

The Multipurpose Solution

4 Options – One pump tube

- Mechanical Seal (MS)
- Seal Less (SL)
- High volume Rotor (R)
- High head Impeller (L)

50 Years of Experience ...

This brilliant design, from the top bearing housing to the discharge-T and pump tube will assure you the highest chemical resistance and minimal wear – extended service life.

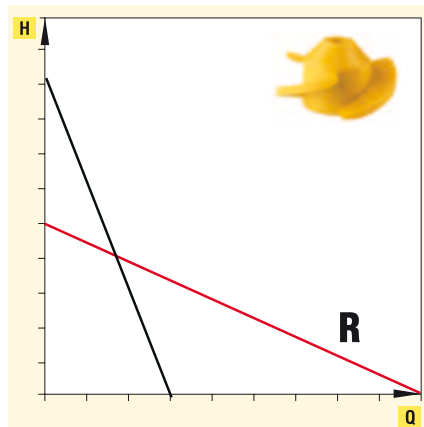
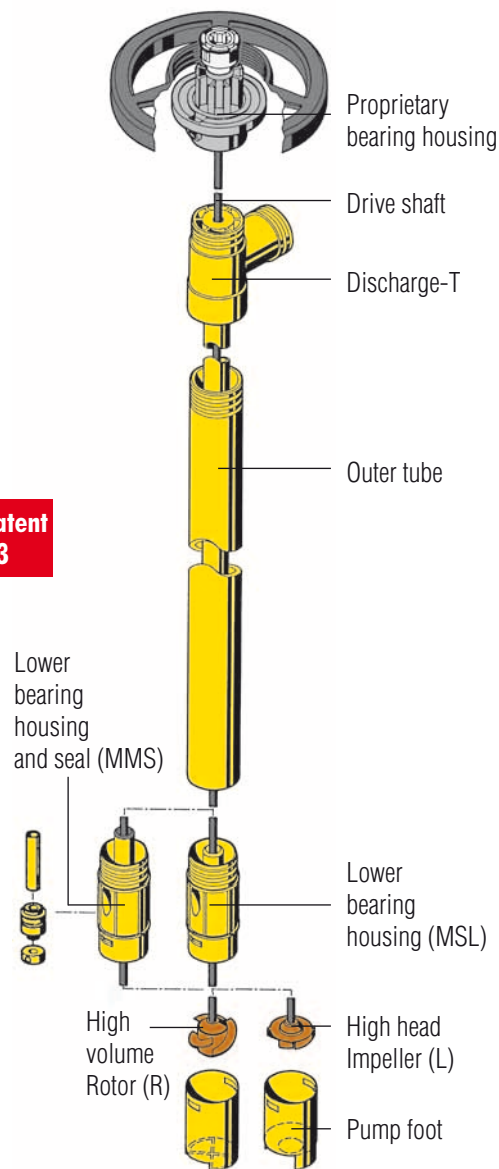
High Quality – For You

Our metal proprietary bearing housing enhances the heat dissipation of the bearing friction. The exceptionally corrosion-resistant coating ensure extended life. Due to wall thickness, the outer tube is extremely rigid. The drive shaft for PVDF and PP are in Hastelloy C with stainless as an option.

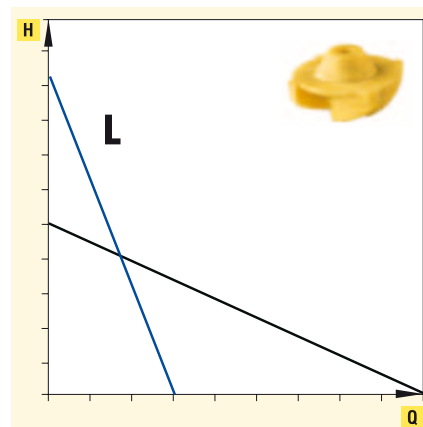
Maintenance made simple

Money and downtime reduced! The lower bearing housing with mech. seal (MS) or the sealless (SL) are easily replaced if repair or conversions are needed. That goes for changing the rotor or impeller too. The robust snap on/off pump foot is even easier to replace.

***United States Patent
No. 6,007,313**



High volume Rotor (R)



High head Impeller (L)

Lutz Polypropylene Pump Tube

For a wide range of acids and alkalis

Sealless (MSL) or with Mechanical Seal (MMS)

Applications

The robust Lutz pump tube with mechanical seal or sealless is suitable for pumping clean and dirty, thin-bodied and slightly viscous, aggressive and non-aggressive liquids out of drums and small or large containers. The pump tube is non-lubricated, thus preventing contamination of the liquids pumped.

Structure and function (MMS-PP)

Lutz pump tubes are immersible centrifugal pumps. The drive shaft of this pump tube is sealed by a single-acting mechanical seal (MS). The patented mechanical seal is integral with the lower bearing housing. This position guarantees the best operating conditions and ensures the long service life of the mechanical seal.

The pump must not be allowed to run dry.

Structure and function (MSL-PP)

Lutz pump tubes are immersible centrifugal pumps.

The drive shaft of this pump tube is not sealed. The bearing housing unit above the impeller is designed to prevent pumped liquid from rising between the shaft and the inner tube. This device guides the liquid which penetrates between the drive shaft and the shaft bearing back into the container being drained.

Length:

MMS/MSL: 27", 39", 47"

MSL only: 55", 59", 63", 67", 78"

Special length on request.



Warning:

The drum and container pump **must not** be used for flammable liquids.

Note:

Axial-flow rotor for high delivery rate and low delivery head. Radial-flow impeller for low delivery rate and high delivery head.

Type	MMS-PP (Mechanical Seal)	MSL-PP (Sealless)
Wetted parts		
Housing:	Polypropylene	Polypropylene
Mechanical seal:	Carbon, SiC, Viton®, HC-4 (2.4610)	None
Bearings:	ETFE/PTFE	ETFE/PTFE
Drive shaft:	Stainless Steel (316 Ti) HC-4 (2.4610) on request	HC-4 (2.4610) Stainless Steel (316 Ti)
Examples of liquids:	Acids, Alkalis, Vegetable Oils, Liquids, Phosphates, Sulphates, Nitrates, Chlorates, Paints and Inks, Water, Sulphites	Acids, Alkalis, Galvanic Fluids, Phosphates, Sulphates, Nitrates, Chlorates, Paints and Inks, Water, Oils, Sulphites
Type of impeller:	axial-flow rotor (R) or radial-flow impeller (L) Material: PP	axial-flow rotor (R) or radial-flow impeller (L) Material: PP

For performance information see page 6 & 7

Viton® is a registered Trademark of DuPont Dow Elastomers.



Picture shows:

Pump tube with motor B 36 / MI 4

Lutz PVDF Pump Tube

For concentrated liquids



Picture shows:
Pump tube with motor B 55 T / MA II 5

Sealless (MSL) or with Mechanical Seal (MMS)

Applications

The robust Lutz pump tube with mechanical seal or sealless is suitable for pumping clean and dirty, thin-bodied and slightly viscous, aggressive and non-aggressive liquids out of drums and small or large containers. The pump tube is non-lubricated, thus preventing contamination of the liquids pumped.

Structure and function (MMS-PVDF)

Lutz pump tubes are immersible centrifugal pumps. The drive shaft of this pump tube is sealed by a single-acting mechanical seal (MS). The patented mechanical seal is integral with the lower bearing housing. This position guarantees the best operating conditions and ensures the long service life of the mechanical seal. The pump must not be allowed to run dry.

Structure and function (MSL-PVDF)

Lutz pump tubes are immersible centrifugal pumps. The drive shaft of this pump tube is not sealed. The bearing housing unit above the impeller is designed to prevent pumped liquid from rising between the shaft and the inner tube. This device guides the liquid which penetrates between the drive shaft and the shaft bearing back into the container being drained.

Length:
27", 39", 47"
Special length on request.



Warning:
The drum and container pump **must not** be used for flammable liquids.

Note:
Axial-flow rotor for high delivery rate and low delivery head. Radial-flow impeller for low delivery rate and high delivery head.

Type	MMS-PVDF (Mechanical Seal)	MSL-PVDF (Sealless)
Wetted parts		
Housing:	PVDF	PVDF
Mechanical seal:	Carbon, SiC, Viton®, HC-4 (2.4610)	None
Bearings:	PTFE	PTFE
Drive shaft:	HC-4 (2.4610)	HC-4 (2.4610)
Examples of liquids:	Highly concentrated Acids and Alkalis, Ethyl Chloride, Chloroform, Chromic Acid, Phosphoric Acid 95%, Perchloric Acid, Sulphuric Acid, Chlorine Water etc.	Highly concentrated Acids and Alkalis, Bromic Acid, Hydrobromic Acid, Chloroform, Dimethyl Phthalate, Hydrofluoric Acid, Potassium Bromate, Sodium Perchlorate, Phosphoric Acid 95%, Nitric Acid etc.
Type of impeller:	axial-flow rotor (R) or radial-flow impeller (L) Material: ETFE	axial-flow rotor (R) or radial-flow impeller (L) Material: ETFE

For performance information see page 6 & 7

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Lutz Aluminum Pump Tube

For neutral liquids

Sealless (MSL) or with Mechanical Seal (MMS)

Applications

The robust Lutz pump tube with mechanical seal or sealless is so designed that it can run dry; it is suitable for pumping non-aggressive, clean, thin-bodied and slightly viscous liquids out of drums and small or large containers.

The pump tube is non-lubricated, thus preventing contamination of the liquids pumped.

Structure and function (MMS-ALU)

Lutz pump tubes are immersible centrifugal pumps.

The drive shaft of this pump tube is sealed by a single-acting mechanical seal (MS) and two shaft seals located behind it, making a robust sealing system.

The pump must not be allowed to run dry.

Structure and function (MSL-ALU)

Lutz pump tubes are immersible centrifugal pumps.

The drive shaft of this pump tube is not sealed. The bearing housing unit above the impeller is designed to prevent pumped liquid from rising between the shaft and the inner tube. This device guides the liquid which penetrates between the drive shaft and the shaft bearing back into the container being drained.

Length:

27", 39", 47"

Special length on request.



Warning:

The drum and container pump **must not** be used for flammable liquids.

Note:

Axial-flow rotor for high delivery rate and low delivery head. Radial-flow impeller for low delivery rate and high delivery head.

Type	MMS-ALU (Mechanical Seal)	MSL-ALU (Sealless)
Wetted parts		
Housing:	ALU, PVDF	Alu, PVDF
Seals:	Viton®	None
Mechanical seal:	Carbon, SiC, Viton®, Stainless Steel	None
Bearings:	PTFE	PTFE
Drive shaft:	Stainless Steel (316 Ti)	Stainless Steel (316 Ti)
Examples of liquids:	Thin-bodied and slightly viscous Mineral Oils, contaminated Oils, Cooling Lubricants, Vegetable Oils, Butylene Glycol, Diesel Fuel, Chlorodiphenyl, Fuel Oil, Ethereal Oils etc.	Thin-bodied and medium viscous Mineral Oils, Butylene Glycol, Diesel Fuel, Fuel Oil, Crude Oil, Phenol, Glycerine, Fatty Acid, Ethereal Oils, Linseed Oil, Paraffin Oil etc.
Type of impeller:	axial-flow rotor (R) or radial-flow impeller (L) Material: ETFE	axial-flow rotor (R) or radial-flow impeller (L) Material: ETFE

For performance information see page 6 & 7

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Picture shows:

Pump tube with motor B 55 T / MA II 5

Lutz Stainless Steel Pump Tube

For flammable and aggressive liquids



Picture shows:
Pump tube with motor Silver Star ME I 6

Sealless (MSL) or with Mechanical Seal (MMS)

Applications

The robust Lutz pump tube with mechanical seal or sealless is suitable for pumping clean and dirty, thin-bodied and slightly viscous, aggressive and non-aggressive, flammable and non-flammable liquids out of drums and small or large containers.
The pump tube is non-lubricated, thus preventing contamination of the liquids pumped.

Structure and function (MMS-SS)

Lutz pump tubes are immersible centrifugal pumps.
The drive shaft of this pump tube is sealed by a single-acting mechanical seal (MS) and two shaft seals located behind it, making a robust sealing system. The pump tube must not be allowed to run dry.

Structure and function (MSL-SS)

Lutz pump tubes are immersible centrifugal pumps.
The drive shaft of this pump is not sealed. The bearing housing insert above the impeller is designed to prevent the pumped liquid from rising between the shaft and the inner tube. This insert guides the liquid which penetrates between the drive shaft and the shaft bearing back into the container being drained.

Length:

MMS/MSL: 27", 39", 47"
MSL only: 55", 59", 63", 67", 78"
Special length on request.



The pump tube is "Zone 0" approved in combination with the original Lutz motors Silver Star / MD-1 / MD-2 in accordance with standards for use in hazardous locations.

Note:

Axial-flow rotor for high delivery rate and low delivery head. Radial-flow impeller for low delivery rate and high delivery head.

For correct bonding and grounding see page 13.

Type	MMS-SS (Mechanical Seal)	MSL-SS (Sealless)
Wetted parts		
Housing:	Stainless Steel (316 Ti)	Stainless Steel (316 Ti)
Seals:	Viton®	None
Mechanical seal:	Carbon, Ceramic, Viton®, Stainless Steel (316 Ti)	None
Bearings:	Carbon	Carbon
Drive shaft:	Stainless Steel (316 Ti)	Stainless Steel (316 Ti)
Examples of liquids:	Gasoline, thin-bodied Oils, Solvents, Chlorine Carbon Hydrogens, Alcohols, Amines, Benzoles, Phenoles, Toluol, Xylol, Fruit Juices, Paints and Inks, Vegetable Oils etc.	Alcohols, Aceton, Acetonitrile, Acetates, Ether, Diethanolamine, Freon, Frigen, Methylene Chloride, Dimethyl Phthalate, Dioxane, Diethylamine, Pyridine etc.
Type of impeller:	axial-flow rotor (R) or radial-flow impeller (L) Material: ETFE	axial-flow rotor (R) or radial-flow impeller (L) Material: ETFE

For performance information see page 6 & 7

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Lutz Hastelloy C Pump Tube

For extremely corrosive applications

SL-HC Sealless

Applications

The robust Lutz pump tube is suitable for pumping nearly all kinds of liquids, whether extremely aggressive or flammable, clean or dirty, thin-bodied or slightly viscous out of drums and small or large containers

Structure and function (SL-HC)

Lutz pump tubes are immersible centrifugal pumps.

The drive shaft of this pump is not sealed. The bearing housing insert above the impeller is designed to prevent the pumped liquid from rising between the shaft and the inner tube.

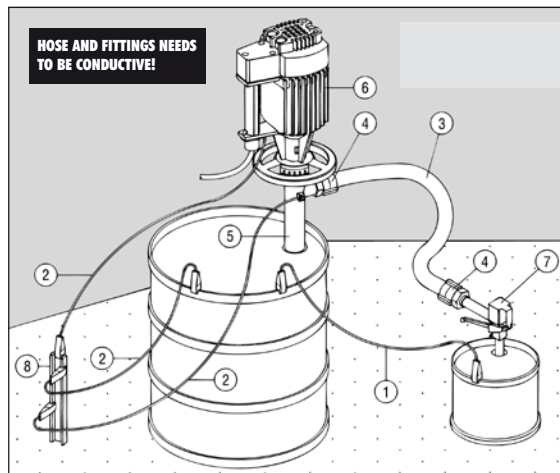
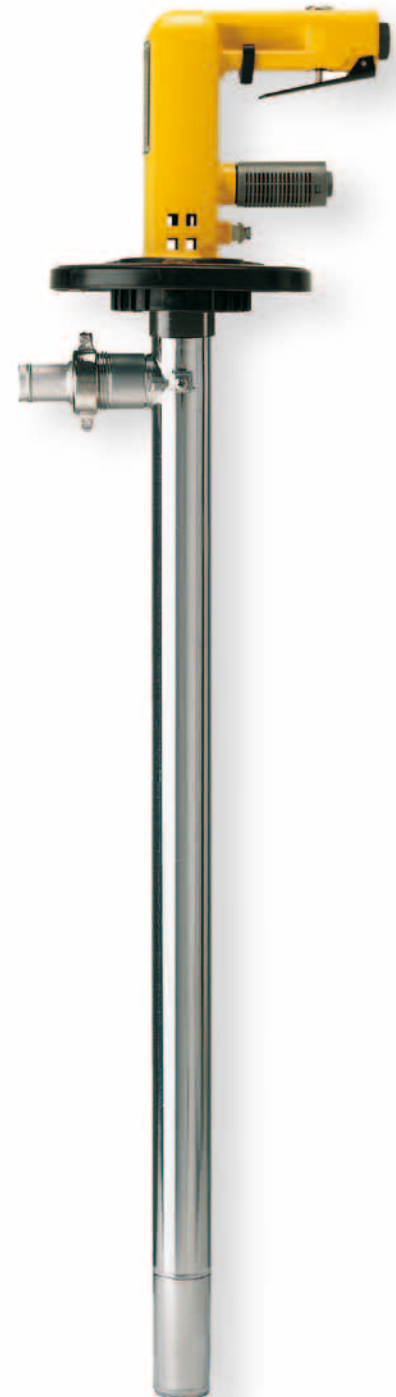
This insert guides the liquid which penetrates between the drive shaft and the shaft bearing back into the container being drained.

Length:

39", 47", Special length on request.



The pump tube is "Zone 0" approved in combination with the original Lutz motors Silver Star / MD-1 / MD-2 in accordance with standards for use in hazardous locations.



HOSE AND FITTINGS NEEDS TO BE CONDUCTIVE!

Required accessories when using explosion proof pumps in hazardous locations.

Explosion proof plug and socket outlets, bonding and grounding cable, conductive hoses and nozzles in Stainless Steel.
Ex-Motor (ME I, MD-1, MD-2)

Bonding and Grounding Diagram

- ① Bonding wire
- ② Ground wire
- ③ Conductive hose, (10⁶ Ohm)
- ④ Conductive fitting of the hose into hose connector
- ⑤ Metal pump tube for zone "0" in Stainless Steel or Hastelloy "C"
- ⑥ Explosion proof motor ME I / MD-1 / MD-2
- ⑦ Nozzle in Stainless Steel
- ⑧ Grounding rod

*Zone "0": Defines a constant hazardous explosive atmosphere. Covers interior of drum/container used for storing or transporting of explosive liquids. Equipment approved for zone "0" must be specially tested and certified.

Type	SL-HC (Sealless)
Wetted parts	
Housing:	HC-4 (2.4610)
Seals:	Viton®
Mechanical seal:	None
Bearings:	ETFE, Carbon
Drive shaft:	HC-4 (2.4610)
Examples of liquids:	Bromine, Chlorosulphonic Acid, Butylchloride, Chlorine Water and nearly all kinds of liquids
Type of impeller:	axial-flow rotor (R) or radial-flow impeller (L), Material: ETFE

For performance information see page 6 & 7

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Picture shows:

Pump tube with air motor MD-2

Lutz Pump Tubes RE for complete drum drainage

in stainless steel and polypropylene



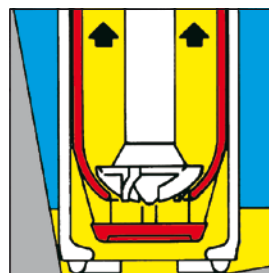
Head Start – Nothing Left Behind

Not only more money in your pocket, but a huge contribution to our environment.

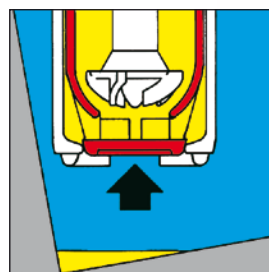
Ignoring waste and costs are things of the past. The RE pump provides the solution for reducing waste and avoiding costs through product loss and waste disposal. Use the RE means almost no residue left in drum.

Patented solution

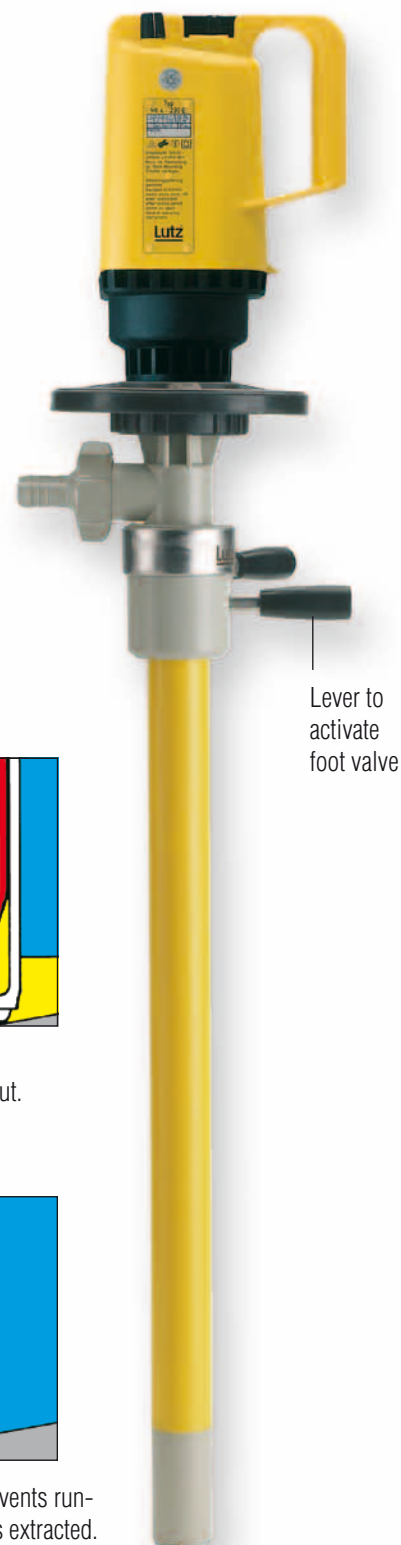
Simple to operate. When the impeller picks up air, the valve is closed by moving lever 90°. Then motor is shut down. With the liquid captured, the pump tube can be moved to next drum or liquid being disposed.



Sealing pot is open - the liquid is pumped out.



Closed sealing pot prevents run-back when the pump is extracted.



Picture shows:

RE pump tube with motor B 36 / MI 4

Lutz Pump Tube RE 88 in PP and Stainless Steel

For complete drainage of highly toxic, expensive and sensitive liquids

RE 88 PP / RE 88 SS Mechanical Seal

Applications

The pump tube RE-88 PP and RE-88 SS is designed to be used where drums or other containers have to be completely drained.

The relatively small pump tube diameter of 41 mm also makes the unit ideal for use in narrow-necked containers or in drums with a 2" bunghole.

The pump tube is non-lubricated, thus preventing contamination of the liquids pumped.

Structure and function

Lutz pump tubes are immersible centrifugal pumps.

The drive shaft of this pump is sealed by a single-acting mechanical seal (MS) above the impeller, making a robust sealing system.

The pump tube must not be allowed to run dry.

Length:

27", 39", 47"

Special length on request.



Warning:

The RE 88 Polypropylene pump **must not** be used for flammable liquids.



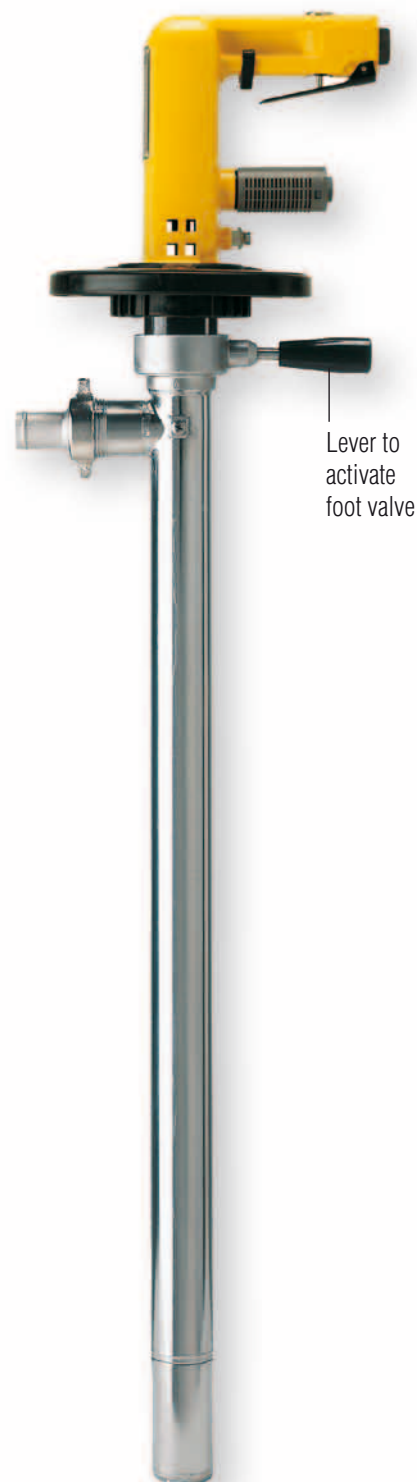
The pump tube is "Zone 0" approved in combination with the original Lutz motors Silver Star / MD-1 / MD-2 in accordance with standards for use in hazardous locations.

For correct bonding and grounding see page 13.

Type	RE-88 PP (Mechanical Seal)	RE-88 SS (Mechanical Seal)
Wetted parts		
Housing:	PP	Stainless Steel (316 Ti)
Seals:	Viton®	FEP coated
Mechanical seal:	Carbon, Ceramic, Viton®, HC-4 (2.4610)	Carbon, Ceramic, PTFE, HC-4 (2.4610)
Bearings:	Carbon	Carbon
Drive shaft:	Stainless Steel (316 Ti)	Stainless Steel (316 Ti)
Examples of liquids:	Water, Acids, Alkalis, Hydrazine, Oils, Fruit Juices, Galvanic Fluids, Phosphates, Sulphates, Nitrates etc.	Petrol, Fuel Oil, Diesel Oil, thin-bodied Oils, Solvents, Chlorine Carbon Hydrogens, Alcohols, Amines, Benzoles, Phenoles etc.
Type of impeller:	radial-flow impeller (L) Material: PP	radial-flow impeller (L) Material: ETFE

For performance information see page 6 & 7

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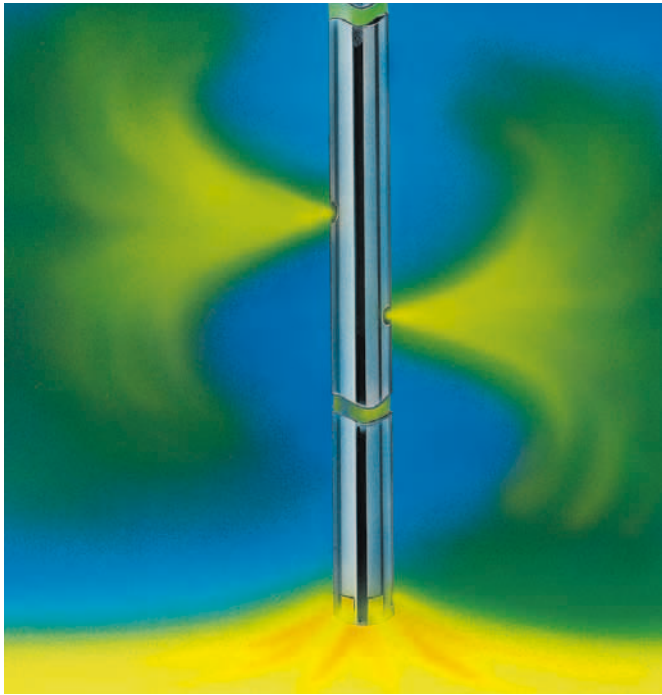


Picture shows:

RE Pump tube with motor MD-2

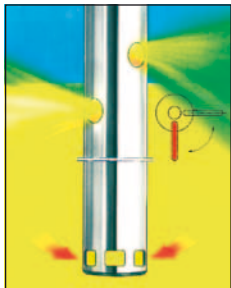
Two in One

Mixing pump tube for corrosive and neutral liquids

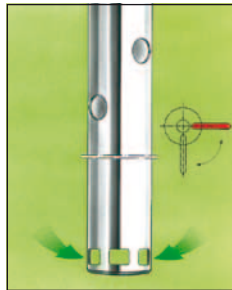


First mix then pump

When it comes to handling emulsions or suspensions which tend to settle out at the bottom of the containers, the MP, mix and pump tube, is an invaluable aid in ensuring that your liquids are gently re-mixed and homogenized.



Mix



Pump



Picture shows:
Mixing pump tube with motor B 55 T / MA II 5

Lutz MP Pump Tube in PP and Stainless Steel

For mixing and pumping of emulsions and suspensions

MP-PP / MP-SS Mechanical Seal

Applications

The Lutz mixing pump tube is designed to be used in any situation where it is necessary to mix and pump in a single operation.

The relatively small pump tube diameter of 50 mm (Polypropylene) and 41 mm (Stainless Steel) also makes the unit ideal for use in narrow-necked containers or in drums with a 2" bunghole.

The rate of flow, viscosity and density of the medium determine the mixing intensity and the delivery rate of the mixing pump tube.

Experience has shown that the mixture quantity should preferably not exceed 55 Gallons if the medium is thin-bodied.

The drive shaft of this pump tube is sealed by a single-acting mechanical seal (MS) above the impeller, making a robust sealing system. The pump tube must not be allowed to run dry.

The pump tube is non-lubricated, thus preventing contamination of the liquids pumped.

Length:

39", 47"

Special length on request.



Warning:

The mixing pump tube in Polypropylene (PP) **must not** be used for flammable liquids.



The mixing pump tube in Stainless Steel is "Zone 0" approved in combination with the original Lutz motors Silver Star / MD-1 / MD-2 in accordance with standards for use in hazardous locations.

For correct bonding and grounding see page 13.

Type	MP MS-PP (Mechanical Seal)	MP SL-PP (Sealless)	MP MS-SS (Mechanical Seal)
Wetted parts			
Housing:	PP	PP	Stainless Steel (316 Ti)
Seals:	—	—	FEP coated
Mechanical seal:	Carbon, SiC, Viton®, HC	—	Ceramic, PTFE, Stainless Steel (316 Ti)
Bearings:	ETFE/PTFE	ETFE/PTFE	Carbon
Drive shaft:	Stainless Steel (316 Ti)	Stainless Steel (316 Ti) optional HC-4 (2.4610)	Stainless Steel (316 Ti)
Examples of liquids:	Chemical, pharmaceutical and metalworking industries, in food production, in printing works, in car repair workshops and in painting/decorating firms.		
Type of impeller:	radial-flow impeller (L)	radial-flow impeller (L)	axial-flow rotor (R)
Material:	PP	PP	ETFE

For performance information see page 6 & 7

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Picture shows:

Mixing pump tube with motor Silver Star ME I 6

Lutz B2 Vario Drum and Laboratory Pump

B2 Vario (polypropylene or stainless steel)

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 new "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.

- Easy and safe to operate by integrated ergonomically designed handles and nozzle
- Ultra quiet, long service life
- **Different lengths available**
19", 27" and 39" for the use in small vessels up to 55 gal. drums
- Wide range of applications possible due to sealless construction
- Service-friendly and simple to dismantle
- Available in **110 V** or **air motor**
- Available in **polypropylene** or **stainless steel 316**

From Pump only to complete system, for safe and accurate transfer.

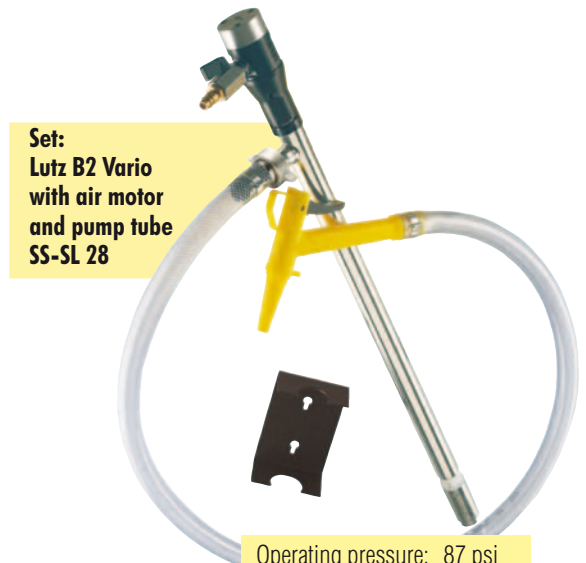
- **Laboratory pump**
with hose connection
- **Set:**
pump, 5' (1.5 m) PVC-hose, Lutz nozzle, 2 hose clips, wall bracket.



Variable speed motor 110 V with safety cut-off to enable the transfer of liquids in small amounts



Set:
Lutz B2 Vario
with 110 V motor
and pump tube
PP-SL 32



Set:
Lutz B2 Vario
with air motor
and pump tube
SS-SL 28

Operating pressure: 87 psi
Air consumption: 13 CFM

Model	Lutz B2 Vario PP-SL 32	Lutz B2 Vario SS-SL 28
Wetted parts		
Housing:	PP	Stainless Steel (316 Ti)
Seals:	None	None
Mechanical seal:	None	None
Bearings:	ETFE/PTFE	ETFE/PTFE
Drive shaft:	Hastelloy C	Stainless Steel (316 Ti)
Examples of liquids:	Battery acid, ammonia solution, glycols, photographic developer/-fixer, phosphoric acid, hydrochloric acid and hydrogen peroxide, etc.	Oil-based lubricants, cleaner solvent plasticizer, etc.
Type of impeller:	axial-flow rotor (R) Material: PP	axial-flow rotor (R) Material: ETFE

For more details request literature
Lutz B2 Vario (Ref. no. 9000-117)