

ROTOMAC™

HELICAL ROTOR SINGLE SCREW PUMPS

'SM' HEAVY DUTY SERIES



COMPACT & RUGGED



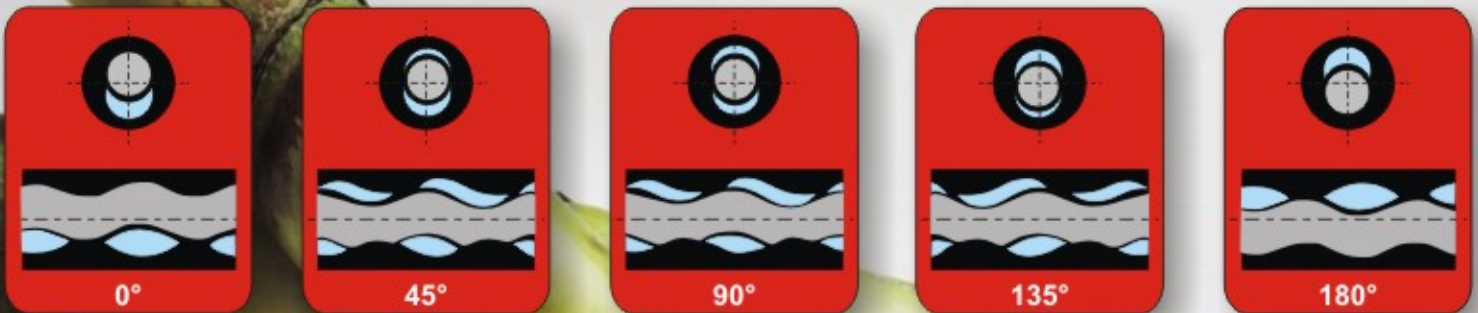
FLOW RATE	:	Upto 200 M ³ / Hr
DIFFERENTIAL PRESSURE	:	Upto 24 bar (for more system pressures, contact factory assistance)
VISCOSITY	:	Upto 100,000 cSt
TEMPERATURE	:	Upto 150°C

PRINCIPLE

The main components which characterise the pump are a metallic single helical rotary part ROTOR and fixed double helical resilient polymer part STATOR in which the rotor turns and thereby a complex progressive sealing line (cspl) is maintained.

Whilst the rotor rotates inside the stator, the cavities formed between them progresses from suction to discharge end, gently carrying the media.

CREATION OF CONVEYING SPACES



ADVANTAGES

POSITIVE DISPLACEMENT

Progressing cavities deliver a uniform, metered and non-pulsating flow. The head developed is independent, and flow rate proportionate to the rotational speed.

SELF PRIMING

Can work on snore i.e., handles high percentage of air with liquid and do not require foot valves.

NON CLOGGING

Can handle solids in suspension or media containing high percentage of solids.

LOW INTERNAL VELOCITY

Minimum degradation of shear-sensitive media and can handle highly viscous pseudo-plastic materials.

LOW NPSH REQUIREMENT

Suction lift capability up to 9.5 MWC and effective even in high vacuum conditions.

REVERSIBLE

Suction and Delivery ends can be interchanged by merely changing the direction of rotation of the pump.

SILENT RUNNING

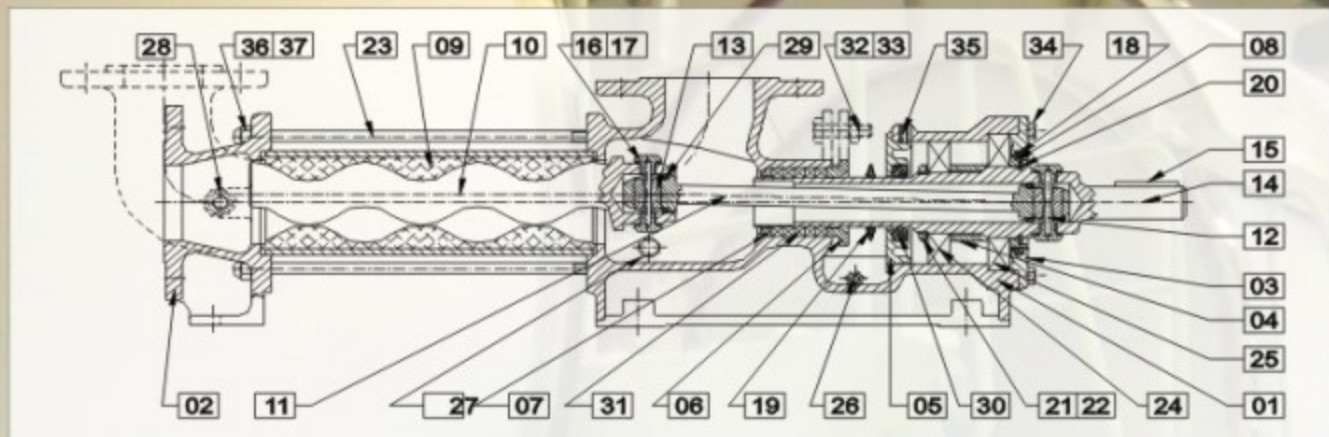
The rotor rotates inside a resilient stator, thus generation minimal noise.

INDUSTRY

- Sugar & Distillery
- Paper
- Mining

MEDIA HANDLED

Melt, Magma, Molasses, Masecuite, Syrup, Milk of Lime, Raw Muddy Juice, Sulphited Juice, etc.
Paper Pulp, Coating Mixture, Lime Wash, Belt Press Sludge, etc.
Mine Water, Coal Slurry, Flotation Sludge, etc.



PART LIST 'SM' SERIES PUMPS

ID. No.	Part No.	DESCRIPTION	No. Off
01	073	BODY	01
02	004	END COVER	01
03	002	BEARING COVER	01
04	019	BEARING SPACER	01
05	010	GREASE SEAL HOUSING	01
06	007	GLAND	01
07	115	GLAND RING	01
08	124	CIRCLIP RING *	01
09	025	BONDED STATOR	01
10	023	ROTOR	01
11	014	COUPLING ROD	01
12	015	COUPLING ROD PIN	02
13	016	COUPLING ROD BUSH	02
14	012	SHAFT	01
15	035	SHAFT KEY	01
16	116	PIN CAP	04
17	117	PIN CAP WASHER	04
18	119	FELT RING	01
19	030	WATER THROWER	01

ID. No.	Part No.	DESCRIPTION	No. Off
20	120	CIRCLIP EXTERNAL *	01
21	020	BEARING LOCK NUT	01
22	021	BEARING LOCK WASHER	01
23	036	TIE ROD	04
24	121	BALL BEARING Small	01
25	122	BALL BEARING Large	01
26	227	DRIP PLUG	01
27	159	FILLING PLUG for 073	01
28	052	DRAIN FLUG for 004	01
29	123	SEAL RING for 014	02
30	032	GREASE SEAL for 010	01
31	033	GLAND PACKING	Set
32	125	HEX. HEAD BOLT for 007	02
33	126	HEX. NUT for 125	02
34	044	HEX HEAD BOLT for 002	04
35	228	GRUB SCREW for 010	01
36	040	DOME NUT for 036	04
37	041	SPRING WASHER for 040	04

DRIVE ARRANGEMENTS

DIRECT DRIVE

Electric Motor, Geared Motor, Gear Box, Mechanical Speed Variator, Eddy Current DC Drive, Hydraulic, Pneumatic, Petrol & Diesel Engines.

For accurate and variable flow rates, AC Variable Frequency Drives can be used.

SHAFT SEALING

A wide variety of gland packed & mechanical seal options with API plan.

PULLEY & V-BELT DRIVE

Overhead & 'L' Type

MATERIAL OPTIONS

HOUSING PARTS

Cast Iron.

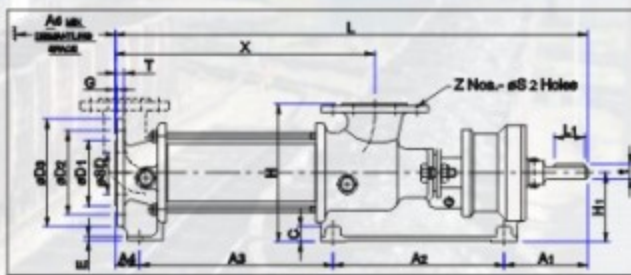
ROTOR & SHAFT

NR, NBR, EPDM, CSM.

STATOR

Alloy steel, AISI-304, AISI-316.

BARE SHAFT PUMP DIMENSIONS



PUMP TYPE	PUMP SIZE	BASIC DIMENSIONS																	FLANGE DIMENSIONS					SHAFT EXTN.					W			
		L	B	H	A1	A2	A3	A4	A5	A6	B1	B2	C	E	H1	K	K1	M	S1	X	SD	D1	D2	D3	T	G	Z-S2	d		t	u	L1
SMA	0201	950	165	208	206	350	356	38	422	250	143	175	30	10	100	50	20	90	12	454	50	102	125	165	18	3	4-ø18	32	35	10	60	65.0
SMA	0301	1232	185	254	206	350	636	40	422	450	184	220	35	19	132	88	22	90	14	736	80	*	146	185	19	*	4-ø18	32	35	10	60	90.0
SMB	0301	1068	185	254	206	350	472	40	422	300	184	220	35	19	132	88	22	90	14	572	80	*	146	185	19	*	4-ø18	32	35	10	60	85.0
SMA	0401	1158	220	320	217	430	458	53	500	325	225	260	55	18	180	75	30	80	18	588	100	158	180	220	22	3	8-ø18	38	41	10	60	115.0
SMB	0401	1389	220	340	276	530	530	53	620	350	230	275	60	18	180	75	30	90	20	688	100	158	180	220	22	3	8-ø18	48	52	14	80	125.0
SMA	0601	1427	285	360	276	530	556	65	620	300	230	275	60	20	180	115	40	90	20	701	150	212	240	285	26	3	8-ø22	48	52	14	80	190.0
SMB	0601	1491	285	360	276	530	620	65	620	375	230	275	60	20	180	115	40	90	20	765	150	212	240	285	26	3	8-ø22	48	52	14	80	175.0
SMA	0801	1649	340	410	308	650	625	66	740	375	250	300	50	20	200	120	40	90	20	820	200	268	295	340	26	3	12-ø22	48	52	14	80	210.0
SMB	0801	1799	340	410	308	650	775	66	740	525	250	300	50	20	200	120	40	90	20	970	200	268	295	340	26	3	12-ø22	48	52	14	80	225.0
SMC	0801	2027	340	410	308	650	1003	66	740	750	250	300	50	20	200	120	40	90	20	1198	200	268	295	340	26	3	12-ø22	48	52	14	80	240.0
SMA	1001	2067	405	450	375	780	812	100	900	550	260	320	60	25	220	150	40	90	22	1047	250	320	355	405	32	3	12-ø26	60	65	18	120	275.0

TYPICAL PERFORMANCE CHART

Pump Model No.	Suction/Delivery Size	Pump Speed RMP	Flow Rate (M ³ /Hr)	Total Head MWC	Power (KW)	
					Abs.	Rec.
SMA0201	2" X 2"	480	4.7 4.2	30 45	0.8	1.1
					1.2	1.5
SMA0301	3" X 3"	480	9.7 9.0	30 45	2.0	2.2
					3.0	3.7
SMB0301	3" X 3"	480	14.8 13.3	30 45	3.2	3.7
					4.2	5.5
SMA0401	4" X 4"	480	24.0 22.0	30 45	4.4	5.5
					5.8	7.5
SMB0401	4" X 4"	360	34.0 30.2	30 45	6.5	7.5
					8.0	9.3
SMA0601	6" X 6"	450	44.0 40.2	30 45	9.5	11.0
					11.0	15.0
SMB0601	6" X 6"	360	43.2 39.6	30 45	8.0	9.3
					11.0	15.0
SMA0801	8" X 8"	400	48.0 44.0	30 45	9.0	11.0
					12.0	15.0
SMB0801	8" X 8"	360	61.9 58.0	30 45	13.2	15.0
					16.0	18.5
SMC0801	8" X 8"	270	65.0 60.0	30 45	14.8	18.5
					17.6	22.0
SMA1001	10" X 10"	320	80.0 74.5	30 45	17.5	22.0
					19.5	22.0

Note:

The above performance table is indicative and higher pump speeds are permissible depending on application.

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