

# Lutz Drum and Container Pumps Be in Control Every Day

**Drum Pump Sets** 

**Laboratory and Drum Pumps** 

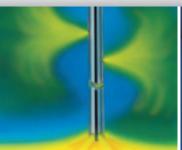
Pumps for complete drum drainage

**Mixing Pumps** 

**Container Pumps** 









### **Lutz – the Development**

#### Decades of innovative and convincing pump technology

#### 1954

The company is founded by Karl Lutz.

#### 1963

Explosion-proof motor for drum pumps, approved by the PTB\*, Braunschweig.

#### 1972

The product innovation — a sealless pumping unit.

#### 1987

The first pumping unit worldwide for complete drum drainage.

#### 1988

The new MA/ME generation of motors: Safety standards that are state of the art even today.



#### 1990

EMIGA emission-proof drum adapter for enhanced safety and health protection at the work place.

#### 1990

The first compressed air motor worldwide in a flameproof enclosure with an explosion-protection classification of Ex d IIC T6.

#### 1993

Modular flow meter system for efficiency and accurate measurement.



#### 1994

Compressed-air-operated oil-free double diaphragm pumps extend the range of products.



#### 2000

New development of a container pump for a safe transfer of chemicals.



#### 2000

New development of a flameproof relay module for flow meters.

#### 2001

Complete pump sets provide enhanced service and a high degree of customer-friendliness.

#### 2001

Centrifugal pumps — easy circulation even in heavy-duty applications.

#### 2001

Certification of all the motors, pumping units and flow meters for compliance with Atex.



#### 2004

HDO Flow meter series for thin bodied to highly viscous fluids.

#### 2006

Complete pump systems for the transfer of alternative fuels and additives from drums and containers.

#### 2007

Lutz B2 Vario pump for the laboratory and research sector.



#### 2010

Battery powered laboratory pump Lutz B1 for convenient and safe transfer of small liquid amounts.

#### 2011

Lutz B70V Sanitary: Designed according to the latest directives for the high requirements of the food, beverage, pharmaceutical, and cosmetics industry.

#### 2012

The new Lutz Flow Meter Series: In Touch with the Future.







# **Contents**

Customer and service orientation	1
Holding structure	

### **Drum Pump Sets**

Individual sets – optimally combined	
for most diverse ranges of application	8-19

### **Drum- and Container Pumps**

For the laboratory range	20-25
For acids, alkalis, oils and non-inflammable liquids	41, 44, 45
For easily inflammable and explosive liquids	43, 46, 47
For complete drum and container drainage	48-57
For mixing and pumping	58-67
For emptying of containers	68-71
Suitable accessories	72-93







### **Consistent customer orientation**

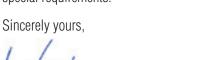
You can expect no less of us

Jürgen Lutz

Concern for safety and reliability plus responsible response to change have been the underlying factors which have helped us become an internationally successful company. Our faithful adherence to these concerns in fulfilling the needs of our customers has provided and will continue to provide the bedrock for sound innovative ideas.

Lutz is the reliable partner in the field of professional liquid handling. As supplier of innovative and high quality pumps and pump systems we support our customers in finding the adequate solution for their fluid handling requirements. Our products as well as our sales and service network contribute worldwide to a safe handling of fluids and the protecting of our environment.

We would be pleased to discuss with you any special requirements.







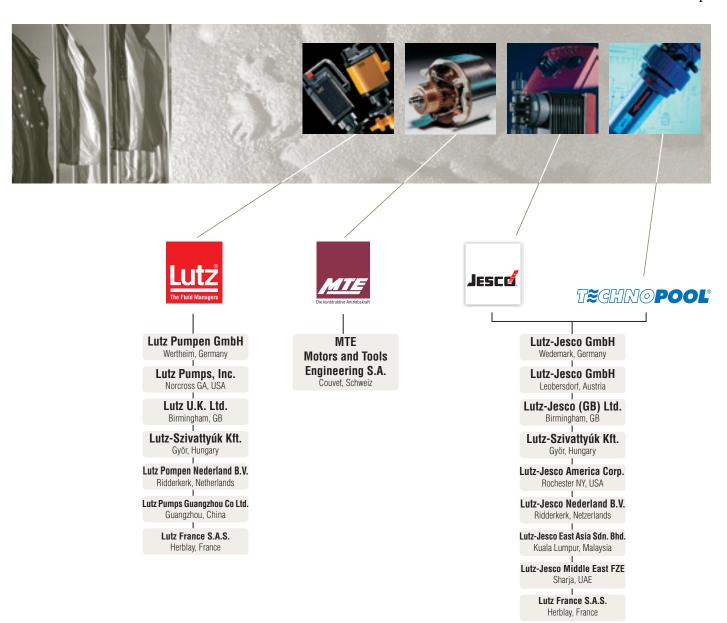
Enhanced safety

with Lutz



### The Holding Structure

A clear concept



# Retain what is good, be open to innovative ideas.

The Lutz Holding GmbH has its own subsidiaries in the USA, the UK, the Netherlands, France, Switzerland, Austria, Hungary, Malaysia, China and the United Arab Emirates. Through its distribution Lutz is represented in more than 80 countries worldwide.

Professional competence and various services within the companies of the Lutz group provide clear advantages and benefits to our customers. Today, the

company offers complex solutions for fluid handling, and even more. The fusion of selected enterprises considerably enlarges the product range. Additionally, the synergies resulting from the interfirm cooperation between Lutz Pumpen GmbH and MTE with Lutz-Jesco GmbH offer the customers interesting perspectives, too. Since 2003, the brand Technopool is adding water treatment equipment for pools to the product line.

# The Best you can do:

### **Decide on Lutz**



#### Save time and money with Lutz

Not only the price/performance ratio is outstanding, the costs of maintenance are even better: With Lutz pumps you maintain durability.

#### Reliable and solid

High quality materials and a proven design guarantee a long service life and a minimum of downtime.

#### Confidence in tried and tested quality

Personal, product and customer training, certification in compliance with DIN EN ISO 9001 and accurate inspection and testing of every single unit guarantee that you are always on the safe side.

#### **Environmental protection is our primary concern**

Environment consciousness is our primary concern. For this reason, Lutz does not "do things by halves". Complete drum drainage, pump tubes without a need for grease and gas displacement devices are a matter of course. EMIGA, the special emission-proof drum adapter by Lutz offers maximum health and environmental protection when handling hazardous material.

#### Service with system

Lutz pumps have hardly no wear parts, the systems are easily detachable and compatible, everything is documented — but nevertheless if service is needed, a world-wide service net and an extensive inventory ensure you that everything gets under way as fast as possible.







#### A tight grip on the future

With Lutz pumps you remain mobile and stay flexible for your future needs: The modular construction allows for a number of combinations.

#### Lutz - and our customers will allways be on the safe side

Operational safety is the most essential thing. Lutz pumps have been approved for compliance with established standards and directives. They comply with all requirements laid down by ATEX, UL, PTB, VDE and CE.

#### Easy operator control through "punch and pump"

Unpack and get started: Lutz pumps systems are absolutely user friendly constructed, easy to clean and flush and if necessary can be disassembled/reassambled in minutes. A convenient hand wheel attaches the motor to the pump tube — connect and disconnect in seconds with no tools.

The hand wheel serves as carrying handle at the same time.

#### Lutz provides comprehensive solutions

Irrespective of whether you want a complete set or a customised unit — Lutz provides solutions that are well-suited. A matching range of accessories guarantees efficient and safe operation in all areas of application.

### **Lutz Pump Sets**

A quick solution for many applications



# Fast assembly Only few simple operations required Immediately ready for use

Lutz pump sets save time and money. The annoying search for the ideal pump with suitable accessories has come to an end. Lutz is now offering you a choice of different pump sets. Optionally, the pumps can be combined with a flow meter. Thus, ordering is simple and you save time for the essential things.

#### Advantages at a glance:

- ✓ Ideally harmonised with the liquid being pumped
- ✓ Fast assembly
- ✓ Immediately ready for action
- ✓ Ideal for pumping and filling thin-bodied liquids
- ✓ Different pump sets for selection
- For emptying of canisters, drums and containers



#### Already pre-assembled

Immediately ready for action. Just delivered, you can start with the new pump sets from Lutz to empty thin-bodied liquids from canisters, drums and containers. We have made preparatory work saving your time.

#### **Ideal** combination

Whether acids or alkalis, light or concentrated, mineral oil products, hazardous fluids or solvents:

Lutz offers for all these applications the ideal solution.

# More time for the essential things



## **Lutz Pump Sets**

1 Pump Set Lutz B2 Vario (Polypropylene)

#### For thin-bodied fluids

such as battery acid, ammonia solution, photographic developer/-fixer, glycols, phosphoric acid, hydrochloric acid and hydrogen peroxide.

For filling small quantities from hobbocks, canisters and drums.

• Motor Lutz B2 Vario, 200 W internally ventilated

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1,3	300	75 (22)	7

Max. temperature of medium 50 °C

Specified values are maximum values determined with water at 20°C, measured directly at the pressure joint. Viscosity determined with oil. When using a nozzle the delivery rate is reduced to approximate values (see brackets).





For emptying caniste	ers and drums		Pump Lutz B2 Vario*	Pump Set Lutz B2 Vario
Imm. depth	500 mm	Order No.	0201-500	0205-020
Imm. depth	700 mm	Order No.	0201-501	0205-021
Imm. depth	1000 mm	Order No.	0201-502	0205-022







Pump Set: **Pump Lutz B2 Vario** polypropylene, **1.5 m** PVC spiral hose 3/4", Lutz-nozzle, hose clamps, wall bracket.

## More time for the essential things

2 Pump Set Lutz B2 Vario (Stainless Steel)

#### For thin-bodied fluids

such as oil-based lubricants, cleaner solvent, plasticizer.

For filling small quantities from hobbocks, canisters and drums.

• Motor Lutz B2 Vario, 200 W internally ventilated

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1,3	300	68 (22)	6,5

Max. temperature of medium 90 °C

Specified values are maximum values determined with water at 20°C, measured directly at the pressure joint. Viscosity determined with oil. When using a nozzle the delivery rate is reduced to approximate values (see brackets).





For emptying caniste	rs and drums		Pump Lutz B2 Vario*	Pump Set Lutz B2 Vario
Imm. depth	500 mm	Order No.	0201-510	0205-030
Imm. depth	700 mm	Order No.	0201-511	0205-031
Imm. depth	1000 mm	Order No.	0201-512	0205-032









Pump Set: **Pump Lutz B2 Vario** stainless steel, **1.5 m** PVC spiral hose 3/4", Lutz-nozzle, hose clamps, wall bracket.

### **Lutz Pump Sets**

3 Pump Set "Alkalis"



such as sodium chloride, kalihydrate, ammonia solution, formic acid and acetic acid.

- **Motor MI-4**, 500 W internally ventilated or optionally with
- Motor MA II 3, 460 W externally ventilated

Motor MI-4

For individual application. For aggressive and non-flammable liquids.

#### Motor MI-4

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1,4	500	87 (50)	19

#### Motor MA II 3

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1.6	500	78 (45)	16

Max. temperature of medium 50 °C

Specified values are maximum values determined with water at 20°C, measured directly at the pressure joint. Viscosity determined with oil. When using a nozzle the delivery rate is reduced to approximate values (see brackets).







**Pump Set Alkalis** 

with motor MI-4

internally ventilated

with shaft SS (stainless steel 1.4571)

For emptying drums and containers	<b>Pump*</b> with MI-4	Pump* with MA II 3	Set with MI-4	Set with MA II 3
Imm. depth 1000 mm Order I	lo. 0205-105	0205-125	0205-101	0205-121
Imm. depth 1200 mm Order I	lo. 0205-106	0205-126	0205-102	0205-122

\*Motor, pump tube PP, hose connection 3/4"

Pump Set: Motor MI-4 or MA II 3, pump tube PP 41-L-SL SS poly-propylene with stainless steel shaft, 2 m PVC spiral hose 3/4" and hose connections, hose clamps, nozzle PP, drum adapter PP.

Pump Set Alkalis
with motor MA II 3

externally ventilated

### More time for the essential things

4 Pump Set "Acids"



such as hydrochloric acid, battery acid, ferric (III) chloride, phosphoric acid, chromic acid and citric acid.

- Motor MA II 3, 460 W externally ventilated or optionally with
- Motor MI-4, 500 W internally ventilated

#### Motor MA II 3

For fuming liquids or corrosive vapours. Powerful, externally ventilated universal motor.

#### Motor MA II 3

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1,6	500	78 (45)	16

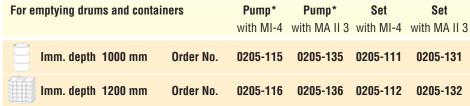
#### Motor MI-4

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1.4	500	87 (50)	19

Max. temperature of medium 50 °C

Specified values are maximum values determined with water at 20°C, measured directly at the pressure joint. Viscosity determined with oil. When using a nozzle the delivery rate is reduced to approximate values (see brackets).





\*Motor, pump tube PP, hose connection 3/4"

Pump Set: Motor MI-4 or MA II 3,
pump tube PP 41-L-SL HC polypropylene
with Hastelloy C shaft, <b>2 m</b> PVC spiral
hose 3/4" and hose connections,
hose clamps, nozzle PP, drum adapter PP.

### **Lutz Pump Sets**

5 Pump Set "Concentrated Acids and Alkalis"

## For concentrated acids and alkalis

such as chloric acid, chromic acid, sulphuric acid, nitric acid, hydrofluoric acid and sodium hypochlorite.

- Motor MA II 3, 460 W externally ventilated or optionally with
- Motor MA II 5, 575 W externally ventilated



#### Motor MA II 3

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1,6	500	78 (45)	16

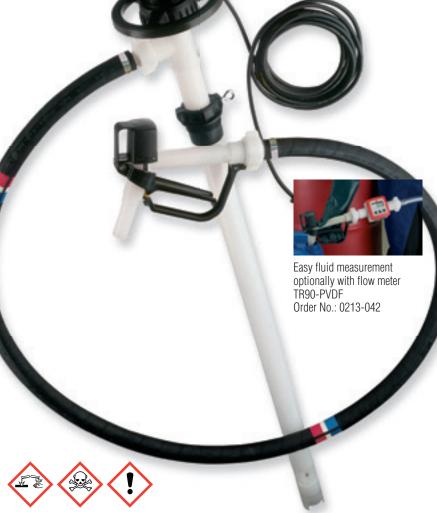
#### Motor MA II 5

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1.8	800	83 (50)	17

Max. temperature of medium 100 °C

Specified values are maximum values determined with water at 20°C, measured directly at the pressure joint. Viscosity determined with oil. When using a nozzle the delivery rate is reduced to approximate values (see brackets).





Pump Set Acids and Alkalis

with motor MA II 3 or

MA II 5 externally ventilated

For emptying drums and contain	ers	Pump*	Pump*	Set	Set
		with MA II 3	with MA II 5	with MA II 3	with MA II 5
Imm. depth 1000 mm	Order No.	0205-215	0205-205	0205-211	0205-201
Imm. depth 1200 mm	Order No.	0205-216	0205-206	0205-212	0205-202

Pump Set: **Motor MA II 3 or MA II 5**, pump tube PVDF 41-L-SL polyvinylidene-fluoride, **2 m** special chemical hose 3/4" and hose connections, hose clamps, nozzle PVDF, with swivel hose connection, drum adapter PP.

\*Motor, pump tube PVDF, hose connection 3/4"

### More time for the essential things

Pump Set Mineral Oil Products

with motor MI-4

internally ventilated or MD 1

6 Pump Set "Mineral Oil Products"

Motor MD-1

reliable.

The compact compressed

air motor is powerful and

# For light viscous mineral oil products

such as Diesel, fuel oil, hydraulic oil, machinery oil and motor oil.

- Motor MI-4, 500 W internally ventilated or optionally with
- Compressed air motor MD-1, 400 W / 6 bar with stop valve and nipple

Motor MI-4

Universal motor for individual application. For aggressive and non-flammable liquids. Strong when handling mineral oil products.

#### Motor MI-4

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1,4	500	87 (50)	19

#### **Motor MD-1**

<b>Density</b> (kg/dm³)	<b>Viscosity</b> (mPas)	<b>Delivery rate</b> (I/min.)	<b>Delivery head</b> (m wc)
1.8	850	90 (65)	20

Max. temperature of medium 100 °C

Specified values are maximum values determined with water at 20°C, measured directly at the pressure joint. Viscosity determined with oil. When using a nozzle the delivery rate is reduced to approximate values (see brackets).





For emptying drums and containers	<b>Pump*</b> with MI-4	Pump* with MD-1	Set with MI-4	Set with MD-1
Imm. depth 1000 mm Order No	. 0205-305	0205-315	0205-301	0205-311
Imm. depth 1200 mm Order No	. 0205-306	0205-316	0205-302	0205-312

Pump Set: Motor MI-4 or MD-1, pump tube Alu 41-L-SL aluminium, 2 m PVC spiral hose 1" and hose connections, hose clamps, nozzle Alu, drum adapter PP.



(For high viscous oils suitable Eccentric Screw Pumps are available, see separate leaflet)



### **Lutz Pump Sets**





For emptying drums and containers	Pump* with ME II 3	Pump* with MD-2	Set with ME II 3	Set with MD-2
Imm. depth 1000 mm Order No.	0205-405	0205-425	0205-401	0205-421
Imm. depth 1200 mm Order No.	0205-406	0205-426	0205-402	0205-422

\*Motor, pump tube SS, equipotential bonding cable

Pump Set: Motor ME II 3 or MD-2, pump tube SS 41-L-SL stainless steel, 2 m solvent hose 3/4", electrically conductive bound with hose connectors brass, nozzle brass, equipotential bonding cable, drum adapter PP (without Ex-plug).

### More time for the essential things

8 Pump Set "Hazardous Fluids"



For emptying drums and containers	Pump* with ME II 3		Set with ME II 3	Set with MD-2
Imm. depth 1000 mm Order No.	0205-405	0205-425	0205-411	0205-441
Imm. depth 1200 mm Order No.	0205-406	0205-426	0205-412	0205-442

\*Motor, pump tube SS, equipotential bonding cable

Pump Set: Motor ME II 3 or MD-2, pump tube SS 41-L-SL stainless steel, 2 m universal chemical hose 3/4", electrically conductive bound with hose connectors stainless steel, nozzle stainless steel 1.4571, equipotential bonding cable, drum adapter PP (without Ex-plug).

### **Lutz Pump Sets**

#### 9 Pump Set "Solvents" for complete drum drainage



0205-502 \*Motor, pump tube RE-SS, equipotential bonding cable

0205-501

0205-521

0205-522

**2 m** solvent hose 3/4", electrically conductive bound with hose connectors brass, nozzle brass, equipotential bonding cable, drum adapter PP (without Ex-plug)

Imm. depth 1000 mm

Imm. depth 1200 mm

Order No.

Order No.

0205-505

0205-506

0205-525

0205-526

### More time for the essential things

10 Pump Set "Hazardous Fluids" for complete drum drainage









For emptying drums and containers	<b>Pump*</b> with ME II 3		Set with ME II 3	Set with MD-2
Imm. depth 1000 mm Ord	er No. 0205-505	0205-525	0205-511	0205-531
Imm. depth 1200 mm Ord	er No. 0205-506	0205-526	0205-512	0205-532

\*Motor, pump tube RE-SS, equipotential bonding cable

Pump Set: Motor ME II 3 or MD-2, pump tube RE-SS 41-L-MS stainless steel, 2 m universal chemical hose 3/4". electrically conductive bound with hose connectors stainless steel, nozzle stainless steel (1.4571), equipotential bonding cable, drum adapter PP (without Ex-plug)

# **Lutz Battery Pump B1 for Laboratories**

#### Mobile and user friendly



# Convenient and safe transfer of small liquid amounts

Environmental protection, safety, energy and cost consciousness and easy handling: the demands which a pump has to meet are growing more and more. At Lutz, we have met this challenge and have completed our delivery program for a battery-powered pump series which lives up to these expectations. The Battery Pump B1 — which is also available as a complete pump set with accessories — incorporates the reliable and tested drum pump technology. This pump type was developed for applications where small amounts of liquids have to be filled from different containers like small cans up to 200-l-drums.

## For each application the right solution from Lutz

With the battery-powered laboratory pump B1 and the electrical-powered pump B2 Vario, Lutz offers to the market a successful duo which is ideally suitable for a convenient and safe transfer of liquids in the laboratory and research sector or whatever industry you are in.



The battery charger can be used as table unit or can be mounted onto the wall.



Pump set immediately ready for use. With 1.5 m PVC-hose and hose nozzle.

### Safe and simple in everyday practice

# Top Performance in a compact design

- ✓ Reliable and tested drum pump technique
- ✓ Modular design
- ✓ Infinitely variable speed controller for comfortable and safe filling applications
- ✓ Ergonomical design for easy handling
- ✓ Optimized complete drum drainage
- ✓ Sophisticated battery system
- Battery charger as wall bracket for safe storage
- ✓ Chemical-resistant
- Easy to service

#### **Battery Pump Set B1 comprises:**

Battery motor 9.6 V, pump tube polypropylene  $\varnothing$  25 mm, 1.5 m PVC-hose DN 12 and hose nozzle

#### **Pump Lutz Battery Pump B1** Drive motor Battery motor 9,6 V, on/off switch with variable speed controller Material: Type of impeller Category 1 / 2 (acc. to ATEX) Immersion tube diameter: up to mm Hose connection: Nominal diameter mm 12 Outer thread G 3/4 Delivery rate\* 16 up to I/min. Delivery head\* up to m wc 8 Temperature of medium: max. °C 0 up to + 40Viscosity\*\* 200 up to mPas Density up to kg/dm3 1.3 1.2 Weight (kg) Motor + pump tube 0205-053 Length: 500 mm Order No. 0205-054 Length: 700 mm Order No. 0205-055 Length: 1000 mm Order No.

#### **Accessories**

Recharger for battery motor	Order No.	0001-050
Curved spout PVC, G 3/4	Order No.	0201-094
Drum adapter (dimensions of threaded connections must be indicated)	Order No.	on request

# Immediately ready for use — only few simple operations required



Remove the motor from the charging station



Connect the motor with the pump tube





Open the nozzle and fill up the requested liquid amount infinitely variable

### **Lutz Drum and Container Pumps**

Lutz B2 Vario: Perfect for the laboratory and research sector



Lutz B2 Vario stands for: Versatile, maximum possible safety, and optimum price-performance ratio.

### The innovation for increased safety and ease of use

Environmental protection, safety, energy and cost consciousness and easy handling: the demands which a pump has to meet are growing more and more. Simplicity and ease of handling must be inherent characteristics as well.

At Lutz, we have met this challenge and have developed a pump which lives up to these expectations. The electric drum and container pump **Lutz B2 Vario** incorporates a reliable and tested technique together with a number of functions providing perfect fluid management solutions, whatever industry you are in.

#### The advantages of the B2 Vario:

- ✓ **Variable speed motor** with safety cut out to enable the transfer of liquids in small amounts
- Easy and safe to operate by integrated ergonomically designed handles and nozzle
- ✓ Ultra quiet, long service life
- ✓ **Different lengths** available 500,700 and 1000 mm for the use in small vessels up to 200 litre drums
- Sealless, lube free pump tube, thus no contamination of the liquid
- ✓ Wide range of applications possible due to sealless construction
- Available in polypropylene, polyvinylidene fluoride and stainless steel (1.4571)

Mounted hanger for storing nozzle and cable at the pump. Service-friendly construction, simple to dismantle and improved complete drainage function.





# **Lutz B2 Vario: (polypropylene or stainless steel)**

The perfect solution to transfer small amounts of liquid







#### **Safety First**

Personal safety and the environment are of vital importance when it comes to handling chemicals, acids, alkalis or other dangerous liquids, particularly when transferring small amounts of liquid. The "Lutz B2 Vario" provides a complete solution. The infinitely variable speed controller with integrated on/off switch allows a controlled and comfortable filling of smaller and larger liquid amounts. The operator can gradually regulate the delivery rate from lowest up to requested speed by one movement of the hand.

# **Lutz Drum and Container Pumps**

Lutz B2 Vario (polypropylene or stainless steel)

Productdetail	Pump		Lutz B2 Vario PP-SL 32	Lutz B2 Vario PVDF-SL 32
	Drive motor		Universal motor 200 W, 230 V, 50 variable speed controller, double class II, protection class IP 24, wi switch, 3 m connection cable	insulated on protection
341	Material:	Pump tube Impeller	PP PP	PVDF ETFE
	Type of impeller		R	R
	Category 1 / 2 (acc. to ATEX)		no	no
	Immersion tube diameter:	up to mm	32	32
	Hose connection:	Nominal diameter mm	19	19
		Outer thread	G 1	G 1
	Delivery rate*	up to I/min.	75	75
	Delivery head*	up to m wc	7	6,5
	Temperature of medium:	up to °C	- 15 up to + 50	- 15 up to + 90
	Viscosity**	up to mPas	300	300
	Density	up to kg/dm³	1.3	1.3
	Weight (kg)	Motor + pump tube	2.2 - 2.5	2.3 - 2.6
11	Length: 500 mm	Order No.	0201-500	0201-580
	Length: 700 mm	Order No.	0201-501	0201-581
	Length: 1000 mm	Order No.	0201-502	0201-582
	* Determined with water at 20 °C	** Determined with oil Special le	ngths, other voltages and frequencies on req	uest.



rump		Luiz DZ Vallo 33-3L Zo					
Drive motor		Universal motor 200 W, 230 V, 50 Hz, on/off switch with variable speed controller, double insulated on protection class II, protection class IP 24, with integrated motor protection switch, 3 m connection cable					
Material:	Pump tube Impeller	Stainless steel 1.4571 ETFE					
Type of impeller		R					
Category 1 / 2 (acc. to ATEX)		no					
Immersion tube diameter:	up to mm	28					
Hose connection: Nominal diameter mm		19					
	Outer thread	G 1					
Delivery rate*	up to I/min.	68					
Delivery head*	up to m wc	6.5					
Temperature of medium:	up to °C	- 15 up to + 90					
Viscosity**	up to mPas	300					
Density	up to kg/dm³	1.3					
Weight (kg)	Motor + pump tube	2.9 - 3.5					
Length: 500 mm	Order No.	0201-510					
Length: 700 mm	Order No.	0201-511					
Length: 1000 mm	Order No.	0201-512					
* Determined with water at 20 °C	** Determined with oil Special le	engths, other voltages and frequencies on request.					

#### for the laboratory and research sector

#### Materials (coming into contact with the pumped medium):

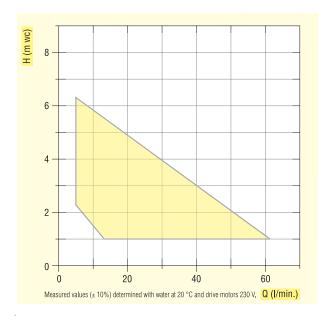
Version:	PP-SL	PVDF-SL	Niro-SL
Housing:	PP/PVDF	PVDF	SS (1.4571)
Impeller:	PP	ETFE	ETFE
Seals:	none	none	none
Mechanical seals:	none	none	none
Bearing:	ETFE/PTFE	ETFE/PTFE	ETFE/PTFE
Drive shaft:	Hastelloy C	Hastelloy C	SS (1.4571)

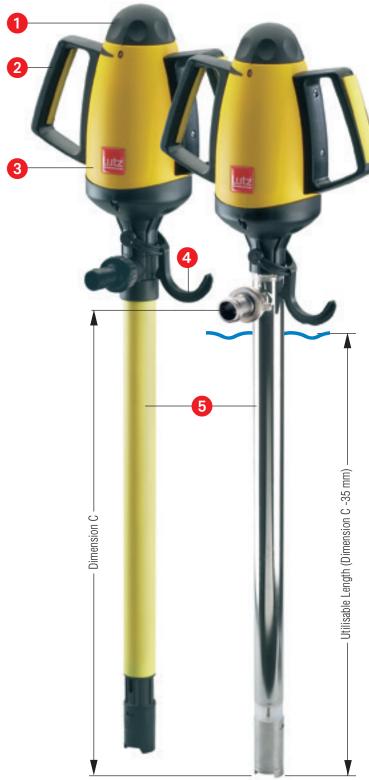
- 1 Infinitely variable speed controller for safe liquid transfer
- 2 Easy and safe to operate by ergonomically designed handles
- 3 Powerful universal motor with improved service life
- 4 Hanger for professional storage of nozzle and cable
- Modular designed sealless pump tube in polypropylene, polyvinylidene fluoride or stainless steel with improved complete drainage function



IP 24

**(**E







Suitable range of accessories see pages 73-75

## **Lutz Drum and Container Pumps**

#### Your individual pump selection

#### **Safety first**

The explosionproof models of Lutz drum pumps provide optimum protection when handling easily inflammable, combustible material and when working in potentially explosive environments. The drum pumps are made of stainless steel (1.4571) and Hastelloy C. They comply with all the international standards and provisions as well as with the directives according to Atex 2014/34/EU and IEC Ex.



Lutz drum and container pumps are always the right choice.

# The right solution for each and every liquid

We have the pump suited to any liquid to be pumped — without compromise. Acids and alkalis have no impact on polypropylene and PVDF drum pumps. Aluminium pumps ensure unrestricted flow of diesel and oil. Stainless steel is particularly suitable for corrosive and neutral liquids, it proves especially useful in the pharmaceutics and food industry. Hastelloy C, which is extremely resistant, does not stop at highly aggressive acids or alkalis. Your choice is not restricted to the type of impeller. Lutz drum pumps are available as sealless versions and as well as versions with mechanical seals.



### **Lutz Drum and Container Pumps**

in PURE Version

#### **Lutz Drum and Container Pumps PURE version**

Pumps and flow meters in contact with food products are considered to be "food contact materials" and are thus subject to strict legal regulations.

The new Lutz PURE series includes products which are in accordance with ATEX Directives as well as with FDA Regulation and European Regulation according to 1935/2004/EC.







- ✓ Physiologically safe type
- High surface quality
- ✓ Food-safe connections
- Not filled with lubricants, preventing product contamination
- Also for alcoholic food products, cosmetics and pharmaceuticals and flammable cleaning products





The "food safe" sign or "glass and fork" symbol stands for suitability for foodstuffs. This symbol denotes products which were tested to determine their physical and chemical composition

and have been found to be safe for contact with food in accordance with the requirements of Regulation (EC) 1935/2004.



The Food and Drug Administration in the USA certifies materials and substances and also defines limit values for extractable substances which must be complied with, as is the case with elastomers for aqueous or fatty food products (21 CFR 177.2600).



Lutz pumps from the PURE series are also available in an explosion-proof version in accordance with ATEX Directive 2014/34/EU. They are well-suited for pumping highly flammable media in food and beverage production, such as alcohols, essential oils and flavourings, as well as cleaning products and disinfectants used for cleaning purposes.

# The frequently used universal solution

Pump tubes: PP/PVDF/ALU

Due to their carefully adapted material combinations, the modular Lutz pump tubes are auitable for almost all applications, in which thin-bodied and slightly viscous liquids need to be pumped. PP and PVDF are ideally suited for acids and alkalis, aluminium is particularly well suited for oil and cooling lubricants.

# Excellent design: Almost anything is possible

Once again, the focus is on a broad range of applications—hence the modular design. The design of the pump tubes permits a sealless version of the pump tube as well as a version with mechanical seals. The sealless versions do not feature any seals that come into contact with the medium—not even O-ring seals. In the version with mechanical seals, the drive shaft is secured with one mechanical seal with two shaft seals behind it. Depending on your requirements, the impeller is optimised either with regard to the delivery rate or the pumping head.

#### We use our intelligence: Smart material selection

We select the materials with regard to the applications. PVDF offers the highest degree of chemical resistance. There are no grease fillings in the shaft tube, so there is no way that the fluid to be pumped can be contaminated. All the models are equipped with universally resistant PTFE slide bearings.

#### Logical decision: Service-friendly design

Maintenance without the need for special tools — that 's what we call service-friendly. The pump tubes boast a straightforward and coherent design. The motor can be disconnected quickly through the convenient hand wheel that is also used as a carrying handle.

#### How economical can you get?

A large number of standard components help save resources and keep inventory costs at bay.

# Two-to-one for your success: one pump tube, two sealing systems

#### Everything well thought out

These models are convincing in their simple design of the connecting head, of the T-fitting and of the pump tube. They guarantee a high degree of resistance and minimum wear, and thus an extended service life.

#### High quality - for you!

The metal connecting head with an exceptionally corrosion-resistant coating enhances the heat dissipation of the bearing friction. The outer tube is extremely rigid due to thick walls. You can select either a stainless steel or Hastelloy C drive shaft.

#### Assembly and replacement made simple

Save time and money. The sealing modules of the pumps with mechanical seals (MS) and of the sealless pumps (SL) can be replaced rapidly and conveniently — should they be worn. It is possible at any time to convert a pump with mechanical seal to a sealless pump. No additional modifications are required. The robust pump foot (model R or L) is easy to detach.

#### Practically indestructible

The double high-quality PTFE shaft bearing guarantees a long service life of these pumps.



#### **German Patent:**

DE 196 14 350 C2



# **Untiring: Lutz Pump Tubes**

Pump tubes: Stainless steel/Hastelloy C

#### Untiring: Pump tubes: Stainless steel/Hastelloy C

These "universal geniuses" don't take offence easily: robust Lutz pump tubes for a vast range of applications, even with extensive mechanical stress. Ideally suited for thin-bodied to slightly viscous liquids.

The pump tubes stainless steel are suited for delivering neutral and aggressive, easily inflammable and non-inflammable liquids. HC is used especially for highly aggressive, easily inflammable chemicals.

# Tried and tested a thousand times in practice

In this case, a broad range of applications was the primary objective of the design engineers. The sealless version does not feature any seals that come into contact with the medium. In the version with mechanical seals, the drive shaft is secured with one mechanical seal with two shaft seals behind it.

#### The material is what matters

Stainless steel pump tubes feature an extremely resistant pure carbon bearing, Hastelloy C pump tubes feature an extremely resistant ceramic bearing. Another benefit: There are no grease fillings in the shaft tube, so there is no way the fluid to be pumped can be contaminated.

**New:** Stainless steel pump tubes in PURE version. All materials coming into contact with the pumped fluids are physiologically safe. The pump tubes are mainly used in the food-, cosmeticsand pharmaceutical industry.





# When does one have to use an explosionproof pump, when not?

Several factors play a role where safety is at stake. The liquid to be delivered, the circumstances of the delivery and the environment.

Explosion protection measures are imperative for flammable liquids belonging to explosion group II (according to EN/IEC 60 079-0).

The hazard imposed by the gases increases from explosion group II A and II B to II C. Accordingly, the demands placed in the operating appliances used for these explosion groups also rises.

Of course, this is the reason why operating appliances, for example, which are approved for II C, are also usable for all other explosion groups.

#### Caution!

SS

A pump tube with an explosionproof motor must be used for easily inflammable liquids.

Refer to page 32

#### Some examples:

Group II A: e.g. acetone, gasoline, toluene Group II B: e.g. ethene, ethylene oxide,

diethyl ether

Group II C: e.g. acetylene, hydrogen,

carbon disulfide

### **Pump Power: Range of Motors**



Double insulation in keeping with type of protection class II, splash water protected in keeping with IP 24, double-pole ON/OFF switch and single-pole thermal overcurrent release. 5-m connection cable with plug. Not explosionproof.

- Light and convenient
- ✓ Powerful
- ✓ Good price/performance ratio
- Optionally available with speed controller

Undemanding universal motor designed for industrial applications and suitable for pumping thin-bodied, slightly viscous, neutral, aggressive and non-inflammable fluids. It demonstrates its power even when handling acids and alkalis.

r More information see below.

#### **Everything under control: MI 4-E**

The MI 4-E motor is additionally equipped with a speed controller. This ensures controlled filling and refilling of fluids at any time.

We recommend the use of the MA II 5-S motor for extremely aggressive environments.

Тур	Voltage ∨	Frequency Hz	<b>Output</b> W	<b>Weight</b> kg	Order No. (with Low-voltage release)	Order No. (without low-voltages- release)
MI-4-230	220-230	50	450-500	2.8	-	0030-000
MI-4-230 E	220-230	50	450-500	2.8	-	0030-001
MI-4-230	230	60	400	2.8	-	0030-015
MI-4-230 E	230	60	400	2.8	-	0030-016
MI-4-120	110-120	50-60	550-640	2.8	-	0030-003
MI-4-120 E	110-120	50-60	550-640	2.8	-	0030-006
MI-4-100 E	100	50-60	520-550	2.8	-	0030-008



Double-pole ON/OFF switch, splash water protected in keeping with IP 54, single-pole thermal overcurrent release. 5-m connection cable with shock-proof plug. Not explosion proof

- ✓ Robust, rigid design
- ✓ Double insulation with protective conductor connection
- ✓ Integrated low voltage release (option)
- Optimised cooling air conduction
- Externally cooled
- ✓ Double wall housing
- ✓ Available in three power ratings

The convenient and powerful MA II universal motors are ideal for pumping thin-bodied to slightly viscous, aggressive and non-inflammable fluids.

#### **Double protection is even better**

Robust and durable: The inner part of the double wall housing is made of aluminium, the outer part is made of special acid-proof plastic. Aggressive and corrosive vapours cannot intrude into the inner part of the motor. The air flow for cooling the motor is conducted between the two walls of the housing.

#### Safety and protection

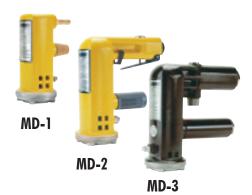
A low voltage release prevents uncontrolled starting of the motor. There is double insulation between the live parts and the outer surface of the motor and the pump tube that can be touched.

## Acid-proof version: The indestructible

The acid-proof motor version MA II 5-S is armed against all types of "aggression". The motors feature a metal housing with a special anti-acid coating, a plastic shell and additional sealing of the inner part of the motor.

Тур	<b>Voltage</b> V	Frequency Hz	<b>Output</b> W	Weight kg	Order No. (with Low-voltage release)	Order No. (without low-voltages- release)
MAII3	220-230	50	430-460	4.6	0060-008	0060-000
	100-120	50-60	430	4.6	0060-016	0060-044
MAII 5	220-230	50	540-575	5.4	0060-009	0060-001
	220-230	60	450-490	5.4	0060-043	0060-042
	100-120	50-60	510	5.4	0060-017	0060-045
	42	50	520	5.4	0060-014	0060-006
	24	=	400	5.4	0060-015	0060-007
MAII5S	220-230	50	540-575	5.4	-	0060-091
	100-120	50-60	510	5.4	-	0060-094
MAII 7	220-230	50	790-795	6.6	0060-010	0060-002
	100-120	50-60	700	6.6	0060-018	0060-046

### **Lutz: The Fluid Managers**









Overload-proof and explosion proof compressed air motor. 400 W at an operating pressure of 6 bar. Air consumption approx. 0.88 Nm<sup>3</sup>/min (unconfined air). Operating range of from 3-6bar. Low-noise operation through muffler.

- Explosionproof
- Overloadproof
- Compact design
- Delivery flow is easy to control
- Optionally with/without manual operation

#### MD compressed air motors

Especially in environments, in which electricity may constitute a hazard. The compact MD compressed air motors automatically adjust to the respective load. Ideal for handling thin-bodied, aggressive, slightly viscous and easily inflammable liquids assigned to explosion groups II A, II B and II C.

#### Trio grande: The models

Three different versions of the MD compressed air motors are available: MD-1 without manual operation for automatic control. MD-2 with manual operation and interlock. MD-3 with on/off pushbutton. Approved according to Atex Fx II 2 G.

#### MD-3: Play it safe

The first compressed air motor in an explosionproof enclosure. Flashback arresters, spring loaded spherical safety relief valves, plastic rotors and extremely long threads guarantee even more safety when pumping easily inflammable liquids. This virtually eliminates opera-

Туре	Betriebsdruck W	Output W	<b>Weight</b> kg	Order No.
MD-1	6	400	1.1	0004-087
MD-2	6	400	1.5	0004-088
MD-3	6	400	2.1	0004-090



The B4/GT has a proven record of success in plant construction and as a drum pump drive. The perfect system for thin-bodied to slightly viscous liquids. These "undemanding" partners hardly ever show signs of wear. The ideal solution for long periods of operation.

#### A wide range of capabilities

The B4/GT motor is suitable for stationary applications with terminal box and external

protection switch in the control cabinet and equally well as a mobile multi-talent - in this case with a protection switch attached.

#### **Absolutely undemanding**

The flange mounted single-stage gears are oillubricated and extremely easy to maintain.

Three-phase gear motor, 0.75 kW, 230/400 V, 50 Hz, efficiency level IE 2. With terminal box or attached motor protection switch with ON/OFF function.

- Especially smooth and quiet operation
- Special models available

Туре	<b>Voltage</b> V	Frequency Hz	<b>Output</b> W	<b>Weight</b> kg	Order No. (cable terminal box)	Order No. (protection switch)
B4/GT	230-400	50	750	10.0	0004+019	0004+067

### **Pump Power: The motors ME II**







Explosionproof in compliance with II 2 G Ex de IIC T 5 or T6. Double-pole ON/OFF switch, splash water protected in keeping with IP 54, double-pole thermal overcurrent release. 5 m connection cable with safety plug (not explosionproof), optionally available with explosionproof plug.

- Explosionproof in compliance with Atex and IEC Ex
- Low voltage release by default
- Optionally available without low voltage release
- Double isolation with protective conductor connection
- ✓ Optimised cooling air conduction
- Externally cooled
- Double wall housing

Available in four power ratings

These motors aren't taken aback easily. The ME II explosionproof universal motor is the answer (German Patent DE 38 15427 C2) for pumping a large variety of thin-bodied, easily inflammable and combustible liquids..

# Double walls provide optimum protection

The inner part of the double wall housing is made of aluminium, the outer part is made of special acidproof, non-conducting plastic. This prevents aggressive and corrosive vapours from intruding into the inner part of the motor. The air flow for cooling the motor is conducted between the two walls of the housing.

#### Tested quality and safety

Complies with the European Standards EN/IEC 60 079-0, EN/IEC 60 079-1 and EN/IEC 60 079-7, explosion proof in compliance with II 2 G Ex de IIC T5 or T6 and built and approved in keeping with the explosion protection Atex Directive 2014/34/EU and IEC Ex.

A low voltage release prevents uncontrolled starting of the motor. All the motors of the ME II series feature a protective conductor connection. There is double insulation between the live parts and the outer surface of the motor that can be touched as well as between the live parts and the pump tube. This guarantees protection against spark discharge during potential equalisation, specially in explosive areas.

#### **German Patent:**

DE 38 15427 C2

#### Who is afraid of voltages?

Туре	<b>Voltage</b> V	Frequency Hz	<b>Output</b> W	<b>Weight</b> kg	Order No. (with low-voltage release)	Order No. (without low-voltage release)
ME II 3	220-230	50	430-460	5.5	0050-000	0050-016
	100-120	50	380-440	5.5	0050-003	-
	110-120	60	400-460	5.5	0050-006	0050-009
ME II 5	220-230	50	540-580	6.3	0050-001	0050-017
	220-230	60	475-515	6.3	0050-034	0050-035
	24	=	400	6.3	0050-013	0050-015
ME II 7	220-230	50	750-795	7.5	0050-002	0050-018
ME II 8	220-230	50	880-930	8.0	0050-042	0050-041



### Some like it hot

Lutz explosionproof drum pumps



#### **Power**

Our extensive range of motors comprises explosionproof compressed air and electric motors. Both the motor and the pump tube are approved as explosionproof in keeping with Atex Directive 2014/34/EU, since the motor and the pump tube form an integral assembly.

#### **Handy and convenient**

In the case of explosionproof pumps, the motor and the pump tube are also connected and disconnected in no time at all via the hand wheel. The hand wheel is also used as a carrying handle.

#### Safety benefits from experience

For more than 50 years, explosion protection has played a major role in the philosophy of our company. This stands for experience that you as a planner and operator - can trust. In 1963, Physikalisch-Technische Bundesanstalt (PTB) granted Lutz the first approval for an explosionproof drum pump. Today, motors and pump tubes are subject to to Atex Directive 2014/34/EU. The motors and pump tubes are each awarded their own certificate. Lutz - as the manufacturer, certifies this through the EC Declaration of Conformity.

#### Explosion protection is a

#### matter of public concern!

The manufacturer is not the only one responsible for ensuring that all the requirements of the explosion protection directive are met. The plant operator is equally responsible. The commissioning regulations depend on the intended use of the pump. Apart from this, every country has its national regulations with which the plant operator must comply in everyday practice – for his own safety and the safety of his employees.



# **Lutz Drum and Container Pumps**

Pump tube PP (polypropylene) for corrosive and neutral liquids

roductdetail	Pump tube							·SL	PP-MS		
V.	Type of im	peller					L	R	L	R	
	Category 1 / 2 (acc. to ATEX)						no	no	no	no	
7		tube diamet			up to mm		41	41		41	
		re of mediun			up to °C		50	50		50	
	Material				Pump tube		PP	PP		PP	
					Impeller		PP	PP	PP	PP	
	Hose conn	ection			Nominal diam	eter mm	19-32	19-32	19-32	19-32	
					Outer thread		G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/	
	Length: 7	'00 mm***	shaft SS		Order No.		0110-304	0110-300	0103-504	0103-5	
	Length: 1000 mm*** shaft SS				Order No.		0110-305	0110-301	0103-505	0103-5	
		:00 mm***			Order No.		0110-306	0110-302	0103-506	0103-5	
<b>×</b>		'00 mm***			Order No.		0110-204	0110-200	0103-404	0103-4	
		00 mm*** s			Order No.						
	-	100 mm***			Order No.						
	-	.00 mm*** s			Order No.			0110-213		_	
	_	00 mm***			Order No.			0110-214		_	
	_	00 mm*** s			Order No.			0110-215		_	
	_	'00 mm*** s			Order No.			0110-216			
	_				Order No.			0110-210			
	Lengin. 20	00 mm*** s	SHAIL FIG		Oraci No.		0110-212	0110-217		_	
	01 1										
	Choice	of motor	S		<b>Operating</b>	data					
		MI-4	MI-4-E		Characteristic	curve no.	101	100	101	100	
2		-	with speed		Flow rate*	up to I/min.	87	160	87	160	
			controller		Delivery head		19	8.5	19	8.5	
-	Output	500 W	500 W		Viscostiy**	up to mPas	500	150	500	150	
	Voltage:	230 V	230 V		Density****	up to kg/dm³	1.4	1.1		1.1	
	Order No.	0030-000	0030-001		Weight (kg)	Motor + pump tube	3.9	3.9	3.9	3.9	
		MA II 3			Characteristic		103	102	103	102	
	Output:	460 W	460 W		Flow rate*	up to I/min.	78	155		155	
	Voltage:	230 V	230 V		Delivery head	* up to m wc	16	7.5		7.5	
	LVR.:	no	yes		Viscostiy**	up to mPas	500	150		150	
	0 1 11	0000 000	0000 000		Density****	up to kg/dm³	1.6	1.2		1.2	
	Order No.	<u>UUbU-UUU</u>	0060-008		Weight (kg)	Motor + pump tube	5.7	5.7	no 41 50 PP PP 19-32 G 1 1/4 0103-504 0103-505 0103-404 0103-405 101 87 19 500 1.4 3.9	5.7	
		MAII 5	MA II 5	MAII5S	Characteristic	curve no.	105	104	105	104	
	Output:	575 W	575 W	575 W	Flow rate*	up to I/min.	83	160		160	
	Voltage:	230 V	230 V	230 V	Delivery head	* up to m wc	18	9		9	
	LVR.:	no	yes	no	Viscostiy**	up to mPas	800	350		350	
	Order No.	0060-001	0060-009	acid-proof <b>0060-091</b>	Density**** Weight (kg)	up to kg/dm³ Motor + pump tube	1.8 6.5	1.3 6.5		1.3 6.5	
	0.301110.										
	O. 14-20 14	MA II 7	70F W		Characteristic		107	106		106	
w-voltage release (LVR.):	Output:	795 W	795 W		Flow rate*	up to I/min.	90	170		170	
events the pump from starting	Voltage:	230 V	230 V		Delivery head		22	12 350		12 350	
again without warning after a wer failure. Its recommended	LVR.:	no	yes		Viscostiy** Density****	up to mPas	800 1.9	350 1.4		1.4	
nen pumping hazardous liquids.	Order No.	0060-002	0060-010		Weight (kg)	up to kg/dm³ Motor + pump tube	7.7	7.7		7.7	
		MD-1	MD-2		Characteristic	curve no.	109	108	109	108	
	Output:	400 W	400 W		Flow rate*	up to I/min.	90	180		180	
	Operating				Delivery head		20	10		10	
The same of the sa	pressure:	6 bar	6 bar		Viscostiy**	up to mPas	850	600		600	
The same	pressure.	O Dai									
	pressure.	o bai			Density****	up to kg/dm³	1.8	1.3		1.3	

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 200–2500 mm on request

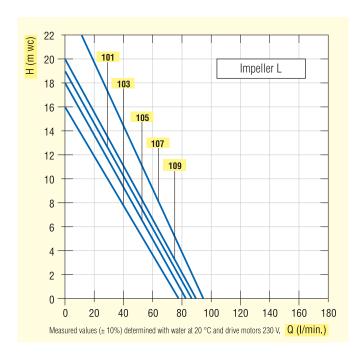
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

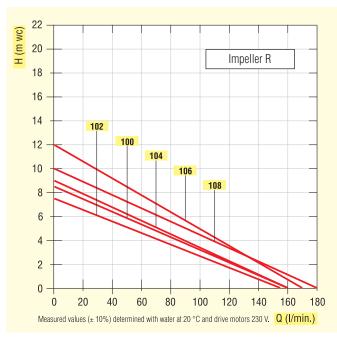
# Pump Tube PP (polypropylene)

#### for corrosive and neutral liquids

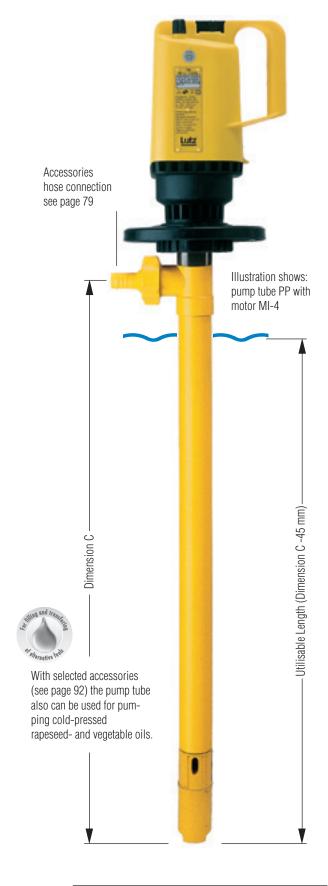
#### Materials (coming into contact with the pumped medium):

Version:	SL	MS			
Housing:	PP/PVDF	PP/PVDF			
Impeller:	PP	PP			
Seals:	none	FPM			
Mechanical seals:	none	Carbon, SiC, FPM, HC-4 (2.4610)			
Bearing:	ETFE/PTFE	ETFE/PTFE			
Drive shaft:	Stainless steel (1.4571) or HC-4 (2.4610)	Stainless steel (1.4571) or HC-4 (2.4610)			





Please remember that the flow rate is reduced as the **viscosity** increases. The **density** of the pumped liquid similarly affects the flow rate, though to a lesser extent.





# **Lutz Drum and Container Pumps**

Pump tube PVDF (polyvinylidene fluoride) for highly corrosive chemicals and neutral liquids

Productdetail	Pump to	ube					PVD	F-SL	PVDI	F-MS
2	Type of im	peller					L	R	L	R
Design 1		/ 2 (acc. to AT	EX)				no	no	no	no
	Immersion	tube diamet	er:		up to mm		41	41	41	41
	Temperatur	re of medium	1:		up to °C		100	100	100	100
	Material:				Pump tube		PVDF	PVDF	PVDF	PVDF
					Impeller		ETFE	ETFE	ETFE	ETFE
	Hose connection:		Nominal diame	eter mm	19-32	19-32	19-32	19-32		
					Outer thread		G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Length: 7				Order No.			0122-200		0123-400
	Length: 10				Order No.				0123-405	
1	Length: 12	OO IIIIII			Order No.		0122-200	0122-202	0123-406	0123-402
	Choice	of motor:	S		Operating	data				
		MI-4	MI-4-E		Characteristic of	curve no.	201	200	201	200
2		-	with speed		Flow rate*	up to I/min.	87	160	87	160
E .			controller		Delivery head*	up to m wc	19	8.5	19	8.5
-	Output:	500 W	500 W		Viscosity**	up to mPas	500	150	500	150
	Voltage:	230 V	230 V		Density****	up to kg/dm³	1.4	1.1	1.4	1.1
	Order No.	0030-000	0030-001		Weight (kg)	Motor + pump tube	4.5	4.5	4.5	4.5
-		MAII3			Characteristic of	curve no	203	202	203	202
	Output:	460 W	460 W		Flow rate*	up to I/min.	78	155	78	155
160	Voltage:	230 V	230 V		Delivery head*		16	7.5	16	7.5
7	LVR.:	no	yes		Viscosity**	up to mPas	500	150	500	150
					Density****	up to kg/dm³	1.6	1.2	1.6	1.2
	Order No.	0060-000	0060-008		Weight (kg)	Motor + pump tube	6.3	6.3	6.3	6.3
		MA II 5	MA II 5	MAII 5 S	Characteristic of	curve no	205	204	205	204
	Output:	575 W	575 W	575 W	Flow rate*	up to I/min.	83	160	83	160
	Voltage:	230 V	230 V	230 V	Delivery head*	The state of the s	18	9	18	9
	LVR.:	no	yes	no	•	up to mPas	800	350	800	350
				acid-proof	Density****	up to kg/dm³	1.8	1.3	1.8	1.3
	Order No.	0060-001	0060-009	0060-091	Weight (kg)	Motor + pump tube	7.1	7.1	7.1	7.1
		MAII 7			Characteristic of	curve no	207	206	207	206
	Output:	795 W	795 W		Flow rate*	up to I/min.	95	170	95	170
Low-voltage release (LVR.):	Voltage:	230 V	230 V		Delivery head*	up to m wc	25	12	25	12
Prevents the pump from starting up again without warning after a	LVR.:	no	yes		Viscosity**	up to mPas	800	350	800	350
power failure. Its recommended when pumping hazardous liquids.			,		Density****	up to kg/dm³	1.9	1.4	1.9	1.4
which pumping nazardous niquids.	Order No.	0060-002	0060-010		Weight (kg)	Motor + pump tube	8.3	8.3	8.3	8.3
		MD-1	MD-2		Characteristic of	curvo no	209	208	209	208
	Output:	400 W	400 W		Flow rate*	up to I/min.	90	180	90	180
	Operating	100 11	100 11		Delivery head*	up to m wc	20	100	20	100
THE PARTY NAMED	pressure:	6 bar	6 bar		Viscosity**	up to m we	850	600	850	600
					Density****	up to kg/dm³	1.8	1.3	1.8	1.3
	Order No.	0004-087	0004-088		Weight (kg)	Motor + pump tube	3.2	3.2	3.2	3.2
		B4/GT			Characteristic of	curve no	211	210	211	210
	Output:	750 W	750 W		Flow rate*	up to I/min.	75	140	75	140
	Voltage:	230/400 V	230/400 V		Delivery head*	up to m wc	10	8.5	10	8.5
THE PERSON NAMED IN	Protection	200, 100 V	200, 100 V		Viscosity**	up to m we	400	400	400	400
CONTROL OF	switch:	no	yes		Density****	up to kg/dm³	2.2	2.0	2.2	2.0

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 200–2500 mm on request

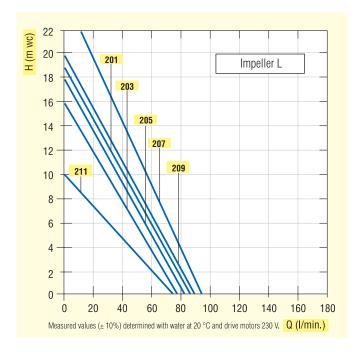
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

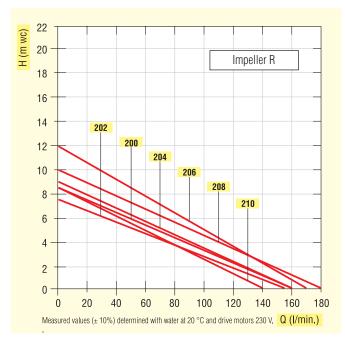
## Pump Tube PVDF (polyvinylidene fluoride)

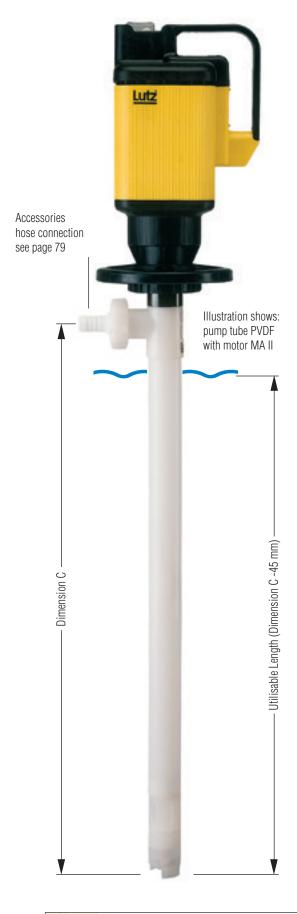
for highly corrosive chemicals and neutral liquids

#### Materials (coming into contact with the pumped medium):

Version:	SL	MS
Housing:	PVDF	PVDF
Impeller:	ETFE	ETFE
Seals:	none	FPM
Mechanical seals:	none	Carbon/SiC, FPM, HC-4 (2.4610)
Bearing:	ETFE/PTFE	ETFE/PTFE
Drive shaft:	HC-4 (2.4610)	HC-4 (2.4610)









Pump tube Alu (aluminium) for neutral, non flammable liquids

Productdetail	Pump to	ıbe					Alu	-SL	Alu-	-MS
¥	Type of im	peller					L	R	L	R
		/ 2 (acc. to ATI	EX)				no	no	no	no
	Immersion	tube diamet	er:		up to mm		41	41	41	41
	Temperatur	re of medium	1:		up to °C		100	100	100	100
	Material:				Pump tube		Alu	Alu	Alu	Alu
					Impeller		ETFE	ETFE	ETFE	ETFE
	Hose conn	ection:			Nominal diame	eter mm	19-32	19-32	19-32	19-32
					Outer thread		G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Length: 7				Order No.		0132-304		0133-504	0133-500
	Length: 10				Order No.				0133-505	
	Length: 12				Order No.				0133-506	0133-502
- 0	Length: 15	UU mmaaa			Order No.		0132-309	-	_	-
	Choice	of motors	S		Operating	data				
		MI-4	MI-4-E		Characteristic	curve no.	301	300	301	300
2		-	with speed		Flow rate*	up to I/min.	87	160	87	160
-			controller		Delivery head*	up to m wc	19	8.5	19	8.5
-	Output:	500 W	500 W		Viscosity**	up to mPas	500	150	500	150
	Voltage:	230 V	230 V		Density****	up to kg/dm³	1.4	1.1	1.4	1.1
	Order No.	0030-000	0030-001		Weight (kg)	Motor + pump tube	4.3	4.3	4.3	4.3
E		MAII3			Characteristic	curve no.	303	302	303	302
	Output:	460 W	460 W		Flow rate*	up to I/min.	78	155	78	155
No.	Voltage:	230 V	230 V		Delivery head*		16	7.5	16	7.5
	LVR.:	no	yes		Viscosity**	up to mPas	500	150	500	150
			,		Density****	up to kg/dm³	1.6	1.2	1.6	1.2
	Order No.	0060-000	0060-008		Weight (kg)	Motor + pump tube	6.1	6.1	6.1	6.1
		MA II 5	MA II 5	MAII 5 S	Characteristic	curve no	305	304	305	304
	Output:	575 W	575 W	575 W	Flow rate*	up to I/min.	83	160	83	160
	Voltage:	230 V	230 V	230 V	Delivery head*		18	9	18	9
	LVR.:	no	yes	no	Viscosity**	up to mPas	800	350	800	350
		110	you	acid-proof	Density****	up to kg/dm <sup>3</sup>	1.8	1.3	1.8	1.3
	Order No.	0060-001	0060-009	0060-091	Weight (kg)	Motor + pump tube	6.9	6.9	6.9	6.9
		MA II 7			Characteristic	curve no	307	306	307	306
	Output:	795 W	795 W		Flow rate*	up to I/min.	95	170	95	170
Low-voltage release (LVR.):	Voltage:	230 V	230 V		Delivery head*		25	12	25	12
Prevents the pump from starting up again without warning	LVR.:	no	yes		Viscosity**	up to mPas	800	350	800	350
after a power failure. It is			,00		Density****	up to kg/dm³	1.9	1.4	1.9	1.4
recommended when pumping hazardous liquids.	Order No.	0060-002	0060-010		Weight (kg)	Motor + pump tube	8.1	8.1	8.1	8.1
		MD-1	MD-2		Characteristic	CURVE NO	309	308	309	308
The same of	Output:	400 W	400 W		Flow rate*	up to I/min.	90	180	90	180
	Operating		.55 11		Delivery head*		20	100	20	100
THE PARTY NAMED	pressure:	6 bar	6 bar		Viscosity**	up to mPas	850	600	850	600
** #*					Density****	up to kg/dm³	1.8	1.3	1.8	1.3
	Order No.	0004-087	0004-088		Weight (kg)	Motor + pump tube	3.0	3.0	3.0	3.0
		B4/GT			Characteristic	curve no.	311	310	311	310
	Output:	750 W	750 W		Flow rate*	up to I/min.	75	140	75	140
	Voltage:	230/400 V	230/400 V		Delivery head*		10	8.5	10	8.5
Armin	Protection	,	, v		Viscosity**	up to m we	400	400	400	400
100 100	LIOTEPHOLI									
TO STATE OF THE PARTY OF THE PA	switch:	no	yes		Density****	up to kg/dm <sup>3</sup>	2.2	2.0	2.2	2.0

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 200–2500 mm on request

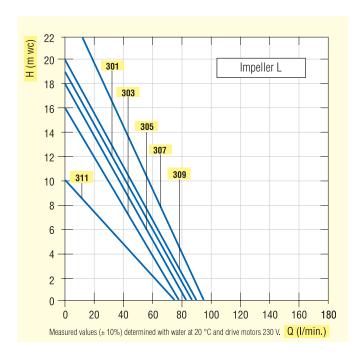
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating jperiods.

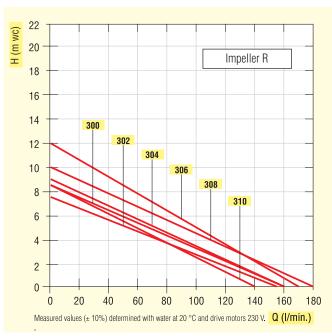
## Pump Tube Alu (aluminium)

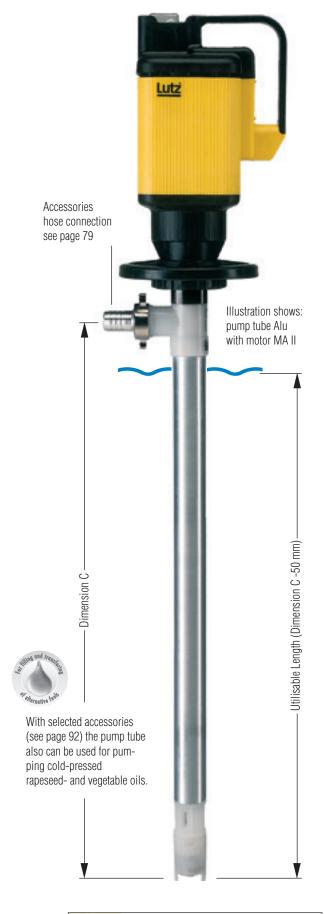
#### for neutral, non flammable liquids

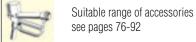
#### Materials (coming into contact with the pumped medium):

Version:	SL	MS
Housing:	Alu, PVDF	Alu, PVDF
Impeller:	ETFE	PP ETFE
Seals:	none	FPM
Mechanical seals:	none	Carbon, SiC, FPM, HC, HC-4 (2.4610)
Bearing:	ETFE	ETFE
Drive shaft:	Stainless steel (1.4571)	Stainless steel (1.4571)









Pump tube SS (stainless steel) for corrosive and neutral liquids

Productdetail	Pump to	ube				SS	-SL	SS-	MS
y	Type of im	peller				L	R	L	R
		/ 2 (acc. to ATI	EX)			yes	yes	yes	yes
	Immersion tube diameter:			up to mm	41	41	41	41	
	Temperatur	re of medium	1:		up to °C	100	100	100	100
	Material:				Pump tube	1.4571	1.4571	1.4571	1.4571
					Impeller	ETFE	ETFE	ETFE	ETFE
	Hose conn	ection:			Nominal diameter mm	19-32	19-32	19-32	19-32
					Outer thread	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Length: 7				Order No.	0150-003			0151-000
	Length: 10 Length: 12				Order No. Order No.		0150-001 0150-002		
	Length: 14				Order No.		0150-002	U 10 1-000 -	U101-UUZ
	Length: 15				Order No.		0150-114		
	Length: 16				Order No.		0150-115	_	_
	Length: 17				Order No.		0150-116	_	_
	Length: 20				Order No.		0150-117	-	-
					0 " 11				
	Choice	of motors			Operating data				
		MI-4	MI-4-E		Characteristic curve no.	401	400	401	400
ė.		-	with speed		Flow rate* up to I/min.	117	210	117	210
18	Output:	500 W	controller 500 W		Delivery head* up to m wc Viscosity** up to mPas	19 500	10 350	19 500	10 350
1000	Voltage:	230 V	230 V		Density**** up to kg/dm³	1.4	1.1	1.4	1.1
-	Order No.		0030-001		Weight (kg) Motor + pump tube		5.7	5.7	5.7
EC		MA II 3			Characteristic curve no.	403	402	403	402
	Output:	460 W	460 W		Flow rate* up to I/min.	95	178	95	178
MAT .	Voltage:	230 V	230 V		Delivery head* up to m wc	14	9	14	9
	LVR.:	no	yes		Viscosity** up to mPas Density**** up to kg/dm³	350 1.6	200 1.2	350 1.6	200 1.2
	Order No.	0060-000	0060-008		Density**** up to kg/dm³ Weight (kg) Motor + pump tube		7.5	7.5	7.5
		MA II 5	MA II 5	MAII5S	Characteristic curve no.	405	404	405	404
	Output:	575 W	575 W	575 W	Flow rate* up to I/min.	100	190	100	190
	Voltage:	230 V	230 V	230 V	Delivery head* up to m wc	16	10	16	10
	LVR.:	no	yes	no	Viscosity** up to mPas	700	550	700	550
	Ouder Ne	0000 004	0000 000	acid-proof	Density**** up to kg/dm³	1.8	1.3	1.8	1.3
	Order No.		0000-009	0060-091	3 (3)		8.3	8.3	8.3
	0.4-	MA II 7	705 147		Characteristic curve no.	407	406	407	406
Low-voltage release (LVR.):	Output: Voltage:	795 W 230 V	795 W 230 V		Flow rate* up to I/min.  Delivery head* up to m wc	115 20	210 13	115 20	210 13
Prevents the pump from starting up again without warning after a		230 V NO	yes		Viscosity** up to mPas	500	400	500	400
power failure. It is recommended when pumping hazardous liquids.			,		Density**** up to kg/dm³	1.9	1.4	1.9	1.4
mion pamping nazarabas ngalus.	Order No.	0060-002	0060-010		Weight (kg) Motor + pump tube	9.5	9.5	9.5	9.5
		MD-1	MD-2		Characteristic curve no.	409	408	409	408
	Output:	400 W	400 W		Flow rate* up to I/min.	110	210	110	210
	Operating	6 har	6 har		Delivery head* up to m wc Viscosity** up to mPas	20	12	20	12
::- ::	pressure:	6 bar	6 bar		Viscosity** up to mPas  Density**** up to kg/dm³	500 1.8	400 1.3	500 1.8	400 1.3
	Order No.	0004-087	0004-088		Weight (kg) Motor + pump tube		4.4	4.4	4.4
		B4/GT			Characteristic curve no.	411	410	411	410
	Output:	750 W	750 W		Flow rate* up to I/min.	100	180	100	180
	Voltage:	230/400 V			Delivery head* up to m wc	12	13	12	13
	Protection				Viscosity** up to mPas	500	400	500	400
	switch:	no	yes		Density**** up to kg/dm³	2.2	2.0	2.2	2.0
U U U U U U U U U U U U U U U U U U U	Order No.	UUU4+U19	0004+067		Weight (kg) Motor + pump tube	13.7	13.7	13.7	13.7

<sup>\*</sup>Determined with water at 20 °C  $\,\,$  \*\*\* Special lengths  $\,\,$  \*\* Determined with oil  $\,\,$  200–2500 mm on request

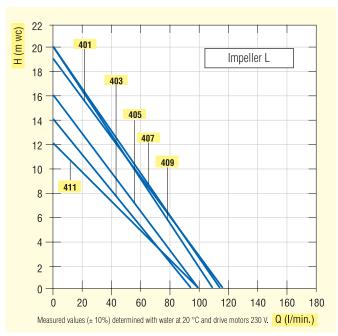
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

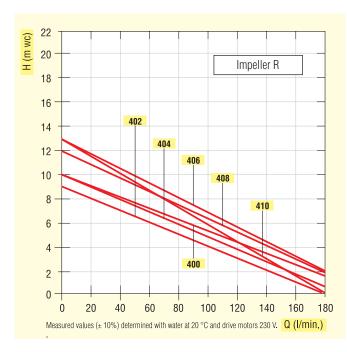
### Pump Tube SS (stainless steel)

#### for corrosive and neutral liquids

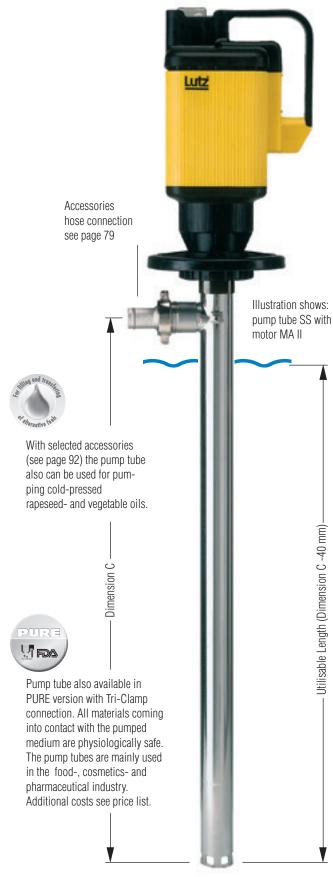
#### Materials (coming into contact with the pumped medium):

Version:	SL	MS	SL PURE	MS PURE
Housing:	SS (1.4571)	SS (1.4571)	SS (1.4571)	SS (1.4571)
Impeller:	ETFE	ETFE	PP	ETFE
Seals:	none	FPM	none	EPDM, FPM
Mechanical seal:	none	Carbon, Ceramic, FPM, Stainless steel	none	Carbon, Ceramic, FPM, EPDM, Stainless steel
Bearing:	Pure Carbon	Pure Carbon	Pure Carbon	Pure Carbon
Drive shaft:	SS (1.4571)	SS (1.4571)	SS (1.4571)	SS (1.4571)





Please remember that the flow rate is reduced as the **viscosity** increases. The **density** of the pumped liquid similarly affects the flow rate, though to a lesser extent.

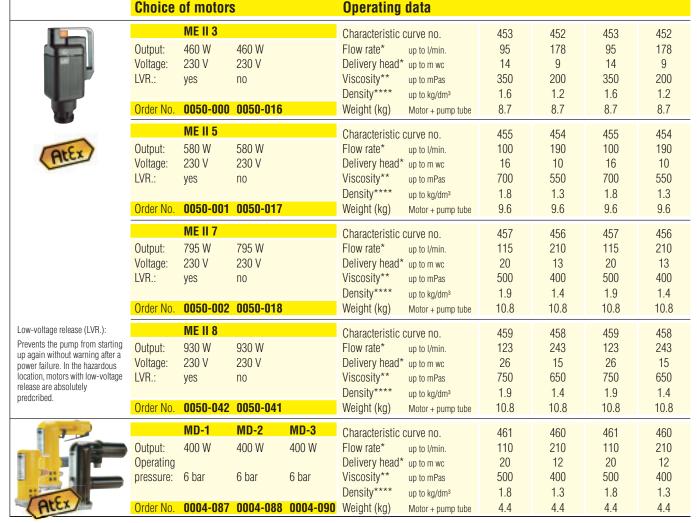


Suitable range of accessories

see pages 76-92

#### Pump tube SS (stainless steel) for highly inflammable liquids

Productdetail	Pump tube		SS-	·SL	SS-	MS
y.	Type of impeller		L	R	L	R
med (I)	Category 1 / 2 (acc. to ATEX)		yes	yes	yes	yes
	Immersion tube diameter:	up to mm	41	41	41	41
	Temperature of medium:	up to °C	100	100	100	100
	Material:	Pump tube	1.4571	1.4571	1.4571	1.4571
		Impeller	ETFE	ETFE	ETFE	ETFE
	Hose connection:	Nominal diameter mm	19-32	19-32	19-32	19-32
		Outer thread	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Length: 700 mm***	Order No.	0150-003	0150-000	0151-003	0151-000
	Length: 1000 mm***	Order No.	0150-004	0150-001	0151-004	0151-001
	Length: 1200 mm***	Order No.	0150-005	0150-002	0151-005	0151-002
	Length: 1400 mm***	Order No.	0150-108	0150-113	-	-
	Length: 1500 mm***	Order No.	0150-109	0150-114	-	-
	Length: 1600 mm***	Order No.	0150-110	0150-115	-	-
	Length: 1700 mm***	Order No.	0150-111	0150-116	-	-
	Length: 2000 mm***	Order No.	0150-112	0150-117	-	-



Determined with water at 20 °C \*\*\* Special lengths \*\* Determined with oil 200-2500 mm on request

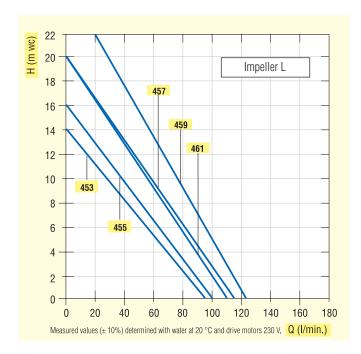
Determined with 3 m hose 3/4" and open nozzle 3/4" Higher densities possible for shorter operating periods.

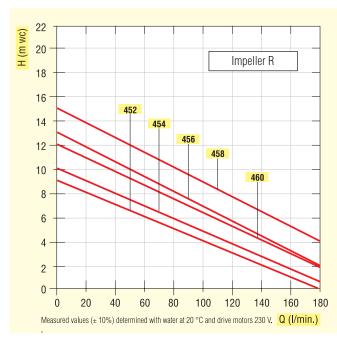
## Pump Tube SS (stainless steel)

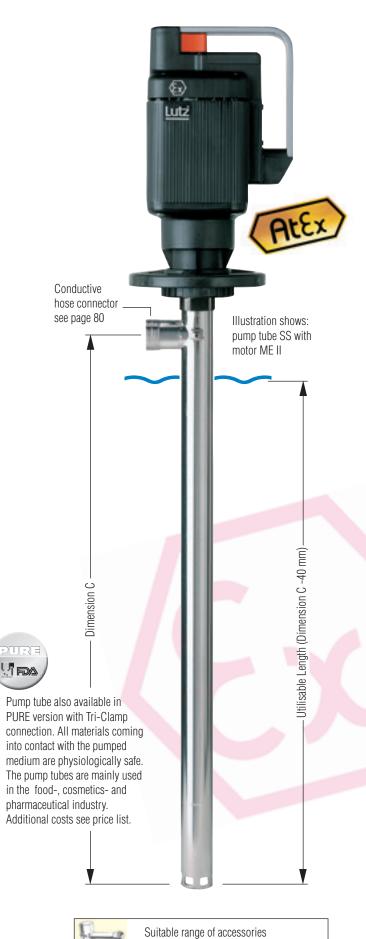
for highly inflammable liquids

#### Materials (coming into contact with the pumped medium):

Version:	SL	MS	MS PURE
Housing:	SS (1.4571)	SS (1.4571)	SS (1.4571)
Impeller:	ETFE	ETFE	ETFE
Seals:	none	FPM	FPM, EPDM
Mechanical seals:	none	Carbon, Ceramic, FPM, Stainless steel	Carbon, Ceramic, FPM, EPDM, Stainless steel
Bearing:	Pure Carbon	Pure Carbon	Pure Carbon
Drive shaft:	SS (1.4571)	SS (1.4571)	SS (1.4571)







### Pump tube HC (Hastelloy C) for highly corrosive chemicals

Productdetail	Pump to	ube				HC	-SL
y	Type of im	peller				L	R
mald		/ 2 (acc. to ATI	EX)			yes	yes
	Immersion	tube diamet	er:	up to mm		42	42
III.	Temperatu	re of medium	ı:	up to °C		120	120
III.	Material:			Pump tube		HC	HC
III.				Impeller		ETFE	ETFE
ll ll	Hose conn	ection:		Nominal dia		19-32	19-32
III.				Outer thread	i	G 1 1/4	G 1 1/4
III.	Length: 10			Order No.		0162-204	0162-201
	Length: 12	100 mm^^^		Order No.		0162-205	0162-202
u	Chaine			Onevetin			
	CHOICE	of motors		Operatin	iy uata		
		MI 4	MI 4-E	Characterist	ic curve no.	501	500
4		-	with speed	Flow rate*	up to I/min.	117	210
100	Output:	500 W	controll 500 W	Delivery hea	ad* up to m wc up to mPas	19 500	10 350
1000	Voltage:	230 V	230 V	Density****		1.4	1.1
	Order No.	0030-000		Weight (kg)	Motor + pump tube	7.2	7.2
-		MAII3		Characterist	ic curve no	503	502
	Output:	460 W	460 W	Flow rate*	up to I/min.	95	178
to di	Voltage:	230 V	230 V		ad* up to m wc	14	9
	LVR.:	no	yes	Viscosity**	up to mPas	350	200
				Density****		1.6	1.2
	Order No.	0060-000	0060-008	Weight (kg)	Motor + pump tube	9.0	9.0
		MA II 5	MAII 5 MA	II 5 S Characterist	ic curve no.	505	504
	Output:	575 W	575 W 575		up to I/min.	100	190
	Voltage:	230 V	230 V 230			16	10
	LVR.:	no	yes no	Viscosity** -proof Density****	up to mPas up to kg/dm³	700 1.8	550 1.3
	Order No.	0060-001		<b>10-091</b> Weight (kg)	Motor + pump tube	9.8	9.8
		MA II 7					
	Output:	795 W	795 W	Characterist Flow rate*	IC CURVE NO. up to I/min.	507 115	506 210
Low-voltage release (LVR.):  Prevents the pump from starting	Voltage:	230 V	230 V	Delivery hea		20	13
up again without warning after a	LVR.:	no	yes	Viscosity**	up to mPas	500	400
power failure. It is recommended when pumping hazardous liquids.				Density****		1.9	1.4
, , , , , , , , , , , , , , , , , , , ,	Order No.	0060-002	0060-010	Weight (kg)	Motor + pump tube	11.0	11.0
		MD-1	MD-2	Characterist	ic curve no.	509	508
	Output:	400 W	400 W	Flow rate*	up to I/min.	110	210
	Operating-		6 hor	Delivery hea		20	12
11. 11.	pressure:	o nar	6 bar	Viscosity** Density****	up to mPas up to kg/dm <sup>3</sup>	500 1.8	400 1.3
<b></b>	Order No.	0004-087	0004-088	Weight (kg)	Motor + pump tube	5.9	5.9
	01401110.	B4/GT	3007 000				510
	Output:	750 W	750 W	Characterist Flow rate*	up to I/min.	511 100	180
	Voltage:	230/400 V	230/400 V	Delivery hea		12	13
		,,	,				400
	Protection			Viscosity**	up to mPas	500	400
NATE OF THE PARTY	switch:	no	yes	Density****		2.2 15.2	2.0

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 200–2500 mm on request

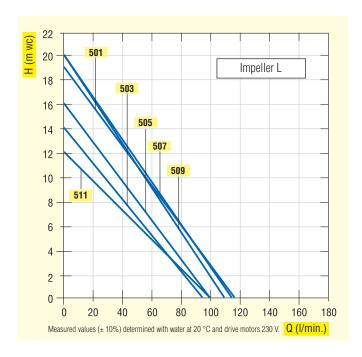
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

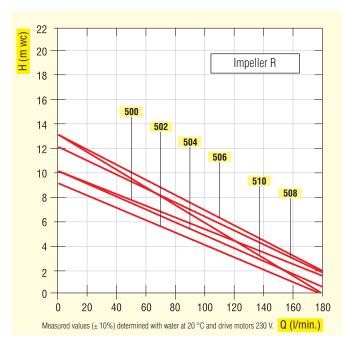
# Pump Tube HC (Hastelloy C)

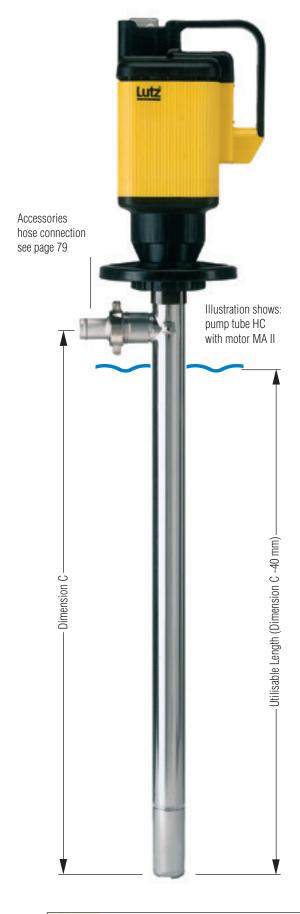
for highly corrosive chemicals

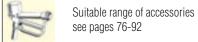
#### Materials (coming into contact with the pumped medium):

Version:	SL			
Housing:	HC-22 (2.4602)			
Impeller:	ETFE			
Seals:	FPM (FEP coated)			
Bearing:	ETFE, Carbon			
Drive shaft:	HC-4 (2.4610)			









### Pump tube HC (Hastelloy C) for highly inflammable chemicals

Productdetail	Pump tube	HC	-SL	
y	Type of impeller		L	R
mail II	Category 1 / 2 (acc. to ATEX)		yes	yes
	Immersion tube diameter:	up to mm	42	42
III.	Temperature of medium:	up to °C	120	120
III.	Material:	Pump tube	HC	HC
III.		Impeller	ETFE	ETFE
	Hose connection:	Nominal diameter mm	19-32	19-32
		Outer thread	G 1 1/4	G 1 1/4
	Length: 1000 mm***	Order No.	0162-204	0162-201
	Length: 1200 mm***	Order No.	0162-205	0162-202
- 11				
10				

Vo	otput: oltage: VR.:	230 V	460 W 230 V no	Characteristic of Flow rate* Delivery head* Viscosity** Density**** Weight (kg)	urve no. up to I/min. up to m wc up to mPas up to kg/dm³ Motor + pump tube	553 95 14 350 1.6 10.2	552 178 9 200 1.2 10.2
Vo LV	otput: oltage: VR.:	230 V	580 W 230 V no	Characteristic of Flow rate* Delivery head* Viscosity** Density**** Weight (kg)	up to I/min.	555 100 16 700 1.8 11.1	554 190 10 550 1.3 11.1
Vo	otput: oltage: VR.:	230 V	795 W 230 V no	Characteristic of Flow rate* Delivery head* Viscosity** Density**** Weight (kg)	urve no. up to I/min. up to m wc up to mPas up to kg/dm³ Motor + pump tube	557 115 20 500 1.9 12.3	556 210 13 400 1.4 12.3
power failure. In the hazardous location, motors with low-voltage release are absolutely predcribed.	otput: oltage: VR.:	230 V	930 W 230 V no	Characteristic of Flow rate* Delivery head* Viscosity** Density**** Weight (kg)	up to I/min.	559 123 26 750 1.9 12.3	558 243 15 650 1.4 12.3
Or Or	utput: perating- ressure: rder No.	400 W 6 bar <b>0004-087</b>	MD-2 400 W 6 bar 0004-088	Viscosity** Density*** Weight (kg)	up to I/min. up to m wc up to mPas up to kg/dm³ Motor + pump tube	561 110 20 500 1.8 5.9	560 210 12 400 1.3 5.9 Special voltages and

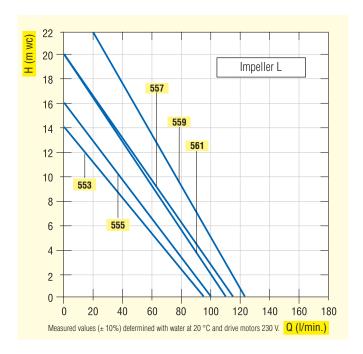
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

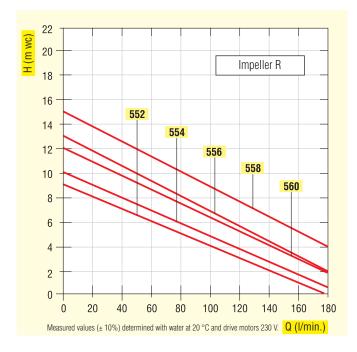
## Pump Tube HC (Hastelloy C)

#### for highly inflammable chemicals

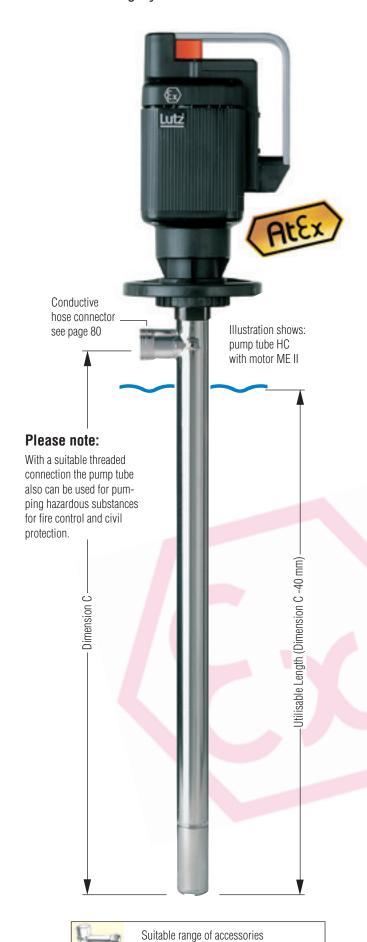
#### Materials (coming into contact with the pumped medium):

Version:	SL
Housing:	HC-22 (2.4602)
Impeller:	ETFE
Seals:	FPM (FEP coated)
Bearing:	ETFE, Carbon
Drive shaft:	HC-4 (2.4610)





Please remember that the flow rate is reduced as the **viscosity** increases. The **density** of the pumped liquid similarly affects the flow rate, though to a lesser extent.



see pages 76-92

# Lutz Pump Tubes RE for complete drum drainage

In stainless steel and polypropylene







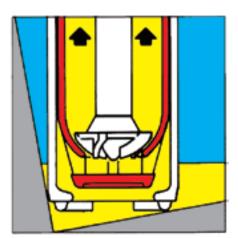
# Competitive edge instead of drawback

#### Experts, never tired of work:

Lutz pump tubes RE in stainless steel and polypropylene. Not only are they environmentally safe, they also help to save money. On the one hand, the liquid is used to the maximum, on the other hand, the cost for disposing of residuals is drastically reduced, since only the slightest residue remains in the containers.

# Open to everything but absolutely leak-proof...

The power is transferred to the drive shaft via a flexible coupling that is sealed well and bedded in a shaft tube. The impeller feeds the liquid safely to the hose connection on top of the pump.



The sealing cap is open — the liquid is pumped out.

The closed sealing cap prevents a return flow when the pump is removed.

#### Patented solution

With the motor running, the pump foot is closed by lowering the sealing cap within the pump tube. The sealing cap locks the pump foot and prevents the entered liquid from flowing back into the drum. Closing is done in no time at all — carried out by a small lever below the hand wheel. With the motor switched off, the pump tube holding the liquid can be removed and inserted into the next drum. A development that has rightfully been patented.

### Down-to-earth technology

RE pump tubes for complete drainage feature a simple yet very convincing concept. Simple — and that is exactly why it is ingenious — since the integration of the RE concept offers considerable advantages. Due to their technology, these pumps guarantee maximum pump out of the fluid, literally draining the container "to the dregs". The residues amount to less than 0.10 l.

Residues less than 0.10 l

#### **German Patent:**

DE 37 18325 C2

# Pump Tubes for complete drum drainage

In polypropylene (PP) and stainless steel (SS 1.4571)

These pump tubes for complete drainage are suitable for applications, in which thin-bodied liquids need to be drained almost completely from drums and other containers. PP likes to demonstrate its capabilities in handling acids and alkalis. Stainless steel pump tubes have a way with aggressive, neutral, easily inflammable and non inflammable fluids.

#### Excellent design: Almost anything is possible

Like all components designed by Lutz, these pump tubes boast a straightforward and logic design. In the version with mechanical seals, the drive shaft is secured with a mechanical seal with two shaft sealing rings behind it. The motor can be disconnected quickly through the convenient Lutz hand wheel.



### The material is what matters

We select the materials with regard to the liquids to be pumped. Both the pump tube models feature an extremely resistant pure carbon bearing and there are no grease fillings in the shaft tube, so there is no way the fluid to be pumped can be contaminated. The drive shaft is optionally available in Hastelloy C4 for use with acids and alkalis. Stainless steel pump tubes have FEP coated seals.

**New:** Stainless steel pump tubes in PURE version. All materials coming into contact with the pumped fluids are physiologically safe. The pump tubes are mainly used in the food-, cosmeticsand pharmaceutical industry.



### Logical decision: Service-friendly design

Maintenance without the need for special tools — that 's what we call service-friendly.

#### Important!

A stainless steel pump tube and an explosionproof motor with Atex certification must be used for pumping easily inflammable liquids. Please refer to pages 31-32.

### **Lutz Pump Power**

Choice of motors

### Small but very useful

Undemanding universal motor designed for industrial applications and suitable for pumping thin-bodied, slightly viscous, neutral, aggressive and non-inflammable liquids. It demonstrates its power even when handling acids and alkalis.













MI 4/MI 4-E

### Lightweight but dependable

The convenient and powerful MA II universal motors. Ideal for pumping thin-bodied to slightly viscous, aggressive and non-inflammable liquids.











MAII

### Safety first

These motors aren't taken aback easily. The ME II explosionproof universal motors are the nostrum (German Patent DE 38 15427 C2 - for pumping a large variety of thin-bodied, easily inflammable and combustible liquids.





**€**x IP 54 **(€** 

ME II

### Trio grande: The models

Three different versions of the MD compressed air motors are available. MD-1 without manual operation for automatic control, MD-2 with manual operation and interlock, MD-3 with on/off pushbutton. Approved according to Atex Ex II 2 G.











MD-1/MD-2/MD-3 compressed air motors



For detailed information on the motors please refer to pages 30-32.

#### Reliable and powerful, thus suitable for extreme conditions

The B4/GT has a proven record of success in plant constructions and as a drum pump drive. The perfect system for thin-bodied to slightly viscous liquids. These "undemanding" partners hardly ever show signs of wear. The ideal solution for long periods of operation.



C€ IP 54/IP 55

B4/GT three-phase gear motor

Pump tube RE-PP (polypropylene) for complete drum drainage of corrosive and neutral liquids

Productdetail	Pump to	ube					RE-PP MS
	Type of im	peller					L
0.337		/ 2 (acc. to ATI	EX)				no
(III)	Immersion tube diameter:			up to mm		41	
_		re of medium			up to °C		50
	Material:	io oi illoululi	•		Pump tube		PP
	ividio iui.				Impeller		PP
	Hose conn	ection:			Nominal diam	eter mm	19-32
					Outer thread		G 1 1/4
	Length: 7	'00 mm*** s	haft SS		Order No.		0103-020
		00 mm*** s			Order No.		0103-021
		00 mm*** s			Order No.		0103-022
	Length: 7	'00 mm*** s	haft HC		Order No.		0103-040
		00 mm*** s			Order No.		0103-041
	Length: 12	00 mm*** s	haft HC		Order No.		0103-042
	Choice	of motors	S		Operating	data	
		MI-4	MI-4-E		Characteristic	curve no	600
2		_	with speed		Flow rate*	up to I/min.	70
			controller		Delivery head		12
-	Output:	500 W	500 W		Viscosity**	up to mPas	1000
100	Voltage:	230 V	230 V		Density****	up to kg/dm³	1.6
	Order No.	0030-000	0030-001		Weight (kg)	Motor + pump tube	4.0
E		MA II 3			Characteristic	curve no.	601
	Output:	460 W	460 W		Flow rate*	up to I/min.	60
MI	Voltage:	230 V	230 V		Delivery head	* up to m wc	11
	LVR.:	no	yes		Viscosity**	up to mPas	800
	Ouder Ne	0000 000	0000 000		Density****	up to kg/dm³	1.7
100	Order No.	0060-000	0000-000		Weight (kg)	Motor + pump tube	5.8
		MA II 5	MA II 5	MAII5S	Characteristic	curve no.	602
	Output:	575 W	575 W	575 W	Flow rate*	up to I/min.	60
	Voltage:	230 V	230 V	230 V	Delivery head		11.5
	LVR.:	no	yes	no	Viscosity** Density****	up to mPas	1200
	Order No.	0060-001	0060-009	acid-proof 0060-091	Weight (kg)	up to kg/dm³ Motor + pump tube	2.0 6.6
						- Pamp tabo	
		MA II 7			Characteristic		603
Low-voltage release (LVR.):	Output:	795 W	795 W		Flow rate*	up to I/min.	69
Low-voltage release (LVR.):			0001/			1 1 m \$0 mm 1110	
Prevents the pump from starting	Voltage:	230 V	230 V		Delivery head		15
Prevents the pump from starting up again without warning after a power failure. It is recommended			230 V yes		Viscosity**	up to mPas	1000
Prevents the pump from starting up again without warning after a	Voltage:	230 V	yes				
Prevents the pump from starting up again without warning after a power failure. It is recommended	Voltage: LVR.:	230 V no <b>0060-002</b>	yes 0060-010		Viscosity** Density**** Weight (kg)	up to mPas up to kg/dm³ Motor + pump tube	1000 2.0 7.8
Prevents the pump from starting up again without warning after a power failure. It is recommended	Voltage: LVR.: Order No.	230 V no <b>0060-002</b> <b>MD-1</b>	yes 0060-010 MD-2		Viscosity** Density*** Weight (kg) Characteristic	up to mPas up to kg/dm³ Motor + pump tube  Curve no.	1000 2.0 7.8
Prevents the pump from starting up again without warning after a power failure. It is recommended	Voltage: LVR.: Order No.	230 V no <b>0060-002</b>	yes 0060-010		Viscosity** Density**** Weight (kg)  Characteristic Flow rate*	up to mPas up to kg/dm³ Motor + pump tube CURVE NO. up to I/min.	1000 2.0 7.8 604 60
Prevents the pump from starting up again without warning after a power failure. It is recommended	Voltage: LVR.: Order No. Output: Operating	230 V no <b>0060-002</b> <b>MD-1</b> 400 W	yes 0060-010 MD-2 400 W		Viscosity** Density**** Weight (kg)  Characteristic Flow rate* Delivery head	up to mPas up to kg/dm³ Motor + pump tube  Curve no. up to l/min. * up to m wc	1000 2.0 7.8 604 60 12
Prevents the pump from starting up again without warning after a power failure. It is recommended	Voltage: LVR.: Order No.	230 V no <b>0060-002</b> <b>MD-1</b>	yes 0060-010 MD-2		Viscosity** Density**** Weight (kg)  Characteristic Flow rate*	up to mPas up to kg/dm³ Motor + pump tube CURVE NO. up to I/min.	1000 2.0 7.8 604 60

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 200–2500 mm on request

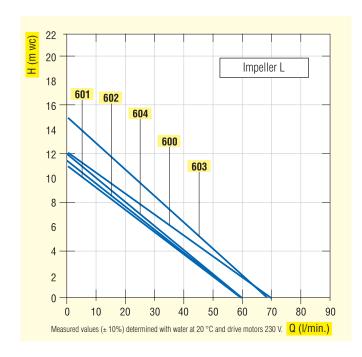
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

# Pump Tube RE-PP (polypropylene)

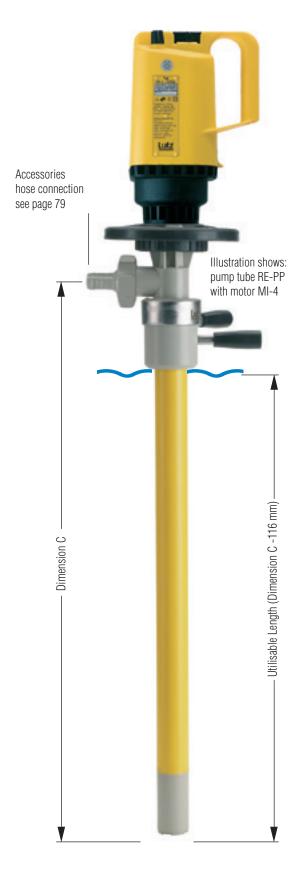
for complete drum drainage of corrosive and neutral liquids

#### Materials (coming into contact with the pumped medium):

Version:	MS
Housing:	PP
Impeller:	PP
Sealing pot:	PP
Seals:	FPM
Mechanical seals:	Carbon, Ceramic, FPM, HC-4 (2.4610)
Bearing:	Pure Carbon
Drive shaft:	Stainless steel (1.4571)









Pump tube RE-SS (stainless steel) for complete drum drainage of corrosive and neutral liquids

roductdetail	Pump to	ube				RE-SS MS
V.	Type of im	peller				L
(10-		/ 2 (acc. to AT	EX)			yes
TOTAL		tube diamet			up to mm	41
		Temperature of medium:			up to °C	100
	Material:		Pump tube	1.4571		
	material.				Impeller	ETFE
	Hose conn	ection:			Nominal diameter mm	19-32
	11000 001111	ootioii.			Outer thread	G 1 1/4
	Length: 7	00 mm***			Order No.	0151-156
	Length: 10				Order No.	0151-157
	Length: 12				Order No.	0151-158
1						
	Choice	of motor:	S		Operating data	
		MI-4	MI-4-E		Characteristic curve no.	700
		-	with speed		Flow rate* up to I/min.	78
<b>E</b>			controller		Delivery head* up to m wc	17
-	Output:	500 W	500 W		Viscosity** up to mPas	700
100	Voltage:	230 V	230 V		Density**** up to kg/dm³	1.4
		0030-000	0030-001		Weight (kg) Motor + pump tu	De 6.0
-		MAII3			Characteristic curve no.	701
	Output:	460 W	460 W		Flow rate* up to I/min.	77
	Voltage:	230 V	230 V		Delivery head* up to m wc	14
	LVR.:	no	yes		Viscosity** up to mPas	500
	LVIII.	110	you		Density**** up to kg/dm³	1.6
	Order No.	0060-000	0060-008		Weight (kg) Motor + pump tu	
		MA II 5		A II 5 S	Observatoristic surre no	700
	Output:	575 W		75 W	Characteristic curve no. Flow rate* up to I/min.	702 77
	Voltage:	230 V		30 V	Flow rate* up to I/min.  Delivery head* up to m wc	14
	LVR.:				Viscosity** up to mPas	900
	LVII	no	yes no	id-proof	Density**** up to kg/dm³	1.8
	Order No.	0060-001	0060-009 00		Weight (kg) Motor + pump tu	
		MA II 7				
	Output	795 W	795 W		Characteristic curve no. Flow rate* up to I/min.	703 70
w-voltage release (LVR.):	Output:		795 W 230 V			18
events the pump from arting up again without	Voltage: LVR.:	230 V			Delivery head* up to m wc Viscosity** up to mPas	700
arning after a power failure.	LVII	no	yes		Viscosity** up to mPas  Density**** up to kg/dm³	1.9
is recommended when imping hazardous liquids.	Order No.	0060-002	0060-010		Weight (kg) Motor + pump tu	
		MD-1	MD-2		Characteristic curve no.	704
and the same of	Output:	400 W	400 W		Flow rate* up to I/min.	68
	Operating				Delivery head* up to m wc	17
THE PARTY	pressure:	6 bar	6 bar		Viscosity** up to mPas	700
# #					Density**** up to kg/dm³	1.8
	Order No.	0004-087	0004-088		Weight (kg) Motor + pump tu	
		B4/GT			Characteristic curve no.	705
	Output:	750 W	750 W		Flow rate* up to I/min.	55
	Voltage:	230/400 V	230/400 V		Delivery head* up to m wc	8.5
	Protection	, .55 1	, ,		Viscosity** up to mPas	600
All Seconds	switch:	no	yes		Density**** up to kg/dm³	2.2
	SWILCII.	110	y 0 3		Deligity up to ku/ulli	2.2

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths

\*\* Determined with oil 200–2500 mm on request

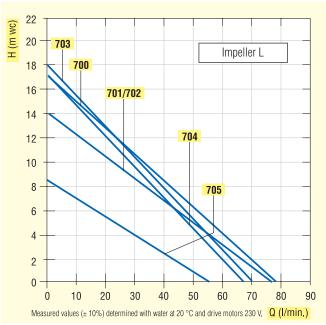
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

### Pump Tube RE-SS (stainless steel)

for complete drum drainage of corrosive and neutral liquids

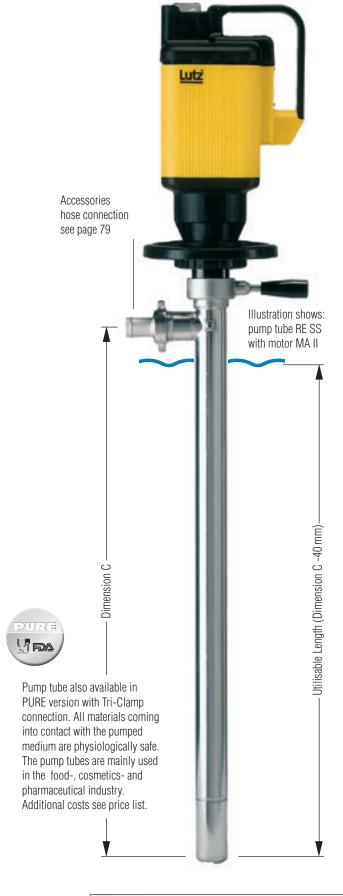
#### Materials (coming into contact with the pumped medium):

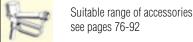
Version:	MS	MS PURE
Housing:	Stainless steel (1.4571)	Stainless steel (1.4571)
Impeller:	ETFE	PP
Sealing pot:	ETFE/Stainless steel (1.4571)	ETFE/Stainless steel (1.4571)
Seals:	FEP coated	EPDM
Mechanical seals:	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)
Bearing:	Pure Carbon	Pure Carbon
Drive shaft:	Stainless steel (1.4571)	Stainless steel (1.4571)



#### Complete drum drainage

Nearly completely drained. Residual quantity < 0.10 litres.





**Choice of motors** 

Pump tube RE-SS (stainless steel) for complete drum drainage of highly inflammable liquids

Productdetail	Pump tube		RE-SS MS
V	Type of impeller		L
(1)	Category 1 / 2 (acc. to ATEX)		yes
-	Immersion tube diameter:	up to mm	41
	Temperature of medium:	up to °C	100
	Material:	Pump tube	1.4571
		Impeller	ETFE
	Hose connection:	Nominal diameter mm	19-32
		Outer thread	G 1 1/4
	Length: 700 mm***	Order No.	0151-156
	Length: 1000 mm***	Order No.	0151-157
	Length: 1200 mm***	Order No.	0151-158
- 1			



Determined with water at 20 °C \*\*\* Special lengths \*\* Determined with oil 200-2500 mm on request

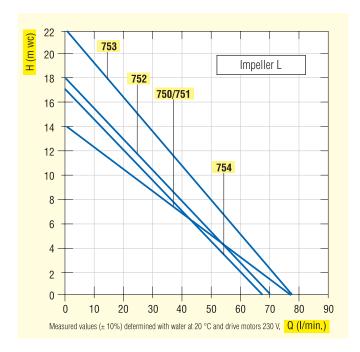
Determined with 3 m hose 3/4" and open nozzle 3/4" Higher densities possible for shorter operating periods

## **Pump Tube RE-SS (stainless steel)**

for complete drum drainage of highly inflammable liquids

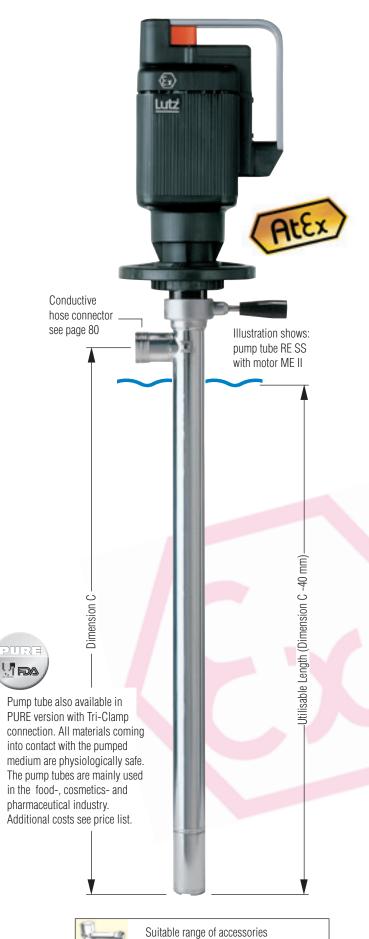
#### Materials (coming into contact with the pumped medium):

Version:	MS	MS PURE
Housing:	Stainless steel (1.4571)	Stainless steel (1.4571)
Impeller:	ETFE	ETFE
Sealing pot:	ETFE/Stainless steel (1.4571)	ETFE/Stainless steel (1.4571)
Seals:	FEP coated	FPM
Mechanical seals:	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)
Bearing:	Pure Carbon	Pure Carbon
Drive shaft:	Stainless steel (1.4571)	Stainless steel (1.4571)





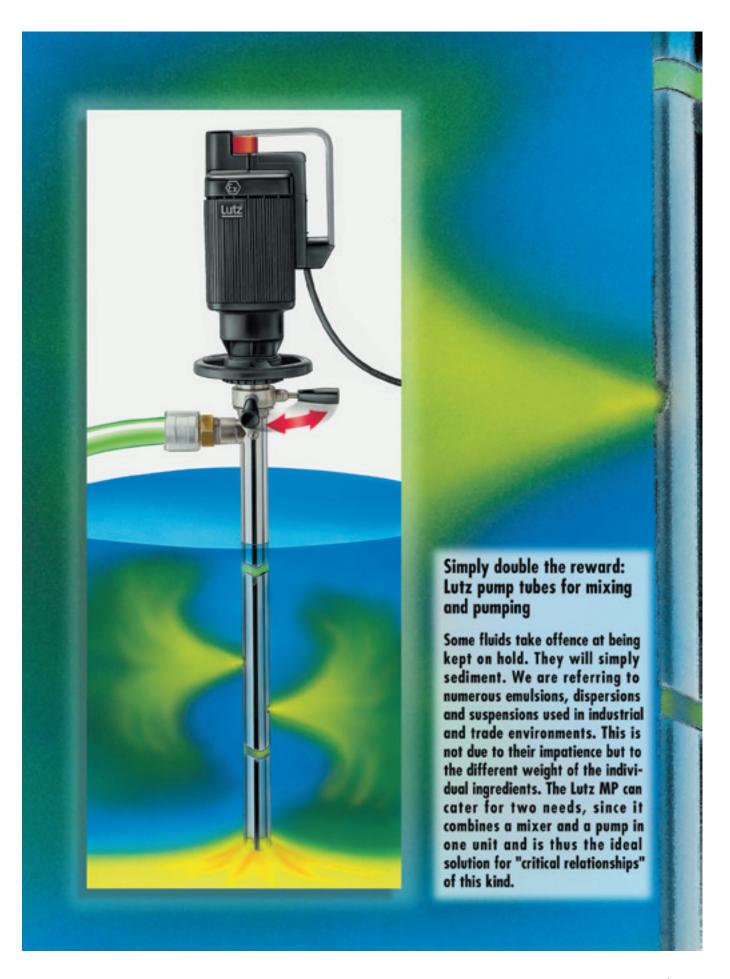
Please remember that the flow rate is reduced as the **viscosity** increases. The **density** of the pumped liquid similarly affects the flow rate, though to a lesser extent.



see pages 76-92

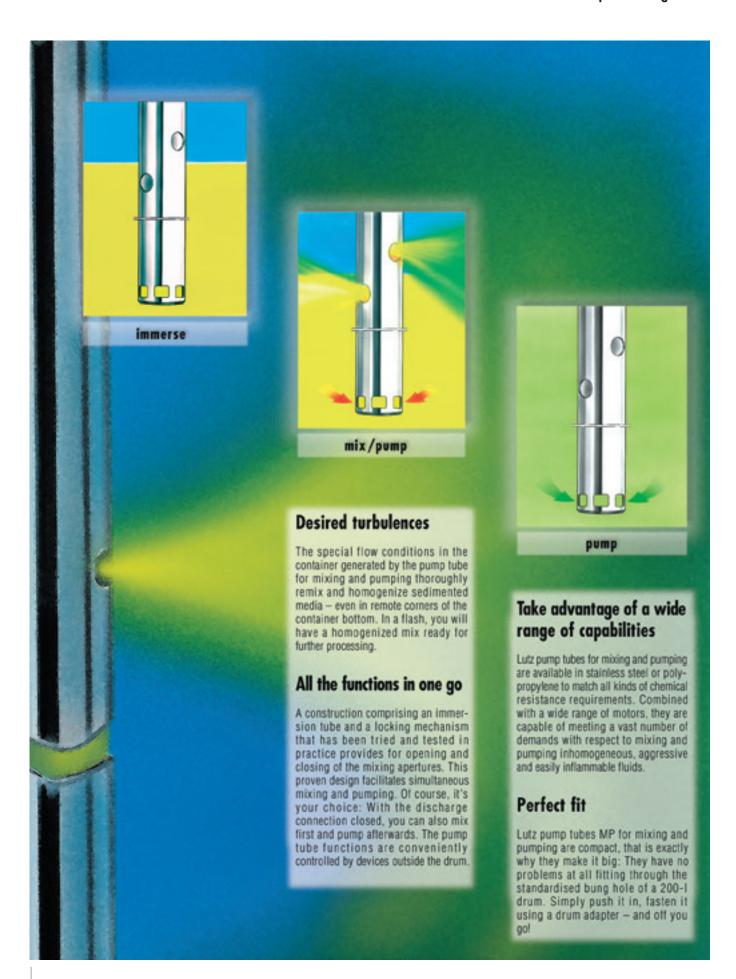
# Pump Tubes MP for mixing and pumping

Multi talent: Lutz pump tube MP for mixing and pumping



# **Universally Applicable**

"Mixer" and Pump in a single unit



# Pump Tubes for mixing and pumping

In polypropylene (PP) and stainless steel (SS 1.4571)

These pump tubes for mixing and pumping are suitable for applications, in which thin-bodied liquids in drums and other containers need to be remixed and homogenised before being pumped. PP likes to demonstrate its capabilities in handling acids and alkalis. Stainless steel pump tubes have a way with aggressive, neutral and easily inflammable fluids.

#### **Excellent design:** Almost anything is possible

Like all components designed by Lutz, these pump tubes boast a straightforward and logic design. In the version with mechanical seals, the drive shaft is secured with a mechanical seal with two shaft sealing rings behind it. The motor can be disconnected quickly through the convenient Lutz hand wheel. If you want to mix only, a shut-off device must be provided on the discharge side.



be pumped. Both the pump tube models feature an extremely resistant pure carbon bearing and there are no grease fillings in the shaft tube, so there is no way the fluid to be pumped can be contaminated. The drive shaft is optionally available in Hastelloy C4 for use with acids and alkalis. Stainless steel pump tubes have FEP coated seals.

New: Stainless steel pump tubes in PURE version. All materials coming into contact with the pumped fluids are physiologically safe. The pump tubes are mainly used in the food-, cosmetics and pharmaceutical industry.

#### Important!

A stainless steel pump tube and an explosionproof motor with Atex certification must be used for pumping easily inflammable liquids. Please refer to pages 31-32.

#### Logical decision: Service-friendly design

Maintenance without the need for special tools that 's what we call service-friendly.

## **Lutz Pump Power**

Choice of motors

### Small but very useful

Undemanding universal motor designed for industrial applications and suitable for pumping thin-bodied, slightly viscous, neutral, aggressive and non-inflammable liquids. It demonstrates its power even when handling acids and alkalis.











MI 4/MI 4-E

### Lightweight but dependable

The convenient and powerful MA II universal motors. Ideal for pumping thin-bodied to slightly viscous, aggressive and non-inflammable liquids.











MA II

### Safety first

These motors aren't taken aback easily. The ME II explosionproof universal motors are the nostrum -German Patent DE 38 15427 C2-for pumping a large variety of thin-bodied, easily inflammable and combustible liquids.







⟨€x⟩ IP 54 C€

### Trio grande: The models

Three different versions of the MD compressed air motors are available. MD-1 without manual operation for automatic control, MD-2 with manual operation and interlock, MD-3 with on/off bushbutton. Approved according to Atex Ex II 2 G.











MD-1/MD-2/MD-3 compressed air motors



For detailed information on the motors please refer to pages 30-32.

#### Reliable and powerful, thus suitable for extreme conditions

The B4/GT has a proven record of success in plant constructions and as a drum pump drive. The perfect system for thin-bodied to slightly viscous liquids. These "undemanding" partners hardly ever show signs of wear. The ideal solution for long periods of operation.



**C**€ IP 54/IP 55

**B4/GT three-phase** gear motor

Pump tube MP-PP (polypropylene) for mixing and pumping of corrosive and neutral liquids

Productdetail	Pump to	ube					MP-F	P-SL	MP-P	P MS
w	Type of im	neller					L	R	L	R
		/ 2 (acc. to ATI	-X)				no	no	no	no
		tube diamet			up to mm		50	50	50	50
		re of medium			up to °C		50	50	50	50
	Material:				Pump tube		PP	PP	PP	PP
					Impeller		PP	PP	PP	PP
	Hose conn	ection:			Nominal diame	eter mm	19-32	19-32	19-32	19-32
:					Outer thread		G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
- B	-	00 mm*** s			Order No.		0110-150		0103-150	0103-160
	-	00 mm*** s			Order No.		-	0110-152	-	-
	-	00 mm*** s			Order No.		0110-170		-	-
	Length: 12	.00 mm*** s	haft HC		Order No.		-	0110-172	-	-
	Choice	of motors	8		<b>Operating</b>	data				
		MI-4	MI-4-E		Characteristic o	curve no.	802	801	802	801
2		-	with speed		Flow rate*	up to I/min.	87	160	87	160
-			controller		Delivery head*	up to m wc	19	8.5	19	8.5
-	Output:	500 W	500 W		Viscosity**	up to mPas	500	150	500	150
	Voltage: Order No.	230 V <b>0030-000</b>	230 V <b>0030-001</b>		Density**** Weight (kg)	up to kg/dm³	1.4 4.1	1.1 4.1	1.4 4.1	1.1 4.1
	Oluci No.		0030-001			Motor + pump tube				
	0 1 1	MA II 3	400 114		Characteristic of		804	803	804	803
	Output:	460 W 230 V	460 W 230 V		Flow rate* Delivery head*	up to I/min.	78 16	155 7.5	78 16	155 7.5
	Voltage: LVR.:	230 V NO	yes		Viscosity**	up to mPas	500	160	500	160
	LVII	110	yoo		•	up to fin as	1.6	1.2	1.6	1.2
	Order No.	0060-000	0060-008		Weight (kg)	Motor + pump tube	5.9	5.9	5.9	5.9
		MA II 5	MA II 5	MAII5S	Characteristic of	curve no.	806	805	806	805
	Output:	575 W	575 W	575 W	Flow rate*	up to I/min.	80	160	80	160
	Voltage:	230 V	230 V	230 V	Delivery head*	up to m wc	17	9	17	9
	LVR.:	no	yes	no	Viscosity**	up to mPas	800	350	800	350
	Order No.	0060-001	0060-009	acid-proof <b>0060-091</b>	Density**** Weight (kg)	up to kg/dm³ Motor + pump tube	1.8 6.7	1.3 6.7	1.8 6.7	1.3 6.7
		MA II 7			Characteristic o	curve no	808	807	808	807
Low-voltage release (LVR.):	Output:	795 W	795 W		Flow rate*	up to I/min.	90	170	90	170
Prevents the pump from starting	Voltage:	230 V	230 V		Delivery head*	up to m wc	22	12	22	12
up again without warning after a power failure. It is recommended	LVR.:	no	yes		Viscosity**	up to mPas	800	350	800	350
when pumping hazardous liquids.	Order No.	0060-002	0060-010		Density**** Weight (kg)	up to kg/dm³ Motor + pump tube	1.9 7.9	1.4 7.9	1.9 7.9	1.4 7.9
	2.20.110.	MD-1	MD-2							
	Output:	400 W	400 W		Characteristic of Flow rate*	ourve no. up to I/min.	810 90	809 180	810 90	809 180
	Operating	100 11	100 11		Delivery head*		20	100	20	100
THEFT	pressure:	6 bar	6 bar		Viscosity**	up to mPas	850	600	850	600
<u> </u>					Density****	up to kg/dm³	1.8	1.3	1.8	1.3
	Order No.	0004-087	0004-088		Weight (kg)	Motor + pump tube	2.8	2.8	2.8	2.8

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 400–2500 mm on request

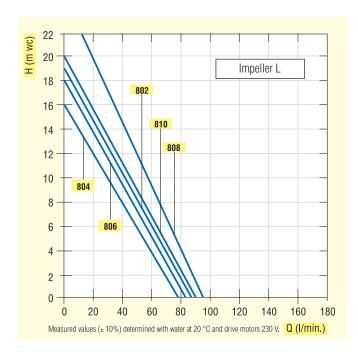
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

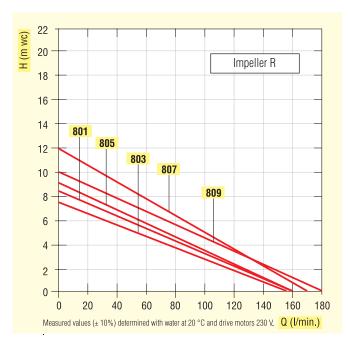
## Pump Tube MP-PP (polypropylene)

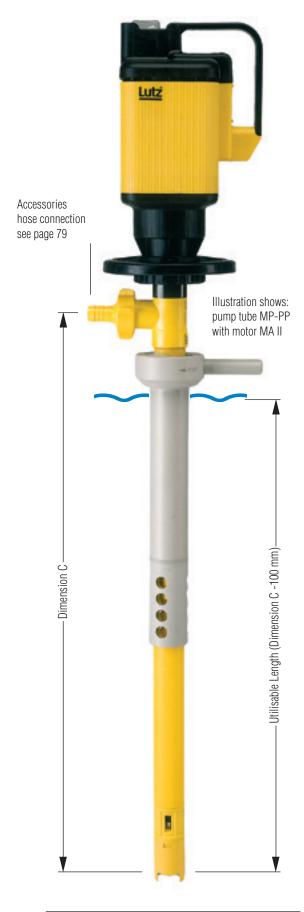
for mixing and pumping of corrosive and neutral liquids

#### Materials (coming into contact with the pumped medium):

Version:	SL	MS
Housing:	PP/PVDF	PP/PVDF
Impeller:	PP	PP
Seals:	none	FPM
Mechanical seals:	none	Carbon, SiC, FPM, HC
Bearing:	ETFE/PTFE	ETFE/PTFE
Drive shaft:	Stainless steel (1.4571) or HC-4 (2.4610)	Stainless steel (1.4571) or HC-4 (2.4610)









Pump tube MP-SS (stainless steel) for mixing and pumping of corrosive and neutral liquids

Productdetail	Pump to	ıbe					MP-SS MS
V	Type of imp	oeller					R
(10-		/ 2 (acc. to AT	EX)				yes
	Immersion	tube diamet	er:		up to mm		41
	Temperatur	e of medium	1:		up to °C		100
	Material:				Pump tube		1.4571
				Impeller		ETFE	
	Hose conn	ection:			Nominal diame	eter mm	19-32
- 16					Outer thread		G 1 1/4
	Length: 10				Order No.		0151-240
	Length: 12	UU mm^^^			Order No.		0151-255
8	Choice	of motors			Operating	data	
	CHUICE	טו וווטנטוג	3		Operating	uata	
		MI-4	MI-4-E		Characteristic	curve no.	900
		-	with speed		Flow rate*	up to I/min.	210
8	Outered	500 W	contoller		Delivery head*		10
1000	Output: Voltage:	500 W 230 V	500 W 230 V		Viscosity** Density****	up to mPas	350 1.1
	Order No.		0030-001		Weight (kg)	up to kg/dm <sup>3</sup> Motor + pump tube	6.0
	Order Ite.						
		MA II 3			Characteristic		901
	Output:	460 W	460 W		Flow rate*	up to I/min.	178
	Voltage: LVR.:	230 V no	230 V yes		Delivery head* Viscosity**	up to m wc up to mPas	9 200
	LVII	110	you		Density****	up to hir as up to kg/dm <sup>3</sup>	1.2
	Order No.	0060-000	0060-008		Weight (kg)	Motor + pump tube	7.8
		MA II 5	MA II 5	MAII 5 S	Obavastavistia		000
	Output:	575 W	575 W	575 W	Characteristic (Flow rate*	curve 110. up to I/min.	902 190
	Voltage:	230 V	230 V	230 V	Delivery head*		10
	LVR.:	no	yes	no	Viscosity**	up to mPas	550
	_			acid-proof	Density****	up to kg/dm³	1.3
	Order No.	0060-001	0060-009	0060-091	Weight (kg)	Motor + pump tube	8.6
		MAII7			Characteristic	curve no	903
Low-voltage release (LVD.)	Output:	795 W	795 W		Flow rate*	up to I/min.	210
Low-voltage release (LVR.): Prevents the pump from starting	Voltage:	230 V	230 V		Delivery head*		13
up again without warning after a power failure. Its recommended	LVR.:	no	yes		Viscosity**	up to mPas	400
when pumping hazardous liquids.	Onder Ne	0000 000	0000 040		Density****	up to kg/dm³	1.4 9.8
	Order No.	0000-002	0060-010		Weight (kg)	Motor + pump tube	9.0
		MD-1	MD-2		Characteristic	curve no.	904
	Output:	400 W	400 W		Flow rate*	up to I/min.	200
	Operating	6 hor	6 har		Delivery head*		11
::- ::	pressure:	6 bar	6 bar		Viscosity** Density****	up to mPas up to kg/dm <sup>3</sup>	400 1.3
<del>=</del> =		0004-087	0004-088		Weight (kg)	Motor + pump tube	4.7
	Order No.				5 ( 3)	, ,	
	Order No.						
•		B4/GT	750 144		Characteristic		905
	Output:	<b>B4/GT</b> 750 W	750 W		Flow rate*	up to I/min.	140
	Output: Voltage:	B4/GT	750 W 230/400 V		Flow rate* Delivery head*	up to I/min. up to m wc	140 10.5
	Output:	<b>B4/GT</b> 750 W			Flow rate*	up to I/min.	140

<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths

\*\* Determined with oil 600–2500 mm on request

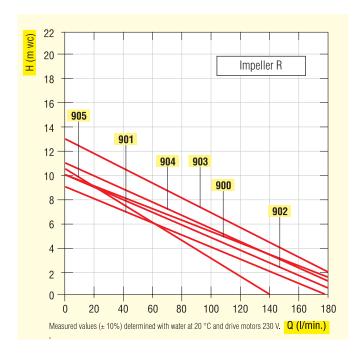
<sup>\*\*\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

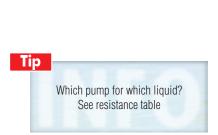
### **Pump Tube MP-SS (stainless steel)**

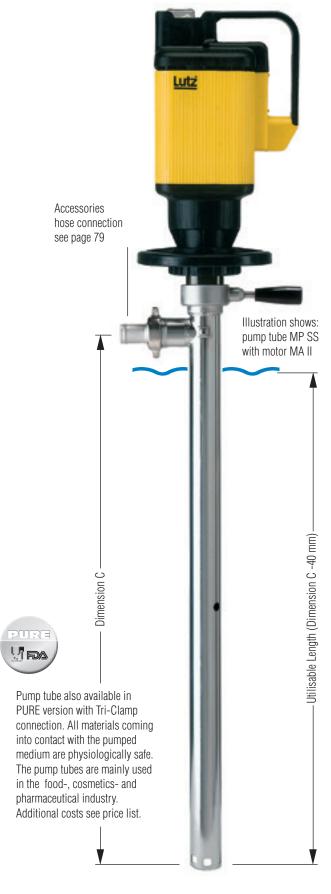
for mixing and pumping of corrosive and neutral liquids

#### Materials (coming into contact with the pumped medium):

Version:	MS	MS PURE
Housing:	Stainless steel (1.4571)	Stainless steel (1.4571)
Impeller:	ETFE	ETFE
Seals:	FPM (FEP coated)	FPM
Mechanical seals:	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)
Bearing:	Pure Carbon	Pure Carbon
Drive shaft:	Stainless steel (1.4571)	Stainless steel (1.4571)











Pump tube MP-SS (stainless steel) for mixing and pumping of highly inflammable liquids

Productdetail	Pump tube	MP-SS MS	
- V	Type of impeller		R
(1)	Category 1 / 2 (acc. to ATEX)		yes
-	Immersion tube diameter:	up to mm	41
	Temperature of medium:	up to °C	100
	Material:	Pump tube Impeller	1.4571 ETFE
II.	Hose connection:	Nominal diameter mm Outer thread	19-32 G 1 1/4
	Length: 1000 mm***	Order No.	0151-240
	Length: 1200 mm***	Order No.	0151-255



<sup>\*</sup> Determined with water at 20 °C \*\*\* Special lengths
\*\* Determined with oil 600–2500 mm on request

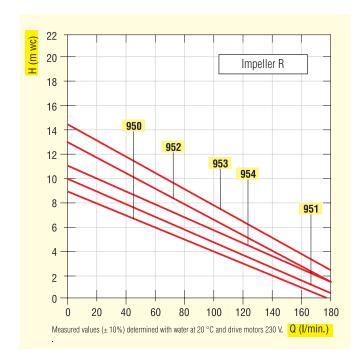
<sup>\*\*</sup> Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods.

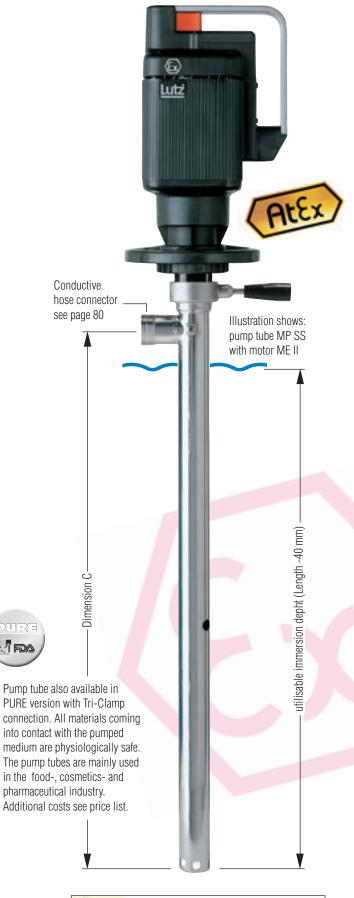
### **Pump Tube MP-SS (stainless steel)**

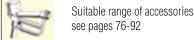
for mixing and pumping of highly inflammable liquids

#### Materials (coming into contact with the pumped medium):

Version:	MS	MS PURE
Housing:	Stainless steel (1.4571)	Stainless steel (1.4571)
Impeller:	ETFE	ETFE
Seals:	FPM (FEP coated)	FPM
Mechanical seals:	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)	Carbon, Ceramic, PTFE, HC-4 (2.4610), Stainless steel 1.4571)
Bearing:	Pure Carbon	Pure Carbon
Drive shaft:	Stainless steel (1.4571)	Stainless steel (1.4571)







Container Pump B50



### **Container Pump B50**

The solution you can safely rely on

#### Practice-oriented design

These pumps meet all criteria for an optimal emptying of container by their vertical wet-set-up design. Thus also the necessity for floor drains is void — thereby fewer leckage risks. They are suitable for endurance run, have a low weight, work with low speeds and offer highest industrial safety.

The Lutz container pump is so conceived that it can almost immersed and fixed into each container opening without the necessity of adjustment. The advantages by the cartridge of the Lutz container pump B50 is in the cost reduction by fast emptying, in the omission of redundant hose connectors and an improved environmental protection.

#### Great development: Container pump

Safety, fast, economically: container pumps convince in the liquid transfer by low wear, high delivery rates and fast emptying. The model B50 is the functional answer to changed requirements in practice to the trend to ever larger bundles — up to 1200-litres-containers.

#### **Responsible Care**

The B50 container pump, is the contribution of Lutz to "Responsible Care". Responsible Care is the chemical industry's voluntary commitment to continual improvement in all aspects of health, safety and environmental (HS&E) performance and to openness in communication about its activities and its achievements.

- Easy and fast disassembly
- Convenient to clean
- ✓ Smooth running
- ✓ High pump capacity
- ✓ Short emptying times
- Low degree of wear
- Ease of handling
- Few components
- Low weight, mobile unit
- Convenient Lutz hand-wheel for disconnecting the motor and for use as a handle
- Due to the adapter, it can be attached to almost any container filler neck
- Driven by a powerful capacitor start motor (230 V, 50 Hz, with a 5-m connecting cable and plug)



#### Container Pump B50



# Simplicity and maximum working safety

Bulk chemical transfer or filling is made light work of with the B50 with flows up to 200 l/min. and quick installation.

The B50 is constructed along the lines of a drum pump in order to maintain the proven features. These include: long life, reliability, low maintenance, reduced downtime, process and transfer time savings and not least enhanced safety and efficiency.

The vertically mounted pump runs at low speed with a direct coupled motor. The motor is secured with the Lutz hand wheel for quick assembly and disassembly, and with power to cover densities from 1.0 to 1.9 kg/dm³ and viscosities up to 100 mPas without penalty. The pump is positively mounted into the container with a specially designed adaptor.

The pump is designed and constructed with proven centrifugal hydraulics guaranteeing stable performance characteristics.

The single robust housing design with an immersion depth of 1100 mm successfully achieves weight reduction and the minimisation of parts.

Productdetail	Container pump		B50 PP/HC	B50 PP/SS
	Category 1 / 2 (acc. to ATEX)		no	no
	Immersion tube diameter:	max. mm	100	100
	Temperature of medium:	max. °C	40	40
	Material:	Pump tube	PP	PP
		Impeller/diffuser material	PPO / PPE	PPO / PPE
		Drive shaft	Hastelloy C (2.4610)	Stainless steel (1.4571)
	Outrun piece:		G 1 1/2	G 1 1/2
			Outer thread	Outer thread
	Length: 1100 mm	Order No.	0180-001	0180-501

	Choice o	of motors		Operating data		
	Single pha					
181		0.00	0.75 kW	Flow rate* up to I/min.	200	200
	Density:	up to 1.3 kg/dm <sup>3</sup>		Delivery head* up to m wc	22	22
	Speed:		2700 1/min.	Viscosity up to mPas	100	100
"(Ti"	Prot. class:	IP 54	IP 54	Weight (kg) Motor + pump tube	10.5 - 13.5	10.5 - 13.5
	Order No.	0180-030	0180-031			

## **Container Pump B50**

for bulk transfer of chemicals

#### Materials (coming into contact with the pumped medium):

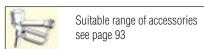
Version:	B50 PP/HC	B50 PP/SS
Pumpwerk:	Polypropylen (PP)	Polypropylen (PP)
Laufrad / Leitrad:	PPO / PPE	PPO / PPE
Mechanical seals:	Carbon / SiC / HC	Carbon / SiC / HC
Sekundärdichtung:	FPM (EPDM)	FPM (EPDM)
Drive shaft:	Hastelloy C (2.4610)	Hastelloy C (2.4610)



# Suitable accessories: Flow meter for easy volume preselection

With the modular flow meter system Lutz offer an economic solution for safe and rational volume measurement of your liquids. Flow meters, type ST and SL, convince by their easy operation, compact construction and easy connection to the container pump. By using a relay module easy volume presetting is possible. For more information, please refer to separate flow meter leaflet.



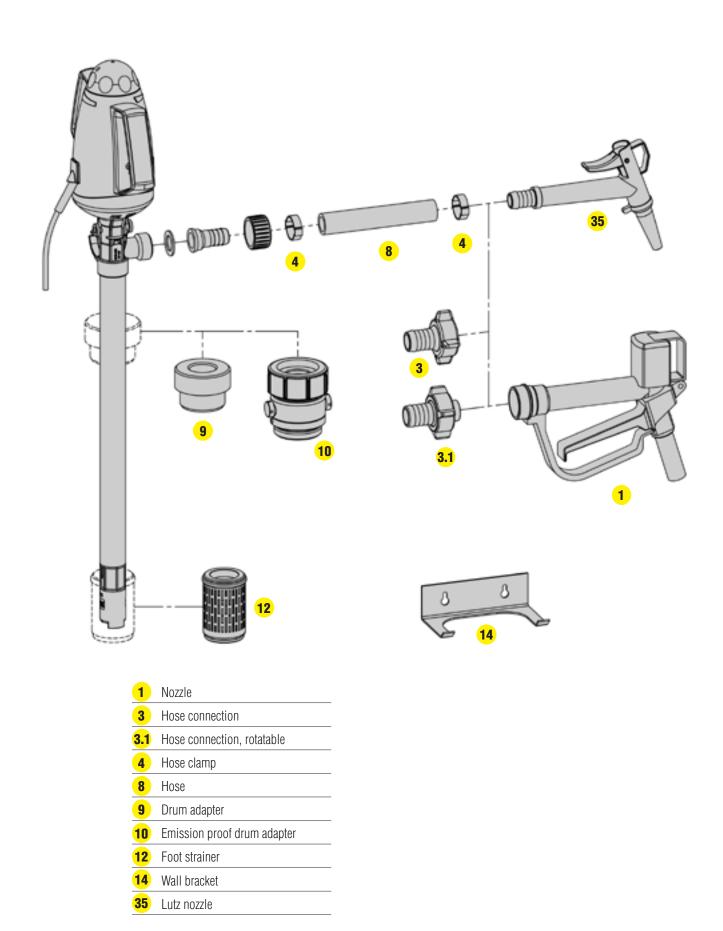


# **Accessories Lutz Drum and Container Pumps**

"Getting started"



Accessories for drum and laboratory pump B 2 at a glance



## for drum and laboratory pump Lutz B2 Vario

#### Productdetail

#### **Specification**

Order-No.



#### **Set-accessories**

Comprises of:

Lutz nozzle, 1.5 mtr. PVC-hose 3/4", hose connection,

hose clamps, wall bracket

For pump Lutz B2 Vario PP-SL ø 32

0201-550



### 35 Lutz nozzle PP for Lutz B2 Vario

For filling and transferring neutral and aggressive liquids. The liquid stream can be regulated by a turnlock fastener.

Outlet spout ø 12 mm (conical).

Polypropylene (PP) housing. FPM (FPM) seals.

Operating pressure: max. 1 bar at 20 °C Viscosity: max. 300 mPas Flow rate: max. 40 l/min. (water) Temperature of medium: max. 50 °C

Weight: max. 50 °C approx. 0.1 kg

Connection: hose liner DN 19 (3/4") **0201-215** 



## 4 Hose clamp

Stainless steel hose clamp to fix hoses at the pump outlet connection and accessories.

Nominal diameter:

Ear clamp DN 19 (3/4") **0301-257** 



## 9 Drum adapter PP

For fixing the pump B2 in the drum or container opening.

For pump tube:	For pump type:		
ø 32 mm	PP-SL 32	G 2 outer thread	0204-328
ø 32 mm	PP-SL 32	ø 56,7 mm	0208-009
ø 28 mm	SS-SL 28	ø 56,7 mm	0208-010
ø 32 mm	PP-SL 32	BCS 70 x 6	0208-027
ø 32 mm	PP-SL 32	BCS 56 x 4	0208-051
ø 28 mm	SS-SL 28	BCS 56 x 4	0208-050
ø 28 mm	SS-SL 28	BCS 70 x 6	0208-053



## 10 Emission proof drum adapter

To prevent emission of dangerous gases when using a drum pump, so protecting the operator, the environment and the drive motor from hazardous, aggressive gases and vapours. Two venting valves ensure pressure compensation between inside of the drum and surrounding atmosphere.

Connection for gas displacement pipe: G 3/8

Screw-in thread: G 2 outer thread

Seals: FPM

Material: For pump type: PP—SL 32

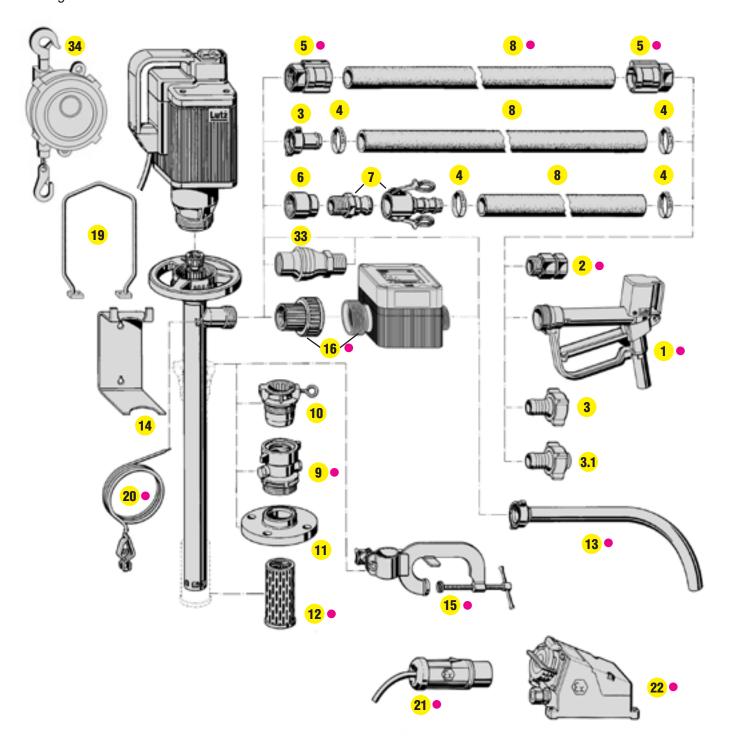
0204-251

# for drum and laboratory pump Lutz B2 Vario

**Specification** Order-No. Productdetail 12 Foot strainer Made of PP for mounting onto the pump foot. Keeps impurities away from the rotating parts. Material: For pump tube: PP ø 32 mm 0204-539 14 Wall bracket For storage of drum and laboratory pump Lutz B2 Vario. This facility helps to protect pumps from damage and maintain their value. For pump Lutz B2 Vario 0102-079

Nozzles, hoses and hose connections see pages 77-83.

# At a glance



1 •	Nozzle
2 •	Turning knuckle
3	Hose connection
3.1	Hose connection, rotatable
4	Hose clamp
5 •	Hose connector
6	Reducing sleeve
7	Quick-action hose coupling
	Reducing sleeve

8 •	Hose
9 •	Emission proof drum adapter
10	Drum adapter
11	Installation flange
<b>12</b> •	Foot strainer
<b>13</b> •	Discharge spout
14	Wall bracket
<mark>15</mark> ●	Clamping device

<mark>16</mark> ●	Flow meter
19	Lifting device
20 •	Equipotential bonding cable
<b>21</b> •	Ex-plug
<b>22</b> •	Ex-socket
33	Check valve
34	Hoist

Suitable for transferring combustible and easy inflammable liquids (e.g. ethanol, petrol) or in explosive hazard area.

#### **Nozzles**

## Specification Order-No. Productdetail

### 1 PP nozzle

For filling and transferring neutral and aggressive liquids.

With hoop guard and two outlet spouts ø 23 mm (cylindrical) and ø 12 mm (conical).

Polypropylene (PP) housing and valve tappet.

Operating pressure: max. 3 bar at 20 °C
Viscosity: max. 760 mPas
Flow rate: max. 50 l/min. (Water)
Temperature of medium: max. 50 °C
Weight: max. 50 °C

Weight: approx. 0.25 kg
Connection: outer thread G 1 1/4
Seal: FPM (FPM)

FPM (FPM) 0204-380 EPDM 0204-385

FEP/FPM 0204-387



## 1 PVDF nozzle

For filling and transferring neutral and aggressive liquids.

With hoop guard and two outlet spouts ø 23 mm (cylindrical) and ø 12 mm (conical).

Polyvinylidenfluoride (PVDF) housing and valve tappet. FPM (FPM) seals.

Additional costs for seals FFPM or FEP/FPM see price list.

Operating pressure: max. 3 bar at 20 °C
Viscosity: max. 760 mPas
Flow rate: max. 50 l/min. (Water)
Temperature of medium: max. 80 °C

Weight: max. 80 °C approx. 0.3 kg connection: outer thread G 1 1/4

onnection: outer thread G 1 1/4 **0204-390** 



#### 1 Stainless steel nozzle

Ideally suitable for filling and transferring liquids - also for combustible and easy inflammable liquids - in food and pharmaceutical industry.

Stainless steel (1.4571) housing and valve tappet.

With hoop guard and rotating joint. Additional costs for seals EPDM.

NEW: Nozzle in PURE-version available.

Additional costs see price list.

Operating pressure: max. 3 bar
Viscosity: max. 760 mPas
Flow rate: max. 50 l/min. (Water)

Temperature of medium: max. 80 °C
Weight: approx. 1 kg
Connection: outer thread G 1 1/4
Seal: FPM (FPM)

 FPM (FPM)
 0204-370 ●

 FEP/FPM
 0204-377 ●





Hose connection (item 3) or hose connector (item 5) for quick starting up.

## Nozzles, check valves

#### Productdetail

#### **Specification**

Order-No.



#### 1 Brass nozzle

Brass housing and valve tappet, nickel-plated. PTFE seals. With hoop guard and rotating joint. For filling and transferring solvents and neutral liquids.

Operating pressure: max. 4 bar Viscosity: max. 760 mPas max. 80 I/min. (Water) Flow rate: Temperature of medium: max. 80 °C Weight: approx. 0.6 kg

Connection: outer thread G 1 1/4 0372-502



#### Aluminium nozzle

For filling and transferring fuel and diesel oil. Aluminium housing and valve tappet. NBR seals. With hoop guard and rotating joint.

Operating pressure: max. 4 bar Viscosity: max. 760 mPas Flow rate: max. 60 l/min. (Water) Temperature of medium: max. 60 °C

Weight: approx. 0.5 kg

Connection: inner thread G 1 0372-250



#### Automatic aluminium nozzle

Automatic switch-off with ball-tilt safety release. Housing in aluminium, internal components in brass/Delrin. Swivel hose connection is possible.

outer thread G 1

Operating pressure: max. 0.5 up to 4 bar Viscosity: max. 7 mPas max. 80 I/min. (Water) Flow rate: Temperature of medium: max. 60 °C approx. 1.1 kg Weight:

0372-245 Seal: PTFE



#### 2 Rotating joint

Connection:

Rotating connection between hose connector and nozzle.

FEP/FPM seals.

Material: Nominal diameter:

inner thread G 1/outer thread G 1 Brass 0372-120 Stainless steel inner thread G 1/outer thread G 1 0370-012 Stainless steel outer thread G 1/outer thread G 1 0370-011



#### 33 Check valve

Prevents backflow of the liquid at downtime of the pump.

Material: Nominal diameter: Operating pressure: Stainless steel 1.4301 inner thread G 1 1/4 max. 16 bar 0372-017 inner thread G 1 1/4, seal PTFE 0372-050 Stainless steel 1.4401 max. 16 bar 0204-516 Stainless steel 1.4401 inner thread G 1 1/4/outer thread G 1 1/4 max. 16 bar

seal PTFE (preferred for horizontal fitting)

PVC inner thread G 1 1/4/outer thread G 1 1/4 max. 6 bar 0204-517 seal EPDM (preferred for horizontal fitting)

 Suitable for transferring combustible and easy inflammable liquids (e.g. ethanol, petrol) or in explosive hazard area.

# Hose connections

			Order-No.	Productdeta
Hose connection  Hose connector with wi to the pump tube or noz	ing nut for connecting the zzle.	hoses		<b>S</b>
Connection: inner threa Material: PP PP PP PP PP PP grey	Nominal diameter:  DN 13 (1/2")  DN 19 (3/4")  DN 25 (1")  DN 32 (1 1/4")  DN 19 (3/4")		0204-409 0204-410 0204-411 0204-412 0204-419	
PVDF PVDF PVDF	DN 19 (3/4") DN 25 (1") DN 32 (1 1/4")		0204-421 0204-422 0204-423	
Alu Alu Alu	DN 19 (3/4") DN 25 (1") DN 32 (1 1/4")		0204-403 0204-404 0204-405	
Stainless steel Stainless steel Stainless steel	DN 19 (3/4") DN 25 (1") DN 32 (1 1/4")		0204-400 0204-401 0204-402	
HC	DN 25 (1")		0204-407	
Connection: outer threa Material: Brass Brass	nd G 1 Nominal diameter: DN 19 (3/4") DN 25 (1")		0204-428 0204-429	
Hose connection rot Hose connector with wi to the PP and PVDF no.	ing nut for connecting the	hoses		
Connection: inner threa Material: PP PP PP PP PP PP	Nominal diameter: DN 19 (3/4") DN 25 (1") DN 32 (1 1/4") DN 19 (3/4") DN 25 (1") DN 19 (3/4") DN 19 (3/4") DN 19 (3/4") DN 25 (1")	Seal FPM/FPM Seal FPM/FPM Seal FPM/FPM Seal FEP/FPM Seal FEP/FPM Seal EPDM Seal EPDM	0204-424 0204-434 0204-367 0204-430 0204-431 0204-432 0204-433	
PVDF PVDF	DN 19 (3/4") DN 25 (1") DN 32 (1 1/4")	Seal FPM/FPM Seal FPM/FPM Seal FPM/FPM	0204-435 0204-425 0204-368	
PVDF				

## Hose clamps, hose connections

Productdetail	Specification	Order-No.



## 4 Stepless 1-ear hose clamp

1-ear hose clamp of stainless steel for the safe fixing of different hoses onto the hose connection.

(Advices for selecting the suitable hose clamp - see hoses).

*	,	
Size:	26.3 - 29.5 mm	0300-415
	28.0 - 31.0 mm	0301-257
	28.3 - 31.5 mm	0300-420
	30.3 - 33.5 mm	0300-425
	30.8 - 34.0 mm	0300-430
	31.5 - 35.0 mm	0300-435
	32.8 - 36.0 mm	0300-440
	35.8 - 39.0 mm	0300-445
	39.8 - 43.0 mm	0300-450
	42.3 - 45.5 mm	0300-455
	43.8 - 47.0 mm	0300-460
	49.8 - 53.0 mm	0300-465
	60.3 - 63.5 mm	0300-470
	64.8 - 68.0 mm	0300-475



## 5 Hose connector

The use of conductive hoses is obligatory in explosion hazard areas. The ohmic resistance between the armatures must be less than  $10^6$  ohm. The hose connection must ensure a highly conductive transition between hose and pump tube.

## **Brass**

for hose DN 19 (3/4")	inner thread G 1 (EN12 115)	0302-073
for hose DN 19 (3/4")	outer thread G 1 (EN12 115)	0302-074
for hose DN 19 (3/4")	inner thread G 1 1/4 (EN12 115)	0302-106
for hose DN 25 (1")	inner thread G 1 (EN12 115)	0302-011
for hose DN 25 (1")	outer thread G 1 (EN12 115)	0302-010
for hose DN 25 (1")	inner thread G 1 1/4 (EN12 115)	0302-012
for hose DN 32 (1 1/4")	outer thread G 1 1/4 (EN12 115)	0302-093 🔵
for hose DN 32 (1 1/4")	inner thread G 1 1/4 (EN12 115)	0302-107

#### Brass for mineral oil hose DN 19 / DN 25

for mineral oil hose DN 19 (3/4")	inner thread G 1 (EN12 115)	0302-111
for mineral oil hose DN 25 (1")	inner thread G 1 (EN12 115)	0302-112
for mineral oil hose DN 25 (1")	inner thread G 1 1/4 (EN12 115)	0302-113

## Stainless steel (1.4571)

for hose DN 19 (3/4")	inner thread G 1 (EN12 115)	0302-108
for hose DN 19 (3/4")	inner thread G 1 1/4 (EN12 115)	0302-109 🔵
for hose DN 25 (1")	inner thread G 1 (EN12 115)	0302-014
for hose DN 25 (1")	outer thread G 1 (EN12 115)	0302-013
for hose DN 25 (1")	inner thread G 1 1/4 (EN12 115)	0302-015
for hose DN 32 (1 1/4")	outer thread G 1 1/4 (EN12 115)	0302-094
for hose DN 32 (1 1/4")	inner thread G 1 1/4 (EN12 115)	0302-110

Suitable for transferring combustible and easy inflammable liquids (e.g. ethanol, petrol) or in explosive hazard area.

# Double nipple, reducing sleeves, quick-action hose couplings

Specification		Order-No.	Productdetai
<b>Double nipple</b> Stainless steel (1.4571)	G 1 1/4 outer thread	0300-106	
To connect quick action he Inner thread G 1 1/4 and G  Material: PP Brass Stainless steel	ose coupling with pump tube.	0204-072 0372-018 0372-019	
	pling nd leakproof connection between pass, stainless steel and polypropyl male element DN 25 (1") female element DN 25 (1") female element DN 25 (1") male element DN 25 (1") male element DN 25 (1") female element DN 25 (1") female element DN 25 (1") male element DN 25 (1") female element DN 25 (1")	0372-020 0372-021 0372-022 0372-023 0372-024 0372-025 0372-026 0372-027	A complete quick-action hose coupling is consisting of reducing sleeves plus female and male coupling element.

## PVC hoses, mineral oil hoses, solvent hoses

#### Productdetail

#### **Specification**

Order-No.



8 PVC-spiral hose

PVC hose, with steel helix for aggressive, non-flammable liquids.

Operating pressure: max. 10 bar Temperature of medium: -15 up to +65 °C

Nominal diameter: Weight: Suitable hose clamp:

 DN 19 (3/4")
 0.33 kg/m
 0300-415
 0374-457

 DN 25 (1")
 0.52 kg/m
 0300-435
 0374-440

 DN 32 (1 1/4")
 0.6 kg/m
 0300-450
 0374-441



8 PVC hose

Fabric reinforced PVC hose for aggressive, non-flammable liquids.

Operating pressure: max. 6 bar Temperature of medium: 0 up to +60 °C

Nominal diameter: Weight: Suitable hose clamp:

DN 32 (1 1/4") 0.5 kg/m 0300-450 **0374-425** 



#### 8 Electrically conductive hoses

Caution: Electrical conductivity is assured through the assigned materials and their composition. If correctly installed, resistance during the entire life of the hoses will remain with type  $\Omega$  smaller  $10^6$  ohm and with type  $\Omega$  smaller  $10^2$  ohm (to EN 12115).

#### Mineral oil hose

Colour coding: "yellow".

Hose for mineral oil products of all kinds up to 50 % aromatics and methanol content.

Inner rubber NBR (antistatic) and outer rubber chloroprene (CR).

Type  $\Omega$  smaller 10<sup>6</sup> ohm (to EN 12115)

Operating pressure: max. 10 bar
Temperature of medium: -35 up to +60 °C

Nominal diameter: Weight: Suitable hose clamp:

DN 32 (1 1/4") 1.0 kg/m 0300-455 **0374-413 •**DN 38 (1 1/2") 1.2 kg/m 0300-465 **0374-414 •** 

Hose for mineral oil products of all kinds up to 50 % aromatics and methanol content.

Inner rubber NBR (antistatic) and outer rubber NBR.

Type  $\Omega$  smaller 10<sup>6</sup> ohm (to EN 12115)

Operating pressure: max. 10 bar
Temperature of medium: -30 up to +65 °C

Nominal diameter: Weight: Suitable hose clamp:

DN 19 (3/4") 0.6 kg/m 0300-415 **0374-461** • DN 25 (1") 0.8 kg/m 0300-440 **0374-462** •



#### 8 Solvent hose

Colour coding: "blue".

Hose suitable for a wide range of commercial solvents.

Inner rubber of special coating (not conductive) and outer rubber of chloroprene (CR).

Type  $\Omega$  smaller  $10^6$  ohm (to EN 12115)

Operating pressure: max. 10 bar
Temperature of medium: -35 up to +60 °C

Nominal diameter: Weight: Suitable hose clamp:

DN 19 (3/4") 0300-430 0374-416 0.6 kg/m DN 25 (1") 0.8 kg/m 0300-445 0374-417 DN 32 (1 1/4") 0374-418 1.2 kg/m 0300-455 0374-450 DN 38 (1 1/2") 1.5 kg/m 0300-465

# Universal chemical hoses, special chemical hoses and hoses for foodstuffs

## Specification Order-No. Productdetail

#### 8 Universal chemical hose

Colour coding: "blue/white/blue".

Suitable for 95% of all customary industrial chemicals such as almost all acids and alkalis,

mineral oil products and solvents of all kinds.

Internal finish: Smooth special lining of ultra high molecular polyethylene (U-PE)

and white intermediate safety layer.

External finish: Electrically conductive EPDM. Intermediate layers: Textile mesh in tinplated copper fibres and tin-plated steel wire filament. If correctly installed, resistance during the entire life of the hose will remain under  $10^6$  ohm. Type  $\Omega$  smaller  $10^6$  Ohm (to EN 12115).

Operating pressure: max. 10 bar
Temperature of medium: -30 up to +100 °C

Nominal diameter: Weight: Suitable hose clamp:

DN 19 (3/4") 0300-425 0374-420 0.8 kg/m DN 25 (1") 0300-445 0374-419 0.9 kg/m DN 32 (1 1/4") 1.2 kg/m 0300-455 0374-421 0374-453 DN 38 (1 1/2") 1.5 kg/m 0300-465



## 8 Special chemical hose

Colour coding: "blau/white/red".

Suitable for all commonly used chemicals, ideal also for very pure media.

Internal finish: PTFE FEP transparent, smooth, seamless, non-leaching, non-dyeing

(in conformity with FDA and USP Class VI demands).

Intermed. layer: EPDM.

External finish: EPDM electrically conductive with OHM conductive stripes.

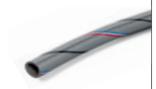
Operating pressure: max. 16 bar Temperature of medium: -30 up to +100 °C

Nominal diameter: Weight: Suitable hose clamp:

 DN 19 (3/4")
 0.6 kg/m
 0300-430
 0374-428

 DN 25 (1")
 0.9 kg/m
 0300-445
 0374-429

 DN 32 (1 1/4")
 1.1 kg/m
 0300-455
 0374-430



## Emission proof drum adapters



To permit reliable application, emission protection for "on site" pumping operations must be made as convenient as possible under practical conditions. The Lutz EMIGA system achieves more for the user while involving less work:

- All that is needed is a single drum adapter with two integrated valves.
- Due to "active seal", emission protection is guaranteed even in the event to wear and tear, damage or pump tube diameter tolerances.
- The lower part of the adapter can be adapted to varying thread and diameter sizes in container openings.
- Simple installation using a plug-in-connection for individual adaption.
- Stability ensured by integrated spring loaded mechanism.
- Suitable container cup for container emptying available.
- Larger dimensioned air valves cater for pressure equalisation by the fast emptying of containers.

#### Productdetail

# Specification

Order-No.



**9** Emission proof drum adapter

To prevent emission of dangerous gases when using a drum pump, so protecting the operator, the environment and the drive motor from hazardous, aggressive gases and vapours. Two venting valves ensure pressure compensation between inside of the drum and surrounding atmosphere.

Connection for gas displacement pipe: G 3/8; Screw-in thread: G 2 outer thread Seals: FPM or EPDM.

Other threads and seal materials on request.

Material: Pump tube diameter:

PP 41 mm 0204-250
PVDF 41 mm 0204-465
Brass 41 mm 0204-252 •
Stainless steel 41 mm 0204-253 •

#### Following special threads are available

PP, Messing, Edelstahl Tri-Sure 2", BCS 56 x 4 OT, Mauser 2", BCS 70 x 6 OT

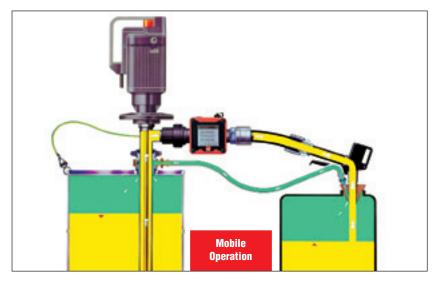
Messing, Edelstahl M 64 x 4 OT

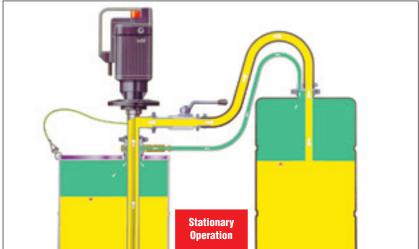
Air valve for emptying of containers (additional costs see price list) **0204-364** 

**Container cap** 

DN 150 0373-060 DN 225 0373-061

## EMIGA: emission proof drum adapters with gas displacement system





Concern about air pollution has never been so widespread as it is today. Acting on its sense of environmental responsibility, Lutz has further developed its emission proof drum adapter as a complete gas displacement system. Harmful gases and vapours created when transporting hazardous media remain practically in a closed system while themselves ensuring the necessary pressure compensation.

- Prevents emissions of harmful gases and vapours when filling **and** emptying.
- Protects the operator as well as the environment from noxious, toxic and/or severely oxidising emissions.
- All advantages of the reliable Lutz-EMIGAsystem will be maintained.
- For flexible operation with nozzle or stationary operation by fixed union.
- A check valve integrated into the gas displacement pipe, prevents the gas from back-flow at standstill of the pump.

**Specification Order-No.** Product detail

0204-202

0204-253

0373-153

#### Gas sealing kit with union for stationary operation

Reliable connection by fixed union on the container.

Stop valve and fast-action coupling ensure as fast and safe changing of drum.

#### Gas sealing kit with union

comprising of:

Stop valve, connection fittings, sealing plug, drip-free fast action coupling closing on two sides, hose connection with wing nut

Shown in addition here:

Emission drum adapter stainless steel

Gas sealing hose:

PVC-hose DN 9

Other emission proof drum adapters see page 84



## EMIGA: for safe handling of hazardous liquids

## Product detail Specification Order-No.

#### Gas sealing kit with nozzle for flexible operation

The sealing plug adapts on different drum and container openings (D = 40-75 mm). Combined with a nozzle a safe transferring even into small vessels ist possible.

A valve integrated into the gas displacement pipe,

prevents the gas from back-flow at standstill of the pump or changing the drum.



#### Application with pump tube SS 41 and nozzle SS

Variable system for use with a nozzle in such areas as fuels and solvents, etc.

#### Gas sealing kit for nozzle

comprises of: Conical sealing plug, check valve for gas displacement pipe, screw-in nipple with wing nut and connection piece, hose clamps

1. Shown in addition here:

2. Emission proof drum adapter stainless steel

3. Other emission proof drum adapters see page 84

1. Nozzle stainless steel, G 1 1/4

3. Ozo4-370

3. Gas sealing hose:

2. PVC hose DN 9

3. Ozo4-370

3. Alternatively for flammable liquids:

3. Solvent hose DN 9

3. Ozo4-253

3.

0204-272



#### Application with pump tube SS 41 and automatic nozzle Alu

In conjunction with an automatic nozzle, the flow rate is cut off automatically when the maximum level is reached.

(serving to return with sealless pump tubes arising gases back into the container)

#### Gas sealing kit for nozzle

Emission proof hose

comprises of: Conical sealing plug, check valve for gas displacement pipe, screw-in nipple with wing nut and connection piece, hose clamps 0204-201 Shown in addition here: 0204-253 Emission proof drum adapter stainless steel Other emission proof adapters see page 84 Automatic nozzle in aluminium DN 25, seal PTFE 0372-245 0204-274 Discharge pipe cpl. for automatic nozzle Alu (necessary when using a valve pad) Gas sealing hose: PVC hose DN 9 0373-153 Alternatively for flammable liquids: Solvent hose DN 9 0374-415 0204-272 Emission proof hose (serving to return with sealless pump tubes arising gases back into the container)

EMIGA: emission proof drum adapters with gas displacement system, drum adapters, installation flanges

#### **Specification** Order-No. Productdetail

0204-511

#### Application with pump tube PP 41 und nozzle PP

Prevents emissions when handling severely oxidising or fuming acids and alkalis.

#### Gas sealing kit for nozzle

comprises of: Conical sealing plug, check valve for gas displacement pipe, pipe fitting	0204-510
Shown in addition here: Emission proof drum adapter PP	0204-250
Nozzle PP/FPM (FPM) G 1 1/4	0204-380
Nozzle outlet spout PP	0204-297
Gas sealing hose: PVC hose DN 9	0373-153

(serving to return with sealless pump tubes arising gases back into the container)

\*in connection with a new pump tube



#### 10 Drum adapter in PP

Drum adapter for continuous pump tube diameters. For fixing the pump in the drum opening.

Outer thread G 2 0208-007



#### 10 Drum adapter in ST 37

Separable drum adapter for pump tubes with enlarged pump foot. For fixing the pump in the drum opening.

Additional costs: Emission proof hose with connection flange PVDF\*

Thread G 2 and M 64 x 4 0204-215



#### 10 Drum adapter in steel, galvanized

For fixing the pump in the drum opening.

Outer thread G 2

For mixing pump tube PP 0208-013



### 10 Drum adapter PE (electrically conductive)

For fixing the pump in the drum opening.

Outer thread G 2 0208-055 Outer thread BCS 56 x 4 0208-052 0208-054 Outer thread BCS 70 x 6



For fixing the drum and container pump according to DIN 2573, DN 50, PN 6 to a companion flange. The flange is welded onto the pump tube.

Material:	For pump tube:	
PP	ø 41 mm	0110-191
PVDF	ø 41 mm	0122-001
Alu	ø 41 mm	0132-120
SS	ø 41 mm	0151-622



Foot strainers, pump security rack, discharge spouts, wall bracket, clamping device, oval gear flow meter

#### Productdetail

#### **Specification**

Order-No.



#### 12 Foot strainer

Available in PP, PVDF and stainless steel, for mounting on the pump foot. Keeps impurities away from the rotating parts.

Material: For pump tube:

 PP
 PP Ø 41 mm
 0343-177

 PVDF
 PVDF and Alu Ø 41 mm
 0343-187

 Stainless steel
 SS Ø 41 mm
 0204-617 ●



#### **Pump security rack**

For pump tubes up to Ø 50 mm

0204-093

0204-200

0204-373

0204-225



#### 13 Discharge spout

Serving to transfer and fill liquids directly into other vessels. They are available in PP, alu and stainless steel and are threaded onto the pump outlet connection.

 Material:
 Nominal diameter:
 Wing nut:

 PP
 DN 19 (3/4")
 G 1 1/4

 Alu
 DN 25 (1")
 G 1 1/4

 SS
 DN 25 (1")
 G 1 1/4

I

## 14 Wall bracket

For storage of drum pumps. This facility helps protect pumps from damage, and maintains their value.

For pump tubes with hand wheel **0204-308** 



#### 15 Clamping device

To fasten the drum pumps in open-topped drums and containers. Suitable for different pump tube diameters.

For pump tubes:

PP, PVDF, Alu, SS and HC

0205-040

0211-600



#### 16 Oval gear flow meter MDO 1

For efficient flow measurement of mineral oils and alternative fuels.

Easy handling, compact construction and quick assembly onto the pump.

 $\begin{array}{lll} \mbox{Measuring principle:} & \mbox{Oval gear} \\ \mbox{Range of measurement:} & 3 - 80 \mbox{ l/min.} \\ \mbox{Range of viscosity:} & 1 - 2000 \mbox{ mPas} \\ \mbox{Accuracy of measurement:} & \pm 0,5\% \end{array}$ 

Connection: G 1 1/4

## Electronical flow meters, lifting devices, hoist, electrical accessories

Specification Order-No. Productdetail

### 16 Electronical flow meter, TR series

For easy and precise flow rate measuring of various liquids. Ease of handling, compact design and ideally to combine with all drum and container pumps (connection G 1 or G 1 1/4), available in polypropylene (PP) or polyvinylidenefluoride (PVDF).

For more details see separate flow meter leaflet.



### 16 Modular electronical flow meter system, TS series

For metering all kinds of liquids. Wide range of applications: Directly at the drum pump, remote or in-line operation possible. Convenient pre-setting of required volume using a touch screen display. Multilingual menues and simple plain-text operation. A comprehensive range of system components offers practical problem solutions.

For more details see separate flow meter leaflet.



### 19 Lifting device

To simplify the process of lifting the pump in and out of drums and containers.

For motors MA II and ME II
For motors B4/GT

0211-047
0214-196



#### 34 Hoist

for drum pump, with infinitely adjustable load balancer for easy lifting and moving of the pump.

Load bearing capacity: 10-14 kg Tackle: 2 m





#### **Connecting cable**

For extension of the connecting line for universal motors, 2 or 3-wired (three-phase motors 4-wired). According to requirements the cable is available in every necessary length.

H05 RN-F, 3 x 1 mm<sup>2</sup> for motor MA II H07 RN-F, 2 x 2,5 mm<sup>2</sup> for motor MA II (42 V, 24 V) H07 RN-F, 3 x 1,5 mm<sup>2</sup> for motor ME II H07 RN-F, 4 x 1,5 mm<sup>2</sup> for three-phase motors



#### Cekon-plug

5-pole - 16 A

For three-phase gear motors B4/GT

0336-415

0466-000

0466-003

0336-074

0336-339



## for explosion proof applications

## Productdetail

#### **Specification**

Order-No.



#### 20 Equipotential bonding cable

Serves to create electrically conductive connection between explosion proof pump and container as earthing and equipontential bonding function.

2 m long with fastening clip

0204-994



## 21 Ex-plug

CEE round plug in accordance with EEx de IIC T6, splash proof in compliance with IP 65.

3-pole (alternating current) CEAG for motor ME II 3-pole (alternating current) STAHL for motor ME II

0336-536

0336-540

0336-531

0336-542



### 22 Ex-socket

CEE-socket in accordance with EEx de IIC T6, splash proof in compliance with IP 65.

3-pole (alternating current) for motor ME II
3-pole (alternating current) STAHL for motor ME II

for compressed air supply of motors MD-1, MD-2 and MD-3

**Specification** Order-No. Productdetail 30 25 Maintenance unit For cleaning and oiling the supply air. With manometer for setting operating pressure. Operating pressure: max. 10 bar 0204-152 26 Coupling (female part) Self-disconnecting in brass. For screwing in the maintenance unit. 0372-154 G 3/8 outer thread 27 Nipple (male part) In brass 0372-045 G 3/8 outer thread 28 Air hose coupling connector For connection to a coupling. For compressed air hose DN 9 0372-155 29 Stop valve Chromium-plated brass for regulating the compressed air as well as the speed of the compressed air motors. G 3/8 outer thread/inner thread 0372-043 30 Compressed air hose PVC-hose with intermediate woven layer, DN 9, for air supply to compressed air motors. 0373-153 Operating pressure: max. 14 bar at 20 °C 31 Hose clamp (Chromated steel: 1.4016) For compressed air hose DN 9 0301-156 32 Coupling with hose connector (female part) Self-disconnecting in brass, with hose connector DN 9. 0372-166 For compressed air hose DN 9

## for vegetable oil pumps

#### Productdetail

### **Specification**

Order-No.



#### Hose set SL-Bio

Hose Slimline Bio with two textile braids and plain surface. Hose clamp and hose connection from polypropylene (PP) G 1 1/4 for assembly onto the pump tube or nozzle.

Nominal diameter:

DN 21 (7/8") 0.55 kg/m

Length: 2.5 m **0205-805** Length: 4.0 m **0205-806** Length: 6.0 m **0205-807** 



#### PP nozzle

For filling and transferring. With hoop guard and two outlet spouts  $\emptyset$  23 mm (cylindrical) and  $\emptyset$  12 mm (conical). Polypropylene (PP) housing and valve tappet.

Operating pressure: max. 3 bar at 20 °C
Weight: approx. 0,.5 kg
Connection: outer thread G 1 1/4
Seal: FPM (FPM)

: FPM (FPM) **0204-380** 



#### Drum adapter in PP

Drum adapter for continuous pump tube diameters.

For fixing the pump in the drum opening.

Prevents the drum pump from tiping over in the empty drum. Thread G 2.

Container cap

NW 150 0373-060 NW 225 0373-061



#### Wall bracket

For storage of drum pumps.

This facility helps to protect pumps from damage, and maintains their value.

0204-308

0208-007



#### Oval gear flow meter MDO 1

For efficient flow measurement of mineral oils and alternative fuels. Easy handling, compact construction and quick assembly onto the pump.

 $\begin{array}{lll} \mbox{Measuring principle:} & \mbox{Oval gear} \\ \mbox{Range of measurement:} & 3 - 80 \mbox{ l/min.} \\ \mbox{Range of viscosity:} & 1 - 2000 \mbox{ mPas} \\ \mbox{Accuracy of measurement:} & \pm 0,5\% \end{array}$ 

Connection: G 1 1/4 **0211-600** 

# for container pump B50

Specification			Order-No.	Productdetai
Lifting device To simplify the process of lifting the pump in and out of drums and containers.			0155-154	
Hose connection  Hose connector with wing nut to the pump tube or nozzle.  Material: PP PP	for connecting the I	hoses Nominal diameter: DN 38 DN 32	0180-161 0204-412	
			0207 412	
<b>Reducing sleeve</b> G 1 1/2 inner thread to G 1 1/4	outer thread	for connection of a flow meter	0180-167	
Reducing sleeve G 1 1/2 outer thread to G 1 1/4	4 inner thread	for hose diameter DN 38 when using a flow meter	0180-169	
Foot strainer Keeps impurities away from the	e rotating parts.			150
Material: PP			0180-174	
Acid proof coating In aggressive atmosphere the t by a special acid proof coating				
is possible.  Acid proof coating			0006-516	
PVC hose Fabric reinforced PVC hose for	aggressive, non-fl	lammable liquids.		
Operating pressure: m Temperature of medium: 0	nax. 6 bar up to +60 °C /eight:	Suitable hose clamp:		
	.6 kg/m	0300-460	0374-431	

Hoses, hose clamps and hose connections see pages 79-83 accessories drum and container pumps.

# Twice the **COMPETENCE**...







# Professional Fluid Management

Drum pump sets

Drum and container pumps

Eccentric screw drum pumps

Flow meter systems

Air operated double diaphragm pumps Vertical and horizontal centrifugal pumps











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