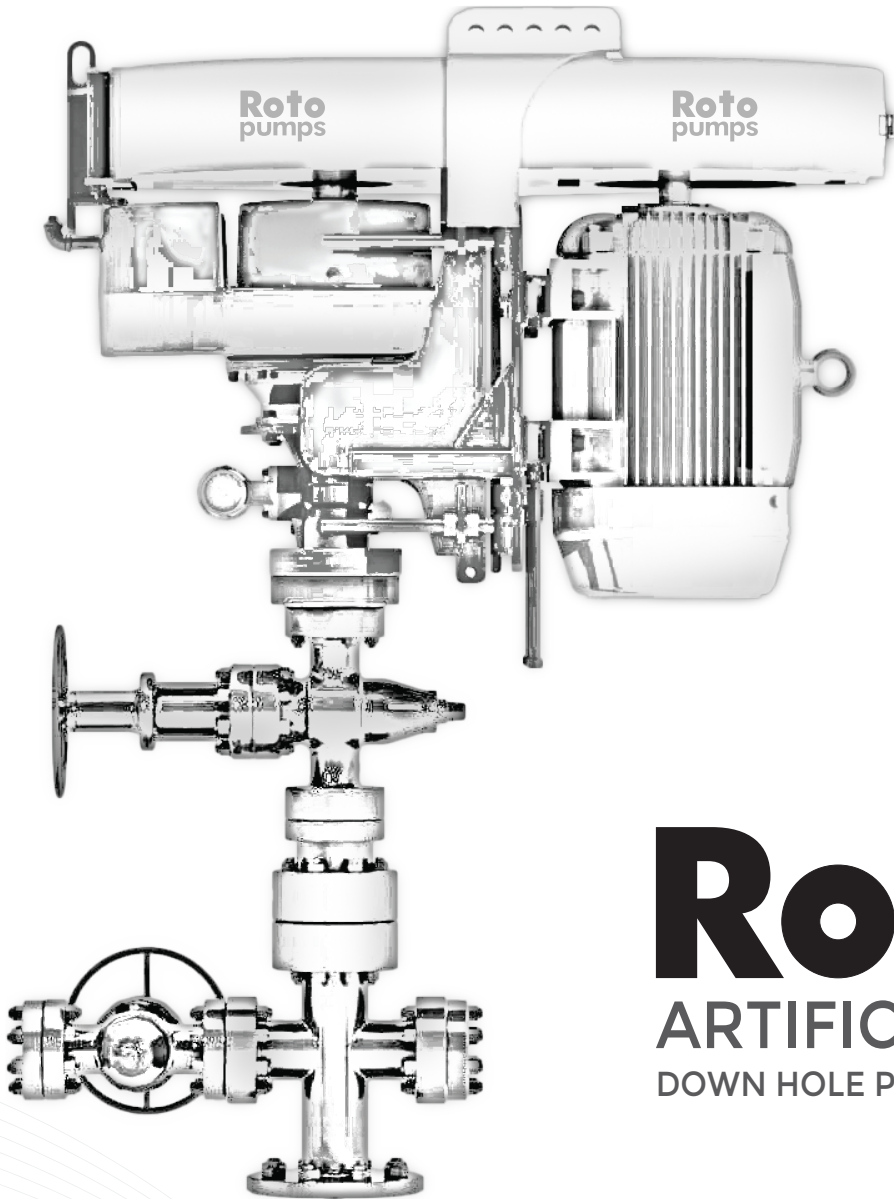




WE COMPETE  
WITH ONLY  
ONE PUMP  
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# Roto<sup>®</sup>

## ARTIFICIAL LIFT

DOWN HOLE PROGRESSIVE CAVITY PUMP

Leading the Way in Fluid Engineering Innovations



## Roto Artificial Lift - Downhole Progressive Cavity Pumps

Roto Artificial Lift - Downhole Progressive Cavity Pump (PCP) stands as a proven solution for artificial lift, ideal for various fluid conditions, rates, and lifts. These pumps are built and tested as per ISO 15136 standards to give customers the promise of quality and reliability.

Renowned for their efficiency and benefiting from advancements in pump geometry and material technology, our PCP systems excel in handling highly viscous applications, including sand-laden heavy oil, coal bed methane (CBM), and medium to light oil applications.

### Distinctive Features

- Cost-effective with superior system efficiency.
- Easy installation with minimal wellhead footprint.
- Optimizes reservoir deliverability by operating at low bottom-hole pressure, it extends the wells economic lift.
- Easily adjust production rates from the surface, streamlining well optimization while minimizing downtime and intervention costs.
- The rotor's abrasion-resistant coating, paired with the stator's soft elastomer surface, enhances its ability to handle abrasive fluids more effectively than alternative artificial lift technologies.

### Applications

- Sand-Laden Heavy Crude Oil and Bitumen
- Medium Crude Oil with Limits on H<sub>2</sub>S And CO<sub>2</sub>
- Light Sweet Crude Oil with limits on Aromatics Content
- High Water Cuts
- Dewatering Gas Wells e.g. Coal Bed Methane Projects
- Mature Waterfloods
- Visual and/or Height Sensitive Areas
- All types of Wells, including Horizontal, Slant, Directional, and Vertical Reservoirs





# World's Best Stator Manufacturer

We enforce process control and stringent quality checks for designing and manufacturing the highest quality stators with exceptional durability. With in-house compound formulation and preparation, as well as mould/core designing and manufacturing capabilities, we ensure dimensional accuracies. Each batch of elastomer undergoes rigorous testing in our polymer test lab to ensure guaranteed compatibility and peak performance. Our commitment to quality is evident in our comprehensive development and qualification process, where we select the most suitable materials for varied well conditions.

## Technical Specifications

Main Properties	Low Nitrile	Medium Nitrile	High Nitrile	HNBR	FKM
Identification Number	RJ334	RJ239	RJ149	RS143	RV166
Specific Gravity	1.19	1.2	1.2	1.2	1.84
Hardness - Shore A	68 - 72	70 - 74	70 - 74	70 - 74	72 - 76
Ultimate Tensile Strength - Kg/cm <sup>2</sup>	140 - 150	150 - 160	160 - 170	160 - 180	100 - 120
Ultimate Elongation Break - %	350 - 400	300 - 325	280 - 310	450 - 550	200 - 300
Unaged Stator Bonding – Rubber Retention Kg/inch (100R)	39	39	39	39	39
Maximum Operating Temp. °C (°F)	100 (210)	100 (210)	100 (210)	150 (300)	160 (320)

## Elastomer Selection

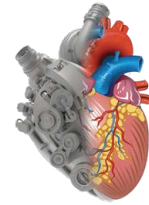
Main Properties	Low Nitrile	Medium Nitrile	High Nitrile	HNBR	FKM
Mechanical Resistance	Very Good	Very Good	Excellent	Excellent	Poor
Abrasion Resistance	Good	Good	Good	Good	Poor
Carbon Dioxide	Poor	Good	Very Good	Good	Good
Hydrogen Sulfide	Poor	Poor	Good	Excellent	Excellent
Aromatic Resistance	Poor	Good	Good	Good	Excellent
Water Swell	Good	Good	Very Good	Excellent	Excellent
Main Applications	Heavy oil with low contents of aromatics and high sand contents	Light and medium crude oils with high aromatic contents, dewatering (CSG/CBM)	Light and medium crudes with high aromatics content, gas, high water contents	Heavy or medium crude with low contents of aromatics under high temperature and presence of H <sub>2</sub> S	Light crude with high aromatic content and low abrasion



# Pump Selection

PUMP				STATOR				ROTOR				
Series	Displacement m <sup>3</sup> /day @ 100 RPM	Lift Capacities		Top Connections	Length (mm)	Max. OD (mm)	Tagbar Distance (mm)	Tagbar Connection	Top Connection	Length (mm)	Drift Dia. (mm)	Orbit Dia. (mm)
		Kpa	m									
004-900	4	8826	900	2-3/8" EUE Pin	1662	65.89	380	2-3/8" EUE Pin	3/4" API Pin	2169	38.1	39
004-1200		11768	1200		2220					2727		
004-1500		14710	1500		2760					3267		
004-1800		17652	1800		3324					3831		
004-2000		19613	2000		3684					4191		
004-2400		23536	2400		4440					4947		
005-900	5	8826	900	2-7/8" EUE Pin	1319	73.15	380	2-7/8" EUE Pin	7/8" API Pin	1830	41.4	48.2
005-1200		11768	1200		1762					2273		
005-1500		14710	1500		2191					2702		
005-1800		17652	1800		2638					3149		
005-2000		19613	2000		2924					3435		
005-2400		23536	2400		3524					4035		
007-900	7	8826	900	2-7/8" EUE Pin	2119	78.59	380	2-7/8" EUE Pin	3/4" API Pin	2626	38.1	46
007-1200		11768	1200		2831					3337		
007-1500		14710	1500		3519					4026		
007-1800		17652	1800		4238					4745		
007-2000		19613	2000		4697					5204		
007-2400		23536	2400		5661					6168		
008-900	8	8826	900	3-1/2" EUE Pin	1620	88.9	380	3-1/2" EUE Pin	1" API Pin	2145	51	58
008-1200		11768	1200		2165					2689		
008-1500		14710	1500		2691					3216		
008-1800		17652	1800		3241					3766		
008-2000		19613	2000		3592					4117		
008-2400		23536	2400		4329					4854		
010-900	10	8826	900	2-7/8" EUE Pin	2576	78.59	380	2-7/8" EUE Pin	7/8" API Pin	3086	43	51
010-1200		11768	1200		3441					3951		
010-1500		14710	1500		4278					4788		
010-1800		17652	1800		5152					5662		
010-2000		19613	2000		5710					6220		
010-2400		23536	2400		6882					7392		
015-900	15	8826	900	3-1/2" EUE Pin	2493	88.9	380	3-1/2" EUE Pin	7/8" API Pin	3003	48	61
015-1200		11768	1200		3330					3840		
015-1500		14710	1500		4140					4650		
015-1800		17652	1800		4986					5496		
015-2000		19613	2000		5526					6036		
015-2400		23536	2400		6660					7170		
020-900	20	8826	900	3-1/2" EUE Pin	2784	88.9	380	3-1/2" EUE Pin	1" API Pin	3309	53	66
020-1200		11768	1200		3719					4243		
020-1500		14710	1500		4623					5148		
020-1800		17652	1800		5568					6092		
020-2000		19613	2000		6171					6696		
020-2400		23536	2400		7437					7962		
023-900	23	8826	900	4" EUE Pin	2285	101.6	380	4" EUE Pin	1" API Pin	2810	58	76
023-1200		11768	1200		3053					3577		
023-1500		14710	1500		3795					4320		
023-1800		17652	1800		4571					5095		
023-2000		19613	2000		5066					5590		
023-2400		23536	2400		6105					6630		

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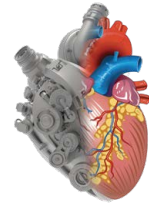
PUMP				STATOR				ROTOR				
Series	Displacement m <sup>3</sup> /day @ 100 RPM	Lift Capacities		Top Connections	Length (mm)	Max. OD (mm)	Tagbar Distance (mm)	Tagbar Connection	Top Connection	Length (mm)	Drift Dia. (mm)	Orbit Dia. (mm)
		Kpa	m									
025-900	25	8826	900	3-1/2" EUE Pin	3740	88.9	380	3-1/2" EUE Pin	1" API Pin	4264	51	63
025-1200		11768	1200		4995					5520		
025-1500		14710	1500		6210					6735		
025-1800		17652	1800		7479					8004		
025-2000		19613	2000		8289					8814		
025-2400		23536	2400		9990					10515		
033-900	33	8826	900	3-1/2" EUE Pin	3968	95.25	380	3-1/2" EUE Pin	1" API Pin	4493	55	70
033-1200		11768	1200		5300					5825		
033-1500		14710	1500		6590					7114		
033-1800		17652	1800		7936					8461		
033-2000		19613	2000		8796					9321		
033-2400		23536	2400		10601					11125		
035-900	35	8826	900	4-1/2" EUE Pin	2701	120.65	380	4-1/2" EUE Pin	1-1/8" API Pin	3233	66	87
035-1200		11768	1200		3608					4140		
035-1500		14710	1500		4485					5017		
035-1800		17652	1800		5402					5934		
035-2000		19613	2000		5987					6519		
035-2400		23536	2400		7215					7747		
043-900	43	8826	900	4" EUE Pin	4487	101.6	380	4" EUE Pin	1" API Pin	5012	58	75
043-1200		11768	1200		5994					6519		
043-1500		14710	1500		7452					7977		
043-1800		17652	1800		8975					9500		
043-2000		19613	2000		9947					10472		
043-2400		23536	2400		11988					12513		
047-900	47	8826	900	3-1/2" EUE Pin	5402	95.25	380	3-1/2" EUE Pin	1" API Pin	5926	53	71
047-1200		11768	1200		7215					7740		
047-1500		14710	1500		8970					9495		
047-1800		17652	1800		10803					11328		
047-2000		19613	2000		11973					12498		
047-2400		23536	2400		14430					14955		
052-900	52	8826	900	4-1/2" EUE Pin	3885	120.65	380	4-1/2" EUE Pin	1-1/8" API Pin	4417	66	88
052-1200		11768	1200		5189					5721		
052-1500		14710	1500		6452					6984		
052-1800		17652	1800		7770					8302		
052-2000		19613	2000		8611					9144		
052-2400		23536	2400		10379					10911		
053-900	53	8826	900	4-1/2" EUE Pin	4487	114.3	380	4-1/2" EUE Pin	1" API Pin	5012	62	84
053-1200		11768	1200		5994					6519		
053-1500		14710	1500		7452					7977		
053-1800		17652	1800		8975					9500		
053-2000		19613	2000		9947					10472		
053-2400		23536	2400		11988					12513		
060-900	60	8826	900	3-1/2" EUE Pin	6877	95.25	380	3-1/2" EUE Pin	1" API Pin	7401	53	71
060-1200		11768	1200		9185					9710		
060-1500		14710	1500		11420					11944		
060-1800		17652	1800		13753					14278		
060-2000		19613	2000		15243					15768		
060-2400		23536	2400		18371					18895		



PUMP				STATOR				ROTOR				
Series	Displacement m <sup>3</sup> /day @ 100 RPM	Lift Capacities		Top Connections	Length (mm)	Max. OD (mm)	Tagbar Distance (mm)	Tagbar Connection	Top Connection	Length (mm)	Drift Dia. (mm)	Orbit Dia. (mm)
		Kpa	m									
070-900	70	8826	900	4-1/2" EUE Pin	5817	114.3	380	4-1/2" EUE Pin	1" API Pin	6343	62	84
070-1200		11768	1200		7770					8295		
070-1500		14710	1500		9660					10185		
070-1800		17652	1800		11634					12159		
070-2000		19613	2000		12894					13419		
070-2400		23536	2400		15540					16065		
075-900	75	8826	900	5" CLT Pin	5194	127	380	5" EUE Pin	1" API Pin	5718	66	92
075-1200		11768	1200		6938					7462		
075-1500		14710	1500		8625					9150		
075-1800		17652	1800		10388					10912		
075-2000		19613	2000		11513					12037		
075-2400		23536	2400		13875					14400		
080-300	80	2942	300	3-1/2" EUE Pin	3195	95.25	380	3-1/2" EUE Pin	1" API Pin	3720	57	71
080-600		5884	600		6396					6921		
080-900		8826	900		9598					10123		
080-1200		11768	1200		12821					13345		
090-300	90	2942	300	4" EUE Pin	3001	101.6	380	4" EUE Pin	1" API Pin	3525	57	76
090-600		5884	600		6009					6533		
090-900		8826	900		9016					9541		
090-1200		11768	1200		12044					12568		
105-300	105	2942	300	4" EUE Pin	3706	101.6	380	4" EUE Pin	1" API Pin	4232	57	74
105-600		5884	600		7421					7946		
105-900		8826	900		11135					11660		
113-300	113	2942	300	4-1/2" EUE Pin	3015	114.3	380	4-1/2" EUE Pin	1" API Pin	3540	64	85
113-600		5884	600		6036					6561		
113-900		8826	900		9058					9583		
113-1200		11768	1200		12099					12624		
120-300	120	2942	300	4" EUE Pin	4398	101.6	380	4" EUE Pin	1" API Pin	4923	57	73
120-600		5884	600		8805					9330		
120-900		8826	900		13213					13738		
145-300	145	2942	300	3-1/2" EUE Pin	5532	95.25	380	3-1/2" EUE Pin	1" API Pin	6057	57	72
145-600		5884	600		11076					11601		
160-300	160	2942	300	4-1/2" EUE Pin	4370	114.3	380	4-1/2" EUE Pin	1-1/8" API Pin	4902	64	84
160-600		5884	600		8750					9282		
160-900		8826	900		13130					13662		
175-300		2942	300		3665					4197		
175-600	175	5884	600	5" CLT Pin	7338	127	380	5" EUE Pin	1-1/8" API Pin	7870	72	96
175-900		8826	900		11011					11540		
175-1200		11768	1200		14708					15236		
190-300		2942	300		3969					4501		
190-600	190	5884	600	5" CLT Pin	7947	127	380	5" EUE Pin	1-1/8" API Pin	8479	72	96
190-900		8826	900		11925					12457		
200-300	200	2942	300	5" CLT Pin	4356	127	380	5" EUE Pin	1-1/8" API Pin	4889	70	94
200-600		5884	600		8722					9255		
200-900		8826	900		13088					13620		
300-300	300	2942	300	5" CLT Pin	6258	127	380	5" EUE Pin	1-1/8" API Pin	6790	72	96
300-600		5884	600		12530					13062		



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## Robust INFRASTRUCTURE



Stator Injection Machine  
Injection Length - Up to 8000 mm



Artificial Lift  
Down Hole PC Pump Test Bed



5 AXIS Rotor Cutting Machine  
Machining Length - Up to 75 mm  
Dia. - Up to 300 MM



Hard Chrome Plating Facility  
Length - Up to 8500 mm



**ROTO PUMPS NORTH AMERICA INC.**

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