



ABS PROCESS PUMPS OF CENTRIFUGAL TYPE BA.

Series BA

Reliable process pumps

Application

BA-pumps have an extensive range of applications and a rugged design that is particularly suited to tough duties, such as paper stock with a consistency of 6-8%, chemical slurries and effluents. High efficiencies also make them ideal for clean liquids.

Special versions are available for pumping slurries containing large amounts of air or large particles.

For abrasive media and corrosive liquids, we can assist you in selecting the most suitable material, based on tests in our own research laboratory.

Reliability

The robust construction and thorough manufacturing methods combined with integrated quality control assure reliable pump performance.

With the pump operating under normal conditions a bearing life, L_{10h} , of at least 50 000 hours is guaranteed.

Shaft deflection at the seal of less than 0,05 mm ensures a long life for the seal. The ABS seal cartridge for single mechanical seals, the PSI, creates ideal conditions for the seal.

BA 350/300-43 pumping paper stock.



Series BA

Energy Savings

BA-pumps have very high efficiencies with some peaking at 90%. For a pump operating 24 hours a day this means substantial energy savings.

Each BA-pump is performance tested according to the standard ISO 9906 Grade 2 before despatch.

Ease of Maintenance

The BA-pumps are built for long, tough continuous operation and require only regular bearing lubrication. When designing the BA-pump special consideration was given to facilitate maintenance.

Thanks to the ABS Modular System, the bearing assembly and the shaft seal are easy to replace. Over 70 pumps are included in the ABS Modular System which ensures interchangeability of major parts and results in reduced spares inventory and minimises down-time. The Modular System based on the six bearing assemblies includes everything from baseplate to the impeller and the seal cartridge.

The seal cartridge system has few parts and makes it very easy to change seals.

BA-pumps are normally fitted with spacer-couplings, permitting back pull-out of the rotor assembly from the pump casing, without moving the motor.

Wear Resistance

Pump casings with generous wall thickness and smooth pocket free internals combine to provide wear resistant casings.

The BA-pumps are available in a variety of materials to ensure the best material for the pumped liquid.



BA 300/250-43 pumping water from Göta river for AKZO NOBEL.

Quality Standard

All BA-pumps are built to the stringent international quality standard ISO 5199, which applies to process pumps. ISO 5199 stipulates standards for bearing life, shaft deflection, vibration levels, corrosion resistance etc.

Series BA

Construction

Pump Casing

The pump casing has a rugged construction with a generous wall thickness. This combined with a smooth contour design gives good protection against erosion and corrosion.

The larger pumps have a double volute casing reducing radial forces and shaft deflection.

Wear Disc

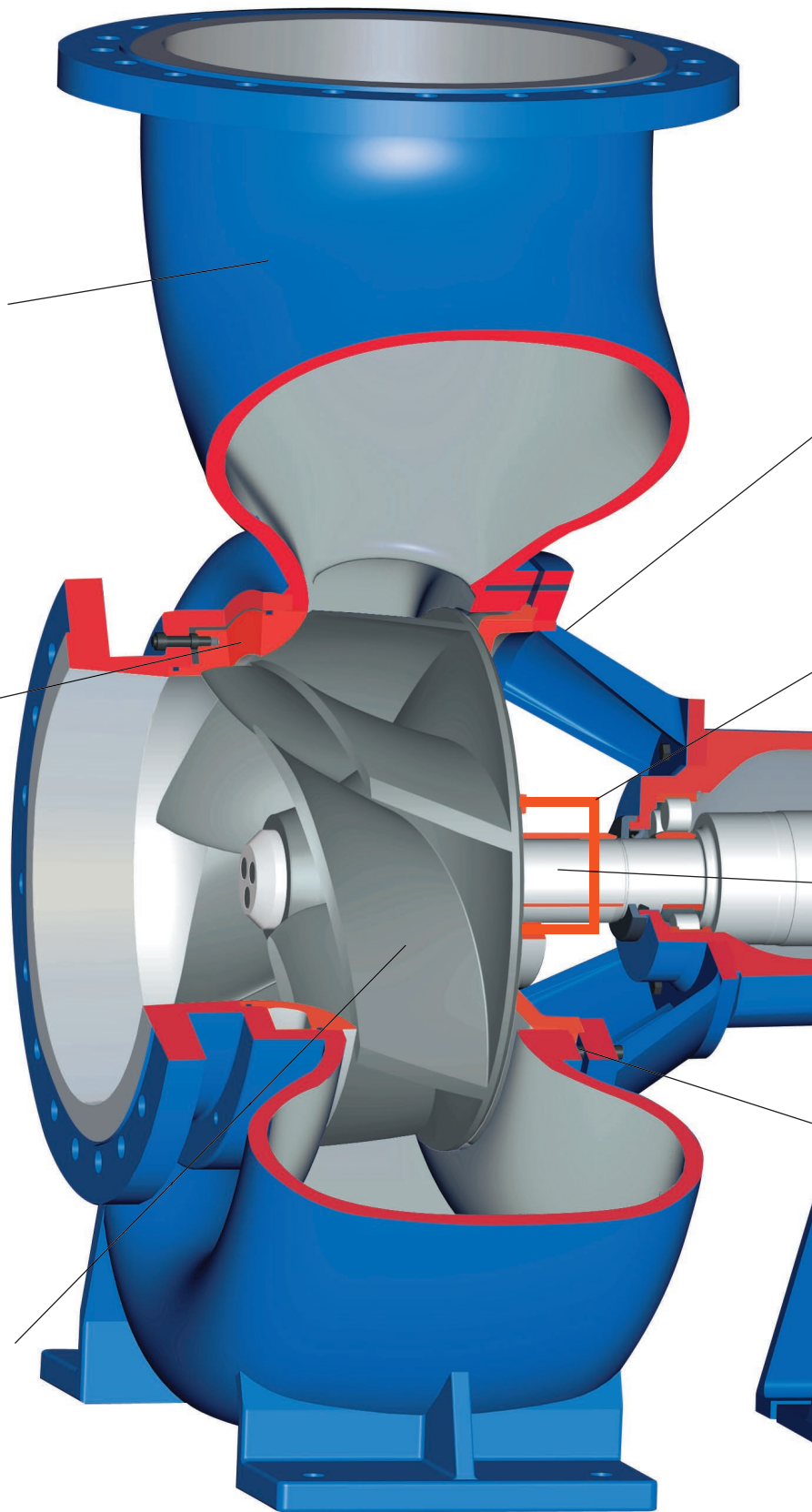
The pump inlet is protected by a replaceable wear disc. The wear disc is adjustable to retain the high efficiency. The wear discs of the two larger bearing assemblies are adjusted at the front of the pump casing. All wear discs are sealed by o-rings.

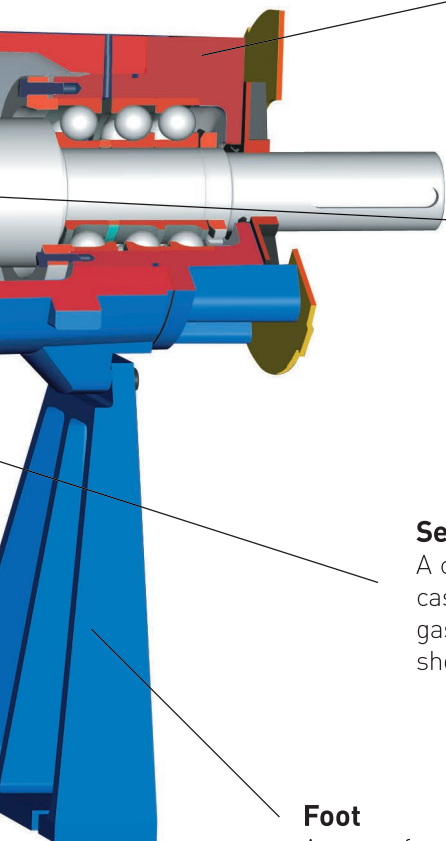
On the smaller pumps the wear disc forms part of the pump suction.

Impeller

Through continuous research all BA-pumps have high efficiencies with semi-open impellers that have large free passages.

For low pulsation applications, special FAN pump impellers are available.





Lantern

The heavy duty lantern with easy maintenance access connects the pump casing to the bearing assembly.

Shaft Seal

BA-pumps can be fitted with most seal configurations, gland packing, single/double mechanical seal or dynamic seal. All seals are available in a variety of materials to suit every application.

Shaft and Shaft Sleeve

The deflection of the rigid shaft is less than 0,05 mm at the seal (when the pump is operating under normal conditions).

All shafts are protected by a replaceable shaft sleeve in stainless steel.

Sealing

A confined gasket between the pump casing and casing cover prevents gasket "Blow-out" by sudden pressure shocks within the system.

Foot

A strong foot in nodular iron supports the bearing assembly.

Energy-saving Bearing

Assembly

The ABS Modular System centers around the bearing assembly. Six different sizes cover all pumps included in the modular system.

Traditionally, impeller back vanes have counteracted the axial thrust but in doing so consumed a lot of energy. The two largest bearing assemblies are designed to accept the total axial thrust from the impeller. For a pump in continuous operation this means large energy savings.

The bearings must withstand large axial thrust and radial loads simultaneously. All bearing assemblies have angular contact ball bearings at the driven end.

The bearing life, L_{10h} , of at least 50 000 hours (when the pump is operating under normal conditions).

Standard lubrication by grease with the option of oil.

On the two largest bearing assemblies a fan forms an integral part of the bearing assembly. This keeps the bearing temperatures low even in demanding applications. Lower temperature promotes longer life. Standard grease qualities can therefore be used under all conditions.

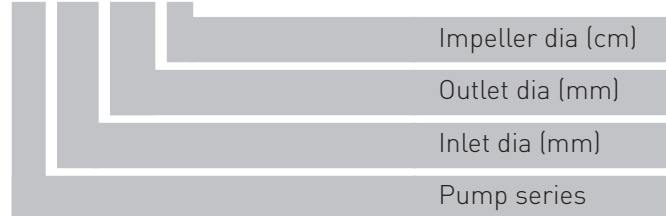
Series BA

Technical Data

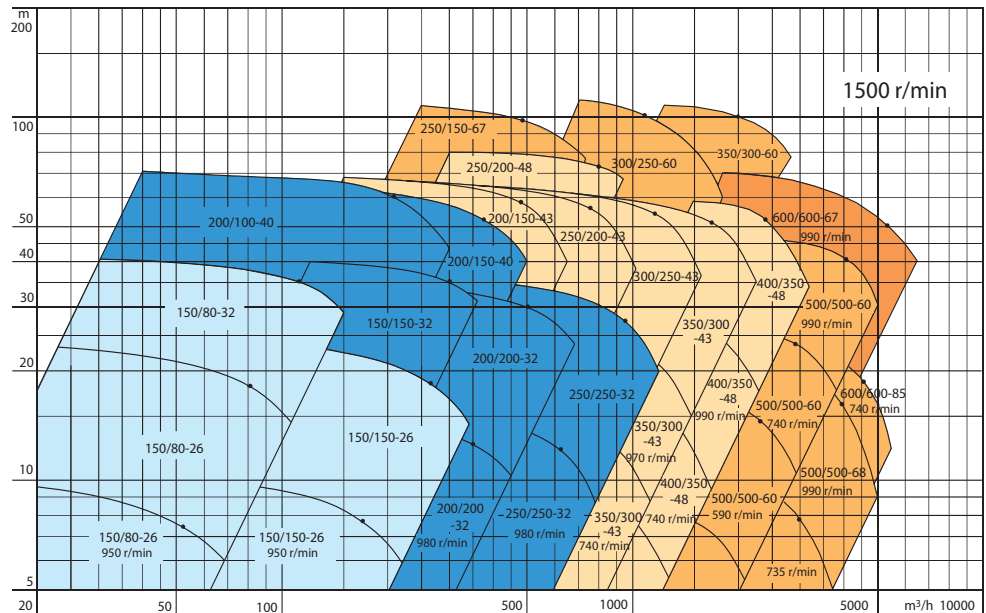
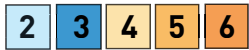
Capacity	20-6500 m ³ /h
Head	5-120 m
Temperature	Max. 190°C (with grease lubrication)
Pressure	PN6/PN10/PN16 (See separate brochure for pumps of 25 bar pressure rating.)
Flanges	ISO 7005 PN10 or PN16 (BS 4504) or ANSI
Lubrication	Grease; oil as an option
Specification	ISO 5199 "Technical Specification for Centrifugal pumps Class II"
Dimension standard	ISO 2858 (Applies to positioning of the feet on sizes up to BA 200/200-32.)

Type Designations

BA 250/250-32



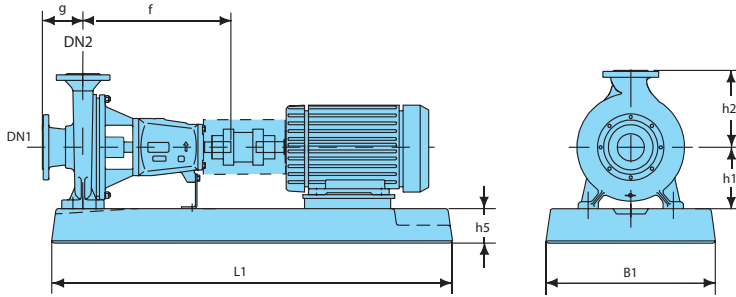
Bearing Assembly Sizes



Code	Standard material combination			08	09	21	25	26	27	32
	03	05	24							
Pump casing	Cast iron	Cast iron	Stainless steel 2324	Nodular iron 0717	Nodular iron 0717	Stainless steel 2399	Stainless steel 2390	Stainless steel 2343	Stainless steel 2564	Nickel alloy 6371
Casing cover	0120	0120	steel 2324	0120	steel 2324	steel 2399	steel 2390	steel 2343	steel 2564	alloy 6371
Wear disc	Cast iron 0120	Stainless steel 2324	Stainless steel 2324	Cast iron 0120	Stainless steel 2324	Stainless steel 2399	Stainless steel 2390	Stainless steel 2343	Stainless steel 2564	Nickel alloy 6371
Impeller	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2399	Stainless steel 2390	Stainless steel 2343	Stainless steel 2564	Nickel alloy 6371
Shaft	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2390	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324
Shaft sleeve	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2324	Stainless steel 2562	Stainless steel 2324	Stainless steel 2562	Nickel alloy 6371

ABS material	Equivalent grades France	Germany	UK	USA	Chemical Composition
0120	Ft20D	GG20	Gr. 220	A48/30B	Cast iron
0717	FGS 400-12	GGG-40	Gr. 420/12	A536/60-40-18	Nodular iron
2321	Z15 CN 16-02	1.4057	431 S29	AISI 431	17Cr 2Ni 0.2C
2324	-	1.4460	-	AISI 329	24Cr 5Ni 1.5Mo 0.10C
2343	Z6 CND 18-12-M	1.4408	316 C16	A743/CF-8M	18.5 Cr 12Ni 3Mo 0.07C
2390	Z3 CNUD 26.5-M	-	-	A743/CD-4 M Cu	25Cr 5.8Ni 2.8Mo 2.5Cu 0.05C
2562	Z2 NCDU 25.20	1.4539	-	UNSN 08904	20Cr 25Ni 4.5Mo 1.6Cu 0.025C
2564	Z6 NCDU 25-20-04M	-	332 C11	A743/CN-7 M	20Cr 25Ni 4.5Mo 3.5Cu 0.06C
6371	-	2.4537	-	A494/CW-12 MW	16.5Cr 56Ni 17Mo 4.5W 6Fe

Series BA



Pumps with Bearing Assembly Sizes 2, 3, 4 and 5

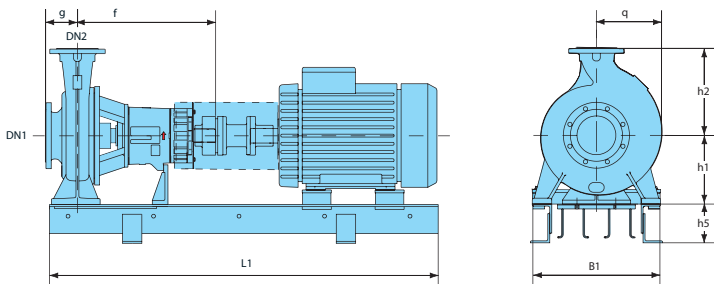
Baseplate of concrete or fabricated steel

Pump Type	Bear. Assy.	DN1	DN2	h1	h2	g	f	B1**	L1**	h5**	Weight kg***
BA 150/80-26*	2D/2E	150	80	200	280	150	500	830	1410	200	100
BA 150/80-32*	2D/2E	150	80	225	315	150	500	830	1520	200	115
BA 150/150-26*	2D/2E	150	150	250	315	150	500	830	1660	200	125
BA 150/150-32*	3D/3E	150	150	280	400	150	530	900	1740	250	190
BA 200/100-40*	3D/3E	200	100	280	400	155	530	900	2040	250	200
BA 200/150-40*	3D/3E	200	150	315	450	155	530	900	2040	250	210
BA 200/200-32*	3D/3E	200	200	315	450	150	530	900	2040	250	210
BA 250/250-32	3D/3E	250	250	400	530	250	486	900	2040	250	350
BA 200/150-43	4F	200	150	355	450	165	712	1150	2400	250	360
BA 250/200-43	4F	250	200	355	500	180	718	1150	2400	250	400
BA 250/200-48	4F	250	200	450	530	180	749	1150	2400	250	625
BA 300/250-43	4F	300	250	450	550	200	725	1150	2400	250	470
BA 350/300-43	4F	350	300	450	600	210	733	1150	2400	250	515
BA 400/350-48	4F	400	350	500	700	250	775	1150	2400	250	740
BA 250/150-67	5F	250	150	450	630	190	932	1400	2600	250	870
BA 300/250-60	5F	300	250	450	675	200	905	1150	2600	250	750
BA 350/300-60	5F	350	300	500	750	240	920	1150	3000	250	800
BA 500/500-60	5F	500	500	630	875	300	905	1400	2600	250	1350
BA 500/500-68	5F	Please contact ABS.									
BA 600/600-85	5F	Please contact ABS.									
(BA 600/600-67	6F	Please contact ABS).									

*] Pump without suction flange

**] The dimension varies depending on motor size and baseplate material

***] Only pump



Pumps with Bearing Assembly Sizes 4 and 5

Baseframe for concreting in.

Pump Type	Bear. Assy.	DN1	DN2	h1	h2	g	f	q	B1**	L1**	h5	Weight kg***
BA 200/150-43	4F	200	150	355	450	165	712	338	660	2130	200	360
BA 250/200-43	4F	250	200	355	500	180	718	384	660	2130	200	400
BA 250/200-48	4F	250	200	450	530	180	749	415	760	2330	200	625
BA 300/250-43	4F	300	250	450	550	200	725	444	760	2330	200	470
BA 350/300-43	4F	350	300	450	600	210	733	502	760	2330	200	515
BA 400/350-48	4F	400	350	500	700	250	775	567	760	2330	200	740
BA 250/150-67	5F	250	150	450	630	190	932	469	960	2600	250	870
BA 300/250-60	5F	300	250	450	675	200	905	476	760	2600	250	750
BA 350/300-60	5F	350	300	500	750	240	920	525	760	2600	250	800
BA 500/500-60	5F	500	500	630	875	300	905	726	1010	2600	250	1350
BA 500/500-68	5F	Please contact ABS.										
BA 600/600-85	5F	Please contact ABS.										
(BA 600/600-67	6F	Please contact ABS).										

**] The dimension varies depending on motor size

***] Only pump

Quality at every stage



Our continuing commitment to advanced research and development and the newest machining technology combined with a salesforce well-trained in products and applications give complete satisfaction.

With this reliable background we can offer products where performance, availability and low running and servicing costs will give you the most economical solution on the market:

-Cost-Effective Pumping



We know how water works