



Competitive Reliability

Alfa Laval OptiLobe Rotary Lobe Pump

Application

The OptiLobe range of rotary lobe pumps combines cost-effective simplicity with Alfa Laval quality and reliability. The OptiLobe range has been developed for general applications within the Dairy, Beverage and Food Industries.

The 'OptiLobe' pump range has been certified by EHEDG (European Hygienic Equipment Design Group) as fully CIP cleanable to their protocol, and therefore is ideally suited for applications where cleanability is paramount.

Also the OptiLobe pump range conforms to USA 3-A Hygienic Standard and all media contacting components are FDA compliant.

The pump features the "EasyFit" front loading seal which allows quick and easy inspection or replacement without the need for pipework disassembly.

The 'OptiLobe' pump range is compact, efficient and capable of flow rates up to 48 m³/h and pressures up to 8 bar.



TECHNICAL DATA

Pump Sizing

In order to correctly size a rotary lobe pump some essential information is required. Provision of this information listed below enables our Customer Support personnel to obtain the optimum pump selection.

Materials

- Gear canister 304 stainless steel.
- Bearing housing 304 stainless steel.
- Shafts duplex stainless steel.
- Pumphead product wetted components in 316L.
- Product wetted elastomers . . . EPDM, FPM all FDA conforming.
- Mechanical Seals Carbon/Stainless Steel, Carbon/Silicon Carbide or Silicon Carbide/Silicon Carbide.

Shaft Seal Options

- EasyFit type single or single flush/quench mechanical seals.
- All sealing options are fully front loading and fully interchangeable. Specialised seal setting of the mechanical seal is not required as the seal is dimensionally set on assembly. This feature further enhances fast and efficient on-site seal interchangeability.

OPERATING DATA

Product/Fluid Data

- Fluid to be pumped
- Viscosity
- SG/Density
- Pumping temperature, minimum, normal and maximum
- Cleaning in Place temperature(s), minimum, normal and maximum

Performance Data

- Flow rate, minimum, normal and maximum
- Discharge head/pressure (closest to pump outlet)
- Suction condition



Weight

Pump Model	22	23	32	33	42	43
Bare Shaft Pump (kg)	20.5	21.5	33.5	34.5	60.0	63.0

Standard Design

Pump Gearbox

The OptiLobe pump range has a universal gearbox design with the flexibility of mounting inlet and outlet ports in either a vertical or horizontal plane by simply changing the foot position. A stainless steel gear canister and electro-less nickel plated bearing housing provides a clean, paint free corrosion resistant external finish.

Pump head Construction

The OptiLobe pump range has hygienic design full bore inlet and outlet ports to International Standards, maximising inlet and outlet port efficiency and NPSH characteristics. Pumps are fitted with tri-lobe rotors rated to 130°C facilitating use with CIP processes.

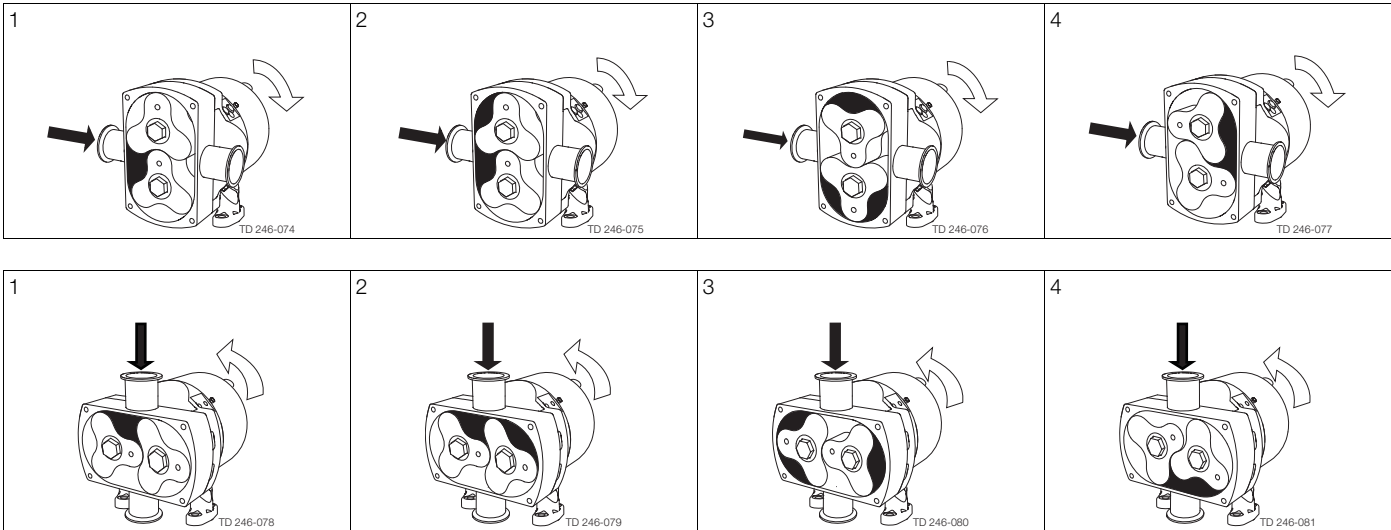
Standard Specification Options

- Specification of inlet and outlet ports (Screwed male to DIN11851 to BS 4825, SMS, ISS/IDF, RJT and Tri-clamp).
- Complete pump unit comprising: Pump + Baseplate (mild or stainless steel) + coupling with guard + Geared electric motor suitable for (or supplied with) frequency speed control or manual variable speed drive (advise motor enclosure and electrical supply)

Working Principle

The positive displacement of the OptiLobe pump is provided by non-contacting, contra rotating tri-lobe rotors within a fully swept pump chamber. All OptiLobe pumps are capable of bi-rotational flow without modification.

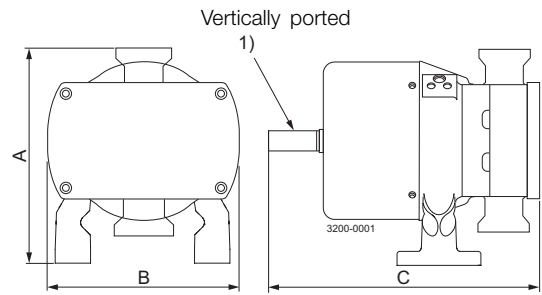
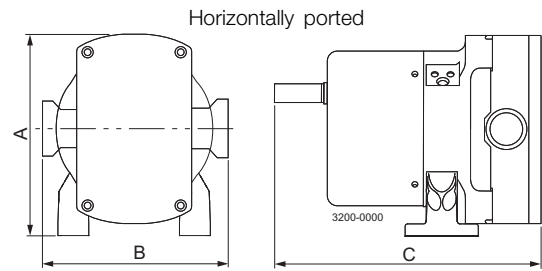
Fig. 1



Flows/Pressures/Connections

OptiLobe Model	Displacement			Inlet and Outlet		Differential Pressure		Maximum Speed
				Connection				
				Size				
	Litres/rev	Imp gall/ 100 rev	US gall/ 100 rev	mm	in	bar	psi	rev/min
22	0.17	3.74	4.49	40	1.5	8	115	1000
23	0.21	4.62	5.55	40	1.5	8	115	1000
32	0.32	7.04	8.45	50	2	8	115	1000
33	0.40	8.80	10.57	50	2	8	115	1000
42	0.64	14.08	16.91	65	2.5	8	115	1000
43	0.82	18.04	21.66	80	3	8	115	1000

Dimensions (mm)



Horizontally ported							Vertically ported					
Pump model	22	23	32	33	42	43	22	23	32	33	42	43
A	216	216	251	251	294	294	216	216	256	256	289	297
B	192	192	240	240	260	276	162	162	192	192	235	235
C	275	286	304	316	370	366	275	286	304	316	370	386