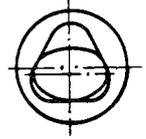
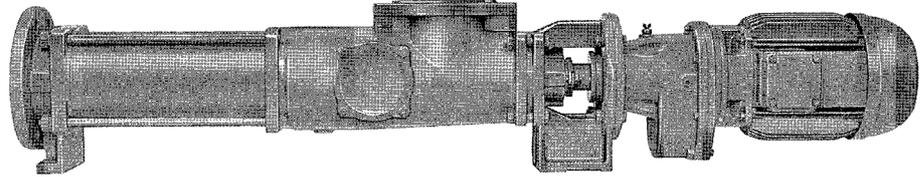


Eccentric Screw Pumps in Block Design

ALLTRI



Series AEB1L Design IE



Application

For handling liquid to highly viscous, neutral or aggressive, uncontaminated or abrasive liquids, liquids containing gases or which tend to froth, also containing fibers and solid matter.

In waste water and waste water treatment engineering, chemical and petrochemical industry, paper and cellulose industry, soap and fats industry, paint and lacquer industry, food and beverage industry, plastics industry, ceramics industry, agriculture, sugar industry and in shipbuilding.

Operating

Self-priming, single-stage, rotary positive displacement pump. Conveying elements are the rotating screw (rotor) and the fixed stator. In the cross-sectional plane, both are in contact with one another at three points forming three sealing lines along the length of the conveying elements. The contents of the sealed chambers which are formed as the rotor turns, are displaced axially and with complete continuity from the suction to the delivery end of the pump. Despite rotor rotation, there is no turbulence. The constant chamber volume excludes squeezing, thus ensuring an extremely gentle low-pulsating delivery.

Design features

The pump and drive are held together by the bearing bracket to form a modular unit.

By means of external casing connecting screws (clamping screws), the pressure casing, stator and suction casing are interconnected. The suction casings are designed particularly favorable to flow. The pump sizes 381 to 5001 are supplied in cast iron and are provided with staggered holes for cleaning. The stator vulcanized into a tube or shell casing (even elastomer wall thickness) is provided with external collars vulcanized to it on both sides, reliably sealing towards the suction casing and delivery casing and protecting the stator shell from corrosion.

The exchangeable shaft sealing housing or mechanical seal housing (subsequent conversion to another sealing variant is possible) are arranged between the suction casing and bearing bracket.

The torque of the drive is transmitted over the driving shaft and the joint shaft onto the rotor. On both sides, the joint shaft ends in liquid-tight encapsulated bolt joints, which are of particularly simple and sturdy design and easily absorb the eccentric movement of the rotor.

Shaft seal

By uncooled, cooled or heated stuffing box or by uncooled or cooled maintenance-free unbalanced, single or double-acting mechanical seal.

Material pairing and design are adapted to the respective operating conditions. For further data, refer to pages 4, 5.

The stuffing box or mechanical seal housings of the various shaft sealing types are interchangeable within one size. The various mechanical seal housing parts form a modular construction system and, in case of conversion to a different mechanical seal design, can be easily combined with one another.

Installation spaces for mechanical seals according to DIN 24 960 (except for double mechanical seal).

For further information, refer to pages 4, 5, 6 and 7.

Technical data

Deliveries, admissible speed ranges and required drive powers are to be taken from the performance graph on page 3 and/or the separate individual characteristic curves.

				AEB1L
Delivery	Q	l/min	to	2700
Temperature of fluid pumped	t	°C ①	to	100
Delivery pressure single-stage	Δp	bar	to	4
Pump outlet pressure	p _d	bar ②	to	16
Attainable underpressure	p _s	bar ③	to	0.9
Viscosity	η	mPa·s	to	200.000 ③
Admissible solids content	vol % ③		to	60

The mentioned performance data are to be considered as a product and performance abstract only. The particular operating limits can be taken from the quotation or order acknowledgement.

Max. admissible grain sizes and fiber lengths

Size	51	101	201	381	551	
max. grain size	mm	3	4	5	6.3	8
max. fiber length	mm	35	42	42	48	60
Size	751	1001	1451	2701	5001	
max. grain size	mm	8	10	10	12.5	16
max. fiber length	mm	60	79	79	98	130

Increasing solids content and increasing grain size require a reduction of the pump speed:

- ① depending upon the fluid to be pumped and the elastomers employed
- ② depending on the direction of rotation, inlet pressure
- ③ depending on the pump size/design, speed and fluid to be pumped

Bearings

The driving and the joint shaft are situated in the reinforced bearings of the electric motors, gear motors or control gear which also absorb the generated axial forces.

As all drives are only supplied with reinforced bearings it must be assured that the assigned pumps can be run at full capacity within their permissible application limits.

Drive

The drive can be provided by non-explosion-proof or explosion-proof three-phase motors, gear motors or control gear. For drive options see page 12. For technical data and dimensions, please refer to the separate sales documentation, data sheet 19-00-0000-111-3.

A considerable advantage is the fact that within a pump size the connection dimensions for all drive types are the same. This allows a later change to a different drive type or size.

Installation

AEB1L pumps may be installed horizontally or vertically. In case of vertical arrangement, "shaft shank downwards" is not admissible.

Exchangeability of components

The components of all eccentric screw pumps are of a modular design. This allows a simple and cost-effective spare parts management even if different series and designs of pumps are used.