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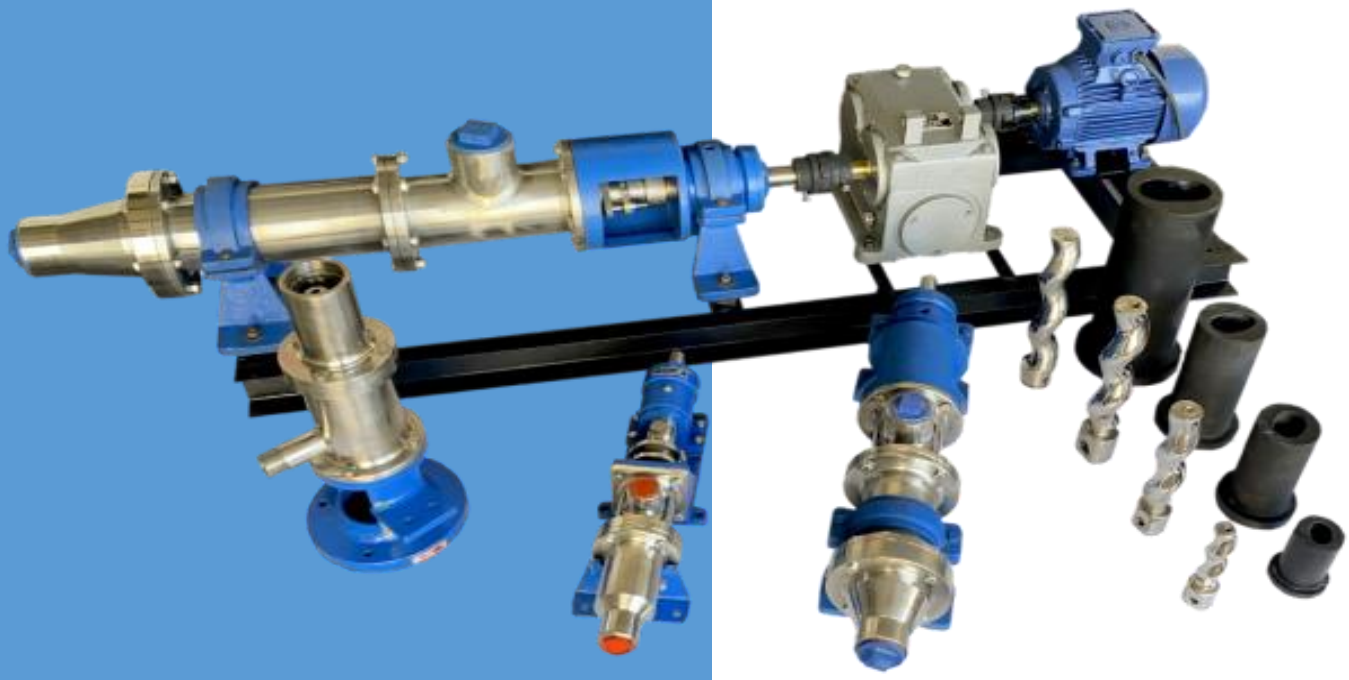

PROGRESSIVE CAVITY SCREW PUMPS

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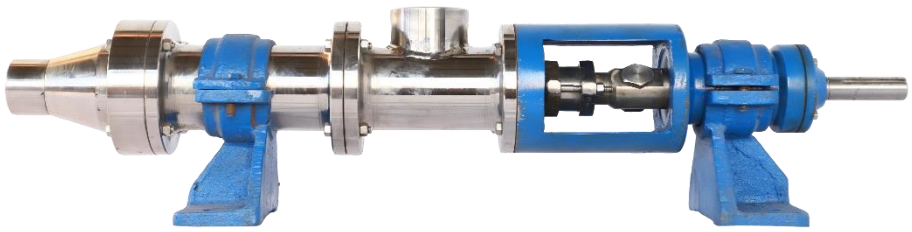
PROGRESSIVE CAVITY SCREW END PUMP INLET & OUTLET



NOVA SERIES single screw eccentric progressive cavity pumps are the most universal and any additional options additional optional and configurations are available, such as made of stainless steel, explosion proof, with extra heat flow rectangular feeding inlet, screw feeder, the protection system <<dry run>>,special climate versions, etc.

- **Type of design**
  Horizontal

- **Pressure**
  From 1 to 5 bar

- **Productive capacity**
  0.1to 60 Cubic Meters per Hour

- **Material of flow part**
  Industrial version of hard steel
  Hygienic version AISI 314
  Chemical version AISI 316

- **sealing of drive shaft**
  Mechanical seal
  Gland seal

- **pumped substances**
  Any industrial liquid substances with different viscosity level, with or without inclusions, including abrasive media: acids, bases, petroleum, acetone, resin etc. The temperature of pumping fluid to 190 degree Celsius.

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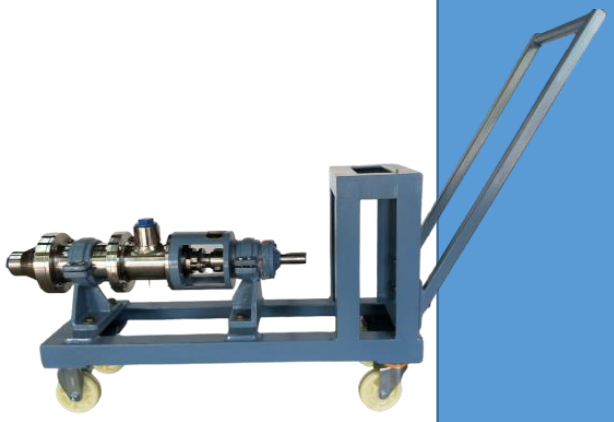
PROGRESSIVE CAVITY SCREW PUMP

Brand : **CHEMIQUIP make nova brand**

Pump Name: **Progressive cavity screw pump.**

Application: These pumps are mainly used to transfer syrup, Slurries, sludge, molasses, high viscous material, paste etc. and ideal for food, drink, dairy, bakery, pharmaceuticals, cosmetics, chemicals, brewery, printing inks and other hygiene conscious industries and water effluent plants.



TROLLEY MOUNTED SCREW PUMP

Salient Features:

- Uniform, non-pulsating, non-agitating, flow.
- Flow is approximately proportional to speed.
- Suitable up to 150 psig with double stages.
- Maximum operating temperature 180°C with different kind of rubbers.
- Can handle liquids with solid particles of 10 to 12 mm size.
- Efficiency remains same in either direction.
- Feeder and /or hopper arrangement for high viscous liquids and slurries.
- Available in sizes from ½" to 6".
- Available in various material of construction like, CI, MS, Cast S.S bodies, stators in various rubber compositions, contact parts in S.S.
- Pumps can be supplied with screw/flange / IDF connection.
- There are NOVA screw pump for handling practically anything that will push through the pipe from free flowing liquids to abrasive slurries.
- This pump is fitted on MS fabricated base frame with pulleys, belts and belt guard.
- We will be glad to make specific recommendations for your particular pumping problem. Feel free to call us at any time.

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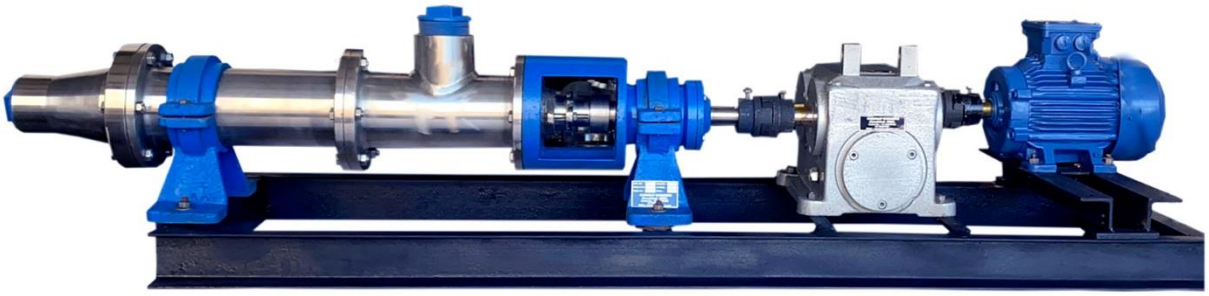
Progressive cavity screw pump with feeder arrangement

It is used in case of no possibility for connecting the pipe to the inlet of the pump.

Progressive cavity screw pump with gear drive arrangement



It is utilized when a fluid discharge must be continuously required.

Vertical Design Barrel Pump (Screw Type)

This is vertical type screw pump mainly used for transferring paste/cream type material from open vessel directly.

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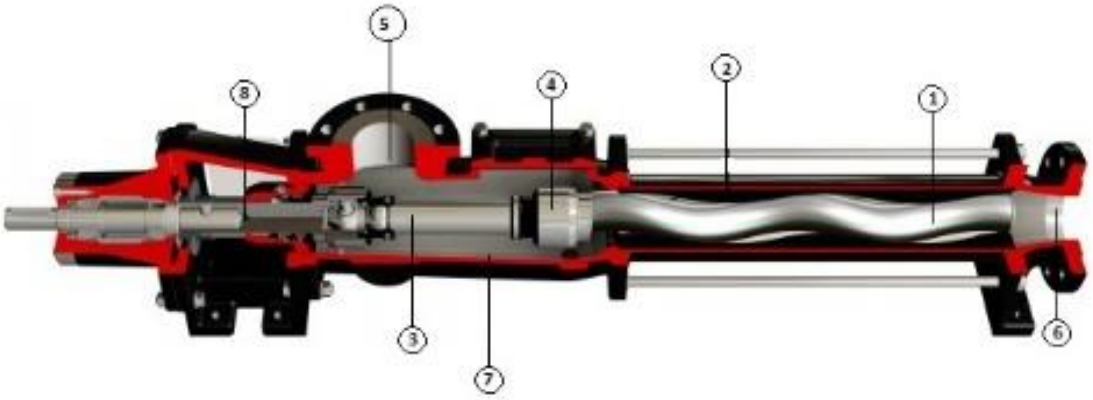

1. THE ROTOR: The External Single Start Helical Line with Cross Section the Center of Which Is Shifted On the Size of Eccentricity from the Rotated Axis. The rotor is made of metallic alloys, coated or uncoated.
2. THE STATOR: inner double threaded helical line made of elastomer and fixed inside of the metal sleeve.
3. CONNECTING ROD: it transmits torque from the drive shaft to the rotor, has a high resistance to wear. The usage of transmission rod with a screw feeder is also possible.
4. THE JOINT: it compensates eccentricity of the rotor, filled with grease and has a sealed structure
5. INLET: depends on the desires of the customer and the model of the pump, the unit can be made in the form of the pipe with flange sleeve, the quick coupling connection, or in the form of a rectangular charging inlet.
6. OUTLET: Depends on the desires of the customer and the model of the pump, the unit can be made in the form of the pipe with the flange sleeve or the quick coupling connection.
7. THE PUMP CHAMBER: provides the delivering of pumping substance to the screw pair of pump unit.
8. THE SHAFT SEAL: provides the seal of the shaft .it is possible to use serviced stuffing box, single and double mechanical seal with flushing.
9. THE BEARING HOUSING: it is the connecting node between the drive and the pump chamber. The maintenance of seal of the drive shaft happens through the transitional rack.

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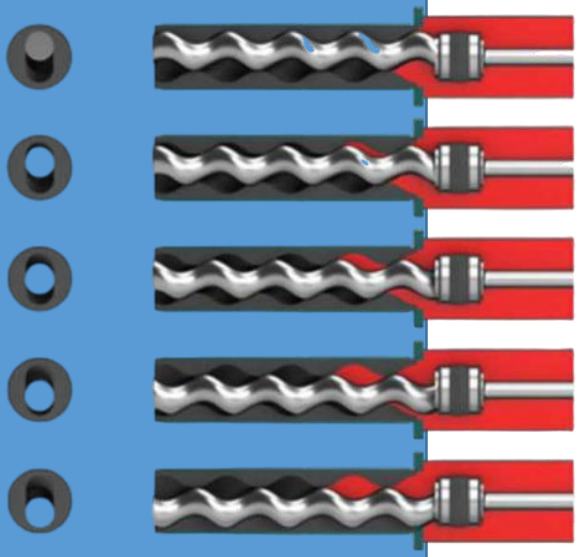


The main part of the single screw eccentric progressing cavity pump is a screw consists of:

The stator: double threaded helical line made of elastomer inseparably connected with metallic casing;

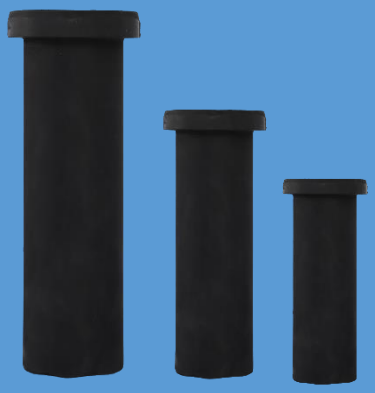
The rotor: external single thread helix line made of steel coated or uncoated.

The principle of pumping lies in conveying (periodically replacement) the constant capacity of inside the hermetic chambers between rotating rotor and static stator. While the rotor rotates, cavity from suction side increase in volume and creates pressure. Under the pressure convertible fluid fills the for formative cavity. While circular helix rotates and moves, the cavity closes and the rotor conveys the pumping fluid along the stator axial to the pressure side. At the same time the number of such closes cavities to the unit of screw pair length defines the ultimate unit pressure the volume of each cavity determines its productivity capacity.

Single screw eccentric progressing cavity pumps allows the effective pumping of high viscous and multiphase with significant amount of mechanical inclusions. These pumps have a big number of advantages in comparison with other types of pumps such as centrifugal, guided-vane, gear, membrane and peristaltic that use other methods of power transmission of forward motion in the pumping fluid.

MATERIAL OPTIONS OF ROTOR

Stainless steel, tool steel and exotic alloys



Material of construction	
Stator material	
Elastomer type	**Permissible temp [^{O} C]**
Natural commercial rubber	65
Neoprene	70
nitrile commercial (black)	80
Nitrile food graded (white)	80
EPDM	100
Silicone commercial rubber	110
HYPALON	125
VITON	150

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CAPACITY CHART

Suction			Total Discharge Head (metres)											
Model	lift	speed	0		10		20		30		40		50	
	ft.		L.P.M.	H.P.	L.P.M.	H.P.	L.P.M.	H.P.	L.P.M.	H.P.	L.P.M.	H.P.	L.P.M.	H.P.
N15 (1/2")	27.00	480.00	2.50	0.33	2.40	0.33	2.30	0.33	2.10	0.50	1.85	0.50	1.60	0.50
		720.00	3.75	0.51	3.60	0.50	3.40	0.50	3.10	0.50	2.80	0.50	2.50	0.50
		960.00	5.00	0.50	4.75	0.50	4.50	0.50	4.20	0.50	3.80	0.50	3.40	0.50
		1440.00	7.50	0.50	7.20	0.50	6.80	0.50	6.20	0.50	5.60	0.50	5.00	0.50
N20 (3/4")	27.00	480.00	5.60	0.50	5.30	0.50	5.00	0.50	4.60	0.75	4.40	0.75	3.80	0.75
		720.00	8.40	0.75	8.00	0.75	7.50	0.75	6.90	0.75	6.30	0.75	5.60	0.75
		960.00	11.20	0.75	10.60	0.75	10.00	0.75	9.20	0.75	8.80	0.75	7.60	0.75
		1440.00	16.80	0.75	16.00	0.75	15.00	0.75	13.80	0.75	12.60	0.75	11.20	0.75
N25 (1")	27.00	480.00	12.00	0.75	11.40	0.75	10.70	0.75	10.00	0.75	9.00	0.75	8.00	0.75
		720.00	18.00	0.75	17.00	0.75	16.00	0.75	15.00	1.00	13.60	1.00	12.00	1.00
		960.00	24.00	1.00	23.00	1.00	21.50	1.00	19.50	1.00	17.50	1.00	16.00	1.00
		1440.00	36.00	1.00	34.00	1.00	32.00	1.00	30.00	1.00	27.00	1.00	24.00	1.00
N40(1.5')	27.00	360.00	29.00	1.50	28.00	1.50	26.50	1.50	24.50	1.50	22.50	1.50	20.00	1.50
		480.00	38.00	1.50	36.00	1.50	34.00	1.50	31.50	1.50	29.00	1.50	26.00	1.50
		720.00	57.00	1.50	54.00	1.50	51.00	1.50	47.00	2.00	43.00	2.00	39.00	2.00
		960.00	75.00	1.50	72.00	1.50	67.00	2.00	62.00	2.00	57.00	2.00	51.00	2.00
N50 (2")	27.00	240.00	44.00	2.00	42.00	2.00	39.50	2.00	36.50	2.00	33.50	2.00	30.00	2.00
		360.00	65.00	2.00	62.00	2.00	58.50	2.00	54.50	2.00	50.00	2.00	44.00	2.00
		480.00	88.00	2.00	84.00	2.00	79.00	2.00	73.00	2.00	67.00	3.00	58.00	3.00
		720.00	130.00	3.00	124.00	3.00	117.00	3.00	109.00	3.00	100.00	3.00	88.00	3.00
		960.00	175.00	3.00	168.00	3.00	158.00	3.00	146.00	3.00	134.00	3.00	116.00	3.00
N60 (2.5")	20.00	240.00	75.00	3.00	70.00	3.00	65.00	3.00	60.00	3.00	55.00	3.00	50.00	3.00
		360.00	110.00	3.00	103.00	3.00	36.00	3.00	88.00	3.00	81.00	3.00	74.00	3.00
		480.00	150.00	3.00	140.00	3.00	130.00	3.00	120.00	3.00	110.00	3.00	100.00	3.00
		600.00	186.00	3.00	174.00	3.00	162.00	3.00	150.00	5.00	138.00	5.00	124.00	5.00
		720.00	220.00	3.00	206.00	3.00	192.00	5.00	176.00	5.00	162.00	5.00	148.00	5.00
N75 (3")	20.00	240.00	166.00	5.00	158.00	5.00	148.00	5.00	136.00	5.00	124.00	5.00	110.00	5.00
		360.00	249.00	5.00	235.00	5.00	221.00	5.00	205.00	5.00	186.00	5.00	168.00	5.00
		480.00	332.00	5.00	316.00	5.00	296.00	5.00	272.00	7.50	248.00	7.50	221.00	7.50
		600.00	415.00	5.00	397.00	5.00	373.00	7.50	347.00	7.50	317.00	7.50	277.00	10.00
		720.00	498.00	5.00	470.00	5.00	442.00	7.50	410.00	7.50	372.00	10.00	332.00	10.00
N90 (4")	20.00	240.00	286.00	5.00	271.00	5.00	254.00	5.00	235.00	5.00	214.00	7.50	191.00	10.00
		360.00	430.00	5.00	405.00	5.00	378.00	5.00	350.00	7.50	320.00	10.00	286.00	10.00
		480.00	572.00	5.00	542.00	5.00	508.00	7.50	470.00	10.00	428.00	10.00	381.00	10.00
		600.00	716.00	7.50	676.00	7.50	632.00	10.00	584.00	10.00	534.00	10.00	478.00	12.50
		720.00	858.00	7.50	810.00	7.50	756.00	10.00	700.00	10.00	640.00	12.50	572.00	12.50
N100 (4")	20.00	240.00	350.00	7.50	330.00	7.50	310.00	7.50	285.00	7.50	225.00	7.50	230.00	7.50
		360.00	525.00	7.50	495.00	7.50	495.00	10.00	430.00	10.00	390.00	10.00	350.00	10.00
		480.00	700.00	7.50	660.00	7.50	660.00	10.00	570.00	10.00	510.00	12.50	460.00	12.50
		600.00	875.00	10.00	820.00	10.00	820.00	10.00	705.00	10.00	640.00	12.50	580.00	15.00
		720.00	1150.00	10.00	990.00	10.00	930.00	12.50	860.00	12.50	780.00	12.50	700.00	20.00

note :- all above mentioned capacties are based on water at 70 degree fahrenheit and density 1(2)hps mentioned above are recommended

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