

# NORMBLOCK MULTI MAXIMUM STABILITY 2.

Corrosion-resistant – even with high brine concentrations.

Permanently improved rate of efficiency due to new surface qualities.

The innovative, completely plastic concept of the Normblock Multi enhances the proven Normblock technology, taking it to a completely unique level.



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### Benefits of the Normblock Multi:

- > Internal coating is unnecessary for the complete plastic pump.
- > Wetted parts are made from optimised technically high-performance plastic (THP) – constantly robust, maintenance-free and economical.
- > Pump shaft does not come into contact with the pump liquid.
- > Corrosion-resistant and low-wear, even with high brine concentrations.
- > Maintenance-friendly plug-in shaft design.
- > Flexible attachment of IE3 and PM motors from 2.20 to 11.00 kW.

### WHY PLASTIC?

We wanted to eliminate systemic disadvantages of the Normblock concept, which has already been proven a thousand times over, and to develop it further. Robust with high brine concentrations, lighter, less wear, less maintenance – more flexibility. The THP plastic construction of the new Normblock Multi achieves more in every respect.



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

# Normblock Multi

## 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 39.

### 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 Pump shaft

Pump shaft made from stainless steel. Motor/pump shaft has no contact with the medium providing complete electrical separation.

### 4 Mechanical seal

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

### 5 Impeller

Closed impeller for optimal smooth running and durability of the whole pump.

### 6 Pump material

THP (technically high-performance plastic).  
Permanent corrosion protection and protection against aggressive media for all wetted parts due to completely plastic version.

### 7 Auxiliary connections

Holes for additional connections e.g. pressure gauge.

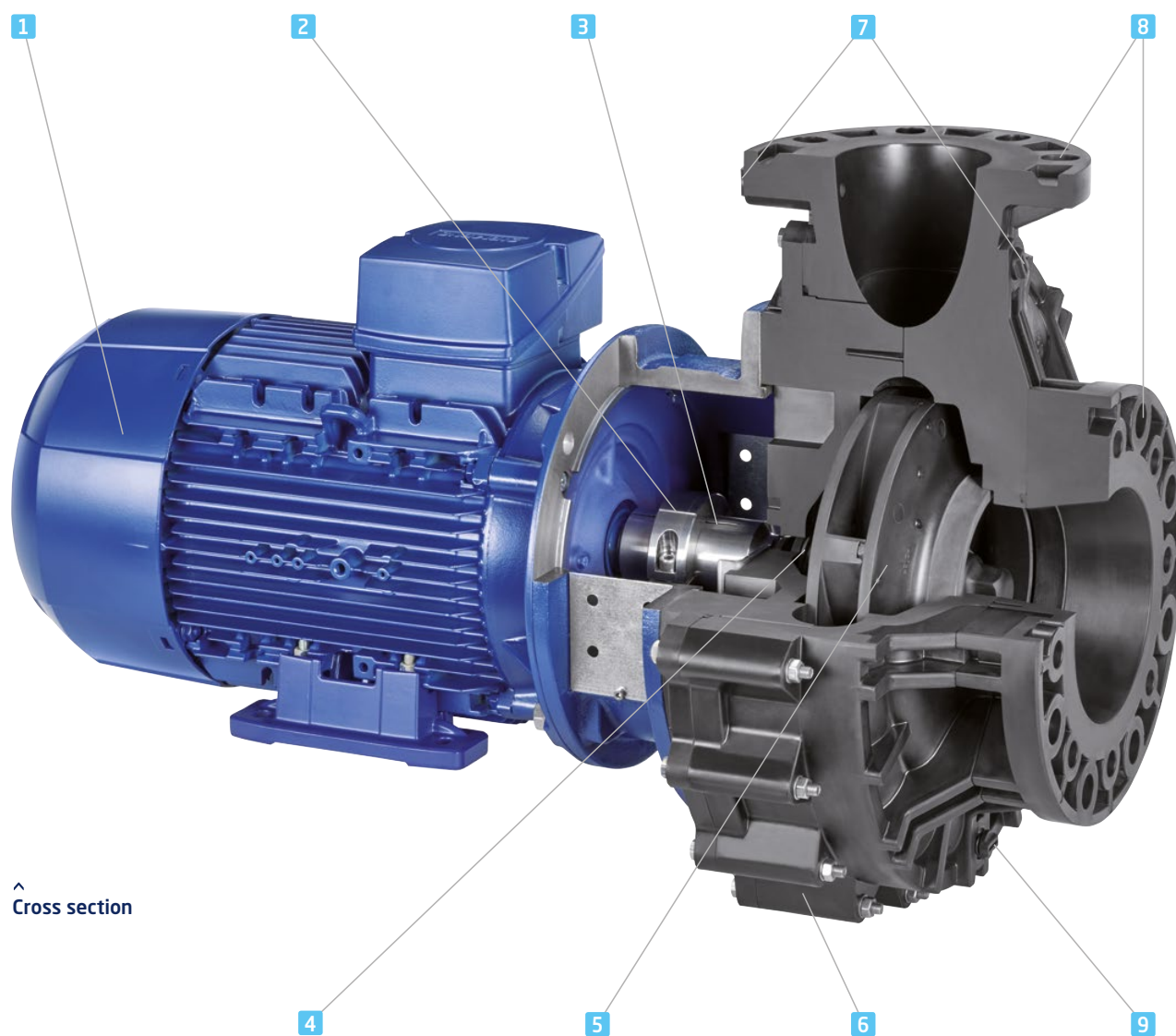
### 8 Connections

Standardised connections, compatible with DIN and ASME (American standard).

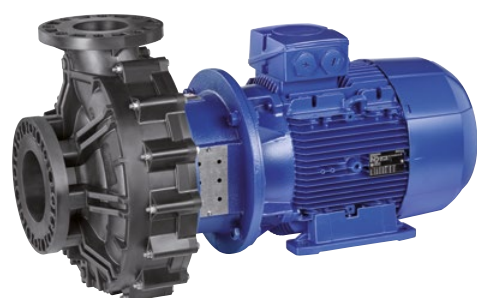
### 9 Drainage

Simple drainage without having to remove the pump.

> Detailed information regarding the Normblock Multi can be found on page 38.



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Cross section



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Normblock Multi

# Normblock Multi

## 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
- Spas<sup>4)</sup>
- Pools with high salt concentrations<sup>4)</sup>
- Water treatment, e.g. filter unit construction
- Leisure facilities
- Attractions, e.g. water slides
- Shipbuilding<sup>4)</sup>
- Industry, e.g. cool water units<sup>4)</sup>
- Water supply, e.g. irrigation

### Design

The Normblock pump is a non-self-priming, single-stage, volute casing pump with performance classification and main dimensions according to NF E 44-112 and DIN EN 733 (replacement for DIN 24255).

### Construction

Pump and removable, standard motor are flanged into a modular unit.

### Paintwork

RAL 5002, ultramarine blue.

> Customised paintwork on request.

### Technical data

Flow rate .....	Q	up to max. 250 m <sup>3</sup> /h
Dynamic head .....	H	up to 24 m
Water temperature .....	t	max. 40 °C
Maximal operating pressure ....	p	3 bar
Speed 50 Hz .....	n	approx. 1450 rpm
60 Hz .....	n	approx. 1750 rpm

### Construction sizes

Normblock Multi 65/250.....	DND 65/DNS 80
Normblock Multi 100/250.....	DND 100/DNS 125

### Flange

compatible with EN 1092-2 PN-16 and ASME

### 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.

### Connection positions

Inlet connection .....	axial
Outlet connection .....	radial upwards, side option

### Installation

The Normblock pump can be installed horizontally or vertically in the pipe network. **Vertical installation with the motor facing downwards is not permitted.**

> More details regarding all designs, characteristics and dimensional drawings on request or at [badu.de](http://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 35
Protection class .....	IP 55
Idle speed .....	1450/1750 rpm
Frequency .....	50/60 Hz
Voltage 50 Hz .....	up to 2.20 kW: 230 V $\Delta$ /400 V Y
60 Hz .....	up to 2.60 kW: 265 V $\Delta$ /460 V Y
Voltage 50 Hz .....	from 3.00 kW: 400 V $\Delta$ /690 V Y
60 Hz .....	from 3.60 kW: 460 V $\Delta$
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.

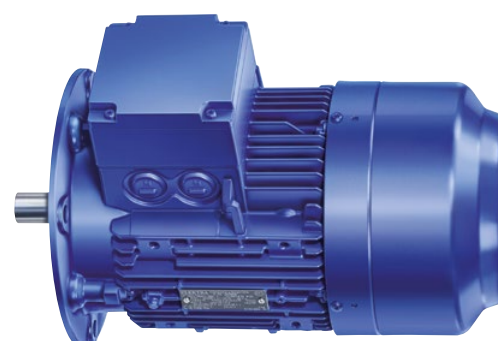
**Advantage:** very high grade of efficiency.

#### 3 Water-cooled motor

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

**Advantage:** heat recovery.

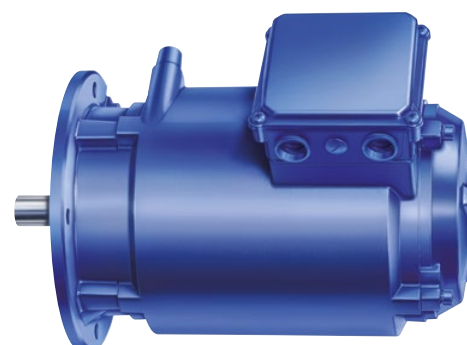
> Motor design only available on request.



1 Standard motor



2 PM motor



3 Water-cooled motor

# Normblock Multi

Horizontal, completely plastic block pump with permanently improved rate of efficiency. Innovative attraction pump with a thousandfold proven concept.

**Field of application**

Swimming pool water circulation and filtration as well as operation of swimming pool attractions in public swimming pools. Can also be used for irrigation, drainage, water supply, shipbuilding and industry.

**Design**

The Normblock pump is a non-self-priming, single-stage, volute casing pump with performance classification and main dimensions according to NF E 44-112 and DIN EN 733 (replacement for DIN 24255).

**Performance**

up to 250 m³/h



## Materials used

Design	
Casing parts	THP technically high-performance plastic
Impeller	THP technically high-performance plastic
Mechanical seal	SiC/SiC/HNBR
Pump shaft (no contact with pump liquid)	stainless steel 1.4057
Motor lantern	cast iron EN-JL 1040

Subject to technical modifications.