

Directions for use

**MACH 115**

Halogen Spot Lamp



Stand lamp .....	Item no. 1151101200
Wall lamp.....	Item no. 1151102100
Table lamp.....	Item no. 1151102500
Attachment to supply rail .....	Item no. 1151102601
Attachment to round or rectangular tube .....	Item no. 1151102602
Attachment with screw-on plate .....	Item no. 1151102604

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## 1. Safety instructions

**Please pay attention to the directions for use when handling the lamp.**

**Attention:**

**This device is not suitable for use in hazardous locations.  
The lamp is classified as a group 1 device according to the MPG  
(law for medical products).**

**The lamp may be connected to mains only after the complete mounting of the stand and the lamp.**

**Repairs to the lamp and special installation work on the reflector or at the transformer should only be carried out by ourselves or a company expressly authorised by ourselves.**

**The manufacturer is only responsible for the safety of the lamp and the stand if repairs and alterations have been carried out by themselves or a company who can guarantee that the safety regulations have been observed.**

**The manufacturer is not liable for personal or material damages if the lamp or the stand is misappropriately or incorrectly operated or misused.**

### **General instructions**

All Dr. Mach stand lamps are supplied with all installation and connection parts and components.

For packaging reasons, the five-foot stand is supplied in dismantled state. The stand tube is always assembled as a unit and only needs to be attached to the foot with the lower fastening screw.

The lamp is supplied with integrated connection lead and earthed plug.

The socket to be used for the lamp must be installed according to the requirements stipulated by the IEC or VDE 0107.

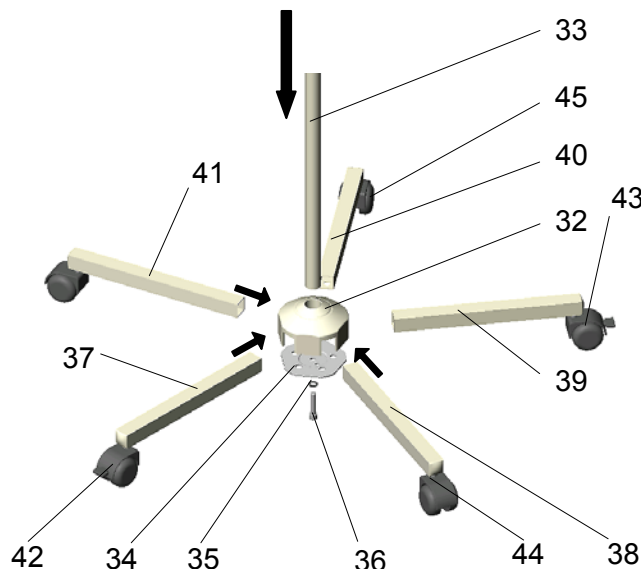
Please check that the earthed socket is available within the working area of the lamp.

## 2. Mounting instructions

### Extent of supply

- 1x 5-footed plastic central base
- 2x extension arms with blocking rollers
- 2x extension arms with electrically conductive rollers
- 1x extension arm with roller
- 1x cam catch plate
- 1x cheese head screw M8 with lock washer
- 1x stand tube
- Lamp head with arm
- Mounting instructions/Instructions for use – lamp head and stand

### 2.1 Mounting the stand



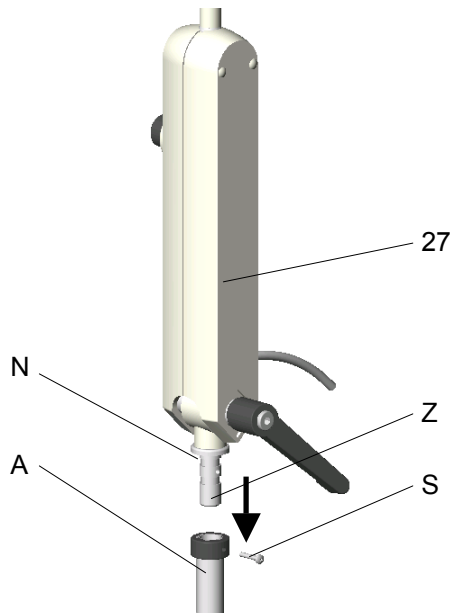
For mounting the stand proceed as follows:

- Place the central base **32** onto the stand tube  $\varnothing 25$  **33**. The stiffness is to ensure a tight fit that is free from any movement.
- Pre-mount the cam catch plate **34** (cams point inwards), with the lock washer **35** and cheese head screw M8 **36**, so that the extension arm **37** can still fit easily into the central base. Insert the extension arm **37** into the central base from above holding the cam catch plate **34** against from the opposite side.
- Insert the other 4 extension arms **38-41** in the sequence shown in the left figure into the central base. The extension arms are held by the cams of the cam catch plates.

**Remark:** Mount the two locking rollers **42** and **43**, and the two electrically conductive rollers **44** and **45** as shown in the figure (not next to each other).

- Tighten the catch plate with an Allen key SW6 (approx. 15Nm).  
The cams of the catch plate must mate with the drill holes of the extension arms so that every extension arm is tightly fitted to both the central base and stand tube.  
The cams also prevent the extension arms from being pulled out.

## 2.2 Mounting the lamp



Tighten screw **S** in the mounting device (stand, wall, table, rail, round and rectangular tube, screw-on plate) after the lamp has been attached. This prevents the lamp from being unintentionally removed.

Make sure that joint **Z** at the lower side of transformer housing **27** is fully inserted into tube **A**, so that the safety screw **S** engages properly in the provided groove **N**.

## 2.3 Wall attachment

- Mark the position of the holes to be drilled in the wall using the wall bracket.
- Drill the holes and insert dowels.  
**Remark: Use the three screws and dowels provided to attach the wall bracket.**
- For mounting the lamp see point 2.2.

## 2.4 Table attachment

- Screw table clamp onto table.
- For mounting the lamp see point 2.2.

## 2.5 Rail attachment

- Attach light mounting in the desired position on the rail.
- For mounting the lamp see point 2.2.

## 2.6 Round and rectangular tube attachment

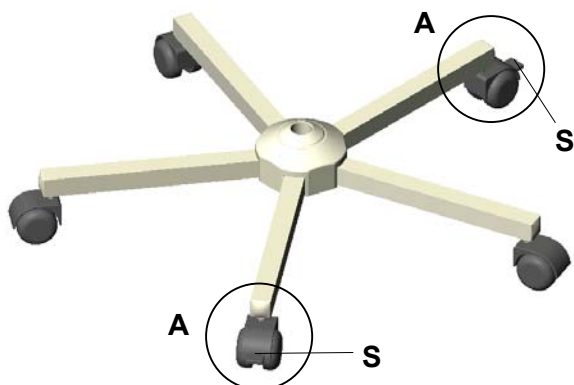
- Screw light mounting in desired position onto tube.
- For mounting the lamp see point 2.2.

## 2.7 Attachment of screw-on plate

- Drill attachment holes and attach with screws.
- For mounting the lamp see point 2.2.

### 3. Directions for use

#### 3.1 Stand foot



The five-foot stand is equipped with two opposing braked wheels **A**.

Set the brake by pressing the pedal **S** on the roller. Unlock by lifting the pedal again.

#### 3.2 Stand tube



The stand tube can be adjusted continuously in height and fixed in the precisely required position, needing only one hand.

The height is adjusted by lifting the slip button **34**. The position is automatically fixed on letting go.

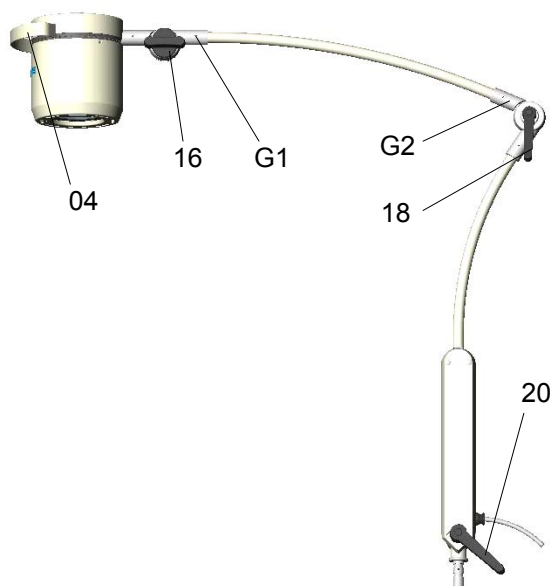
As long as the slip button **34** is raised, the extension tube can be pulled off or inserted into the stand tube.



### 3.3 Operating the lamp

#### 3.3.1 ON/OFF switch

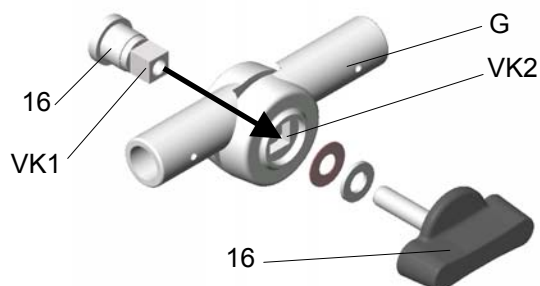
Push rotary type push button **29** on switch **24** at the transformer housing to turn the lamp on and off.



#### 3.3.2 Positioning

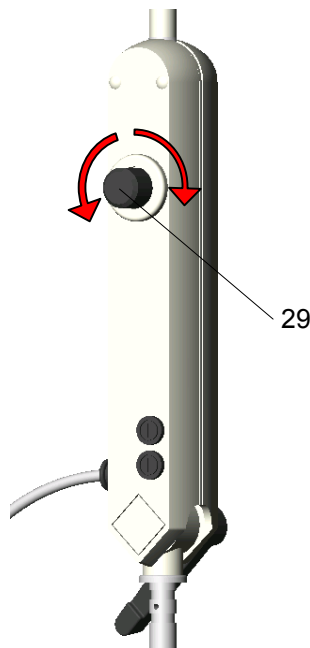
To position the lamp use clamping lever **20** at the transformer housing, The clamping lever at the self-locking joint **G2** as well as the wing screw **16** at the self-locking joint **G1**.

Use handle **04** to position the lamp head as desired.



In case the winged screws **16** have been loosened more than necessary, it is possible, that bolt **16** no longer fit in the guidance of the joint **G**. Before tightening the winged screw **16** again, always make sure that square **VK1** of bolt **16** fits with square **VK2** of the joint **G**.

**Notice the mounting order of the washers: plate spring, washer, plate spring, winged screw 16.**



### 3.3.3 Electronic light intensity control

The lamp is supplied with an electronic light intensity control.

To activate the light intensity control, turn rotary type push button **29** at the transformer housing:

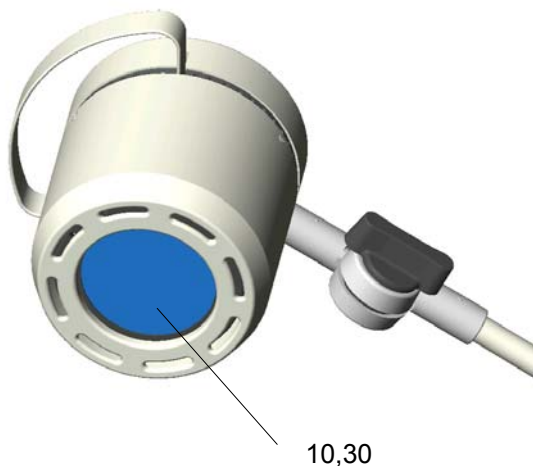
- Turn to the **left**: light intensity decreases;
- Turn to the **right**: light intensity increases.

## 4. Cleaning

### 4.1 Stand

The surface of the stands can be easily kept clean by simply wiping with a damp cloth. You can use conventional cleaning agents.

In case of disinfection only use disinfectants with less than 20% alcohol.



### 4.2 Lamp head

The lamp has a high-quality surface, which can be cleaned with conventional cleaning agents.

Only use disinfectant with less than 20% alcohol.

### 4.3 Protective disk (filter disk)

The protective disk **10** is made of an high-quality plastic, the filter disk **30** is made of high quality glass. For cleaning use lukewarm water and a soft viscose sponge. Pay attention to the following during cleaning:

- Wipe over the protective disk **10** (filter disk **30**) with a wet cloth (never use a dry cloth!).
- Only use disinfectant with less than 20% alcohol.



**Alc. ≤ 20 %**

Wipe protective disk **10** (filter disk **30**) after cleaning with an antistatic, non-fluffy cloth.



## 5. Maintenance

The lamp is constructed in such a way, that regular service intervals are not required.

### 5.1 Settings at the stand

#### ♦ One-handed height adjustment

Adjusting the spring force at these stands is not possible.

It is usually not necessary to adjust the spring force at stands with one handed height adjustment.



### 5.2 Changing of spare parts

#### 5.2.1 Changing the halogen bulbs

Dr. Mach uses special halogen bulbs as illuminants.

Only original Dr. Mach replacement bulbs may be used.

The use of other bulbs can lead to a considerable reduction of the light power and increase in the thermal load.

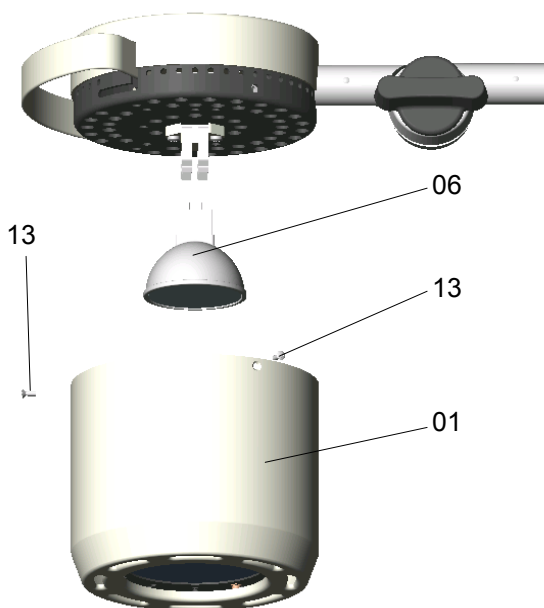
**Attention! Disconnect from mains before changing the bulb.**

To change the bulb proceed as follows:

- Loosen three recessed head screws **13** and remove the housing lower part **01**.
- Pull out carefully halogen bulb **06** (12V/35W).
- Change the halogen bulb.  
**Make sure that the front side of the halogen bulb is always clean.**
- Push housing lower part onto housing upper part and fix with the three recessed head screws **13**.

**Remark:**

**The halogen bulbs have a service life of approx. 1000 hours without any deterioration in their luminosity.**



### 5.2.2 Changing the fuses

The fuses in the lamp housing prevent the transformer burning through in the event of a short circuit. The fuses are situated in the transformer housing 27.

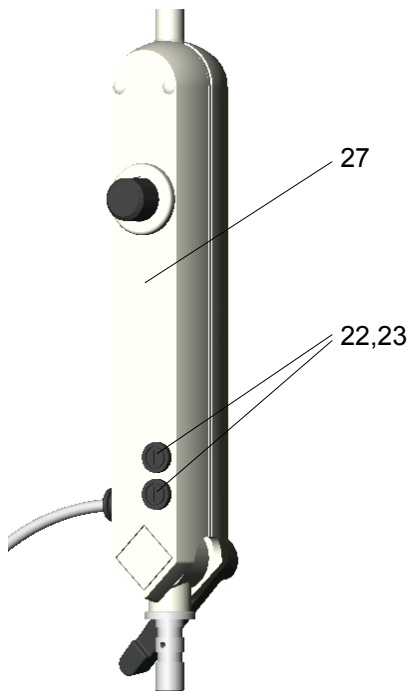
**Attention! Disconnect from mains before changing the fuses.**

**Visible fuse 5x20/T0,315A/250V for 230V**

If the halogen bulb no longer burns, check the bulb first, then the fuses.

To change the fuses proceed as follows:

- Turn the black fuse holder 23 ¼ of a rotation anticlockwise with a screwdriver.
- Change fuses 22.
- Insert fuse holder 23 under slight pressure and rotate in a clockwise direction (bayonet catch).



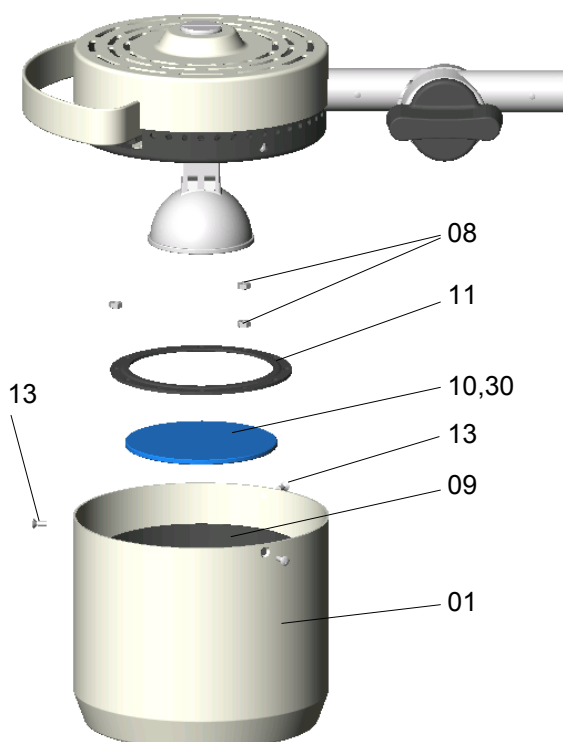
### 5.2.3 Changing the protective disk (filter disk)

As an option the lamp can be supplied with a filter disk (no heat protection filter!)

**Remark: In case of lamps without filter disk the thermal load in the wound area increases.**

To change the protective disk (filter disk) proceed as follows:

- Loosen three recessed head screws 13 and remove the housing lower part 01.
- Loosen three nuts 08 at the cooling body 09.
- Remove heat-protection mounting 11.
- Change protective disk 10 (filter disk 30).
- Fit heat-protection ring 11 and nuts 08 as shown in the figure.
- Tighten nuts 08 very carefully by hand, until the disk just starts to turn.
- Push housing lower part onto housing upper part and fix with the three recessed head screws 13.



**Remark:**

**Only use protective disks (filter disks) that have been cleaned according to point 4.3.**

## 6. Data

### 6.1 Technical data

#### Five foot stand

Lamp type		Mach 115
Data		
Stand foot	Number of extension arms	5
	Length of extension arms	310mm
	Rollers Ø	50mm
Stand tube	Approx. length.	95cm – 145cm
	Diameter	25mm
	Extension	yes
	Cable connection	no
	Suitable for article no.	1151 1012 00
Arm + lamp head	Mounting	<ul style="list-style-type: none"> <li>arm and Lamp head pre-mounted</li> <li>arm mounted to stand</li> </ul>

#### Lamp head Mach 115 – mains voltage 230 Volt

~ Wechselstrom

Pr Primärseitig 230V / 0,27A

Sek Sekundärseitig 12V AC / 2,91A

Leistungsaufnahme 20 – 60VA

Hz Hertz – Frequenz 50 / 60Hz

 Sicherung 5x20 / T0,315A / 250V

 Schutzgrad Type „B“

~ Alternating current

Pr Primary side

Sec Secondary side

Power consumption

Hz Hertz – frequency

Fuse

Class of protection

## 6.2 Environmental conditions

### Operation

	Min.	Max.
Temperature	+10°C	+40°C
Relative atmospheric humidity	30%	75%
Air pressure	700 hPa	1060 hPa

### Transport / storage

	Min.	Max.
Temperature	-10°C	+50°C
Relative atmospheric humidity	20%	90%
Air pressure	700 hPa	1060 hPa

## 7. Characteristics



Protective conductor



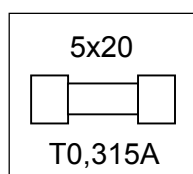
Switch ON/OFF

### 7.1 Specification of bulb

12V 35W 10°  
FRB 8D  
Philips

Voltage, power

### 7.2 Specification of fuse

**Mains voltage 230 Volt**

Visible fuse 5x20  
T0,315A 250V

### **7.3 CE-mark**



The products Mach 115 comply to the standards 93/42/EEC for medical products of the European Community's Council.

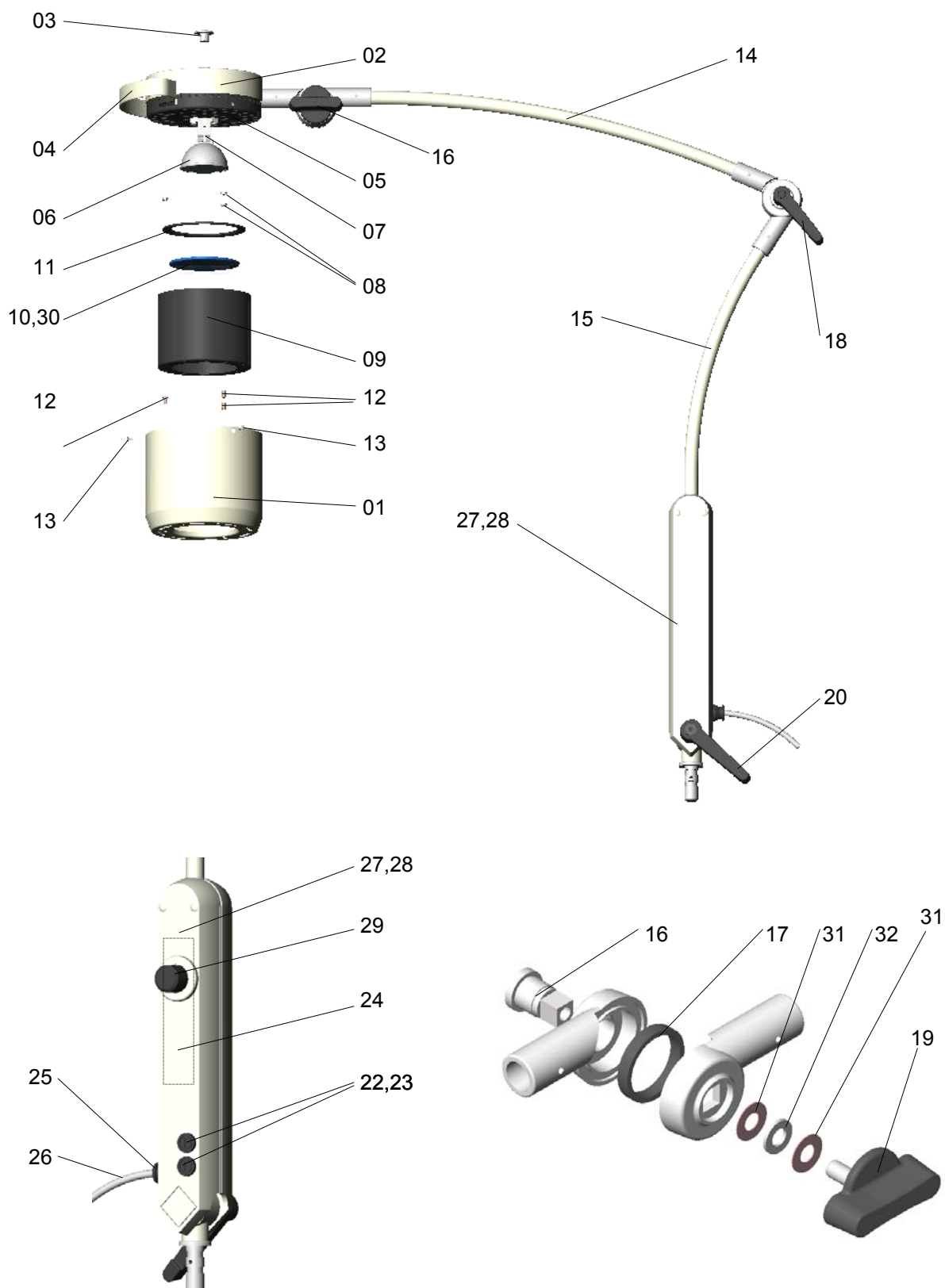
## **8. Disposal**

The lamp and the stand do not contain any danger goods.  
The components of the lamp and the stand should be properly disposed at the end of its shelf life. Make sure, that the materials are separated accordingly.

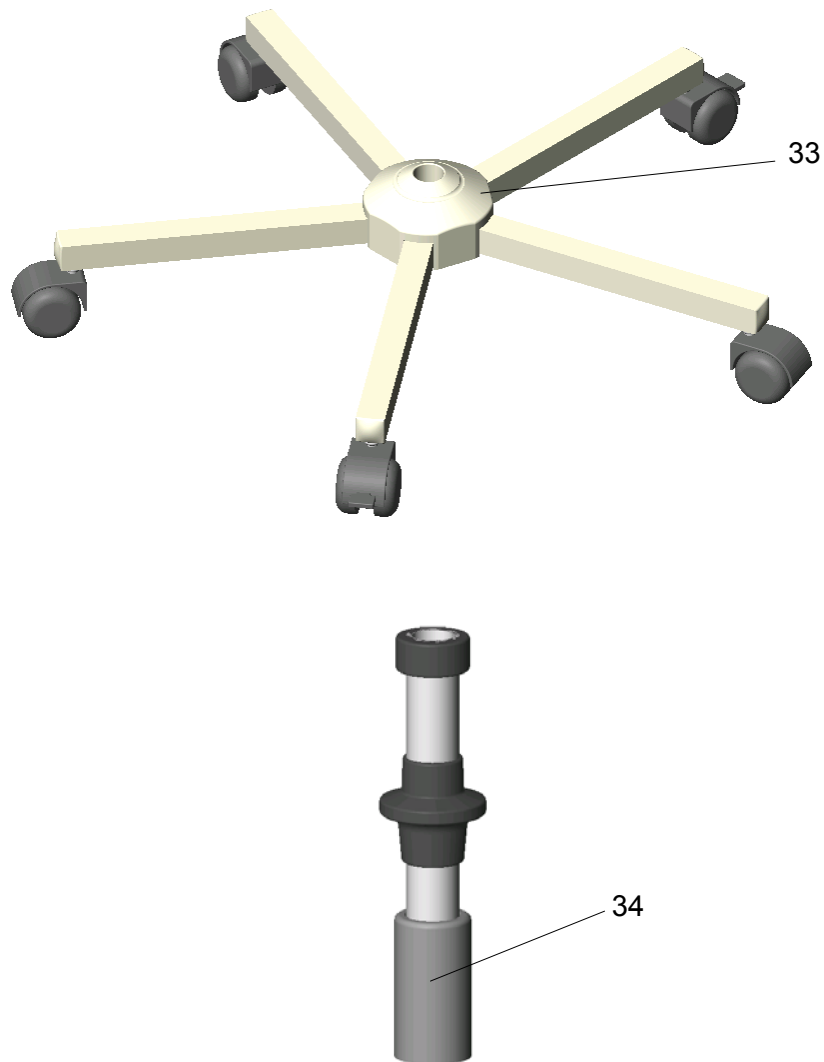
Electronic components should be submitted to an appropriate recycling.  
The rest of the components should be disposed according to the contained materials.

## 9. Spare parts

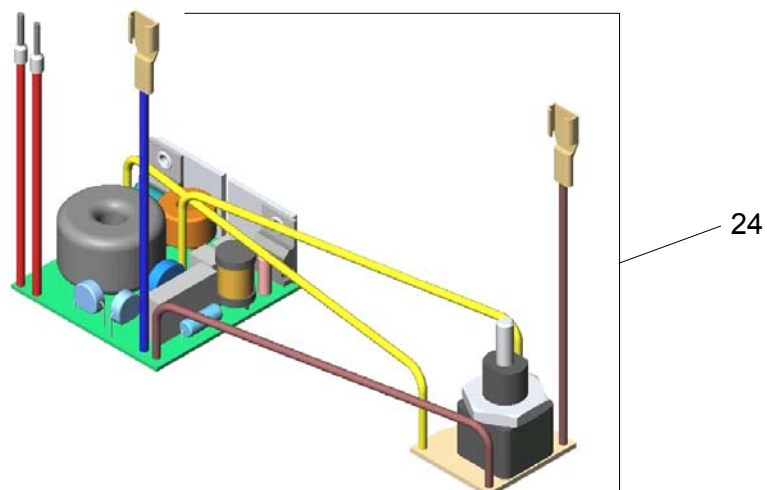
### 9.1 Lamp head, arm



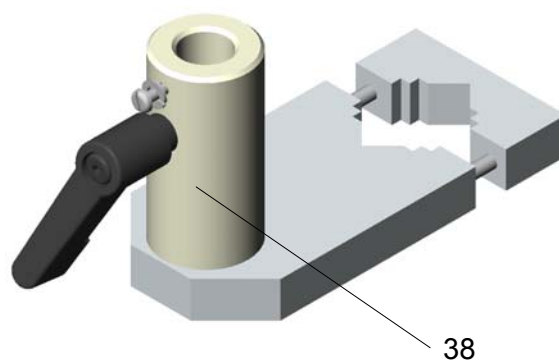
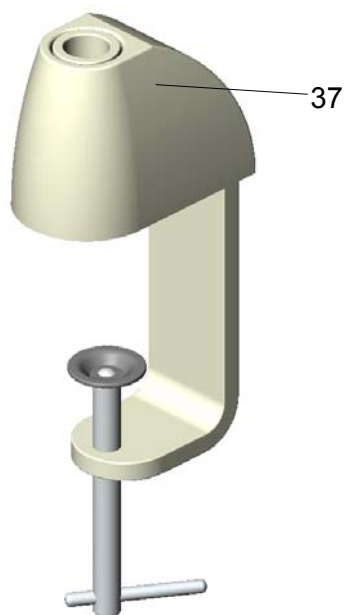
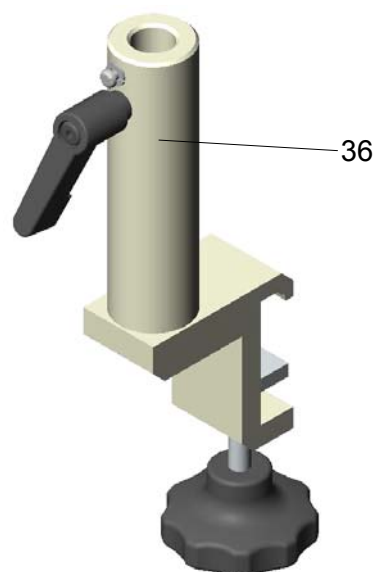
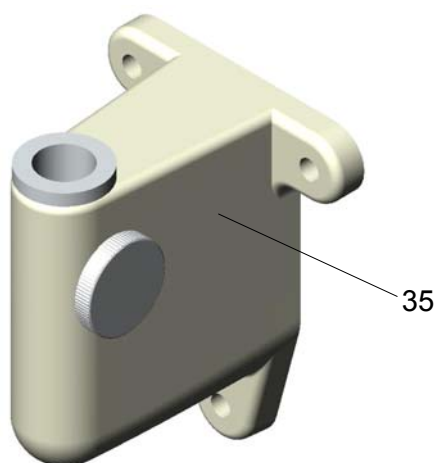
## 9.2 Stand foot, stand tube



## 9.3 Transformer with switch / potentiometer



## 9.4 Mounting possibilities





### 9.3 Spare parts list

Item	Qty.	Name	EDVNO	Remark
01	1	Housing lower part	04012203	
02	1	Housing upper part	04011201	
03	1	Head screw	04080201	
04	1	Handle	04080206	
05	1	Support	04031001	
06	1	Halogen bulb 12V 35W	67100202	FRB 8D Philips
07	1	Socket for halogen bulb 12V 35W	67320009	
08	3	Nut	65332002	
09	1	Cooling body	04012202	
10	1	Protective disk Makrolon	01011208	
11	1	Heat-protection ring	04012201	
12	3	Tubular rivet	65702003	
13	3	Recessed head screw M2,5x6 DIN 966:A2	65112022	
14	1	Bracket	04142001	
15	1	Transversal arm	04148001	
16	1	Cap nut	74581002	
17	2	Brake ring	74551005	
18	1	Clamping lever M8x0,75 65 long	74503005	
19	1	T-handle	74501003	
20	1	Clamping lever M8x0,75 65	74551009	
21				
22	2	Fuse 5x20 T0,315A	67370002	for 230V
23	2	Fuse holder	74551008	
24	1	Transformer INSTA 40W with potentiometer	67010402	
25	1	Strain relief	74551007	
26	1	Line cord with converted safety plug	67200201	
27	1	Half part of transformer housing	04080209	
28	1	Half part of transformer housing	04080210	
29	1	Rotary type push button	10160201	
30	1	Heat protection filter	01011203	optional
31	2	Plate spring	74551011	
32	1	Washer	04080208	
33	1	5-foot stand	74905003	
34	1	Stand tube Ø25mm with extension tube	74953001	
35	1	Wall attachment	01180001	
36	1	Rail attachment	04352001	
37	1	Table attachment	74451001	
38	1	Tube attachment	04352002	

