

Series BA

End suction centrifugal process pumps for pulp and paper, chemical, hydrocarbon process, automotive, mining, and other industrial applications

- Reliable
- High-efficiency
- Easy maintenance
- Wear resistant
- Modular construction



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.

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

Reliability

The rugged construction and thorough manufacturing methods, combined with integrated quality control standards, 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 0.002" ensures a long life for the seal. The ABS seal cartridge for single mechanical seals, the PSI, creates ideal conditions for the seal.

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 Hydraulic Institute standards before shipping.



BA 14x12-17 installed in a paper mill pumping paper stock.

Ease of maintenance

The BA pumps are built for 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 80 pumps are included in the modular system which ensures interchangeability of major parts and results in reduced spares inventory and minimizes down time. The modular system, based on the five 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 thicknesses 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.

Quality standard

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

Construction

Lantern (Frame Adapter)

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

Pump Casing

Rugged construction with a generous wall thickness and smooth contour design gives good protection against corrosion. Larger models have a double volute casing reducing radial forces and shaft deflection.

Energy-saving Bearing Assembly

The ABS Modular System centers around the bearing assembly. Five 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 and are lubricated by grease or oil.

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

Bearing temperatures are kept low by incorporating special design features even in demanding applications.

Wear Disc

The pump inlet is protected by a replaceable wear disc. The wear disc is adjustable to retain 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. The wear disc on smaller models form part of the pump suction.

Impeller

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.

Shaft and Shaft Sleeve

The deflection of the rigid shaft is less than 0.002" at the seal (when the pump is operating under normal conditions). All shafts are protected by a replaceable shaft sleeve in stainless steel.

Shaft Seal

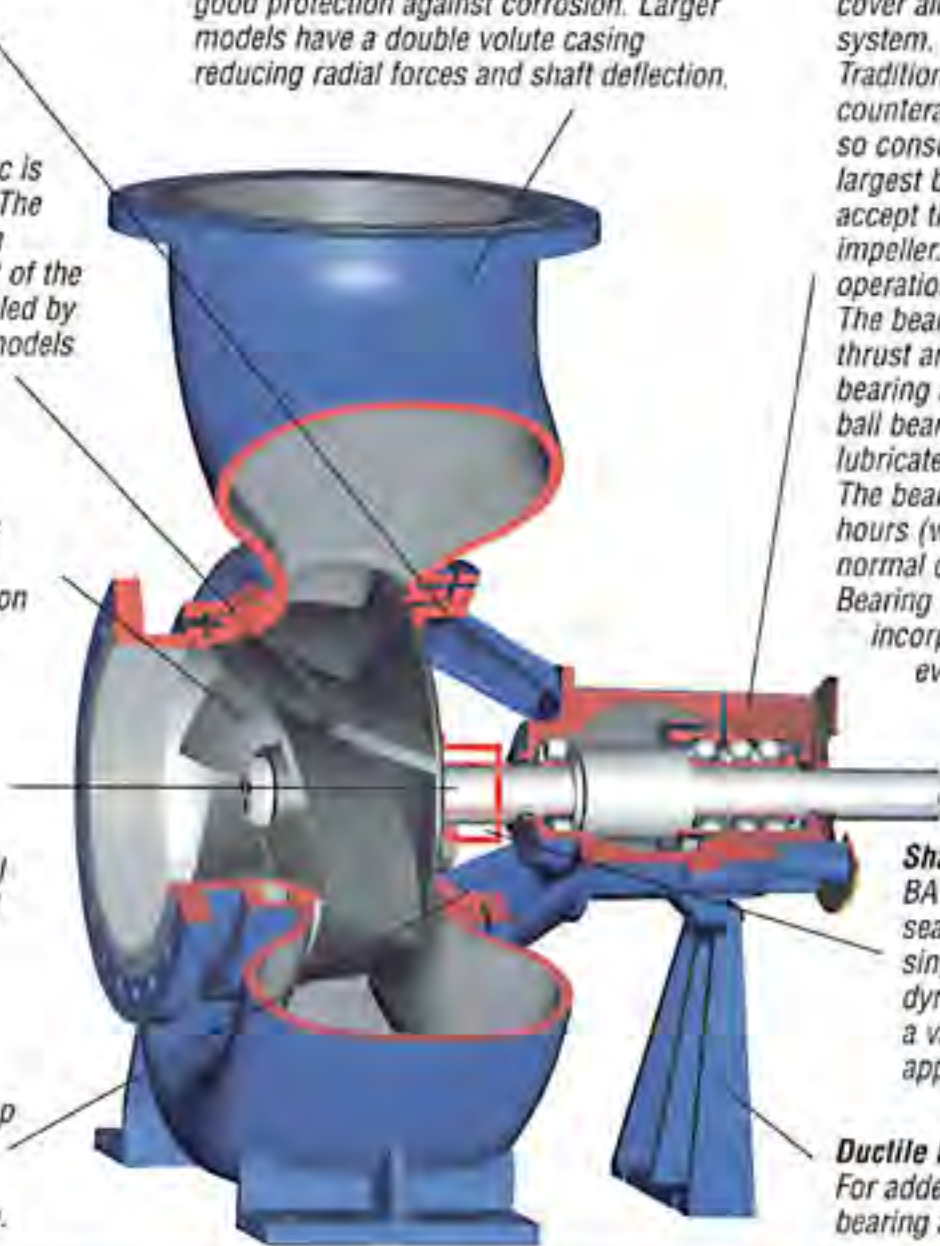
BA pumps can be fitted with most seal configurations, gland packing, single/double mechanical seal or dynamic seal. All seals are available in a variety of materials to suit every application.

Sealing

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

Ductile Iron Foot

For added strength in supporting the bearing assembly.



Standard material combination										
Code	03	05	24	08	09	21	25	26	27	32
Pump casing	Cast iron	Cast iron	Stainless steel 2324	Ductile iron 0717	Ductile iron 0717	Stainless steel 2399	Stainless steel 2390	Stainless steel 2343	Stainless steel 2564	Nickel alloy 6371
Casing cover	0120	0120	steel 2324	0120	0120	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 2321	Stainless steel 2321	Stainless steel 2321	Stainless steel 2321	Stainless steel 2321	Stainless steel 2321	Stainless steel 2390	Stainless steel 2321	Stainless steel 2321	Nickel alloy 6371
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

* For Bearing Assembly sizes 4 and 5: Shaft made of the same material as the shaft sleeve.

Technical Data

Capacity	40-44000 GPM.
Head	16-525 Ft.
Temperature/Pressure Rating	Refer to pressure-temperature chart.
Flanges	ANSI B 16.1, 125 lbs. RF. ANSI B 16.5, 150 lbs. RF.
Lubrication	Oil. Optional alternative - Grease.

Type Designations

BA 10 x 10-13



ABS #	Equivalent Grade USA Generic	ASTM	Composition
0120	Cast iron	A48/30B	Cast iron
0717	Ductile iron	A536/60-40-18	Ductile iron
2321	Stainless steel	A276/431	17 CR 2N
2324	Duplex stainless	A890/3A	24Cr 5Ni 1.5Mo
2343	316 SS	A743/CF-8M	18.5 Cr 12Ni 3Mo
2390	CD4MCu	A743/CD-4MCu	25Cr 5.8Ni 2.8Mo 2.5Cu
2562	Alloy 20	B649/N08904	20Cr 25Ni 4.5Mo 1.6Cu
2564	Alloy 20	A743/CN-7M	20Cr 25Ni 4.5Mo 3.5Cu
6371	Hastelloy C	A94/CW-12MW	16.5Cr 56Ni 17Mo 4.5W 6Fe
ErCo-2399		ABS Erosion/Corrosion Resistant Material	

The manufacturer reserves the right to alter performance, specifications or designs without notice.

