



ROTOMAC™

PROGRESSIVE CAVITY PUMPS

'SAP' INDUSTRIAL & CHEMICAL SERIES

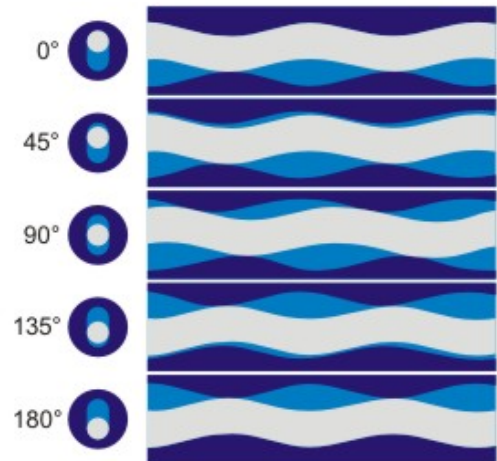


FLOW RATE	:	Upto 200 M ³ /Hr
DIFFERENTIAL PRESSURE	:	Upto 24 bar (for more system pressures, contact factory assistance)
VISCOSITY	:	Upto 100,000 cSt
TEMPERATURE	:	Upto 150°C

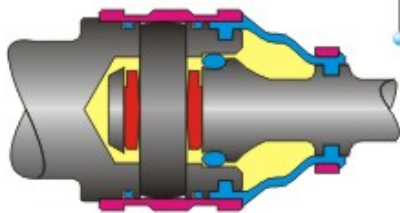
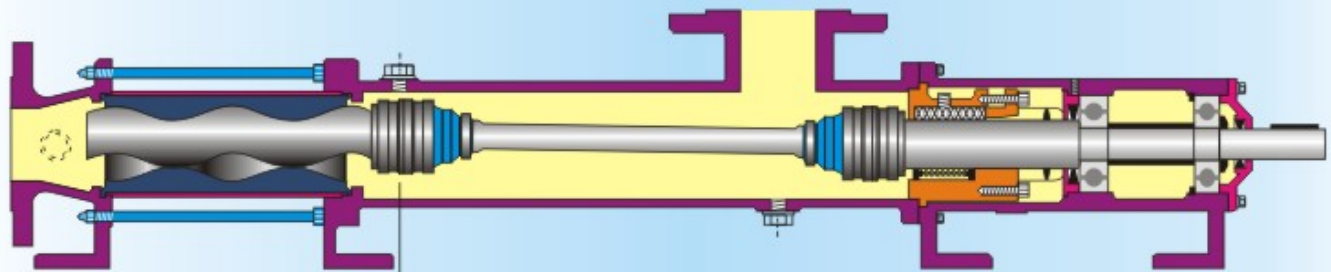
ROTOMAC™

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.



Cavity Movement at Different Rotor Settings



UNIVERSAL JOINT

User friendly, completely sealed pin & bush joints for a longer service life.

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.

PULLEY & V-BELT DRIVE

Overhead & 'L' Type

MATERIAL OPTIONS

HOUSING PARTS Cast Iron, Cast Steel, CF8, CF8M, CF8ML, Alloy20, Hastelloy etc.

ROTOR & SHAFT Ni-Cr, Nitrided Steel, Tool Steel, AISI410, AISI304, AISI316, Hardened & Hard Chrome Plated.

STATOR NR, IIR, NBR, HNBR, EPDM, CR, CSM, Q, CFM, FKM in black, white, food grade, abrasion resistant & high temperature resistant variants.

SHAFT SEALING

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

APPLICATIONS

Sewage • Effluent & Water • Sugar, Distillery & Brewery • Paper, Pulp & Cellulose • Ceramics & Refractories • Bulk Explosives & Emulsions • Chemicals • Construction • Canning • Cosmetic & Toiletries • Edible Oil • Engineering • Fertilizer • Marine • Mining • Man made Fibre • Oil & Gas • Paint & Varnish • Printing Ink • Palm Oil • Soap & Detergent • Ship Building Industries • Starch Factories • Cattle Feed • Abattoir & Meat Processing • Dye Stuff & Intermediates

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 generating minimal noise.

INTEGRAL SAFETY RELIEF VALVE

Recommended for plant safety wherever the possibility of the pump running against a closed valve or in-line blockade exists.

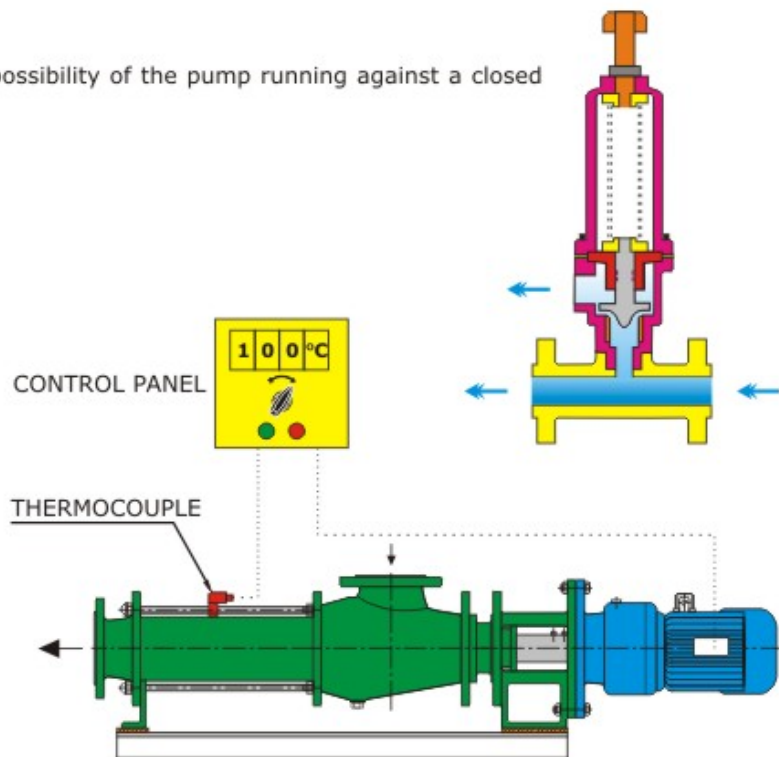
DRY RUNNING PROTECTION

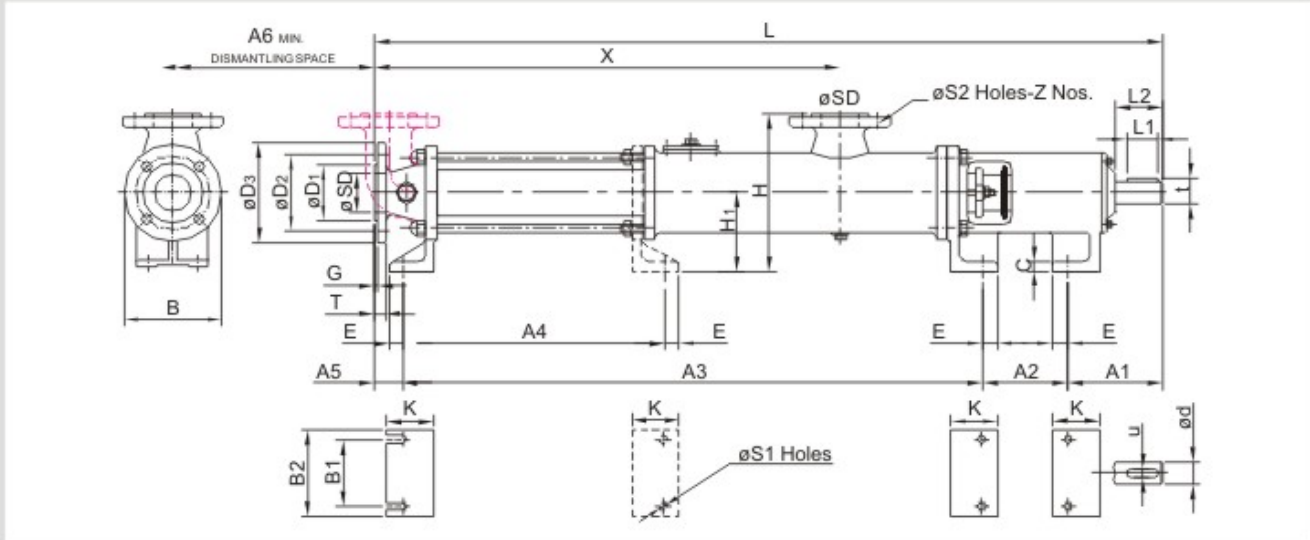
The temperature between the rotor and the stator is permanently sensed thermoelectrically via a temperature sensor integrated in the stator and compared with the limit value set at the TSE control unit.

When the pump runs dry, the temperature will rise due to the increased friction between the rotor and the stator. When the set limit value has been reached, the TSE control unit switches off the pump drive and triggers a fault message to trip the motor.

FLUIDS HANDLED

Digested Sewage Sludge • De-Watered Effluent Sludge • Industrial Effluents • Fuel Oil Sludge • Poly Electrolytes • Flocculants • Molasses • Magma • Masecuite • Spent Wash • Sulphited Sugar Syrup • Paper Pulp upto 20% consistency • Alum • Latex • Coating Slurry • Ferrite Slurry • Glue • Sodium Silicate • Black Liquor • Ceramic & Clay Slurry • Casein Slurry • Maize Slurry • Soap Stock • Lime Slurry • Ammonium Nitrate Solution • Resins • Edible Oil • Gum Sludge • Cake Mix • Acrylic Emulsion • Aluminium Hydroxide Gel • Bentonite Slurry • Chemical Slurry • Detergent Slurry • Epoxy Mix • Grout Mix • Electroplating Solutions • Yeast • Instant Tea • Lube Oil • Petroleum Jelly • Rice Bran Oil • Tribasic Lead Sulphate • Varnish • Viscose





PUMP TYPE	V	PUMP SIZE	BASIC DIMENSIONS																FLANGE DIMENSIONS					SHAFT EXTN.				Wt. Kg.						
			L	B	H	A1	A2	A3	A4	A5	A6	B1	B2	C	E	H1	K	S1	X	SD	D1	D2	D3	T	G	Z-S2	d		t	u	L1	L2		
SA	P	01561	627															296															13	
SA	P	01562	705															374															14	
SA	P	01564	861															530															14	
SA	P	02081	655															324															15	
SA	P	02082	759	140	165	82	133											428	32	78	100	140	18	2	4-ø18	14	16	5	20	30		16		
SA	M	01601	651															320															15	
SA	M	01602	741															410															16	
SA	M	02101	666															335															16	
SA	M	02102	786															455															17	
SA	P	02501	791															428															32	
SA	P	02502	991	150	175	96	133											628	40	88	110	150	18	3	4-ø18	18	21	6	30	47		37		
SA	P	03501	985															623															32	
SA	P	02084	1200															783															47	
SA	N	02304	1169															752															45	
SA	P	03121	944															527															32	
SA	P	03122	1100	165	200	108	177											683	50	102	125	165	20	3	4-ø18	22	25	6	40	54		41		
SA	M	03801	1060															642															40	
SA	N	03802	1300															882															45	
SA	N	04301																																
SA	P	03124	1565															1097															75	
SA	M	05201	1992															824															58	
SA	P	04161	1148	185	234	127	177											680	65	122	145	185	20	3	4-ø18	28	31	8	40	63		60		
SA	P	04162	1356															888															72	
SA	P	04164	1977															1406															110	
SA	P	05201	1491															920															94	
SA	P	05202	1841	200	277	154	203											1270	80	138	160	200	22	3	8-ø18	32	35	10	60	78		107		
SA	M	06201	1503															932															92	
SA	P	05204	2731															2064															165	
SA	P	06241	1651															984															154	
SA	P	06242	1963	220	325	168	228											1296	100	158	180	220	24	3	8-ø18	38	40	10	60	83		174		
SA	P	07281	1726															1059															178	
SA	P	07282	2136															1469															205	
SA	P	06244	2568															1903															225	
SA	P	07284	2917															2252															235	
SA	P	08321	1775															1110															167	
SA	P	08322	2117															1452															192	
SA	P	09361	1925	250	345	187	270											1260	125	188	210	250	26	3	8-ø18	48	52	14	80	100		180		
SA	P	09362	2501															1836															218	
SA	P	09881	2149															1484															295	
SA	P	09882	2929															2264															340	
SA	P	10401	2220															1343															500	
SA	P	10402	2740	290	390													1863	150	212	240	285	26	3	8-ø22	60	66	18	100	133		550		
SA	P	13521	2471			247	352											1594															620	
SA	P	13522	3207	340	400													2330	200	268	295	340	30	3	12-ø22							690		

NOTES:-

1. ALL DIMENSIONS ARE IN m.m. AND FOR GUIDANCE ONLY, EXCEPT WHERE OTHERWISE STATED.
2. SHAFT DIAMETERS ARE TO BS 4506:1970 AND KEYWAYS TO BS 4235:1982 PART I AND ISO R773.
3. FLANGES ARE IDENTICAL AND TO BS 4504:1969. (ISO/DIN/ANSI/IS FLANGES OPTIONAL)

4. W = WEIGHT IN KG.
5. V = DESIGN VARIATION.
6. INSPECTION COVER USED IN PUMP SIZE 05204 AND ABOVE SIZE.
7. FOR FULL CERTIFIED DRAWINGS REFER TO ROTOMAC, KANPUR (INDIA)