

End Suction Back Pullout Pumps
Self Priming Non Clog Pumps
Polypropylene Pumps
Gear Pumps

Reflective Solutions



Company Overview

Megatech Engineers an ISO 9001:2008 Certified Company was established in the year 2002. We would like to introduce ourselves as one of the premier manufacturer of pumps, valves & other devices for the control of fluids.

Over the years, we have developed into one of the world's leading pumps & valves manufacturer. Today, the Megatech brand has a solid reputation for outstanding quality in India and around the world. Our strict observance to maintaining quality standards has seen us, grow in leaps and bounds in this highly aggressive field creating a role for ourselves. We offer a wide range of products keeping in mind the varied needs of different industries.

We are specialized in manufacturing of centrifugal back pullout pump, self priming non clog pump, gear pump, polypropylene pumps, piston valve.

Utmost care is taken to maintain and deliver products of the highest quality to our ever growing list of customers. This has been made possible by our vision of providing only the best, which has been the constant endeavor of our team of highly competent technical staff. This has made the name Megatech Engineers synonymous with quality products.

Megatech Engineers will remain a manufacturer that concentrates on pumps & valves and other devices to control fluids, constantly working toward the goals of helping make our lives more fulfilling and earning the trust of all stakeholders.



TESTING FACILITY

We are having testing facilities for Hydraulic Testing & Pneumatic Testing. All the Pumps & valves are 100% strictly tested at the required pressure as per the international standards and necessary documents.

QUALITY POLICY

Megatech takes pride in its Quality Control system. With full-time on the floor inspection on all shifts you can rest assured that your job will meet or exceed all specifications.

Our quality assurance system encompasses receipt, identification, stocking and issue of parts and material. This system is designed to provide for early detection of discrepancies and positive corrective action.

The Company has build and enviable reputation for producing high quality valves and pumps. The established Quality Assurance Systems ensure that each pumps and valve is constructed in accordance with the international codes. They have been audited and inspected by major inspecting authorities' material test Certificate is provided to guarantee the material of construction and Test Cum Guarantee Certificate is provided to guarantee the products.





CASING

Chemical Process pumps having top centerline discharge, self-venting casing, arranged for back pull-out. Fully confined gasket. Foot support under casing for maximum resistance to misalignment and distortion from pipe loads. ANSI-B-16.5 (Class 150) flanges standard, ANSI-B-16.5 (Class 300) optional for working pressures to 2550 kPa with 3 mm corrosion allowance. For Maximum Corrosion-erosion resistance casing is supplied without tapped openings but gauge and drain plug openings are provided when specified.

IMPELLER

Pump Impeller matched to casing for high efficiency and low NPSH. Fully open, has partial shrouds for maximum vane support without high thrust inherent in closed impellers. Stuffing box pressure reduced and entrance of solids prevented by back pump-out vanes. Large smoothly contoured flow passages combine best slurry and solid handling ability. Impeller is locked on shaft with impeller lock-nut and are sealed by Teflon (PTFE) gasket. State of the art casting methods provide smoothest possible surfaces for highest efficiency. All impellers are statically and dynamically balanced

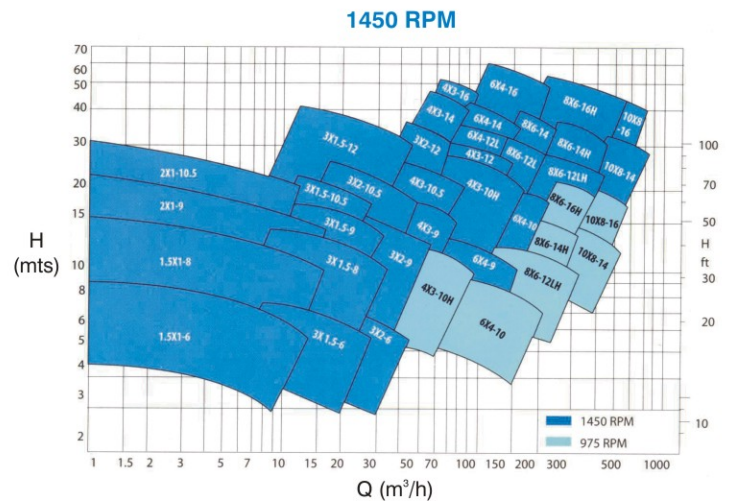
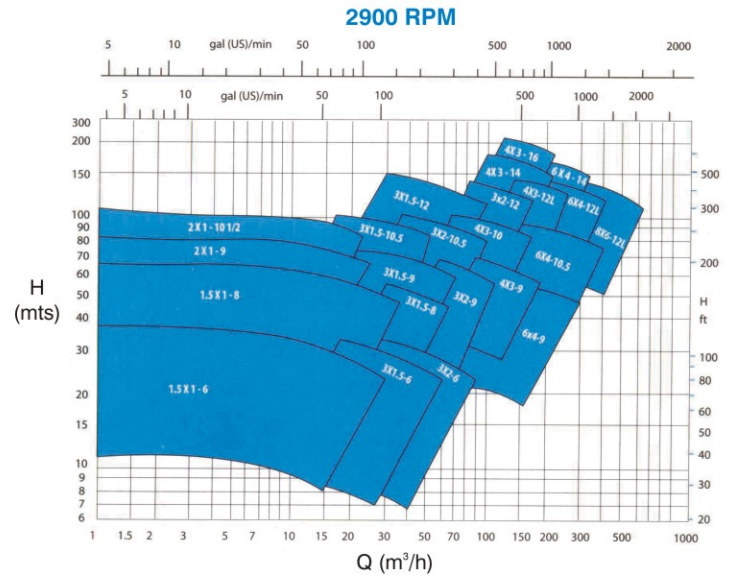
SHAFT

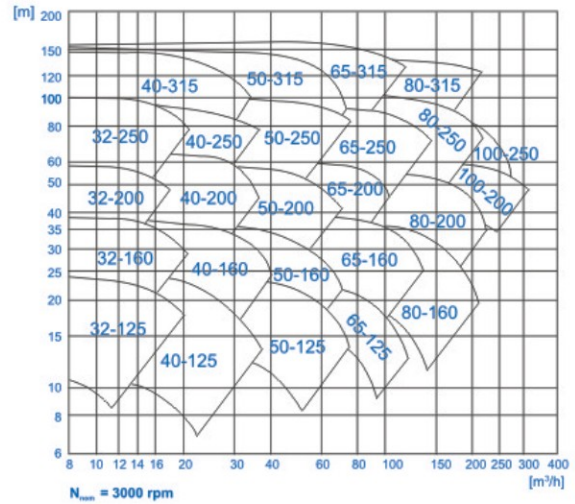
Pumps having a single piece shaft is designed for 0.05 mm maximum deflection at stuffing box face. All critical surfaces ground to less than 0.8 micron.

STUFFING BOX COVER

Our process pumps are designed with encloses back of causing and contains stuffing box chamber. The Cover is fastened to frame or adopter so that a spare back pull-out assembly can be stocked completely assembled. Cover can be supplied with jacket for cooling stuffing box chamber in high temperature services. Jacket can also be used for heating viscous or high freezing point liquids.

Packed box has five rings of packing and a lantern ring. Quench gland with water tapes and an auxiliary ring of packing is standard. Gland is spilt for easy removal. Tapped openings to lantern ring permit "in" and "out" sealing, external flushing or lubrication as required. Stuffing box is completely machined for mechanical seal installation, either originally or as a field conversion. Inside, outside, unbalanced, balanced, single, double or tandem seals with any required gland, throat bushing, throttle bushing and flushing lines furnished to meet individual sealing problems. Gland completely confines stationary mating ring gasket.





APPLICATION

Type of industries like Chemical, Textile, Fertilizer, Paper & Pulp, Petrochemical, Food Processing, Sugar, Starch, Refinery, Powder Plant, Dairy, Pharmaceutical and Bulk Drugs, Oil extraction etc.

CASING

High efficiency volute type. Suction and discharge nozzle as well as the supporting feet are cast integral with the casing.

IMPELLER

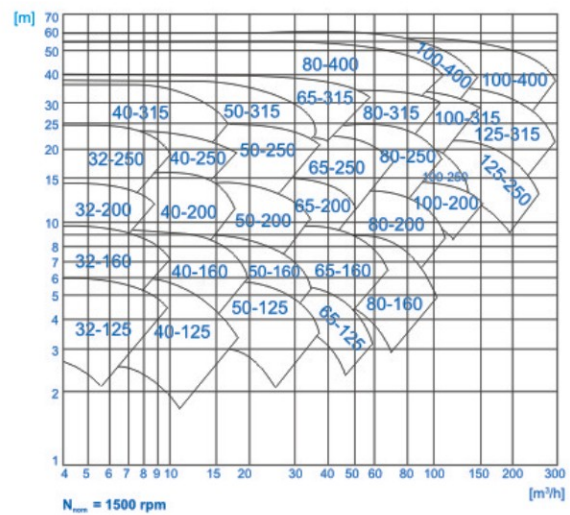
Enclosed type and accurately balanced dynamically. Hydraulically balanced by back vanes and for large impellers by balancing holes.

SHAFT

Three shaft units cover complete range of MEC pumps. Made of high tensile steel and accurately ground all over.

STUFFING BOX

Available with suitable gland packing. Mechanical seal arrangement available upon request.



MATERIAL OF CONSTRUCTION

Impeller : Cast Iron / SS - 316, Cast Steel / Bronze etc.
 Pump Casing : Cast Iron / SS - 316, Cast Steel / Bronze etc.
 Shaft / Sleeve : SS - 410 / SS - 316 - 304
 Sealing : Mechanical Seal / Gland Packing

RANGE

Capacity : 400 m³ / Hr.
 Head : Up to 100 Mt.
 Temperature : Up to 350°C



APPLICATION

- Effluent treatment, Sewage Plants, Dyes and Intermediate Industries.
- Dewatering Docks, Ports, Vessels, Swamps, Basements, Trenches, Construction Sites, Swimming Pools etc.
- Pumping petroleum products like L.D.O., Dielsel, Petrol, Kerosene etc.
- Transfer of Chemicals, Solvents, Effluents, Hot Water, Chilled Water, Condensate etc.

FEATURES

- Graded casting & EN - 8/SS 316/SS-410 Shaft increase service life.
- Minimum need for inspection and maintenance because greased for life, external lubrication.
- Drive options of electric motor, coupled or best drive versions or by Petrol/Diesel engine.
- Perfect sealing assured by high quality mechanical seal which can not run dry because of in-pump oil reservoir.

MATERIAL OF CONSTRUCTION

Impeller : Cast Iron / SS - 316, SS - 304 / Bronze or as per request
 Pump Casing : Cast Iron / SS - 316, SS - 304 / Bronze or as per request
 Shaft : EN - 8 / SS - 316, SS - 304 or as per request
 Mechanical Seal : Carbon Vs. Ceramic / Tc Vs. Tc with NBR / Viton / PTFE

DESIGN

- Perfect self priming action with maximum suction head of 6 meters.
- Back pullout design, simplifies inspection and maintenance.
- Impellers with wider flow passage avoid clogging and can handle solids up to 24 mm diameter.
- Compact, light weight and yet rugged construction.

RANGE

Capacity : Up to 270 m³/Hr.
 Head : Up to 57 Mt.
 Suction Head : Up to 6 Mt.
 Solids : Up to 24 mm Dia

For 50 Hz n = 2900 RPM

MSP	3	6	9	12	15	18	24	30	36	45	60	75	M ³ /HR	*Size	#MM	HP
11-3	15.2 0.43	13.7 0.55	11.5 0.63	9.9 0.68									H mt Kw	1 1/4"	7.5	1
11-4	16.3 0.68	15.2 0.71	14.2 0.75	13.0 0.79	11.6 0.84	10.0 0.9								1 1/2"	12	1.5
128-5	20.0 1.10	19.0 1.12	17.8 1.16	16.5 1.21	15.4 1.29	14.0 1.36	10.2 1.49							2"	10	2
12-5		19.8 1.10	18.9 1.17	18.0 1.22	17.1 1.29	16.1 1.36	13.7 1.56	10.3 1.73						2"	13	3
12-6				19.2 1.58	18.5 1.60	18.0 1.66	16.7 1.79	15.5 1.97	14.4 2.15	12.0 2.45	4.0 2.65			2 1/2"	20	5
14-8					22.5 2.7	22.0 2.8	21.0 3.0	20.5 3.2	19.8 3.4	18.5 3.6	15.0 3.8	10.2 3.8		80 mm	24	7.5
15-6				29.0 2.85	28.0 2.95	27.0 3.05	25.0 3.25	23.0 3.5	20.8 3.7	16.0 3.95				2 1/2"	11	7.5
16-3	32.0 1.25	28.5 1.41	24.3 1.56	19.2 1.73	10.0 1.84									1 1/4"	6	3
16-6				35.0 3.55	34.5 3.7	34.0 3.2	34.4 4.25	31.0 4.6	29.0 4.95	22.5 5.3				2 1/2"	12	7.5

*Size = Suction - Discharge Ports. #MM = Max Permissible solid size.



SALIENT FEATURES

- The design speciality of these pumps allows pumping out certain amount of mud, dirt and suspended solids.
- Suitable for handling water and non corrosive liquids having temperature up to 60°C
- Non clog and semi open type impeller enables to handle solids of 7 to 40 mm as per model.
- Back pull out design enable to service without disturbing the pipe line.
- Easy maintenance with interchangeable parts and separate gland cover.

APPLICATION

- Suitable for Pumping muddy water, Sewage, Polluted liquids including solids etc.
- Dewatering Docks, Ports, Vessels, Swamps, Basements, Trenches, Construction sites, Swimming pools etc.
- Transfer for Chemicals, Solvents, Effluents, Hot water, Chilled water, Condensate etc.

MATERIAL OF CONSTRUCTION

Impeller : Cast Iron / SS - 316, SS - 304 / Bronze or as per request
 Casing : Cast Iron / SS - 316, SS - 304 / Bronze or as per request
 Shaft/Sleeve : EN - 8 / SS - 316, SS - 304 or as per request

Approximate performance of 'SPM' Series, Self Priming, Coupled Pumps, at rated speed

Model	Power Rating		*Size (mm)	Impeller Dia. (mm)	Total Head in Meters																Solid handling Size (mm)	Rated Speed (RPM)			
	KW	HP			SUCxDEL	6	8	10	12	14	15	16	18	19	20	22	24	25	26	28			30	32	34
Motor Drive					Capacity in Liters per Second																				
SPM '0'	0.75	1.0	40 x 40	116	4.6	4.1	3.6	2.7	1.5	0.6	-	-	-	-	-	-	-	-	-	-	-	-	7.0	2900	
SPM 1H	1.5	2.0	40 x 40	134	-	-	6.3	5.6	4.9	4.4	4.0	2.8	1.9	0.9	-	-	-	-	-	-	-	-	8.5	2900	
SPM 2H	2.2	3.0	50 x 50	145	-	-	9.3	8.8	8.1	7.8	7.3	6.5	6.0	5.4	4.1	2.7	1.8	0.8	-	-	-	-	10.5	2900	
SPM 3A	3.7	5.0	80 x 80	174	-	-	-	-	-	-	-	-	-	-	10.1	9.3	8.2	7.5	6.8	5.2	3.8	1.8	-	7.0	2900
SPM 3	5.5	7.5	80 x 80	174	-	-	-	-	-	-	-	-	-	-	16.4	16.2	15.5	14.8	14.0	12.5	10.2	8.0	5.5	14.5	2900
SPM 3L+	3.7	5.0	80 x 80	224	-	-	18.0	16.4	13.6	11.6	10.0	5.5	-	-	-	-	-	-	-	-	-	-	-	15.5	1450
SPM 4LA+	7.5	10.0	100 x 100	292	-	-	36.0	33.9	31.2	30.0	28.6	25.5	23.9	22.5	18.0	12.0	-	-	-	-	-	-	-	18.5	1450
SPM 4L+	9.3	12.5	100 x 100	292	-	-	41.5	39.5	36.6	35.3	33.6	30.5	28.3	26.2	22.0	17.0	14.0	10.0	-	-	-	-	-	23.0	1450
SPM 6LA	15.0	20.0	150 x 150	296	-	-	66.3	63.4	59.8	57.5	55.0	48.8	45.5	42.5	34.2	23.8	-	-	-	-	-	-	-	34.0	1450
SPM 6L	18.7	25.0	150 x 150	296	-	-	75.0	72.5	68.7	66.2	64.0	58.5	55.5	52.0	45.0	34.0	27.5	20.0	-	-	-	-	-	40.0	1450
Engine Drive					Capacity in Liters per Second																				
SPM 3L+	4.0	6.0	80 x 80	224	-	-	-	17.7	15.6	14.0	12.5	8.5	6.0	3.5	-	-	-	-	-	-	-	-	-	15.5	1500
SPM 3L+	9.0	12.0	80 x 80	224	-	-	-	-	-	22.5	22.0	20.7	19.9	19.0	16.7	13.7	12.0	10.1	6.0	-	-	-	-	15.5	1800
SPM 4LA+	9.0	12.0	100 x 100	292	-	-	-	36.3	33.9	32.5	31.2	28.2	26.6	25.0	21.5	17.1	14.5	11.5	-	-	-	-	-	18.5	1500
SPM 4L+	10.5	14.0	100 x 100	292	-	-	-	41.2	39.1	38.0	36.5	33.9	32.0	30.5	26.4	21.5	18.5	16.0	9.9	-	-	-	-	23.0	1500
SPM 6LA	16.5	22.0	150 x 150	296	-	-	68.0	66.1	63.0	62.0	59.0	53.5	51.7	48.0	41.0	32.8	28.4	22.5	-	-	-	-	-	34.0	1500
SPM 6L	19.5	26.0	150 x 150	296	-	-	77.5	75.0	72.0	71.0	68.0	63.0	62.0	57.0	51.0	42.5	38.8	32.5	-	-	-	-	-	40.0	1500

Note : Performance applicable to liquid of specific gravity 1 and viscosity as of water.
 *Size = Suction - Discharge Ports.

MICP SERIES

CHEMICAL PROCESS PUMPS IN INVESTMENT CASTING



OPERATION DATA

Capacity	: Up to 350 M3/hr
Head	: Up to 150 Mtr.
Temperature	: Up to 250°C
Discharge Size	: 25 mm to 100 mm
Pressure	: 15 kg/cm ²
Speed	: Up to 3500 rpm
M.O.C	: C.I, C.S., SS-304 / 304L, SS316 / 316L Bronze, Alloy-20, CD4MCU Hast alloy B & C, etc...

APPLICATION

- Paper and pulp industries.
- Food, Sugar, Salt, Industries.
- Organic / Inorganic chemicals, volatile liquids, corrosive chemicals, caustic process, effluent, filter press, slurry application.
- Pharmaceutical, dyes, textiles, kerosene, diesel and other solvents.
- ETP, STP & waste water treatment plant, fertilizers, cement and steel industries.
- For pumping chemicals, with solids in suspension polluted liquids.
- Hot and Cold water.

MPOP SERIES

PULP & PAPER MILL PUMPS



OPERATION DATA

Capacity	: Up to 2000 m ³ /hr
Head	: Up to 50 mtr.
Temperature	: 30°C to 90°C
Discharge Size	: Up to 600 mm
Pressure	: Up to 5.5 kg/cm ²
Speed	: Up to 1500 RPM
Impellers	: Semi open type / Close
Consistency	: 0 % to 1.5%
M.O.C	: C.I., C.S. / S.S., 55 304, SS 316, SS 316 L etc...

APPLICATION

- Stock pump • Refiners pump • Fan pump • Centri cleaner pump
- Back water pump • Chest pump • Separator pump etc...
- ETP, STP & Waste water treatment plant, Fertilizers, Cement & Steel industries
- For pumping chemicals with solids in suspension polluted liquids widely used for public & civil engineering.

MHOP SERIES

CENTRIFUGAL AIR COOLED HOT OIL PUMPS



OPERATION DATA

Capacity	• Up to 180 M3/hr
Head	• Up to 80 Mtr.
Temperature	• Up to 350°C
Discharge Size	• 32 mm to 80 mm
Pressure	• Up to 8 kg/cm ²
Speed	• Up to 3500 rpm
Cooling Method	• With Air
M.O.C	• Grey Cast Iron, Cast Steel, Alloy Cast Steel

APPLICATION

- Petro-chemical industries. • Oil industries.
- Synthetic-fibre Industries. • Textile, dyeing, printing industries.
- Plastic and rubber industries. • Paper making industries.
- Timber processing industries. • Sugar industries.
- Food Industries. • Construction Industries.

PIPE FRICTION DATA FRICTION LOSS IN VALVES AND FITTINGS - METRIC

Pipe Size mm	Long Radius Elbow	Round Elbow	Normal Bend	Tee	Return Bend	Gate Valve Open	Globe Valve Open	Swing Check	Foot Valve & Strainer
20	0.3	0.3	0.6	6.7	0.5	1.5	1.5	1.5	1.5
25	0.3	0.3	0.8	8.2	0.5	2.0	1.8	2.3	2.0
32	0.3	0.6	0.9	11.3	0.8	2.6	2.4	2.7	2.6
40	0.4	0.6	1.1	13.4	0.9	3.1	2.7	3.4	3.1
50	0.5	0.8	1.4	17.4	1.1	4.0	3.4	4.6	4.0
65	0.6	0.9	1.7	20.1	1.4	5.2	4.3	5.5	4.6
80	0.8	1.1	2.1	26.0	1.5	6.1	5.2	6.7	5.5
100	1.1	1.5	2.7	34.0	2.1	8.2	6.7	8.8	7.3
125	1.2	1.8	3.7	43.0	2.7	10.0	8.2	11.0	9.5
150	1.5	2.1	4.3	49.0	3.4	12.2	10.0	14.0	11.0
200	2.1	3.1	5.5	67.0	4.3	16.5	13.4	18.0	15.0
250	2.4	3.7	7.3	85.4	5.5	20.0	16.5	22.0	19.0
300	3.1	4.3	8.5	98.0	6.7	24.4	20.0	27.4	23.0

Equivalent length of straight pipe in meters, for calculating friction loss

Notes for pipe friction chart :

- (1) The chart is drawn for water at 150C in clean smooth pipes of the actual bore indicated.
- (2) Substantial errors may result if nominal diameters are used.
- (3) Allowance should be made for actual pipe condition and possible deterioration in the future.
Suggested factors are:
Plastic x 1.0 Stainless Steel x 1.1
Copper x 1.1 Steel x 1.3 Cast Iron x 1.7
- (4) Viscous effects may be complex. For a fair approximation under normal conditions, with moderate viscosities and turbulent flow, the water loss should be multiplied by the following factors:
5cSt x 1.5 10cSt x 1.7 20cSt x 2.0 50cSt x 2.6



MEGATECH ENGINEERS

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