

# BE3928 Operating Instructions

(Translation of original)

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## BRINKMANN Immersion Pumps

### STH21...STH28



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# Brinkmann Immersions pumps of the series STH21 ... STH28

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## 1 Indication to the manual

This operating manual gives basic instructions which are to be observed during installation, operation and maintenance of the pump. It is therefore imperative that this manual be read by the responsible personnel and operator prior to assembly and commissioning. It is always to be kept available at the installation site.

### 1.1 Identification of safety instructions in the operating manual

Safety instructions given in this manual non-compliance with which would affect **safety** are identified by the following symbol



Safety sign according with ISO 3864 – B.3.1

or where **electrical safety** is involved, with:



Safety sign according with ISO 3864 – B.3.6

Where non-compliance with the safety instructions may cause a risk to the machine and it's function the word

**ATTENTION**

is inserted.

## 2 Description of product

### 2.1 General description of the pump

Pumps of this type are multi-stage rotary pumps. Series TH/STH use closed impellers in order to minimizing power consumption and to optimize hydraulic pump efficiencies. In addition, the STH series offers high pressures at short immersion depths.

The pump shaft and the motor shaft are connected by a coupling. The pump shaft is sealed by a rotating mechanical seal. The pump is protected again impurity by a filter. Pump and motor form a compact and space-saving unit.

Vertically mounted pumps are equipped with a mounting flange. The pump end immerses into the tank and the motor extends vertically above the tank.

### 2.2 Intended use

The immersion pumps of the series STH have been especially developed to supply internally cooled tools with coolant fluid within the limiting application in accordance with table 1.

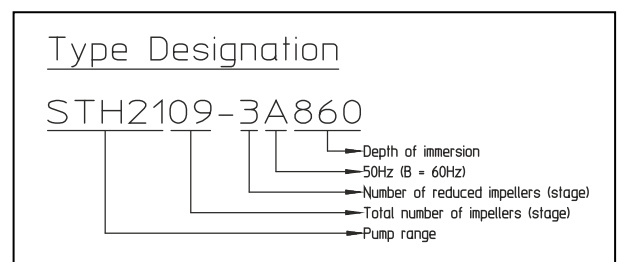
Limit of Application (Table 1)

Type	STH21...28	
Mediums	Cooling emulsions, cooling- and cutting-oils	
Kinetic viscosity of the medium	...45 mm <sup>2</sup> /s	
Temperature of medium	0 ... 90 °C	
Particle-size in the medium	1 mm	
max. operation pressure	STH21 22 bar	STH28 15 bar
min. delivery volume	STH21 200 l/min	STH28 250 l/min
Dry running	is not permitted	
Switching-on frequency per hour	Motors from 3 kW to 4.0 kW	max. 40
	Motors from 5.0 kW to 10.3 kW	max. 20
	Motors 11 kW and higher	max. 15
Ambient temperature	40 °C	
Set-up altitude	1000 m	

**ATTENTION**

The pumps are to be operated within their design limits. Applications outside of these limits are not approved. The manufacturer is not responsible for any damages resulting from use of the pumps in such applications.

### 2.3 Type Designation



## 2.4 Technical data

### 50 Hz

Type	Max. del. pressure bar / spec. weight 1	Min. del. volume l/min	Max. del. volume l/min	Height <sup>1)</sup> H mm	Depth of immersion <sup>1)</sup> h mm	Weight STH kg	Power kW	Noise level <sup>2)</sup> dBA
STH2101-1A260	2.0	200	900	571	257	81	3.0	71
STH2101-0A260	2.7	200	900	571	257	82	4.0	71
STH2102-2A340	4.0	200	900	601	332	90	5.5	71
STH2102-0A340	5.5	200	900	680	332	120	7.5	74
STH2103-2A410	6.7	200	900	688	407	151	11.0	74
STH2103-0A410	8.2							
STH2104-2A490	9.4	200	900	982	482	170	15.0	78
STH2104-0A490	10.8							
STH2105-2A560	12.0	200	900	1042	557	182	18.5	78
STH2105-0A560	13.4							
STH2106-2A640	14.6	200	900	1046	632	196	22.0	78
STH2106-0A640	16.1							
STH2107-2A710	17.4	200	900	1125	707	305	30.0	78
STH2107-0A710	18.8							
STH2108-2A790	19.8				782	307		
STH2108-0A790	21.3							
STH2109-3A860	21.8		800		857	310		

1) Dimensions in accordance with page 8

2) Noise emissions measured in accordance with  
DIN 45635 at a distance of 1 m

The motor is surface-cooled and compliant with  
DIN IEC 34 and EN 60034 (protection degree IP 55).

## 50 Hz

Type	Max. del. pressure bar / spec. weight 1	Min. del. volume l/min	Max. del. volume l/min	Height <sup>1)</sup> H mm	Depth of immersion <sup>1)</sup> h mm	Weight STH kg	Power kW	Noise level <sup>2)</sup> dBA
STH2801-1A280	2.2	250	1350	601	272	89	5.0	71
STH2801-0A280	2.9	250	1350	601	272	89	5.5	71
STH2802-2A370	4.4	250	1350	680	362	129	9.0	74
STH2802-0A370	5.9	250	1350	688	362	151	11.0	74
STH2803-2A460	7.4	250	1350	982	452	171	15.0	78
STH2803-0A460	8.9	250	1350	1042	452	181	18.5	78
STH2804-2A550	10.6	250	1350	1046	542	195	22.0	78
STH2804-0A550	12.2							
STH2805-2A640	13.7	250	1350	1125	632	305	30.0	78
STH2805-0A640	15.4							

1) Dimensions in accordance with page 8

2) Noise emissions measured in accordance with  
DIN 45635 at a distance of 1 m

The motor is surface-cooled and compliant with  
DIN IEC 34 and EN 60034 (protection degree IP 55).

## 60 Hz

Type	Max. del. pressure bar / spec. weight 1	Min. del. volume l/min	Max. del. volume l/min	Height <sup>1)</sup> H mm	Depth of immersion <sup>1)</sup> h mm	Weight STH kg	Power kW	Noise level <sup>2)</sup> dBA
STH2101-1B260	2.9	200	1200	601	257	87	5.75	74
STH2101-0B260	4.0	200	1200	601	257	87	6.3	74
STH2102-2B340	5.7	200	1200	680	332	126	10.3	77
STH2102-0B340	8.0	200	1200	688	332	147	15.0	79
STH2103-2B410	9.7	200	1200	982	407	167	17.3	81
STH2103-0B410	11.8	200	1200	1042	407	177	21.3	81
STH2104-2B490	13.5	200	1200	1046	482	191	25.3	81
STH2104-0B490	15.6	200	1200	1125	482	297	33.5	81
STH2105-2B560	17.4				557	299		
STH2105-0B560	19.3							

1) Dimensions in accordance with page 8

2) Noise emissions measured in accordance with  
DIN 45635 at a distance of 1 m

The motor is surface-cooled and compliant with  
DIN IEC 34 and EN 60034 (protection degree IP 55).

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## 60 Hz

Type	Max. del. pressure bar / spec. weight 1	Min. del. volume l/min	Max. del. volume l/min	Height <sup>1)</sup> H mm	Depth of immersion <sup>1)</sup> h mm	Weight STH kg	Power kW	Noise level <sup>2)</sup> dBA
STH2801-1B280	3.2	250	1550	642	272	112	7.48	77
STH2801-0B280	4.2	250	1550	680	272	125	10.3	77
STH2802-2B370	6.4	250	1550	688	362	150	15.0	79
STH2802-0B370	8.6	250	1550	1042	362	177	21.3	81
STH2803-2B460	10.7	250	1550	1046	452	192	25.3	81
STH2803-0B460	12.9	250	1550	1125	452	298	33.5	81

1) Dimensions in accordance with page 8

2) Noise emissions measured in accordance with  
DIN 45635 at a distance of 1 m

The motor is surface-cooled and compliant with  
DIN IEC 34 and EN 60034 (protection degree IP 55).

### 3 Safety instructions

When operating the pump, the safety instructions contained in this manual, the relevant national accident prevention regulations and any other service and safety instructions issued by the plant operator are to be observed.

#### 3.1 Hazards in the event of non-compliance with the safety instructions

Non-compliance with the safety instructions may produce a risk to the personnel as well as to the environment and the machine and results in a loss of any right to claim damages.

For example, non-compliance may involve the following hazards:

- Failure of important functions of the machines/plant
- Failure of specified procedures of maintenance and repair
- Exposure of people to electrical, mechanical and chemical hazards
- Endangering the environment due to hazardous substances being released

#### 3.2 Unauthorized modes of operation



- Pump may not be used in potentially explosive environments!
- Pump and discharge piping are not designed to hold any weight and may not be used as a step ladder.

#### 3.3 Remaining Risk



##### **Risk of Injury!**

Risk of squeezing or crushing body parts when installing or removing the pump exists. Proper and secured lifting tools must be used.

##### **Risk of burns!**

The pump must have cooled down sufficiently prior to commencing any repair, maintenance or installation.

#### 3.4 Qualification and training of operating personnel

The personnel responsible for operation, maintenance, inspection and assembly must be adequately qualified. Scope of responsibility and supervision of the personnel must be exactly defined by the plant operator. If the staff does not have the necessary knowledge, they must be trained and instructed, which may be performed by the machine manufacturer or supplier on behalf of the plant operator. Moreover, the plant operator is to make sure that the contents of the operating manual are fully understood by the personnel.

#### 3.5 Safety instructions relevant for operation

- If hot or cold machine components involve hazards, they must be guarded against accidental contact.
- Guards for moving parts (e.g. coupling) must not be removed from the machine while in operation.
- Any leakage of hazardous (e.g. explosive, toxic, hot) fluids (e.g. from the shaft seal) must be drained away so as to prevent any risk to persons or the environment. Statutory regulations are to be complied with.
- Hazards resulting from electricity are to be prevented (see for example, the VDE Specifications and the by-laws of the local power supply utilities).
- The pumps' stability against falling over is not ensured unless it is properly mounted onto the tank.
- The female threads on the motor MUST NOT be used to lift the entire pump and motor assembly.

#### 3.6 Safety instructions relevant for maintenance, inspection and assembly work

Any work on the machine shall only be performed when it is at a standstill, it being imperative that the procedure for shutting down the machine described in this manual be followed.

Pumps and pump units which convey hazardous media must be decontaminated.

On completion of work all safety and protective facilities must be re-installed and made operative again.

Prior to restarting the machine, the instructions listed under "Start up" are to be observed.

#### 3.7 Signs on the pump

It is imperative that signs affixed to the machine, e.g.:

- arrow indicating the direction of rotation
  - symbols indicating fluid connections
- be observed and kept legible.

#### 3.8 Unauthorized alterations and production of spare parts

Any modification may be made to the machine only after consultation with the manufacturer. Using spare parts and accessories authorized by the manufacturer is in the interest of safety. Use of other parts may exempt the manufacturer from any liability.

### 4 Transport and storage

Protect the pump against damage when transporting.

The pumps may only be transported in a horizontal position and hooks or straps must be attached on the motor and pump end.

Do not use the pump shaft for connecting any transportation aids such as hooks or straps.

Pumps must be drained prior to their storage.

Store pump in dry and protected areas and protect it against penetration of foreign bodies.

Always store pump above the freezing point!

## 5 Installation and Connection

### 5.1 Mechanical installation

During any assembly or disassembly process the pumps must be secured against tipping through ropes for example at all times.

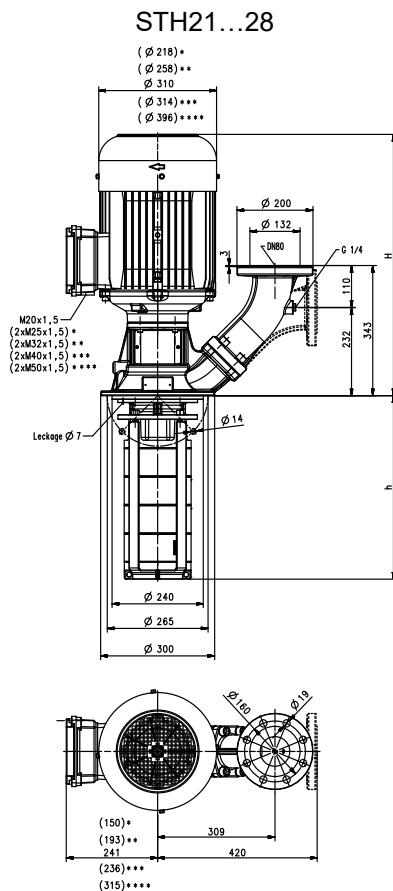
Pumps must be mounted securely. Piping, tank and pumps must be mounted without any tension.

The inlet is at the bottom of the immersed pump body. The distance between the inlet and the tank bottom must be so large that the inlet cannot be blocked by deposits during longer shutdowns.

The leakage is collected in a leakage chamber and drained off by the leakage hole into the tank. During the assembling of the pump, be sure that the leakage hole is free.

To obtain the full flow rate it is recommended to choose for the pipework the nominal bore diameter of the pumps cross section for connection. Therefore pipe bends should be used, not pipe angles!

The pipework must be qualified for occurring hydraulic pressure.



\*) Dimensions for 3 kW to 6 kW

\*\*\*) Dimensions for 7.5 kW to 10.3 kW  
Dimensions for 11 kW to 15 kW 60 Hz

\*\*\*\*) Dimensions for 15 kW 50 Hz to 25.3 kW

\*) Dimensions for 30 kW

### ATTENTION

**Pay attention of the max. tightening torque (max. 200 Nm) for piping connection**

**When installed the space around the pump must be large enough to provide sufficient cooling of the motor.**

**Do not prop up the pressure line via the joining socket.**



**The pump must be mounted in that way that rotating parts under the cover of the coolant tank can not be touched!**

### 5.2 Electric wiring



**All service work must be carried out by qualified service personnel. Pump must be disconnected from the power source and all rotating parts must stand still. Reassure that pump is disconnected from power source and cannot be switched on. Verify that there is no voltage at the terminal board!**

According to the European Standard EN809 a motor overload must be installed and properly set to the full load amps stated on the pump name plate.

It is the responsibility of the machine operator to decide whether or not an additional emergency switch must be installed.



### Danger!

#### Risk of electric shock

Our asynchronous motors can optionally be fitted with temperature sensors in the form of triplet PTC thermistors, which are used for thermal monitoring of the motor windings. Please note that the temperature sensors meet the insulation requirements of basic insulation. The improper connection of the triplet PTC thermistors to evaluation units that do not have a protective function against overvoltage in the event of a fault can lead to voltages dangerous to the touch and electric shock.

Please check whether the evaluation units you intend to use are permissible for the electrical connection of the temperature sensors.

#### 5.2.1 Circuit



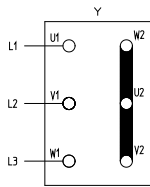
Tension voltage and frequency must correspond with the shown specification on the nameplate.

The pump must be wired so that a solid long term electrical connection is ensured. Establish a solid ground connection.

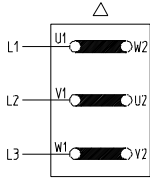
**The electrical wiring must be performed according to the wiring diagram shown inside the terminal box cover. (Please see above sample wiring diagrams)**



## Wiring diagram e.g.



**Star connection**  
up to 5.5 kW  
3 x 400 V. 50 Hz  
resp. 380-415 V. 50 Hz



**Delta connection**  
up to 5.5 kW  
3 x 230 V. 50 Hz  
resp. 220-240 V. 50 Hz  
From 7.5 kW and higher  
3 x 400 V. 50 Hz  
resp. 380-415 V. 50 Hz

There may be no foreign objects such as dirt, particles or humidity inside the terminal board.

Mount terminal board cover to motor tight against dust and humidity and close up all unused wiring ports.

### ATTENTION

When Variable Frequency Drives are used interfering signals might occur.

Non-sinus shaped supply voltage from a variable frequency drive might result in elevated motor temperatures.

## 6 Start up / Shut down

### 6.1 Start up

#### ATTENTION

Switch off at the mains.

After connection the electrical wires, close the terminal box. Briefly start the motor (max. 15 sec.) and check the rotation according to the arrow on the top of the motor.

If the direction is incorrect change over two of the power leads.

### 6.2 Shut down

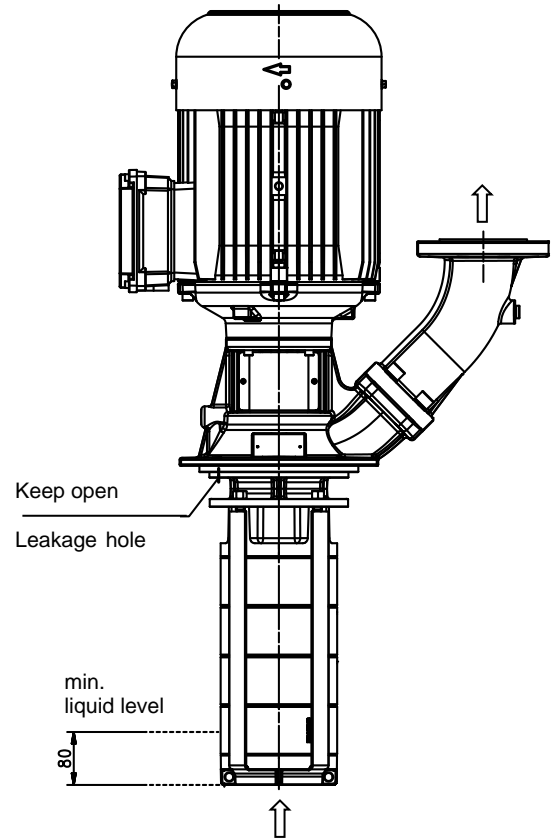
All service work must be carried out by qualified service personnel. Pump must be disconnected from the power source and all rotating parts must stand still. Reassure that pump is disconnected from power source and cannot be switched on. Verify that there is no voltage at the terminal board!

Open terminal box and disconnect the power leads. Empty out the pump.

## 7 Operation

### Liquid level

Be sure that the suction hole of the pump body is immersed about 80 mm in the liquid (min. liquid level) before starting up the motor.



If the pump should lock up and cease, shut pump down (see 6.2) and disconnect from power supply. Pump must be uninstalled and removed from the system prior to its repair.



### Attention! Potential Risk of Burning!

Surface temperatures above 50°C do occur during regular operation, i.e. on the surfaces of the motor and bearing housing.

It must be insured that the pump has cooled down sufficiently prior to performing any repair or maintenance work.

## 8 Servicing and Maintenance

#### ATTENTION

The surface of the motor must be kept free of dirt.

The motor shaft is spinning in permanently greased ball bearings (with special grease and increased bearing play) and does not require any special maintenance.

## 9 Trouble shooter's guide

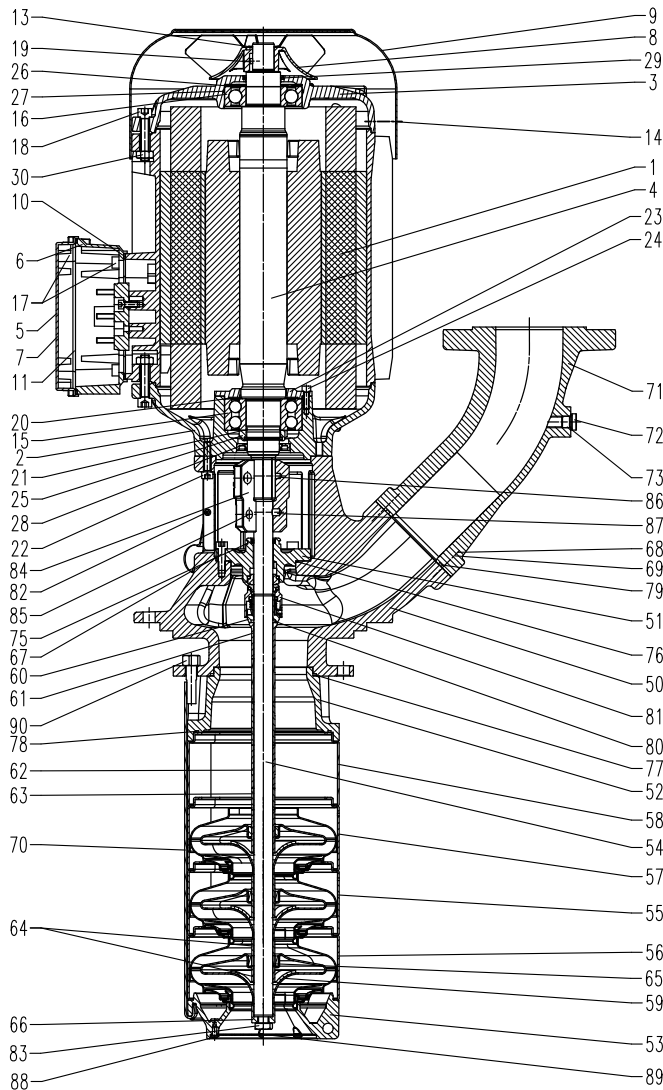
Fault	Cause	Remedy
Motor does not start, no motor noise	At least two of the power supply leads have failed	Check fuses, terminals and supply leads.
	Overload has tripped	Inspect overload
Motor does not start, humming noise	One of the supply leads has failed	See above
	Impeller faulty Motor bearing faulty	Replace impeller Replace bearing
Overload trips	Pump locked up mechanically	Inspect pump hydraulics
	High on/of cycling frequency	Check application
Power consumption is too high	Wrong direction of rotation of impeller	See above
	Lime or other deposits mechanical friction	Clean pump mechanism repair pump
Motor overheats	High on/off cycling frequency Wrong power supply (voltage or cycles)	See above Power supply must correspond with name plate rating
	Insufficient cooling	Check air flow at motor fan
Pump does not pump	liquid level too low	Fill up liquid
	Pump mechanism faulty Pipe blocked	replace pump mechanism Clean pipe
Insufficient flow and pressure	Wrong direction of rotation of impeller	Change over two power supply leads
	Pump mechanism silted up Worn pump mechanism	Clean pump mechanism Replace pump mechanism
Incorrect flow or pressure	Wrong power supply (voltage or cycles)	Power supply must correspond with name plate rating
Running noise/Vibration	Foreign objects in pump end	Remove foreign objects
	Impeller damaged	Replace impeller
	Bearing/Bushing broken	Replace bearing/bushing

## 10 Spare part

### 10.1 Spare part list for the immersion pumps of the series

STH2101-1A260...STH2103-0A410  
STH2101-1B260...STH2102-0B340

STH2801-1A280...STH2802-0A370  
STH2801-1B280...STH2802-2B370



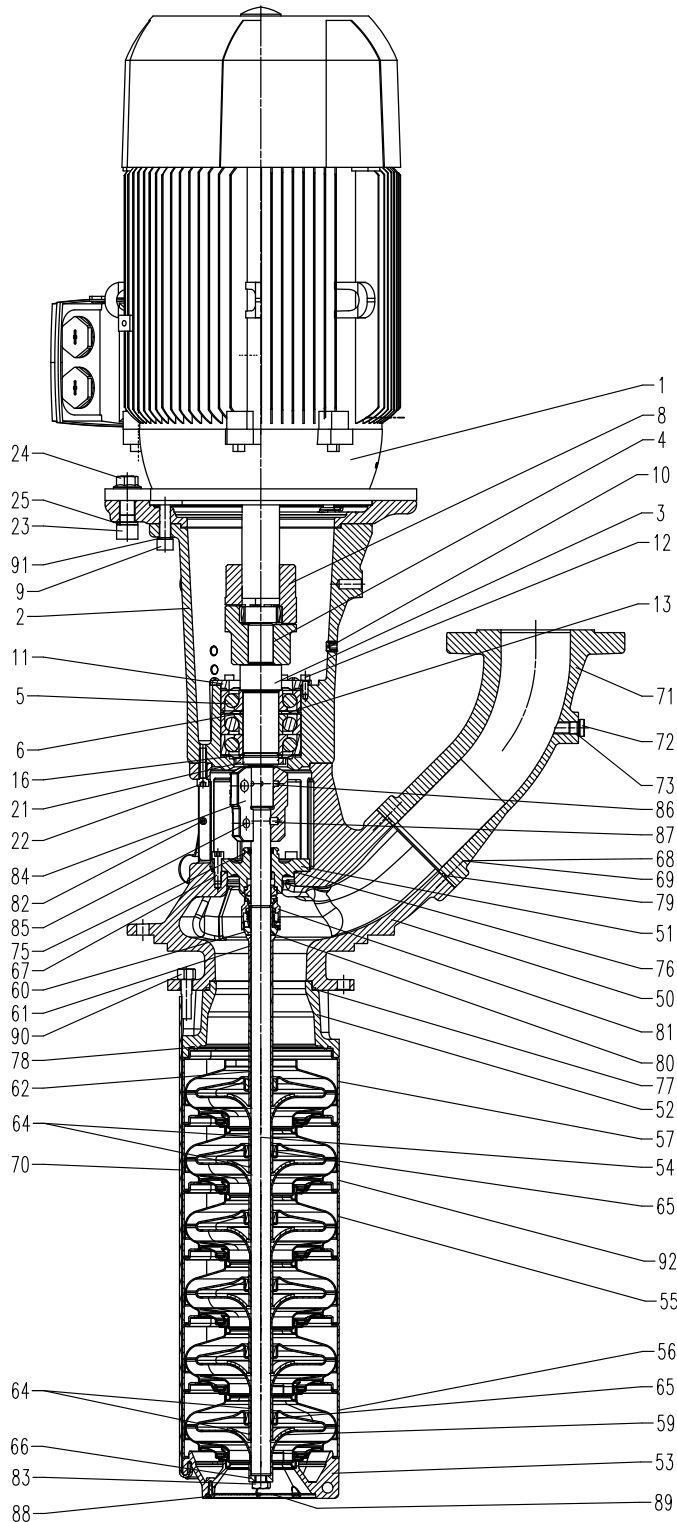
#### Item Description

1	Stator with terminal board	
2	Motor flange	
3	End shield	
4	Motor shaft with rotor	
5	Terminal box up to 5.5 kW	
6	Terminal box frame from 6.5 kW and over	
7	Terminal box cover from 6.5 kW and over	
8	Fan	
9	Fan cover	
10	Gasket	
11	Gasket	
11	Gasket from 6.5 kW and over	
13	Retaining ring	
14	Thread rolling screw	DIN 7500
15	Ball bearing	DIN 625
15	Ball bearing 7.5 kW and over	DIN 628
16	Ball bearing	DIN 625
17	Slotted cheese head screw	DIN 84
18	Hexagon socket head cap screw	DIN 912
19	Parallel pin	DIN 7
20	Retaining ring up to 5.5 kW	DIN 472
21	Retaining ring up to 5.5 kW	DIN 471
22	Hexagon socket head cap screw	DIN 912
23	Bearing cover 7.5 kW and over	
24	Hexagon head cap screw 7.5 kW	DIN 931
25	Shaft nut 7.5 kW and over	
26	Compensation disk	
27	O-ring	
28	Shaft seal	
29	Rotary shaft seal	
30	Nut up to 11 kW	DIN 934
50	Pump body	
51	Casing cover	
52	Adapter	
53	Intake cover	
54	Pump shaft	
55	Diffusor	
56	Bearing stage with venting bore	
57	Outflow stage	
58	Empty stage	
59	Impeller	
60	Spacer sleeve Mechanical seal	
61	Spacer sleeve start	
62	Spacer sleeve	
63	Spacer sleeve Outflow stage	
64	Spacer sleeve Bearing stage	
65	Running sleeve	
66	Spacer sleeve end	
67	Hexagon socket head cap screw	DIN 912
68	Socket head cap screw	DIN 912
69	Spring washer	DIN 7980
70	Clamp	
71	Joining socket	
72	Screw plug	DIN 908
73	Sealing ring	DIN 7603
75	Rotary shaft seal	
76	O-ring	
77	O-ring	
78	O-ring	
79	O-ring	
80	O-ring	
81	Mechanical seal	
82	Coupling shield with M4 screw	
83	Hexagon head cap screw with lock	DIN 933
84	Clamp coupling	
85	Hexagon socket head cap screw	DIN 912
86	Parallel pin	DIN 7
87	Parallel pin	ISO 2338
88	Lens head screw	DIN 7045
89	Sieve	
90	Nut	

**10.1 Spare part list for the immersion pumps  
of the series**

**STH2104-2A490...STH2109-3A860  
STH2103-2B410...STH2105-0B560**

**STH2803-2A460...STH2805-0A640  
STH2802-0B370...STH2803-0B460**



**Item Description**

1	Motor	
2	Bearing housing	
3	Bearing shaft	
4	Woodruff key	DIN 6888
5	Ball bearing	DIN 628
6	Distance plate	
8	Coupling	
9	Socket head cap screw	DIN 912
10	Threaded pin	DIN 705
11	Bearing cover	
12	Socket head cap screw	DIN 912
13	Nilos-ring	
16	Nilos-ring	
21	Shaft nut	
22	Hexagon socket head cap screw	DIN 912
23	Socket head cap screw	DIN 912
24	Nut	
25	Spring washer	DIN 7980
50	Pump body	
51	Casing cover	
52	Adapter	
53	Intake cover	
54	Pump shaft	
55	Diffusor	
56	Bearing stage with venting bore	
57	Outflow stage	
59	Impeller	
60	Spacer sleeve Mechanical seal	
61	Spacer sleeve start	
62	Spacer sleeve	
64	Spacer sleeve Bearing stage	
65	Running sleeve	
66	Spacer sleeve end	
67	Hexagon socket head cap screw	DIN 912
68	Socket head cap screw	DIN 912
69	Spring washer	DIN 7980
70	Clamp	
71	Joining socket	
72	Screw plug	DIN 908
73	Sealing ring	DIN 7603
75	Rotary shaft seal	
76	O-ring	
77	O-ring	
78	O-ring	
79	O-ring	
80	O-ring	
81	Mechanical seal	
82	Coupling shield with M4 screw	
83	Hexagon head cap screw with lock	DIN 933
84	Clamp coupling	
85	Hexagon socket head cap screw	DIN 912
86	Parallel pin	DIN 7
87	Parallel pin	ISO 2338
88	Lens head screw	DIN 7045
89	Seve	
90	Nut	
91	Spring washer	DIN 7980
92	Bearing stage	

## 10.2 Indications to the spare part order

Spare parts are available from the supplier. Standard commercially available parts are to be purchased in accordance with the model type. The ordering of spare parts should contain the following details:

### 1. Pumptype

e.g. STH2101-1A260

### 2. Pump No.

e.g. 06243928

The date of the construction year is a component of the pumps type number.

### 3. Voltage. Frequency and Power

Take item 1, 2 and 3 from the nameplate

### 4. Spare part with item No.

e.g. Impeller item No. 59

## 11 Repair

### 11.1 Exchange the rotary mechanical seal: (S)TH21...STH28

- 1) Disconnect the pump from the power supply.
- 2) Loosen the M4 screws and remove coupling shield (82). Remove clamp coupling (84.1, 84.2) and parallel pin (86, 87).
- 3) Unscrew the hexagon socket head cap screw (22). Remove the motor from the pump body (50).
- 4) Remove the casing cover (51) by loosening the hexagon socket head cap screw (67) together with the O-ring (76), the rotary shaft seal (75) and the stationary mechanical seal unit (81).
- 5) Remove stationary mechanical seal unit (81.1) from the casing cover (51) and clean the seat.
- 6) Remove the rotating mechanical seal unit (81.2) from the spacer sleeve (60).
- 7) Mounting of the new mechanical seal:
 

Ensure that the sliding surfaces of rotating axial face seal unit are free from grease and dirt. Moisten the O-ring lightly with rinse water / (water with dishwashing detergent) and push the stationary mechanical seal unit (81.1) into the casing cover (51).

**Note** the position of the fixing groove relative to the pin.

Slide the rotating mechanical seal unit (81.2) onto the spacer sleeve (60) via the pump shaft (54).

**Attention**, the 3 pins of the mechanical seal must be attached to the holes of the spacer sleeve (60).
- 8) Before mounting the housing cover (51) lubricate the lip of the rotary shaft seal (75) lightly. Slide the housing cover (51) onto the pump shaft (54) together with the O-ring (76), the rotary shaft seal (75) and the stationary mechanical seal unit (81).
- 9) Connect the motor (1) and pump body (50) and attach them using the hexagon socket head cap screw (22).
- 10) Insert the cylinder pin (87) into the pump shaft (54) and align the first coupling clamp (84.1). Press pump shaft (54) against the motor shaft

(4) / bearing shaft (3) the distance between the two shaft ends **must be zero**

Insert the cylinder pin (86) into the motor shaft/ bearing shaft and coupling clamp (84.1). Attach the second half of the clamp coupling (84.2).

Tighten the hexagon socket head cap screws (85) evenly (max 75 Nm).

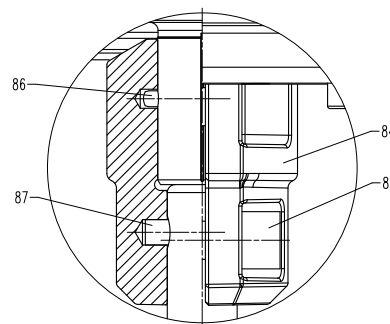
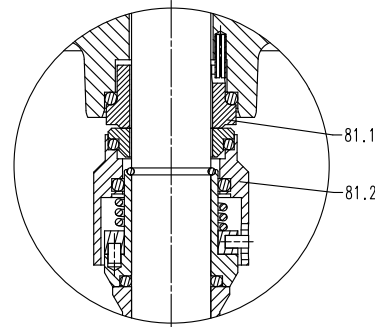
11) Attach the coupling shield (82) and tighten the M4 screws.

12) Reconnect pump to the power supply.

### Check direction of rotation!

### Tightening torques for screwed connections

Thread - Ø	M4	M5	M6	M8	M10	M12	M16
Strength classes	4.8	4.8	8.8	8.8	8.8 / 10.0	8.8	8.8
Tightening torque (Nm)	1 Nm 2 Nm Item 88	3 Nm	4.5 Nm	15 Nm	30 Nm	40 Nm 60 Nm Item 83 70 Nm Item 90 75 Nm Item 85	60 Nm Item 68 150 Nm Item 23



## 12 Disposal

When disposing of the pump or the packaging materials the local and national regulation for proper disposal must be complied with.

Prior to its disposal, the pump must be completely drained and decontaminated if necessary.

## 13 Declarations of conformity

### 13.1 UK declaration of conformity



## UK declaration of conformity

Manufacturer

**Brinkmann Pumpen, K. H. Brinkmann GmbH & Co. KG**  
Friedrichstraße 2  
D-58791 Werdohl  
Germany

This declaration of conformity is issued under the sole responsibility of Brinkmann Pumps and belongs to the following product.

Product name

**Immersion pumps**

Type                    **STH21 ... 28**

The named product described above complies with the following statutory requirements of United Kingdom:

<b>UK SI 2008 No. 1597</b>	<b>The Supply of Machinery (Safety) Regulations 2008</b>
<b>UK SI 2016 No. 1091</b>	<b>The Electromagnetic Compatibility Regulations 2016</b>
<b>UK SI 2020 No. 1647</b>	<b>The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2020</b>

**The following exceptions in accordance with table 1, "Table of exempted applications" are claimed: No.12 (6a), No.15 (6b)**

The following designated standards and technical specification have been applied:

<b>EN 809:1998+A1:2009+AC:2010</b>	<b>EN ISO 12100:2010</b>	<b>EN 60204-1:2018</b>
<b>EN IEC 61000-3-2 :2019 +A1 :2021</b>	<b>EN 61000-3-3 :2013+A1 :2019 +A2 :2021 +A2 :2021/AC :2022</b>	
<b>EN IEC 61000-6-2 :2019</b>	<b>EN IEC 61000-6-3 :2021</b>	<b>EN IEC 63000 :2018</b>

Additionally the following standard has been applied:

**EN 60034-1 :2010/AC :2010**

**The instructions contained in the operating manual for installation and start up the pump have to be followed.**

**Brinkmann Pumpen, K. H. Brinkmann GmbH & Co.**  
**KG**

Werdohl, 04.06.2024

.....  
Dr.-Ing. Dirk Wenderott  
Chief Product Officer (CPO)  
Head of Engineering

Dr. H. Abou Dayé  
K. H. Brinkmann GmbH & Co. KG  
Friedrichstraße 2, D-58791 Werdohl  
Representative of documentation

## 13.2 EC declaration of conformity

DEUTSCH / ENGLISH / FRANÇAIS / ESPAÑOL



### EG-Konformitätserklärung

#### EC declaration of conformity / Déclaration de conformité CE / Declaración de conformidad CE

Hersteller / Manufacturer / Constructeur / Fabricante

**Brinkmann Pumpen, K. H. Brinkmann GmbH & Co. KG**  
Friedrichstraße 2, D-58791 Werdohl

Produktbezeichnung / Product name / Désignation du produit / Designación del producto

**Tauchpumpen / Immersion pumps / Pompes plongeantes / Bombas de inmersión**

**Typ / Type / Tipo**                    **STH21 ... 28**

Das bezeichnete Produkt stimmt mit den folgenden Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EG-Mitgliedsstaaten überein:

The named product conforms to the following Council Directives on approximation of laws of the EEC Member States:  
Le produit sus-mentionné est conforme aux Directives du Conseil concernant le rapprochement des législations des Etats membres CEE:

El producto designado cumple con las Directivas del Consejo relativas a la aproximación de las legislaciones de los Estados Miembros de la CEE:

<b>2006/42/EG</b>	Richtlinie für Maschinen
<b>2006/42/EC</b>	Council Directive for machinery
<b>2006/42/CE</b>	Directive du Conseil pour les machines
<b>2006/42/CE</b>	Directivas del Consejo para máquinas
<b>2014/30/EU</b>	Richtlinie für elektromagnetische Verträglichkeit
<b>2014/30/EU</b>	Council Directive for Electromagnetic compatibility
<b>2014/30/UE</b>	Directive du Conseil pour Compatibilité électromagnétique
<b>2014/30/UE</b>	Directivas del Consejo para Compatibilidad electromagnética
<b>2011/65/EU und 2015/863/EU</b>	RoHS Richtlinien
<b>2011/65/EU and 2015/863/EU</b>	RoHS Directives
<b>2011/65/UE et 2015/863/UE</b>	Directives RoHS
<b>2011/65/UE y 2015/863/UE</b>	RoHS Directivas

Folgende Ausnahmen gem. Anhang III RoHS (2011/65/EU) werden in Anspruch genommen: 6a, 6b.

The following exceptions in accordance with appendix III RoHS (2011/65/ EU) are claimed: 6a, 6b.

Les exceptions suivantes selon l'annexe III RoHS (2011 / 65 / UE) sont revendiquées : 6a, 6b.

Las siguientes excepciones conforme al apéndice III RoHS (2011/65 / UE) son requeridas: 6a, 6b.

Hinsichtlich der elektrischen Gefahren wurden gemäß Anhang I Nr. 1.5.1 der Maschinenrichtlinie 2006/42/EG die Schutzziele der Niederspannungsrichtlinie 2014/35/EU eingehalten.

With respect to potential electrical hazards as stated in appendix I No. 1.5.1 of the machine guide lines 2006/42/EC all safety protection goals are met according to the low voltage guide lines 2014/35/EU.

Conformément à l'annexe I N° 1.5.1 de la Directive "Machines" (2006/42/CE) les objectifs de sécurité relatifs au matériel électrique de la Directive "Basse Tension" 2014/35/UE ont été respectés.

Con respecto al potencial peligro eléctrico como se indica en el apéndice I No. 1.5.1 del manual de la máquina 2006/42/CE, todos los medios de protección de seguridad se encuentran según la guía de bajo voltaje 2014/35/UE.

Die Übereinstimmung mit den Vorschriften dieser Richtlinien wird nachgewiesen durch die vollständige Einhaltung folgender Normen:

Conformity with the requirements of this Directives is testified by complete adherence to the following standards:

La conformité aux prescriptions de ces Directives est démontrée par la conformité intégrale avec les normes suivantes:

La conformidad con las prescripciones de estas directivas queda justificada por haber cumplido totalmente las siguientes normas:

Harmonisierte Europ. Normen / Harmonised Europ. Standards / Normes europ. harmonisées / Normas europ. Armonizadas

**EN 809 :1998+A1 :2009+AC :2010    EN ISO 12100 :2010    EN 60204-1 :2018    EN IEC 61000-3-2 :2019 +A1 :2021**  
**EN 61000-3-3 :2013+A1 :2019 +A2 :2021 +A2 :2021/ZAC :2022    EN IEC 61000-6-2 :2019    EN IEC 61000-6-3 :2021**  
**EN IEC 63000 :2018**

Nationale Normen / National Standards / Normes nationales / Normas nacionales : **EN 60034-1 :2010/AC :2010**

**Die Hinweise in der Betriebsanleitung für den Einbau und die Inbetriebnahme der Pumpe sind zu beachten.**

**The instructions contained in the operating manual for installation and start up the pump have to be followed.**

**Les indications d'installation / montage et de mise en service de la pompe prévues dans l'instruction d'emploi doivent être suivies.**

**Tenga en cuenta las instrucciones en el manual para la instalación y puesta en marcha de la bomba.**

**Brinkmann Pumpen, K. H. Brinkmann GmbH & Co. KG**

Werdohl, 04.06.2024

Dr.-Ing. Dirk Wenderott  
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Head of Engineering

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documentation/ Mandataire de documentation /  
Mandatario de documentación