

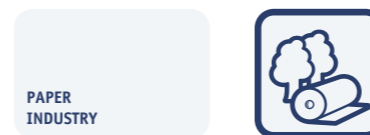
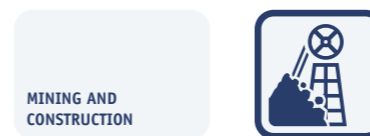
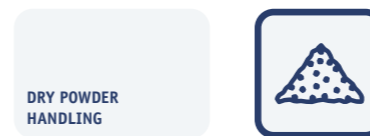
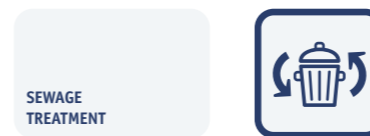
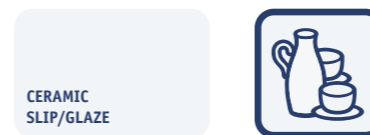
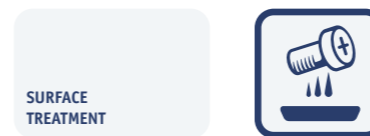
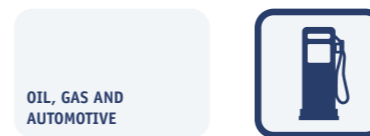
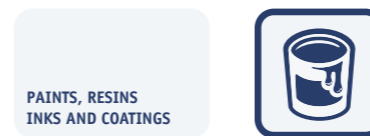
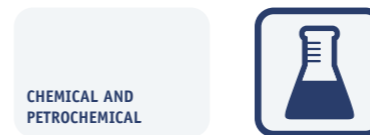
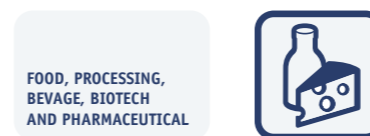
DELLMECO[®]

A O D D I A P H R A G M P U M P S

Air Operated Double Diaphragm Pumps



PUMP FEATURES



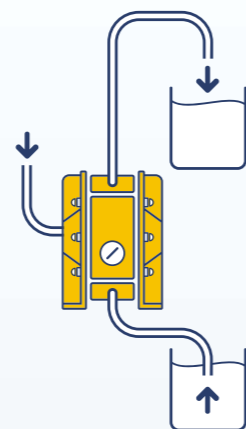
- Compact, solid design - low space required
- Pumps abrasive and shear-sensitive materials. Low internal velocities handle abrasive liquids with no damage to the pump. The gentle pumping does not shear fragile materials
- Pumps move everything from water to very viscous liquids with solids
- Sealless - are environmentally friendly, no seals or packing to leak
- Safe in hazardous areas - air driven - non sparking
- Can run dry without damage
- Self-priming to over 8 meters
- Variable flow - simply regulate the inlet air supply to adjust the pump flow from zero to max flow
- Pump stalls if discharge is closed and restarts when discharge is opened (no heat build-up, or wear). Expensive types systems and pressure relief valves not required
- Composite, long life diaphragms for heavy applications (no diaphragm discs). Is smooth and not interrupted by any seals whatever
- Operates without any lubrication
- Fully groundable
- Easy maintenance
- Certifications

CE Ex ATEX



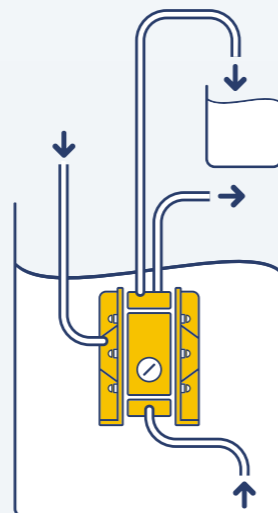
SELF PRIMING APPLICATION

Pumps range in suction lift capability for 5 meters dry, 8 meters can be reached in a primed condition. Suction lift will vary according to materials of construction and application parameters. All data is based on pumping water at 20°C.



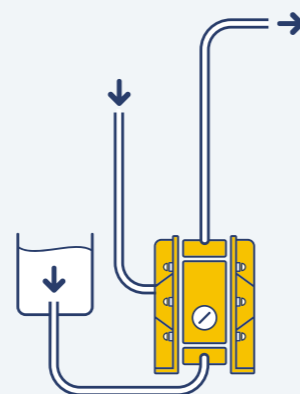
SUBMERGED OPERATION

All pumps can operate in full submersion. Construction materials must be compatible with the surrounding liquid and the exhaust must be placed above the liquid level.



POSITIVE SUCTION HEAD

Common as a method of drawing off the bottoms of holding tanks or clarifiers. Optimum inlet pressure should be kept at 0.5-0.6 bar.



PUMP CODE

DM 15/55 PTS-DM 1	
DM - Dellmeco Pump 15 - Port dimension, DN 55 - Max capacity l/min at 8 bar	
P - Housing material: A - Aluminium B - Aluminium coated with PTFE C - Cast Iron H - AISI 316L Hygienic P - PE R - PE conductive S - AISI 316 Industrial T - PTFE Z - PTFE conductive	
T - Diaphragm material: (all conductive) E - EPDM N - NBR T - TFM/PTFE	
S - Material and kind of valve: E - EPDM, ball valve N - NBR, ball valve S - AISI 316, ball valve T - PTFE, ball valve U - Polyurethane, ball valve F - PTFE, cylinder valve P - PE, cylinder valve C - Ceramic, ball valve	
DM 1 - Optional equipment: BC1 – Barrier Chamber with sensors (Napur) BC2 – Barrier Chamber as BC1 with controllers BC3 – Barrier Chamber as BC2, ATEX DM1 – Diaphragm Monitoring, Namur – ATEX DM2 – Diaphragm Monitoring with controller F1 – Flange Connection PN 10 with FEP/FPM O-ring F2 – Flange Connection PN 10 with EPDM O-ring F3 – Flange Connection PN 10 with NBR O-ring F8 – Flange Connection PN16, ANSI 150 SC1 – Stroke sensor, ATEX SC2 – SC1 plus stroke counter SC3 – SC1 plus stroke counter – ATEX SC5 – Stroke counting pneumatical with pressure transmitter SC6 – SC5 plus stroke counter BF1 – Back flushing system, hand operated, EPDM seals BF2 – Back flushing system, hand operated, PTFE seals BF3 – Back flushing system, hand operated, FPM seals BF4 – Back flushing system, pneumatical, EPDM seals BF5 – Back flushing system, pneumatical, PTFE seals AF1, AF2 - Air filter, regulator, valve, nipple, connector D – Drum pump HJ – Heating Jacket HP – High pressure S – Sleeve with split connections P – Powder pump T – Trolley CLEAN – the Clean package to meet enlarged purity requirements for special pump applications	

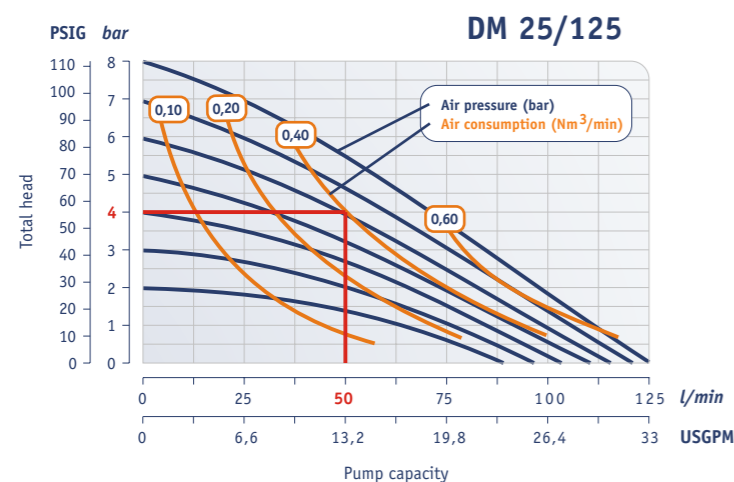
MATERIALS PROFILE

MATERIALS PROFILE	OPERATING TEMPERATURES		
	MIN	MAX	
NBR General purpose, oil-resistant. Shows good solvent, oil, water, and hydraulic fluid resistance. Should not be used with highly polar solvents like acetone and MEK, ozone, chlorinated hydrocarbons and nitro hydrocarbons	30°C	90°C	PE (polyethylene) is very tough and exceedingly resistant to wear, its water absorption capacity is very low and it displays good general resistance to chemicals. Only such strong oxidants as nitric acid, oleum and halogens can damage PE. PE competes with PP (polypropylene) which is frequently used in the manufacture of pumps. Thermally and chemically speaking, there are virtually no differences between these two. However, the similarity ends where the mechanical properties are concerned: trials based on the sand-slurry method have shown that the abrasion resistance of the PE is 7 times higher than that of PP and even 1.6 times higher than that of steel. It is certainly also more wear-resistant than, for example, cast iron or aluminium. This high resistance to abrasion plays a vital role in many applications (e.g. pickling baths in the electroplating industry, printing inks, lime slurry for wet desulphurization, ceramic mass and glazes in the ceramic industry).
EPDM Shows very good water and chemical resistance. Has poor resistance to oil and solvents, but is fair in ketones and alcohols.	-40°C	120°C	PTFE is a thermoplastic polymer of tetrafluoroethylene. It has a smooth surface, a very low friction coefficient, is physiologically safe, can be used over a wide range of temperatures and displays virtually universal resistance to chemicals. However, pure PTFE has very little resistance to abrasion and tends to cold-flow.
Virgin PTFE. Chemically inert, virtually impervious. Very few chemicals are known to chemically react with PTFE; molten alkali metals, turbulent liquid or gaseous fluorine and few fluoro-chemicals such as chlorine trifluoride or oxygen difluoride with readily liberate free fluorine at elevated temperatures.	-37°C	120°C	

Maximum and Minimum Temperatures are the limits for which these materials can be operated. Temperatures coupled with pressure affect the longevity of diaphragm pump components. Maximum life should not be expected at the extreme limits of the temperature ranges.

A. HOW TO SELECT PUMP SIZE

- 1) Enter Flow (l/min) and Head
(example: 50l/min at 4 bar)
- 2) Approximate energy requirements in Pressure and Volume
(example: 0,40 Nm³/min at 6 bar)

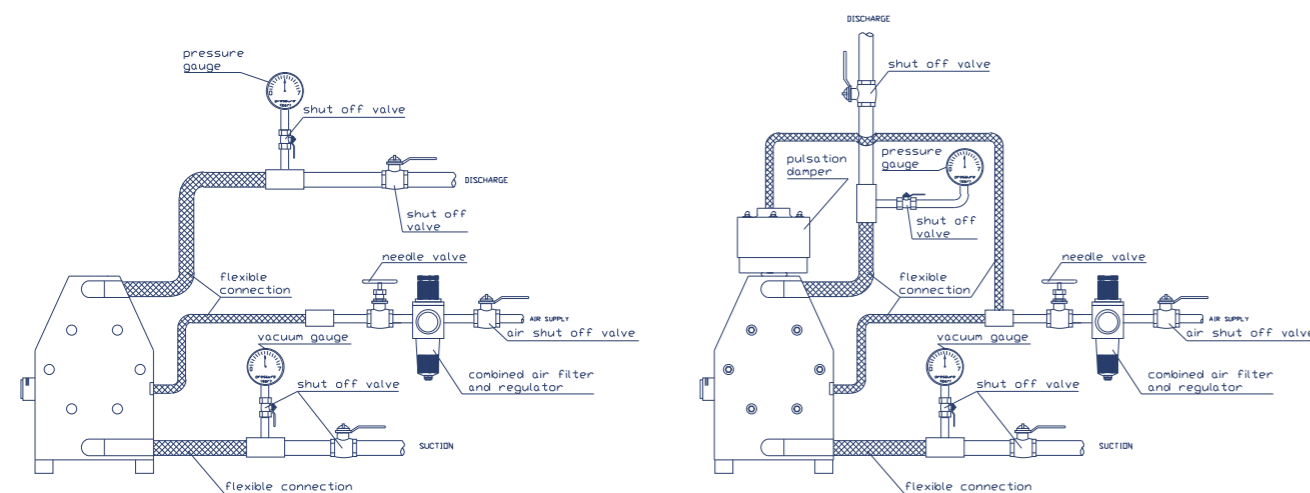


1" Pump - Performance Curve
Performance based on water at 20°C

B. RECOMMENDED INSTALLATION GUIDELINES

For best results DELLMECO recommend installing the pulsation dampener on the discharge side of the pump.

To reduce piping and pump connection stresses, we recommend flexible connections on both inlet and outlet piping and air inlet connections.



- 1) Connect a flow valve and a drain valve to the fluid discharge port of the pump.
- 2) Connect a valve for maintenance to the fluid suction intake port of the pump.
- 3) Connect a hose to the valve on the suction-port side and the valve of the discharge-port side of the pump.
- 4) Connect a hose on the suction-side intake and the discharge-port side to the respective vessels.

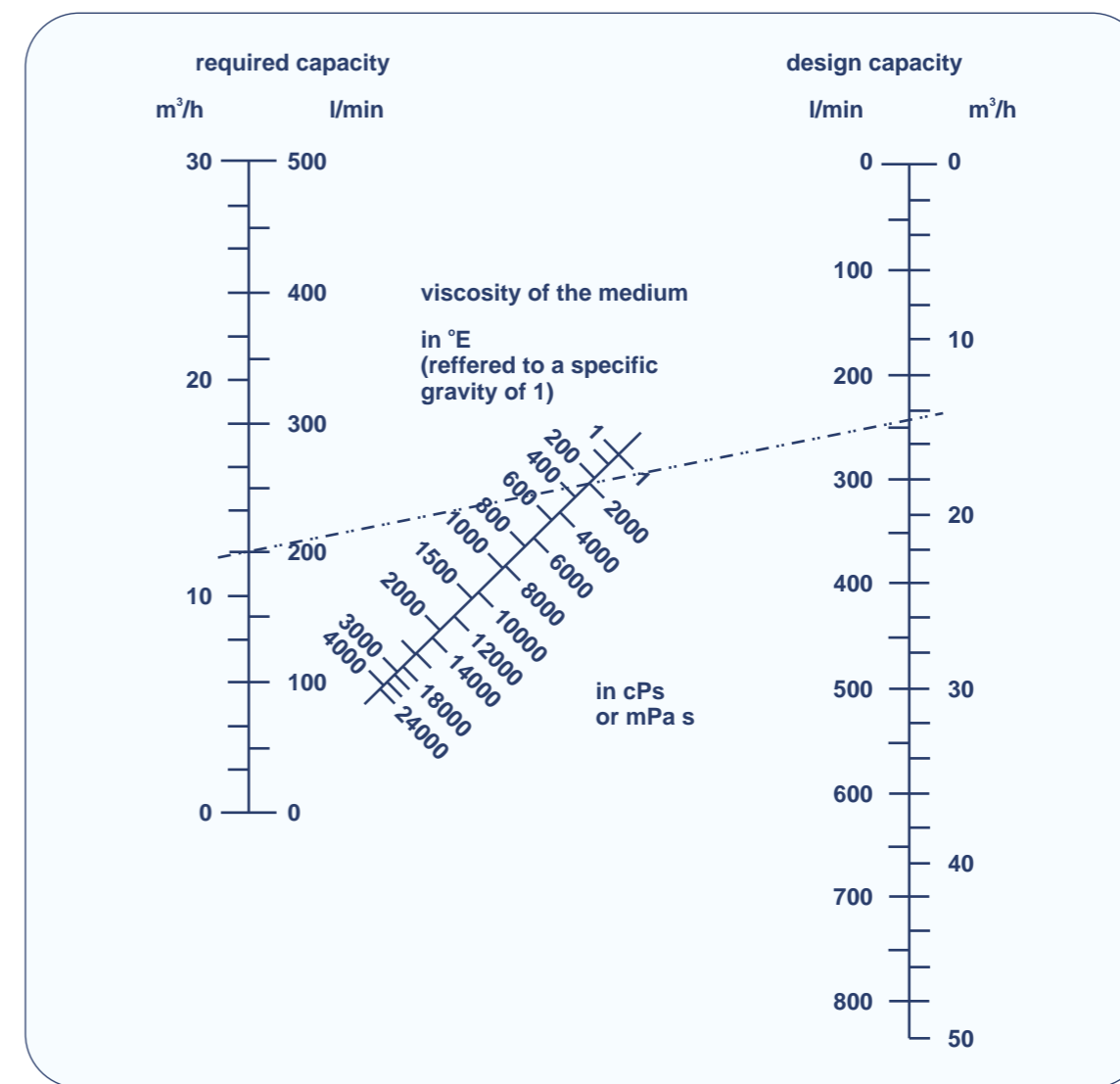
C. REDUCTION OF FLOW RATE

Product viscosity affects pump capacity.

The capacity specified in the pump performance charts generally refer to water (1cPs).

The value must be reduced correspondingly when pumping media with higher viscosity. The design capacity can be read off directly from the graph and the corresponding pump size selected.

The example shown here is based on required capacity of 200l/min with a product viscosity of 2000 cPs. The dash-dotted line intersects the design capacity scale at 248l/min.



POLYETHYLENE AND PTFE PUMPS



1. Designed to succeed

- temperatures to 120°C
- pressure to 16bar
- lubrication-free operation
- low air consumption

2. Flexible installations

- BSP as standard,
- PN10, PN16, AISI316, ANSI, NPT, split manifold configurations available
- connections may rotate 180°C

3. Solid and strong

- housing machined from a solid PE, PTFE (and conductive)
- stand against aggressive chemicals
- gentle pumping action
- viscous product transfer

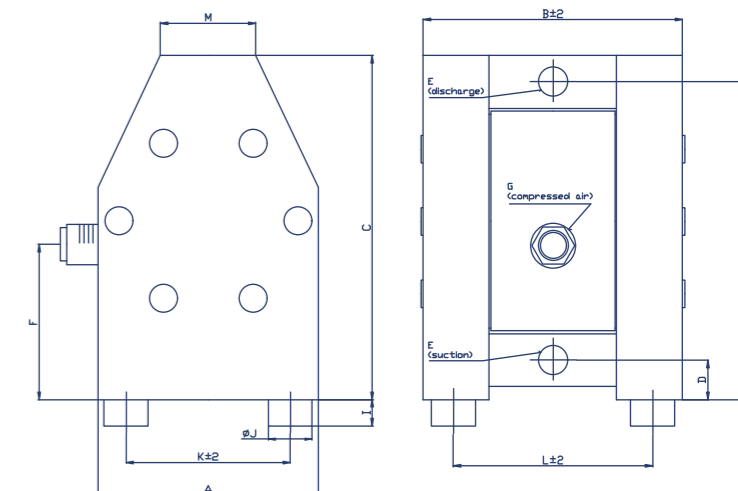
4. Perfect diaphragm

- completely smooth liquid side surface (no hole)
- no metal in contact with the liquid

POLYETHYLENE AND PTFE MATERIALS



DIMENSIONAL DRAWING



DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	K	L	M
DM 08/10	70	111 ± 2	120	15	G 1/4"	61	R 1/8"	107	10	15	50 ± 2	86 ± 2	36
DM 10/25	105	130 ± 2	163	18	G 3/8"	84	R 1/8"	150	10	15	75 ± 2	93 ± 2	45
DM 15/55	150	177 ± 2	235	25	G 1/2"	92	R 1/4"	217	17.8	30	112 ± 2	132 ± 2	65
DM 25/125	200	224 ± 2	312	35	G 1"	123	R 1/4"	287	27.8	40	140 ± 2	169 ± 2	85
DM 40/315	270	312 ± 2	426	42	G 1 1/2"	166	R 1/2"	388	30	60	210 ± 2	227 ± 2	120
DM 50/565	350	385 ± 2	540	45	G 2"	215	R 1/2"	485	30	60	280 ± 2	278 ± 2	150

PUMP CODE

	08/10	10/25	15/55	25/125	40/315	50/565
Max capacity (l/min)	10	25	55	125	315	565
Max pressure (bar)	8					
Nominal port size	1/4"	3/8"	1/2"	1"	1 1/2"	2"
Air connection	R 1/8"	R 1/8"	R 1/4"	R 1/4"	R 1/2"	R 1/2"
Suction lift dry (mWC)	1	2	3	4	4	5
Suction lift wet (mWC)	9					
Max diameter solids (mm)	2	3	4	7	10	12
Temperature limits - PE (°C)	70	70	70	70	70	70
Temperature limits - PTFE (°C)	110	110	120	120	120	120
Weight - PE (kg)	0.9	1.4	5	9	23	42
Weight - PTFE (kg)	1.4	2.4	7	16	43	87
Material of pump housing	PE, PTFE					
Diaphragm options	PTFE	NBR, EPDM or TFM/PTFE				
Valve balls	PTFE, AISI 316	NBR, EPDM, PTFE, AISI 316, PU				
Rod valves	PE or PTFE					
O-rings	EPDM, FEP/FPM, PTFE+EPDM, or PTFE+FPM					

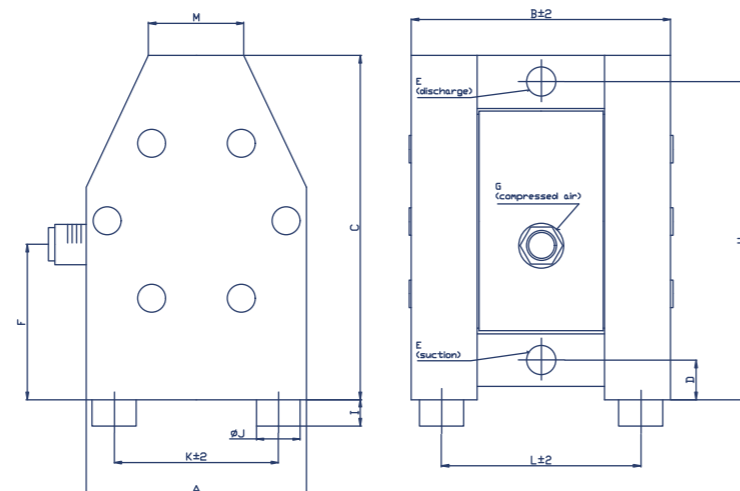
The above figures represent EPDM-fitted pump capabilities.
It can vary for PTFE-fitted diaphragm.



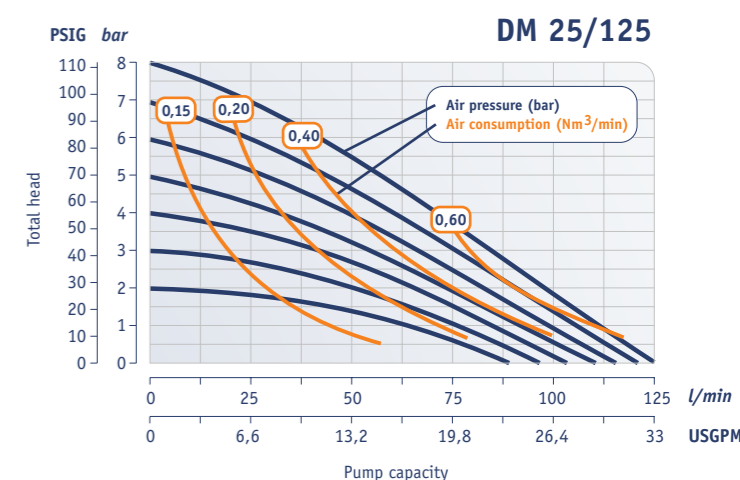
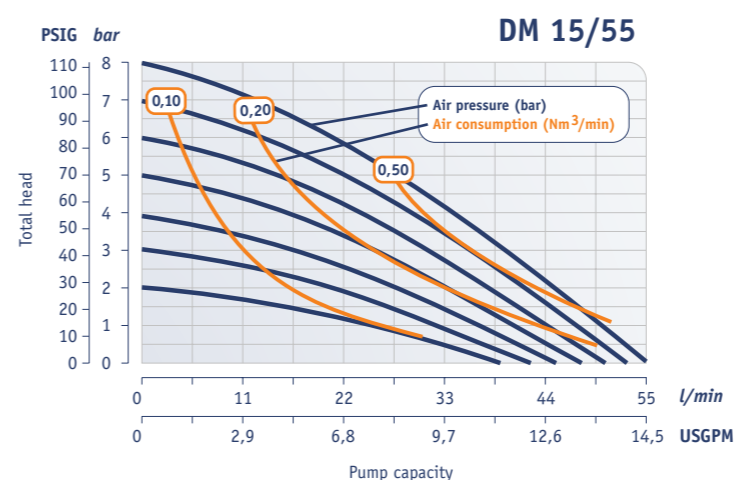
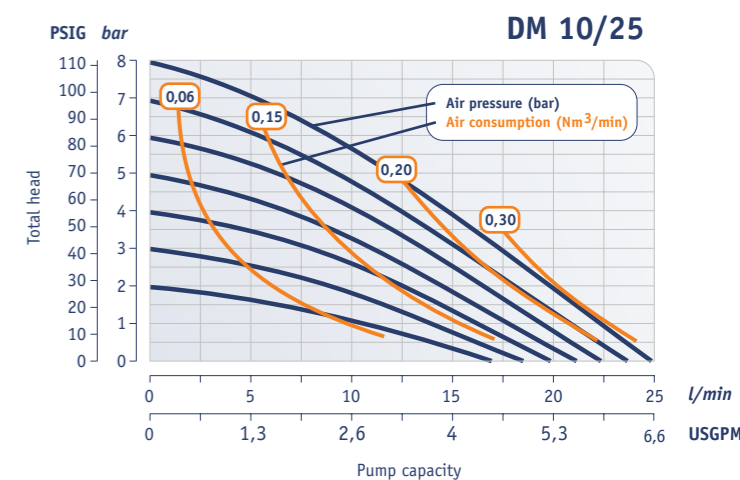
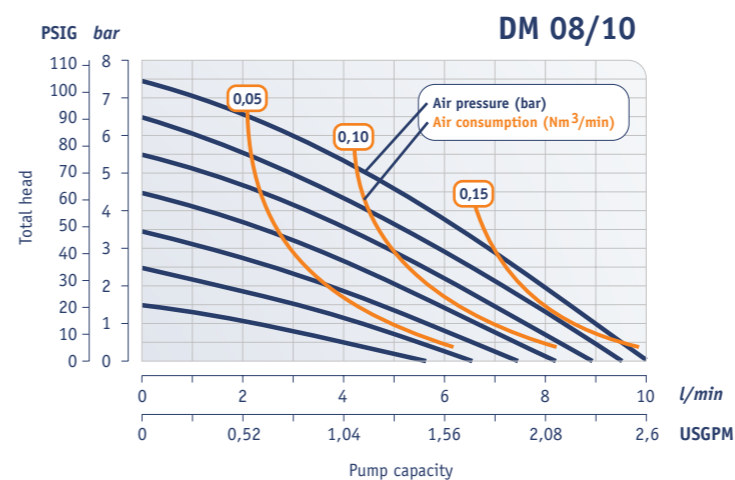
WHERE ATEX IS REQUIRED

The plastic pumps manufactured of conductive PE and PTFE are constructed to enable grounding of non-metallic pumps. This feature allows the pump to safely transfer solvents, alcohols and other volatile liquids without the danger of static electricity build-up. These features apply also to the aluminium, cast iron and AISI 316 pumps.

DIMENSIONAL DRAWING



DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	K	L	M
DM 08/10	70	111 ± 2	120	15	G 1/4"	61	R 1/8"	107	10	15	50 ± 2	86 ± 2	36
DM 10/25	105	130 ± 2	163	18	G 3/8"	84	R 1/8"	150	10	15	75 ± 2	93 ± 2	45
DM 15/55	150	177 ± 2	235	25	G 1/2"	92	R 1/4"	217	17.8	30	112 ± 2	132 ± 2	65
DM 25/125	200	224 ± 2	312	35	G 1"	123	R 1/4"	287	27.8	40	140 ± 2	169 ± 2	85
DM 40/315	270	312 ± 2	426	42	G 1 1/2"	166	R 1/2"	388	30	60	210 ± 2	227 ± 2	120
DM 50/565	350	385 ± 2	540	45	G 2"	215	R 1/2"	485	30	60	280 ± 2	278 ± 2	150

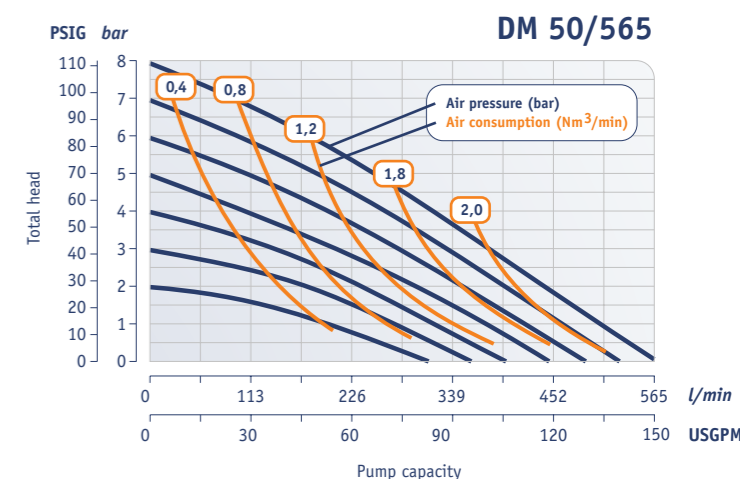
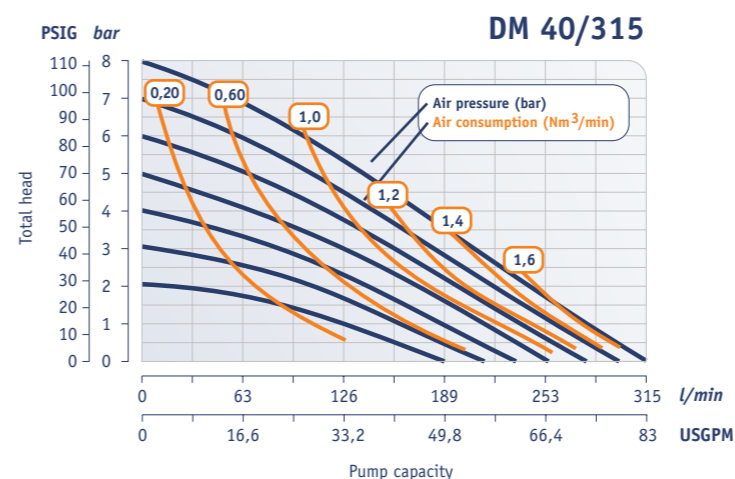


PUMP CODE

	08/10	10/25	15/55	25/125	40/315	50/565
Max capacity (l/min)	10	25	55	125	315	565
Max pressure (bar)	8					
Nominal port size	1/4"	3/8"	1/2"	1"	1 1/2"	2"
Air connection	R 1/8"	R 1/8"	R 1/4"	R 1/4"	R 1/2"	R 1/2"
Suction lift dry (mWC)	1	2	3	4	4	5
Suction lift wet (mWC)	9					
Max diameter solids (mm)	2	3	4	7	10	12
Temperature limits - PE cond. (°C)	70	70	70	70	70	70
Temperature limits - PTFE cond. (°C)	110	110	120	120	120	120
Weight - PE (kg)	0.9	1.4	5	9	23	42
Weight - PTFE (kg)	1.4	2.4	7	16	43	87
Material of pump housing	PE conductive, PTFE conductive					
Diaphragm options	PTFE	NBR, EPDM or TFM/PTFE				
Valve balls	PTFE, AISI 316	NBR, EPDM, PTFE, AISI 316, PU				
Rod valves	PE or PTFE					
O-rings	EPDM, FEP/FPM, PTFE+EPDM, or PTFE+FPM					

ATEX CE Ex II 2G TX

ATEX pumps are designed to meet ATEX regulations for pneumatic diaphragm pumps handling flammable liquids. All material construction with approved NBR, EPDM or PTFE/TFM elastomers.



The above figures represent EPDM-fitted pump capabilities. It can vary for PTFE-fitted diaphragm.

METAL PUMPS



1. Designed to succeed

- temperatures to 120°C
- pressure to 16bar
- lubrication-free operation
- low air consumption

2. Flexible installations

- BSP as standard,
- PN10, PN16, ANSI, NPT, split manifold configurations available
- connections may rotate 180°C

3. Solid and strong

- gentle pumping action
- viscous product transfer
- the valve seat made of AISI 316 is integrated with pump housing

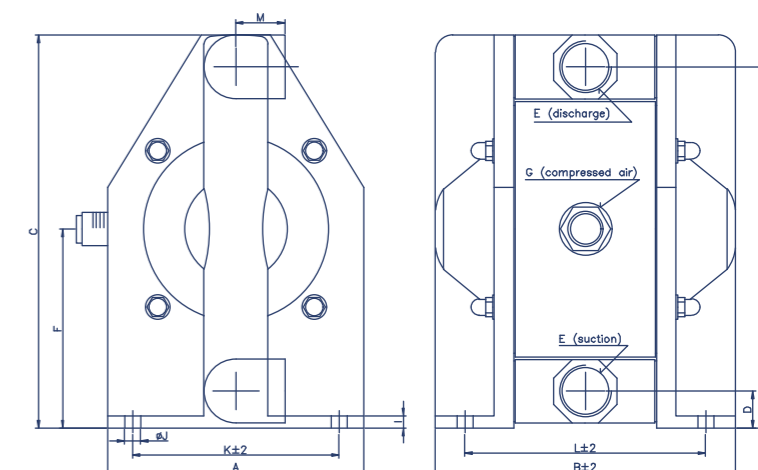
4. Perfect diaphragm

- completely smooth liquid side surface (no hole)
- no metal in contact with the liquid



ALUMINIUM, ALUMINIUM WITH PTFE, CAST IRON

DIMENSIONAL DRAWING



DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	K	L	ØM	N	O
DM 20/75	150	171	228	19	G 3/4"	84	R 1/4"	209	7	8.5	116	133	31	17.8	30
DM 25/125	200	202	302	27	G 1"	115	R 1/4"	279	7	8.5	160	164	34	27.8	40
DM 40/315	270	267	412	34	G 1 1/2"	157	R 1/2"	380	10	8.5	220	213	45	30	60
DM 50/565	350	345	535	46	G 2"	222	R 1/2"	493	10	8.5	280	281	58	30	60

TECHNICAL DATA

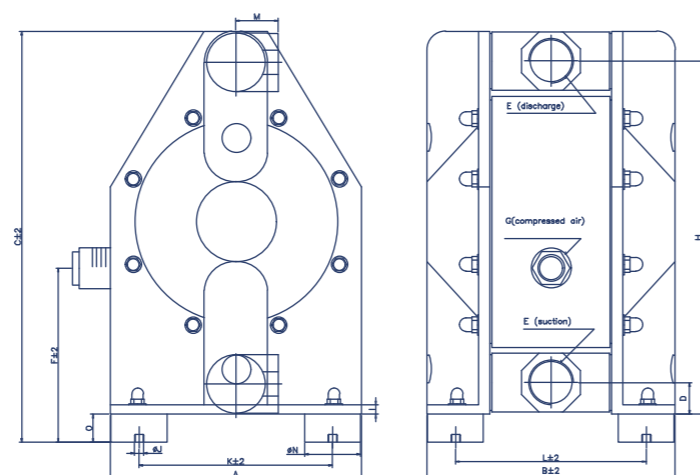
	15/25	20/75	25/125	40/315	50/565
Max capacity (l/min)	25	75	125	315	565
Max pressure (bar)	8				
Nominal port size	1/2"	3/4"	1"	1 1/2"	2"
Air connection	R 1/8"	R 1/4"	R 1/4"	R 1/2"	R 1/2"
Suction lift dry (mWC)	2	3	4	4	5
Suction lift wet (mWC)	9				
Max diameter solids (mm)	3	4	7	10	12
Temperature limits - NBR, EPDM (°C)	80				
Temperature limits - PTFE (°C)	120				
Weight - Alu (kg)	1.9	4.9	8	18	33
Material of pump housing	Aluminium, Aluminium Coated with PTFE, cast iron				
Diaphragm options	NBR, EPDM or TFM/PTFE				
Valve balls	NBR, EPDM, PTFE, AISI 316, PU				
O-rings	NBR, EPDM, or FEP/FPM				

The above figures represent EPDM-fitted pump capabilities. It can vary for PTFE-fitted diaphragm.



STAINLESS STEEL AISI 316 - INDUSTRIAL

DIMENSIONAL DRAWING



DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	K	L	M
DM 20/75	150	171	228	19	G 3/4"	84	R 1/4"	209	7	8,5	116	133	31
DM 25/125	200	202	302	27	G 1"	115	R 1/4"	279	7	8,5	160	164	34
DM 40/315	270	267	412	34	G 1/2"	157	R 1/4"	380	10	8,5	220	213	45
DM 50/565	350	345	535	46	G 2"	222	R 1/2"	493	10	8,5	280	281	58

TECHNICAL DATA

	20/75	25/125	40/315	50/565
Max capacity (l/min)	75	125	315	565
Max pressure (bar)	8			
Nominal port size	3/4"	1"	1 1/2"	2"
Air connection	R 1/4"	R 1/4"	R 1/2"	R 1/2"
Suction lift dry (mWC)	3	4	4	5
Suction lift wet (mWC)	9			
Max diameter solids (mm)	4	7	10	12
Temperature limits - NBR, EPDM (°C)	80			
Temperature limits - PTFE (°C)	120			
Weight - AISI 316 (kg)	9.5	14	31	70
Material of pump housing	AISI 316			
Diaphragm options	NBR, EPDM or TFM/PTFE			
Valve balls	NBR, EPDM, PTFE, AISI 316, PU			
O-rings	NBR, EPDM, or FEP/FPM			

The above figures represent EPDM-fitted pump capabilities.
It can vary for PTFE-fitted diaphragm.

SPECIAL MATERIAL VERSIONS



Aluminium coated with PTFE as alternative solution for AISI 316 pumps.
Pump connection are made of AISI 316.
Especially suitable for print and ink industry.



Cast iron Pump with PP (polypropylene) centre section.



Aluminium Pump with conductive centre section -
ATEX Pump.

SPECIAL VERSIONS



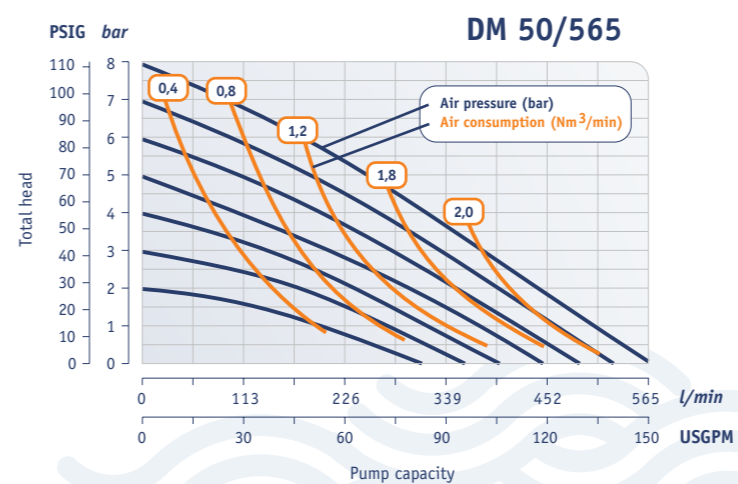
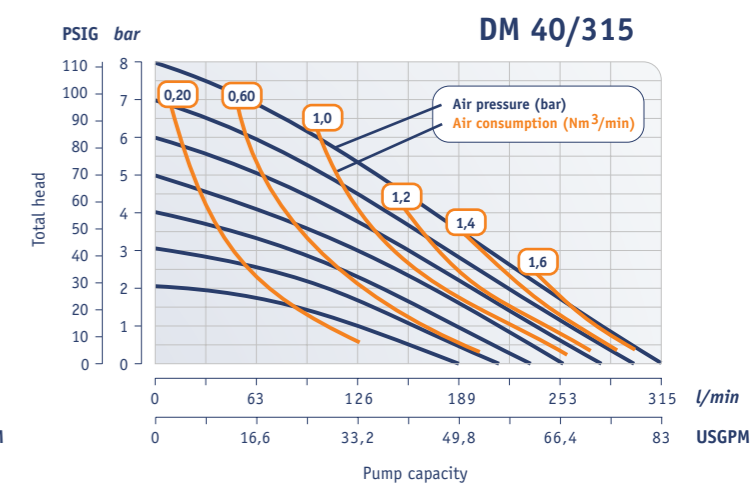
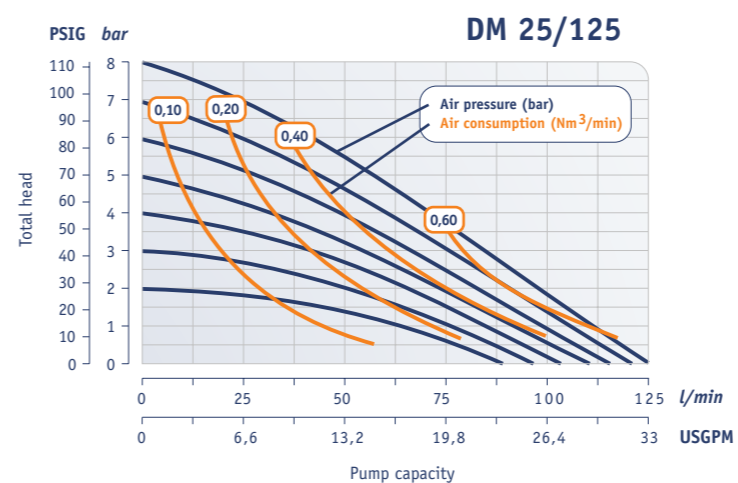
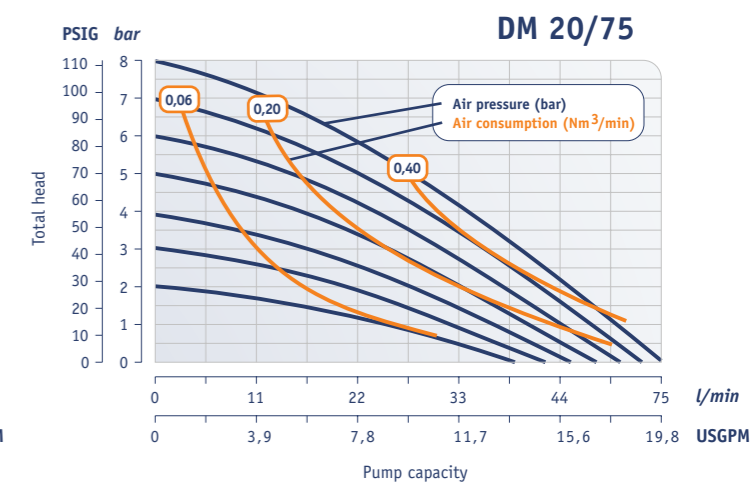
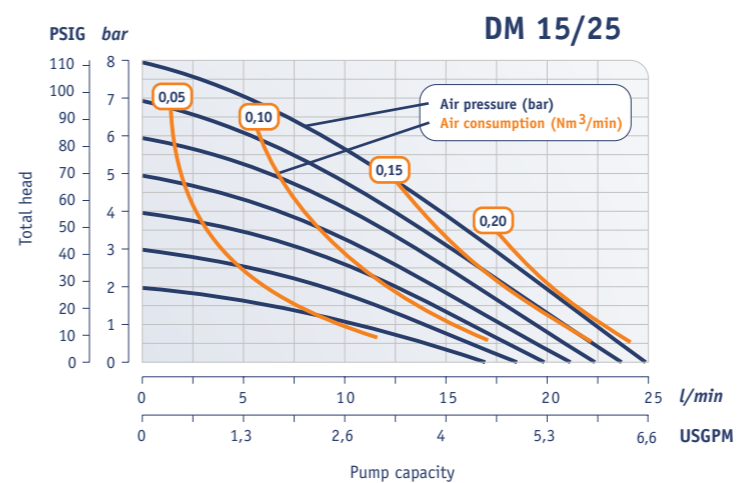
AISI 316 Industrial Pump with conductive centre section - ATEX Pump.



Metal pump with heating jacket.



Metal pump with handle used as a Drum pump.



SANITARY PUMPS

HYGIENIC CONSTRUCTION



1. Quick dismantling

The clamp system ensures rapid dismantling without any tools.

2. Plain surface

The sandwich diaphragm has a completely plain surface, which eliminates bacteria growth problems. The diaphragm is available in food grade material - pure TFM (PTFE).

3. Superior finish

Both liquid side and outside is electropolished to obtain superior finish and hygiene. Special surface finish may be done according to your requirements.

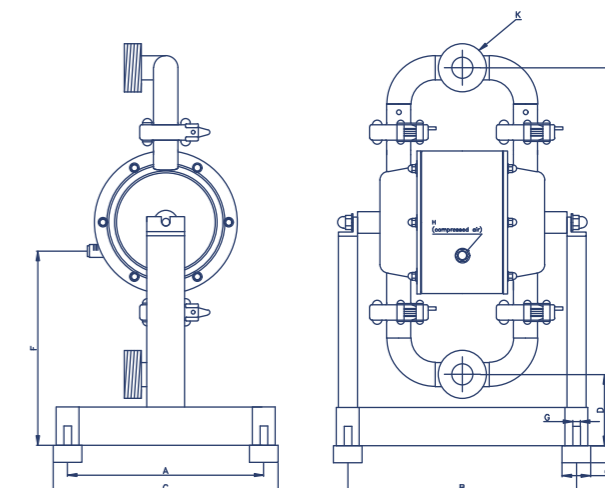
4. Pollution free air valve

The sealing system is lubrication free, always keeping your product and environment free from oil contamination.

AISI 316L POLISHED - HYGIENIC PUMP



DIMENSIONAL DRAWING



Hygienic design made from electropolished stainless steel to meet the requirements in hygienic installations.

DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	ØK		
											TC	DIN	SMS
DM 25/75	206	240	230	74	386	204	M8	R 1/4"	18	30	1"	25	25
DM 40/125	226	257	250	67	440	221	M8	R 1/4"	18	30	1 1/2"	40	38
DM 50/315	326	357	350	102	640	304	M8	R 1/2"	18	30	2"	50	51
DM 65/565	326	435	350	97	845	414	M8	R 1/2"	18	30	2 1/2"	65	63,5

TECHNICAL DATA

	25/75	40/125	50/315	65/565
Max capacity (l/min)	75	125	315	565
Max pressure (bar)	8			
Nominal port size	DN 25	DN 40	DN 50	DN 65
Optional connections	Tri-Clamp standard, DIN 11850, SMS			
Air connection	R 1/4"	R 1/4"	R 1/2"	R 1/2"
Suction lift dry (mWC)	3	4	4	5
Suction lift wet (mWC)	9			
Max diameter solids (mm)	5	8	11	14
Temperature limits - NBR, EPDM (°C)	80			
Temperature limits - PTFE (°C)	120			
Weight (kg)	8	11	26	34
Material of pump housing	AISI 316L			
Material of centre housing	PE, PE conductive			
Diaphragm options	NBR, EPDM or TFM/PTFE			
Valve balls	NBR, EPDM, PTFE, AISI 316			
Gaskets	Silicone, PTFE, EPDM, NBR			

The above figures represent EPDM-fitted pump capabilities. It can vary for PTFE-fitted diaphragm.

Sanitary series

Sanitary series is particularly designed to meet the requirements of the food, beverage, pharmaceutical and cosmetic industries. Lubrication free air distribution system, maintenance free ball check valve system and total visual inspection of the wetted parts are some of the major features for this pump series.

Made to be clean

Our design allows for total visual inspection of the wetted parts. There are no hidden areas where bacteria can grove. The manifold clamps and the housing screws are simply removed for complete disassembly and cleaning. The pump is also designed for cleaning and sterilization in place - C.I.P. and S.I.P. After such operations, the pump is easily turned in its support for drainage.

SPECIAL VERSIONS



TROLLEY FOR PUMP

Make your DELLMECO pump mobile. The trolley is available for all pump sizes



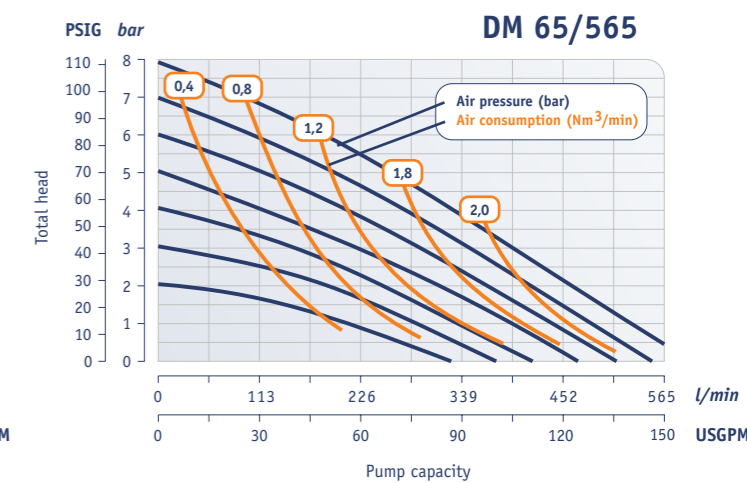
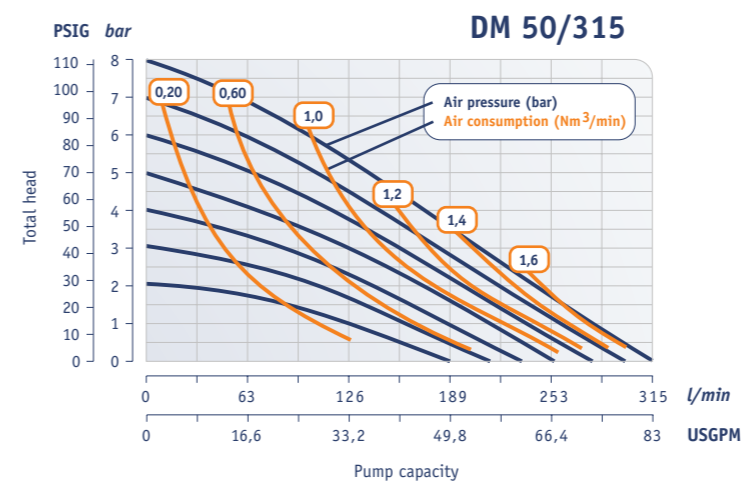
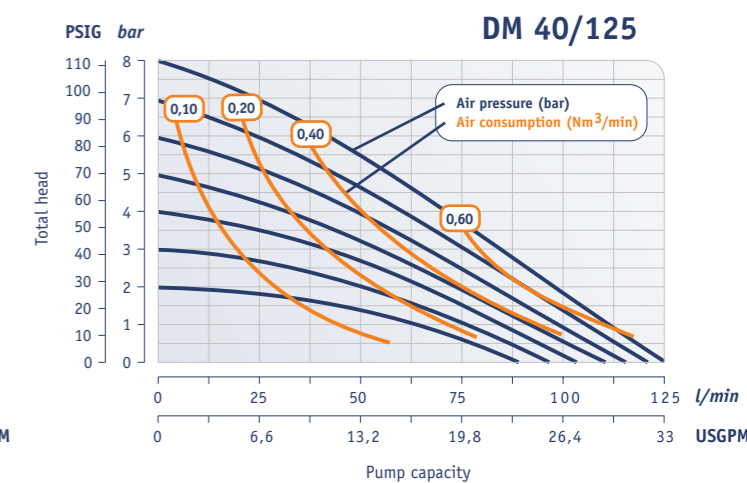
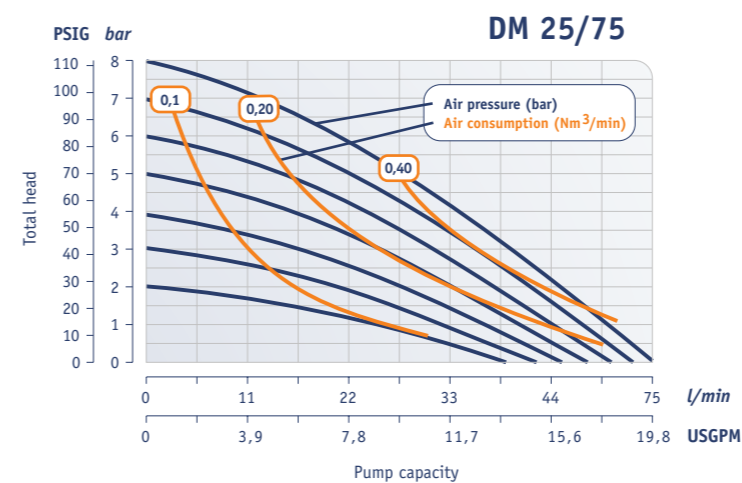
VARIETY OF CONNECTION TYPES

The pump is supplied as standard with TC clamp connections. However, the pump may be equipped with almost any type of connection used in the hygienic field – DIN, SMS, RJT, ANSI etc.



HEATING JACKET

The heating jacket is used when the pumped product has to maintain a specific temperature, high or low, throughout the process. A heating or cooling medium is continuously circulated in the heating jacket. The jacket is covering all the wetted parts of the pump. Available on all sanitary series pumps.

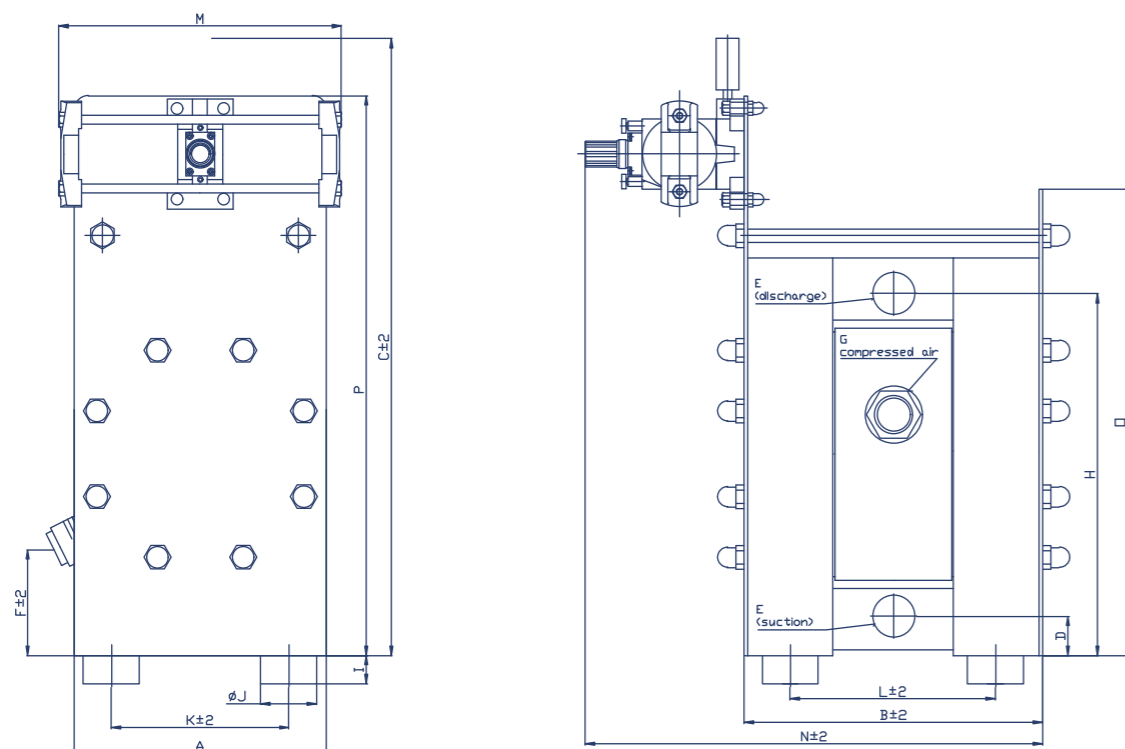


HIGH PRESSURE PUMPS



HP - High Pressure pump station for filter-press feeding is a very compact unit that can be mounted directly to the filterpress. The design and function allows the user a straightforward pressing of slurries. Pressure regulator is already mounted to the unit. The pump stations are based on the standard Dellmeco pumps from machined polyethylene (PE). An external pressure booster doubles the delivery pressure. For example, with available air pressure of 7bar, the delivery pressure will be maximum 14bar.

DIMENTIONAL DRAWING - POLYMER



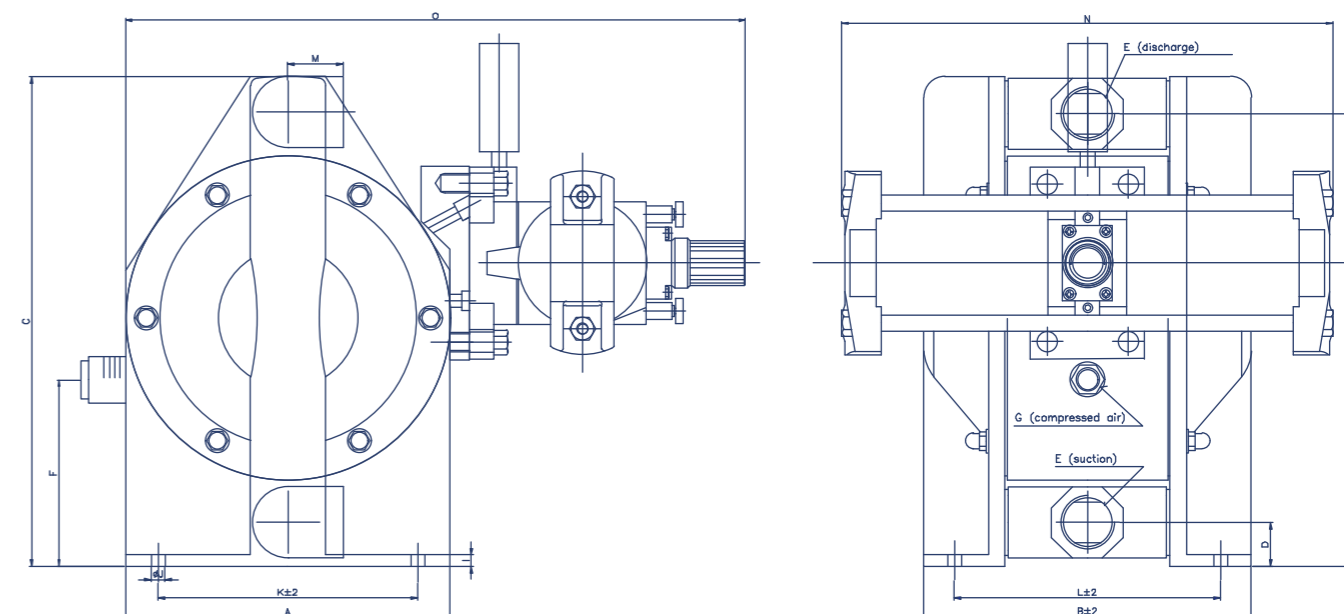
DIMENSIONS	A	B	C	D	E	F	G	H	I	∅J	K	L	M	N	O	P
DM 15 /55	153	185	372	25	G 1/2"	106	R 1/4"	217	17.8	30	112	136	150	294	248	328
DM 25/125	200	232	526	35	G 1"	123	R 1/4"	287	27.8	40	140	161	303	402	349	462
DM 40/315	270	320	661	42	G 1/2"	113	R 1/2"	388	30	60	190	220	303	490	500	630
DM 50/565	350	393	771	45	G 2"	150	R 1/2"	485	30	60	280	282	382	604	560	720



INSTALLATION

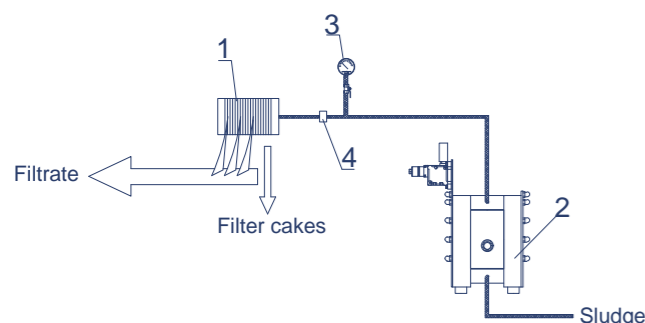
As this station works self-regulating, an additional device for regulating the flow quantity is not necessary. Just mount it to the filterpress, connect it - ready. Even the pressure regulator for the air supply is included. For monitoring the filling-level of the filterpress, stroke sensors and stroke counters are available. Pump is self priming, can run dry.

DIMENTIONAL DRAWING - METAL

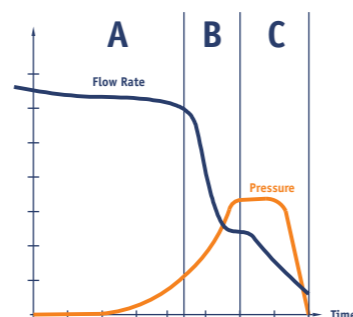


DIMENSIONS	A	B	C	D	E	F	G	H	∅I	J	K
DM 20/75	150	228	172	107	116	31	19	204	6,5	1/4"	3/4"
DM 25/125	200	302	201	163	160	34	27	279	8,5	1/4"	1"
DM 40/315	270	412	267	212	220	45	34	380	8,5	1/2"	1 1/2"
DM 50/565	350	535	347	283	280	58	46	495	8,5	1/2"	2"

POWDER PUMPS



Part no.	Name
1	Filter press
2	Filling and pressure maintenance pump
3	Pressure gauge
4	Bursting disk



Typical operating cycle of filter press

A – High capacity filling allowing filter cake formation.
B – End of filling, filtration resistance, capacity reduction.
C – Pressure maintenance, filter cake formed, high filtration resistance, reduction of filtrate flow to minimum flow at end of pressing.



Dellmeco Pump can also transfer and handle dry process POWDERS more quickly, cleanly and at a fraction of the cost associated with installed systems.

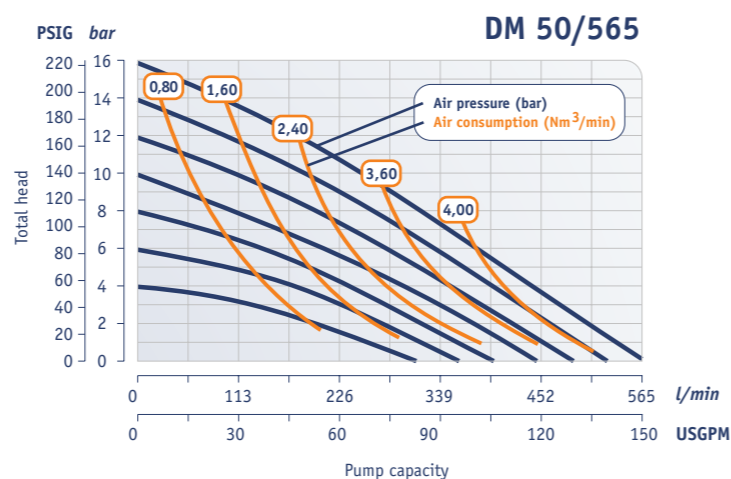
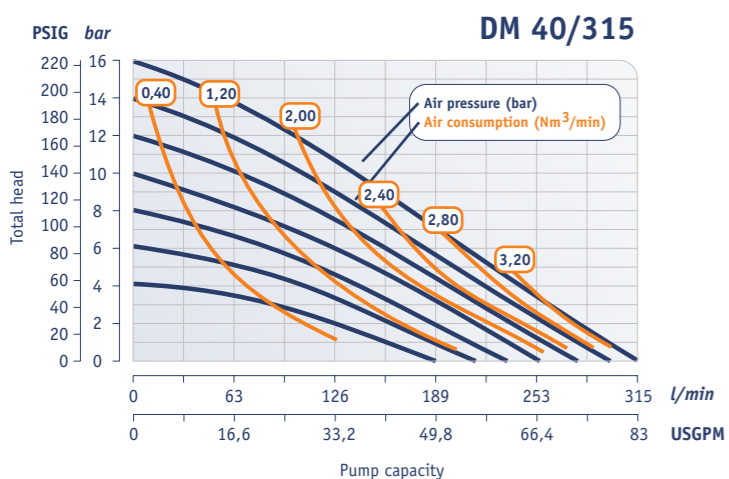
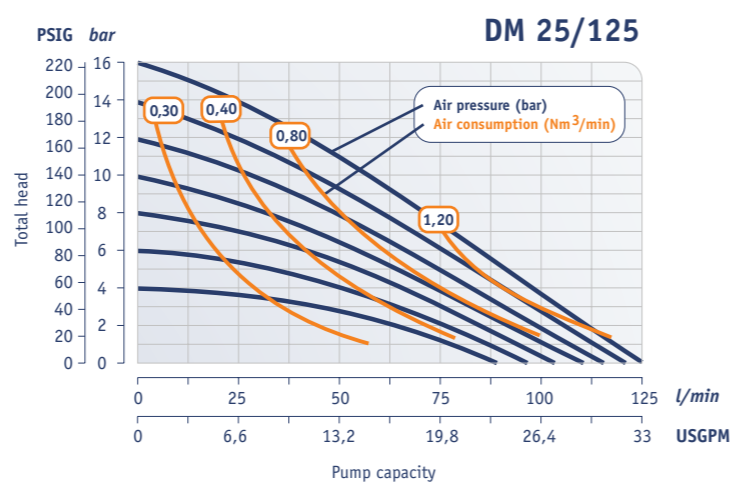
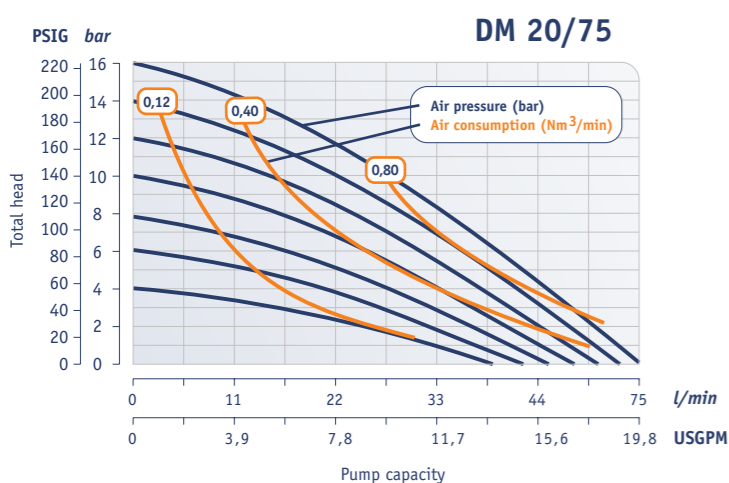
Features:

Replaces manual powder processes.

Reduces airborne contamination - transfer powder directly from the container to your recipe.

Economical and simple - unlike large, complex systems.

Portable - can be moved from site to site.



For transferring POWDERS up to 800kg/m³ (50lb/ft³)

For the consistent, trouble-free Powders transfer of:

- Ground limestone
- Pharmaceuticals
- Talcums
- Expanded mica
- Silicones
- Carbon black
- Fumed silica
- Acrylic resins

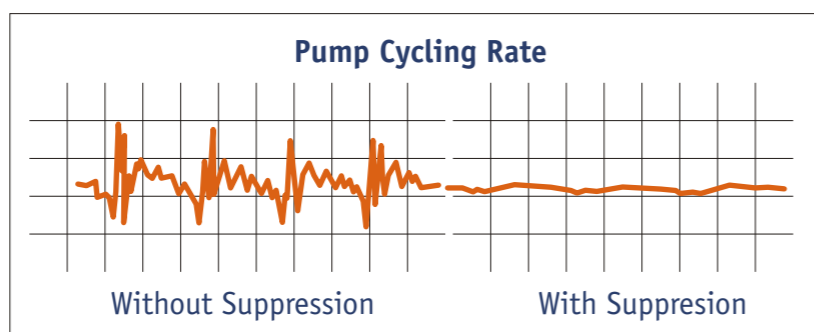
HOW TO SELECT PUMPSIZE

Enter flow rate e.g. 75l/min and pressure 14 bar.
 A DM 25/125 will be suitable with 7 bar supplied compressed air.

PULSATION DAMPENERS



An air cushion established by liquid pressure pushing the diaphragm upward. This allows air to enter the chamber. The balancing air cushion keeps the diaphragm center at mid stroke. During operation, the diaphragm flex within the mid-range position, absorbing and equalizing discharge surge. If pressure changes in the system, the air cushion pressure compensates, automatical increasing or decreasing. If liquid pressure is released, air in the suppressor chamber exhausts into the atmosphere. Property sized and installed, dampeners provide virtually surge-free discharge flow.



Simple installation
Virtually surgee-free flows
Less vibration and noise
Steadier pressures
Automatically self-charging and self-venting
Variety od sizes and materials

Example of the damper type code:

DM	15	P	E	P	
					Material of dampener head:
					P - PE
					R - PE conductive
					L - PP
					Diaphragm material:
					E - EPDM
					T - PTFE
					N - NBR
					Material of dampener housing:
					P - PE
					R - PE conductive
					A - Aluminium
					S - AISI 316 Industrial
					H - AISI 316L Hygienic
					T - PTFE
					Z - PTFE conductive
					Size, nominal connection size: 10: 3/8", 15: 1/2", 20: 3/4", 25: 1", 40: 1 1/2", 50: 2", 65: 2 1/2"

DELLMECO pulsation dampener

Air supply connection: DM 08/10/15/20/25: R 1/8",
DM 40/50/65: R 1/4"
Max. operating pressure: 8 bar
Max. operating temperature: PE dampener housing - 70°C,
PTFE dampener housing - 120°C,
Metal dampener housing - 120°C

Plastic dampeners

For inflammable liquids as well as for applications in explosion protected areas, only dampers made of conductive polymer materials (code Z resp. R) may be used. It is not necessary to ground the damper separately, as the damper is connected conductively to the pump, which is conductive and has to be grounded itself.

In general, pump and damper are dispatched completely mounted. Still, they can be packed in separate boxes, for client wish. If so, the damper has to be screwed into the thread at the top of discharge port carefully, but only until the damper is in contact with the pump. Exceeded tightening may damage the thread. Besides, a correct positioning of the O-ring within the groove has to be ensured.

Metal dampeners

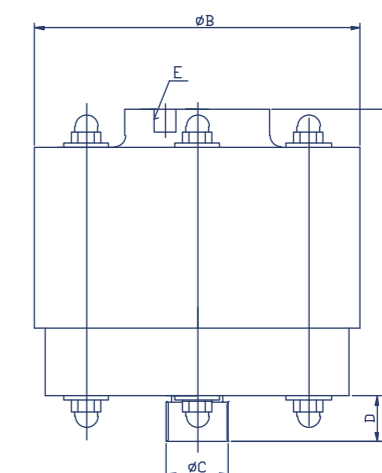
For inflammable liquids as well as for applications in explosion protected areas, only dampers made of PE conductive (code R) may be used. It is necessary to ground the damper separately, as the damper is not connected to the pump, which is conductive and has to be grounded itself. In general, pump and damper are dispatched separately.

PLASTIC DAMPENERS INTEGRATED WITH PUMPS

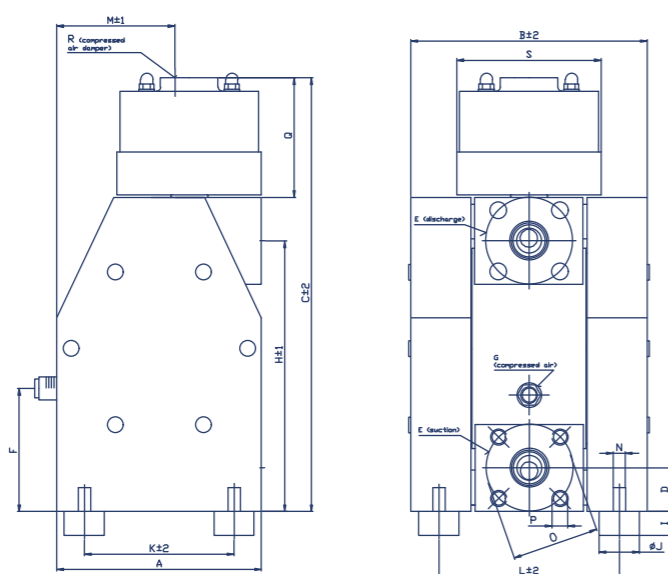


METAL

Material	Aluminium				
Type	DM 15	DM 20	DM 25	DM 40	DM 50
A	85	99	139	170	215
ØB	73	108	152	200	272
ØC	1/2"	3/4"	1"	1 1/2"	2"
D	12	15	20	19	32
E	R 1/8"	R 1/8"	R 1/8"	R 1/4"	R 1/4"



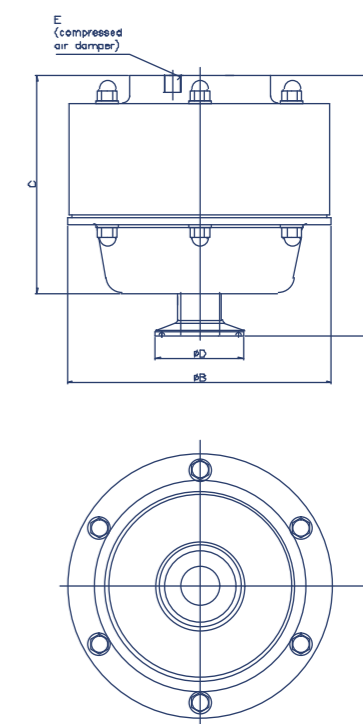
DIMENTIONAL DRAWINGS



DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	K	L
DM 08/10	70	101	118	15	1/4"	58	R1/8"	107	10	15	50	78
DM 10/25	105	120	163	19	3/8"	78	R1/8"	150	10	15	75	89
DM 15/55	150	166	235	27	1/2"	152	R1/4"	217	18	30	112	126
DM 25/125	200	222	312	35	1"	207	R1/4"	287	18	30	140	161
DM 40/315	270	310	426	42	1 1/2"	206	R1/2"	388	28	40	210	220
DM 50/565	350	383	530	45	2"	266	R1/2"	485	28	40	280	273

HYGIENIC AISI 316L - POLISHED

AISI 316L				
Type	DM 25	DM 40	DM 50	DM 65
A	148	148	191	261
ØB	150	150	200	270
C	124	124	151	198
ØD	TC	50.4	50.4	64
	DIN	51.4	64.3	77.1
	SMS	39.3	59.5	69.6
E	R 1/8"	R 1/8"	R 1/4"	R 1/4"



STANDARD BSP



Standard connection for all plastic and metal pumps.

FLANGE CONNECTIONS PN 16



F8 - PN16, ANSI 150

FLANGE CONNECTIONS PN10



This version offers the possibility to use flange connectors according to DIN/PN 10. Thread bushings made of stainless steel to fix the flangers are included in the inlet/outlet. The O-rings attached have to be inserted into the grooves of the manifolds to improve sealing before connecting the pump.

- F1 - Flange connection PN 10 EPDM
- F2 - Flange connection PN 10 NBR
- F3 - Flange connection PN 10 PTFE

S - SPLIT CONNECTIONS



All pump models can have Split connections - code S. Pumps can be converted from a double-acting air-driven diaphragm pump into two separated single-acting ones. The standard sleeve with one suction and one discharge connection is exchanged for a sleeve with split connections, so with separate suction and discharge connections for both pump chambers. By separation in two pump halves with the same drive there are two liquid streams in 1:1 ratio.

Other connections on request.

BARRIER CHAMBER SYSTEM



To comply with high safety standards, the barrier chamber system replaces the standard diaphragm by a tandem arrangement of two diaphragms and a barrier chamber of conductive PE filled with a non-conductive liquid in between.

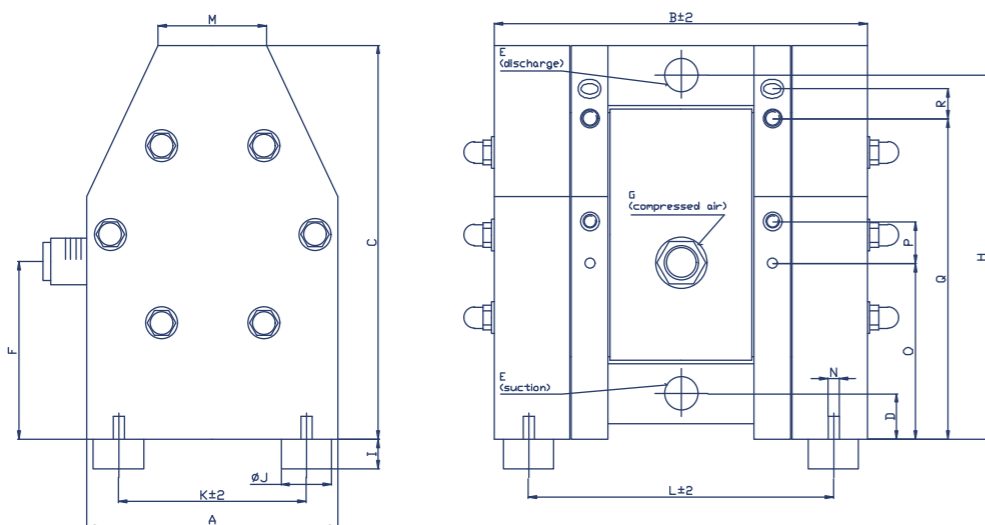
Conductivity sensors monitor the conductivity of this fluid.

If the diaphragm fails, the sensors detect a conductivity variance a signal is sent to a controller.

The barrier system is available in three variations:

- BC1 barrier system with sensors, standard
- BC2 barrier system complete with sensors and controllers
- BC3 barrier system complete with sensors and controllers for explosion proof zone - ATEX

MAIN DIMENTIONS



DIMENSIONS	A	B	C	D	E	F	G	H	I	øJ	K±2	L±2	M	N	O	P	Q	R	øN
DM 10/25	105	173	164	18	G 3/8"	84	R 1/8"	150	10	15	75	138	45	M4	61.3	22.7	127.7	17.8	N
DM 15 /55	153	223	235	25	G 1/2"	92	R 1/4"	217	17.8	30	112	182	65	M8	85.5	25	191.2	17.8	17.8
DM 25/125	200	271	312	35	G 1"	125	R 1/4"	287	27.8	40	140	208	85	M8	146	30	250.3	19.9	27.8
DM 40/315	270	360	426	42	G 1 1/2"	113	R 1/2"	388	30	60	190	268	120	M8	203.5	25	348.5	19.9	30
DM 50/565	350	433	540	45	G 2"	150	R 1/2"	485	30	60	280	321	150	M8	252.5	25	442.8	19.9	30

STROKE COUNTING



STROKE COUNTING (OPTION CODE SC1, SC2, SC3, SC5, SC6)

A sensor is installed in the central pump housing to count the strokes. The diaphragm movement is scanned without contact by this sensor: a safe form of monitoring totally independent of external influences and the pump's mode of operation. The issued sensor pulses can be output to existing detectors or to a stroke counter (can also be supplied). When the preset value is reached, the stroke counter outputs a signal which can then be processed further, for instance in order to shut down the pump via a solenoid valve.

The stroke counting system is available in five variations:

- SC 1 Stroke sensor (Namur), also for explosion-proof zone
- SC 2 Stroke counting system complete with sensor and stroke counter
- SC 3 Stroke counting system complete with sensor, stroke counter and controller for explosion-proof zone
- SC 5 Stroke counting pneumatical with pressure transmitter
- SC 6 Stroke counting as SC5 but cpl. with stroke counter

In case only the sensor is included (code SC1), it has to be connected to an existing controller with Namur inlet. For applications an explosion-proof device is required for (code SC3) the intrinsically safe controller has to be installed between the sensor and the counter. The wiring diagram and technical data can be found on the electric units themselves. For further details, please refer to the data delivered by the manufacturers of the components. The controllers have to be installed in a suitable cabinet.

DIAPHRAGM MONITORING



Although DELLMECO diaphragms with integrated metal core are designed for an optimum service life, the diaphragm remains a wear part. If it breaks, liquid can leak into the center housing and possibly emerge through the muffler. This can be prevented simply and effectively with the DELLMECO diaphragm monitoring.

A capacitive diaphragm sensor is mounted in the muffler of the pump, which registers any liquid approaching the sensor, no matter whether the liquid is conductive or not. Hence, a fast reaction to a damage of a diaphragm becomes possible. In case of humid surrounding air a false alert may occur despite operating the pump with dried compressed air.

The diaphragm monitoring system is available in two variations:

- DM1 Diaphragm sensor (Namur), also for explosion proof area
- DM2 Diaphragm monitoring system complete with sensor and controller

BACK FLUSHING



BACK FLUSHING SYSTEM (OPTION CODE BF1, BF2, BF3, BF4, BF5)

The pump equipped with the back flushing system (ball lift system) can be amplified along with an including discharge line while being installed within the plant. It consist of a bypass-system in the side housing which can be activated by manual valves (code BF1, BF2, BF3) or pneumatically (code BF4, BF5).

Open the manual valves (BF1, BF2) by approx. 10mm by turning to the left (attention: as there is no blocking of the valves, it has to be ensured not to take them out completely). The pump should be kept in operation meanwhile. Slow down the pump slowly and finally stop it.



The below illustrates the flushing system (code BF4, BF5, minimum air pressure 3 bar). By attaching a 4-2-way valve (not included in the delivery), the back flushing system can be activated automatically when cutting off the pump.

The O-rings side housing are made of EPDM (BF1, BF4), PTFE (BF2, BF5) or resp. FPM (BF3).



Ball lifters for metal pumps.

PNEUMIXERS



How it functions...

The Pneumixer works both as product transport pump as well as mixer, It utilizes the container the product arrives in to mix and dispense. The Pneumixer simply fits securely in the vessels fill hole. With this ingenious system there is no need of rolling, shaking or pumping to a mixing vessel that adds time, waste, mess and expense. Available in stainless steel AISI 316L.

Mixing mode

The discharge valve is closed and the recirculation valve is open to allow the product to circulate in container.

Transfer mode

The discharge valve is open and recirculation valve is partially open, to both mix and to transfer the product out of Pneumixer.



DRUM PUMPS

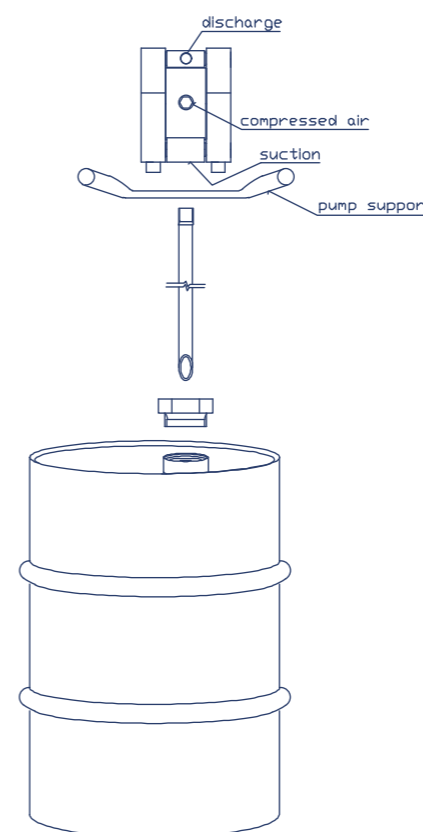


DELLMECO drum pumps are available in the following materials: PE, PTFE (also conductive), aluminium and AISI 316L for optimum fluid compatibility. They can work with liquids with different viscosities; available up to 1".

Converting 3/8", 1/2", 3/4" or 1" plastic or metal pumps to a drum or pail application is easy. The adaptor kits are constructed of chemically - resistant materials to handle the job. Plastic or metal pipe assembly comes complete with all the hardware needed. Simply attach the adaptor to the drum and lower the pumps with tube into it.

The standard sizes of tubes are 1 or 1,2 m.

INSTALLATION



Material of tubes:

- Polypropylene,
- Polyethylene conductive,
- PTFE,
- PTFE conductive,
- Aluminium,
- AISI 316

NOTES

Lined area for notes, consisting of approximately 25 horizontal lines within a rounded rectangular border.





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