



BADU® BLOCK MAXIMAL RELIABILITY.

Proven over decades and continually improving.

Energy efficient with optimised rate of efficiency.

The perfect, completely metal concept of the BADU Block unites reliability and durability.

Based on current development levels.



Benefits of the BADU Block:

- > Pump in cast iron or bronze version with RILSAN-coated filter housing. Optionally available with CDP internal coating for all wetted pump parts for optimal corrosion protection.
- > Robust construction with oversized wall thickness and solid workmanship.
- > Material and seal combinations can be selected depending on the pump media.
- > Flexible attachment of IE3 and PM motors up to 55.00 kW.
- > Various material and equipment combinations can be selected e.g. housing in tin bronze, plastic filter housing, transparent lid etc.

OPTIMAL CORROSION PROTECTION

We are able to implement a modern and advanced procedure, as an option: cathodic dip painting (CDP). For high process safety, even layer thickness and high fitting accuracy. Temperature resistant up to 50 °C and permanently durable.

For further questions or
an individual consultation ...
call us on: +49 9123 949-400



BADU® Block

Performance features

1 Motor

Standard trademark motor, optimised for the operating point with ball bearings that are lubricated for life. Further motor variations on page 23.

2 Plug-in shaft system

Motor can be replaced without having to completely disassemble the pump or without having to dismantle the mechanical seal.

3 Ventilation

An external vent line allows manual ventilation and results in the long life of the mechanical seal.

4 Pump shaft

Pump shaft made from stainless steel.

5 Mechanical seal

Maintenance-free bellow-type mechanical seal is cooled and lubricated by the pumping liquid. This allows long durability and long intervals between maintenance periods.

6 Impeller

Closed impeller, well-balanced, for optimal smooth running and durability of the whole pump. Individual adjustment of the impeller diameter for the respective operating points.

7 Pump material

Various materials can be selected e.g. cast iron, tin bronze. Permanent corrosion protection and protection against aggressive media due to optional CDP coating of all relevant wetted parts (volute casing, discharge cover).

8 Connections

Largely dimensioned inlet connections result in low flow speeds.

9 Strainer basket

Low-wear with retaining plate and handle welded into the basket. Robust welding seals. Curved edges for more stability.

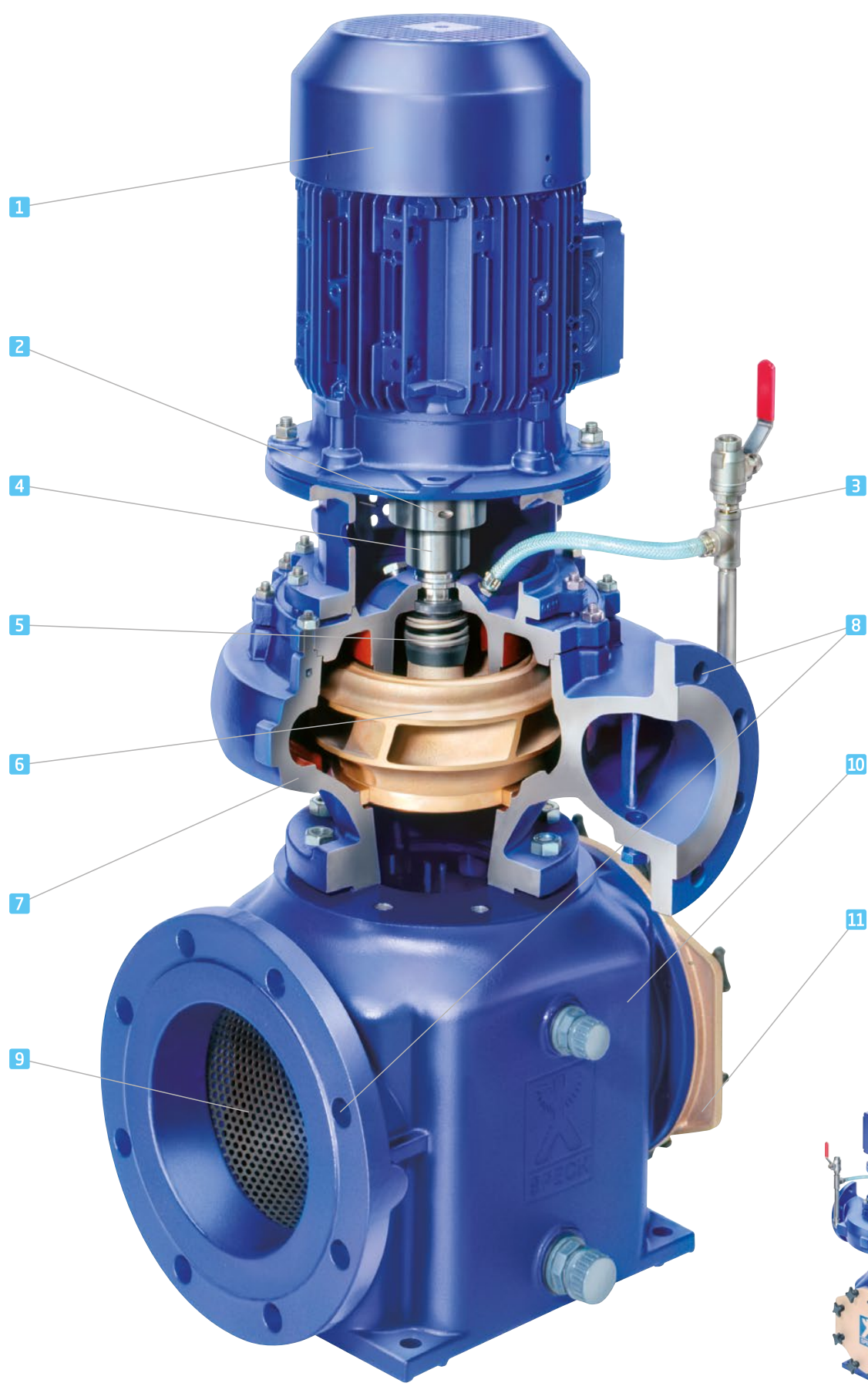
10 Filter housing

RILSAN-coated filter housing for optimal corrosion protection. Stain resistant. Also optionally available in a plastic version – see accessories on page 64.

11 Filter lid

Robust lid, extremely stable under pressure, made from bronze. Also optionally available in a transparent version – see accessories on page 64.

> Detailed information regarding the BADU Block can be found on page 22.



^
Cross section

^
BADU Block

BADU® Block

Description

Field of application

Swimming pool water circulation and filtration as well as operation of swimming pool attractions in public swimming pools.

- Open-air and indoor pools
- Spas⁴⁾
- Pools with high salt concentrations⁴⁾
- Water treatment, e.g. filter unit construction
- Leisure facilities
- Attractions, e.g. water slides
- Shipbuilding⁴⁾
- Industry, e.g. cool water units⁴⁾
- Water supply, e.g. irrigation

Design

Non-self-priming, single-stage, volute casing pump in vertical monoblock design. The process design allows easy replacement of the motor without disassembling the pipes. Due to the low motor speed, pump operation is quiet with very little wear and tear. The pump is equipped with replaceable, corrosion-resistant wear rings. The closed, well-balanced impeller can be individually adjusted to suit the respective operating conditions. Balancing is carried out in quality class 6.3 according to DIN ISO 1940. This ensures optimal smooth running and durability of the whole pump.

Filter housing capacity

BADU Block 32/.. to 65/..	approx. 13 l
BADU Block 80/.. to 125/..	approx. 29 l
BADU Block 150/..	approx. 71 l
Strainer basket mesh size	approx. Ø 3 mm

> Materials used can be found on page 25.

Paintwork

RAL 5002, ultramarine blue.

> Customised paintwork on request.

Technical data at 50/60 Hz

Flow rate	Q	up to max. 600/750 m³/h
Dynamic head	H	up to 40/55 m
Water temperature	t	max. 50 °C

Maximum operating pressure/temperature

Pump casing	p	10 bar
Filter housing		
- cast iron	p	5 bar
- optional plastic		
BADU Block 32/.. to 125/..	p	2.5 bar
	t	max. 40 °C
- optional transparent lid	p	2.5 bar
	t	max. 40 °C

> Optional plastic filter housing can be found on page 64.

Speed variables	n	approx. 1450/1750 rpm
Construction size	DND	32 up to 200

Flange

up to DN 150 according to EN 1092-2 PN-16
up to DN 200 according to EN 1092-2 PN-10

Noise generation

The sound power or sound pressure level is largely determined by both the motor and the pump and especially by the installation conditions and relevant installation situation. Special sound insulation measures are to be taken to reduce the transmission of structure-borne or airborne noise.

> More details regarding all designs, characteristics and dimensional drawings on request or at badu.de



Motor

Motor

Directly mounted, DIN-IEC three-phase, low-noise operation, surface-cooled, removable motor in German brand quality. Energy efficiency class IE3 from 0.55 kW, including PTC resistor sensor with fixed bearings on the pump side. The motors are produced in the factory with closed condensation drain holes.

Construction	IM B 5
Protection class	IP 55
Idle speed	1450/1750 rpm
Frequency	50/60 Hz
Voltage 50 Hz	up to 2.20 kW: 230 V Δ/400 V Y
60 Hz	up to 2.60 kW: 265 V Δ/460 V Y
Voltage 50 Hz	from 3.00 kW: 400 V Δ/690 V Y
60 Hz	from 3.60 kW: 460 V Δ
Class of insulation	F
Cooling air temperature	max. 40 °C

> Special motors on request.

Direction of rotation

Clockwise, as seen on the motor fan.

Bearing/lubrication

Motors up to construction size 160 have sufficiently dimensioned, maintenance-free, deep groove ball bearings according to DIN 625 with permanent lubrication.

1 Standard motor

Make: Siemens IE3 motor from 0.55 kW.

Advantage: very high grade of efficiency.

2 PM motor

Make: VEM IE4 motor from 0.37 kW.

Advantage: very high grade of efficiency.

3 Water-cooled motor

Make: EMOD. Energy efficiency class depends on the temperature of the media.

Advantage: heat recovery.



1 Standard motor



2 PM motor



3 Water-cooled motor

BADU® Block

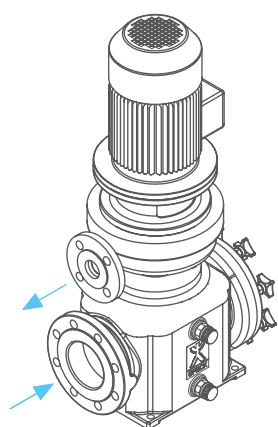
Connection positions

Variable outlet connection positions

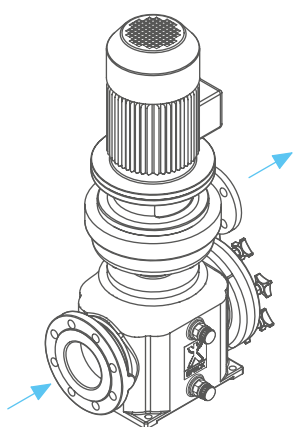
The outlet connection positions can be arranged flexibly where the installation conditions are less convenient. Therefore the pump can be adapted depending on the situation in the engineering room and installation area. A spacer is not necessary, even if the inlet and outlet connections are arranged above each other.

All pump types can be rotated on the filter housing by 90°.

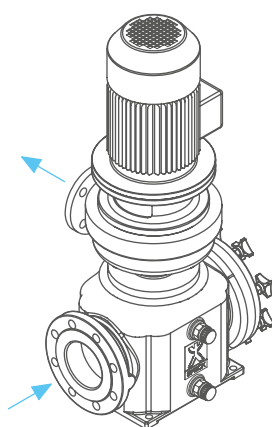
The following pump types can be rotated by 90° and 45°:
BADU Block 65/160, 65/200, 65/250, 65/315, 80/160, 80/200, 80/250, 80/315, 100/160, 100/200, 100/250, 100/315, 125/200, 125/250, 125/315, 150/200, 150/250, 150/315.



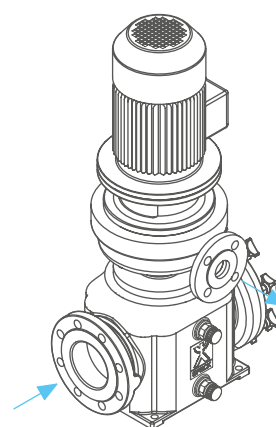
V
Standard front



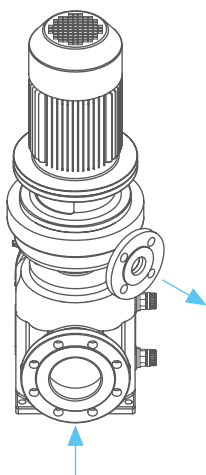
H
back



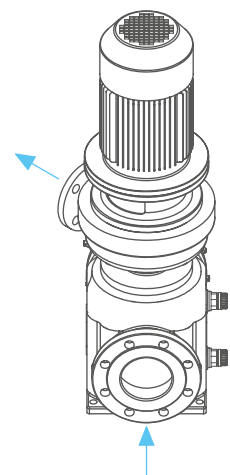
L
left



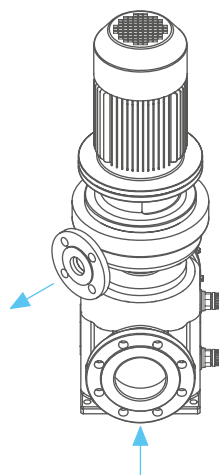
R
right



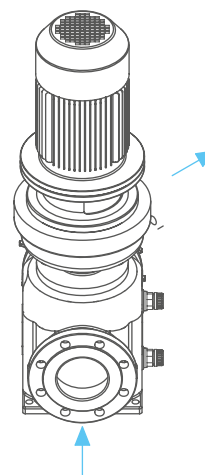
V45°
front, rotated 45°



H45°
back, rotated 45°



L45°
left, rotated 45°



R45°
right, rotated 45°



Materials used

Design	12	05
Casing parts	cast iron EN-JL 1040	tin bronze CC480K-GS
Impeller	tin bronze CC480K-GS	tin bronze CC480K-GS
Mechanical seal	carbon/SiC/EPDM optional SiC/SiC/HNBR	SiC/SiC/HNBR
Wear rings	CC495K-GS	CC495K-GS
Pump shaft	stainless steel 1.4571	stainless steel 1.4571
Shaft protection sleeve	stainless steel 1.4571	stainless steel 1.4571
Motor lantern	cast iron EN-JL 1040	cast iron EN-JL 1040
Filter housing	cast iron EN-JL 1030 plastic-coated	cast iron EN-JL 1030 plastic-coated
Strainer basket	stainless steel 1.4571	stainless steel 1.4571
Filter lid	tin bronze CC480K-GS PA6.6 GF30 ^{*)}	tin bronze CC480K-GS PA6.6 GF30 ^{*)}

Subject to technical modifications.

Circulation line and ball valve vent made from stainless steel and PVC hose.

^{*)} Only for BADU Block 32/160, 32/200, 32/250, 40/160, 40/200, 40/250, 40/315, 50/160, 50/200, 50/250, 50/315, 65/160, 65/200, 65/250, 65/315