

Chemical Process Pumps

Assured
Quality
Dependable
Services



Manufactured By : _____

SMS
PUMPS & ENGINEERS



Company Profile

Welcome to **SMS PUMPS & ENGINEERS**, are Manufacturers, Exporter & Supplier of Centrifugal Chemical Process Pumps as per DIN 24256 / ISO 2858, Centrifugal Chemical Process Pumps as per ANSI Standard, Centrifugal Water Pumps as per DIN 24255, Thermic Fluid High Temperature Pumps - Foot / Centreline Mounted, Vertical Submerged Pumps (Extended Shaft), Self Priming Mud Pumps Spares for Pumps & Import Substitution

SMS PUMPS & ENGINEERS, takes special care for ensuring the right selection of the pump for the Specific Application. We would be pleased to receive details of your pump requirements and provide a competitive technical / commercial quotation by return.

SMS PUMPS & ENGINEERS, specialises in the design and manufacture of Chemical Process Pumps. Our Pump Ranges, provide Technical & Cost Effective solutions not only for standard applications, but also for special applications where engineering is required to tailor a pump to a specific service.

We provide solutions and products, offering a comprehensive line of high quality centrifugal pumps, that handles corrosive, abrasive or high temperature liquids **SMS PUMPS & ENGINEERS**, is vertically integrated with its own Machine Shop / Pump Manufacturing Plant, Testing Facility and Service Network with strategically located operating offices / Dealers, in various parts of the country.

SMS PUMPS & ENGINEERS, company incepted in the year 2010, by **Mr. S. M. SHUKLA**, with his BE-Mech academic background & 22 years of experience in the field of Industrial Pumps / Process Industries, since 1989, with a focus on offering

"Quality Pumps with Reliability".

The company has achieved a distinct name in the state & national / international markets. Today, we have carved a niche as one of the major manufacturer and exporter of industrial pumps for standard / critical applications.

Infrastructure

SMS PUMPS & ENGINEERS, with a well equipped infrastructural base for manufacturing of Pumps, with hired support of Advanced Technology Machines and Equipment that aid us in designing advanced industrial pumps.

We continuously upgrade the production technology to assure the production of Efficient Industrial Pumps.

We have our own Performance Testing Facility to test the running Performance of Pumps with latest Flow-meters for Flow Measurement.

Quality

SMS PUMPS & ENGINEERS, a quality oriented firm, assure highest quality standards of industrial pumps. We have advanced quality testing machines like flow measurement, pressure test, etc. We keep a strict vigil on the production process of industrial pumps, starting from the procurement of raw materials to the dispatching of the pumps.

The objective has always been on creating value by offering customized and cost effective range of products for the desired pumping requirements

Team

SMS PUMPS & ENGINEERS, has experienced team of engineers / technicians and other allied workers, working hard for production of highest quality industrial pumps. The prime motto of our team is to provide utmost satisfaction to the clients. Our team always keep themselves updated with the ever changing market needs to meet the different needs of the clients.

Quality Policy

SMS PUMPS & ENGINEERS, "Customer satisfaction is the ultimate goal and commitment to customer is the driving force of our business".

We strive to meet customer requirements consistently through implementation of Quality Management System as per ISO 9001-2008 and its periodic review to identify areas needing improvement.

We strictly adhere to quality control procedures, established to ensure the reliability and durability of our products.

Products Range

SMS PUMPS & ENGINEERS -Expertise area of manufacturing is,

Centrifugal Process Pumps as per, DIN 24256 / ISO 2858 Standard.	FPE-FM series FPE-F series FPE-F IC series
Centrifugal Process Pumps as ANSI Standard with Semi-Open Impeller.	FPE-A ANSI series
Centrifugal Thermic Fluid Pumps for high temp. Service (Centerline / Foot Mounted).	FPE-TC series FPE-TF series
Centrifugal Vertical Submerged Pumps (Extended Shaft Pumps).	FPE-V series
Centrifugal Self Priming Pumps.	FPE-S series FPE-SJ series
Centrifugal Multi Stage Pumps.	FPE-M series

Various Material of Construction

Above Pumps are manufactured in variety of materials such as

Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M, CF3, CF3M, CD4MCu, CN7M(AI 20)

Duplex Steel as per ASTM A 890/890M

Nickel Alloys as per ASTM A 494 / 494M Gr. Hastelloy B – C, CZ 100 (100% Nickel)

Other Alloys: SS 2324 / 2%NiCl / Ni-Resist / D2B / Monel / Inconel 600 / R – 55 / Ni 200

Cast Iron & special Alloy Cast Irons, SG Iron / Ductile Iron.

Carbon Steel / WCB.

Bronze / Alluminium & Various Non Ferrous Alloys.

Various Industries / Applications covered

Pulp & Paper Industries

Starch Industries

Pharmaceuticals & Chemical

Effluent Treatment Plants

Dyes & Intermediates

RO & DM Water Plants

Oil Extraction / Waste Oil Refining Plants

Air-Conditioning / Heating Plants

Cooling Tower Water Circulation

Solvent Transfer

Thermic Fluid Circulation



Chemical Process Pumps

FPE-FM series

AS PER ISO 2858 / DIN 24256

Capacity up to : 750 M³/Hr.
 Temp. up to : 250° C
 TDH up to : 140 MLC
 Working Pr. up to : 40 Bars
 Delivery Size up to : 250 mm

Industries Covered

Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Effluent Treatment Plants	Cooling Tower Water Circulation
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

Material of Construction :

Pumps are manufactured in variety of materials such as

- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M, CF3, CF3M, CD4MCu, CN7M(AI 20)
- Duplex Steel as per ASTM A 890/890M
- Nickel Alloys as per ASTM A 494 / 494M Gr. Hastelloy B-C, CZ 100 (100% Nickel)
- Other Alloys: SS 2324 / 2%NiCl / Ni-Resist / D2B / Monel / Inconel 600 / R-55 / Ni 200
- Cast Iron & special Alloy Cast Irons, SG Iron / Ductile Iron.
- Carbon Steel / WCB.
- Bronze / Aluminium & Various Non Ferrous Alloys.

Constructional features :

Pumps are as per DIN 24256 and ISO 2858. The design is of back pull out type. Large variety of models are available to operate at 1450 rpm and 2900 rpm at 50 Hz and 1750 rpm and 3500 rpm at 60 Hz.

Casing :

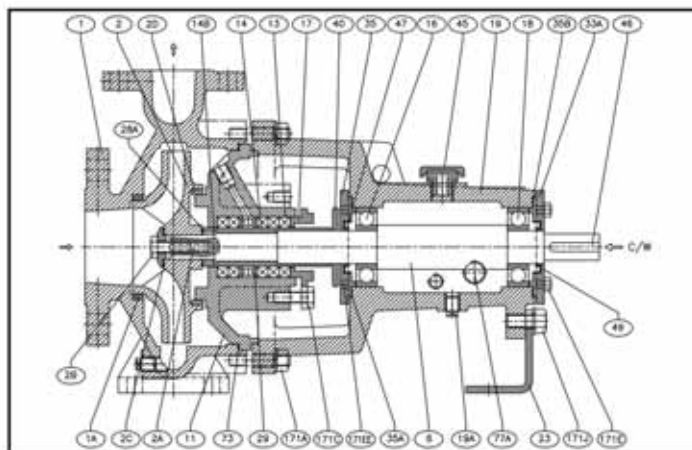
The casing has axial suction and top centre line delivery. Smooth hydraulic passages ensure high efficiency. Normal design is for foot mounted pumps.

Impeller :

The impellers are of enclosed type and semi-open impellers can also be supplied. Hydraulic balancing of impellers is achieved either by back wear ring. The impellers are statically and dynamically balanced.

Shaft :

The shaft is supported by two antifriction bearings to take residual axial thrust and prevent axial float or radial run out. It is fully protected from the liquid handled by means of a shaft



sleeve and PTFE gaskets between impeller nut, impeller hub and shaft sleeve.

Stuffing box :

The stuffing box is sealed by gland packing or by mechanical seal. Conversion from gland packing to mechanical seal is achieved by changing some standardised parts. Re-machining of stuffing box is not necessary.

Bearings :

The bearings are oil lubricated.

Direction of rotation :

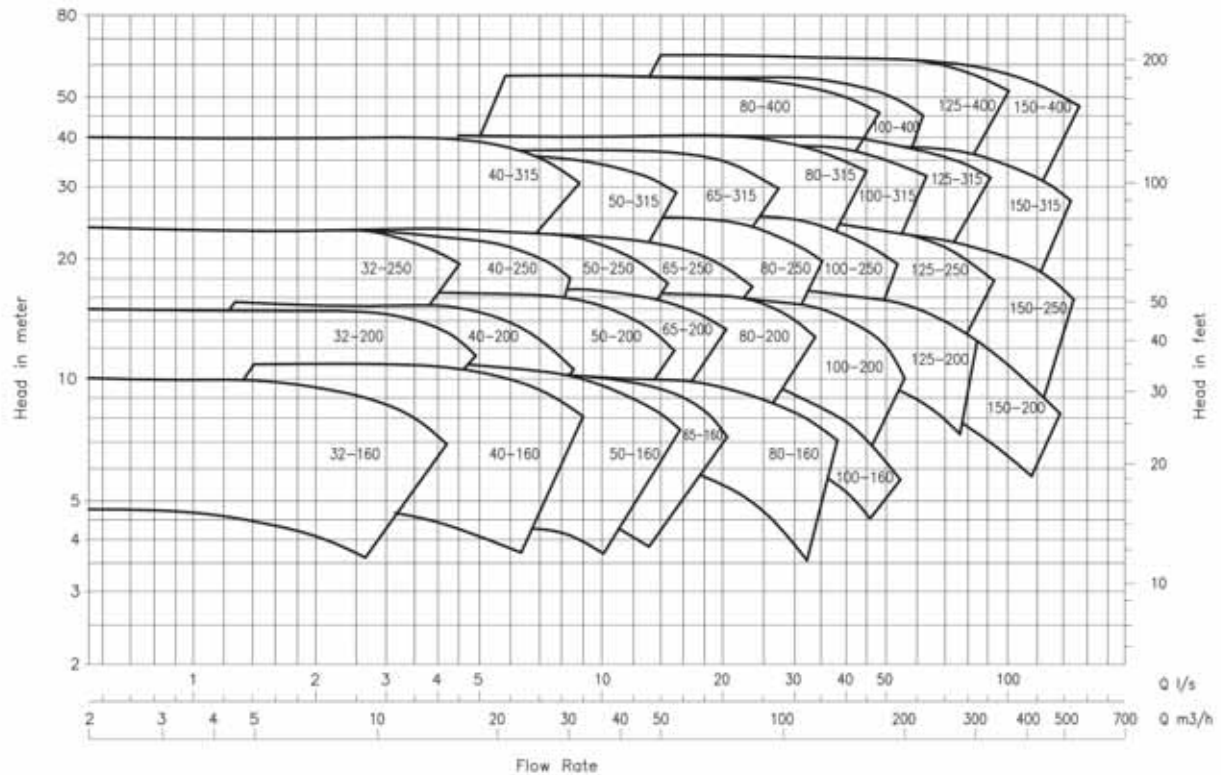
Clockwise viewed from driving end.

Flanges :

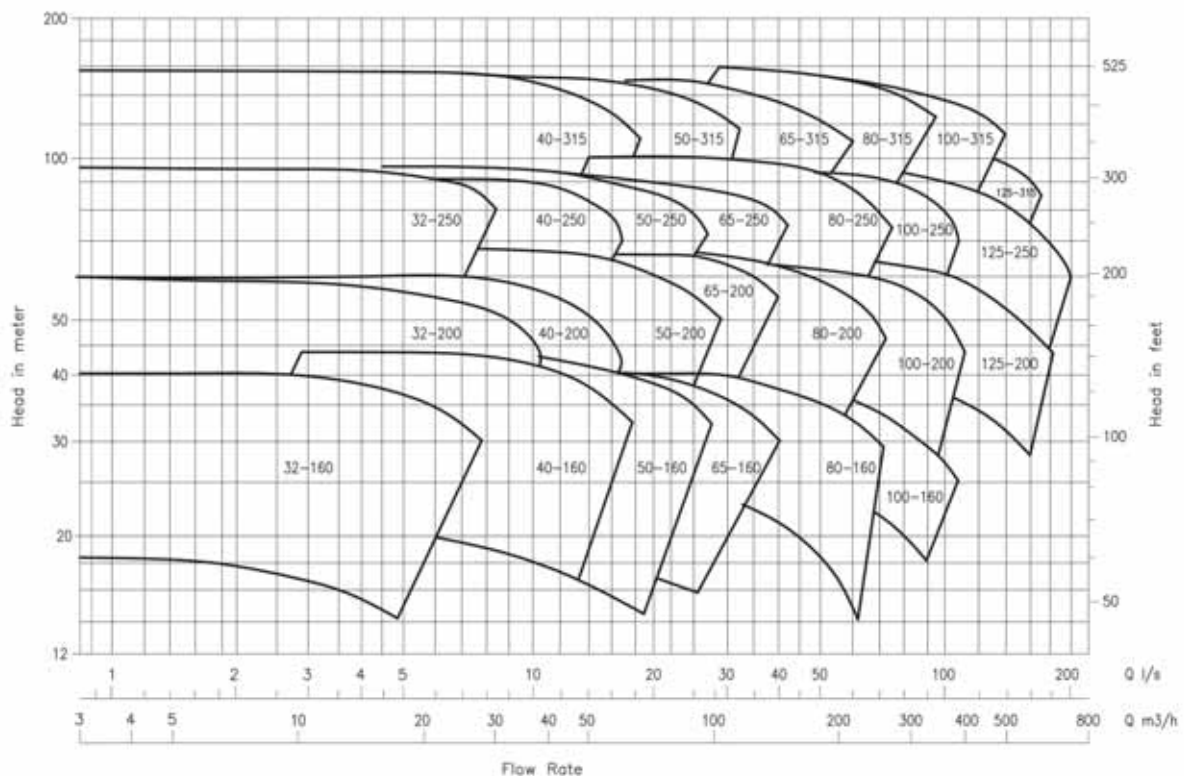
Standard
 Drilling as per ND 16
 DIN 2533 (Cast Iron Raised face)
 DIN 2543 (Steel-Plain face)

Optional
 DIN ND 10, ND 25
 ASA 150 BS 10 Table F
 BS 4504-16 bar or 25 bar

Selection Chart 1450 RPM



Selection Chart 2900 RPM





Chemical Process Pumps

FPE-F series

AS PER ISO 2858 / DIN 24256

Capacity up to : 750 M³/Hr.
 Temp. up to : 250° C
 TDH up to : 140 MLC
 Working Pr. up to : 40 Bars
 Delivery Size up to : 250 mm

Industries Covered

Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Effluent Treatment Plants	Cooling Tower Water Circulation
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

Material of Construction :

Pumps are manufactured in variety of materials such as

- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M, CF3, CF3M, CD4MCu, CN7M(AI 20)
- Duplex Steel as per ASTM A 890/890M
- Nickel Alloys as per ASTM A 494 / 494M Gr. Hastelloy B-C, CZ 100 (100% Nickel)
- Other Alloys: SS 2324 / 2%NiCl / Ni-Resist / D2B / Monel / Inconel 600 / R - 55 / Ni 200
- Cast Iron & special Alloy Cast Irons, SG Iron / Ductile Iron.
- Carbon Steel / WCB.
- Bronze / Aluminium & Various Non Ferrous Alloys.

Constructional features :

Pumps are as per DIN 24256 and ISO 2858 and generally conform to API 610 (7th Edition.) The design is of back pull out type. Large variety of models are available to operate at 1450 rpm and 2900 rpm at 50 Hz and 1750 rpm and 3500 rpm at 60 Hz.

Casing :

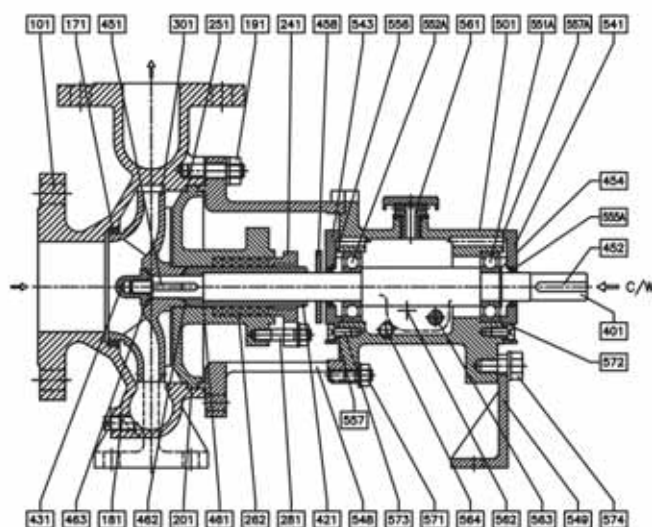
The casing has axial suction and top centre line delivery. Smooth hydraulic passages ensure high efficiency. Normal design is for foot mounted pumps. Centre line mounting for special applications are also available.

Impeller :

The impellers are of enclosed type and semi-open impellers can also be supplied. Hydraulic balancing of impellers is achieved either by back vanes or by balancing holes. The impellers are statically and dynamically balanced. Reliable fixing of the impeller on shaft is achieved by using helicoil insert under impeller nut. To improve NPSH performance, inducer can be supplied.

Shaft :

The shaft is supported by two antifriction bearings to take



residual axial thrust and prevent axial float or radial run out. It is fully protected from the liquid handled by means of a shaft sleeve and PTFE gaskets between impeller nut, impeller hub and shaft sleeve.

Stuffing box :

The stuffing box is sealed by gland packing or by mechanical seal. Conversion from gland packing to mechanical seal is achieved by changing some standardised parts. Re-machining of stuffing box is not necessary. Stuffing box cooling is provided for high temperature applications.

Bearings :

The bearings are oil lubricated. For high temperature application, bearing oil cooling arrangement is provided.

Direction of rotation :

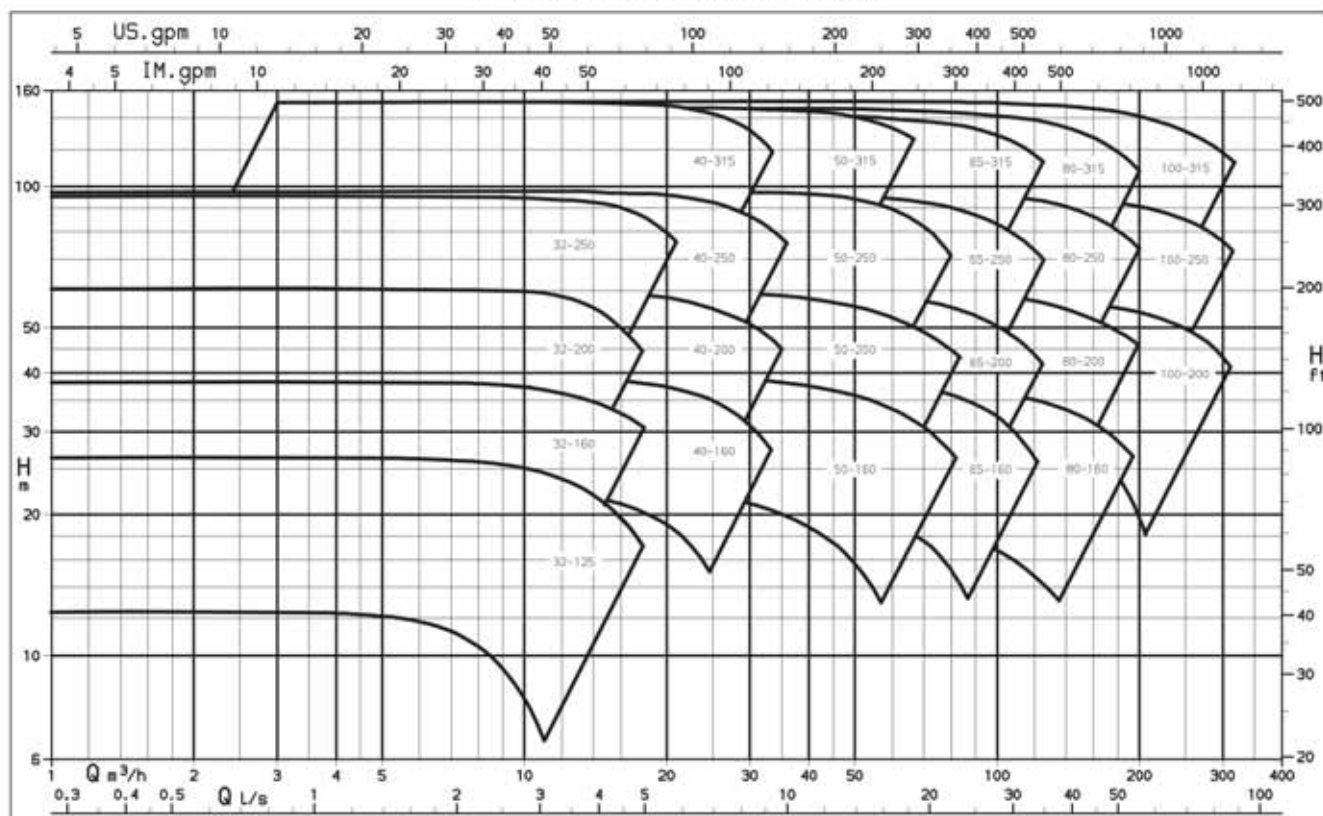
Clockwise viewed from driving end.

Flanges :

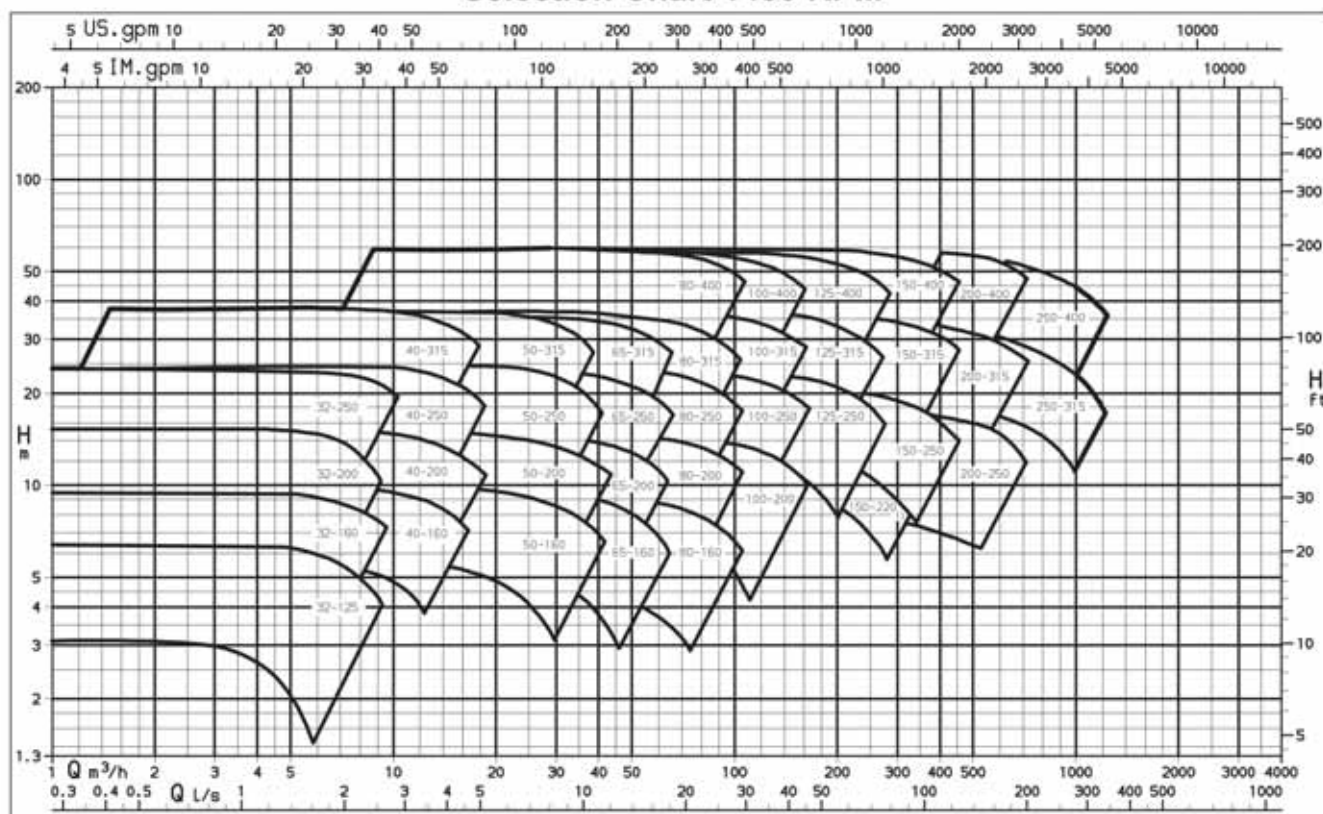
Standard
 Drilling as per ND 16
 DIN 2533 (Cast Iron Raised face)
 DIN 2543 (Steel-Plain face)

Optional
 DIN ND 10, ND 25
 ASA 150 BS 10 Table F
 BS 4504-16 bar or 25 bar

Selection Chart 2900 RPM



Selection Chart 1450 RPM





Chemical Process Pumps

FPE-A ANSI series

Semi-Open Impeller Pumps

Capacity up to : 500 M³/Hr.
 Temp. up to : 200° C
 TDH up to : 180 MLC
 Working Pr. up to : 26 Bars
 Delivery Size up to : 200 mm

Industries Covered

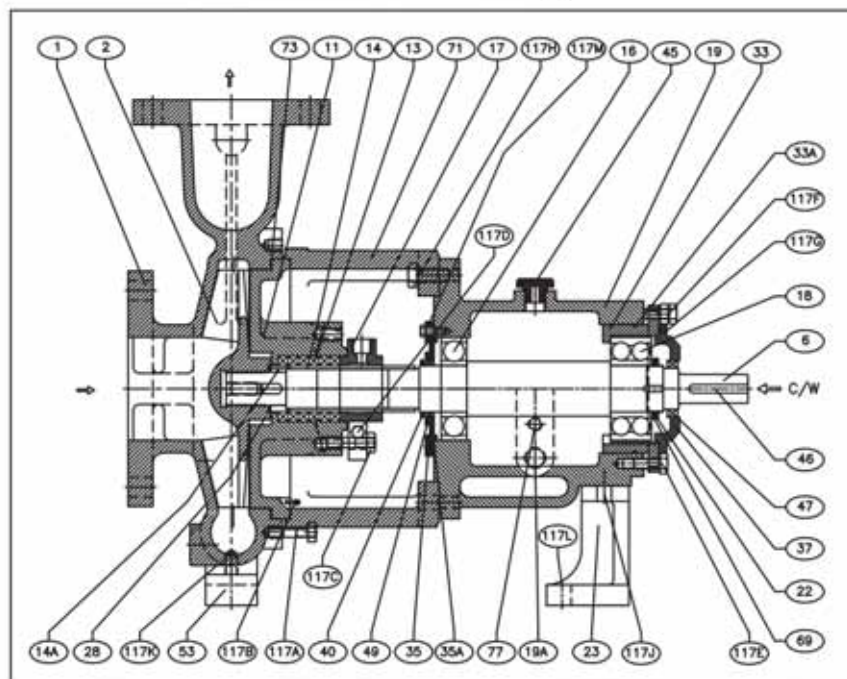
Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Effluent Treatment Plants	Cooling Tower Water Circulation
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

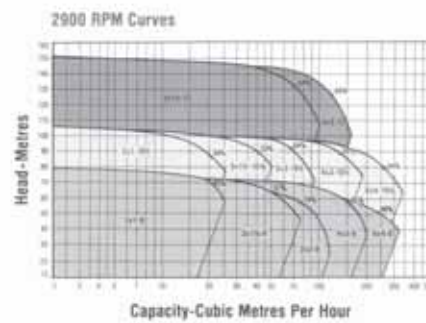
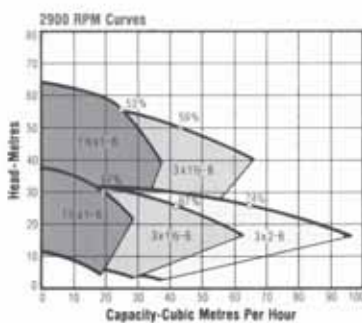
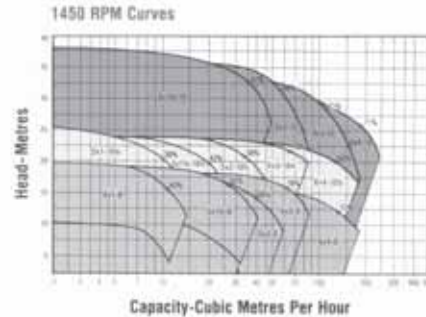
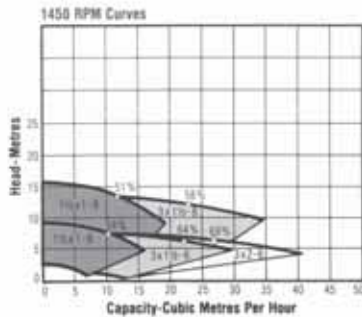


Material of Construction :

Pumps are manufactured in variety of materials such as

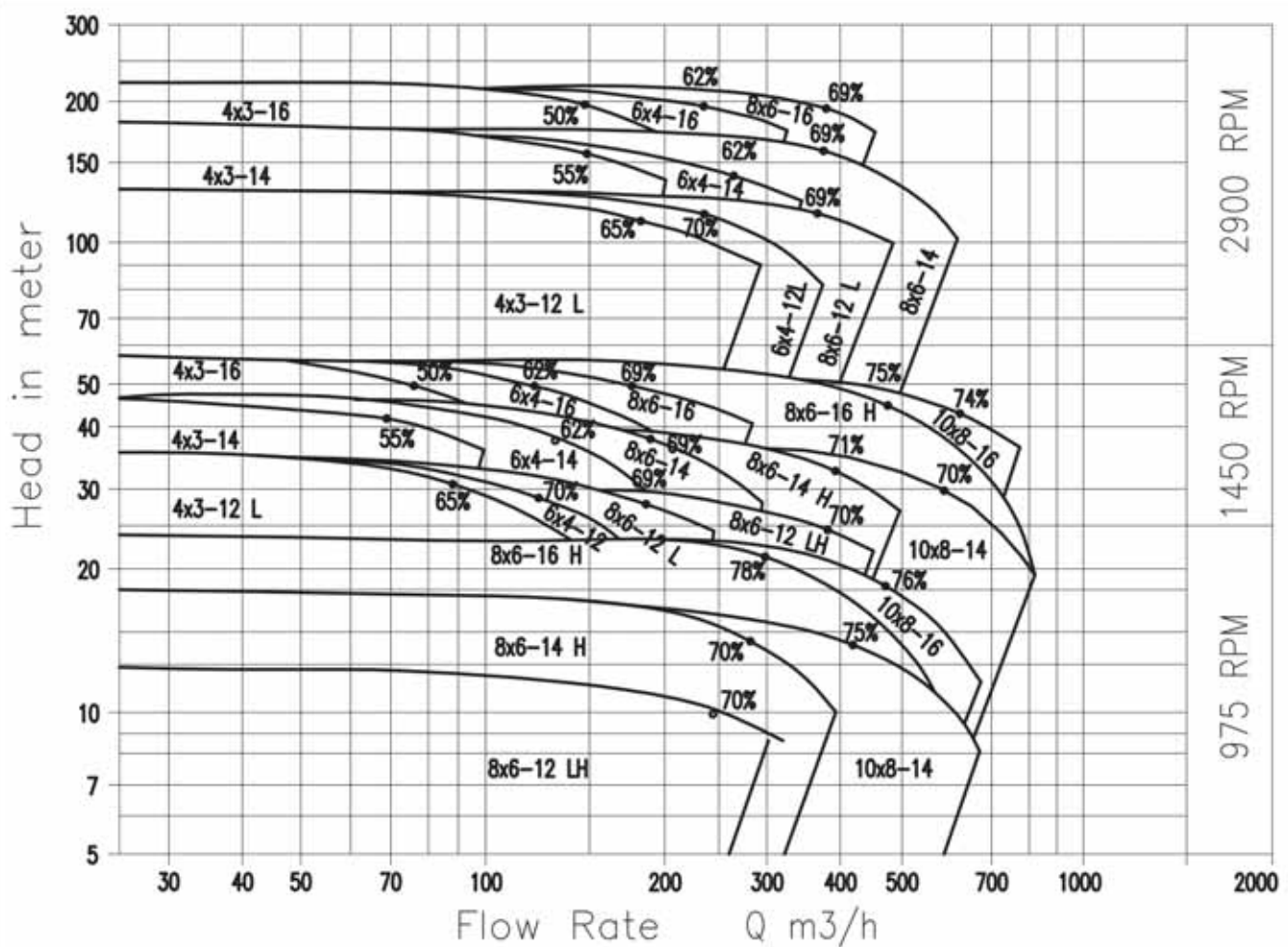
- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M, CF3, CF3M, CD4MCu, CN7M(AI20)
- Duplex Steel as per ASTM A 890/890M
- Nickel Alloys as per ASTM A 494 / 494M Gr. Hastelloy B- C, CZ 100 (100% Nickel)
- Other Alloys: SS 2324 / 2%NiCl / Ni-Resist / D2B / Monel / Inconel 600 / R - 55 / Ni 200
- Cast Iron & special Alloy Cast Irons, SG Iron / Ductile Iron.
- Carbon Steel / WCB.
- Bronze / Alluminium & Various Non Ferrous Alloys.





FPE-AS

FPE-AM



FPE-AL



Thermic Fluid Pumps **FPE-TF/FPE-TC series**

AS PER ISO 2858 / DIN 24256

Capacity up to : 250 M³/Hr.
Temp. up to : 350° C
TDH up to : 95 MLC
Working Pr. up to : 20 Bars
Delivery Size up to : 100 mm

Industries Covered

Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Effluent Treatment Plants	Cooling Tower Water Circulation
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

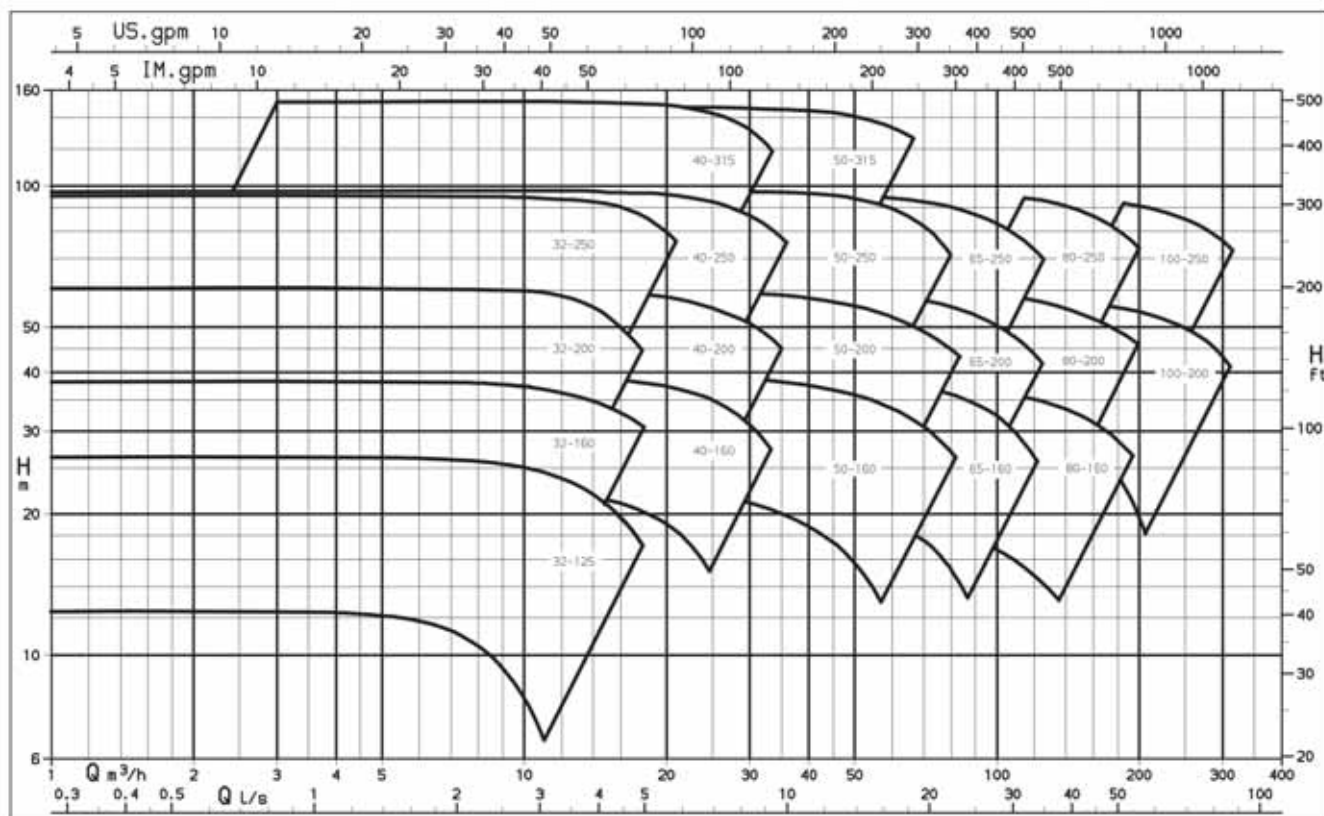
Material of Construction :

Pumps are manufactured in variety of materials such as

- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M,
- Carbon Steel / WCB.



Selection Chart 2900 RPM



Capacity up to : 400 M³/Hr.
Temp. up to : 120° C
TDH up to : 55 MLC
Working Pr. up to : 15 Bars
Delivery Size up to : 150 mm
Column Height up to : 10 mtr.

Pharmaceuticals & Chemical	RO & DM Water Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Effluent Treatment Plants	Solvent Transfer
Dyes & Intermediates	

- CI / WCB





Chemical Process Pumps

FPE-F IC series

Capacity up to : 15 M³/Hr.
 Temp. up to : 120° C
 TDH up to : 45 MLC
 Working Pr. up to : 10 Bars
 Delivery Size up to : 25 mm



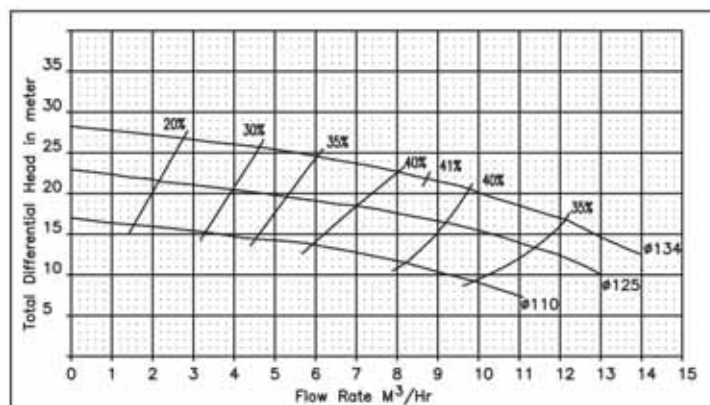
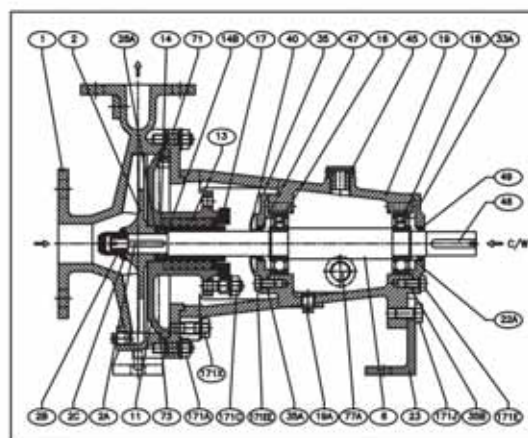
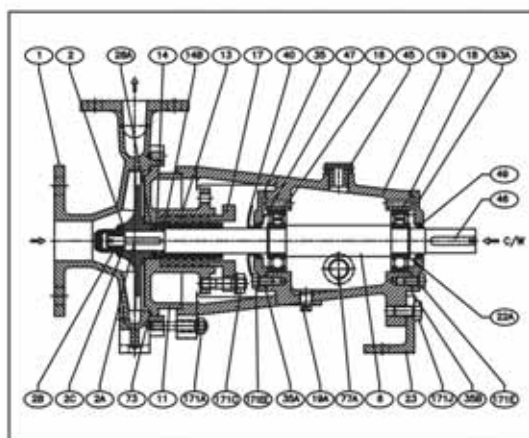
Industries Covered

Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

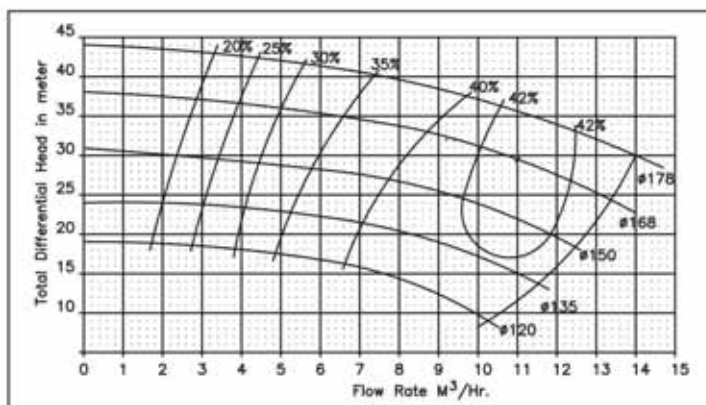
Material of Construction :

Pumps are manufactured in variety of materials such as

- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M, CF3, CF3M, CD4MCu, CN7M(AI 20)
- Duplex Steel as per ASTM A 890/890M
- Carbon Steel / WCB.



FPE-F 25-125/140 I



FPE-F 25-180 I

Centrifugal Multi Stage Pumps **FPE-M series**

Capacity up to : 50 M³/Hr.
Temp. up to : 120° C
TDH up to : 300 MLC
Working Pr. up to : 30 Bars
Delivery Size up to : 65 mm



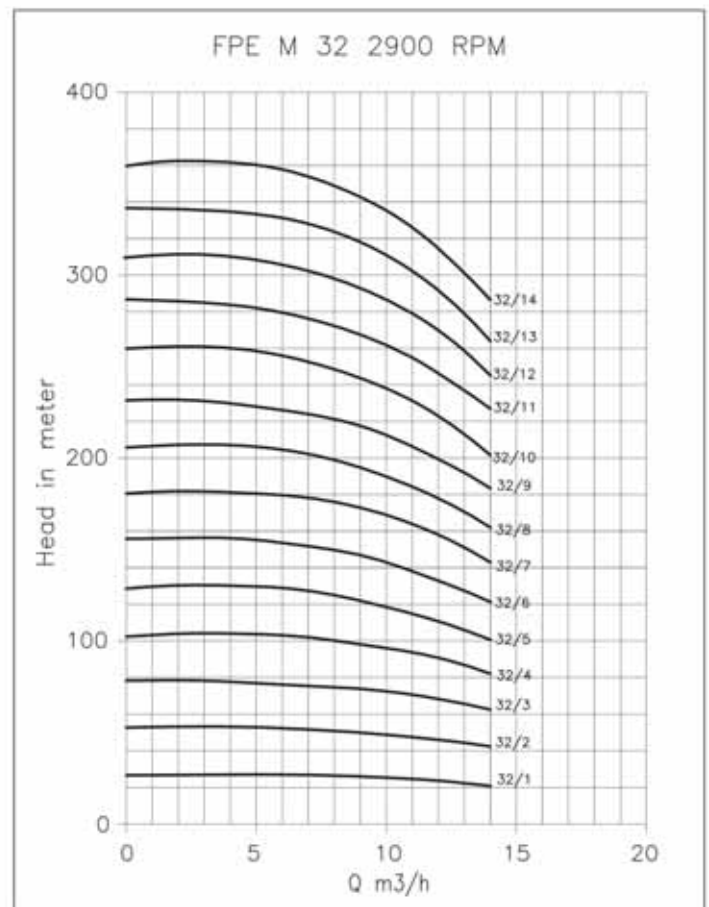
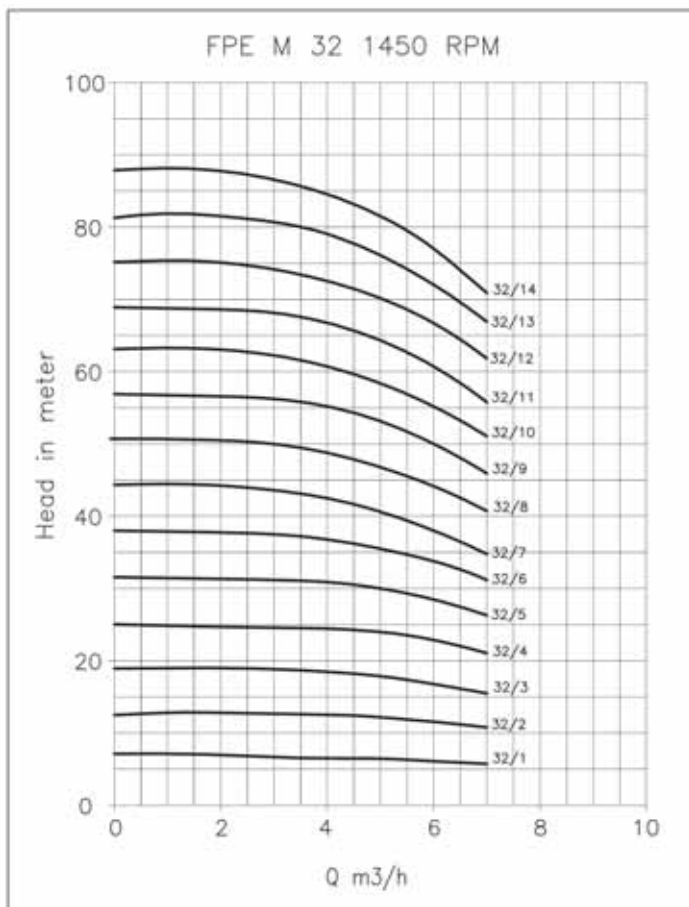
Industries Covered

Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Effluent Treatment Plants	Cooling Tower Water Circulation
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

Material of Construction :

Pumps are manufactured in variety of materials such as

- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M, CF3, CF3M, CD4MCu, CN7M(AI 20)
- Cast Iron. • Carbon Steel / WCB. • Bronze.





Centrifugal Self Priming Pumps

FPE-S / FPE-SJ series

Capacity up to : 100 M³/Hr.
 Temp. up to : 120° C
 TDH up to : 35 MLC
 Working Pr. up to : 15 Bars
 Delivery Size up to : 150 mm

Industries Covered

Pharmaceuticals & Chemical	Oil Extraction Plants
Pulp & Paper Industries	Waste Oil Refining Plants
Starch Industries	Air-Conditioning / Heating Plants
Effluent Treatment Plants	Cooling Tower Water Circulation
Dyes & Intermediates	Solvent Transfer
RO & DM Water Plants	Thermic Fluid Circulation

Material of Construction :

Pumps are manufactured in variety of materials such as

- Cast Iron
- Stainless Steel as per ASTM A 351/743 Gr. CF8, CF8M
- Carbon Steel / WCB.
- Bronze



PUMP SELECTION

Approximate performance of FPE-S Series, Self Priming, Coupled Pumps, at rated speed :

PUMP	POWER		RATED SPEED	PIPE SIZE		IMP. DIA.	TOTAL HEAD IN METRES																												SOLID HANDLING	DOR FROM
	KW	HP		SUC.	DEL.		6	8	10	12	14	15	16	18	19	20	22	24	25	26	28	30	32	34	(mm)											
CAPACITY IN LITRES PER SECOND																																				
Motor Coupled																																				
FPE-S 40	0.75	1.0	2900	40	40	116	4.6	4.1	3.6	2.7	1.5	0.6																	7.0	CCW						
FPE-S 40H	1.5	2.0	2900	40	40	134			6.3	5.6	4.9	4.4	4.0	2.8	1.9	0.9														8.5	CCW					
FPE-S 50	2.2	3.0	2900	50	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	CW					
FPE-S 80A	3.7	5.0	2900	80	80	174										10.1	9.3	8.2	7.5	6.8	5.2	3.8	1.8						7.0	CCW						
FPE-S 80	5.5	7.5	2900	80	80	174										16.4	16.2	15.5	14.8	14.0	12.5	10.2	8.0	5.5					14.5	CCW						
FPE-S 80L +	3.7	5.0	1450	80	80	224			18.0	16.4	13.6	11.6	10.0	5.5																15.5	CW					
FPE-S 100LA+	7.5	10.0	1450	100	100	292			36.0	33.9	31.2	30.0	28.6	25.5	23.9	22.5	18.0	12.0												18.5	CW					
FPE-S 100L+	9.3	12.5	1450	100	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	CW					
FPE-S 150LA	15.0	20.0	1450	150	150	296			66.3	63.4	59.8	57.5	55.0	48.8	45.5	42.5	34.2	23.8												34.0	CCW					
FPE-S 150L	18.7	25.0	1450	150	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	CCW					
Engine Coupled																																				
FPE-S 80L+	4.0	6.0	1500	80	80	224					17.7	15.6	14.0	12.5	8.5	6.0	3.5													15.5	CW					
FPE-S 80L+	9.0	12.0	1800	80	80	224							22.5	22.0	20.7	19.9	19.0	16.7	13.7	12.0	10.1	6.0								15.5	CW					
FPE-S 100LA+	9.0	12.0	1500	100	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	CW					
FPE-S 100L+	10.5	14.0	1500	100	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	CW					
FPE-S 150LA	16.5	22.0	1500	150	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	CCW					
FPE-S 150L	19.5	26.0	1500	150	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	CCW					

NOTE: Performance applicable to liquid of specific gravity 1 and viscosity as of water.

Regenerative Self Priming Pumps

FPE-RS series

Capacity	: Max. 130 L.P.M.
Head	: Max. 80 M.
Speed	: 1450 R.P.M. (Normal) 1800 R.P.M. (Max.)
Temperature	: Max. 60°C for Standard Pump Max. 100°C for Hot Water Pump 'H'
Suction Lift	: Max. 8 M.
Rotation	: Clockwise when looking from drive end.

Application :

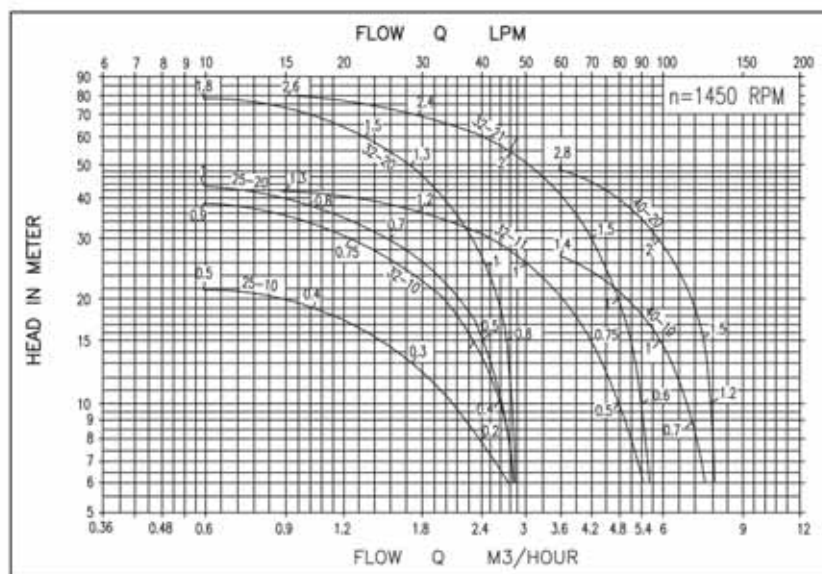
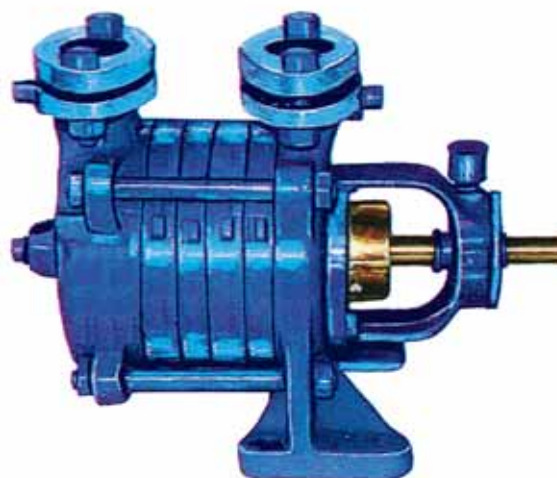
Solvent Transfer
Transfer of Liquid with Air / Gas
Various Marine Application
Refrigeration / Fuel Oil
Industrial RO Water Supply

Material of Construction :

Suction Cover	: CI FG 260
Delivery Cover	: CI FG 260
Intermediate Parts	: CI FG 260
Impeller	: H.T. Brass
Shaft	: Stainless Steel
Shaft Sealing	: Gland Packing / Mech. Seal
Special materials also available	

Constructional Features :

Horizontal, lateral channel, self-priming design for continuous operation handling clear liquid free from any suspended particle. Suction and Delivery branches are vertical and flanges are oval. Counter flanges are provided with BSP thread. Pumps are provided with one grease lubricated ball bearing and one bush bearing flushed by liquid handled. For special applications mechanical seal can be fitted.



- Tolerance on Capacity + 10% at rated head and rated R.P.M.
- Capacity applies to liquid at barometric height of 760 mm mercury and at a temperature of 30°C
- Power Inputs indicated above are for specific gravity of 1.0 and viscosity of 1 cSt.
- For Hot water pump 'H', capacity is reduced.
- For Suction lift of more than 4 M. capacity is reduced.



Manufactured By :

SMS

PUMPS & ENGINEERS

Works : 195, PUSHPAK INDUSTRIAL ESTATE,
(NIKA TUBE COMPOUND), PHASE-1,
GIDC, VATVA, AHMEDABAD-382 445.
Ph. : 079-29295783, M : 8530 566772
E-mail : smspumps@gmail.com,
Web : www.smspumps.com