

SPECIAL MATERIAL VERSIONS (I)



Aluminium coated with PTFE is an alternative solution for AISI 316 pumps.
Pump connections are made of AISI 316.
Especially suitable for the print and ink industry.



Cast iron pump with conductive PE center section.

SPECIAL MATERIAL VERSIONS (II)



Metal pump with heating/cooling jacket. This jacket can be used when the media need to maintain a specific temperature, high or low, throughout the process. A heating or cooling medium is continuously circulated inside of the jacket. The jacket covers the wetted parts of the pump. Available for all our industrial pump series.



Metal pump fitted with handles for the drum option (code D)

SPECIAL VERSIONS



PUMP TROLLEY

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



HEATING/COOLING JACKET

The heating/cooling jacket is used when the pumped media has to maintain a specific high or low temperature throughout the process. A heating or cooling medium is continuously circulated and the jacket also covers all the wetted parts of the pump. This option is available for all our hygienic pump series.

HIGH PRESSURE PUMPS (I)

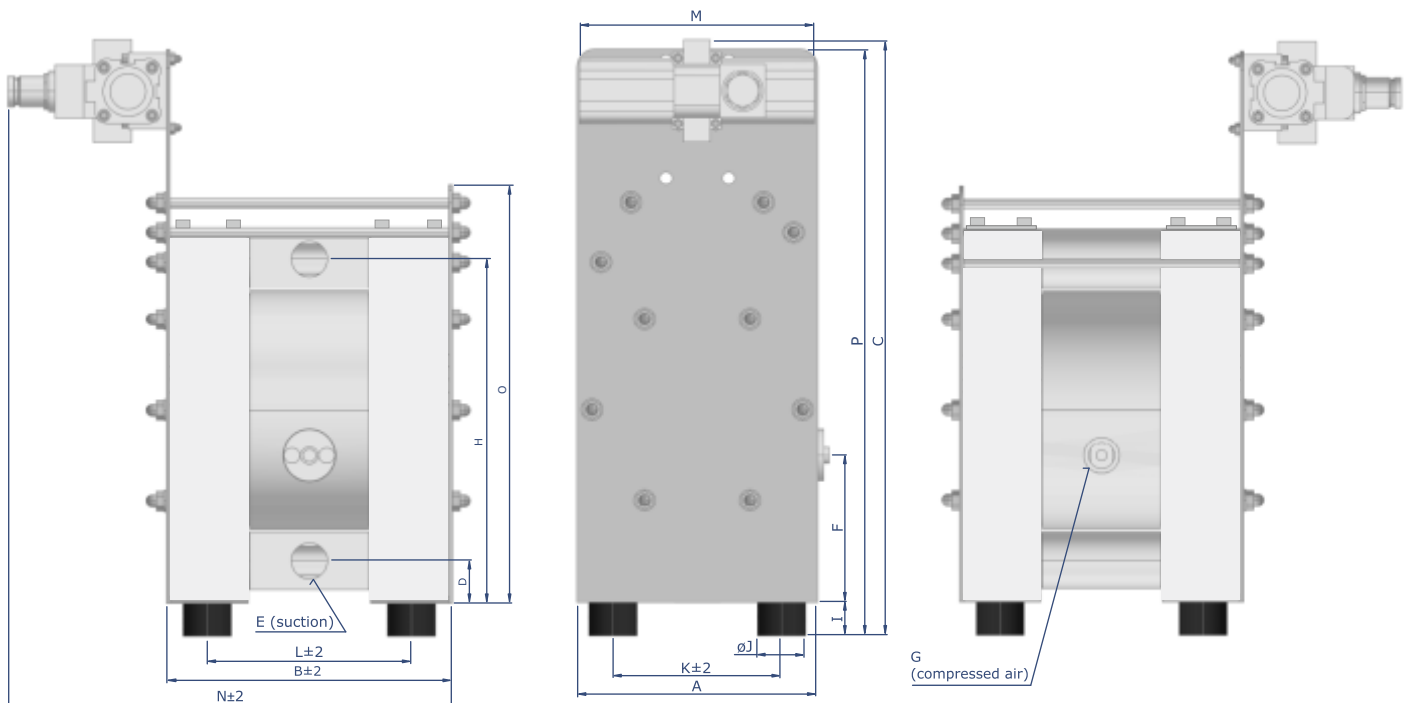


The high pressure (HP) option is a compact booster that can be directly mounted to the pump. It is capable of doubling the delivery pressure and, for example, with an available air pressure of 7bar the delivery pressure can be up to 14bar.

The design is based upon the standard DELLMECO pump made from machined polyethylene (PE). A pressure regulator is already incorporated with the unit for easy adjustment.

Applications include filter presses and slurry drying especially in the food and beverage industry as well as for water and wastewater management.

DIMENSIONS - PLASTIC PUMPS



DIMENSIONS	A	B	C	D	E	F	G	H	I	∅J	K	L	M	N	O	P
DM 15/55	153	183	335	25	G 1/2"	87	R 1/4"	217	18	30	112	136	195	321	253	333
DM 25/125	200	238	469	35	G 1"	123	R 1/4"	287	28	40	140	170	195	377	349	462
DM 40/315	270	318	600	42	G 1 1/2"	109	R 1/2"	388	30	60	190	227	290	529	500	600
DM 50/565	350	391	690	45	G 2"	158	R 1/2"	485	30	60	270	282	404	612	560	690

HIGH PRESSURE PUMPS (II)



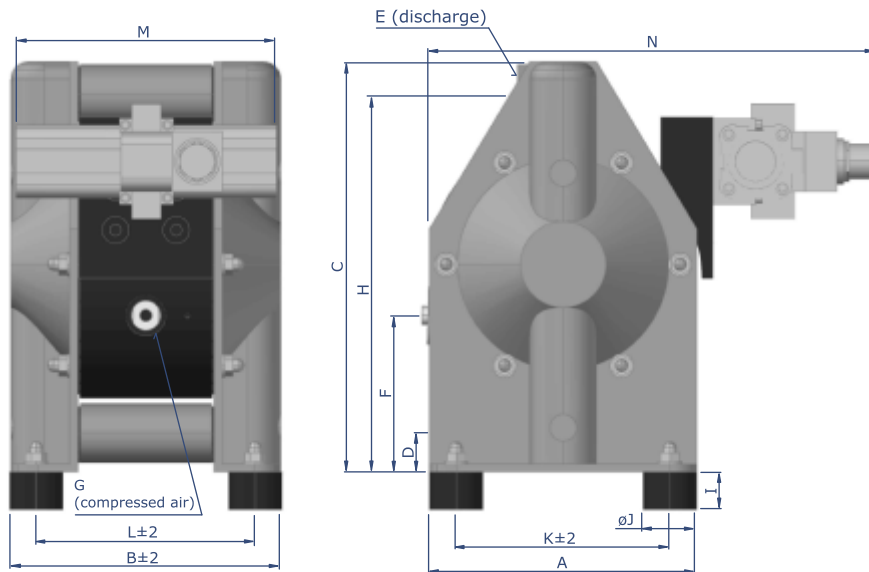
INSTALLATION

Our HP pumps are self-regulating and additional devices for regulating the media flow are not necessary. Just mount it to the unit, connect, and it's ready. Even the pressure regulator for the air supply is included.

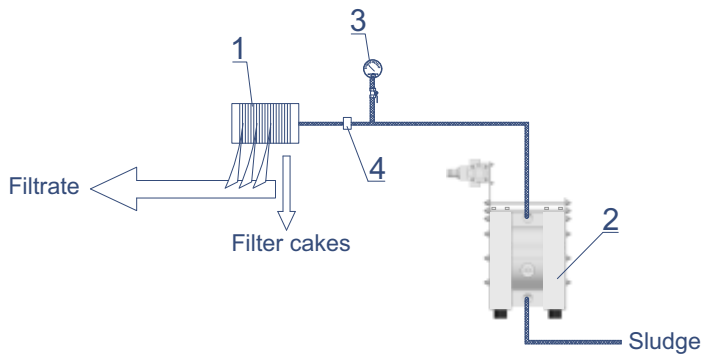
In applications such as for example filter presses, the filling level can be monitored by stroke sensors and stroke counters which are available as optional equipment.

The pump is also self priming and can run dry.

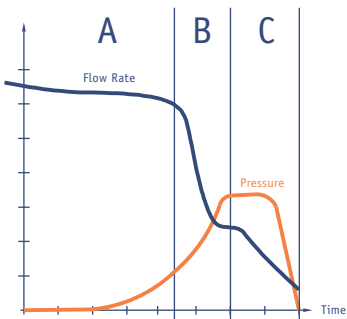
DIMENSIONS - METAL PUMPS



DIMENSIONS	A	B	C	D	E	F	G	H	I	øJ	K	L	M	N
DM 20/75	150	173	228	19	G 3/4"	84	R 1/4"	209	18	30	118	139	195	297
DM 25/125	200	202	302	27	G 1"	115	R 1/4"	279	18	30	160	164	195	351
DM 40/315	270	267	412	34	G 1 1/2"	100	R 1/2"	380	28	40	213	213	290	372
DM 50/565	350	345	538	48	G 2"	115	R 1/2"	493	30	60	286	285	404	573

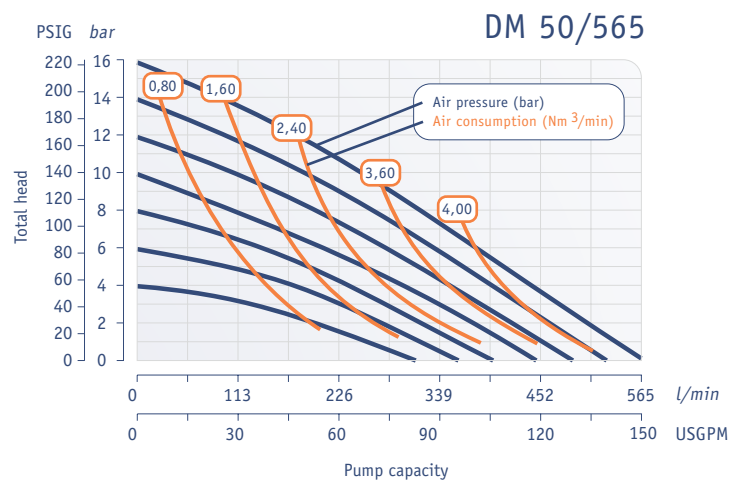
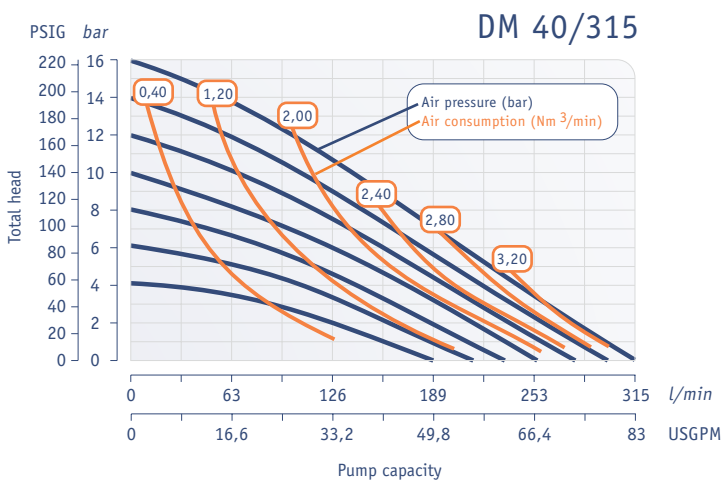
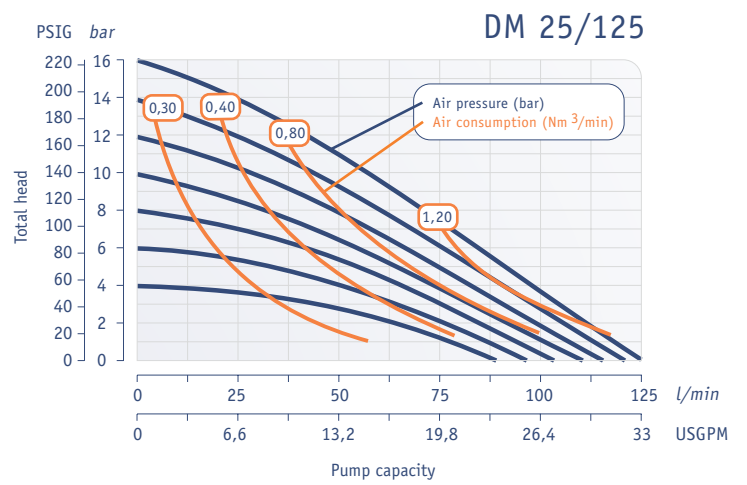
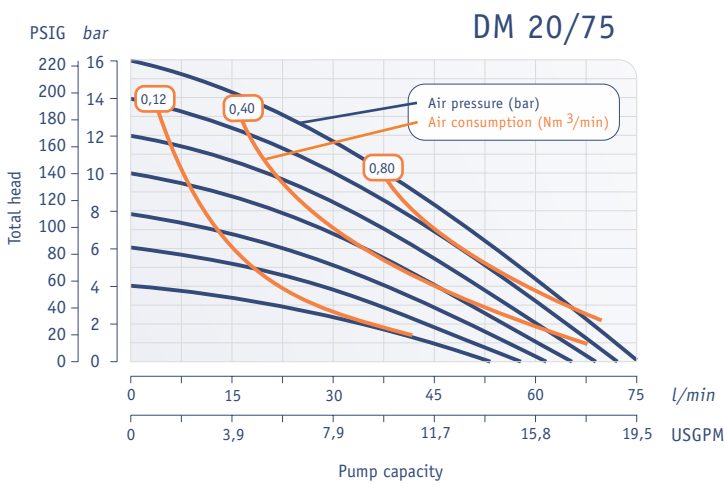


Part no.	Name
1	Filter press
2	Pump with high pressure booster
3	Pressure gauge
4	Bursting disk



Typical operating cycle of a filter press

- A – High capacity inlet: 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 process



HOW TO SELECT THE PUMP SIZE

Enter flow rate and pressure (e.g. 75 l/min and 14bar)
 Read off the pump size - in this case a DM 25/125 will be suitable with 7bar compressed air

POWDER PUMPS



DELLMECO pumps can also be used to transfer dry powders more quickly, cleanly and at a fraction of the cost than many other systems.

Key features

Replaces manual powder transfer processes

Reduces airborne contamination - transfers powders directly and in a closed system

Economical and simple - the opposite of large, complex systems

Portable - can be moved from site to site

Applications for transferring powders up to 800 kg/m³ (50 lb/ft³)

A reliable, efficient and trouble-free transfer of powders including:

- Various types of dried food
- Limestone
- Pharmaceuticals
- Talcum
- Expanded mica
- Silicones and silicas
- Carbon black
- Acrylic resins

CONNECTION TYPES - PLASTIC SERIES



STANDARD BSP

This is the standard connection for all plastic and metal pumps.



S - SPLIT CONNECTIONS

All pump models can be fitted with split connections (code S). The pump can be converted from a standard double-action air-driven diaphragm pump into a unit with two single chambers. The suction and discharge connections are replaced by a split sleeve with a separate suction and discharge for both chambers. Both chambers are independent and by having them with the same drive it means there can be two media streams in a 1:1 ratio.



FLANGE CONNECTIONS PN10

This option offers the possibility to use flange connectors according to DIN/PN 10. The inlet/outlet flange connections are by thread bushings made of stainless steel. The attached O-rings 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 FEP/FPM



OTHER TYPES OF FLANGE CONNECTIONS

- F4 - JIS B2220
- F7 - PN10 DIN 2576
- F8 - ANSI 150 RF-SO
- F9 - PN10/16 DIN 2277/2278

Additional connection types are available upon request

BARRIER CHAMBER SYSTEM



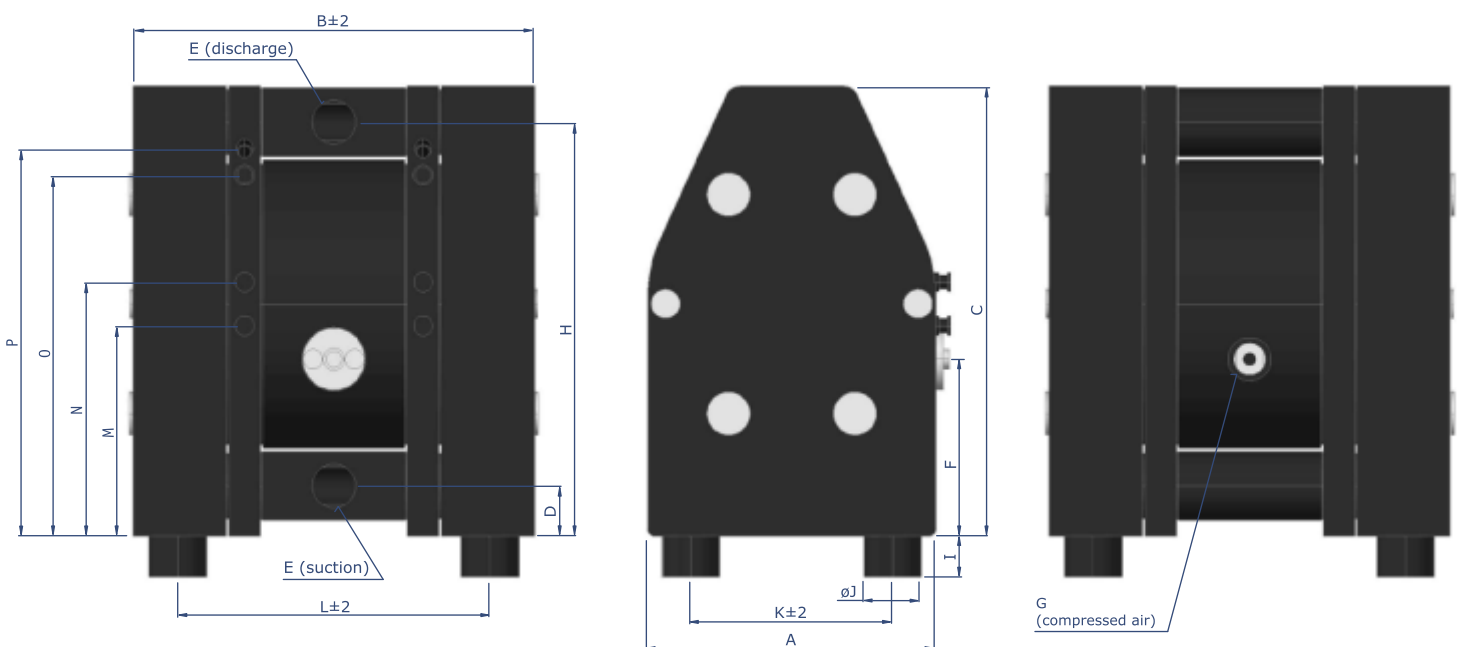
To comply with increased safety standards, this system replaces the standard diaphragm by a tandem arrangement of two diaphragms and a PE conductive barrier chamber filled with a non-conductive liquid (usually de-ionised water).

Sensors monitor the conductivity of this liquid and if the diaphragm fails, they detect the change in conductivity and an electronic signal is sent to a controller.

The barrier system is available with three options:

- 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 zones - ATEX

DIMENSIONS



DIMENSIONS	A	B	C	D	E	F	G	H	I	ØJ	K	L	M	N	O	P
DM 10 /25	105	173	164	18	G 3/8"	84	R 1/8"	150	10	15	75	138	61	84	128	146
DM 15 /55	153	223	235	25	G 1/2"	87	R 1/4"	217	18	30	112	182	86	111	191	209
DM 25 /125	200	282	312	35	G 1"	123	R 1/4"	287	28	40	140	220	146	176	250	270
DM 40 /315	270	360	426	42	G 1 1/2"	109	R 1/2"	388	30	60	190	276	204	229	349	369
DM 50 /565	350	433	540	45	G 2"	158	R 1/2"	485	30	60	270	335	253	278	443	463

STROKE COUNTER



STROKE COUNTER (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 physical contact by this sensor - a safe form of monitoring totally independent of external influences and the pump's mode of operation. The signal from the sensor can be sent as output data to either existing detectors or to a digital counter (also supplied). When the pre-set value is reached the stroke counter can be shut down with, for example, a solenoid valve.

The stroke counting system is available in five options:

- SC 1: Stroke sensor (NAMUR type) also for explosion-proof zones
- SC 2: Stroke counting system complete with sensor and counter
- SC 3: Stroke counting system complete with sensor, counter and controller for explosion-proof zones
- SC 5: Pneumatic stroke counting system with pressure transmitter
- SC 6: Pneumatic stroke counting system with pressure transmitter and counter

In cases where only the sensor is required (code SC1), it has to be connected to an existing controller with a Namur type inlet. For explosion-proof applications, the stroke counting option requires an intrinsically safe controller (code SC3), which has to be installed between the sensor and counter. The wiring diagram and technical data is supplied with the electric units. The controllers have to be installed in a suitable cabinet.

DIAPHRAGM MONITORS



Although DELLMECO diaphragms are designed for optimum service and maximum lifespan, regular maintenance must be included as part of the service programme. This is called 'preventive maintenance planning' (PMP). However, for increased security in sensitive applications, any pump failure from, for example, the media leaking into the pump central housing can be simply and effectively prevented by installing a DELLMECO diaphragm monitoring system.

A capacitive diaphragm sensor is mounted in the pump muffler which monitors any media in proximity to the sensor, no matter whether this media is conductive or not. Thus, immediate remedial actions can be taken.

The diaphragm monitoring system is available in two options:

DM1: Diaphragm sensor (NAMUR type) also for explosion-proof zones

Dm2 : Diaphragm monitoring system complete with sensor and controller(s)

BACK-FLUSHING

OPTIONS BF1, BF2, BF3, BF4, BF5



The DELLMECO pump can be completely emptied (flushed) either manually or pneumatically without dismantling or moving the unit. It consists of a bypass in the pump side housing which can be activated manually (code BF1, BF2, BF3) or pneumatically (code BF4, BF5). In the manual system the pump should be kept in operation and the valves opened (BF1, BF2) by approx. 10 mm. Attention is needed to ensure the valves are not blocked. The pump is then slowed down by decreasing the air inlet pressure and finally stopped. The side housing O-rings can be made of EPDM (BF1, BF4), PTFE (BF2, BF5) or FPM (BF3).



The pneumatic back-flushing system (code BF4 and BF5) requires a minimum air pressure of 3bar. By attaching a 4-2-way valve (available as an additional option), the back-flushing can be activated automatically when the media flow is stopped.



A metal pump with ball lift system (BF2 option) is when the valves are opened manually by turning the steel blocking pins situated on both side housings of the pump. The pump can then be completely drained on the suction side.

PNEUMIXERS

How it functions

The Pneumixer works both as a pump and as a mixer. It uses the container to both mix and transfer the media and it fits securely yet simply into the hole used for filling. With this ingenious system there is no need for rolling, shaking or pumping to mix the media. Valuable time and costs are thus saved whilst waste and mess are avoided.

Available in stainless steel AISI 316L.

Mixing mode

The discharge valve is closed and the re-circulation valve opened to allow the media to mix in the container.

Transfer mode

To both mix and pump the media out of the container the discharge valve is opened and the re-circulation valve partially opened.

The length of pipe can be ordered to fit any container size



DRUM PUMPS

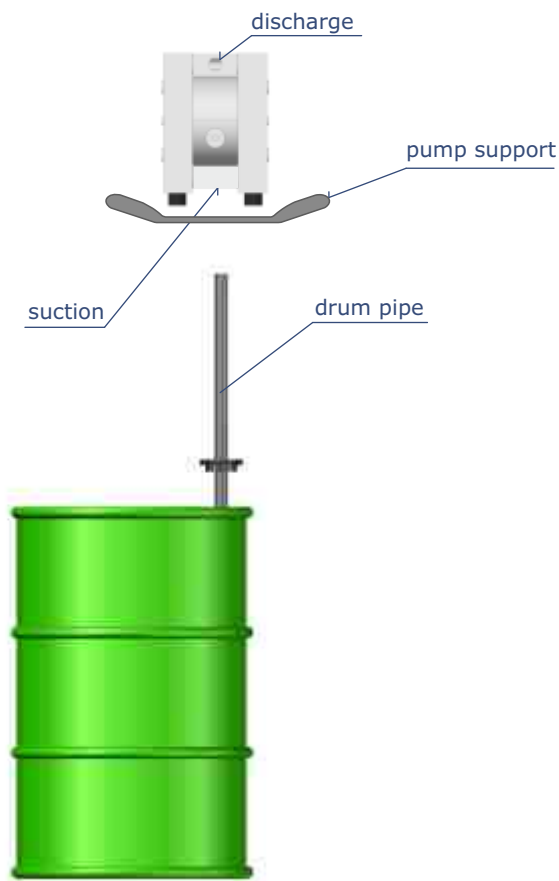


DELLMECO drum pumps are available in both standard and conductive PE, PTFE, aluminium and AISI 316L for optimum media compatibility. The sizes range up to 1" and they can work with media of different viscosities.

Converting 3/8", 1/2", 3/4" or 1" plastic or metal pumps to a drum or rail application is easy. The adaptor kits are constructed of chemically resistant materials to handle any job. And the drum pipe assembly also comes complete with all the hardware needed. Simply attach the adaptor to the drum and then fix the pump with the pipe connected into the drum.

The standard length of drum pipe is 1.0m or 1.2m but orders can be made to fit any container size.

INSTALLATION



Drum pipe material:

- Polypropylene
- Aluminium
- AISI 316

PUMP WITH SOLENOID VALVE - MV OPTION



DELLMECO plastic pumps with the MV option replace the standard air valve with a solenoid air valve. This enables media to be delivered in precise and constant volumes for such applications as found in the chemical industry.

The pump is fitted to a 2-position, 4-way solenoid valve. When the solenoid is unpowered, one chamber within the pump is pressurised with air, whilst the opposite chamber is discharged. When electric power is applied, the solenoid re-pressurises the discharged chamber and the opposite chamber is then discharged.

By alternatively turned on and off, the solenoid enables the unit to run like a standard DELLMECO pump and no lubrication is needed.

This option requires 24 V DC to operate.

Pumps with the MV option are non-submersible.