

seko

Progressive Cavity Pumps

Volumetric Rotary and Self-Priming Pumps



Your Choice,
Our Commitment

Main technical features of progressing cavity pumps

“Cavity Progressive” Screw Pumps: Volumetric Rotary and Self-Priming Pumps

The pump features a uniform flow rate proportional to the number of revolutions, as well as small size. This allows pumping the product without pulsations but also to keep it unaltered and undamaged. The pump is self-priming, with suction capacity proportional to its size, number of stages and speed. **Minimum suction is 4 m.W.C.**

The pump can work with a wide range of fluids. These can contain gases, abrasives, fibers and solids within the liquid matrix.

The Screw Pump characteristics include:

- Pumping and dosing high or low viscosity liquids up to 1.000.000 cps;
- Pulse-free pumping with minimum tensile strain on the processed product;
- High pumping pressure (6 bar per stage);
- The pumps are available in single or multi-stage versions, depending on the required pressure.

Pump component

1 ROTOR

It's a screw shape with circular section that rotating in to the stator, allows the pumping of the fluid. The pressure of the pump depends on the number of stages.

Every stage gives a pressure of 6 bar. We have two types of rotors: standard and long step type that, considering the same diameter and eccentricity, doubles the capacity increasing the pump performance.

Materials: AISI 304; AISI 316; AISI 420B

2 STATOR

It is the fixed made in vulcanized rubber, contained or less on the metal tube, shaped like a circular screw quarry where the rotor rotates.

Maximum working temperature up to 150 °C.

Rubber type: NBR

3 TRANSMISSION AND JOINT

Withstand the axial and torque and torque stress between rotor connection and driver.

Rubber type: AISI 304; AISI 316

Tips: Pin joint

4 PUMP BODY

It's the structure where the liquid is pumped from. Available with a lot of connection types.

Materials: Cast iron G25 UNI 5007; AISI 304 / 316

5 COUPLING

Possible coupling types are: close coupled, bearing housing, stainless steel support.

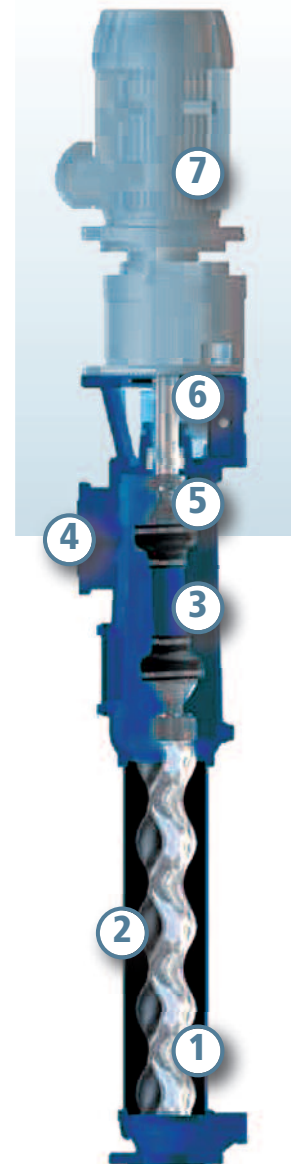
6 SEAL

It's the connection between the fix part and the rotating part of the pump to avoid the exit of the fluid.

The selection of the type is depending by the fluid to pump

7 MOTORIZATION

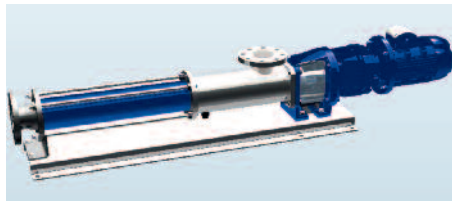
These are the devices that give the movement to the pump: motor, hand variator, gear reducer, inverter.



Products Range

FSERIES Designed with new technology for "reversible flow"

CNSERIES Suitable for the dosing of various liquid products.



Application Fields

Sewage treatment

Dirty waste water, primary, secondary, digested, dewatered sludge, flocculants, lime milk.

Fish industry

Waste, interiors, flour, minced fish, vegetal oil, fish oil, water mix with blood.

Chemical and petrochemical industry

Resin, reagent, sulphate, caustic soda, acids, crude oil sludge, biodiesel.

Marine

Oil sludge, bilge water, sea water.

Paper industry

Paper paste, cellulose, glue, pulps, patinas, starch.

Mining

Mining waste water, sludge, lime milk.

Construction

Mortar, coat, cement, concrete.

Ceramic industry

Porcelain mix, clay sludge, lime.

Cosmetic industry

Soap, cream, tooth-paste, shampoo, detergent.

Winery

Grapes, must, grape paste, wine.

Beverage

Fruit juice pulp, liquors, beer, fruit paste.

Oil industry

Oil, olive mass.

Agriculture and biotechnology

Fodder, manure, corn, wheat.

Pastry and bakery

Flour, dough, sponge cake, caramel, chocolate, creams, honey, jam.

Food industry and dairy

Tomatoes, pulp fruit, vegetable, honey, milk products.

Slaughterhouse

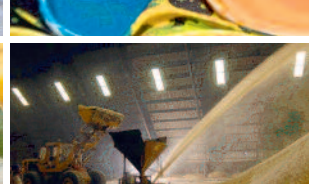
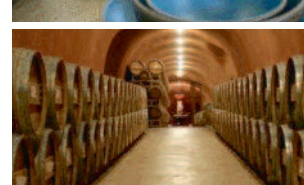
Minced meat, blood, bones and meat mix.

Paint and coat industry

Colour, solvent, ink paste, pigment, paint.

Sugar industry

Product derivatives by beet and sugar cane, glucose, treacle, alcohol, ethanol.



F SERIES

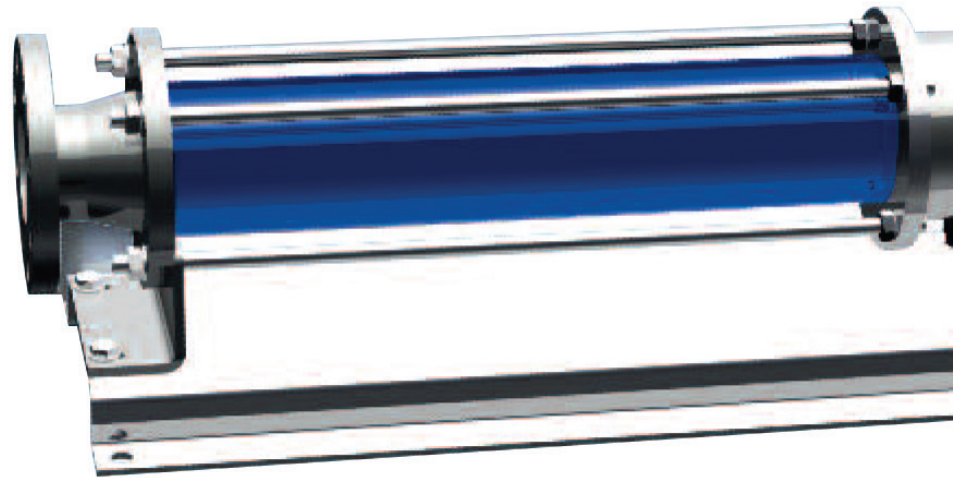
seko presents its range of progressing cavity pumps.

Studied and designed to increase the performance.

These pumps are completely reversible.

Available a wide pumps range.

Hopper Version available, completed with feeding conveyor for pumping fluid with high viscosity and solid in suspension (about to 17%)



Compact design and good quality/price ratio Easy to install thanks to the compact design

- Single stage stator with long pitch geometry to improve performance
- Reversible flow: standard up to 3 bar, with hydraulic balance can be increased up to 12 bars
- Compact Joint with geometry and dimensions designed to ensure the maximum suction capacity
- To ensure minimal wear, the transmission shaft is completed with a universal pin joint, bushing and transmission guides to ensure high reliability and long life
- Rubber sleeves designed to increase working life in case of sharp solids in the fluids
- Easy Maintenance. Fewer wearing components, small-sized by design

- The concept of universal joint design is the same for all pumps. The dimension and material selected according to the application
- Standard rotating parts are made in Stainless Steel. Other materials available
- The section between stator and pump body is designed to increase priming of the pump
- The standard version has a single mechanical seal. The pumps are designed to install a wide range of mechanical seal solutions: packing seal, double mech.seal and cartridge
- Modular bearing housing with taper roller bearings and blocking nut to set the preload
- Compact dimensions allow easy bearing maintenance
- Efficient integrated lubrication system

VERSIONS

Cast iron

Body pump / outlet flange: cast iron G25

- Inspection ports standard in all the sizes cast iron
- Available connection: Flanges DIN 2501; Flanges ANSI RF150; Spherical connections

Stainless steel

Body pump / outlet flange: AISI 304 / 316

- CIP on request
- Available connections: BSP (Gas); Flanges DIN 2501; Flanges ANSI RF150; DIN 11851; SMS; RJT (BMS); Macon; Clamp; Other if requested

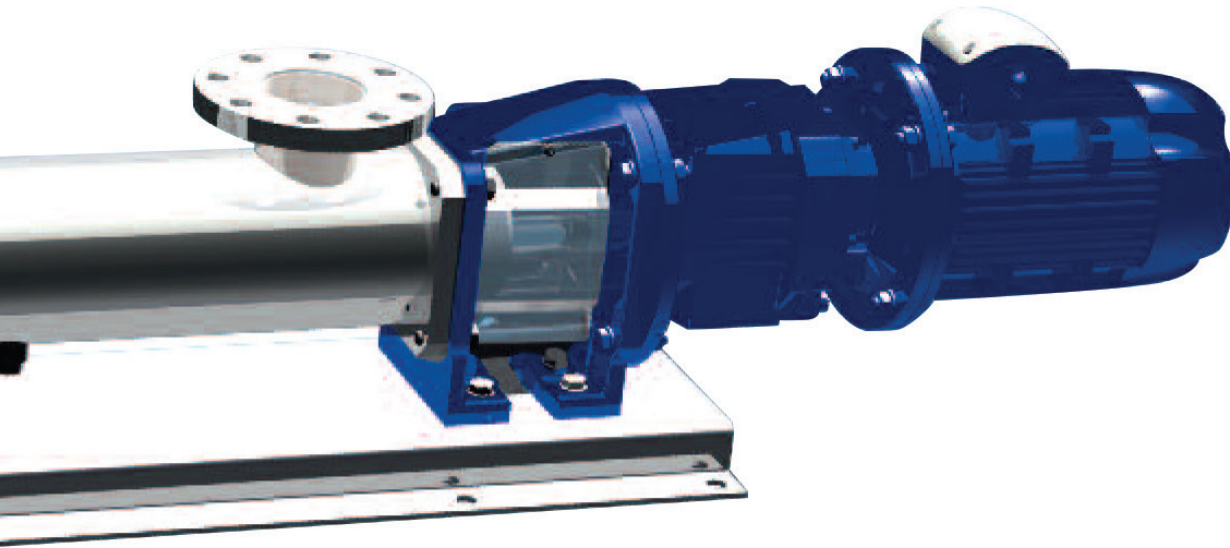
Hopper / outlet flange: AISI 304 / 316

- CIP on request
- Available connections: BSP (Gas); Flanges DIN 2501; Flanges ANSI RF150; DIN 11851; SMS; RJT (BMS); Other if requested

SHAFT AND PIN JOINT

The Transmission joint with stands the axial stress and torque between the rotor connection and the drive. They are completely reversible. **Materials** : AISI 304; AISI 316





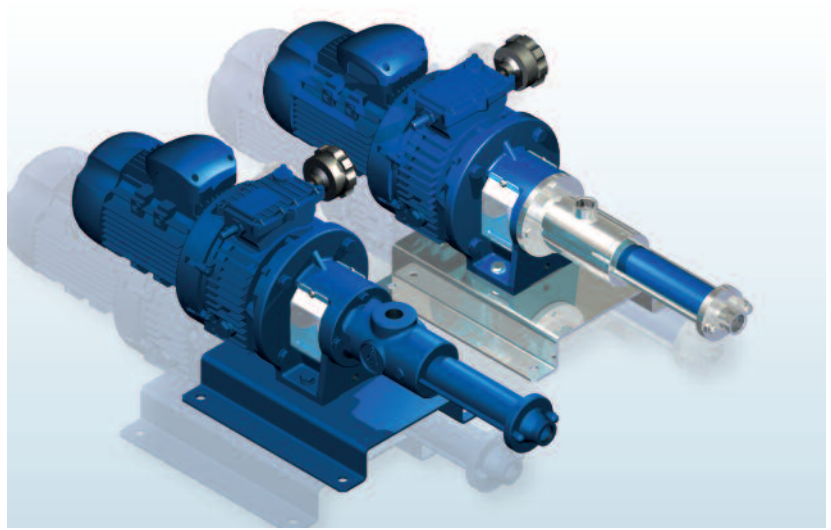
MOTOR COUPLING	Close Coupled Type "FS - FT"	<ul style="list-style-type: none"> ■ Flange diam. 160 / 200 / 250 / 300 mm related to the pumps sizes ■ Female drive shaft AISI 304 / AISI 316 / AISI 420B ■ Diam. 24 /30 /35 /40 /50 mm related to the pumps sizes 			
	Close Coupled Type "FN - FH"	<ul style="list-style-type: none"> ■ Flange diam. 160 / 200 / 250 / 300 mm related to the pumps sizes ■ Female drive shaft AISI 316 / carbon steel with chrome (HCP) ■ Diam. 19 / 24 / 25 / 28 / 30 / 32 / 35 / 40 mm related to the pumps sizes 			
BEARING HOUSING	<ul style="list-style-type: none"> ■ FLEXIBLE JOINT TYPE "S" [FS] ■ FLEXIBLE JOINT TYPE "T" [FT] 				
PRODUCTS LINE (WITH HAND VARIATOR*)	MODELS	FLOW RATE	PRESSURE	MOTOR POWER	
	FN 02 2V8	0,6÷2,8 m ³ /h	2 bar	1,5 kW	
	FN 02 005	1÷5 m ³ /h	2 bar	1,5 kW	
	FN 04 005	1÷5 m ³ /h	4 bar	2,2 kW	
	FN 08 2V5	0,5-2,5 m ³ /h	8 bar	2,2 kW	
	FN 08 005	1÷5 m ³ /h	8 bar	3 kW	
	FN 02 010	2÷10 m ³ /h	2 bar	2,2 kW	
	FN 04 010	2÷10 m ³ /h	4 bar	3 kW	
	FN 08 010	2÷10 m ³ /h	8 bar	4 kW	
	FN 03 020	4÷20 m ³ /h	3 bar	4 kW	
	FN 02 026	5÷26 m ³ /h	2 bar	4 kW	
	FN 04 040	8÷40 m ³ /h	4 bar	7,5 kW	
FN 02 060	12÷60 m ³ /h	2 bar	11 kW		
TYPES AVAILABLE	N	■ FLANGED			
	H	■ HOPPER			

(*) Gear reducer (FIX FLOW) available on request

CN SERIES

The dosing pump with small capacities, continuous flow, low pulsations, no vibrations, very high priming capacity and flow reversibility.

It's suitable to pump precisely medium liquid, dense, viscous, with solid parts on suspension.



VERSIONS	Cast iron	Body pump / outlet flange: cast iron G25 <ul style="list-style-type: none"> ■ Inspection ports standard in all the sizes ■ Available connection: Flanges DIN 2501; Flanges ANSI RF150; Spherical connections 			
	Stainless steel	Body pump / outlet flange: AISI 304 / 316 <ul style="list-style-type: none"> ■ CIP on request ■ Available connections: BSP (Gas); Flanges DIN 2501; Flanges ANSI RF150; DIN 11851; SMS; RJT (BMS); Macon; Clamp; Other if requested 			
MOTOR COUPLING	Close Coupled Type "CN"	<ul style="list-style-type: none"> ■ Flange diam. 160 / 200 / 250 / 300 mm related to the pumps sizes ■ Female drive shaft AISI 316 / carbon steel with chrome (HCP) ■ Diam. 19 / 24 / 25 / 28 / 30 / 32 / 35 / 40 mm related to the pumps sizes 			
PRODUCTS LINE (WITH HAND VARIATOR*)	MODELS	FLOW RATE	PRESSURE	MOTOR POWER	
	CN 08 060	12÷60 l/h	8 bar	0,37 kW	
	CN 16 030	6÷30 l/h	16 bar	0,37 kW	
	CN 08 150	30÷150 l/h	8 bar	0,37 kW	
	CN 02 650	150÷650 l/h	2 bar	0,55 kW	
	CN 08 650	150÷650 l/h	8 bar	0,75 kW	
	CN 02 16H	300÷1600 l/h	2 bar	0,75 kW	
	CN 02 10H	200÷1000 l/h	2 bar	0,55 kW	
CN 02 30H	600÷3000 l/h	2 bar	1,1 kW		

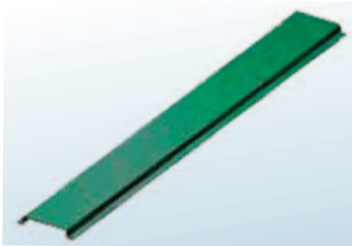
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Accessories



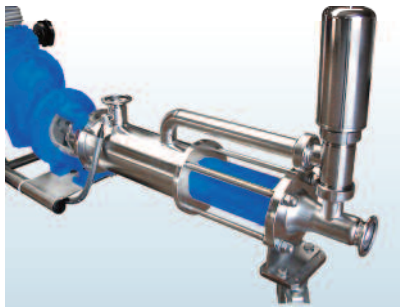
PROBE AND THERMOREGULATOR

Dry running of our pumps causes damages to stator making it destroyed. Pump working without liquid inside makes internal temperature sharply increasing. That increase is relieved by the thermal probe which, when installed on the pumps, stops the pumping and avoid the stator going burned.



BASE PLATE

This equipment is built with omega profile in order to get strong resistance to any shock, mechanical stress, weight. Easy fixation of the pump through fitted holes. For bearing housing pumps, the baseplate is requested for the correct alignment between pump and motor group.



BY-PASS

In order to avoid problems of overpressure in the discharge branch, a safety valve may be applied on the pump, connected to a circuit called "by-pass" automatically driven when the working pressure goes over the set up safety level.



TROLLEY

This is a solution for the all that applications requesting several different displacements of pump or just to help the maintenance moving the pump placed under some installation.

Your Choice, Our Commitment

In the modern Globalised world, being a privately owned Company has significant benefits especially for our Customers, our Partners. For over 40 years, SEKO has developed a Global organisation able to take the longer view, manage the pressure of the now, and to plan for the long term, delivering true Partnership for our Customers, with transparency and mutual respect for each other.

Whether it's for our reknown flexibility, our attention to detail, the high-quality products, or just the way we do business, we understand that it's Your Choice to do business with us. It is Our Commitment to fulfill your needs wherever you, our Customers are.



For more information about our portfolio, worldwide locations, approvals, certifications, and local representatives, please visit www.seko.com

As part of a process of on-going product development, SEKO reserves the right to amend and change specifications without prior notice. Published data may be subject to change.

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