



brainpower your pumps!



# COOLANT PUMPS MAIN CATALOGUE 2023

# CONTROL, OPTIMIZE, DIGITALIZE.

Industry 4.0 in perfection: Utilizing blogic pump control allows to intelligently integrate BRINKMANN PUMPS' know-how between machine tools, pumps, filtration systems and other components.

blogic adapts perfectly to the existing sytem environment – no matter which variable frequency drives are used.



brainpower your pumps!

## blogic

DEVICE FEATURES

CONNECTIVITY

BASIC APPLICATIONS

MONITORING

PREDICTIVE MAINTENANCE

SOFT SENSORS

ADVANCED APPLICATIONS



Additional information can be found under:  
[blogic.brinkmannpumps.de/en](http://blogic.brinkmannpumps.de/en)



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<b>Immersion Pumps</b> <b>Stainless Steel Immersion Pumps</b> TB   TA   TE   STE   STA   TVG   TVA	Semi-open /closed impellers <b>Standard coolant pumps</b> 25 ... 5000 l/min 4 ... 120 m	20 – 49	
<b>Quick Suctioning Immersion Pumps with BRINKMANN's Suction De-aeration System</b> TL   TAL   STL   SAL	Axial/semi-open impellers <b>Inflated fluids / slurping</b> 25 ... 2600 l/min 5 ... 115 m	50 – 67	
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# Recommendations to choose Coolant Pumps










Series	Application										Medium							Pollution	Proportion of air in the fluid			Performance			Page			
	boring	sawing	milling	turning	grinding	eroding	circulating	tempering	cooling	washing	emulsions	coolants and lubricants	grinding oils	thermal oils	dielectric	industrial water	de-ionized water		lees / solvents	coarse	medium	few	normal	increased		extreme	lifting	washing
TB16 ... 100	●	●	●	●	●	○	●				●	●	●	○	○		○		●	●	●	●			●	●		20–21
TA160 ... 600	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●	●	22–23
TE/STE141 ... 146	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●	●	24–25
TA/STA301 ... 306	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●	●	26–27
STA401 ... 4500	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●	●	28–41
TVA400...900							●		●	●	●					●	●	●		●	●			●	●		46–49	
TVG400 ... 1000							●		●	●	●					●	●	●		●	●			●	●		42–45	
TL50 ... TAL200	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●		●	●	●	50–51
TL/STL141 ... 146	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●		●	●	●	52–53
TAL/SAL301 ... 306	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●		●	●	●	54–55
SAL401 ... 2500	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●		●	●	●	56–57
TGL/SGL331 ... 2200	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●		●	●	●	68–77
SZG701 ... 1002	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●	●	●	●	●	78–79
TAS301 ... 601	●	●	●	●	●	○	●				●	●	●	○	○		○		●	●	●	●			●	●	●	80–81
STS1001	●	●	●	●	●	○	●				●	●	●	○	○		○		●	●	●	●			●	●	●	80–81
TAA140 ... 280	●	●	●	●	●	○	●				●	●	●	○	○		○		●	●	●	●			●	●		82–83
SBA141 ... 2002 (V)	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●	●	84–105
SBG501 ... 1700 (V)	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●	●		●	●	●	106–119
SBM140 ... 450	●	●	●	●	●	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●		120–121
SFL550 ... 2350	●	●	●	●	●	○	●		○	○	●	●	○	○		○		●	●	●	●	●			●	●		128–129
SBF125 ... 1850	●	●	●	●	●	○	●		○	○	●	●	○	○		○		●	●	●	●	●			●	●		130–135
SFC620 ... 2320	●	●	●	●	●	○	●		○	○	●	●	○	○		○		●	●	●	●	●			●	●		136–137
SXC2824	●	●	●	●							●	●	○	○				●	●	●	●	●			●			138–139
SPC820	●	●	●	●							●	●	○	○				●	●	●					●			140–141
SGC820	●	●	●	●							●	●	○	○				●	●	●	●				●			142–143
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FT35 ... FTA140	●	●	●	●	●	○	●				●	●	●	○	○		○		●	●	●	●			●	●		148–149
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(S)TC25 ... 160	●	●	●	●	○	○	●	○	○		●	●	●	○	○		○		○	●	●				●	●		162–169
(S)TH2 ... 28	●	●	●	●	○	○	○	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●		170–201
FH2 ... 17	●	●	●	●	○	○		○	○	○	●	●	●	○	○		○		●	●	●	●			●	●		202–225
(S)TC260 ... 460	●	●	●	●	○	○	●	○	○	○	●	●	●	○	○		○		●	●	●	●			●	●		226–227
BFS1 ... TFS6	●	●	●	●	○						●	●	○						●	●					●	●		228
FFS1 ... FFS6	●	●	●	●	○						●	●	○						●	●					●	●		228
KTF25 ... 83						○	●	○	●		●	○	○		○	○	○		●	●					●	●		230–231
KTF151 ... 303						○	●	○	●		●	○	○		○	○	○		●	●					●	●		232–233
KTB200						○	●	○	●		●	○	○		○	○	○		●	●					●	●		232–233
KC21 ... 60	○	○	○	○		○	●	○	○	○	○		●	○	○	○	○		○	●	●				●	●		234–235
SB20 ... 60	●	●	●	●	○	○	●	○	○	○	●	●	○	○	○	○	○		○	●	●				●			236–237
TB40-M ... 100-M							●	●	○			●	●	○	○	○	○		●	●	●				●			238–239
B401 ... 501						○	●	●	○	○	●	○	○	○	○	○	○			●	●				●	●		240–241
BMK3 ... BMK4						○	●	●	○	○	●	○	○	○	○	○	○			●	●				●	●		242–243

● usable ○ please ask before choice

## Hydraulic modular system

Our modular design system allows us to precisely focus on and respond to the multitude of applications within the machine tool industry. Customized pump hydraulics can be used to perfectly adapt to different kinds of machined materials, different coolants such as water soluble coolant or oil, high percentages of air or chips and your specific system configuration.

	Vertical design	Horizontal design
	<b>STA</b> <b>Standard centrifugal pump</b> <ul style="list-style-type: none"> <li>Pressure is generated by either a single or multiple impellers</li> <li>For water-soluble coolant or oil without air-entrainment</li> </ul>	<b>SBA</b> <b>Horizontal end-suction pump</b> <ul style="list-style-type: none"> <li>Pressure is generated by either a single or multiple impellers</li> <li>For water-soluble coolant or oil without air-entrainment</li> </ul>
	<b>SAL</b> <b>Quick suctioning immersion pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with de-aeration and quick suctioning feature</li> <li>For water-soluble coolant with air-entrainment</li> </ul>	<b>SBA</b> <b>Horizontal end-suction pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with axial impeller</li> <li>For water-soluble coolant with air-entrainment</li> </ul>
	<b>SGL</b> <b>Quick suctioning immersion pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with de-aeration and quick suctioning feature</li> <li>For oil with high air-entrainment</li> </ul>	<b>SBG</b> <b>Horizontal end-suction pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with axial impeller</li> <li>For oil with high air-entrainment</li> </ul>
	<b>SZG</b> <b>Quick suctioning immersion pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump for multi-phase fluids</li> <li>For oil with very high air-entrainment</li> </ul>	<b>SBZ</b> <b>Horizontal end-suction pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump for multi-phase fluids</li> <li>For oil with very high air-entrainment</li> </ul>
	<b>SFL</b> <b>Lifting pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with de-aeration and quick suctioning feature</li> <li>For water-soluble coolant or oil with increased chip load</li> </ul>	<b>SBF</b> <b>Horizontal end-suction lifting pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with axial impeller</li> <li>For water-soluble coolant or oil with increased chip load</li> </ul>
	<b>STS</b> <b>Suction immersion pump</b> <ul style="list-style-type: none"> <li>Centrifugal pump with axial impeller</li> <li>For vacuum filter, e.g. on split sieve basis for vacuums from -0.3 ... -0.5 bar</li> </ul>	
	<b>Optional agitator</b> <ul style="list-style-type: none"> <li>The SFL and the SGL series can be equipped or retrofitted with agitators. The agitator is used to break up chip bundles or grinding wool matts.</li> </ul>	

## Electrical Features



### Motors acc. to EN 60034-1

Protective system	IP55
Insulation class	F
Number of poles	2
Efficiencies	EN 60034-30, IE2 ≥ 0.12 kW / IE3 ≥ 0.48 kW*

\* Motors without fans, such as those installed in TB16-100 or FT35, are excluded.

	50 Hz		60 Hz	
	220 V – 240 V $\Delta$ 380 V – 415 V $\Upsilon$	380 V – 415 V $\Delta$	460 V $\Upsilon$	460 V $\Delta$
up to 5.5 kW	Standard	●	Standard	●
as of 6.0 kW	–	Standard	–	Standard

In accordance with DIN EN 60034-1, **Zone A**, and permanent operation, the voltage tolerance is  $\pm 5\%$  and the frequency tolerance is  $\pm 2\%$ .

Special voltages are available upon request:

	200 V	200 V 220 V	200 V – 220 V 400 V	380 V	400 V	415 V	440 V	480 V	500 V	575 V	200 V $\Upsilon\Upsilon$ 400 V $\Upsilon$	230 V $\Upsilon\Upsilon$ 460 V $\Upsilon$
50 Hz	●	–	–	●	●	●	–	–	●	–	●	–
● available	–	not available	–	●	●	–	●	●	–	●	–	●
60 Hz	–	●	●	●	●	–	●	●	–	●	–	●

Other voltages upon request.

For operation at 60 Hz, as well as the choice of the corresponding motor winding, the manufacturer will also adapt the hydraulics, e. g. with smaller impellers or dummy stages.

For special demands, versions for use with a standardized voltage 50 and 60 Hz (Transformer usage) are possible after consulting with the company, e. g.  $3 \times 400\text{ V}, \pm 5\%$ , 50 – 60 Hz.

### Motors as of 6 kW

Motors are  $\Delta$  connected.

The motor design allows  $\Upsilon/\Delta$ -starting, if required.

Screw-spindle pumps used for  $\Upsilon/\Delta$ -starting must be started without pressure.

Soft-starting devices are a recommendable alternative to  $\Upsilon/\Delta$ -starting.

### Switching-on frequency

Motors less than 3 kW ►  
maximum 200 times per hour

Motors from 3 kW to 4 kW ►  
maximum 40 times per hour

Motors from 5 kW to 9 kW ►  
maximum 20 times per hour

Motors as of 11 kW ►  
maximum 15 times per hour

Higher on/off cycling frequencies are available upon request.

## Electrical Features



### Non-European Regulations, Brinkmann motors



Approved by UL with „UL Recognized Component Mark“ for USA acc. to UL 1004-1 and for Canada acc. to CSA C22.2 No. 100-14 (UL-File E233349)



Brinkmann Motors up to 15 kW, 60 Hz, and up to max. 600 V are available with UL Recognized Component Mark approval as special designs.

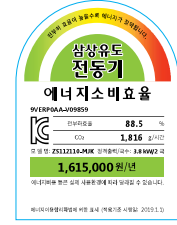
Brinkmann motors ranging from 1.3 kW to 13 kW, 50 Hz, are available with the China Energy Label GB18613-2020, Grade 3 upon request.



CC311B

Compliance Certification number CC311B according to 10 C.F.R. §431 (NEMA PREMIUM EFFICIENCY)

Brinkmann motors ranging from 0.86 kW to 15 kW, 60 Hz, are available with NEMA PREMIUM MG 1 upon request.



Brinkmann motors ranging from 1.1 kW to 6.3 kW, 60 Hz, are available with KEMCO certification for South Korea upon request.

Brinkmann Motors Options	50 Hz					60 Hz								
	200 V	380 V	400 V	415 V	500 V	200 V 220 V	380 V	400 V	440 V	460 V	230 V 460 V	480 V	230 V 480 V	575 V 600 V
UL/CSA	-	-	-	-	-	●	●	●	●	●	●	●	●	●
CEL (Grade 3) 1.3 kW – 13 kW	●	●	●	●	●	-	-	-	-	-	-	-	-	-
NEMA PREMIUM MG 1 ≥ 0.86 kW	0.86 – 6.3 kW	-	-	-	-	●	●	●	●	●	●	●	●	●
	3.45 – 15 kW	-	-	-	-	-	●	●	●	●	-	●	-	●
	0.86 – 15 kW	-	-	-	-	-	-	○	-	-	●	-	●	-
KEMCO	1.1 – 6.3 kW	-	-	-	-	-	●	●	●	●	-	●	-	-
	1.1 – 6.3 kW	-	-	-	-	●	○	○	○	○	-	○	-	-
	1.1 – 5.8 kW	-	-	-	-	●	-	●	-	-	-	-	-	-

● available – not available ○ upon request Additional country-specific approvals upon request.

### Non-European Regulations, Standard motors

Upon request. Depending on actual motor rating and sizing (Power / Motor efficiency class) deviations in pump and motor configurations are possible. An overview of pumps built with standard motors can be found on our website.

### Current / Rated current

The current ( $I_{catalog}$ ) stated at the name plates is used for the sizing of electronic components.

- Motor  $\leq 0.12$  kW (50 Hz):  $I_{max} = I_{catalog}$
- Motor 0.17 kW – 0.32 kW:  $I_{max} =$  please see table
- Motor  $\geq 0.48$  kW:  $I_{max} = 1.05 \times I_{catalog}$

Power	$I_{max}$ @400 V, 50 Hz	$I_{max}$ @460 V, 60 Hz
0.17/0.195 kW	$I_{max} = 1.2 \times I_N$	$I_{max} = 1.08 \times I_N$
0.22/0.255 kW	$I_{max} = 1.14 \times I_N$	$I_{max} = 1.08 \times I_N$
0.32/0.365 kW	$I_{max} = 1.24 \times I_N$	$I_{max} = 1.1 \times I_N$

Special voltages upon request.

For extended voltage ranges we mention only the highest current value in our data sheets.

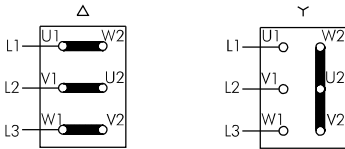
## Electrical Features



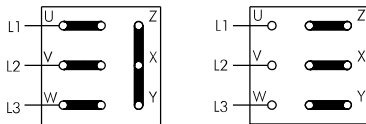
### Circuits

**Standard voltage changing**  $\Upsilon / \Delta$   
e. g. 220 – 240 V / 380 – 415 V, 50 Hz

$\Delta$  (Delta Connection)      $\Upsilon$  (Star Connection)



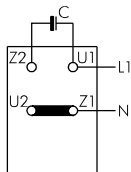
**Voltage changing 1 : 2**  $\Upsilon\Upsilon / \Upsilon$   
e. g. 230 V / 460 V, 60 Hz



$\Upsilon\Upsilon$   
Low Voltage

$\Upsilon$   
High Voltage

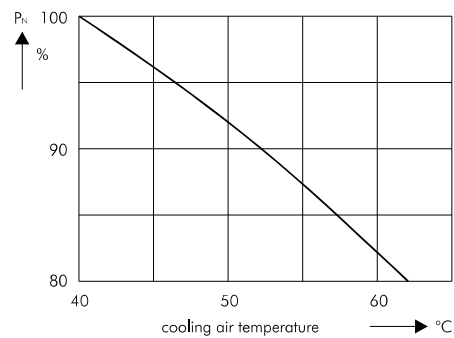
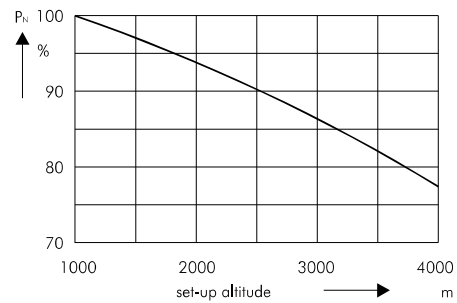
**Optional Connection to single-phase**  
e. g. 1 x 230 V, 50 Hz:



### Set-up altitude and coolant temperature

The specified power ratings ( $P_N$ ) and operating values for the motors apply for operating mode S 1 according to EN 60034-1 (continuous operation) at a frequency of 50 Hz, rated voltage, a cooling air temperature (KT) of max. 40 °C and a set-up altitude of up to 1000 m above sea level. The motors can also be used at a cooling air temperature above 40 °C up to max. 60 °C or set-up altitude above 1000 m above sea level. In such cases the power rating must be reduced according to the diagrams, or an appropriately larger motor version or higher heat class has to be selected. However, a deviation from the specified data is necessary when the cooling air temperature is reduced according to table simultaneously at set-up altitudes higher than 1000 m above sea level.

Set-up altitude / m	Maximum cooling air temperature for heat class F / °C
0 up to 1000	40
1000 up to 2000	30
2000 up to 3000	19
3000 up to 4000	9



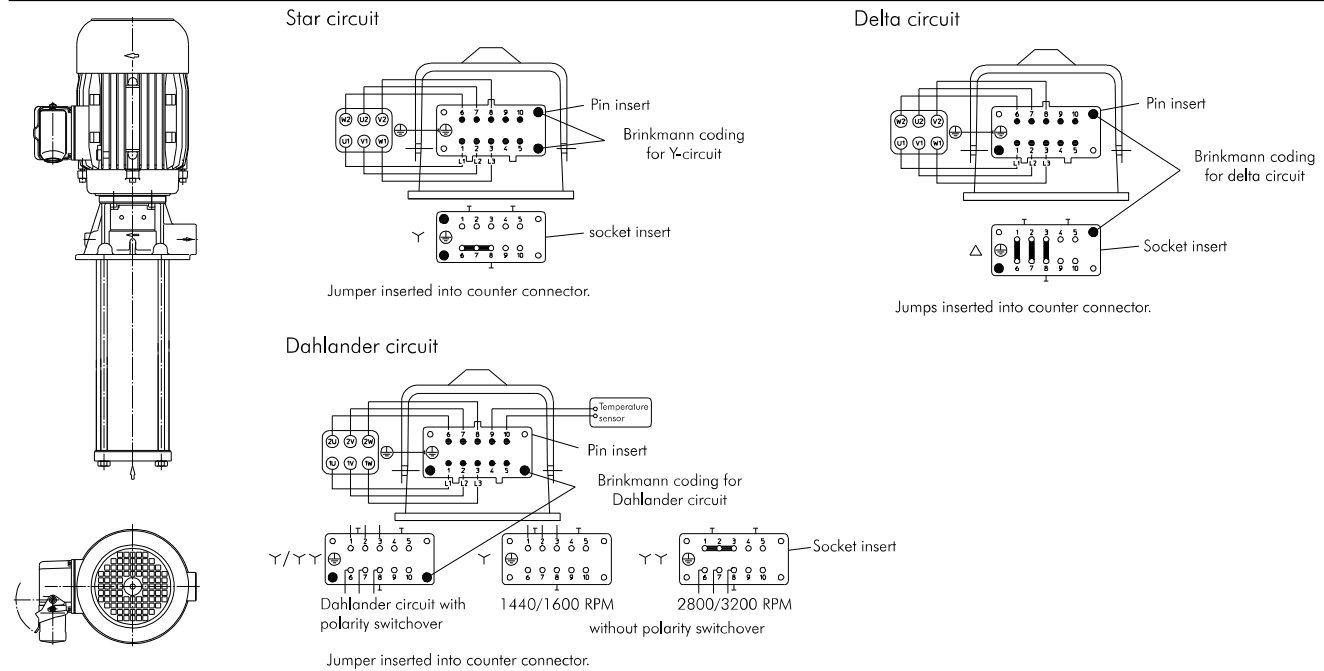
### Noise Levels

The noise levels stated in the catalog are valid for 50 Hz operation. For 60 Hz operation the noise levels are approximately 3 – 4 dBA above those stated. For reduced noise levels special axial motor fan blades are available upon request.

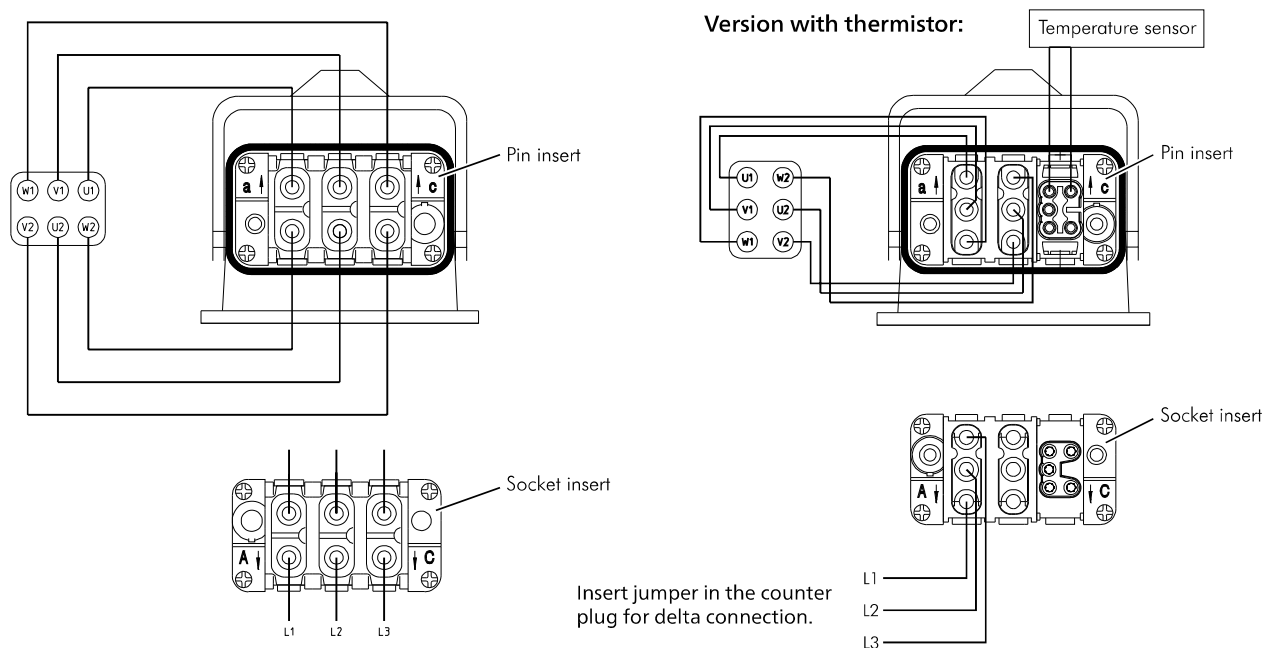




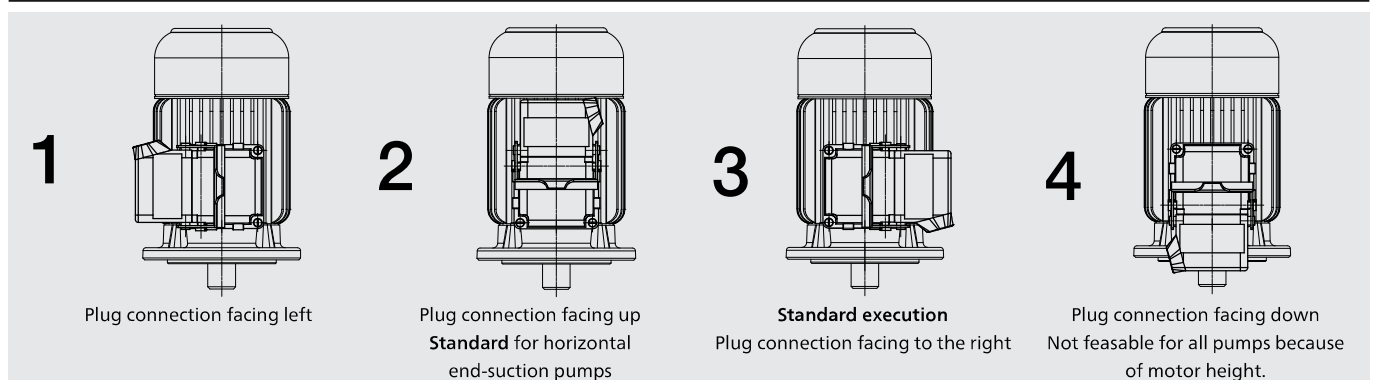
### Pin assignment for HAN 10-pin connector for pumps with motors up to 7.5/8.6 kW (400 V, 50 Hz / 460 V, 60 Hz)



### Assignment for HAN modular plug connector for pumps with motors from 6/6.9 kW to 13/15 kW (50 Hz / 60 Hz)



### Positions for motor connection plug – View onto terminal board



## Control / Regulation

### Brinkmann coolant pumps with frequency converter 1.3 – 22 kW

Pumps with integrated frequency converter offer the optimum supplement to the existing product line for your application.

With the use of a frequency converter the Q/H curve which is typical for centrifugal pumps, is replaced by a performance curve array. This makes it possible to regulate the pump to various operating points within the performance curve array, allowing the pump to be optimally matched to your specific application.



### Pump Regulation

Regulation is an operation with which a physical value such as pressure is continuously measured and compared with a set value. In the event of deviation the regulation device (here a PI controller) provides for the desired adaptation.

With regulation a check is made whether a desired state is achieved or not. This allows a previously set pressure to be held constant within certain ranges in a process regardless of the flow quantities supplied.

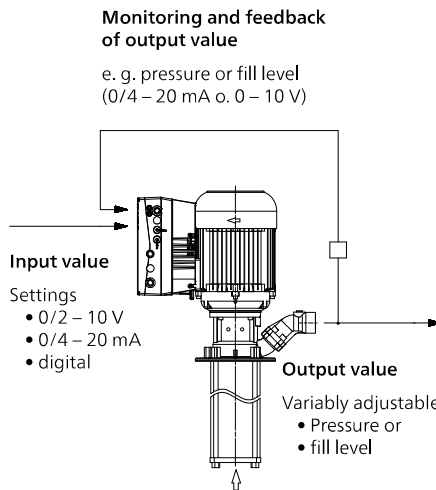


Fig. 2: Scheme of regulation

### Pump control

Control is an operation in which a physical value such as pressure or flow rate is influenced by other values.

Within pump control we also speak of an open effective circuit, because the effect of the control is not monitored. Interferences occurring in the system cannot be compensated, because the output value has no effect on the input value.

Pumps with integrated frequency converter are always supplied pre-programmed by the manufacturer.

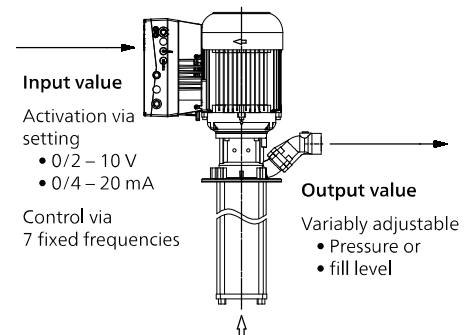


Fig. 4: Control scheme

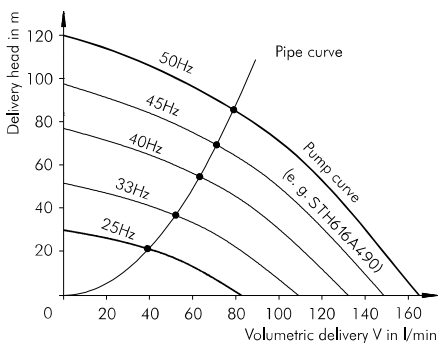


Fig. 1: Performance map

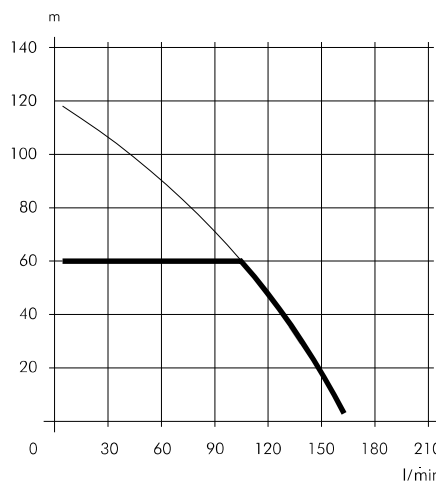


Fig. 3: Pressure regulation limited to max. 6 bar



### 1. Pump control via analog signal

When the coolant pump is controlled by using a frequency converter, nearly an infinite number of pressures can be achieved, for example, for different tools.

Usually the layout of the pump is limited to the 50 Hz version. Operation at higher frequencies is possible for various pumps with power reserves after consulting with the company.

The frequency converter is then operated at the current limit. This means the motor is operated at the set motor current rating at its maximum. If the pump requires more motor power for the operating point, the frequency is reduced until the max. motor current is reached again.

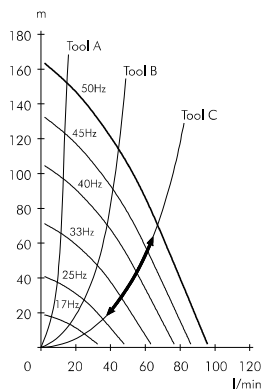


Fig. 5: Analog signal (infinite)

### 2. Pump control via fixed frequencies (max. 7)

An alternative to analog pump control is digital control of the frequency converter over 3 digital inputs. Here up to 7 different fixed frequencies can be set.

With fixed frequency control it is possible to realize different pressure stages with one tool.

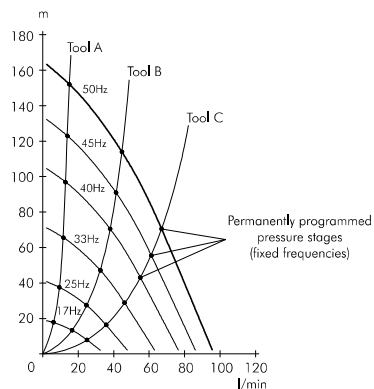
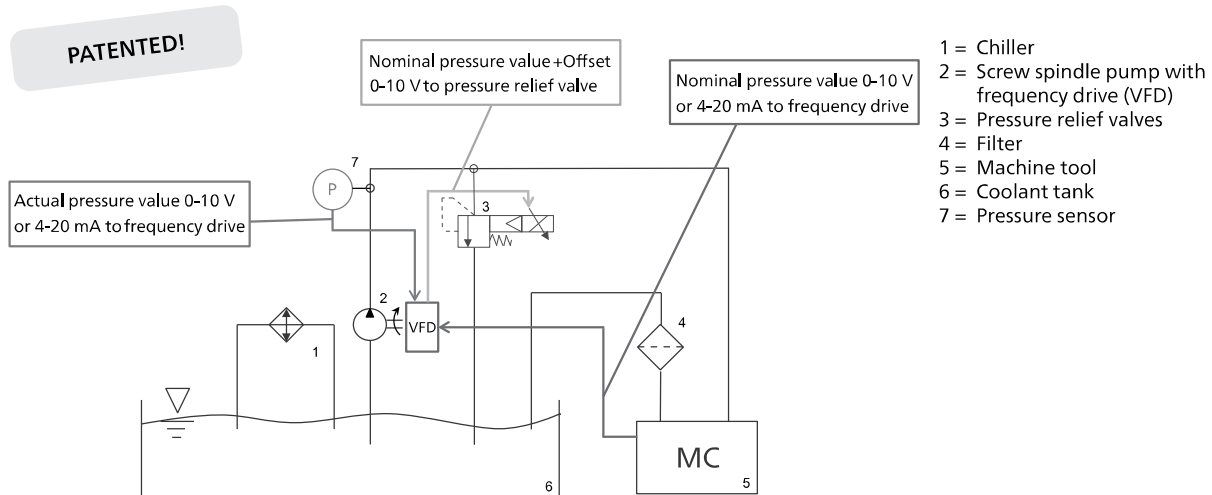


Fig. 6: Fixed frequencies

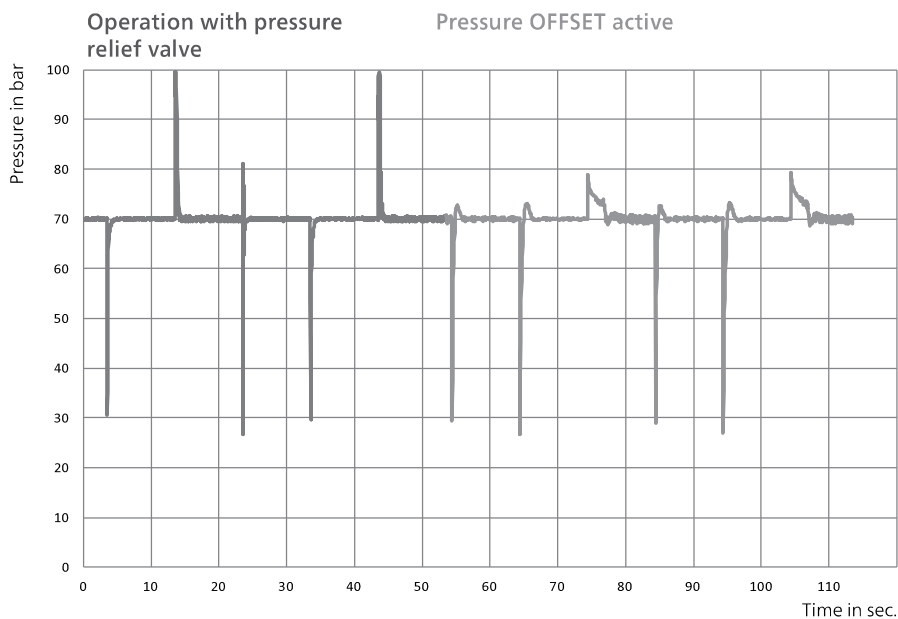


### Brinkmann Pumps Offset Regulation for High Pressure Pumps

The target pressure is calculated by the VFD based on the working point and is not supplied by the machine tool. The intelligent control of the valves allows for minimizing potential pressure spikes.



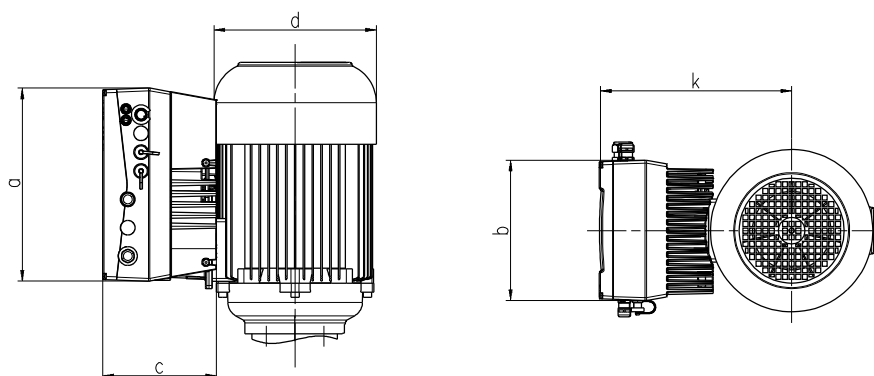
### Minimizing pressure peaks during tool change



### TECHNICAL DATA Frequency converter FKO (1.5 – 22 kW)

Function	Specification
Rated voltage	3 AC 380 V -10 % ... 480 V +10 %
Rated frequency	50/60 Hz ± 6 %
Output ranges	... 1.5 kW      2.2 – 4 kW      5.5 – 7.5 kW      11 – 22 kW
Housing size	A      B      C      D
Protective system	IP 65      IP 55
EMV approvals acc. to EN61800-3US	C2
Temperature range	-10 °C ... +50 °C
Overload capability	1.5 times rated output current
Protective functions	undervoltage, overvoltage, I <sup>2</sup> t-restriction, short circuit, motor temperature, converter temperature, anti-tilt protection
Output frequency range	according to layout at factory
Digital inputs	4
Fixed frequencies	7
Digital outputs	2
Analog inputs	2 analog inputs (0/2 – 10 V, 0/4 – 20 mA)
Analog outputs	0 – 10 V (-I <sub>max</sub> = 10 mA) or 0 – 20 mA (burden R = 500 Ω)
Process control	PID
Relay outputs	2 x NO contacts 250 V AC 2 A
USB interface	USB on plug M12 (RS485/RS232)
Manual control unit (optional)	MMI with cable
Bus modules (optional)	PROFIBUS DP, CANopen, EtherCAT, PROFINET
UL approval	yes

### Dimensions with Brinkmann motor



Motor power kW	housing size	a mm	b mm	c mm	d mm	k mm
1.1	A	233	153	120	138	199
1.3 – 1.7	A	233	153	120	176	209
1.9 – 2.6	B	270	189	140	176	223
3.0 – 4.0	B	270	189	140	218	243
5.0 – 5.5	C	307	223	181	218	287
6.0 – 9.0	C	307	223	181	258	306
11.0 – 13.0	D	414	294	233	314	404

## Hydraulic Features



BRINKMANN's program of coolant pumps offers appropriate design approaches for different applications.

Based upon the **centrifugal pump system**, we offer **immersed pumps with open, semi-open and closed impellers** for different coolants.

Patented quick suctioning pumps series **TL, SAL, SFL, SGL and SZG** are provided for **handling** of air entrained coolants.

Vortex pumps series **SFT** and lifting pumps series **SFL** are suitable for **coolants with heavy chip loads**.

Suction immersion pumps Series **TAS/STS** make it possible to connect to vacuum filters because of their single connection on the suction side (for instance, with a wedge wire).

Lifting pumps series **TAA** pump are for foam-sensitive cooling lubricants.

Immersion pumps series **(S)TC, (S)TH** for medium pressure get **optimal hydraulic efficiency** due to their **closed impellers**; simple pre-filtration is recommended.

High pressure in coolant systems is provided by **screw pumps using longwearing silicon carbide housings**. Please contact us to provide additional information about working conditions in your devices.

Please note that with all immersion pumps, the **highest fill level of coolant should stay a few inches below the mounting flange**.

The pump characteristics, shown in this brochure, apply to water at 20 °C (1 mm<sup>2</sup>/s). Higher viscosities need larger motors. Coolants with specific weight of less than 1 need less power and more than 1 need more power.

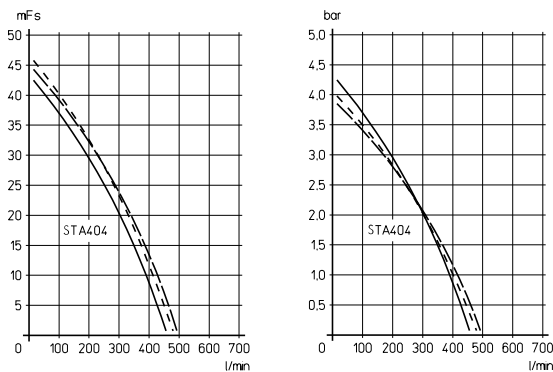
Centrifugal pump pressure is stated as delivery head in metres (m).

The diagrams of immersion pump types **STA404**; with semi-open impellers, and **STC63/560**, with closed impellers, show the rates for coolants of different viscosities and different specific weights in m and bar respectively.

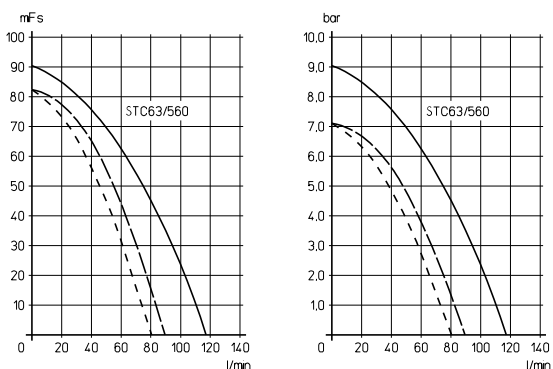
**Noise levels refer to 50 Hz operation.**

The viscogram shows examples of common oils. Upon request, oil curves for specific pumps can be provided.

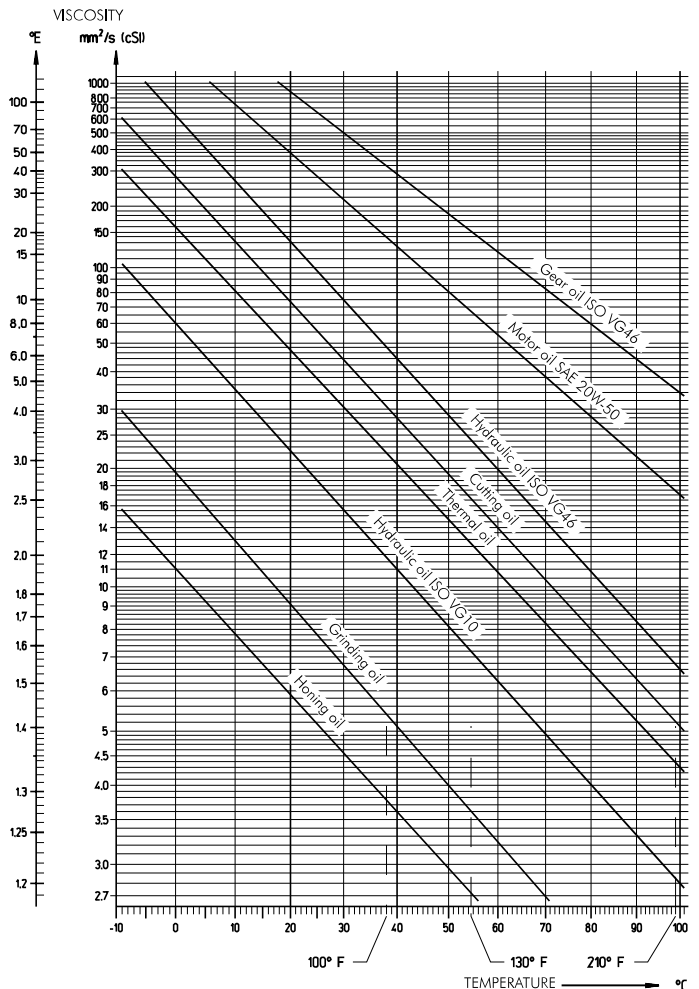
**STA404**  
with semi-open impellers



**STC63**  
with closed impellers



Water ————  
Oil - . . . - 45 mm<sup>2</sup>/s spec. weight  
Oil - - - - - 90 mm<sup>2</sup>/s 0.87



## Mechanical Features



### Terminal Box Position acc. to EN 12157

In accordance with EN 12157 the terminal box is positioned above the outlet on immersion and suction pumps:  
Position 1 is the standard design for immersion pumps, position 2 for suction pumps, and position 3 for miniature centrifugal pumps.  
If a non-standard position is required, please provide details when ordering.

	Position	Motor top view
1		Terminal box opposite to pump discharge. Standard set-up for immersion pumps.
2		Terminal box to the left of the pump discharge. Standard set-up for suction pumps. For Horizontal End-Suction pumps please refer to page 16.
3		Terminal box over the pump discharge. Standard set-up for miniature centrifugal pumps.
4		Terminal box on the right of the pump discharge.

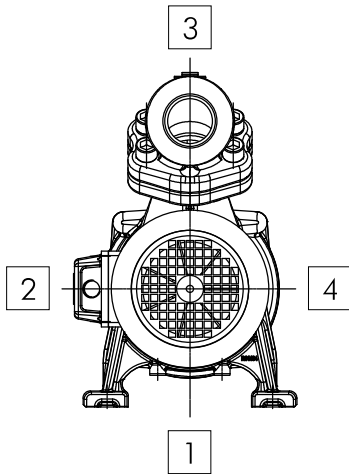
### Lacquering

Standard	RAL 9005
Upon request	Other colors and unpainted or primed available on request.

## Mechanical Features



### Horizontal End-Suction Pumps – Terminal box and foot location

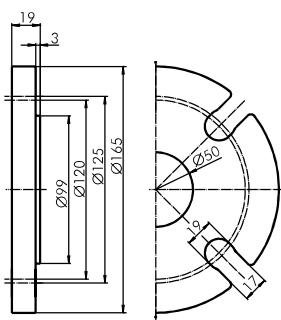


Location	Series SBA, SBG and SBF	
	Terminal box location	Foot location
1	–	Standard
2	Standard	●
3	□	–
4	●	●

- available
- available upon request
- not available

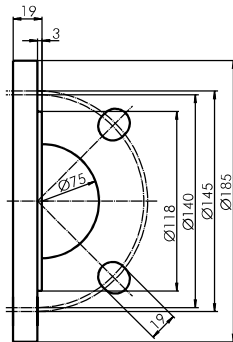
**Attention:**  
Terminal box location and foot location cannot be facing in the same direction!

### Horizontal End-Suction Pumps – Suction port



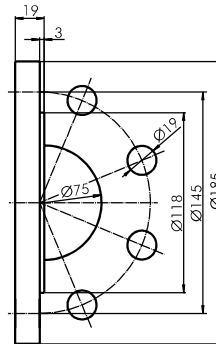
DN50, 4 hole flange connection size 140

DN50, 4 hole flange connection, is equivalent to ASME B16.1-2005 Class 25 Flange NPS 2 and JIS B 2239:2004 10K A50

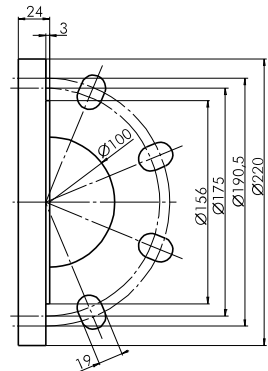


DN65, 4 hole flange connection sizes 400, 550, 600 sizes 650, 850, 1150, 800, 900, 1300

DN65, 4 hole flange connection, is equivalent to ASME B16.1-2005 Class 25 Flange NPS 2 1/2 and JIS B 2239:2004 10K A65

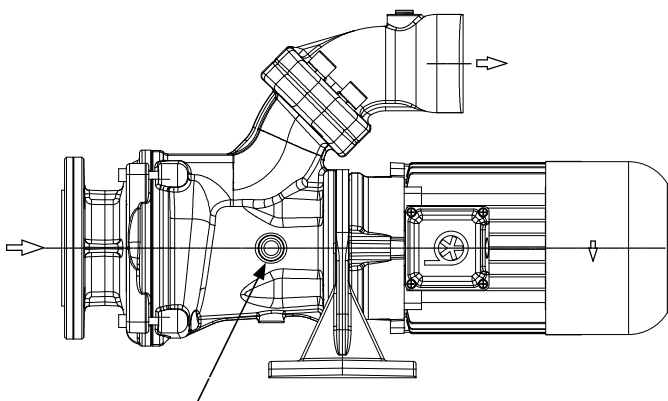


DN65, 8 hole flange connection sizes 850, 1150, 1100, 1300 Available upon request



DN100, 8 hole flange connection sizes 1350, 1550, 1850 sizes 1600, 1700, 2000

### Dry-running Version (-GD)



Monitoring window for models with second mechanical seal (-GD)

A second mechanical seal is available for unlimited dry-running. By utilizing an additional oil reservoir, continuous lubrication of the mechanical seal can be assured, which in turn allows dry-running of the pump.

The oil level within the reservoir can be monitored through an integrated monitoring window.



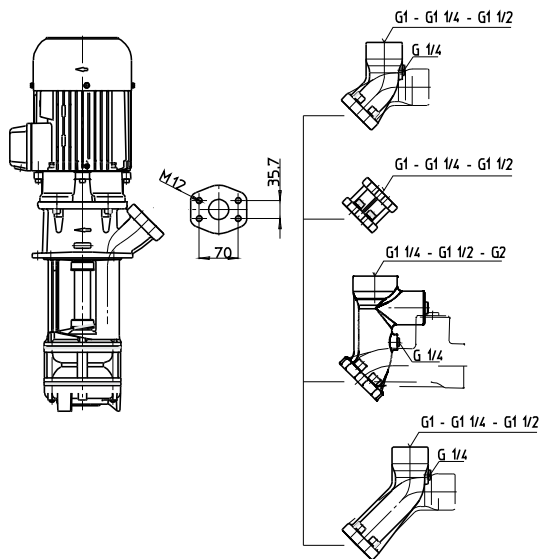
## Mechanical Features

### Brinkmann Pumps with SAE flanges or 45 degree flanges

Most Brinkmann pumps with motors larger than 0.5 kW are equipped with the user friendly SAE flange or 45 degree flange connection which allows for either vertical or horizontal pipe connection. Each SAE flange or 45 degree flange is equipped with an additional G 1/4 pressure gauge connection.

For optimized chip transport and to avoid chip blockages inside the pumps, all flow is directed in long soft turns. All flanges are designed in a way that any cross section diameter changes down stream are always increasing never decreasing in order to prevent bottle necks inside the pump.

#### Small pump body (Ø 140 mm)



#### SAE flange G1, G1 1/4, G1 1/2, G2

Standard as shown on data sheets. Fully interchangeable. Upon request also available for TC and TH pumps.

#### SAE Extension Port

This extension port is available upon request for all pumps which are featuring an SAE flange.

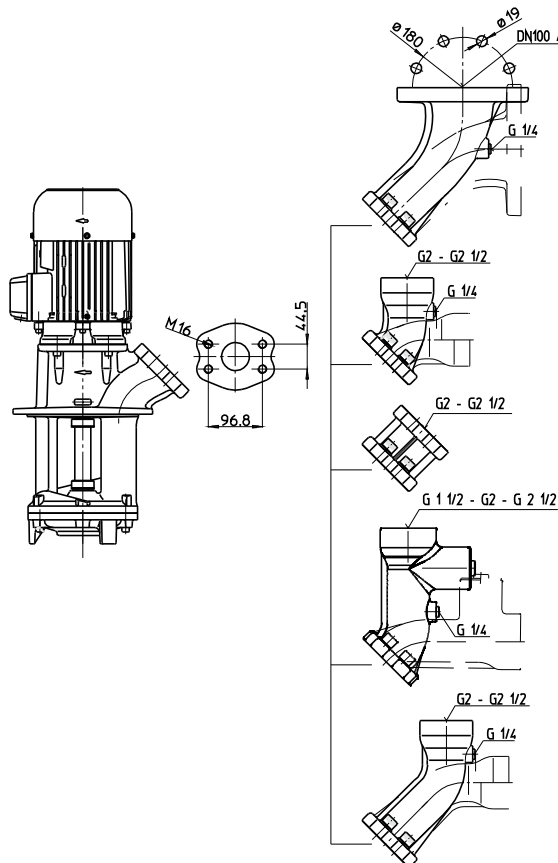
#### Regulating Valve for SAE flange G1, G1 1/4, G1 1/2, G2

This regulating valve allows to adjust the flow rate of the pump even during regular operation. This valve has no complete shut off function. An additional check valve is available upon request.

#### SAE flange G1, G1 1/4, G1 1/2, G2

Standard for motors larger than 11 kW and for standard motors.

#### Large pump body (≥ Ø 200 mm)



#### Flange DN100/PN16

This flange is available upon request for all pumps with larger pump body which are featuring a 45 degree flange.

#### 45 degree flange G2, G2 1/2

Standard as shown on data sheets. G 2 is available upon request instead of the G 2 1/2 without surcharge.

#### Extension Port for 45 degree flange

This extension port is available upon request for all pumps which are featuring a 45 degree flange.

#### Regulating Valve for 45 degree flange G1 1/2, G2, G2 1/2

This regulating valve allows to adjust the flow rate of the pump even during regular operation. This valve has no complete shut off function.

#### Extended 45 degree flange G2, G2 1/2

Standard for motors larger than 11 kW and for standard motors.



# Machine tool coolant supply

## Low Pressure Pumps

Semi-open impellers are a central feature for this range of pumps. The pumps are resistant to dirt and are suitable for various applications. In the patented version with suction de-aeration system, they are the right solution, particularly for inflated emulsions and grinding oils. Horizontal end-suction pumps are a compact, space-saving alternative.

Coolant pumps, that's us!



### TB | TA | TE | STE | STA | TVG | TVA



**Impellers** semi-open  
**Fluids** coolants, emulsions, oils  
**Volumetric delivery** up to 5000 l/min  
**Delivery head** up to 120 m

#### Immersion Pumps

- Easy mounting on top of the tank
- Simple pipe connection with 45 degree SAE flange
- Long lifetime, seal-less or low wear anti-friction bearing
- Multi-stage version (steep performance curves)
- Immersion depth up to 1.5 m possible
- All wetted parts are available in stainless steel (TVG/TVA)

### TL | STL | TAL | SAL | TGL | SGL | SZG



**Impellers** axial / semi-open  
**Fluids** coolants, emulsions, oils  
**Volumetric delivery** up to 2600 l/min  
**Delivery head** up to 115 m

#### Quick Suctioning Immersion Pumps

- Easy mounting on top of the tank
- Simple pipe connection with 45 degree SAE flange
- Long lifetime due to low wear anti-friction bearing
- Patented BRINKMANN 's Suction De-aeration System
- Multi-stage version (steep performance curves)
- Immersion depth up to 1.5 m possible
- Available with additional agitator at the pump suction for breaking up clusters of grinding sludge

### SBA | SBA-V | SBG | SBG-V | SBM



**Impellers** axial / semi-open  
**Fluids** coolants, emulsions, oils  
**Volumetric delivery** up to 2250 l/min  
**Delivery head** up to 62 m

#### Horizontal End-Suction Pumps

- Foot mounted inline pumps; gravity fed
- Simple pipe connection with 45 degree SAE flange
- Vertical (space saving) design available
- Long lifetime due to low wear anti-friction bearing
- Multi-stage version (steep performance curves)
- Available in a version resistant to dry running (-GD)