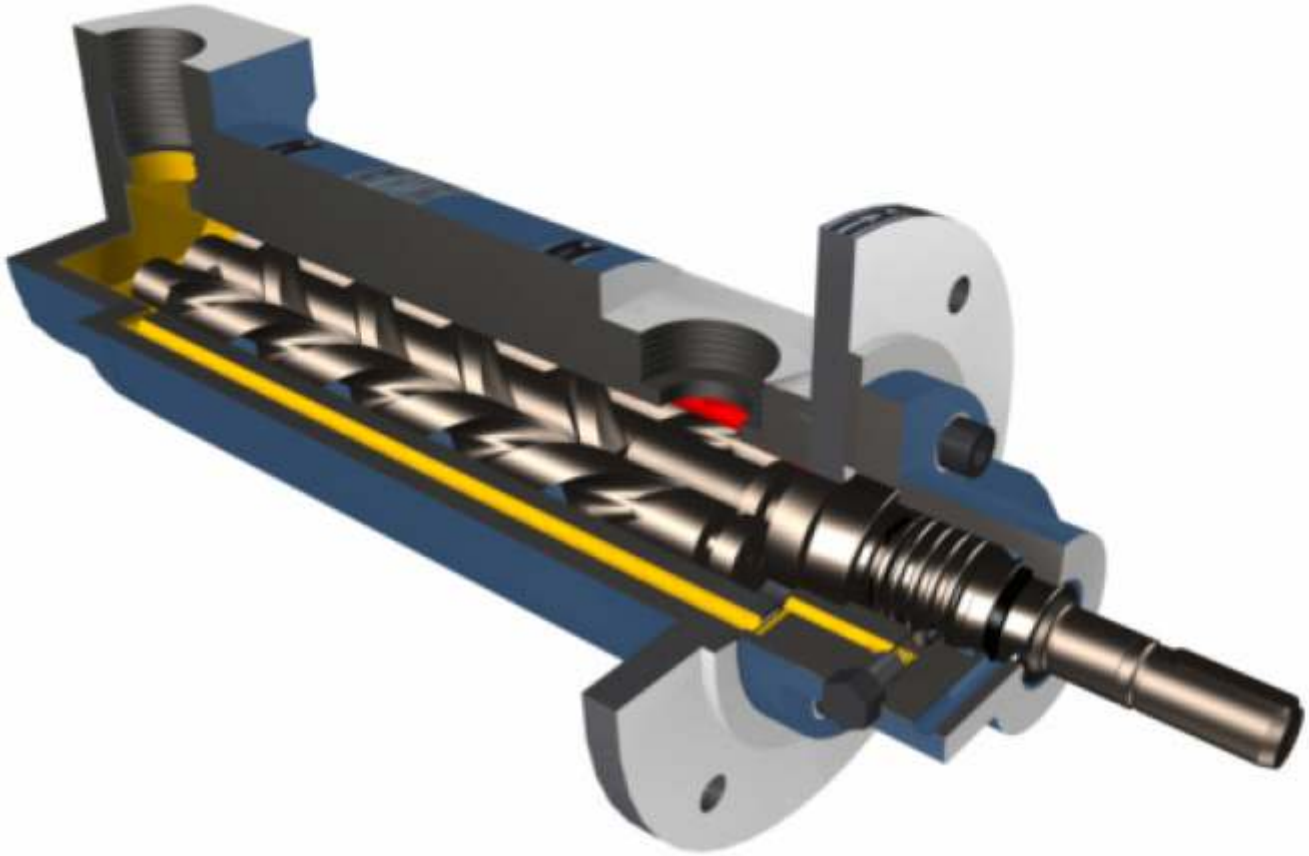




ALEKTON



SERIES-C TRIPLE-SCREW PUMPS

Alektion triple-screw pumps are positive-displacement, self-priming rotary pumps of advanced design and manufacture, for use in a variety of industrial and marine applications. Typical liquids handled include lubricating oils, fuel oils, hydraulic oils, viscose, molasses, paints and creams.

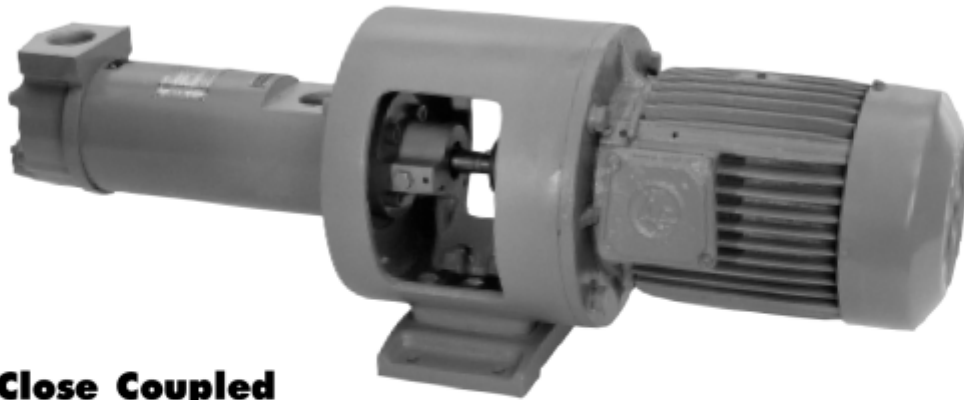
Triple-screw pumps combine the advantages of centrifugal and positive-displacement pumps. They can operate at high speeds, and can handle liquids having wide ranges of viscosity, even with entrained gases. The pumps can develop high pressures and have very good suction capability and operating efficiency. Their discharge is virtually constant and pulsation-free with variations in pressures and liquid viscosities.

Alektion triple-screw pumps are very versatile and can handle liquids with as varied characteristics as benzene and bitumen. As the pumping action of their screws is continuous, the noise and vibration levels are extremely low. They are engineered to give long trouble-free service with minimum maintenance.

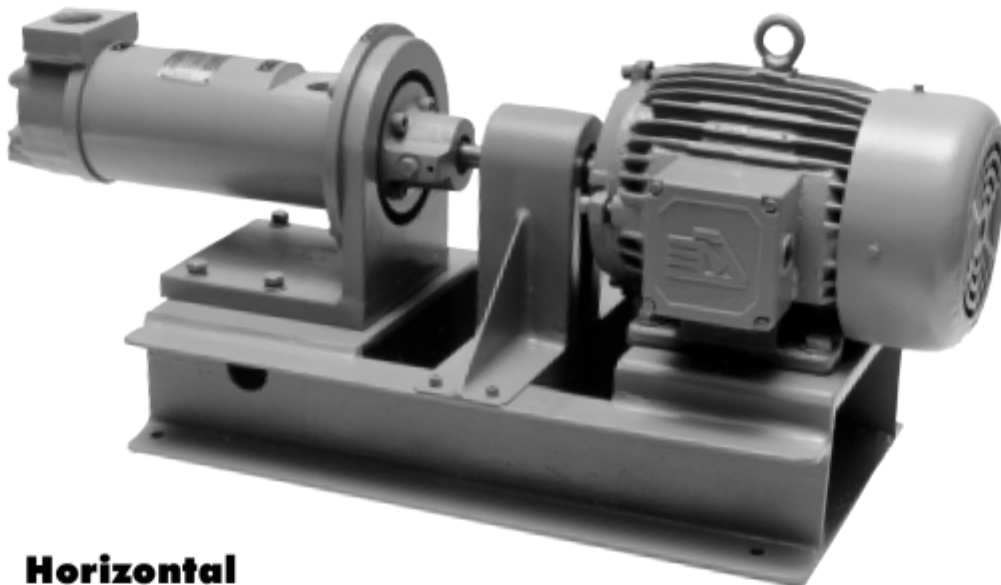
Alektion triple-screw pumps are manufactured using premium quality materials matched to service requirements. Computerised design and production-control systems, and manufacture on precision CNC machinery assure consistently high quality and performance.

Upon request, pumps can be manufactured to meet the specific requirements of international inspection agencies.

Standard Mounting Arrangements



Close Coupled



Horizontal



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Series-C Triple Screw Pumps

Specifications

Application

For handling clear viscous liquids. The liquids to be pumped must neither contain abrasive substances nor chemically attack the pump materials.

Design

The pumping elements comprise of a power-screw and two idler screws, running in a close fitting insert. Mathematically calculated profiles of the screws ensure the formation of a series of chambers of constant volume. When the screws rotate, they move at uniform velocity axially and transfer the entrapped liquid without crushing, turbulence or pulsation.

The idler screws serve to maintain the closed chambers which pump the liquid. Because they are suitably proportioned, they are driven hydraulically by the pumped liquid, eliminating the need for timing gears. Axial hydraulic thrust is balanced by balancing drums on each screw thus relieving the bearing of thrust loads.

The shaft seal chamber is connected internally to the inlet and the seal is therefore always subjected to inlet pressure only. With high suction lifts, a pressure control valve is provided so that the pressure in the seal chamber is maintained above atmospheric to prevent ingress of air and dry-running of the seal.

Shaft Bearing

Normally, pumps are fitted with internal anti-friction bearings, lubricated by the pumped liquid. External bearings can be provided if the pumped liquid is non-lubricating.

Shaft Seal

Shaft sealing can be accomplished by a mechanical seal.

Pressure Relief Valves

All pumps can be supplied with built-on pressure relief valves.

Materials of Construction

Screws	: Nitrided chrome-alloy steel
Insert	: Bearing-grade cast iron
Other wetted metallic parts	: Steel / Cast iron
Wetted non-metallic parts	: Rubber / Fibre
Non-wetted parts	: Steel / Cast iron

General Construction

The screws are located inside the insert which has an integral outlet connection. An end-cover attached to the insert is provided with the inlet connection.

Pumps are available with the following mounting arrangements:

Type	Mounting arrangement
H	Horizontal, foot-mounted
V	Vertical, foot-mounted
F	Flange mounted
C	Close-coupled
S	Sump-mounted

Normal Operating Range

Viscosity	: 0.8 to 5000 cSt
Flow rate	: 5 to 1300 L/min
Outlet pressure	: 0 to 16 barg
Inlet pressure	: -1 to 6 barg
Liquid temperature	: -30 to 130 °C

Pump Selection

A computer program is used to make the optimum selection which takes into account the extreme site duty conditions and liquid characteristics.

Optional Equipment

The following accessories and optional equipment can be provided:

- Pressure relief valves
- Motor stools for flange mounted designs
- Motors, engines or other prime-movers
- Couplings
- Base-plates, coupling-guards and foundation-bolts for foot-mounted arrangements

Modifications

Various special modifications are possible, some of which are as follows:

- Inlet and outlet sizes and orientation
- Materials of construction
- Extended operating limits
- Alternative mounting arrangements
- Special shaft sealing arrangements

Other series of pumps are available for higher duty conditions—please refer to us with details.

Duty Range

Size	Displacement ml/rev
120-200	3.6
120-240	4.3
120-280	5.0
120-320	5.7
120-360	6.4
120-400	7.2
135-225	5.1
135-270	6.1
135-315	7.1
135-360	8.2
135-405	9.2
135-450	10.2
150-250	7.0
150-300	8.4
150-350	9.8
150-400	11.2
150-450	12.6
150-500	14.0
165-275	9.3
165-330	11.2
165-385	13.0
165-440	14.9
165-495	16.8
165-550	18.6
189-315	14.0
189-378	16.8
189-441	19.6
189-504	22.4
189-567	25.2
189-630	28.0
210-350	19.2
210-420	23.0
210-490	26.9
210-560	30.7
210-630	34.5
210-700	38.4
240-400	28.6
240-480	34.4
240-560	40.1

Size	Displacement ml/rev
240-640	45.8
240-720	51.6
240-800	57.3
270-450	40.8
270-540	48.9
270-630	57.1
270-720	65.2
270-810	73.4
270-900	81.6
300-500	55.9
300-600	67.1
300-700	78.3
300-800	89.5
300-900	101
300-1000	112
330-550	74.5
330-660	89.3
330-770	104
330-880	119
330-990	134
330-1100	149
375-625	109
375-750	131
375-875	153
375-1000	175
375-1125	197
375-1250	219
420-700	153
420-840	184
420-980	215
420-1120	246
420-1260	276
420-1400	307
480-800	229
480-960	275
480-1120	321
480-1280	367
480-1440	412
480-1600	458



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