

# Small Geared Motors

## Series G2



**Heytraction Antriebstechnik GmbH**  
**Heidemannstraße 3 D-80939 München**

Tel.: +49 89 312135-0  
E-Mail: [info@heytraction.de](mailto:info@heytraction.de)

Fax: +49 89 312135-12  
Internet: [www.heytraction.de](http://www.heytraction.de)

## Content

### ⇒ Technical Data

Generally and Characteristics .....	3
Permissible Torques.....	3
Permissible Shaft loadings .....	3

### ⇒ Selection Tables

G2 with spur gearbox .....	4
G2 with spur-bevel gearbox .....	11
G2 with worm gearbox .....	17

### ⇒ Dimension Drawings

G2 with spur gearbox .....	7
G2 with spur-bevel gearbox .....	14
G2 with worm gearbox .....	17

This catalog only contains product specifications, but no warranty of characteristics. Delivery opportunities and the right for technical changings are reserved.

All dimensions are indicated in mm.

**Please visit our homepage**  
**[www.heytraction.de](http://www.heytraction.de)**

## Generally

The mini geared motors **Series G2** are constructed for industrial applications and are particularly characterised by their small size. In sturdy aluminum cast housings are used hardened and partial flank-polished gear wheels, which ensures a very quiet running.

## Characteristics

- Input power up to 90 Watt
- Output torques up to 30 Nm
- Transmission ratios from  $i=2,96$  up to  $i=5611$
- Smallest size
- Combinations with spur-, bevel- and worm gearboxes
- Available with 1-phase and 3-phase motors  
Explosions proofed motors (ATEX conform) are also available, please contact us
- Lubricated for life, maintenance free
- All drives are independent on position applicable, available designs see dimensional sketches

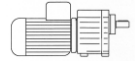
## Permissible input- and output torques

	Gearbox with free inputshaft	
	Input torque, max. Nm (with $n_1=1400$ rpm)	Output torque, max. Nm
G21	0,9	6
G22	0,9	16
G23 - G27	0,5	10
G239 - G269	0,9	30
G22W2	0,9	20
G23W2 - G27W2	0,5	20
G239W3 - G269W3	0,9	30

## Permissible shaft loadings

	Permissible radial force $F_R$ related to center shaft	
	Free Inputshaft N	Outputshaft N
G21	40	240
G22	40	530
G23 - G27	20	300
G239 - G269	40	850
G22W2	40	660
G23W2 - G27W2	20	660
G239W3 - G269W3	40	750

## Spur gearbox



### Input power 0,02 KW

### 1-phase motor

Output-speed $n_2$ with $n_1=1400$ rpm <b>rpm</b>	Output-torque $M_2$ <b>Nm</b>	Type	Transmission ratio <b>i =</b>	Weight with motor <b>kg</b>	Weight without motor <b>kg</b>	Dimensions <b>page</b>
473	0,41	G21-02/4	2,96	3,1	1,1	7
420	0,40	G23-02/4	3,33	2,9	0,9	9
334	0,51	G23-02/4	4,19	2,9	0,9	9
276	0,71	G21-02/4	5,07	3,1	1,1	7
213	0,92	G21-02/4	6,58	3,1	1,1	7
207	0,83	G23-02/4	6,77	2,9	0,9	9
175	1,1	G22-02/4	8,00	3,5	1,5	8
135	1,3	G23-02/4	10,37	2,9	0,9	9
102	1,8	G22-02/4	13,71	3,5	1,5	8
90	1,91	G23-02/4	15,56	2,9	0,9	9
78	2,4	G22-02/4	17,81	3,5	1,5	8
64	2,68	G239-02/4	21,65	4,1	2,1	10
62	2,77	G24-02/4	22,31	3,0	1,0	9
49	3,50	G24-02/4	28,14	3,0	1,0	9
41	4,2	G24-02/4	34,15	3,0	1,0	9
37	4,60	G239-02/4	37,10	4,1	2,1	10
33	5,2	G24-02/4	43,07	3,0	1,0	9
29	5,9	G239-02/4	48,20	4,1	2,1	10
27	6,3	G24-02/4	51,27	3,0	1,0	9
24	7,1	G249-02/4	58,57	4,1	2,1	10
19	9,0	G25-02/4	73,49	3,0	1,0	9
18	9,5	G24-02/4	78,49	3,0	1,0	9
15	*10	G25-02/4	92,68	3,0	1,0	9
14	12,2	G249-02/4	100,38	4,1	2,1	10
12,4	*10	G25-02/4	112,50	3,0	1,0	9
10,7	16,0	G249-02/4	130,43	4,1	2,1	10
9,9	*10	G25-02/4	141,89	3,0	1,0	9
8,8	19,5	G259-02/4	158,50	4,2	2,2	10
8,2	*10	G25-02/4	168,89	3,0	1,0	9
5,7	*10	G26-02/4	242,08	3,1	1,1	9
5,1	*30	G259-02/4	271,62	4,2	2,2	10
4,5	*10	G26-02/4	305,31	3,1	1,1	9
3,9	*30	G259-02/4	352,93	4,2	2,2	10
3,8	*10	G26-02/4	370,60	3,1	1,1	9
3,2	*30	G269-02/4	428,87	4,2	2,2	10
3,0	*10	G26-02/4	467,39	3,1	1,1	9
2,5	*10	G26-02/4	556,36	3,1	1,1	9
1,9	*30	G269-02/4	734,96	4,2	2,2	10
1,75	*10	G27-02/4	797,45	3,1	1,1	9
1,46	*30	G269-02/4	954,97	4,2	2,2	10
1,39	*10	G27-02/4	1005,73	3,1	1,1	9
1,15	*10	G27-02/4	1220,79	3,1	1,1	9
0,91	*10	G27-02/4	1539,64	3,1	1,1	9
0,76	*10	G27-02/4	1832,73	3,1	1,1	9
0,50	*10	G27-02/4	2805,65	3,1	1,1	9

\* constructional maximum torque of the gearbox

## Spur gearbox



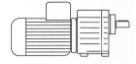
### Input power 0,03 KW

### 3-Phase Motor

Output-speed $n_2$ with $n_1=1400$ rpm <b>1/min</b>	Output-torque $M_2$ <b>Nm</b>	Type	Transmission ratio <b>i =</b>	Weight with motor <b>kg</b>	Weight without motor <b>kg</b>	Dimensions <b>page</b>
473	0,62	G21-03/4	2,96	3,1	1,1	7
420	0,61	G23-03/4	3,33	2,9	0,9	9
334	0,77	G23-03/4	4,19	2,9	0,9	9
276	1,1	G21-03/4	5,07	3,1	1,1	7
213	1,4	G21-03/4	6,58	3,1	1,1	7
207	1,24	G23-03/4	6,77	2,9	0,9	9
175	1,6	G22-03/4	8,00	3,5	1,5	8
135	1,9	G23-03/4	10,37	2,9	0,9	9
102	2,8	G22-03/4	13,71	3,5	1,5	8
90	2,86	G23-03/4	15,56	2,9	0,9	9
78	3,6	G22-03/4	17,81	3,5	1,5	8
64	4,02	G239-03/4	21,65	4,1	2,1	10
62	4,15	G24-03/4	22,31	3,0	1,0	9
49	5,26	G24-03/4	28,14	3,0	1,0	9
41	6,3	G24-03/4	34,15	3,0	1,0	9
37	6,9	G239-03/4	37,10	4,1	2,1	10
33	7,8	G24-03/4	43,07	3,0	1,0	9
29	8,8	G239-03/4	48,20	4,1	2,1	10
27	9,5	G24-03/4	51,27	3,0	1,0	9
24	10,7	G249-03/4	58,57	4,1	2,1	10
19	*10	G25-03/4	73,49	3,0	1,0	9
18	*10	G24-03/4	78,49	3,0	1,0	9
15	*10	G25-03/4	92,68	3,0	1,0	9
14	18,4	G249-03/4	100,38	4,1	2,1	10
12,4	*10	G25-03/4	112,50	3,0	1,0	9
10,7	24,0	G249-03/4	130,43	4,1	2,1	10
9,9	*10	G25-03/4	141,89	3,0	1,0	9
8,8	29,3	G259-03/4	158,50	4,2	2,2	10
8,2	*10	G25-03/4	168,89	3,0	1,0	9
5,7	*10	G26-03/4	242,08	3,1	1,1	9
5,1	*30	G259-03/4	271,62	4,2	2,2	10
4,5	*10	G26-03/4	305,31	3,1	1,1	9
3,9	*30	G259-03/4	352,93	4,2	2,2	10
3,8	*10	G26-03/4	370,60	3,1	1,1	9
3,2	*30	G269-03/4	428,87	4,2	2,2	10
3,0	*10	G26-03/4	467,39	3,1	1,1	9
2,5	*10	G26-03/4	556,36	3,1	1,1	9
1,9	*30	G269-03/4	734,96	4,2	2,2	10
1,75	*10	G27-03/4	797,45	3,1	1,1	9
1,46	*30	G269-03/4	954,97	4,2	2,2	10
1,39	*10	G27-03/4	1005,73	3,1	1,1	9
1,15	*10	G27-03/4	1220,79	3,1	1,1	9
0,91	*10	G27-03/4	1539,64	3,1	1,1	9
0,76	*10	G27-03/4	1832,73	3,1	1,1	9
0,50	*10	G27-03/4	2805,65	3,1	1,1	9

\* constructional maximum torque of the gearbox

## Spur gearbox



**Input power**  
**0,09 KW**

**1-Phase Motor**  
**3-Phase Motor**

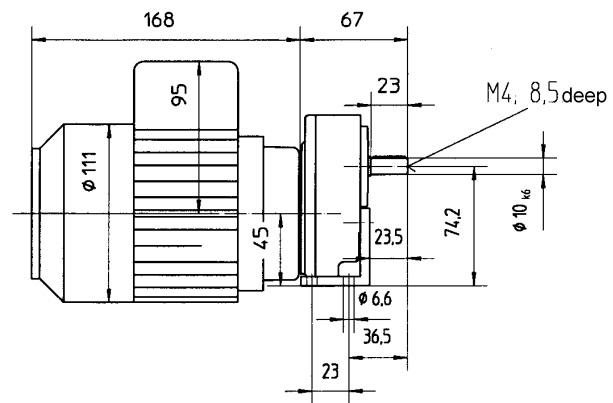
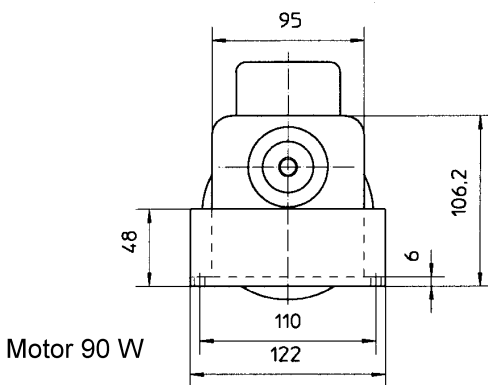
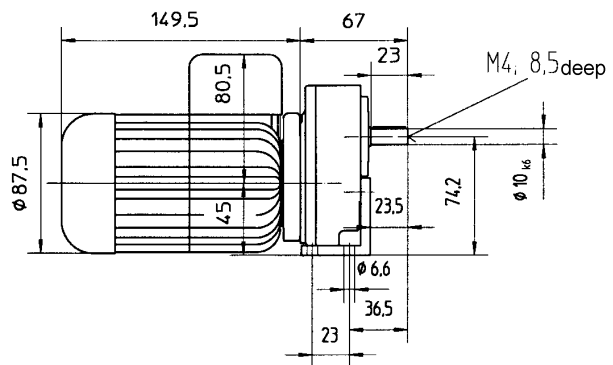
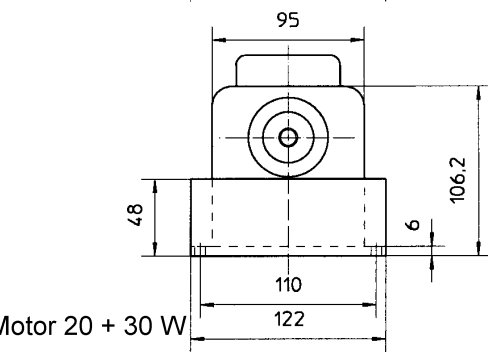
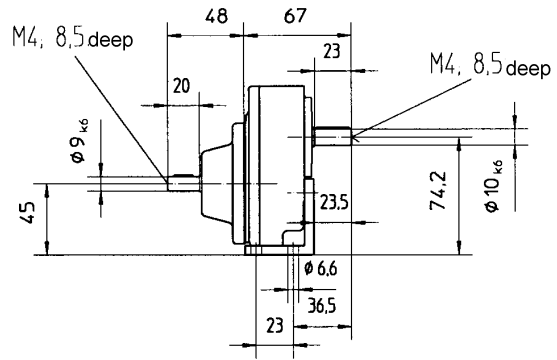
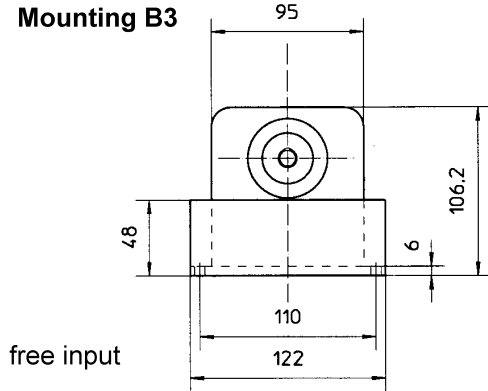
Output-speed $n_2$ with $n_1=1400$ rpm <b>rpm</b>	Output-torque $M_2$ <b>Nm</b>	Type	Transmission ratio <b>i =</b>	Weight with motor <b>kg</b>	Weight with motor <b>kg</b>	Dimensions <b>page</b>
473	1,8	<b>G21-09/4</b>	2,96	4,5	1,1	7
420	1,84	<b>G23-09/4</b>	3,33	4,4	0,9	9
334	2,31	<b>G23-09/4</b>	4,19	4,4	0,9	9
276	3,0	<b>G21-09/4</b>	5,07	4,5	1,1	7
213	3,9	<b>G21-09/4</b>	6,58	4,5	1,1	7
207	3,73	<b>G23-09/4</b>	6,77	4,4	0,9	9
175	4,6	<b>G22-09/4</b>	8,00	5,0	1,5	8
135	5,7	<b>G23-09/4</b>	10,37	4,4	0,9	9
102	8,0	<b>G22-09/4</b>	13,71	5,0	1,5	8
90	8,59	<b>G23-09/4</b>	15,56	4,4	0,9	9
78	10,1	<b>G22-09/4</b>	17,81	5,0	1,5	8
64	12,1	<b>G239-09/4</b>	21,65	5,6	2,1	10
62	*10	<b>G24-09/4</b>	22,31	4,5	1,0	9
49	*10	<b>G24-09/4</b>	28,14	4,5	1,0	9
41	*10	<b>G24-09/4</b>	34,15	4,5	1,0	9
37	20	<b>G239-09/4</b>	37,10	5,6	2,1	10
33	*10	<b>G24-09/4</b>	43,07	4,4	1,0	9
29	26	<b>G239-09/4</b>	48,20	5,6	2,1	10
27	*10	<b>G24-09/4</b>	51,27	4,5	1,0	9
24	*30	<b>G249-09/4</b>	58,57	5,6	2,1	10
14	*30	<b>G249-09/4</b>	100,38	5,6	2,1	10
10,7	*30	<b>G249-09/4</b>	130,43	5,6	2,1	10
8,8	*30	<b>G259-09/4</b>	158,50	5,7	2,2	10

\* constructional maximum torque of the gearbox

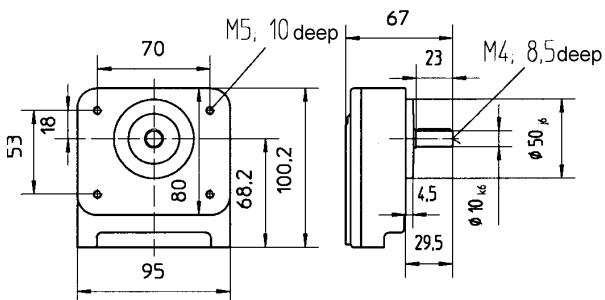
## Mini Geared Motor

### Type G21

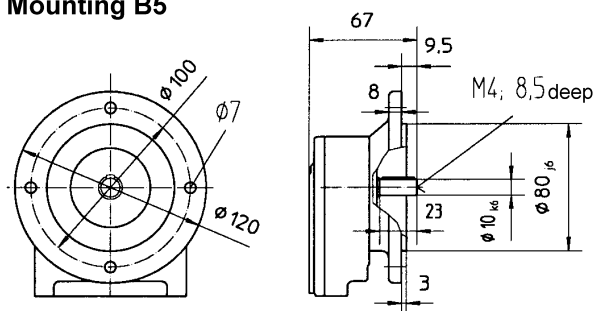
#### Mounting B3



#### Mounting B14

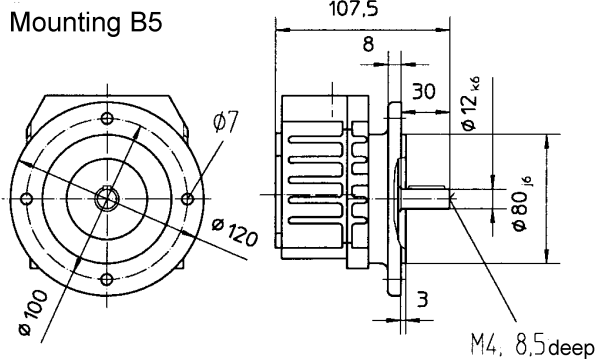
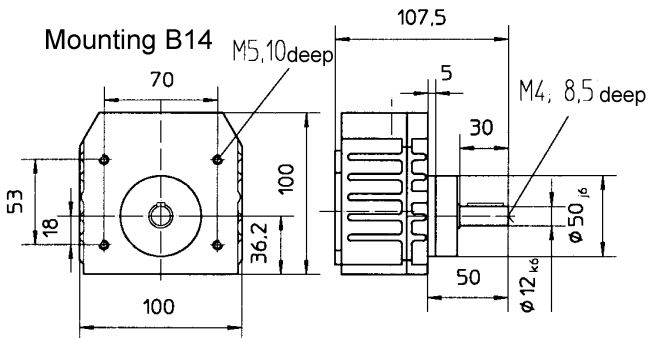
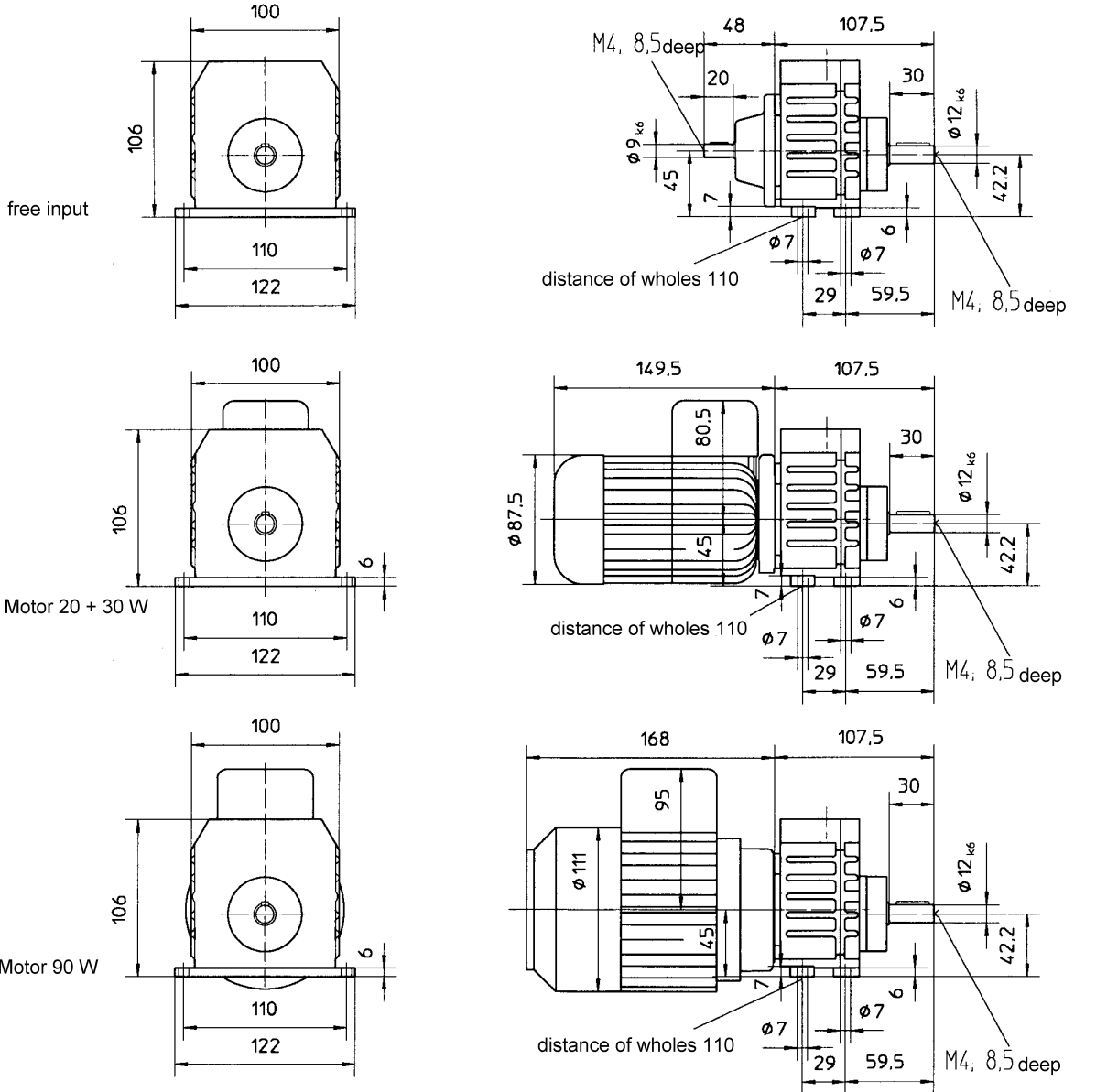


#### Mounting B5



## Mini Geared Motor Type G22

### Mounting B3

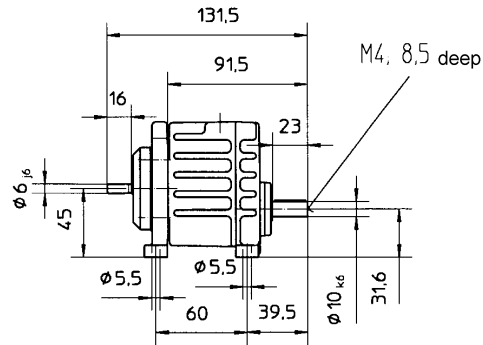
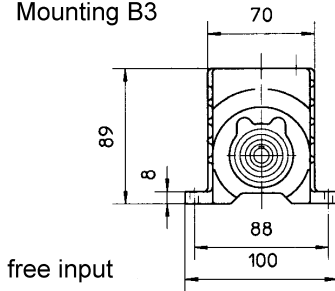




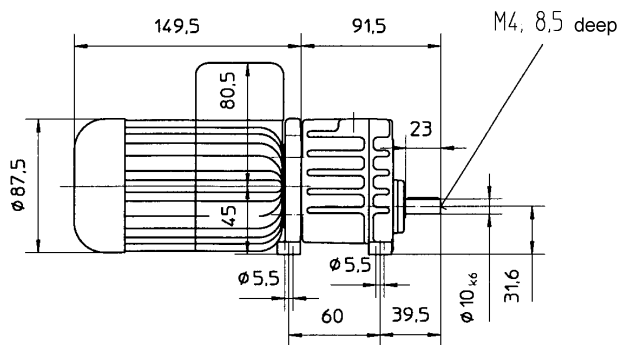
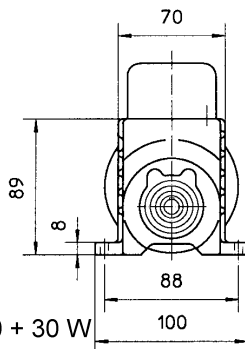
## Mini Geared Motor

### Type G23 - G27

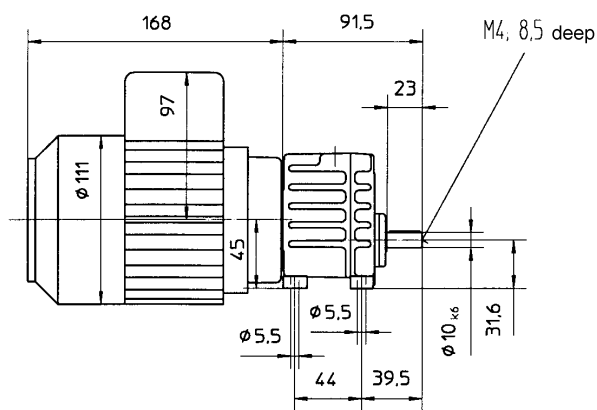
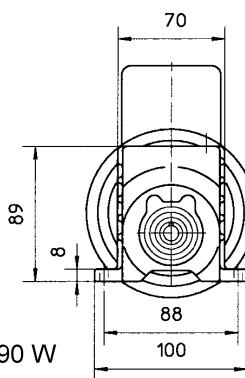
Mounting B3



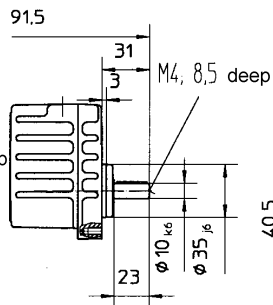
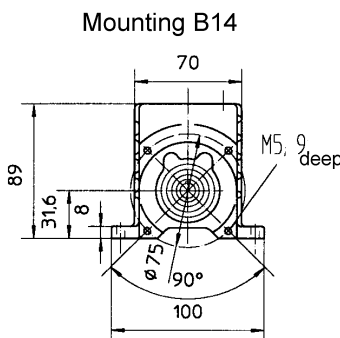
Motor 20 + 30 W



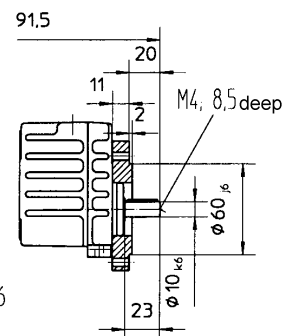
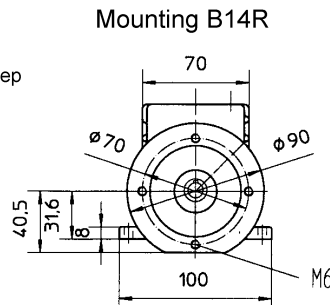
Motor 90 W



Mounting B14

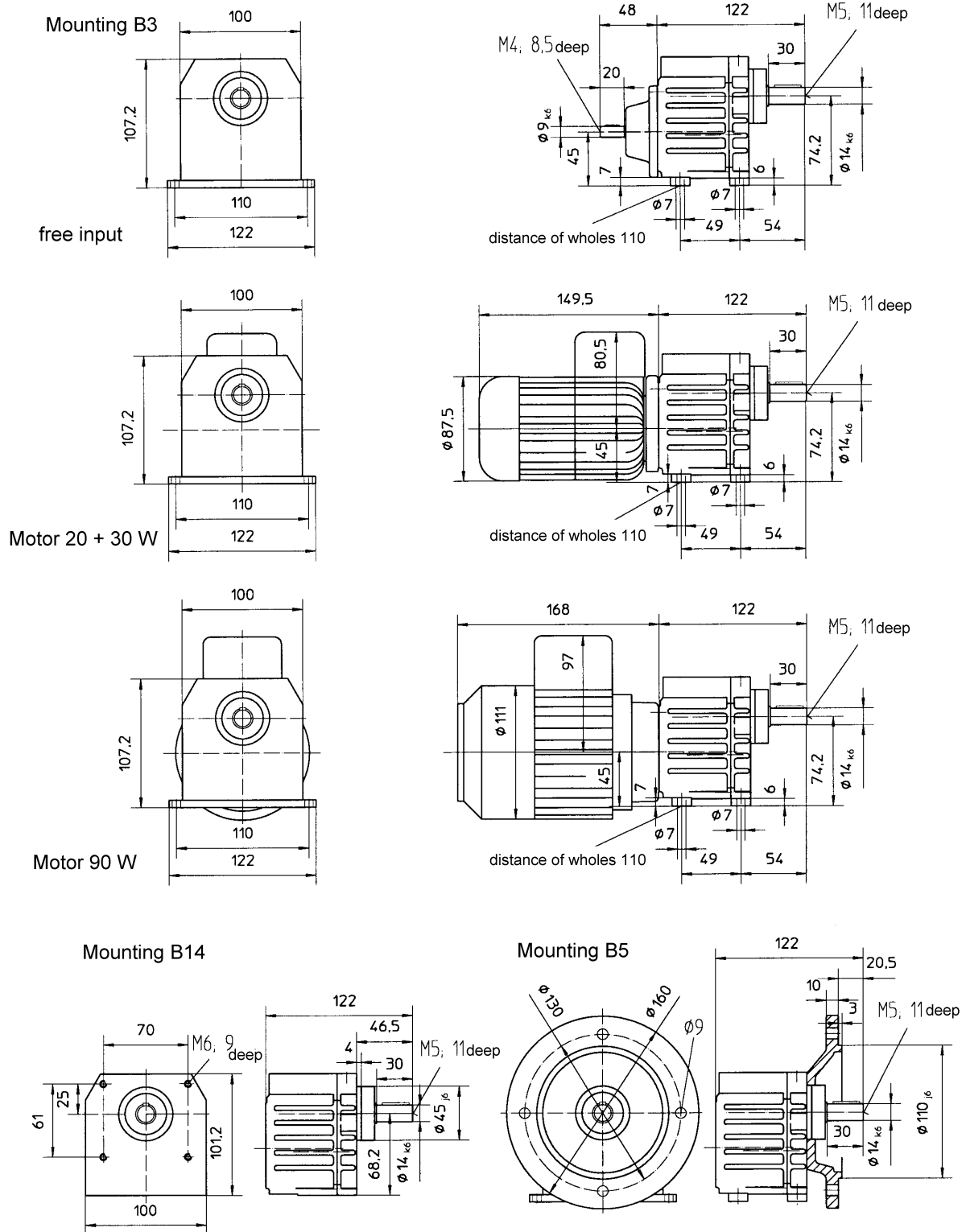


Mounting B14R

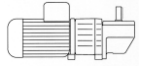


## Mini Geared Motor

### Type G239 - G269



## Spur-bevel gearbox



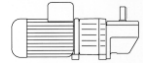
### Input power 0,02 KW

### 1-Phase Motor

Output-speed $n_2$ with $n_1=1400$ rpm	Output-torque $M_2$	Type	Transmission ratio	Weight with motor	Weight without motor	Dimensions
rpm	Nm		$i =$	kg	kg	page
210	0,81	G23W2-02/4	6,66	3,7	1,7	15
167	1,02	G23W2-02/4	8,38	3,7	1,7	15
137	1,25	G23W2-02/4	10,18	3,7	1,7	15
109	1,58	G23W2-02/4	12,84	3,7	1,7	15
103	1,66	G23W2-02/4	13,54	3,7	1,7	15
87	2,0	G22W2-02/4	16,0	4,3	2,3	14
67	2,56	G23W2-02/4	20,74	3,7	1,7	15
51	3,5	G22W2-02/4	27,42	4,3	2,3	14
45	3,82	G23W2-02/4	31,12	3,7	1,7	15
42	4,09	G239W3-02/4	32,47	5,6	3,6	16
39	4,5	G22W2-02/4	35,63	4,3	2,3	14
31	5,5	G24W2-02/4	44,62	3,8	1,8	15
24	7,1	G239W3-02/4	55,65	5,6	3,6	16
24	7,1	G24W2-02/4	56,28	3,8	1,8	15
20	8,6	G24W2-02/4	68,30	3,8	1,8	15
19	9,0	G239W3-02/4	72,3	5,6	3,6	16
16	10,7	G24W2-02/4	86,14	3,8	1,8	15
16	10,7	G249W3-02/4	87,85	5,6	3,6	16
13,5	12,7	G24W2-02/4	102,54	3,8	1,8	15
9,5	18,0	G25W2-02/4	146,98	3,8	1,8	15
9,3	18,4	G249W3-02/4	150,57	5,6	3,6	16
9,0	19,1	G24W2-02/4	156,98	3,8	1,8	15
7,5	*20	G25W2-02/4	185,36	3,8	1,8	15
7,1	24	G249W3-02/4	195,65	5,6	3,6	16
6,2	*20	G25W2-02/4	225	3,8	1,8	15
5,8	29,5	G259W3-02/4	237,75	5,7	3,7	16
4,9	*20	G25W2-02/4	283,78	3,8	1,8	15
4,1	*20	G25W2-02/4	337,78	3,8	1,8	15
3,4	*30	G259W3-02/4	407,43	5,7	3,7	16
2,8	*20	G26W2-02/4	484,16	3,9	1,9	15
2,6	*30	G259W3-02/4	529,39	5,7	3,7	16
2,2	*20	G26W2-02/4	610,62	3,9	1,9	15
2,1	*30	G269W3-02/4	643,30	5,7	3,7	16
1,9	*20	G26W2-02/4	741,20	3,9	1,9	15
1,5	*20	G26W2-02/4	934,78	3,9	1,9	15
1,26	*30	G269W3-02/4	1102,44	5,7	3,7	16
1,25	*20	G26W2-02/4	1112,72	3,9	1,9	15
0,97	*30	G269W3-02/4	1432,45	5,7	3,7	16
0,87	*20	G27W2-02/4	1594,90	3,9	1,9	15
0,69	*20	G27W2-02/4	2011,46	3,9	1,9	15
0,57	*20	G27W2-02/4	2441,58	3,9	1,9	15
0,45	*20	G27W2-02/4	3079,28	3,9	1,9	15
0,38	*20	G27W2-02/4	3665,43	3,9	1,9	15
0,25	*20	G27W2-02/4	5611,30	3,9	1,9	15

\* constructional maximum torque of the gearbox

## Spur-bevel gearbox



### Input power 0,03 KW

### 3-Phase Motor

Output-speed $n_2$ with $n_1=1400$ rpm	Output-torque $M_2$		Transmission ratio	Weight with motor	Weight without motor	Dimensions
rpm	Nm	Type	$i =$	kg	kg	page
210	1,22	G23W2-03/4	6,66	3,7	1,7	15
167	1,54	G23W2-03/4	8,38	3,7	1,7	15
137	1,88	G23W2-03/4	10,18	3,7	1,7	15
109	2,36	G23W2-03/4	12,84	3,7	1,7	15
103	2,5	G23W2-03/4	13,54	3,7	1,7	15
87	3,1	G22W2-03/4	16,00	4,3	2,3	14
67	3,8	G23W2-03/4	20,74	3,7	1,7	15
51	5,2	G22W2-03/4	27,42	4,3	2,3	14
45	5,7	G23W2-03/4	31,12	3,7	1,7	15
42	6,1	G239W3-03/4	32,47	5,6	3,6	16
39	6,8	G22W2-03/4	35,63	4,3	2,3	14
31	8,3	G24W2-03/4	44,62	3,8	1,8	15
24	10,7	G239W3-03/4	55,65	5,6	3,6	16
24	10,7	G24W2-03/4	56,28	3,8	1,8	15
20	12,8	G24W2-03/4	68,30	3,8	1,8	15
19	13,5	G239W3-03/4	72,3	5,6	3,6	16
16	16,1	G24W2-03/4	86,14	3,8	1,8	15
16	16,1	G249W3-03/4	87,85	5,6	3,6	16
13,5	19,0	G24W2-03/4	102,54	3,8	1,8	15
9,5	*20	G25W2-03/4	146,98	3,8	1,8	15
9,3	27,7	G249W3-03/4	150,57	5,6	3,6	16
9,0	*20	G24W2-03/4	156,98	3,8	1,8	15
7,5	*20	G25W2-03/4	185,36	3,8	1,8	15
7,1	*30	G249W3-03/4	195,65	5,6	3,6	16
6,2	*20	G25W2-03/4	225	3,8	1,8	15
5,8	*30	G259W3-03/4	237,75	5,7	3,7	16
4,9	*20	G25W2-03/4	283,78	3,8	1,8	15
4,1	*20	G25W2-03/4	337,78	3,8	1,8	15
3,4	*30	G259W3-03/4	407,43	5,7	3,7	16
2,8	*20	G26W2-03/4	484,16	3,9	1,9	15
2,6	*30	G259W3-03/4	529,39	5,7	3,7	16
2,2	*20	G26W2-03/4	610,62	3,9	1,9	15
2,1	*30	G269W3-03/4	643,30	5,7	3,7	16
1,9	*20	G26W2-03/4	741,20	3,9	1,9	15
1,5	*20	G26W2-03/4	934,78	3,9	1,9	15
1,26	*30	G269W3-03/4	1102,44	5,7	3,7	16
1,25	*20	G26W2-03/4	1112,72	3,9	1,9	15
0,97	*30	G269W3-03/4	1432,45	5,7	3,7	16
0,87	*20	G27W2-03/4	1594,90	3,9	1,9	15
0,69	*20	G27W2-03/4	2011,46	3,9	1,9	15
0,57	*20	G27W2-03/4	2441,58	3,9	1,9	15
0,45	*20	G27W2-03/4	3079,28	3,9	1,9	15
0,38	*20	G27W2-03/4	3665,43	3,9	1,9	15
0,25	*20	G27W2-03/4	5611,30	3,9	1,9	15

\* constructional maximum torque of the gearbox

## Spur-bevel gearbox



**Input power**  
**0,09 KW**

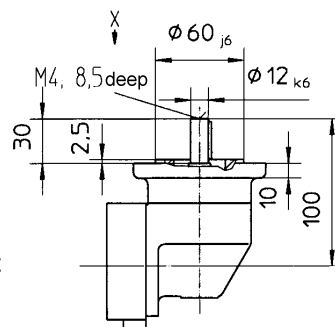
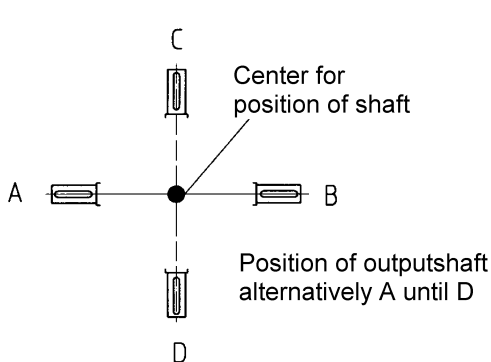
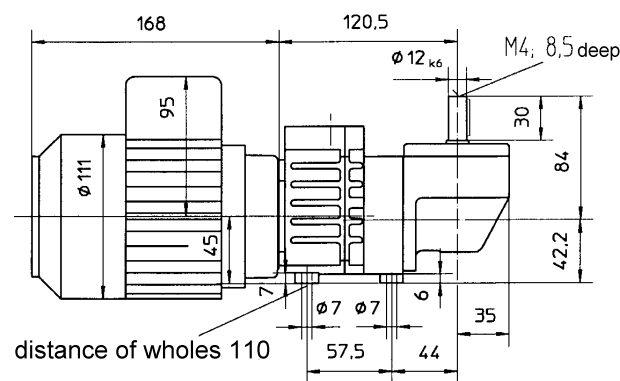
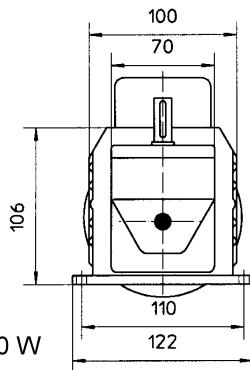
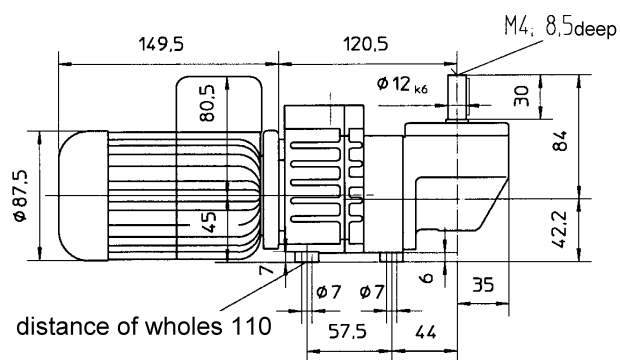
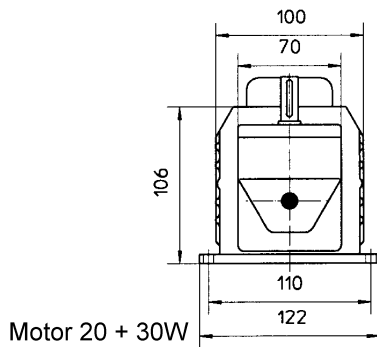
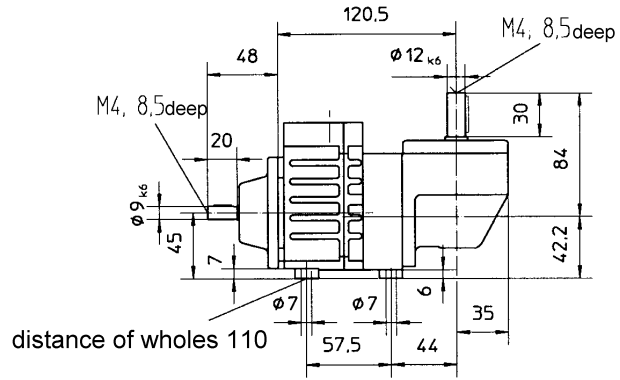
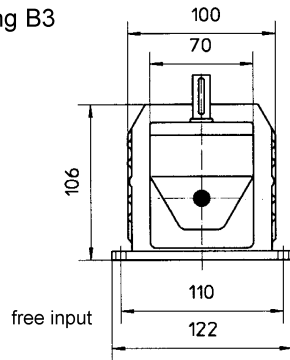
**1-Phase Motor**  
**3-Phase Motor**

Output-speed $n_2$ with $n_1=1400$ rpm	Output-torque $M_2$	Type	Transmission ratio	Weight with motor	Weight without motor	Dimensions
rpm	Nm		$i =$	kg	kg	page
210	3,68	G23W2-09/4	6,66	5,2	1,7	15
167	4,63	G23W2-09/4	8,38	5,2	1,7	15
137	5,6	G23W2-09/4	10,18	5,2	1,7	15
109	7,1	G23W2-09/4	12,84	5,2	1,7	15
103	7,5	G23W2-09/4	13,54	5,2	1,7	15
87	8,6	G22W2-09/4	16,00	5,8	2,3	14
67	11,5	G23W2-09/4	20,74	5,2	1,7	15
51	14,8	G22W2-09/4	27,42	5,8	2,3	14
45	17,1	G23W2-09/4	31,12	5,2	1,7	15
42	18,4	G239W3-09/4	32,47	7,1	3,6	16
39	*20	G22W2-09/4	35,63	5,8	2,3	14
31	*20	G24W2-09/4	44,62	5,3	1,8	15
24	*30	G239W3-09/4	55,65	7,1	3,6	16
24	*20	G24W2-09/4	56,28	5,3	1,8	15
20	*20	G24W2-09/4	68,30	5,3	1,8	15
19	*30	G239W3-09/4	72,3	7,1	3,6	16
16	*20	G24W2-09/4	86,14	5,3	1,8	15
16	*30	G249W3-09/4	87,85	7,1	3,6	16
13,5	*20	G24W2-09/4	102,54	5,3	1,8	15
9,5	*20	G25W2-09/4	146,98	5,3	1,8	15
9,3	*30	G249W3-09/4	150,57	7,1	3,6	16

\* constructional maximum torque of the gearbox

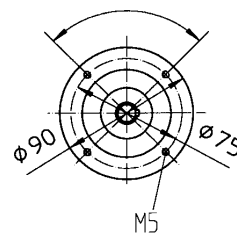
Mini Geared Motor  
 Type G22W2

Mounting B3



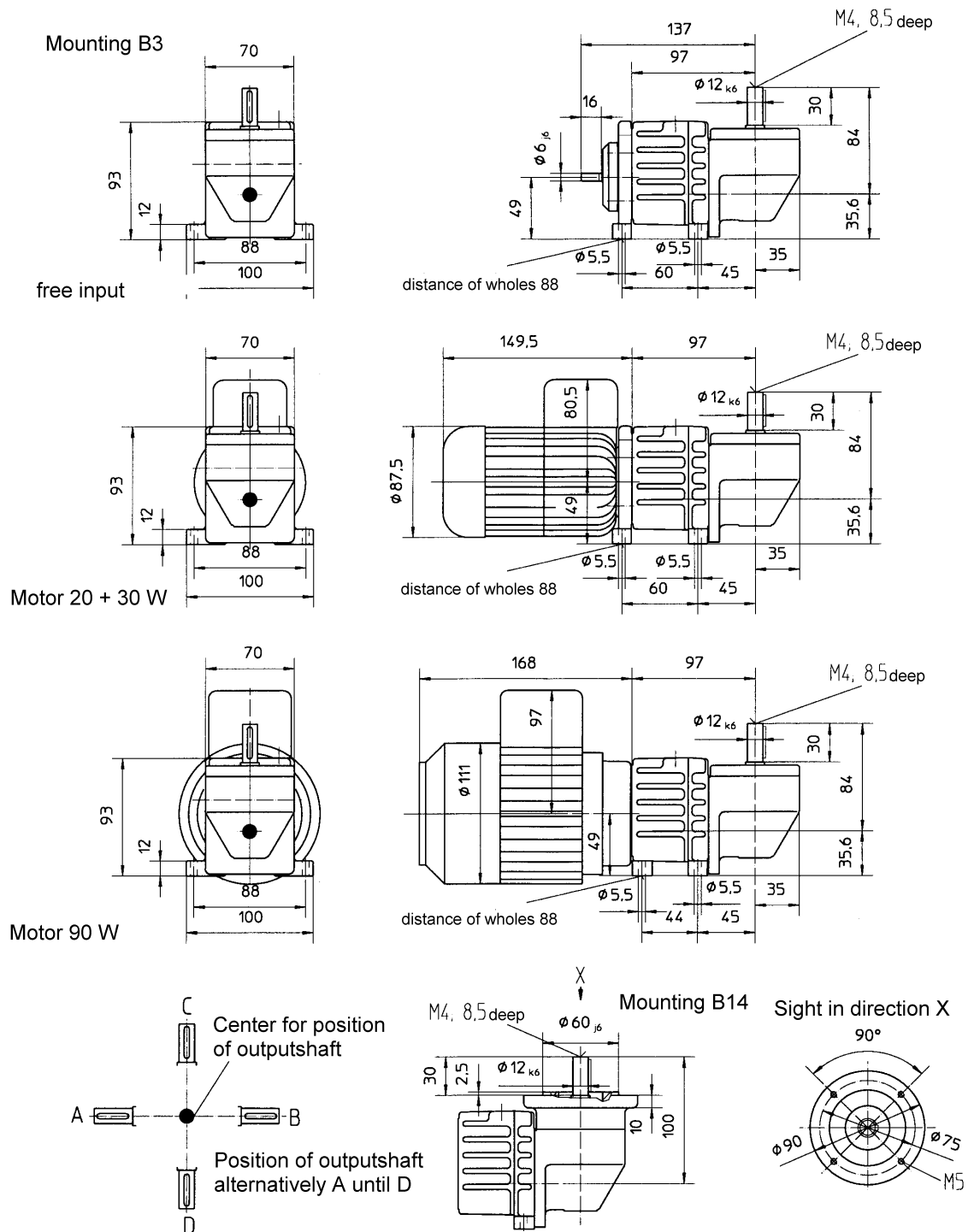
Mounting B14

Sight in direction X  
 90°



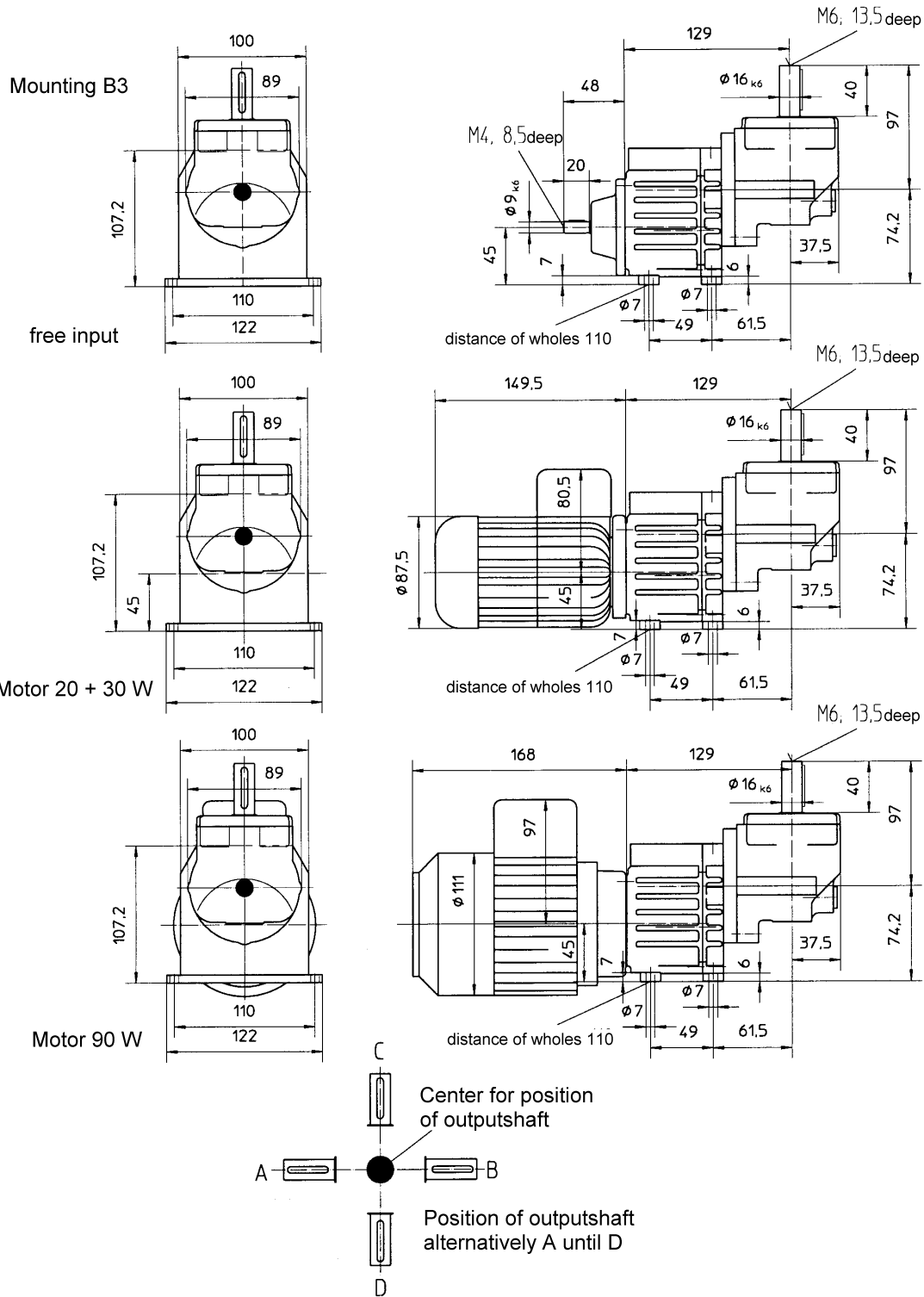
## Mini Geared Motor

### Type G23W2 - G27W2



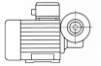
## Mini Geared Motor

### Type G239W3 - G269W3





## Worm gearbox



**Input power**  
**0,09 KW**

**1-Phase Motor**  
**3-Phase Motor**

Output-speed $n_2$ with $n_1=1400$ rpm	Output-torque $M_2$	Type	Transmission ratio	Weight with motor	Only available with motor	Dimensions page
rpm	Nm		$i =$	kg		
260	1,53	<b>G2S1-09/4</b>	5	3,5		17
186	2,15	<b>G2S1-09/4</b>	7	3,5		17
87	4,6	<b>G2S1-09/4</b>	15	3,5		17
72	5,5	<b>G2S1-09/4</b>	18	3,5		17
54	7,3	<b>G2S1-09/4</b>	24	3,5		17
34	*10	<b>G2S1-09/4</b>	38	3,5		17
23,6	*10	<b>G2S1-09/4</b>	55	3,5		17
17,3	*7,3	<b>G2S1-09/4</b>	75	3,5		17

\* constructional maximum torque of the gearbox

### Mini Geared Motor

### G2S1-09/4

