

The Double diaphragm 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

Products on which you can rely





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, PVDF, Nylon, Conductive Nylon, Aluminium and Stainless Steel.

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

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

Advantages of the product

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

No leakage and contamination in the compressed air system due to a novel valve technique

- Reduced operating costs
- Gentle pumping of liquids and pastes

Further typical advantages of the Double Diaphram Pumps

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



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.





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.



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 (Teflon 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.

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.

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: Delivery head: Materials: up to 16 l/min up to 6.8 bar PP, PVDF, Nylon

DMP 3/8"

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

Delivery rate: Delivery head: Materials: up to 34 l/min up to 8 bar PP, PVDF, Nylon

DMP 1/2"

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

Delivery rate: Delivery head: Materials: Up to 65 l/min up to 8 bar PP, PVDF, Nylon, Aluminium, Stainless Steel

DMP 1"

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

Delivery rate:	up to 156 l/min
Delivery head:	up to 8 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

Donvory rate.	up to +52 i/iiiii	DM
Delivery head:	up to 8.2 bar	DIV
Materials:	PP, PVDF, Aluminium, Stainless Steel	DN

DMP 2"

Paint, latex, ceramic slip, slurries, polymers,		
tank car fill and empty, foods.		
Delivery rate:	up to 681 I/min	
Delivery head:	up to 8.2 bar	

Bonnong noua.	up to 0.2 bui	DIVIP Z
Materials:	PP, PVDF, Aluminium,	
	Stainless Steel	DMP 3"

DMP 3"

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

Delivery rate:	up to 965 l/min
Delivery head:	up to 8.5 bar
Materials:	Aluminium
1	

DIVIF	1/4
DMP	3/8"
DMP	1/2"
DMP	1"
DMP	1 1/

Size

DMD 1//









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



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.

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

Operating data / Dimensions / Weights				
	DMP 1/4" PP	DMP 1/4" Kynar®	DMP 1/4" Nylon	
Housing material:	Polypropylene	Kynar®	Nylon	
Diaphragm materials:	Geolast®, Santoprene®, Teflon®	Teflon®	Teflon®, Santoprene®	
Valve material:	Teflon®	Teflon®	Teflon®	
Seals:	Geolast®, Santoprene®, Teflon®	Teflon®	Teflon®, Santoprene®	
Max. flow rate:	16 l/min.	16 l/min.	16 I/min.	
Suction lift dry:	6 m	6 m	6 m	
Suction lift Teflon®:	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	

Material description:

Geolast®	=	NBR/PP-compound
Kynar®	=	PVDF = Polyvinylidenfluoride
Nylon	=	PA = Polyamide-compound
Polypropylene	=	PP
Santoprene®	=	EPDM/PP-compound
Teflon®	=	PTFE = Polytetrafluorethylene

¹)if the air flow control valve is used (not included in the delivery extent – see page 39).

Туре	Materials of construction		Order No.
	Housing	Diaphragm, Seals	
DMP 1/4" PPB PP/Geolast®	PP	Geolast®	5700-000
DMP 1/4" PPE PP/Santoprene®	PP	Santoprene®	5700-020
DMP 1/4" PPT PP/Teflon®	PP	Teflon®	5700-040
DMP 1/4" KNT Kynar®/Teflon®	Kynar®	Teflon®	5700-100
DMP 1/4" NEC Nylon/Santoprene $^{\otimes \star}$	Nylon	Santoprene®	5700-180
DMP 1/4" NTC Nylon/Teflon $^{\otimes \star}$	Nylon	Teflon®	5700-140

*conductive version Ex II 2 G c T4

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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 34-47.



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

Operating data / Dimensions / Weights			
	DMP 3/8" PP	DMP 3/8" Kynar®	DMP 3/8" Nylon
Housing material:	Polypropylene	Kynar®	Nylon
Diaphragm materials:	Geolast®, Santoprene®, Teflon®	Santoprene®, Teflon®,	Geolast [®] , Teflon [®] ,
Valve materials:	Geolast [®] , Santoprene [®] , Teflon [®] , Viton [®]	Santoprene®, Teflon®, Viton®	Geolast [®] ,Teflon [®] , Viton [®]
Seals:	Geolast [®] , EPDM, Teflon [®] , Viton [®]	Teflon®	Geolast [®] , Teflon [®]
Valve seat Teflon®:	PP	Kynar®	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 Teflon®:	3 m	3 m	3 m
Operating pressure:	max. 8 bar	max. 8 bar	max. 8 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:

Geolast®	= NBR/PP-compound
Kynar®	= PVDF = Polyvinylidenfluoride
Nylon	= PA = Polyamide-compound
Polypropylene	= PP
Santoprene®	= EPDM/PP-compound
Teflon®	= PTFE = Polytetrafluorethylene
Viton®	= FPM = Fluoro Elastomer

¹)if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре		Order No.		
	Housing	Diaphragm	Valve balls, Seals	
DMP 3/8" PPB PP/Geolast®	PP	Geolast®	Geolast®	5706-000
DMP 3/8" PPE PP/Santoprene®	PP	Santoprene®	Santoprene®	5706-020
DMP 3/8" PPT PP/Teflon®	PP	Teflon®	Teflon®	5706-040
DMP 3/8" PPV PP/Viton®	PP	Teflon®	Viton®	5706-060
DMP 3/8" KNE Kynar®/Santoprene®	Kynar®	Santoprene®	Santoprene®	5706-080
DMP 3/8" KNT Kynar®/Teflon®	Kynar®	Teflon®	Teflon®	5706-100
DMP 3/8" KNV Kynar®/Viton®	Kynar®	Teflon®	Viton®	5706-120
DMP 3/8" NTC Nylon/Teflon®* $\langle E x \rangle$	Nylon	Teflon®	Teflon®	5706-140
DMP 3/8" NBC Nylon/Geolast®* $\langle Ex \rangle$	Nylon	Geolast®	Geolast®	5706-160
DMP 3/8" NVC Nylon/Viton®* 〈Ex〉	Nylon	Teflon®	Viton®	5706-180

*conductive version Ex II 2 G c T4

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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 47)

Teflon[®] versions with ball valve.







Suitable range of accessories see pages 34-47.



Front View



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

Operating data	/ Dimensions / Weights	S
	DMP 1/2" PP	DMP 1/2" Kynar®
Housing material:	Polypropylene	Kynar®
Diaphragm materials:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®
Valve ball materials:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®
Seals:	Geolast®, EPDM, Teflon®, Viton®	Teflon®
Valve seat:	PP	Kynar®
Max. flow rate:	53 l/min.	53 l/min.
Suction lift dry:	4.5 m	4.5 m
Suction lift Teflon®:	3 m	3 m
Operating pressure:	max. 6.8 bar	max. 6.8 bar
Temperature limits:	66 °C	93 °C
Solids handling:	max. ø 3.1 mm	max. ø 3.1 mm
Housing material:	Polypropylene	Kynar®
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:	3.6 kg	4.9 kg

Material description:

Geolast®	=	NBR/PP-compound	
Kynar®	=	PVDF = Polyvinylidenfluoride	
Polypropylene	=	PP	
Santoprene®	=	EPDM/PP-compound	
leflon®	=	PTFE = Polytetrafluorethylene	
/iton®	=	FPM = Fluoro Elastomer	

¹)if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре	Materials of construction		Order No.
	Housing	Diaphragm, Valve balls, Seals	
DMP 1/2" PPB PP/Geolast®	PP	Geolast®	5701-000
DMP 1/2" PPT PP/Teflon®	PP	Teflon®	5701-020
DMP 1/2" PPE PP/Santoprene®	PP	Santoprene®	5701-100
DMP 1/2" PPV PP/Viton®	PP	Viton®	5701-120
DMP 1/2" KNT Kynar®/Teflon®	Kynar®	Teflon®	5701-080

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

Typical application:

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







Suitable range of accessories see page 34-47.



Front View



on request. Dimensions in mm

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

Operating data	/ Dimensions /	Weights	
	DMP 1/2" PP	DMP 1/2" Kynar®	DMP 1/2" Nylon
Housing material:	Polypropylene	Kynar®	Nylon
Diaphragm materials:	Geolast [®] , Santoprene [®] , Teflon [®] , Viton [®]	Teflon®	Geolast®, Teflon®
Valve ball materials:	Geolast [®] , Santoprene [®] , Teflon [®] , Viton [®]	Teflon®	Geolast®, Teflon®
Seals:	Geolast [®] , Santoprene [®] , Teflon [®] , Viton [®]	Teflon®	Geolast®, Teflon®
Valve seat:	PP	Kynar®	Kynar®, SS*
Max. flow rate:	65 I/min.	65 l/min.	65 l/min.
Suction lift: with Max-Pass™ Valve	6 m	6 m	6 m
Suction lift dry:	4.5 m	4.5 m	4.5 m
Suction lift (Teflon®):	3 m	3 m	3 m
Operating pressure:	max. 8 bar	max. 8 bar	max. 8 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

Material description:

Geolast®	= NBR/PP-compound	
Kynar®	= PVDF = Polyvinylidenfluoride	
Nylon	= PA = Polyamide-compound	
Polypropylene	= PP	
Santoprene®	= EPDM/PP-compound	
Teflon®	= PTFE = Polytetrafluorethylene	
Viton®	= FPM = Fluoro Elastomer	

¹⁾if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре	Materials of construction		Order No.
	Housing	Diaphragm, Seals	
DMP 1/2" PPB PP/Geolast®	PP	Geolast®	5701+000
DMP 1/2" PPB PP/Geolast [®] (with Max-Pass™)	PP	Geolast®	5701+002
DMP 1/2" PPT PP/Teflon®	PP	Teflon®	5701+020
DMP 1/2" PPE PP/Santoprene®	PP	Santoprene®	5701+100
DMP 1/2" PPE PP/Santoprene® (with Max-Pass™)	PP	Santoprene®	5701+102
DMP 1/2" PPV PP/Viton®	PP	Viton [®]	5701+120
DMP 1/2" PPV PP/Viton [®] (with Max-Pass™)	PP	Viton®	5701+122
DMP 1/2" KNT Kynar®/Teflon®	Kynar®	Teflon®	5701+080
DMP 1/2" NTC Nylon/Teflon®*	Nylon	Teflon®	5701+160
the shart a second as Full 0.0 + T4			

*conductive version Ex II 2 G c T4

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

Typical application:

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









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



Suitable range of accessories see pages 34-47.



Front View



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Model 1" Clamped Version (non-metallic)

Operating data	/ Dimensions / Weight	S
	DMP 1" PP	DMP 1" Kynar®
Housing material:	Polypropylene	Kynar®
Diaphragm materials:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®, Viton®
Valve ball materials:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®, Viton®
Seals:	Geolast®, EPDM, Teflon®, Viton®	Teflon®, Viton®
Valve seat:	РР	Kynar®
Max. flow rate:	152 I/min.	152 l/min.
Suction lift dry:	4.5 m	4.5 m
Suction lift Teflon®:	3 m	3 m
Operating pressure:	max. 6.8 bar	max. 6.8 bar
Temperature limits:	66 °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:	3/8" NPT female	3/8" NPT female
Suction:	1" BSP female	1" BSP female
Discharge:	1" BSP female	1" BSP female
Weight:	8.6 kg	9.9 kg

Material description:

Geolast®	=	NBR/PP-compound
Kynar®	=	PVDF=Polyvinylidenfluoride
Polypropylene	=	PP
Santoprene®	=	EPDM/PP-compound
leflon®	=	PTFE = Polytetrafluorethylene
/iton®	=	FPM = Fluoro Elastomer

¹⁾ if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре		Order No.	
	Housing	Diaphragm, Valve balls, Seals	
DMP 1" PPB PP/Geolast®	PP	Geolast®	5702-000
DMP 1" PPT PP/Teflon®	PP	Teflon®	5702-020
DMP 1" PPE PP/Santoprene®	PP	Santoprene®	5702-100
DMP 1" KNT Kynar®/Teflon®	Kynar®	Teflon®	5702-080
DMP 1" KNV Kynar®/Viton®	Kynar®	Viton®	5702-180

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Model 1" Clamped Version (non-metallic)

Typical application:

Drum and small tank transfer, pickling solutions, chemical feed







Suitable range of accessories see page 34-47.



Front View



Model 1" Bolted Version (non-metallic)

Operating data	/ Dimensions / Weight	S
	DMP 1" PP	DMP 1" Kynar®
Housing material:	Polypropylene	Kynar®
Diaphragm materials:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®, Santoprene®, Viton®
Valve ball materials:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®, Viton®
Seals:	Geolast®, Santoprene®, Teflon®, Viton®	Teflon®, Viton®
Valve seat:	PP	Kynar®
Max. flow rate:	156 I/min.	156 I/min.
Suction lift with Max-Pass Valve™:	5.5 m	5.5 m
Suction lift dry:	4.5 m	4.5 m
Suction lift Teflon®:	3 m	3 m
Operating pressure:	max. 8 bar	max. 8 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

Material description:

Geolast®	=	NBR/PP-compound
Kynar®	=	PVDF = Polyvinylidenfluoride
Polypropylene	=	PP
Santoprene®	=	EPDM/PP-compound
Teflon®	=	PTFE = Polytetrafluorethylene
Viton®	=	FPM = Fluoro Elastomer

¹)if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре		Order No.	
	Housing	Diaphragm, Seals	
DMP 1" PPB PP/Geolast®	PP	Geolast®	5702+000
DMP 1" PPB PP/Geolast [®] (with Max-Pass™)	PP	Geolast®	5702+002
DMP 1" PPE PP/Santoprene®	PP	Santoprene®	5702+100
DMP 1" PPE PP/Santoprene [®] (with Max-Pass™)	PP	Santoprene®	5702+102
DMP 1" PPT PP/Teflon®	PP	Teflon®	5702+020
DMP 1" PPV PP/Viton®	PP	Viton®	5702+120
DMP 1" PPV PP/Viton [®] (with Max-Pass™)	PP	Viton®	5702+122
DMP 1" KNT Kynar®/Teflon®	Kynar®	Teflon®	5702+080
DMP 1" KNV Kynar®/Viton®	Kynar®	Viton®	5702+180
DMP 1" KNV Kynar [®] /Viton [®] (with Max-Pass™)	Kynar®	Viton®	5702+182

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Model 1" Bolted Version (non-metallic)

Typical application:

Drum and small tank transfer, pickling solutions, chemical feed



Max-Pass™ (Details see page 47)







Suitable range of accessories see pages 34-47.



Front View



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

Operating data / Dimensions / Weights			
	DMP 1 1/2" PP	DMP 1 1/2" Kynar®	
Housing material:	Polypropylene	Kynar®	
Diaphragm materials:	Geolast®, Teflon®, Santoprene®	Teflon®, Santoprene®	
Valve ball materials:	Geolast®, Teflon®, Santoprene®	Teflon [®] , Santoprene [®]	
Seals:	Geolast®, EPDM, Teflon®	Teflon®	
Valve seat:	Polypropylene	Kynar®	
Max. flow rate:	492 l/min.	492 l/min.	
Suction lift dry:	4.5 m	4.5 m	
Suction lift Teflon®:	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:

Geolast®	=	NBR/PP-compound
Kynar®	=	PVDF = Polyvinylidenfluoride
Polypropylene	=	PP
Santoprene®	=	EPDM/PP-compound
Teflon®	=	PTFE = Polytetrafluorethylene

¹)if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре	Materials of construction		Order No.
	Housing	Diaphragm, Seals	
DMP 1 1/2" PPB PP/Geolast®	PP	Geolast®	5703+000
DMP 1 1/2" PPT PP/Teflon®	PP	Teflon®	5703+020
DMP 1 1/2" PPE PP/Santoprene®	PP	Santoprene®	5703+100
DMP 1 1/2" KNE Kynar®/Santoprene®	Kynar®	Santoprene®	5703+070
DMP 1 1/2" KNT Kynar®/Teflon®	Kynar®	Teflon®	5703 +080

*conductive version Ex II 2 G c T4

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

Typical application:

Filter press, tank cleaning systems, pigments and resins







Suitable range of accessories see pages 34-47.





Model 2" Bolted Version (non-metallic)

Operating da	ta / Dimensions / V	Weights
	DMP 2" PP	DMP 2" Kynar®
Housing material:	Polypropylene	Kynar®
Diaphragm materials:	Geolast®, Santoprene®, Teflon®	Teflon®
Valve ball materials:	Geolast®, Santoprene®, Teflon®	Teflon®
Seals:	Geolast®, Santoprene®, Teflon®	Teflon®
Valve seat:	PP	Kynar®
Max. flow rate:	681 l/min.	681 l/min.
Suction lift dry:	4.5 m	4.5 m
Suction lift Teflon®:	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 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:	22 kg	31 kg

Material description:

Geolast®	= NBR/PP-compound
Kynar®	= PVDF = Polyvinylidenfluoride
Polypropylene	= PP
Santoprene®	= EPDM/PP-compound
Teflon®	= PTFE = Polytetrafluorethylene

¹)if the air flow control valve is used (not included in the delivery extent - see page 39).

Туре	Materials of construction		Order No.
	Housing	Diaphragm, Seals	
DMP 2" PPB PP/Geolast®	PP	Geolast®	5704+000
DMP 2" PPT PP/Teflon®	PP	Teflon®	5704+020
DMP 2" PPE PP/Santoprene®	PP	Santoprene®	5704+100
DMP 2" PPT/TF PP/Teflon®**	PP	Teflon®	5704+220
DMP 2" KNT Kynar®/Teflon®	Kynar®	Teflon®	5704+060
DMP 2" KNT/TF Kynar®/Teflon®**	Kynar®	Teflon®	5704+240

**Teflon-coated clamp fittings and bolts

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Model 2" Bolted Version (non-metallic)

Typical application:

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







Suitable range of accessories see pages 34-47.



Front View



Individual datasheets on request. Dimensions in mm

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:	Geolast®, Santoprene®, Teflon®, Viton®	Geolast®, Teflon®, Santoprene®, Viton®	
Valve ball materials:	Geolast®, Santoprene®, Teflon®, Viton®	Geolast®, Teflon®, Santoprene®, Viton®	
Seals:	Buna-N, EPDM, Teflon®, Viton®	Buna-N, EPDM, Teflon®, Viton®	
Valve seat:	PP, Nylon	Stainless Steel	
Max. flow rate:	57 l/min.*	57 l/min.*	
Suction lift dry:	4.5 m	4.5 m	
Suction lift Teflon®:	4.3 m	4.3 m	
Operating pressure:	max. 8.3 bar	max. 8.3 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	

Material description:

е

¹)if the air flow control valve is used (not included in the delivery extent – see page 39).

*See operating curves

Туре		Materials of construction	
	Housing	Diaphragm, Valve balls, Seals	
DMP 1/2" ALB Alu/Geolast®**	Aluminium	Geolast® Geolast® Buna-N	5611+000
DMP 1/2" ALE Alu/Santoprene®** < Ex	Aluminium	Santoprene® Santoprene® EPDM	5611+04 0
DMP 1/2" ALT Alu/Teflon®** $\langle Ex \rangle$	Aluminium	Teflon® Teflon® Teflon®	5611+02 0
DMP 1/2" ALV Alu/Viton®** <	Aluminium	Viton [®] Viton [®] Viton [®]	5611+06 0
DMP 1/2" SSB SS/Geolast ^{®**} $\langle Ex \rangle$	Stainless Steel	Geolast® Geolast® Buna-N	5621+040
DMP 1/2" SSE SS/Santoprene®** $\langle Ex \rangle$	Stainless Steel	Santoprene® Santoprene® EPDM	5621+020
DMP 1/2" SST SS/Teflon®** $\langle Ex \rangle$	Stainless Steel	Teflon® Teflon® Teflon®	5621+000
DMP 1/2" SSV SS/Viton®** <	Stainless Steel	Viton [®] Viton [®] Viton [®]	5621+060

**Ex II 2G c T4

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Model 1/2" Bolted Version (metallic)

Typical application:

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







Explosion proof protection Suitable range of accessories for avoiding electrostatic charge see pages 34-47.





Individual datasheets on request.

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:	Geolast [®] , Santoprene [®] , Teflon [®] , Viton [®]	Geolast®, Teflon®, Santoprene®, Viton®	
Valve ball materials:	Geolast®, Santoprene®, Teflon®, Viton®	Geolast®, Teflon®, Santoprene®, Viton®	
Seals:	Buna-N, EPDM, Teflon®, Viton®	Buna-N, EPDM, Teflon®, Viton®	
Valve seat:	PP, Nylon	Stainless Steel	
Max. flow rate:	182 l/min.*	182 l/min.*	
Suction lift dry:	5.2 m	5.2 m	
Suction lift Teflon®:	5.2 m	5.2 m	
Operating pressure:	max. 8.3 bar	max. 8.3 bar	
Temperature limits:	93 °C	93 °C	
Solids handling:	max. ø 6.4 mm	max. ø 6.4 mm	
Air inlet:	1/2" NPT female (G 1/2 BSP female) ¹⁾	1/2" 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:

Geolast®	= NBR/PP-compound
Nylon	= PA = Polyamide-compound
Polypropylene	= PP
Santoprene®	= EPDM/PP-compound
Teflon®	= PTFE = Polytetrafluorethylene
Viton®	= FPM = Fluoro Elastomer

 $^{\rm 1)if}$ the air flow control valve is used (not included in the delivery extent – see page 39). *See operating curves

Туре		Order No.	
	Housing	Diaphragm, Seals	
DMP 1" ALB Alu/Geolast®* 🛛 🕅	Aluminium	Geolast®	5612+000
DMP 1" ALE Alu/Santoprene $^{\otimes \star}$	Aluminium	Santoprene®	5612+040
DMP 1" ALT Alu/Teflon®* <	Aluminium	Teflon®	5612+020
DMP 1" ALV Alu/Viton®* <	Aluminium	Viton®	5612+060
DMP 1" SSB SS/Geolast®* 〈Ex〉	Stainless Steel	Geolast®	5622+040
DMP 1" SSE SS/Santoprene®* <	Stainless Steel	Santoprene®	5622+020
DMP 1" SST SS/Teflon®* <	Stainless Steel	Teflon®	5622+000
DMP 1" SSV SS/Viton®*	Stainless Steel	Viton®	5622+060

*Ex II 2 G c T4

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Model 1" Bolted Version (metallic)

Typical application:

Drum and small tank transfer, pickling solutions, chemical feed





(Hand

Explosion proof protection Suitable range of accessories for avoiding electrostatic charge see pages 34-47.





Individual datasheets on request.

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:	Geolast®, Teflon®, Santoprene®	Geolast [®] , Teflon [®] , Santoprene [®]					
Valve ball materials:	Geolast®, Teflon®, Santoprene®	Geolast®, Teflon®, Santoprene®					
Seals:	Geolast®, EPDM, Teflon®	Geolast®, EPDM, Teflon®					
Valve seat:	PP, Nylon	Stainless Steel					
Max. flow rate:	492 I/min.	492 I/min.					
Suction lift dry:	4.5 m	4.5 m					
Suction lift Teflon®:	3 m	3 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:	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 4 0 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:	27 kg	60 kg					

Material description:

Geolast®	= NBR/PP-compound
Nylon	= PA = Polyamide-compound
Polypropylene	= PP
Santoprene®	= EPDM/PP-compound
Teflon®	= PTFE = Polytetrafluorethylene
Viton®	= FPM = Fluoro Elastomer

¹) if the air flow control valve is used (not included in the delivery extent – see page 39).

Туре		Order No.	
	Housing	Diaphragm, Seals	
MP 1 1/2" ALB Alu/Geolast®	Aluminium	Geolast®	5713+000
DMP 1 1/2" ALT Alu/Teflon®	Aluminium	Teflon®	5713+020
DMP 1 1/2" ALE Alu/Santoprene®	Aluminium	Santoprene®	5713+040
DMP 1 1/2" ALTS Alu/Teflon®/Santoprene®*	Aluminium	Teflon [®] cond./Santoprene [®]	5713+021
DMP 1 1/2" SSB SS/Geolast®	Stainless Steel	Geolast®	5723+000
DMP 1 1/2" SST SS/Teflon®	Stainless Steel	Teflon®	5723+020
DMP 1 1/2" SSE SS/Santoprene®	Stainless Steel	Santoprene®	5723+040
DMP 1 1/2" SSTS SS/Teflon®/Santoprene®* <	Stainless Steel	Teflon [®] cond./Santoprene [®]	5723+021

*Ex II 2 G c T4

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Model 1 1/2" Bolted Version (metallic)

Typical application:

Filter press, tank cleaning systems, pigments and resins







Explosion proof protection Suitable range of accessories for avoiding electrostatic charge see pages 34-47.





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:	Geolast®, Teflon®, Santoprene®	Geolast®, Teflon®, Santoprene®					
Valve ball materials:	Geolast [®] , Teflon [®] , Santoprene [®]	Geolast®, Teflon®, Santoprene®					
Seals:	Buna-N,, EPDM, Teflon®	Buna-N,, EPDM, Teflon®					
Valve seat:	PP, Nylon	Stainless Steel					
Max. flow rate:	719 l/min.*	719 l/min.*					
Suction lift dry:	7.4 m	7.4 m					
Suction lift Teflon®:	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:

Geolast®	= NBR/PP-compound
Nylon	= PA = Polyamide-compound
Polypropylene	= PP
Santoprene®	= EPDM/PP-compound
Teflon®	= PTFE = Polytetrafluorethylene
Viton®	= FPM = Fluoro Elastomer

 $^{\rm 1)if}$ the air flow control valve is used (not included in the delivery extent – see page 39). *See operating curves

Туре		Order No.	
	Housing	Diaphragm, Valve balls, Seals	
DMP 2" ALB Alu/Geolast®	Aluminium	Geolast [®] , Geolast [®] , Buna-N	5614+000
DMP 2" ALT Alu/Teflon®	Aluminium	Teflon®, Teflon®, Teflon®	5614+020
DMP 2" ALE Alu/Santoprene®	Aluminium	Santoprene [®] , Santoprene [®] , EPDM	5614+040
DMP 2" ALTS Alu/Teflon®/Santoprene®** <	Aluminium	Teflon [®] cond./Santoprene [®] , EPDM	5614+021
DMP 2" SST SS/Teflon®	Stainless Steel	Teflon®, Teflon®, Teflon®	5624+000
DMP 2" SSE SS/Santoprene®	Stainless Steel	Santoprene®, Santoprene®, EPDM	5624+020
DMP 2" SSB SS/Geolast®	Stainless Steel	Geolast®, Geolast®, Buna-N	5624+040
DMP 2" SSTS SS/Teflon®/Santoprene®** $\langle \xi_x \rangle$	Stainless Steel	Teflon [®] cond./Santoprene [®] , EPDM	5624+021

**Ex II 2G c T4

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Model 2" Bolted Version (metallic)

Typical application:

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





Explosion proof protection Suitable range of accessories for avoiding electrostatic charge see pages 34-47.





Individual datasheets on request.

Model 3" Bolted Version (metallic)

Operating data / Dimensions / Weights				
	DMP 3" Aluminium			
Housing material:	Aluminium			
Diaphragm materials:	Polyrethane, Teflon [®] , Santoprene [®] , Viton [®]			
Valve ball materials:	Geolast®, Viton®, Teflon®, Santoprene®			
Seals:	NBR, EPDM, Viton®, Teflon®			
Valve seat:	Nylon, EPDM, Viton®, NBR			
Max. flow rate:	965 l/min.			
Suction lift dry:	4.5 m			
Suction lift Teflon®:	3 m			
Operating pressure:	max. 8.5 bar			
Temperature limits:	93 °C			
Solids handling:	max. ø 11.1 mm			
Air inlet:	3/4" NPT female (3/4" BSP female) ¹⁾			
Air outlet:	3/4" NPT female			
Suction:	3" BSP female			
Discharge:	3" BSP female			
Weight:	59 kg			

Material d	escription:
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Geolast®	=	NBR/PP-compound
Nylon	=	PA = Polyamide-compound
Polypropylene	=	PP
Santoprene®	=	EPDM/PP-compound
Teflon®	=	PTFE = Polytetrafluorethylene
Viton®	=	FPM = Fluoro Elastomer
Polyurethane	=	PUR

 $^{1)}\mbox{if the air flow control valve is used (not included in the delivery extent – see page 39).$

Туре		Order No.	
	Housing	Diaphragm, Seals	
DMP 3" ALU Alu/Polyurethane	Aluminium	Polyurethane, Geolast®, NBR	5715+00 0
DMP 3" ALE Alu/Santoprene®	Aluminium	Santoprene®, EPDM	5715+020
DMP 3" ALT Alu/Teflon®	Aluminium	Teflon®	5715+040
DMP 3" ALV Alu/Viton®	Aluminium	Viton®	5715+060

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Model 3" Bolted Version (metallic)

Typical application:

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







Suitable range of accessories see pages 34-47.

416

258

Side View

284 -

with muffler





Air Inlet

> Individual datasheets on request. Dimensions in mm

Air

392

Outlet

Pipe fitting, coupling connector, hose connection

Product detail	Specification			Order-No.
	Pipe fitting Allows the direct con PP PVDF PP	nection of hoses at pressure-/suctio DN 8 x G 1/4 male DN 8 x G 1/4 male DN 8 x G 3/8 male	n piece of the double diaphrag DMP 1/4" DMP 1/4" DMP 3/8"	m pump. 5000-314 5000-315 5000-316
	PVDF	DN 8 x G 3/8 male	DMP 3/8"	5000-317
	Coupling connect Allows the direct con PP PVDF Brass SS (1.4571) PP	Dr Inection of hoses at pressure-/suctio DN 8 x G 1/4 male DN 8 x G 1/4 male DN 9 x G 1/4 male DN 9 x G 1/4 male DN 12 x G 1/4 male	n piece of the double diaphrag DMP 1/4" DMP 1/4" DMP 1/4" DMP 1/4" DMP 1/4" DMP 1/4"	m pump. 5000-020 5000-021 5000-022 5000-023 5000-024
	PP	DN 12 x G 3/8 male	DMP 3/8"	5000-034
	PVDF PP PVDF Brass SS (1.4571) SS (1.4571)	DN 12 x G 3/8 male DN 12 x G 1/2 male DN 20 x G 1/2 male DN 12 x G 1/2 male DN 20 x G 1/2 male	DMP 3/8" DMP 1/2" DMP 1/2" DMP 1/2" DMP 1/2" DMP 1/2" DMP 1/2"	5000-035 5000-030 5000-036 5000-031 5000-032 5000-033 0300-215
	PP SS (1.4571)	DN 25 x G 1 male DN 25 x G 1 male	DMP 1" DMP 1"	5000-037 5000-038
	Hose connection Hose connector with For direct connectior of the double diaphra			
	PP PP PP PVDF PVDF	DN 13 x G 1 1/4 DN 19 x G 1 1/4 DN 25 x G 1 1/4 DN 19 x G 1 DN 19 x G 1 DN 19 x G 1 1/4 DN 25 x G 1 1/4	DMP 1/2" DMP 1/2" DMP 1/2" DMP 1/2" DMP 1/2" DMP 1/2"	0204-409* 0204-410* 0204-411* 0204-438* 0204-421* 0204-422*
	PP PP PVDF PVDF PVDF	DN 19 x G 1 1/4 DN 25 x G 1 1/4 DN 32 x G 1 1/4 DN 19 x G 1 1/4 DN 25 x G 1 1/4	DMP 1" DMP 1" DMP 1" DMP 1" DMP 1"	0204-410* 0204-411* 0204-412* 0204-421* 0204-422*
	Alu Alu Alu	DN 19 x G 1 1/4 DN 25 x G 1 1/4 DN 32 x G 1 1/4	DMP 1" DMP 1" DMP 1"	0204-403* 0204-404* 0204-405*
	SS (1.4571)	DN 19 x G 1 1/4	DMP 1"	0204-400*
	SS (1.4571) SS (1.4571) *) can be used only i	DN 25 x G 1 1/4 DN 32 x G 1 1/4 n connection with reducing piece	DMP 1" DMP 1"	0204-401* 0204-402*
	Hose connection Hose connector with	wing nut and seal		
	Brass SS (1.4571)	DN 38 x G 1 1/2 DN 38 x G 1 1/2	DMP 1 1/2" DMP 1 1/2"	5000-042** 0204-418**
	PP PVDF	DN 50 x G 2 DN 50 x G 2	DMP 2" DMP 2"	5000-250** 5000-251**
	Brass SS (1.4571)	DN 50 x G 2 DN 50 x G 2	DMP 2" DMP 2"	5000-252 5000-253
	**) can be used only	in connection with flange		

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

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

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

Product detail	Specification	Order-No.
	Suction pipeSS (1.4571)Outer diameter 41 mm, Length 1000 mmConnection: G 1 maleSS (1.4571)Outer diameter 41 mm, Length 1200 mmConnection: G 1 maleSS (1.4571)Outer diameter 41 mm, Length 1000 mmConnection: G 1 maleSS (1.4571)Outer diameter 41 mm, Length 1200 mmConnection: G 1 1/4 maleSS (1.4571)Outer diameter 41 mm, Length 1200 mmConnection: G 1 1/4 malePPOuter diameter 41 mm, Length 1200 mmConnection: G 1 1/4 malePPOuter diameter 41 mm, Length 1200 mmConnection: G 1 1/4 malePVDFOuter diameter 41 mm, Length 1200 mmConnection: G 1 1/4 male	0204-229 0204-355 0204-228 0204-356 5000-120 5000-119 5000-118
	Foot strainerSuitable for suction pipeSS (1.4571)Outer diameter 55 mmPPOuter diameter 55 mmMesh diameter 20 x 2 mmMesh diameter 20 x 2 mm	0204-617 0343-177
C.	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
	StrainerSuitable for suction hoseSS (1.4571) / PASS (1.4571)G 1 1/4 maleSS (1.4571)G 1 1/4 male	5000-283 5000-284
	Vibration dampener kitFor vibration damping with free mounting Consisting of 4 vibration dampers, including fixing materialDMP 1/4" - DMP 1"For vibration damping with foot mounting Consisting of 4 vibration dampeners, including fixing materialDMP 3/8" and DMP 1/2"	5000-218 5000-216
	DMP 1" DMP 1 1/2" and DMP 2"	5000-215 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 ●
0	Drum pump kitSuction pipe and bung hole adapter for emptying of 200 I-drums. Length: 1000 mm (is directly screwed into the suction manifold of the double diaphragm pump)PPDMP 1/2" (Clamped Version) AluAluDMP 1/2" SS (1.4571)PPDMP 1/2" DMP 1/2"PPDMP 1/2"	5000-174 5000-175 5000-221 5000-176

Hose clips, PVC-Hose, PTFE-Hose, mineral oil hose

Specification	Order-No.	Product detail
Stepless 1-ear hose clamp1-ear hose clamp of stainless steel for the safe fixing of different hoses onto the hose connection. (Advices for selecting the suitable hose clip - see hoses).Size: $9.0 - 11.0 \text{ mm}$ $15.0 - 17.0 \text{ mm}$ $17.8 - 21.0 \text{ mm}$ $19.4 - 22.6 \text{ mm}$ $21.6 - 24.8 \text{ mm}$ $26.3 - 29.5 \text{ mm}$ $28.0 - 31.0 \text{ mm}$ $30.3 - 33.5 \text{ mm}$ $30.8 - 34.0 \text{ mm}$ $31.5 - 35.0 \text{ mm}$ $32.8 - 36.0 \text{ mm}$ $32.8 - 36.0 \text{ mm}$ $39.8 - 43.0 \text{ mm}$ $42.3 - 45.5 \text{ mm}$ $43.8 - 47.0 \text{ mm}$ $49.8 - 53.0 \text{ mm}$ $64.8 - 68.0 \text{ mm}$	0301-214 0302-034 0300-400 0300-405 0300-415 0300-415 0301-257 0300-420 0300-425 0300-425 0300-425 0300-435 0300-445 0300-445 0300-455 0300-455 0300-465 0300-470 0300-475	
PVC-spiral hosewith steel helixTemp. range of application: -15 up to +65 °COperatingMaterial:Nominal diameter:Weight:PVCDN 190.33 kg/mPVCDN 250.52 kg/mPVCDN 320.66 kg/mPVCDN 380.80 kg/mPVCDN 501.30 kg/m	g Suitable : hose clips: bar 0300-415 0374-457 bar 0300-435 0374-440 ar 0300-450 0374-441 ar 0300-460 0374-442 ar 0300-470 0374-443	O
PVC-hoseFabric reinforcedoperating pressure:max. 8 bar at 20 °CMaterial:Nominal diameter:PVCDN 9PVCDN 13With steel helix, suitable as suction and pressure hoseOperating pressure:max. 7 bar at 20 °CPVCDN 19PVCDN 25PVCDN 32PVCDN 38PVCDN 50	Suitable hose clips: 0301-156 0373-153 0300-400 0373-154 Low pressure: max. 1 bar (0 bar abs.) Suitable hose clips: 0300-415 0374-457 0300-435 0374-440 0300-450 0374-441 0300-460 0374-442 0300-470 0374-443	
PTFE-hoseTemp. range of application: Operating pressure:- 30 °C up to + 100 °C max. 6.5 at 20 °CMaterial:Nominal diameter: DN 8 PTFEPTFEDN 8 DN 13	Low pressure: max. 0.7 bar (0.3 bar abs.) Suitable hose clips: 0301-214 0374-444 0302-034 0374-445	9

Solvent hose, universal chemical hose, special chemical hose

Product detail	Specification	Order-No.
	Mineral oil hoseElectrically conductive, tube of NBR, cover of chloroprene. Not suitable for suction operation. Type Ω smaller 10° Ohm (to EN 12115).Operating pressure: max. 10 barTemperature of medium: - 35 °C up to + 60 °C Material: NBRNBRDN 13O300-405 NBRDN 32NBRDN 32O300-455 NBRDN 50O300-475Electrically conductive, tube of NBR, cover of NBR. Not suitable for suction operation. Type Ω smaller 10° Ohm (to EN 12115). Operating pressure: max. 10 barTemperature of medium: Temperature of medium: - 30 °C up to + 65 °C Suitable hose clips:	0374-446 • 0374-413 • 0374-414 • 0374-448 •
	NBR DN 19 0300-415 NBR DN 25 0300-440	0374-461 • 0374-462 •
	Solvent hoseElectrically conductive, tube of NBR special, cover of chloroprene. Type Ω smaller 10 ⁶ Ohm (to EN 12115).Operating pressure:max. 10 barLow pressure: max. 0.9 bar Temperature of medium: - 35 °C up to + 60 °CMaterial:Nominal diameter:Suitable hose clips:NBR specialDN 130300-410 NBR specialNBR specialDN 190300-430 NBR specialNBR specialDN 250300-445 NBR specialNBR specialDN 320300-455 NBR specialNBR specialDN 380300-465 NBR specialNBR specialDN 380300-475	0374-449 0374-416 0374-417 0374-418 0374-450 0374-451
	Universal chemical hoseElectrically conductive, tube of ultra high molecular polyethylene (U-PE), cover of EPDM. Type Ω smaller 10 ⁶ Ohm (to EN 12115).Operating pressure:max. 10 barLow pressure: max. 0.9 bar Temperature of medium: - 30 °C up to + 100 °C (0.1 bar abs.)Material:Nominal diameter:Suitable hose clips:PE-XDN 13 0300-4100300-410 PE-X PE-XPE-XDN 25 0300-4450300-445 PE-X PE-X DN 38 0300-455PE-XDN 36 0300-4550300-475	0374-452 0374-420 0374-419 0374-421 0374-453 0374-454
	$\begin{array}{llllllllllllllllllllllllllllllllllll$	0374-428 • 0374-429 • 0374-430 • 0374-455 • 0374-456 •

for compressed air supply



for compressed air supply

Product detail	Specification	Order-No.
	Since the second sector Brass (NW 7.2) G 3/8 male DMP 1/4" DMP 3/8" DMP 1/2" DMP 1" DMP 1/4" Brass (NW 7.2) G 1/2 male (when using a regulation valve) DMP 1/4" DMP 3/8" DMP 1/4" DMP 1/2" DMP 1/2" DMP 1/2" DMP 1" Brass (NW 10) G 3/4 male DMP 1 1/2" DMP 2" DMP 3"	0372-045 5000-179 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
Q.	 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
Comment Tarah	9 Double nipple Brass G 3/8 male Brass G 3/4 male	0302-157 5000-171
	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 3/8 female x 1/2 NPT male Brass G 3/8 female x 3/4 NPT male Brass G 3/4 female x 3/4 NPT male Brass G 3/8 male x G 3/4 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

Push-in fittings for compressed air supply

Specification	Order-No.	Product detail
	23 27 27 24 23	
Wale connector For connecting to the pump Brass, nickel-plated G 1/4 male x DN 12 mm For connecting to a pressure regulator Brass, nickel-plated G 3/8 male x Ø 12 mm	DMP 1/4" up to 1" 5000-400 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 ∅ 12 mm	DMP 1/4" up to 1" 5000-403	
 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	
Polyurethane hoseFor use with plug-type connectorsRange of temperature:- 40 °C up to + 60 °CMax. operating pressure:PUR0uter-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	e DMP 1/4" up to 1" 5000-406	
 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





Non-contacting volume measurement

Specification	Order-No.	Product detail
Intermediate plate Necessary for fixing the operating unit. PP	0230-304	
Accessories optional 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 ●	Q
 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	
2) 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 on request ●	
Protective cap SH10 with 1 data socket Allows a separate installation from relay module and/or control unit.	0230-350	

Adjustable pulsation dampener

Product detail	Specification			Order-No.
	Automatic pulsation d Operation The pulsation dampener is stomeric bladder, which p a pulse is created, fluid e pressing the gas and abso pushing the fluid back to fluid flow.	lampener is a vessel filled with compressed gas. The gas is o prevents contact between the process fluid and cor nters the wetted chamber of the dampener, displac orbing the shock. When the liquid pressure decrea the process line. The pump's discharge will produ	entrapped by the ela- npressed gas. When ing the bladder, com- ses, the gas expands ce an almost steady	
	 Advantages of the pul Dampeners avoid vibr. Compensation of hydr Create a nearly steady of the flow meter syste Explosion proof mode 	Isation dampener ations of the pipeline, which cause material fatigue raulic surge ("water hammer") protects integrated f and continuous fluid flow, which increases the ac ems. Is with ATEX approval	es and pipe breaks. ittings. curacy	
	Installation Mount pulsation dampen necessary to regulate the They regulate themselves air operated double diaph	er as close to the pump as possible. For models w dampener pressure and to adjust the dampener if in dependence on the system pressure. The air su nragm pump are parallel.	ith automatic air conti there are pressure var Ipply of the dampener	rol it is not iations. and of the
	Pulsation dampener F Housing materials: Diaphragms: Connection: Air supply: Operating pressure: Volume: Air control: Weight:	PD III D for DMP 1/4" and DMP 3/8" PP, PVDF and SS (1.4571) PTFE, EPDM, NBR and FPM G 1/2 female 1/4 NPT male max. 10 bar approx. 0.16 dm ³ , respectively approx. 0.13 dr adjustable approx. 1 up to 1.8 kg	n³ with PTFE-diaphra	gm
	Type PD III D – P – B	Housing materials PP (in contact with the product) PP (not in contact with the product)	Diaphragms NBR	Order No. 5000-350
	PD III D – P – ND	PP (in contact with the product) 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 (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 (Viton®)	5000-353
THE A	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/IIC T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	PTFE	5000-357 🔴
	Viton® is a registered Trademark	c of DuPont Performance Flastomers		

Adjustable pulsation dampener

Specification				Order-No.	Product detai
Pulsation dampener	for DMP 1/2"	DT 50 / DTX 70	PD II F		
Housing materials: Diaphragms: Connection: Air supply: Operating pressure: Air control: Weight:		PE, PTFE and SS (1.4571) PTFE, EPDM, NBR G 1/2 female / G 3/4 SS G 1/4 female max. 8 bar automatically approx. 1.4 up to 2.1 kg	SS (1.4571) FPM G 3/4 IG 1/4 NPT male max. 10 bar adjustable approx. 4.5 kg		
Type DT 50 PN	Housing m PP (in conta	naterials act with the product)	Diaphragms NBR	Order No. 5000-410	2
DT 50 PE	PP (in conta	act with the product)	EPDM	5000-411	
DT 50 PT	PP (in conta	act with the product)	PTFE	5000-412	
DT 50 TT	PVDF (in co	ontact with the product)	PTFE	5000-413	
DT X 70 ST Ex	SS, 1.4571	(in contact with the product)	PTFE	5000-414 🔴	
PD II F – S – V Ex II2 GD IIB/IIC T4	SS, 1.4571 SS, 1.4571	(in contact with the product) (not in contact with the product)	FPM (Viton®)	5000-363 ●	าส า
Pulsation dampener	for DMP 1"	DT 100 / DTX 120	PD II D		
Housing materials: Diaphragms: Connection: Air supply: Operating pressure: Air control: Weight:		PE, PTFE and SS (1.4571) PTFE, EPDM, NBR G 1 female G 1/4 female max. 8 bar automatically approx. 2.8 up to 4.6 kg	SS (1.4571) FPM G 3/4 female 1/4 NPT male max. 10 bar adjustable approx. 6 kg		
Type DT 100 PN	Housing m PP (in conta	naterials act with the product)	Diaphragms NBR	Order No. 5000-415	
DT 100 PE	PP (in conta	act with the product)	EPDM	5000-416	
DT 100 PT	PP (in conta	act with the product)	PTFE	5000-417	
DT 100 TT	PVDF (in co	ontact with the product)	PTFE	5000-418	
DT X 120 ST Ex	SS, 1.4571	(in contact with the product)	PTFE	5000-419 🔴	
PD II D – S – V Ex II2 GD IIB/IIC T4	SS, 1.4571 SS, 1.4571	(in contact with the product) (not in contact with the product)	FPM (Viton®)	5000-369 ●	

Adjustable pulsation dampener, pressure relief valve

Product detail	Specification			Order-No.
	Pulsation dampener Pl Housing materials: Diaphragms: Connection: Air supply: Operating pressure: Volume: Air control: Weight:	D I D for DMP 1 1/2" and DMP 2" PP, PVDF and SS (1.4571) PTFE, EPDM, NBR and FPM G 2 female 1/4 NPT male max. 10 bar approx. 6 dm ³ , respectively approx. 5.8 dm ³ wi adjustable approx. 7.2 up to 19 kg	th PTFE-diaphragm	
	Type PD I D – P – B	Housing materials PP (in contact with the product) PP (not in contact with the product)	Diaphragms NBR	Order No. 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
13- 42- 43- 43- 43- 43- 43- 43- 43- 43- 43- 43	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 II2 GD IIB/IIC 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 II2 GD IIB/IIC T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	PTFE	5000-375 ●
TT .	PD I D – S – V Ex II2 GD IIB/IIC T4	SS, 1.4571 (in contact with the product) SS, 1.4571 (not in contact with the product)	FPM (Viton®)	5000-376 🗢
	Pulsation dampener Pl Housing materials: Diaphragms: Connection: Air supply: Operating pressure: Volume: Air control: Weight:	D IV D for DMP 3" Aluminium PU and FPM Flange DIN DN 75 PN 10 or ANSI 150 1/4 NPT male max. 10 bar approx. 18 dm ³ adjustable approx. 18 kg		
	Type PD IV D – A – PU Ex	Housing materials Alu (in contact with the product)	Diaphragms Polyurethane	Order No. 5000-203 ●
Ţ	II 2 GD IIB/IIC T4 Pd IV d – A – V Ex II 2 Gd IIB/IIC T4	Alu (not in contact with the product) Alu (in contact with the product) Alu (not in contact with the product)	FPM (Viton®)	5000-377 ●
	Pressure relief valve Provides for a defined worl under unfavourable geodet The set pressure of the val- between pressure- and suc	king pressure and supports the pump when opera tic conditions (e.g. large suction heads, open disc ve produces the necessary positive pressure diffe tion side of the pump.	ting charge). rence	
	Setting range:	0.3 - 10 bar DN 10 - DN 50		on request

$\mathbf{Max}\text{-}\mathbf{Pass}^{\mathsf{TM}} \; \mathbf{Valve}, \; \mathbf{electric} \; \mathbf{solenoid} \; \mathbf{control} \; \mathbf{valve}$

Specification	Order-No.	Product detail
 Max-Pass[™]-Valve Designed to transfer fluids containing large solids and highly visco paints, inks or slurries. Special construction features offer numero traditional ball or cone valves: 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 stroke 	ous fluids, e.g. adhesives, us advantages compared with es	
 Electric solenoid control valve The electric solenoid control valve is used for controlling the opera pump. When energized, air is delivered to one side of the diaphrag sting the other side. The reverse occurs when the solenoid is de-energized by delivering air to the side of the pump previously be Via the frequency and the number of electromagnetic impulses the batch can be optionally set. The pump stops exactly on the given set Control voltage: 230V AC/50 Hz, 120V AC/60 Hz or 24V DC. 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 Available at add. price in following versions* 24V DC * (To order a pump, please advise the respective refno. for add. p 	ating cycles of the diaphram gm while simultaneously exhau- being exhausted. If flow rate or the setting. DMP 1/2" and 1" 5000-322 DMP 1/2" and 1" 5000-321 DMP 1/2" and 1" 5000-320 DMP 1/2" and 1" 5000-320	
Diaphragm Control In case of a diaphragm rupture , the pumped liquid can enter the ai and exit through the air exhaust. Such a leakage can be avoided wh diaphragm control. Both air chambers have sensors which registra These sensors transmit an impulse to a level controller which stop and/or activates an alarm signal. The use of a diaphragm control is only possible with conductive line The diaphragm control is available for following types at Diaphragm control DMP 3/8" Diaphragm control DMP 1/2" Diaphragm control DMP 1 1/2" and DMP 2" Diaphragm control DMP 3" *(To order a nump please advise respective Ref. No. for additional	ir side of the pump hen using a ate entering liquid. os the pump quids. t extra costs* 5000-624 5000-625 5000-625 5000-626 5000-627 5000-628	

Materials of the pump housings

Туре	Polypropylene	PVDF	Nylon	Nylon-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:

Geolast®	-12 °C to 82 °C
Santopren®	-18 °C to 138 °C
Viton®	-40 °C to 176 °C
Teflon® TFE	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:

- 0 °C to 66 °C
-18 °C to 93 °C
-23 °C to 66 °C
-23 °C to 93 °C
-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

Polypropylene (PP) 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 watersoluble inorganic chemicals.

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

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.

Nylon

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 (Nylon-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.

Teflon® are Viton® are registered Trademarks of DuPont Dow Company. Kynar® is a registered Trademark of Pennwalt Corp.

Materials of the diaphragms, valve balls and o-rings

Teflon[®] Diaphragms

All Double Diaphragm Pumps fitted with Teflon diaphragms have back-up diaphragms made of Santoprene.

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

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

Viton[®] Diaphragms

FKM (Viton®): A polymer of vinylidenfluoride and hexafluorpropylene. 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 TPE compounds.

Geolast®: Is a compound of NBR and PP. The chemical resistance is comparable with NBR (Buna-N, Perbunan, etc.).

Perfectely suitable for oils and oil based liquids. Excellent for working under cold tempera-tures and is a cost-saving alternative when pumping thin-bodied inorganic acids or caustics.

Santoprene®: Is a compound of EPDM and PP. The chemical resistance is comparable with EPDM (Buna AB, Keltan).

When pumping acids and alkalis, Santoprene is an excellent alternative to Teflon[®] 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:

Туре	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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