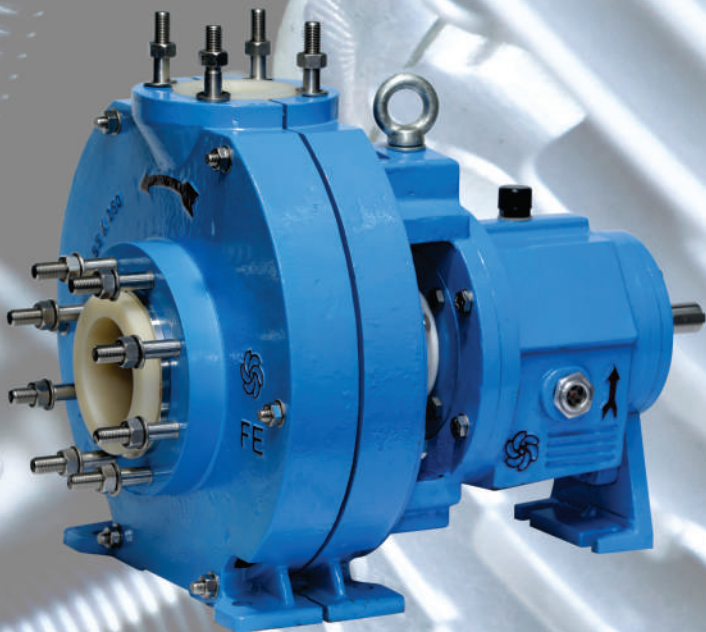




**Fluorolined  
Equipment Pvt. Ltd.**

TM



**PVDF Mechanical Seal ISO 2858 / 5199 Pumps**



## Company Details

Fluorolined Equipment Pvt. Ltd. is one of the largest manufacturers of highly efficient Non-Metallic Pumps in ISO dimensions covering wide spectrum of applications in corrosive environments with over 30 Models to offer.

We are equipped with highly sophisticated and state of the art Manufacturing and Moulding Facilities enabling us to provide highly accurate products for the pumping Industry with wide customer network worldwide offering Sales and Service Support. The company has been serving nearly 80% of the steel and chemical industries since last three decades.

## Introduction of PVDF

The fluorinated polymers are widely appreciated for their remarkable chemical inertness and their excellent resistance to aging.

Polyvinylidene Fluoride (PVDF) offers the Specific advantage of easy processing in accordance with all the conventional methods used in plastic industry. PVDF polymerized, according to its own special process, offer a high degree of crystallinity to that by other processes, resulting among other things in superior thermo-mechanical properties.

The Intrinsic technical superiority is one of the reasons for which PVDF has achieved success on the world market for more than 25 years.

But nothing is possible without a genuine quality assurance policy which Fluorolined Equipment follows with their continuous efforts for Total Quality Management over their products & services

## Technical Data

Operating Frequency	50Hz	60Hz
Capacity[Q] up to	500 m³/hr ( 2200 US gpm)	3100 US gpm (700 m³/hr)
Head [H] up to	120mts (394 ft)	492 ft (150mts)
Motor Power [P] up to	150HP ( 115 kW)	170HP (130 kW)
Viscosity up to	150 mPas (cP)	
Suction Lift up to	8 m ( 26 ft ) with priming chamber *	
Maximum Working Pressure	12 bar (175 psi)	
Maximum Specific Gravity [SG]	1.8 - 3	
Minimum Continuous Flow [MCF]	3 m³/hr ( 13 US gpm)	
Maximum Temperature	PVDF:120°C(250°F)	
Suction & Delivery Connection	ANSI B16.5 - Class 150 , DIN ND 10	
Shaft Seal	Single (TB / TBR), DROTT, IMS,DMS & SS	
Bearing	Rolling Element Bearing	
Lubrication	Grease / Oil	
Motor Compatibility	IS 1231 , IEC 72 - 1 , NEMA*	
*available on request		



# PLC PUMP 3D CROSS SECTION FOR 1.625 SERIES

## Backplate / Stuffing Box :-

Injection moulded PVDF stuffing box with large bores to accommodate single and double mechanical seal for wider applications of clear liquids and slurries.

## Casing Armour :-

High wall thickness casing armour with encapsulated casing liner resulting in taking effective piping loads-static and dynamic-protecting the expensive casing liner from internal and external corrosion. High walled thickness even provides efficient and smooth flow of the pumping media.

## Casing Liner :-

High wall injection moulded PVDF casing liner with intrinsic channel design for uninterrupted flow of the acids achieving maximum efficiency and resulting in powder reduction.

## Impeller :-

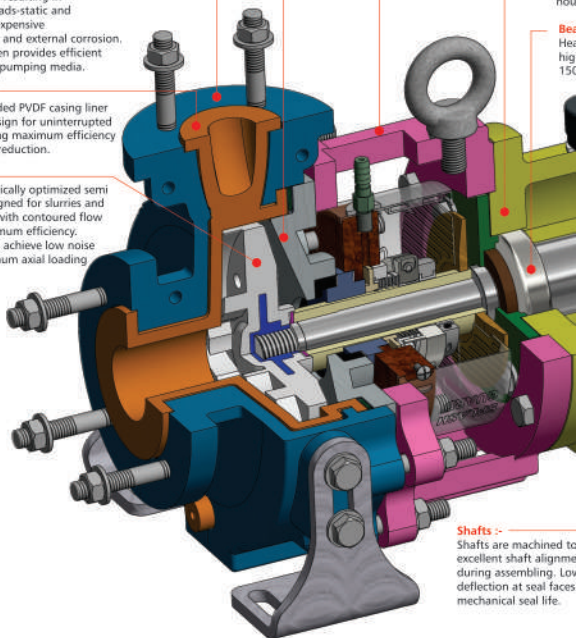
Best in class hydrodynamically optimized semi open radial impeller designed for slurries and passages of small solids with contoured flow passages achieving maximum efficiency. Impellers are designed to achieve low noise and vibration with minimum axial loading on bearing and seal.

## Adopter:-

Rugged individual bearing housing for ease of maintenance and

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## Shafts :-

Shafts are machined to excellent shaft alignment during assembling. Low deflection at seal faces mechanical seal life.



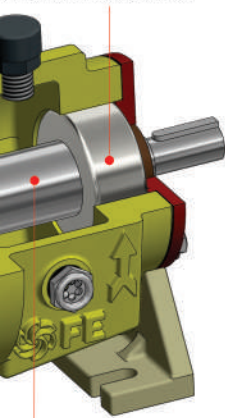
block - adpater design  
and assembly,

#### Bearing Housing:-






base and oil lubricated bearing frames with  
pump oil sump design enabling longer life in  
hrs for the bearing.

#### Bearings:-

heavy thrust and roller bearings capable of withstanding  
high axial and radial loads optimizing bearing life up to  
10000 hrs in normal working conditions.



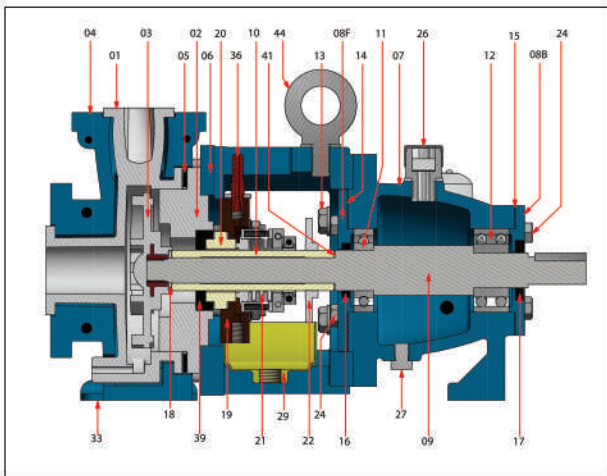
finest tolerance leading to  
alignment and perpendicularity  
high stiffness ratio results in  
thus maximizing

-  CASING LINER
-  BACK PLATE
-  IMPELLER
-  CASING ARMOUR
-  ADAPTOR
-  BEARING BLOCK
-  FRONT SIDE BEARING COVER
-  BACKSIDE BEARING COVER
-  SHAFT
-  SHAFT SLEEVE
-  BALL BEARING
-  OIL PAPER FRONT & BACK SIDE
-  OIL SEAL
-  WASHER FOR IMPELLER AND SLEEVE SEALING
-  LOCATING FLANGE
-  STATIONARY UNIT
-  ROTARY UNIT
-  DEFLECTOR
-  BEARING BLOCK LEG
-  CASING ARMOUR LEG
-  SPLASH GUARD
-  EYE BOLT
-  CFT BUSH
-  OIL LEVEL INDICATOR
-  OIL BREATHER
-  FASTENERS & KEY
-  NOZZLE (COOLING WATER INLET)
-  ENVELOPE GASKET





# Series I - 1.375"



## Part List ( PLC 1.375 Series )

PART NO	DESCRIPTION	M.O.C.	QTY.
01	CASING LIVER	PVDF	01 NO.
02	BACK PLATE	PVDF	01 NO.
03	IMPELLER	PVDF	01 NO.
04	CAGE RING	SG IRON	01 NO.
05	ENVELOPE GASKET	EPDM+PTFE	01 NO.
06	ADAPTOR	CAST IRON	01 NO.
07	BEARING BLOCK WITH LEG	SG IRON	01 NO.
08F	FRONT SIDE BEARING COVER	CAST IRON	01 NO.
08B	BACK SIDE BEARING COVER	CAST IRON	01 NO.
09	SHAFT-SHAFT KEY	EN19/55316/55410	01 NO.
10	SHAFT SLEEVE	CERAMIC/HAFT-C/ALLOY 20	01 NO.
11	BALL BEARING- INBOARD	SKF 6207	01 NO.
12	BALL BEARING- OUTBOARD	2XL 3036	01 NO.
13	ADAPTOR HARDWARE	SS	1 SET (BANDS)
14	OIL PAPER FOR FRONT BEARING COVER	OIL PAPER	01 NO.
15	OIL PAPER FOR BACK BEARING COVER	OIL PAPER	01 NO.
16	OIL SEAL FRONT SIDE	NEOPRENE	01 NO.
17	OIL SEAL BACK SIDE	NEOPRENE	01 NO.
18	WASHER FOR IMPELLER & SLEEVE SEALING	PTFE	01 NO.
19	LOCATING FLANGE	NYLON	01 NO.
20	SEPARATOR UNIT OF MECH SEAL	CERAMIC/SS	01 NO.
21	ROTARY UNIT OF MECH SEAL	GFT/SS	01 NO.
22	DEFLECTOR	PP	01 NO.

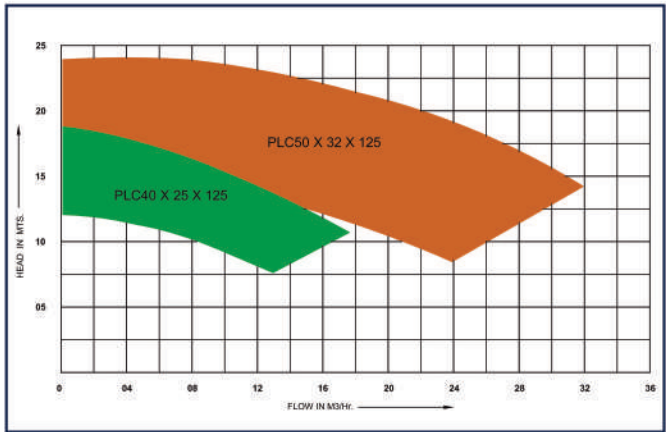
\* Parts not shown in cross section view

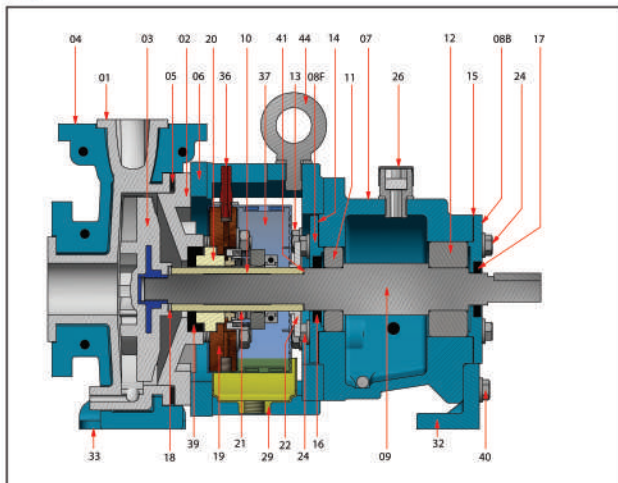
PART NO	DESCRIPTION	M.O.C.	QTY.
*23	CONSTANT LEVEL OILER	AL & POLYCARBONATE	01 NO.
24	HARDWARE FOR FRONT & BACK BEARING COVER	SS	1 SET (08 NOS)
*25	BOLTS FOR CLAMPING MECH. SEAL	SS	1 SET (04 NOS)
26	OIL BREATHER/ OIL PRIMING PLUG	STEEL	01 NO.
27	OIL DRAIN PLUG	STEEL	01 NO.
*28	COUPLING	CAST IRON	01 NO.
29	DRIP TRAY WITH NOZZLE	PP	01 NO.
*30	BASE PLATE	M.S.PLB.	01 NO.
*31	CAGE RING HARDWARE	SS	01 SET (08 NOS)
33	CASING ARMOUR LEG	SS-304	01 SET (02 NOS)
*34	CASING ARMOUR LEG HARDWARE	SS	04 NO.
*35	COUPLING GUARD	PP/M.S(ALL)	01 NO.
36	NOZZLE (COOLING WATER INLET)	PVDF	01 NO.
*38	OIL LEVEL INDICATOR	ALUMINUM-GLASS	01 NO.
39	OFT BUSH FOR BACK PLATE	CFT	01 NO.
41	WASHER FOR SHAFT & SHAFT SLEEVE (BACK SIDE)	PTFE	01 NO.
*42	DRIP PAN TRAY FOR BASE FRAME WITH NOZZLE	PP	01 NO.
*43	LOCATION BOLT	SS	02NO.
44	EYE BOLT	STEEL	01 NO.
*45	PUMP FLANGE HARDWARE (SUCTION & DELIVERY)	SS	01 SET (08 NOS)





## Pumps Performance Characteristics at 2900 RPM





## Part List ( PLC 1.675 Series )

PART NO	DESCRIPTION	M.O.C.	QTY.
01	CASING LINER	PVDF	01 NO.
02	BACK PLATE	PVDF	01 NO.
03	IMPELLER	PVDF	01 NO.
04	CASING ARMOUR	CAST IRON	01 NO.
05	ENVELOPE GASKET	EPDM+PTFE	01 NO.
06	ADAPTOR	CAST IRON	01 NO.
07	BEARING BLOCK	CAST IRON	01 NO.
08F	FRONT SIDE BEARING COVER	CAST IRON	01 NO.
08B	BACK SIDE BEARING COVER	CAST IRON	01 NO.
09	SHAFT+SHAFT KEY	EN19/5516/SA10	01 NO.
10	SHAFT SLEEVE	CERAMIC/HAFT-C/ALLOY 20	01 NO.
11	BALL BEARING- INBOARD	6208-2Z SKF	01 NO.
12	BALL BEARING- OUTBOARD	5308-2Z NACH/3308-2Z SKF	01 NO.
13	ADAPTOR HARDWARE	SS	1 SET (04 NOS)
14	OIL PAPER FOR FRONT BEARING COVER	OIL PAPER	01 NO.
15	OIL PAPER FOR BACK BEARING COVER	OIL PAPER	01 NO.
16	OIL SEAL FRONT SIDE	NEOPRENE	01 NO.
17	OIL SEAL BACK SIDE	NEOPRENE	01 NO.
18	WASHER FOR IMPELLER & SLEEVE SEALING	PTFE	01 NO.
19	LOCATING FLANGE	NYLON	01 NO.
20	STATIONARY UNIT OF MECH SEAL	CERAMIC/SS	01 NO.
21	ROTARY UNIT OF MECH SEAL	GFT/SS	01 NO.
22	DEFLECTOR	PP	01 NO.
*23	CONSTANT LEVEL OILER	AL & POLYCARBONATE	01 NO.

PART NO	DESCRIPTION	M.O.C.	QTY.
24	HARDWARE FOR FRONT & BACK BEARING COVER	SS	1 SET (08 NOS)
*25	BOLTS FOR CLAMPING MECH SEAL	SS	1 SET (04 NOS)
26	OIL BREATHER/ OIL FILLING PLUG	STEEL	01 NO.
*27	OIL DRAIN PLUG	STEEL	01 NO.
*28	COUPLING	CAST IRON	01 NO.
29	DRIP TRAY WITH NOZZLE	PP	01 NO.
*30	BASE PLATE	M.S.FAB.	01 NO.
*31	CASING HARDWARE	SS	01 SET (08 NOS)
32	BEARING BLOCK LEG	SS IRON	01 NO.
33	CASING ARMOUR LEG	SS 304	1 SET (02 NOS)
*34	CASING ARMOUR LEG HARDWARE	SS	04 NOS
*35	COUPLING GUARD	PPYM STALL	01 NO.
36	NOZZLE (COOLING WATER INLET)	PVDF	01 NO.
37	SPLASH GUARD WITH SCREW	PP	02 SET
*38	OIL LEVEL INDICATOR	ALUMINIUM+GLASS	01 NO.
39	CFT BUSH FOR BACK PLATE	CFT	01 NO.
40	BEARING BLOCK TO LEG HARDWARE	SS	1 SET (02 NOS)
41	WASHER FOR SHAFT & SHAFT SLEEVE (BACK SIDE)	PTFE	01 NO.
*42	DRIP PAN TRAY FOR BASE FRAME WITH NOZZLE	PP	01 NO.
*43	LOCATION BOLT	SS	02 NO.
44	EYE BOLT	STEEL	01 NO.
45	SUCTION FLANGE	SS	01 NO.

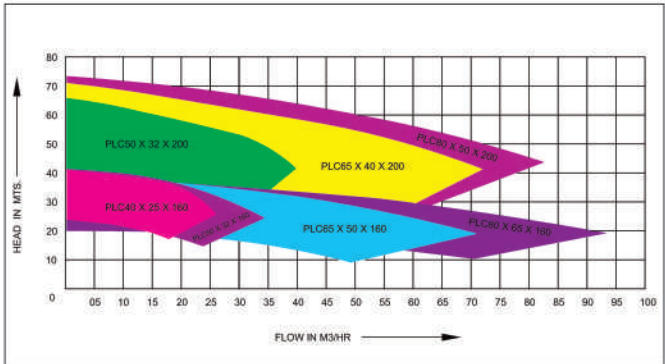
\* Parts not shown in cross section view



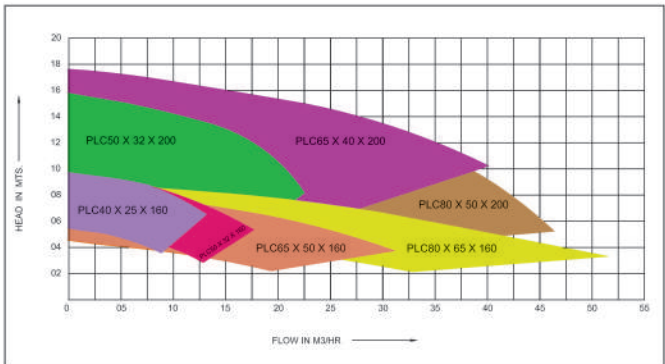


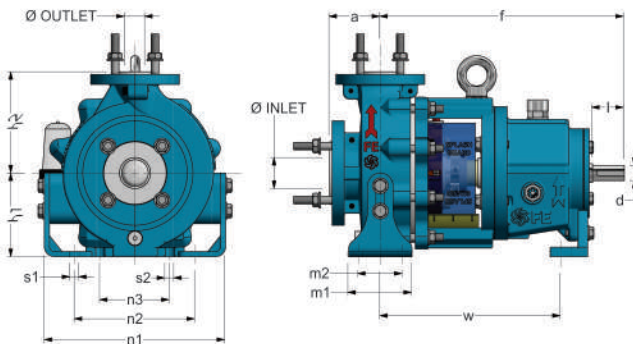
## Pumps Performance Characteristics

**2900 RPM**



**1440 RPM**





## Mechanical Seal Size : 1.375"

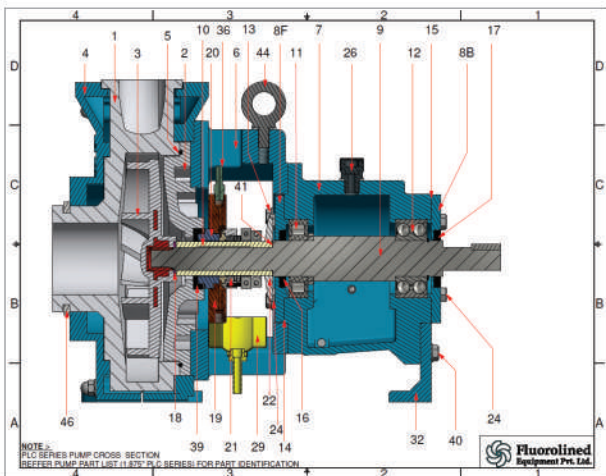
MODELS	$\varnothing$ inlet	$\varnothing$ outlet	a	f	h1	h2	l	m1	m2	n1	n2	n3	w	s1	s2	d
PLC40X25X125	40	25	80	385	112	140	50	100	70	258	140	110	285	M12	M12	24
PLC50X32X125	50	32	80	385	112	140	50	100	70	258	140	110	285	M12	M12	24

All Dimensions in mm

## Mechanical Seal Size : 1.625"

MODELS	$\varnothing$ inlet	$\varnothing$ outlet	a	f	h1	h2	l	m1	m2	n1	n2	n3	w	s1	s2	d
PLC40X25X160	40	25	80	385	132	160	50	100	70	286	190	110	285	M12	M12	24
PLC50X32X160	50	32	80	385	132	160	50	100	70	286	190	110	285	M12	M12	24
PLC65X50X160	65	50	80	385	132	160	50	100	70	286	190	110	285	M12	M12	24
PLC80X65X160	80	65	100	385	160	180	50	100	70	286	212	110	285	M12	M12	24
PLC50X32X200	50	32	80	385	160	180	50	100	70	356	190	110	285	M12	M12	24
PLC65X32X200	65	40	100	385	160	180	50	100	70	366	212	110	285	M12	M12	24
PLC80X50X200	80	50	100	385	160	200	50	100	70	366	212	110	285	M12	M12	24

All Dimensions in mm



## Part List ( PLC 1.875 Series )

PART NO.	DESCRIPTION	M.O.C.	QTY.
01	CASING LINER	PVDF	01 NO.
02	BACK PLATE	PVDF	01 NO.
03	IMPELLER	PVDF	01 NO.
04	CASING ARMOUR	CAST IRON	01 NO.
05	10 RING FOR BACK PLATE	WITCH	01 NO.
06	ADAPTOR	CAST IRON	01 NO.
07	BEARING BLOCK	CAST IRON	01 NO.
08F	FRONT SIDE BEARING COVER	CAST IRON	01 NO.
08B	BACK SIDE BEARING COVER	CAST IRON	01 NO.
09	SHAFT + SHAFT KEY	EN41B316SSB410	01 NO.
10	SHAFT SLEEVE	CONFORMIST-CHALCOY 35	01 NO.
11	CYLINDRICAL ROLLER BEARING - INBOARD	SKF NJ 310	01 NO.
12	BALL BEARING - OUTBOARD	SKF - 3103	01 NO.
13	ADAPTOR HARDWARE	SS	1 SET (26 NOS)
14	OIL PAPER FOR FRONT BEARING COVER	OIL PAPER	01 NO.
15	OIL PAPER FOR BACK BEARING COVER	OIL PAPER	01 NO.
16	OIL SEAL, FRONT SIDE	NEOPRENE	01 NO.
17	OIL SEAL, BACK SIDE	NEOPRENE	01 NO.
18	WASHER FOR IMPELLER & SLEEVE SEALING	PTFE	01 NO.
19	LOCATING FLANGE	HYLAM	01 NO.
20	STATIONARY UNIT OF MECH. SEAL	CERAMIC / SSC	01 NO.
21	ROTARY UNIT OF MECH. SEAL	GFT 1 SEC	01 NO.
22	DEFLECTOR	PP	01 NO.
* 23	CONSTANT LEVEL OILER	AL & POLYCARBONATE	01 NO.

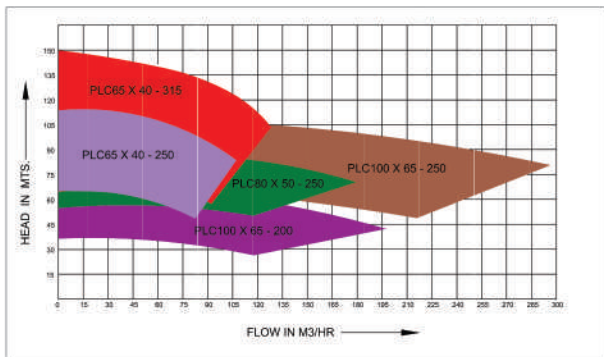
\* Parts not shown in cross section view

PART NO.	DESCRIPTION	M.O.C.	QTY.
24	HARDWARE FOR FRONT & BACK BEARING COVER	SS	1 SET (26 NOS)
* 25	BOLTS FOR CLAMPING MECH. SEAL	SS	1 SET (26 NOS)
26	OIL BREATHER / OIL PRIMING PLUG	STEEL	01 NO.
* 27	OIL DRAIN PLUG	STEEL	01 NO.
* 28	COUPLING	CAST IRON	01 NO.
29	DIP TRAY WITH NOZZLE	PP	01 NO.
* 30	BASE PLATE	M.S. F&B	01 NO.
* 31	CASING ARMOUR HARDWARE	SS	1 SET (26 NOS)
32	BEARING BLOCK LEG	SG IRON	01 NO.
* 33	COUPLING GUARD	PP / M.S. / ALU	01 NO.
35	NOZZLE ( COOLING WATER INLET )	PVDF	01 NO.
37	SPLASH GUARD WITH 2 SCREW	PP	01 NO.
* 38	OIL LEVEL INDICATOR	ALUMINUM + GLASS	01 NO.
39	GFT BUSH FOR BACK PLATE	GFT	01 NO.
40	HARDWARE FOR LEG TO BEARING BLOCK	SS	02 NO.
41	WASHER FOR SHAFT & SHAFT SLEEVE (BACK SIDE)	PTFE	01 NO.
* 42	DIP PAN TRAY FOR BASE FRAME WITH NOZZLE	PP	01 NO.
* 43	LOCATOR BOLT	STEEL	02 NO.
44	EYE BOLT	STEEL	01 NO.
* 45	PUMP FLANGE HARDWARE ( SUCTION & DELIVERY )	SS	01 SET
46	LOCATING RING FOR CASING LINER	SS	01 NO.

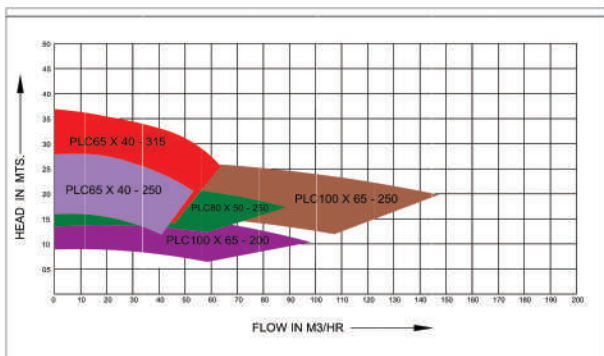


## Pumps Performance Characteristics

2900 RPM

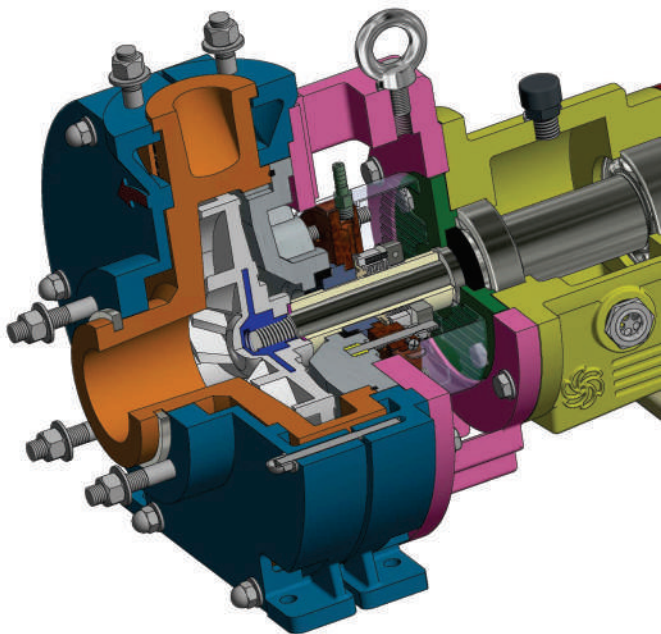


1440 RPM





## PLC PUMP 3D CROSS SECTION FOR 1.875 SERIES



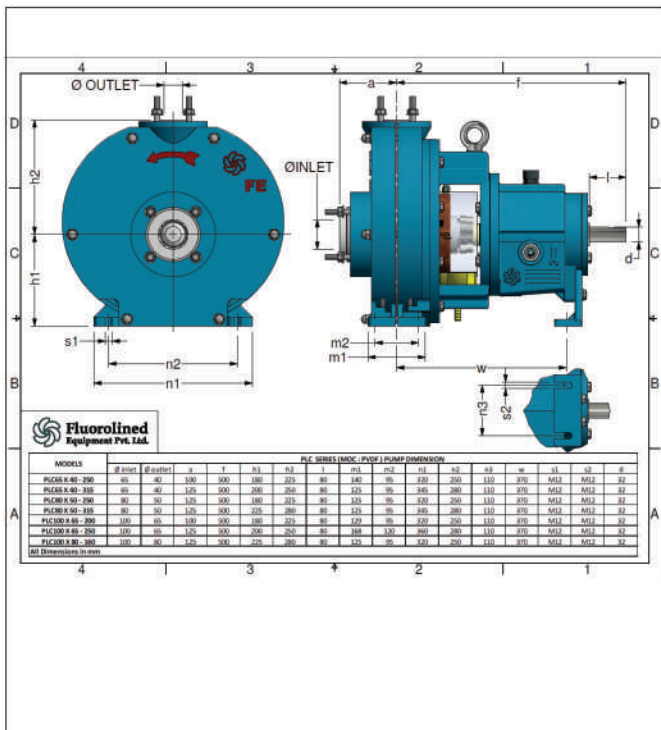


-  CASING LINER
-  BACK PLATE
-  IMPELLER
-  CASING ARMOUR
-  'O' RING FOR BACK PLATE
-  ADAPTOR
-  BEARING BLOCK
-  FRONT SIDE BEARING COVER
-  BACK SIDE BEARING COVER
-  SHAFT
-  SHAFT SLEEVE
-  CYLINDRICAL ROLLER BEARING
-  BALL BEARING
-  OIL PAPPER FRONT & BACK SIDE
-  OIL SEAL
-  WASHER FOR IMPELLER & SLEEVE SEALING
-  LOCATING FLANGE
-  STATIONARY UNIT
-  ROTARY UNIT
-  DEFLECTOR
-  BEARING BLOCK LEG
-  CASING ARMOUR LEG
-  SPLASH GUARD
-  EYE BOLT
-  CFT BUSH
-  OIL LEVEL INDICATOR
-  OIL BREATHER
-  FASTENERS & KEY
-  NOZZLE (COOLING WATER INLET)
-  LOCKING RING FOR CASING LINER














# ISO 2858 / 5199 Pump Dimensions


































# Modular Interchangeability Chart

## Series I - 1.375"

Pump Model (Suct. Dia. x Del. Dia. - Imp. Dia.) in mm	Casing Armour with Liner		Casing Liner		Impeller		Stuffing Box (Backplate)		Adaptor		Shaft, Bearing Block and Leg Assembly
PLC 40X25X125		←		←							
PLC 50X32X125		←		←		←		←		←	

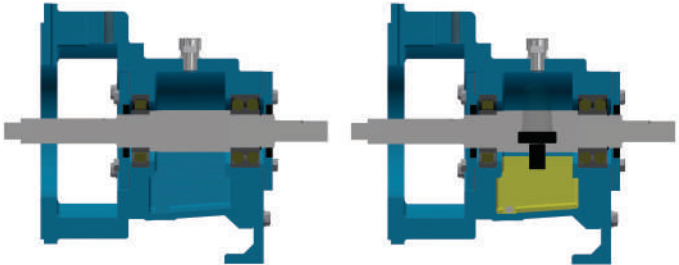
## Series II - 1.625"

Pump Model (Suct. Dia. x Del. Dia. - Imp. Dia.) in mm	Casing Armour		Casing Liner		Impeller		Stuffing Box (Backplate)		Adaptor		Shaft & Bearing Block		Leg
PLC 40X25X160		←		←									
PLC 50X32X160		←		←		←		←				←	
PLC 65X50X160		←		←		←		←					
PLC 80X65X160		←		←		←		←		←			
PLC 50X32X200		←		←		←						←	
PLC 65X40X200		←		←		←		←					
PLC 80X50X200		←		←		←							



## Series III - 1.825"

Pump model/Modelo, Dia e Del (Dia - Imp., Del. In mm)	Casing arrow	Casing Uniter	Impeller	Shafting box (Backbone)	Adapter	Shaft, bearing kit& leg assembly	Leg	Group / Series
PUC300 X 80 - 130								1.825"
PUC300 X 80 - 230								
PUC300 X 100 - 230								
PUC300 X 40 - 230								
PUC300 X 60 - 230								
PUC300 X 40 - 315								
PUC300 X 100 - 315								



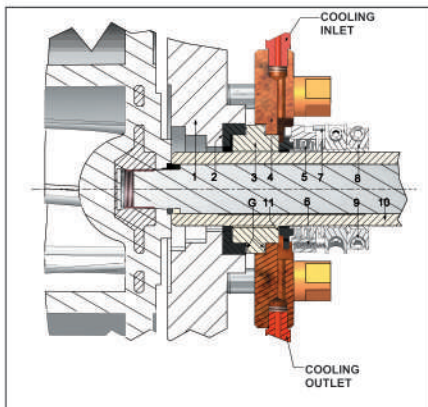
### Features

We use bearings from world's most reputed manufacturers like SKF and ZKL providing upto 15000 Service Life Hours for Bearings. Greased for Life bearings enables the user to run smaller Pumps with ease without paying attention to regular maintenance of the bearings. However periodic maintenance can be required.

Lubricated Oil Bearings in larger Pumps promises higher service life for the Pumps. Highly intrinsic bearing housing design leads to Lower Temperature, Noise and Vibration levels in Pumps leading to smooth continuous operation.



## Single Outside Mounted Teflon Bellow Seal

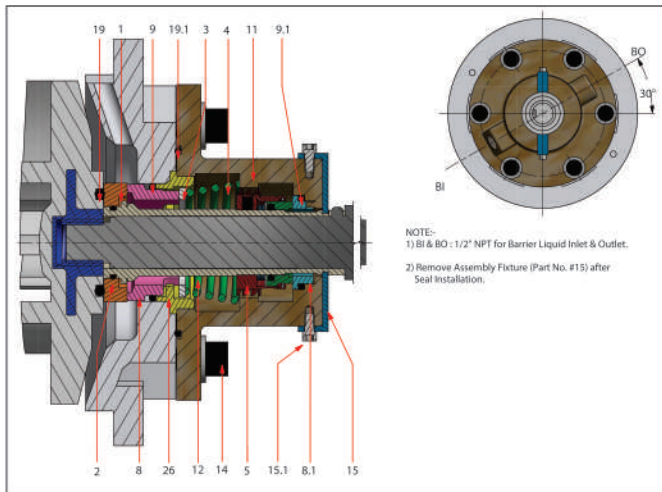


## Part List

PART NO	DESCRIPTION	M.O.C.	QTY.
1	BACK PLATE	PVDF	1
2	BACK PLATE BUSH	CFR	1
3	STATIONARY RING	CERAMIC/SIC	1
4	LOCATING FLANGE	NYLON	1
5	BELLOW	P.T.F.E.	1
6	SPRING	HAST-C	4/6
7	DRIVE PIN	HAST-C	2
8	COLLAR	SS 316	1
9	CAP SCREW	SS 304	2
10	SLEEVE	CERAMIC / SIC / HAST-B / ALLOY 20 / TITANIUM / PVDF - COATED	1
11	ROTARY FACE	GFT / SIC / SFT / CFR	1
16	GASKET	P.T.F.E.	2



## Inside Mounted Double Mechanical Seal



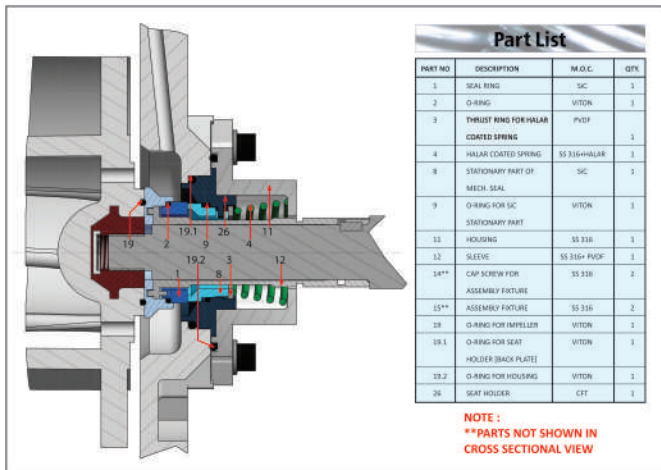
## Part List

PART NO	DESCRIPTION	M.O.C.	QTY.
01	PRIMARY ROTARY PART	SIC	01 NO.
02	O RING FOR SLEEVE	VITON	01 NO.
03	THRUST RING FOR HALAR COATED SPRING	PVDF	01 NO.
04	HALAR COATED SPRING	SS 316 + HALAR	01 NO.
05	SECONDARY ROTARY ASSEMBLY	SS 316 + CARBON	01 NO.
08	PRIMARY STATIONARY PART	SIC	01 NO.
8.1	SECONDARY STATIONARY PART	SIC	01 NO.
09	O RING FOR SIC STATIONARY PART	VITON	01 NO.
9.1	O RING FOR SECONDARY SIC STATIONARY PART	VITON	01 NO.
11	HOUSING	SS 316	01 NO.
12	SLEEVE	SS 316	01 NO.
14	ALLEN CAP SCREW + WASHER FOR HOUSING	SS 316	06 NO.
15	ASSEMBLY FIXTURE	SS 316	02 NO.
15.1	ALLEN CAP SCREW FOR ASSEMBLY FIXTURE	SS 316	02 NO.
19	O RING FOR IMPELLER	VITON	01 NO.
19.1	O RING FOR HOUSING	VITON	01 NO.
26	SEAT HOLDER	CPT	01 NO.





## Single Inside Mounted Special Seal Without External Water Cooling



## Features

1. Complete elimination of water requirement. The seal faces are self lubricated.
2. Advanced flushing arrangement with the use of impeller and the backplate.



### Advantages of Internal Mechanical Seal

1. Inside mounted arrangement having a hard silicon carbide face behind the impeller not allowing any liquid (HCL) or slurry particles ( $\text{FeCl}_3$ ,  $\text{Fe}_3\text{Cl}_4$ ) to get out (As compared to outside mounted TBR).
2. All the parts are product protected.
3. Three silicon carbide faces to avoid scoring effect on the stuffing box due to hard and abrasive Ferric Chloride particles.
4. Sleeves and Springs are all PVDF hard coated on the metal parts as compare to brittle ceramic sleeves which develops cracks on failure due to back pressure
5. Cartridge Type assembly easy to install and maintain.
6. Continuous circulation of water should be given.
7. Can be used for high pressure applications due to reverse Balanced Mechanical Seal Construction
8. The ceramic sleeve which is very brittle is totally eliminated and liquid at no point of time will enter the shaft area.
9. The internal seal is backed by two robust silicon carbide out of which one is stationary and the other is rotary and also supported by another SiC which totally stops the liquid from entering the shaft area.
10. It's a foolproof sealing solution for highly corrosive, erosive and abrasive liquids handled by nonmetallic pumps.

### Thermosyphon Pot Assembly

1. Extra backup pressure to the Inboard Rotary- Stationary assembly.
2. Offers pressurised cooling to secondary faces eliminating complete seal failure when primary faces being damaged.
3. Thermosyphon pot facilitates zero process emission ,removes frictional heat generated by seal faces and enhances seal face life.



☐ **Steel Pickling Plants**

Pickling acid recirculation, Rinse recirculation Spent/Waste acid transfer, Fresh acid transfer.

☐ **Acid Regeneration Plants**

Concentrated waste pickle liquor, fresh acid transfer

☐ **Pesticide & Insecticide Plants**

Various kinds of toxic and hazardous chemicals with our without slurries

☐ **Caustic Chlorine Plants**

HCL loading/unloading, Chloride destruction, Anolyte blowdown, Drying tower.

☐ **Dyes and Intermediates Plants**

Acidic chemicals with slurries, Filter press application

☐ **Pharmaceutical and Bulk Drug**

Pure to slightly contaminated, Toxic, Explosive or Environmentally harmful media such as acids, alkalis and solvents.

☐ **Environmental**

Industrial waste water treatment (ETP), Scrubber recirculation.

☐ **Electroplating**

☐ **Power plants**

☐ **Auto paint shops**

☐ **Chlorinated Parafin Wax (CPW) industries.**



## Robust, User Friendly & Maintenance Free Pumps

- ❑ **Heavy Walled Thickness** PVDF parts for tackling higher corrosion, abrasion and erosion effect with strong mechanical strength. [Thickest in the industry]
- ❑ Encapsulated with casing armour shields the parts for **Heavy Duty** chemical pumping at high temperature.
- ❑ Intrinsic power frame design with **Large Oil Reservoir** as compared to competitors with excellent movements of oil around bearings reduces temperature, noise and vibration.
- ❑ **Magnetic Drain plug** for draining out all contaminations.
- ❑ **Innovative Oil Breather** having best heat dissipation and avoiding the entry of water or any other particles during mashing of the pumps.
- ❑ Bearing Housing bores and shafts finished to **15** microns having no run outs.
- ❑ The best internal mechanical seal developed for aggressive chemicals and installed at **500** trusted customers.
- ❑ **Large Bore Stuffing Box** for higher seal life when pumping abrasive slurries.





- ❑ Energy efficient complete ISO 2858 standard design - Better efficiencies at lower power consumption.
- ❑ Semi-open impeller with a well contoured vane design for the most abrasive and corrosive clear liquids and slurries.
- ❑ Rugged individual Bearing block - adaptor design for ease of maintenance and assembly.
- ❑ Low Shaft stiffness ration minimizing shaft deflection for improved seal and bearing life , thus longer Mean Time Between Failures
- ❑ Various mechanical seal options- Single Teflon Bellow , Double Seal , Special seal without external water cooling
- ❑ Factory fitted robust base frames (FRP coating option available) with shims and level arrangement bolts for better alignment.
- ❑ PP coupling guards and drip trays which take care of acidic fumes and leakages.
- ❑ Excellent epoxy paint finish to protect against external corrosion.
- ❑ An option for OSHA STD coupling guards.
- ❑ The advantage of two piece power frame is that at the time of seal leakage only the adapter needs to be changed and not the entire power frame.
- ❑ Bearing protectors (Labyrinth Seals) are provided as an optional feature.

### FEPL v/s competitors

#### **Competitors : Closed or semi-open with nut design for wrong rotation**

**Our Answer:** Nut is an additional joint which leads to leakage through O-rings resulting in acid penetrating into the shaft area ultimately damaging the entire pump. Closed impeller leads to clogging in slurry applications affecting the pump performance.



**Fluorolined  
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TM

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**ISO 9001 : 2008  
CERTIFIED COMPANY**

*As development is a continuous process any changes in specifications is made without notice*

**WARRANTEE CLAUSE:** We stand guarantee only for the genuinity of PVDF Resin used in our pumps but do not stand guarantee for any kind of chemical, physical, & toxicological effects on the same by the liquid handled with our pumps. Since the conditions of handling and use are beyond our control, we make no guarantee of results. We assume no liability for injuries, damages or penalties resulting from its use whether or not our recommendations are followed. Our recommendations are only on the basis of our past experience and should not be taken as guarantee.