

Maintenance

Lighting Tools

Maintenance of lighting systems

Maintenance of lighting systems Ansorg luminaires are quality products which have been manufactured according to the latest state of the art and conform to the relevant standards and regulations. They are, in addition, subject to constant quality control. As in the case of every technical product specialist maintenance and care are decisive for the reliable technical functioning and the service lives of your luminaires. The maintenance tasks include among other things the regular checking and cleaning of the reflectors and safety glass as well as the timely replacement of the lamps.

The maintenance schedule

A maintenance schedule should comprise a time schedule for inspections, replacement of lamps and the cleaning of the luminaire bodies and of the related equipment. The light in a lighting system deteriorates quite gradually and is, additionally, not directly visible for the human eye. The most important cause of this drop in the luminous flux is the accumulation of dirt on luminaires, lamps, walls and ceilings. A further factor is the ageing of lamps which fail at the end of the specified product life or show uncontrolled behaviour. For this reason inspections of the overall performance of the lighting system should be provided for as a standard in a maintenance schedule.

Lamp replacement

For the replacement of lamps there are two methods: replacement of one single lamp or replacement of a group of lamps.

1. Group-wise replacement of lamps

The replacement of all lamps of the same type in the system after a pre-determined, fixed period, in good time before the end of the service life.

2. Replacement of a single lamp

The replacement of single lamps which no longer function or show a luminous colour different from the other lamps of the system (End of the product service life reached).

The replacement of single lamps and the group-wise replacement in comparison.

In the case of the replacement of single lamps, the lamps are only replaced when they no longer function. This way of proceeding may perhaps at first sight appear less expensive than group-wise replacement, since only the failed lamps are replaced. However, it must in this case be borne in mind that the replacement of one lamp can be relatively labour-intensive, e.g. if the luminaires are located in places difficult of access or if for the simultaneous cleaning of the luminaire body special equipment is necessary. In some cases in addition specialist knowledge is necessary (trained personnel). Added to this is the fact that the light flux from lamps decreases in the course of time.

If a lighting system only single lamps are replaced, this can then lead to the light flux of the lamps being very different (old lamps alongside new lamps), as a result of which the illuminated area makes an 'untidy' impression. For these reasons leading lamp manufacturers strongly recommend replacing the lamps group-wise. The best period for the replacement of lamps can be fixed on the basis of the information concerning the service life of the particular lamps (single lamps which have failed should be replaced in the interim in this case). Without a well functioning maintenance schedule there is a danger that a good lighting system will quickly deteriorate and that the ease of operation, reliability and safety and the working environment will suffer from the worsened lighting conditions. This then leads to higher indirect costs which are not directly related to light sources.

Replacement of HIT lamps

Metal halide lamps (referred to as HIT) must be replaced in good time before the end of their useful lives as otherwise damage to the ballast can occur. Optimum operation of the luminaires also with regard to the power consumption is then no longer ensured. A further influencing factor is the quality of the local voltage supply. Voltage fluctuations have a decisive influence on the service life of the lamps. 5% voltage increase or decrease shortens and/or extends the service life by approx. 50%.

Possible additional indications of the **necessary replacement** are:

- Marked change in luminous colour or
- Marked loss of brightness or
- Cyclic start-up or
- The lamp no longer starts up

Changes in the luminous colour

If a lamp approaches the end of its technical service life, small cracks and leaks can form in the burner and cause a general blackening of the outer bulb. The first sign of a blackening is a change in the luminous colour which becomes slightly yellowish. If a white surface is illuminated this effect becomes clearly visible.

Blackening of the outer bulb

If the lamp is not replaced the outer bulb gradually blackens. As soon as signs of blackening are noticed the lamp must be replaced immediately. If this is not possible the luminaire must be switched off as otherwise overheating of the lamp can occur. In that way other sensitive electronic parts of the luminaire could also be damaged.

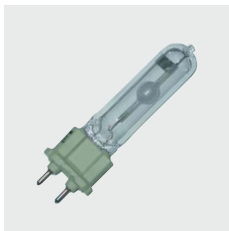
Service lives of bulbs

The information referring to service lives of lamps within one category, e.g. in the case of gas discharge lamps can vary depending on the manufacturer. Therefore the individual and in each case the most recent data of the various manufacturers are to be taken into account!

You can find further notes and instructions on the luminaires in the assembly/mounting and operating instructions enclosed with every delivery, as well as on our Website: www.ansorg.de, area "Service & Support". Should, nevertheless, at any time problems or questions on maintenance arise please get in touch with our local branch directly or our head office in Mülheim/Germany. They will arrange a contact person for you who will give you further assistance.



| High-pressure metal halide lamps HIT | | | | | |
|--------------------------------------|--------------|--------------------|--------|---------|--------------------|
| Ansorg Article no. | Manufacturer | Description | Socket | Wattage | Colour temperature |
| 19 LS 5034 | Philips | MasterColour CDM-T | G12 | 35 W | 830 |
| 19 LS 5035 | Philips | MasterColour CDM-T | G12 | 70 W | 830 |
| 19 LS 5060 | Philips | MasterColour CDM-T | G12 | 70 W | 942 |
| 19 LS 5036 | Philips | MasterColour CDM-T | G12 | 150 W | 830 |
| 19 LS 5062 | Philips | MasterColour CDM-T | G12 | 150 W | 942 |



| | | | | | |
|------------|-------|---------------------------|-----|-------|-----|
| 19 LS 5068 | Osram | Powerball HCI-T | G12 | 35 W | 830 |
| 19 LS 5069 | Osram | Powerball HCI-T | G12 | 35 W | 942 |
| 19 LS 5013 | Osram | Powerball HCI-T | G12 | 70 W | 830 |
| 19 LS 5145 | Osram | Powerball HCI-T | G12 | 70 W | 942 |
| 19 LS 5136 | Osram | Powerball HCI-T | G12 | 150 W | 830 |
| 19 LS 5049 | Osram | Powerball HCI-T | G12 | 150 W | 942 |
| 19 LS 5171 | Osram | Powerball HCI-T Shoplight | G12 | 70 W | 930 |

High-pressure metal halide lamps HIT-TC

| Ansorg Article no. | Manufacturer | Description | Socket | Wattage | Colour temperature |
|--------------------|--------------|---------------------|--------|---------|--------------------|
| 19 LS 5052 | Philips | MasterColour CDM-TC | G8.5 | 35 W | 830 |
| 19 LS 5053 | Philips | MasterColour CDM-TC | G8.5 | 70 W | 830 |



| | | | | | |
|------------|-------|----------------------------|------|------|-----|
| 19 LS 5142 | Osram | Powerball HCI-TC | G8.5 | 35 W | 830 |
| 19 LS 5098 | Osram | Powerstar HCI-TC | G8.5 | 70 W | 830 |
| 19 LS 5170 | Osram | Powerball HCI-TC Shoplight | G8.5 | 70 W | 930 |



Service lives of lamps

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