

Safety

Economy

Diversity

Environment



A Pump For All Seasons

motralec

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Dear Reader

For many years Lutz has enjoyed the satisfaction of providing our worldwide customers with products which have given years of service in many diverse industries and markets.

As we cater responsibly for your many needs we would like to state clearly our mission, which is to consistently provide you with products which not only meet your specific requirements, but which are safe, reliable and cost-effective.

In this brochure, we would like to share with you, our „Seasons“ which we believe figuratively sum up our ideal to be always innovative, producing new solutions to meet your needs, whilst being constant in our endeavours to fulfil our mission.

We would like to thank all of our existing customers for their loyalty and trust in us which has given us a position of leadership, and those of you who would benefit from our products in the future.

Karl Lutz

Jürgen Lutz



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Erst ausgerichtet
wenn der genaue
Inhalt feststeht

From the bucket to the pump



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.

Transferring corrosive, flammable or toxic liquids presents its own challenges to personal safety and the environment.

At Lutz, we believe you will be able to find your optimum solution among the range of products which have been developed specifically to overcome the dangers and disadvantages of decanting such liquids.



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 100a.

(*The Physikalisch-Technische Bundesanstalt (PTB), Braunschweig and Berlin, is the National Institute of natural and engineering sciences and the highest technical authority for metrology and physical safety engineering in the Federal Republic of Germany)



Environment

Getting started on any project demands a little concentration, but once the focus is there life becomes easier and with the right tools, the job is quickly done. No more spillage and waste. No claims against the environment, no unnecessary accidents.

80% of the transfer jobs can be effected with our basic materials which cover neutral, aggressive and highly corrosive liquids. Our separate corrosion guide provides a simple and quick way to determine the right pump material for your liquid.

Lutz Drum and Container Pumps

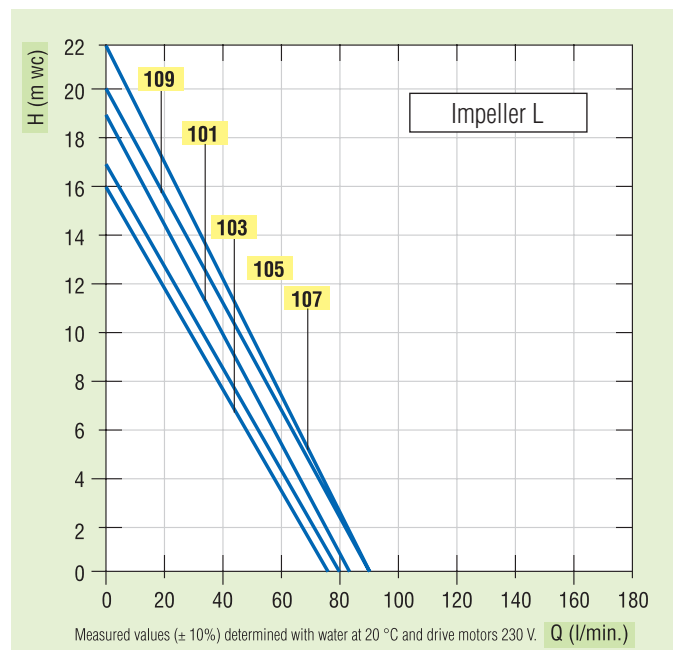
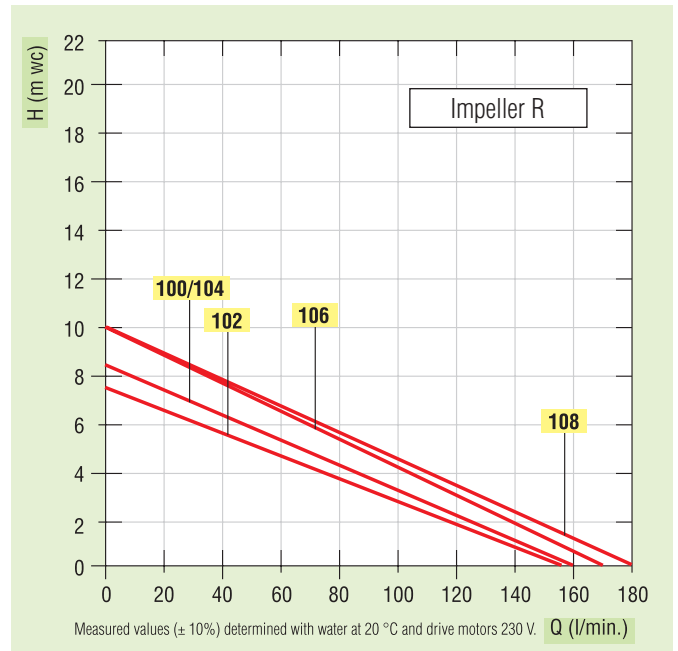
Pump tube PP (polypropylene)



Materials (coming into contact with the pumped medium)

| | PP-MS | PP-SL |
|------------------|---|---|
| Housing: | PP/PVDF | PP/PVDF |
| Impeller: | PP | PP |
| Seals: | Viton® | none |
| Mechanical seal: | Carbon, SiC, Viton®, HC-4 (2.4610) | none |
| 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) |

Viton® is a registered trademark of DuPont Dow Elastomers.






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

Pump tube PP (polypropylene)

for corrosive and neutral liquids

| Pump tube | | PP-MS | | PP-SL | | Productdetail |
|---------------------------------------|-------------------------------------|------------------|------------------|------------------|------------------|---------------|
| Type of impeller | | R | L | R | L | |
| Zone 0 (approved acc. to IEC and Vbt) | | no | no | no | no | |
| Immersion tube diameter | up to mm | 41 | 41 | 41 | 41 | |
| Temperature of medium | up to °C | 50 | 50 | 50 | 50 | |
| Material | Pump tube Impeller | PP PP | PP PP | PP PP | PP PP | |
| Hose connection | Nominal diameter mm Outer thread | 19-32 G 1 1/4 | 19-32 G 1 1/4 | 19-32 G 1 1/4 | 19-32 G 1 1/4 | |
| Length: 700 mm*** shaft SS | Order No. | 0103-500 | 0103-504 | 0110-300 | 0110-304 | |
| Length: 1000 mm*** shaft SS | Order No. | 0103-501 | 0103-505 | 0110-301 | 0110-305 | |
| Length: 1200 mm*** shaft SS | Order No. | 0103-502 | 0103-506 | 0110-302 | 0110-306 | |
| Length: 700 mm*** shaft HC | Order No. | 0103-400 | 0103-404 | 0110-200 | 0110-204 | |
| Length: 1000 mm*** shaft HC | Order No. | 0103-401 | 0103-405 | 0110-201 | 0110-205 | |
| Length: 1200 mm*** shaft HC | Order No. | 0103-402 | 0103-406 | 0110-202 | 0110-206 | |
| Length: 1400 mm*** shaft HC | Order No. | – | – | 0110-213 | 0110-208 | |
| Length: 1500 mm*** shaft HC | Order No. | – | – | 0110-214 | 0110-209 | |
| Length: 1600 mm*** shaft HC | Order No. | – | – | 0110-215 | 0110-210 | |
| Length: 1700 mm*** shaft HC | Order No. | – | – | 0110-216 | 0110-211 | |
| Length: 2000 mm*** shaft HC | Order No. | – | – | 0110-217 | 0110-212 | |

| Choice of motors | | | Operating data | | | | | | |
|---------------------|-----------------|-----------------------|-------------------------------|-------------------------------|-----|-----|-----|---|---|
| | MI 4 | MI 4-E | Characteristic curve no. | 100 | 101 | 100 | | 101 |  |
| | - | with speed controller | Delivery rate* up to l/min. | 160 | 85 | 160 | 85 | | |
| Output | 500 W | 500 W | Delivery head* up to m wc | 8.5 | 19 | 8.5 | 19 | | |
| Voltage: | 230 V | 230 V | Viscosity** up to mPas | 150 | 500 | 150 | 500 | | |
| | | | Density**** up to kg/dm³ | 1.1 | 1.4 | 1.1 | 1.4 | | |
| Order No. | 0030-000 | 0030-001 | Weight (kg) motor + pump tube | 3.9 | 3.9 | 3.9 | 3.9 | | |
| | MA II 3 | | Characteristic curve no. | 102 | 103 | 102 | 103 |  | |
| Output: | 460 W | 460 W | Delivery rate* up to l/min. | 155 | 75 | 155 | 75 | | |
| Voltage: | 230 V | 230 V | Delivery head* up to m wc | 7.5 | 16 | 7.5 | 16 | | |
| LVR: | no | yes | Viscosity** up to mPas | 150 | 500 | 150 | 500 | | |
| | | | Density**** up to kg/dm³ | 1.2 | 1.6 | 1.2 | 1.6 | | |
| Order No. | 0060-000 | 0060-008 | Weight (kg) motor + pump tube | 5.7 | 5.7 | 5.7 | 5.7 | | |
| | MA II 5 | MA II 5 | MA II 5 S | Characteristic curve no. | 104 | 105 | 104 | | 105 |
| Output: | 575 W | 575 W | 575 W | Delivery rate* up to l/min. | 160 | 80 | 160 | 80 | |
| Voltage: | 230 V | 230 V | 230 V | Delivery head* up to m wc | 8.5 | 17 | 8.5 | 17 | |
| LVR: | no | yes | no | Viscosity** up to mPas | 350 | 800 | 350 | 800 | |
| | | | acid-proof | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 | |
| Order No. | 0060-001 | 0060-009 | 0060-091 | Weight (kg) motor + pump tube | 6.5 | 6.5 | 6.5 | 6.5 | |
| | MA II 7 | | | Characteristic curve no. | 106 | 107 | 106 | 107 |  |
| Output: | 795 W | 795 W | | Delivery rate* up to l/min. | 170 | 90 | 170 | 90 | |
| Voltage: | 230 V | 230 V | | Delivery head* up to m wc | 10 | 22 | 10 | 22 | |
| LVR: | no | yes | | Viscosity** up to mPas | 350 | 800 | 350 | 800 | |
| | | | | Density**** up to kg/dm³ | 1.4 | 1.9 | 1.4 | 1.9 | |
| Order No. | 0060-002 | 0060-010 | | Weight (kg) motor + pump tube | 7.7 | 7.7 | 7.7 | 7.7 | |
| | MD-1 | MD-2 | | Characteristic curve no. | 108 | 109 | 108 | 109 | |
| Output: | 400 W | 400 W | | Delivery rate* up to l/min. | 180 | 90 | 180 | 90 | |
| Operating Pressure: | 6 bar | 6 bar | | Delivery head* up to m wc | 10 | 20 | 10 | 20 | |
| | | | | Viscosity** up to mPas | 600 | 850 | 600 | 850 | |
| | | | | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 | |
| Order No. | 0004-087 | 0004-088 | | Weight (kg) motor + pump tube | 2.6 | 2.6 | 2.6 | 2.6 | |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

* Determined with water at 20 °C

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

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Lutz Drum and Container Pumps

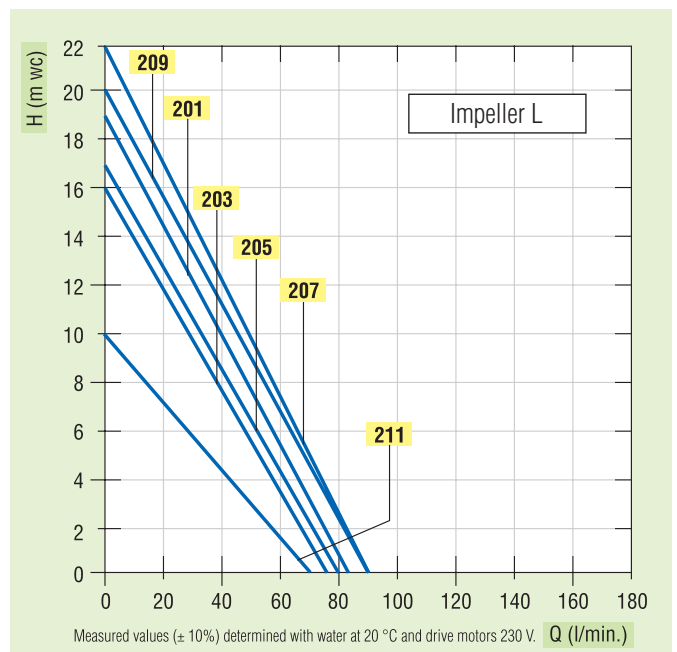
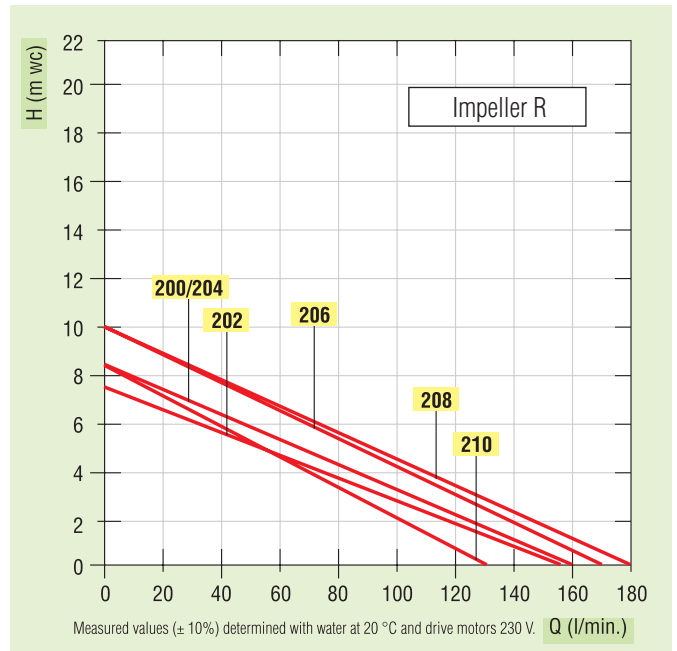
Pump tube PVDF (polyvinylidene fluoride)



Materials (coming into contact with the pumped medium)

| | PVDF-MS | PVDF-SL |
|------------------|-----------------------------------|---------------|
| Housing: | PVDF | PVDF |
| Impeller: | ETFE | ETFE |
| Seals: | Viton® | none |
| Mechanical seal: | Carbon/SiC, Viton®, HC-4 (2.4610) | none |
| Bearing: | ETFE/PTFE | ETFE/PTFE |
| Drive shaft: | HC-4 (2.4610) | HC-4 (2.4610) |


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

Pump tube PVDF (polyvinylidene fluoride)

for highly corrosive chemicals and neutral liquids

| Pump tube | | PVDF-MS | | PVDF-SL | | Product detail |
|---------------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| Type of impeller | | R | L | R | L |  |
| Zone 0 (approved acc. to IEC and VbF) | | no | no | no | no | |
| Immersion tube diameter: | up to mm | 41 | 41 | 41 | 41 | |
| Temperature of medium: | up to °C | 100 | 100 | 100 | 100 | |
| Material: | Pump tube | PVDF | PVDF | PVDF | PVDF | |
| | 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. | 0123-400 | 0123-404 | 0122-200 | 0122-204 | |
| Length: 1000 mm*** | Order No. | 0123-401 | 0123-405 | 0122-201 | 0122-205 | |
| Length: 1200 mm*** | Order No. | 0123-402 | 0123-406 | 0122-202 | 0122-206 | |

Choice of motors Operating data

| MI 4 | MI 4-E | Operating data | | | | |
|---------------------------|-----------------------|-------------------------------|-----|-----|-----|-----|
| - | with speed controller | Characteristic curve no. | 200 | 201 | 200 | 201 |
| Output: 500 W | 500 W | Delivery rate* up to l/min. | 160 | 85 | 160 | 85 |
| Voltage: 230 V | 230 V | Delivery head* up to m wc | 8.5 | 19 | 8.5 | 19 |
| Order No. 0030-000 | 0030-001 | Viscosity** up to mPas | 150 | 500 | 150 | 500 |
| | | Density**** up to kg/dm³ | 1.1 | 1.4 | 1.1 | 1.4 |
| | | Weight (kg) motor + pump tube | 4.5 | 4.5 | 4.5 | 4.5 |



| MA II 3 | Operating data | | | | | |
|---------------------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: 460 W | 460 W | Characteristic curve no. | 202 | 203 | 202 | 203 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | 155 | 75 | 155 | 75 |
| LVR: no | yes | Delivery head* up to m wc | 7.5 | 16 | 7.5 | 16 |
| Order No. 0060-000 | 0060-008 | Viscosity** up to mPas | 150 | 500 | 150 | 500 |
| | | Density**** up to kg/dm³ | 1.2 | 1.6 | 1.2 | 1.6 |
| | | Weight (kg) motor + pump tube | 6.3 | 6.3 | 6.3 | 6.3 |



| MA II 5 | MA II 5 | MA II 5 S | Operating data | | | | |
|---------------------------|-----------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: 575 W | 575 W | 575 W | Characteristic curve no. | 204 | 205 | 204 | 205 |
| Voltage: 230 V | 230 V | 230 V | Delivery rate* up to l/min. | 160 | 80 | 160 | 80 |
| LVR: no | yes | no | Delivery head* up to m wc | 8.5 | 17 | 8.5 | 17 |
| Order No. 0060-001 | 0060-009 | 0060-091 | Viscosity** up to mPas | 350 | 800 | 350 | 800 |
| | | acid-proof | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 |
| | | | Weight (kg) motor + pump tube | 7.1 | 7.1 | 7.1 | 7.1 |

| MA II 7 | Operating data | | | | | |
|---------------------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: 795 W | 795 W | Characteristic curve no. | 206 | 207 | 206 | 207 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | 170 | 90 | 170 | 90 |
| LVR: no | yes | Delivery head* up to m wc | 10 | 22 | 10 | 22 |
| Order No. 0060-002 | 0060-010 | Viscosity** up to mPas | 350 | 800 | 350 | 800 |
| | | Density**** up to kg/dm³ | 1.4 | 1.9 | 1.4 | 1.9 |
| | | Weight (kg) motor + pump tube | 8.3 | 8.3 | 8.3 | 8.3 |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

| MD-1 | MD-2 | Operating data | | | | |
|---------------------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: 400 W | 400 W | Characteristic curve no. | 208 | 209 | 208 | 209 |
| Operating Pressure: 6 bar | 6 bar | Delivery rate* up to l/min. | 180 | 90 | 180 | 90 |
| Order No. 0004-087 | 0004-088 | Delivery head* up to m wc | 10 | 20 | 10 | 20 |
| | | Viscosity** up to mPas | 600 | 850 | 600 | 850 |
| | | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 |
| | | Weight (kg) motor + pump tube | 3.2 | 3.2 | 3.2 | 3.2 |



| B4/GT | Operating data | | | | | |
|---------------------------|-----------------|-------------------------------|------|------|------|------|
| Output: 750 W | 750 W | Characteristic curve no. | 210 | 211 | 210 | 211 |
| Voltage: 230/400 V | 230/400 V | Delivery rate* up to l/min. | 130 | 70 | 130 | 70 |
| Protection switch: no | yes | Delivery head* up to m wc | 8.5 | 10 | 8.5 | 10 |
| Order No. 0004-019 | 0004-067 | Viscosity** up to mPas | 400 | 400 | 400 | 400 |
| | | Density**** up to kg/dm³ | 2.0 | 2.2 | 2.0 | 2.2 |
| | | Weight (kg) motor + pump tube | 11.7 | 11.7 | 11.7 | 11.7 |



* Determined with water at 20 °C *** Special lengths 200–2500 mm on request **** Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods. Special voltages and frequencies on request.

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Lutz Drum and Container Pumps

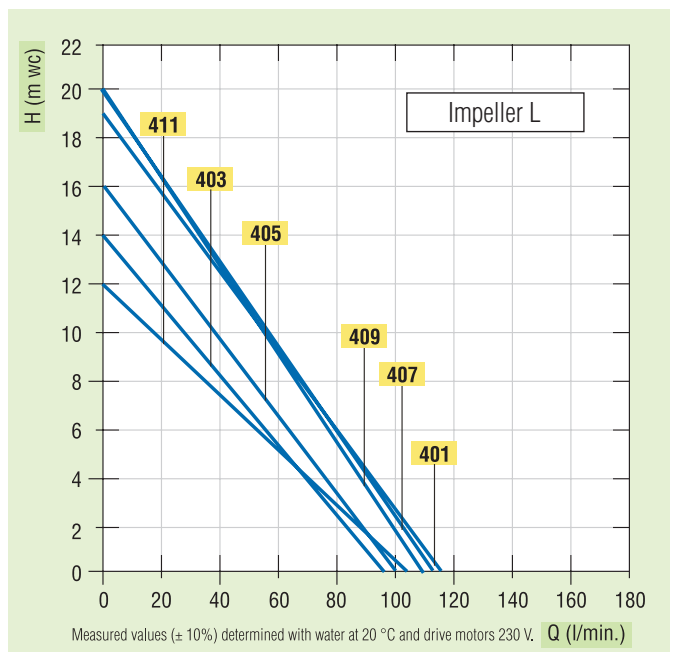
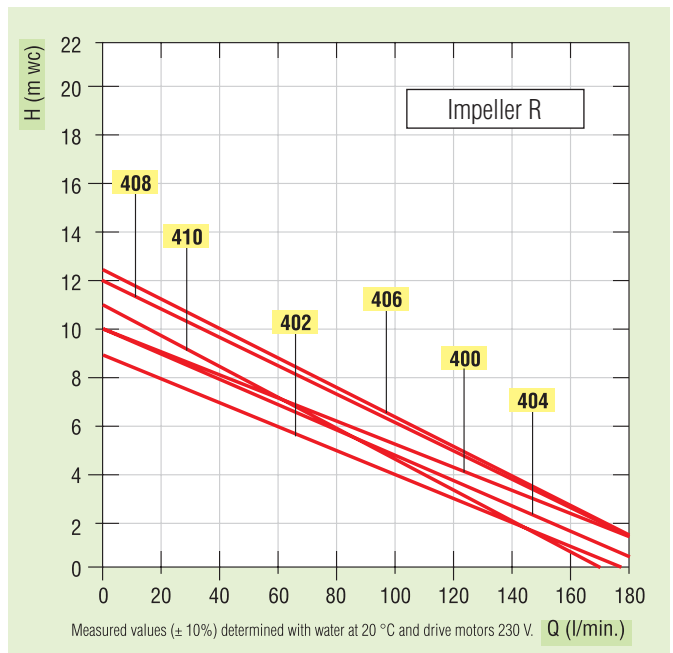
Pump tube SS (stainless steel)



Materials (coming into contact with the pumped medium)

| | SS-MS | SS-SL |
|------------------|--|--------------------------|
| Housing: | Stainless steel (1.4571) | Stainless steel (1.4571) |
| Impeller: | ETFE | ETFE |
| Seals: | Viton® | none |
| Mechanical seal: | Carbon, ceramic, Viton®, stainless steel | none |
| Bearing: | Pure carbon | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) | Stainless steel (1.4571) |

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

Pump tube SS (stainless steel)

for corrosive and neutral liquids

| Pump tube | | SS-MS | | SS-SL | | Product detail |
|---------------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|----------------|
| Type of impeller | | R | L | R | L | |
| Zone 0 (approved acc. to IEC and VbF) | | 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. | 0151-000 | 0151-003 | 0150-000 | 0150-003 | |
| Length: 1000 mm*** | Order No. | 0151-001 | 0151-004 | 0150-001 | 0150-004 | |
| Length: 1200 mm*** | Order No. | 0151-002 | 0151-005 | 0150-002 | 0150-005 | |
| Length: 1400 mm*** | Order No. | – | – | 0150-113 | 0150-108 | |
| Length: 1500 mm*** | Order No. | – | – | 0150-114 | 0150-109 | |
| Length: 1600 mm*** | Order No. | – | – | 0150-115 | 0150-110 | |
| Length: 1700 mm*** | Order No. | – | – | 0150-116 | 0150-111 | |
| Length: 2000 mm*** | Order No. | – | – | 0150-117 | 0150-112 | |

| Choice of motors | | Operating data | | | | | | |
|---------------------------|-----------------------|-------------------------------|-------------------------------|------|------|------|---|---|
| MI 4 | MI 4-E | Characteristic curve no. | 400 | 401 | 400 | 401 |  | |
| – | with speed controller | Delivery rate* up to l/min. | 210 | 117 | 210 | 117 | | |
| Output: 500 W | 500 W | Delivery head* up to m wc | 10 | 19 | 10 | 19 | | |
| Voltage: 230 V | 230 V | Viscosity** up to mPas | 350 | 500 | 350 | 500 | | |
| Order No. 0030-000 | 0030-001 | Density**** up to kg/dm³ | 1.1 | 1.4 | 1.1 | 1.4 | | |
| | | Weight (kg) motor + pump tube | 5.7 | 5.7 | 5.7 | 5.7 | | |
| MA II 3 | | Characteristic curve no. | 402 | 403 | 402 | 403 |  | |
| Output: 460 W | 460 W | Delivery rate* up to l/min. | 178 | 95 | 178 | 95 | | |
| Voltage: 230 V | 230 V | Delivery head* up to m wc | 9 | 14 | 9 | 14 | | |
| LVR: no | yes | Viscosity** up to mPas | 200 | 350 | 200 | 350 | | |
| Order No. 0060-000 | 0060-008 | Density**** up to kg/dm³ | 1.2 | 1.6 | 1.2 | 1.6 | | |
| | | Weight (kg) motor + pump tube | 7.5 | 7.5 | 7.5 | 7.5 | | |
| MA II 5 | MA II 5 | MA II 5 S | Characteristic curve no. | 404 | 405 | 404 | 405 | |
| Output: 575 W | 575 W | 575 W | Delivery rate* up to l/min. | 190 | 100 | 190 | 100 | |
| Voltage: 230 V | 230 V | 230 V | Delivery head* up to m wc | 10 | 16 | 10 | 16 | |
| LVR: no | yes | no | Viscosity** up to mPas | 550 | 700 | 550 | 700 | |
| Order No. 0060-001 | 0060-009 | acid-proof | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 | |
| | 0060-091 | | Weight (kg) motor + pump tube | 8.3 | 8.3 | 8.3 | 8.3 | |
| MA II 7 | | | Characteristic curve no. | 406 | 407 | 406 | 407 |  |
| Output: 795 W | 795 W | | Delivery rate* up to l/min. | 210 | 115 | 210 | 115 | |
| Voltage: 230 V | 230 V | | Delivery head* up to m wc | 13 | 20 | 13 | 20 | |
| LVR: no | yes | | Viscosity** up to mPas | 400 | 500 | 400 | 500 | |
| Order No. 0060-002 | 0060-010 | | Density**** up to kg/dm³ | 1.4 | 1.9 | 1.4 | 1.9 | |
| | | | Weight (kg) motor + pump tube | 9.5 | 9.5 | 9.5 | 9.5 | |
| MD-1 | MD-2 | | Characteristic curve no. | 408 | 409 | 408 | 409 |  |
| Output: 400 W | 400 W | | Delivery rate* up to l/min. | 210 | 110 | 210 | 110 | |
| Operating Pressure: 6 bar | 6 bar | | Delivery head* up to m wc | 12 | 20 | 12 | 20 | |
| | | | Viscosity** up to mPas | 400 | 500 | 400 | 500 | |
| Order No. 0004-087 | 0004-088 | | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 | |
| | | | Weight (kg) motor + pump tube | 4.4 | 4.4 | 4.4 | 4.4 | |
| B4/GT | | | Characteristic curve no. | 410 | 411 | 410 | 411 |  |
| Output: 750 W | 750 W | | Delivery rate* up to l/min. | 170 | 105 | 170 | 105 | |
| Voltage: 230/400 V | 230/400 V | | Delivery head* up to m wc | 11 | 12 | 11 | 12 | |
| Protection switch: no | yes | | Viscosity** up to mPas | 400 | 500 | 400 | 500 | |
| Order No. 0004-019 | 0004-067 | | Density**** up to kg/dm³ | 2.0 | 2.2 | 2.0 | 2.2 | |
| | | | Weight (kg) motor + pump tube | 13.9 | 13.9 | 13.9 | 13.9 | |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

* Determined with water at 20 °C

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request

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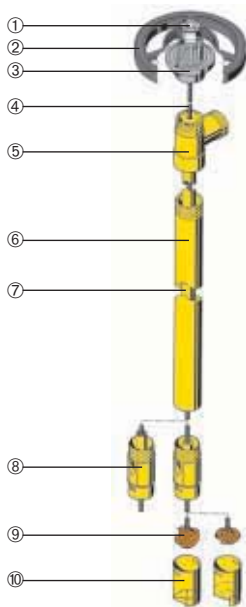
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Don't be stuck in one place



The modular concept behind the construction of the Lutz drum pump, provides not only for fixed installations, but also assures a great degree of flexibility in movement. The hand wheel makes the pump easy to carry and provides a simple but quick means of coupling and un-coupling the motor.

Just ten parts in the construction allow the pumps to be service and user friendly. Interchangeability of parts and no special tools reduce downtime to a bare minimum.



- ① **Coupling**
- ② **Hand wheel**
- ③ **Bearing housing**
- ④ **Shaft**
- ⑤ **Outrun piece**
- ⑥ **Outer tube**
- ⑦ **Inner tube**
- ⑧ **Cartridge bearing**
- ⑨ **Impeller**
- ⑩ **Pump foot**



Diversity

The heat is on. Different jobs may demand different tools or a different approach to provide a satisfactory solution to your transfer problem. Here we provide exceptional materials and exceptional pumps to cover those oily, greasy, sticky, shear sensitive and highly viscous liquids. From intermittent to round-the-clock transfer, we have a fluid management solution at hand, never mind the industry you are in.

Lutz Drum and Container Pumps

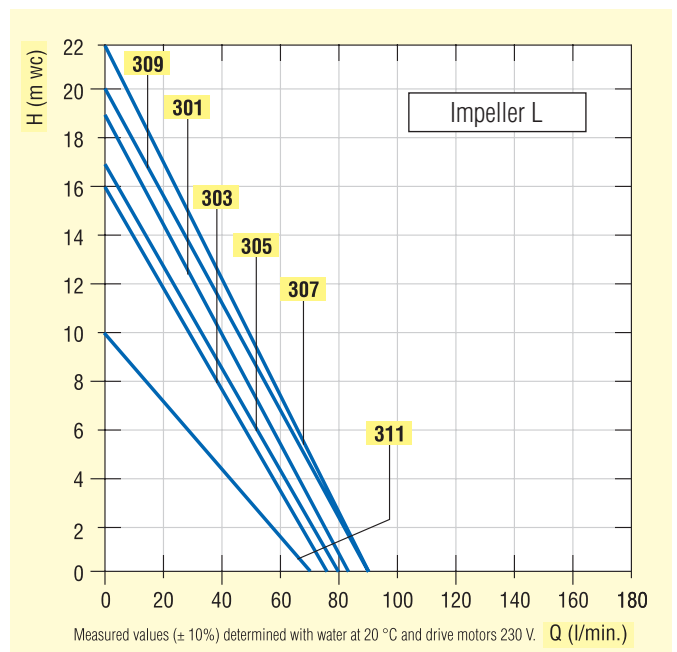
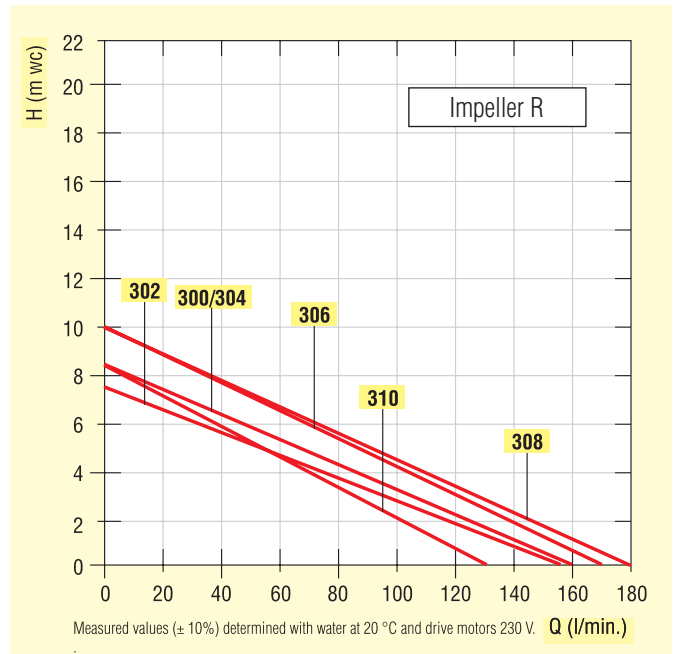
Pump tube Alu (aluminium)



Materials (coming into contact with the pumped medium)

| | Alu-MS | Alu-SL |
|------------------|------------------------------------|--------------------------|
| Housing: | Alu, PVDF | Alu, PVDF |
| Impeller: | ETFE | ETFE |
| Seals: | Viton® | none |
| Mechanical seal: | Carbon, SiC, Viton®, HC-4 (2.4610) | none |
| Bearing: | ETFE | ETFE |
| Drive shaft: | Stainless Steel (1.4571) | Stainless Steel (1.4571) |


Viton® is a registered trademark of DuPont Dow Elastomers.



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

Pump tube Alu (aluminium)

for neutral, non flammable liquids

| Pump tube | | Alu-MS | | Alu-SL | | Productdetail |
|---------------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| Type of impeller | | R | L | R | L |  |
| Zone 0 (approved acc. to IEC and Vbf) | | no | no | no | no | |
| Immersion tube diameter: | up to mm | 41 | 41 | 41 | 41 | |
| Temperature of medium: | up to °C | 100 | 100 | 100 | 100 | |
| Material: | Pump tube | Alu | Alu | Alu | Alu | |
| | 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. | 0133-500 | 0133-504 | 0132-300 | 0132-304 | |
| Length: 1000 mm*** | Order No. | 0133-501 | 0133-505 | 0132-301 | 0132-305 | |
| Length: 1200 mm*** | Order No. | 0133-502 | 0133-506 | 0132-302 | 0132-306 | |
| Length: 1500 mm*** | Order No. | – | – | – | 0132-309 | |

Choice of motors Operating data

| MI 4 | | MI 4-E | | Operating data | | | | |
|-----------|-----------------|-----------------|-----------------------|-------------------------------|-----|-----|-----|-----|
| | | | with speed controller | Characteristic curve no. | 300 | 301 | 300 | 301 |
| Output: | 500 W | 500 W | | Delivery rate* up to l/min. | 160 | 85 | 160 | 85 |
| Voltage: | 230 V | 230 V | | Delivery head* up to m wc | 8.5 | 19 | 8.5 | 19 |
| Order No. | 0030-000 | 0030-001 | | Viscosity** up to mPas | 150 | 500 | 150 | 500 |
| | | | | Density**** up to kg/dm³ | 1.1 | 1.4 | 1.1 | 1.4 |
| | | | | Weight (kg) motor + pump tube | 4.3 | 4.3 | 4.3 | 4.3 |



| MA II 3 | | | Operating data | | | | |
|-----------|-----------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: | 460 W | 460 W | Characteristic curve no. | 302 | 303 | 302 | 303 |
| Voltage: | 230 V | 230 V | Delivery rate* up to l/min. | 155 | 75 | 155 | 75 |
| LVR: | no | yes | Delivery head* up to m wc | 7.5 | 16 | 7.5 | 16 |
| Order No. | 0060-000 | 0060-008 | Viscosity** up to mPas | 150 | 500 | 150 | 500 |
| | | | Density**** up to kg/dm³ | 1.2 | 1.6 | 1.2 | 1.6 |
| | | | Weight (kg) motor + pump tube | 6.1 | 6.1 | 6.1 | 6.1 |



| MA II 5 | | MA II 5 S | | Operating data | | | | |
|-----------|-----------------|-----------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: | 575 W | 575 W | 575 W | Characteristic curve no. | 304 | 305 | 304 | 305 |
| Voltage: | 230 V | 230 V | 230 V | Delivery rate* up to l/min. | 160 | 80 | 160 | 80 |
| LVR: | no | yes | no | Delivery head* up to m wc | 8.5 | 17 | 8.5 | 17 |
| Order No. | 0060-001 | 0060-009 | 0060-091 | Viscosity** up to mPas | 350 | 800 | 350 | 800 |
| | | | acid-proof | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 |
| | | | | Weight (kg) motor + pump tube | 6.9 | 6.9 | 6.9 | 6.9 |

| MA II 7 | | Operating data | | | | | |
|-----------|-----------------|-----------------|-------------------------------|-----|-----|-----|-----|
| Output: | 795 W | 795 W | Characteristic curve no. | 306 | 307 | 306 | 307 |
| Voltage: | 230 V | 230 V | Delivery rate* up to l/min. | 170 | 90 | 170 | 90 |
| LVR: | no | yes | Delivery head* up to m wc | 10 | 22 | 10 | 22 |
| Order No. | 0060-002 | 0060-010 | Viscosity** up to mPas | 350 | 800 | 350 | 800 |
| | | | Density**** up to kg/dm³ | 1.4 | 1.9 | 1.4 | 1.9 |
| | | | Weight (kg) motor + pump tube | 8.1 | 8.1 | 8.1 | 8.1 |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids

| MD-1 | | MD-2 | | Operating data | | | |
|---------------------|-----------------|-----------------|-------------------------------|----------------|-----|-----|-----|
| Output: | 400 W | 400 W | Characteristic curve no. | 308 | 309 | 308 | 309 |
| Operating Pressure: | 6 bar | 6 bar | Delivery rate* up to l/min. | 180 | 90 | 180 | 90 |
| Order No. | 0004-087 | 0004-088 | Delivery head* up to m wc | 10 | 20 | 10 | 20 |
| | | | Viscosity** up to mPas | 600 | 850 | 600 | 850 |
| | | | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 |
| | | | Weight (kg) motor + pump tube | 3.0 | 3.0 | 3.0 | 3.0 |



| B4/GT | | Operating data | | | | | |
|--------------------|-----------------|-----------------|-------------------------------|------|------|------|------|
| Output: | 750 W | 750 W | Characteristic curve no. | 310 | 311 | 310 | 311 |
| Voltage: | 230/400 V | 230/400 V | Delivery rate* up to l/min. | 130 | 70 | 130 | 70 |
| Protection switch: | no | yes | Delivery head* up to m wc | 8.5 | 10 | 8.5 | 10 |
| Order No. | 0004-019 | 0004-067 | Viscosity** up to mPas | 400 | 400 | 400 | 400 |
| | | | Density**** up to kg/dm³ | 2.0 | 2.2 | 2.0 | 2.2 |
| | | | Weight (kg) motor + pump tube | 11.5 | 11.5 | 11.5 | 11.5 |



* Determined with water at 20 °C

** Determined with oil

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

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Lutz Drum and Container Pumps

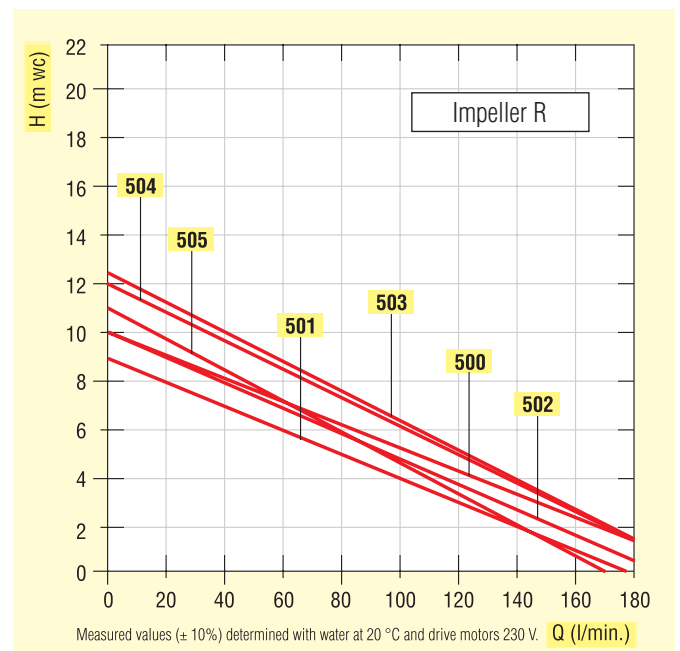
Pump tube HC (Hastelloy C)



Materials (coming into contact with the pumped medium)

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


Viton® is a registered trademark of DuPont Dow Elastomers.








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

Pump tube HC (Hastelloy C)

for highly corrosive chemicals

| Pump tube | | HC-SL | Productdetail |
|---------------------------------------|---------------------|-----------------|---|
| Type of impeller | | R |  |
| Zone 0 (approved acc. to IEC and VbF) | | yes | |
| Immersion tube diameter: | up to mm | 42 | |
| Temperature of medium: | up to °C | 120 | |
| Material: | Pump tube | HC | |
| | Impeller | ETFE | |
| Hose connection: | Nominal diameter mm | 19-32 | |
| | Outer thread | G 1 1/4 | |
| Length: 1000 mm*** | Order No. | 0162-201 | |
| Length: 1200 mm*** | Order No. | 0162-202 | |

Type of impeller „L“ on request.

| Choice of motors | | | Operating data | | |
|---------------------------|-----------------------|------------------|-------------------------------|------|---|
| MI 4 | MI 4-E | | Characteristic curve no. | 500 |  |
| - | with speed controller | | Delivery rate* up to l/min. | 210 | |
| Output: 500 W | 500 W | | Delivery head* up to m wc | 10 | |
| Voltage: 230 V | 230 V | | Viscosity** up to mPas | 350 | |
| | | | Density**** up to kg/dm³ | 1.1 | |
| Order No. 0030-000 | 0030-001 | | Weight (kg) motor + pump tube | 7.2 | |
| MA II 3 | | | Characteristic curve no. | 501 |  |
| Output: 460 W | 460 W | | Delivery rate* up to l/min. | 178 | |
| Voltage: 230 V | 230 V | | Delivery head* up to m wc | 9 | |
| LVR: no | yes | | Viscosity** up to mPas | 200 | |
| | | | Density**** up to kg/dm³ | 1.2 | |
| Order No. 0060-000 | 0060-008 | | Weight (kg) motor + pump tube | 9.0 | |
| MA II 5 | MA II 5 | MA II 5 S | Characteristic curve no. | 502 | |
| Output: 575 W | 575 W | 575 W | Delivery rate* up to l/min. | 190 | |
| Voltage: 230 V | 230 V | 230 V | Delivery head* up to m wc | 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 | 9.8 | |
| MA II 7 | | | Characteristic curve no. | 503 |  |
| Output: 795 W | 795 W | | Delivery rate* up to l/min. | 210 | |
| Voltage: 230 V | 230 V | | Delivery head* up to m wc | 13 | |
| LVR: no | yes | | Viscosity** up to mPas | 400 | |
| | | | Density**** up to kg/dm³ | 1.4 | |
| Order No. 0060-002 | 0060-010 | | Weight (kg) motor + pump tube | 11.0 | |
| MD-1 | MD-2 | | Characteristic curve no. | 504 |  |
| Output: 400 W | 400 W | | Delivery rate* up to l/min. | 210 | |
| Operating Pressure: 6 bar | 6 bar | | Delivery head* up to m wc | 12 | |
| | | | Viscosity** up to mPas | 400 | |
| | | | Density**** up to kg/dm³ | 1.3 | |
| Order No. 0004-087 | 0004-088 | | Weight (kg) motor + pump tube | 5.9 | |
| B4/GT | | | Characteristic curve no. | 505 |  |
| Output: 750 W | 750 W | | Delivery rate* up to l/min. | 170 | |
| Voltage: 230/400 V | 230/400 V | | Delivery head* up to m wc | 11 | |
| Protection switch: no | yes | | Viscosity** up to mPas | 400 | |
| | | | Density**** up to kg/dm³ | 2.0 | |
| Order No. 0004-019 | 0004-067 | | Weight (kg) motor + pump tube | 15.4 | |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

* Determined with water at 20 °C

** Determined with oil

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

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Lutz Drum and Container Pumps

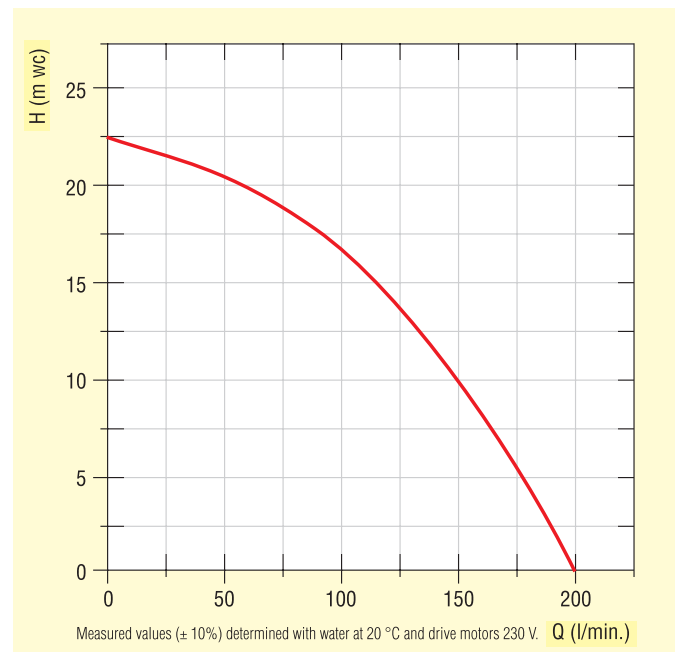
Container pump B50



Materials (coming into contact with the pumped medium)

| Container pump | B50 PP/HC | B50 PP/SS |
|------------------|--------------------|--------------------------|
| Pump tube: | Polypropylene (PP) | Polypropylene (PP) |
| Stator: | PPO / PPE | PPO / PPE |
| Mechanical seal: | Carbon / SiC / HC | Carbon / SiC / HC |
| Secondary seal: | Viton® (EPDM) | Viton® (EPDM) |
| Drive shaft: | HC-4 (2.4610) | Stainless steel (1.4571) |

Viton® is a registered trademark of DuPont Dow Elastomers.



Container pump B50

For bulk transfer of chemicals



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.

| Container pump | | B50 PP/HC | B50 PP/SS | Product detail |
|---------------------------------------|----------------------------|-------------------------|--------------------------|----------------|
| Zone 0 (approved acc. to IEC and Vbf) | | no | no | |
| Immersion tube diameter: | max. mm | 100 | 100 | |
| Temperature of medium: | max. °C | 50 | 50 | |
| 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 Outer thread | G 1 1/2 Outer thread | |
| Length: 1100 mm | Order No. | 0180-001 | 0180-501 | |

| Choice of motors | | Operating data | | | |
|---------------------------|---|-------------------------------|-------------|--|-------------|
| Single phase motor | | | | | |
| Output: | 0.55 kW 0.75 kW | Delivery rate* up to l/min. | 200 | | 200 |
| Dichte: | up to 1.3 kg/dm ³ up to 1.8 kg/dm ³ | Delivery head* up to m wc | 22 | | 22 |
| Speed: | 2800 1/min. 2700 1/min. | Viscosity up to mPas | 100 | | 100 |
| 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 | | | | |

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Through thick and thin



Beverage
Chemical
Pharmaceutical
Food industry

Honey
Printing ink
Liquid soap
Liquid wax
Fruit pulp
Fruit juice
Gear oil
Glucose



Resin
Yoghourt
Lacquer
Latex emulsion
Motor oil
Polyester resin
Shampoo
Tomato ketchup





High viscosity pumps

Viscous liquids often present a challenge in trying to transfer them. To share this task with you, we have a range of progressive cavity pumps which covers viscosities from 500 mPas to 120,000 mPas.

Our pumps have been designed along a modular concept that provides a maximum of flexibility with a minimum of fuss. Simplicity and ease of handling are inherent characteristics.

Choice of motors electric or pneumatic, shaft, sealing method and stators provide the best for user-friendliness.

Flows from 12 to 120 l/min. at pressures up to 10 bar make easy work of emptying drums and containers.

All pumps can be quickly disassembled and cleaned, an essential requirement for the food, beverage, cosmetic and pharmaceutical industries.

Running at relatively low speeds, shear sensitive liquids and liquids containing solids present no problem. Likewise sticky liquids such as molasses, glucose and honey.



Drum and Container Pumps

Eccentric screw pump Lutz HD-E

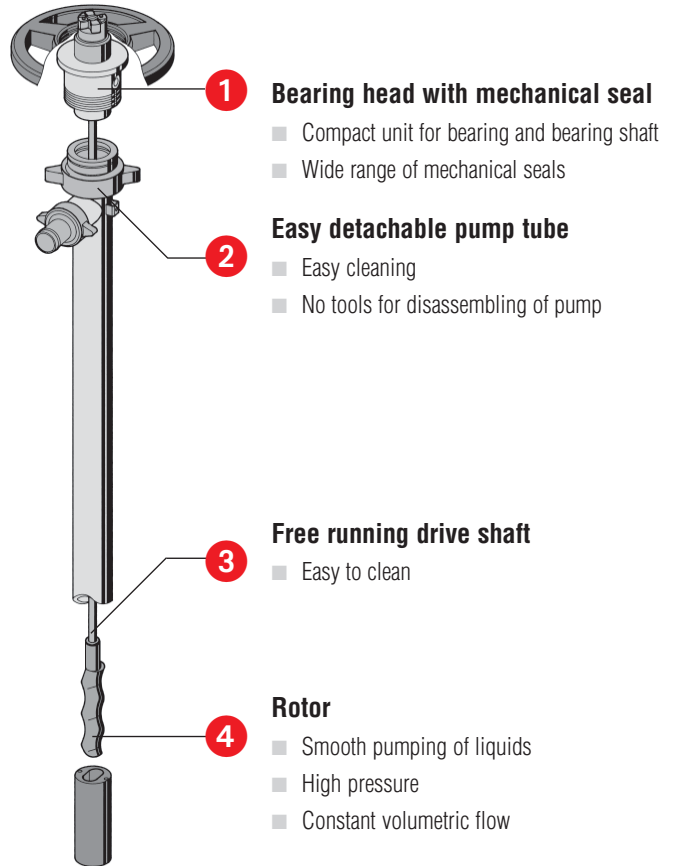


Materials (coming into contact with the pumped medium)

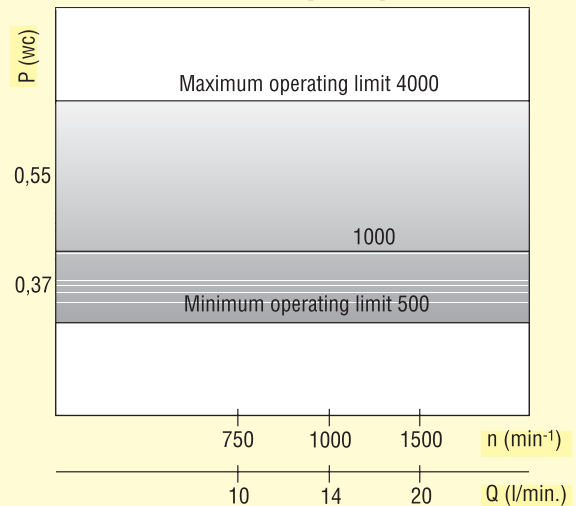
HD-E

| | |
|------------------|---------------------------------------|
| Pump tube: | Stainless steel (1.4571) |
| Stator: | PTFE |
| Mechanical seal: | Carbon/CrMo-casting (bellows constr.) |
| Secondary seal: | Viton® |
| Drive shaft: | Stainless steel (1.4571) |

Viton® is a registered trademark of DuPont Dow Elastomers.



Viscosity [mPas]



Selection chart of the drive motor for pump tube HD-E

Lutz Eccentric screw pump HD-E

for viscosities from 500 to 4000 mPas



The intelligent solution for the pumping of medium-viscosity liquids

High efficiency, handy, low weight and easily disassembled for easy cleaning make the Lutz HD-E a practical drum pump system especially for medium-viscosity liquids.

It is suitable for pumping of acid and basic liquids, oils, used oil, waste disposal liquids, colours, foodstuffs, cosmetics and creams.

- ✓ light and compact
- ✓ simple and easily dismantled
- ✓ easy to clean
- ✓ suitable for continuous operation
- ✓ practical Lutz-hand wheel for motor separation and to carry
- ✓ smooth flow
- ✓ for thin and thick liquids
- ✓ constant volumetric flow

| Pump tube | | HD-E | Productdetail |
|---------------------------------------|---------------------|--------------------------|---------------|
| Zone 0 (approved acc. to IEC and Vbf) | | no | |
| Immersion tube diameter: | up to mm | 41 | |
| Temperature of medium: | up to °C | 100 | |
| Material: | Pump tube | Stainless steel (1.4571) | |
| | Stator | PTFE | |
| Hose connection: | Nominal diameter mm | 19-32 | |
| | Outer thread | G 1 1/4 | |
| Length: 1000 mm | Order-No. | 0155-010 | |

| Choice of motors | | Operating data | | |
|---------------------------|---------------|-------------------|----------|--|
| Single phase motor | | | | |
| Output: 0.55 kW | Delivery rate | up to l/min. | 20 | |
| Voltage: 230 V | Delivery head | up to bar | 4 | |
| Speed: 1500 1/min. | Viscosity | up to mPas | 500-4000 | |
| Protection class: IP 54 | Weigth(kg) | motor + pump tube | 11.5 | |
| Order No. 0155-032 | | | | |

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Lutz Drum and Container Pumps

Eccentric screw pump B70V-SR 12.1 and 25.1

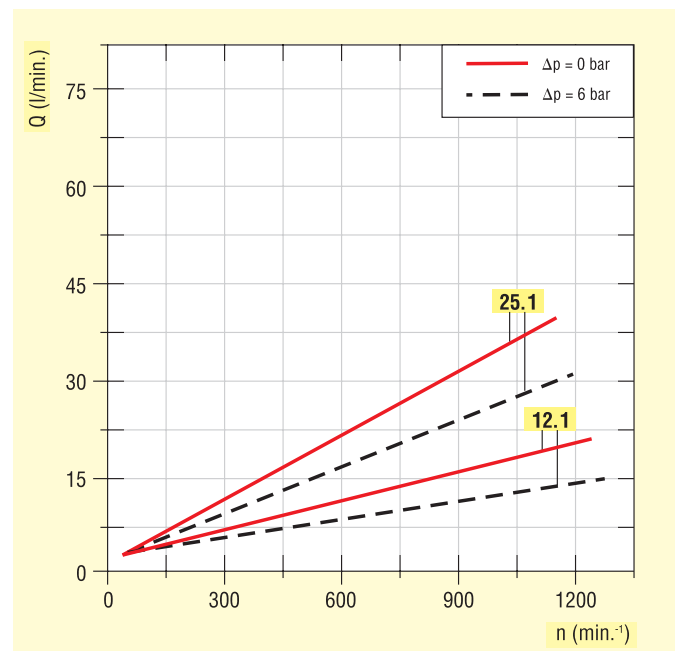


Materials (coming into contact with the pumped medium)

B70V-SR 12.1/25.1

| | |
|------------------|---|
| Housing: | Stainless steel (1.4571) |
| Rotor: | Stainless steel (1.4571) |
| Seals: | FPM (Viton®) |
| Mechanical seal: | Carbon/CrMo-casting, Viton® |
| Packing gland: | PTFE soft packing Safe for use with foodstuffs |
| Drive shaft: | Stainless steel (1.4571) |
| Stator Material: | NBR light, Viton®, PTFE |


Viton® is a registered trademark of DuPont Dow Elastomers.



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

Lutz Eccentric screw pump B70V-SR 12.1 and 25.1

for viscosities from 1 - 40,000 mPas

| Pump tube | | B70V-SR | | | | | | Productdetail |
|------------------------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Size | | 12.1 | 12.1 | 12.1 | 25.1 | 25.1 | 25.1 |  |
| Seal | Packing gland (St) Mechanical seal (MS) | MS | MS | St | MS | MS | St | |
| Drive shaft | Torsion shaft (TS) Universal joint shaft (UJ) | TS | UJ | UJ | TS | UJ | UJ | |
| Delivery rate* | up to l/min. | 12 | 12 | 12 | 25 | 25 | 25 | |
| Delivery head* | up to bar | 6 | 6 | 6 | 8 | 8 | 8 | |
| Temp. of medium** | up to °C | 140 | 140 | 140 | 140 | 140 | 140 | |
| Material pump tube | | 1.4571 | 1.4571 | 1.4571 | 1.4571 | 1.4571 | 1.4571 | |
| Immersion tube diameter | mm | 54 | 54 | 54 | 54 | 54 | 54 | |
| Pressure joint | Outer thread | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | |
| Weight | kg | 7 | 7 | 7 | 7 | 7 | 7 | |
| Length*** | mm | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| Stator NBR light (T max. 80 °C) | Order No. | – | – | – | 0174-131 | 0174-141 | 0174-121 | |
| Stator Viton (T max. 140 °C) | Order No. | – | – | – | 0174-132 | 0174-142 | 0174-122 | |
| Stator PTFE (T max. 140 °C) | Order No. | 0174-014 | 0174-024 | 0174-004 | 0174-134 | 0174-144 | 0174-124 | |

* Determined with water at 20 °C, three-phase motor (900 rpm) and elastomer stator

** with PTFE Stator

*** Special length 500 - 2000 mm on request (version with joint shaft only)

Combination of packing gland and torsion shaft on request.

- Explosion proof eccentric screw pump B70V approved „Zone 0“ for pumping inflammable liquids of the explosion group IIA and temperature class T4



Choice of motors

| Universal motors non-ex. proof | MI 4 | MI 4-E | MA II 3 | MA II 5 | MA II 7 |
|---|-----------------|-----------------------------------|-----------------|-----------------|-----------------|
| Type | 500 W, 230 V | 500 W, 230 V | 460 W, 230 V | 575 W, 230 V | 795 W, 230 V |
| Protection class/weight | IP 44 2.8 kg | IP 44 2.8 kg with speed contr. | IP 54 4.6 kg | IP 54 5.4 kg | IP 54 6.6 kg |
| Order No. (without low-voltage release) | 0030-000 | 0030-001 | 0060-000 | 0060-001 | 0060-002 |
| Order No. (with low-voltage release) | – | – | 0060-008 | 0060-009 | 0060-010 |



| Universal motors explosion proof | ME II 3 | ME II 5 | ME II 7 | ME II 8 |
|---|-----------------|-----------------|-----------------|-----------------|
| Type | 460 W, 230 V | 580 W, 230 V | 795 W, 230 V | 930 W, 230 V |
| Protection class/weight | IP 54 5.5 kg | IP 54 6.3 kg | IP 54 7.5 kg | IP 54 8 kg |
| Order No. (with low-voltage release) | 0050-000 | 0050-001 | 0050-002 | 0050-042 |
| Order No. (without low-voltage release) | 0050-016 | 0050-017 | 0050-018 | 0050-041 |



| Compressed air motors | MD-1 | MD-2 | MD-3 |
|-----------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Type | 400 W | 400 W | 400 W |
| Weight | Operating pressure: 6 bar 1.1 kg | Operating pressure: 6 bar 1.5 kg | Operating pressure: 6 bar 2.1 kg |
| Order No. | 0004-087 | 0004-088 | 0004-090 |



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Lutz Drum and Container Pumps

Eccentric screw pump B70V-SR 50.1

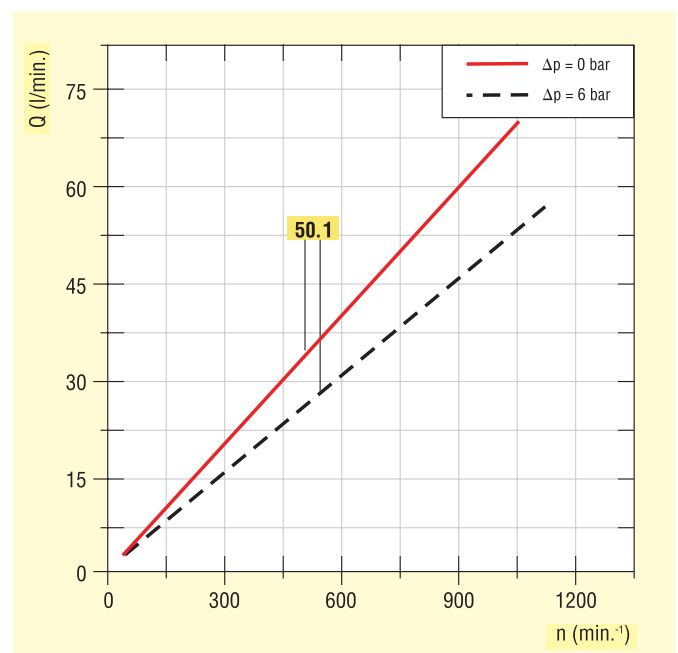


Materials (coming into contact with the pumped medium)

B70V-SR 50.1

| | |
|------------------|---|
| Housing: | Stainless steel (1.4571) |
| Rotor: | Stainless steel (1.4571) |
| Seals: | FPM (Viton®) |
| Mechanical seal: | Carbon/CrMo-casting, Viton® |
| Packing gland: | PTFE soft packing Safe for use with foodstuffs |
| Drive shaft: | Stainless steel (1.4571) |
| StatorMaterial: | NBR light, Viton®, PTFE |


Viton® is a registered trademark of DuPont Dow Elastomers.



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

Lutz Eccentric screw pump B70V-SR 50.1

for viscosities from 1 - 40,000 mPas

| Pump tube | | B70V-SR | | | Productdetail |
|------------------------------------|--|-----------------|-----------------|-----------------|---|
| Size | | 50.1 | 50.1 | 50.1 |  |
| Seal | Packing gland (St) Mechanical seal (MS) | MS | MS | St | |
| Drive shaft | Torsion shaft (TW) Universal joint shaft (GW) | TS | UJ | UJ | |
| Delivery rate* | up to l/min. | 50 | 50 | 50 | |
| Delivery head* | up to bar | 8 | 8 | 8 | |
| Temp. of medium** | up to °C | 140 | 140 | 140 | |
| Material pump tube | | 1.4571 | 1.4571 | 1.4571 | |
| Immersion tube diameter | mm | 54 | 54 | 54 | |
| Pressure joint | Outer thread | G 1 1/2 | G 1 1/2 | G 1 1/2 | |
| Weight | kg | 7 | 7 | 7 | |
| Length*** | mm | 1100 | 1100 | 1100 | |
| Stator NBR light (T max. 80 °C) | Order No. | 0174-511 | 0174-521 | 0174-501 | |
| Stator Viton (T max. 140 °C) | Order No. | 0174-512 | 0174-522 | 0174-502 | |
| Stator PTFE (T max. 140 °C) | Order No. | 0174-514 | 0174-524 | 0174-504 | |

* Determined with water at 20 °C, three-phase motor (900 rpm) and elastomer stator

Combination of packing gland and torsion shaft on request.

** with PTFE Stator

*** Special length 500 - 2000 mm on request (version with joint shaft only)*

**** Mechanical seal: carbon/CrMo-casting, Viton® and SIC/SIC

● Explosion proof eccentric screw pump B70V approved „Zone 0“
for pumping inflammable liquids of the explosion group IIA and temperature class T4



Choice of motors

| Universal motors non-ex. proof | MI 4 | MI 4-E | MA II 3 | MA II 5 | MA II 7 |
|---|-----------------|-------------------|-----------------|-----------------|-----------------|
| Type | 500 W, 230 V | 500 W, 230 V | 460 W, 230 V | 575 W, 230 V | 795 W, 230 V |
| Protection class/weight | IP 44 2.8 kg | IP 44 2.8 kg | IP 54 4.6 kg | IP 54 5.4 kg | IP 54 6.6 kg |
| | - | with speed contr. | | | |
| Order No. (without low-voltage release) | 0030-000 | 0030-001 | 0060-000 | 0060-001 | 0060-002 |
| Order No. (with low-voltage release) | - | - | 0060-008 | 0060-009 | 0060-010 |



| Universal motors explosion proof | ME II 3 | ME II 5 | ME II 7 | ME II 8 |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|
| Type | 460 W, 230 V | 580 W, 230 V | 795 W, 230 V | 930 W, 230 V |
| Protection class/weight | IP 54 5.5 kg | IP 54 6.3 kg | IP 54 7.5 kg | IP 54 8 kg |
| Order No. (with low-voltage release) | 0050-000 | 0050-001 | 0050-002 | 0050-042 |
| Order No. (without voltage release) | 0050-016 | 0050-017 | 0050-018 | 0050-041 |



| Compressed air motors | MD-1 | MD-2 | MD-3 |
|-----------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Type | 400 W | 400 W | 400 W |
| Weight | Operating pressure: 6 bar 1.1 kg | Operating pressure: 6 bar 1.5 kg | Operating pressure: 6 bar 2.1 kg |
| Order No. | 0004-087 | 0004-088 | 0004-090 |



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Lutz Drum and Container Pumps

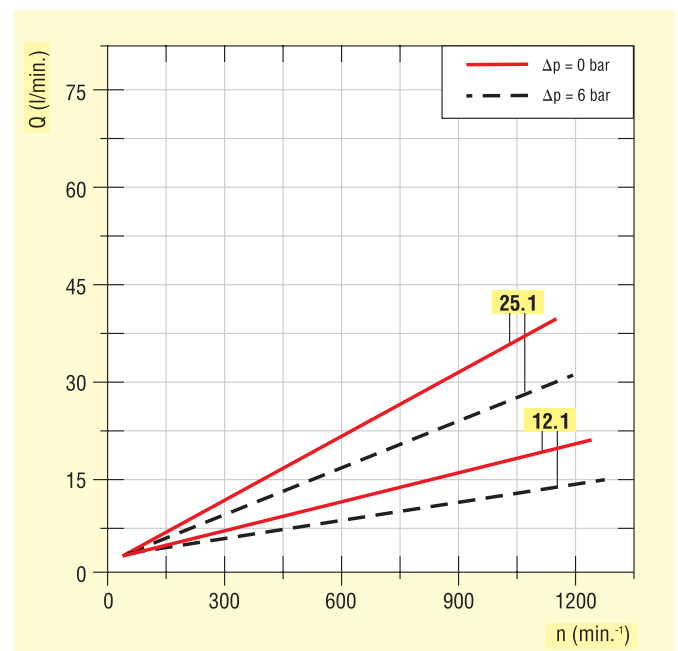
Eccentric screw pump B70V 12.1 and 25.1



Materials (coming into contact with the pumped medium)

| | B70V 12.1/25.1 | B70V 25.1 Steel |
|-------------------|--|--|
| Housing: | Stainless steel (1.4571) | Galvanized steel |
| Rotor: | Stainless steel (1.4571) | soft-nitrided steel |
| Seals: | FPM (Viton®) | FPM (Viton®) |
| Mechanical seal: | Carbon/CrMo-cast., Viton® (optional SIC/SIC, Viton®) | Carbon/CrMo-cast., Viton® (optional SIC/SIC, Viton®) |
| Packing gland: | PTFE soft packing Safe for use with foodstuffs | none |
| Drive shaft: | Stainless steel (1.4571) | Galvanized steel |
| Stator materials: | NBR light, Viton®, PTFE | NBR light, Viton®, PTFE |


Viton® is a registered trademark of DuPont Dow Elastomers.



When pumping in „Zone 0“ areas or pumping flammable liquids only pumps with mechanical seal, universal joint shaft and PTFE stator are approved.

Lutz Eccentric screw pump B70V 12.1 and 25.1

for viscosities from 1 - 100,000 mPas

| Pump tube | | B70V | | | | | | | Productdetail |
|-----------------------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Size | | 12.1 | 12.1 | 12.1 | 25.1 | 25.1 | 25.1 | 25.1 Steel |  |
| Seal | Packing gland (St) Mechanical seal (MS) | MS | MS | St | MS | MS | St | MS | |
| Drive shaft | Torsion shaft (TS) Universal joint shaft (UJ) | TS | UJ | UJ | TS | UJ | UJ | TS | |
| Delivery rate* | up to l/min. | 12 | 12 | 12 | 25 | 25 | 25 | 25 | |
| Delivery head* | up to bar | 6 | 6 | 6 | 8 | 8 | 8 | 8 | |
| Temp. of medium** | up to °C | 140 | 140 | 140 | 140 | 140 | 140 | 80 | |
| Material pump tube | | 1.4571 | 1.4571 | 1.4571 | 1.4571 | 1.4571 | 1.4571 | galv. Steel | |
| Immersion tube diameter | mm | 54 | 54 | 54 | 54 | 54 | 54 | 54 | |
| Pressure joint | Outer thread | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | |
| Weight | kg | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| Length*** | mm | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| Stator NBR light (Tmax. 80 °C) | Order No. | – | – | – | 0172-121 | 0173-131 | 0173-121 | 0171-121 | |
| Stator Viton (Tmax. 140 °C) | Order No. | – | – | – | 0172-122 | 0173-132 | 0173-122 | 0171-122 | |
| Stator PTFE (Tmax. 140 °C) | Order No. | 0172-004 | 0173-014 | 0173-004 | 0172-124 | 0173-134 | 0173-124 | 0171-124 | |

* Determined with water at 20 °C, three-phase motor (900 rpm) and elastomer stator

Combination of packing gland and torsion shaft on request.

** with PTFE Stator

*** Special lengths 500 - 2000 mm on request (version with joint shaft only)

● Explosion proof eccentric screw pump B70V approved „Zone 0“
for pumping inflammable liquids of the explosion group IIA and temperature class T4



Choice of motors

| Motors with cable terminal box | For B70V - 12.1 | | For B70V - 25.1 | |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|
| Type | 0.37 kW, 700 1/min. | 0.55 kW, 900 1/min. | 0.55 kW, 700 1/min. | 0.75 kW, 900 1/min. |
| Protection class/weight | IP 55 10.5 kg | IP 55 10.5 kg | IP 55 15 kg | IP 55 12 kg |
| Order No. | 0172-803 | 0172-806 | 0172-809 | 0172-812 |
| Motors with Protection switch | For B70V - 12.1 | | For B70V - 25.1 | |
| Type | 0.37 kW, 700 1/min. | 0.55 kW, 900 1/min. | 0.55 kW, 700 1/min. | 0.75 kW, 900 1/min. |
| Protection class/weight | IP 54 11 kg | IP 54 11 kg | IP 54 15.5 kg | IP 54 12.5 kg |
| Order No. | 0172-802 | 0172-805 | 0172-808 | 0172-811 |
| Motors, explosion proof | For B70V - 12.1 | | For B70V - 25.1 | |
| Type | 0.37 kW, 700 1/min. | 0.55 kW, 900 1/min. | 0.55 kW, 700 1/min. | 0.75 kW, 900 1/min. |
| Protection class | EEx e II T3, IP 54 | EEx e II T3, IP 54 | EEx e II T3, IP 54 | EEx e II T3, IP 54 |
| Weight | 10.5 kg | 10.5 kg | 15 kg | 12 kg |
| Order No. | 0172-801 | 0172-804 | 0172-807 | 0172-810 |



Three-phase motor 230/400 V, 50 Hz, protection class IP 55 with cable terminal box or IP 54 with attached protection switch as on/off-switch. Special voltages, frequencies, protection classes as well as higher explosion proof protection classes on request.

| Compressed air motors | For B70V - 12.1 | For B70V - 25.1 |
|-----------------------|--|---|
| Type | 4 DA , 0.5 kW, 900 1/min., Weight 5 kg, Operating pressure at 6 bar, air consumption 55 Nm³/h, 87 dB (A) air supply thread G 3/8 | 6 DA , 1.0 kW, 900 1/min., Weight 10 kg, Operating pressure at 6 bar, air consumption 80 Nm³/h, 87 dB (A) air supply thread G 1/2 |
| Order No. | 0172-821 | 0172-822 |



Compressed air motors with muffler up to an operation pressure at 7 bar, recommended speed (200 - 900 1/min).

Dimensions see page 65

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Lutz Drum and Container Pumps

Eccentric screw pump B70V 25.2 and 50.1

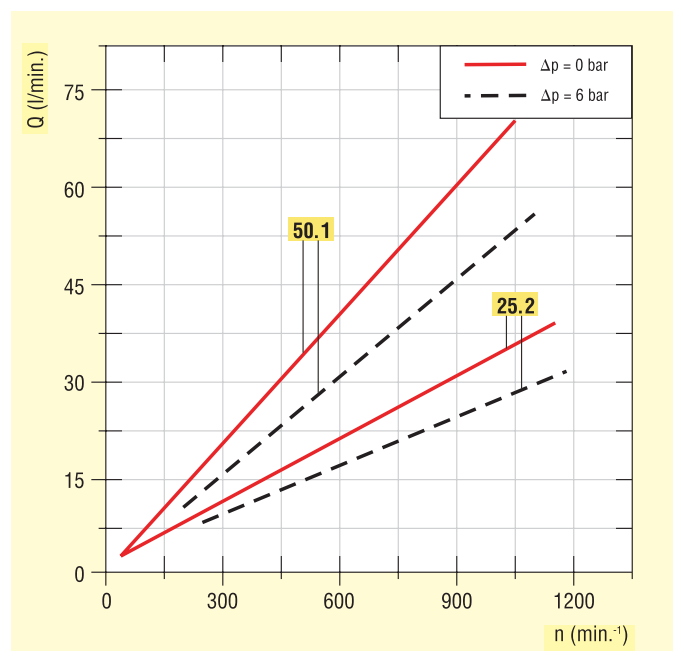


Materials (coming into contact with the pumped medium)

B70V 25.2/50.1

| | |
|-------------------|------------------------------|
| Housing: | Stainless steel (1.4571) |
| Rotor: | Stainless steel (1.4571) |
| Seals: | FPM (Viton®) |
| Mechanical seal: | Carbon/CrMo-casting, Viton® |
| Packing gland: | PTFE soft packing |
| | Safe for use with foodstuffs |
| Drive shaft: | Stainless steel (1.4571) |
| Stator materials: | NBR light, Viton®, PTFE |


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When pumping in „Zone 0“ areas or pumping flammable liquids only pumps with mechanical seal, universal joint shaft and PTFE stator are approved.

Lutz Eccentric screw pump B70V 25.2 and 50.1

for viscosities from 1 - 100,000 mPas

| Pump tube | | B70V | | | | | | Productdetail |
|------------------------------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|
| Size | | 25.2 | 25.2 | 25.2 | 50.1 | 50.1 | 50.1 |  |
| Seal | Packing gland (St) Mechanical seal (MS) | MS | MS | St | MS | MS | St | |
| Drive shaft | Torsion shaft (TS) Universal joint shaft (UJ) | TS | UJ | UJ | TS | UJ | UJ | |
| Delivery rate* | up to l/min. | 25 | 25 | 25 | 50 | 50 | 50 | |
| Delivery head* | up to bar | 10 | 10 | 10 | 8 | 8 | 8 | |
| Temp. of medium** | up to °C | 140 | 140 | 140 | 140 | 140 | 140 | |
| Material pump tube | | 1.4571 | 1.4571 | 1.4571 | 1.4571 | 1.4571 | 1.4571 | |
| Immersion tube diameter | mm | 54 | 54 | 54 | 54 | 54 | 54 | |
| Pressure joint | Outer thread | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | G 1 1/2 | |
| Weight | kg | 7 | 7 | 7 | 7 | 7 | 7 | |
| Length*** | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | |
| Stator NBR light (T max. 80 °C) | Order No. | – | – | – | 0172-501 | 0173-511 | 0173-501 | |
| Stator Viton (T max. 140 °C) | Order No. | – | – | – | 0172-502 | 0173-512 | 0173-502 | |
| Stator PTFE (T max. 140 °C) | Order No. | 0172-254 | 0173-264 | 0173-254 | 0172-504 | 0173-514 | 0173-504 | |

* Determined with water at 20 °C, three-phase motor (900 rpm) and elastomer stator

** with PTFE Stator

*** Special length 500 - 2000 mm on request (version with joint shaft only)

Combination of packing gland and torsion shaft on request.

- Explosion proof eccentric screw pump B70V approved „Zone 0“ for pumping inflammable liquids of the explosion group IIA and temperature class T4



Choice of motors

| Motors with cable terminal box | For B70V - 25.2 | For B70V - 50.1 |
|--------------------------------|--------------------------|--------------------------|
| Type | 0.75 kW, 700 1/min., | 1.1 kW, 900 1/min., |
| Protection class/weight | IP 55 20 kg | IP 55 15 kg |
| Order No. | 0172-815 | 0172-818 |
| Motors with protection switch | For B70V - 25.2 | For B70V - 50.1 |
| Type | 0.75 kW, 700 1/min. | 1.1 kW, 900 1/min. |
| Protection class/weight | IP 54 20.5 kg | IP 54 15.5 kg |
| Order No. | 0172-814 | 0172-817 |
| Motors, explosion proof | For B70V - 25.2 | For B70V - 50.1 |
| Type | 0.65 kW, 700 1/min., | 1.0 kW, 900 1/min., |
| Protection class/weight | EEx e II T3, IP 54 20 kg | EEx e II T3, IP 54 15 kg |
| Order No. | 0172-813 | 0172-816 |



| Compressed air motor | For B70V - 25.2 / 50.1 |
|----------------------|---|
| Type | 8 DA , 1.7 kW, 900 1/min., Weight 14 kg operating pressure at 6 bar, air consumption 130 Nm³/h, 102 db (A) air supply thread G 1/2 |
| Order No. | 0172-823 |



Compressed air motors with muffler up to an operation pressure at 7 bar, recommended speed (200 - 900 1/min).
Dimensions see page 65

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Lutz Drum and Container Pumps

Eccentric screw pump B70V 80.1 and 120.1



Materials (coming into contact with the pumped medium)

B70V 80.1/120.1

| | |
|------------------|---|
| Housing: | Stainless steel (1.4571) |
| Rotor: | Stainless steel (1.4571) |
| Seals: | FPM (Viton®) |
| Mechanical seal: | Cutting metal/cutting metal, Viton® |
| Packing gland: | PTFE soft packing Safe for use with foodstuffs |
| Drive shaft: | Stainless steel (1.4571) |
| StatorMaterial: | NBR light, Viton®, PTFE |

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Range 1:

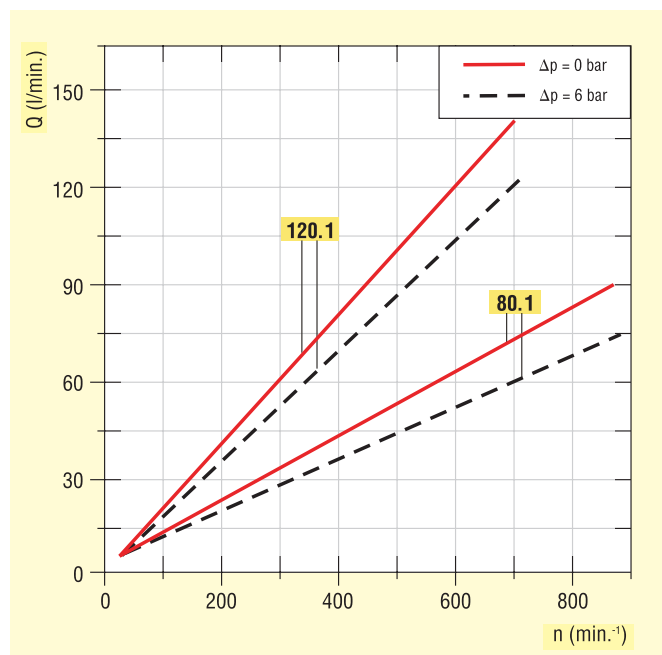
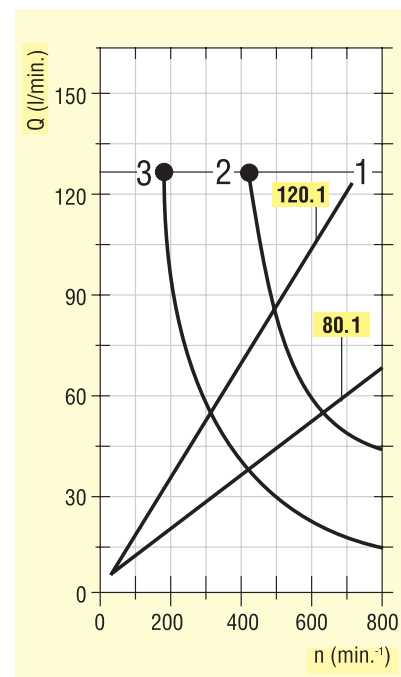
Thin-bodied, lubricating fluids
 $\eta < 7000$ mPas

Range 2:

Abrasive and viscous fluids such
as pulps, adhesives, paints, inks, etc
 $\eta < 20000$ mPas


Range 3:

Very abrasive and highly viscous fluids
such as honey, greases, syrups, etc.
 $\eta > 20000$ mPas



Lutz Eccentric screw pump B70V 80.1 and 120.1

for viscosities from 1 - 120,000 mPas

| Pump tube | | B70V | | | | Productdetail |
|---------------------------------------|----------------------------|-----------------|-----------------|-----------------|-----------------|---|
| | | 80.1 | 80.1 | 120.1 | 120.1 |  |
| Size | | 80.1 | 80.1 | 120.1 | 120.1 | |
| Zone 0 (approved acc. to IEC and Vbf) | | no | no | no | no | |
| Seal | Packing gland (St) | MS | St | MS | St | |
| | Mechanical seal (MS) | | | | | |
| Drive shaft | Torsion shaft (TS) | UJ | UJ | UJ | UJ | |
| | Universal joint shaft (UJ) | | | | | |
| Delivery rate* | up to l/min. | 80 | 80 | 120 | 120 | |
| Delivery head* | up to bar | 6 | 6 | 6 | 6 | |
| Temp. of medium** | up to °C | 140 | 140 | 140 | 140 | |
| Material pump tube | | 1.4571 | 1.4571 | 1.4571 | 1.4571 | |
| Immersion tube diameter | mm | 120 | 120 | 120 | 120 | |
| Pressure joint | Outer thread | G 2 | G 2 | G 2 | G 2 | |
| Weight | kg | 15 | 15 | 15 | 15 | |
| Length*** | mm | 1000 | 1000 | 1000 | 1000 | |
| Stator PTFE (T max. 140 °C) | Order No. | 0175-004 | 0175-024 | 0175-124 | 0175-144 | |

* Determined with water at 20 °C, three-phase motor (900 rpm) and elastomer stator combination of packing gland and torsion shaft on request.

** with PTFE Stator

*** Special length 500 - 2500 mm on request (version with joint shaft only)

Choice of motors

| Three-phase gear motors with cable terminal box | B70V 80.1 – 120.1 | | |
|---|---|-----------------------------|-----------------------------|
| Type | 1.5 kW, 230/400 V, Speed range: 107, 197, 214, 291, 313, 392, 498, 578, 624, 700 1/min. IP 55 | 2.2 kW, 230/400 V, IP 55 | 3.0 kW, 230/400 V, IP 55 |
| Weight | 36 kg | 39 kg | 44 kg |
| Order No. | on request | on request | on request |



| Three-phase, variable gear motors with cable terminal box | B70V 80.1 – 120.1 | | |
|---|---------------------------------|-----------------------------|--|
| | speed range manually adjustable | | |
| Type | 1.5 kW, 230/400 V, IP 55 | 2.2 kW, 230/400 V, IP 55 | 3.0 kW, 230/400 V, Speed range: 103 – 723 1/min. IP 55 |
| Weight | 57 kg | 62 kg | 65 kg |
| Order No. | on request | on request | on request |

Drive motors

Three-phase motors 230/400 V, 50 Hz, Protection class IP 55 with cable terminal box, special voltages, frequencies, Protection class, explosion proof types on request.

Connection dimensions for motor flange:

Shaft diameter: 30 mm
 Shaft length: 70 mm
 Centring diameter: 110 mm
 Pitch circle diameter: 130 mm
 Bolts: 4 x M 8

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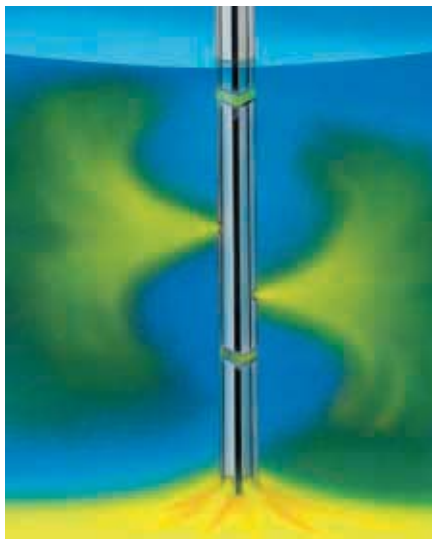
From the laboratory to the production



The B2 pump is the ideal answer to transferring low viscosity liquids in small amounts. The small tube diameter allows narrow necked containers to be emptied. The light weight and small dimensions is particularly suited for laboratory work minimising time and effort.



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 of the RE means less than 0.1 litre is left in a standard 200 litre drum.



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





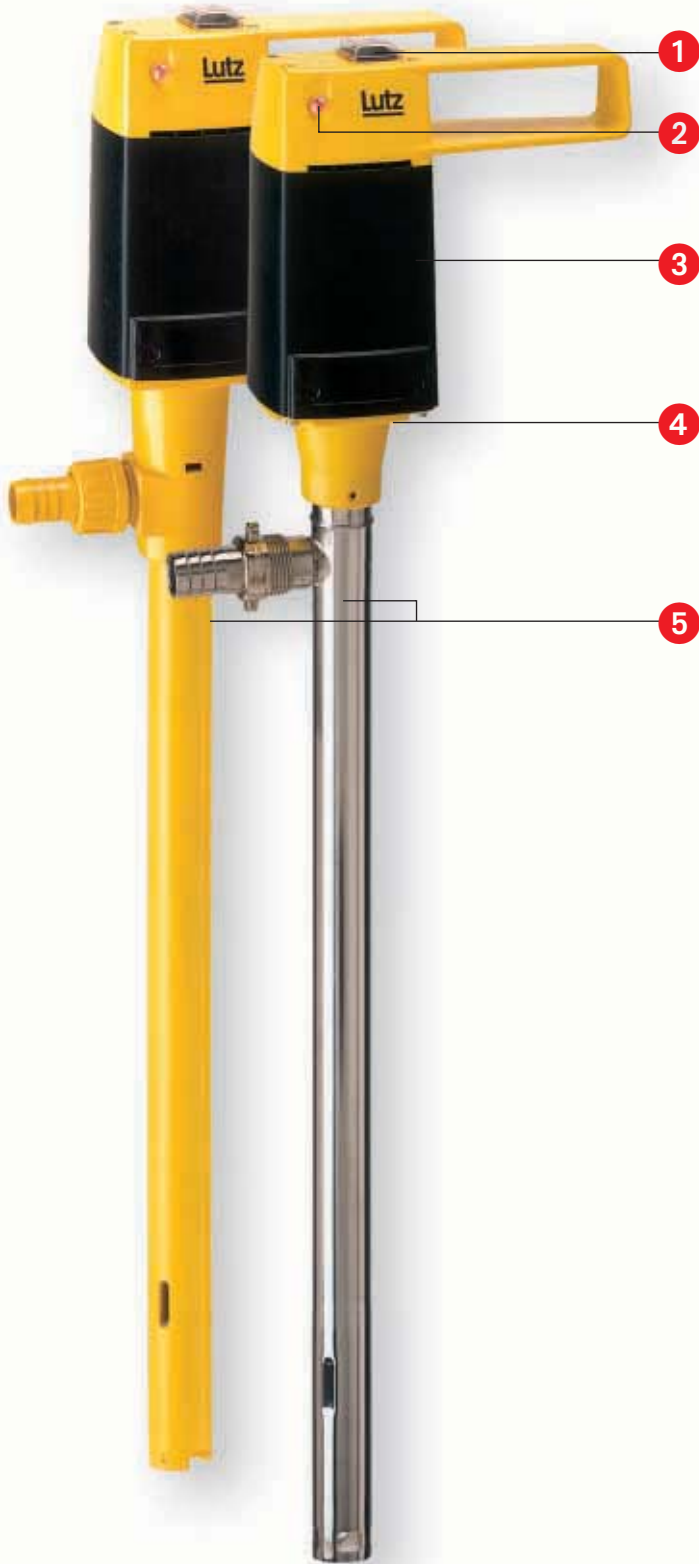
Economy

The days are shorter and maybe we should pause for reflection. Is there something we may have overlooked? Costs perhaps? Our specialised pumps economically take care of the light tasks, as well as those involving expensive, toxic or simply dangerous liquids. We do not leave much to chance, including your budget.

Our sets provide a complete solution, no need to hunt for the extra accessory. With our modular system, all our motors are interchangeable with our pump tubes.

Lutz Drum and Container Pumps

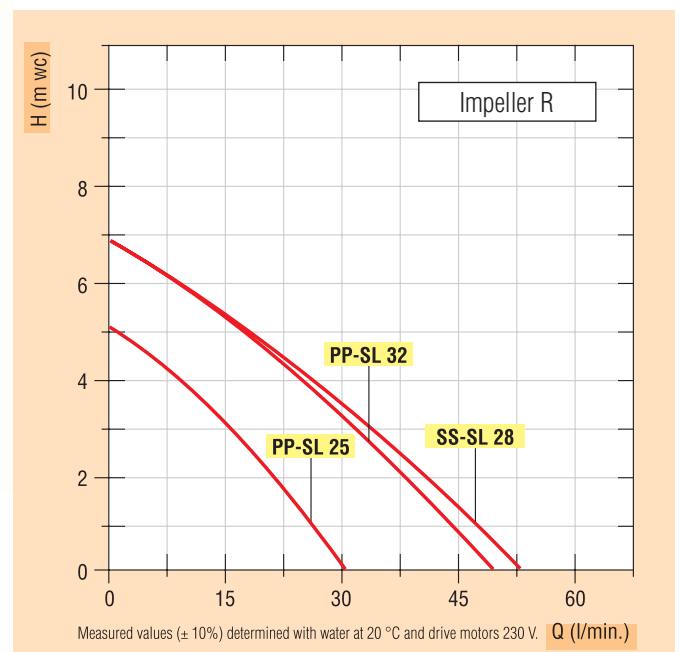
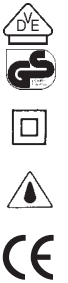
Drum pump B2 (polypropylene or stainless steel)



Materials (coming into contact with the pumped medium)


| | B2 PP-SL | B2 SS-SL |
|-------------------|-------------|--------------------------|
| Housing: | PP | Stainless steel (1.4571) |
| Impeller: | PP | ETFE |
| Seals: | none | none |
| Mechanical seals: | none | none |
| Bearing: | carbon | Carbon |
| Drive shaft: | Hastelloy C | Stainless steel (1.4571) |

- 1 Splash proof, double-pole on-off switch.
- 2 Protection against motor damage in case of overloading and operating errors with motor protection switch.
- 3 Powerful, double insulated and splash proof universal motor.
- 4 Special cooling air flow system protects the motor from overheating.
- 5 Sealless pump tube in polypropylene or SS with acid and alkali resistant shaft in Hastelloy C or SS.



Drum pump B2 (polypropylene or stainless steel)

for the laboratory and research sector

| Pump | | B2-A PP-SL 25 | B2 PP-SL 25 | B2 PP-SL 32 | Product detail |
|---------------------------------------|--------------------------|-------------------------|---|-----------------|---|
| Drive motor | | Storage battery (4.8 V) | Universal motor 200 W, 230 V, 50 Hz, double insulated on protection class II, protection class IP 44, with integrated motor protection switch, 3 m connection cable | |  |
| Material: | Pump tube Impeller | PP PP | PP PP | PP PP | |
| Type of | Impeller | R | R | R | |
| Zone 0 (approved acc. to IEC and Vbf) | | no | no | no | |
| Immersion tube diameter: | up to mm | 25 | 25 | 32 | |
| Hose connection: | Nominal diameter mm | 19 | 19 | 19 | |
| | Outer thread | G 3/4 | G 3/4 | G 3/4 | |
| Delivery rate* | up to l/min. | 13 | 40 | 65 | |
| Delivery head* | up to m wc | 4 | 5 | 6.5 | |
| Temperature of medium: | up to °C | 60 | 60 | 60 | |
| Viscosity** | up to mPas | 380 | 500 | 500 | |
| Density | up to kg/dm ³ | 1.3 | 1.3 | 1.3 | |
| Weight (kg) | motor+pump tube | 2.0 | 2.0 | 2.5 | |
| Length: 650 mm | Order No. | 0201-182 | 0201-203 | – | |
| Length: 1000 mm | Order No. | – | – | 0201-208 | |

* Determined with water at 20 °C ** Determined with oil Special lengths, other voltages and frequencies on request.

Charging appliance

For B2-A PP-SL 25 Order No. **0238-010**



| Pump | | B2 SS-SL 28 |
|---------------------------------------|--------------------------|---|
| Drive motor | | Universal motor 200 W, 230 V, 50 Hz, double insulated on protection class II, protection class IP 44, with integrated motor protection switch 3 m connection cable. |
| Material: | Pump tube Impeller | Stainless steel 1.4571 ETFE |
| Type of impeller | | R |
| Zone 0 (approved acc. to IEC and Vbf) | | no |
| Immersion tube diameter: | up to mm | 28 |
| Hose connection: | Nominal diameter mm | 19 |
| | Outer thread | G 3/4 |
| Delivery rate* | up to l/min. | 70 |
| Delivery head* | up to m wc | 7 |
| Temperature of medium: | up to °C | 100 |
| Viscosity** | up to mPas | 500 |
| Density | up to kg/dm ³ | 1.3 |
| Weight (kg) | motor+pump tube | 3.5 |
| Length: 1000 mm | Order No. | 0201-218 |

* Determined with water at 20 °C ** Determined with oil Special lengths, other voltages and frequencies on request.



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Lutz Drum and Container Pumps

Pump tube RE-PP (polypropylene)

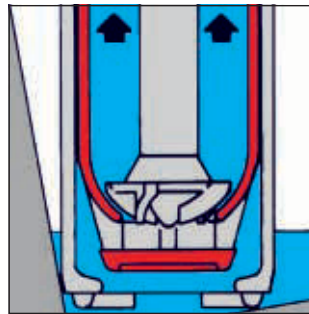


Materials (coming into contact with the pumped medium)

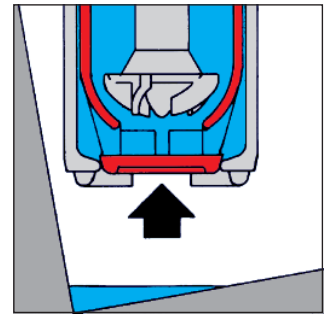
| RE-PP-MS | |
|------------------|--|
| Housing: | PP |
| Impeller: | PP |
| Sealing pot: | PP |
| Seals: | Viton® |
| Mechanical seal: | Carbon, ceramic, Viton®, HC-4 (2.4610) |
| Bearing: | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) |

Viton® is a registered trademark of DuPont Dow Elastomers.

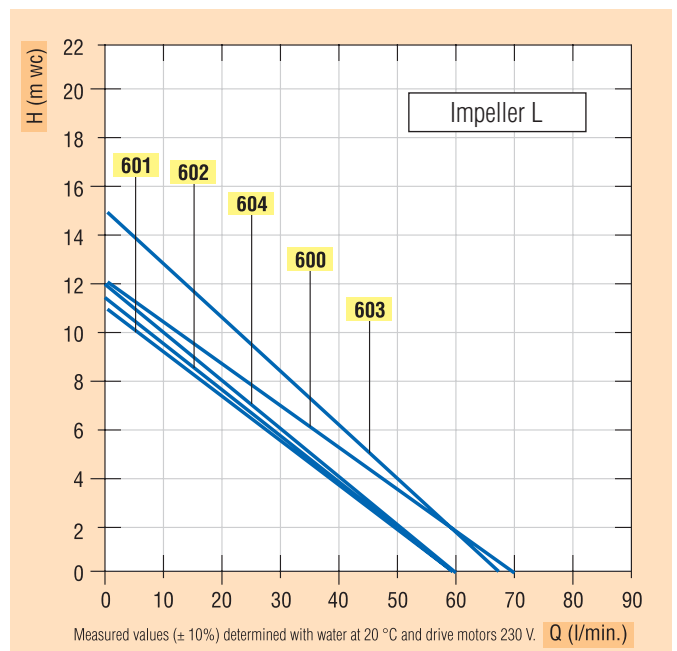
Function



Sealing pot is open - the liquid is pumped off.




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



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

Pump tube RE-PP (polypropylene)

for complete drum drainage of corrosive and neutral liquids

| Pump tube | | RE-PP MS | Productdetail |
|---------------------------------------|---------------------|-----------------|---|
| Type of impeller | | L |  |
| Zone 0 (approved acc. to IEC and Vbf) | | no | |
| Immersion tube diameter: | up to mm | 40 | |
| Temperature of medium: | up to °C | 50 | |
| Material: | Pump tube | PP | |
| | Impeller | PP | |
| Hose connection: | Nominal diameter mm | 19-32 | |
| | Outer thread | G 1 1/4 | |
| Length: 700 mm*** | Order No. | 0103-020 | |
| Length: 1000 mm*** | Order No. | 0103-021 | |
| Length: 1200 mm*** | Order No. | 0103-022 | |

Choice of motors

Operating data

| MI 4 | MI 4-E | | | |
|---------------------------|-----------------------|-------------------------------|--|------|
| - | with speed controller | Characteristic curve no. | | 600 |
| Output: 500 W | 500 W | Delivery rate* up to l/min. | | 70 |
| Voltage: 230 V | 230 V | Delivery head* up to m wc | | 12 |
| Order No. 0030-000 | 0030-001 | Viscosity** up to mPas | | 1000 |
| | | Density**** up to kg/dm³ | | 1.6 |
| | | Weight (kg) motor + pump tube | | 4.0 |



| MA II 3 | | | | |
|---------------------------|-----------------|-------------------------------|--|-----|
| Output: 460 W | 460 W | Characteristic curve no. | | 601 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | | 60 |
| LVR: no | yes | Delivery head* up to m wc | | 11 |
| Order No. 0060-000 | 0060-008 | Viscosity** up to mPas | | 800 |
| | | Density**** up to kg/dm³ | | 1.7 |
| | | Weight (kg) motor + pump tube | | 5.8 |



| MA II 5 | MA II 5 | MA II 5 S | | |
|---------------------------|-----------------|-----------------|-------------------------------|------|
| Output: 575 W | 575 W | 575 W | Characteristic curve no. | 602 |
| Voltage: 230 V | 230 V | 230 V | Delivery rate* up to l/min. | 60 |
| LVR: no | yes | no | Delivery head* up to m wc | 11.5 |
| Order No. 0060-001 | 0060-009 | 0060-091 | Viscosity** up to mPas | 1200 |
| | | acid-proof | Density**** up to kg/dm³ | 2.0 |
| | | | Weight (kg) motor + pump tube | 6.6 |

| MA II 7 | | | | |
|---------------------------|-----------------|-------------------------------|--|------|
| Output: 795 W | 795 W | Characteristic curve no. | | 603 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | | 69 |
| LVR: no | yes | Delivery head* up to m wc | | 15 |
| Order No. 0060-002 | 0060-010 | Viscosity** up to mPas | | 1000 |
| | | Density**** up to kg/dm³ | | 2.0 |
| | | Weight (kg) motor + pump tube | | 7.8 |

Low-voltage release (LVR):

Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

| MD-1 | MD-2 | | | |
|---------------------------|-----------------|-------------------------------|--|------|
| Output: 400 W | 400 W | Characteristic curve no. | | 604 |
| Operating Pressure: 6 bar | 6 bar | Delivery rate* up to l/min. | | 60 |
| Order No. 0004-087 | 0004-088 | Delivery head* up to m wc | | 12 |
| | | Viscosity** up to mPas | | 1000 |
| | | Density**** up to kg/dm³ | | 2.0 |
| | | Weight (kg) motor + pump tube | | 2.7 |



* 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.

Special voltages and

frequencies on request.

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Lutz Drum and Container Pumps

Pump tube RE-SS (stainless steel)

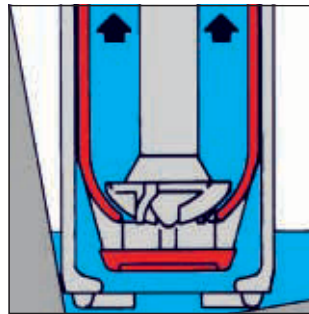


Materials (coming into contact with the pumped medium)

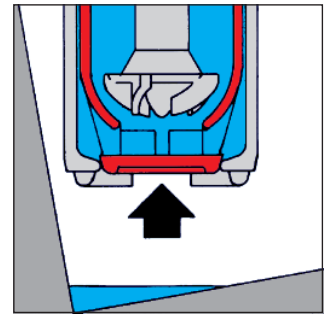
RE-SS-MS

| | |
|------------------|--|
| Housing: | Stainless steel (1.4571) |
| Impeller: | ETFE |
| Sealing pot: | ETFE/stainless steel (1.4571) |
| Seals: | FEP coated |
| Mechanical seal: | Carbon, ceramic, PTFE, HC-4 (2.4610), stainless steel (1.4571) |
| Bearing: | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) |

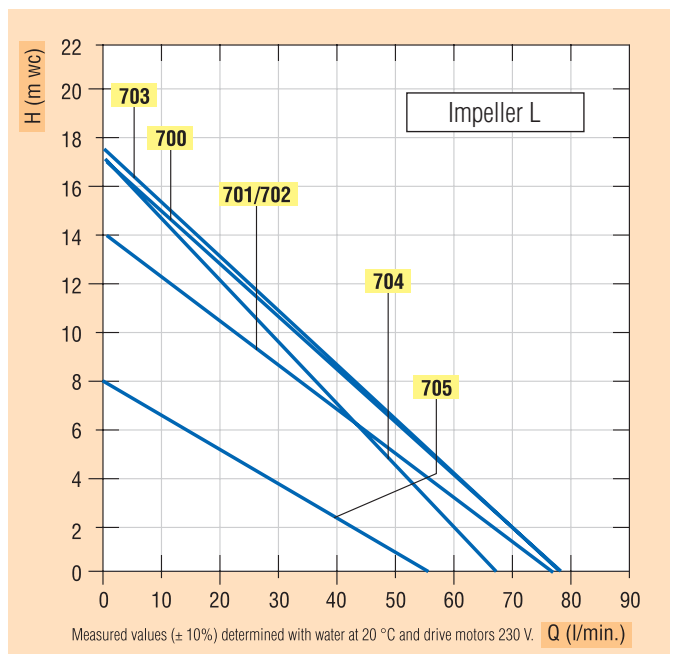
Function



Sealing pot is open - the liquid is pumped off.




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



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

Pump tube RE-SS (stainless steel)

for complete drum drainage of corrosive and neutral liquids

| Pump tube | | RE-SS MS | Product detail |
|---------------------------------------|---------------------|-----------------|---|
| Type of impeller | | L |  |
| Zone 0 (approved acc. to IEC and Vbf) | | 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 | |

Choice of motors Operating data

| MI 4 | MI 4-E | | | |
|---------------------------|-----------------------|-------------------------------|--|-----|
| - | with speed controller | Characteristic curve no. | | 700 |
| Output: 500 W | 500 W | Delivery rate* up to l/min. | | 78 |
| Voltage: 230 V | 230 V | Delivery head* up to m wc | | 17 |
| Order No. 0030-000 | 0030-001 | Viscosity** up to mPas | | 700 |
| | | Density**** up to kg/dm³ | | 1.4 |
| | | Weight (kg) motor + pump tube | | 6.0 |



| MA II 3 | | | | |
|---------------------------|-----------------|-------------------------------|--|-----|
| Output: 460 W | 460 W | Characteristic curve no. | | 701 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | | 77 |
| LVR: no | yes | Delivery head* up to m wc | | 14 |
| Order No. 0060-000 | 0060-008 | Viscosity** up to mPas | | 500 |
| | | Density**** up to kg/dm³ | | 1.6 |
| | | Weight (kg) motor + pump tube | | 7.8 |



| MA II 5 | MA II 5 | MA II 5 S | | |
|---------------------------|-----------------|-----------------|-------------------------------|-----|
| Output: 575 W | 575 W | 575 W | Characteristic curve no. | 702 |
| Voltage: 230 V | 230 V | 230 V | Delivery rate* up to l/min. | 77 |
| LVR: no | yes | no | Delivery head* up to m wc | 14 |
| Order No. 0060-001 | 0060-009 | 0060-091 | Viscosity** up to mPas | 900 |
| | | acid-proof | Density**** up to kg/dm³ | 1.8 |
| | | | Weight (kg) motor + pump tube | 8.6 |

| MA II 7 | | | | |
|---------------------------|-----------------|-------------------------------|--|------|
| Output: 795 W | 795 W | Characteristic curve no. | | 703 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | | 78 |
| LVR: no | yes | Delivery head* up to m wc | | 17.5 |
| Order No. 0060-002 | 0060-010 | Viscosity** up to mPas | | 700 |
| | | Density**** up to kg/dm³ | | 1.9 |
| | | Weight (kg) motor + pump tube | | 9.8 |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

| MD-1 | MD-2 | | | |
|---------------------------|-----------------|-------------------------------|--|-----|
| Output: 400 W | 400 W | Characteristic curve no. | | 704 |
| Operating Pressure: 6 bar | 6 bar | Delivery rate* up to l/min. | | 68 |
| Order No. 0004-087 | 0004-088 | Delivery head* up to m wc | | 17 |
| | | Viscosity** up to mPas | | 700 |
| | | Density**** up to kg/dm³ | | 1.8 |
| | | Weight (kg) motor + pump tube | | 4.7 |



| B4/GT | | | | |
|---------------------------|-----------------|-------------------------------|--|------|
| Output: 750 W | 750 W | Characteristic curve no. | | 705 |
| Voltage: 230/400 V | 230/400 V | Delivery rate* up to l/min. | | 55 |
| Protection | | Delivery head* up to m wc | | 8 |
| Switch: no | yes | Viscosity** up to mPas | | 600 |
| Order No. 0004-019 | 0004-067 | Density**** up to kg/dm³ | | 2.2 |
| | | Weight (kg) motor + pump tube | | 14.2 |



* Determined with water at 20 °C

** Determined with oil

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

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Lutz Drum and Container Pumps

Pump tube MP-PP (polypropylene)

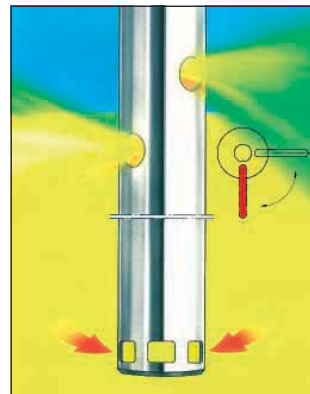


Materials (coming into contact with the pumped medium)

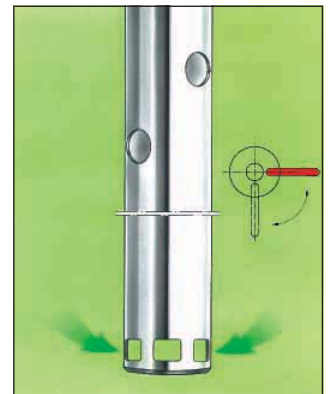
| MP-PP-MS | |
|------------------|--------------------------|
| Housing: | PP/PVDF |
| Impeller: | PP |
| Seals: | Viton® |
| Mechanical seal: | Carbon, SiC, Viton®, HC |
| Bearing: | ETFE/PTFE |
| Drive shaft: | Stainless steel (1.4571) |

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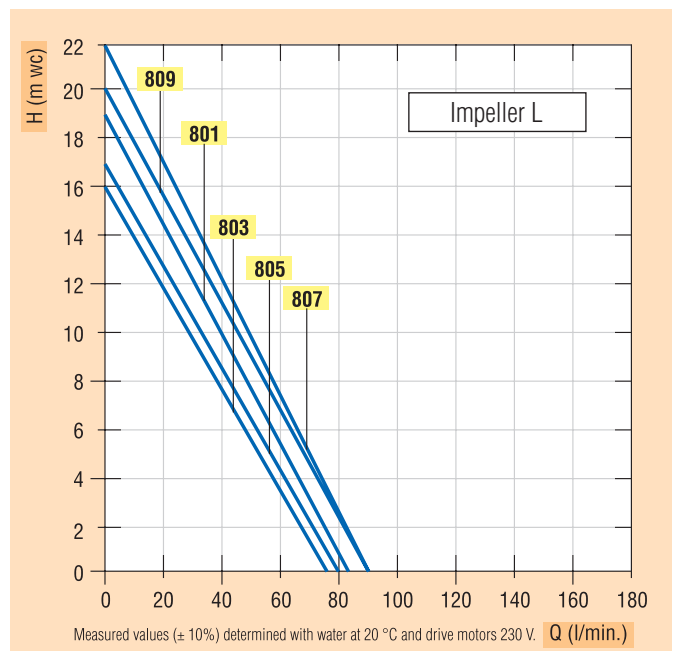
Function



Mix/Pump




Pump



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

Pump tube MP-PP (polypropylene)

| Pump tube | | MP-PP MS | MP-PP-SL | Productdetail |
|---------------------------------------|---------------------|-----------------|-----------------|---|
| Type of impeller | | L | L |  |
| Zone 0 (approved acc. to IEC and Vbf) | | no | no | |
| Immersion tube diameter: | up to mm | 41 | 41 | |
| Temperature of medium: | up to °C | 50 | 50 | |
| Material: | Pump tube | PP | PP | |
| | Impeller | PP | PP | |
| Hose connection: | Nominal diameter mm | 19-32 | 19-32 | |
| | Outer thread | G 1 1/4 | G 1 1/4 | |
| Length: 1000 mm*** | Order No. | 0103-150 | 0110-150 | |

Choice of motors Operating data

| MI 4 | MI 4-E | | | |
|---------------------------|-----------------------|-------------------------------|-----|-----|
| - | with Speed controller | Characteristic curve no. | 801 | 801 |
| Output: 500 W | 500 W | Delivery rate* up to l/min. | 85 | 85 |
| Voltage: 230 V | 230 V | Delivery head* up to m wc | 19 | 19 |
| Order No. 0030-000 | 0030-001 | Viscosity** up to mPas | 500 | 500 |
| | | Density**** up to kg/dm³ | 1.4 | 1.4 |
| | | Weight (kg) motor + pump tube | 4.1 | 4.1 |



| MA II 3 | | | | |
|---------------------------|-----------------|-------------------------------|-----|-----|
| Output: 460 W | 460 W | Characteristic curve no. | 803 | 803 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | 75 | 75 |
| LVR: no | yes | Delivery head* up to m wc | 16 | 16 |
| Order No. 0060-000 | 0060-008 | Viscosity** up to mPas | 500 | 500 |
| | | Density**** up to kg/dm³ | 1.6 | 1.6 |
| | | Weight (kg) motor + pump tube | 5.9 | 5.9 |



| MA II 5 | MA II 5 | MA II 5 S | | |
|---------------------------|-----------------|-----------------|-------------------------------|-----|
| Output: 575 W | 575 W | 575 W | Characteristic curve no. | 805 |
| Voltage: 230 V | 230 V | 230 V | Delivery rate* up to l/min. | 80 |
| LVR: no | yes | no | Delivery head* up to m wc | 17 |
| Order No. 0060-001 | 0060-009 | 0060-091 | Viscosity** up to mPas | 800 |
| | | acid-proof | Density**** up to kg/dm³ | 1.8 |
| | | | Weight (kg) motor + pump tube | 6.7 |

| MA II 7 | | | | |
|---------------------------|-----------------|-------------------------------|-----|-----|
| Output: 795 W | 795 W | Characteristic curve no. | 807 | 807 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | 90 | 90 |
| LVR: no | yes | Delivery head* up to m wc | 22 | 22 |
| Order No. 0060-002 | 0060-010 | Viscosity** up to mPas | 800 | 800 |
| | | Density**** up to kg/dm³ | 1.9 | 1.9 |
| | | Weight (kg) motor + pump tube | 7.9 | 7.9 |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

| MD-1 | MD-2 | | | |
|---------------------------|-----------------|-------------------------------|-----|-----|
| Output: 400 W | 400 W | Characteristic curve no. | 809 | 809 |
| Operating Pressure: 6 bar | 6 bar | Delivery rate* up to l/min. | 90 | 90 |
| Order No. 0004-087 | 0004-088 | Delivery head* up to m wc | 20 | 20 |
| | | Viscosity** up to mPas | 850 | 850 |
| | | Density**** up to kg/dm³ | 1.8 | 1.8 |
| | | Weight (kg) motor + pump tube | 2.8 | 2.8 |



* Determined with water at 20 °C

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

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Lutz Drum and Container Pumps

Pump tube MP-SS (stainless steel)



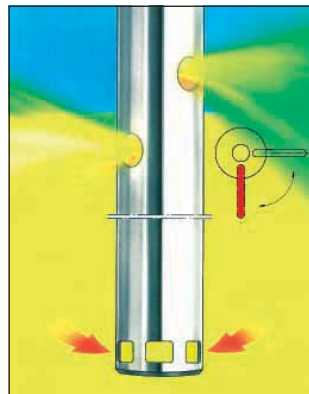
Materials (coming into contact with the pumped medium)

MP-SS-MS

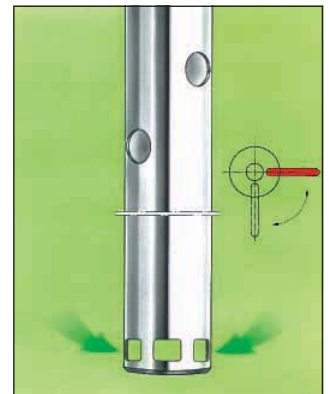
| | |
|------------------|---|
| Housing: | Stainless steel (1.4571) |
| Impeller: | ETFE |
| Seals: | Viton® |
| Mechanical seal: | Carbon, ceramic, PTFE, Stainless steel (1.4571), HC-4 (2.4610) |
| Bearing: | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) |

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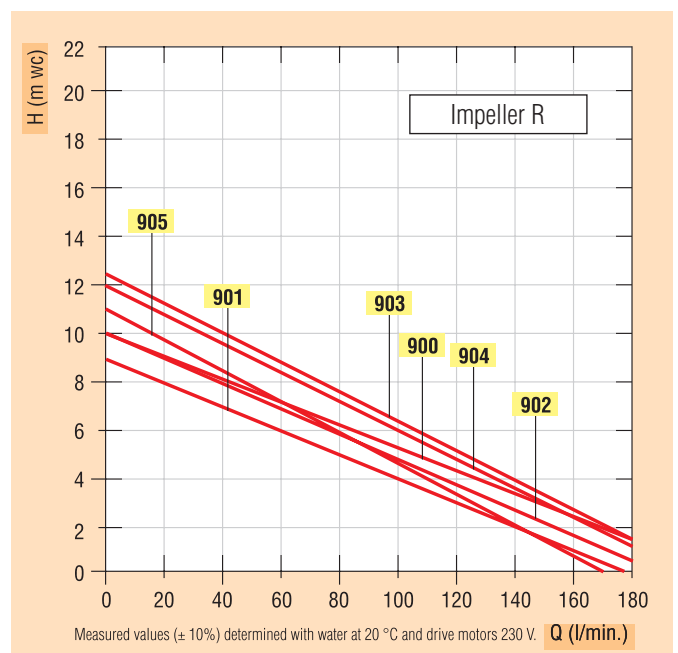
Function



Mix/Pump




Pump



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

Pump tube MP-SS (stainless steel)

for mixing and pumping of corrosive and neutral liquids

| Pump tube | | MP-SS MS | Productdetail |
|---------------------------------------|---------------------|-----------------|---|
| Type of impeller | | R |  |
| Zone 0 (approved acc. to IEC and Vbf) | | 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: 1000 mm*** | Order No. | 0151-240 | |
| Length: 1200 mm*** | Order No. | 0151-255 | |

Choice of motors Operating data

| MI 4 | MI 4-E | | | |
|---------------------------|-----------------------|-------------------------------|--|-----|
| - | with speed controller | Characteristic curve no. | | 900 |
| Output: 500 W | 500 W | Delivery rate* up to l/min. | | 210 |
| Voltage: 230 V | 230 V | Delivery head* up to m wc | | 10 |
| Order No. 0030-000 | 0030-001 | Viscosity** up to mPas | | 350 |
| | | Density**** up to kg/dm³ | | 1.1 |
| | | Weight (kg) motor + pump tube | | 6.0 |



| MA II 3 | | | | |
|---------------------------|-----------------|-------------------------------|--|-----|
| Output: 460 W | 460 W | Characteristic curve no. | | 901 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | | 178 |
| LVR: no | yes | Delivery head* up to m wc | | 9 |
| Order No. 0060-000 | 0060-008 | Viscosity** up to mPas | | 200 |
| | | Density**** up to kg/dm³ | | 1.2 |
| | | Weight (kg) motor + pump tube | | 7.8 |



| MA II 5 | MA II 5 | MA II 5 S | | |
|---------------------------|-----------------|-----------------|-------------------------------|-----|
| Output: 575 W | 575 W | 575 W | Characteristic curve no. | 902 |
| Voltage: 230 V | 230 V | 230 V | Delivery rate* up to l/min. | 190 |
| LVR: no | yes | no | Delivery head* up to m wc | 10 |
| Order No. 0060-001 | 0060-009 | 0060-091 | Viscosity** up to mPas | 550 |
| | | acid-proof | Density**** up to kg/dm³ | 1.3 |
| | | | Weight (kg) motor + pump tube | 8.6 |

| MA II 7 | | | | |
|---------------------------|-----------------|-------------------------------|--|-----|
| Output: 795 W | 795 W | Characteristic curve no. | | 903 |
| Voltage: 230 V | 230 V | Delivery rate* up to l/min. | | 210 |
| LVR: no | yes | Delivery head* up to m wc | | 13 |
| Order No. 0060-002 | 0060-010 | Viscosity** up to mPas | | 400 |
| | | Density**** up to kg/dm³ | | 1.4 |
| | | Weight (kg) motor + pump tube | | 9.8 |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. It's recommended when pumping hazardous liquids.

| MD-1 | MD-2 | | | |
|---------------------------|-----------------|-------------------------------|--|-----|
| Output: 400 W | 400 W | Characteristic curve no. | | 904 |
| Operating Pressure: 6 bar | 6 bar | Delivery rate* up to l/min. | | 200 |
| Order No. 0004-087 | 0004-088 | Delivery head* up to m wc | | 12 |
| | | Viscosity** up to mPas | | 400 |
| | | Density**** up to kg/dm³ | | 1.3 |
| | | Weight (kg) motor + pump tube | | 4.7 |



| B4/GT | | | | |
|---------------------------|-----------------|-------------------------------|--|------|
| Output: 750 W | 750 W | Characteristic curve no. | | 905 |
| Voltage: 230/400 V | 230/400 V | Delivery rate* up to l/min. | | 170 |
| Protection Switch: no | yes | Delivery head* up to m wc | | 11 |
| Order No. 0004-019 | 0004-067 | Viscosity** up to mPas | | 400 |
| | | Density**** up to kg/dm³ | | 2.0 |
| | | Weight (kg) motor + pump tube | | 14.2 |



* Determined with water at 20 °C ** Determined with oil *** Special lengths 200–2500 mm on request **** Determined with 3 m hose 3/4" and open nozzle 3/4". Higher densities possible for shorter operating periods. Special voltages and frequencies on request.

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Lutz Pump Sets

Ready for action



Set 1

For aqueous fluids

| | B2-A PP-SL25* battery-powered | B2-PP-SL25 230 V | B2 PP-SL32 230 V |
|-------------------------------|----------------------------------|---------------------|---------------------|
| Imm. depth: 650 mm Order-No. | 0201-181 | 0201-223 | – |
| Imm. depth: 1000 mm Order-No. | – | – | 0201-228 |

Consisting of:

Pump, Lutz-nozzle, 2 x hose clips 3/4", 1.5 m PVC hose 3/4", curved spout, wall bracket

| | | | |
|----------------|-----------------------------|-----------------------------|-----------------------------|
| Density: | max. 1.3 kg/dm ³ | max. 1.3 kg/dm ³ | max. 1.3 kg/dm ³ |
| Viscosity: | max. 500 mPas | max. 500 mPas | max. 500 mPas |
| Delivery rate: | max. 13 l/min. | max. 40 l/min. | max. 65 l/min. |
| Delivery head: | max. 4 m wc | max. 5 m wc | max. 6.5 m wc |

* Charging appliance (0238-010) additionally required



Set 2

For aqueous fluids

| | B2-A PP-SL25* battery-powered | B2-PP-SL25 230 V | B2 PP-SL32 230 V |
|-------------------------------|----------------------------------|---------------------|---------------------|
| Imm. depth: 650 mm Order-No. | 0201-212 | 0201-210 | – |
| Imm. depth: 1000 mm Order-No. | – | – | 0201-211 |

Consisting of:

Pump, flow meter TR 50-PP, Lutz-nozzle, 2 x hose clips 3/4", 1.5 m PVC hose 3/4", curved spout, wall bracket

| | | | |
|----------------|-----------------------------|-----------------------------|-----------------------------|
| Density: | max. 1.3 kg/dm ³ | max. 1.3 kg/dm ³ | max. 1.3 kg/dm ³ |
| Viscosity: | max. 20 mPas** | max. 20 mPas** | max. 20 mPas** |
| Delivery rate: | max. 13 l/min. | max. 40 l/min. | max. 65 l/min. |
| Delivery head: | max. 4 m wc | max. 5 m wc | max. 6.5 m wc |

* Charging appliance (0238-010) additionally required **Maximum with flow meter TR 50-PP



Set 3

Set 4

Set 3

For thin-bodied alkalis

| | |
|-------------------------------|----------|
| Imm. depth: 1000 mm Order-No. | 0205-101 |
| Imm. depth: 1200 mm Order-No. | 0205-102 |

Set 4

For thin-bodied acids

| |
|----------|
| 0205-111 |
| 0205-112 |

Consisting of:

Motor MI 4, pump tube PP 41-L-SL SS (Set 3), PP 41-L-SL HC (Set 4), 2 x hose connection PP 3/4", 2.5 m PVC fabric hose 3/4", 2 x hose clips 3/4", nozzle PP with sealing FEP (Set 3), nozzle PP (Set 4), drum adapter PP

| | |
|----------------|-----------------------------|
| Density: | max. 1.4 kg/dm ³ |
| Viscosity: | max. 500 mPas |
| Delivery rate: | max. 85 l/min. |
| Delivery head: | max. 19 m wc |



Set 5

For highly aggressive acids and alkalis

| | |
|-------------------------------|----------|
| Imm. depth: 1000 mm Order-No. | 0205-201 |
| Imm. depth: 1200 mm Order-No. | 0205-202 |

Consisting of:

Motor MA II 5, pump tube PVDF 41-L-SL, hose connection PTFE 3/4", 2.5 m special chemical hose 3/4", 2 x hose clips 3/4", nozzle PVDF, hose connection turnable, drum adapter PP

| | |
|----------------|-----------------------------|
| Density: | max. 1.8 kg/dm ³ |
| Viscosity: | max. 800 mPas |
| Delivery rate: | max. 80 l/min. |
| Delivery head: | max. 17 m wc |

For light viscous mineral oil products

Imm. depth: 1000 mm Order-No. **0205-301**

Set 6



Consisting of:

Motor MI 4, pump tube Alu 41-L-SL, hose connection Alu 1", 2.5 m PVC fabric hose 1", 2 x hose clips 1", nozzle aluminium, hose connection brass 1", drum adapter PP

Density: max. 1.4 kg/dm³
 Viscosity: max. 500 mPas
 Delivery rate: max. 85 l/min.
 Delivery head: max. 19 m wc

For easily flammable hydrocarbons

Imm. depth: 1000 mm Order-No. **0205-401**

Set 7



Consisting of:

Motor ME II 3, pump tube SS 41-L-SL, 2 x hose connection brass, 2.5 m solvent hose 1", nozzle brass/PTFE, equipotential bonding cable, drum adapter PP (without ex plug)

Density: max. 1.6 kg/dm³
 Viscosity: max. 350 mPas
 Delivery rate: max. 95 l/min.
 Delivery head: max. 14 m wc

For all hazardous fluids

Imm. depth: 1000 mm Order-No. **0205-411**

Set 8



Consisting of:

Motor ME II 3, pump tube SS 41-L-SL, 2 x hose connection SS, 2.5 m universal chemical hose 1", nozzle SS with sealing FEP, equipotential bonding cable, drum adapter PP (without ex plug)

Density: max. 1.6 kg/dm³
 Viscosity: max. 350 mPas
 Delivery rate: max. 95 l/min.
 Delivery head: max. 14 m wc

Set 9

Suitable for complete drum drainage for easily flammable hydrocarbons

Imm. depth: 1000 mm Order-No. **0205-501**

Consisting of:

Motor ME II 3, pump tube RE-SS 41-L-GLRD, 2 x hose connection brass, DN 25, 2.5 m solvent hose 1", nozzle brass/PTFE, equipotential bonding cable, drum adapter PP (without ex plug)

Density: max. 1.6 kg/dm³
 Viscosity: max. 500 mPas
 Delivery rate: max. 77 l/min.
 Delivery head: max. 14 m wc

Set 10

Suitable for complete drum drainage for all hazardous fluids

Order-No. **0205-511**

Consisting of:

Motor ME II 3, pump tube RE-SS 41-L-GLRD, 2 x hose connection SS, DN 25, 2.5 m universal chemical hose 1", nozzle SS with sealing FEP, equipotential bonding cable, drum adapter PP (without ex plug)

Set 9

Set 10



Choice of motors

Non explosion proof



| Type | Nominal voltage | Frequency | Nominal power | Weight |
|------------|-----------------|-----------|---------------|--------|
| | V | Hz | W | kg |
| MI 4-230 | 220-230 | 50 | 450-500 | 2.8 |
| MI 4-230 E | 220-230 | 50 | 450-500 | 2.8 |
| MI 4-120 | 110-120 | 50-60 | 550-640 | 2.8 |
| MI 4-120 E | 110-120 | 50-60 | 550-640 | 2.8 |
| MI 4-100 E | 100 | 50-60 | 520-550 | 2.8 |



With or without speed controller



| Type | Nominal voltage | Frequency | Nominal power | Weight |
|-----------|-----------------|-----------|---------------|--------|
| | V | Hz | W | kg |
| MA II 3 | 220-230 | 50 | 430-460 | 4.6 |
| | 100-120 | 50-60 | 430 | 4.6 |
| MA II 5 | 220-230 | 50 | 540-575 | 5.4 |
| | 220-230 | 60 | 450-490 | 5.4 |
| | 100-120 | 50-60 | 510 | 5.4 |
| | 42 | 50 | 520 | 5.4 |
| | 24 | = | 400 | 5.4 |
| MA II 5 S | 220-230 | 50 | 540-575 | 5.4 |
| | 100-120 | 50-60 | 510 | 5.4 |
| MA II 7 | 220-230 | 50 | 790-795 | 6.6 |
| | 100-120 | 50-60 | 700 | 6.6 |



With or without low voltage-release



MD-1



MD-2

| Type | Operating pressure | Nominal power | Weight |
|------|--------------------|---------------|--------|
| | bar | W | kg |
| MD-1 | 6 | 400 | 1.1 |
| MD-2 | 6 | 400 | 1.5 |



| Type | Nominal voltage | Frequency | Nominal power | Weight |
|-------|-----------------|-----------|---------------|--------|
| | V | Hz | W | kg |
| B4/GT | 230-400 | 50 | 750 | 10.0 |



For continuous operation

Choice of motors

Explosion proof

| Type | Nominal voltage | Frequency | Nominal power | Weight |
|---------|-----------------|-----------|---------------|--------|
| | V | Hz | W | kg |
| ME II 3 | 220-230 | 50 | 430-460 | 5.5 |
| | 100-110 | 50 | 380-440 | 5.5 |
| | 110-120 | 60 | 400-460 | 5.5 |
| ME II 5 | 220-230 | 50 | 540-580 | 6.3 |
| | 220-230 | 60 | 475-515 | 6.3 |
| | 110 | 50 | 510 | 6.3 |
| | 42 | 50 | 520 | 6.3 |
| | 24 | = | 400 | 6.3 |
| ME II 7 | 220-230 | 50 | 750-795 | 7.5 |
| | 110 | 50 | 700 | 7.5 |
| ME II 8 | 220-230 | 50 | 880-930 | 8.0 |



IP 54

With or without low voltage-release

| Type | Operating pressure | Nominal power | Weight |
|------|--------------------|---------------|--------|
| | bar | W | kg |
| MD-1 | 6 | 400 | 1.1 |
| MD-2 | 6 | 400 | 1.5 |
| MD-3 | 6 | 400 | 2.1 |



| Type | Nominal voltage | Frequency | Nominal power | Weight |
|------------|-----------------|-----------|---------------|--------|
| | V | Hz | W | kg |
| B4/GT (Ex) | 230-400 | 50 | 750 | 10.0 |



IP 54

For continuous operation

1

2

3

4

Getting started



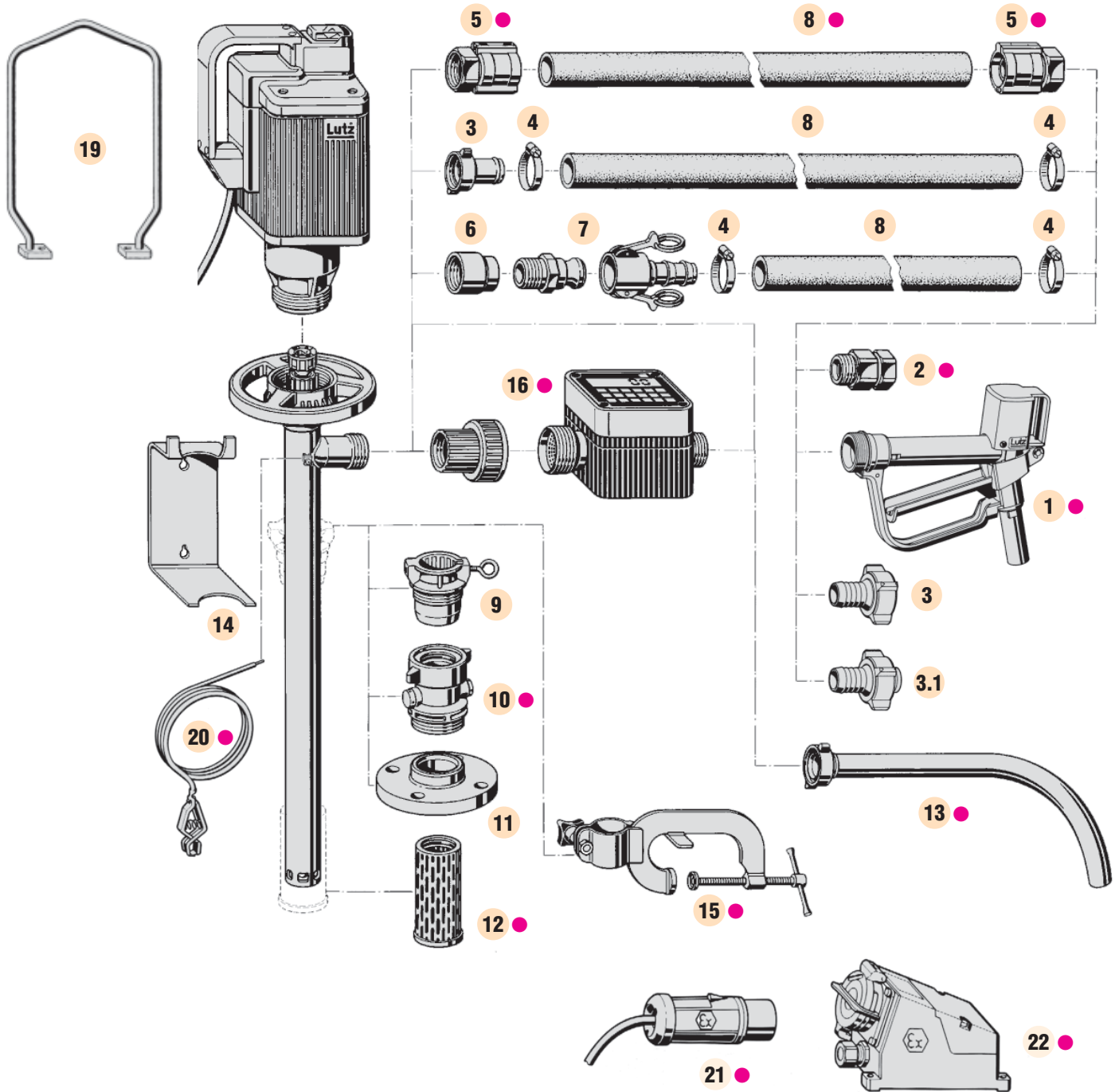
In keeping with our philosophy of making life safe and simple, we have a complete range of accessories available for you.

From the humble wall bracket to protect your pump, connectors to fit your hose size, to bonding and grounding wires to protect your employees, nothing has been overlooked.

To reduce the risk of spillage, we have nozzles available in five different materials, polypropylene, PVDF, stainless steel, brass and aluminium.

To avoid fumes or emissions from drums or containers, we have specialised drum adapters, and when it comes to accurate measurement or process control, we have a full range of flow meters to cater to your needs. The latter not only cover thin and thick fluids, but also flammable and explosive liquids.





1 ● Nozzle

2 ● Turning knuckle

3 Hose connection

3.1 Hose connection, turnable

4 Hose clips

5 ● Hose connectors

6 Reducing sleeves

7 Quick-action hose couplings

8 ● Hose

9 Drum adapter

10 ● Emission proof drum adapter

11 Installation flange

12 ● Foot strainer

13 ● Discharge spout

14 Wall bracket

15 ● Clamping device

16 ● Flow meter

19 Lifting device

20 ● Equipotential bonding cable

21 ● Explosion proof plug

22 ● Explosion proof socket

● For the delivery of easy flammable liquids (e. g. ethanol, petrol) or in hazardous locations

When is necessary?



If we were to go into the subject of „explosion protection“ with all its guidelines and specifications and all the protective measures that are derived from them, this would more than exceed the scope of our catalogue. Nevertheless, we would like to include a few explanations and make a few statements with respect to the basics of this subject.

The prerequisite for a potential explosion hazard is the development of an explosive atmosphere. Such an atmosphere can arise wherever flammable gases or liquids are manufactured, processed, transported and stored. Particularly in chemical factories, refineries, storage tank installations, paint factories, filling stations, etc., it is possible for such hazardous locations to exist. These are locations in which explosive atmospheres with potentially dangerous levels can arise due to the environmental and operational conditions that prevail. Consequently, there is an explosion hazard.

The term „explosion“ is understood as being a rapidly occurring combustion process for which three essential conditions must be prevalent simultaneously: flammable gases, oxygen (air) and an ignition source such as the ignition sparks of electrical equipment (brush sparking).

However, it is an unavoidable necessity at many industrial locations to run electrical equipment in an explosive atmosphere. The precautions that have to be taken against an explosion occurring are stipulated by the national or other authorities responsible for safety. These authorities lay down constructional requirements for the electrical equipment and issue specifications with respect to their installation and operation.

In addition to the concepts of "electrical equipment", "hazardous locations" and "explosive atmosphere" mentioned above, another important factor is the ignition temperature of a combustible substance. This is the lowest measured temperature of a heated wall, located in a test apparatus, at which the combustible substance mixed with air is still just about capable of igniting itself. The flammable gases and vapours of flammable liquids are classified according to their ignition temperature.

The term "type of enclosure" refers to measures built into electrical equipment during manufacture to prevent this equipment from igniting the explosive atmosphere in which it is located.

As a result, electrical equipment is categorised into groups and classes in accordance with the European norms. According to EN 50 014, electric drum and container pumps for use in hazardous locations belong to Group II (Explosion Group II).

| Designation | Euro Norm | Explanation | Area of Application |
|-------------|-----------|--|---|
| EEx d | EN 50 018 | Explosion proof enclosure: Parts that are capable of igniting an explosive atmosphere are enclosed in a housing which, should an explosion occur within it, is so designed that it can withstand the resultant pressure. | Zones 1 + 2 |
| EEx e | EN 50 019 | Increased-safety enclosure: Measures have been taken to provide a greater degree of safety by preventing impermissibly high temperatures and the generation of sparks or arcing. | Zones 1 + 2 |
| EEx i | EN 50 020 | Intrinsic safety: Circuit in which it is not possible for a spark or thermal effect to arise which could cause a specific explosive atmosphere to ignite. | Zones 1 + 2, Zone 0 after special test |
| EEx m | EN 50 028 | Encapsulation: The potential source of a spark is encapsulated. | Zones 1 + 2 |



Safety

When it comes to keeping warm, we make sure you are not in the fire. Our pumps and motors are certified to the latest ATEX100a standards and offer protection against hazardous and highly flammable liquids, or hazardous environments. Your safety is our concern.

A subdivision of Group II into A, B and C is also stipulated for a number of types of enclosure, whereby the flammability of gases and vapours belonging to Group IIA is the lowest and that of gases and vapours in Group IIC the highest. Consequently, we have had our explosion proof drum and container pumps tested in this group. The temperature class of a piece of electrical equipment is dependent on the maximum surface temperature measured at an ambient temperature of 40 °C. The classes range from T1 to T6.

Of the various types of enclosure possible, only „explosion proof enclosure“ (EN 50 018), „increased-safety enclosure“ (EN 50 019) and „intrinsic safety“ (EN 50 020) are of relevance to Lutz electric drum pumps.

The Lutz ME II motors are explosion proof in accordance with European standards EN 50 014, EN 50 018 and EN 50 019 and approved for protection class EEx de IIC T6. In addition to these safety features, the version with double insulation also ensures additional safety for equipotential bonding. Live components are isolated from the accessible external surfaces and from the pump tube.



Lutz Drum and Container Pumps



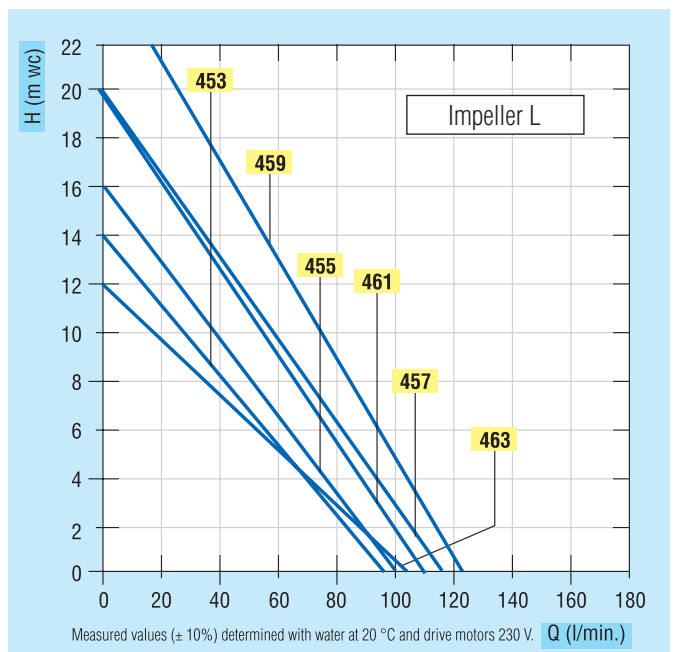
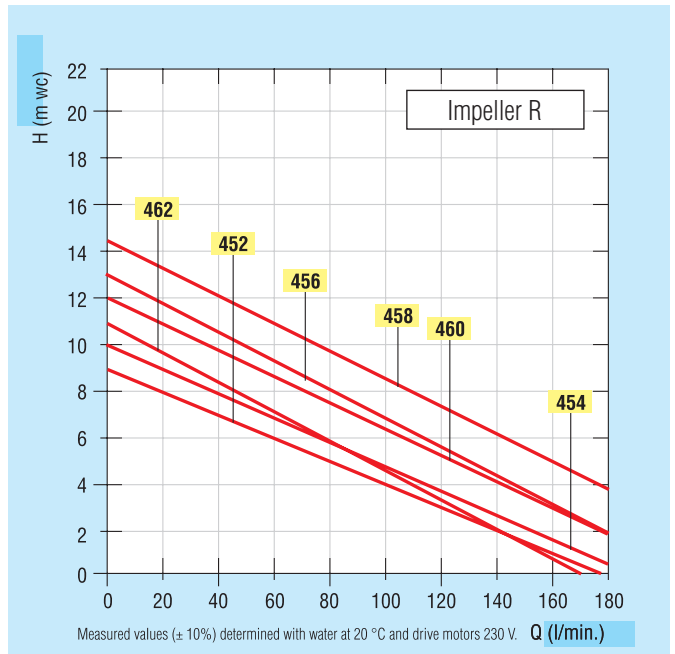
Pump tube SS (stainless steel)



Materials (coming into contact with the pumped medium)

| | SS-MS | SS-SL |
|------------------|---|--------------------------|
| Housing: | Stainless steel (1.4571) | Stainless steel (1.4571) |
| Impeller: | ETFE | ETFE |
| Seals: | Viton® | none |
| Mechanical seal: | Carbon, ceramic, Viton®, Stainless steel | none |
| Bearing: | Pure carbon | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) | Stainless steel (1.4571) |


Viton® is a registered trademark of DuPont Dow Elastomers.



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

Pump tube SS (stainless steel)

for highly inflammable liquids

| Pump tube | | SS-MS | | SS-SL | | Productdetail |
|--------------------------------------|---------------------|-----------------|-----------------|-----------------|-----------------|---|
| Type of impeller | | R | L | R | L |  |
| Zone 0 (approve acc. to IEC and Vbf) | | 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. | 0151-000 | 0151-003 | 0150-000 | 0150-003 | |
| Length: 1000 mm*** | Order No. | 0151-001 | 0151-004 | 0150-001 | 0150-004 | |
| Length: 1200 mm*** | Order No. | 0151-002 | 0151-005 | 0150-002 | 0150-005 | |
| Length: 1400 mm*** | Order No. | – | – | 0150-113 | 0150-108 | |
| Length: 1500 mm*** | Order No. | – | – | 0150-114 | 0150-109 | |
| Length: 1600 mm*** | Order No. | – | – | 0150-115 | 0150-110 | |
| Length: 1700 mm*** | Order No. | – | – | 0150-116 | 0150-111 | |
| Length: 2000 mm*** | Order No. | – | – | 0150-117 | 0150-112 | |

Choice of motors Operating data

| ME II 3 | | Characteristic curve no. | 452 | 453 | 452 | 453 |
|-----------|--------------------------|-------------------------------|-----|-----|-----|-----|
| Output: | 460 W 460 W | Delivery rate* up to l/min. | 178 | 95 | 178 | 95 |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 9 | 14 | 9 | 14 |
| LVR: | yes no | Viscosity** up to mPas | 200 | 350 | 200 | 350 |
| | | Density**** up to kg/dm³ | 1.2 | 1.6 | 1.2 | 1.6 |
| Order No. | 0050-000 0050-016 | Weight (kg) motor + pump tube | 8.7 | 8.7 | 8.7 | 8.7 |

| ME II 5 | | Characteristic curve no. | 454 | 455 | 454 | 455 |
|-----------|--------------------------|-------------------------------|-----|-----|-----|-----|
| Output: | 580 W 580 W | Delivery rate* up to l/min. | 190 | 100 | 190 | 100 |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 10 | 16 | 10 | 16 |
| LVR: | yes no | Viscosity** up to mPas | 550 | 700 | 550 | 700 |
| | | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 |
| Order No. | 0050-001 0050-017 | Weight (kg) motor + pump tube | 9.6 | 9.6 | 9.6 | 9.6 |

| ME II 7 | | Characteristic curve no. | 456 | 457 | 456 | 457 |
|-----------|--------------------------|-------------------------------|------|------|------|------|
| Output: | 795 W 795 W | Delivery rate* up to l/min. | 210 | 115 | 210 | 115 |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 13 | 20 | 13 | 20 |
| LVR: | yes no | Viscosity** up to mPas | 400 | 500 | 400 | 500 |
| | | Density**** up to kg/dm³ | 1.4 | 1.9 | 1.4 | 1.9 |
| Order No. | 0050-002 0050-018 | Weight (kg) motor + pump tube | 10.8 | 10.8 | 10.8 | 10.8 |

| ME II 8 | | Characteristic curve no. | 458 | 459 | 458 | 459 |
|-----------|--------------------------|-------------------------------|------|------|------|------|
| Output: | 930 W 930 W | Delivery rate* up to l/min. | 243 | 123 | 243 | 123 |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 14.5 | 25.5 | 14.5 | 25.5 |
| LVR: | yes no | Viscosity** up to mPas | 650 | 750 | 650 | 750 |
| | | Density**** up to kg/dm³ | 1.4 | 1.9 | 1.4 | 1.9 |
| Order No. | 0050-042 0050-041 | Weight (kg) motor + pump tube | 10.8 | 10.8 | 10.8 | 10.8 |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. In the hazardous location, motors with low-voltage release are absolutely prescribed.

| MD-1 MD-2 MD-3 | | Characteristic curve no. | 460 | 461 | 460 | 461 |
|---------------------|-----------------------------------|-------------------------------|-----|-----|-----|-----|
| Output: | 400 W 400 W 400 W | Delivery rate* up to l/min. | 210 | 110 | 210 | 110 |
| Operating Pressure: | 6 bar 6 bar 6 bar | Delivery head* up to m wc | 12 | 20 | 12 | 20 |
| | | Viscosity** up to mPas | 400 | 500 | 400 | 500 |
| | | Density**** up to kg/dm³ | 1.3 | 1.8 | 1.3 | 1.8 |
| Order No. | 0004-087 0004-088 0004-090 | Weight (kg) motor + pump tube | 4.4 | 4.4 | 4.4 | 4.4 |



| B4/GT | | Characteristic curve no. | 462 | 463 | 462 | 463 |
|-----------|-----------------|-------------------------------|------|------|------|------|
| Output: | 750 W | Delivery rate* up to l/min. | 170 | 105 | 170 | 105 |
| Voltage: | 230/400 V | Delivery head* up to m wc | 11 | 12 | 11 | 12 |
| | | Viscosity** up to mPas | 400 | 500 | 400 | 500 |
| | | Density**** up to kg/dm³ | 2.0 | 2.2 | 2.0 | 2.2 |
| Order No. | 0004-021 | Weight (kg) motor + pump tube | 13.9 | 13.9 | 13.9 | 13.9 |



* Determined with water at 20 °C

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request

1

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Lutz Drum and Container Pumps



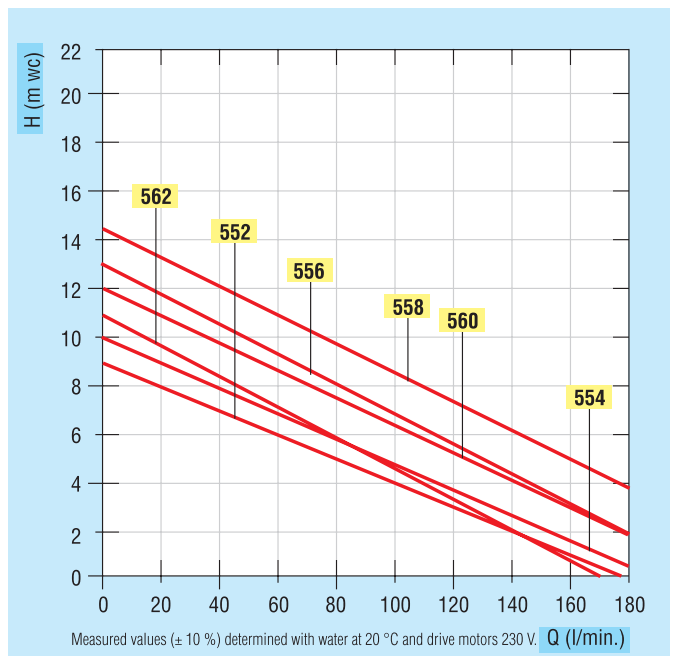
Pump tube HC (Hastelloy C)



Materials (coming into contact with the pumped medium)

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


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

Pump tube SS (stainless steel)

for highly inflammable chemicals

| Pump tube | HC-SL | Productdetail | |
|------------------------------------|---------------------|---|-----------------|
| Type of impeller | R |  | |
| Category 1 / 2 (acc. to ATEX 100a) | yes | | |
| Immersion tube diameter: | up to mm | | 42 |
| Temperature of medium: | up to °C | | 120 |
| Material: | Pump tube | | HC |
| | Impeller | | ETFE |
| Hose connection: | Nominal diameter mm | | 19-32 |
| | Outer thread | | G 1 1/4 |
| Length: 1000 mm*** | Order No. | | 0162-201 |
| Length: 1200 mm*** | Order No. | | 0162-202 |

| Choice of motors | Operating data | |
|---|--------------------------------------|------|
| ME II 3 | Characteristic curve no. | 552 |
| Output: 460 W 460 W | Flow rate* up to l/min. | 178 |
| Voltage: 230 V 230 V | Delivery head* up to m wc | 9 |
| LVR.: yes no | Viscosity** up to mPas | 200 |
| | Density**** up to kg/dm ³ | 1.2 |
| Order No. 0050-000 0050-016 | Weight (kg) motor + pump tube | 10.2 |
| ME II 5 | Characteristic curve no. | 554 |
| Output: 580 W 580 W | Flow rate* up to l/min. | 190 |
| Voltage: 230 V 230 V | Delivery head* up to m wc | 10 |
| LVR.: yes no | Viscosity** up to mPas | 550 |
| | Density**** up to kg/dm ³ | 1.3 |
| Order No. 0050-001 0050-017 | Weight (kg) motor + pump tube | 11.1 |
| ME II 7 | Characteristic curve no. | 556 |
| Output: 795 W 795 W | Flow rate* up to l/min. | 210 |
| Voltage: 230 V 230 V | Delivery head* up to m wc | 13 |
| LVR.: yes no | Viscosity** up to mPas | 400 |
| | Density**** up to kg/dm ³ | 1.4 |
| Order No. 0050-002 0050-018 | Weight (kg) motor + pump tube | 12.3 |
| ME II 8 | Characteristic curve no. | 558 |
| Output: 930 W 930 W | Flow rate* up to l/min. | 243 |
| Voltage: 230 V 230 V | Delivery head* up to m wc | 14.5 |
| LVR.: yes no | Viscosity** up to mPas | 650 |
| | Density**** up to kg/dm ³ | 1.4 |
| Order No. 0050-042 0050-041 | Weight (kg) motor + pump tube | 12.3 |
| MD-1 MD-2 MD-3 | Characteristic curve no. | 560 |
| Output: 400 W 400 W 400 W | Flow rate* up to l/min. | 210 |
| Operating pressure: 6 bar 6 bar 6 bar | Delivery head* up to m wc | 12 |
| | Viscosity** up to mPas | 400 |
| | Density**** up to kg/dm ³ | 1.4 |
| Order No. 0004-087 0004-088 0004-090 | Weight (kg) motor + pump tube | 5.9 |
| B4/GT | Characteristic curve no. | 562 |
| Output: 750 W | Flow rate* up to l/min. | 170 |
| Voltage: 230/400 V | Delivery head* up to m wc | 11 |
| | Viscosity** up to mPas | 400 |
| | Density**** up to kg/dm ³ | 2.0 |
| Order No. 0004-021 | Weight (kg) motor + pump tube | 15.4 |



Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. In the hazardous location, motors with low-voltage release are absolutely prescribed.



* Determined with water at 20 °C *** Special Lengths 200–2500 mm on request

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

Special voltages and frequencies on request

1

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Lutz Drum and Container Pumps



Pump tube RE-SS (stainless steel)

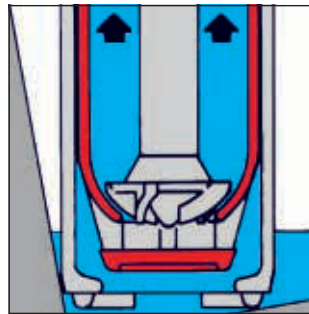


Materials (coming into contact with the pumped medium)

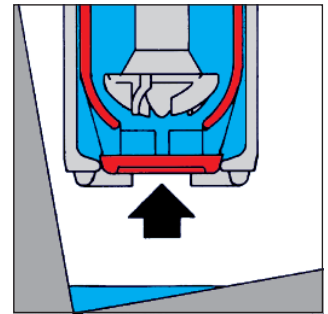
RE-SS-MS

| | |
|------------------|--|
| Housing: | Stainless steel (1.4571) |
| Impeller: | ETFE |
| Sealing pot: | ETFE/stainless steel (1.4571) |
| Seals: | FEP coated |
| Mechanical seal: | Carbon, ceramic, PTFE, HC-4 (2.4610), stainless steel (1.4571) |
| Bearing: | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) |

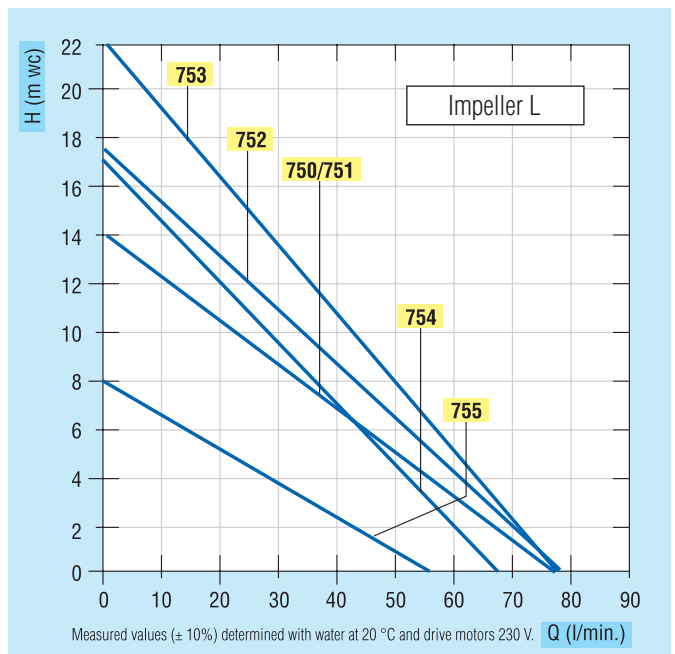
Function



Sealing pot is open - the liquid is pumped off.




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














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

Pump tube RE-SS (stainless steel)

for complete drum drainage of highly inflammable liquids

| Pump tube | | RE-SS MS | Productdetail |
|---------------------------------------|---------------------|-----------------|---|
| Type of impeller | | L |  |
| Zone 0 (approved acc. to IEC and Vbf) | | 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 | |

| Choice of motors | | Operating data | | |
|-----------------------------|---|-------------------------------|------|--|
| ME II 3 | | Characteristic curve no. | 750 |   |
| Output: | 460 W 460 W | Delivery rate* up to l/min. | 77 | |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 14 | |
| LVR: | yes no | Viscosity** up to mPas | 500 | |
| | | Density**** up to kg/dm³ | 1.6 | |
| Order No. | 0050-000 0050-016 | Weight (kg) motor + pump tube | 9.0 | |
| ME II 5 | | Characteristic curve no. | 751 |   |
| Output: | 580 W 580 W | Delivery rate* up to l/min. | 77 | |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 14 | |
| LVR: | yes no | Viscosity** up to mPas | 900 | |
| | | Density**** up to kg/dm³ | 1.8 | |
| Order No. | 0050-001 0050-017 | Weight (kg) motor + pump tube | 9.9 | |
| ME II 7 | | Characteristic curve no. | 752 |   |
| Output: | 795 W 795 W | Delivery rate* up to l/min. | 78 | |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 17.5 | |
| LVR: | yes no | Viscosity** up to mPas | 700 | |
| | | Density**** up to kg/dm³ | 1.9 | |
| Order No. | 0050-002 0050-018 | Weight (kg) motor + pump tube | 11.1 | |
| ME II 8 | | Characteristic curve no. | 753 |   |
| Output: | 930 W 930 W | Delivery rate* up to l/min. | 78 | |
| Voltage: | 230 V 230 V | Delivery head* up to m wc | 22 | |
| LVR: | yes no | Viscosity** up to mPas | 950 | |
| | | Density**** up to kg/dm³ | 1.9 | |
| Order No. | 0050-042 0050-041 | Weight (kg) motor + pump tube | 11.1 | |
| MD-1 MD-2 MD-3 | | Characteristic curve no. | 754 |  |
| Output: | 400 W 400 W 400 W | Delivery rate* up to l/min. | 68 | |
| Operating Pressure: | 6 bar 6 bar 6 bar | Delivery head* up to m wc | 17 | |
| | | Viscosity** up to mPas | 700 | |
| | | Density**** up to kg/dm³ | 1.8 | |
| Order No. | 0004-087 0004-088 0004-090 | Weight (kg) motor + pump tube | 4.7 | |
| B4/GT | | Characteristic curve no. | 755 |   |
| Output: | 750 W | Delivery rate* up to l/min. | 55 | |
| Voltage: | 230/400 V | Delivery head* up to m wc | 8 | |
| | | Viscosity** up to mPas | 600 | |
| | | Density**** up to kg/dm³ | 2.2 | |
| Order No. | 0004-021 | Weight (kg) motor + pump tube | 14.2 | |

Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. In the hazardous location, motors with low-voltage release are absolutely prescribed.

* Determined with water at 20 °C

** Determined with oil

*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

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Lutz Drum and Container Pumps



Pump tube MP-SS (stainless steel)



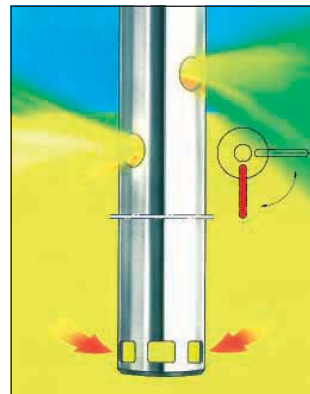
Materials (coming into contact with the pumped medium)

MP-SS-MS

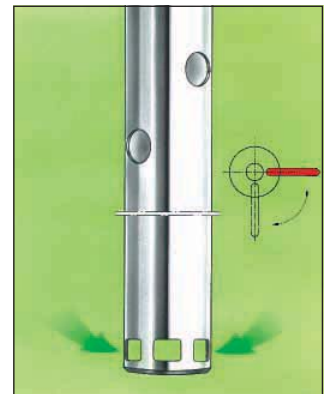
| | |
|------------------|---|
| Housing: | Stainless steel (1.4571) |
| Impeller: | ETFE |
| Seals: | Viton® |
| Mechanical seal: | Carbon, ceramic, PTFE, Stainless steel (1.4571), HC-4 (2.4610) |
| Bearing: | Pure carbon |
| Drive shaft: | Stainless steel (1.4571) |

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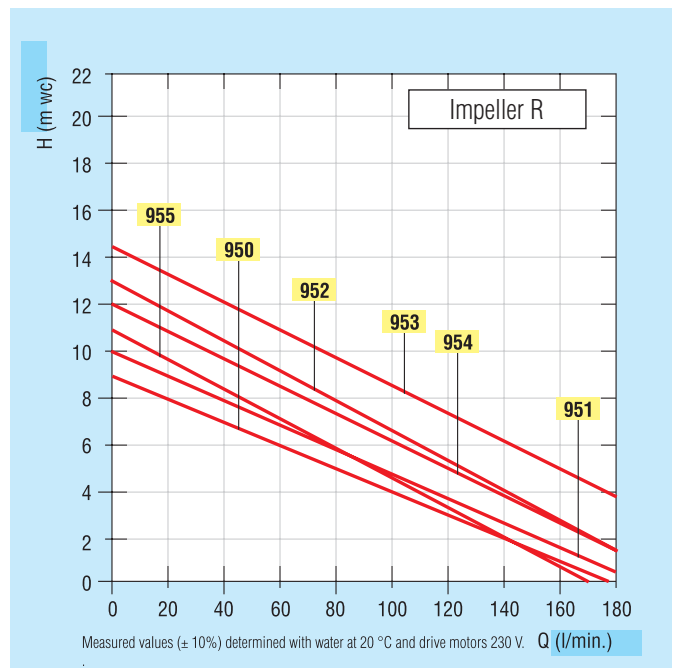
Function



Mix/Pump




Pump



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

Pump tube MP-SS (stainless steel)

for mixing and pumping of highly inflammable liquids

| Pump tube | | MP-SS MS | Product detail |
|---------------------------------------|---------------------|-----------------|---|
| Type of impeller | | R |  |
| Zone 0 (approved acc. to IEC and Vbt) | | 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: 1000 mm*** | Order No. | 0151-240 | |
| Length: 1200 mm*** | Order No. | 0151-255 | |

Choice of motors Operating data

| ME II 3 | | | Characteristic curve no. | 950 |
|-----------|-----------------|-----------------|--------------------------------------|-----|
| Output: | 460 W | 460 W | | |
| Voltage: | 230 V | 230 V | Delivery head* up to m wc | 9 |
| LVR: | yes | no | Viscosity** up to mPas | 200 |
| | | | Density**** up to kg/dm ³ | 1.2 |
| Order No. | 0050-000 | 0050-016 | Weight (kg) motor + pump tube | 9.0 |

| ME II 5 | | | Characteristic curve no. | 951 |
|-----------|-----------------|-----------------|--------------------------------------|-----|
| Output: | 580 W | 580 W | | |
| Voltage: | 230 V | 230 V | Delivery head* up to m wc | 10 |
| LVR: | yes | no | Viscosity** up to mPas | 550 |
| | | | Density**** up to kg/dm ³ | 1.3 |
| Order No. | 0050-001 | 0050-017 | Weight (kg) motor + pump tube | 9.9 |

| ME II 7 | | | Characteristic curve no. | 952 |
|-----------|-----------------|-----------------|--------------------------------------|------|
| Output: | 795 W | 795 W | | |
| Voltage: | 230 V | 230 V | Delivery head* up to m wc | 13 |
| LVR: | yes | no | Viscosity** up to mPas | 400 |
| | | | Density**** up to kg/dm ³ | 1.4 |
| Order No. | 0050-002 | 0050-018 | Weight (kg) motor + pump tube | 11.1 |

| ME II 8 | | | Characteristic curve no. | 953 |
|-----------|-----------------|-----------------|--------------------------------------|------|
| Output: | 930 W | 930 W | | |
| Voltage: | 230 V | 230 V | Delivery head* up to m wc | 14.5 |
| LVR: | yes | no | Viscosity** up to mPas | 650 |
| | | | Density**** up to kg/dm ³ | 1.4 |
| Order No. | 0050-042 | 0050-041 | Weight (kg) motor + pump tube | 11.1 |

| MD-1 | MD-2 | MD-3 | Characteristic curve no. | 954 | |
|---------------------|-----------------|-----------------|--------------------------|--------------------------------------|-------|
| Output: | 400 W | 400 W | | | 400 W |
| Operating Pressure: | 6 bar | 6 bar | 6 bar | Delivery head* up to m wc | 12 |
| | | | | Viscosity** up to mPas | 400 |
| | | | | Density**** up to kg/dm ³ | 1.3 |
| Order No. | 0004-087 | 0004-088 | 0004-090 | Weight (kg) motor + pump tube | 4.7 |

| B4/GT | | | Characteristic curve no. | 955 |
|-----------|-----------------|--|--------------------------------------|------|
| Output: | 750 W | | | |
| Voltage: | 230/400 V | | Delivery head* up to m wc | 11 |
| | | | Viscosity** up to mPas | 400 |
| | | | Density**** up to kg/dm ³ | 2.0 |
| Order No. | 0004-021 | | Weight (kg) motor + pump tube | 14.2 |



Low-voltage release (LVR):
Prevents the pump from starting up again without warning after a power failure. In the hazardous location, motors with low-voltage release are absolutely prescribed.



* Determined with water at 20 °C

** Determined with oil

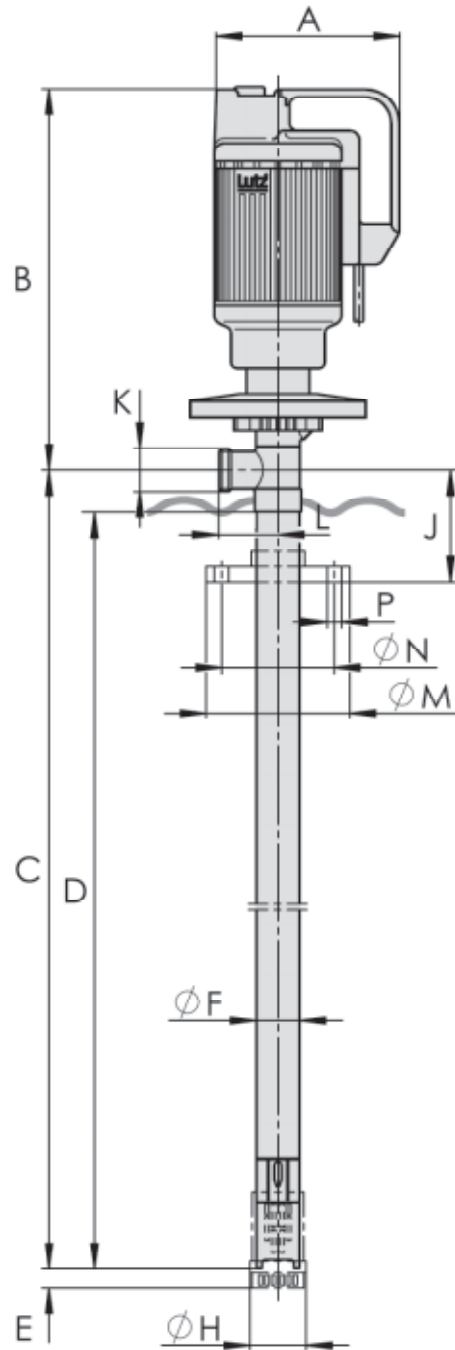
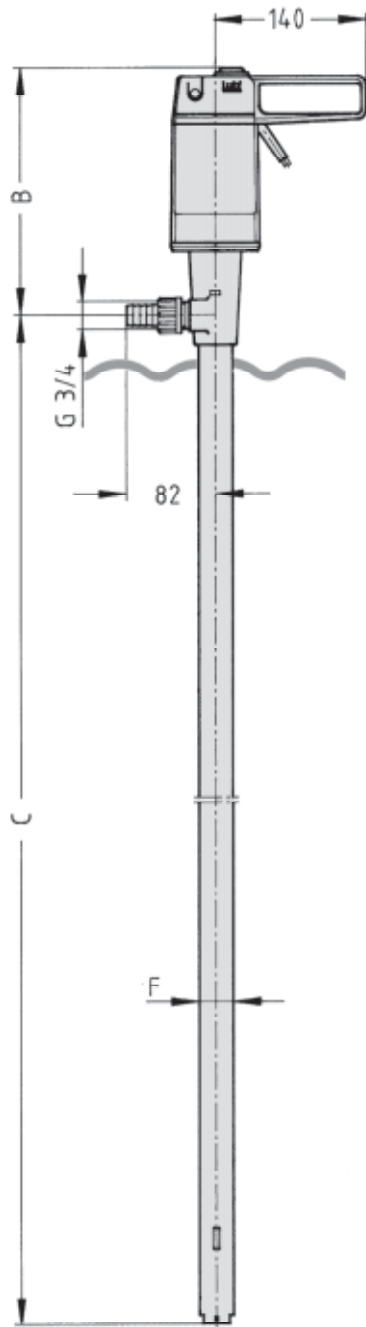
*** Special lengths 200–2500 mm on request

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

Special voltages and frequencies on request.

1
2
3
4

Dimensional drawing drum and container pumps






| | B | C | F Ø |
|-------------|-----|------|--------|
| B2 PP-SL 25 | 226 | 650 | 25 |
| B2 PP-SL 32 | 226 | 1011 | 32 |
| B2 SS-SL 28 | 237 | 1000 | 28 |

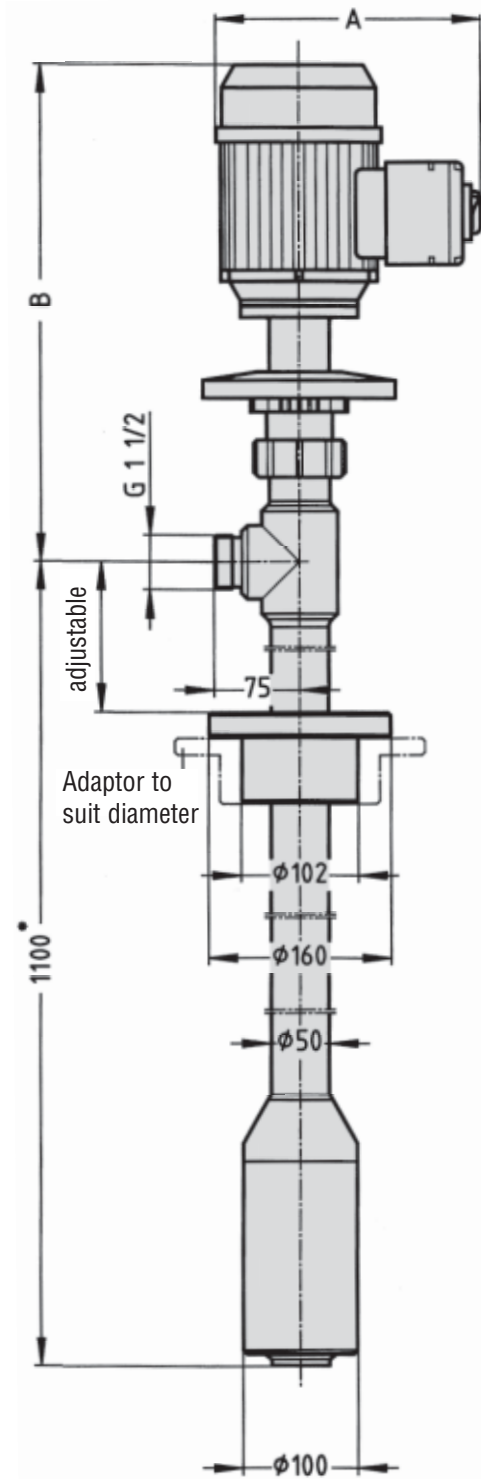
- A** Width of motor
- B** Motor to discharge centre
- C** Foot of pump to discharge centre
- H** Foot strainer diameter
- M** Flange diameter
- D** Immersion length
- J** Flange bottom to centre of discharge
- N** Pitch circle diameter
- E** Base of pump foot to base of strainer
- K** Discharge outer thread
- P** Bolt centre flange diameter
- F** Pump tube diameter
- L** Pump centre to discharge end

Table of dimensions drum and container pumps

| Pump-tubes | C | | | D | | | E | Ø F | Ø H | J | K | L | Ø M | Ø N | P |
|-----------------------|-----|------|------|-----|------|------|----|-----|-----|-----|---------|----|-----|-----|---------|
| | 700 | 1000 | 1200 | 700 | 1000 | 1200 | | | | | | | | | |
| Immersion dep. | 700 | 1000 | 1200 | 700 | 1000 | 1200 | | | | | | | | | |
| PP 41 | 701 | 1001 | 1201 | 656 | 956 | 1156 | 22 | 41 | 56 | 110 | G 1 1/4 | 58 | 140 | 110 | 4 x Ø14 |
| PVDF 41 | 701 | 1001 | 1201 | 656 | 956 | 1156 | 22 | 41 | 56 | 110 | G 1 1/4 | 58 | 140 | 110 | 4 x Ø14 |
| Alu 41 | 701 | 1001 | 1201 | 656 | 956 | 1156 | 22 | 41 | 56 | 80 | G 1 1/4 | 58 | 140 | 110 | 4 x Ø14 |
| SS 41 | 700 | 1000 | 1200 | 660 | 960 | 1160 | 22 | 41 | 55 | 80 | G 1 1/4 | 56 | 140 | 110 | 4 x Ø14 |
| HC 42 | – | 1009 | 1209 | – | 960 | 1160 | 22 | 42 | 56 | 80 | G 1 1/4 | 56 | 140 | 110 | 4 x Ø14 |
| RE PP | 714 | 1014 | 1214 | 598 | 898 | 1098 | – | 40 | – | – | G 1 1/4 | 58 | – | – | – |
| RE SS | 680 | 980 | 1180 | 640 | 940 | 1140 | – | 41 | – | – | G 1 1/4 | 56 | – | – | – |
| MP PP | – | 1001 | – | – | 908 | – | – | 50 | – | – | G 1 1/4 | 58 | – | – | – |
| MP SS | – | 977 | – | – | 937 | – | – | 41 | – | – | G 1 1/4 | 56 | – | – | – |

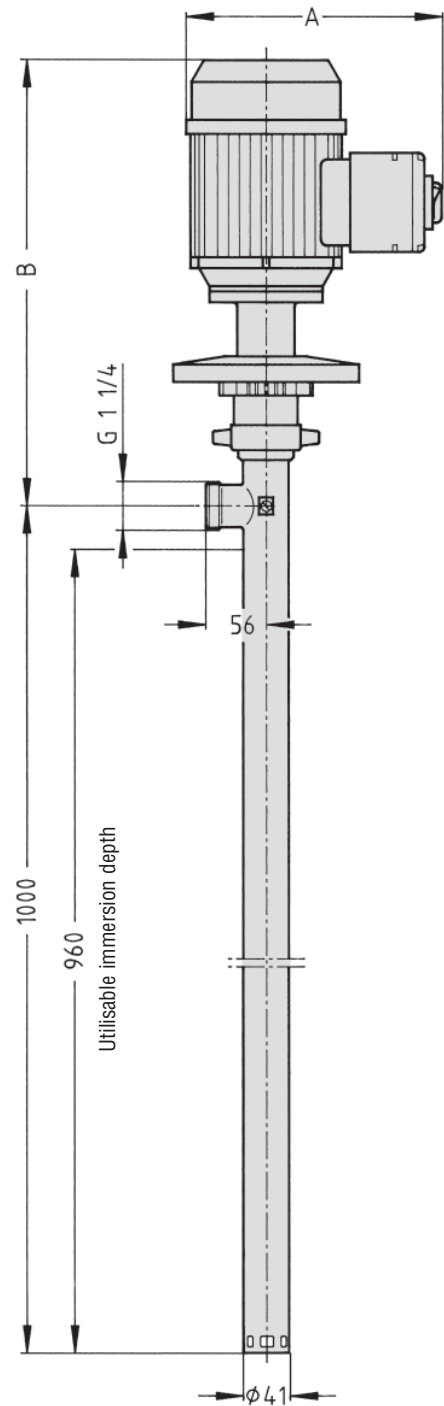
| Motors | A | B | | | | | | | | |
|--|-----|-------|---------|--------|-------|-------|-------|-------|-------|-------|
| | | PP 41 | PVDF 41 | Alu 41 | SS 41 | HC 42 | RE PP | RE SS | MP PP | MP SS |
| MI 4 | 162 | 316 | 316 | 316 | 322 | 322 | 314 | 346 | 316 | 346 |
| MA II 3 | 179 | 357 | 357 | 357 | 363 | 363 | 355 | 387 | 357 | 387 |
| MA II 5 | 179 | 372 | 372 | 372 | 378 | 378 | 370 | 402 | 372 | 402 |
| MA II 5S | 179 | 392 | 392 | 392 | 398 | 398 | 390 | 422 | 392 | 422 |
| MA II 7 | 179 | 396 | 396 | 396 | 402 | 402 | 394 | 426 | 396 | 426 |
| ME 3 (Ex)  | 179 | 377 | 377 | 377 | 383 | 383 | 375 | 407 | 377 | 407 |
| ME 5 (Ex)  | 179 | 392 | 392 | 392 | 398 | 398 | 390 | 422 | 392 | 422 |
| ME 7/8 (Ex)  | 179 | 416 | 416 | 416 | 422 | 422 | 414 | 446 | 416 | 446 |
| MD 1 (Ex) | 100 | 211 | 211 | 211 | 217 | 217 | 209 | 241 | 211 | 241 |
| MD 2 (Ex) | 159 | 239 | 239 | 239 | 245 | 245 | 237 | 269 | 239 | 269 |
| MD 3 (Ex) | 180 | 245 | 245 | 245 | 251 | 251 | 243 | 275 | 245 | 275 |
| B4/GT-750-IP54 | 205 | 392 | 392 | 392 | 398 | 398 | 390 | 422 | 392 | 422 |
| B4/GT-750-IP54 with protection sw. | 265 | 392 | 392 | 392 | 398 | 398 | 390 | 422 | 392 | 422 |
| B4/GT-750-(Ex) | 225 | 444 | 444 | 444 | 450 | 450 | 442 | 474 | 444 | 474 |

**Dimensional drawing
container pump B50**



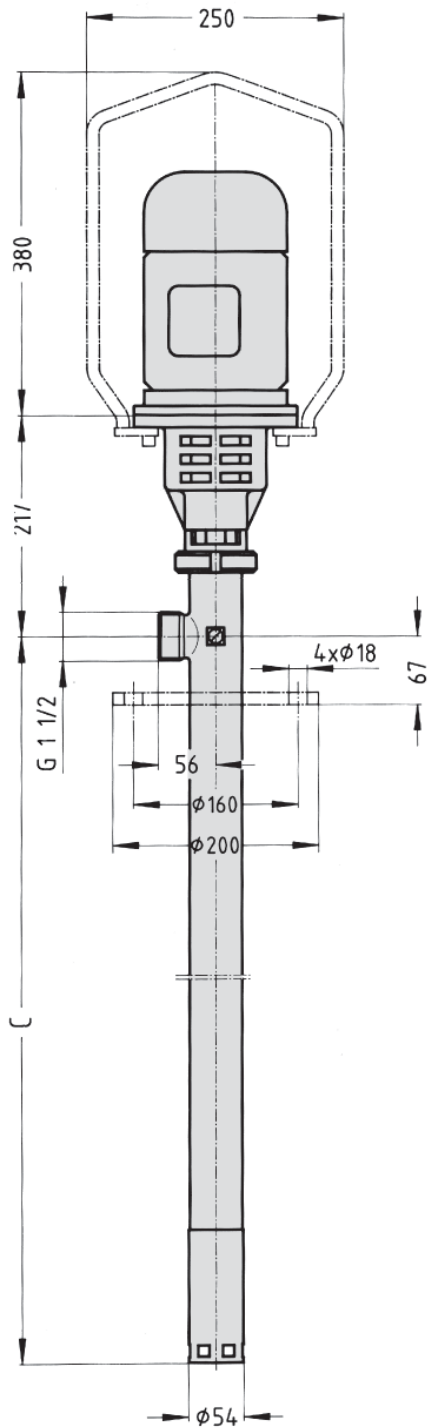
| Output | Frame size | A | B |
|---------|------------|-----|-----|
| 0.55 kW | M 71 | 236 | 442 |
| 0.75 kW | M 80 | 255 | 478 |

**Dimensional drawing
Eccentric screw pump HD-E**



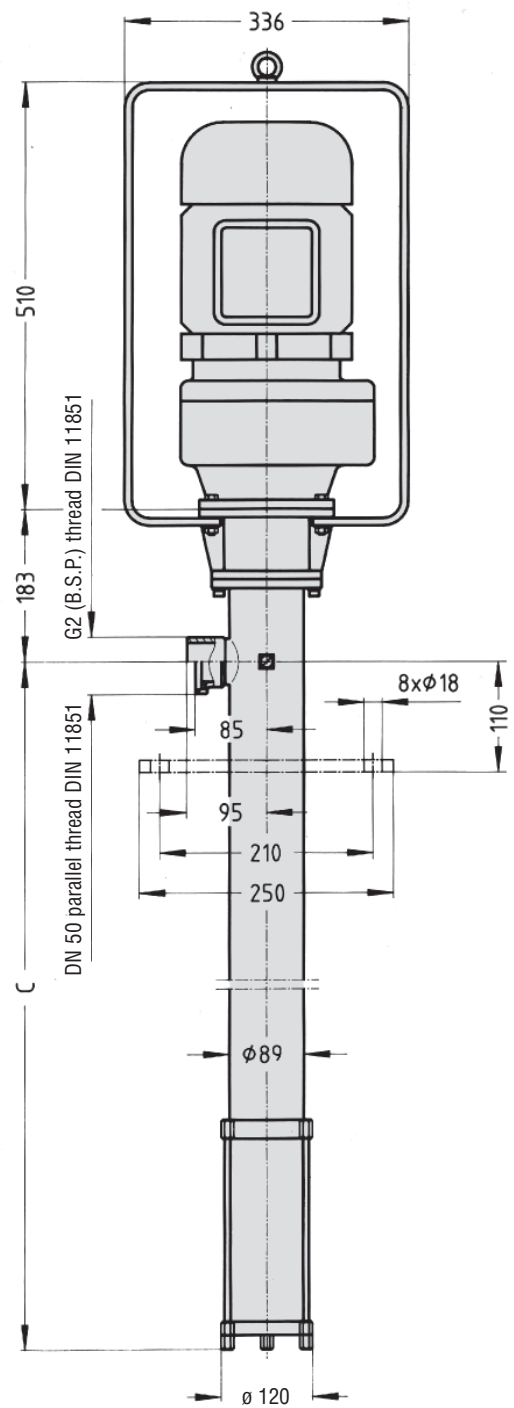
| Condenser motor | A | B |
|-----------------|-----|-----|
| Frame size M 80 | 255 | 435 |

**Dimensional drawing
Eccentric screw pump
B70V 12.1-50.1 (Three-phase)**



| Size | C | |
|-------------|------|------|
| | 1000 | 1100 |
| 12.1 | 1030 | - |
| 25.1 | 1030 | - |
| 25.2 | - | 1130 |
| 50.1 | - | 1130 |

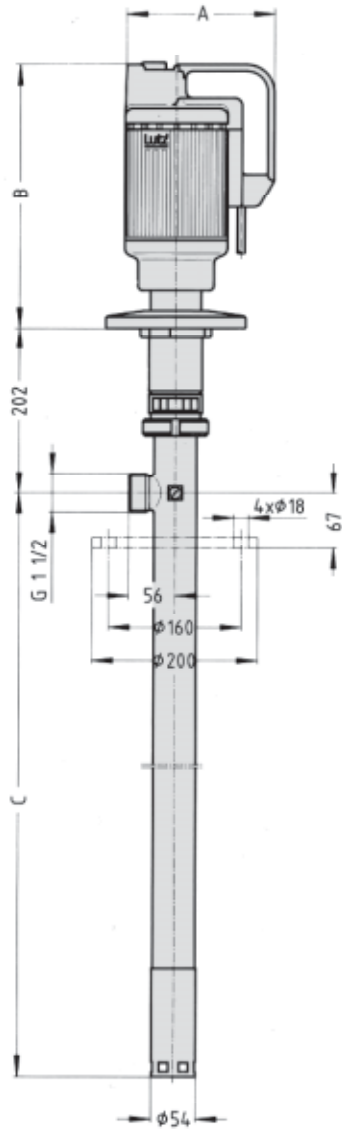
**Dimensional drawing
Eccentric screw pump
B70V 80.1-120.1**



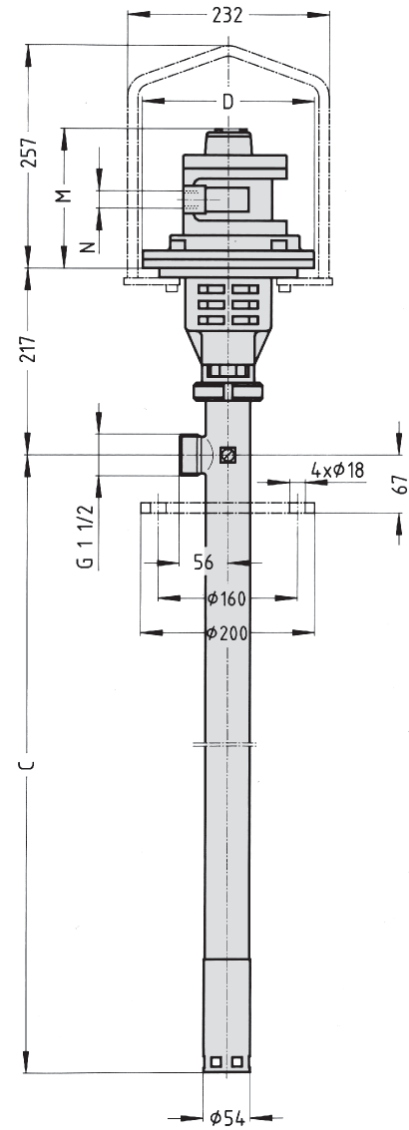
| Size | C | |
|--------------|-------------|------|
| | 80.1 | 1000 |
| 120.1 | 1000 | |

Dimensions in mm

**Dimensional drawing
eccentric screw pump
B70V-SR 12.1-50.1**



**Dimensional drawing
eccentric screw pump
B70V 12.1-50.1 (compressed air)**



| | A | B | C | |
|---------------------|-----|-----|------|------|
| | | | 1000 | 1100 |
| MI 4 | 162 | 260 | | |
| MA II 3 | 179 | 301 | | |
| MA II 5 | 179 | 316 | | |
| MA II 5 S | 179 | 336 | | |
| MA II 7 | 179 | 340 | | |
| ME II 3 (Ex) | 179 | 321 | | |
| ME II 5 (Ex) | 179 | 336 | | |
| ME II 7 (Ex) | 179 | 360 | | |
| ME II 8 (Ex) | 179 | 360 | | |
| MD-1 (Ex) | 100 | 155 | | |
| MD-2 (Ex) | 159 | 183 | | |
| MD-3 (Ex) | 180 | 189 | | |
| 12.1 | | | 1030 | - |
| 25.1 | | | 1030 | - |
| 50.1 | | | - | 1130 |

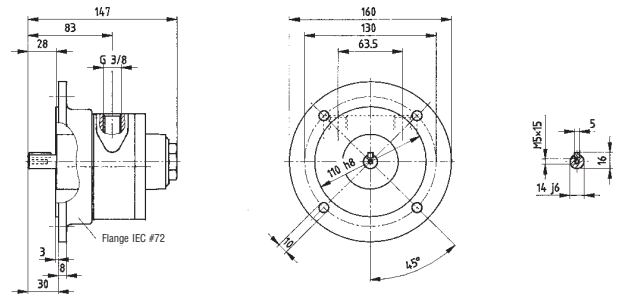
| | C | | D ∅ | M | N |
|-------------|------|------|--------|-----|-------|
| | 1000 | 1100 | | | |
| 4 DA | | | 160 | 117 | G 3/8 |
| 6 DA | | | 200 | 163 | G 1/2 |
| 8 DA | | | 200 | 199 | G 1/2 |
| 12.1 | 1030 | - | | | |
| 25.1 | 1030 | - | | | |
| 25.2 | - | 1130 | | | |
| 50.1 | - | 1130 | | | |

Dimensional drawing of flanges for eccentric screw pump B70V

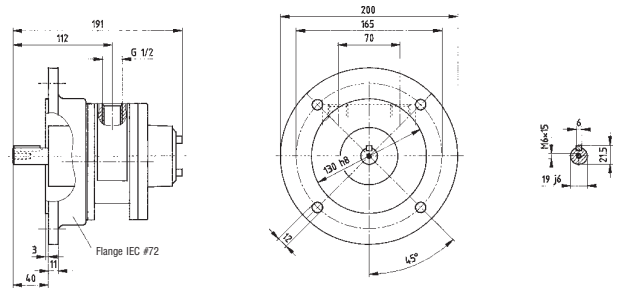
| Motor connecting dimensions Frame size V 18 | Standard construction 90 S | Adapter flange for three-phase motors 100 L | Adapter flange for compressed air motors (6 DA and 8 DA) |
|---|-------------------------------|---|--|
| Shaft diameter | 14 mm, 19 mm, 24 mm | 28 mm | 19 mm, 24 mm |
| Shaft length | 30 - 50 mm | 60 mm | 40 mm, 50 mm |
| Order No. | - | 0172-850 | 0172-851 |

Dimensions of compressed air motors for eccentric screw pump B70V

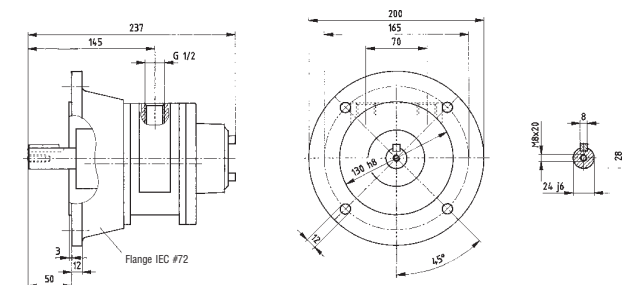
Type 4 DA



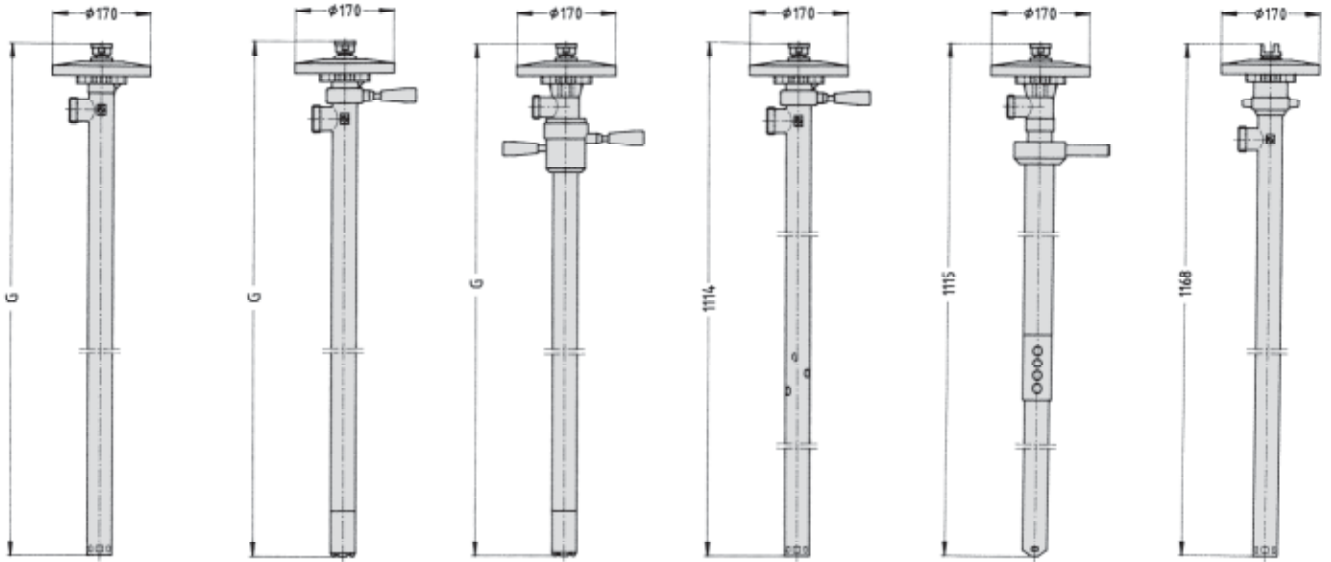
Type 6 DA



Type 8 DA



Dimensions of Lutz pump tubes



Pump tubes

RE Pump tube in SS

RE Pump tube in PP

MP Mixing Pump tube SS

MP Mixing pump tube in PP

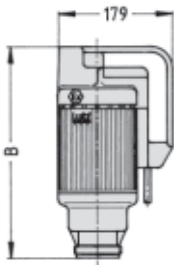
HD Pump tube in SS

| Pump-tube | G | | | | | | | |
|-----------|-----|------|------|------|------|------|------|------|
| | 700 | 1000 | 1200 | 1400 | 1500 | 1600 | 1700 | 2000 |
| PP 41 | 812 | 1112 | 1312 | 1512 | 1612 | 1712 | 1812 | 2112 |
| PVDF 41 | 812 | 1112 | 1312 | - | - | - | - | - |
| Alu 41 | 812 | 1112 | 1312 | - | 1612 | - | - | - |
| SS 41 | 813 | 1113 | 1313 | - | - | - | - | - |
| SS 41-SL | 813 | 1113 | 1313 | 1513 | 1613 | 1713 | 1813 | 2113 |
| HC 42 | - | 1119 | 1319 | - | - | - | - | - |

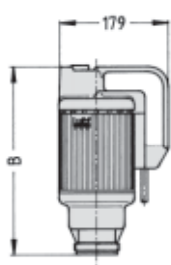
| Pump tube | 700 | 1000 | 1200 |
|-----------|-----|------|------|
| RE SS | 817 | 1117 | 1317 |

| Pump tube | G | | |
|-----------|-----|------|------|
| | 700 | 1000 | 1200 |
| RE PP | 819 | 1119 | 1319 |

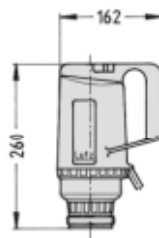
Dimensions of Lutz motors



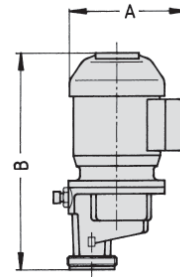
Universal motors ME II



Universal motors MA II



Universal motors MI 4

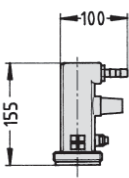


B4/GT Three-phase gear motors

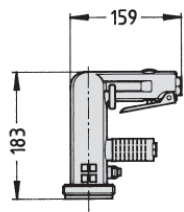
| Type | B |
|---------|-----|
| ME II 3 | 321 |
| ME II 5 | 336 |
| ME II 7 | 360 |
| ME II 8 | 360 |

| Type | B |
|-----------|-----|
| MA II 3 | 301 |
| MA II 5 | 316 |
| MA II 5 S | 336 |
| MA II 7 | 340 |

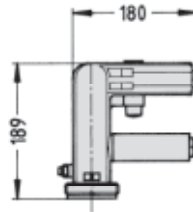
| Type | A | B |
|--------------------------------|-----|-----|
| B 4/GT-750-IP55 | 205 | 336 |
| B 4/GT-750-IP54 protection sw. | 265 | 336 |
| B 4/GT-750-(Ex), IP 54 | 225 | 388 |



Compressed air motor MD-1



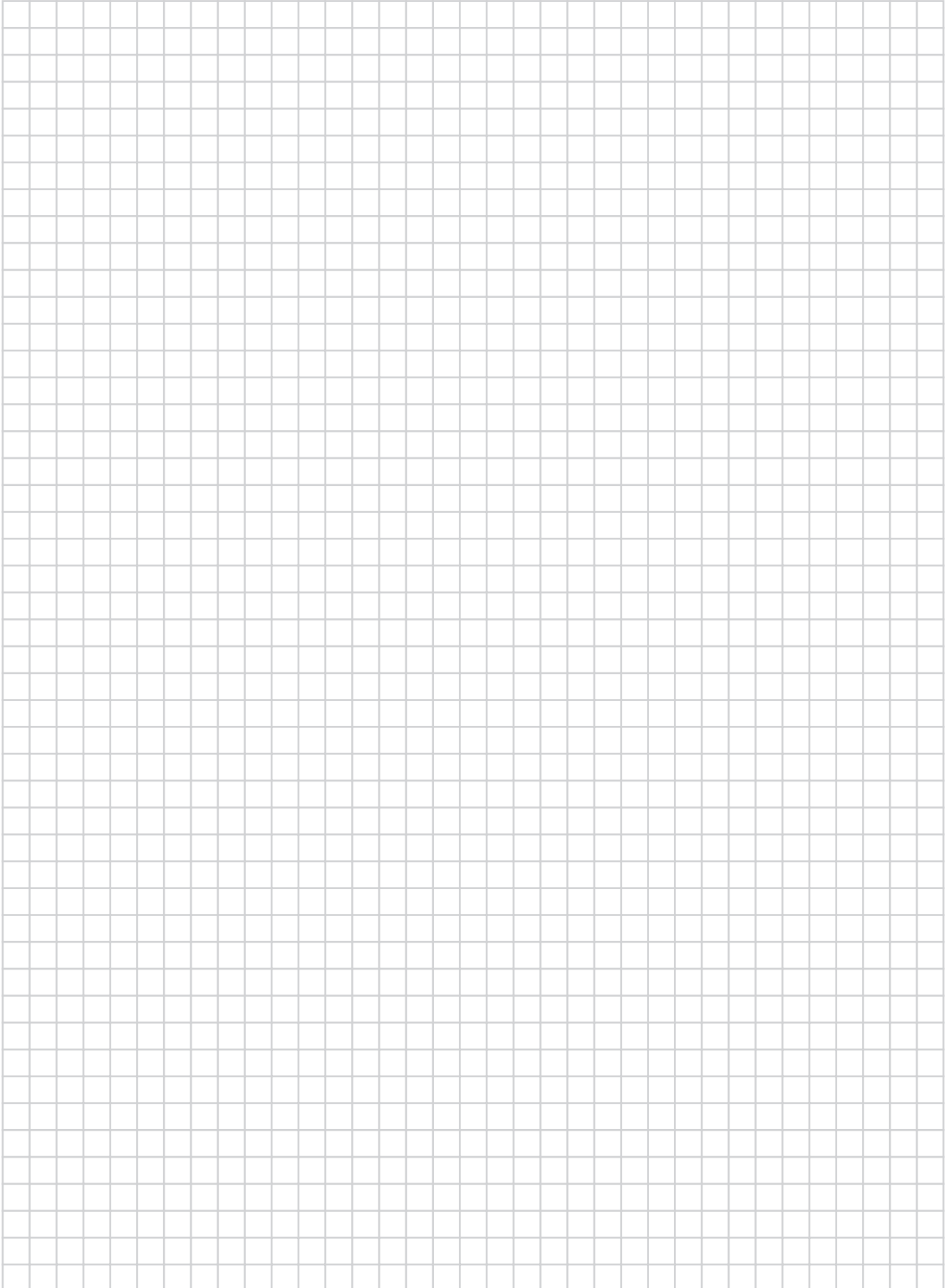
Compressed air motor MD-2



Compressed air motor MD-3

Dimensions in mm

Note



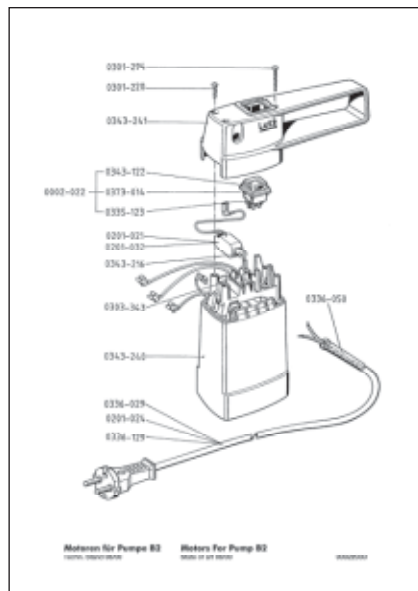
Customer Service

To ensure that you can operate and service your Lutz pump or motor, where ever you are, or else need some more information concerning your purchase, we have available on the internet under the title 'Service', test and CE Conformity certificates, spare part lists, data sheets and dimensional drawings, all of which may be downloaded. If you have misplaced your operating manual or need a second copy, we would be pleased to send you another. In any

case should you feel more comfortable calling or writing to us directly for any advice please do so. We look forward to hearing from you.



Test certificate



Spare part list

| Motordatenblatt | | | |
|------------------|-----------------------|--------------------------------|--|
| Typ: MA II S-230 | | | |
| 1 | 2 | 3 | 4 |
| 1 | Leistungsbereich | Rated power | 0,94-0,975 kW |
| 2 | Erschleuber (EC) | Cycle number factor (CCF) | 100 % |
| 3 | Spannung | Voltage | 230-230 V |
| 4 | Wendenumdrehung | Rated current | 3,0 A |
| 5 | Anlaufstrom | Starting current | 6,5-10,5 A |
| 6 | Drehzahl | Speed | 9000-9000 min ⁻¹ |
| 7 | Frequenz | Frequency | 50 Hz |
| 8 | Wirkungsgrad η | Efficiency η | 60-66 % |
| 9 | Leistungsfaktor cos φ | Power factor cos φ | 0,81-0,82 |
| 10 | Wendenumdrehung | Rated power | 0,940-0,960 kW |
| 11 | Anfangstrom | Starting current | 1,0 A |
| 12 | Motorschutz | Protection of motor | 0,93 x 10 ³ km ² |
| 13 | Motorschutz IP | Protection type motor IP | 54 |
| 14 | Schutzklasse | Protection class | I |
| 15 | Zündschutz | Method of explosion protection | - |
| 16 | Isolationsklasse | Insulation class | F |
| 17 | Umgebungstemperatur | Max. ambient temperature | 25 °C |
| 18 | Kabeltyp | Type of cable | H05RN-F |
| 19 | Querschnitt | Size | 3 x 1,6 mm ² |
| 20 | Gewicht | Net weight | 0,4 kg |
| 21 | Stromstärkewert | Rated intensity level | 0,045 |

Data sheet



Operating instruction



motralec

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