PCM PRECI POMPE

Lagoa Series

Diaphragm dosing pumps

Simple, reliable, deliverable within 2 to 6 days

PCM Keep it moving

PCM Pompes
Lagoa series:
Simplicity, reliability and availability

AFAQ ISO 9001 VERSION 2000

Advantages

Of electro-mechanical drive

- Reduced mechanical and hydraulic shocks
- Silent
- Does not cause and is not affected by interference

Of the design

- Simple and robust construction
- Reliability of metering
- Adaptable: meters a wide range of fluids
- Simplified maintenance
- Dry running

Technical data

- Maximum flow: 350l/hr per pumphead
- Adjustable from 10 to 100%
- Maximum pressure: 12 bar
- Maximum temperature: 100°C
- Speed: 48 and 120 strokes/min
- Precision: ± 1%
- Linearity: ± 3%

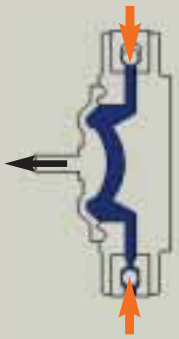
Deliverable within 2 to 6 days.

Operation

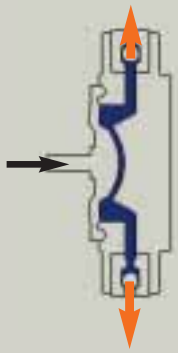
The Lagoa pump is composed of a membrane connected to a piston of which the alternating movement successively fills and empties the pumphead.

1 **The backward movement of the membrane opens the bottom check valve and allows the entry of fluid, which fills the pumphead.**

2 **The forward movement of the membrane closes the bottom check valve, opens the top check valve and expels the dose.**

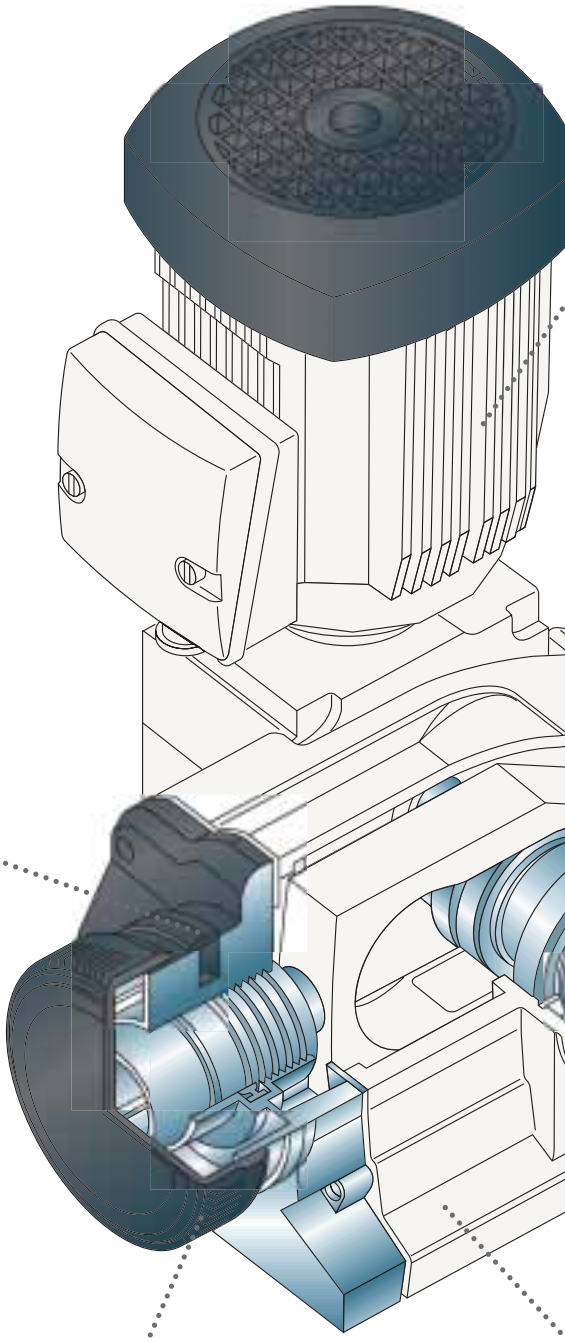


1 - Suction phase



2 - Discharge phase

The Lagoa series is designed for metering a wide variety of products in chemical engineering, environmental applications as well as the food and personal care industries



Locking device

The stroke adjustment mechanism can be locked in position to ensure that stroke length remains at its set point.

Stroke adjustment

The capacity is set by turning the micrometer dial which is fitted with vernier scale graduated in percentage stroke length.
Electric servo control can be fitted (1).

Drive

The pump is driven by a direct mounted light alloy motor with IP55 protection. The bearings are greased for life, making the motors maintenance-free.

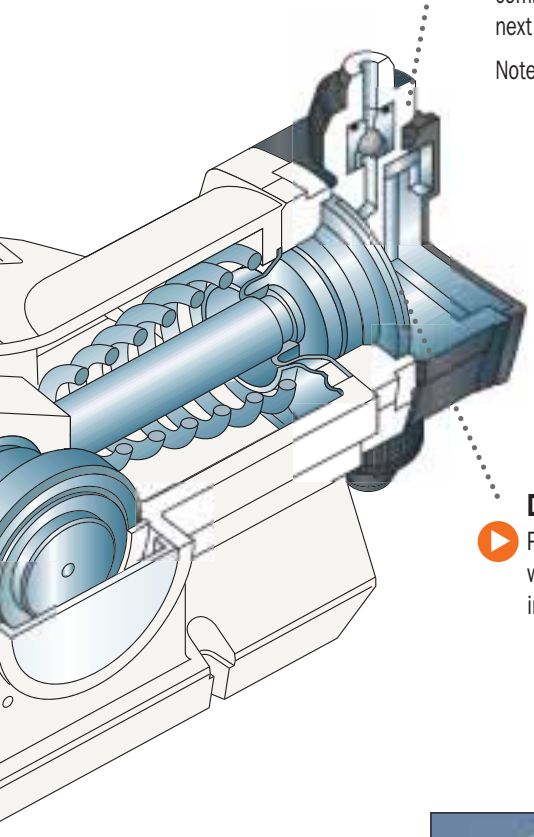
Pumphead

The pumphead is easy to remove and change. It consists of:

- 1 suction check valve
- 1 discharge check valve
- 1 liquid end body

Pumpheads are available in many material combinations as shown in the table on the next page.

Note: other versions are available on request.



Diaphragm

Preformed type, made of PTFE reinforced with elastomer. The liquid contact part is in chemically inert PTFE.

Casing

Robust cast aluminium alloy construction.

Possibility of multiplexing for:

- performing proportional metering with different fluids (a resin and a hardener, for example)
- obtaining a greater flow than with one single pumphead
- phasing the pump stroke to prevent pulsations and thereby achieving linear flow.

Applicable directives and standards

CE · Ex (1) · FDA

The pumps in the Lagoa series meet the machine directive requirements and its harmonized standards.

Accessories

PCM offers you a comprehensive range of solutions to enable you to achieve high-performance metering regardless of the working conditions of your installation.

Foot valves
Filter undesirable particles and keep the pump primed when stopped.

Injection rod
Enables your product to be injected in a vein without polluting the injection pipework (non-return function).

Safety and retention valves
Prevent excess flow and pressures, siphoning and underloading.

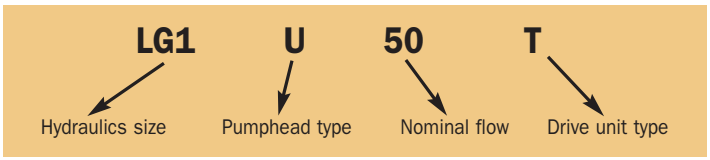
Pulsation dampers
To render your flow linear and lessen fluid hammer effects.

"Ready-to-meter" assemblies
You connect the assembly to the pump and you are ready to start !

Dosunits (1)
Complete metering units on a 120 to 1000 l capacity HDPE tank.

(1) Please contact us

Understanding model designation

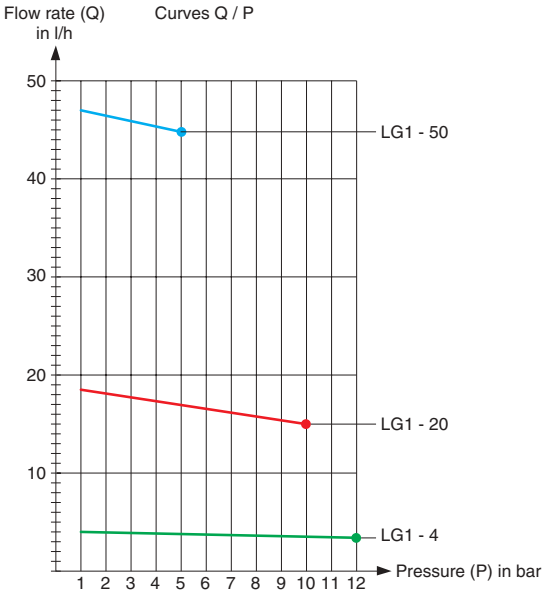


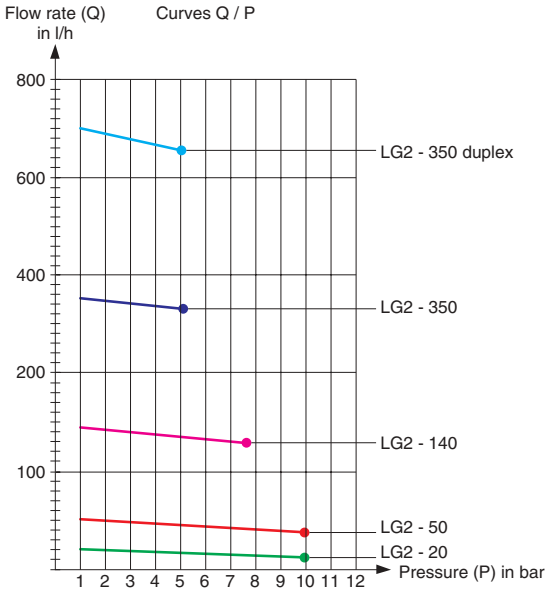
Pumphead type	
U	Polypro
H	PVC
S	Stainless steel
SA	Stainless steel with food connections

Performances

Model	Pumpheads	Flow at 1 bar - 50Hz		Flow at Pmax - 50Hz		Pressure	Rate	Power	
		10 %	100 %	10 %	100 %	max**	50Hz	Mono (M)	Three (T)
		l/h	l/h	l/h	l/h	bar	strokes/min	W	W
LG1 - 4	U, H, S, SA	1	4	0	3,3	12	48	60***	60
LG1 - 20		3	18,5	1	15	10	48	60***	60
LG1 - 50		10	47	2	42	5	120	60***	60
LG2 - 20		6	20	0,5	16	10	48	-	120
LG2 - 50		12	51	2	45	10	120	-	250
LG2 - 140		25	145	10	127	7.5	48	-	120
LG2 - 350		70	350	40	330	5	120	-	250
LG2 - 350 duplex *	U, H, S	140	700	80	660	5	120	-	250

* asynchronous pumpheads - ** maximum pressures are stated at 20°C - *** available with the U pumphead only.



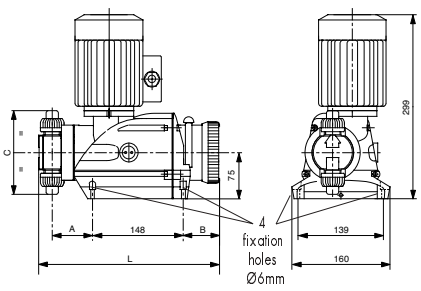


Overall Dimensions

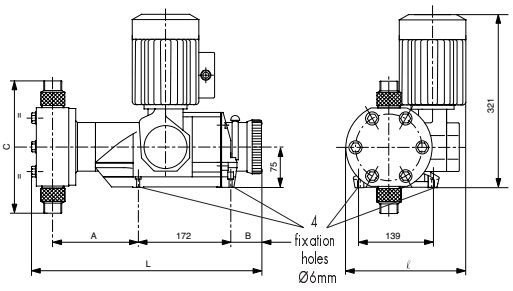
Model	L mm	l mm	A mm	B mm	C mm
LG1 - 4	294	160	65.5	58.5	136
LG1 - 20	302	160	65.5	58.5	168
LG1 - 50	302	160	65.5	58.5	168
LG2 - 20	375	210	114.5	58.5	168
LG2 - 50	375	210	114.5	58.5	168
LG2 - 140	429	223	159	59	246
LG2 - 350	429	223	159	59	246
LG2 - 350 duplex	429	389	159	59	246

Connections

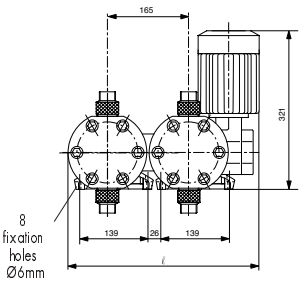
Pumphead size	Pumphead type			
	U	H	S	SA
4	4x8 flexible hose or 10-16 PVC pipe	1" G male	1/2" G male	DIN DN10 male
20	6x12 flexible hose or 10-16 PVC pipe			
50				
140	1" G male		3/4" G female	SMS 25 male
350				
350 duplex				—



Lagoa LG1



Lagoa LG2



Lagoa LG2 Duplex

Applications

Food

- Metering of alkaline and/or acid products and disinfecting solutions into installed cleaning systems (CIP)
- Metering of fermentation products and renet in the dairy industry
- Metering of anti-foaming products
- Metering of flavoring, coloring agents and yeasts
- Metering of citric acid and ascorbic acid
- Metering of sugar syrup
- Metering of arabic gum, sulfur anhydride, casein and gelatine as additives in wine-production
- Metering of diatomaceous earth (filtration of brine baths)
- Metering of liquid fertilizer

Pump on filtering pallet (wine production)

Industry

- Surface treatment:
  - Metering of degreasing agents and surfagents for surface preparation
  - Metering of hydrochloric acid and inhibitor
  - Additions of chromic acid for electrophoresis
  - Additions of sulfuric acide or phosphoric acid to top-up bath levels
  - Metering of wetting agent for coil coating
- Foundries: proportional metering of resin and catalyzer in the production of sand moulds
- Paper-making: metering of coloring agents and anti-foaming agents
- Textiles: metering of coloring agents
- Cement: metering of wetting agent, waterproofing agent and water-reducing plasticizer in the production of plasterboard
- Tile production: metering of coloring paste
- Timber: metering of fungicide

Metering of soda and acid

Environment

- Metering of coagulants: polymer of viscosity lower than 1500cP (polyacrylamides). Injection of diluted polymer into concentrated ludges can decrease pressure losses and thereby contribute to reducing operating costs
- Metering of coagulants such as ferric chloride, ferric sulfate, ferrous sulfate, alumina sulfate, aluminum chloride (WAC, PAC)
- Metering of anti-foaming products
- Metering of alkaline and acidic products: hydrochloric acid, phosphoric acid, nitric acid and soda
- Metering of biocides and disinfectants for preventing the development of bacteria (sodium or calcium hypochlorite, or chorine bioxide)
- Metering of hydrazine (elimination of oxygen dissolved in boiler water)
- Metering of sodium carbonate for re-establishing the calcium/carbon balance in water
- Metering of methanol (atex), phosphoric acid and urea as nutrients.

Ferric chloride pumping in purification station