

DEPA Air Driven Diaphragm Pumps

Series L Type DH Highly Polished Stainless Steel Pumps (USDA Approved)

For hygienic pumping duties throughout food, beverage, pharmaceutical, biotechnology and cosmetic manufacturing processes.

DEPA Series L, Type DH Pumps are suitable for chemical cleaning in place (CIP) or steam sterilisation in place (SIP). They are designed for transfer of abrasive, viscous or shear sensitive media, including products with entrained solids and require minimal maintenance.

Because of the low shear, positive displacement pumping action, delicate products including entire chunks of fruit, vegetables and meat can be transported without damage. This gentle action also avoids excessive wear on pump internal components. These pumps use oilfree air and require no oil or grease lubrication, so obviating any risk of product contamination by lubricants.

Incorporation of the widely used, threaded milk connections (DIN 11851) ensures that the pumps can be quickly and easily dismantled for visual inspection. Choice can be made from a variety of construction materials for the internal diaphragms and valve balls, to meet exact requirements. See page 2.

DEPA Series L Type DH pumps are manufactured in four sizes with connections: DIN15 to DN50. The option of DIN 11851 Tri-clamp, SMS etc., is also available.

Standard design

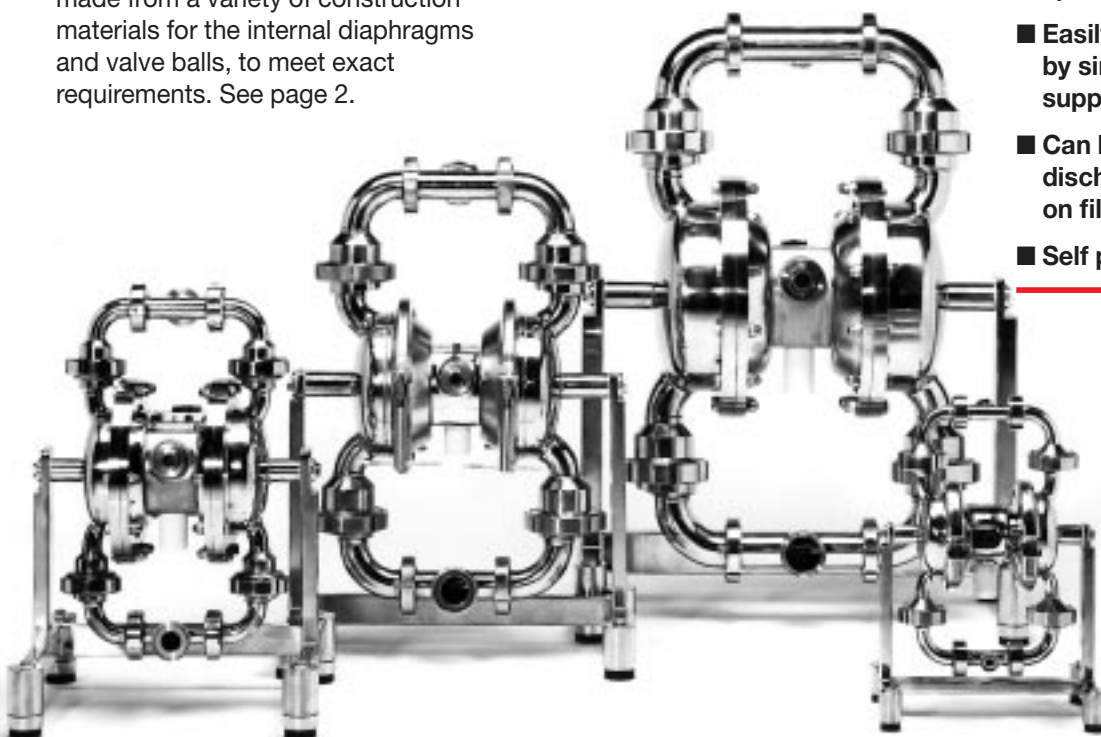
Overall corrosion resistant construction incorporates all metallic, product wetted parts in 316 stainless steel. Other features include maintenance free control valve, stainless steel base with integral anti vibration mounts, muffler and air intake filter for sizes 25 to 50.

Accessories

A complete range of accessories simplifies operation and enhances flexibility. They include pulsation dampeners, monitoring and control systems, various transport devices, quick release couplings, adapters etc.

For more information, please contact your local supplier.

- Designed for hygienic processes with highly polished stainless steel construction, CIP and SIP compatibility and easy manual cleaning.
- Use of oil-free air obviates any risk of product contamination.
- Ideal for abrasive, viscous and shear sensitive media, and for products with entrained solids.
- Tolerance of dry running and harsh usage.
- Minimal maintenance with no lubrication required.
- Gentle positive displacement pumping action minimises product shear.
- Completely enclosed units with no bearings or rotary seals in the product stream.
- Air operation means suitability for explosive or hazardous areas.
- Easy control of flow rate by regulating air supply.
- No need for electric motors, special drives or base plates.
- Easily portable and ready to use by simply connecting to air supply.
- Can be run against a closed discharge—a vital benefit for use on filling machines.
- Self priming and submersible.



CRANE

DEPA Air Driven Diaphragm Pumps

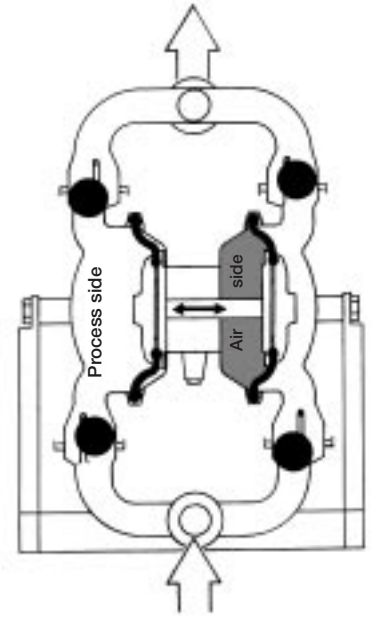
Series L Type DH Operating Principle

Double acting, positive displacement Series L pumps operate with two alternating pumping chambers. The compressed air which drives the unit is admitted through a control valve to the rear of each diaphragm in turn, so displacing the medium from alternate pumping chambers.

In the pump illustrated, the left hand pumping chamber is in the intake position. A vacuum has been

created by the retraction of the diaphragm and the pumped medium flows into the chamber. The right hand diaphragm, which is supported by compressed air, simultaneously displaces the medium present in this chamber.

Since the two diaphragms are connected by a common piston rod, suction always occurs in one chamber whilst discharge is occurring in the other.



Series	
Polished stainless steel USDA approved ¹⁾	DH

Materials of construction available as standard series:

DH 40 - UL - U - G

Pump size		
Connections ½ in. Tri-Clamp	15	
Connections 1 in. Tri-Clamp	25	
Connections 1½ in. Tri-Clamp	40	
Connections 2 in. Tri-Clamp	50	

Major subassemblies			
Housing	Wetted piston	Centre block	
Polished stainless steel	Polished stainless steel	Chromium plated ²⁾ cast bronze	UL
AISI 316 (1.4571)	AISI 316 (1.4571)		

Internals ³⁾	Diaphragm	Seats	Balls
EPDM gray for DH range	U	-	-
PTFE for Series DH	P	-	-
Stainless steel	-	-	R
EPDM grey with steel core	-	-	X
PTFE steelcore	-	-	Z
NRS	-	-	B

¹⁾ Series L Type DH has been reviewed and accepted by the Dairy Grading Branch, USDA for use in dairy plants surveyed and approved for USDA grading service.

²⁾ Models with externally mounted air valves, aluminium chromium plated except DL15, stainless steel.

³⁾ Other ball materials are available on request.

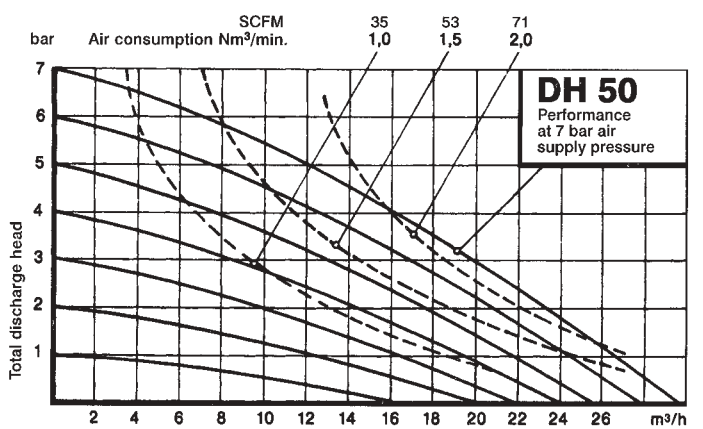
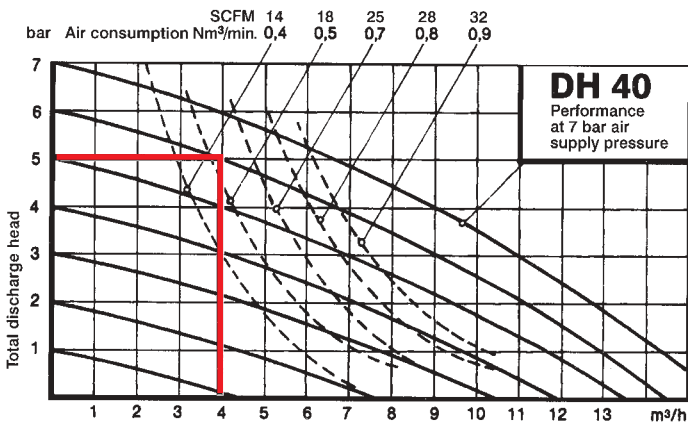
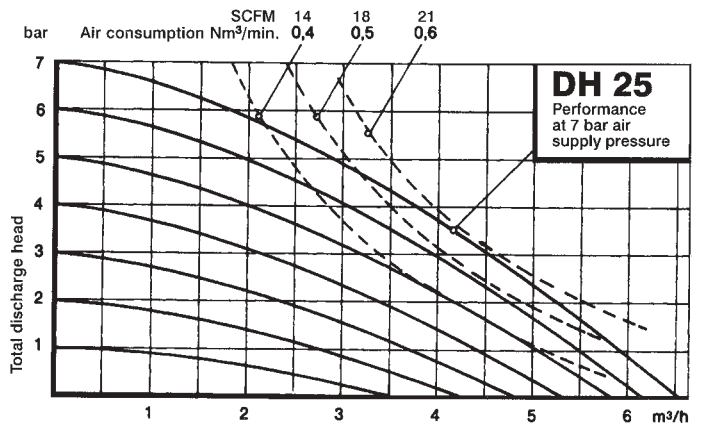
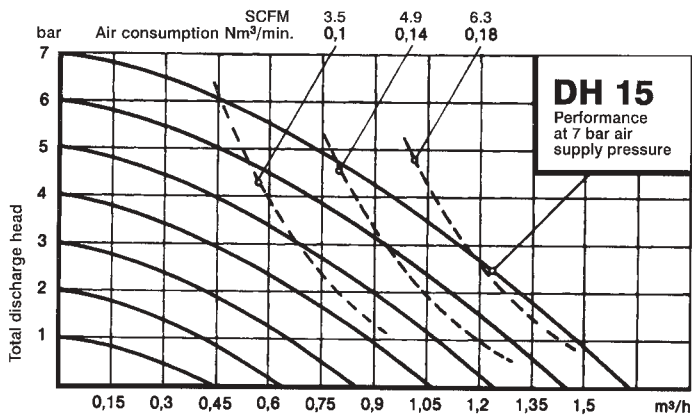
Particle size and suction lift				
Pump size	15	25	40	50
Particle size mm	3.5	10	16	18
Suction lift in mWC dry ⁴⁾	3.5	4	4	4
Wetted	9	8	8	8

Maximum operating temperature	°C
Highly polished stainless steel pumps	
with internal components: NBR, EPDM	100
FKM	140
PTFE	110

⁴⁾ For pumps equipped with diaphragms and valve balls of PTFE a decrease in suction lift must be expected.

Pump weight in kg	Housing type	
	DH-UL	
Pump size	15	10
	25	22
	40	33
	50	56

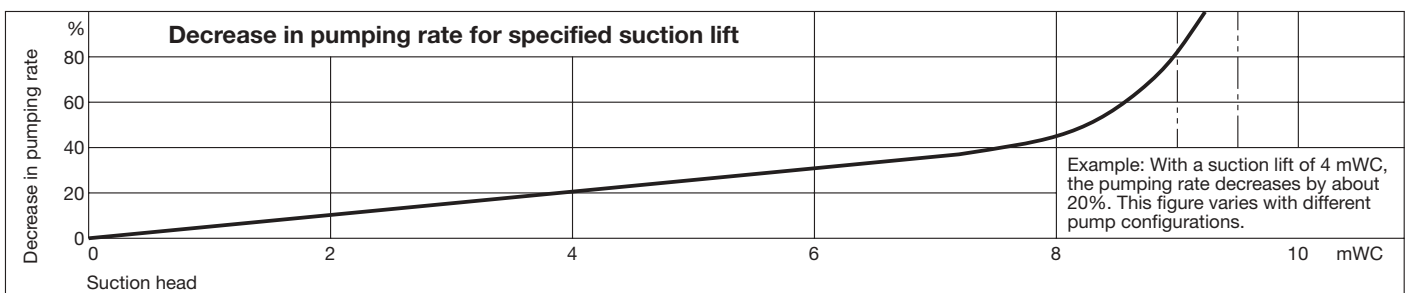
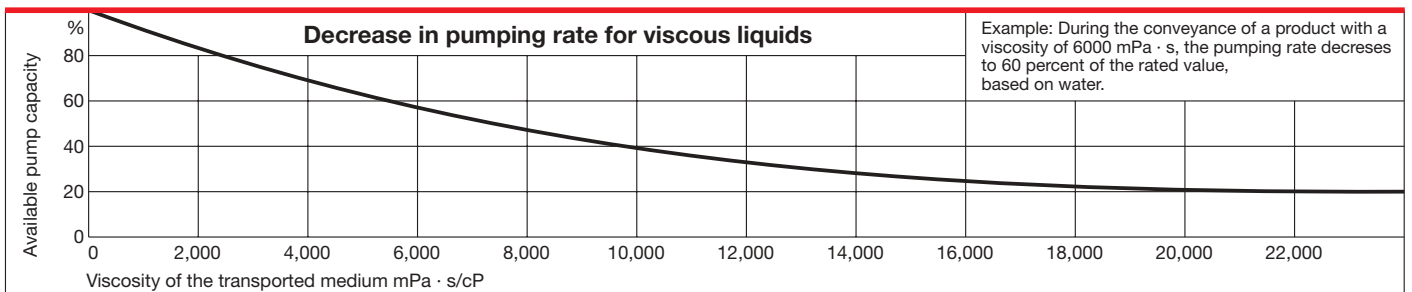
Performance characteristics of Series L Type DH Highly polished stainless steel models



Example: To help you select the correct pump size:

Required pump rate is 4 m³ per hour, required total discharge head 50 metres. The correct selection is DH40, the required air pressure 6.0 bar and the air consumption is 0.52 Nm³/min.

The indicated pumping rates are based on water.

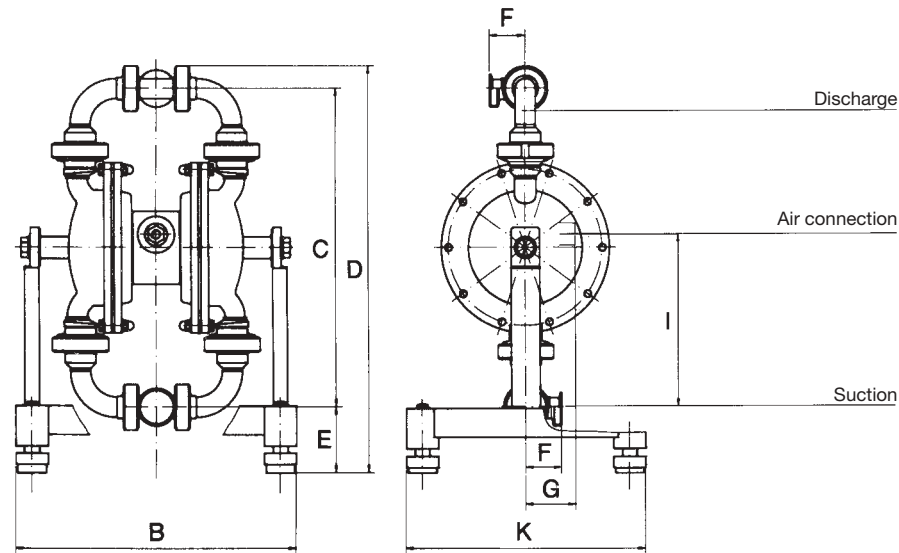
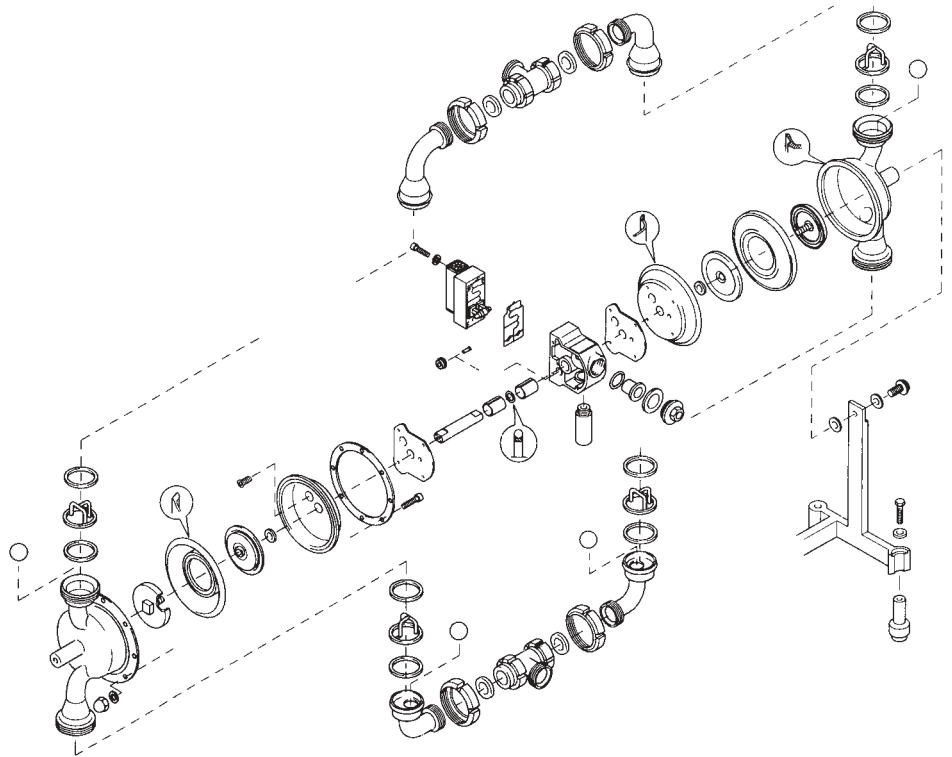


Extremely rugged construction reduces downtime to a minimum.

DEPA pumps have been designed in such a way that all components in contact with the product can be disassembled and reassembled within a few minutes. This means that servicing work is reduced to the absolute minimum.

DEPA air driven diaphragm pumps have been developed as a modular system. Consequently, many components—some of which are common to all versions—are mutually compatible and interchangeable.

This flexible construction allows quick and simple changing of the internals for all Type DH models, to fulfil different applications.



Dimensions for all sizes

	Size			
	15	25	40	50
B	285	389	465	627
C	312	413	575	714
D	407	520	678	839
E	73	81	71	86
F	32	50	55	57
G	34	82	82	107
I	155	249	307	385
K	180	335	335	335
Air connection	R $\frac{1}{4}$ in.	R $\frac{3}{8}$ in.	R $\frac{3}{8}$ in.	R $\frac{3}{4}$ in.

Dimensions in mm

There is a DEPA diaphragm pump for practically every liquid that flows.

DEPA air driven diaphragm pumps are available in three different basic con-

structions: cast metal, solid plastic and highly polished stainless steel (CIP compatible). Special purpose designed models are available for powders, high pressures up to 21 bar

and drum pumping of hard-to-handle drum contents.

For more information please contact your local supplier.

