

Experts in Water industry liquid transportation

## LECI Electric Diaphragm Pump

### Product specification





# LECI Electric Diaphragm Pump

## SUMMARY

LECI Electric Diaphragm Pump mainly uses cycloid reducer technology. The crank slider mechanism drives the double diaphragm to do reciprocating motion, which makes the working chamber volume changes occur alternately so as to keep the liquid sucking and discharging.

In recent years, due to the breakthrough of diaphragm materials, more and more international industrialized countries have adopted this type of pump, which replacing part of the centrifugal pump and screw pumps. They are widely applied to petrochemical, ceramic and metallurgical industries.

## ADVANTAGES

1. Good self priming ability without irrigation water.
2. Good performance, particles below 10mm and slurry can effortlessly pass through easily.
3. Since the diaphragm is separated from the medium and transmission machinery, the medium will not be leaked out. And the pump itself no shaft seal, which greatly extended services life. Depending on the medium, the diaphragm can be divided into chloroprene rubber, fluorine rubber, nitrile rubber, PTFE etc., an satisfy the requirements of different customers.
4. Small volume and light weight. it is uses cycloid reducer technology, and pump type to obtain a small size. It's volume and weight are decreased by about half if compared with same kind of pumps.
5. Medium flows through the pump part, according to customer requirements are divided into cast iron, stainless steel, rubber lined. Motor can be divided into normal type and explosion proof type.

## SCOPE OF APPLICATION

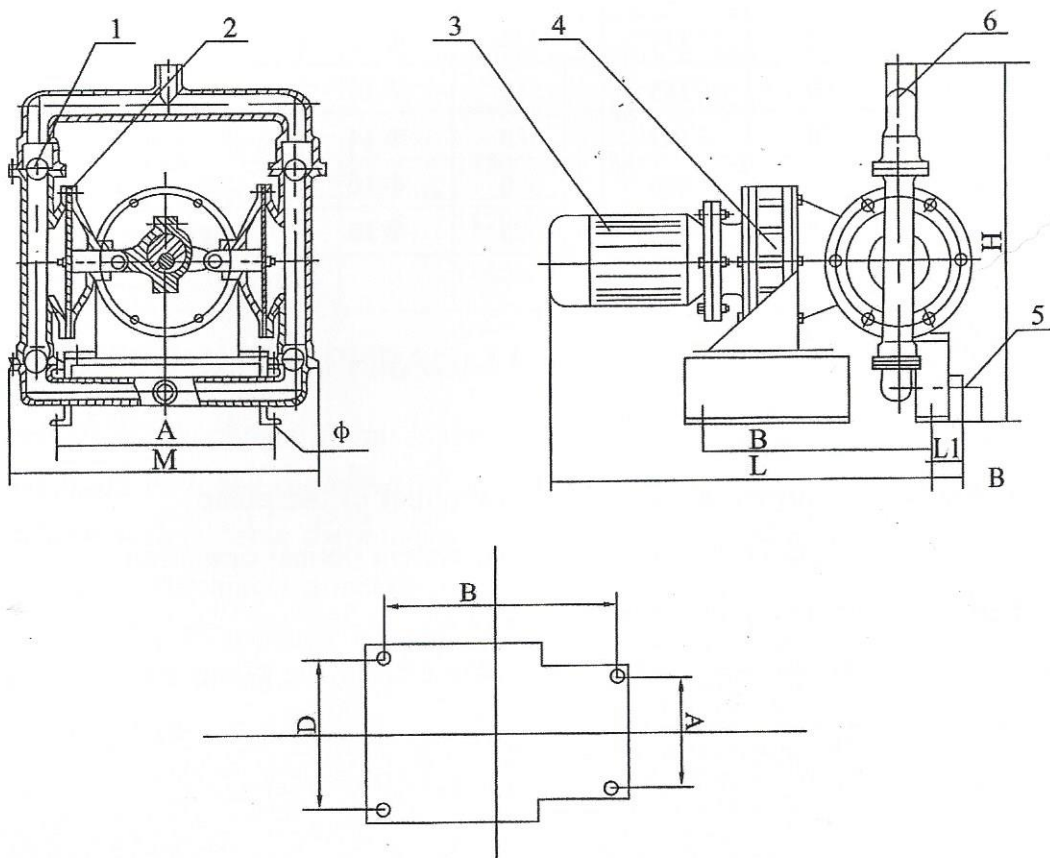
1. A variety of toxic, flammable, volatile liquid;
2. Acids, alkali, corrosive liquid;
3. High temperature medium up to 150°C;
4. As a variety of filter first-level pressure device;
5. Recovering and recycling of hot water;
6. Loading and unloading tankers, oil depots and oil;
7. Pickles, jam, mashed potatoes, chocolate etc,;
8. Pumping paint, rubber and paint binders;
9. Porcelain, glaze, cement grout and slurry;



10. Latex rubber pulp, organic solvents and fillers;
11. Pumping sewage and residual oil from cruises or barges;
12. Hops and yeast slurry, syrup, molasses;
13. Pump sediment contaminant in shaft, tunnel, tunnels and sewers;
14. The delivery of a variety of special medium.

## WORKING PRINCIPLE

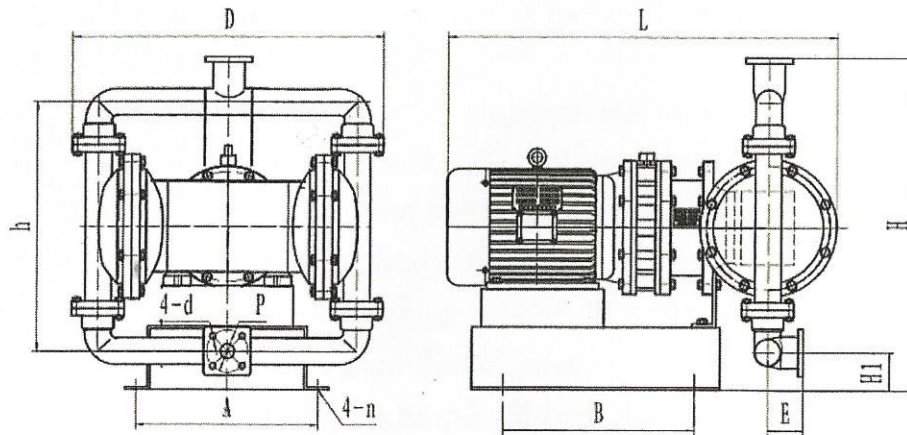
The motor (3) through the speed reducer (4) drives the diaphragms (2), which are installed on the plungers to make a left and right reciprocating movements. There are 4 pieces up and down balls (1) in the left side and right side pump chambers, and the diaphragms movements changed the chamber's volume, which forces the 4 pieces balls opening and closing alternately and the liquid are constantly suction (5) and discharge (6).





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## The Pump' Dimensions and Installation Dimension in Horizontal Type



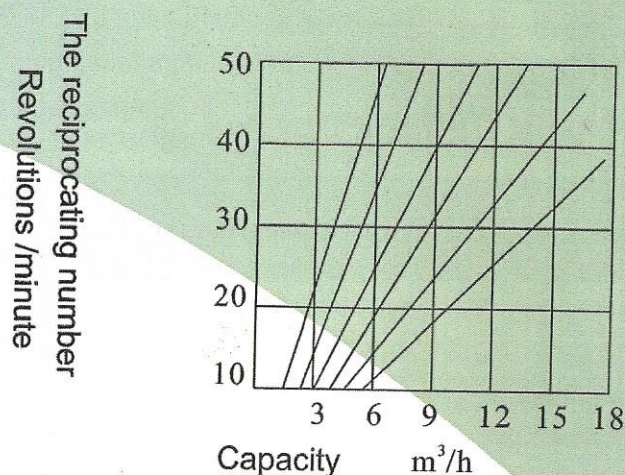
TYPE	A	B	D	D	L	H	H1
LECI-10	185	245	320	Φ 12	500	275	50
LECI-15	185	245	320	Φ 12	500	275	50
LECI-25	260	335	455	Φ 12	700	500	65
LECI-40	260	335	455	Φ 12	700	500	65
LECI-50	300	385	580	Φ 14	850	670	95
LECI-65	300	385	580	Φ 14	850	670	95
LECI-80	410	480	690	Φ 16	1100	940	170
LECI-100	410	480	690	Φ 16	1100	940	170

### NOTES:

1. No valves is permitted to be installed at the outlet of the pump.
2. Please add the lubricating in time to maintain system normal operation.
3. Outlet pressure should be less than 0.3 MPA
4. If the medium easily deposit or crystallize, please clean the pump and discharge the accumulate medium after use, so as to avoid any damage when restarting the pump



## THE CURVE



## MAIN PERFORMANCE SPECIFICATIONS

Model	Capacity m <sup>3</sup> /h	Suction Head m	Head m	Outlet Pressure Kgf/cm <sup>2</sup>	Motor Power R/KW	Working Temperature °C		Inlet/Outlet Size	Weight Kg	Note
						Cast Iron	Stainless Steel			
LECI-10	0.5	3	30	3	1450/0.55	90	150	3/8" Screw thread	50	
LECI-15	0.75	3	30	3	1450.55	90	150	1/2" Screw thread	50	
LECI-25	3.5	4	30	3	1450.1.5	90	150	1" Screw thread	170	
LECI-40	4.5	4	30	3	1450/2.2	90	150	1 1/2" Screw thread	170	
LECI-50	6.5	4.5	30	3	1450/2.2	90	150	50mm Flange	300	
LECI-65	8	4.5	30	3	1450/2.2	90	150	65mm Flange	300	
LECI-80	16	5	30	3	1450/4.0	90	150	80mm Flange	400	
LECI-100	20	5	30	3	1450/4.0	90	150	100mm Flange	400	

## HOW TO SELECTION DIAPHRAGM PUMP

The main part of the diaphragm pump is the diaphragm. Correct selection of the diaphragm can get twice the result with half the effort. According to different working medium, here we can equip the pumps with suitable diaphragms. Usually there are several diaphragms as follow:

1. Buna-N rubber diaphragm is mainly used in oil resistant occasions;
2. Neoprene 5301 # specially manufactured by our factory, it mainly used for various acids and alkali;
3. Fluorine rubber 6201 # specially manufactured by our factory, it mainly used for high temperature 150°C, and toluence resistance and corrosion resistance. But it's price is higher than other diaphragms.
4. PTFE diaphragm is mainly used for various strong acid strong alkali, solvents etc.
5. Food rubber is specially used for food and beverage.



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## DIAPHRAGM CHARACTERISTIC

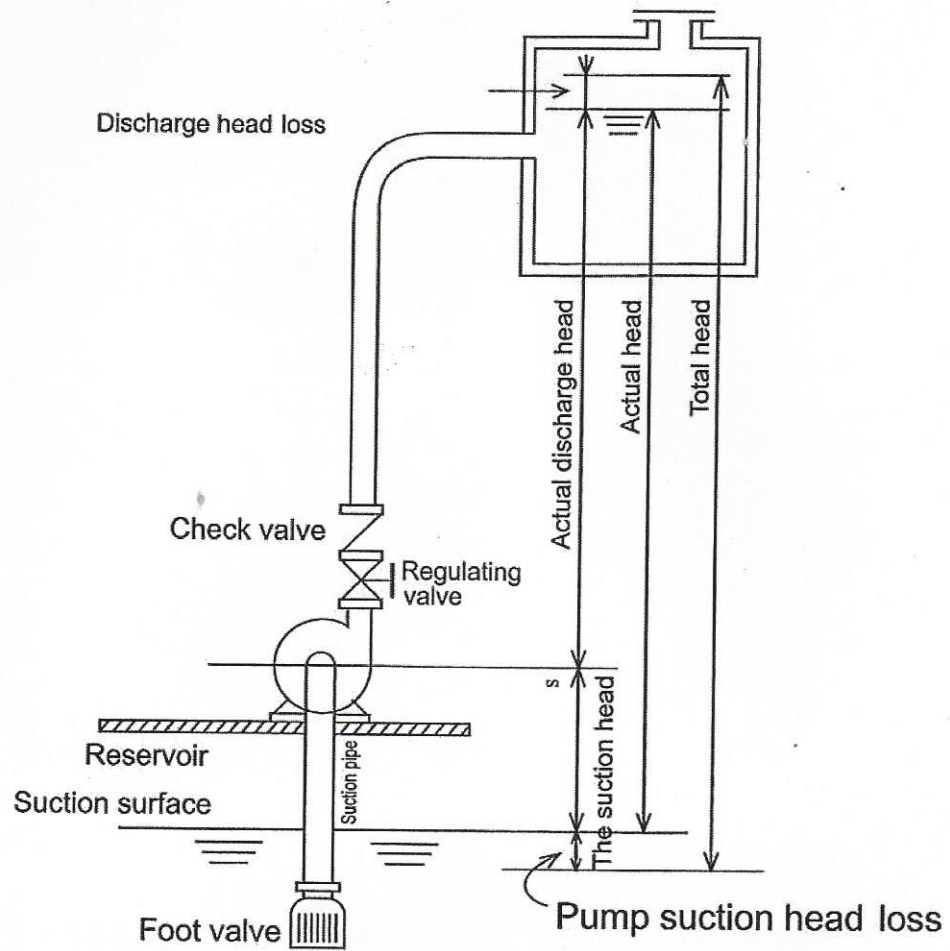
Diaphragm varieties	Buna-N rubber	Chloroprene rubber	Fluororubber	PTFE	Foodrubber
Medium type					
Fuming nitric acid	X	X	△	△	
Concentrated nitric acid	X	X	△	△	
Concentrated Sulfuric acid	X	X	○	△	
Concentrated hydrochloric acid	X	△	△	△	
Strong phosphoric acid	X	△	△	△	
Strong acetic acid	X	X	X	△	
Concentrated sodium hydroxide	○	○	△	△	
Anhydrous ammonia	△	△	△	△	
Nitric acid	X	X	○	△	
Diluted sulphuric	△	△	△	△	
Diluted hydrochloric acid	X	○	△	△	
Diluted phosphoric acid	X	X	△	△	
Diluted sodium hydroxide	○	○	△	△	
Ammonia water	△	X	X		
Benzene	X	X	○	○	
Gasoline	○	○	○	○	
Oil	△	X	○	○	
Carbon tetrachloride	○		○	○	
Carbon disulfide	○		X	○	
Alcohol	○	○	△	○	
Acetone	X	△	△	○	
Cresol	X	△	△	○	
Acetaldehyde	X	X	X	○	
Ethylbenzene	X	X	○	○	
Acrylonitrile	△	△	△	○	
Butanol	○	○	△	○	
Butadiene	○	X	X	○	
Styrene	X	X	X	○	
Acetic ether	X	X	X	○	
Ether	X	X	X		

Note:

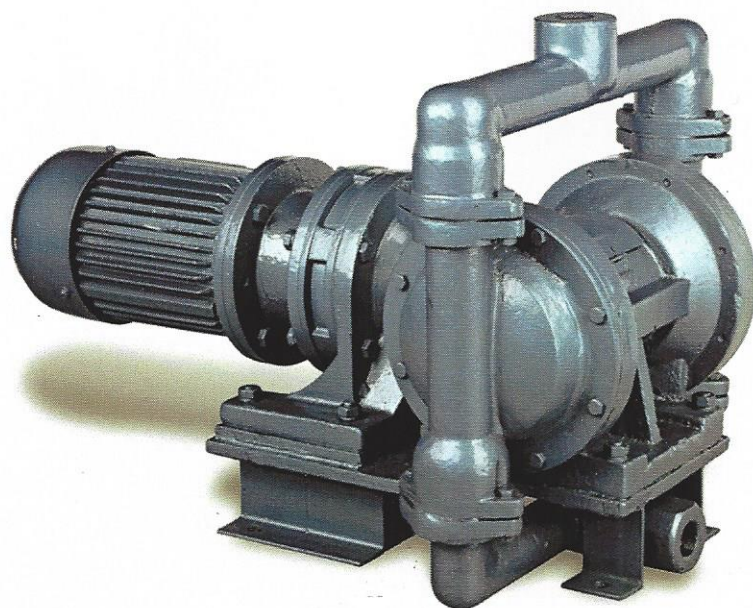
- means longer serving life,
- △ means normal serving life,
- X means not applicable.

The table only considers anti-corrosion, as elasticity of PTFE is relatively low, the actual service life may be different under the influence of pressure, pump travel, impurities and other factors. Food rubber is specially used for food and beverage industries.

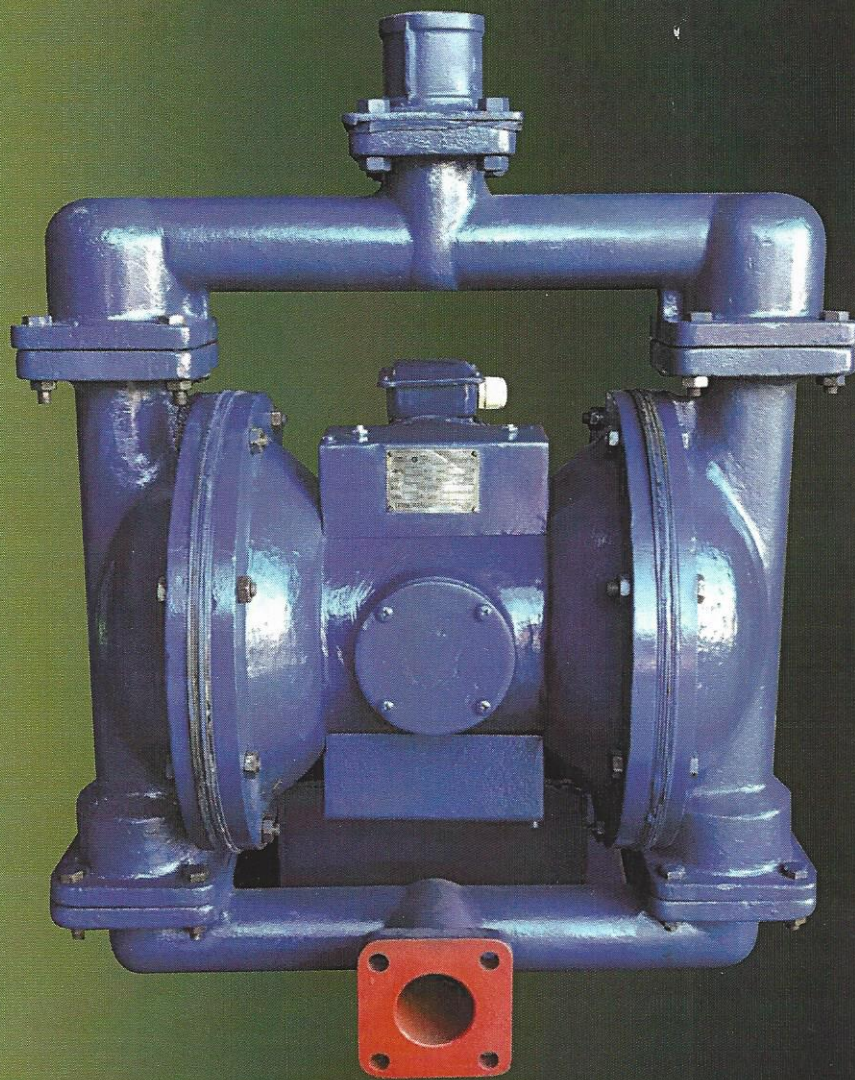




Pump water system







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