

GAL IMMERSION PUMPS



# FLUX CENTRIFUGAL IMMERSION PUMPS — QUALITY THAT SETS STANDARDS

Manufactured at our main plant, these ranges of immersion pumps are the result of extensive product and process evaluation by our research and development department.

They are a true FLUX product, from conception through to manufacture, assembly and testing. Their design philosophy, and the materials selected for their construction make them ideal for applications in the chemical industry, surface treatment, electroplating, printed circuit manufacturing, water treatment and wastewater treatment.

FLUX centrifugal immersion pumps can be used whenever liquids have to be transferred or circulated. They are suitable for use with a wide variety of acids and alkalis as well as other chemicals, typically coolants, lubricants and non-flammable solvents.

With delivery rates of up to 74 m<sup>3</sup>/h and delivery heads of maximum 35 m water column, FLUX centrifugal immersion pumps combine maximum efficiency with a robust and reliable construction, resulting in a pump that provides the ultimate in process security. These are features that you can rely on, each hour, 24 hours a day.

The mechanical seal types F 620 and F 640 are designed for typical liquid transfer operations, with either stationary or portable variants. These units compliment the well-proven barrel pumps range and have a higher output and kW-rating.

Top of the range, are the sealless units, these pumps complete the range of high output, high reliability immersion pumps. Designed for continuous use with a wide range of aggressive liquids, from acids to alkalis, the range includes the type F 706 – with only a sleeve bearing in contact with the liquid – or the types F 716 and F 726 - with a suspended free-flying shaft and no bearings or seals in contact with the liquid.

Three-phase drive motors are available as matched power units in kW-ratings from 0,37 to 5.5 kW, protected to IP 55 as well as explosion-proof to EEx e II T3 for models F 620, F 640, F 706 and F 726.

With immersion lengths from 300 to 4000 mm almost every application requirement can be met. The use of high-class materials such as Hastelloy C and polyvinylidenfluoride, together with polypropylene and stainless steel, are combined with design experience perfected over decades of pump manufacturing. This guarantees the long service life of FLUX centrifugal immersion pumps.

Detailed information and performance charts are shown on the following pages.

To receive a quotation compiled to your application, please could you to fill in the questionnaire on page 22.2 and return it to us.









# SAFE, POWERFUL, RELIABLE – THE NEW FLUX RANGE

With 4 different design formats within the vertical centrifugal immersion pump range FLUX offer a cost effective, reliable solution for many liquid transfer and circulating operations. With these pumps FLUX meet the requirements of the market with their forward-looking designs and the manufacture of high quality products.

Type F 706: 4 different sizes, sealles design with sleeve bearing, immersion length up to 2000 mm

Type F 620 and F 640: with mechanical seal in vertical and horizontal version



Type F 716:
compact design requires little
space for installation, version w

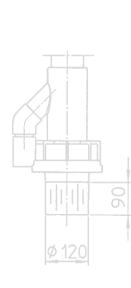
space for installation, version with support tube or support bars for continuous use, suitable for dry operation

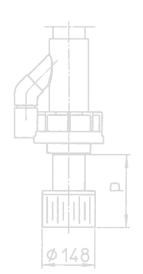


Type F 726:

very robust construction with shaft bearing located in a pedestal, version with support bars for continuous use, suitable for dry operation







Ø 195

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18-19	FLUX Centrifugal Immersion Pumps F 726 PP and F 726 PVDF Size 115 and 135 in polypropylene or polyvinylidenfluoride for delivery rates of up to 12 m <sup>3</sup> /h
20-21	FLUX Centrifugal Immersion Pumps F 726 PP and F 726 PVDF Size 185 and 230 in polypropylene or polyvinlydenfluoride for delivery rates of up to 45 m <sup>3</sup> /h
22-23	Dimensions of three-phase motors Questionnaire The great range of FLUX pumps

## FLUX CENTRIFUGAL IMMERSION PUMP F 620 S IN STAINLESS STEEL SIZE 15 AND 30

## **Typical Applications**

Transferring low flammability liquids up to a viscosity of 2500 mPas (cP) from containers or tanks, either open topped or closed.

Suitable for stationary or portable applications.

## **Construction features**

Centrifugal pump in stainless steel consisting of an inner tube and outer tube.

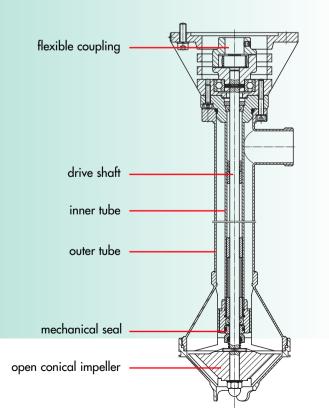
The centrifugal impeller in the pump housing is driven by the motor via the drive shaft. The drive shaft is supported by intermediate bearings within the inner tube, a mechanical seal separates the liquid from the bearings and upper shaft. This construction provides the ultimate in stability, and ensures the maximum integrity of the mechanical seal. With an open conical impeller.

Three-phase motors in differing kW-ratings are available as a matched power unit. Connection to the pump is made via a flexible coupling.

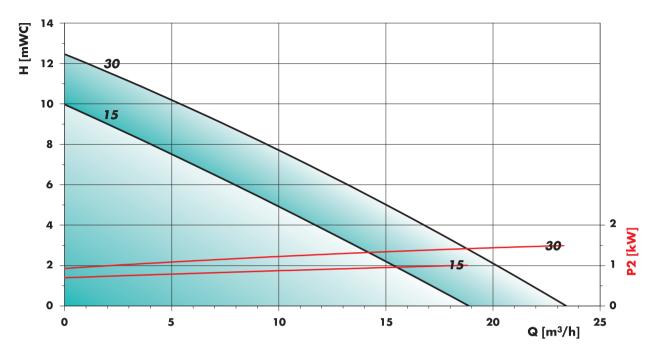


F 620 S-30 with suction strainer

## CONSTRUCTION FEATURES IN DETAIL



# TECHNICAL DATA Performance chart FLUX F 620 S-15 and F 620 S-30

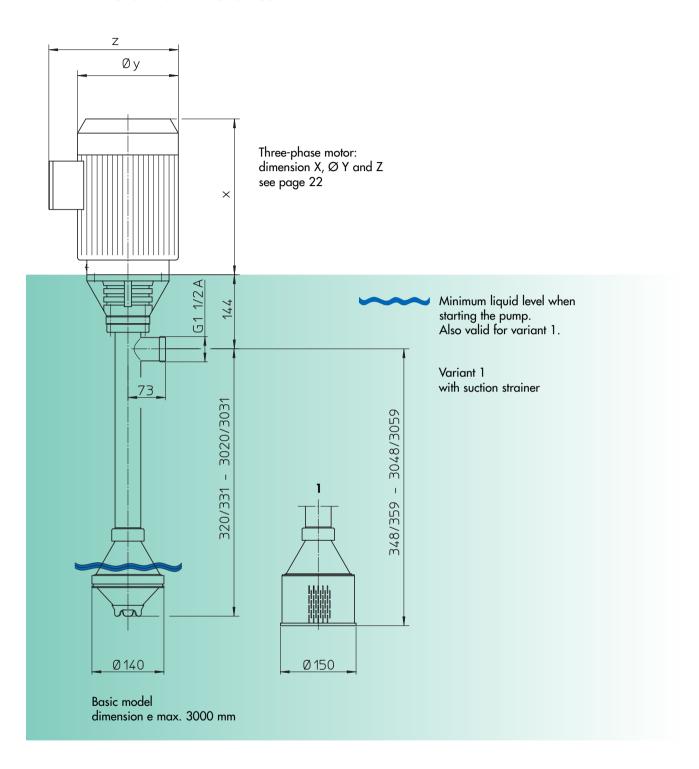


Measured values  $\pm$  10% determined with water (20 °C). Nominal speed n = 2850 rpm

In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.



# TECHNICAL DATA Dimensions F 620 S-15 and F 620 S-30





## CENTRIFUGAL IMMERSION PUMP F 620 S, THREAD ON OUTLET G 11/4 A (BSP 11/2" MALE), WITHOUT DRIVE MOTOR

Type / <u>Size</u>		F 620 S- <u>15</u>	F 620 S- <u>30</u>
Delivery rate Q m	ax.	19 m <sup>3</sup> /h	23 m³/h
Delivery head H m	ax.	10 m water column	12 m water column
Viscosity max.		2500 mPas (cP)	2500 mPas (cP)
Temperature max.		100 °C	100 °C
Seal type		mechanical seal in ceramic oxide, o-rings in FPM	
Material	Material shaft in stainless steel 1.4		4571/316 Ti, seal in FPM
Impeller	Impeller conical impeller in polypropylene (		version in stainless steel on request)
Pump housing		Ø 140 mm	Ø 140 mm
Part No.			
Immersion length	700 mm	620 23 001	621 23 001
	1000 mm	620 23 002	621 23 002
	1500 mm	620 23 003	621 23 003
Part numbers for i	mmersion leng	gth 300 to 3000 mm (in steps of 100 mm) on request.	

ran nonibers for infinersion length 300 to 3000 min (in steps of 100 min) on request.

Accessories:	Part No.					
Mounting flange in stainless steel 1.4571/316 Ti outside Ø 265 mm, pitch circle Ø 225 mm, 8 bores Ø 18 mm each	947 14 005					
Suction strainer in stainless steel 1.4571/316 Ti	001 10 232					
Hose connection in stainless steel, complete with nut in brass G 11/2 (BSP 11/2" female)						
for hose inside diameter DN 25	959 04 002					
for hose inside diameter DN 32	959 04 003					
for hose inside diameter DN 38	959 04 004					

## DRIVE MOTORS FOR CENTRIFUGAL IMMERSION PUMP F 620 S

#### Three-phase motors protected to IP 55, with motor protection switch or cable terminal box

Capacity	Voltage	Frequency	Nominal speed	Part No.	Part No.
P2				Version with motor protection switch	Version with cable terminal box
0,75 kW	230/400 V	50 Hz	2850 rpm	001 00 046	001 00 006
1,1 kW	230/400 V	50 Hz	2850 rpm	001 00 047	001 00 007
1,5 kW	230/400 V	50 Hz	2850 rpm	001 00 048	001 00 008
2,2 kW	230/400 V	50 Hz	2850 rpm	001 00 049	001 00 009
3,0 kW	400 V	50 Hz	2850 rpm	001 00 050	001 00 010
4,0 kW	400 V	50 Hz	2850 rpm	001 00 051	001 00 011

## Three-phase motors explosion-proof to $\mathbf{EEx}$ e II T3 with cable terminal box

Capacity	Voltage	Frequency	Nominal speed	Part No.	Part No.
P2				Three-phase motor with cable terminal box	Motor protection switch EEx de II C T6 to be mounted on the carrying handle
0,75 kW	230/400 V	50 Hz	2850 rpm	001 00 066	936 06 118
1,1 kW	230/400 V	50 Hz	2850 rpm	001 00 067	936 06 118
1,5 kW	230/400 V	50 Hz	2850 rpm	001 00 068	936 06 119
2,0 kW	230/400 V	50 Hz	2850 rpm	001 00 069	936 06 119
2,5 kW	400 V	50 Hz	2850 rpm	001 00 070	936 06 120
3,3 kW	400 V	50 Hz	2850 rpm	001 00 071	936 06 120

Accessories:	Part No.
Carrying handle for three-phase motors up to 3,0 kW	001 10 504
Carrying handle for three-phase motors up 4,0 kW	001 10 531
Carrying handle for three-phase motors explosion-proof up to 3,3 kW	001 10 567

## SCOPE OF SUPPLY

A complete vertical centrifugal immersion pump consists of: drive motor, pump and necessary accessories. Weight per pump: 15 – 45 kg depending on the pump size, immersion length and motor kW.

# FLUX CENTRIFUGAL IMMERSION PUMP F 640 PP in Polypropylene Size 15, 30, 15 Z and 30 Z

## Typical applications

Transferring low flammability liquids up to a viscosity of 2500 mPas (cP) from containers, tanks, either open topped or closed.

Transferring corrosive liquids in chemical processing and engineering, metal-working and electroplating together with water treatment and waste water treatment. Suitable for stationary or portable application.

## **Construction features**

L IMMERSION PUMPS

CENTRIFUGAL

Vertical centrifugal immersion pump in polypropylene consisting of an inner tube and outer tube.

The centrifugal impeller in the pump housing is driven by the motor via the drive shaft. The drive shaft is supported by intermediate bearings within the plastic sleeved steel inner tube, a mechanical seal separating the liquid from the bearings and upper shaft. This construction provides the ultimate in stability, preventing elongation of the plastic at high temperatures and ensures the maximum integrity of the mechanical seal.

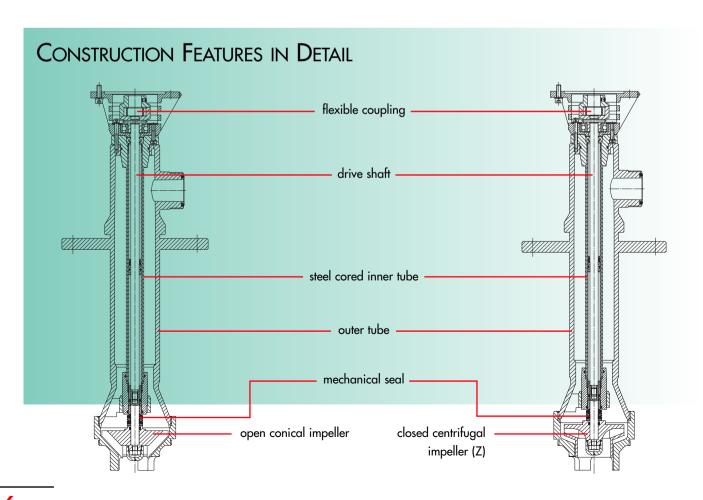
With an open conical impeller or a closed centrifugal impeller (Z).

The liquid is delivered between the inner and outer tubes to the pump outlet.

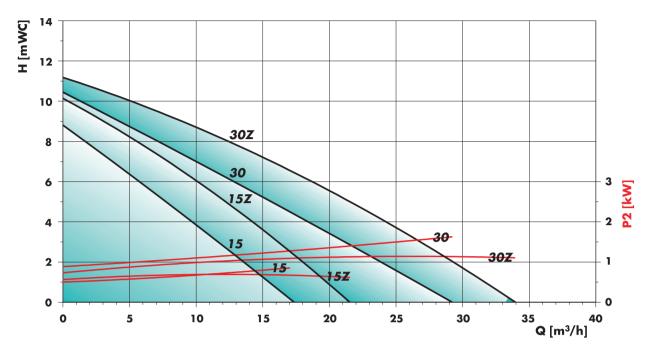
Three-phase motors in differing kW-ratings are available as a matched power unit. Connection to the pump is made via a flexible coupling.



F 640 PP-30 with suction strainer



# TECHNICAL DATA Performance chart F 640 PP-15, F 640 PP-30, F 640 PP-15 Z and F 640 PP-30 Z



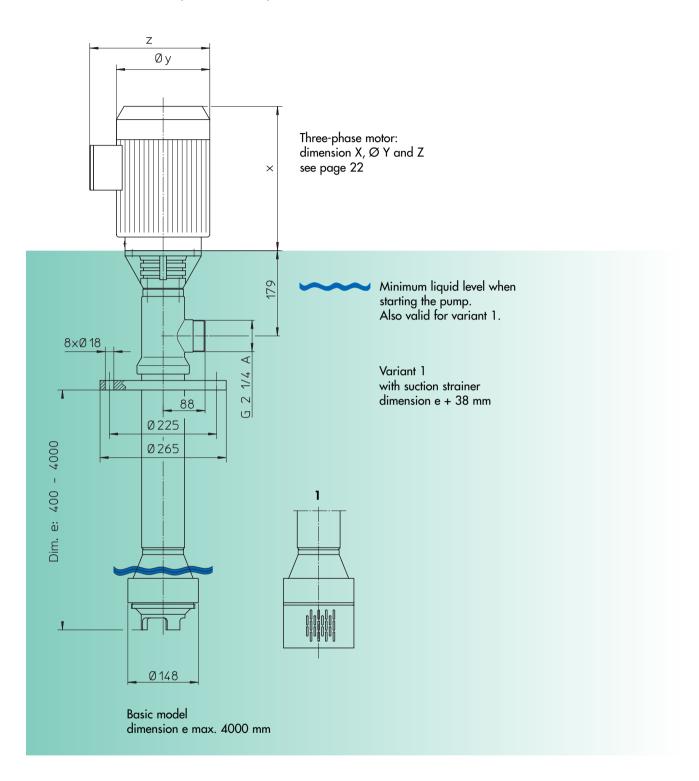
Measured values  $\pm$  10% determined with water (20 °C). Nominal speed n = 2850 rpm

In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.



## TECHNICAL DATA

## Dimensions F 640 PP-15, F 640 PP-30, F 640 PP-15 Z and F 640 PP-30 Z





<u>a</u>

CENTRIFUGAL IMMERSION PUMP

## CENTRIFUGAL IMMERSION PUMP F 640 PP, THREAD ON OUTLET G $2^{1}/_{4}$ A (BSP $2^{1}/_{4}$ " MALE), WITHOUT DRIVE MOTOR

Type / <u>Size</u>		F 640 PP- <u>15</u>	F 640 PP- <u>30</u>	F 640 PP- <u>15Z</u>	F 640 PP- <u>30Z</u>
Delivery rate G	Q max.	17 m³/h	29 m³/h	21 m³/h	34 m³/h
Delivery head	Н тах.	8 m water column	10 m water column	10 m water column	11 m water column
Viscosity max.		2500 mPas (cP)	2500 mPas (cP)	150 mPas (cP)	150 mPas (cP)
Temperature m	ax.	50 °C	50 °C	50 °C	50 °C
Seal type		mechanical seal in ceramic oxide / SiC, o-rings in FPM			
Material		shaft in Hastelloy C, seals in FPM			
Impeller		open conical i	impeller in PP	closed centrifugal impeller in PP	
Pump housing		Ø 148 mm	Ø 148 mm	Ø 148 mm	Ø 148 mm
Mounting flang	ge*	outside (	Ø 265 mm, pitch circle Ø	225 mm, 8 bores Ø 18 mm	each
Part No.					
	700 mm	640 41 407	640 41 607	640 41 507	640 41 707
Immersion length Dimension e	1000 mm	640 41 410	640 41 610	640 41 510	640 41 710
2	1500 mm	640 41 415	640 41 615	640 41 515	640 41 715
Part numbers for immersion length 400 to 4000 mm (in steps of 100 mm) on request.					

<sup>\*</sup> also available without mounting flange for portable application.

2 - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -					
Accessories:	Part No.				
Suction strainer in polypropylene	001 10 235				
Hose connection in polypropylene, complete with nut G 21/4 (BSP 21/4" female)					
for hose inside diameter DN 32	959 04 098				
for hose inside diameter DN 38	959 04 099				
for hose inside diameter DN 50	959 04 100				

## DRIVE MOTORS FOR CENTRIFUGAL IMMERSION PUMP F 640 PP

## Three-phase motors protected to IP 55, with motor protection switch or cable terminal box

•	•	•			
Capacity	Voltage	Frequency	Nominal speed	Part No.	Part No.
P2				Version with motor protection switch	Version with cable terminal box
0,75 kW	230/400 V	50 Hz	2850 rpm	001 00 046	001 00 006
1,1 kW	230/400 V	50 Hz	2850 rpm	001 00 047	001 00 007
1,5 kW	230/400 V	50 Hz	2850 rpm	001 00 048	001 00 008
2,2 kW	230/400 V	50 Hz	2850 rpm	001 00 049	001 00 009
3,0 kW	400 V	50 Hz	2850 rpm	001 00 050	001 00 010
4,0 kW	400 V	50 Hz	2850 rpm	001 00 051	001 00 011

## Three-phase motors explosion-proof to $\mathbf{EEx}$ e II T3 with cable terminal box

Capacity	Voltage	Frequency	Nominal speed	Part No.	Part No.
P2				Version with cable terminal box	Motor protection switch EEx de II C T6 to be mounted on the carrying handle
0,75 kW	230/400 V	50 Hz	2850 rpm	001 00 066	936 06 118
1,1 kW	230/400 V	50 Hz	2850 rpm	001 00 067	936 06 118
1,5 kW	230/400 V	50 Hz	2850 rpm	001 00 068	936 06 119
2,0 kW	230/400 V	50 Hz	2850 rpm	001 00 069	936 06 119
2,5 kW	400 V	50 Hz	2850 rpm	001 00 070	936 06 120
3,3 kW	400 V	50 Hz	2850 rpm	001 00 071	936 06 120

Accessories:	Part No.
Carrying handle for three-phase motors up to 3,0 kW	001 10 504
Carrying handle for three-phase motors up 4,0 kW	001 10 531
Carrying handle for three-phase motors explosion-proof up to 3,3 kW	001 10 567

## SCOPE OF SUPPLY

A complete vertical centrifugal immersion pump consists of: drive motor, pump and necessary accessories. Weight per pump: 15 - 60 kg depending on the pump size, immersion length and motor kW.

# FLUX CENTRIFUGAL IMMERSION PUMP F 640 PP AND F 640 PVDF IN POLYPROPYLENE OR POLYVINYLIDENFLUORIDE

SIZE 185

## **Typical applications**

Transferring low flammability liquids up to a viscosity of 2500 mPas (cP) from containers, tanks, either open topped or closed.

Transferring corrosive liquids in chemical processing and engineering, metal-working and electroplating together with water treatment and waste water treatment. Suitable for stationary or portable application.

#### **Construction features**

Vertical centrifugal immersion pump for stationary application.

The centrifugal impeller in the pump housing is driven by the motor via the drive shaft. The drive shaft is supported by intermediate bearings within the plastic sleeved steel inner tube, a mechanical seal separating the liquid from the bearings and upper shaft. This construction provides the ultimate in stability, preventing elongation of the plastic at high temperatures and ensures the maximum integrity of the mechanical seal.

This pump design does not have a separate discharge tube. Immediately after the pump housing the liquid is fed back into the outer tube and delivered to the outlet connection between the inner and outer tubes.

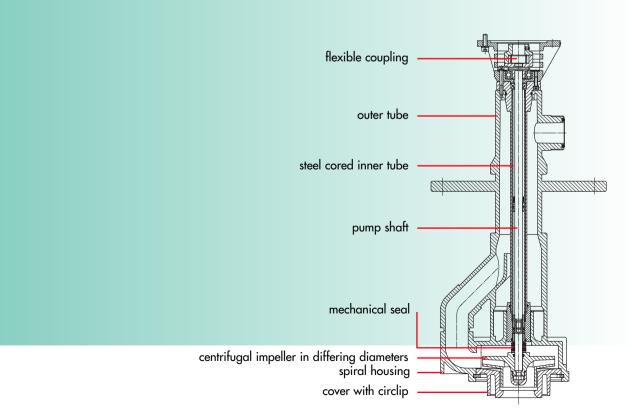
A range of carefully chosen impeller diameters, together with a range of three-phase motors in differing kW-ratings, ensures the optimum selection of pumps to meet the specific operating requirements.

Connection of pump and motor is made via a flexible coupling.

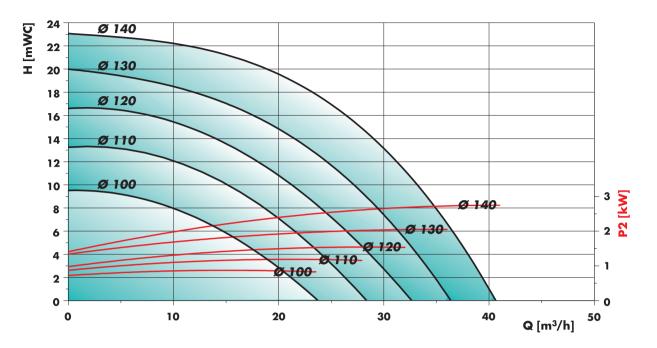


F 640 PP-185

## CONSTRUCTION FEATURES IN DETAIL



# TECHNICAL DATA Performance chart F 640 PP-185 and F 640 PVDF-185



Measured values ± 10% determined with water (20 °C). Nominal speed n = 2850 min-1

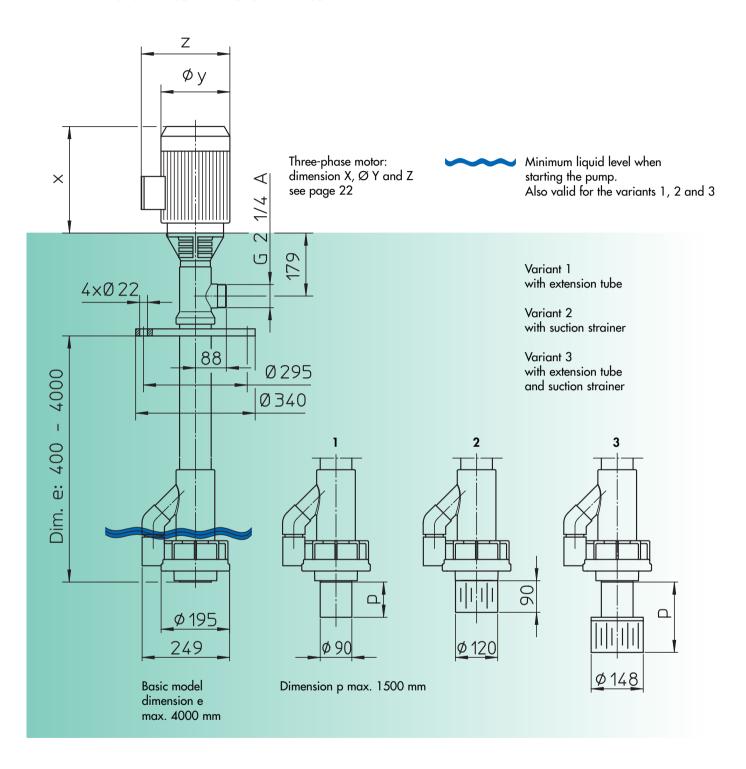
In order to achieve the desired output, centrifugal impellers in diameters of 100 to 140 mm are available.

In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.



## TECHNICAL DATA

Dimensions F 640 PP-185 and F 640 PVDF-185





640 PVDF

PP

CENTRIFUGAL IMMERSION PUMP

## CENTRIFUGAL IMMERSION PUMP F 640 PP IN POLYPROPYLENE AND F 640 PVDF IN POLYVINYLIDENFLUORIDE, THREAD ON OUTLET G $2^{1}/4$ A (BSP $2^{1}/4$ " MALE), WITHOUT DRIVE MOTOR

Type / <u>Size</u>		F 640 PP- <u>185</u>	F 640 PVDF- <u>185</u>
Delivery rate C	Q max.	40 m <sup>3</sup> /h	40 m³/h
Delivery head	H max.	23 m water column	23 m water column
Viscosity max.		150 mPas (cP)	150 mPas (cP)
Temperature m	ıax.	60 °C	80 °C
Seal type		mechanical seal in ceramic	oxide /SiC, o-rings in FPM
Material		shaft in Hastello	y C, seals in FPM
Centrifugal imp	peller	Ø 100 – 140 m	nm in PP or PVDF
Pump housing		Ø 249 mm	Ø 249 mm
Mounting flang	ge	outside Ø 340 mm, pitch circle Ø 295 mm, 4 bores Ø 22 mm each	
Part No.			
	1000 mm	640 41 210	640 61 210
Immersion length Dimension e	1500 mm	640 41 215	640 61 215
2000 mm		640 41 220	640 61 220
Part numbers for immersion length 400 to 4000 mm (in steps of 100 mm) on reques		1th 400 to 4000 mm (in steps of 100 mm) on request.	

Part numbers for immersion length 400 to 4000 mm (in steps of 100 mm) on reques	st.
Accessories:	Part No.
Extension tube in PP or PVDF in steps of 100 mm. Dimension p up t	to max. 1500 mm
Suction strainer in PP or PVDF welded onto the cover of the pump h	housing or onto the extension tube
Hose connection in polypropylene, complete with nut G 2 <sup>1</sup> / <sub>4</sub> (BSP 2 <sup>1</sup> / <sub>4</sub> " for hose inside diameter DN 32 for hose inside diameter DN 38 for hose inside diameter DN 50	' female) 959 04 098 959 04 099 959 04 100
Hose connection in polyvinylidenfluoride, complete with nut G 21/4" for hose inside diameter DN 32 for hose inside diameter DN 38 for hose inside diameter DN 50	" (BSP 2 <sup>1</sup> / <sub>4</sub> female) 959 04 104 959 04 105 959 04 096

## DRIVE MOTORS FOR CENTRIFUGAL IMMERSION PUMPS F 640 PP AND F 640 PVDF Three-phase motors protected to IP 55, with motor protection switch or cable terminal box

Capacity	Voltage	Frequency	Nominal speed	Part No.	Part No.
P2				Version with motor protection switch	Version with cable terminal box
0,75 kW	230/400 V	50 Hz	2850 rpm	001 00 046	001 00 006
1,1 kW	230/400 V	50 Hz	2850 rpm	001 00 047	001 00 007
1,5 kW	230/400 V	50 Hz	2850 rpm	001 00 048	001 00 008
2,2 kW	230/400 V	50 Hz	2850 rpm	001 00 049	001 00 009
3,0 kW	400 V	50 Hz	2850 rpm	001 00 050	001 00 010
4,0 kW	400 V	50 Hz	2850 rpm	001 00 051	001 00 011

## Three-phase motors explosion-proof to EEx e II T3 with cable terminal box

Capacity	Voltage	Frequency	Nominal speed	Part No.	Part No.
P2				Version with cable terminal box	Motor protection switch EEx de II C T6 to be mounted on the carrying handle
0,75 kW	230/400 V	50 Hz	2850 rpm	001 00 066	936 06 118
1,1 kW	230/400 V	50 Hz	2850 rpm	001 00 067	936 06 118
1,5 kW	230/400 V	50 Hz	2850 rpm	001 00 068	936 06 119
2,0 kW	230/400 V	50 Hz	2850 rpm	001 00 069	936 06 119
2,5 kW	400 V	50 Hz	2850 rpm	001 00 070	936 06 120
3,3 kW	400 V	50 Hz	2850 rpm	001 00 071	936 06 120

## SCOPE OF SUPPLY

A complete vertical centrifugal immersion pump consists of: drive motor, pump with mounting flange and necessary accessories. Weight per pump: 20 - 60 kg depending on the pump size, immersion length and motor kW.

## FLUX CENTRIFUGAL PUMPS F 620 S TR AND F 640 PP TR IN HORIZONTAL VERSION

## **Typical applications**

Transferring low flammability liquids up to a viscosity of 2500 mPas (cP) from containers or tanks, either open topped or closed. The pump is used either horizontally mounted onto a base plate or fixed vertically.

## **Construction features**

Centrifugal pump in horizontal version in stainless steel or polypropylene, consisting of an inner tube and outer tube.

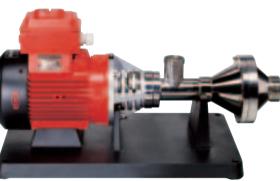
The centrifugal impeller in the pump housing is driven by the motor via the drive shaft The drive shaft is supported by intermediate bearings within inner tube, a mechanical seal separates the liquid from the bearings and upper shaft.

The PP version has a steel cored PP inner tube. This construction provides the ultimate in stability, preventing elongation of the plastic at high temperatures and ensures the maximum integrity of the mechanical seal.

With an open conical impeller or a closed centrifugal impeller (Z)

Depending on the model, suction and discharge sides are fitted with threaded or flanged connections.

Three-phase motors in differing kW-ratings are available as a matched power unit. Connection to the pump is made via a flexible coupling.



F 620 S-30 TR mounted on base plate



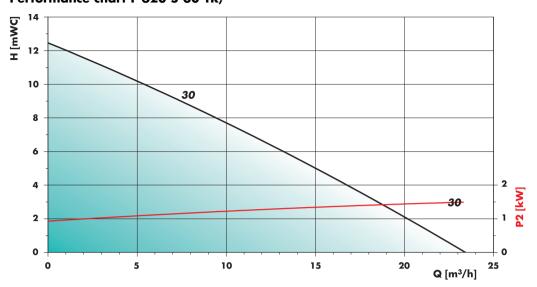
F 640 PP-30 TR mounted on base plate



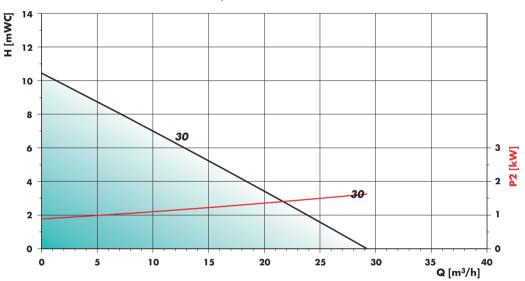
F 640 PP-230 TR mounted on base plate



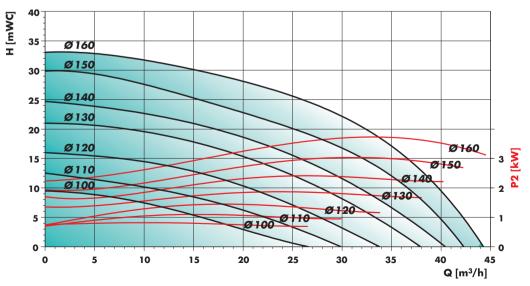
# TECHNICAL DATA Performance chart F 620 S-30 TR,



## Performance chart F 640 PP-30 TR,



## Performance chart F 640 PP-230 TR

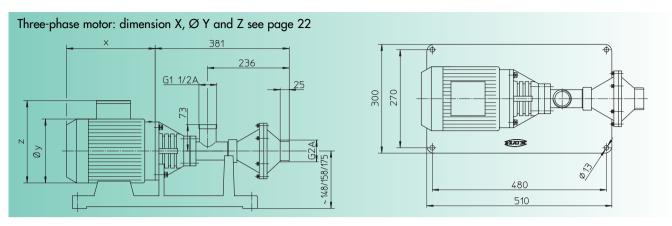


Measured values  $\pm$  10% determined with water (20 °C). Nominal speed n = 2850 rpm

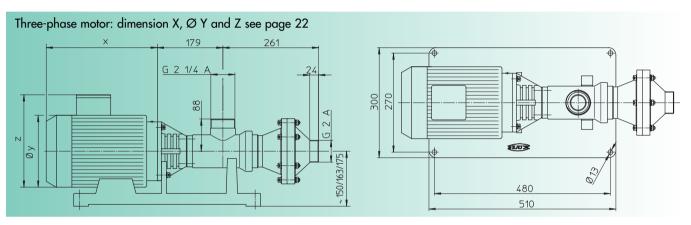
In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.

## TECHNICAL DATA

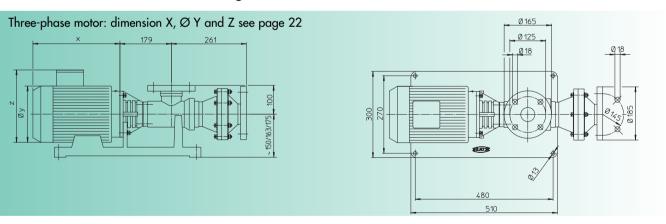
## Dimensions F 620 S-30 TR with thread connection



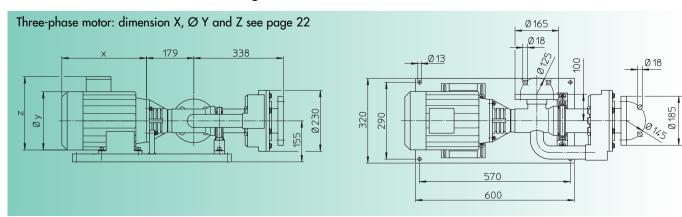
## Dimensions F 640 PP-30 TR with thread connection



## Dimensions F 640 PP-30 TR with flange connection



## Dimensions F 640 PP-230 TR with flange connection





TAL VERSION

CENTRIFUGAL PUMPS IN HORIZON

## CENTRIFUGAL PUMP F 620 S TR IN STAINLESS STEEL, WITHOUT DRIVE MOTOR

Type / <u>Size</u>	F 620 S- <u>30</u> TR
Delivery rate Q max.	23 m³/h
Delivery head H max.	12 m water column
Viscosity max.	2500 mPas (cP)
Temperature max.	100 °C
Seal type	mechanical seal in ceramic oxide, o-rings in FPM
Material	shaft in stainless steel 1.4571/316 Ti, seals in FPM
Impeller	open conical impeller in polypropylene (version in stainless steel on request)
Suction side	thread G 2 A (BSP 2" male)
Discharge side	thread G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1 <sup>1</sup> / <sub>2</sub> " male)
Part No.	620 25 502

Accessoires:	Part No.
Base plate in aluminium alloy	001 15 002
Hose connection in stainless steel, complete with nut G 11/2 (BSP 11/2	2" female)
for hose inside diameter DN 25	959 04 002
for hose inside diameter DN 32	959 04 003
for hose inside diameter DN 38	959 04 004

## CENTRIFUGAL PUMP F 640 PP TR IN POLYPROPYLENE, WITHOUT DRIVE MOTOR

Type / <u>Size</u>	F 640 PP- <u>30</u> TR	
Delivery rate Q max.	29 m³/h	
Delivery head H max.	10 m water column	
Viscosity max.	2500 mPas (cP)	
Temperature max.	50 °C	
Seal type	mechanical seal in ceramic oxide /SiC, o-ring	gs in FPM
Material	shaft in Hastelloy C, seals in FPM	
Impeller	open conical impeller in PP	
Suction side	thread G 2 A (BSP 2" male)	flange DN 65, PN 10
Discharge side	thread G 21/4 A (BSP 2 1/4" male)	flange DN 50, PN 10
Part No.	640 41 601	640 41 600

## CENTRIFUGAL PUMP F 640 PP TR IN POLYPROPYLENE, WITHOUT DRIVE MOTOR

Type / <u>Size</u>	F 640 PP- <u>230</u> TR
Delivery rate Q max.	44 m³/h
Delivery head H max.	33 m water column
Viscosity max.	150 mPas (cP)
Temperature max.	60 °C
Seal material	mechanical seal in ceramic oxide/SiC, o-rings in FPM
Material	shaft in Hastelloy C, seals in FPM
Impeller	Ø 100 – 160 mm in PP
Suction side	flange DN 65, PN 10; outside Ø 185 mm, p.c.Ø 145 mm, 4 bores Ø 18 mm each
Discharge side	flange DN 50, PN 10; outside Ø 165 mm, p.c.Ø 125 mm, 4 bores Ø 18 mm each
Part No.	640 41 300

Accessories:	Part No.
Base plate in aluminium alloy for F 640 PP-30 TR	001 15 001
Base plate in polypropylene for F 640 PP-30 TR and F 640 PP-230 TR	001 15 023
Hose connection in polypropylene, complete with nut G 21/4 (BSP 2 1/4	female)
for hose inside diameter DN 32	959 04 098
for hose inside diameter DN 38	959 04 099
for hose inside diameter DN 50	959 04 100

## Drive motors see page 9

## SCOPE OF SUPPLY

A complete centrifugal pump in horizontal version consists of drive motor, pump and base plate. Weight per pump including base plate: 9 – 50 kg depending on pump size and motor kW.

# FLUX CENTRIFUGAL IMMERSION PUMP F 706 PP in Polypropylene Size $135,\,185,\,230$ and 350

## Typical applications

Transfer of corrosive liquids in the chemical industry and all aspects of chemical engineering together with any application that requires the safe and economical transfer, or circulation, of acids and alkalis or other chemical fluids, with or without solids in suspension.

#### **Construction features**

Vertical centrifugal immersion pump for stationary application.

The robust pump housing is solidly welded to the support tube.

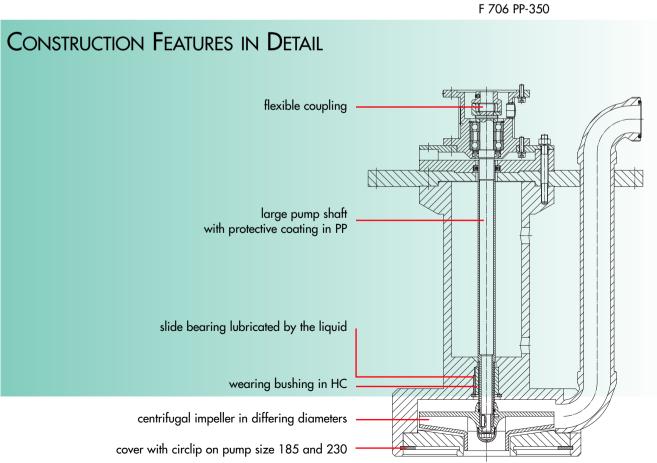
A sleeve bearing, which is lubricated by the liquid, allows immersion lengths of up to 1000 mm, and on the pump size 230, with additional intermediate bearings, even up to 2000 mm.

A large polpypropylene-coated drive shaft together with the use of a thick-walled support tube ensures a very smooth running pump.

This type of construction prevents the rotating components from coming to contact with the pump housing and guarantees a long service life and extended maintenance intervals, even in the case of continuous use.

A range of carefully chosen impeller diameters, together with a range of three-phase motors in differing kW-ratings, ensures the optimum selection of pumps to meet the specific operating requirements. Connection of pump and motor is made via a flexible coupling.



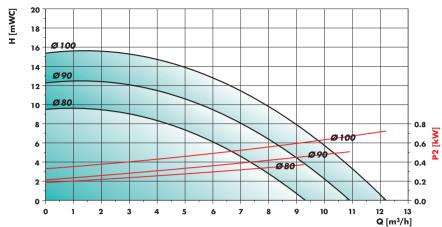


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## TECHNICAL DATA

## Performance chart F 706 PP-135

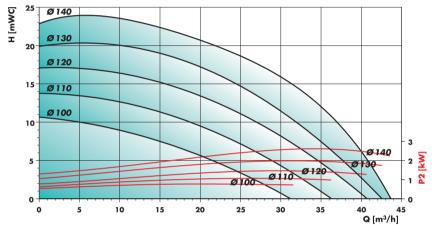


Measured values ± 10% determined with water (20 °C). Nominal speed n = 2850 rpm

In order to obtain the desired output, centrifugal impellers in differing diameters are available.

In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.

## Performance chart F 706 PP-185

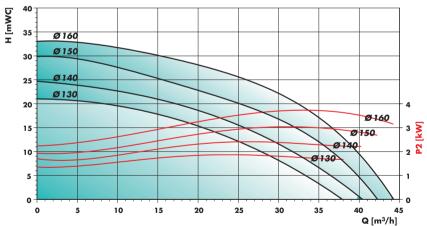


## Performance chart F 706 PP-230

Performance chart F 706 PP-350

Ø 250

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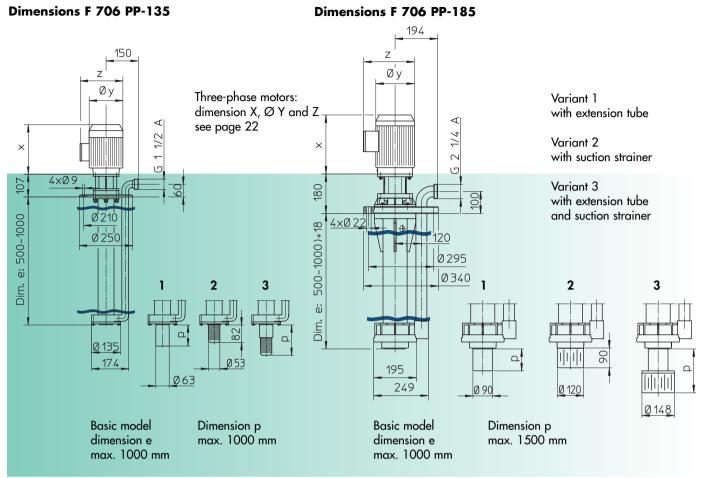


## Nominal speed n = 1450 rpm



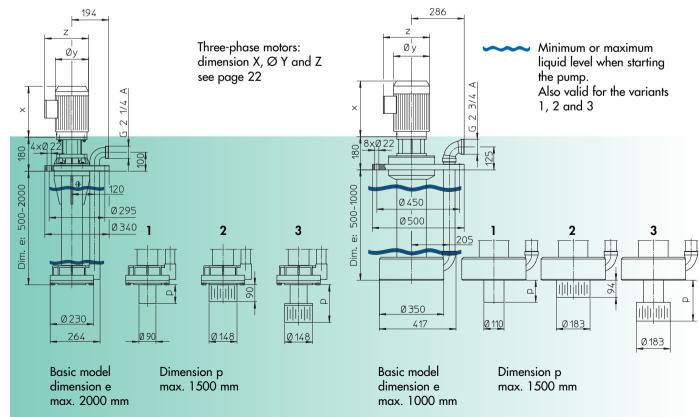
Ø230

## TECHNICAL DATA



## Dimensions F 706 PP-230

## Dimensions F 706 PP-350



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Ø210 Ø200



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CENTRIFUGAL IMMERSION PUMP

## CENTRIFUGAL IMMERSION PUMP F 706 PP IN POLYPROPYLENE, VERSION WITH SUPPORT TUBE, WITHOUT DRIVE MOTOR

Type / <u>Size</u>	F 706 PP- <u>135</u>	F 706 PP- <u>185</u>	F 706 PP- <u>230</u>	F 706 PP- <u>350</u>
Delivery rate Q max.	12 m³/h	43 m³/h	44 m³/h	74 m³/h
Delivery head H max.	15 m water column	23 m water column	33 m water column	23 m water column
Viscosity max.	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)
Temperature max.	60 °C	60 °C	60 °C	60 °C
Seal material	naterial no seals in contact with the liquid			
Material	shaft in stainless steel 1.45	571/316 Ti with protective o	oating in PP, slide bearing in	hard carbon or fluorosint
Centrifugal Impeller in PP	Ø 80 – 100 mm	Ø 100 – 140 mm	Ø 130 – 160 mm	Ø 200 – 250 mm
Pump housing	Ø 174 mm	Ø 249 mm	Ø 264 mm	Ø 417 mm
Mounting flange in PP	outside Ø 250 mm	outside Ø 340 mm	outside Ø 340 mm	outside Ø 500 mm
Thread on outlet	G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1 <sup>1</sup> / <sub>2</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>3</sup> / <sub>4</sub> A (BSP 2 <sup>3</sup> / <sub>4</sub> " male)
Motor capacity P2	0,37 – 0,75 kW n = 2850 rpm	1,5 – 4,0 kW n = 2850 rpm	3,0 – 5,5 kW n = 2850 rpm	3,0 – 5,5 kW n = 1450 rpm
Part No.				
500 mm	706 41 105	706 41 205	706 41 305	706 41 405
Immersion length Dimension e	706 41 107	706 41 207	706 41 307	706 41 407
1000 mm	706 41 110	706 41 210	706 41 310	706 41 410

#### Accessories:

Extension tube in PP in steps of 100 mm.

Dimension p up to max. 1000 mm at size 135 and up to 1500 mm at sizes 185, 230 and 350.

Suction strainer in PP welded onto the cover of the pump housing or onto the extension tube.

## DRIVE MOTORS FOR CENTRIFUGAL IMMERSION PUMP F 706 PP

Three-phase motors protected to IP 55, with cable terminable box

Capacity P2	Flange Ø	Voltage	Frequency	Nominal speed	Part No.
0,37 kW	120 mm	230/400 V	50 Hz	n = 2850 rpm	001 00 004
0,55 kW	120 mm	230/400 V	50 Hz	n = 2850 rpm	001 00 005
0,75 kW	120 mm	230/400 V	50 Hz	n = 2850 rpm	001 00 019
1,5 kW	160 mm	230/400 V	50 Hz	n = 2850 rpm	001 00 008
2,2 kW	160 mm	230/400 V	50 Hz	n = 2850 rpm	001 00 009
3,0 kW	160 mm	400 V	50 Hz	n = 2850 rpm	001 00 010
4,0 kW	160 mm	400 V	50 Hz	n = 2850 rpm	001 00 011
5,5 kW	160 mm	400 V	50 Hz	n = 2850 rpm	001 00 015
3,0 kW	160 mm	400 V	50 Hz	n = 1450 rpm	001 00 530
4,0 kW	160 mm	400 V	50 Hz	n = 1450 rpm	001 00 511
5,5 kW	160 mm	400 V	50 Hz	n = 1450 rpm	001 00 532

Three-phase motors explosion-proof to EEx e II T3 with terminal box on request.

## SCOPE OF SUPPLY

A complete vertical centrifugal immersion pump consists of: drive motor, pump with mounting flange and necessary accessories. Weight per pump F 706 PP: 13 – 85 kg depending on the pump size, immersion length and motor kW.

## FLUX CENTRIFUGAL IMMERSION PUMP F 716 PP AND F 716 PVDF IN POLYPROPYLENE OR POLYVINYLIDENFLUORIDE SIZE 115 AND 135

## **Typical applications**

Transferring and circulating of neutral or corrosive liquids in the chemical industry and chemical engineering, electroplating industry, steel or stainless steel pickling plants, flue gas decontamination, exhaust air purification, water and waste water treatment.

#### **Construction features**

Vertical centrifugal immersion pump for stationary application. With a compact design requiring very little head room above the mounting flange. This design uses a three-phase motor with extended shaft, especially allowing the pump to use the motor shaft. All wetted parts are made in PP or PVDF. The robust support tube (bars) solidly connected to the mounting flange ensures a very smooth running, prevents the rotating elements from making contact with the pump housing and guarantees a very long service life, even in case of continuous use.

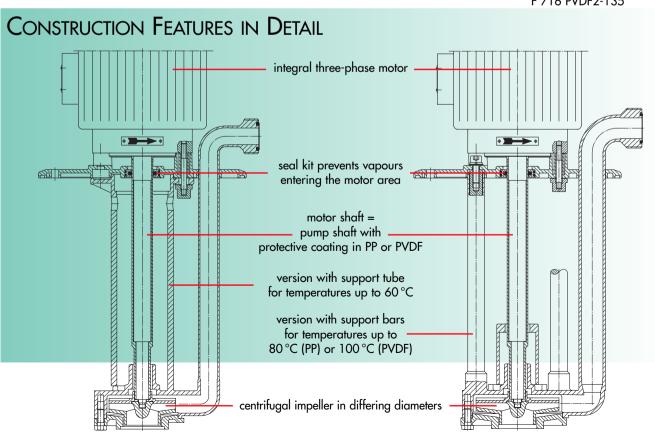
As neither bearings nor seals are in contact with the liquid, the pump is very wear-resistant and suitable for dry running operation.

The immersion length of the pump can be extended, up to 1000 mm maximum, by the suction tube option. A suction strainer welded onto the cover of the pump housing or onto the extension tube protects the pump against the ingress of coarse impurities.

A range of carefully chosen impeller diameters, together with a range of three-phase motors in differing kW-ratings, ensures the optimum selection of pumps to meet the specific operating requirements.



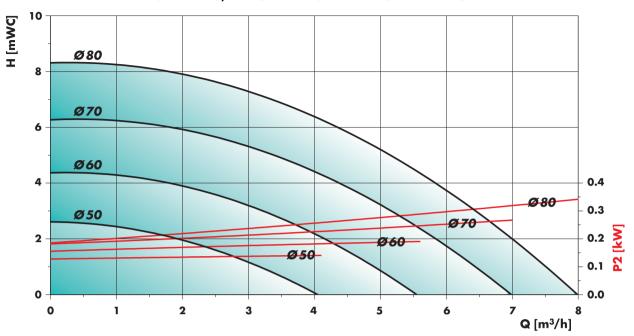
F 716 PVDF2-135



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# TECHNICAL DATA Performance chart F 716 PP1-115, F 716 PP2-115 and F 716 PVDF2-115

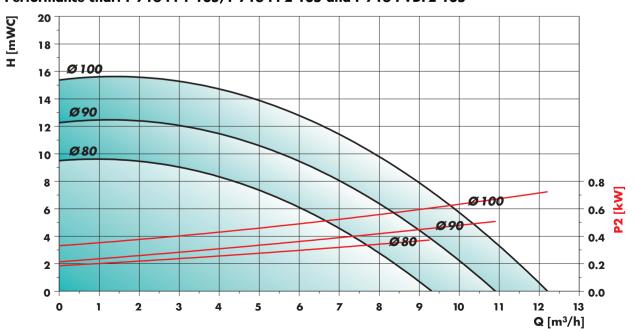


Measured values ± 10% determined with water (20 °C). Nominal speed n = 2850 rpm

In order to obtain the desired output, centrifugal impellers in differing diameters are available.

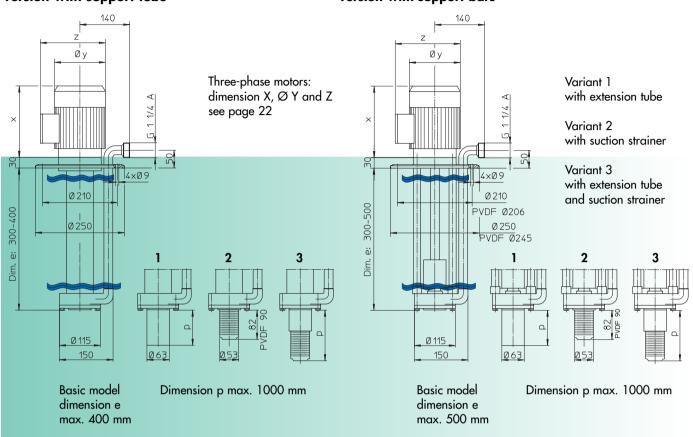
In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.

## Performance chart F 716 PP1-135, F 716 PP2-135 and F 716 PVDF2-135



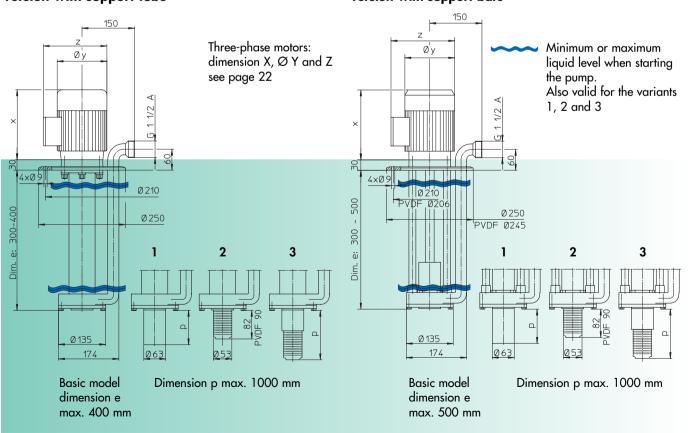
# TECHNICAL DATA Dimensions F 716 PP1-115 Version with support tube

## Dimensions F 716 PP2-115 and F 716 PVDF2-115 Version with support bars



## Dimensions F 716 PP1-135 Version with support tube

## Dimensions F 716 PP2-135 and F 716 PVDF2-135 Version with support bars





## CENTRIFUGAL IMMERSION PUMP F 716 PP IN POLYPROPYLENE, WITH INTEGRAL THREE-PHASE MOTOR

Type / <u>Size</u>		F 716 PP1- <u>115</u>	F 716 PP2- <u>115</u>	F 716 PP1- <u>135</u>	F 716 PP2- <u>135</u>	
Version		with support tube	with support bars	with support tube	with support bars	
Delivery rate Q	max.	8 m <sup>3</sup> /h	8 m³/h	12 m³/h	12 m³/h	
Delivery head h	H max.	8 m water column	8 m water column	15 m water column	15 m water column	
Viscosity max.		150 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)	
Temperature ma	ax.	60 °C	80 °C	60 °C	80 °C	
Seal material			no bearings nor seals i	n contact with the liquid		
Material		shaft i	n stainless steel 1.4571/31	6 Ti with protective coating	in PP	
Centrifugal imp	eller in PP	Ø 50 – 80 mm	Ø 50 – 80 mm	Ø 80 – 100 mm	Ø 80 – 100 mm	
Pump housing		Ø 150 mm	Ø 150 mm	Ø 174 mm	Ø 174 mm	
Mounting flang	e in PP	outside Ø 250 mm	outside Ø 250 mm	outside Ø 250 mm	outside Ø 250 mm	
Thread on outlet		G 1 <sup>1</sup> / <sub>4</sub> A (BSP 1 <sup>1</sup> / <sub>4</sub> " male)	G 11/4 A (BSP 11/4" male)	G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1 <sup>1</sup> / <sub>2</sub> " male)	G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1 <sup>1</sup> / <sub>2</sub> " male)	
Part No.						
Motor capacity	P2	0,37 kW	0,37 kW	0,37 kW	0,37 kW	
	300 mm	716 41 003	716 42 003	716 41 103	716 42 103	
Immersion length Dimension e	400 mm	716 41 004	716 42 004	716 41 104	716 42 104	
Dimension	500 mm	-	716 42 005	-	716 42 105	
Part No.						
Motor capacity	P2	0,55 kW	0,55 kW	0,55 kW	0,55 kW	
	300 mm	716 41 013	716 42 013	716 41 113	716 42 113	
Immersion length Dimension e	400 mm	716 41 014	716 42 014	716 41 114	716 42 114	
Dimension	500 mm	-	716 42 015	-	716 42 115	
Part No.						
Motor capacity P2		0,75 kW	0,75 kW	0,75 kW	0,75 kW	
	300 mm	-	-	716 41 123	716 42 123	
Immersion length Dimension e	400 mm	-	-	716 41 124	716 42 124	
Difficition e	500 mm	-	-	-	716 42 125	

## CENTRIFUGAL IMMERSION PUMP F 716 PVDF IN POLYVINYLIDENFLUORIDE, WITH INTEGRAL THREE-PHASE MOTOR

Type / <u>Size</u>	F 716 PVDF2-11	F 716 PVDF2- <u>115</u>		F 716 PVDF2- <u>135</u>		
Version	with support bars		with support ba	with support bars		
Delivery rate Q max.	8 m <sup>3</sup> /h		12 m <sup>3</sup> /h	12 m³/h		
Delivery head H max.	8 m water column		15 m water colu	ımn		
Viscosity max.	150 mPas (cP)		150 mPas (cP)			
Temperature max.	100 °C		100 °C			
Seal material		no bearings nor sec	ıls in contact with the	liquid		
Material		shaft in stainless steel 1.4571/	316 Ti with protective	6 Ti with protective coating in PVDF		
Centrifugal impeller in PVDI	F Ø 50 – 80 mm		Ø 80 – 100 mn	Ø 80 – 100 mm		
Pump housing	Ø 150 mm		Ø 174 mm	Ø 174 mm		
Mounting flange in PVDF	outside Ø 245 mm		outside Ø 245 i	outside Ø 245 mm		
Thread on outlet	G 11/4 A (BSP 11/4	4" male)	G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1	G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1 <sup>1</sup> / <sub>2</sub> " male)		
Part No.						
Motor capacity P2	0,37 kW	0,37 kW 0,55 kW		0,55 kW	0,75 kW	
300 mm	716 62 003	716 62 013	716 62 103	716 62 113	716 62 123	
Immersion length Dimension e 400 mm	716 62 004	716 62 014	716 62 104	716 62 114	716 62 124	
500 mm	716 62 005	716 62 015	716 62 105	716 62 115	716 62 125	

#### Accessories

Extension tube in PP or PVDF in steps of 100 mm. Dimension p up to max. 1000 mm.

Suction strainer in PP or PVDF welded at the cover of the pump housing or at the extension tube.

## SCOPE OF SUPPLY

A complete vertical centrifugal immersion pump consists of: pump with mounting flange and integral three-phase motor and necessary accessories. Weight per pump: 9 – 15 kg depending on the pump size, immersion length and motor kW.

# FLUX CENTRIFUGAL IMMERSION PUMP F 716 PP AND F 716 PVDF IN POLYPROPYLENE OR POLYVINYLIDENFLUORIDE SIZE 185 AND 230

## **Typical applications**

Transferring and circulating of neutral or corrosive liquids in the chemical industry and chemical engineering, electroplating industry, steel or stainless steel pickling plants, flue gas decontamination, exhaust air purification, water and waste water treatment.

## **Construction features**

Vertical centrifugal immersion pump for stationary application. With a compact design requiring very little head room above the mounting flange. This design uses a three-phase motor with extended shaft, allowing the pump to use the motor shaft. All wetted parts are made in PP or PVDF.

The robust support tube (bars) solidly connected to the mounting flange ensures a very smooth running, prevents the rotating elements from making contact with the pump housing and guarantees a very long service life, even in case of continuous use.

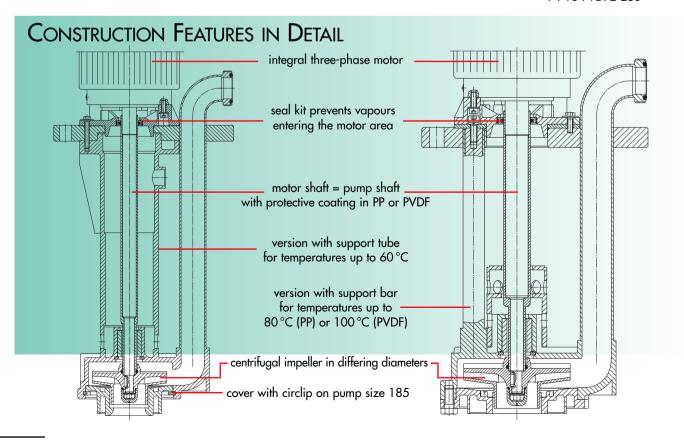
As neither bearings nor seals are in contact with the liquid, the pump is very wear-resistant and suitable for dry running operation.

The immersion length of the pump can be extended, up to 1500 mm maximum, by the suction tube option. A suction strainer welded onto the cover of the pump housing or onto the extension tube protects the pump against the ingress of coarse impurities.

A range of carefully chosen impeller diameters, together with a range of three-phase motors in differing kW-ratings, ensures the optimum selection of pumps to meet the specific operating requirements.



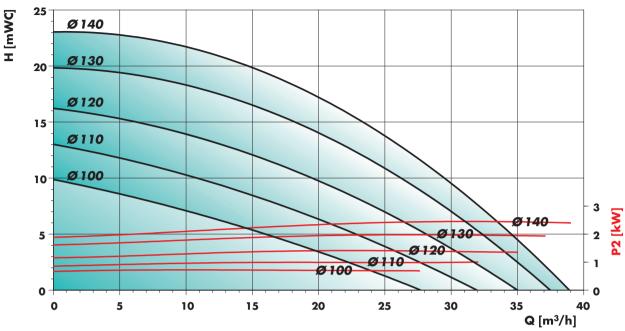
F 716 PVDF2-230



CENTRIFUGAL IMMERSION PUMP



# TECHNICAL DATA Performance chart F 716 PP1-85, F 716 PP2-185 and F 716 PVDF2-185

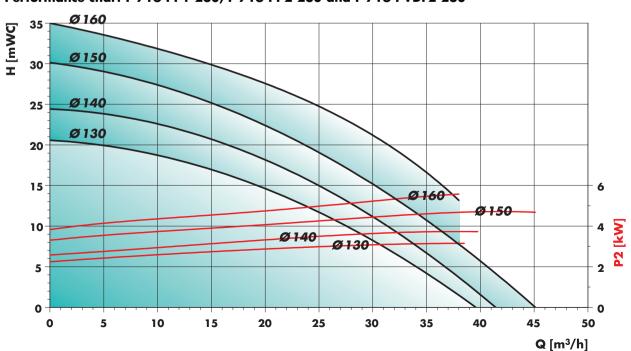


Measured values ± 10% determined with water (20 °C). Nominal speed n = 2850 min-1

In order to obtain the desired output, centrifugal impellers in differing diameters are available.

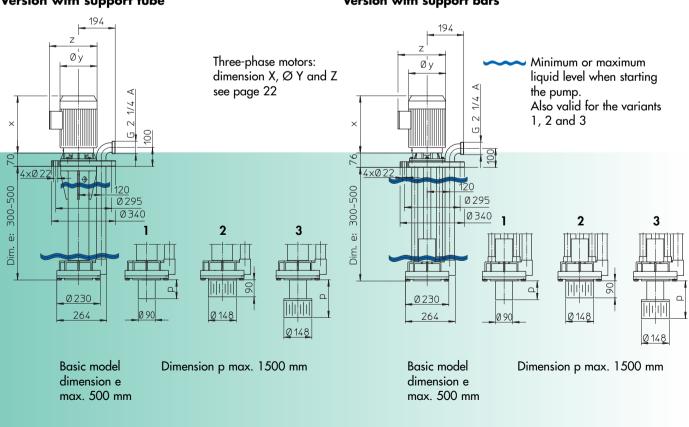
In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.

## Performance chart F 716 PP1-230, F 716 PP2-230 and F 716 PVDF2-230



#### TECHNICAL DATA Dimensions F 716 PP1-185 Dimensions F 716 PP2-185 and F 716 PVDF2-185 Version with support tube Version with support bars Three-phase motors: Variant 1 dimension X, $\emptyset$ Y and Zwith extension tube see page 22 Variant 2 with suction strainer Variant 3 4×022 with extension tube and suction strainer 0 295 | | Ø 340 **]** 2 2 3 Ø 340 Ø 195 Ø 195 Ø 249 Ø249 Ø 120 Dimension p max. 1500 mm Basic model Basic model Dimension p max. 1500 mm dimension e dimension e max. 500 mm max. 500 mm

# Dimensions F 716 PP1-230 Version with support tube Dimensions F 716 PP2-230 and F 716 PVDF2-230 Version with support bars





## CENTRIFUGAL IMMERSION PUMP F 716 PP IN POLYPROPYLENE, WITH INTEGRAL THREE-PHASE MOTOR

Type / <u>Size</u>		F 716 PP1- <u>185</u>	F 716 PP2- <u>185</u>	F 716 PP1- <u>230</u>	F 716 PP2- <u>230</u>
Version		with support tube	with support bars	with support tube	with support bars
Delivery rate G	max.	38 m³/h	38 m³/h	45 m³/h	45 m³/h
Delivery head	H max.	23 m water column	23 m water column	35 m water column	35 m water column
Viscosity max.		150 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)
Temperature m	ax.	60 °C	80 °C	60 °C	80 °C
Seal material			no bearings nor seals i	n contact with the liquid	
Material		shaft i	n stainless steel 1.4571/31	16 Ti with protective coating	j in PP
Centrifugal imp	oeller in PP	Ø 100 – 140 mm	Ø 100 – 140 mm	Ø 130 – 160 mm	Ø 130 – 160 mm
Pump housing		Ø 249 mm	Ø 249 mm	Ø 264 mm	Ø 264 mm
Mounting flang	je in PP	outside Ø 340 mm			
Thread on outle	et	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)
Part No.					
Motor capacity	P2	1,5 kW	1,5 kW	3,0 kW	3,0 kW
	300 mm	716 41 203	716 42 203	716 41 303	716 42 303
Immersion length Dimension e	400 mm	716 41 204	716 42 204	716 41 304	716 42 304
Difficusion e	500 mm	716 41 205	716 42 205	716 41 305	716 42 305
Motor capacity	P2	2,2 kW	2,2 kW	4,0 kW	4,0 kW
	300 mm	716 41 213	716 42 213	716 41 313	716 42 313
Immersion length Dimension e	400 mm	716 41 214	716 42 214	716 41 314	716 42 314
Difficusion e	500 mm	716 41 215	716 42 215	716 41 315	716 42 315
Motor capacity	P2	3,0 kW	3,0 kW	5,5 kW	5,5 kW
	300 mm	716 41 223	716 42 223	716 41 323	716 42 323
Immersion length Dimension e	400 mm	716 41 224	716 42 224	716 41 324	716 42 324
Dimension e	500 mm	716 41 225	716 42 225	716 41 325	716 42 325
Motor capacity	P2	4,0 kW	4,0 kW		
	300 mm	716 41 233	716 42 233		
Immersion length Dimension e	400 mm	716 41 234	716 42 234		
Difficusion e	500 mm	716 41 235	716 42 235		

## CENTRIFUGAL IMMERSION PUMP F 716 PVDF IN POLYVINYLIDENFLUORIDE, WITH INTEGRAL THREE-PHASE MOTOR

Type / <u>Size</u>		F 716 PVDF2- <u>185</u>		F 716 PVDF2- <u>230</u>	
Version		with support bars		with support bars	
Delivery rate G	max.	38 m³/h		45 m³/h	
Delivery head I	H max.	23 m water column		35 m water column	
Viscosity max.		150 mPas (cP)		150 mPas (cP)	
Temperature ma	ax.	100 °C		100 °C	
Seal material		no bearings nor seals in		in contact with the liquid	
Material		shaft in stainless steel 1.4571/316		6 Ti with protective coating	in PVDF
Centrifugal imp	eller in PVDF	Ø 100 – 140 mm		Ø 130 – 160 mm	
Pump housing		Ø 249 mm		Ø 264 mm	
Mounting flang	e in RCH1000	outer Ø 340 mm		outer Ø 340 mm	
Thread on outle	et	G 2 <sup>1</sup> / <sub>4</sub> A		G 2 <sup>1</sup> / <sub>4</sub> A	
Part No.					
Motor capacity	P2	1,5 kW	2,2 kW	3,0 kW	4,0 kW
	300 mm	716 62 203	716 62 213	716 62 303	716 62 313
Immersion length Dimension e	400 mm	716 62 204	716 62 214	716 62 304	716 62 314
Dimension	500 mm	716 62 205	716 62 215	716 62 305	716 62 315
Puissance de moteur P2		3,0 kW	4,0 kW	5,5 kW	
300 mm	300 mm	716 62 223	716 62 233	716 62 323	
Immersion length Dimension e	400 mm	716 62 224	716 62 234	716 62 324	
Dimension e	500 mm	716 62 225	716 62 235	716 62 325	

Extension tube in PP or PVDF in steps of 100 mm. Dimension p up to max. 1500 mm.

Suction strainer in PP or PVDF welded onto the cover of the pump housing or onto the extension tube.

Weight per pump: 22 – 50 kg depending on the pump size, immersion length and motor kW.

## FLUX CENTRIFUGAL IMMERSION PUMP F 726 PP AND F 726 PVDF IN POLYPROPYLENE OR POLYVINYLIDENFLUORIDE SIZE 115 AND 135

## Typical applications

Transferring and circulating of neutral or corrosive liquids in the whole field of the chemical industry and chemical engineering, electroplating industry, steel or stainless steel pickling plants, flue gas decontamination, exhaust air purification, water and waste-water treatment.

## **Construction features**

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CENTRIFUGAL IMMERSION PUMP

Vertical centrifugal immersion pump for stationary application. The robust pump shaft is mounted in an upper pedestal and supported by two antifriction bearings. This construction, with the bearings spaced along the pedestal, ensures that any radial or axial forces are absorbed, even under heavy load. The result is a very smooth running pump. The solid version with support bars prevents the rotating elements from making contact with the pump housing and guarantees a very long service life, even in continuous use applications. As neither bearing nor seals are in contact with the liquid, the pump is very wear-resistant and suitable for dry running operation. The immersion length of the pump can be extended, up to 1000 mm maximum, by the suction tube option. A suction strainer welded onto the cover of the pump housing or onto the extension tube protects the pump against the ingress of coarse impurities.

A range of carefully chosen impeller diameters, together with a range of three-phase motors in differing kW-ratings, ensures the optimum selection of pumps to meet the specific operating requirements.



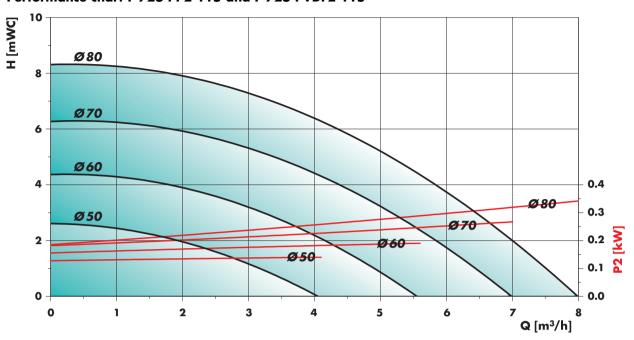
F 726 PVDF2-135

# CONSTRUCTION FEATURES IN DETAIL 2 antifriction bearings located in a pedestal seal kit prevents vapours entering the pedestal robust pump shaft with protective coating in PP or PVDF version with support bars for temperatures up to 80 °C (PP) or 100 °C (PVDF) centrifugal impeller in differing diameters

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# TECHNICAL DATA Performance chart F 726 PP2-115 and F 726 PVDF2-115

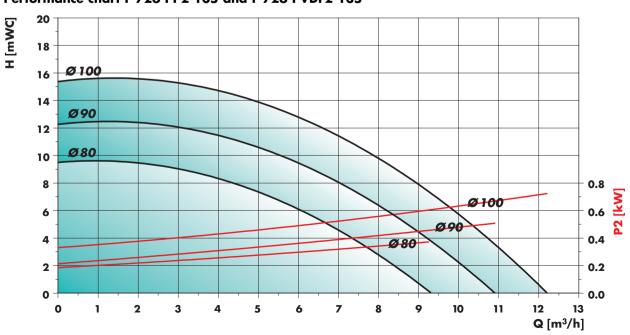


Measured values  $\pm$  10% determined with water (20 °C). Nominal speed n = 2850 rpm

In order to achieve the desired output, centrifugal impellers in differing diameters are available.

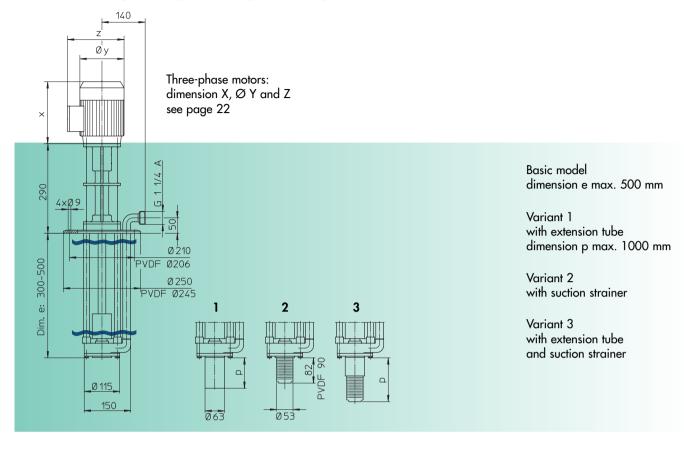
In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.

## Performance chart F 726 PP2-135 and F 726 PVDF2-135

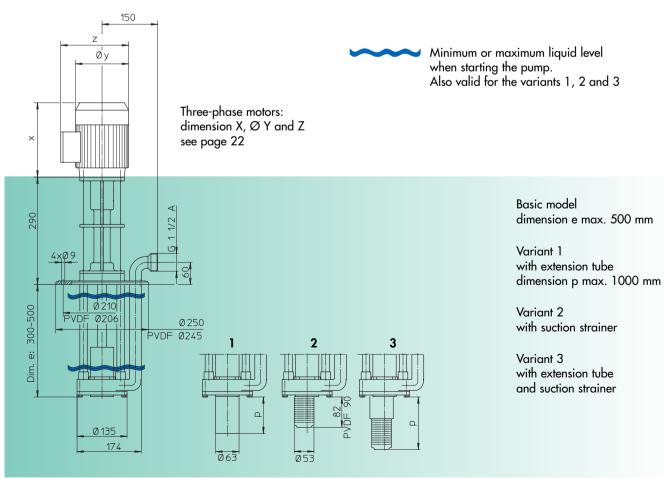


## TECHNICAL DATA

## Dimensions F 726 PP2-115 and F 726 PVDF2-115



## Dimensions F 726 PP2-135 and F 726 PVDF2-135





26 PVDF

PP AND

26

CENTRIFUGAL IMMERSION PUMP

CENTRIFUGAL IMMERSION PUMP F 726 PP IN POLYPROPYLENE AND F 726 PVDF IN POLYVINYLIDENFLUORIDE, VERSION WITH SUPPORT BARS, WITHOUT DRIVE MOTOR

Type / <u>Size</u>		F 726 PP2- <u>115</u>	F 726 PP2- <u>135</u>	F 726 PVDF2-115	F 726 PVDF2-135
Delivery rate Q	max.	8 m³/h	12 m³/h	8 m³/h	12 m³/h
Delivery head h	H max.	8 m water column	15 m water column	8 m water column	15 m water column
Viscosity max.		150 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)
Temperature mo	ax.	80 °C	80 °C	100 °C	100 °C
Seal material			no bearings nor seals i	n contact with the liquid	
Material		shaft i	n stainless steel 1.4571/31	6 Ti with protective coating	in PP
Centrifugal impe	ller in PP or PVDF	Ø 50 – 80 mm	Ø 80 – 100 mm	Ø 50 – 80 mm	Ø 80 – 100 mm
Pump housing		Ø 150 mm	Ø 174 mm	Ø 150 mm	Ø 174 mm
Mounting flang	e in PP or PVDF	outside Ø 250 mm	outside Ø 250 mm	outside Ø 245 mm	outside Ø 245 mm
Thread on outle	et	G 1 <sup>1</sup> / <sub>4</sub> A (BSP 1 <sup>1</sup> / <sub>4</sub> " male)	G 1 <sup>1</sup> / <sub>2</sub> A (BSP 1 <sup>1</sup> / <sub>2</sub> " male)	G 1 <sup>1</sup> / <sub>4</sub> A (BSP 1 <sup>1</sup> / <sub>4</sub> " male)	G $1^{1}/_{2}$ A (BSP $1^{1}/_{2}$ " male)
Part No.					
	300 mm	726 42 003	726 42 103	726 62 003	726 62 103
Immersion length Dimension e	400 mm	726 42 004	726 42 104	726 62 004	726 62 104
Zimension c	500 mm	726 42 005	726 42 105	726 62 005	726 62 105

#### Accessories:

Extension tube in PP or PVDF in steps of 100 mm. Dimension p up to. max. 1000 mm.

Suction strainer in PP or PVDF welded onto the cover of the pump housing or onto the extension tube.

DRIVE MOTORS FOR CENTRIFUGAL IMMERSION PUMPS F 726 PP AND F 726 PVDF

Three-phase motors protected to IP 55, with cable terminable box

Capacity P 2	Flange Ø	Voltage	Frequency	Nominal speed	Part No.
0,37 kW	120 mm	230/400 V	50 Hz	2850 rpm	001 00 004
0,55 kW	120 mm	230/400 V	50 Hz	2850 rpm	001 00 005
0,75 kW	120 mm	230/400 V	50 Hz	2850 rpm	001 00 019

Drive motors explosion-proof to EEx e II T3 with cable terminal box on request.

## SCOPE OF SUPPLY

A complete vertical centrifugal immersion pump consists of: drive motor, pump with mounting flange and the necessary accessories. Weight per pump 17 – 30 kg depending on the pump size, immersion length and motor kW.

FLUX CENTRIFUGAL IMMERSION PUMPS F 726 PP AND F 726 PVDF IN POLYPROPYLENE OR POLYVINYLIDENFLUORIDE

SIZE 185 AND 230

## **Typical applications**

Transferring and circulating of neutral or corrosive liquids in the whole field of the chemical industry and chemical engineering, electroplating industry, steel or stainless steel pickling plants, flue gas decontamination, exhaust air purification, water and waste-water treatment.

## **Construction features**

Vertical centrifugal immersion pump for stationary application. The robust pump shaft is mounted in an upper pedestal and supported by two antifriction bearings. This construction, with the bearings spaced along the pedestal, ensures that any radial or axial forces are absorbed, even under heavy load. The result is a very smooth running pump. The solid version with support bars prevents the rotating elements from making contact with the pump housing and guarantees a very long service life, even in continuous use applications. As neither bearing nor seals are in contact with the liquid, the pump is very wear-resistant and suitable for dry running operation.

The immersion length of the pump can be extended, up to 1500 mm maximum, by the suction tube option. A suction strainer welded onto the cover of the pump housing or onto the extension tube protects the pump against the ingress of coarse impurities.

A range of carefully chosen impeller diameters, together with a range of three-phase motors in differing kW-ratings, ensures the optimum selection of pumps to meet the specific operating requirements.



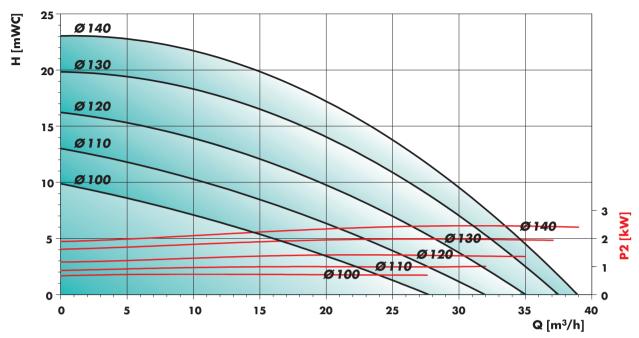
F 726 PVDF2-230

# CONSTRUCTION FEATURES IN DETAIL 2 antifriction bearings located in a pedestal seal kit prevents vapours entering the pedestal robust pump shaft with protective coating version with support bars for temperatures of up to 80 °C (PP) or 100 °C (PVDF) centrifugal impeller in differing diameters



## TECHNICAL DATA

## Performance chart F 726 PP2-185 and F 726 PVDF2-185

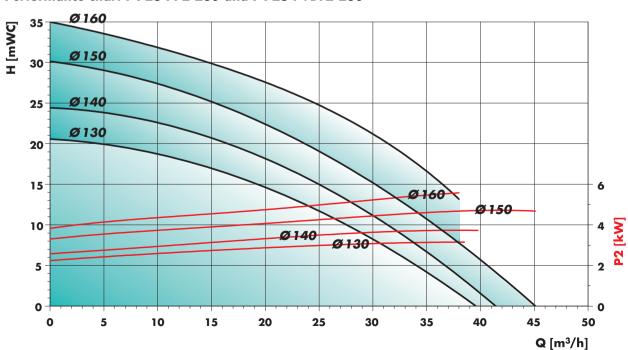


Measured values  $\pm$  10% determined with water (20 °C). Nominal speed n = 2850 rpm

In order to achieve the desired output, centrifugal impellers in differing diameters are available.

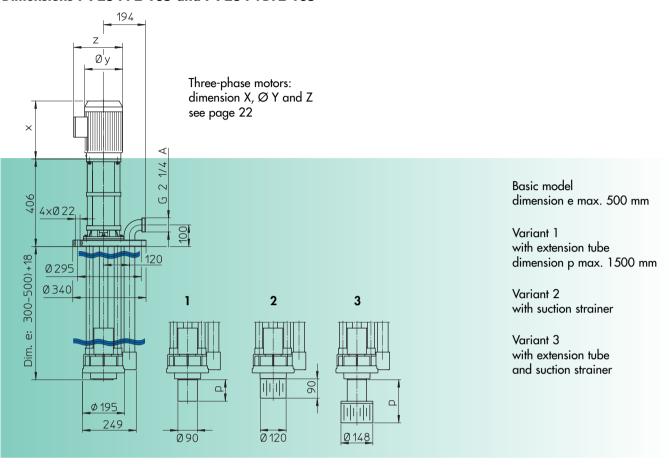
In determining the absorbed kW of the motor, multiply the absorbed kW shown in the above diagram with the specific gravity of the liquid to be pumped.

## Performance chart F 726 PP2-230 and F 726 PVDF2-230

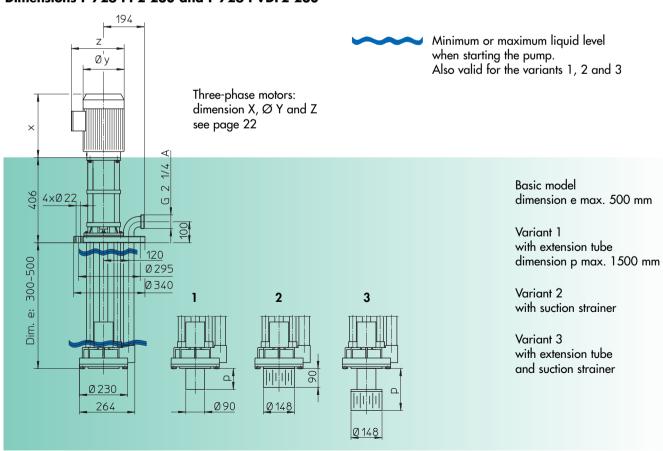


## TECHNICAL DATA

## Dimensions F 726 PP2-185 and F 726 PVDF2-185



## Dimensions F 726 PP2-230 and F 726 PVDF2-230





**726 PVDF** 

726 PP AND F

CENTRIFUGAL IMMERSION PUMP F

## CENTRIFUGAL IMMERSION PUMP F 726 PP IN POLYPROPYLENE AND F 726 PVDF IN POLYVINYLIDENFLUORIDE, VERSION WITH SUPPORT BARS, WITHOUT DRIVE MOTOR

Type / Size		F 726 PP2- <u>185</u>	F 726 PP2- <u>230</u>	F 726 PVDF2-185	F 726 PVDF2-230
Delivery rate Q	max.	38 m³/h	45 m³/h	38 m³/h	45 m³/h
Delivery head H	H max.	23 m water column	35 m water column	23 m water column	35 m water column
Viscosity max.		1 <i>5</i> 0 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)
Temperature mo	ıx.	80 °C	80 °C	100 °C	100 °C
Seal material			no bearings nor seals i	n contact with the liquid	
Material		shaft i	n stainless steel 1.4571/31	6 Ti with protective coating	in PP
Centrifugal impe	ller in PP or PVDF	Ø 100 – 140 mm	Ø 130 – 160 mm	Ø 100 – 140 mm	Ø 130 – 160 mm
Pump housing		Ø 249 mm	Ø 264 mm	Ø 249 mm	Ø 264 mm
Mounting flange or RCH 1000	e in PP	outside Ø 340 mm			
Thread on outle	t	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)	G 2 <sup>1</sup> / <sub>4</sub> A (BSP 2 <sup>1</sup> / <sub>4</sub> " male)
Part No.					
	300 mm	726 42 203	726 42 303	726 62 203	726 62 303
Immersion length Dimension e	400 mm	726 42 204	726 42 304	726 62 204	726 62 304
2	500 mm	726 42 205	726 42 305	726 62 205	726 62 305

#### **Accessories:**

Extension tube in PP or PVDF in steps of 100 mm, Dimension p up to max. 1500 mm.

Suction strainer in PP or PVDF welded onto the cover of the pump housing or onto the extension tube.

## DRIVE MOTOR FOR CENTRIFUGAL IMMERSION PUMP F 726 PP

Three-phase motors protected to IP 55, with cable terminal box

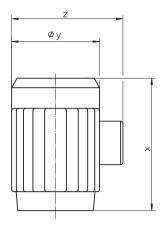
Capacity P 2	Flange Ø	Voltage	Frequency	Nominal speed	Part No.
1,5 kW	160 mm	230/400 V	50 Hz	2850 rpm	001 00 008
2,2 kW	160 mm	230/400 V	50 Hz	2850 rpm	001 00 009
3,0 kW	160 mm	400 V	50 Hz	2850 rpm	001 00 010
4,0 kW	160 mm	400 V	50 Hz	2850 rpm	001 00 011
5,5 kW	160 mm	400 V	50 Hz	2850 rpm	001 00 015

Three-phase motors explosion-proof to EEx e II T3 with cable terminal box on request.

## SCOPE OF SUPPLY

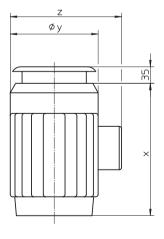
A complete vertical centrifugal immersion pump consists of: drive motor, pump with mounting flange and the necessary accessories. Weight per pump 25 – 75 kg depending on the pump size, immersion length and motor kW.

## DIMENSIONS OF THREE-PHASE MOTORS PROTECTED TO IP 55



Capacity P 2	Nominal speed	X	ØY	Z
0,37 kW	2850 rpm	201	143	183
0,55 kW	2850 rpm	201	143	183
0,75 kW	2850 rpm	232	158	201
1,1 kW	2850 rpm	232	158	201
1,5 kW	2850 rpm	244	176	227
2,2 kW	2850 rpm	269	176	227
3,0 kW	2850 rpm	303	196	252
4,0 kW	2850 rpm	320	220	277
5,5 kW	2850 rpm	405	246	313
3,0 kW	1450 rpm	303	196	252
4,0 kW	1450 rpm	320	220	277
5,5 kW	1450 rpm	405	246	313

## DIMENSIONS OF THREE-PHASE MOTORS EXPLOSION-PROOF TO EEX e II T3



Capacity P 2	Nominal speed	x	ØY	Z	
0,75 kW	2850 rpm	232	158	212	
1,1 kW	2850 rpm	232	158	212	
1,5 kW	2850 rpm	244	176	237	
2,0 kW	2850 rpm	269	176	237	
2,5 kW	2850 rpm	303	196	256	
3,3 kW	2850 rpm	320	220	279	



QUESTIONNAIRE TO QUOTE ON

## FLUX VERTICAL CENTRIFUGAL IMMERSION PUMPS

## REQUESTED VERSION for portable application for stationary application for horizontal application LIQUID DATA Chemical Formula \_ Description \_ Specific gravity \_ Concentration \_ mPas/cP at \_ Operating temperature \_ Size of solids Solids in suspension \_ ☐ hard Does liquid cristallize? ☐ Yes ☐ No Which materials are resistant to liquid according to previous experience? **OPERATING DATA** Delivery rate \_ Delivery head m water column Immersion length \_\_\_ Suction strainer ☐ Yes □ No Mounting flange in special dimensions: Extension tube ☐ Yes □ No outside Ø \_\_\_\_ \_\_\_ mm, p.c. Ø \_\_ Dimension p = ☐ Oui pressure flange ☐ Non outside Ø \_\_\_ \_ mm, p.c. Ø \_\_\_ Ø of the container opening Operating time per day \_ Number of starts **DRIVE MOTOR** Three-phase motor Operating voltage \_Volt \_\_\_\_ \_Hz Is motor to be explosion-proof?

☐ Yes

□ No

QUOTATION TO	BE SENT BY:		
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