

# Technical Information



## Electrical Features

CE Motors acc. to EN 60034 (resp. DIN ICE 34)

Grade of protection IP55  
Type of insulation F

### Brinkmann motors

60 Hz	230 V $\Upsilon$ $\Upsilon$ 460 V $\Upsilon$	440 V – 480 V $\Upsilon$	440 V – 480 V $\Delta$
up to 7.4 HP	Standard	●	●
10 HP – 13.4 HP	Standard	●	●

### Siemens standard motors

60 Hz	440 V – 480 V $\Upsilon$	440 V – 480 V $\Delta$
up to 7.4 HP	Standard	●
10 HP and higher	●	Standard

### For 50 Hz applications

50 Hz	220 V – 240 V $\Delta$ 380 V – 420 V $\Upsilon$	380 V – 420 V $\Delta$
up to 7.4 HP	Standard	●
10 HP and higher	●	Standard

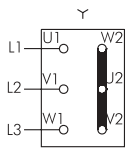
- Upon request

Other voltages upon request.

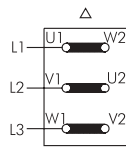
Motors larger than 13.4 HP (50 Hz) and 15.4 HP (60 Hz) are automatically equipped with thermal protectors.

### Circuits

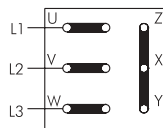
$\Upsilon$  (Star Connection)  $\Delta$  (Delta Connection) Voltage changing 1 : 2  $\Upsilon$   $\Upsilon$  /  $\Upsilon$   
up to 7.4 HP (5.5 kW) 10 HP and higher (7.5 kW and higher) e. g. 230 / 460 V, 60 Hz



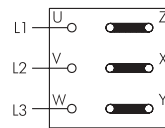
$\Upsilon$  440 V – 480 V  
60 Hz



$\Delta$  440 V – 480 V  
60 Hz



$\Upsilon$   $\Upsilon$   
Low Voltage



$\Upsilon$   
High Voltage

### Installation

#### Brinkmann Screw Pump with Harting Connector

DESINA includes a complete concept for standardization and decentralization of the electronic and fluid technical installation of machine tool OEMs, the automotive industry and its suppliers. The specifications for the required components were defined in cooperation between the machine construction, automotive and supplier industry.

DESINA considers proven solutions such as open bus systems, industrial standards for connectors, etc. By standardizing components, interfaces and connection elements it is possible to realize highly varying field bus systems on a common physical basis.

Motors up to 7.4 HP (5.5 kW) are available with a HAN 10-pin connector.

### Control/Regulation

#### Brinkmann screw pumps with integrated frequency converter

Pumps with integrated frequency converter offer the perfect supplement to the existing product line for your application. Please contact us for additional information.

#### Motors of 10 HP (7.5 kW)

Motor design available for  $\Upsilon$  /  $\Delta$ -start.

Screw pumps must be started without back pressure when utilizing a  $\Upsilon$  /  $\Delta$ -start-up mode.

#### Motor cycle time

Motors less 4.0 HP (3 kW):  
up to 200 times per hour.

Motors from 4.0 HP (3 kW) to 7.4 HP (5.5 kW):

up to 40 times per hour.

Motors from 10 HP (7.5 kW) to 13.4 HP (10 kW):

up to 20 times per hour.

Motors 15 HP (11 kW) and higher:  
up to 15 times per hour.

### UL/CSA Certification

#### Brinkmann motors

Motors up to 13.4 HP (10 kW) and up to max. 600 V are available as special designs with cUL-certification.

Approval testing is carried out by the Underwriters Laboratories Inc. according to the UL 1004 Electric Motors Standard. The motor's name plate bears the identification:



„Recognized Component Mark for Canada and the United States“.

#### Siemens standard motors

Motors are available upon request with UL-certification, with CSA-certification or with UL- and CSA-certification.



„Recognized Component Mark for Canada and the United States“.

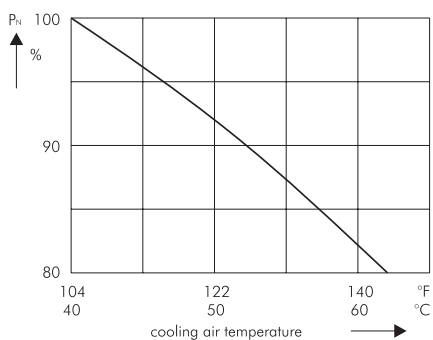
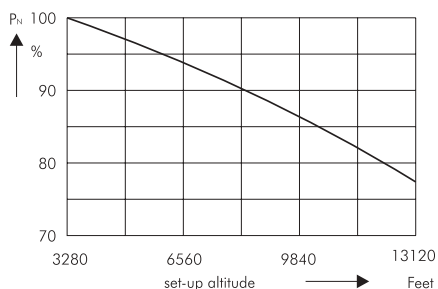
# Technical Information

## Electrical / Hydraulic Features

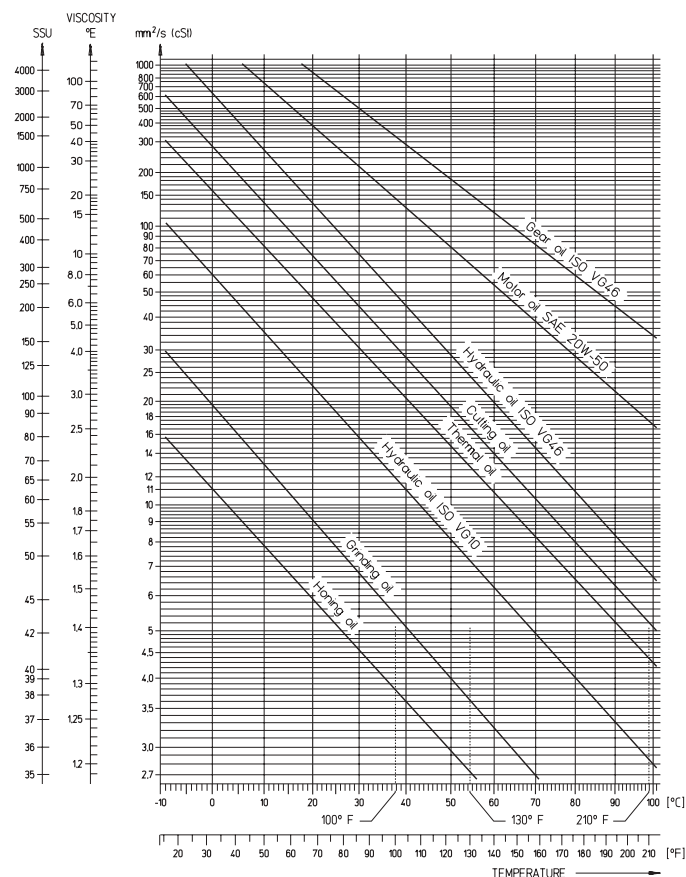
### Set-up altitude and coolant temperature

The specified power ratings ( $P_N$ ) and operating values for the motors apply to operating mode S1 according to EN 60034-1 (continuous operation) at a frequency of 60 Hz, rated voltage, a cooling air temperature (KT) of max. 104 °F (40 °C) and a set-up altitude of up to 3280 ft (1000 m) above sea level. The motors can also be used at a cooling air temperature above 104 °F (40 °C) up to max. 140 °F (60 °C) or set-up altitude above 3280 ft (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 3280 ft (1000 m) above sea level.

Set-up altitude feet	Maximum cooling air temperatur for heat class F	
	°F	°C
0 up to 3280	104	40
3280 up to 6560	86	30
6560 up to 9840	66	19
9540 up to 13120	48	9



### Viscogram



# Technical Information



## Electrical Features

### Technical motor data

Three-phase induction motor 2 pole, thermal protection class F, grade of protection IP 55

### Brinkmann motors

Power 50 Hz / 60 Hz		Rated current 2 pole 50 Hz Y 380–420 V / Δ 380–420 V		Noise level max.	Rated current 2 pole 60 Hz 230 V Y Y	Rated current 2 pole 60 Hz Y 460 V	Noise level max.
kW	HP	AMPS		dBA / 50 Hz	AMPS	AMPS	dBA / 60 Hz
B 1.3 / 1.5	B 1.75 / 2.0	3.0	–	63	6.0	3.0	67
B 1.5 / 1.75	B 2.0 / 2.35	3.8	–	63	7.6	3.8	67
B 1.7 / 1.95	B 2.3 / 2.6	4.1	–	63	8.2	4.1	67
B 1.9 / 2.2	B 2.5 / 3.0	4.9	–	63	9.8	4.9	67
B 2.2 / 2.55	B 3.0 / 3.4	5.3	–	63	10.6	5.3	67
B 2.6 / 3.0	B 3.5 / 4.0	6.3	–	63	12.6	6.3	67
B 3.3 / 3.8	B 4.4 / 5.1	8.0	–	71	16.0	8.0	75
B 4.0 / 4.6	B 5.4 / 6.2	9.5	–	71	19.0	9.5	75
B 5.0 / 5.75	B 6.7 / 7.7	12.0	–	71	24.0	12.0	75
B 5.5 / 6.3	B 7.4 / 8.4	12.5	–	71	25.0	12.5	75
B 7.5 / 8.6	B 10.0 / 11.5	–	17.0	74	34.0	17.0	78
B 10.0 / 11.5	B 13.4 / 15.5	–	23.0	74	46.0	23.0	78

### Siemens standard motors

Power 50 Hz / 60 Hz		Rated current 2 pole 50 Hz Y 380–420 V	Noise level	Rated current 2 pole 60 Hz Y 440–480 V	Noise level	Rated current 4 pole 50 Hz Y 380–420 V	Noise level	Rated current 4 pole 60 Hz Y 440–480 V	Noise level
kW	HP	AMPS	dBA / 50 Hz	AMPS	dBA / 60 Hz	AMPS	dBA / 50 Hz	AMPS	dBA / 60 Hz
0.75 / 0.86	1.0 / 1.15	1.73	60	1.7	64	1.86	52	1.8	56
1.1 / 1.3	1.5 / 1.75	2.4	60	2.4	64	2.55	56	2.5	60
1.5 / 1.75	2.2 / 2.35	3.25	66	3.2	70	3.4	56	3.3	60
2.2 / 2.55	3.0 / 3.4	4.55	66	4.5	70	4.75	56	4.6	60
3.0 / 3.45	4.0 / 4.6	6.1	67	5.9	71	6.4	56	6.2	60
4.0 / 4.6	5.4 / 6.2	7.8	67	7.6	71	8.2	59	7.9	63
5.5 / 6.3	7.4 / 8.4	10.3	72	10.1	76	11.4	62	10.9	66
		Rated current 2 pole 50 Hz Δ 380–420 V		Rated current 2 pole 60 Hz Δ 440–480 V		Rated current 4 pole 50 Hz Δ 380–420 V		Rated current 4 pole 60 Hz Δ 440–480 V	
		AMPS		AMPS		AMPS		AMPS	
7.5 / 8.6	10.0 / 11.5	13.8	72	13.5	76	15.2	62	14.7	66
11.0 / 12.6	15.0 / 17.0	20.0	75	19.8	79	21.5	66	21.0	70
15.0 / 17.3	20.0 / 23.0	26.5	75	26.5	79	28.5	66	28.0	70
18.5 / 21.3	25.0 / 28.5	32.5	75	32.0	79	35.0	66	35.0	70
22.0 / 24.5	29.5 / 33.0	39.0	75	39.0	79	41.0	66	41.0	70
30.0 / 33.5	40.0 / 45.0	53.0	75	53.0	79	55.0	67	55.0	71
37.0 / 41.5	50.0 / 56.0	65.0	75	65.0	79	68.0	68	67.0	72
45.0 / 51.0	60.0 / 68.0	78.0	76	77.0	80	81.0	68	80.0	72
55.0 / 62.0	74.0 / 83.0	96.0	#	94.0	#				
75.0 / 84.0	101 / 113	128	#	130	#				
90.0 / 101	121 / 135	154	#	148	#				
110 / 123	147 / 165	190	#	184	#				

Noise level with +3 dBA tolerance for standard motors (Siemens).

For the #  $L_{pTA}$  +  $L_{WA}$  values, see Siemens catalog.