Eccentric block-type screw pumps of CIP design

Available in accordance with US 3-A sanitary standards

Series ACNBP

Adapted to practically used modern cleaning processes – CIP flushings – the ACNBP series provides a pump type which, without being dismantled, can be cleaned by way of through-flushing (during standstill) absolutely free from residues and thus bacteria.

For a pump with open joints to be completely cleaned and drained, it can be temporarily switched in during the flushing process.

If silicone stators with uniform elastomer wall thickness are used, the pump may remain in operation during the whole flushing process.

For the structural design, particular attention was paid to that the liquid pumped flows properly through the entire internal pump chamber. Rest areas without the flow of product which may result in deposits during the pumping process were avoided.

In addition to the corresponding design of the pump interior, all components coming into contact with the liquid such as shaft seals and pin joints are installed and designed so that they are properly cleaned during through-flushing.

Materials and surface quality of the components wetted by the product are adapted to the increased demands for cleanliness. Thus, the ACNBP series provides pumps meeting all requirements regarding a CIP type according to today’s state of the art.

Application
For pumping low to high-viscosity, pure, neutral or aggressive liquids, liquids containing gases or tending to froth, also with fibrous and solids content.

Principal fields of application
Dairies, beverage industry, meat and fish processing, sweets industry, fruit and vegetable processing, other foodstuff industry, pharmaceutical and cosmetics industry.

Operation
Self-priming rotary positive displacement pump whose pumping elements are the rotating eccentric screw (rotor) and the fixed stator. In any cross-sectional plane, the two are in contact with one another at two points, and along the length of the conveying elements, these points form two sealing lines. The material contained in the sealed enclosed cavities which are formed as the rotor turns is displaced axially and with complete continuity from the suction to the discharge side of the pump. Despite the fact that the rotor rotates, no turbulence is produced. The constant chamber volume assures an extremely gentle low-surge pumping action.

Structural design/type
Discharge casing, stator, suction casing and lantern are held together by corrosion-resistant, easily removable casing connecting screws (tie rods).

For all sizes, the suction/discharge and flushing connections are of particularly large design.

Due to a horizontal clearance-volume-free bottom of the discharge branch, complete draining is possible at this point. The suction casings and, in case of branch position H, the discharge casing are designed with a flushing/drain connection tangentially arranged at the underside of the casing (other connection arrangements are possible).

The metallic pump components in contact with the liquid are micro-ground, all outer surfaces are polished.

The stator which is vulcanized into a tubular or shell casing (uniform elastomer wall thickness) is provided with external collars vulcanized to both ends which provide a safe seal of the suction and discharge casing thus preventing any corrosion.

The stator shell proper is in principle protected against corrosion from the outside by means of an additional stainless steel shell which can be designed for cooling purposes (special variant).

Via an easily dismountable driver pin, the drive torque is transmitted onto the hollow shaft and from there, via the coupling rod, onto the rotor. The coupling rod terminates at both ends in special pin-type universal joints which can easily be flushed and cleaned. As a special variant, pin-type joint connections are possible which are encapsulated by collars, liquid-tight.

Shaft seal
By means of uncooled, maintenance-free, non-balanced or balanced, single-acting mechanical seal which is supplied with or without quench. O-ring seat for stationary seal ring of the CIP type. Mounting spaces for mechanical seals correspond to DIN 24 960 (short type).

Seal faces and types are adapted to the respective operating conditions.

For further details, see pages 5, 6 and 7.

Advantages:
The shaft seals are arranged in the suction chamber so that they are completely flushed by the liquid pumped; therefore, optimum cleaning possibility.

Bearing
The bearing of the drive/hollow shaft is in the reinforced bearings of the geared motors or variable-speed gears which, at the same time, absorb the axial forces occurring.

As all drives are only supplied with reinforced bearings, it is assured that the allocated pumps can always be fully run within their permissible operation limits.

Drive
Non-explosion-proof or explosion-proof geared motors or variable-speed gears can be provided for the drive. For possible types of drives, see pages 10 and 11. For the corresponding technical characteristics and dimensions, see separate information sheet 19-54-0000-025-3.
The fact that the mating dimensions of all types of drives are identical within one pump size is of a material advantage. As a result hereof, subsequent conversion to a different type or size of drive is easily possible.

Technical characteristics
Flow rates, permissible speed ranges and drive powers required can be taken from the performance chart on page 3 or from the separate individual pump characteristics.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate Q l/min</td>
<td>up to 480</td>
</tr>
<tr>
<td>Temperature for liquid pumped t °C</td>
<td>up to 100</td>
</tr>
<tr>
<td>Differential pressure</td>
<td></td>
</tr>
<tr>
<td>single-stage, sizes 25 to 550</td>
<td>Δp bar up to 6</td>
</tr>
<tr>
<td>single-stage, sizes 100 to 380</td>
<td>Δp bar up to 12</td>
</tr>
<tr>
<td>two-stages, size 12 to 380</td>
<td>Δp bar up to 12</td>
</tr>
<tr>
<td>Pump discharge pressure p_d bar</td>
<td>up to 12</td>
</tr>
<tr>
<td>Suction obtainable p_s bar</td>
<td>up to 0,95</td>
</tr>
<tr>
<td>Viscosity η mPa·s</td>
<td>up to 150,000</td>
</tr>
<tr>
<td>Permissible solids content Vol.%</td>
<td>up to 60</td>
</tr>
</tbody>
</table>

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.

Permissible particle sizes and fibre lengths:

<table>
<thead>
<tr>
<th>Pump size</th>
<th>12</th>
<th>25</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>380</th>
<th>550</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. particle size mm</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3,8</td>
<td>5</td>
<td>6,8</td>
<td>6,8</td>
</tr>
<tr>
<td>max. fibre length mm</td>
<td>35</td>
<td>42</td>
<td>42</td>
<td>48</td>
<td>60</td>
<td>79</td>
<td>79</td>
</tr>
</tbody>
</table>

Increases in the solids content and particle size require a reduction of the pump speed.

Installation
ACNBP pumps are installed horizontally. If vertical installation is requested, contact the factory.

The special advantages of the ACNBP series at a glance:

- Pumps of CIP design (CLEANING IN PLACE) with flushing connection.
- Open, flushable joints (sleeve encapsulation possible).
- Sealing by mechanical seal, with or without quench. The shaft seal is arranged in the suction casing so that it is fully covered by the flow of the liquid pumped/flushing liquid.
- Pump completely of stainless steel (including lantern).
- Stators of bright foodstuff design (various material qualities) with uniform or non-uniform wall thickness.
- When using silicone stators with uniform elastomer wall thickness, the pump may remain in operation during the entire flushing process.
- The following is achieved with stators with uniform elastomer wall thickness:
  - lower starting and operating torques,
  - a lower power consumption,
  - smooth operation and a low-pulsation delivery.
- Discharge casing designed horizontal at the underside (asymmetrical). The suction casing and, in case of branch position H, the discharge casing with a tangentially arranged flushing/drain connection at the underside of the casing. Thus, perfect emptying of the casings is possible.
- Stator covered with stainless steel pipe, thus, heating or cooling is possible at this point.

1. The permissible temperature of the liquid pumped moreover depends on the elastomers used, the kind of the liquid pumped and the attached drives.
2. Stator with uniform elastomer wall thickness.
3. Depending on the sense of rotation and inlet pressure.
4. Depending on the liquid being pumped, pump speed and pump size.
Series ACNBP

Performance chart
For a rough selection of the pump size and speed as a function of the required flow rate and the nature of the liquid to be pumped.

\( v_{g\text{m}} \) = mean sliding speed of rotor in stator.

---

Sizes of ACNBP series. Information on performance ranges not covered by the ACNBP series can be found on the back cover of this brochure or in the separate brochures dealing with the other series. For exact performance data, see the individual pump characteristics.
## Type coding

<table>
<thead>
<tr>
<th>Position in type coding</th>
<th>Designation</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Series</td>
<td>ALLWEILER eccentric screw block-type pump of the CIP design. As a variant of the aseptic design.</td>
</tr>
<tr>
<td>2</td>
<td>Size</td>
<td>Possible sizes: 12, 25, 50, 100, 200, 380, 550. The numbers indicate the theoretical flow rate in l/min at n = 400 r.p.m and Δp = 0 bar.</td>
</tr>
<tr>
<td>3</td>
<td>Number of stages</td>
<td>1 = single-stage up to 6 bar (up to 12 bar, sizes 100-380 with stator with uniform elastomer wall thickness) (size 12 available only two-stage). 2 = two-stage up to 12 bar (size 550 available only single-stage).</td>
</tr>
<tr>
<td>4</td>
<td>Bearing</td>
<td>E = external bearing in the drive aggregate.</td>
</tr>
<tr>
<td>5</td>
<td>Type of suction/discharge connections</td>
<td>2 = Threaded connection – according to dimensional drawing pages 8 and 9. X = Special-type suction and/or outlet connection, e.g.: Connections for inch system of units such as ISO 2852, IDF standard, ACME 3A, APV-RJT, Mácon, SMS, Clamp (ISO 2853), Tri-Clamp.</td>
</tr>
</tbody>
</table>

**Example:** A pump with the type coding ACNBP 50.1E2DG0C244PL02FP would be a single-stage pump with an external bearing in the drive aggregate, made of stainless steel, with a theoretical flow rate of 50 l/min at n = 400 r.p.m and Δp = 0 bar.

**Seal faces:**
- Single-acting mechanical seal
- Springs and construction materials
- Auxiliary seals

**Auxiliary seals:**
- Single-acting mechanical seal
- Springs and construction materials
- Auxiliary seals

---

**Explanatory notes on the type coding:**
- **Position in type coding:**
  - **Series:** ALLWEILER eccentric screw block-type pump of the CIP design. As a variant of the aseptic design.
  - **Size:** Possible sizes: 12, 25, 50, 100, 200, 380, 550. The numbers indicate the theoretical flow rate in l/min at n = 400 r.p.m and Δp = 0 bar.
  - **Number of stages:** 1 = single-stage up to 6 bar (up to 12 bar, sizes 100-380 with stator with uniform elastomer wall thickness) (size 12 available only two-stage). 2 = two-stage up to 12 bar (size 550 available only single-stage).
  - **Bearing:** E = external bearing in the drive aggregate.
  - **Type of suction/discharge connections:** 2 = Threaded connection – according to dimensional drawing pages 8 and 9. X = Special-type suction and/or outlet connection, e.g.: Connections for inch system of units such as ISO 2852, IDF standard, ACME 3A, APV-RJT, Mácon, SMS, Clamp (ISO 2853), Tri-Clamp.

Design of shaft seal:

- G = Mechanical seal

Type of shaft:

- 0 = Shaft with wear sleeve

Type of shaft seal:

- A = Mechanical seal, single-acting, balanced, direction-independent, spring not in contact with the product, auxiliary seals of elastomer
- B = as for A, however, with additional quench
- C = Mechanical seal, single-acting, non-balanced, direction-dependent, single spring, auxiliary seals of elastomer
- D = as for C, however, with additional quench
- X = Special-type mechanical seal

Double shell:

- D = Double shell for heating or cooling

Double shell type:

- 4 = Stator (only unpressurized)
- X = Special type for further double shells

Design options:

- N = Rotor with thermal expansion clearance as a function of the temperature of the liquid pumped
- M = Rotor with thermal expansion clearance as a function of the temperature of the liquid pumped
- H = Rotor ductile hard-chrome plated
- T = Stator with uniform elastomer wall thickness (possible from size 100)
- X = Other designs, e.g. encapsulated joints

Casing part materials:

- 2 = 1.4301
- 4 = 1.4404
- X = Special materials

Hollow shaft, coupling rod, wetted, material:

- 4 = 1.4571
- X = Special materials, e.g. also for joint parts

Rotor materials:

- 4 = 1.4571
- X = Special materials, e.g. other metals, plastics

Stator materials:

- PL = Perbunan, light
- P = Perbunan
- YL = Hypalon, light
- SL = Silicone, light
- X = Special materials

Material of cover sleeves (special variant):

- O = No cover sleeves, standard CIP joints
- X = Special materials

Material of shaft seal:

- Mechanical seal:
  - Seal faces
  - Springs and construction materials
  - Auxiliary seals

  1st figure | 2nd figure | 3rd figure
  --- | --- | ---
  1 = Cr cast iron/hard carbon | A = 1.4300 | P = Perbunan
  2 = CrMo cast iron/hard carbon | F = 1.4571 | E = EP rubber
  3 = CrNiMo steel armoured/hard carbon | L = Hastelloy B | S = Silicone caoutchouc
  4 = Ceramics/hard carbon | M = Hastelloy C | N = Neoprene
  5 = Carbide/carbide highly wear-resistant | X = Special materials | V = Viton
  6 = Carbide/carbide corrosion-resistant | TTE = EP rubber | TTV = Viton
  7 = Carbide/carbide, highly corrosion-resistant | X = Special materials | TTS = Silicone rubber
  X = Special materials |  |  |

- double PTFE-coated
Sectional drawing and parts list

Bearing: E (external bearing in the drive unit), hollow shaft at the driver pin easily dismountable

Shaft seal: G0A mechanical seal, single-acting, balanced, direction-independent, spring not in contact with the product, O-ring seal for stationary seal ring of the CIP type.

Suitable for all liquids, especially suited for sticky (adhesive) products and products tending to hardening.

Permitted pressure at the shaft seal $p = -0.5$ to 12 bar.

Joints: open, product-lubricated.

Stator: with uniform elastomer wall thickness.

Sizes 100 to 380

Part No. Designation
---
122 | Lantern
123 | Driver pin
124 | Locking device for driver pin
125 | Hollow shaft
141 | Lubricating paste
142 | O-ring
219 | Mechanical seal
220 | Locking pin
232 | Lip seal
301 | Coupling rod pin
302 | Coupling rod bush
303 | Guide bush
304 | Retaining sleeve
305 | Joint grease
306 | Clamping band
307 | Coupling rod
308 | Cover sleeve
309 | Lobe seal
401 | Rotor
402 | Stator
501 | O-ring
504 | Discharge casing
505 | Suction casing
506 | O-ring
507 | O-ring
508 | O-ring
509 | O-ring
516 | Stator shell
517 | O-ring
601 | Name plate
606 | Hexagon screw
609 | Hexagon nut
610 | Washer
611 | Tie rod
612 | Support, pump-side
614 | Grub screw

† Not required for pump size 12

Section A–B, Part 505

Stator: with non-uniform elastomer wall thickness.

Sizes 12 to 550

Branch position E:
Suction branch vertically upwards, flushing connection tangentially to the right
(as seen from the drive)
Joints: encapsulated liquid-tight, lubricated for life (special variant).

Shaft seal: G0B as G0A, however, with additional quench. Max. permitted pressure difference between quench liquid pressure and pressure in the pump casing: $p = 0.5$ bar. Max. quench liquid pressure: 3 bar.

Shaft seal: G0D as G0C, however, with additional quench. Max. permitted pressure difference between quench liquid pressure and pressure in the pump casing: $p = 0.5$ bar. Max. quench liquid pressure: 3 bar.

Shaft seal: G0C Mechanical seal, single-acting, non-balanced, direction-dependent, single spring, O-ring seat for stationary seal ring of the CIP type. Suited for all liquids. Permitted pressure at the shaft seal: $p = -0.5$ to 10 bar.
Series ACNBP

Pump dimensions, possible branch positions, weights

Pump dimensions for shaft seal design: G0A, G0B, G0C, G0D

Branch position E or D
Casing not rotatable

Branch position A, B or C
Casing rotatable

Branch position F or G
Casing not rotatable
Series ACNBP

Pump dimensions, possible branch positions, weights

Dimensions in mm, pitch of round threads in inches.
Subject to alterations without prior notice.

<table>
<thead>
<tr>
<th>Size</th>
<th>b1</th>
<th>b2</th>
<th>c</th>
<th>e</th>
<th>f</th>
<th>g1</th>
<th>g2</th>
<th>q1</th>
<th>k</th>
<th>h2</th>
<th>k</th>
<th>h1</th>
<th>h2</th>
<th>m</th>
<th>n</th>
<th>a</th>
<th>o</th>
<th>p1</th>
<th>p2</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.2</td>
<td>483.5</td>
<td>337</td>
<td>43</td>
<td>170</td>
<td>130</td>
<td>11</td>
<td>43</td>
<td>84</td>
<td>23</td>
<td>9</td>
<td>32</td>
<td>Rd 58 x 1/6</td>
<td>20</td>
<td>Rd 44 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.1</td>
<td>483</td>
<td>278</td>
<td>50</td>
<td>230</td>
<td>190</td>
<td>11</td>
<td>55</td>
<td>95</td>
<td>27.5</td>
<td>12</td>
<td>40</td>
<td>Rd 65 x 1/6</td>
<td>25</td>
<td>Rd 52 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.2</td>
<td>609</td>
<td>404</td>
<td>50</td>
<td>230</td>
<td>190</td>
<td>11</td>
<td>55</td>
<td>95</td>
<td>27.5</td>
<td>12</td>
<td>40</td>
<td>Rd 65 x 1/6</td>
<td>25</td>
<td>Rd 52 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.1</td>
<td>582</td>
<td>336</td>
<td>58</td>
<td>290</td>
<td>240</td>
<td>11</td>
<td>63</td>
<td>113</td>
<td>34</td>
<td>17</td>
<td>50</td>
<td>Rd 78 x 1/6</td>
<td>32</td>
<td>Rd 58 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50.2</td>
<td>742</td>
<td>496</td>
<td>58</td>
<td>290</td>
<td>240</td>
<td>11</td>
<td>63</td>
<td>113</td>
<td>34</td>
<td>17</td>
<td>50</td>
<td>Rd 78 x 1/6</td>
<td>32</td>
<td>Rd 58 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.1</td>
<td>696</td>
<td>389</td>
<td>58</td>
<td>370</td>
<td>320</td>
<td>11</td>
<td>63</td>
<td>118</td>
<td>43.5</td>
<td>21.5</td>
<td>65</td>
<td>Rd 95 x 1/6</td>
<td>40</td>
<td>Rd 65 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100.2</td>
<td>896</td>
<td>589</td>
<td>58</td>
<td>370</td>
<td>320</td>
<td>11</td>
<td>63</td>
<td>118</td>
<td>43.5</td>
<td>21.5</td>
<td>65</td>
<td>Rd 95 x 1/6</td>
<td>40</td>
<td>Rd 65 x 1/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200.1</td>
<td>886</td>
<td>503</td>
<td>99</td>
<td>450</td>
<td>360</td>
<td>14</td>
<td>73</td>
<td>167</td>
<td>50</td>
<td>26</td>
<td>80</td>
<td>Rd 110 x 1/4</td>
<td>50</td>
<td>Rd 78 x 1/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200.2</td>
<td>1138</td>
<td>755</td>
<td>99</td>
<td>450</td>
<td>360</td>
<td>14</td>
<td>73</td>
<td>167</td>
<td>50</td>
<td>26</td>
<td>80</td>
<td>Rd 110 x 1/4</td>
<td>50</td>
<td>Rd 78 x 1/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>380.1</td>
<td>1045</td>
<td>579</td>
<td>114</td>
<td>540</td>
<td>450</td>
<td>14</td>
<td>89</td>
<td>182</td>
<td>50</td>
<td>37.5</td>
<td>100</td>
<td>Rd 130 x 1/4</td>
<td>50</td>
<td>Rd 78 x 1/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>380.2</td>
<td>1351</td>
<td>885</td>
<td>114</td>
<td>540</td>
<td>450</td>
<td>14</td>
<td>89</td>
<td>182</td>
<td>50</td>
<td>37.5</td>
<td>100</td>
<td>Rd 130 x 1/4</td>
<td>50</td>
<td>Rd 78 x 1/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>550.1</td>
<td>1189</td>
<td>733</td>
<td>114</td>
<td>540</td>
<td>450</td>
<td>14</td>
<td>89</td>
<td>182</td>
<td>50</td>
<td>37.5</td>
<td>100</td>
<td>Rd 130 x 1/4</td>
<td>50</td>
<td>Rd 78 x 1/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Size Pump dimensions Suction/pressure connection Flushing connection Weight approx. ca. kg

1. Stator/suction casing dismantling dimension
2. Only with double shell design
3. Cylindrical female thread according to DIN 2999
4. Two identical connections, opposite

Sense of rotation: Counterclockwise looking from the drive end is standard, in which case DN1 = discharge connection, DN2 = suction connection, DN3 = flushing connection.
Changes of sense of rotation possible, in which case DN1 = suction connection, DN2 = discharge connection.

Subject to alterations without prior notice.
Series ACNBP

Possible branch arrangements as seen from the drive
Casing rotatable

- Design A
- Design B
- Design C
- Design D

Possible branch arrangements as seen from the drive
Casing not rotatable

- Design E
- Design F
- Design G
- Design H

Drive/installation possibilities

1. ACNBP with geared motor and base plate (cover hood to the drive at extra price).
2. ACNBP with geared motor, base plate with concave feet (cover hood to the drive at extra price).
Drive/installation possibilities

3. ACNBP with geared motor and concave feet (cover hood to the drive at extra price).

4. ACNBP with infinitely variable-speed gear and base plate (cover hood to the drive at extra price).

5. ACNBP with infinitely variable-speed gear, base plate with concave feet (cover hood to the drive at extra price).

6. ACNBP with infinitely variable-speed gear and concave feet (cover hood to the drive at extra price).

Other drives are possible.
Branch arrangement D was graphically represented, other branch arrangements are possible, refer to page 10.
### Range of eccentric screw pumps

<table>
<thead>
<tr>
<th>Series</th>
<th>Number of stages</th>
<th>Maximum output at $\Delta p = 0$ bar</th>
<th>Maximum del. pressure bar</th>
<th>Maximum viscosity $\text{mPa}\cdot\text{s}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE.E-ID</td>
<td>1,2</td>
<td>450 m$^3$/h</td>
<td>7500 l/min</td>
<td>10</td>
</tr>
<tr>
<td>AE.N-ID</td>
<td>1,2</td>
<td>290 m$^3$/h</td>
<td>4850 l/min</td>
<td>16</td>
</tr>
<tr>
<td>AE.H-ID</td>
<td>2,4</td>
<td>174 m$^3$/h</td>
<td>2900 l/min</td>
<td>24</td>
</tr>
<tr>
<td>AEB.E-I.E</td>
<td>1,2</td>
<td>174 m$^3$/h</td>
<td>2900 l/min</td>
<td>6</td>
</tr>
<tr>
<td>AEB.N-I.E</td>
<td>1,2</td>
<td>111 m$^3$/h</td>
<td>1850 l/min</td>
<td>12</td>
</tr>
<tr>
<td>AEBH.E-I.E</td>
<td>1,2</td>
<td>12 m$^3$/h</td>
<td>200 l/min</td>
<td>24</td>
</tr>
<tr>
<td>AED.E-ID</td>
<td>1</td>
<td>720 m$^3$/h</td>
<td>12000 l/min</td>
<td>8</td>
</tr>
<tr>
<td>AEDN.IE</td>
<td>2</td>
<td>450 m$^3$/h</td>
<td>7500 l/min</td>
<td>16</td>
</tr>
<tr>
<td>AEDB.E-I.E</td>
<td>1</td>
<td>258 m$^3$/h</td>
<td>4300 l/min</td>
<td>6</td>
</tr>
<tr>
<td>AEDBN.IE</td>
<td>2</td>
<td>174 m$^3$/h</td>
<td>2900 l/min</td>
<td>12</td>
</tr>
<tr>
<td>AEN...-RG</td>
<td>1,2,4</td>
<td>30 m$^3$/h</td>
<td>500 l/min</td>
<td>20</td>
</tr>
<tr>
<td>TECFLOW</td>
<td>1</td>
<td>186 m$^3$/h</td>
<td>3100 l/min</td>
<td>4</td>
</tr>
<tr>
<td>SEZP</td>
<td>1,2</td>
<td>21 m$^3$/h</td>
<td>350 l/min</td>
<td>10</td>
</tr>
<tr>
<td>SNZP</td>
<td>1,2</td>
<td>45 m$^3$/h</td>
<td>750 l/min</td>
<td>12</td>
</tr>
<tr>
<td>SNZBP</td>
<td>1,2</td>
<td>45 m$^3$/h</td>
<td>750 l/min</td>
<td>12</td>
</tr>
<tr>
<td>SSP</td>
<td>1,2</td>
<td>48 m$^3$/h</td>
<td>800 l/min</td>
<td>12</td>
</tr>
<tr>
<td>SSBP</td>
<td>1,2</td>
<td>48 m$^3$/h</td>
<td>800 l/min</td>
<td>12</td>
</tr>
<tr>
<td>SETP (1)</td>
<td>1,2</td>
<td>140 m$^3$/h</td>
<td>2350 l/min</td>
<td>10</td>
</tr>
<tr>
<td>SETBP</td>
<td>1,2</td>
<td>40 m$^3$/h</td>
<td>670 l/min</td>
<td>10</td>
</tr>
<tr>
<td>SEFBP</td>
<td>1</td>
<td>40 m$^3$/h</td>
<td>670 l/min</td>
<td>6</td>
</tr>
<tr>
<td>SMP</td>
<td>1</td>
<td>40 m$^3$/h</td>
<td>670 l/min</td>
<td>6</td>
</tr>
<tr>
<td>SMP2</td>
<td>1</td>
<td>5,5 m$^3$/h</td>
<td>92 m$^3$/h</td>
<td>6</td>
</tr>
<tr>
<td>AFP</td>
<td>1</td>
<td>2,8 m$^3$/h</td>
<td>47 l/min</td>
<td>6</td>
</tr>
<tr>
<td>ANP</td>
<td>2</td>
<td>2,5 m$^3$/h</td>
<td>42 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ANBP</td>
<td>2</td>
<td>2,5 m$^3$/h</td>
<td>42 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ASP</td>
<td>2</td>
<td>2,5 m$^3$/h</td>
<td>42 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ASBP</td>
<td>2</td>
<td>2,5 m$^3$/h</td>
<td>42 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ADP</td>
<td>3</td>
<td>0,6 m$^3$/h</td>
<td>10 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ADP</td>
<td>3</td>
<td>0,6 m$^3$/h</td>
<td>10 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ACNP</td>
<td>1,2</td>
<td>29 m$^3$/h</td>
<td>480 l/min</td>
<td>12</td>
</tr>
<tr>
<td>ACNBP</td>
<td>1,2</td>
<td>29 m$^3$/h</td>
<td>480 l/min</td>
<td>12</td>
</tr>
</tbody>
</table>

(1) Special versions for higher pressures available.

### Peristaltic range

<table>
<thead>
<tr>
<th>Series</th>
<th>Maximum output</th>
<th>Maximum del. pressure bar</th>
<th>Maximum viscosity $\text{mPa}\cdot\text{s}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASL</td>
<td>2,4 m$^3$/h</td>
<td>40 l/min</td>
<td>4</td>
</tr>
<tr>
<td>ASH</td>
<td>60 m$^3$/h</td>
<td>1000 m$^3$/h</td>
<td>15</td>
</tr>
</tbody>
</table>

### Macerator range

<table>
<thead>
<tr>
<th>Series</th>
<th>Maximum throughput</th>
<th>Generated delivery head</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM ... S–1</td>
<td>80 at 3 % solids</td>
<td>3</td>
</tr>
<tr>
<td>ABM ... S–1</td>
<td>80 at 3 % solids</td>
<td>3</td>
</tr>
<tr>
<td>AM ... I–1</td>
<td>160 at 3 % solids</td>
<td>–</td>
</tr>
<tr>
<td>ABM ... I–1</td>
<td>80 at 3 % solids</td>
<td>–</td>
</tr>
</tbody>
</table>

### Accessories

**Pump accessories:** Stator setting devices, electrical heaters, bridge breakers.

**Drivers:** Electric motors, geared motors, variable speed transmissions, reduction gearboxes, internal combustion engines, pneumatic and hydraulic drives.

**Transmission components:** Couplings, V-belt transmissions, toothed belt transmissions, other types of transmission.

**Base plates:** Standard and special versions, wheeled trolleys, mounting flanges.

**Safety arrangements:** Bypass lines with safety or regulating valves, systems to guard against dry running (conductive, capacitive, thermal etc.).

**Other accessories:** Electrical, hydraulic and pneumatic control arrangements, filter systems, metering equipment, seal liquid and circulating systems for shaft seals, valves, flanges, flexible pipes.

Subject to technical alterations.