Derungs
MEDICAL LIGHTING

Installation and operating instructions 14 ENG

D^med® **Halux** N30-1 P SV
D^med® **Halux** N30-1 P SH
D^med® **Halux** N30-1 P SGV
D^med® **Halux** N30-1 P SGH
D^med® **Halux** N30-1 P F1

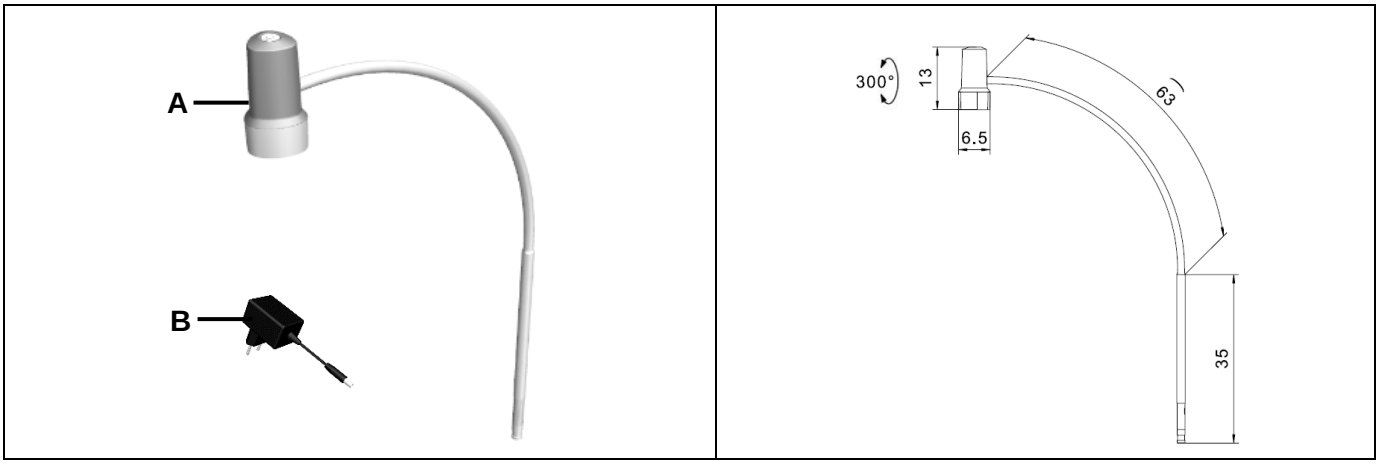
Examination light

IMPORTANT!
THESE OPERATING INSTRUCTIONS MUST BE READ BEFORE USING THE PRODUCT.
BE READ CAREFULLY!
KEEP → FOR FUTURE REFERENCE!

CONTENT

1. VARIANTS AND SCOPE OF DELIVERY

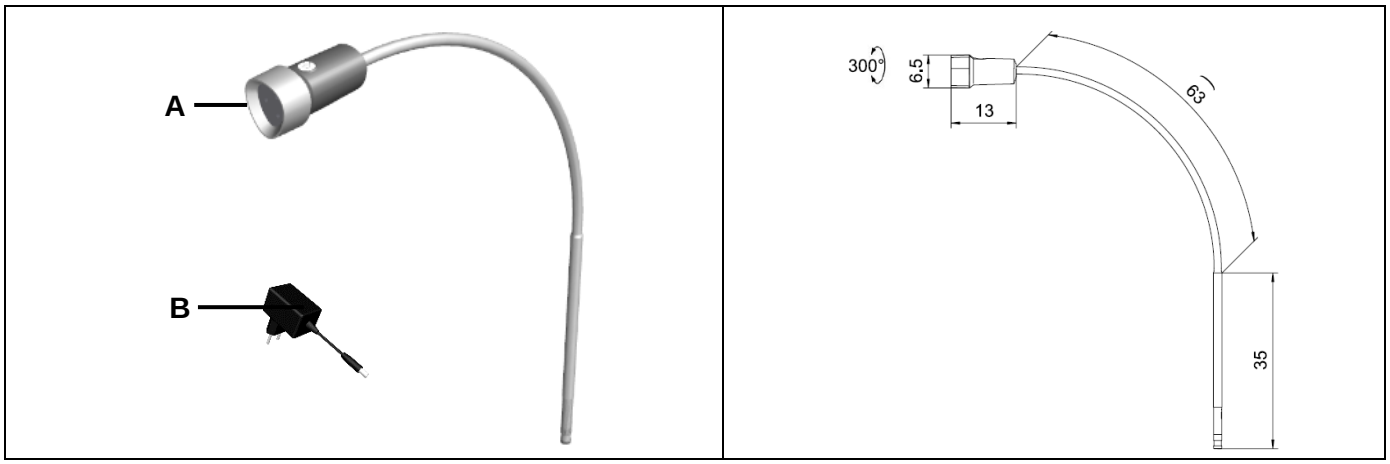
1.1 Halux N30-1 P SV



A: Luminaire with gooseneck

B: plug-in power supply

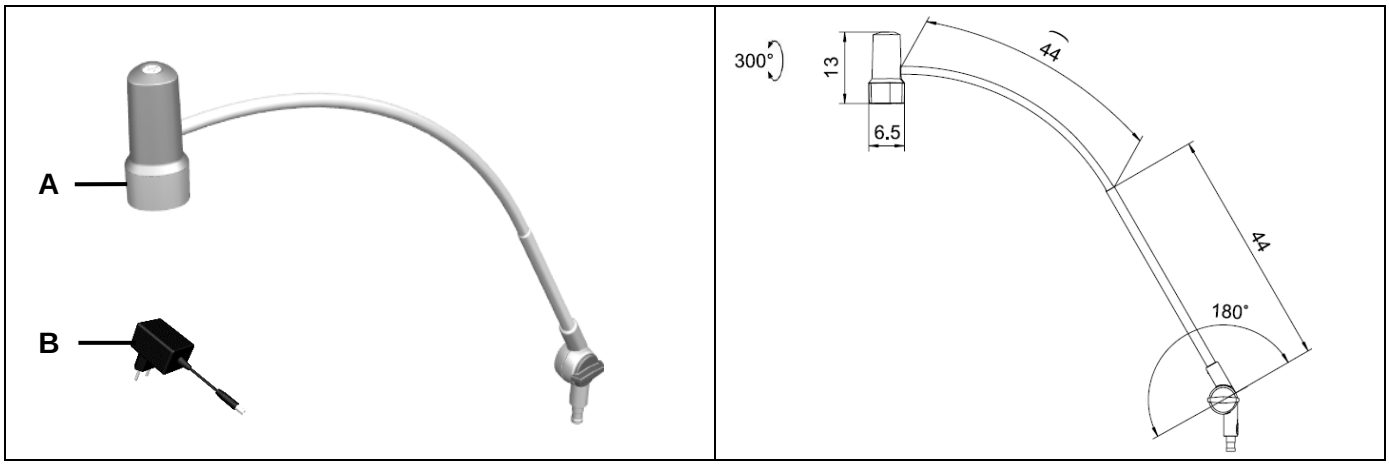
1.2 Halux N30-1 P SH



A: Luminaire with gooseneck

B: plug-in power supply

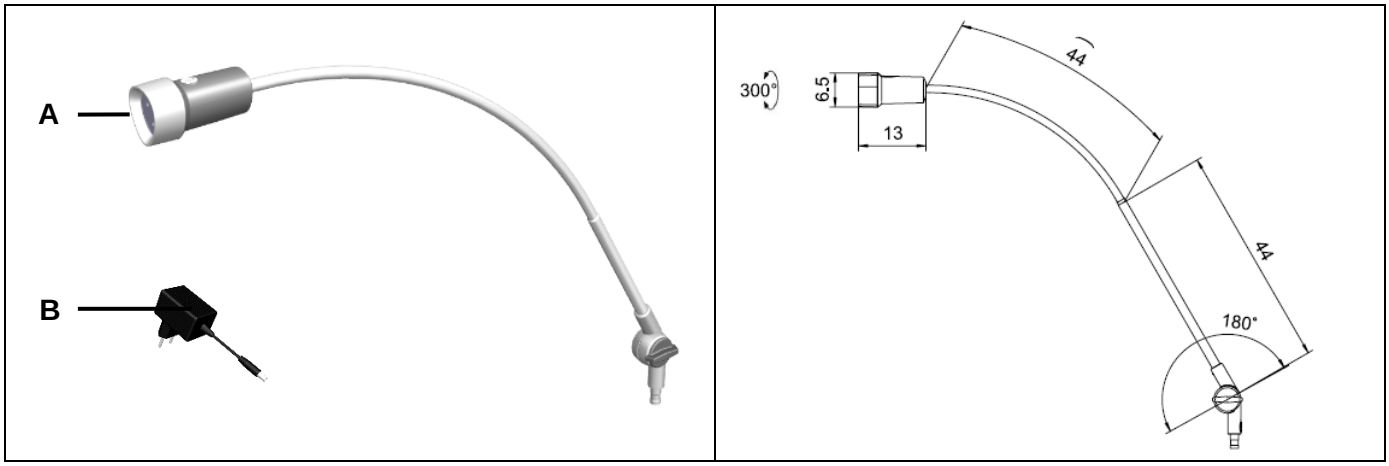
1.3 Halux N30-1 P SGV



A: Luminaire with gooseneck and bottom joint

B: plug-in power supply

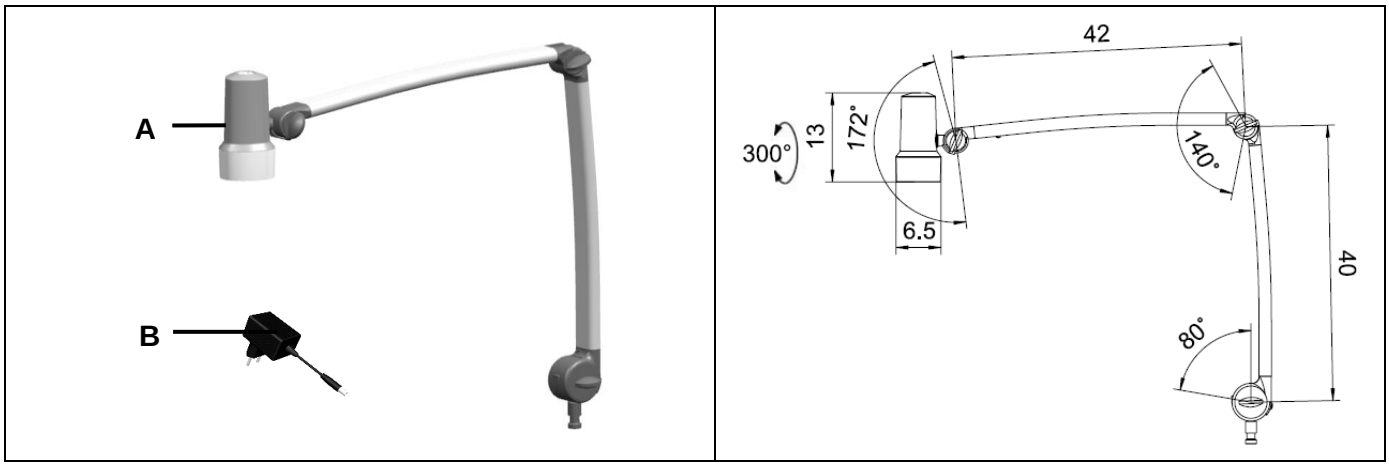
1.4 Halux N30-1 P SGH



A: Luminaire with gooseneck and bottom joint

B: plug-in power supply

1.5 Halux N30-1 P F1



A: Luminaire with spring arm

B: plug-in power supply

2. SAFETY INSTRUCTIONS

2.1 Intended use

The luminaire Dmed® Halux N30 is an examination luminaire. It is designed to illuminate a patient's body locally to support diagnosis. The diagnosis can be interrupted at any time due to a light failure without endangering the patient. The lamp is not intended for use in operating rooms.

2.2 User profiles

Medical Specialist

Are all persons who have completed medical training and work in their trained professional field.

Cleaning specialist

Is familiar with national and workplace hygiene regulations.

Electrician

He is trained in electronics and electrical engineering and knows the relevant standards and regulations.

Qualified specialist

Due to his technical training, knowledge and experience as well as knowledge of the regulations, he is able to carry out the assembly / disassembly.

2.3 Safety instructions

- Operation by medical specialist
- The manual is part of the product and must be kept and made available to all subsequent users.
- All work on the lamp (including repairs) may only be carried out by a qualified electrician. Installation may only be carried out by a qualified electrician.
- The lamp must not be changed or manipulated. Only approved original parts may be used. Other than the intended use with the original parts can lead to other technical values and life-threatening dangers.
- Operation in hazardous areas is prohibited. The power supply of the lamp is a potential ignition source.
- The luminaire may only be operated in dry and dust-free rooms.
- The lamp must not burn without supervision..
- For luminaires of protection class I, the protective conductor must be connected to the luminaire housing.
- Do not use a damaged lamp. Defective cables are also a potential hazard. Do not place cables near heat sources or on sharp edges.
- Never load the lamp head or the arm system additionally.
- The luminaire must not be covered with a cloth or similar in the operating state.
- The ventilation openings (if present) must always be free in case of operation!
- Do not operate the luminaire near external heat sources that exceed the maximum ambient temperature of the luminaire.
- The luminaire must not be used outside the intended ambient conditions.
- Do not use together with medical devices that can react sensitively to a light spectrum in the visible range (e.g. pulsating light and/or light with high illuminance).
- Luminaire may only be used for the purpose mentioned here..
- The manufacturer cannot be held responsible for damage caused as a result of use other than in accordance with the intended use, or non-compliance with safety instructions and warnings.
- The luminaire is designed for a service life of 10 years.

2.4 Warning levels

⚠ DANGER

Warnings of hazards which, if not avoided, could result in death or serious injury.

⚠ WARNING

Warnings of dangers which, if not avoided, could result in injury.

⚠ CAUTION

Warnings of dangers that can lead to material damage if the measures are not observed.

3. MOUNTING

3.1 Mounting instruction

- Fastening material is not included in the scope of delivery.
- The luminaires are equipped with a pin connection. The luminaire must therefore be connected in one of the accessories mentioned in section 8.
- If the "wall bracket" accessory is used, installation must be carried out by a specialist.
- The wall must ensure a firm hold.
- Only use fixing material that is suitable for the corresponding substrate.

3.2 Load data

Bending moment M_B	25Nm
Vertical weight F_G	90N

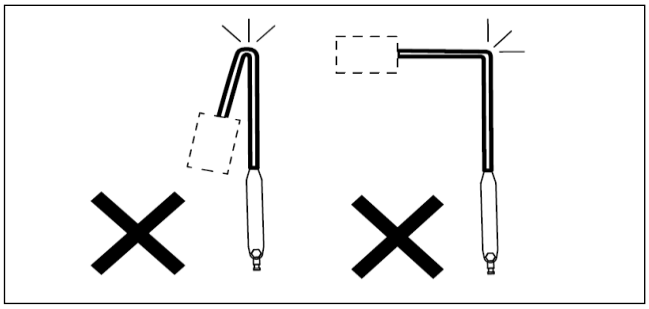
4. OPERATION

4.1 Danger note

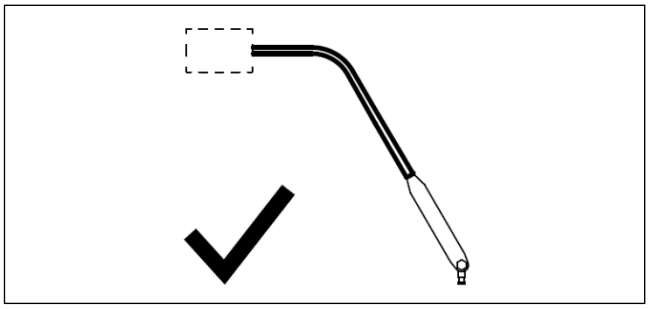
⚠ DANGER

Risk of death due to electric shock

- ▶ Do not plug in damaged power cables.
- ▶ If there are signs of damage to the power cord, replace it immediately with a new one.
- ▶ The supply voltage and frequency must match the data on the nameplate.



- ▶ - The 180° position (parking position) is not permitted.
- ▶ Sharp bending of approx. 90° at the connecting piece is not permitted.

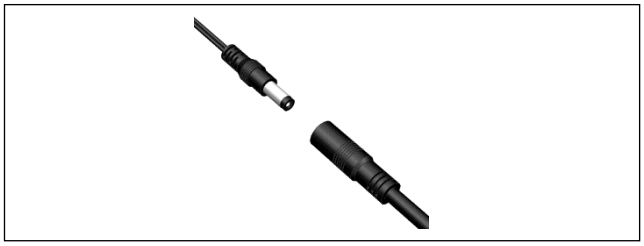


- ▶ Example of a correct parking position

⚠ WARNING

Warning of eye damage

- ▶ Never look directly into the beam of light



- ▶ Plug in the cable
- ▶ Connecting the cable to the mains
- ▶ Before each use carry out a function test: all LEDs in the light beam must light up.

4.2 Operation

- ▶ Switching on / off at the push of a button

- ▶ Dimming by pressing and holding the push button

5. CLEANING

⚠ DANGER

Risk of death due to electric shock

- ▶ Before disinfection cleaning, disconnect the mains connection from the power supply and secure it against unintentional switching on.

⚠ CAUTION

Material damage due to incorrect cleaning

- ▶ For cleaning only use agents which do not affect the function of the luminaire.
- ▶ For cleaning, do not use any solvent or chlorine based or abrasive detergents as they can, among other things, result in cracking of the plastic parts.
- ▶ The agents used must be approved for use on plastics such as PC, PMMA, PA and ABS.
- ▶ Damage to the luminaire due to concentrated disinfectants.
- ▶ Regarding concentration and exposure time please refer to the information of the agent.
- ▶ Scratches may be caused by incorrect wiping cloths.

RECOMMENDED DISINFECTANTS

- ▶ Mikrozid AF Liquid
- ▶ Dismozon Plus
- ▶ Lysoformin
- ▶ Hexaquart plus
- ▶ Sagrotan rapid disinfectant cleaner

⚠ CAUTION

Dirt reduces luminosity

- ▶ Keep the screen clean by cleaning it regularly.
- ▶ Only wipe cleaning permitted

- ▶ Clean the front cover glass with a suitable cleaning cloth and detergent.

⚠ CAUTION

To minimize the risk of disease transmission, applicable health and safety regulations and the requirements of the national bodies responsible for hygiene and disinfection must be observed in addition to these instructions

6. SAFETY INSPECTIONS

⚠ DANGER

Risk of death due to electric shock

- ▶ Disconnect the power supply cord from the supply mains.
- ▶ Power supply cable must be checked at least once a year for damage.

⚠ CAUTION

- ▶ Maintenance and repairs may only be carried out by qualified electricians.
- ▶ The corresponding user profile can be found in chapter 1 Safety instructions.

YEARLY:

- ▶ Check connecting cable for damage and replace if necessary.
- ▶ Check for paint damages
- ▶ Check for Cracks in plastic parts
- ▶ Check for Deformation or damage of the load-bearing system
- ▶ Check for loose parts

7. DEMOUNTING

⚠ DANGER

Risk of death due to electric shock

- ▶ Before dismantling, disconnect the mains connection from the power supply and secure it against unintentional switching on.

7.1 Disposal

Do not dispose of the luminaire in household refuse. Dispose of the luminaire at a disposal point in accordance with local regulations or take them to a dealer that provides an appropriate disposal service.
Cut off the cable at the housing.

The products listed above are more than 95% recyclable. The luminaires have been constructed to be compatible with recycling so that a high proportion of the materials used in these products can be recycled or converted into energy after the end of life cycle. They contain no materials that are dangerous or that need to be monitored.

8. ACCESSORIES

Roller stand: - D15.595.000-00656247

Extension arm: - D13.363.000-00647314

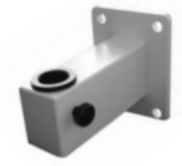
Tableclamp: - D14.228.000-00625467 (black)

Universal mount: - D13.430.000-00627986 (pure white)

Rail clamp: - D13.269.000-007069 (alu)

Wall bracket: - D13.231.000-00522182

Wall bracket: - D15.435.000-00659957



Pipe clamp: - D12.313.000-00630672

Standard wall rail system: D13.505.000-00647049 (1.0m)
Standard wall rail system: D13.506.000-00630687 (1.5m)

9. ADDITIONAL INSTRUCTIONS

The luminaire itself is maintenance free.

Additional documents may be requested from the manufacturer for this product.
Using this luminaire does not present a risk to other equipment.

To save energy, the luminaire should only be switched on when it is actually needed

All serious incidents occurring in connection with the product must be reported to the manufacturer or his representative and to the competent authority of the Member State in which the user is established.

10. TROUBLESHOOTING

Fault	Possible cause	Troubleshooting	User profiles
The luminaire does not come on	Contact problem	Switch on again	All
The luminaire does not come on	No mains voltage	Check mains voltage, check all connections	Electrician
The luminaire does not come on	Electronics defect	Contact manufacturer support	By manufacturer service only

11. TECHNICAL DATA

Electrical data:	
Rated input voltage	100-240V
Frequency range	50/60Hz
Power consumption (20-1)	7.8 - 8.1W (16 - 20VA)
Photometric values*:	
Central illuminance Ec at 0.5m (1.64 feet) distance	30‘000 lx *
Light field diameter d10 at 0.5m (1.64 feet) distance	Ø = 18 cm
Light field diameter d50 at 0.5m (1.64 feet) distance	Ø = 9 cm
Color temperature	4400K
Color rendering index Ra	93
Color rendering index R9	90
Total irradiance Ee at maximum intensity	<180 W/m^2
	* -10% / +20% tolerance
Ambient conditions for transport, storage and operation:	
Ambient temperature (storage and transport)	-20°C bis +70°C
Ambient temperature (operation)	+10°C bis +35°C
Relative humidity (non-condensing) (storage and transport)	max. 90%
Relative humidity (non-condensing) (operation)	max. 75%
Weight:	
Halux N30-1 P SV / SH	1.3 kg
Halux N30-1 P SGV / SGH	1.6 kg
Halux N30-1 P F1	1.1 kg
Operating mode:	
Operating mode	Permanent
Classification:	
Halux N30-1 P SV / SH / SGV / SGH / F1	Protection class II
Degree of protection as per IEC 60529	IP 20
Classification according to EU-REGULATION 2017/745 (MDR), Article 51	Class I
Electrical safety test and EMC according to:	EN/IEC 60601-1 EN/IEC 60601-2-41 EN/IEC 60601-1-2
Blue light hazard according to EN/IEC 62471	RG 1 (low risk)
Service life of light source:	
LED life cycle	50‘000h (L80/B70)

12. ELECTROMAGNETIC COMPATIBILITY (EMC)

Medical electrical equipment is subject to special precautionary measures concerning electromagnetic compatibility. This device can be affected by other electrical devices.

This device was tested for electromagnetic compatibility using accessories from the list of accessories. Other accessories may only be used if they do not compromise the electromagnetic compatibility. The use of non-compliant accessories may result in increased electromagnetic emissions or decreased electromagnetic immunity of the device.

⚠ WARNING

Risk due to insuffcient separation distance

If mobile high-frequency communication equipment is used too close to this device, malfunctions that put the patient at risk may occur.

Maintain a separation distance of at least 0.3 m (1.0 ft).

Electromagnetic environment

This device may only be used in environments specified in the "Intended use" section of the instructions for use.

The device is intended for use in an electromagnetic environment as specified below.

Emissions	Compliance	Electromagnetic environment
RF emissions EN 55011 (CISPR 11) Radiated: 30 MHz bis 1 GHz Conducted: 150 kHz bis 30 MHz	Class B, Group 1	The medical device is intended for use in all facilities, including residential buildings and facilities connected directly (without a transformer) to the same low-voltage network as residential buildings.
Harmonic emissions (IEC 61000-3-2)	Class A	
Voltage fluctuations / flicker emissions (IEC 61000-3-3)	Compliant	

Immunity against	Test level and required electromagnetic environment	Electromagnetic environment
Electrostatic discharge (ESD) (IEC 61000-4-2)	Contact discharge: ± 8 kV Air discharge: ± 15 kV	Floors are preferably made of wood, concrete or ceramic tiles. In the case of synthetic floor covering, the relative humidity should be at least 30%.
Rapid transient electrical disturbances: Bursts (IEC 61000-4-4)	Power cables: ± 2 kV Longer signal input lines/output lines: ± 1 kV	The quality of the supply voltage should correspond to that of a typical business or hospital environment.
Impulse voltage/surges (IEC 61000-4-5)	Voltage: External conductor- external conductor: ± 1 kV External conductor- protective ground conductor: ± 2 kV	
Voltage dips and interruptions in the power supply (IEC 61000-4-11)	30 % to 100 %, 10 ms to 5 s, different phase angles	
Magnetic field at the supply frequency (IEC 61000-4-8)	50Hz and 60Hz: 30 A/m	Devices with strong line-frequency magnetic fields (transformer stations, etc.) should not be operated in the vicinity of the medical device.
Emitted RF disturbance (IEC 61000-4-3)	80 MHz up to 2,7 GHz: 10 V/m	Faults are possible in the area around devices which are marked with the following pictogram: 
Conducted RF interference (IEC 61000-4-6)	150 kHz up to 80 MHz: 3 V_{rms} ISM bands and amateur radio bands: 6 V_{rms}	

Recommended safety distances to portable and mobile RF communications equipment		
Power of transmitter [W]	**150 kHz - 800 MHz** **d = 1.2□√p**	**800 MHz - 2.5 GHz** **d = 2.3□√p**
0.01	0.12 m (0.39 ft)	0.23 m (0.76 ft)
0.1	0.38 m (1.25 ft)	0.73 m (2.4 ft)
1	1.2 m (3.9 ft)	2.3 m (7.6 ft)
10	3.8 m (12.5 ft)	7.3 m (23.9 ft)
100	12m (39 ft)	23 m (76 ft)