

## Series FB

### Clogless Pumps

- Reliable
- Wear resistant
- Low maintenance costs
- Easy to service
- Low power consumption
- Modular construction



# Series FB - a Solid Selection for Solids-carrying Liquids

## Range of Applications

The FB pump is a solids handling pump for all kinds of liquids containing abrasives, large and long contaminants.

Typical applications are severely contaminated waste paper, sewage, effluent and paper mill rejects.

## Low Energy Consumption

Series FB exhibit very high efficiencies for vortex pumps, due to the special impeller vane design. With channel impellers even higher efficiencies are achieved.

## Operating Reliability

The rigid bearing assembly of thorough design ensures a bearing life exceeding 50 000 hours. The sturdy shaft has a maximum deflection of 0.05mm, at the seal, thereby providing the best possible working conditions for the shaft seal.

## Low-cost Maintenance

The FB pumps are incorporated into the ABS Modular System™. Pumps with the same bearing assembly size have many spare parts in common.



*These FB pumps at Stora Enso, Sweden, are pumping the leftovers from paper making. The liquid contains fibre sludge.*

## The FB Pump

- ▶ is rigid, reliable and wear resistant
- ▶ has a large free passage area and is clogless
- ▶ is designed according to international quality standard
- ▶ has low maintenance costs
- ▶ has high efficiency giving high energy savings

## Clogless

The spacious pump casing, the wide openings in the channel impellers and the even larger passages of the vortex impellers ensure a clogless pump.

## Wear Resistant

Many applications are highly erosive. The pump casing has generous wall thicknesses and smooth internal contours to allow for a long service life.

## Easy to Service

The back-pull out design permits rotor removal without disturbing the connecting pipework or drive motor. A quick way of changing shaft seals is to replace the seal cartridge with another cartridge from the stock, without even removing the casing cover. The shaft seal is then replaced or reconditioned and the cartridge is stocked. ABS Modular system™ means quick and easy service, making down-times short.



*At the waste water plant in Falkenberg, Sweden, FB pumps are handling sewage.*

# Design

**Passage**  
The casings and impellers are designed to give maximum free passage area.

**Impellers**  
The FB pumps are equipped with channel or vortex impellers.  
All impellers have back vanes to prevent clogging behind the impeller.

**Quality Standard**  
FB pumps are designed to ISO 5199 "Technical Specification for Centrifugal pumps Class II".

**Pump Casing**  
Casings have smooth internal contours and generous wall dimensions to give long service life, when handling abrasive liquids.

**Bearing Assembly**  
The bearing assembly is a rigid design ensuring a long and maintenance free life of the pump. As the shaft has a very limited deflection, max. 0.05mm, the working conditions for the seal are perfect.

**Shaft Sealing**  
ABS PSI™ cartridge for single mechanical seals is the best solution for most applications. Our Pump Seal Integration provides perfect conditions for the seal.

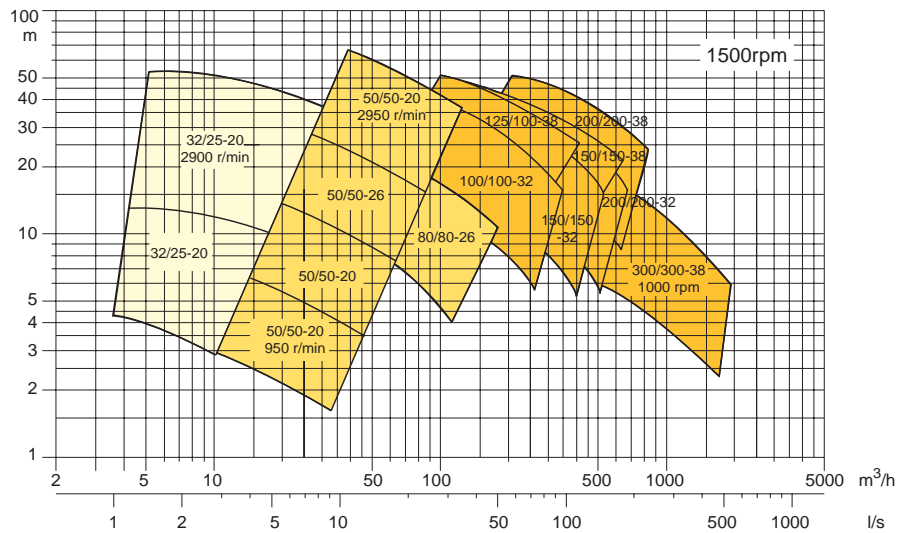
**Flexibility**  
The best sealing solution for each application: Single or double mechanical seals or gland packing.

**Channel Impeller**  
Our channel impellers have maximum channel area and can transport large solids. The high efficiency makes an FB pump with a channel impeller suitable also for clean liquids.

**Vortex Impeller**  
The special advantage of the vortex impeller is its ability to handle large and long solids. The vortex impeller can also be installed recessed, as shown, to get an even larger passage.

# Technical Data

<b>Flow</b>	1-1500 m <sup>3</sup> /h
<b>Head</b>	2-60 m
<b>Temperature</b>	Max. 190°C
<b>Pressure</b>	PN10/PN16
<b>Flanges</b>	ISO 7005 PN10/16
<b>Standard</b>	ISO 5199
<b>Lubrication</b>	Standard: Grease Option: Oil



## Materials

Material code	01	03	24
Pump casing	Grey Cast iron 0120	Grey Cast iron 0120	Duplex Stainl. steel 2324
Impeller	Grey Cast iron 0120	Duplex Stainl. steel 2324	Duplex Stainl. steel 2324
Shaft*	Stainless steel 2321	Stainless steel 2321	Stainless steel 2321
Shaft sleeve	Duplex Stainl. steel 2324	Duplex Stainl. steel 2324	Duplex Stainl. steel 2324

\*) Protected from pumped liquid

ABS material	Equivalent grades				Chemical composition
	Germany	USA	UK	France	
0120	GG20	A48/30B	1452/Gr. 220	Ft 20D	Grey Cast iron
2321	1.4057	AISI 431	431 S29	Z15 CN16-2	17Cr 2Ni 0.2C
2324	1.4460	AISI 329	-	-	25Cr 5Ni 1.5Mo 0.10C

### Ball Passages for Impeller Types

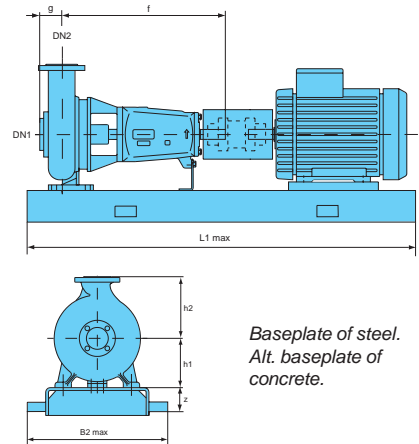
Pump type	Ball passage in mm		
	Vortex impeller	Recessed vortex imp.	Two-ch. impeller
FB 32/25-20	20	-	-
FB 50/50-20	-	50	-
FB 50/50-26	-	50	-
FB 80/80-26	-	80	-
FB 100/100-32	65	100	72
FB 150/150-32	75	130	80
FB 200/200-32	85	140	80
FB 125/100-38	60	-	78
FB 150/150-38	78	-	80
FB 200/200-38	-	-	90
FB 300/300-38	-	-	92*

\*) Three-channel impeller

## Dimensions

Pump type	Bear.Assy. size	DN1	DN2	h1	h2	g	f	B2* max.	L1* max.	z* max.	Weight** kg
FB 32/25-20	1	32	25	160	200	65	390	500	1120	150	55
FB 50/50-20	2	50	50	180	225	78	550	630	1560	210	85
FB 50/50-26		50	50	200	250	78	550	630	1560	245	100
FB 80/80-26		80	80	225	280	98	565	630	1560	235	110
FB 100/100-32	3	100	100	315	355	130	565	880	1970	295	150
FB 150/150-32		150	150	315	360	120	580	880	1970	295	205
FB 200/200-32		200	200	315	410	140	595	880	1970	295	220
FB 125/100-38		125	100	315	400	130	573	880	1970	295	210
FB 150/150-38		150	150	315	400	120	579	880	1970	295	230
FB 200/200-38		200	200	315	440	140	598	880	1970	295	240
FB 300/300-38		300	300	450	580	171	612	880	1970	295	310

\*) Varies with motor size and baseplate material    \*\*) Pump only



ABS reserves the right to alter specifications due to technical developments.

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