

en Translation of the
original instructions
PUMP TUBES
for drum and container pumps

Type

PP 41-R-GLRD	Niro 41-R-DL
PP 41-L-GLRD	Niro 41-L-DL
PP 41-R-DL	HC 42-R-DL
PP 41-L-DL	HC 42-L-DL
PVDF 41-R-GLRD	RE-PP-GLRD
PVDF 41-L-GLRD	RE-Niro-GLRD
PVDF 41-R-DL	MP-PP-R-GLRD
PVDF 41-L-DL	MP-PP-L-GLRD
Alu 41-R-GLRD	MP-PP-R-DL
Alu 41-L-GLRD	MP-PP-L-DL
Alu 41-R-DL	MP-Niro-R-GLRD
Alu 41-L-DL	MP-Niro-L-GLRD
Niro 41-R-GLRD	
Niro 41-L-GLRD	



Please read this manual before starting up.

To be retained for future reference.

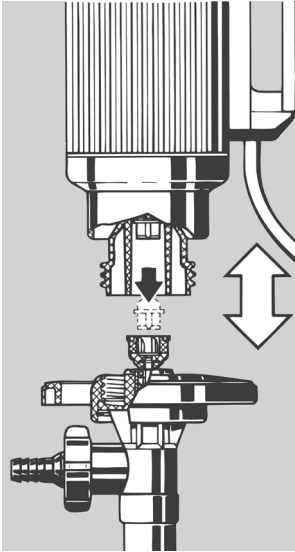


Fig. 1

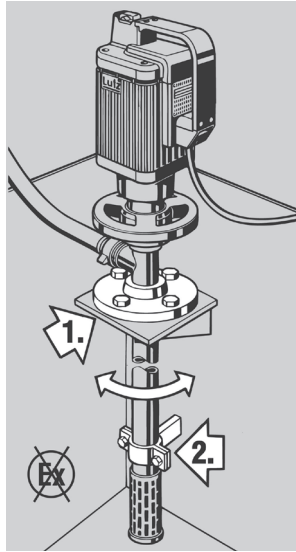


Fig. 2

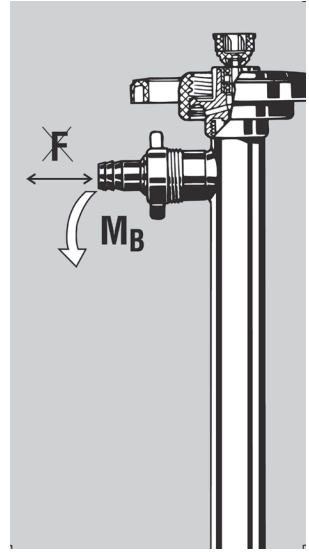


Fig. 3

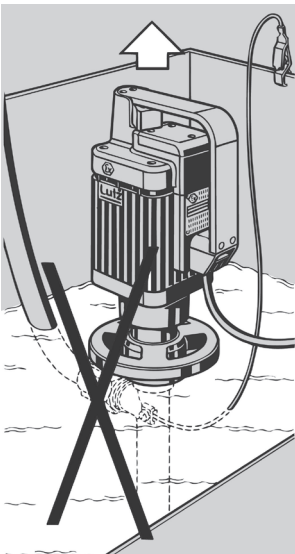


Fig. 4

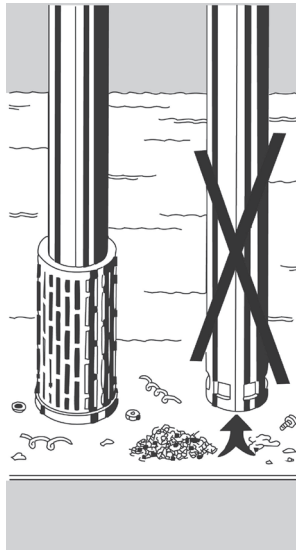


Fig. 5

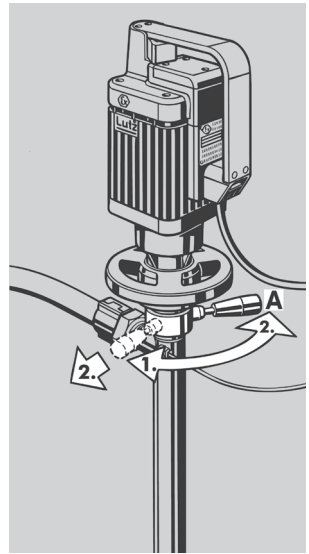


Fig. 6 (Pump tube RE SS)

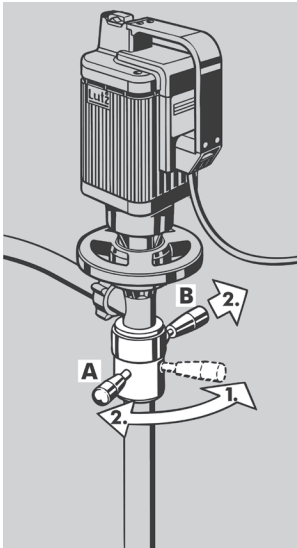


Fig. 7 (Pump tube RE PP)

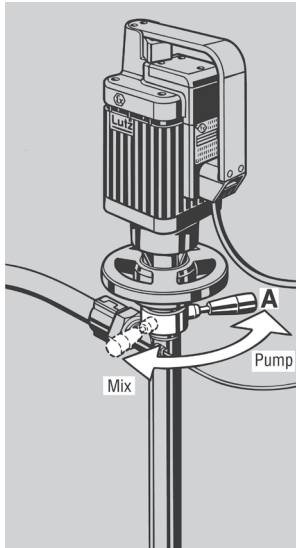


Fig. 8

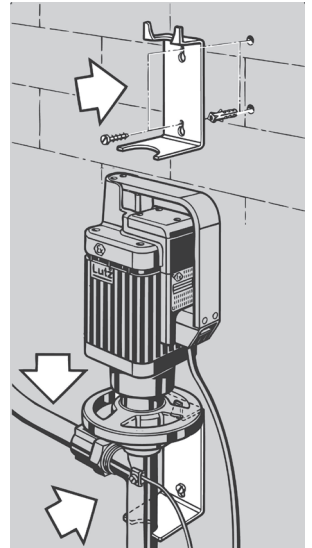


Fig. 9

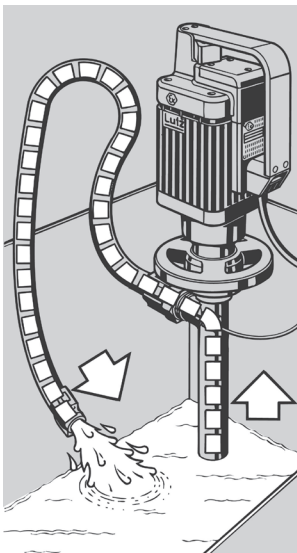


Fig. 10

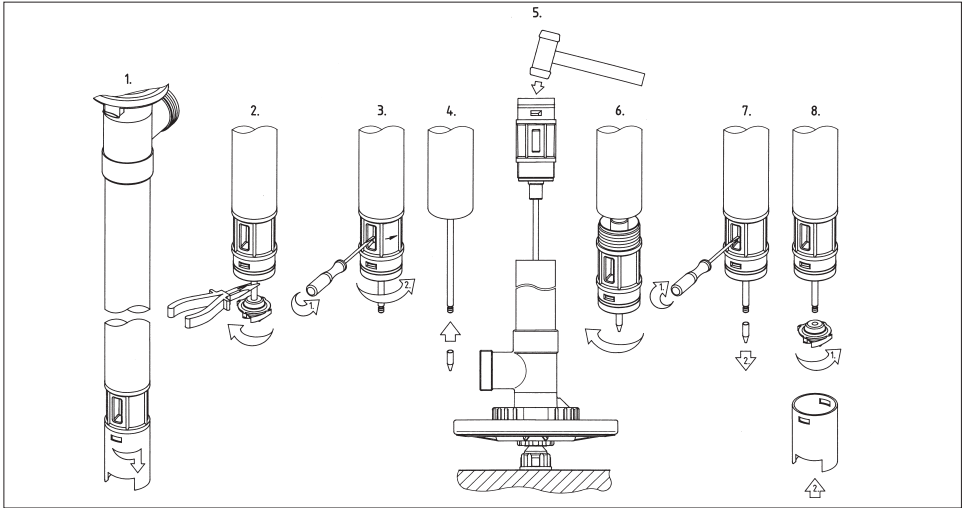


Fig. 11

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1. Concerning this manual

This manual

- is part of this product
- is valid for all mentioned series
- describes the safe and proper use in all operating stages

1.1 Terms

User: Single person or organisation who is using the products e.g. customer, user, assistant

1.2 Target groups

Target group	Task
User	<ul style="list-style-type: none"> ▶ Retain these operating instructions at the product's place of use for future reference. ▶ Demand the staff to read and observe these instructions and the additional valid documents, in particular the safety information and warnings. ▶ Observe additional regulations and instructions concerning the plant.
Qualified personnel, installer	<ul style="list-style-type: none"> ▶ Read, observe and follow these instructions and the additional valid documents, in particular the safety information and warnings.

Tab. 1: Target groups and their tasks

1.3 Associated applicable documents

Document	Purpose
Operating instructions motor	Safe and proper use of the motor.
Operating instruction hose lines	Safe use of hose lines.
Supplementary operating instructions	for additional delivered components

Tab. 2: Associated applicable documents and purpose

1.4 Warnings and symbols

Warning	Level of risk	Consequences in case of non-compliance
DANGER	direct danger	death or serious injury
WARNING	possible direct danger	death or serious injury
CAUTION	possible dangerous situation	Light physical injury
NOTICE	possible dangerous situation	damage of property

Tab. 3: Warnings and consequences in case of non-compliance

Symbol	Meaning
	Safety information <ul style="list-style-type: none"> ▶ Comply with all measures that are marked with a safety sign to prevent injuries or death.
	Information / Recommendation
	What to do
	Cross reference
	Requirement

Tab. 4: Symbols and meaning

1.5 Latest state

Please find the latest state of this operating instruction under www.lutz-pumpen.de.

1.6 Copyright

The content of this operating instruction and the images contained in them are subject to the copyright protection of Lutz Pumpen GmbH.

2. Safety

The manufacturer will not be held responsible for any damages resulting from non-compliance of the overall documentation, in particular for damages in case of non-compliance of the operating instructions.

2.1 General safety information

Observe following regulations before accomplishing all activities.

Product safety

The pump is constructed in conformity with the state of the art and approved safety-related standards. Danger however can occur during use for life and health of the user or third parties or damage of the pump and other material assets. Therefore:

- Operate the pump only in a technically sound state, for its proper use, and conscious of safety and hazards taking into account these instructions.
- Ensure that these instructions and all associated applicable documents are complete, legible, and stored in a place that personnel can access at all times.
- Refrain from any manner of working that endangers personnel or uninvolved third parties.
- In the case of a safety-relevant malfunction, stop the pump immediately and enlist a responsible person to rectify the malfunction.
- In addition to the overall documentation, observe the statutory or other safety and accident prevention regulations, as well as the valid standards and guidelines of the respective operating country.

Modifications

Unless the manufacturer has provided its consent in writing, the manufacturer is not liable for interventions performed by the user (modifications) on the product, such as conversion, alteration, new design, etc.

Modifications not agreed with the manufacturer may have the following effects, among others:

- Functional impairments on the appliance or plant
- Damage to the appliance and other property damage
- Environmental damage
- Personal injuries right through to death

Duties of the operator

Safety-conscious working

- Operate the pump only in a technically sound state, for its proper use, and conscious of safety and hazards taking into account these instructions.
- Ensure observance and monitoring of:
 - Proper use
 - Statutory or other safety and accident prevention regulations
 - Safety provisions in handling hazardous substances
 - Valid standards and guidelines in the respective country of operation
- Provide protective equipment.

Personnel qualification

- Ensure that personnel tasked with work on the pump read and understood these instructions and all associated applicable documents, particularly safety, maintenance and servicing information, before they start work.
- Clarify responsibilities, competencies and monitoring of the personnel.
- Ensure that all work is carried out by technical qualified personnel only:
 - Assembly, servicing, maintenance work
 - Work on the electrics
- Instruct inexperienced personnel in the use of the pump before allowing them to operate it for the first time.

Safety devices

- Provide the following safety devices and ensure their function:
 - with possible electrostatic charge: provide the corresponding earthing

Statutory warranty

- During the guarantee period, obtain the manufacturer's permission for modifications, maintenance work or alterations.
- Use only original components or components authorized by the manufacturer.

Duties of the personnel

- Observe the notices on the pump and maintain them in a legible state, e.g. rotation arrow, marking for fluid connections.
- Use protective equipment where necessary.
- Do not reach into the intake port of the pump.
- Only perform work on the pump during downtime.
- Ensure that the motor is disconnected before you carry out assembly and maintenance work.
- After completing all the work on the pump, remount the safety devices in accordance with specifications.

2.2 Proper use

- Pump may only be installed in an upright position.
- The pump may only be used to pump the agreed liquids (→ contract data sheet, → table of materials table 7).
- Dry running must be avoided.
 - Ensure that the pump is commissioned only with liquid and is never operated without pump medium.
- Pumps delivered without a motor require completion to a pump unit in accordance with the specifications of the machinery directive 2006/42/EC.


If the product and supplied accessories are used for other purposes than the intended purpose, it is the responsibility of the user to check the suitability and admissibility. Product use not confirmed in writing by the manufacturer absolves the manufacturer of any liability. The manufacturer is not liable for consequences of incorrect treatment, use, maintenance, servicing and operation of the appliance, as well as normal wear and tear. The same applies if faults arise from intervention or configurations on the part of the user not confirmed by the manufacturer.

Prevention of obvious misapplication (examples)

- Observe and comply with the operating limits of the pump in terms of temperature, pressure, delivery rate and speed (→ Appendix, table 8; contract data).
- The power consumption of the pump increases with increasing density or viscosity of the liquid. To prevent an overload of the pump, coupling and motor, comply with the permissible density and viscosity (→ Appendix, table 9, table 10). A lower density and viscosity is allowed.
- When pumping fluids containing solids, maintain the limit values for solid contents and grain size (→ contract data sheet, technical description).
- Do not use the pump tube to lift objects.
- For pump tubes made of PP, PVDF and Alu following applies:
 - Do not operate in explosion hazard area.
 - Do not pump flammable liquids.

2.3 Specific danger

Explosion hazard area

- Chapter 10: Instructions for the explosion protection
- Only Ga/Gb use pump tubes made of stainless steel (SS 1.4571) and Hastelloy C (HC) with ATEX-Identification  II 1/2 G Ex h IIB T4 Ga/Gb.
 - Only use explosion-proof drive motors.

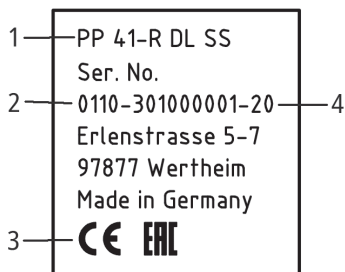
Dangerous media

- When pumping dangerous media (e.g. hot, flammable, explosive, poisonous, dangerous to health) observe safety regulations for handling hazardous substances.
- Always wear protective equipment when working on the pump.

3. Configuration and function

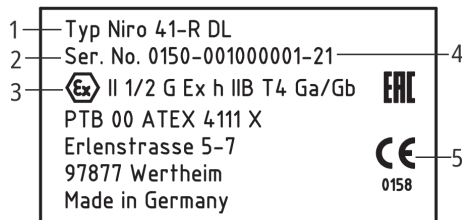
3.1 Identification

Rating plate



Rating plate pump tube (example)

- 1 Type
- 2 Serial number
- 3 CE-Identification
- 4 Year of construction (last two digits of the serial number e.g. -20 for 2020)



Rating plate pump tube for explosion hazard areas (example)

- 1 Type
- 2 Serial number
- 3 ATEX-Identification
- 4 Year of construction (last two digits of the serial number e.g. -20 for 2020)
- 5 CE-Identification

3.2 Configuration

An electric drum and container pump comprises a drive motor and a pump tube. Following different versions are available:

- **Drive**
 - AC-motor
 - Three-phase motor
 - Compressed air motor
 - Explosion proof motors
- **Pump tube**
 - **Materials**
 - Polypropylene (PP)
 - Polyvinylidene fluoride (PVDF)
 - Aluminium (Alu)
 - Stainless steel (SS 1.4571)
 - Hastelloy C (HC)
 - **Sealing**
 - sealless (SL)
 - with mechanical seal (MS)
 - **Types of impeller**
 - axial impeller (R)
 - radial impeller (L)

3.3 Function

The pump tubes are designed to deliver pure, turbid, aggressive or non aggressive liquids. Check the compatibility of the pump tube for the pumped liquid with a resistance table and the table of materials (→ Annex, table 7).

Pump tube RE for complete drum drainage

Pump tubes RE are used for the complete drainage of drums and containers. Following different versions are available:

- **Materials**
 - Polypropylene (PP)
 - Stainless steel (SS 1.4571)
- **Sealing**
 - mechanical seal (MS)
- **Type of impeller**
 - radial impeller (L)

Mixing pump tube MP

Pump tubes MP are used for mixing and pumping of liquids in drums and containers. Following different versions are available:

- **Materials**
 - Polypropylene (PP)
 - Stainless steel (SS 1.4571)
- **Sealing**
 - sealless (SL)
 - mechanical seal (MS)
- **Type of impellers**
 - axial impeller (R)
 - radial impeller (L)

4. Transport and storage

4.1 Transport

Unpacking and checking condition of delivery

- ▶ Unpack the pump tube on receipt and check for transport damages.
- ▶ Report transport damages to the manufacturer immediately.
- ▶ Check that the consignment is complete as ordered.

4.2 Storage

WARNING

Danger of injury and intoxication when handling hazardous liquids!

- ▶ Always wear protective equipment when working on the pump.

- ▶ Complete emptying of pump tube.
- ▶ Store the pump at a protected and easy accessible place (→ Fig. 9).
- ▶ Pump tubes made of polypropylene (PP): Protect against UV light.
- ▶ Pump tubes with mechanical seals: Turn the pump tube upside down in order that the liquid can be running out of the inner tube.
- ▶ Pump tube RE for complete drum drainage: Store in lever position „I“.

5. Installation and connection

5.1 Assembly of pump tube and motor

- ✓ Motor is switched off
- ▶ Connect the motor with the pump tube.
- ▶ Turn the motor slightly to ensure that the upper coupling engages in the coupling.
- ▶ Firmly connect the motor and pump tube by means of the handwheel (right-hand thread) (→ Fig. 1).

5.2 Fixing of the pump tube

DANGER

Danger of explosion during stationary installation in an explosion hazard area!

- ▶ Observe the indications for explosion proof pump tubes (→ chapter 10).

⚠ CAUTION

Danger of injury due to tipping over of empty drums and containers!

- ▶ The pump tube must always be positioned vertically in the bunghole.
 - ▶ If necessary, use a drum adapter or emission-proof drum adapter.
-
- ▶ Pump tubes with immersion depths of more than 1200 mm (47 inches) should be fitted with an installation flange (→ Fig. 2, item 1).
 - ▶ When installed in containers with liquids in motion: The bottom end of the pump tube must be secured additionally (→ Fig. 2, item 2).

5.3 Safe use

- ▶ Do not subject the outrun piece to tension or pressure (→ Fig. 3).
- ▶ The bending moment M_B at the outlet must not exceed the following values:

Pump material	Maximum bending moment M_B
Polypropylene (PP)	10 Nm
Polyvinylidene fluoride (PVDF)	20 Nm
Aluminium (Alu)	20 Nm
Stainless steel (SS 1.4571)	30 Nm
Hastelloy C (HC)	30 Nm

Tab. 5: Maximum permissible bending moment M_B

- ▶ Do not immerse the pump deeper than the outrun piece (→ Fig. 4).
- ▶ A foot strainer must be used when pumping liquids containing large mechanical impurities (e.g. fibrous materials) (→ Fig. 5).
- ▶ If the container is changed frequently and the pump is heavy, use load handling equipment if necessary.

6. Operation

- ✓ All connections and fittings are properly tightened.

NOTICE

Damage of property as a result of dry running!

- ▶ Supervise the pump tubes or monitor with a flow monitoring device.
 - ▶ Ensure that the pump is pumping liquid.
-
- ▶ Pump tubes with mechanical seal never may run dry.
 - Sealless pump tubes may run dry 15 minutes only.

6.1 Complete drainage of container (pump tube RE)

- ✓ Liquid flow interrupted completely

⚠ WARNING

Danger of injury and intoxication as a result of splashing dangerous liquids at low level!

- ▶ Use containers with a cover.
-
- ▶ Tip the container up.
 - ▶ Guide the intake port to the tipping point of the container.
 - ▶ End pump action: Close the sealing pot when the motor is running:
 - Pump tube RE SS for complete drum drainage: Activate lever A (→ Fig 6, Item 1).
 - Pump tube RE PP for complete drum drainage: Activate lever A (→ Fig 7, Item 1).
 - ▶ Switch off motor.
 - ▶ Remove the pump tube and place in the next container.

- ▶ Empty pump tube:
 - Pump tube RE SS for complete drum drainage: Pull lever A to unlock, and turn to home position (→ Fig 6, item 2).
 - Pump tube RE PP for complete drum drainage: Pull lever B to unlock. Pull lever A into its home position (→ Fig. 7, item 2).

Lever position	Meaning
0	Pump tube closed
I	Pump tube open

Tab. 6: Markings on pump tube for complete drum drainage

6.2 Mixing fluids (pump tube MP)

WARNING

Danger of injury and intoxication when handling hazardous liquids!

- ▶ The drum must always be covered during the mixing process.

- ▶ Activate lever A and set to "mix" for mixing operation (→ Fig. 8).
- ▶ Close the pump outlet to improve the mixing efficiency (e. g. close the nozzle).
- ▶ Activate lever A to end mixing and select the setting "pump" (→ Fig 8).

6.3 Taking out of operation

WARNING

Danger of injury and intoxication when handling hazardous liquids!

- ▶ Always wear protective equipment when working on the pump.
- ▶ Let the pump cool down after pumping hot liquids.
- ▶ Carry the pump by the handwheel and drive.
- ▶ Collect any residual leaking fluids from the pump safely and dispose of it in an environmentally friendly fashion.

NOTICE

Damage to property with horizontal storage of a pump tube wetted with fluid!

- ▶ The pump tube must always be stored on the wall bracket (→ Fig. 9).
- ▶ Remove the pump tube from the container carefully and allow the remaining liquid to flow back into the container.
- ▶ After pumping aggressive, tacky, crystallizing or contaminated liquids the pump tube must be flushed and cleaned with an appropriate detergent (→ Fig. 10).

7. Maintenance and servicing

WARNING

Danger of injury and intoxication when handling hazardous liquids!

- ▶ Always wear protective equipment when working on the pump.
- ▶ Complete emptying of pump tube.

7.1 Observance

- ▶ Only use a non-leaking pump tube: The pump must be switched off and repaired immediately if liquid leaks out of the pump tube below the handwheel
- ▶ With sealless pump tubes: Ensure that the openings above the pump foot are never clogged.

7.2 Maintenance

Change the seal ring bracket with pump tube PP 41 MS

- ▶ Change the seal ring bracket in accordance with the instructions (→ Fig. 11).

8. Repairs

- ▶ Repairs should only be made by the manufacturer or authorized Lutz dealers.
- ▶ Only use original Lutz Pumpen spare parts. Lutz Pumps accepts no liability for other spare parts.

8.1 Sending the pump to the manufacturer

- ✓ Pump pressureless
- ✓ Pump completely emptied
- ✓ Electrical connections separated; motor secured against reactivation
- ✓ Pump cooled down
- ▶ Only return the pump to the manufacturer with a truthfully and completely filled in document of compliance.

9. Waste disposal

Plastic parts can become contaminated by poisonous or radioactive liquids that cleaning is not sufficient.

WARNING

Danger of poisoning and environmental damage from liquid or oil!

- ▶ Always wear protective equipment when working on the pump.
 - ▶ Before disposing the pump:
 - Leaking liquid and oil must be contained and separately disposed according to the locally applicable regulations.
 - Residues of liquid in the pump must be neutralized.
 - ▶ Remove the non-metallic parts and dispose them according to the locally applicable regulations.
-
- ▶ Dispose the pump according to the locally applicable regulations.

10. Instructions for the explosion protection

DANGER

Danger of explosion when used in an explosion hazard area!

- ▶ Only use an explosion-proof pump tube.
- ▶ Only use an explosion-proof motor.

10.1 ATEX-Identification

 II 1/2 G Ex h IIB T4 Ga/Gb

10.2 General

Following pump tubes are used to pump flammable liquids from mobile vessels, which belong to the explosion groups II A and II B and the temperature classes T1 to T4 according to the indicated ATEX-Identification:

- SS 41-R-MS
- SS 41-L-MS
- SS 41-R SL
- SS 41-L SL
- RE SS 41-L-MS
- MP SS 41-R-MS
- MP SS 41-L-MS
- HC 42-R SL
- HC 42-L SL

The pump tubes correspond to the following categories:

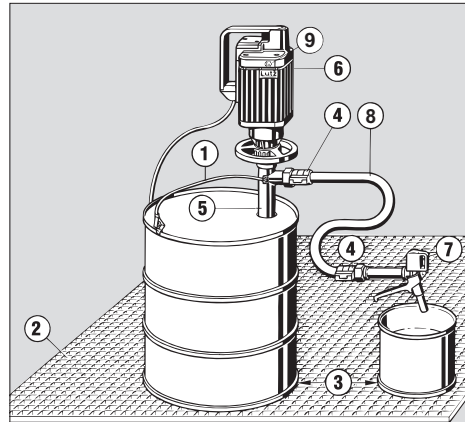
- Category 1:
 - external part between suction opening and pressure joint
- Category 2:
 - external part between pressure joint and connecting part for a drive motor
 - internal part for mechanical seal variants

10.3 Special conditions

- ▶ Ensure that additional fitted components (e.g. coupling, gear, drive motor) are located outside of the mobile container.
- ▶ The requirements of unit group II (sub-class II B), category 2, temperature class T4 have to be met.
- ▶ Ensure that the drive motor (electrical or with compressed air) does not exceed an output of 0.88 kW and a speed of 17,000 1/min.
- ▶ Do not use the drum pump for stationary operation.
- ▶ The operation of the pump has to be monitored during the pumping process in order to avoid dry running and empty running phases.

10.4 Equipotential bonding and earthing

- ▶ Before starting up, an equipotential bonding must be established between the pump, the container to be emptied and the container to be filled.
- ▶ Clamp the equipotential bonding cable (order no. 0204-994) to create an equipotential bonding between the pump and the container to be emptied. For better conductivity, remove the paint and dirt from the clamping points.
- ▶ Equipotential bonding between the containers to be emptied and to be filled via a conductive substrate (e.g. conductive gratings).
- ▶ Ensure that a conductive transition between container and earthing potential is available.



- 1 Equipotential bonding cable
- 2 Conductive substrate or connection of an equipotential bonding cable to each of the two drums
- 3 Galvanic connection (low contact resistance towards earth)
- 4 Conductive connection between hose and hose connector
- 5 Zone 0 pump tube
- 6 Motor with inaccessible metal parts
- 7 Nozzle
- 8 Conductive hose
- 9 ATEX-identification motor

10.5 Conductive hoses / hose connections

- ▶ Use an electrically conductive hose.
- ▶ Ensure that the ohmic resistance between the fittings does not exceed the limited value depending on the respective hose type (→ DGUV Information 213-053).
- ▶ Ensure that the nozzle is conductive.
- ▶ Ensure that the hose coupling provides a highly conductive transition between hose and pump tube as well as the nozzle.
- ▶ With poorly conductive transitions: Earth all conductive parts.
- ▶ Identify and examine hose lines and fittings according to DIN EN 12115.

10.6 Explosion protection regulations

- ▶ Following regulations have to be observed for the use of equipment in hazardous areas within the EU:
 - Directive 1999/92/EC on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres
 - Regulation (EC) 1272/2008 (CLP)
- ▶ National rules and regulations additionally have to be observed.

10.7 Classification of zones for explosion hazard areas

Explosion hazard areas are defined as areas in which explosive atmospheres may occur in potentially dangerous volumes on account of local and operational conditions.

Areas in which explosions may occur on account of flammable gases, vapours or mists, following classification of zones is applied:

- Zone 0: Dangerous explosive atmosphere persists constantly or for a long time.
- Zone 1: Dangerous explosive atmosphere persists occasionally.
- Zone 2: Dangerous explosive atmosphere persists rarely and temporarily.

Explanation of the zone classification when using drum pumps for flammable liquids

- Inside the drum or container: Zone 0
- Bunghole of the drum or the upper edge of the container: Boundary between zone 0 and zone 1
- Rooms in which media are transferred from one drum or container to another: Zone 1

The result for drum and container pumps is:

- ▶ Only pump tubes of unit group II, category 1/2 G may be used to pump flammable liquids.
- ▶ Regardless of their type of protection, motors may not be used in zone 0.
- ▶ Motors of unit group II, category 2 G may be used in zone 1.

10.8 Traceability

Appliances for potentially explosive atmospheres are identified by an individual serial number.

Lutz Pumpen ensures the traceability of this device up to the initial point of delivery according to ATEX Directive.

All persons who redeliver the device are obliged to guarantee its traceability to enable subsequent recall actions.

11. Annex

Description German	Description English	Wetted parts											
		PP	PVDF	Alu	Stainless steel (1.4571)	Hastelloy C	PTFE	FPM	FEP	Oxide ceramics	Carbon	ETFE	SiC
PP 41-... ¹⁾ GLRD SS	PP 41-... ¹⁾ MS SS	●	●		●	●		●			●	●	●
PP 41-... ¹⁾ GLRD HC	PP 41-... ¹⁾ MS HC	●	●			●		●			●	●	●
PP 41-... ¹⁾ DL SS	PP 41-... ¹⁾ SL SS	●	●		●		●					●	
PP 41-... ¹⁾ DL HC	PP 41-... ¹⁾ SL HC	●	●			●	●					●	
PVDF 41-... ¹⁾ GLRD	PVDF 41-... ¹⁾ MS		●			●		●			●	●	●
PVDF 41-... ¹⁾ DL	PVDF 41-... ¹⁾ SL		●			●	●					●	
Alu 41-... ¹⁾ GLRD	Alu 41-... ¹⁾ MS		●	●	●			●			●	●	●
Alu 41-... ¹⁾ DL	Alu 41-... ¹⁾ SL		●	●	●			●				●	
Niro 41-... ¹⁾ GLRD	SS 41-... ¹⁾ MS				●			●		●	●	●	
Niro 41-... ¹⁾ DL	SS 41-... ¹⁾ SL				●						●	●	
HC 42-... ¹⁾ DL	HC 42-... ¹⁾ SL					●			●		●	●	
RE PP 41-... ¹⁾ GLRD SS	RE PP 41-... ¹⁾ MS SS	●			●	●		●		●	●		
RE PP 41-... ¹⁾ GLRD HC	RE PP 41-... ¹⁾ MS HC	●				●		●		●	●		
RE Niro 41-... ¹⁾ GLRD	RE SS 41-... ¹⁾ MS				●	●	●	●		●	●	●	
MP PP 50/41-... ¹⁾ GLRD	MP PP 50/41-... ¹⁾ MS	●	●		●	●		●			●	●	●
MP PP 50/41-... ¹⁾ DL SS	MP PP 50/41-... ¹⁾ SL SS	●	●		●		●					●	
MP PP 50/41-... ¹⁾ DL HC	MP PP 50/41-... ¹⁾ SL HC	●	●			●	●					●	
MP Niro 41-R GLRD	MP SS 41-R MS				●	●	●	●		●	●	●	

¹⁾ ... = Code letter R or L

Tab. 7: Table of materials

Description German	Description English	Maximum operating temperature	
		°C	°F
PP 41-... ¹⁾ GLRD SS	PP 41-... ¹⁾ MS SS	50	122
PP 41-... ¹⁾ GLRD HC	PP 41-... ¹⁾ MS HC	50	122
PP 41-... ¹⁾ DL SS	PP 41-... ¹⁾ SL SS	50	122
PP 41-... ¹⁾ DL HC	PP 41-... ¹⁾ SL HC	50	122
PVDF 41-... ¹⁾ GLRD	PVDF 41-... ¹⁾ MS	100	212
PVDF 41-... ¹⁾ DL	PVDF 41-... ¹⁾ SL	100	212
Alu 41-... ¹⁾ GLRD	Alu 41-... ¹⁾ MS	100	212
Alu 41-... ¹⁾ DL	Alu 41-... ¹⁾ SL	100	212
Niro 41-... ¹⁾ GLRD	SS 41-... ¹⁾ MS	100	212
Niro 41-... ¹⁾ DL	SS 41-... ¹⁾ SL	100	212
HC 42-... ¹⁾ DL	HC 42-... ¹⁾ SL	120	248
RE PP 41-... ¹⁾ GLRD SS	RE PP 41-... ¹⁾ MS SS	50	122
RE PP 41-... ¹⁾ GLRD HC	RE PP 41-... ¹⁾ MS HC	50	122
RE Niro 41-... ¹⁾ GLRD	RE SS 41-... ¹⁾ MS	100	212
MP PP 50/41-... ¹⁾ GLRD	MP PP 50/41-... ¹⁾ MS	50	122
MP PP 50/41-... ¹⁾ DL SS	MP PP 50/41-... ¹⁾ SL SS	50	122
MP PP 50/41-... ¹⁾ DL HC	MP PP 50/41-... ¹⁾ SL HC	50	122
MP Niro 41-R GLRD	MP SS 41-R MS	100	212

¹⁾ ... = Code letter R or L

Tab. 8: Maximum operating temperature

NOTICE

- When handling flammable liquids, note the flashpoint.

Description German	Description English	Motor ¹⁾						
		MI 4 ³⁾	MA/ME II 3 ³⁾	MA/ME II 5 ³⁾	MA/ME II 7 ³⁾	ME II 8 ³⁾	MD1xL, MD2xL	B4/GT
PP 41-R ... ²⁾	PP 41-R ... ²⁾	150	150	350	350	400	1000	400
PP 41-L ... ²⁾	PP 41-L ... ²⁾	500	500	800	800	800	1000	400
PVDF 41-R ... ²⁾	PVDF 41-R ... ²⁾	150	150	350	350	400	1000	400
PVDF 41-L ... ²⁾	PVDF 41-L ... ²⁾	500	500	800	800	800	1000	400
Alu 41-R ... ²⁾	Alu 41-R ... ²⁾	150	150	350	350	400	1000	400
Alu 41-L ... ²⁾	Alu 41-L ... ²⁾	500	500	800	800	800	1000	400
Niro 41-R ... ²⁾	SS 41-R ... ²⁾	350	200	550	400	650	1000	400
Niro 41-L ... ²⁾	SS 41-L ... ²⁾	500	350	700	500	750	1000	500
HC 42-R SL	HC 42-R SL	350	200	550	400	650	1000	400
HC 42-L SL	HC 42-L SL	500	350	700	500	750	1000	500
RE PP 41-L GLRD ... ²⁾	RE PP 41-L MS ... ²⁾	1000	800	1200	1000	1250	1000	1000
RE SS 41-L MS	RE SS 41-L MS	700	500	900	700	950	1000	600
MP PP 50/41-R ... ²⁾	MP PP 50/41-R ... ²⁾	350	200	550	400	700	1000	400
MP PP 50/41-L ... ²⁾	MP PP 50/41-L ... ²⁾	500	500	800	800	800	1000	400
MP Niro 41-R GLRD	MP SS 41-R MS	350	200	550	400	700	1000	400

¹⁾ Data in mPas
²⁾ ... = optional identification
³⁾ at 220V/50Hz

Tab. 9: Max. viscosity

NOTICE

- The viscosity values specified in the table are reduced when pumping liquids with a density of more than 1 kg/dm³.

Description German	Description English	Motor ¹⁾						
		MI ⁴⁾	MA/ME II ³⁾	MA/ME II ⁵⁾	MA/ME II ⁷⁾	ME II ⁸⁾	MD1xL, MD2xL	B4/GT
PP 41-R ... ²⁾	PP 41-R ... ²⁾	1.1	1.2	1.3	1.4	1.3	2.8	2
PP 41-L ... ²⁾	PP 41-L ... ²⁾	1.4	1.6	1.8	1.9	1.8	2.8	2.2
PVDF 41-R ... ²⁾	PVDF 41-R ... ²⁾	1.1	1.2	1.3	1.4	1.3	2.8	2
PVDF 41-L ... ²⁾	PVDF 41-L ... ²⁾	1.4	1.6	1.8	1.9	1.8	2.8	2.2
Alu 41-R ... ²⁾	Alu 41-R ... ²⁾	1.1	1.2	1.3	1.4	1.3	2.8	2
Alu 41-L ... ²⁾	Alu 41-L ... ²⁾	1.4	1.6	1.8	1.9	1.8	2.8	2.2
Niro 41-R ... ²⁾	SS 41-R ... ²⁾	1.1	1.2	1.3	1.4	1.4	2.8	2
Niro 41-L ... ²⁾	SS 41-L ... ²⁾	1.4	1.6	1.8	1.9	1.9	2.8	2.2
HC 42-R SL	HC 42-R SL	1.1	1.2	1.3	1.4	1.4	2.8	2
HC 42-L SL	HC 42-L SL	1.4	1.6	1.8	1.9	1.9	2.8	2.2
RE PP 41-L GLRD ... ²⁾	RE PP 41-L MS ... ²⁾	1.6	1.7	2	2	2.1	2.8	2.2
RE SS 41-L MS	RE SS 41-L MS	1.4	1.6	1.8	1.9	1.9	2.8	2.2
MP PP 50/41-R ... ²⁾	MP PP 50/41-R ... ²⁾	1.1	1.2	1.3	1.4	1.3	2.8	2
MP PP 50/41-L ... ²⁾	MP PP 50/41-L ... ²⁾	1.4	1.6	1.8	1.9	1.8	2.8	2.2
MP Niro 41-R GLRD	MP SS 41-R MS	1.1	1.2	1.3	1.4	1.4	2.8	2

¹⁾ Data in kg/dm³ / Determined with 3 m hose 3/4" and opened nozzle 3/4"
²⁾ ... = optional identification
³⁾ at 220V/50Hz

Tab. 10: Max. density

NOTICE

- The density values specified in the table are reduced when pumping liquids with a viscosity of more than 1 mPas.

Translation of the original declaration of conformity

We herewith declare under the sole responsibility that the following product complies with the EU Directives listed.

Manufacturer: Lutz Pumpen GmbH
Erlenstraße 5-7
D-97877 Wertheim

Product: **Drum- and Container Pump**

Types:	PP 41-R MS HC	PP 41-L MS HC
	PP 41-R MS SS	PP 41-L MS SS
	PP 41-R SL HC	PP 41-L SL HC
	PP 41-R SL SS	PP 41-L SL SS
	PVDF 41-R SL	PVDF 41-L SL
	PVDF 41-R MS	PVDF 41-L MS
	Alu 41-R SL	Alu 41-L SL
	Alu 41-R MS	Alu 41-L MS
	RE PP 41-L MS SS	RE PP 41-L MS HC
	MP PP 50/41-L SL SS	MP PP 50/41-L SL HC
	MP PP 50/41-R SL SS	MP PP 50/41-R SL HC
	MP PP 50/41-L MS	MP PP 50/41-R MS

Relevant European Directives:
Machinery Directive 2006/42/EC

Applicable harmonized standards:
EN ISO 12100
EN 809

Person authorised to compile the technical file
Lutz Pumpen GmbH, Erlenstraße 5-7, D-97877 Wertheim

Wertheim, 08.11.2018



Heinz Lutz, CEO

Translation of the original declaration of conformity

We herewith declare under the sole responsibility that the following product complies with the EU Directives listed.

Manufacturer: Lutz Pumpen GmbH
Erlenstraße 5-7
D-97877 Wertheim

Product: **Drum- and Container Pump**

Types	Type Examination Certificate	Marking
SS 41-R MS	PTB 00 ATEX 4119 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
SS 41-L MS	PTB 00 ATEX 4119 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
SS 41-R SL	PTB 00 ATEX 4111 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
SS 41-L SL	PTB 00 ATEX 4111 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
RE SS 41-L MS	PTB 00 ATEX 4123 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
MP SS 41-R/L MS	PTB 00 ATEX 4122 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
HC 42-R SL	PTB 03 ATEX 4002 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb
HC 42-L SL	PTB 03 ATEX 4002 X	⊕ II 1/2 G Ex h IIB T4 Ga/Gb

Relevant European Directives	ATEX	2014/34/EU ¹⁾
	Machinery Directive:	2006/42/EG
	¹⁾ Not applicable for special versions without ATEX marking.	

Applicable harmonized standards	EN ISO 12100:2010	EN ISO 80079-36:2016 ²⁾
	EN 809:1998+A1:2009/AC:2010	EN ISO 80079-37:2016 ²⁾
	²⁾ One or more of the standards named in the associated EC-type examination certificates has/have been already replaced by new editions. We declare that the products mentioned above are technically conform to the mentioned current standards.	

The notified body Physikalisch-Technische Bundesanstalt 0102, Bundesallee 100, 38116 Braunschweig, has tested for type examination and issued the certificates specified above.

Person authorised to compile the technical file Lutz Pumpen GmbH, Erlenstraße 5-7, D-97877 Wertheim

Wertheim, 23.02.2021


 Heinz Lutz, CEO



Lutz Pumpen GmbH

Erlenstraße 5-7
D-97877 Wertheim
Tel.: (+49 93 42) 8 79 -0
Fax (+49 93 42) 87 94 04
Email: info@lutz-pumpen.de

www.lutz-pumpen.de