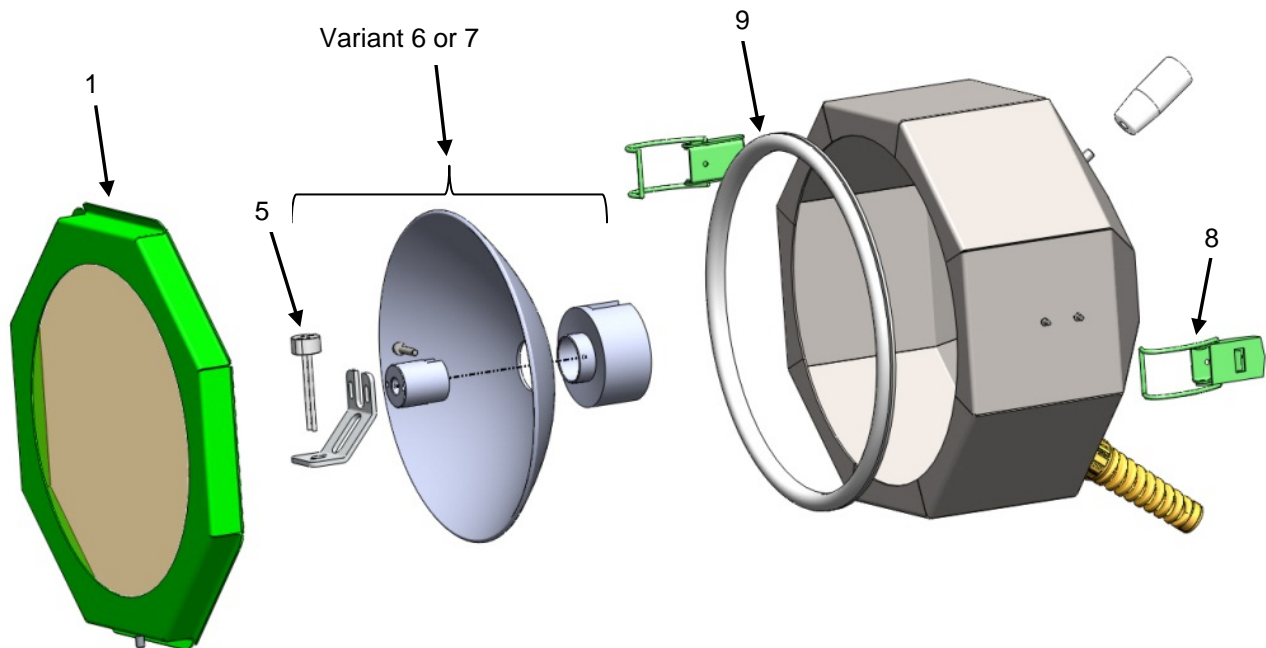
Electrical components contain substances which are hazardous for the environment. Ensure proper disposal or send the defect parts to WISKA. The address is on the back page of these instructions.

9. Spare parts

9.1 Searchlight head S 200

	Designation	Art. no.	Spare part designation
1	Front frame + front glass S 200	22000097	SP-SW-200 Front frame + front glass S 200
2	Halogen lamp 100 W/ 24 V	22000098	SP Halogen lamp 100 W 24 V G 6.35
3	Halogen lamp 150 W/ 24 V	22000099	SP Halogen lamp 150 W 24 V G 6.35
4	Halogen lamp 250 W/ 24 V	22000094	SP Halogen lamp 250 W 24 V G 6.35
5	Lamp holder SW200	22000100	SP holder G 6.35
6.1	Aluminium reflector kit SW 200 A 100 W	22000101	SP-SW-200A Reflector unit 100 W
6.2	Aluminium reflector kit SW 200A 150 W	22000111	SP-SW-200A Reflector unit 150 W
6.3	Aluminium reflector kit SW 200A 250 W	22000113	SP-SW-200A Reflector unit 250 W
7.1	Mirror reflector kit SW 200 100 W	22000102	SP-SW-200 Mirror unit 100 W
7.2	Mirror reflector kit SW 200 150 W	22000114	SP-SW-200 Mirror unit 150 W
7.3	Mirror reflector kit SW 200 250 W	22000115	SP-SW-200 Mirror unit 250 W
8	Quick release lock	22000103	SP-S Quick release locks 2-off
9	Searchlight seal	22000116	SP-SW Seal for searchlight casing

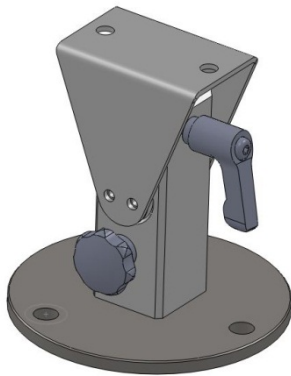
All other parts can be obtained by contacting WISKA sales.



9.2 Fixing and control elements

	Designation	Art. no.	Spare part designation
1	Foot fixing element	22000119	SP-SW-200 Foot, complete. D 200
2	Cabin control	22000120	SP-SW Deck with cabin control C 300
3	FL 20 pan/tilt unit	See operating instructions "pan/tilt unit"	

Foot fixing element





Cabin control



WISKA Hoppmann & Mulsow GmbH

Kisdorfer Weg 28
24568 Kaltenkirchen
Germany

 +49 (0) 4191/508-0

 +49 (0) 4191/508-209

sales@wiska.de

www.wiska.de