

PCM DELASCO

HIGH PRESSURE PERISTALTIC PUMPS

DL & DSC series



improving your process

motralec

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DL/DSC series: High pressure peristaltic pumps



Advantages

► Benefits

Of the peristaltic technology:

- Easy and inexpensive maintenance
- Self-priming
- Dry-running
- Sealless design
- Rapid, economic maintenance
- Reversible
- Dosing
- No valve

Of experienced designing:

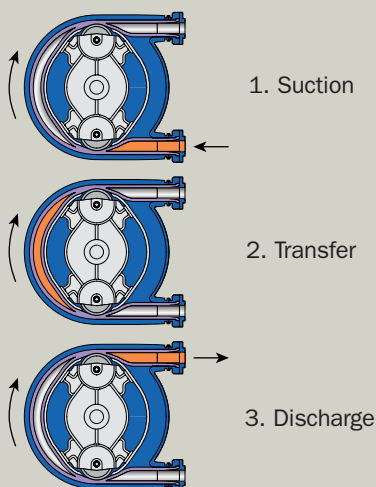
- Longer hose life
- Versatile (varied applications and products)
- Does not alter pumped product
- High volumetric and mechanical efficiency
- High suction and self-priming capabilities

Characteristics:

- 9 models
- Close coupled or bearing arrangement
- Flow rate to: **270** USGPM
- Pressure to: **220** PSI
- Temperature to: **200** °F
- Viscosity to: **40,000** cP
- Dry matter to: **60** %
- Specific gravity to: **2**
- Entrained solids to: **3.9** inches in diameter
- Self-priming: **9** m W.C.

The peristaltic principle:

The peristaltic pumping is based on the capacity of a reinforced elastomer hose to accept a deformation and subsequently recover its initial shape



DL/ DSC series: brought to you by specialists, it becomes the right choice to reduce your maintenance costs

Relief valve plug

- Overpressure safety inside pump housing.

Cover

- Its lifting ring makes it easier to service the pump.

Along with the pump housing it forms a leak tight assembly.

The pump design minimizes the quantity of oil required for a perfect lubrication of the hose and dispersion of the heat.

Oil filling port

Oil level sight glass

Lubricant drain plug

Base (option)

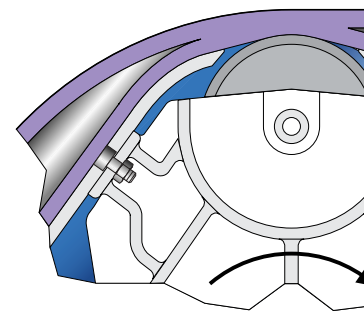
- It is very convenient when pumps needs to be moved from one place to another with a pallet truck.

Roller

Just imagine the wearing of an eraser on a sheet of paper and you'll understand what a shoe does to a hose.

Roller / hose guide

The PCM Delasco DL series of pumps is equipped with hose-guides in addition to the rollers. The association of rollers and hose-guides combines several advantages: the roller rolls without damaging the hose, the hose-guide increases the squeezed surface area, as well as enabling the roller to act on the hose more gradually. Compared with a conventional peristaltic pump of equivalent flow-rate and pressure, the roller/hose-guide combination **lengthens hose life**, and requires **lower installed power** as well as a **smaller quantity of oil**.



Gear drive

- ▶ Pumps are driven by geared motors or variable speed geared motors. All pump models are available in close coupled and bearing versions.

With or without frequency inverters.

Hose guide

- ▶ This design increases the squeezed surface area of the hose, and therefore lengthening hose working life.

Roller

- ▶ The roller has a more gentle action on the hose than a typical straight shoe design. Hose life is therefore greatly improved.

The roller is mounted on a self lubricating ring of composite material. This assembly ensures that the roller will rotate freely throughout the pump's working life.

Its diameter is adjusted to obtain a perfect occlusion of the chamber.

Hose

- ▶ It is reinforced with synthetic fibers and available in four grades:
 - NR: natural rubber
 - EPDM
 - EPX: EPDM with a special inner lining (FDA)
 - NBR: nitrile (FDA)(see chart on next page)

Connections

- ▶ Standard: See performances on next page. Other on request: Clamp, DIN, SMS, NPT...

The hose is the heart of the pumping system

Behind its beautiful simplicity the hose is a highly technical product made of several elastomer layers and braided synthetic fibers. A smooth machined outer surface finishing ensures an even wall thickness and compression.

The hose lining has a fundamental role: it assures the **integrity of the pumped product** during transfer and offers **high resistance to abrasives**.

Everything flows through the machined reinforced rubber hose, and no metal part is in contact with the product.



Performances

Model	Displacement	Flow rate in USGPM at 0 psi		Max speed	Max pressure	Standard Connections
	US Gallon/100rev	@ 50rpm	@ max speed	rpm	PSI	
DL12	0.95	0.48	1.24	130	110	3/4" serrated
DL18	3.33	1.67	4.33	130	110	1" serrated
DL25	7.66	3.83	9.96	130	220	1" ASA 150
DL35	20.2	10.1	24.3	120	220	1"1/2 ASA 150
DL45	46.8	23.4	51.0	110	220	2" ASA 150
DL55	89.8	45	90	100	220	2"1/2 ASA 150
DSC65	190	95	143	75	220	2"1/2 ASA 150
DSC80	308	154	200	65	220	3" ASA 150
DSC100	544	272	272	50	220	4" ASA 150

Hoses

Model	Bore Diameter (inches)	Hose material			
		NR	EPDM	EPX	NBR
DL12	0.47	X	X	X	X
DL18	0.71	X	X	X	X
DL25	0.98	X	X	X	X
DL35	1.38	X	X	X	X
DL45	1.78	X	X	X	X
DL55	2.17	X	X	X	X
DSC65	2.56	X	X	NA	NA
DSC80	3.15	X	X	NA	NA
DSC100	3.94	X	X	NA	NA

HOSE	FIRST CHOICE FOR
NR	Resistance to abrasion
EPDM	Resistance to acids, bases, esters
EPX	Resistance to aromatics
NBR	Resistance to non aromatic oily products

This is general information.

In all cases the PCM Delasco hose selection will be taken care of by PCM Delasco Inc.

OPTIONAL EQUIPMENT

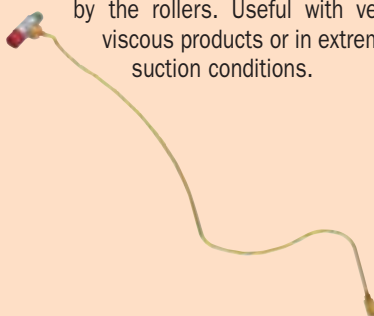
Hose failure detector

Cuts and cracks in the hose cause the product to leak, and when mixed with the oil in the sump, cause the oil level to rise. The hose failure detection unit is designed to report this anomaly, which can be transmitted remotely via a dry contact.



Vacuum device

Available from the DL 55 model, this system helps the hose recover its natural shape after it has been squeezed by the rollers. Useful with very viscous products or in extreme suction conditions.



Pulsation dampener

It cancels out pulsation during pump operation, as well as start-up hammering. It facilitates the installation of instrumentation Components and lengthens hose working life. This means that the pulsation damping chamber is regarded as:

- A process accessory.
- A safety part.



Applications

Minerals industry

- High solid content slurries
- Tailings
- Chamber filter press feeding
- Grouting equipment
- Ceramic slip
- Tile manufacturing
- Table and sanitary ware
- Polymer dosing equipment



Filter press feeding in a quarry

Paper Industry

- Sizing agent (AKD, ASA)
- Calcium carbonate (PCC, GCC), bentonite, talc, titanium dioxide, kaolin circulation and transfer
- Cationic starch cooking equipment
- Coating color
- PVA
- Latex
- Thickeners
- Ammonia
- Soda
- OBA
- Dye dosing units
- Mill waste waters



Titanium dioxide slurry transfer

Chemical industry

- Glue
- Enamel
- Resin
- Explosive preparation
- Gas oil
- Oily water separation
- Detergent
- Soap
- Tar emulsion
- Adhesives
- Mastic



Enamel transfer in a can coating factory

Environment

- Nuclear wastes
- Chamber filter press feeding
- Polymer dosing equipment
- Lime milk dosing



Lime milk dosing

Food industry

- Cheese transfer/additives and ferments dosing
- Slaughterhouse wastes/greasy water/offal/blood transfer/colorings or flavorings dosing
- Liquid dough/pancake dough/yeasts/sauces/stuffing/coating transfer
- Wine lees, grape, must transfer
- Kieselguhr/beer yeasts dosing
- Fruit puree, preparations with fruit or vegetable pieces transfer
- Potato puree and wastes/spinach transfer
- Starch manufacturing
- Sugar industry/molasses transfer
- Sauces/soups/mayonnaise transfer
- Cosmetics and pharmaceutical products/creams/gels/toothpaste transfer



Tomato pulp transfer from storage to preparation tank



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