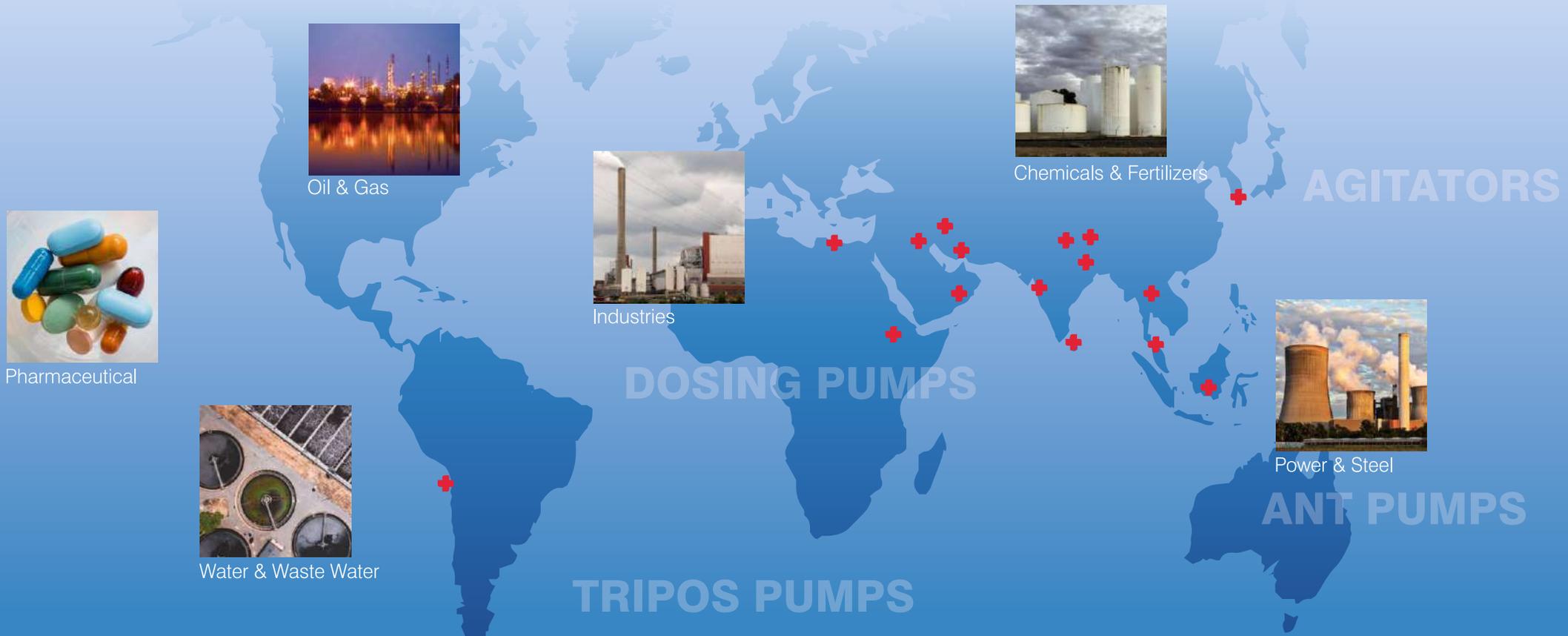


# Over 1,50,000 installations across 40 countries.



Positive Metering Pumps

## Proof positive that we're reliable.



HYDRAULIC DIAPHRAGM PUMPS

RIDUS PUMPS

SKID MOUNTED PACKAGES

# It always seems impossible until it is done.

- Nelson Mandela



World's first & the only Installation in Siachen Glacier for Indian Army



We call it positivity. This belief drives us today and will do so for ever.

'Do it and prove' is the simple mantra of life at Positive Metering for last 27 years.

Our innovative liquid dosing pump solutions have ensured that life flows uninterruptedly.

Bettering our own benchmarks is just another routine for us. With 3 state of the art, ISO 9001: 2015, ISO 14001: 2015 & ISO 45001: 2018 certified manufacturing units, we are the only liquid dosing pump manufacturer to have a captive fabrication unit for skids. One of the many steps to ensure that we deliver reliable solutions every day. Our customers agree.

Diverse innovative solutions for Reliance, Cairn Energy, ONGC, ABB, Doosan, Samsung, GE, L&T, Veolia, Sonatrach, Farabi, ThyssenKrupp, Linde, Glaxo, Aventis, Unilever, Nestle, NALCO, NPCIL, IOCL, HPCL, BPCL, Thermax, NTPC, EIL and many such well-established names in India & abroad have proven to be a case study, in innovation and reliability.

We mention our association with Indian Army in Siachen with a special pride.

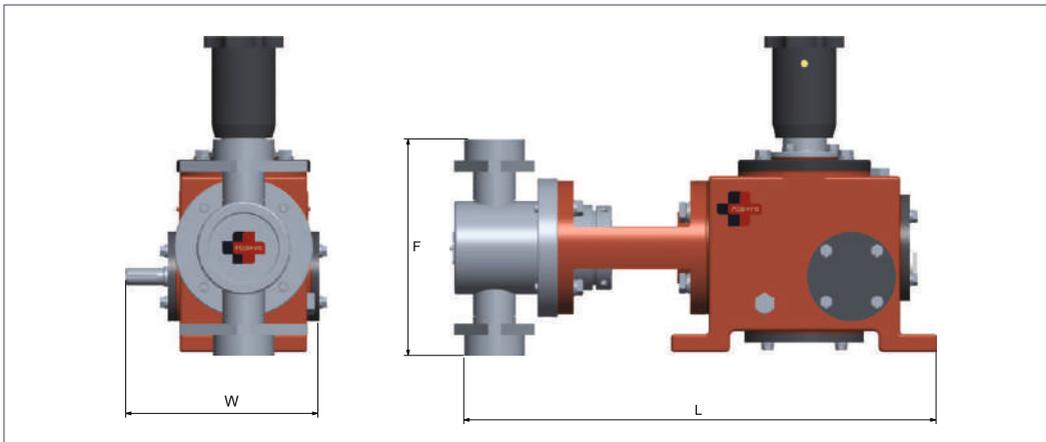
It is indeed our privilege to partner these pioneers in ensuring that life flows uninterruptedly, across the globe.

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## Reliable Liquid Dosing Pumps, Skid Mounted Packages, Mixers, Agitators, Transfer Pumps for:

- Oil, Gas, Petrochemical Industries
  - Food, Pharma, Dairy & Beverages
  - Paper & Sugar Industries
  - Mineral Ore Processing
  - Environmental Protection
  - Chemicals & Fertilizers
  - Textile, Paint & Emulsion
  - Power & Steel
  - Water & Waste Water Applications.
-

# PLUNGER DOSING PUMP (API 675)



## Technical Specifications\*

Flow Rate Ltr. /Hr. Max	Pressure Bar (g) Max.	Pump Model	Installation Dimensions		
			L mm	W mm	F mm
0 – 160	94	PL 1011	400	360	170
0 – 830	100	PL 2017	420	400	210
0 – 4275	250	PL 3530	600	555	250
0 – 7332	366	PL 6040	800	785	350

\* Table given is for reference only and selection shall be done by PMPIPL on case to case basis.

## Features:

- Plunger Type Dosing Pump with Gland Packing
- Precise metering devices
- Metering accuracy is almost independent of back pressure
- Flow rate is linear to stroke length variations
- External arrangement for flushing the gland packing (optional)

## Material of Construction Offered:

- SS304, SS304L, SS316, SS316L
- Hastalloy B/C
- Alloy 20
- Carbon Steel
- Gland Sealing - PTFE
- Any other special alloy

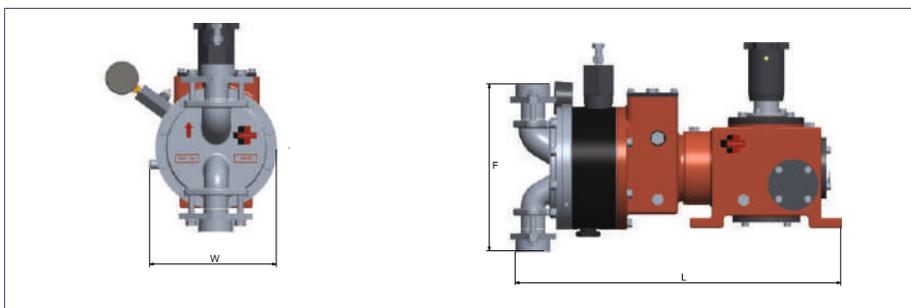
## Options:

- Multiple heads with identical or different outputs, for each head using single drive.
- Jacketed Head for heating or cooling the liquid being pumped
- Automatic flow variation by receiving 4-20 mA signal from the process.

## List of Accessories:

- Strainer
- Pressure Relief Valve
- Calibration Pot
- Pulsation Dampener
- Auto Stroke Actuator
- Local Control Panel
- Level Gauge

# DIAPHRAGM DOSING PUMPS HYDRAULICALLY ACTUATED (API 675)



## Technical Specifications\*

Flow Rate Ltr. /Hr. Max	Pressure Bar (g) Max.	Pump Model	Installation Dimensions		
			L mm	W mm	F mm
0-246	80	SD 1011	520	400	250
0-1169	100	SD 2017	620	470	300
0-6521	200	SD 3530	810	680	350
0-9782	200	SD 6040	1100	900	450

\* Table given is for reference only and selection shall be done by PMPIPL on case to case basis.

## Features:

- Glandless design and entirely leak-proof operation
- Flow rate is linear to stroke length variation
- Metering accuracy almost independent of back pressure
- Sandwiched Diaphragms are always balanced between the pressure exerted by the hydraulic oil and the liquid to be dosed. Ensures longer diaphragm life.
- Automatic air bleeding from the hydraulic oil ensures better metering accuracy
- Arrangement of in-built pressure relief valve protects the pump when pressure exceeds the rated limit.
- Optional RIA - Rupture Indication Arrangement, also called as Diaphragm Rupture Detection System (DRDS)

## Material of Construction Offered:

- SS304/SS304L
- SS316/SS316L
- Carbon Steels
- Any other special alloy
- PP/PVC/PTFE/PVDF
- Alloy20
- Hastalloy B/C
- Diaphragm MOC - PTFE/Metallic

## Options:

- Multiple Head with identical or different outputs for each head using single drive
- Jacketed Head for heating or cooling the liquid being pumped
- Automatic flow variation by receiving 4-20 mA signal from the process

## List of Accessories:

- Strainer
- Pressure Relief Valve
- Calibration Pot
- Pulsation Dampener
- Auto Stroke Actuator
- Local Control Panel
- Level Gauge

# DIAPHRAGM DOSING PUMPS MECHANICALLY ACTUATED: GRM PUMPS



## Features:

- Glandless design and entirely leak-proof operation
- Mechanically operated diaphragm
- Flow rate linear to stroke length variation
- Steady State Accuracy & Repeatability  $\pm 5\%$

## Options:

- Multiple Head with identical or different outputs for each head using single drive
- Automatic flow variation by Variable Frequency Drive (VFD)

## List of Accessories:

- Strainer
- Pressure Relief Valve
- Calibration Pot
- Pulsation Dampener
- Variable Frequency Drive (VFD)
- Local Control Panel

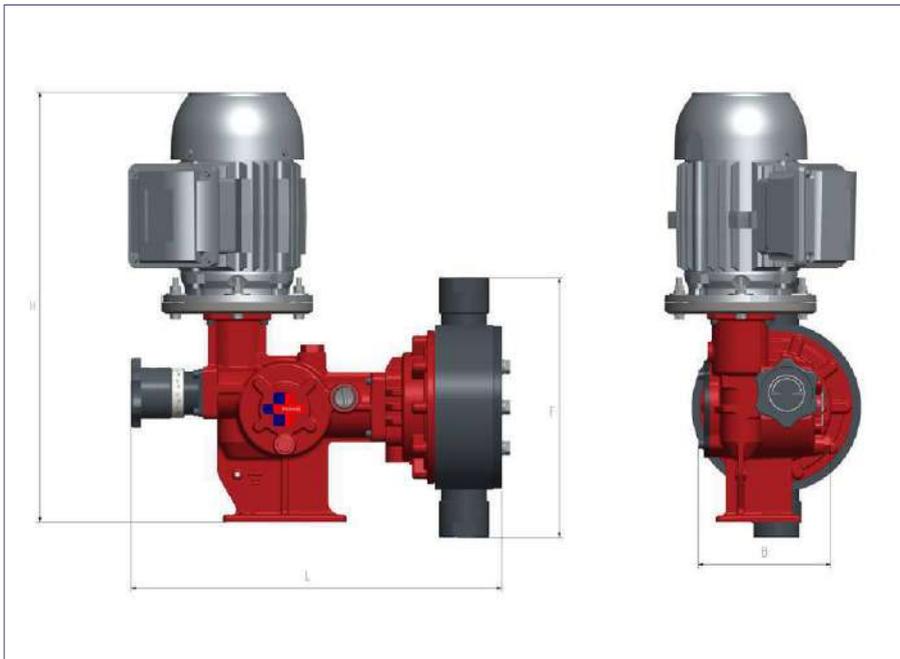
## Material of Construction Offered:

- SS304, SS304L, SS316, SS316L
- Hastalloy B/C, Alloy 20
- PP/PTFE
- Diaphragm - Specially Designed PTFE Diaphragm

## Technical Specifications:

Flow Rate Ltr./Hr Max	Pressure Bar (g) Max	Pump Model	Motor	Installation Dimensions (in mm)							
				A	B	C	D	E	F( $\pm 10$ )	G	H( $\pm 30$ )
35	10	GRM 91	0.5 HP	90	70	78	128	75	200	1/2"	410
165	10	GRM 92	0.5 HP	90	70	78	128	75	220	1/2"	410
600	6	GRM 93	0.5 HP	90	70	78	128	75	300	1"	410
1200	6	GRM 84	1 HP	190	-	200	250	-	300	1"	600

\* Table given is for reference only and selection shall be done by PMPIPL on case to case basis.



# SKID MOUNTED CHEMICAL DOSING PACKAGES

We offer complete engineered skid mounted packages like chemical dosing systems, LDO systems, fuel metering systems, Gas metering systems etc. Our experienced teams of R&D and Engineering have created well engineered simple skid mounted packages to meet our customers' specific requirements. This saves time and procurement cost of our customers in sourcing small individual, various components required for a process. Customers are benefited by giving single point responsibility of supply and performance of a package.

## A Typical Skid Mounted Package Incorporates:

- Solution preparation and/or storage tank, single or compartmented. Made of MS/SS/FRP/HDPE. Wherever required Rubber/FRP etc. lining is possible.
- Components like Chemical Dosing Pumps, Gear/Screw Pumps, Heat Exchanger, Stirrer (Agitator), Valves, Fittings, Piping etc.
- Instruments like Pressure & Level Gauges, Pressure & Level Switches/Transmitters, PRV Controllers, Sensors etc.
- Control Panels, Annunciators
- Manufacturing is done strictly as per a Quality Assurance Plan drawn with reference to the contract.

## List of Accessories:

- Strainer
- Pressure Relief Valve
- Calibration Pot
- Pulsation Dampener
- Auto Stroke Actuator
- Local Control Panel
- Level Gauge



Sizes: 20 Ft. & 40 Ft. Containers



Sizes: 8 m x 4 m x 4 m & bigger sizes also can be manufactured (depending on the requirement)





METHANOL INJECTION PACKAGE



DRA INJECTION SKID



ACIDIC CHEMICAL DOSING SYSTEM



TRI SODIUM PHOSPHATE DOSING SYSTEM

# DIAPHRAGM DOSING PUMPS

## SOLENOID DRIVEN ELECTRONIC DOSING PUMPS : 'ANT' PUMPS

We are specialised in designing tough and high performing range of Electronic Dosing Pumps (ANT), which are extensively used for chemical dosing in applications like water and waste water treatment.

### Technical Specifications\*

Flow Rate Ltr. /Hr.	Pressure Bar (g) Max.	Pump Model	Installation Dimensions		
			L mm	W mm	H mm
0 – 6	4	ED 01	200	100	200
0 – 10	2	ED 02	210	100	200
0 – 20	1	ED 02	210	100	200
0 – 3	10	ED 03	250	100	200
0 – 12	4	ED 03	250	100	200
0 – 30	4	ED 04	280	150	240
0 – 40	2	ED 04	280	150	240
0 – 50	1	ED 04	280	150	240
0 – 2	8	DD 01	200	100	200
0 – 6	4	DD 01	200	100	200
0 – 10	2	DD 02	210	100	200
0 – 7	10	DD 03	250	100	200
0 – 20	4	DD 03	250	100	200
0 – 30	4	DD 04	280	150	240
0 – 6	4	AM 01	200	100	200
0 – 10	2	AM 02	210	100	200
0 – 20	4	AM 03	250	100	200
0 – 30	4	AM 04	280	150	240
0 – 40	2	AM 04	280	150	240
0 – 50	1	AM 04	280	150	240

\* Table given is for reference only and selection shall be done by PMPIPL on case to case basis.

### Material of Construction for Wetted Parts:

- SS304, SS304L, SS316, SS316L
- Alloy 20
- Monel
- PP/PVDF, PTFE, GFT
- Hastalloy B, C
- Diaphragm - Specially Designed PTFE Diaphragm

### Features:

- Electronically driven and mechanically actuated diaphragm
- Adjustable injection frequency (0 to 100 SPM)
- Compact size, light weight, more robust structure
- Unique double ball check NRVs for better dosing accuracy
- Solenoid drive with minimum moving parts
- Digital display of SPM (AM series)
- Electrical supply conditions in a specific country can be adjusted.



### ED Series

Flow control by manual frequency variation

### Features:

- Adjustable injection frequency ( 0 to 100 spm )

### DD Series

Flow control by manual frequency and/or stroke length variation

### Features:

- Adjustable injection frequency (0 to 100 spm) & stroke length

### AM Series

Flow control by automatic flow variation, on receiving 4-20 mA signal.

### Features:

- Digital display of spm
- Manually & automatic flow variation
- Enable to receive 4 - 20 mA signal

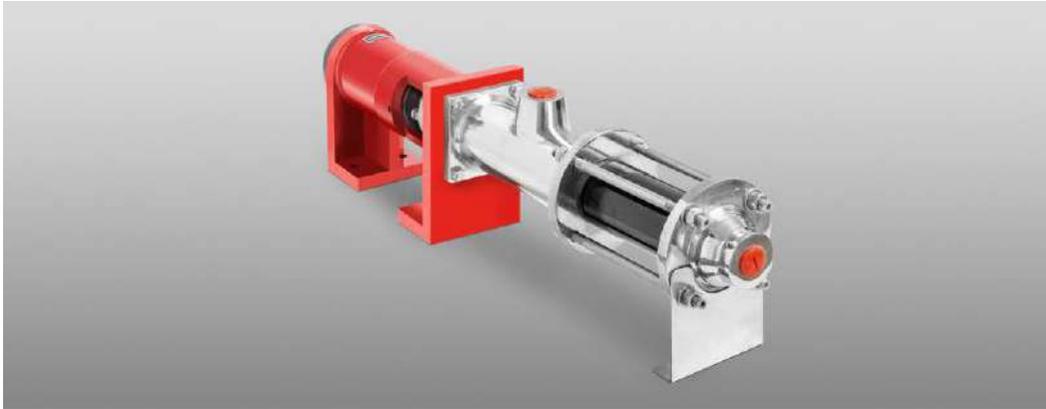
### List of Accessories:

- Suction & Discharge Tubing of LDPE Material
- Strainer Cum Foot Valve
- Anti Syphon Valve in PP
- Built in electrical cable moulded with plug
- Pressure Relief Valve
- Calibration Pot
- Pulsation Dampener
- Local Control Panel
- Level Gauge

### Optional Supply:

- Level Control Switch
- pH Meter
- Tank

# PROGRESSIVE CAVITY SCREW PUMPS (API 676): 'RIDUS' PUMPS



## Technical Specifications\*

Flow Rate Ltr. / Hr. Max.	Pressure Bar (g) Max.	Pump Model	Installation Dimensions		
			L mm	W mm	H mm
600	10	SC 10	500	350	350
1500	10	SC 20	750	510	270
2500	10	SC 25	850	350	350
6000	10	SC 30	1050	700	400
8000	10	SC 40	1150	800	450
12000	10	SC 50	1600	1150	600
20000	10	SC 60	1800	1250	600

\* Table given is for reference only and selection shall be done by PMPIPL on case to case basis.

## Features:

- Simplicity of design and easy for maintenance
- Steady flow without pulsations, minimum turbulence
- Maximum delivery pressure: 10 kg/cm<sup>2</sup>
- Maximum permissible solid content up to 50%
- Negative suction up to 6mwc, low NPSH
- Slurries, pastes up to 5,00,000 centipoise
- Flow rate maximum up to 20 m<sup>3</sup>/hour

## Material of Construction Offered:

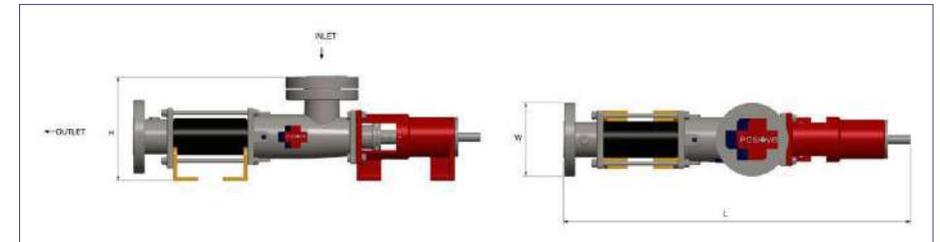
- **Rotor** : Tool Steel, Cast Hardened Steel, Alloy Steel, Stainless Steel
- **Stator** : Natural, Nitrile, High Nitrile, EPDM, HNBR, Viton
- **Wetted Parts**  
**Housing Components** : Cast Iron, Cast Stainless Steel, Fabricated Stainless Steel

## Options:

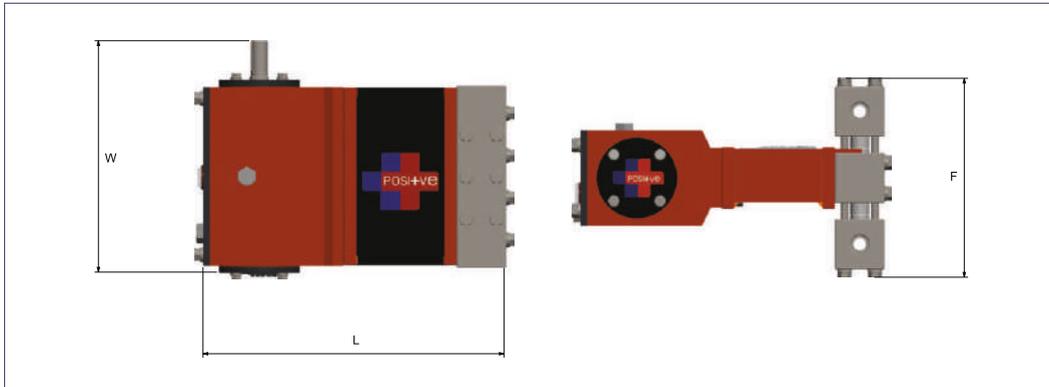
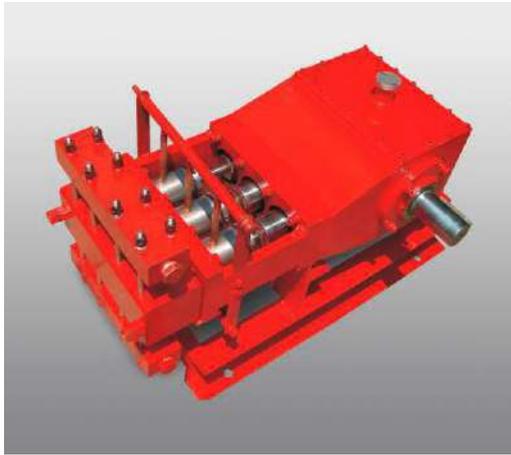
- Mechanical Seal/Gland Packing
- Dry Run Protection
- Belt Pulley Drive/Gearbox

## List of Accessories:

- Strainer
- Pressure Relief Valve
- Variable Frequency Drive (VFD)
- Local Control Panel



# TRIPLEX PLUNGER PUMP (API 674) :TRIPPOS PUMPS



## Technical Specifications\*

Flow Rate Ltr. /Hr. Max	Pressure Bar (g) Max.	Pump Model	Installation Dimensions		
			L mm	W mm	F (Suction- Discharge length)
513	133	Tripos-20	335	250	210
4152	640	Tripos-40	520	380	310
10993	813	Tripos-60	850	520	415
22800	796	Tripos-80	900	600	500

\* Table given is for reference only and selection shall be done by PMPIPL on case to case basis.

## Features:

- Power end parts are lubricated by splash type arrangement or forced lubrication
- Crank shaft is made of high-quality forged steel and it is supported by antifriction bi-metallic bearings. Sturdy balanced design, for easy maintenance.
- High performance non return valves, on suction and delivery side.
- Highly convenient for maintenance
- Flow rate is fixed capacity

## Material of Construction Offered:

- SS304/SS304L
- SS316/SS316L
- Carbon Steel
- Alloy20
- Hastalloy B/C
- Any other special alloy

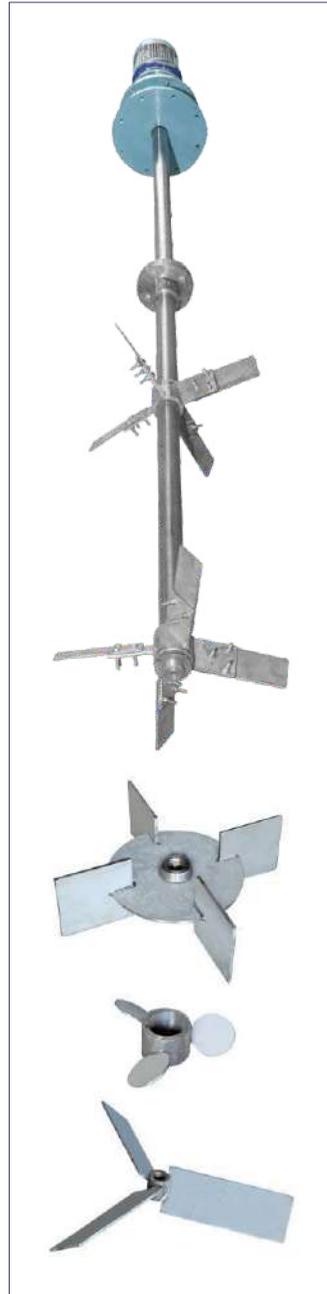
## Options:

- Jacketed Head for heating or cooling the liquid being pumped
- Automatic flow variation by Variable Frequency Drive (VFD)
- Belt Pulley Drive/Gearbox

## List of Accessories:

- Strainer
- Pressure Relief Valve
- Calibration Pot
- Pulsation Dampener
- Local Control Panel

# POSITIVE MIXER



## Features:

- Simple Design
- Efficient
- Versatile
- Compact
- Economical

## Product Range:

- Top Entry Mixers
- Side Entry Mixers
- Flocculator
- Flash Mixer
- Emulsifiers

## Material of Construction Offered:

- EN-8, EN-24, SS304, SS304L, SS316, SS316L,
- Rubber, Lead, Epoxy & Teflon Coating

## Sealing:

- **Types Offered:** Lip Seals, Stuffing Box, Single/Double Mechanical Seals depending upon process parameters such as temperature, pressure in the vessel
- **Lubrication:** Thermo-Syphon or Forced Type

## Drives:

- **Speed Reducers:** Worm & Worm Wheel, Inline/Parallel Helical, Planetary
- Belt System, Speed Variators
- **Couplings:** Flexible, Fluid, Friction Type or Direct

## Shafts:

- Solid/hollow construction considering critical speed and jamming factors
- Machined between centres in one setting

## Impellers:

- Heart of mixing, proper selection enhances the performance
- Variety of impellers available for almost all applications



<b>Positive Metering Pumps (I) Pvt. Ltd.</b>		<b>C E R T I F I E D</b>
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