

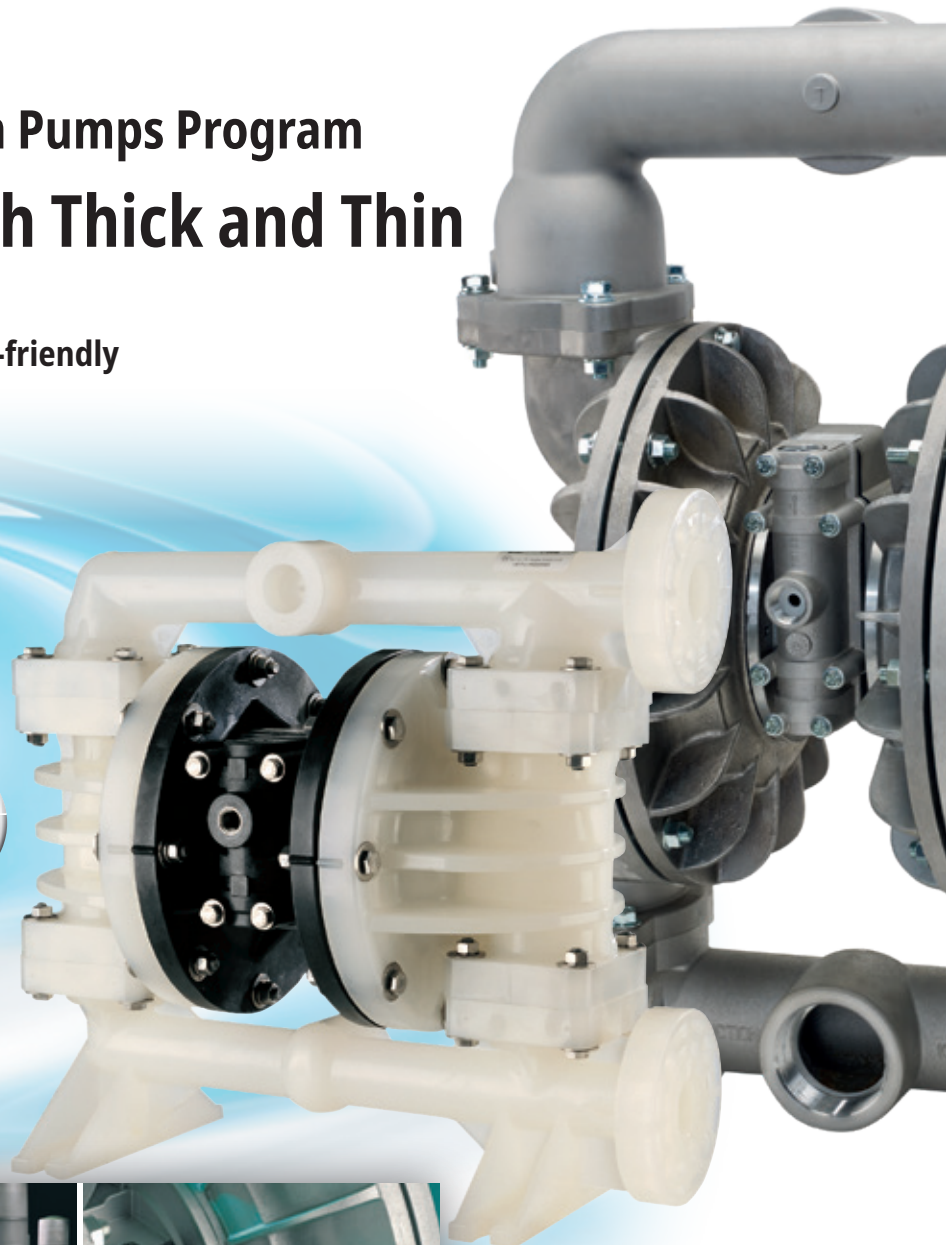


The Double Diaphragm Pumps Program With Lutz Through Thick and Thin

Oilfree, low maintenance, service-friendly

Non-metallic and metallic

Sizes 1/4" up to 3"



Safety is our Concern

Lutz Double Diaphragm Pumps

Products on which you can rely



Oilfree, low maintenance, service-friendly

The Lutz Air Operated Double Diaphragm Pumps are a natural complement to the Lutz range of pumps.

The fundamental similarities are found in their simplicity, versatility, ease of handling and maintenance.

The Lutz Air Operated Double Diaphragm Range has a size and materials of construction to suit your needs.

The pump range comprises a 1/4" (0.25) size all the way to a 3" (3.0) size.

Pumps are available in: Polypropylene (PP), polyvinylidene fluoride (PVDF), polyamide (PA), stainless steel and aluminium.

Lutz is proud to have created a Distributor Network, to provide you with quality products and an excellent After-Sales Service world-wide.

Lutz Air Operated Double Diaphragm Pumps are ATEX Certified, and Lutz Pumpen is certified to DIN EN ISO 9001.



Benefits for the customer

- ✓ High compatibility of parts
- ✓ Reduced stock of spare parts
- ✓ Service-friendly construction
- ✓ High dependability through modern valve technology
- ✓ Hermetically sealed system
- ✓ No leakage and contamination in the compressed air system due to a novel valve technique
- ✓ Reduced operating costs
- ✓ Gentle pumping of liquids and pastes

Advantages of the product

- ✓ Absolutely lube free valve
- ✓ Corrosion free materials of construction
- ✓ Non-stalling function at low pressures
- ✓ Conductive materials available

Further typical advantages of the Double Diaphragm Pumps

- ✓ Can safely run dry
- ✓ Can be regulated continuously
- ✓ Minimal product shear
- ✓ Self-priming dry or wet
- ✓ No dynamic seals
- ✓ Portable



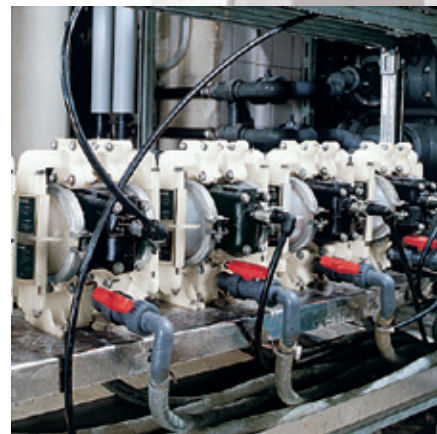
Installation capabilities

A variety of applications

Lutz Double Diaphragm Pumps are designed for a variety of industrial applications.

Stationary or mobile installation

The pump can be installed either permanently or so that they can be transported from one point of application to another as required. Liquids can be pumped from drums and portable or fixed tanks to other containers, or to specific application locations.



Self-priming

When the suction is below the level of the liquid, the pump has to prime the medium. In dry conditions, the Lutz double diaphragm pumps will prime to 4.5 m wc (PTFE versions app. 3 m wc). If the suction pipe is filled, a suction head up to 9 m wc can be reached.

Self-priming with portable containers

When pumping abrasive, dense and/or highly viscous liquids from drums and containers, the Lutz double diaphragm pumps are ideally suited. To facilitate this applications, the 1/2" and 1" sizes can be supplied with suction pipe and adapter.

Flooded suction

When the liquid level is above the suction of the pump, the pump suction is considered positive or flooded. Under this condition the intake can be regulated by a suitably sized valve.

Submerged operation

The pumps can also be operated when submerged. Care should be taken with respect to the materials in contact with the liquid, and that the air outlet is above the liquid level.

Lutz Double Diaphragm Pumps

Common examples of pump applications

DMP 1/4"

For the laboratory sector, small plants, requirements with small delivery volume at relatively high pressure.

Delivery rate: up to 21.6 l/min
Delivery head: up to 8.2 bar
Materials: PP, PVDF, PA

DMP 3/8"

Chemical recirculation and feed, liquids with solid particles, e.g. paints and lacquers, electroplating, etc.

Delivery rate: up to 34 l/min
Delivery head: up to 8.2 bar
Materials: PP, PVDF, PA

DMP 1/2"

200-l-drum pumping, ink recirculation and feed, chemicals, solvents, acids, soap dispensing.

Delivery rate: up to 65 l/min
Delivery head: up to 8.2 bar
Materials: PP, PVDF, PA, Aluminium, Stainless Steel

DMP 1"

Drum and small tank transfer, pickling solutions, chemical feed.

Delivery rate: up to 182 l/min
Delivery head: up to 8.2 bar
Materials: PP, PVDF, Aluminium, Stainless Steel

DMP 1 1/2"

Filter press, tank cleaning systems, pigments and resins.

Delivery rate: up to 492 l/min
Delivery head: up to 8.2 bar
Materials: PP, PVDF, Aluminium, Stainless Steel

DMP 2"

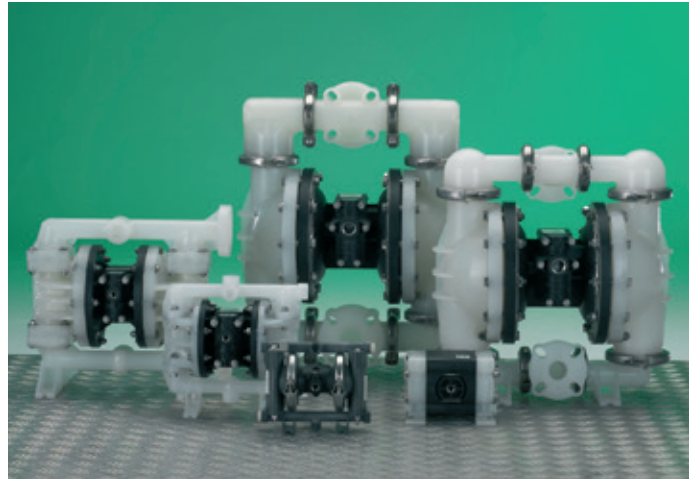
Paint, latex, ceramic slip, slurries, polymers, tank car fill and empty, foods.

Delivery rate: up to 719 l/min
Delivery head: up to 8.2 bar
Materials: PP, PVDF, Aluminium, Stainless Steel

DMP 3"

Paint, latex, ceramic slip, slurries, polymers, tank car fill and empty.

Delivery rate: up to 954 l/min
Delivery head: up to 8.2 bar
Materials: Aluminium, Stainless Steel



Size

DMP 1/4"

DMP 3/8"

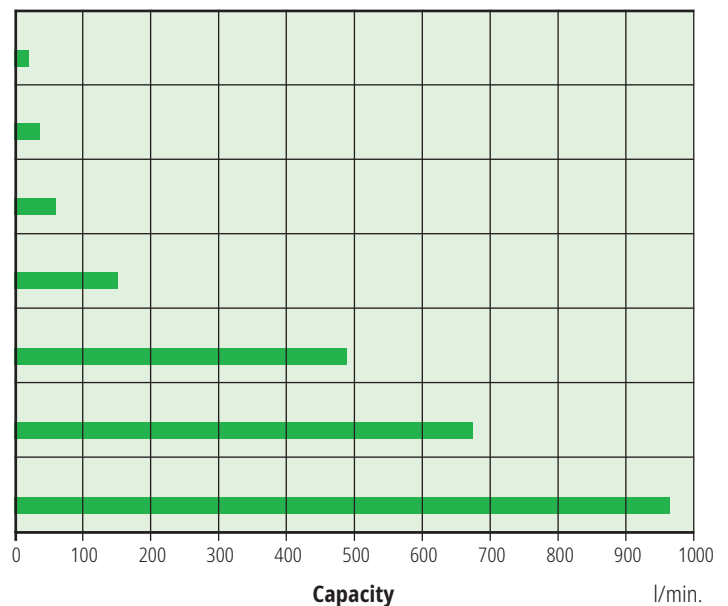
DMP 1/2"

DMP 1"

DMP 1 1/2"

DMP 2"

DMP 3"



Lutz Double Diaphragm Pumps

How it works

In design, the Lutz Double Diaphragm Pumps reflects the state of the art. The pump can be easily disassembled, repaired and reassembled in a short time.

How it works:

By supplying compressed air to the air valve, air is ported through the air valve piston (either in an upward or downward position) into the center block where two directional ports direct air to the left or right side of the pump (depending on air valve piston position). When in the air chamber, the air pressure is applied on the back side of one diaphragm forcing the product out of the liquid chamber into the discharge manifold.

As the two diaphragms are connected by a diaphragm connecting rod, or shaft, the other diaphragm is pulled toward the center of the pump. This action causes the other side to draw product into the pump on a suction stroke.

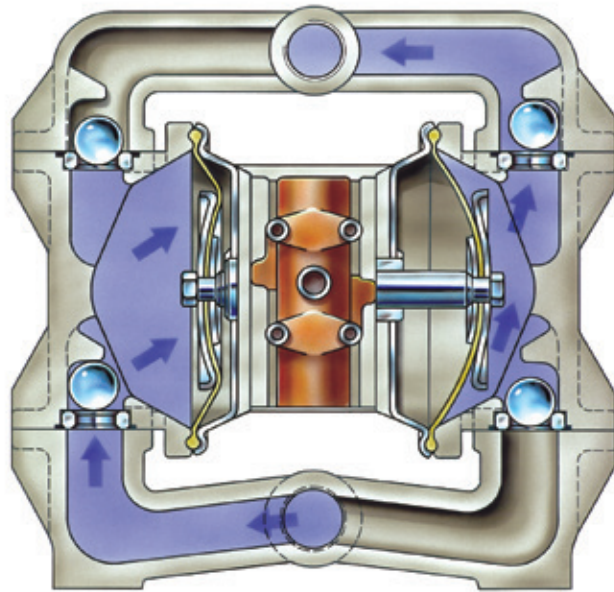
Ball valves open and close alternately to fill chambers, empty chambers, and block backflow.

At the end of the shaft stroke, the air mechanism (air valve piston) automatically shifts the air pressure to (opposite side) reverse the action of the pump, simply put a 1:1 ratio reciprocating pump.

Air pressure supplied to the pump is directly related to the output of liquid and pressure (6.8 bar air in, 6.8 bar discharge).

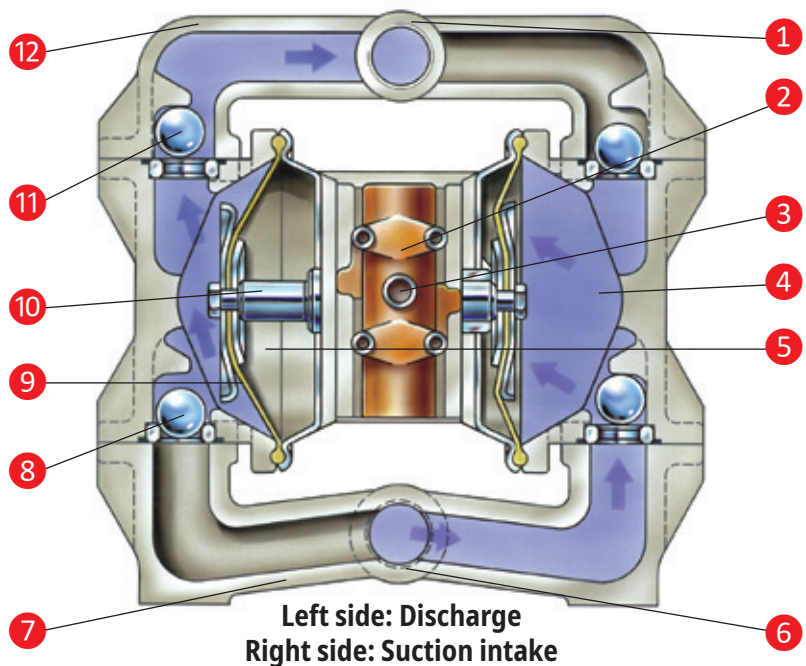
The pump has two liquid chambers, two air chambers and two diaphragms. In each pair of chambers, the liquid and air chambers are separated by a flexible diaphragm. Each diaphragm is sandwiched between two supporting plates and bolted to a common shaft. This diaphragm-shaft assembly

moves back and forth as compressed air, directed by the air valve shuttle, enters or exhausts either the right or left air chamber. Each liquid chamber is equipped with two ball type check valves which automatically control the flow of fluid through the chambers and manifolds of the pump.



Right side: Discharge
Left side: Suction intake

- 1 Discharge
- 2 Shuttle air outlet
- 3 Air inlet
- 4 Liquid chamber
- 5 Air chamber
- 6 Suction
- 7 Inlet manifold
- 8 Inlet check valve Ball type
- 9 Diaphragm
- 10 Diaphragms-connecting-shaft
- 11 Outlet check valve Ball type
- 12 Outlet manifold



Left side: Discharge
Right side: Suction intake

Anti-Stop Valve System

The heart of the Lutz Double Diaphragm Pump



Advantages of the Product

For the entire air system of the Lutz Double Diaphragm Pumps, i. e. for the centre block as well as for the anti-stop valve, quality materials are used. Resulting in the following benefits:

Absolutely lube-free

- ✓ No contaminating of the environment or of the product itself by oil vapour
- ✓ No lubrication required
- ✓ No risk of pump failure due to poor lubrication

Non-stalling operation

- ✓ Pump works at low pressure and low stroke frequency without stalling
- ✓ Continuous operation is possible
- ✓ Immediate start up after stopping

Weight reduction

- ✓ Facilitates handling, especially with portable applications, and installation

Construction features

The valve spool is constructed of Delrin (Acetal), a material which is often and successfully used for pump bearings. The surface of the spool has a very low roughness value. This guarantees a minimal friction between spool, air valve bore and lip seals.

The shuttle valve is made of a self-lubricating polyamide compound. The valve plate is of hard-chrome plated steel, whereas the surfaces of both components are lapped. The minimisation of surface contact differences result in the least possible friction.

Description of Function

The valve spool is shifted by the supply air. This flows through the air valve and the centre block. The supply air in the centre block is controlled by the diaphragm shaft, which simultaneously also serves as pilot shaft. From the compressed air in the centre block a constant partial current affects the valve spool. This prevents the stalling of the spool and the diaphragm shaft. The combination of materials, the shape of the shuttle valve, and the valve plate collectively reduce heating due to friction.

The use of Acetal for the pilot sleeve of the diaphragm shaft and of Polyurethane for the O-rings, result in an extraordinary lubrication-free and wear-proof air valve. The combination of self-lubricating material for the shuttle valve, the lapped and wear-proof surfaces of shuttle valve and valve plate and the correct material for the valve spool guarantee a lubrication-free operation over the entire life of the pump.

Lutz Double Diaphragm Pumps



Model 1/4" Bolted Version (non-metallic)

Operating data / Dimensions / Weights			
	DMP 1/4" PP	DMP 1/4" PVDF	DMP 1/4" PA
Housing material:	Polypropylene	Polyvinylidene fluoride	Polyamide
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	PTFE	PTFE, TPV (EPDM-PP)
Valve material:	PTFE	PTFE	PTFE
Seals:	NBR, EPDM, PTFE	PTFE	PTFE, EPDM
Max. flow rate:	16 l/min.	16 l/min.	16 l/min.
Suction lift dry:	5.2 m	5.2 m	5.2 m
Suction lift PTFE:	5 m	5 m	5 m
Operating pressure:	max. 6.8 bar	max. 6.8 bar	max. 6.8 bar
Temperature limits:	66 °C	93 °C	66 °C
Solids handling:	max. ø 1.6 mm	max. ø 1.6 mm	max. ø 1.6 mm
Air inlet:	1/4" NPSF female (G 1/2 BSP female) ¹⁾	1/4" NPSF female (G 1/2 BSP female) ¹⁾	1/4" NPSF female (G 1/2 BSP female) ¹⁾
Air outlet:	1/4" NPSF female	1/4" NPSF female	1/4" NPSF female
Suction:	1/4" BSP female	1/4" BSP female	1/4" BSP female
Discharge:	1/4" BSP female	1/4" BSP female	1/4" BSP female
Weight:	2.3 kg	3.2 kg	2.3 kg

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene

Type	Materials of construction		Order No.
	Housing	Diaphragm, Seals	
DMP 1/4" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP), NBR	5700-000
DMP 1/4" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP), EPDM	5700-020
DMP 1/4" PPT PP/PTFE	PP	PTFE, PTFE	5700-040
DMP 1/4" KNT PVDF/PTFE	PVDF	PTFE, PTFE	5700-100
DMP 1/4" NEC PA/TPV (EPDM-PP) 	PA	TPV (EPDM-PP), EPDM	5700-180
DMP 1/4" NTC PA/PTFE* 	PA	PTFE, PTFE	5700-140

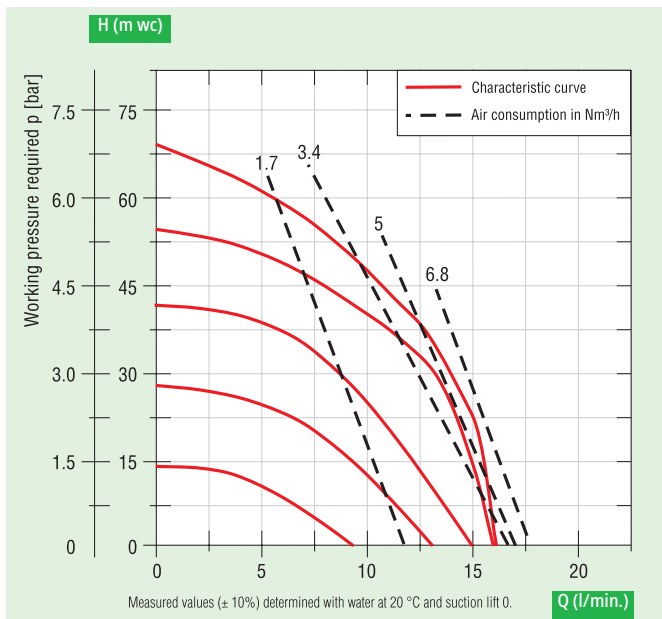
*conductive version Ex II 2 G c T4

Lutz Double Diaphragm Pumps

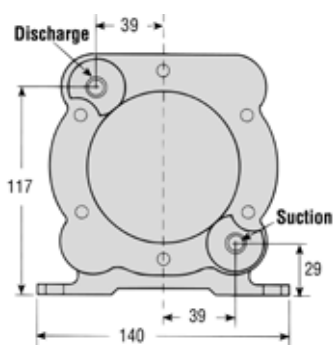
Model 1/4" Bolted Version (non-metallic)

Typical application:

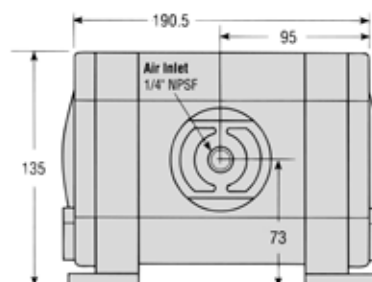
For the laboratory sector, small plants, requirements with small delivery volume at relatively high pressure



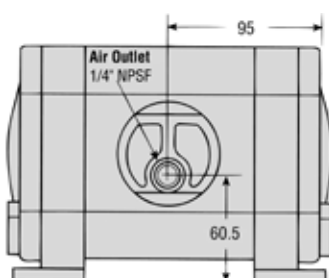
Suitable range of accessories see pages 32-45.



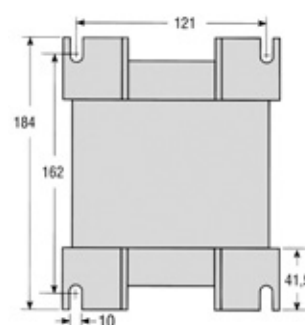
Side View



Front View



Rear View



Mounting Positions

Individual datasheets
on request.
Dimensions in mm

Lutz Double Diaphragm Pumps

Model 1/4" Bolted Version (non-metallic)

Operating data / Dimensions / Weights		
	DMP 1/4" PP	DMP 1/4" PVDF
Housing material:	Polypropylene	Polyvinylidene fluoride
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	PTFE
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	PTFE
Seals:	NBR, EPDM, PTFE	PTFE
Max. flow rate:	21.6 l/min.	21.6 l/min.
Suction lift dry:	4.2 m	4.2 m
Suction lift PTFE:	3 m	3 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	66 °C	93 °C
Solids handling:	max. ø 1.6 mm	max. ø 1.6 mm
Air inlet:	1/4" NPSF female (G 1/2 BSP female) ¹⁾	1/4" NPSF female (G 1/2 BSP female) ¹⁾
Air outlet:	1/4" NPSF female	1/4" NPSF female
Suction:	1/4" BSP female / 3/4" NPT male	1/4" BSP female / 3/4" NPT male
Discharge:	1/4" BSP female / 3/4" NPT male	1/4" BSP female / 3/4" NPT male
Weight:	1.2 kg	1.7 kg

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PP	= Polypropylene
PTFE	= Polytetrafluorethylene

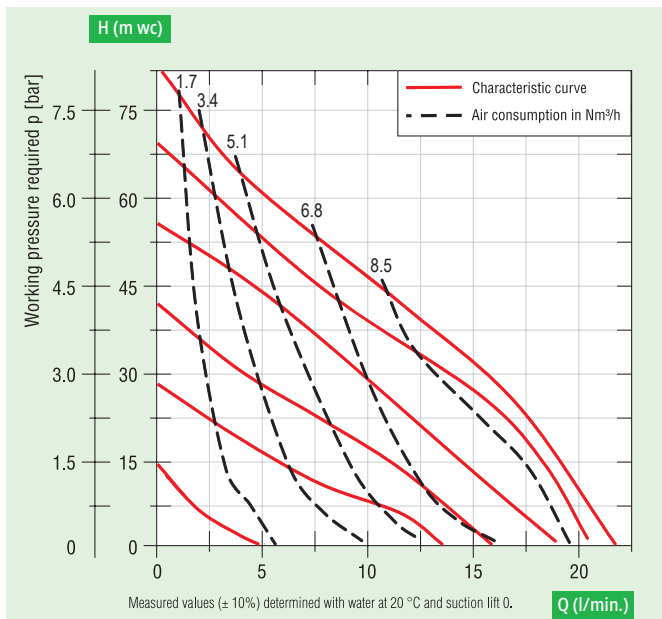
Type	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 1/4" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP), TPV (NBR-PP), NBR	5600-000
DMP 1/4" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5600-020
DMP 1/4" PPT PP/PTFE	PP	PTFE, PTFE, PTFE	5600-040
DMP 1/4" KNT PVDF/PTFE	PVDF	PTFE, PTFE, PTFE	5600-100

Lutz Double Diaphragm Pumps

Model 1/4" Bolted Version (non-metallic)

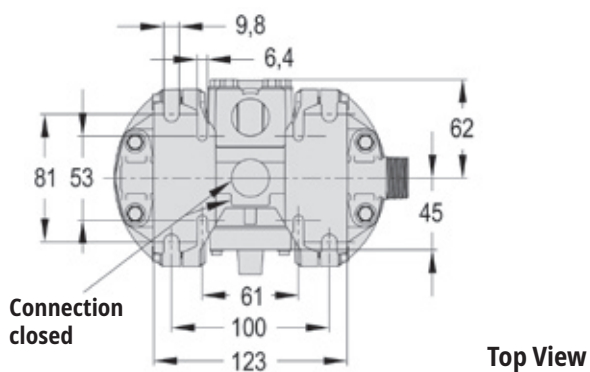
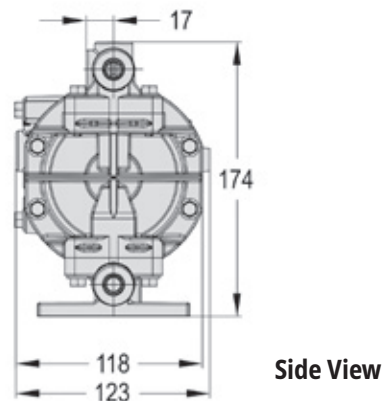
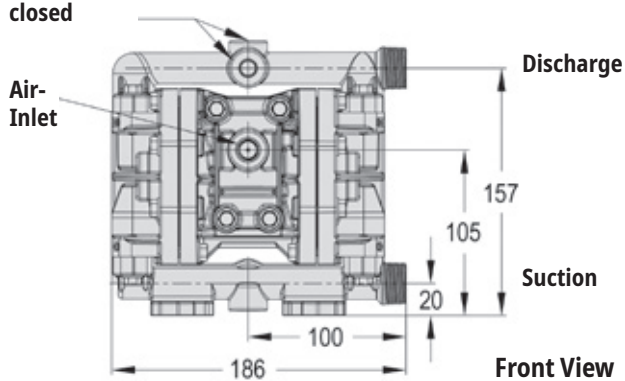
Typical application:

For the laboratory sector, small plants, requirements with small delivery volume at relatively high pressure



Suitable range of accessories see pages 32-45.

Connection closed



Individual datasheets
on request.
Dimensions in mm

Lutz Double Diaphragm Pumps




Model 3/8" Clamped Version (non-metallic)

Operating data / Dimensions / Weights			
	DMP 3/8" PP	DMP 3/8" PVDF	DMP 3/8" PA
Housing material:	Polypropylene	Polyvinylidene fluoride	Polyamide
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (EPDM-PP), PTFE	TPV (NBR-PP), PTFE
Valve material:	NBR, EPDM, PTFE, FPM	EPDM, PTFE, FPM	NBR, PTFE, FPM
Seals:	NBR, EPDM, PTFE, FPM	EPDM, PTFE, FPM	NBR, PTFE, FPM
Valve seat PTFE:	PP	PVDF	Stainless Steel
Max. flow rate:	34 l/min.	34 l/min.	34 l/min.
Suction lift dry with Max-Pass Valve™	5.2 m	5.2 m	5.2 m
Suction lift (PTFE):	3 m	3 m	3 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar	max. 8.2 bar
Temperature limits:	66 °C	93 °C	66 °C
Solids handling: with Max-Pass Valve™	max. ø 6.4 mm	max. ø 6.4 mm	max. ø 6.4 mm
Solids handling:	max. ø 1.6 mm	max. ø 1.6 mm	max. ø 1.6 mm
Air inlet:	1/4" NPT female (G 1/2 BSP female) ¹⁾	1/4" NPT female (G 1/2 BSP female) ¹⁾	1/4" NPT female (G 1/2 BSP female) ¹⁾
Air outlet:	3/8" NPT female	3/8" NPT female	3/8" NPT female
Suction:	3/8" BSP female	3/8" BSP female	3/8" BSP female
Discharge:	3/8" BSP female	3/8" BSP female	3/8" BSP female
Weight:	1.7 kg	2.3 kg	2.3 kg

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

Type	Materials of construction			Order No.
	Housing	Diaphragm	Valve balls, Seals	
DMP 3/8" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP)	NBR, NBR	5706-000
DMP 3/8" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP)	EPDM, EPDM	5706-020
DMP 3/8" PPT PP/PTFE	PP	PTFE	PTFE, PTFE	5706-040
DMP 3/8" PPV PP/FPM	PP	PTFE	FPM, FPM	5706-060
DMP 3/8" KNE PVDF/TPV (EPDM-PP)	PVDF	TPV (EPDM-PP)	EPDM, EPDM	5706-080
DMP 3/8" KNT PVDF/PTFE	PVDF	PTFE	PTFE, PTFE	5706-100
DMP 3/8" KNV PVDF/FPM	PVDF	PTFE	FPM, FPM	5706-120
DMP 3/8" NTC PA/PTFE* 	PA	PTFE	PTFE, PTFE	5706-140
DMP 3/8" NBC PA/TPV (NBR-PP)* 	PA	TPV (NBR-PP)	NBR, NBR	5706-160
DMP 3/8" NVC PA/FPM* 	PA	PTFE	FPM, FPM	5706-180

*conductive version Ex II 2 G c T4

Lutz Double Diaphragm Pumps

Model 3/8" Clamped Version (non-metallic)

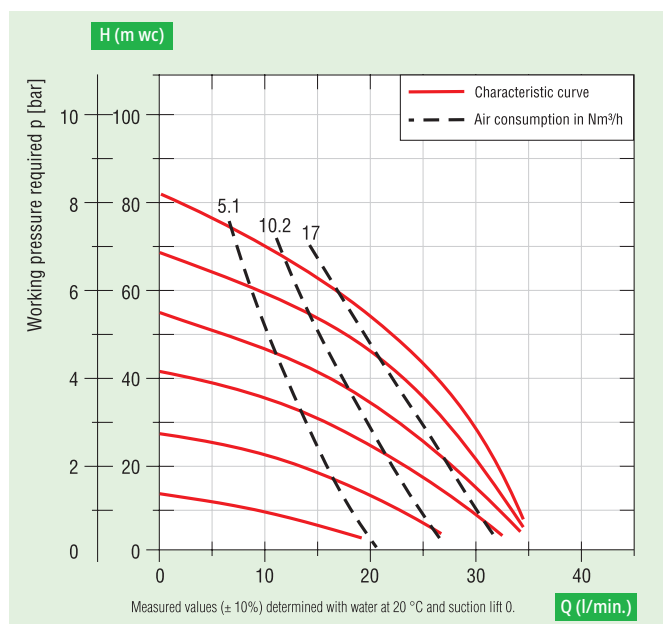
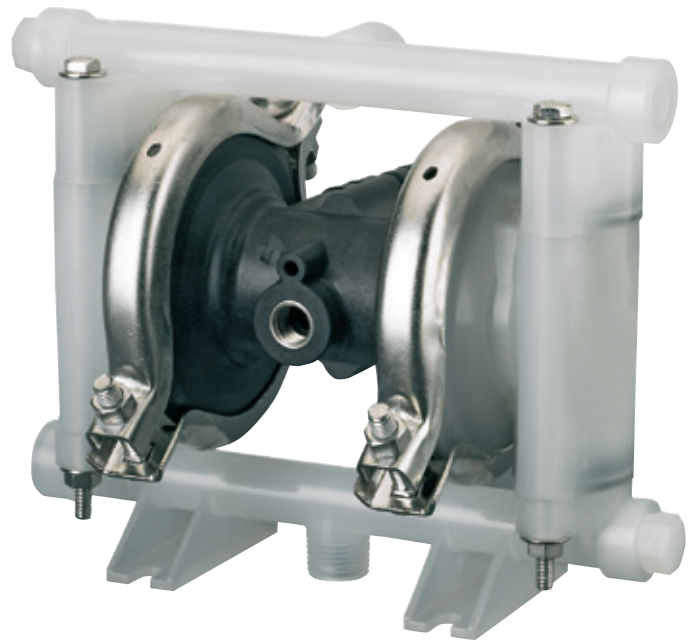
Typical application:

Chemical recirculation and feed, liquids with solid particles, e.g. paints and lacquers, electroplating, etc.

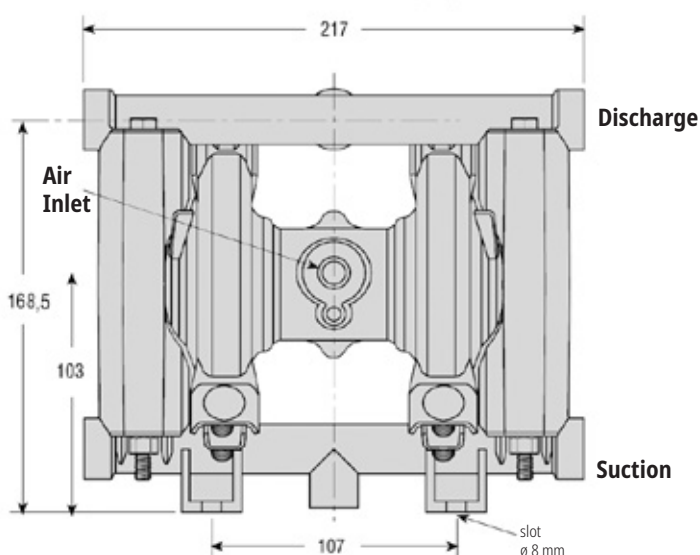


Max-Pass™ included
(Details see page 45)

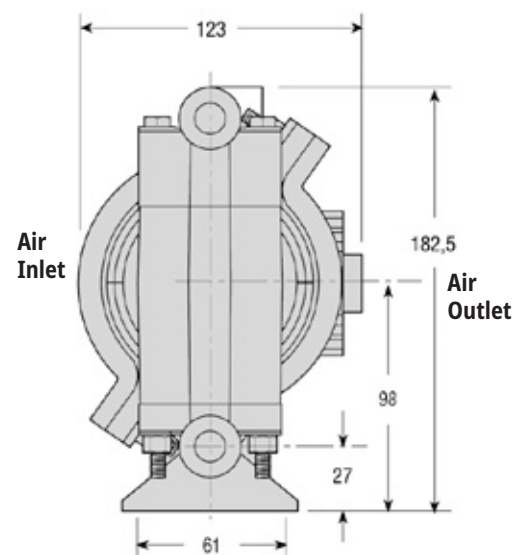
PTFE versions with ball valve.



Suitable range of accessories see pages 32-45.



Front View



Side View

Individual datasheets
on request.
Dimensions in mm

Lutz Double Diaphragm Pumps


Model 1/2" Bolted Version (non-metallic)

Operating data / Dimensions / Weights			
	DMP 1/2" PP	DMP 1/2" PVDF	DMP 1/2" PA
Housing material:	Polypropylene	Polyvinylidene fluoride	Polyamide
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM	PTFE	PTFE
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), NBR, EPDM, PTFE, FPM	PTFE	PTFE
Seals:	NBR, EPDM, PTFE, FPM	PTFE	PTFE
Valve seat:	PP	PVDF	PA, SS*
Max. flow rate:	65 l/min.	65 l/min.	65 l/min.
Suction lift dry with Max-Pass™ Valve:	6 m	6 m	6 m
Suction lift dry:	4,5 m	4,5 m	4,5 m
Suction lift (PTFE):	3 m	3 m	3 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar	max. 8.2 bar
Temperature limits:	66 °C	93 °C	66 °C
Solids handling: with Max-Pass Valve™	max. ø 9,5 mm	max. ø 9,5 mm	max. ø 9,5 mm
Solids handling:	max. ø 3,2 mm	max. ø 3,2 mm	max. ø 3,2 mm
Air inlet:	1/4" NPT female (G 1/2 BSP female) ¹⁾	1/4" NPT female (G 1/2 BSP female) ¹⁾	1/4" NPT female (G 1/2 BSP female) ¹⁾
Air outlet:	3/8" NPT female	3/8" NPT female	3/8" NPT female
Suction:	1/2" BSP female	1/2" BSP female	1/2" BSP female
Discharge:	1/2" BSP female	1/2" BSP female	1/2" BSP female
Weight:	4.1 kg	5.4 kg	4.1 kg

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

Type	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 1/2" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP), TPV (NBR-PP), NBR	5701+000
DMP 1/2" PPB PP/TPV (NBR-PP) (with Max-Pass™)	PP	TPV (NBR-PP), NBR, NBR	5701+002
DMP 1/2" PPT PP/PTFE	PP	PTFE, PTFE, PTFE	5701+020
DMP 1/2" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5701+100
DMP 1/2" PPE PP/TPV (EPDM-PP) (with Max-Pass™)	PP	TPV (EPDM-PP), EPDM, EPDM	5701+102
DMP 1/2" PPV PP/FPM	PP	FPM, FPM, FPM	5701+120
DMP 1/2" PPV PP/FPM (with Max-Pass™)	PP	FPM, FPM, FPM	5701+122
DMP 1/2" KNT PVDF/PTFE	PVDF	PTFE, PTFE, PTFE	5701+080
DMP 1/2" NTC PA/PTFE* 	PA	PTFE, PTFE, PTFE	5701+160

*conductive version Ex II 2 G c T4

Add. price DMP 1/2" PPT PP/PTFE PURE ^	PP	PTFE, PTFE, PTFE	5000-640
Add. price DMP 1/2" KNT PVDF/PTFE PURE ^	PVDF	PTFE, PTFE, PTFE	5000-644

^ Please choose Order-No. basic pump + Order-No. PURE additional price

Lutz Double Diaphragm Pumps

Model 1/2" Bolted Version (non-metallic)

Typical application:

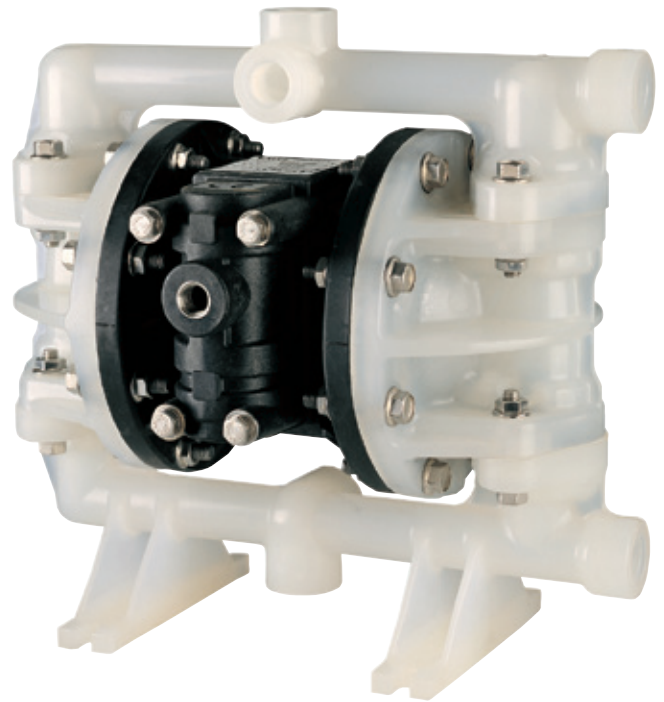
200 l-drum pumping, ink recirculation and feed, chemicals, solvents, acids, soap dispensing



Max-Pass™ optional
(Details see page 45)



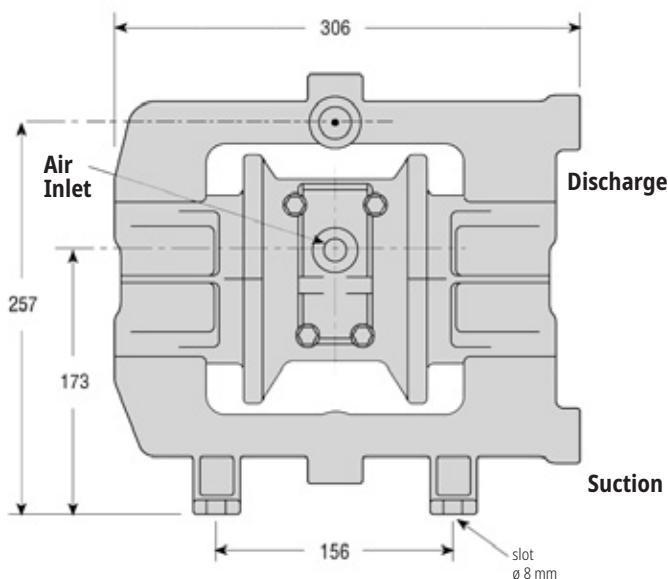
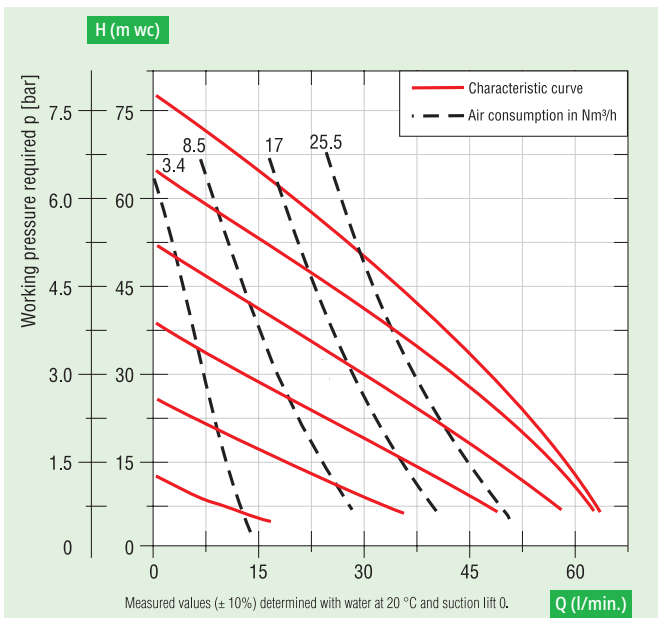
Version for emptying of drums
Additional price Ref. **No. 5000-347**
must be added to the chosen pump.



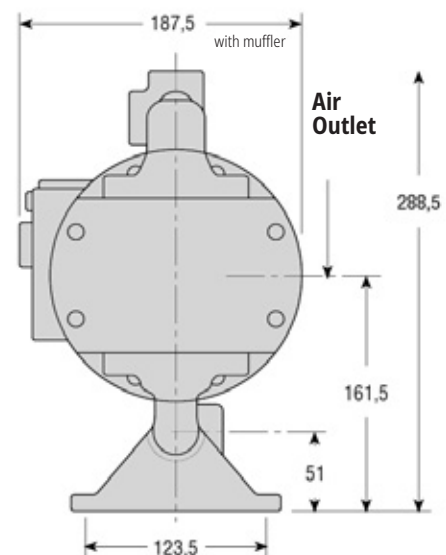
Pump tube also available in PURE version with Tri-Clamp connection. All materials coming into contact with the pumped medium are physiologically safe. The pumps are mainly used in the food-, cosmetics- and pharmaceutical industry.



Suitable range of accessories see pages 32-45.



Front View



Side View

Individual datasheets
on request.
Dimensions in mm

Lutz Double Diaphragm Pumps

Model 1" Bolted Version (non-metallic)

Operating data / Dimensions / Weights		
	DMP 1" PP	DMP 1" PVDF
Housing material:	Polypropylene	Polyvinylidene fluoride
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM	PTFE, TPV (EPDM-PP), FPM
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), NBR, EPDM, PTFE, FPM	PTFE, FPM
Seals:	NBR, EPDM, PTFE, FPM	PTFE, FPM
Valve seat:	PP	PVDF
Max. flow rate:	156 l/min.	156 l/min.
Suction lift dry with Max-Pass™ Valve:	5.5 m	5.5 m
Suction lift dry:	4.5 m	4.5 m
Suction lift (PTFE):	3 m	3 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	66 °C	93 °C
Solids handling: with Max-Pass™ Valve:	max. ø 19 mm	max. ø 19 mm
Solids handling:	max. ø 6,4 mm	max. ø 6,4 mm
Air inlet:	1/4" NPT female (1/2" BSP female) ¹⁾	1/4" NPT female (1/2" BSP female) ¹⁾
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	Flange DIN DN 25 PN 10/ ANSI B16,5 1" 150 PSI	Flange DIN DN 25 PN 10/ ANSI B16,5 1" 150 PSI
Discharge:	Flange DIN DN 25 PN 10/ ANSI B16,5 1" 150 PSI	Flange DIN DN 25 PN 10/ ANSI B16,5 1" 150 PSI
Weight:	9.1 kg	13.7 kg

¹⁾If the air flow control valve is used (not included in the delivery extent – see page 37).

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

Type	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 1" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP), TPV (NBR-PP), NBR	5702+000
DMP 1" PPB PP/TPV (NBR-PP) (with Max-Pass™)	PP	TPV (NBR-PP), NBR, NBR	5702+002
DMP 1" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5702+100
DMP 1" PPE PP/TPV (EPDM-PP) (with Max-Pass™)	PP	TPV (EPDM-PP), EPDM, EPDM	5702+102
DMP 1" PPT PP/PTFE	PP	PTFE, PTFE, PTFE	5702+020
DMP 1" PPV PP/FPM	PP	FPM, FPM, FPM	5702+120
DMP 1" PPV PP/FPM (with Max-Pass™)	PP	FPM, FPM, FPM	5702+122
DMP 1" KNT PVDF/PTFE	PVDF	PTFE, PTFE, PTFE	5702+080
DMP 1" KNV PVDF/FPM	PVDF	FPM, FPM, FPM	5702+180
DMP 1" KNV PVDF/FPM (with Max-Pass™)	PVDF	FPM, FPM, FPM	5702+182

Add. price DMP 1" PPT PP/PTFE PURE ^	PP	PTFE, PTFE, PTFE	5000-641
Add. price DMP 1" KNT PVDF/PTFE PURE ^	PVDF	PTFE, PTFE, PTFE	5000-645

^ Please choose Order-No. basic pump + Order-No. PURE additional price

Lutz Double Diaphragm Pumps

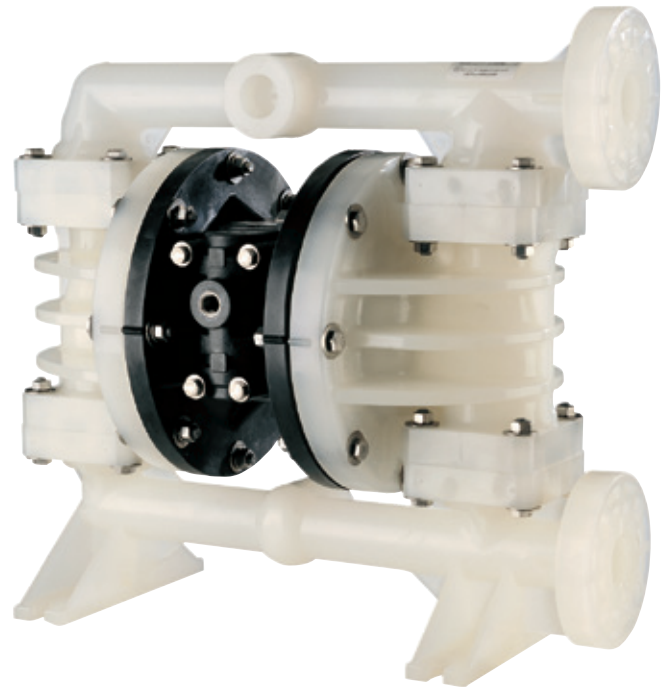
Model 1" Bolted Version (non-metallic)

Typical application:

Drum and small tank transfer, pickling solutions, chemical feed



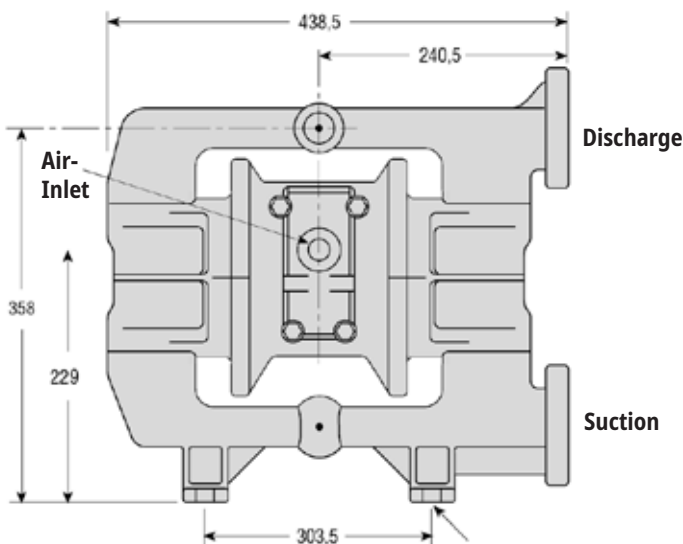
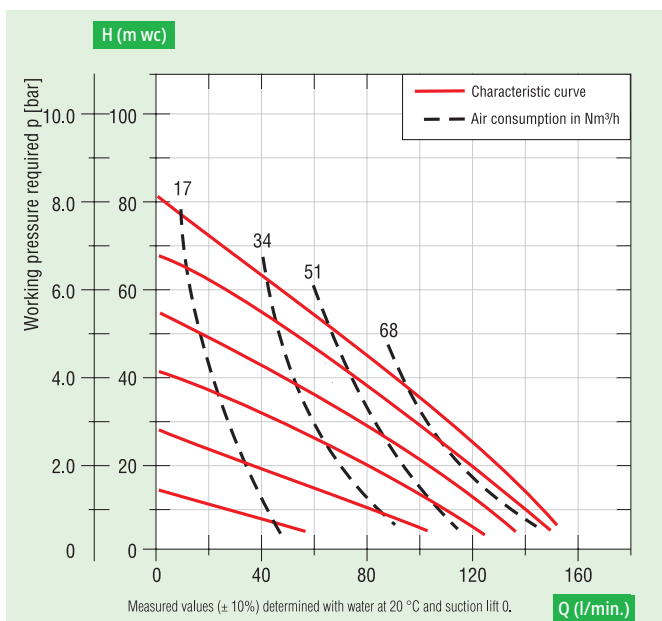
Max-Pass™ optional
(Details see page 45)



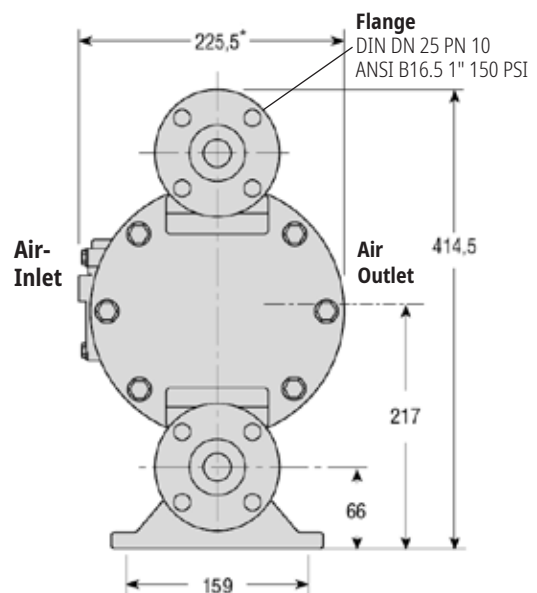
Pump tube also available in PURE version with Tri-Clamp connection. All materials coming into contact with the pumped medium are physiologically safe. The pumps are mainly used in the food-, cosmetics- and pharmaceutical industry.



Suitable range of accessories see pages 32-45.



Front View



Side View

*Approximate Dimension with Muffler (272.5)

Individual datasheets
on request.
Dimensions in mm

Lutz Double Diaphragm Pumps

Model 1 1/2" Bolted Version (non-metallic)

Operating data / Dimensions / Weights		
	DMP 1 1/2" PP	DMP 1 1/2" PVDF
Housing material:	Polypropylene	Polyvinylidene fluoride
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (EPDM-PP), PTFE
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (EPDM-PP), PTFE
Seals:	NBR, EPDM, PTFE	EPDM, PTFE
Valve seat:	PP	PVDF
Max. flow rate:	492 l/min.	492 l/min.
Suction lift dry:	4.5 m	4.5 m
Suction lift (PTFE):	3 m	3 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	66 °C	93 °C
Solids handling:	max. ø 6.4 mm	max. ø 6.4 mm
Air inlet:	3/4" NPT female (3/4" BSP female) ¹⁾	3/4" NPT female (3/4" BSP female) ¹⁾
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	Flange DIN DN 40 PN 10/ ANSI B16,5 1 1/2" 150 PSI	Flange DIN DN 40 PN 10/ ANSI B16,5 1 1/2" 150 PSI
Discharge:	Flange DIN DN 40 PN 10/ ANSI B16,5 1 1/2" 150 PSI	Flange DIN DN 40 PN 10/ ANSI B16,5 1 1/2" 150 PSI
Weight:	21 kg	29.5 kg

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PP	= Polypropylene
PTFE	= Polytetrafluorethylene

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

Type	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 1 1/2" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP), TPV (NBR-PP), NBR	5703+000
DMP 1 1/2" PPT PP/PTFE	PP	PTFE, PTFE, PTFE	5703+020
DMP 1 1/2" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5703+100
DMP 1 1/2" KNE PVDF/TPV (EPDM-PP)	PVDF	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5703+070
DMP 1 1/2" KNT PVDF/PTFE	PVDF	PTFE, PTFE, PTFE	5703+080

Add. price DMP 1 1/2" PPT PP/PTFE PURE [▲]	PP	PTFE, PTFE, PTFE	5000-642
Add. price DMP 1 1/2" KNT PVDF/PTFE PURE [▲]	PVDF	PTFE, PTFE, PTFE	5000-646

[▲] Please choose Order-No. basic pump + Order-No. PURE additional price

Lutz Double Diaphragm Pumps

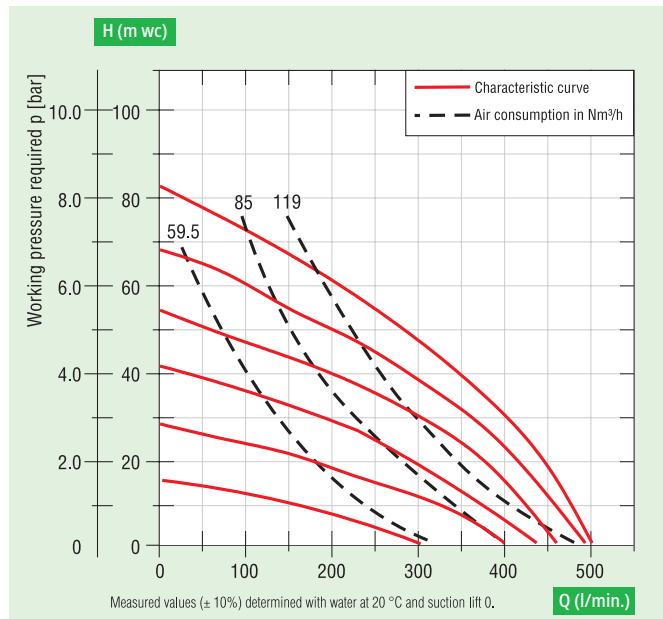
Model 1 1/2" Bolted Version (non-metallic)

Typical application:

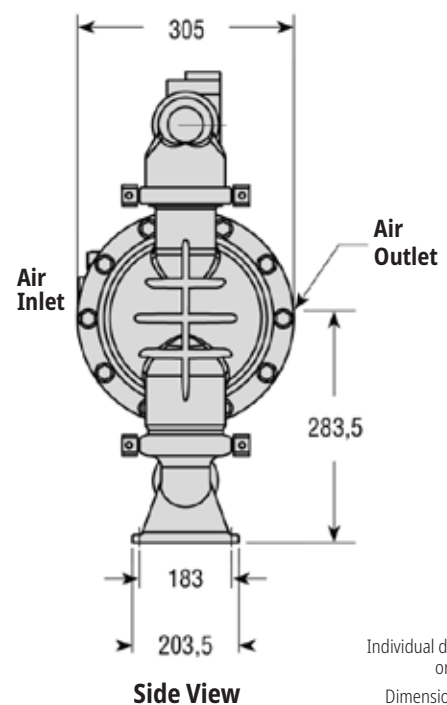
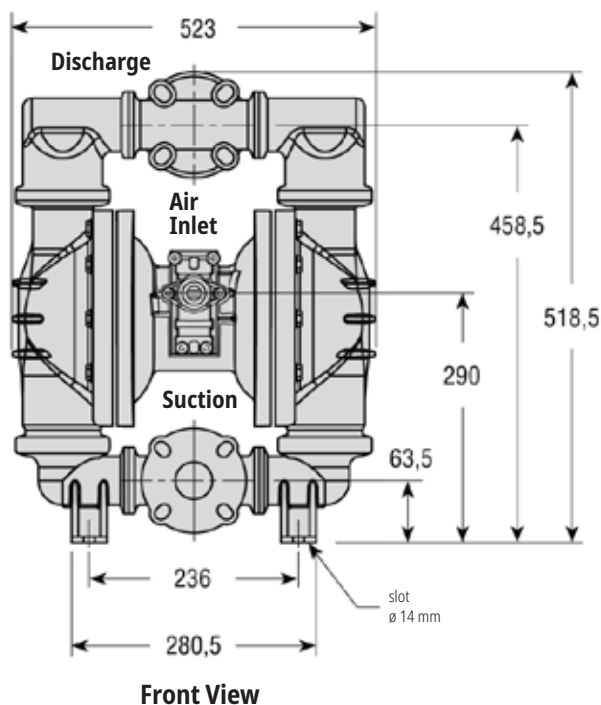
Filter press, tank cleaning systems, pigments and resins



Pump tube also available in PURE version with Tri-Clamp connection. All materials coming into contact with the pumped medium are physiologically safe. The pumps are mainly used in the food-, cosmetics- and pharmaceutical industry.



Suitable range of accessories see pages 32-45.



Individual datasheets
on request.
Dimensions in mm

Lutz Double Diaphragm Pumps

Model 2" Bolted Version (non-metallic)

Operating data / Dimensions / Weights		
	DMP 2" PP	DMP 2" PVDF
Housing material:	Polypropylene	Polyvinylidene fluoride
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	PTFE
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	PTFE
Seals:	NBR, EPDM, PTFE	PTFE
Valve seat:	PP	PVDF
Max. flow rate:	605 l/min.	605 l/min.
Suction lift dry:	5.2 m	5.2 m
Suction lift (PTFE):	4.6 m	4.6 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	66 °C	93 °C
Solids handling:	max. ø 6.4 mm	max. ø 6.4 mm
Air inlet:	3/4" NPT female (3/4" BSP female) ¹⁾	3/4" NPT female (3/4" BSP female) ¹⁾
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	Flange DIN DN 50 PN 10/ ANSI B16,5 2" 150 PSI	Flange DIN DN 50 PN 10/ ANSI B16,5 2" 150 PSI
Discharge:	Flange DIN DN 50 PN 10/ ANSI B16,5 2" 150 PSI	Flange DIN DN 50 PN 10/ ANSI B16,5 2" 150 PSI
Weight:	25 kg	38 kg

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PVDF	= Polyvinylidene fluoride
PP	= Polypropylene
PTFE	= Polytetrafluorethylene

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

* See operating curves

Type	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 2" PPB PP/TPV (NBR-PP)	PP	TPV (NBR-PP), TPV (NBR-PP), NBR	5604+000
DMP 2" PPT PP/PTFE	PP	PTFE, PTFE, PTFE	5604+020
DMP 2" PPE PP/TPV (EPDM-PP)	PP	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5604+100
DMP 2" PPT PP/PTFE**	PP	PTFE, PTFE, PTFE	5604+220
DMP 2" KNT PVDF/PTFE	PVDF	PTFE, PTFE, PTFE	5604+060
DMP 2" KNT PVDF/PTFE**	PVDF	PTFE, PTFE, PTFE	5604+240

**Teflon-coated clamp fittings and bolts

Add. price DMP 2" PPT PP/PTFE PURE [▲]	PP	PTFE, PTFE, PTFE	5000-643
Add. price DMP 2" KNT PVDF/PTFE PURE [▲]	PVDF	PTFE, PTFE, PTFE	5000-647

[▲] Please choose Order-No. basic pump + Order-No. PURE additional price

Lutz Double Diaphragm Pumps

Model 2" Bolted Version (non-metallic)

Typical application:

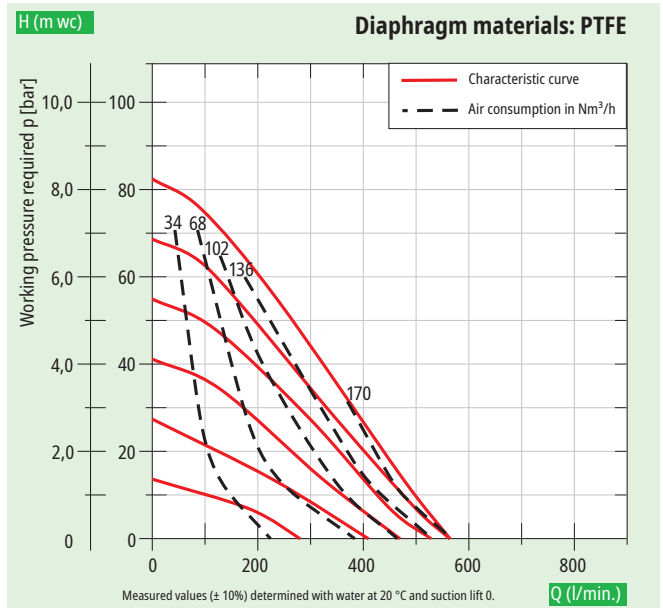
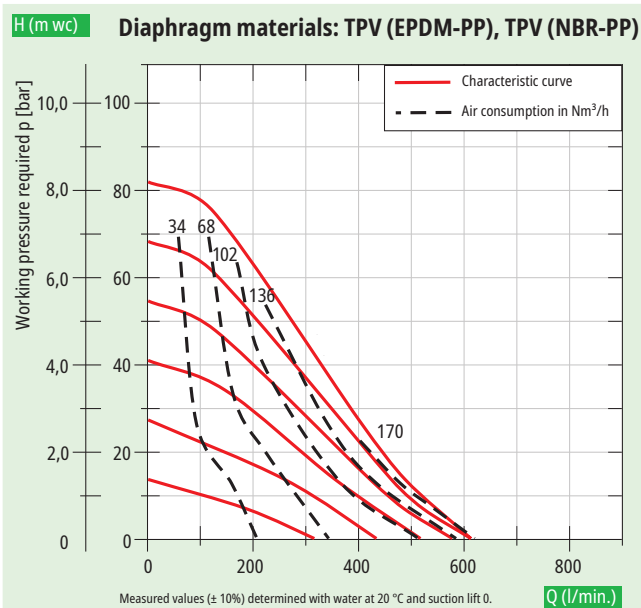
Paint, latex, ceramic slip, slurries, polymers, tank car fill and empty, foods



Pump tube also available in PURE version with Tri-Clamp connection. All materials coming into contact with the pumped medium are physiologically safe. The pumps are mainly used in the food-, cosmetics- and pharmaceutical industry.



Suitable range of accessories see pages 32-45.



Individual datasheets
on request.

Lutz Double Diaphragm Pumps

Model 1/2" Bolted Version (metallic)









Operating data / Dimensions / Weights		
	DMP 1/2" Aluminium	DMP 1/2" Stainless Steel
Housing material:	Aluminium	Stainless Steel 1,4404 (316)
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM
Seals:	NBR, EPDM, PTFE, FPM	NBR, EPDM, PTFE, FPM
Valve seat:	PP, PA	Stainless Steel
Max. flow rate:	57 l/min.*	57 l/min.*
Suction lift dry:	4.5 m	4.5 m
Suction lift (PTFE):	4.3 m	4.3 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	93 °C	93 °C
Solids handling:	max. ø 3.2 mm	max. ø 3.2 mm
Air inlet:	1/4" NPT female (G 1/2 BSP female) ¹⁾	1/4" NPT female (G 1/2 BSP female) ¹⁾
Air outlet:	3/8" NPT female	3/8" NPT female
Suction:	1/2" BSP female	1/2" BSP female
Discharge:	1/2" BSP female	1/2" BSP female
Weight:	4.5 kg	9.1 kg

¹⁾If the air flow control valve is used (not included in the delivery extent – see page 37).

*See operating curves

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PP	= Polypropylene
PA	= Polyamide
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

Type		Materials of construction		Order No.
		Housing	Diaphragm, Valve balls, Seals	
DMP 1/2" ALB Alu/TPV (NBR-PP)**		Aluminium	TPV (NBR-PP), TPV (NBR-PP), NBR	5611+000
DMP 1/2" ALE Alu/TPV (EPDM-PP)**		Aluminium	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5611+040
DMP 1/2" ALT Alu/PTFE**		Aluminium	PTFE, PTFE, PTFE	5611+020
DMP 1/2" ALV Alu/FPM**		Aluminium	FPM, FPM, FPM	5611+060
DMP 1/2" SSB SS/TPV (NBR-PP)**		Stainless Steel	TPV (NBR-PP), TPV (NBR-PP), NBR	5621+040
DMP 1/2" SSE SS/TPV (EPDM-PP)**		Stainless Steel	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5621+020
DMP 1/2" SST SS/PTFE**		Stainless Steel	PTFE, PTFE, PTFE	5621+000
DMP 1/2" SSV SS/FPM**		Stainless Steel	FPM, FPM, FPM	5621+060

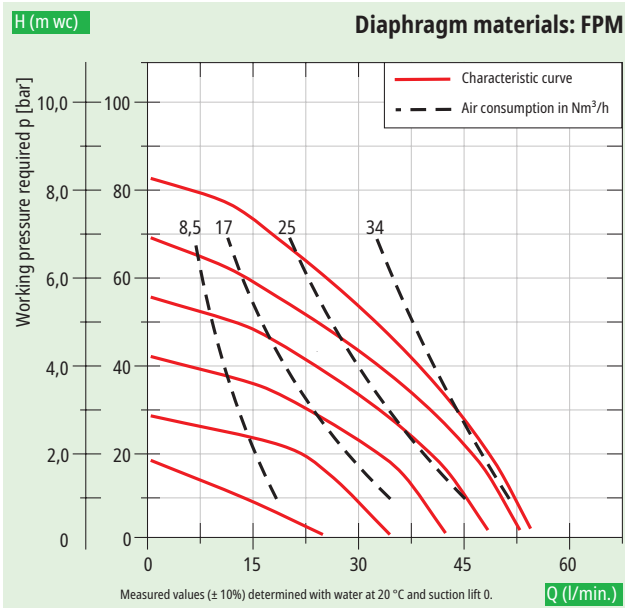
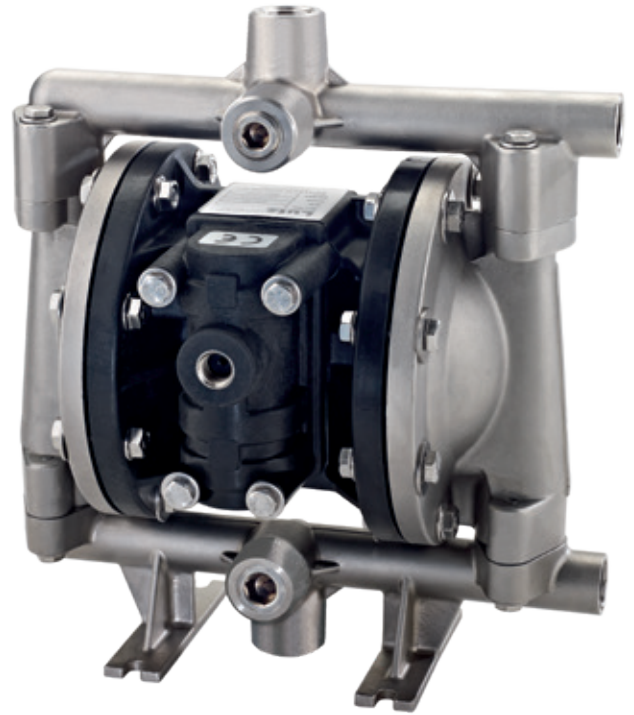
**Ex II 2 GD c TX

Lutz Double Diaphragm Pumps

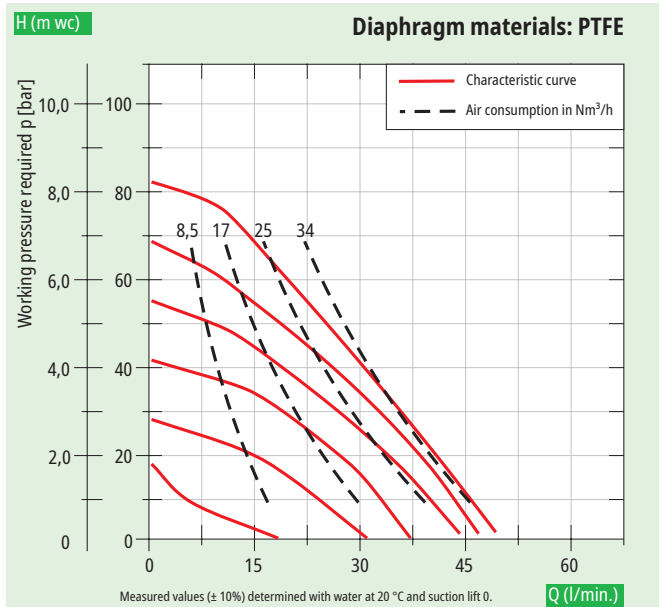
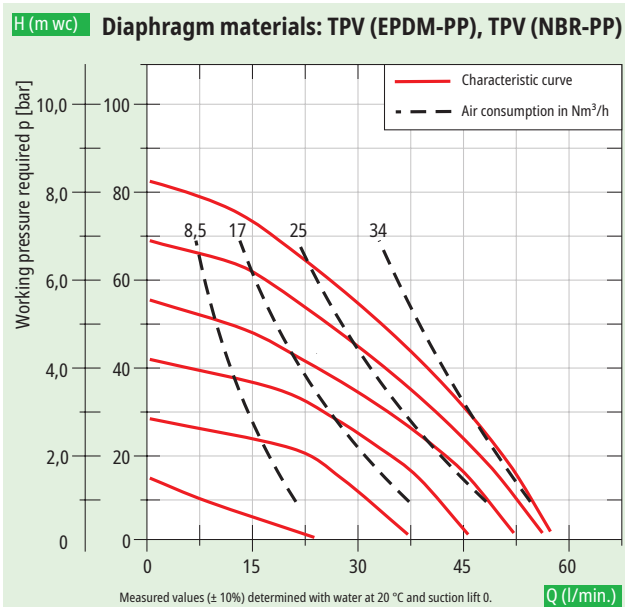
Model 1/2" Bolted Version (metallic)

Typical application:

200 l-drum pumping, ink recirculation and feed, chemicals, solvents, acids, soap dispensing



Suitable range of accessories for avoiding electrostatic charge see pages 32-45.



Individual datasheets
on request.

Lutz Double Diaphragm Pumps

Model 1" Bolted Version (metallic)









Operating data / Dimensions / Weights		
	DMP 1" Aluminium	DMP 1" Stainless Steel
Housing material:	Aluminium	Stainless Steel 1.4404 (316)
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM	TPV (NBR-PP), TPV (EPDM-PP), PTFE, FPM
Seals:	NBR, EPDM, PTFE, FPM	NBR, EPDM, PTFE, FPM
Valve seat:	PP, PA	Stainless Steel
Max. flow rate:	182 l/min.*	182 l/min.*
Suction lift dry:	5.2 m	5.2 m
Suction lift (PTFE):	5.2 m	5.2 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	93 °C	93 °C
Solids handling:	max. ø 6,4 mm	max. ø 6,4 mm
Air inlet:	1/4" NPT female (G 1/2 BSP female) ¹⁾	1/4" NPT female (G 1/2 BSP female) ¹⁾
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	1" BSP female	1" BSP female
Discharge:	1" BSP female	1" BSP female
Weight:	8 kg	17 kg

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

*See operating curves

Type	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 1" ALB Alu/TPV (NBR-PP)** 	Aluminium	TPV (NBR-PP), TPV (NBR-PP), NBR	5612+000
DMP 1" ALE Alu/TPV (EPDM-PP)** 	Aluminium	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5612+040
DMP 1" ALT Alu/PTFE** 	Aluminium	PTFE, PTFE, PTFE	5612+020
DMP 1" ALV Alu/FPM** 	Aluminium	FPM, FPM, FPM	5612+060
DMP 1" SSB SS/TPV (NBR-PP)** 	Stainless Steel	TPV (NBR-PP), TPV (NBR-PP), NBR	5622+040
DMP 1" SSE SS/TPV (EPDM-PP)** 	Stainless Steel	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5622+020
DMP 1" SST SS/PTFE** 	Stainless Steel	PTFE, PTFE, PTFE	5622+000
DMP 1" SSV SS/FPM** 	Stainless Steel	FPM, FPM, FPM	5622+060

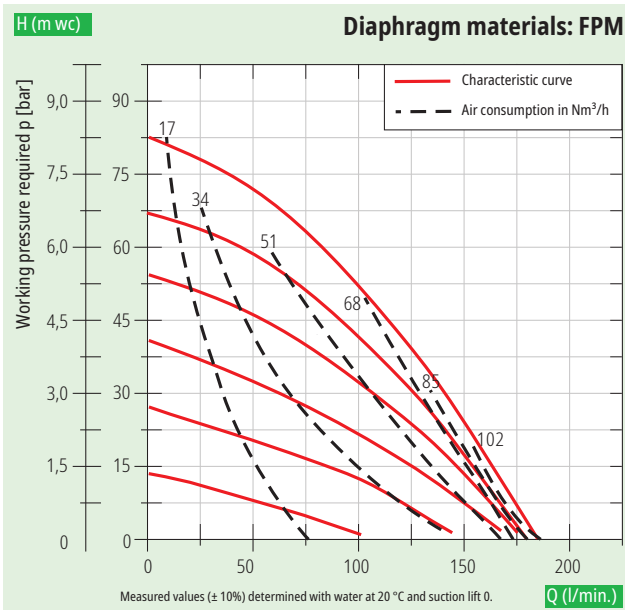
**Ex II 2 GD c TX

Lutz Double Diaphragm Pumps

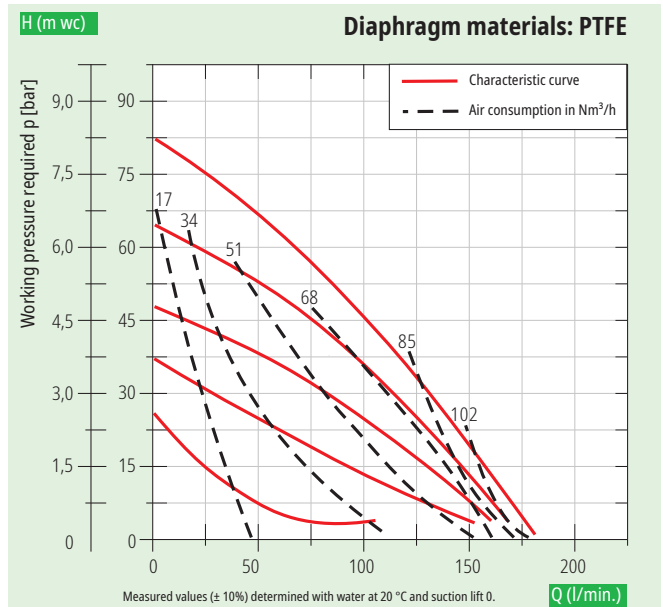
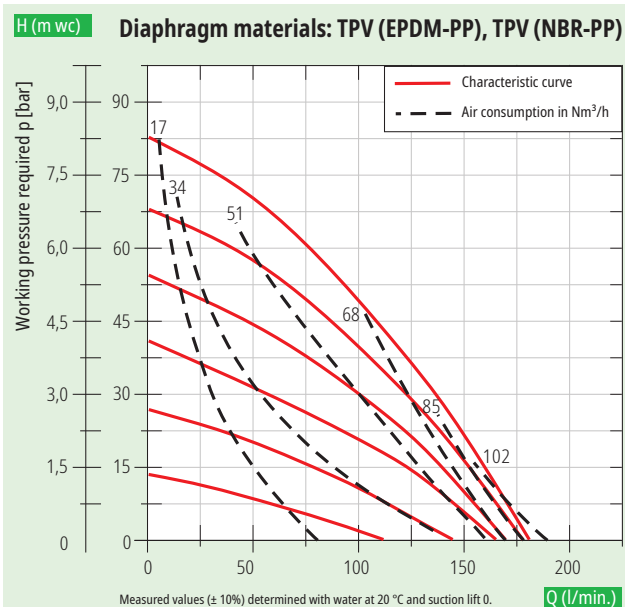
Model 1" Bolted Version (metallic)

Typical application:

Drum and small tank transfer, pickling solutions, chemical feed



Suitable range of accessories for avoiding electrostatic charge see pages 32-45.



Individual datasheets
on request.

Lutz Double Diaphragm Pumps

Model 1 1/2" Bolted Version (metallic)

Operating data / Dimensions / Weights		
	DMP 1 1/2" Aluminium	DMP 1 1/2" Stainless Steel
Housing material:	Aluminium	Stainless Steel 1.4404 (316)
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (NBR-PP), TPV (EPDM-PP), PTFE
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (NBR-PP), TPV (EPDM-PP), PTFE
Seals:	NBR, EPDM, PTFE	NBR, EPDM, PTFE
Valve seat:	PP, PA	Stainless Steel
Max. flow rate:	435 l/min.*	435 l/min.*
Suction lift dry:	6.7 m	6.7 m
Suction lift (PTFE):	5.5 m	5.5 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	93 °C	93 °C
Solids handling:	max. ø 6,4 mm	max. ø 6,4 mm
Air inlet:	3/4" NPT female (3/4" BSP female) ¹⁾	3/4" NPT female (3/4" BSP female) ¹⁾
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	1 1/2" BSP female	1 1/2" BSP female
Discharge:	1 1/2" BSP female**	1 1/2" BSP female**
Weight:	20 kg	32 kg







Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

¹⁾ if the air flow control valve is used (not included in the delivery extent – see page 37).

* See operating curves

** Discharge to top 1 1/4" BSP female (Reduction of the characteristic measured value is 10% when using the discharge on top).

Type		Materials of construction		Order No.
		Housing	Diaphragm, Valve balls, Seals	
DMP 1 1/2" ALB Alu/TPV (NBR-PP)***		Aluminium	TPV (NBR-PP), TPV (NBR-PP), NBR	5613+000
DMP 1 1/2" ALT Alu/PTFE***		Aluminium	PTFE, PTFE, PTFE	5613+020
DMP 1 1/2" ALE Alu/TPV (EPDM-PP)***		Aluminium	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5613+040
DMP 1 1/2" SSB SS/TPV (NBR-PP)***		Stainless Steel	TPV (NBR-PP), TPV (NBR-PP), NBR	5623+000
DMP 1 1/2" SST SS/PTFE***		Stainless Steel	PTFE, PTFE, PTFE	5623+020
DMP 1 1/2" SSE SS/TPV (EPDM-PP)***		Stainless Steel	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5623+040

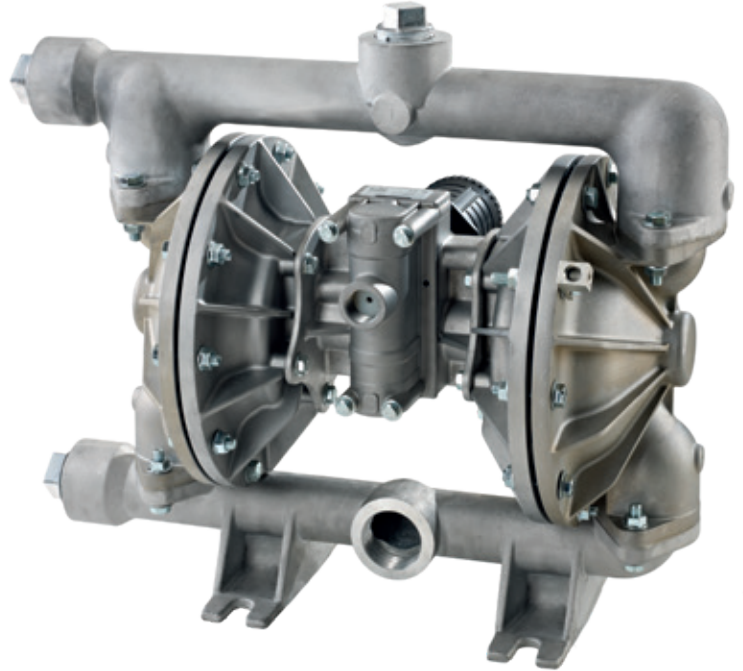
***Ex II 2 GD c TX

Lutz Double Diaphragm Pumps

Model 1 1/2" Bolted Version (metallic)

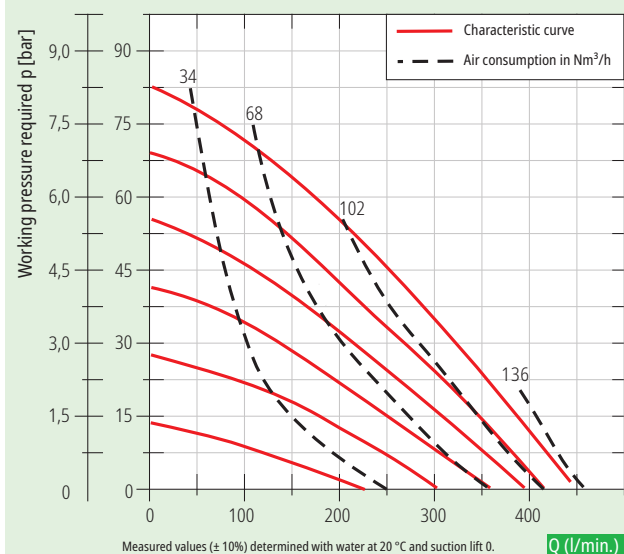
Typical application:

Filter press, tank cleaning systems, pigments and resins

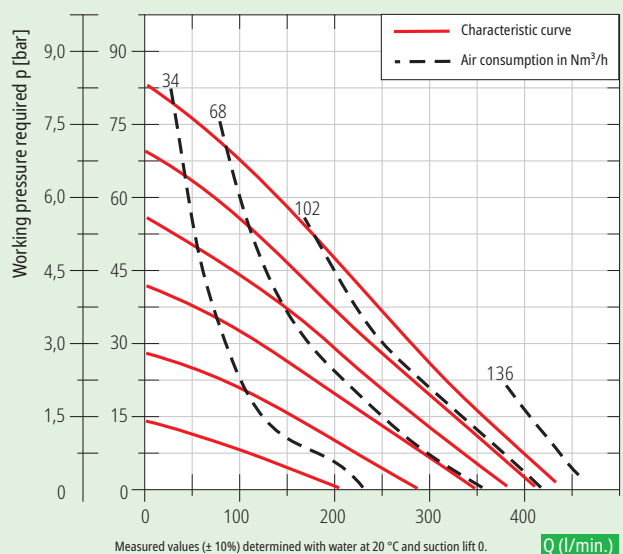


Suitable range of accessories for avoiding electrostatic charge see pages 32-45.

H (m wc) Diaphragm materials: TPV (EPDM-PP), TPV (NBR-PP)



H (m wc) Diaphragm materials: PTFE



Individual datasheets
on request.

Lutz Double Diaphragm Pumps

Model 2" Bolted Version (metallic)







Operating data / Dimensions / Weights		
	DMP 2" Aluminium	DMP 2" Stainless Steel
Housing material:	Aluminium	Stainless Steel 1.4404 (316)
Diaphragm materials:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (NBR-PP), TPV (EPDM-PP), PTFE
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), PTFE	TPV (NBR-PP), TPV (EPDM-PP), PTFE
Seals:	NBR, EPDM, PTFE	NBR, EPDM, PTFE
Valve seat:	PP, PA	Stainless Steel
Max. flow rate:	719 l/min.*	719 l/min.*
Suction lift dry:	7.4 m	7.4 m
Suction lift (PTFE):	5.8 m	5.8 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	93 °C	93 °C
Solids handling:	max. ø 6.4 mm	max. ø 6.4 mm
Air inlet:	3/4" NPT female (3/4" BSP female) ¹⁾	3/4" NPT female (3/4" BSP female) ¹⁾
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	2" BSP female	Flange DIN DN 50 PN 10 / ANSI B 16,5 2" 150, PSI
Discharge:	2" BSP female	Flange DIN DN 50 PN 10 / ANSI B 16,5 2" 150, PSI
Weight:	28 kg	59 kg

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer

¹⁾if the air flow control valve is used (not included in the delivery extent – see page 37).

*See operating curves

Type		Materials of construction		Order No.
		Housing	Diaphragm, Valve balls, Seals	
DMP 2" ALB Alu/TPV (NBR-PP)**		Aluminium	TPV (NBR-PP), TPV (NBR-PP), NBR	5614+000
DMP 2" ALT Alu/PTFE**		Aluminium	PTFE, PTFE, PTFE	5614+020
DMP 2" ALE Alu/TPV (EPDM-PP)**		Aluminium	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5614+040
DMP 2" SST SS/PTFE**		Stainless Steel	PTFE, PTFE, PTFE	5624+000
DMP 2" SSE SS/TPV (EPDM-PP)**		Stainless Steel	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5624+020
DMP 2" SSB SS/TPV (NBR-PP)**		Stainless Steel	TPV (NBR-PP), TPV (NBR-PP), NBR	5624+040

**Ex II 2 GD c TX

Lutz Double Diaphragm Pumps

Model 2" Bolted Version (metallic)

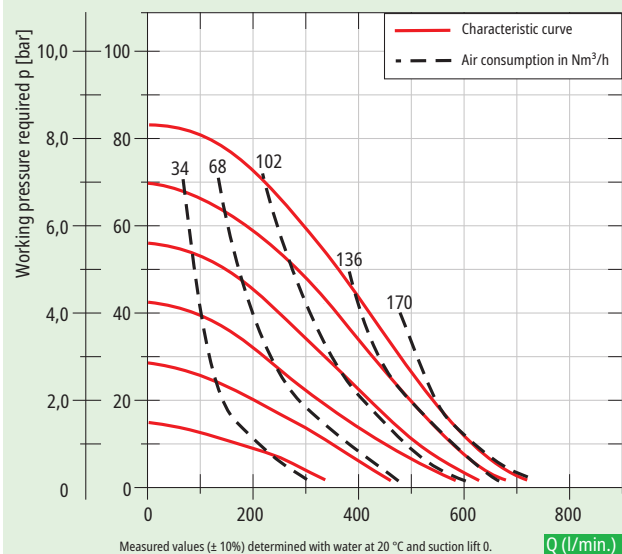
Typical application:

Paint, latex, ceramic slip, slurries, polymers,
tank car fill and empty, foods

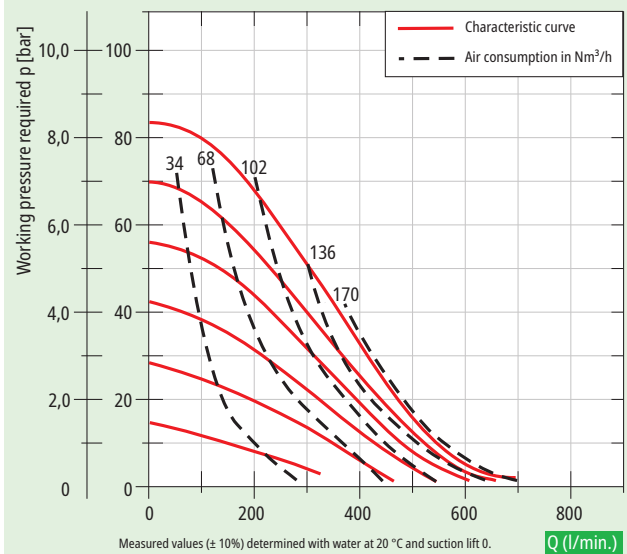


Suitable range of accessories for avoiding
electrostatic charge see pages 32-45.

H (m wc) Diaphragm materials: TPV (EPDM-PP), TPV (NBR-PP)



H (m wc) Diaphragm materials: PTFE



Individual datasheets
on request.

Lutz Double Diaphragm Pumps

Model 3" Bolted Version (metallic)

Operating data / Dimensions / Weights		
	DMP 3" Aluminium	DMP 3" Stainless Steel
Housing material:	Aluminium	Stainless Steel 1.4404 (316)
Diaphragm materials:	AU, PTFE, TPV (EPDM-PP), FPM	AU, PTFE, TPV (EPDM-PP), FPM
Valve material:	TPV (NBR-PP), TPV (EPDM-PP), FPM, PTFE	TPV (NBR-PP), TPV (EPDM-PP), FPM, PTFE
Seals:	NBR, EPDM, FPM, PTFE	NBR, EPDM, FPM, PTFE
Valve seat:	PA, EPDM, FPM, NBR	Stainless Steel
Max. flow rate:	954 l/min.*	954 l/min.*
Suction lift dry:	6.1 m	6.1 m
Suction lift (PTFE):	5.2 m	5.2 m
Operating pressure:	max. 8.2 bar	max. 8.2 bar
Temperature limits:	93 °C	93 °C
Solids handling:	max. ø 11 mm	max. ø 11 mm
Air inlet:	3/4" NPT female	3/4" NPT female
Air outlet:	3/4" NPT female	3/4" NPT female
Suction:	3" BSP female	Flange DIN DN 80 PN 10 / ANSI B 16,5 3" 150 PSI
Discharge:	3" BSP female	Flange DIN DN 80 PN 10 / ANSI B 16,5 3" 150 PSI
Weight:	62 kg	136 kg

Material description:

TPV (NBR-PP)	= NBR/PP-Compound
TPV (EPDM-PP)	= EPDM/PP-Compound
PA	= Polyamide
PP	= Polypropylene
PTFE	= Polytetrafluorethylene
FPM	= Fluor Elastomer
AU	= Urethan

*If the air flow control valve is used (not included in the delivery extent – see page 37).

*See operating curves

Type		Materials of construction		Order No.
		Housing	Diaphragm, Valve balls, Seals	
DMP 3" ALU Alu/AU*	Ex	Aluminium	AU, TPV (NBR-PP), NBR	5615+000
DMP 3" ALE Alu/TPV (EPDM-PP)*	Ex	Aluminium	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5615+020
DMP 3" ALT Alu/PTFE*	Ex	Aluminium	PTFE, PTFE, PTFE	5615+040
DMP 3" ALV Alu/FPM*	Ex	Aluminium	FPM, FPM, FPM	5615+060
DMP 3" SSU SS/AU	Ex	Stainless Steel	AU, TPV (NBR-PP), NBR	5625+000
DMP 3" SSE SS/TPV (EPDM-PP)	Ex	Stainless Steel	TPV (EPDM-PP), TPV (EPDM-PP), EPDM	5625+020
DMP 3" SST SS/PTFE*	Ex	Stainless Steel	PTFE, PTFE, PTFE	5625+040
DMP 3" SSV SS/FPM	Ex	Stainless Steel	FPM, FPM, FPM	5625+060

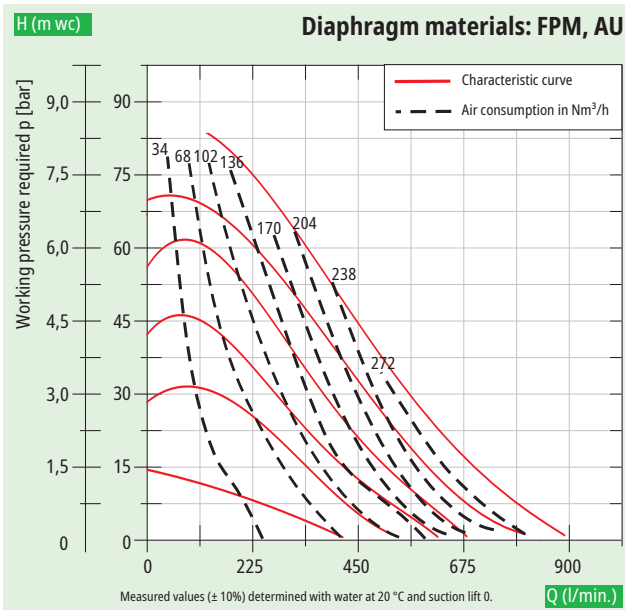
*Ex II 2 GD c TX

Lutz Double Diaphragm Pumps

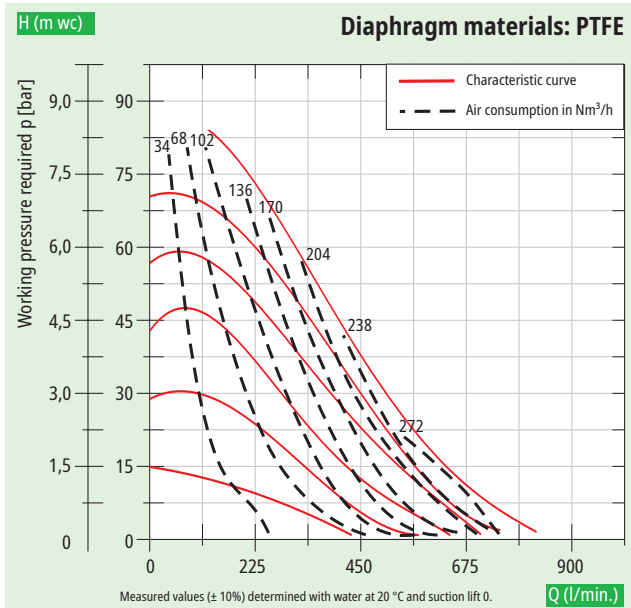
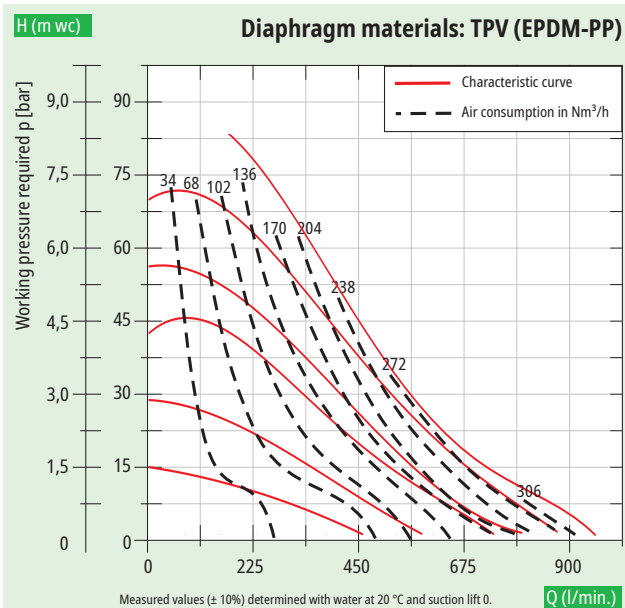
Model 3" Bolted Version (metallic)

Typical application:

Paint, latex, ceramic slip, slurries, polymers, tank car fill and empty



Suitable range of accessories see pages 32-45.



Individual datasheets
on request.

Lutz Double Diaphragm Pumps Mixing System

Mixing and pumping in one system



For liquids which have to be mixed prior to processing and then pumped or which are containing small solids, the new DDP mixing system with an integrated air-operated doubled diaphragm pump from Lutz is the perfect solution.

The mixing and pumping process is made via a suction and mixing tube and a 3-way tap. The pre-assembled system is immediately ready for use with a few simple steps and is also suitable for explosive liquids.

Features & Benefits:

- Mixing and pumping in one system
- Also suitable for higher viscosities and liquids containing solids
- Quick installation and time saving thanks to easy handling
- No additional mixer necessary
- Compact design
- Easy to insert into the 2" bunghole of the container using a hoist or an indoor crane
- Base plate offers a good stability on the container lid



Lutz Double Diaphragm Pumps Mixing System

Mixing and pumping in one system

Examples of liquids:

Paints and varnishes, emulsions, dispersions, suspensions, water/oil mixtures,
liquids with increased viscosity and solids content

Technical Data	
Pump	Compressed air-operated double diaphragm pump mounted on a base plate
Housing material	Stainless steel (1.4404)
Diaphragms, check balls, seals	PTFE
Ex-identification	Ex II 2 GD c TX
Hoses:	Universal chemical hose 3/4" bound
Delivery rate	max. 57 l/min.
Operating pressure	max. 8.2 bar
Temperature	max. 93 °C
Solids up to	max. ø 3,2 mm
Connection on the pressure side of the ball valve	G 3/4 female
Dimensions:	approx. ø 550 x 1300 mm
Piping:	Stainless steel (1.4571)
Weight (including pump)	21 kg
Order No.	5000-140

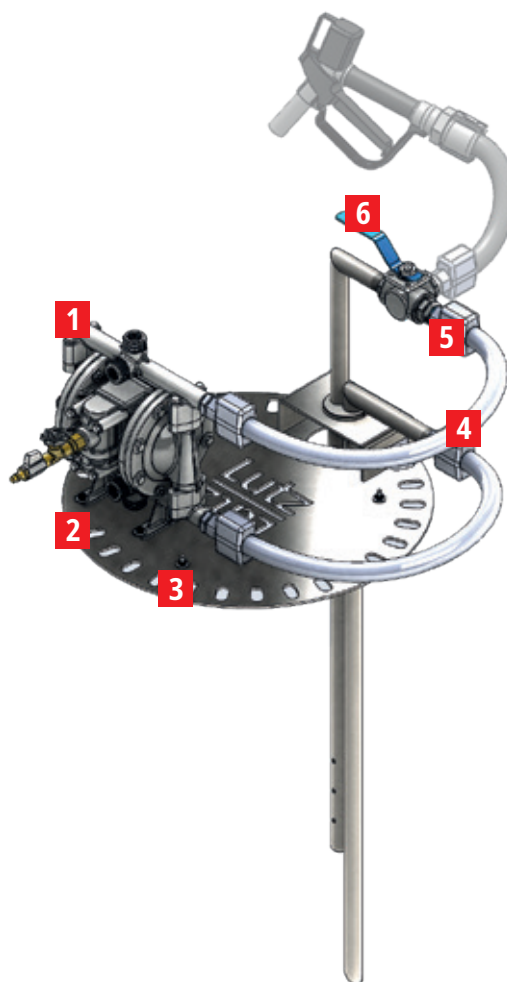
Accessories:

Wire rope suspension

Stainless steel, ø 4 mm, length approx. 700 mm
Order No. 5000-144

Hoses, nozzles, discharge spouts and everything for compressed air supply

see range of accessories pages 34-47





- 1** Double diaphragm pump 1/2"
- 2** Vibration damper
- 3** Base plate
- 4** Universal chemical hose
- 5** Hose connection
- 6** 3-way ball valve G 3/4"

Accessories

Pipe fitting, coupling connector, hose connection



Product detail	Specification	Order-No.
	Pipe fitting Allows the direct connection of hoses at pressure-/suction piece of the double diaphragm pump.	
	PP DN 8 x G 1/4 male DMP 1/4"	5000-314
	PVDF DN 8 x G 1/4 male DMP 1/4"	5000-315
	PP DN 8 x G 3/8 male DMP 3/8"	5000-316
	PVDF DN 8 x G 3/8 male DMP 3/8"	5000-317
	Coupling connector Allows the direct connection of hoses at pressure-/suction piece of the double diaphragm pump.	
	PP DN 8 x G 1/4 male DMP 1/4"	5000-020
	PVDF DN 8 x G 1/4 male DMP 1/4"	5000-021
	Brass DN 9 x G 1/4 male DMP 1/4"	5000-022
	SS (1.4571) DN 9 x G 1/4 male DMP 1/4"	5000-023
	PP DN 12 x G 1/4 male DMP 1/4"	5000-024
	PP DN 12 x G 3/8 male DMP 3/8"	5000-034
	PVDF DN 12 x G 3/8 male DMP 3/8"	5000-035
	PP DN 12 x G 1/2 male DMP 1/2"	5000-030
	PP DN 20 x G 1/2 male DMP 1/2"	5000-036
	PVDF DN 12 x G 1/2 male DMP 1/2"	5000-031
	Brass DN 12 x G 1/2 male DMP 1/2"	5000-032
	SS (1.4571) DN 12 x G 1/2 male DMP 1/2"	5000-033
	SS (1.4571) DN 20 x G 1/2 male DMP 1/2"	0300-215
	PP DN 25 x G 1 male DMP 1"	5000-037
	SS (1.4571) DN 25 x G 1 male DMP 1"	5000-038
 	Hose connection Hose connector with wing nut (+ seal with metal-connections) For direct connection of the hoses with different diameter at pressure-/suction piece of the double diaphragm pump.	
	PP DN 13 x G 1 1/4 DMP 1/2"	0204-409*
	PP DN 19 x G 1 1/4 DMP 1/2"	0204-410*
	PP DN 25 x G 1 1/4 DMP 1/2"	0204-411*
	PP DN 19 x G 1 DMP 1/2"	0204-438*
	PVDF DN 19 x G 1 1/4 DMP 1/2"	0204-421*
	PVDF DN 25 x G 1 1/4 DMP 1/2"	0204-422*
	PP DN 19 x G 1 1/4 DMP 1"	0204-410*
	PP DN 25 x G 1 1/4 DMP 1"	0204-411*
	PP DN 32 x G 1 1/4 DMP 1"	0204-412*
	PVDF DN 19 x G 1 1/4 DMP 1"	0204-421*
	PVDF DN 25 x G 1 1/4 DMP 1"	0204-422*
	Alu DN 19 x G 1 1/4 DMP 1"	0204-403*
	Alu DN 25 x G 1 1/4 DMP 1"	0204-404*
	Alu DN 32 x G 1 1/4 DMP 1"	0204-405*
	SS (1.4571) DN 19 x G 1 1/4 DMP 1"	0204-400*
	SS (1.4571) DN 25 x G 1 1/4 DMP 1"	0204-401*
	SS (1.4571) DN 32 x G 1 1/4 DMP 1"	0204-402*
	*) can be used only in connection with reducing piece	
	Hose connection Hose connector with wing nut and seal	
	SS (1.4571) DN 38 x G 1 1/2 DMP 1 1/2"	0204-418***
	PP DN 50 x G 2 DMP 2"	5000-250**
	PVDF DN 50 x G 2 DMP 2"	5000-251**
	SS (1.4571) DN 50 x G 2 DMP 2"	5000-253**
	**) can be used only in connection with flange	
	***) can be used only in connection with double nipple	

Reducing pieces, Double nipple, flange, hose connector, foot strainer, suction pipe

Specification	Order-No.			Product detail
Reducing piece (product side)				
SS (1.4571)	G 3/8 male x G 1/2 male	DMP 3/8"	5000-074	
PP	G 1/2 male x G 1 1/4 male	DMP 1/2"	5000-060	
PVC	G 1/2 male x G 1 male	DMP 1/2"	5000-065	
PVC	G 1/2 male x G 1 1/4 male	DMP 1/2"	5000-066	
PVDF	G 1/2 male x G 1 1/4 male	DMP 1/2"	5000-061	
SS (1.4571)	G 1/2 male x G 3/4 male	DMP 1/2"	5000-067	
SS (1.4571)	G 1/2 male x G 1 male	DMP 1/2"	5000-068	
SS (1.4571)	G 1/2 male x G 1 1/4 male	DMP 1/2"	5000-063	
Brass	G 1/2 male x G 1 1/4 male	DMP 1/2"	5000-064	
PP	G 1 male x G 1 1/4 male	DMP 1"	0373-076	
PVC	G 1 male x G 1 1/4 male	DMP 1"	5000-069	
PVDF	G 1 male x G 1 1/4 male	DMP 1"	5000-071	
Brass	G 1 male x G 1 1/4 male	DMP 1"	5000-072	
SS (1.4571)	G 1 male x G 1 1/4 male	DMP 1"	5000-073	
Double nipple (product side)				
SS (1.4571)	G 1/2 male	DMP 1/2"	0300-008	
SS (1.4571)	G 1 1/2 male	DMP 1 1/2"	0300-134	
SS (1.4571)	G 2 male	DMP 2"	0300-105	
Flange				
Compl. with screws and seals				
PP	DN 25 x G 1 1/4 male	DMP 1"	5000-610	
PVDF	DN 25 x G 1 1/4 male	DMP 1"	5000-611	
PP	DN 40 x G 1 1/2 male	DMP 1 1/2"	5000-620	
PVDF	DN 40 x G 1 1/2 male	DMP 1 1/2"	5000-621	
Alu	DN 38 x G 1 1/2 male	DMP 1 1/2"	5000-260	
SS (1.4571)	DN 40 x G 1 1/2 male	DMP 1 1/2"	5000-261	
PP	DN 50 x G 2 male	DMP 2"	5000-262	
Alu	DN 50 x G 2 male	DMP 2"	5000-263	
SS (1.4571)	DN 50 x G 2 male	DMP 2"	5000-264	
PVDF	DN 50 x G 2 male	DMP 2"	5000-265	
Hose connector				
Security hose connector for mineral oil hose, solvent hose, universal chemical hose, chemical hose with different connection threads.				
Brass	DN 13 x G 1/2 female	DMP 1/2"	5000-102 ●	
SS (1.4571)	DN 13 x G 1/2 female	DMP 1/2"	5000-103 ●	
Brass	DN 19 x G 3/4 female	DMP 1/2"	5000-104 ●	
SS (1.4571)	DN 19 x G 3/4 female	DMP 1/2"	5000-105 ●	
Brass	DN 25 x G 1 male	DMP 1"	0302-010 ●	
Brass for mineral oil hose	DN 25 x G 1 female	DMP 1"	0302-112 ●	
SS (1.4571)	DN 25 x G 1 male	DMP 1"	0302-013 ●	
Brass	DN 38 x G 1 1/2 female	DMP 1 1/2"	0302-091** ●	
SS (1.4571)	DN 38 x G 1 1/2 female	DMP 1 1/2"	0302-092** ●	
Brass	DN 50 x G 2 female	DMP 2"	5000-100** ●	
SS (1.4571)	DN 50 x G 2 female	DMP 2"	5000-101** ●	
**) can be used only in connection with flange				

Accessories

Suction pipe, foot strainer, strainer, vibration dampener, equipotential bonding cable, drum pump set



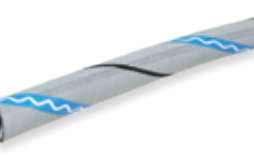
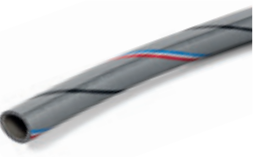
Product detail	Specification	Order-No.
	Suction pipe SS (1.4571) Outer diameter 41 mm, Length 1000 mm Connection: G 1 male 0204-229 SS (1.4571) Outer diameter 41 mm, Length 1200 mm Connection: G 1 male 0204-355 SS (1.4571) Outer diameter 41 mm, Length 1000 mm Connection: G 1 1/4 male 0204-228 SS (1.4571) Outer diameter 41 mm, Length 1200 mm Connection: G 1 1/4 male 0204-356 PP Outer diameter 41 mm, Length 1000 mm Connection: G 1 1/4 male 5000-120 PP Outer diameter 41 mm, Length 1200 mm Connection: G 1 1/4 male 5000-119 PVDF Outer diameter 41 mm, Length 1200 mm Connection: G 1 1/4 male 5000-118	
	Suction pipe for complete drum drainage SS (1.4571) Outer diameter 41 mm, Length 1200 mm Connection: G 1 1/4 male 5000-294	
	Foot strainer Suitable for suction pipe SS (1.4571) Outer diameter 55 mm Mesh diameter 20 x 2 mm 0204-617 PP Outer diameter 55 mm Mesh diameter 20 x 2 mm 0343-177 PVDF Outer diameter 55 mm Mesh diameter 20 x 2 mm 0343-187	
	Suction pipe with strainer Consisting of: Foot strainer with hose piece and Suction pipe PP Outer diameter 21.5 mm, Length 980 mm Connection: G 1/2 male 5000-220	
	Strainer Suitable for suction hose SS (1.4571) / PA G 1 1/4 male 5000-283 SS (1.4571) G 1 1/4 male 5000-284	
	Vibration dampener kit For vibration damping with free mounting consisting of 4 vibration dampers, including fixing material with thread M6 DMP 1/4" - DMP 1/2" 5000-219 with thread M8 DMP 1" 5000-218 For vibration damping with foot mounting consisting of 4 vibration dampeners, including fixing material DMP 1/4" - DMP 1/2" 5000-216 DMP 1" 5000-215 DMP 1 1/2" and DMP 2" 5000-217	
	Equipotential bonding cable Serves to create electrically conductive connection between explosion proof pump and container as earthing and equipotential bonding function. 0204-994 ●	
	Drum pump kit Suction pipe and bung hole adapter for emptying of 200 l-drums. Length: 1000 mm (is directly screwed into the suction manifold of the double diaphragm pump) PP DMP 1/2" (Clamped Version) 5000-174 Alu DMP 1/2" 5000-175 SS (1.4571) DMP 1/2" 5000-221 PP DMP 1" (Clamped Version) 5000-176	

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

Specification	Order-No.	Product detail
Hose clips Stainless steel hose clips with threaded screw for fixing hoses of various nominal bore at the hose connection. Nominal diameter: DN 9 (3/8") DN 13 (1/2") DN 19 (3/4") DN 25 (1") DN 32 - 38 (1 1/4" - 1 1/2") DN 50 (2")	0301-156 0301-403 0301-400 0301-401 0302-402 0302-403	
PVC spiral hose, fabric reinforced Hose made of PVC, with woven layer and imbedded galvanized steel helix. For aggressive, non-flammable liquids. Operating pressure: max. 14 bar Temperature of medium: -5 up to +65 °C Nominal diameter: Weight: DN 19 (3/4") 0,45 kg/m DN 25 (1") 0,67 kg/m DN 32 (1 1/4") 0,80 kg/m DN 38 (1 1/2") 1,15 kg/m DN 50 (2") 1,60 kg/m	0374-466* 0374-467* 0374-468* 0374-469* 0374-470*	
PVC-hose Fabric reinforced Operating pressure: max. 8 bar at 20 °C Material: Nominal diameter: PVC DN 9 PVC DN 13	0373-153 0373-154	
PTFE-hose Temp. range of application: - 30 up to + 100 °C Operating pressure: max. 6.5 at 20 °C Material: Nominal diameter: PTFE DN 8 PTFE DN 13	Low pressure: max. 0.7 bar (0.3 bar abs.) 0374-444 0374-445	

Accessories

Mineral oil hose, solvent hose, universal chemical hose, special chemical hose






Product detail	Specification	Order-No.
	Mineral oil hose Inner rubber of NBR, outer rubber of NBR. Not suitable for suction operation. Electrically conductive: Type Ω -CL ($<10^6$ Ohm between the fittings) according to TRbF 50 appendix B (TRbF 131/2). Temperature of medium: -25 up to +65 °C Material: NBR Nominal diameter: DN 13 Operating pressure: max. 10 bar NBR DN 19 max. 10 bar NBR DN 25 max. 10 bar	0374-446 ● 0374-461 ● 0374-462 ●
	Inner rubber of NBR, outer rubber of chloroprene. Not suitable for suction operation. Electrically conductive: Type Ω /T ($<10^6$ Ohm between the fittings, $<10^9$ Ohm through the hose wall) according to DIN EN 12115:2011. Temperature of medium: -30 up to +90 °C Material: NBR Nominal diameter: DN 32 Operating pressure: max. 16 bar NBR DN 38 max. 16 bar NBR DN 50 max. 16 bar	0374-413 ● 0374-414 ● 0374-448 ●
	Solvent hose Inner rubber of NBR special, outer rubber of NBR/PVC-Compound. Electrically conductive: Type Ω /T ($<10^6$ Ohm between the fittings, $<10^9$ Ohm through the hose wall) according to DIN EN 12115:2011. Temperature of medium: -20 up to +80 °C Material: NBR special Nominal diameter: DN 13 Operating pressure: max. 16 bar Low pressure: max. 0.9 bar (0.1 bar abs.) NBR special DN 19 max. 16 bar max. 0.9 bar (0.1 bar abs.) NBR special DN 25 max. 16 bar max. 0.9 bar (0.1 bar abs.) NBR special DN 32 max. 16 bar max. 0.9 bar (0.1 bar abs.) NBR special DN 38 max. 16 bar max. 0.9 bar (0.1 bar abs.) NBR special DN 50 max. 16 bar max. 0.9 bar (0.1 bar abs.)	0374-449 ● 0374-416 ● 0374-417 ● 0374-418 ● 0374-450 ● 0374-451 ●
	Universal chemical hose Inner rubber of ultra high molecular polyethylene (U-PE), outer rubber of EPDM. Electrically conductive: Type Ω /T ($<10^6$ Ohm between the fittings, $<10^9$ Ohm through the hose wall) according to DIN EN 12115:2011. Temperature of medium: -30 up to +100 °C Material: U-PE Nominal diameter: DN 13 Operating pressure: max. 16 bar Low pressure: max. 0.9 bar (0.1 bar abs.) U-PE DN 19 max. 16 bar max. 0.9 bar (0.1 bar abs.) U-PE DN 25 max. 16 bar max. 0.9 bar (0.1 bar abs.) U-PE DN 32 max. 16 bar max. 0.9 bar (0.1 bar abs.) U-PE DN 38 max. 16 bar max. 0.9 bar (0.1 bar abs.) U-PE DN 50 max. 16 bar max. 0.9 bar (0.1 bar abs.)	0374-474 ● 0374-475 ● 0374-476 ● 0374-477 ● 0374-478 ● 0374-479 ●
 	Special chemical hose FEP Inner rubber of FEP, outer rubber of EPDM. Electrically conductive: Type Ω -C ($<10^6$ Ohm between the fittings) according to DIN EN 12115:2011. (NOT suitable for non-conductive, flammable liquids!) Temperature of medium: -30 up to +100 °C Material: FEP Nominal diameter: DN 19 Operating pressure: max. 16 bar Low pressure: max. 0.9 bar (0.1 bar abs.) FEP DN 25 max. 16 bar max. 0.9 bar (0.1 bar abs.) FEP DN 32 max. 16 bar max. 0.9 bar (0.1 bar abs.) FEP DN 38 max. 16 bar max. 0.9 bar (0.1 bar abs.) FEP DN 50 max. 16 bar max. 0.9 bar (0.1 bar abs.)	0374-428 ● 0374-429 ● 0374-430 ● 0374-455 ● 0374-456 ●
	Special chemical hose PTFE Inner rubber of PTFE, outer rubber of EPDM. Electrically conductive: Type Ω /T ($<10^6$ Ohm between the fittings, $<10^9$ Ohm through the hose wall) according to DIN EN 12115:2011. Temperature of medium: -30 up to +150 °C Material: PTFE Nominal diameter: DN 19 Operating pressure: max. 16 bar Low pressure: max. 0.9 bar (0.1 bar abs.) PTFE DN 25 max. 16 bar max. 0.9 bar (0.1 bar abs.)	0374-481 ● 0374-482 ●

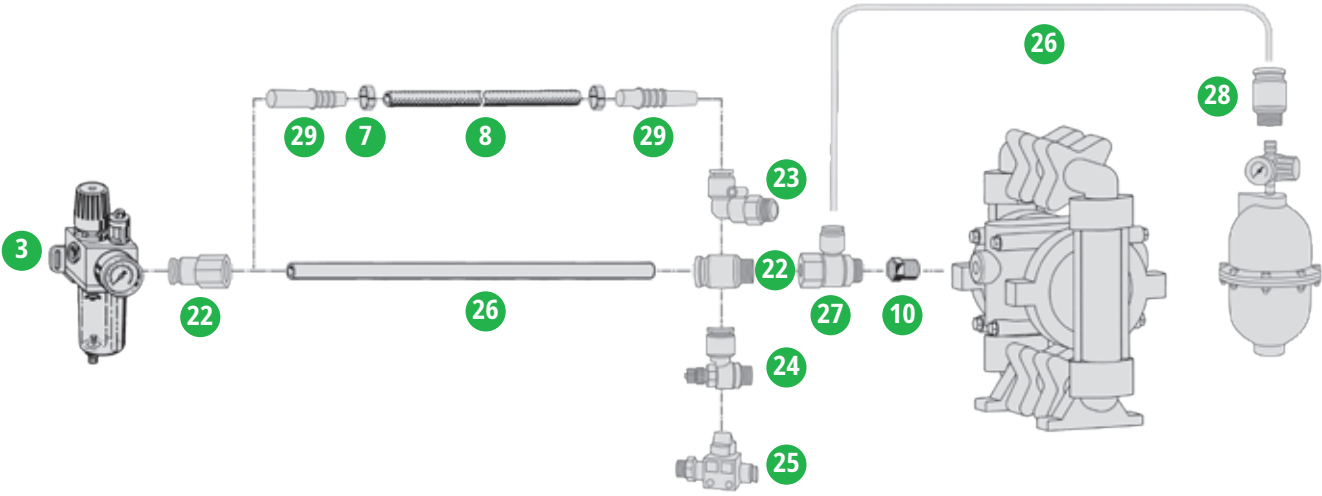








● Suitable for transferring combustible and easy inflammable liquids (e.g. ethanol, petrol) or in explosive hazard area.

Specification	Order-No.	Product detail
1 Needle valve Regulates the air extent to the double diaphragm pump. Brass G 3/8 DMP 1/4" 5000-160 Brass G 3/4 DMP 3/8" 5000-161 Brass G 3/4 DMP 1/2" 5000-161 Brass G 3/4 DMP 1" 5000-161 Brass G 3/4 DMP 1 1/2" 5000-161 Brass G 3/4 DMP 2" 5000-161 Brass G 3/4 DMP 3" 5000-161		
2 Air flow control valve PVC 3/4 NPT male x G 3/4 female DMP 1 1/2" up to 3" 5303-429 PVC 1/4 NPT male x G 1/2 female DMP 1/4" up to 1" 5303-430		
3 Filter pressure regulator Inlet pressure: max. 16 bar Ambient temp.: max. 60 °C Filter element: 5 µm, Cellpor Diaphragms and seals: NBR Housing: Zinc-Pressure cast G 3/8 DMP 1/4" up to DMP 1" 5000-178 Inlet pressure: max. 16 bar Ambient temp.: max. 60 °C Filter element: 40 µm, sinter bronze Diaphragms and seals: NBR Housing: Aluminium G 3/4 DMP 1 1/2" up to DMP 3" 5000-173		
4 Air hose coupling Self-closing Brass (NW 7.2) DN 9 DMP 1/4" and 3/8" 0372-166 Brass (NW 7.2) DN 13 DMP 1/2" and 1" 0372-167 Brass (NW 10) DN 13 DMP 1 1/2" and 3" 5000-165		

Accessories

for compressed air supply

Product detail	Specification	Order-No.
	5 Air coupling connector Brass (NW 7.2) G 3/8 male DMP 1/4" DMP 3/8" DMP 1/2" DMP 1"	0372-045
	Brass (NW 7.2) G 1/2 male (when using a regulation valve) DMP 1/4" DMP 3/8" DMP 1/2" DMP 1"	5000-179
	Brass (NW 10) G 3/4 male DMP 1 1/2" DMP 2" DMP 3"	5000-172
	6 Air hose nozzle For connection into coupling (NW 7.2) For compressed air hose DN 9 DN 13	0372-155 0372-039
	7 Hose clamp (Chrome steel: 1.4016) For compressed air hose DN 9 DN 13	0301-156 0301-403
	8 Compressed air hose PVC-hose with woven layer Max. operating pressure: 8 bar at 20 °C DN 9 DN 13	0373-153 0373-154
	9 Double nipple Brass G 3/8 male Brass G 3/4 male	0302-157 5000-171
	10 Reducing piece Brass G 1/4 female x 1/4 NPT male Brass G 1/4 female x 1/2 NPT male Brass G 3/8 female x 1/4 NPT male Brass G 3/8 female x 1/2 NPT male Brass G 3/4 female x 3/4 NPT male Brass G 3/8 male x G 3/4 male Brass 3/4 NPT female x 1/2 NPT male	5000-225 5000-226 5000-177 5000-227 5000-170 5000-210 5000-228

Specification	Order-No.	Product detail
		
22 Male connector For connecting to the pump Brass, nickel-plated G 1/4 male ø DN 12 mm DMP 1/4" up to 1" 5000-400 For connecting to a pressure regulator Brass, nickel-plated G 3/8 male x ø 12 mm DMP 3/8" up to 1" 5000-401		
23 Male elbow Rotatable, for connecting to the pump Plastic / Brass, nickel-plated G 1/4 male x ø 12 mm DMP 1/4" up to 1" 5000-402		
24 Flow control valve Regulates the air extent to the pump, rotatable, for connecting to the pump Plastic / Brass, nickel-plated G 1/4 male x ø 12 mm DMP 1/4" up to 1" 5000-403		
25 Stop valve For connecting to the pump Plastic / Brass, nickel-plated G 1/4 male x ø 12 mm DMP 1/4" up to 1" 5000-404		
26 Polyurethane hose For use with plug-type connectors Range of temperature: - 40 °C up to + 60 °C Max. operating pressure: 10 bar at 23 °C PUR Outer-ø 12 mm, Inner-ø 9 mm DMP 1/4" up to 1" 5000-405		
27 Elbow tee Optional branch when using a pulsation dampener, rotatable Plastic / Brass, nickel-plated G 1/4 male x ø 12 mm x G 1/4 female DMP 1/4" up to 1" 5000-406		
28 Female connector Optional for connecting a pulsation dampener Brass, nickel-plated G 1/4 male x ø 12 mm 5000-407		
29 Nipple with hose liner for PVC hose DN 9 Plastic ø 10 mm x ø 12 mm 5000-408		

Non-contacting volume measurement

Product detail

Specification

Order-No.

The diagram illustrates the assembly of a double diaphragm pump system. Key components are numbered as follows:

- 19**: The main double diaphragm pump unit.
- 21**: A small auxiliary pump or valve connected to the main pump.
- 9** and **10**: Fittings or connectors for the air inlet line.
- Air inlet**: The connection point for the compressed air supply.
- Air outlet**: The connection point for the air line leading to the operating unit.
- 12**: An impulse set (cable and adapter) for stroke counting.
- 13**: A data cable for electronic pulse connection.
- 14**: The operating unit with a digital display showing volume.
- 16**, **17**, and **18**: Additional components or connectors related to the operating unit.
- 20**: A cable with a connector for the operating unit.

Labels in the diagram include "supplied with pump" pointing to a component and "Air inlet" / "Air outlet" for the respective ports.

12 Impulse set
For counting the strokes of double diaphragm pump

Electronic impulse connection
Consisting of:
Impuls adapter with 0.6 m 2-pole connecting cable and 7-pole coupling socket
Additional price* DMP 1/4" up to DMP 3"

5000-345

13 Data cable pulse connection
Connects the pulse connection electronically with the operating unit or the pulse converter.
Data line 7-pole to 14-pole.

5000-349








*(When ordering a pump, please also advise ref.no. for the additional price)

14 Operating unit
Serves to count the impulses and shows the volume on a digital display.

Operating unit BE10
Operating unit BE10V (electronic moulded)
Operating unit Ex-BE10B
Operating unit Ex-BE10BV (electronic moulded)

0230-000
0230-001
0230-010
0230-011

Non-contacting volume measurement


Specification	Order-No.	Product detail
16 Intermediate plate Necessary for fixing the operating unit. PP	0230-304	
Accessories optional 17 Relay module Allows a preselected volume. Type RM10, 220-240 V, 50-60 Hz, II (2) G [Ex ib] II C Type Ex RM10mK 220-240 V, 50-60 Hz, II 2 G Ex ebmb [ib] IIC T4	0230-200 on request ●	
18 Mains unit NG10 230 V Includes a power supply or the operating unit. 220-240 V, 50-60 Hz, II (2) G [Ex ib] IIC	0230-230	
19 Connecting cable Length 5 m 2/2-way-solenoid valve, 230 V	0211-150	
20 Mains supply 230 V Relay module, 230 V Length 5 m	0211-155	
21 2/2-Way solenoid valve Shuts off the air supply to the double diaphragm pump. Control via the relay module. Brass G 3/8 female Brass, Ex G 3/8 female	5000-167 5000-168 ●	
Protective cap Allows a separate installation from relay module and/or control unit. SH10 with 1 data socket SH20 with 2 data sockets	0230-350 0230-351	

Adjustable pulsation dampener

Product detail

Specification

Order-No.



Automatic pulsation dampener

Operation

The pulsation dampener is a vessel filled with compressed gas. The gas is entrapped by the elastomeric bladder, which prevents contact between the process fluid and compressed gas. When a pulse is created, fluid enters the wetted chamber of the dampener, displacing the bladder, compressing the gas and absorbing the shock. When the liquid pressure decreases, the gas expands pushing the fluid back to the process line. The pump's discharge will produce an almost steady fluid flow.

Advantages of the pulsation dampener

- Dampeners avoid vibrations of the pipeline, which cause material fatigues and pipe breaks.
- Compensation of hydraulic surge ("water hammer") protects integrated fittings.
- Create a nearly steady and continuous fluid flow, which increases the accuracy of the flow meter systems.
- Explosion proof models with ATEX approval

Installation

Mount pulsation dampener as close to the pump as possible. For models with automatic air control it is not necessary to regulate the dampener pressure and to adjust the dampener if there are pressure variations. They regulate themselves in dependence on the system pressure. The air supply of the dampener and of the air operated double diaphragm pump are parallel.

Pulsation dampener PD III D for DMP 1/4" and DMP 3/8"

Housing materials: PP, PVDF and SS (1.4571)
Diaphragms: PTFE, EPDM, NBR and FPM
Connection: G 1/2 female
Air supply: 1/4 NPT male
Operating pressure: max. 10 bar
Volume: approx. 0.16 dm³, respectively approx. 0.13 dm³ with PTFE-diaphragm
Air control: adjustable
Weight: approx. 1 up to 1.8 kg


Type	Housing materials	Diaphragms	Order No.
PD III D – P – B	PP (in contact with the product) PP (not in contact with the product)	NBR	5000-350
PD III D – P – ND	PP (in contact with the product) PP (not in contact with the product)	EPDM	5000-351
PD III D – P – T	PP (in contact with the product) PP (not in contact with the product)	PTFE	5000-352
PD III D – P – V	PP (in contact with the product) PP (not in contact with the product)	FPM	5000-353
PD III D – K – T	PVDF (in contact with the product) PVDF (not in contact with the product)	PTFE	5000-354
PD III D – S – T Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	PTFE	5000-357 ●

Adjustable pulsation dampener



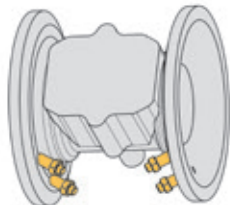
Specification		Order-No.	Product detail
Pulsation dampener for DMP 1/2" DT 50 / DTX 70 Housing materials: PE, PTFE and SS (1.4571) Diaphragms: PTFE, EPDM, NBR Connection: G 1/2 female / G 3/4 SS Air supply: G 1/4 female Operating pressure: max. 8 bar Air control: automatically Weight: approx. 1.4 up to 2.1 kg		PD II F SS (1.4571) FPM G 3/4 female 1/4 NPT male max. 10 bar adjustable approx. 4.5 kg	
Type	Housing materials	Diaphragms	
DT 50 PN	PE (in contact with the product)	NBR	5000-410
DT 50 PE	PE (in contact with the product)	EPDM	5000-411
DT 50 PT	PE (in contact with the product)	PTFE	5000-412
DT 50 TT	PTFE (in contact with the product)	PTFE	5000-413
DT X 70 ST Ex II 2 GD IIB T4	SS, 1.4404 (in contact with the product)	PTFE	5000-414 ●
PD II F – S – V Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product)	FPM	5000-363 ●
Pulsation dampener for DMP 1" DT 100 / DTX 120 Housing materials: PE, PTFE and SS (1.4404) Diaphragms: PTFE, EPDM, NBR Connection: G 1 female Air supply: G 1/4 female Operating pressure: max. 8 bar Air control: automatically Weight: approx. 2.8 up to 4.6 kg		PD II D SS (1.4571) FPM G 3/4 female 1/4 NPT male max. 10 bar adjustable approx. 6 kg	
Type	Housing materials	Diaphragms	
DT 100 PN	PE (in contact with the product)	NBR	5000-415
DT 100 PE	PE (in contact with the product)	EPDM	5000-416
DT 100 PT	PE (in contact with the product)	PTFE	5000-417
DT 100 TT	PTFE (in contact with the product)	PTFE	5000-418
DT X 120 ST Ex II 2 GD IIB T4	SS, 1.4404 (in contact with the product)	PTFE	5000-419 ●
PD II D – S – V Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product)	FPM	5000-369 ●

Accessories

Adjustable pulsation dampener, pressure relief valve

Product detail	Specification	Order-No.																																												
	<p>Pulsation dampener PD I D for DMP 1 1/2" and DMP 2"</p> <p>Housing materials: PP, PVDF and SS (1.4571) Diaphragms: PTFE, EPDM, NBR and FPM Connection: G 2 female Air supply: 1/4 NPT male Operating pressure: max. 10 bar Volume: approx. 6 dm³, respectively approx. 5.8 dm³ with PTFE-diaphragm Air control: adjustable Weight: approx. 7.2 up to 19 kg</p> <table><tr><th>Type</th><th>Housing materials</th><th>Diaphragms</th><th>Order No.</th></tr><tr><td>PD I D – P – B</td><td>PP (in contact with the product) PP (not in contact with the product)</td><td>NBR</td><td>5000-370</td></tr><tr><td>PD I D – P – ND</td><td>PP (in contact with the product) PP (not in contact with the product)</td><td>EPDM</td><td>5000-371</td></tr><tr><td>PD I D – P – T</td><td>PP (in contact with the product) PP (not in contact with the product)</td><td>PTFE</td><td>5000-372</td></tr><tr><td>PD I D – K – T</td><td>PVDF (in contact with the product) PP (not in contact with the product)</td><td>PTFE</td><td>5000-373</td></tr><tr><td>PD I D – C – B Ex II 2 GD IIB T4</td><td>C-Steel (in contact with the product) C-Steel (not in contact with the product)</td><td>NBR</td><td>5000-374 ●</td></tr><tr><td>PD I D – S – T Ex II 2 GD IIB T4</td><td>SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)</td><td>PTFE</td><td>5000-375 ●</td></tr><tr><td>PD I D – S – V Ex II 2 GD IIB T4</td><td>SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)</td><td>FPM</td><td>5000-376 ●</td></tr></table> <p>Pulsation dampener PD IV D for DMP 3"</p> <p>Housing materials: Aluminium Diaphragms: EPDM and FPM Connection: Flange DIN DN 75 PN 10 or ANSI 150 Air supply: 1/4 NPT male Operating pressure: max. 10 bar Volume: approx. 18 dm³ Air control: adjustable Weight: approx. 18 kg</p> <table><tr><th>Type</th><th>Housing materials</th><th>Diaphragms</th><th>Order No.</th></tr><tr><td>PD IV D – A – ND Ex II 2 GD IIB T4</td><td>Alu (in contact with the product) Alu (not in contact with the product)</td><td>EPDM</td><td>5000-203 ●</td></tr><tr><td>PD IV D – A – V Ex II 2 GD IIB T4</td><td>Alu (in contact with the product) Alu (not in contact with the product)</td><td>FPM</td><td>5000-377 ●</td></tr></table>	Type	Housing materials	Diaphragms	Order No.	PD I D – P – B	PP (in contact with the product) PP (not in contact with the product)	NBR	5000-370	PD I D – P – ND	PP (in contact with the product) PP (not in contact with the product)	EPDM	5000-371	PD I D – P – T	PP (in contact with the product) PP (not in contact with the product)	PTFE	5000-372	PD I D – K – T	PVDF (in contact with the product) PP (not in contact with the product)	PTFE	5000-373	PD I D – C – B Ex II 2 GD IIB T4	C-Steel (in contact with the product) C-Steel (not in contact with the product)	NBR	5000-374 ●	PD I D – S – T Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	PTFE	5000-375 ●	PD I D – S – V Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	FPM	5000-376 ●	Type	Housing materials	Diaphragms	Order No.	PD IV D – A – ND Ex II 2 GD IIB T4	Alu (in contact with the product) Alu (not in contact with the product)	EPDM	5000-203 ●	PD IV D – A – V Ex II 2 GD IIB T4	Alu (in contact with the product) Alu (not in contact with the product)	FPM	5000-377 ●	
Type	Housing materials	Diaphragms	Order No.																																											
PD I D – P – B	PP (in contact with the product) PP (not in contact with the product)	NBR	5000-370																																											
PD I D – P – ND	PP (in contact with the product) PP (not in contact with the product)	EPDM	5000-371																																											
PD I D – P – T	PP (in contact with the product) PP (not in contact with the product)	PTFE	5000-372																																											
PD I D – K – T	PVDF (in contact with the product) PP (not in contact with the product)	PTFE	5000-373																																											
PD I D – C – B Ex II 2 GD IIB T4	C-Steel (in contact with the product) C-Steel (not in contact with the product)	NBR	5000-374 ●																																											
PD I D – S – T Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	PTFE	5000-375 ●																																											
PD I D – S – V Ex II 2 GD IIB T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	FPM	5000-376 ●																																											
Type	Housing materials	Diaphragms	Order No.																																											
PD IV D – A – ND Ex II 2 GD IIB T4	Alu (in contact with the product) Alu (not in contact with the product)	EPDM	5000-203 ●																																											
PD IV D – A – V Ex II 2 GD IIB T4	Alu (in contact with the product) Alu (not in contact with the product)	FPM	5000-377 ●																																											
	<p>Pressure relief valve</p> <p>Provides for a defined working pressure and supports the pump when operating under unfavourable geodetic conditions (e.g. large suction heads, open discharge). The set pressure of the valve produces the necessary positive pressure difference between pressure- and suction side of the pump.</p> <p>Housing material: PVC, PP, PVDF, SS Setting range: 0.3 - 10 bar DN 10 - DN 50</p>	on request																																												

Max-Pass™ Valve, electric solenoid control valve

Specification	Order-No.	Product detail										
<p>Max-Pass™-Valve</p> <p>Designed to transfer fluids containing large solids and highly viscous fluids, e.g. adhesives, paints, inks or slurries. Special construction features offer numerous advantages compared with traditional ball or cone valves:</p> <ul style="list-style-type: none">• For fluids with solid particles: DMP 1/2" up to 9.6 mm DMP 1" up to 19 mm• For abrasive fluids• For viscous fluids up to 22.000 mPas• Creates a 25% increase of the suction capability of the pump• Greater freedom of installation of the pump• Developed and tested for long service life > 20 millions of strokes												
<p>Electric solenoid control valve</p> <p>The electric solenoid control valve is used for controlling the operating cycles of the diaphragm pump. When energized, air is delivered to one side of the diaphragm while simultaneously exhausting the other side. The reverse occurs when the solenoid is de-energized by delivering air to the side of the pump previously being exhausted. Via the frequency and the number of electromagnetic impulses the flow rate or the batch can be optionally set. The pump stops exactly on the given setting.</p> <p>Control voltage: 230V AC/50 Hz, 120V AC/60 Hz or 24V DC.</p> <ul style="list-style-type: none">• Pump control via electric impulses• For remote control of the pump via SPS, relay and switch• Ideal for batching and simple metering applications• Non-stalling operation• Absolutely oil-free <p>Available at add. price in following versions*</p> <table><tr><td>220V AC/50Hz</td><td>DMP 1/2" and 1"</td><td>5000-322</td></tr><tr><td>120V AC/60Hz</td><td>DMP 1/2" and 1"</td><td>5000-321</td></tr><tr><td>24V DC</td><td>DMP 1/2" and 1"</td><td>5000-320</td></tr></table> <p>*(To order a pump, please advise the respective ref.-no. for add. price to the pump order-no.)</p>	220V AC/50Hz	DMP 1/2" and 1"	5000-322	120V AC/60Hz	DMP 1/2" and 1"	5000-321	24V DC	DMP 1/2" and 1"	5000-320			
220V AC/50Hz	DMP 1/2" and 1"	5000-322										
120V AC/60Hz	DMP 1/2" and 1"	5000-321										
24V DC	DMP 1/2" and 1"	5000-320										
<p>Diaphragm Control</p> <p>In case of a diaphragm rupture, the pumped liquid can enter the air side of the pump and exit through the air exhaust. Such a leakage can be avoided when using a diaphragm control. Both air chambers have sensors which registrate entering liquid. These sensors transmit an impulse to a level controller which stops the pump and/or activates an alarm signal.</p> <p>The use of a diaphragm control is only possible with conductive liquids.</p> <p>The diaphragm control is available for following types at extra costs*</p> <table><tr><td>Diaphragm control DMP 3/8"</td><td>5000-624</td></tr><tr><td>Diaphragm control DMP 1/2"</td><td>5000-625</td></tr><tr><td>Diaphragm control DMP 1"</td><td>5000-626</td></tr><tr><td>Diaphragm control DMP 1 1/2" and DMP 2"</td><td>5000-627</td></tr><tr><td>Diaphragm control DMP 3"</td><td>5000-628</td></tr></table> <p>*(To order a pump please advise respective Ref. No. for additional price to the pump order-no.)</p>	Diaphragm control DMP 3/8"	5000-624	Diaphragm control DMP 1/2"	5000-625	Diaphragm control DMP 1"	5000-626	Diaphragm control DMP 1 1/2" and DMP 2"	5000-627	Diaphragm control DMP 3"	5000-628		
Diaphragm control DMP 3/8"	5000-624											
Diaphragm control DMP 1/2"	5000-625											
Diaphragm control DMP 1"	5000-626											
Diaphragm control DMP 1 1/2" and DMP 2"	5000-627											
Diaphragm control DMP 3"	5000-628											

Materials of the Lutz Double Diaphragm Pumps

Materials of the pump housings

Type	Polypropylene	PVDF	PA-C	Stainless Steel	Aluminium
DMP 1/4"	●	●	●		
DMP 3/8"	●	●	●		
DMP 1/2"	●	●	●	●	●
DMP 1"	●	●		●	●
DMP 1 1/2"	●	●		●	●
DMP 2"	●	●		●	●
DMP 3"				●	●

Temperature limit values

Diaphragms:

TPV (NBR-PP)	-12 °C to 82 °C
TPV (EPDM-PP)	-40 °C to 107 °C
FPM	-40 °C to 176 °C
PTFE	4 °C to 105 °C

Metallic Pumps:

Can operate past 100°C. However, if you are operating above these limits, consult the factory for assistance.

Plastic Pumps:

Can operate to the following temperature limits:

PP:	- 0 °C to 66 °C
PVDF:	-18 °C to 93 °C
PA:	-18 °C to 66 °C
Aluminium:	-23 °C to 93 °C
Stainless Steel:	-23 °C to 93 °C

Caution: Temperature limits are based upon mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperatures. Always consult engineering guides for chemical limits and chemical compatibility.

Note:

These are average temperatures. Chemicals and solvents can have an effect on temperature limits.

Housing and pump seat materials

Polypropylene (PP)

Polypropylene is a thermoplast, which is obtained from Propene by means of catalyzers through low pressure polymerisation. Polypropylene shows high resistance to organic acids and bases, alcohol and the most water-soluble inorganic chemicals.

Caution: Chlorinated compounds, hydrocarbons and organic solvents will cause swelling or attack polypropylene and should be avoided.

Polyvinylidene fluoride (PVDF)

A tough thermoplastic which exhibits good mechanical strength, high abrasion resistance, high thermal stability and high dielectric strength. Resistant to most chemicals and solvents.

Polyamide (PA)

Polyamide compounds with very high resistance to impact and scuff resistance, a very good resistance especially in the solvent sector. This material is additionally available in conductive version (PA-C).

Aluminium

Offers fair corrosion resistance with most organic acids and is excellent for use in general industrial and marine environments.

Stainless Steel

Exhibits the highest degree of chemical resistance and compatibility with corrosive fluids.

Materials of the Lutz Double Diaphragm Pumps

Materials of the diaphragms, valve balls and o-rings

PTFE Diaphragms

All Double Diaphragm Pumps fitted with PTFE diaphragms have back-up diaphragms made of TPV (EPDM-PP).

PTFE is only conditionally flexible and requires a back-up diaphragm in order to guarantee the flexibility.

PTFE: Highest chemical resistance. Excellent choice when pumping highly aggressive fluids such as aromatic or chlorinated hydrocarbons, acids, caustics, ketones and acetates.

FPM Diaphragms

FKM: A polymer of vinylidenefluoride and hexafluoropropylene. Advantages are the high temperature resistance and the chemical stability. These result in a large resistance to aggressive fluids, e. g. aliphatic and aromatic hydrocarbons or acids.

Thermoplast Diaphragms

These diaphragms are made up entirely of man-made compound and require no fabric reinforcement due to the dimensional stability and tensile strength inherent in TPV compounds.

TPV (NBR-PP): Is a compound of NBR and PP. The chemical resistance is comparable with NBR. Perfectly suitable for oils and oil based liquids. Excellent for working under cold temperatures and is a cost saving alternative when pumping thin-bodied inorganic acids or caustics.

TPV (EPDM-PP): Is a compound of EPDM and PP. The chemical resistance is comparable with EPDM. When pumping acids and alkalis, TPV (EPDM-PP) is an excellent alternative to PTFE on many applications. It exhibits high abrasion resistance.

Pumping characteristics with viscous media

Viscous liquids

As an empirical rule, any liquid that will flow can be pumped by the Lutz Double Diaphragm Pumps.

It is noteworthy that some liquids, in addition to being viscous, may also be sticky. This characteristic may in some cases cause the ball valves to „hang-up“ and not seat properly, in these cases a simple remedy is to use compatible balls of a heavier material e.g. stainless steel.

The flow speed is also critical. Lower speeds reduce the flow resistance.

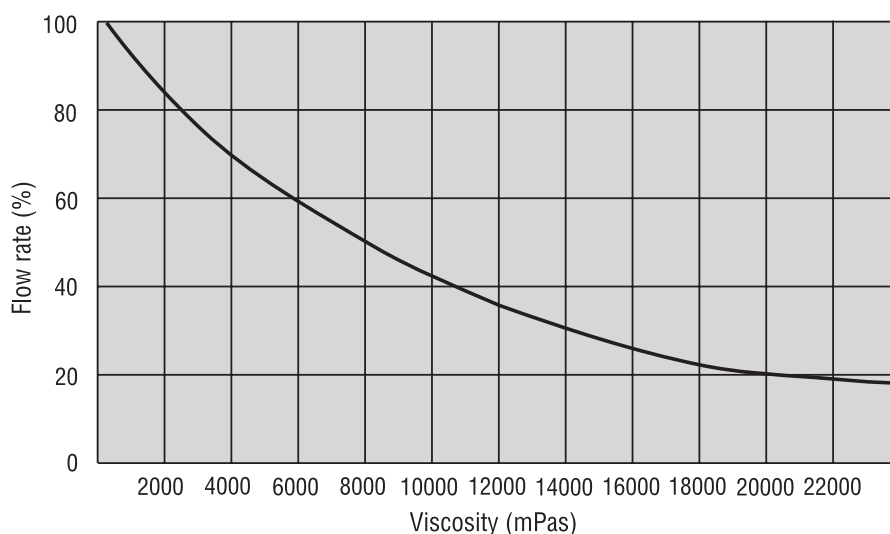
The following is for guidance only:

Type	Viscosity
DMP 1/4"	2000 mPas to 3000 mPas
DMP 3/8"	4000 mPas
DMP 1/2"	5000 mPas
DMP 1"	5000 mPas to 6000 mPas
DMP 1 1/2"	15000 mPas to 20000 mPas
DMP 2"	20000 mPas
DMP 3"	22000 mPas

Values without Max-Pass™ -Valve

Flow rate reduction in relation to viscosity

The diagram shows the approximate flow rate reduction with respect to viscosity, the reduction can also be attributable to suction lift, density as well as pipes and fittings on the suction and discharge.



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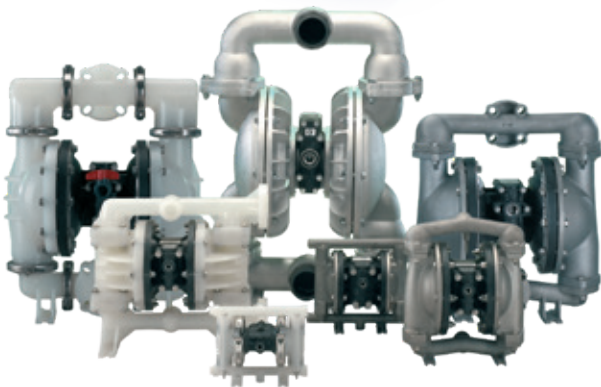
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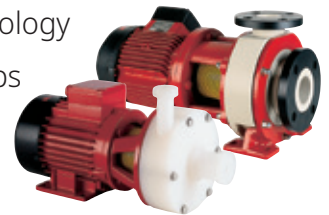
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www.lutz-jesco.com



Lutz Pumpen GmbH

Erlenstraße 5-7
D-97877 Wertheim
Phone: +49 93 42 / 8 79-0
Fax: +49 93 42 / 87 94 04
E-Mail: info@lutz-pumpen.de

www.lutz-pumpen.de