

Heating collar

Operating instructions



Read the operating manual!

The user is responsible for installation and operation related mistakes!

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1 Notes for the Reader

These operating manual contains information and behaviour rules for safe and designated operation of the heating sleeve.

Observe the following principles:

- Read the entire operating manual prior to starting-up the device.
- Ensure that everyone who works with or on the device has read the operating manual and follows it.
- Maintain the operating manual throughout the service life of the device.
- Pass the operating manual on to any subsequent owner of the device.

1.1 General non-discrimination

In this operating manual, only the male gender is used where grammar allows gender allocation. The purpose of this is to make the text easy to read. Men and women are always referred to equally. We would like to ask female readers for understanding of this text simplification.

1.2 Explanation of the signal words

Different signal words in combination with warning signs are used in this operating manual. Signal words illustrate the gravity of possible injuries if the risk is ignored:

Signal word	Meaning
DANGER!	Refers to imminent danger. Ignoring this sign may lead to death or the most serious injuries.
WARNING	Refers to a potentially hazardous situation. Failure to follow this instruction may lead to death or severe injuries.
CAUTION!	Refers to a potentially hazardous situation. Failure to follow this instruction may lead to minor injury or damage to property.
PLEASE NOTE	Refers to a danger which, if ignored, may lead to risk to the machine and its function.

Tab. 1: Explanation of the signal words

1.3 Explanation of the warning signs

Warning signs represent the type and source of a danger:

Warning sign	Type of danger
	General danger zone
	Danger of electric shock
	Danger of burns due to hot surfaces
	Danger of explosions
	Danger of damage to machine or functional influences

Tab. 2: Explanation of the warning signs

1.4 Identification of warnings

Warnings are intended to help you recognise risks and avoid negative consequences.

This is how warnings are identified:

Warning sign	SIGNAL WORD
Description of danger. Consequences if ignored. ⇒ The arrow signals a safety precaution to be taken to eliminate the danger.	

1.5 Instruction for action identification

This is how pre-conditions for action are identified:

- ✓ Pre-condition for action which must be met before taking action.
- ✗ A resource such as a tool or auxiliary materials required to perform the operating instructions.

This is how instructions for action are identified:

- ➔ Separate step with no follow-up action.
- 1. First step in a series of steps.
- 2. Second step in a series of steps.
 - ▶ Result of the above action.
- ✓ **Action completed, aim achieved.**

2 Safety

2.1 General warnings

The following warnings are intended to help you to eliminate the dangers that can arise while handling the product. Risk prevention measures always apply regardless of any specific action.

Safety instructions warning against risks arising from specific activities or situations can be found in the respective sub-chapters.

	DANGER!
Mortal danger from electric shock! Wrongly connected or located cables or damaged ones can injure you. ⇒ Connect the device only to a SCHUKO socket outlet protected by a ground fault circuit interrupter (GFCI). ⇒ Replace damaged cables without delay. ⇒ Do not use extension cables. ⇒ Do not bury cables. ⇒ Secure cables to avoid being damaged by other equipment.	

	DANGER!
Mortal danger from electric shock! This heating sleeve is equipped with a guard from being sprayed with water from all sides. Humidity penetration from chemical substances that you are operating with when using the heating sleeve may lead to dangerous electric shocks. ⇒ Put the heating sleeve into operation only when in a completely dry condition.	

	DANGER!
Mortal danger from electric shock! Heating sleeves where you can see the heating conductor have been overheated. Not taking it out of operation may lead to electric shocks with considerable injuries. ⇒ Overheated heating sleeves must be taken out of operation immediately.	

	DANGER!
Danger to life through explosions! This heating sleeve is not explosion-proof. This is why it must not be used for heating processes where there is a risk of explosive media or an explosive gas / air mixture can form. Explosions may result which could result in fatal injuries. ⇒ Never use the heating sleeve in potentially explosive areas.	

	WARNING
Increased risk of accidents due to insufficient qualification of personnel! Chlorinators and their accessories must only be installed, operated and maintained by personnel with sufficient qualifications. Insufficient qualification will increase the risk of accidents. ⇒ Ensure that all action is taken only by personnel with sufficient and corresponding qualifications. ⇒ Prevent access to the system for unauthorised persons.	

	CAUTION!
Danger of burns due to hot surfaces! During the specified operation, the heating sleeve may reach temperatures that may lead to burns when touched. ⇒ Separate the device from the power supply and allow it to cool down before touching it. ⇒ Ensure for suitable measures to protect persons.	

	WARNING
Danger of personal injury and material damage! The heating sleeve cannot be operated without risk if the following points have occurred: ■ the heating element has visible signs of damage (e.g., cracks). ■ the system / regulation or control no longer operate in the range of their specifications. ■ a mechanical overloading has occurred (e.g., from pressure, tension, operating temperature, incorrect storage or transportation). ■ the heating element is or was exposed to expanding fluids. ■ mechanical changes have been carried out on the heating element (cutting, additional boreholes, etc.). ⇒ In these, or such cases, take the heating sleeve or the system out of operation immediately and secure them against being switched back on.	

	PLEASE NOTE
Damage due to incorrect mains voltage The heating sleeve can be damaged if you connect it to the incorrect mains voltage. ⇒ Observe the information on the mains supply that is given on the rating plate.	

2.2 Working in a safety-conscious manner

Besides the safety instructions specified in this operating manual, further safety rules apply and must be followed:

- Accident prevention regulations
- Safety and operating provisions
- safety provisions for handling dangerous substances (mostly the safety data sheets to dosing media)
- Environmental protection provisions
- Applicable standards and legislation.

2.3 Personnel qualification

The assembly and electrical connection of the heating sleeve require special knowledge and abilities of the personnel.

Anybody who works with the device must meet the conditions below:

- Personal suitability for the respective activity.
- Sufficient qualification for the respective activity.
- training into the handling of the device.
- knowledge of safety equipment and the way this equipment functions.
- Knowledge of this operating manual, particularly of safety instructions and sections relevant for the activity.
- Knowledge of fundamental regulations regarding health and safety and accident prevention.

All persons must generally have the following minimum qualification:

- training as specialist to perform work on their own
- sufficient training, so that they can work under the supervision and guidance of a trained expert.

These operating instructions differentiate between these user groups:

2.3.1 Specialist staff

Thanks to their professional training, knowledge, experience and knowledge of the relevant specifications, specialist staff are able to perform the job allocated to them and recognise and/or eliminate any possible dangers by themselves.

2.3.2 Trained electricians

Due to their professional training, knowledge and experience as well as knowledge of specific standards and provisions, trained electricians are able to do the electrical work assigned to them and to recognise and avoid any potential dangers by themselves.

They are specially trained for their specific working environment and are familiar with relevant standards and provisions.

They must comply with the legally binding regulations on accident prevention.

2.3.3 Trained persons

Trained persons have received training from the operator about the tasks they are to perform and about the dangers stemming from improper behaviour.

Trained persons have attended all trainings offered by the operator.

In the table below you can check what qualifications are the pre-condition for the respective tasks. Only people with appropriate qualifications are allowed to perform these tasks.

Qualification	Activities
Specialist staff	■ Assembly ■ Disposal
Trained electricians	■ Electrical installation of heating sleeve ■ Rectifying electrical faults ■ Taking out of operation
Trained persons	■ Control ■ Transportation ■ Storage

Tab. 3: Personnel qualification

3 Intended use

3.1 Notes on product warranty

Any non-designated use of the product can compromise its function or intended protection. This leads to invalidation of any warranty claims!

Please note that liability is on the side of the user in the following cases:

- the unit is operated in a manner which is not consistent with these operating instructions, particularly safety instructions, handling instructions and chapter 3 „Intended use“ on page 7
- If people operate the product who are not adequately qualified to carry out their respective activities.
- no original spare parts or accessories of Lutz-Jesco GmbH are used.
- unauthorised changes are made to the unit by the user.

3.2 Intended purpose

- The heating sleeve is used to secure against the reverse liquefaction and elimination of liquid chlorine in overpressure lines as well in units (e.g., chlorine gas filter, moisture eliminators) that are used to protect chlorine gas units such as, e.g., chlorination units. Chlorine quantities accumulating can only be evaporated drop by drop in the heating sleeve for the units specified above. Greater amounts of liquid chlorine can never be evaporated.
- Depending on the version, the heating sleeve is used to heat components with a nominal diameter of DN25 or DN50 for mains voltages 120 VAC or 240 VAC. Check the information on the type plate for this purpose.



If the frequent formation of liquid chlorine is to be expected due to the installation or climate, a pressure reduction valve must be used instead of a heating sleeve. It reduces the pressure in the upstream line sufficiently so that the formation of liquid chlorine occurs far below 0°C.

3.3 Prohibited operating conditions

- The product is only intended for the applications according to Section 3.2 "Intended purpose".
- The heating sleeve must only be used for evaporating chlorine quantities accumulating drop by drop. Greater amounts of liquid chlorine must not be evaporated.
- Comply with the information regarding the operating and environmental conditions (see section "Technical Data" on page 8).
- The device is not intended for outdoor use.
- The device must not be operated if protective equipment has been removed or has not been properly installed or is not fully functional.

4 Product description

4.1 Scope of delivery

Carefully check the delivery prior to installation and refer to the delivery note to ensure the delivery is complete and to check for any transport damage. Contact the supplier and/or carrier regarding any questions concerning the delivery and/or transport damage. Do not operate defective devices.

The following items are part of the scope of delivery:

- Heating sleeve
- Mounting material
- Warning sign "Hot surfaces"
- Operating instructions

4.2 Rating plate

The rating plate contains information on the safety and functional method of the product. The rating plate must be kept legible for the entire service life of the product.

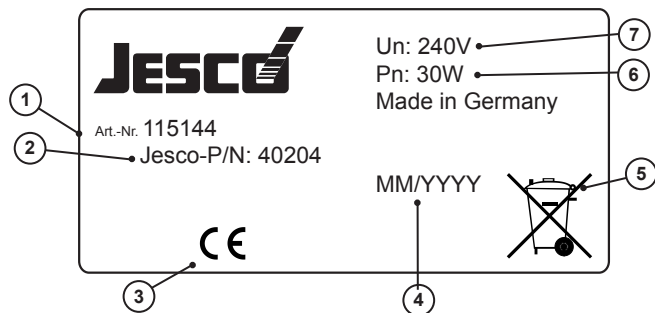


Fig. 1: Rating plate

No.	Description
1	Manufacturer's part number
2	Lutz-Jesco GmbH part number
3	Label showing conformity with applicable European directives
4	Month / year of manufacture
5	WEEE label
6	Rated output
7	Mains voltage

Tab. 4: Rating plate

4.3 Technical data

Description	Value
Material	Silicon
Heating capacity	25 W or 30 W
Supply voltage	120 V 50/60 Hz and 240 V 50/60 Hz
Temperature control	No
Electrical connection	3 m line, 3 wire with exposed ends and 0.2 m ground loop with eyelet for M5 screw
Temperature limits	-40 to +100 °C

Tab. 5: Technical data

5 Dimensions

All dimensions in mm

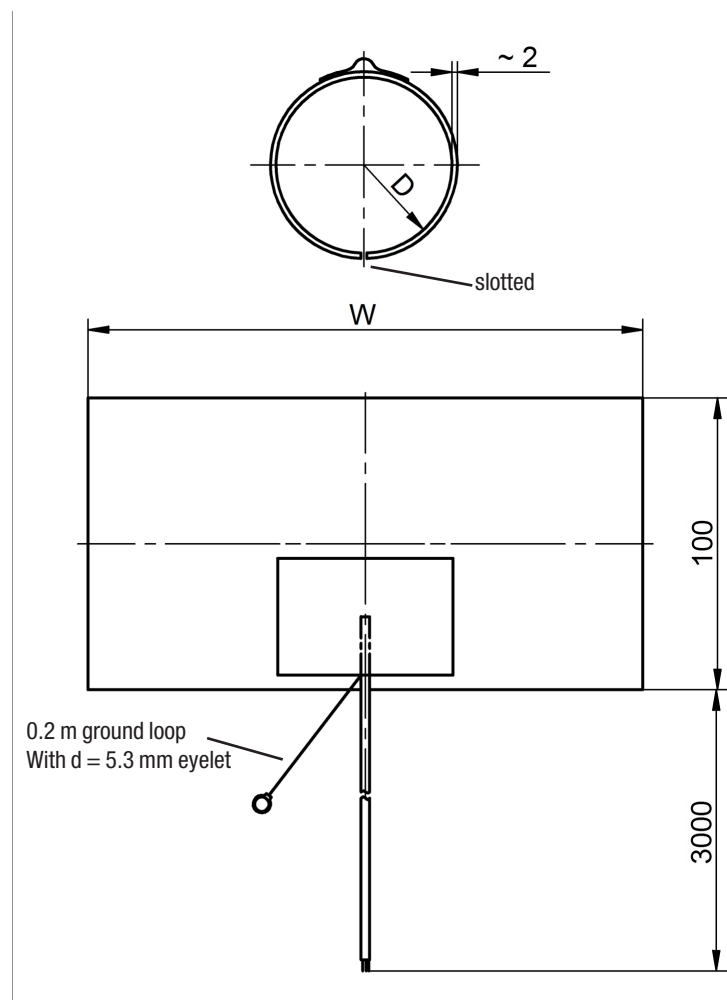


Fig. 2: Heating sleeve dimensions

Heating collar	D	W
DN25 240 VAC 50/60 Hz	33.7 mm	70 mm
DN25 120 VAC 50/60 Hz		
DN50 240 VAC 50/60 Hz	60.3 mm	190 mm
DN50 120 VAC 50/60 Hz		

Tab. 6: Heating sleeve dimensions

6 Installation

The heating sleeve is supplied without connector so that it can use any suitable electrical equipment available on the site for supplying with power.

	WARNING
Increased risk of accidents due to insufficient qualification of personnel! Chlorinators and their accessories must only be installed, operated and maintained by personnel with sufficient qualifications. Insufficient qualification will increase the risk of accidents. ⇒ Make sure that the heating sleeve is installed by a qualified electrician.	

5. Stick on the warning sign "Hot Surfaces" supplied to an area near the heating sleeve that is clearly visible. The surface of the application location must be free of dust and grease and be no hotter than 70°C.



Metallic components that may come into contact with the heating sleeve must be included in the protection measures of protection class I (earthing equipment conductor) according to VDE0100 or country-specific standards. If other fastening material is used other than the material supplied, then take care that this fastening material must not be made of a metallic material otherwise this must also be included in the protection measures of protection class I (earthing equipment conductor).

- ✓ **Heating sleeve mounted.**

6.1 Installation location

The heating sleeve must be installed in components and lines carrying chlorine gas where, under certain operating conditions or as a result of incorrect operation, small amounts of liquid chlorine may enter.

The heating sleeve must, for example, be installed on the following components or lines.

- Moisture eliminator
- Chlorine gas filter
- Lines between chlorine tanks and chlorinators where a temperature may occur below the temperature of the chlorine tank in their course and cannot be routed without inclination to the dosing device.

6.2 Installing the heating collar

Precondition for action:

- ✓ Before connecting to the mains, first check that the existing mains matches with that of the heating sleeve (see rating plate).
- ✓ The surface to be heated must be clean.
- ✓ The subsurface for the mounting must not have any tips, burrs and edges and weld seams must be ground flat.

Perform the following working steps:

1. Place the heating sleeve around the component to be heated.
2. Fasten the heating sleeve with the mounting material supplied so that it rests close to the component to be heated. Make sure that the heating sleeve is not damaged in the process.
3. Connect the pre-assembled open ends of the heating sleeve to the electric network using suitable equipment (e.g., using a junction box available on the site).
4. Fix the ground loop of the heating sleeve to the earth potential using the eyelet. This is required in order to prevent high contact voltages to electrically conductive parts of the device to be heated in event of an error. In doing so, observe the relevant installation instructions in the operating manual of the device to be heated.

6.3 Installation examples

6.3.1 Pressure manifold with heated moisture eliminator

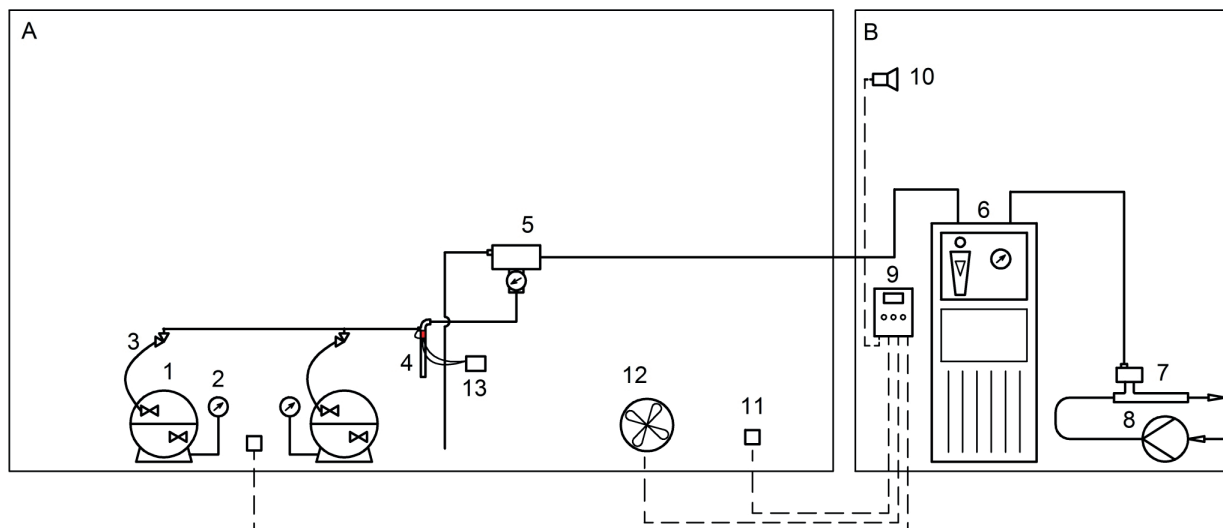


Fig. 3: Pressure manifold with heated moisture eliminator

No.	Description
A	Room for the chlorine supply
B	Dosing device room
1	Chlorine barrel
2	Chlorine drum scales
3	Manifold
4	Moisture eliminator with heater
5	Vacuum regulator
6	Dosing device
7	Booster pump
8	Injector with non-return valve
9	Gas warning device
10	Gas sensor
11	Horn
12	Entrance port of the chlorine eliminator
13	Junction box

Tab. 7: Pressure manifold with heated moisture eliminator

6.3.2 Liquid chlorine extraction with evaporator and heated chlorine gas filter

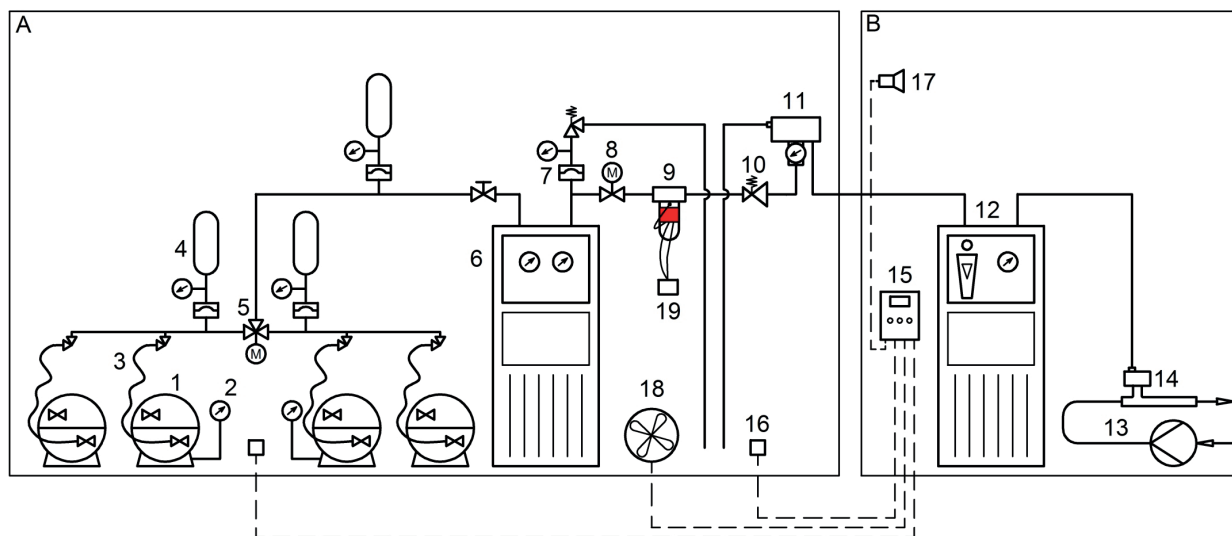


Fig. 4: Liquid chlorine extraction with evaporator and heated chlorine gas filter

No.	Description
A	Room for the chlorine supply
B	Dosing device room
1	Chlorine barrel
2	Chlorine drum scales
3	Manifold
4	Rupture disk with expansion container
5	Chlorine evaporator
6	Changeover switch
7	Rupture disk with safety valve
8	Quick-action valve
9	Chlorine gas filter with heating
10	Pressure reducing valve
11	Vacuum regulator
12	Dosing device
13	Booster pump
14	Injector with non-return valve
15	Gas warning device
16	Gas sensor
17	Horn
18	Entrance port of the chlorine eliminator
19	Junction box

Tab. 8: Pressure manifold with heated moisture eliminator

7 Operation

	CAUTION!
Danger of burns due to hot surfaces! During the specified operation, the heating sleeve may reach temperatures that may lead to burns when touched. ⇒ Separate the device from the power supply and allow it to cool down before touching it. ⇒ Ensure for suitable measures to protect persons.	
	WARNING
Danger of personal injury and material damage! The heating sleeve cannot be operated without risk if the following points have occurred: ■ The heating element has visible signs of damage (e.g., cracks). ■ The system / regulation or control no longer operate in the range of their specifications. ■ A mechanical overloading has occurred (e.g., from pressure, tension, operating temperature, incorrect storage or transportation). ■ The heating element is or was exposed to expanding fluids. ■ Mechanical changes have been carried out on the heating element (cutting, additional boreholes, etc.). ⇒ In these, or such cases, take the heating sleeve or the system out of operation immediately and secure them against being switched back on.	

7.1 Instructions for use

The temperature that can be reached depends on different factors:

- Ambient temperature
- Conductivity of the material or media to be heated
- Radiation (thermal loss caused by external influences)
- Throughput of the medium to be heated

7.2 Disposal of the device

The heating sleeve must be disposed of in accordance with applicable local laws and regulations. The device does not belong to household waste!

As the disposal regulations may differ from country to country in the European Union, please consult your supplier if necessary. In Germany, the manufacturer must provide free-of-charge disposal (provided the device has been returned in a safe manner).

8 EU Declaration of Conformity



(DE) EU-Konformitätserklärung

Hiermit erklären wir, dass das nachfolgend bezeichnete Gerät aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der aufgeführten EG-Richtlinien entspricht. Bei einer nicht mit uns abgestimmten Änderung am Gerät verliert diese Erklärung ihre Gültigkeit.

(EN) EU Declaration of Conformity

We hereby certify that the device described in the following complies with the relevant fundamental safety and sanitary requirements and the listed EC regulations due to the concept and design of the version sold by us.

If the device is modified without our consent, this declaration loses its validity.

(FR) Déclaration de conformité UE

Nous déclarons sous notre propre responsabilité que le produit ci-dessous mentionné répond aux exigences essentielles de sécurité et de santé des directives CE énumérées aussi bien sur le plan de sa conception et de son type de construction que du modèle que nous avons mis en circulation.

Cette déclaration perdra sa validité en cas d'une modification effectuée sur le produit sans notre accord explicite.

(ES) Declaración de conformidad UE

Por la presente declaramos que, dados la concepción y los aspectos constructivos del modelo puesto por nosotros en circulación, el aparato mencionado a continuación cumple con los requisitos sanitarios y de seguridad vigentes de las directivas de la U.E. citadas a continuación.

Esta declaración será invalidada por cambios en el aparato realizados sin nuestro consentimiento.

(PT) Declaração de conformidade UE

Declaramos pelo presente documento que o equipamento a seguir descrito, devido à sua concepção e ao tipo de construção daí resultante, bem como a versão por nós lançada no mercado, cumpre as exigências básicas aplicáveis de segurança e de saúde das directivas CE indicadas.

A presente declaração perde a sua validade em caso de alteração ao equipamento não autorizada por nós.

Bezeichnung des Gerätes:

Silikon Heizmanschette

Description of the unit:

Silicone heating collar

Désignation du matériel:

Manchon chauffant en silicone

Descripción de la mercancía:

Manguito de calor de silicona

EU-Richtlinien:

2014/35/EU (Niederspannungsrichtlinie)

EU directives:

2014/30/EU (EMV)

2011/65/EU (RoHS)

Harmonisierte Normen:

DIN EN 61140:08/2014

Harmonized standards:

DIN EN 60335-1:10/2012

DIN EN 50106:05/2009

DIN EN 55014-1:05/2012

DIN EN 61000-6-3:09/2011

DIN EN 61000-3-2:03/2015

DIN EN 55014-2:01/2016

Dokumentationsbevollmächtigter:

Lutz-Jesco GmbH

Authorized person for documentation:

Heinz Lutz
Geschäftsführer / Chief Executive Officer
Lutz-Jesco GmbH
Wedemark, 01.10.2021

Lutz-Jesco GmbH
Am Bostelberge 19
30900 Wedemark
Germany

9 Declaration of no objection

Please copy the declaration, stick it to the outside of the packaging and return it with the device.

Declaration of no objection

Please fill out a separate form for each appliance!

We forward the following device for repairs:

Device and device type: Part-no.:

Order No.: Date of delivery:

Reason for repair:

.....

.....

Dosing medium

Description: Irritating: ☐ Yes ☐ No

Properties: Corrosive: ☐ Yes ☐ No

We hereby certify, that the product has been cleaned thoroughly inside and outside before returning, that it is free from hazardous material (i.e. chemical, biological, toxic, flammable, and radioactive material) and that the lubricant has been drained.

If the manufacturer finds it necessary to carry out further cleaning work, we accept the charge will be made to us.

We assure that the aforementioned information is correct and complete and that the unit is dispatched according to the legal requirements.

Company / address: Phone:

..... Fax:

..... Email:

Customer No.: Contact person:

Date, Signature:

10 Warranty claim

Warranty claim

Please copy and send it back with the unit!

If the device breaks down within the period of warranty, please return it in a cleaned condition with the complete warranty claim.

Sender

Company: Phone: Date:

Address:

Contact person:

Manufacturer order no.: Date of delivery:

Device type: Serial number:

Nominal capacity / nominal pressure:

Description of fault:

.....

.....

.....

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.....

.....

Service conditions of the device

Point of use / system designation:

.....

.....

Accessories used (suction line etc.):

.....

.....

.....

.....

Commissioning (date):

Duty period (approx. operating hours):

Please describe the specific installation and enclose a simple drawing or picture of the chemical feed system, showing materials of construction, diameters, lengths and heights of suction and discharge lines.

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Operating instructions
Heating collar