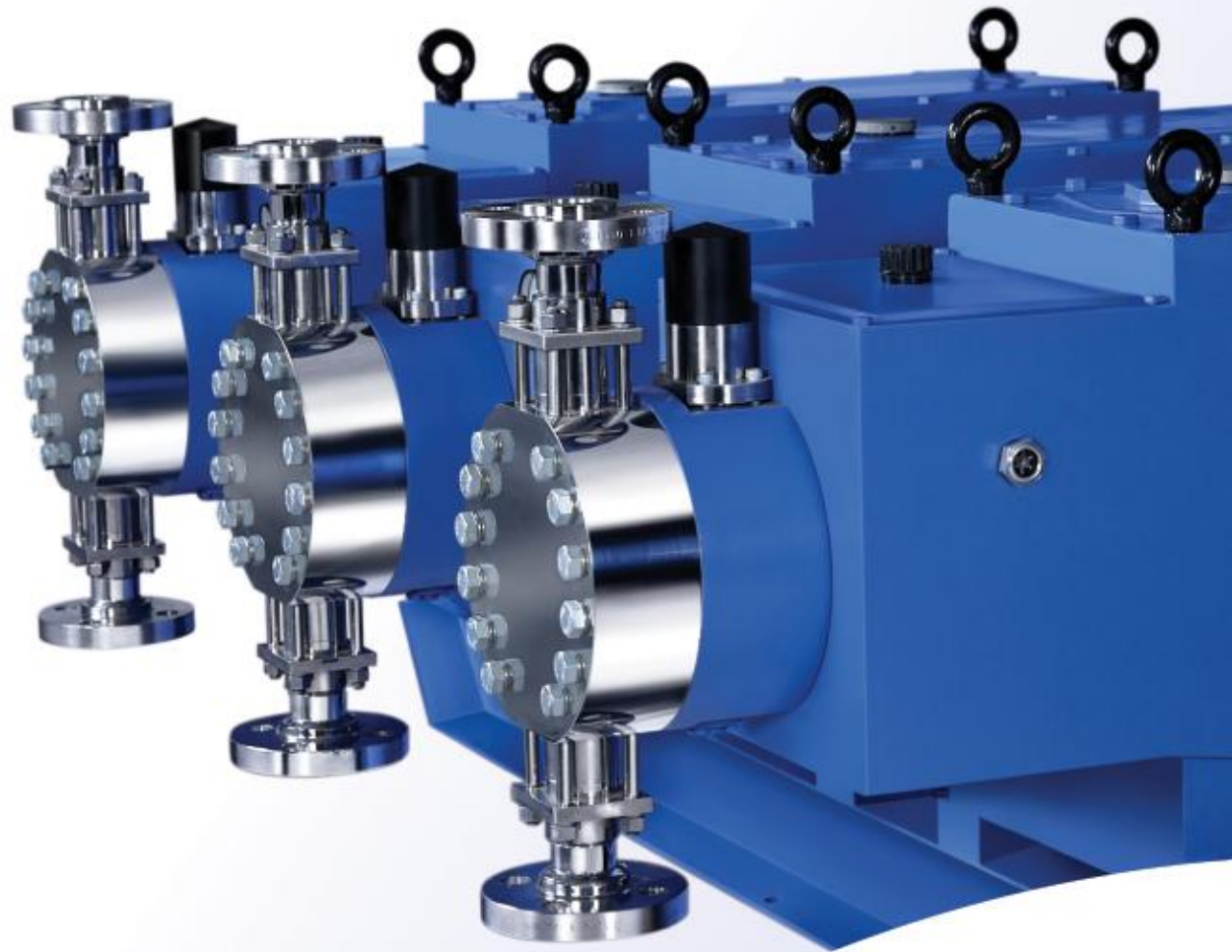


# Swelore

Metering Pumps & Injection Systems

## PRECISION POWER



**Swelore**  
**Engineering Pvt. Ltd.**







# Aiming for higher customer Satisfaction

## Vision

*To be a diversified company known for its engineering excellence and business ethics nationally as well as internationally.*

## Mission

*To offer best in class products through technological expertise and ensure maximum customer satisfaction.*



## A journey through 40 years

Swelore was founded by Mr. Rasiklal Gajjar in 1967 in a small shed in the old part of Ahmedabad city. Since then the company has been focused to metering pump technology and system building.

As an endeavor towards perfection and constant growth, the company currently has 60,000 sq. ft. space with modern facilities like machine shop, assembly units, equipments testing facilities, design, projects and administrative departments.

Our products and services are far superior to others because...

## We have an edge over the others

- Pioneers with 40 years of experience.
- ISO 9001:2008 (DNV) accredited company.
- Products comply with API 675, 674 & CE standards.
- Track record of having executed maximum numbers of project orders for Refinery, Petrochemical, Power, Fertilizer, etc.
- Approvals from various engineering consultants like EIL, UHDE, TOYO, PDIL, BECHTEL, etc.
- Pumps supplied before four decades are still under operation.
- All the pumps at Swelore are manufactured under strict quality control norms with traceability records.
- Excellent post sales services pan-India.







## Infrastructure

Spread in a 60,000 sq. feet area with three impressive buildings in the premises. The company has in-house facilities with ultramodern infrastructure and highly advanced machineries. Manufacturing unit of the company includes fabrication facilities, inspection facilities, material testing facilities, equipment testing facilities and latest machineries & equipments. Through its excellent infrastructure and technological finesse, Swelore offers superior and error-free pumping solutions to its valued customers.





### **Quality Policy**

We satisfy our customers by responding promptly and efficiently to cater their need and expectations.

We strive hard to continually improve our business processes and resources to accomplish our quality objectives.

### **Service and Support**

Swelore strongly believes in establishing enduring relationships with its clients and partnering in their growth through premium products and prompt services.

The company has a dedicated team of proficient technical experts and engineers that provide efficient post sales services. Every query from clients are given due importance and resolved at the earliest. The service team ensures seamless operations through high inputs and productivity.



Aiming  
for higher customer  
Satisfaction

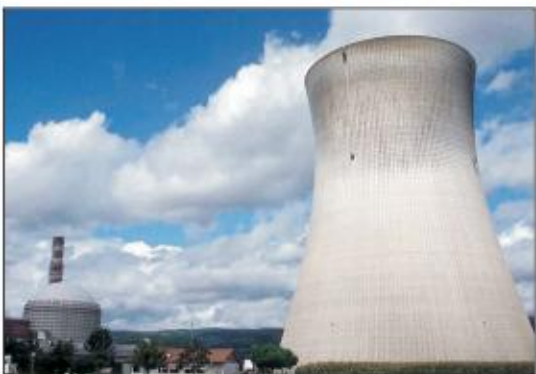




## Industry Applications

The high-end products of Swelore finds applications in a range of industries like:

- Waste Water Treatment
- Speciality Chemicals
- Treatment Plants
- Offshore Platforms
- Food Processing Industry
- Pharmaceutical Industries
- Water Treatment for Boilers
- Power Plants
- Industrial Effluent
- Oil & Gas Industries
- Chemical Process Industries
- Textile Industries
- Refinery & Petrochemical Industries
- RO Plants



## Superlative Products & Designs

Swelore has an unrivaled range of Metering pumps for practically all metering applications in tough chemical industries demand.

### **Our product range includes**

- Packed Plunger
- Mechanically Flexed Diaphragm
- Hydraulically Flexed Diaphragm

### **This broad spectrum of pumps can be combined in many ways like**

- Heating or Cooling Jackets
- Remote Head
- High Pressure Metallic Diaphragm
- Micro Metering
- High Temperature
- Plastic Liquid Ends
- High Viscosity
- Diaphragm Rupture Monitoring System
- Complete Automated System Through Actuators

Swelore having such a wide selection, you can easily find most perfect combination of pump to suit your demand.





# Modular design with option of Vertical or Horizontal motor arrangement Vx-Hx Series



## API 675 Compliance

### Capacity Range

100 ml/hr. to 10,000 l/hr. in Simplex designs. Higher capacities can be achieved by multiplexing.

### Pressure Range

0-250 kg/cm<sup>2</sup> in Standard version  
up to 500 kg/cm<sup>2</sup> in Special version

### Temperature Range

-30°C to 300°C

### Accuracy

Steady state	: ± 1%
Linearity better than	: ± 3%
Repeatability better than	: ± 3%

## Diaphragm (Hydraulic) Process Metering Pumps (Positive Return API 675 Std.)

### Vx-Hx Series (Vertical and Horizontal)

#### Type

Hydraulically flexed diaphragm Metering pump.

Single and Double diaphragm type.

#### Flow Rate

0..... 6000 l/hr. in Simplex design. Higher capacity can be achieved by multiplexing.

#### Pressure

Up to 250 kg/cm<sup>2</sup> standard design.

Up to 350 kg/cm<sup>2</sup> special design.

#### Advantage and Features

- Leak free design.
- All moving parts including plunger is running in oil.
- Diaphragm rupture monitoring system.
- High metering Accuracy.
- In built relief valve in hydraulic circuit.
- Diaphragm life more than 20000 working hours.
- Automatic capacity control via. pneumatic or electric signal on demand.

#### Application

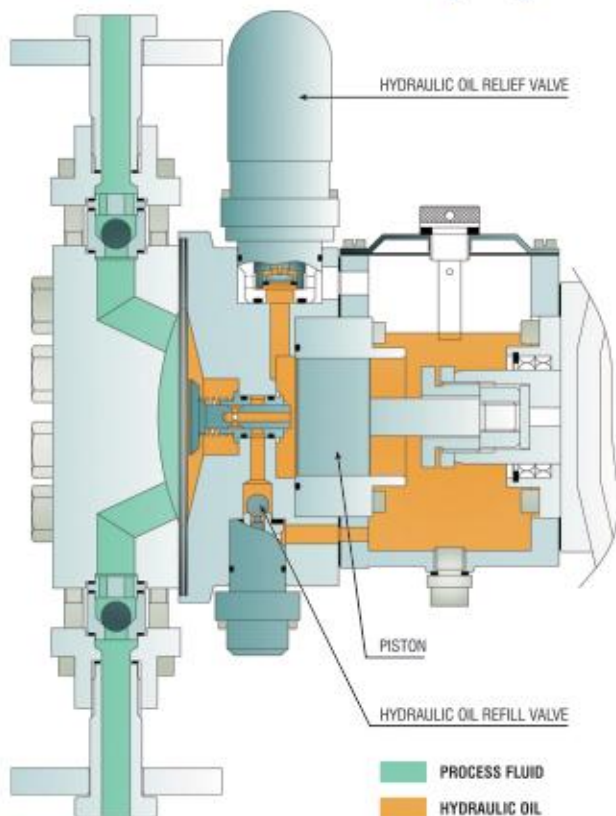
Versatile and suitable for any liquid including toxic and hazardous.



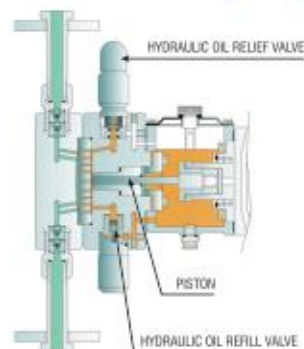


# Diaphragm Heads Options and Variations

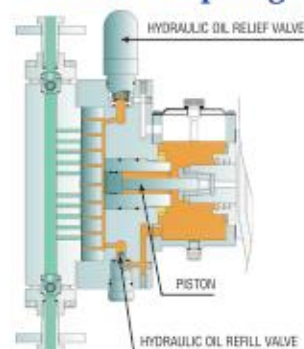
## Metallic Head with PTFE Diaphragm



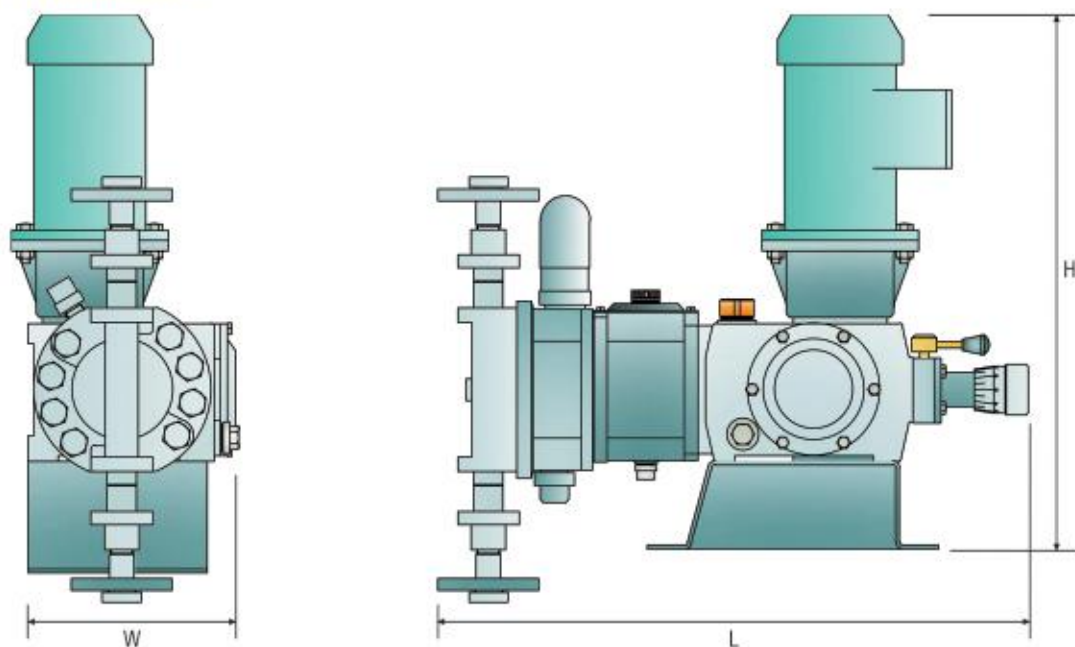
## Low Flow Diaphragm Head



## High Pressure Metallic Diaphragm Head



## Dimensions



### Options

- Heating or cooling jacket
- Remote head for handling hazardous & toxic liquids
- Special valve design for viscous, slurry & difficult liquids

Material Code	Liquid End	Diaphragm	Valve Assembly	Plunger Seal
M10	SS 316/CF 8M	PTFE	SS 316	Gland Less
M12	SS 304/CF 8	PTFE	SS 304	Gland Less
M14	Alloy-20	PTFE	Alloy-20	Gland Less
M50	PP	PTFE	PP/PVC	Gland Less
M53	PTFE/PTFE Lined	PTFE	PTFE	Gland Less

Note: Option of other material like Hastalloy-C, Titanium, PVDF etc. are available on request.

Model	1125	1750	2250	3000
L	540	623	833	1009
Diaphragm H	500	650	817	898
W	185	221	280	345

## Plunger Process Metering Pumps (Positive Return API 675 Std.)

### Vx-Hx Series (Vertical and Horizontal)

#### Type

Packed plunger Metering pump.

#### Flow Rate

0..... 10,000 l/hr. per head. Higher capacity can be achieved by multiplexing.

#### Pressure

Stainless steel head standard pressure upto 300 kg/cm<sup>2</sup>  
special head upto 1000 kg/cm<sup>2</sup>.

#### Advantage and Features

- Heavy duty construction designed for severe industrial environment.
- High volumetric efficiency.
- High metering accuracy.
- Automatic capacity control via. pneumatic or electric signal on demand.
- Low investment cost.
- Internal worm reduction gear.
- Oil bath lubrication for long life.
- Micrometric stroke adjustment while pump is running or stopped.

#### Application

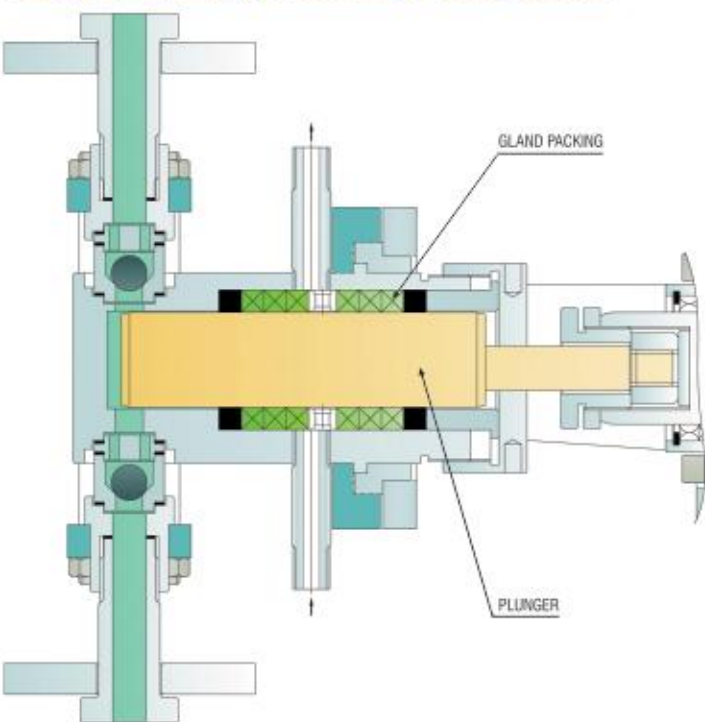
For metering of non hazardous and safe liquids.



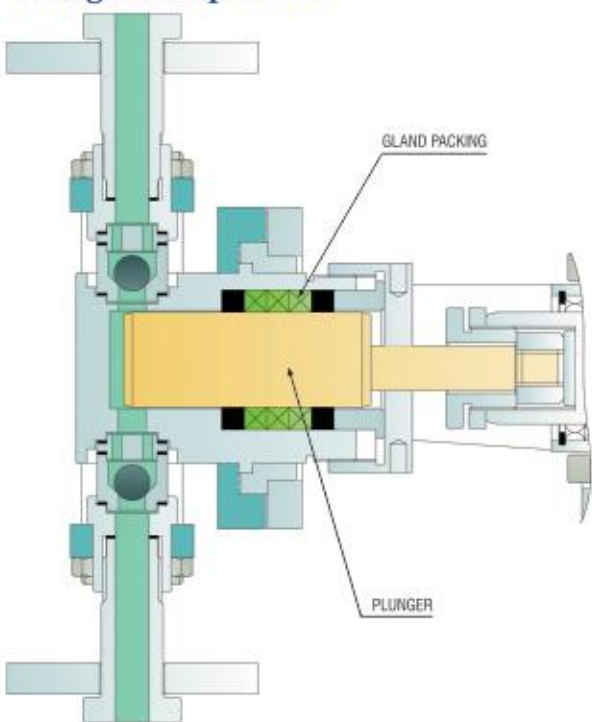


# Plunger Pump Heads

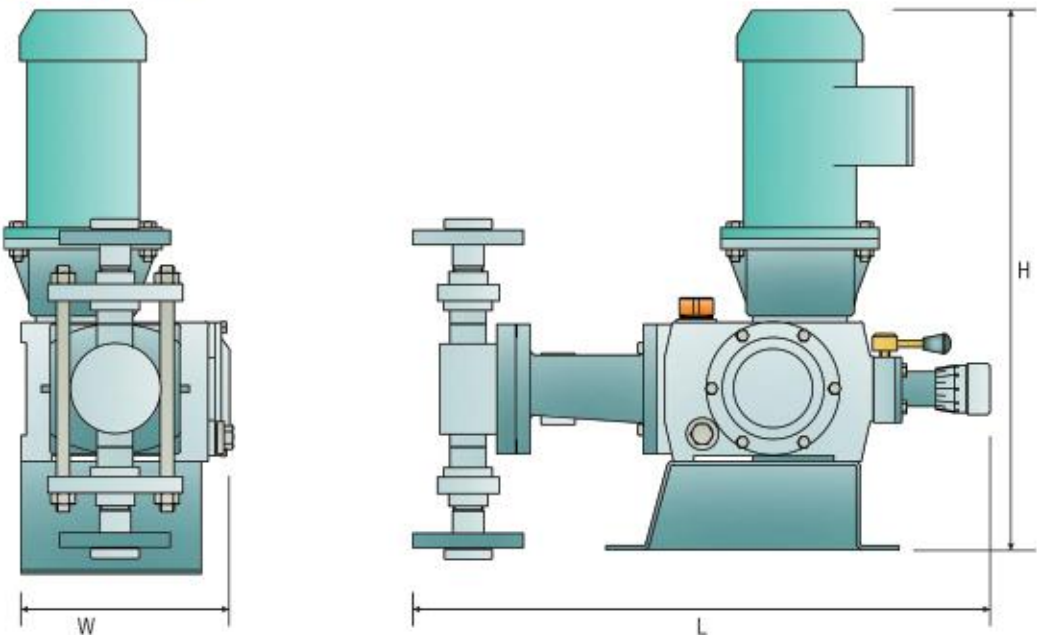
Plunger Pump Head with Gland Flushing or Cooling Arrangement



Conventional Gland Packed Plunger Pump Head



## Dimensions



- Options**
- Heating or cooling jacket
  - Special valve design for slurry & viscous liquids
  - Hard surface coated plungers

Material Code	Liquid End	Plunger	Valve Assembly	Plunger Seal
M10	SS 316/CF 8M	SS 316	SS 316	PTFE Braided
M12	SS 304/CF 8	SS 304	SS 304	PTFE Braided
M14	Alloy-20	Alloy-20	Alloy-20	PTFE Braided

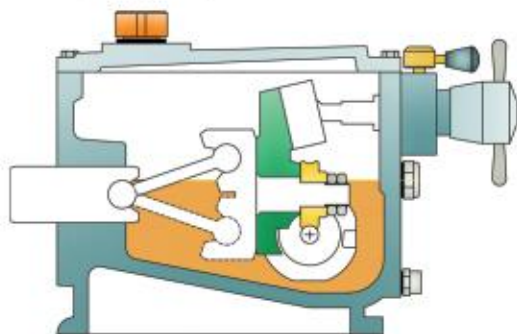
Model	1125	1750	2250	3000
L	511	585	773	923
Plunger H	500	650	817	898
W	185	221	280	345

## Principle

The Swelore metering pump is positive returned plunger, variable stroke reciprocating pump. The metered flow can be varied over wide range with the help of welproven WELCRANK mechanism.

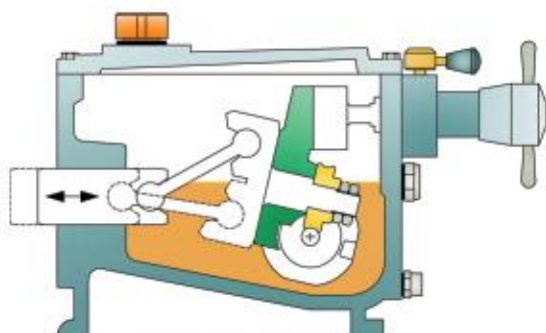
### The Design

The Welore metering pump consists of worm reduction gear train, eccentric, connecting rod, cross head, plunger, cylinder & valves.



#### Zero Stroke

When connected with motor and stroke adjustment knob set at 'O', gear assembly and eccentric revolves without producing reciprocating motion of plunger.



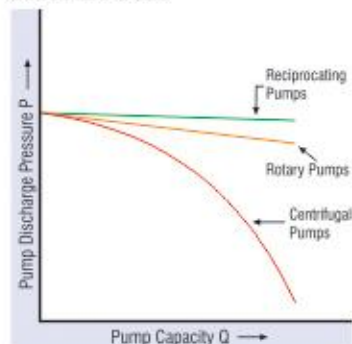
#### Full or Partial Stroke

When stroke adjustment knob set at full or partial stroke, gear assembly and eccentric revolves in inclined position corresponding to the stroke setting. Thus reciprocating motion is produced to desired stroke length.

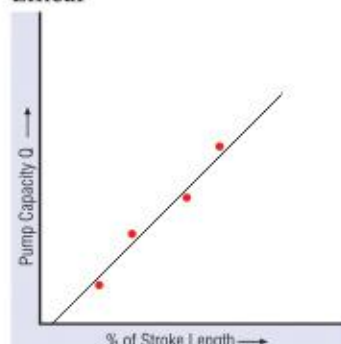
## Characteristic

Metering pump characteristic has definite advantage over various design of pumps.

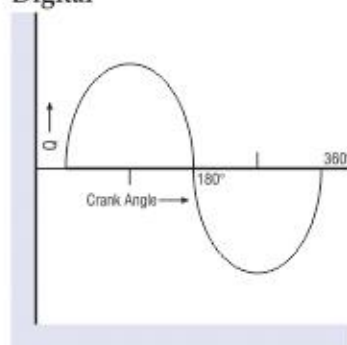
### Pressure Stiff



### Linear

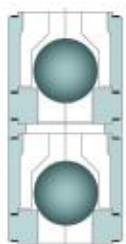


### Digital

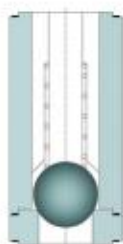


All characteristic made metering pump most favoured pumping tool for precise injection, batch metering & conveying.

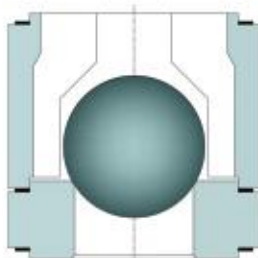
## Valves



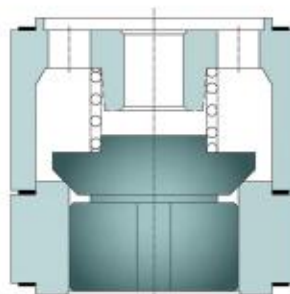
Double Ball Valve



Spring Loaded Ball Valve



Single Ball Valve



Wing Valve

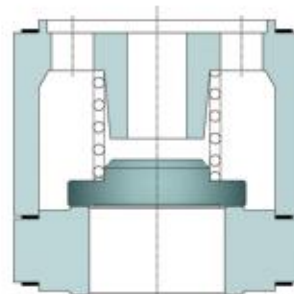


Plate Valve



# Typical Performance

Model		1125		1750		2250		3000		5000	
Pl. Dia. (mm)	SPM	Capacity (l/hr)	Pressure (kg/cm <sup>2</sup> )	Capacity (l/hr)	Pressure (kg/cm <sup>2</sup> )	Capacity (l/hr)	Pressure (kg/cm <sup>2</sup> )	Capacity (l/hr)	Pressure (kg/cm <sup>2</sup> )	Capacity (l/hr)	Pressure (kg/cm <sup>2</sup> )
3	100	0.8	400								
	150	1									
5	100	2	400	2.6	350						
	150	3		4							
8	100	6	239	7	350	11	400	13	350		
	150	8		10		16		20			
10	100	8	153	10	290	17	400	21	350		
	150	12		15		25		31			
12	100	12	106	15	200	24	274	30	350		
	150	18		22		36		45			
14	100	16	78	20	149	33	201	41	350		
	150	25		29		50		62			
16	100	21	60	27	112	43	154	54	350		
	150	32		39		65		81			
20	100	34	38	42	71	67	99	84	235		
	150	50		61		101		127			
22	100	41	32	51	60	82	82	102	197		
	150	61		74		123		154			
25	100	53	24	66	45	106	63	132	150		
	150	79		95		159		198			
28	100	66	19	83	37	133	50	166	121		
	150	100		119		199		249			
30	100	76	17	95	32	152	44	190	106	305	233
	150	114		137		229		286		457	
33	100	92	14	115	26	184	36	230	87	369	193
	150	138		166		277		346		554	
36	100	110	12	137	22	219	30	274	73	439	162
	150	165		197		329		412		658	
40	100	135	10	169	18	271	25	339	59	542	131
	150	203		244		407		508		813	
44	100	164	6	205	15	328	20	410	49	656	108
	150	246		295		492		615		984	
48	100	195	5	244	12	390	17	488	41	781	91
	150	293		351		586		732		1172	
50	100	212	4	265	11	-	-	-	-	-	-
	150	318		381		-	-	-	-	-	-
52	100			286	10	458	15	573	33	916	77
	150			412		687		859		1372	
56	100			332	9	531	13	664	30	1063	67
	150			478		797		997		1595	
60	100			381	8	610	11	763	26	1220	58
	150			549		915		1144		1830	
65	100			447	6	716	9	895	22	1432	49
	150			644		1074		1343		2149	
70	100			519	5	830	8	1038	19	1661	42
	150			747		1246		1557		2492	
76	100					979	7	1224	16	1956	36
	150					1469		1836		2937	
80	100					1085	6	1356	14	2170	32
	150					1627		2034		3255	
85	100					1225	5	1531	13	2449	29
	150					1837		2297		3674	
90	100							1716	11	2749	25
	150							2575		4120	
95	100							1912	10	3060	23
	150							2869		4590	
100	100							2119	10	3391	21
	150							3179		5086	
105	100							2337	7	-	
	150							3505		-	
108	100							-	-	3954	18
	150							-	-	-	
110	100							2565	6	-	
	150							3847		-	
120	100									4883	14
	150									-	
130	100									5731	12

## Notes:

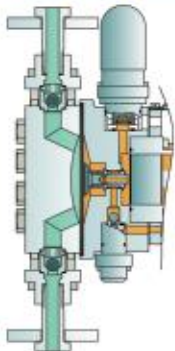
Above performance is based on 90% volumetric efficiency when handling water.

Discharge pressure is based on max. plunger thrust. Please consult us for final selection.

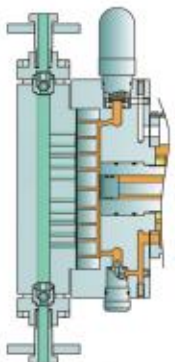
# Versatile

Swelore offers wide variety of pump head and adjustment options, which makes Welore Metering pumps truly versatile.

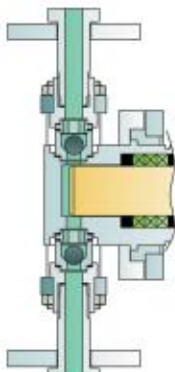
## Liquid Heads



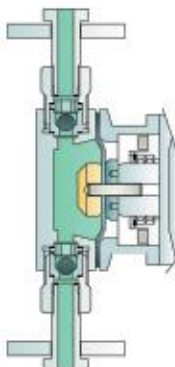
Hydraulic Diaphragm



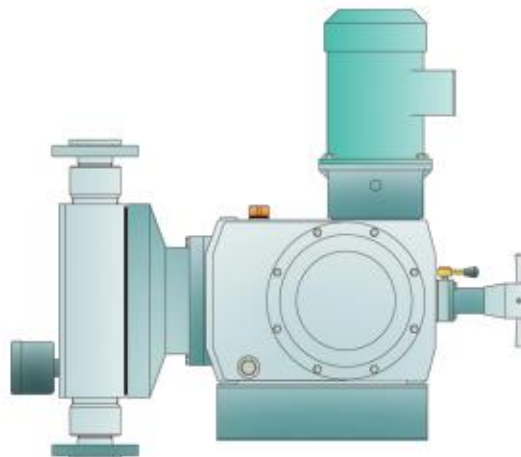
Hydraulic Metal Diaphragm



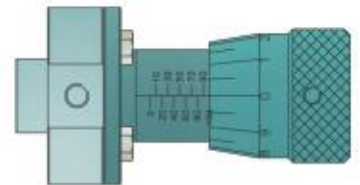
Plunger



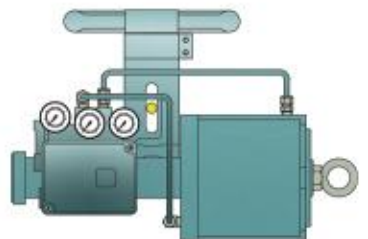
Mechanical Diaphragm



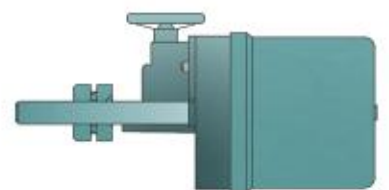
## Adjustment



Manual Micrometric



Pneumatic & Electropneumatic



Electric Actuator for Hazardous & Non Hazardous area

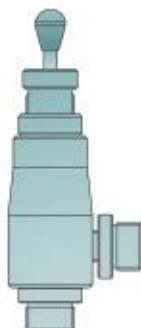


Electronic Speed Control

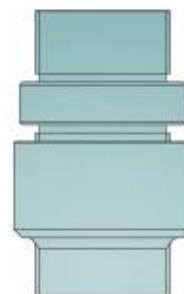


## Accessories

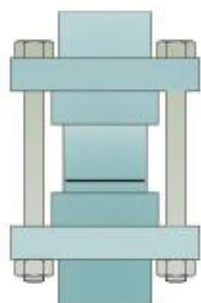
For building up your own metering system, Swelore offers variety of metering pump accessories all at one place.



Safety Valve



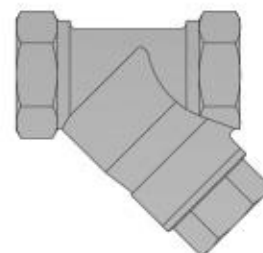
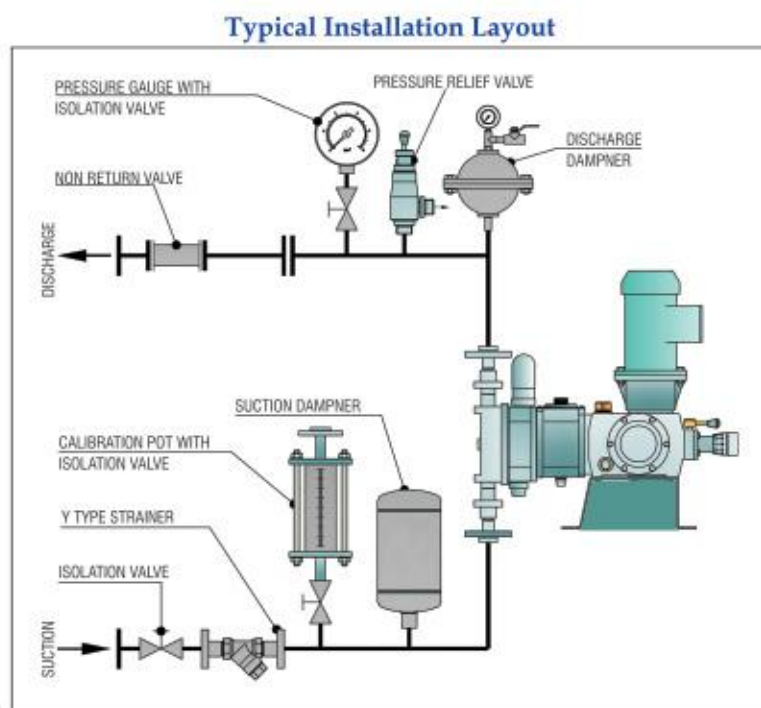
Antisiphon Valve



Antisiphon Valve



Calibration Pot



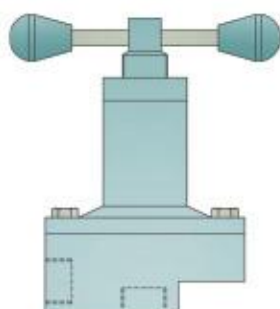
Strainer



Diaphragm Dampner



Vessel Type Dampner



Back Pressure Regulator



Blader Dampner

## Capabilities

### Triplex Diaphragm Process Pumps

Swelore triplex diaphragm process pumps are high-tech combination for applications demand high accuracy, high pressure and high

flow. It is ideal choice for handling difficult liquids, toxic & hazardous. As it is hermetically sealed diaphragm design, it is LEAK PROOF.



### Horizontal Triplex Reciprocating Pump

Professional approach of meeting various chemical processes... We commit "Technology that saves you money".

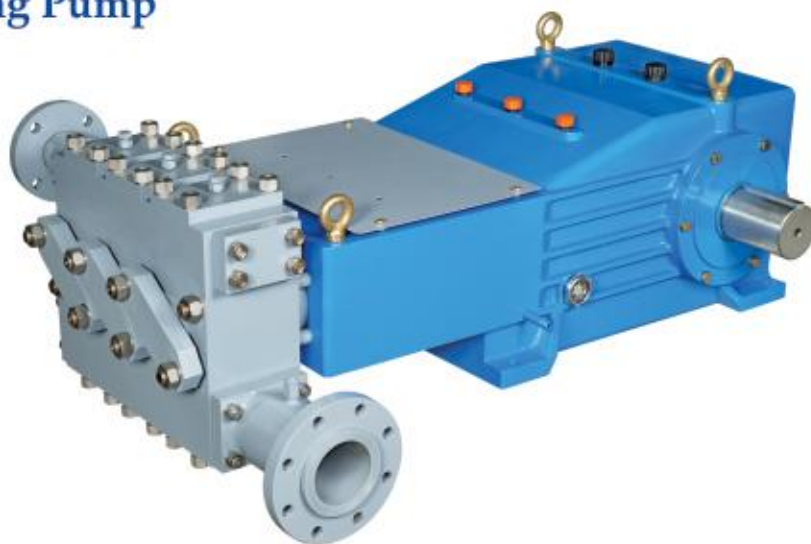
Triplex Pumps are a result of quality product & services using its full-fledged designing & modern facilities in Ahmedabad. Superior & strict quality control & testing with outstanding pump performance guarantees the products passing through severe processing applications & harshest of chemical substances.

#### Features

Offers a wide variety of pumping range in industries such as Process Industries for Hydro Cleaning , Hydro Testing , Reverse Osmosis Plants, Spray Dryers, Boiler Feed, Jet Cleaning, Food Processing, Drain & Sewer Cleaning, Chemical Injection & many more applications.

#### Capabilities

Capacity	: up to 1000 L/min.
Pressure	: up to 700 kg/cm <sup>2</sup>
Temperature	: up to 300° C



- Extra strong, heavy duty power frames ensures long life.
- A wide variety of valves available to suit different pumping fluids & applications.
- Smooth operations with efficient performance.
- Simple to repair & nominal maintenance cost.
- Spring loaded plunger packing ensures leak free pumping.
- Three piece liquid end block designs avoids any possibility of block cracking.





Diaphragm Pump with Electric Actuator



Diaphragm Pump with Electro Pneumatic Actuator



Horizontal Diaphragm Pump with Electric Actuator



Complete Jacketed Diaphragm Pump



Jacketed Plunger Head

## Tailor-made Dosing Packages

Tailor made chemical Dosing/Injection systems supplied by Swelore are self-contained, ready to operate units, which only require to be connected to your chemical supply line & injection points. Swelore chemical Dosing/Injection systems are designed to meet individual customer requirements. These systems are complete with Dosing pumps, Piping Storage vessels & all

instrumentation required for optimum and trouble free operations. These systems are supplied duly mounted on single skid with platform, ladders, etc. as per customer requirements.

Swelore Dosing systems are built conforming to applicable national & international standards.





# Tailor-made Dosing Packages

## Applications

- LP & HP Dosing System
- Phosphate Dosing System
- Hydrazine Dosing System
- Ammonia Dosing System
- Corrosion Inhibitor Dosing System
- Mercaptan Dosing System
- BFW Dosing System
- Sulphuric Acid Dosing System
- Additive Injection System
- DMDS & many more...



## Valuable Clients (Domestic)

• Aditya Birla Nuvo Ltd.	• Indian Oil Tanking Ltd.
• Atul Ltd.	• Indian Petrochemicals Corp. Ltd.
• Advent Envirocare Tech Pvt. Ltd.	• Jindal Steel & Power
• Arvind Limited	• Kalpataru Power Transmission
• Bharat Heavy Electricals Ltd.	• Larsen & Toubro Ltd.
• BASF - The Chemical Company	• MRF Ltd.
• Bharat Petroleum Co. Ltd.	• Mother Dairy
• Bajaj Amines Ltd.	• Nirma Limited
• Bharat Petroleum Co. Ltd.	• Numaligarh Refinery Ltd.
• BGR Energy Systems Ltd.	• Oil & Natural Gas Corp Ltd.
• Cairn Energy Ltd.	• Oil India Ltd.
• Cethar Vessels Ltd.	• Oriental Carbon & Chemicals Ltd.
• Century Rayon	• Pragati Power Corp Ltd.
• Chennai Petroleum Corporation Ltd.	• Punj Llyods Ltd.
• Deepak Nitrite Ltd.	• Reliance Industries Ltd.
• Dorf Ketal Chemicals (I) Pvt. Ltd.	• Reliance Petrochemicals Ltd.
• Desmet Chemfood Engineering Pvt. Ltd.	• SRF Limited
• Doshion Veolia Water Solutions	• Steel Authority of India
• Electrical & Mechanical Engg. Corp.	• Samsung Engineering
• Enpro Industries Ltd.	• The Fertilizers & Chemicals Travancore
• Engineers India Ltd.	• Torrent Pharmaceuticals Ltd.
• Essar Projects Ltd.	• Toyo Engineering Corp. Ltd.
• Finolex Industries Ltd.	• Tata Projects Ltd.
• Gail India Ltd.	• Technimont ICB Pvt. Ltd.
• Gujarat Alkalies and Chemical Ltd.	• Thermax Abcock Wilcox Ltd.
• Gujarat State Fertilizers & Chemicals Ltd	• Thermax Ltd.
• Gujarat Flouro Chemicals Ltd.	• Torrent Power Ltd.
• HPCL- Mittal Energy Ltd.	• Turkuaz Edible Oil Industries
• Hindustan Petroleum Corp. Ltd.	• United Breweries Ltd.
• Hindustan Zinc Ltd.	• UDHE India Ltd.
• Indian Oil Corporation Ltd.	• Va Tech Wabag Ltd.
• Indian Farmers Fertilizers Co-operative Ltd.(IFFCO)	• Voltas Ltd.



## Valuable Clients (International)

### Dosing / Metering Diaphragm Pumps

• Alfa Misr For Industrial Investment	Egypt
• ASM Chemicals Industries Ltd.	Bangladesh
• Burrup Fertilizers	Australia
• Chemanol (Methanol Company)	Saudi Arabia
• Crescent Light Trading Est.	Jordan
• EDS Europe Ltd.	England
• Egyptian Water Technology	Egypt
• Egyptian Dutch For Marine Project	Egypt
• ELM Trading Co.	Kuwait
• Expertise Co. Ltd.	Dubai
• Galaxy Projects FZCO	Australia
• Gee & Co.	England
• GE Power & Water	Kuwait
• Hypo Hygiene Products Ltd.	Nigeria
• Kardanane Shargh Co.	Iran
• Leda Egypt Co.	Egypt
• Ocean Way Orange LLC	Japan
• OGA Parvas Engineering Co.	Iran
• Oman India Fertilizer Co. (SAOC)	Oman
• P.T. Technindo Contromatra	Indonesia
• P.T. Indo Bharat Rayon	Indonesia
• Petronash FZE	Dubai
• Petrotech Ind. Eng. Co.	Egypt
• Podshipnik - Import LLC	Russia
• Process Group International	Abu Dhabi
• Spic Fertilizer	Dubai
• Swastik Oil Industries (P) Ltd.	Nepal
• Thai Organic Chemicals Co. Ltd.	Thailand
• Tujrkuaz Edible Oil Ind.	Kazakistan
• Wata Chem. Ltd.	Bangladesh

### Chemical Injection Packages

• ARCO Qatar Inc. - Al Rayyan Oil Development Project (Parsons Technip)	Abu Dhabi
• Simon Carves Ltd.	Abu Dhabi

## Sales Network



Consistent performance & quality services has earned 'Swelore' a customer loyalty from its national & international patrons. The company has clients in various countries of South Africa, Australia, South-east Asia as well as the Gulf nations.



Swelore reserves the right to change the above data without any obligation for the pumps already sold or subsequently sold.  
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