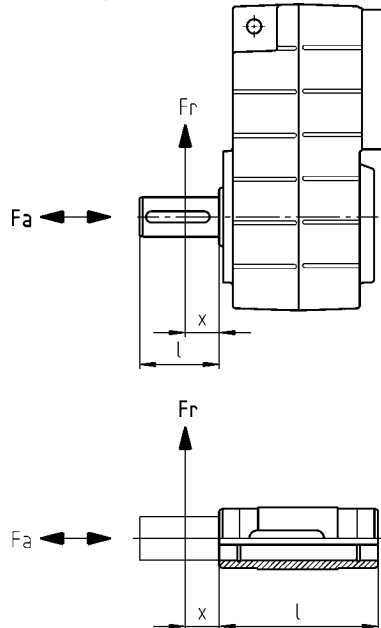




**Permissible radial force**

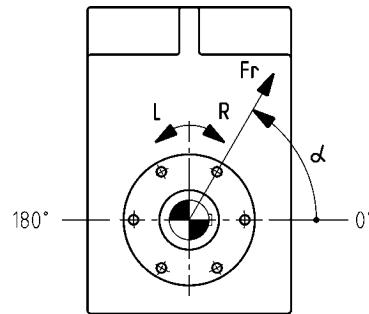
$$Fr_{zul} = \min(f_w \times f_\alpha \times Fr_{Tab}; f_w \times Fr_{max})$$

At  $Fr$  and  $Fa \neq 0$  please contact your Lenze sales office.

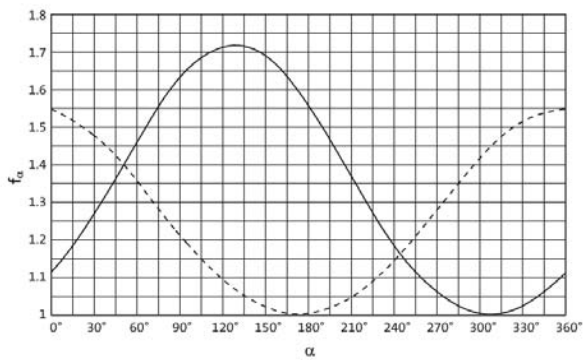


**Permissible axial force**

$$Fa_{zul} = Fa_{Tab} \text{ at } Fr = 0$$

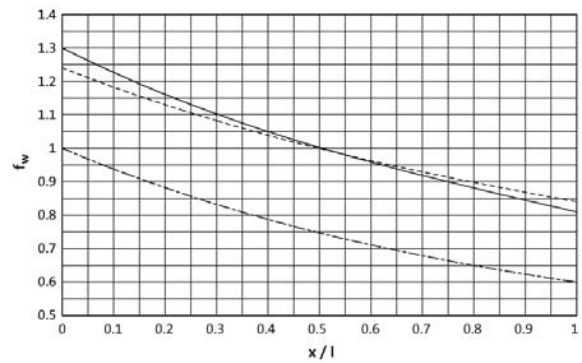


**Effective direction factor  $f_\alpha$  at output shaft**

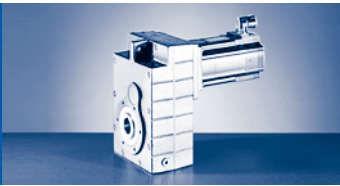


- Direction of rotation R
- - - Direction of rotation L

**Additional load factor  $f_w$  at output shaft**



- Solid shaft (VQR)
- - - Solid shaft with flange (VQK)
- · - Hollow shaft (HQ)

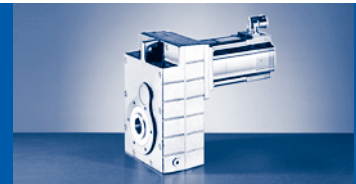


# GFL [N]

Solid shaft without flange (V□R)														
Application of force Fr: centre of shaft journal (x = l/2)														
Fa <sub>Tab</sub> only valid for Fr = 0														
	GFL04-2		GFL05-2/3		GFL06-2/3		GFL07-2/3		GFL09-2/3 <sup>1)</sup>		GFL11-2/3 <sup>1)</sup>		GFL14-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
1000	1650	1300	1400	1600	1850	2400	1650	2000	-	-	-	-	-	-
630	2100	1700	1900	2200	2500	3200	2600	2700	-	-	-	-	-	-
400	2300	2200	2400	2800	3200	4000	3200	3400	3800	3100	5500	4700	47000	25000
250	2700	2600	2700	3600	3600	5200	3600	4700	4400	4200	6300	6000	54000	27000
160	3200	3200	3200	4200	3900	6000	3900	6000	5500	5800	7300	7500	62000	29000
100	3600	4200	4000	5900	5100	8500	5100	8500	8000	10000	11200	14000	65000	32000
63	3600	5300	4800	6600	6500	10000	6500	12000	10000	13500	14500	19000	65000	35000
40	3600	5500	5800	6600	8400	10000	8400	14000	12000	17000	17400	25000	65000	35000
25	3600	5500	6200	6600	9000	10000	9000	14000	18000	21000	20500	27000	65000	35000
≤ 16	3600	5500	6200	6600	9000	10000	9000	14000	18000	21000	23000	27000	65000	35000
Fr <sub>max</sub>	3600	-	7000	-	11000	-	11000	-	22000	-	28000	-	65000	-

<sup>1)</sup> Reinforced output shaft bearings are available on request for V□R versions.

Solid shaft with flange (V□K)														
Application of force Fr: centre of shaft journal (x = l/2)														
Fa <sub>Tab</sub> only valid for Fr = 0														
	GFL04-2		GFL05-2/3		GFL06-2/3		GFL07-2/3		GFL09-2/3		GFL11-2/3		GFL14-2/3	
n <sub>2</sub> [r/min]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]	Fr <sub>Tab</sub> [N]	Fa <sub>Tab</sub> [N]
1000	2300	1300	2900	1800	4000	2500	4000	3600	-	-	-	-	-	-
630	2800	1700	3700	2400	5000	3400	5200	4800	-	-	-	-	-	-
400	3200	2200	4300	3100	6100	4300	6400	6100	7800	6100	12500	6800	18000	6000
250	3700	2600	5100	3900	7000	5500	7400	6500	9000	6500	14500	8500	20000	8000
160	4400	3200	5900	4800	7800	6500	8900	7000	10500	7000	17000	10500	23000	10000
100	4600	4200	6800	6400	9600	8500	10500	9500	14000	9500	21500	17000	27500	13000
63	4600	4400	7000	6600	10000	10000	12000	11500	15000	11500	26000	22000	32000	19000
40	4600	4400	7000	6600	10000	10000	13000	11500	15000	11500	30000	27000	38000	26000
25	4600	4400	7000	6600	10000	10000	14000	11500	15000	11500	30000	27000	43000	35000
≤ 16	4600	4400	7000	6600	10000	10000	14000	11500	15000	11500	30000	27000	43000	35000
Fr <sub>max</sub>	4600	-	7400	-	11000	-	16000	-	16000	-	32000	-	46000	-



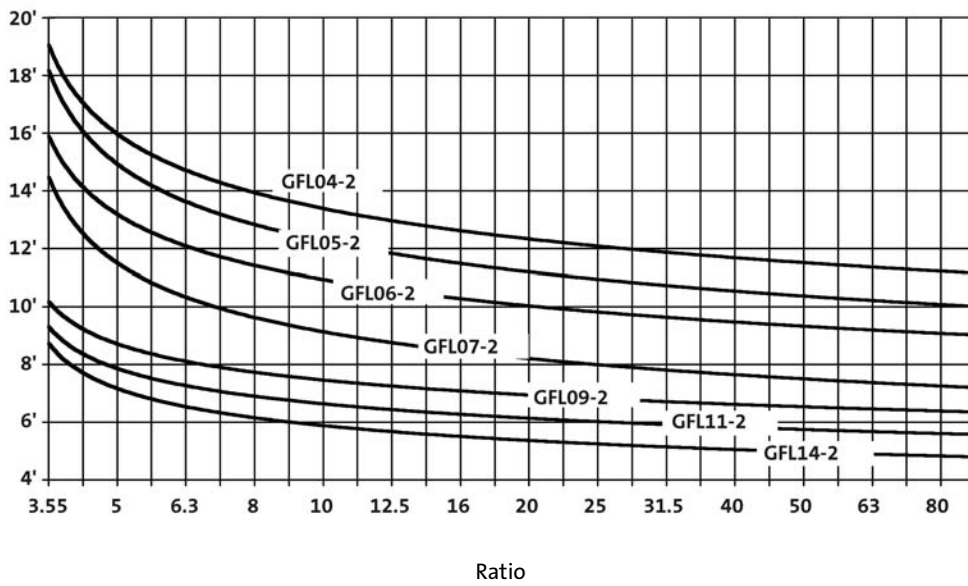
Hollow shaft (H□□)														
Application of force $F_r$ : on hollow shaft end face ( $x = 0$ )														
$F_{aTab}$ only valid for $F_r = 0$														
	GFL04-2		GFL05-2/3		GFL06-2/3		GFL07-2/3		GFL09-2/3		GFL11-2/3		GFL14-2/3	
$n_2$ [r/min]	$F_{rTab}$ [N]	$F_{aTab}$ [N]	$F_{rTab}$ [N]	$F_{aTab}$ [N]	$F_{rTab}$ [N]	$F_{aTab}$ [N]	$F_{rTab}$ [N]	$F_{aTab}$ [N]	$F_{rTab}$ [N]	$F_{aTab}$ [N]	$F_{rTab}$ [N]	$F_{aTab}$ [N]	$F_{rTab}$ [N]	$F_{aTab}$ [N]
<b>1000</b>	2100	1300	1800	1600	2400	2400	2200	2000	-	-	-	-	-	-
<b>630</b>	2700	1700	2400	2200	3300	3200	3400	2700	-	-	-	-	-	-
<b>400</b>	2800	2200	3000	2800	4300	4000	4500	3400	5000	3100	7300	4700	8000	4000
<b>250</b>	3200	2600	3400	3600	4700	5200	5100	4700	6000	4200	8700	6000	9000	5000
<b>160</b>	3800	3200	4100	4200	5000	6000	6400	6000	7200	5800	10000	7500	9500	6200
<b>100</b>	4600	4200	5000	5900	6600	8500	7900	8500	10500	10000	14200	14000	11500	7500
<b>63</b>	5500	5300	6000	6600	8500	10000	9300	12000	13000	13500	19000	19000	14000	11000
<b>40</b>	6300	5500	7100	6600	10800	10000	11500	14000	15000	17000	23000	25000	18000	17500
<b>25</b>	7000	5500	8000	6600	12000	10000	15000	14000	22000	21000	27000	27000	30000	31000
<b>≤ 16</b>	7000	5500	8000	6600	12000	10000	16000	14000	24000	21000	30000	27000	45000	35000
<b><math>F_{rmax}</math></b>	7000	-	10000	-	15000	-	20000	-	30000	-	38000	-	56000	-

- ▶ Neither radial nor axial forces are permissible for the hollow shaft with shrink disc (S□□).

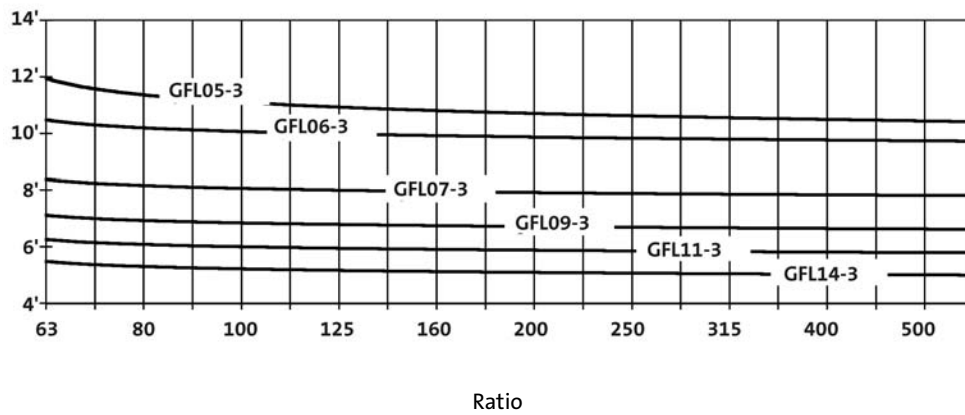


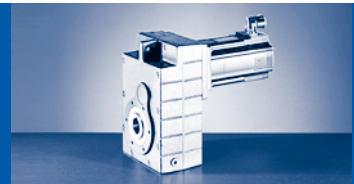
Output backlash in angular minutes

GFL04...14-2



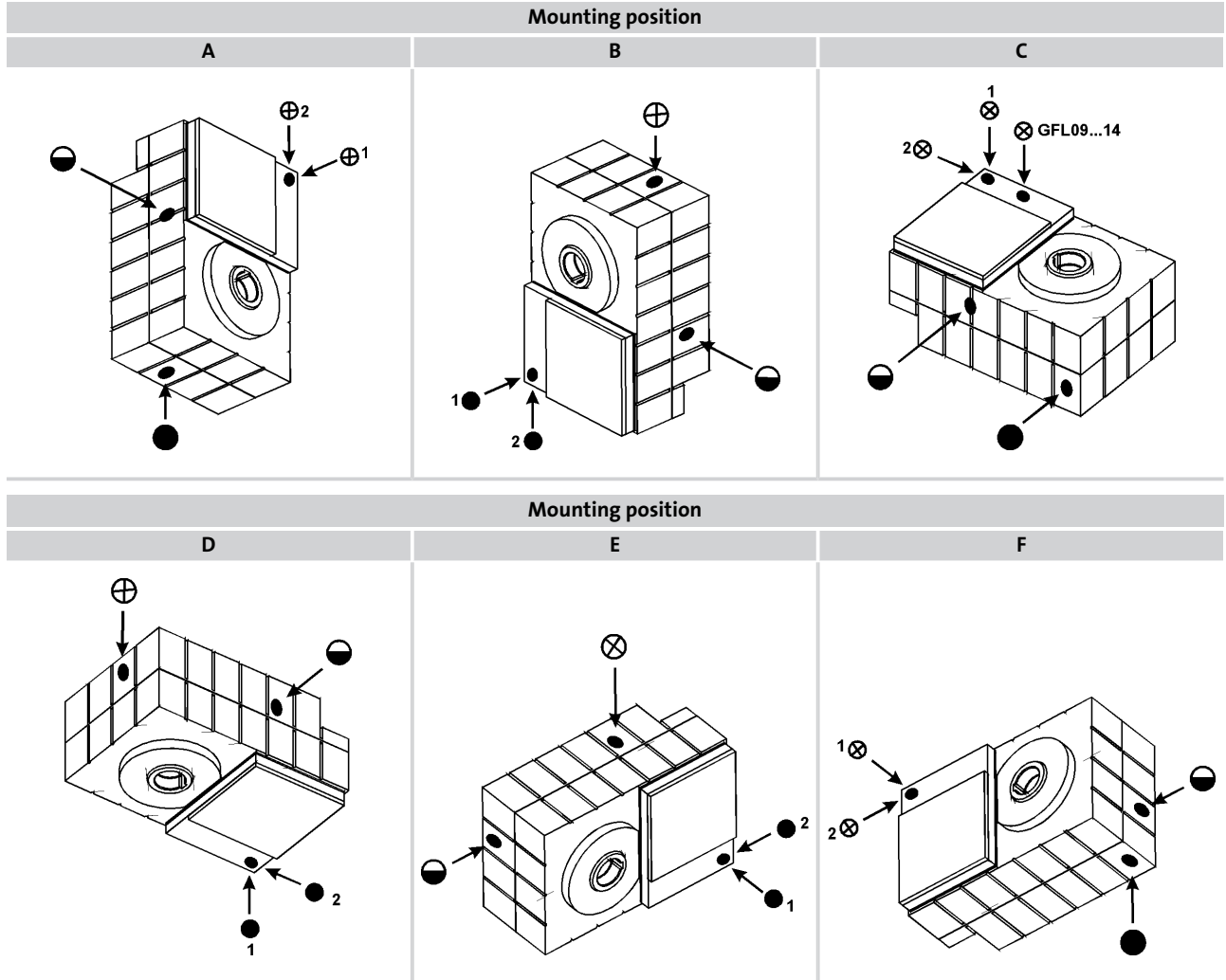
GFL05...14-3





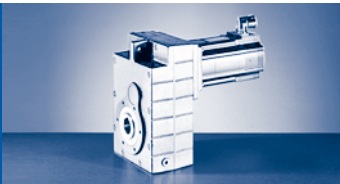
**Position of ventilation, sealing elements and oil control**

**GFL05...14-2**



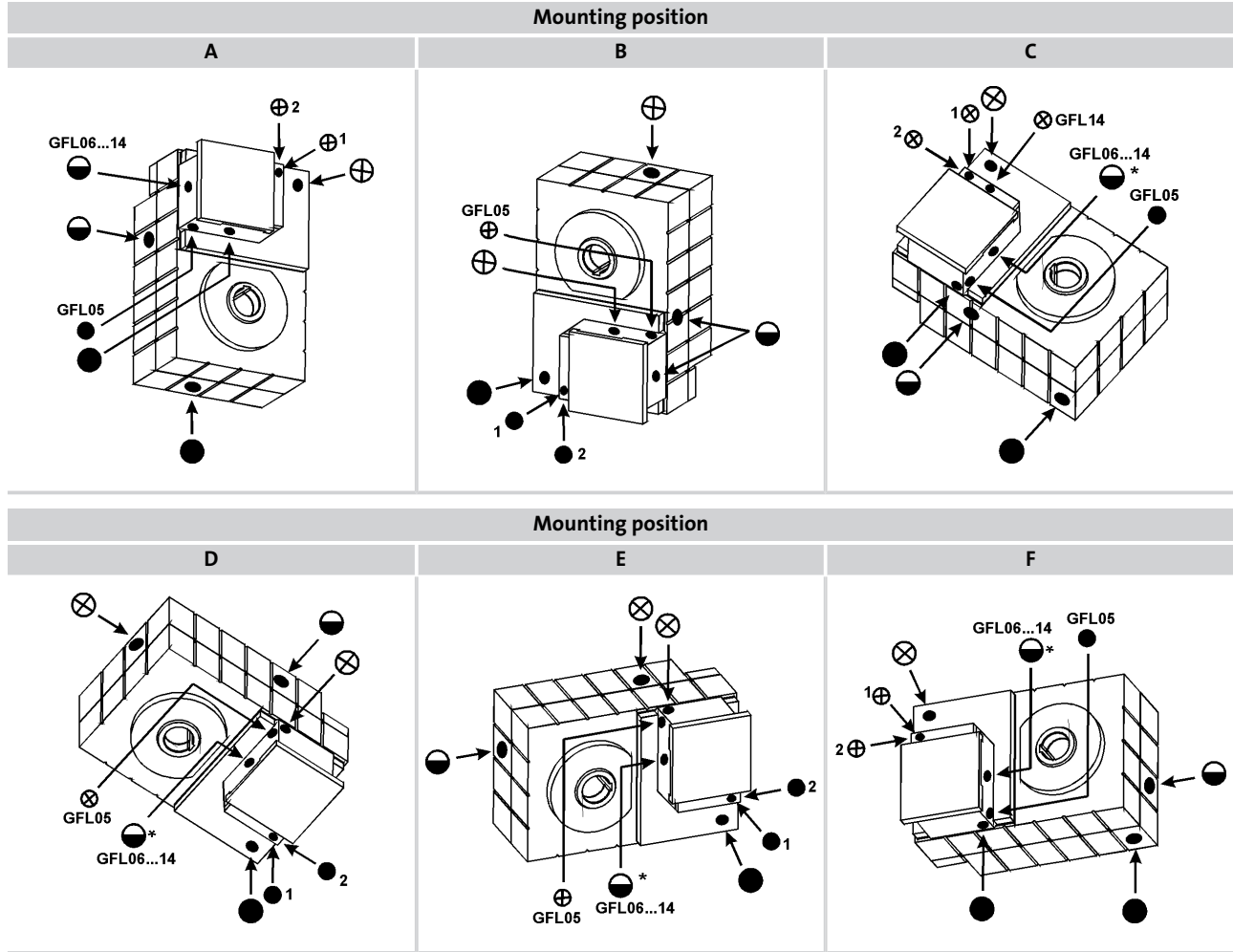
- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ◐ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GFL05-2A □□□ 14LC□□



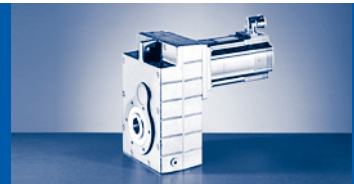
Position of ventilation, sealing elements and oil control

GFL05...14-3

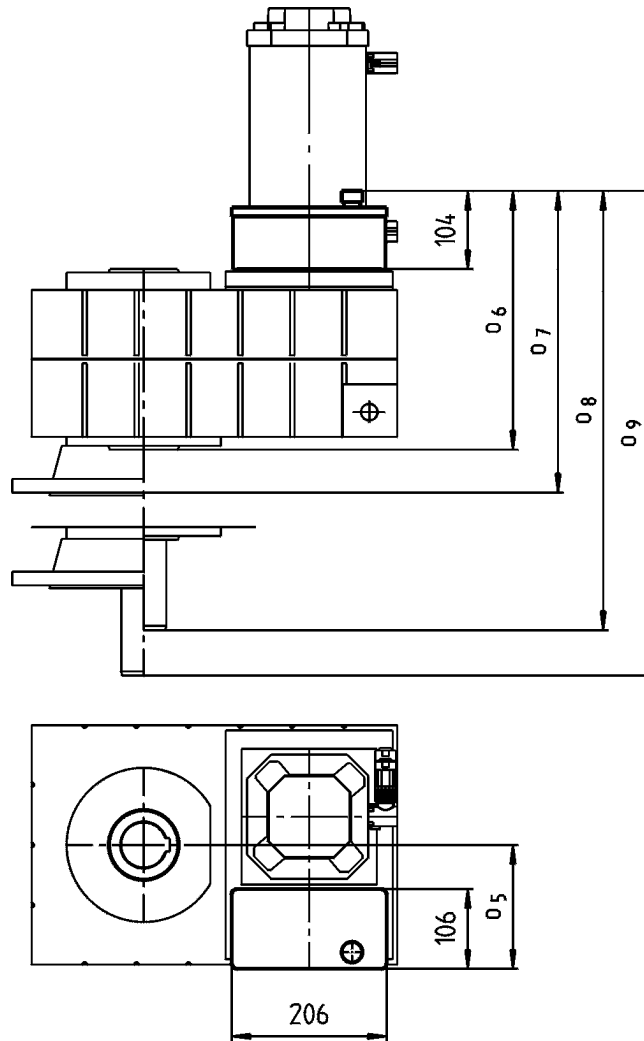


- ⊗ Ventilation/oil filler plug
- Oil drain plug
- ⊖ Oil control plug
- \* On both sides
- \*\* Opposite

Pos.1 standard  
 Pos.2 only on GFL07-3A □□□ 14LC□□

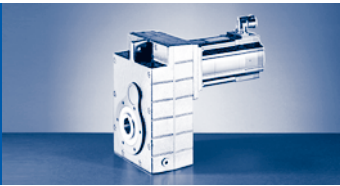


Compensation reservoir for mounting position C



GFL□□-2A...		14LC□□ <sup>1)</sup>	17NC□□ <sup>1)</sup>	19SC□□ <sup>1)</sup>	21XC□□ <sup>1)</sup>	GFL□□-2S...		12□C□□	14□C□□	19□C□□	
GFL09...	o <sub>5</sub>	165		187	204	GFL09...	o <sub>5</sub>	165		204	
	o <sub>6</sub>		344				o <sub>6</sub>		344		
	o <sub>7</sub>		405				o <sub>7</sub>		405		
	o <sub>8</sub>		464				o <sub>8</sub>		464		
	o <sub>9</sub>		525				o <sub>9</sub>		525		
GFL11...	o <sub>5</sub>	154		176	200	GFL11...	o <sub>5</sub>	154		200	
	o <sub>6</sub>	387		391			o <sub>6</sub>	387		391	
	o <sub>7</sub>	448		452			o <sub>7</sub>	448		452	
	o <sub>8</sub>	547		551			o <sub>8</sub>	547		551	
	o <sub>9</sub>	608		612			o <sub>9</sub>	608		612	
GFL14...	o <sub>5</sub>			181	211	GFL14...	o <sub>5</sub>			211	
	o <sub>6</sub>			446			o <sub>6</sub>			446	
	o <sub>7</sub>			507			o <sub>7</sub>			507	
	o <sub>8</sub>			646			o <sub>8</sub>			646	
	o <sub>9</sub>			707			o <sub>9</sub>			707	

<sup>1)</sup> Connector/terminal box position 3 is not permitted.



## GFL [kg]

### GFL□□-2S HCR/HDR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL04...	9		10	12	13	14	16								
GFL05...	21		22	24		25	27			30		33			
GFL06...	35	36	37	38	39	40	42	41		44		47			
GFL07...				64	65	66	68	67		70		73			
GFL09...								115		118		121			

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GFL06...	46		51		56		60							
GFL07...	73		77		82		87		89		96		106	
GFL09...	120		125		129		134		136		143		153	
GFL11...	206		210		215		220		221		228		238	
GFL14...								363		370		380		

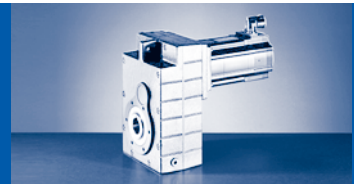
### GFL□□-3S HCR/HDR...RSO B0

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL05...	23		24	26	27	28	30								
GFL06...	40		41	43	44	45	47								
GFL07...	69		70	71	72	73	75		78		81				
GFL09...	121		122	123	124	125	127	126		129		133			
GFL11...				217	218	219	221	220		223		226			
GFL14...								377		380		383			

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GFL07...														
GFL09...	131		136		141		146							
GFL11...	225		230		235		239		242		249		259	
GFL14...	382		387		392		397		399		406		416	

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GFL□□-2A HCR/HDR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	13	17	19						
GFL05...	26	30	32		36		38		
GFL06...	40	44	46		50		52		58
GFL07...	66	70	72		76		78		84
GFL09...					122		124		130
GFL11...					208		209		215
GFL14...									

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	61									
GFL07...	86		107		110		124			127
GFL09...	133		153		156		171			174
GFL11...	218		238		241		254			258
GFL14...			380		384		395			398

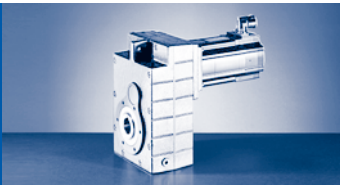
## GFL□□-3A HCR/HDR...RSO B0

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	27	31	33						
GFL06...	44	48	50						
GFL07...	74	78	80		84		86		
GFL09...	125	129	131		135		137		143
GFL11...	219	223	224		228		230		236
GFL14...					385		387		393

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	146									
GFL11...	239		260		263		277			280
GFL14...	395		415		419		433			437

Note additional weights.

Weights in [kg] with oil capacity for mounting position A, all given as approximate values



## GFL [kg]

### Additional weights MCS servo motors

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
...P1	0.3			0.8				0.9						
...P2				0.5				1.2						
...SCS/SCM/SRM/SRS ...ECN/EQN	0.4			0.2				0.3						

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
...P1	1.9							1.5							
...P2	3.1										4.3				
...SCS/SCM/SRM/SRS ...ECN/EQN								0.3							

### Additional weights MCA servo motors

	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
...P1/P5								2.4	
...P2/P6	0.8	1.4		1.5					
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.3	0.5		0.6				0.7	

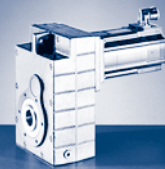
  

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
...P1/P5	2.4		4.8				5.0			
...P2/P6										
...CDD ...ECN/EQN/EQI ...SCS/SCM/SRM/SRS/S20 ...T20	0.7		1.0				1.1			

### Additional weights gearbox

	Solid shaft	2nd output shaft end	Hollow shaft with shrink disc	Flange	Foot
	V□□	V□□	S□□	□□K	□A□/□B□
GFL04...	0.6	0.2	0.6	2.5	1
GFL05...	1	0.3	0.8	4	1.5
GFL06...	2.5	0.8	1	7	2.5
GFL07...	5	1.5	1.5	11	4
GFL09...	8	2.7	3	16	7
GFL11...	16	6.3	5	24	14
GFL14...	33	12	11	33	23

Weights in [kg]



►  $i_g = z_g / z_t$

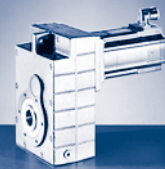
	i	$z_g$	$z_t$
<b>GFL04-2</b>	3.659	2415	660
	5.018	2760	550
	5.833	2625	450
	6.422	2967	462
	7.025	3864	550
	8.379	2765	330
	9.333	2800	300
	10.238	3225	315
	11.491	3160	275
	12.800	3200	250
	14.706	3397	231
	16.087	4424	275
	17.920	4480	250
	20.519	4740	231
	22.857	4800	210
	25.136	4977	198
	28.000	5040	180
	31.600	5214	165
	35.200	5280	150
	40.697	5372	132
	45.333	5440	120
	51.579	6241	121
	57.455	6320	110
	64.636	6399	99
72.000	6480	90	
85.156	6557	77	
94.857	6640	70	
<b>GFL05-2</b>	3.333	2100	630
	4.571	2400	525
	5.133	2310	450
	5.667	2380	420
	6.400	3360	525
	7.040	2640	375
	7.771	2720	350
	9.010	2838	315
	9.946	2924	294
	11.360	2840	250
	12.800	2880	225
	14.538	3053	210
	15.904	3976	250
	17.920	4032	225
	20.286	4260	210
	22.857	4320	189
	24.850	4473	180
	28.000	4536	162



# GFL [ i ]

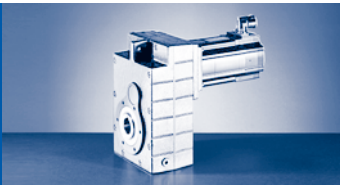
►  $i_g = z_g / z_t$

	i	$z_g$	$z_t$
GFL05-2	32.344	5822	180
	36.444	5904	162
	40.233	4828	120
	45.333	4896	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	80.763	6461	80
	91.000	6552	72
GFL05-3	61.653	258944	4200
	78.639	277440	3528
	90.123	270368	3000
	101.547	274176	2700
	114.952	289680	2520
	129.524	293760	2268
	140.817	304164	2160
	158.667	308448	1944
	177.027	318648	1800
	199.467	323136	1620
	227.989	328304	1440
	256.889	332928	1296
	288.948	381412	1320
	325.576	386784	1188
	362.100	391068	1080
	408.000	396576	972
	477.052	400724	840
	537.524	406368	756
GFL06-2	3.675	2205	600
	5.211	2345	450
	5.750	2415	420
	6.450	2709	
	7.147	2680	375
	8.400	2520	300
	9.463	2555	270
	10.092	2967	294
	11.520	2880	250
	12.978	2920	225
	14.743	3096	210
	16.128	4032	250
	18.169	4088	225
	20.571	4320	210
	23.175	4380	189
	25.200	4536	180
	28.389	4599	162



$$\blacktriangleright i_g = z_g / z_t$$

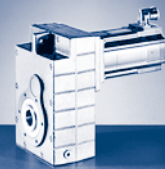
	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GFL06-2</b>	32.800	5904	180
	36.951	5986	162
	40.800	4896	120
	45.963	4964	108
	52.800	6336	120
	59.481	6424	108
	64.080	6408	100
	72.189	6497	90
	81.000	6480	80
	91.250	6570	72
<b>GFL06-3</b>	66.213	262800	3969
	72.000	272160	3780
	81.111	275940	3402
	88.200	285768	3240
	99.361	289737	2916
	116.571	293760	2520
	131.323	297840	2268
	144.320	389664	2700
	162.583	395076	2430
	179.520	323136	1800
	202.237	327624	1620
	231.200	332928	1440
	260.457	337552	1296
	293.018	386784	1320
	299.200	430848	1440
	367.200	396576	1080
	413.667	402084	972
	475.200	513216	1080
	535.333	520344	972
	576.720	519048	900
649.700	526257	810	
759.806	531864	700	
855.954	539251	630	
<b>GFL07-2</b>	3.350	2040	609
	4.643	2340	504
	5.159	2244	435
	5.695	2312	406
	6.400	3360	525
	7.150	2574	360
	8.324	2414	290
	9.379	2448	261
	9.714	2856	294
	11.538	2769	240
	13.000	2808	216
	14.200	2982	210



# GFL [ i ]

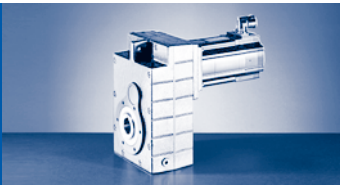
►  $i_g = z_g / z_t$

	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GFL07-2</b>	15.904	3976	250
	17.920	4032	225
	20.286	4260	210
	22.857	4320	189
	24.850	4473	180
	28.000	4536	162
	32.344	5822	180
	36.444	5904	162
	39.642	4757	120
	44.667	4824	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	79.875	6390	80
	90.000	6480	72
<b>GFL07-3</b>	65.306	259200	3969
	72.452	326032	4500
	81.636	330624	4050
	92.413	349320	3780
	104.127	354240	3402
	113.206	366786	3240
	127.556	371952	2916
	147.347	477404	3240
	166.025	484128	2916
	183.285	395896	2160
	206.519	401472	1944
	224.636	323476	1440
	253.111	328032	1296
	290.706	418616	1440
	327.556	424512	1296
	352.811	423373	1200
	397.533	429336	1080
	430.222	557568	1296
	522.133	563904	1080
	562.391	562391	1000
633.680	570312	900	
718.786	575029	800	
809.900	583128	720	
<b>GFL09-2</b>	6.864	2574	375
	7.466	2613	350
	9.010	2838	315
	9.799	2881	294
	11.167	3752	336
	12.307	2769	225



►  $i_g = z_g / z_t$

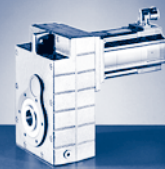
	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GFL09-2</b>	14.333	3010	210
	16.333	3920	240
	18.407	3976	216
	19.667	4130	210
	22.164	4189	189
	24.111	4340	180
	27.173	4402	162
	32.667	5880	180
	36.815	5964	162
	39.667	4760	120
	44.704	4828	108
	51.333	6160	120
	57.852	6248	108
	62.300	6230	100
	70.211	6319	90
	78.750	6300	80
	88.750	6390	72
	<b>GFL09-3</b>	63.326	251340
73.173		329280	4500
82.465		333984	4050
93.333		352800	3780
105.185		357840	3402
114.333		370440	3240
128.852		375732	2916
148.815		482160	3240
167.712		489048	2916
185.111		399840	2160
208.617		405552	1944
224.778		323680	1440
253.321		328304	1296
290.889		418880	1440
327.827		424864	1296
353.033		423640	1200
397.863		429692	1080
424.247		549824	1296
514.881		556072	1080
554.470		554470	1000
624.879		562391	900
700.875	560700	800	
789.875	568710	720	
<b>GFL11-2</b>	6.864	2574	375
	7.466	2613	350
	9.010	2838	315
	9.799	2881	294
	10.720	3752	350



# GFL [ i ]

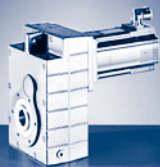
►  $i_g = z_g / z_t$

	<b>i</b>	<b>z<sub>g</sub></b>	<b>z<sub>t</sub></b>
<b>GFL11-2</b>	12.480	2808	225
	14.538	3053	210
	15.904	3976	250
	17.920	4032	225
	20.286	4260	210
	22.857	4320	189
	24.850	4473	180
	28.000	4536	162
	32.739	5893	180
	36.889	5976	162
	40.233	4828	120
	45.333	4896	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	79.875	6390	80
	90.000	6480	72
	<b>GFL11-3</b>	65.306	259200
73.335		330008	4500
82.631		334656	4050
93.540		353580	3780
105.397		358560	3402
114.586		371259	3240
129.111		376488	2916
149.144		483226	3240
168.049		490032	2916
182.792		394831	2160
205.963		400392	1944
224.636		323476	1440
253.111		328032	1296
267.259		519552	1944
327.556		424512	1296
358.077		429692	1200
403.467		435744	1080
430.222		557568	1296
522.133		563904	1080
562.391		562391	1000
633.680	570312	900	
710.888	568710	800	
801.000	576720	720	
<b>GFL14-2</b>	7.150	2574	360
	7.777	2613	336
	8.800	2772	315
	9.571	2814	294



►  $i_g = z_g / z_t$

	<b>i</b>	<b><math>z_g</math></b>	<b><math>z_t</math></b>
<b>GFL14-2</b>	11.538	2769	240
	13.000	2808	216
	14.200	2982	210
	15.620	3905	250
	17.600	3960	225
	19.948	4189	210
	22.476	4248	189
	24.456	4402	180
	27.556	4464	162
	32.344	5822	180
	36.444	5904	162
	39.642	4757	120
	44.667	4824	108
	52.067	6248	120
	58.667	6336	108
	63.190	6319	100
	71.200	6408	90
	79.875	6390	80
	90.000	6480	72
	<b>GFL14-3</b>	64.296	249984
68.708		259718	3780
77.418		263376	3402
85.037		330624	3888
104.889		356832	3402
114.126		369768	3240
128.593		374976	2916
136.889		354816	2592
156.148		303552	1944
170.074		495936	2916
202.074		392832	1944
224.636		323476	1440
253.111		328032	1296
273.778		532224	1944
332.444		430848	1296
352.811		423373	1200
397.533		429336	1080
430.222		557568	1296
522.133		563904	1080
562.391		562391	1000
633.680	570312	900	
710.888	568710	800	
801.000	576720	720	



# GFL [Nm]

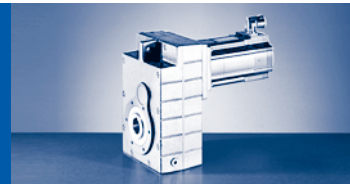
## GFL□□-□S (MCS)

$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
3.659	100	1.51	$M_2$						13	15
			c						5.4	4.5
			$n_{2 \text{ Eck}}$						1107	1107
			$n_{2 \text{ th}}$						998	968
5.018	111	0.86	$M_2$					14	18	21
			c					5.4	4.3	3.7
			$n_{2 \text{ Eck}}$					747	807	807
			$n_{2 \text{ th}}$					747	775	754
5.833	153	0.93	$M_2$						21	25
			c						5.1	4.3
			$n_{2 \text{ Eck}}$						694	694
			$n_{2 \text{ th}}$						621	603
6.422	113	0.56	$M_2$				14	19	23	27
			c				5.6	4.3	3.4	2.9
			$n_{2 \text{ Eck}}$				631	584	631	631
			$n_{2 \text{ th}}$				631	584	631	631
7.025	113	0.47	$M_2$				15	20	25	30
			c				5.2	3.9	3.1	2.6
			$n_{2 \text{ Eck}}$				577	534	577	577
			$n_{2 \text{ th}}$				576	534	576	576
8.379	179	0.67	$M_2$					24	30	36
			c					5.2	4.2	3.5
			$n_{2 \text{ Eck}}$					448	483	483
			$n_{2 \text{ th}}$					434	416	404
9.333	165	0.61	$M_2$				20	27	34	40
			c				5.7	4.3	3.4	2.9
			$n_{2 \text{ Eck}}$				434	402	434	434
			$n_{2 \text{ th}}$				395	377	361	349
10.238	159	0.37	$M_2$				22	30	37	44
			c				5.0	3.8	3.0	2.6
			$n_{2 \text{ Eck}}$				396	366	396	396
			$n_{2 \text{ th}}$				396	366	396	396
11.491	181	0.41	$M_2$				25	34	41	49
			c				5.1	3.9	3.1	2.6
			$n_{2 \text{ Eck}}$				353	326	353	353
			$n_{2 \text{ th}}$				347	326	319	310
12.800	166	0.38	$M_2$				28	38	46	55
			c				4.2	3.2	2.5	2.1
			$n_{2 \text{ Eck}}$				316	293	316	316
			$n_{2 \text{ th}}$				302	289	277	269
14.706	182	0.28	$M_2$				32	43	53	64
			c				4.0	3.0	2.4	2.0
			$n_{2 \text{ Eck}}$				275	255	275	275
			$n_{2 \text{ th}}$				275	255	275	274
16.087	182	0.25	$M_2$			22	35	48	59	70
			c			5.6	3.6	2.8	2.2	1.9
			$n_{2 \text{ Eck}}$			252	252	233	252	252
			$n_{2 \text{ th}}$			252	252	233	252	252
17.920	167	0.23	$M_2$		20	25	39	53	66	78
			c		5.8	4.6	3.0	2.3	1.8	1.5
			$n_{2 \text{ Eck}}$		226	226	226	209	226	226
			$n_{2 \text{ th}}$		226	226	226	209	223	205

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

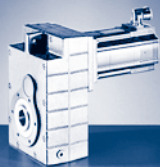


$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
20.519	183	0.17	$M_2$		23	29	45	61	75	89
			c		5.5	4.4	2.9	2.2	1.7	1.5
			$n_{2 \text{ Eck}}$		197	197	197	183	197	197
			$n_{2 \text{ th}}$		197	197	197	183	197	197
22.857	167	0.16	$M_2$		26	32	50	68	84	100
			c		4.5	3.6	2.4	1.8	1.4	1.2
			$n_{2 \text{ Eck}}$		177	177	177	164	177	177
			$n_{2 \text{ th}}$		177	177	177	164	177	167
25.136	183	0.13	$M_2$		28	35	55	75	92	109
			c		5.1	4.1	2.7	2.0	1.6	1.4
			$n_{2 \text{ Eck}}$		161	161	161	149	161	161
			$n_{2 \text{ th}}$		161	161	161	149	161	161
28.000	168	0.12	$M_2$		32	40	62	84	103	122
			c		4.2	3.4	2.2	1.7	1.3	1.1
			$n_{2 \text{ Eck}}$		145	145	145	134	145	145
			$n_{2 \text{ th}}$		145	145	145	134	145	145
31.600	185	0.09	$M_2$		36	45				
			c		4.1	3.3				
			$n_{2 \text{ Eck}}$		128	128				
			$n_{2 \text{ th}}$		128	128				
35.200	170	0.08	$M_2$		40	50				
			c		3.4	2.7				
			$n_{2 \text{ Eck}}$		115	115				
			$n_{2 \text{ th}}$		115	115				
40.697	187	0.06	$M_2$		46	58				
			c		3.2	2.6				
			$n_{2 \text{ Eck}}$		100	100				
			$n_{2 \text{ th}}$		100	100				
45.333	172	0.06	$M_2$	25	52	65				
			c	5.3	2.7	2.1				
			$n_{2 \text{ Eck}}$	89	89	89				
			$n_{2 \text{ th}}$	89	89	89				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

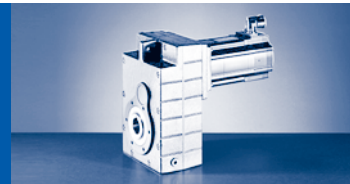
## GFL□□-□S (MCS)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	
				...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	4050	4050	4050	3750	4050	4050	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	
3.333	110	1.68	$M_2$						14	
			c						5.4	
			$n_2$ Eck							1215
			$n_2$ th							920
3.333	150	1.68	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
4.571	133	2.13	$M_2$					16	19	
			c					5.7	4.8	
			$n_2$ Eck					886	886	
			$n_2$ th					790	766	
4.571	170	2.13	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
5.133	170	2.37	$M_2$						21	
			c						5.4	
			$n_2$ Eck						789	
			$n_2$ th						597	
5.133	223	2.37	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
5.667	187	2.33	$M_2$						24	
			c						5.4	
			$n_2$ Eck						715	
			$n_2$ th						541	
5.667	233	2.33	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
6.400	149	0.82	$M_2$				18	23	27	
			c				5.7	4.5	3.8	
			$n_2$ Eck				586	633	633	
			$n_2$ th				586	612	595	
6.400	173	0.82	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
7.040	205	1.47	$M_2$					25	30	
			c					5.7	4.8	
			$n_2$ Eck					575	575	
			$n_2$ th					513	498	
7.040	248	1.47	$M_2$							
			c							
			$n_2$ Eck							
			$n_2$ th							
7.771	226	1.45	$M_2$					27	33	
			c					5.7	4.8	
			$n_2$ Eck					521	521	
			$n_2$ th					465	451	

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

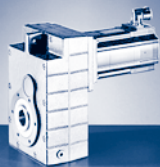


$M_{2GN} \leq 345 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
							c	1.68	110	3.333
							$n_2$			
							Eck			
							$n_2$			
							th			
		31	25	23	43	35	$M_2$			
		4.6	4.6	4.7	3.2	3.0	c	1.68	150	3.333
		450	900	1058	585	1215	$n_2$			
		450	891	893	585	819	Eck			
							$n_2$			
							th			
							$M_2$			
							c	2.13	133	4.571
							$n_2$			
							Eck			
							$n_2$			
							th			
		43	34	32	59	48	$M_2$			
		3.8	3.8	3.9	2.6	2.5	c	2.13	170	4.571
		328	656	771	427	886	$n_2$			
		328	656	736	427	676	Eck			
							$n_2$			
							th			
							$M_2$			
							c	2.37	170	5.133
							$n_2$			
							Eck			
							$n_2$			
							th			
		48	38	36	66	54	$M_2$			
		4.5	4.5	4.5	3.0	2.9	c	2.37	223	5.133
		292	584	687	380	789	$n_2$			
		292	575	576	380	528	Eck			
							$n_2$			
							th			
							$M_2$			
							c	2.33	187	5.667
							$n_2$			
							Eck			
							$n_2$			
							th			
		53	43	40	73	59	$M_2$			
		4.2	4.2	4.2	2.9	2.8	c	2.33	233	5.667
		265	529	622	344	715	$n_2$			
		265	515	516	344	473	Eck			
							$n_2$			
							th			
							$M_2$			
							c	0.82	149	6.400
							$n_2$			
							Eck			
							$n_2$			
							th			
33	26	61	49	46	83	68	$M_2$			
4.7	4.7	2.8	2.8	2.8	1.9	1.8	c	0.82	173	6.400
305	633	234	469	551	305	633	$n_2$			
305	614	234	469	551	305	508	Eck			
							$n_2$			
							th			
							$M_2$			
							c	1.47	205	7.040
							$n_2$			
							Eck			
							$n_2$			
							th			
		66	53	50	91	74	$M_2$			
		3.6	3.6	3.6	2.5	2.4	c	1.47	248	7.040
		213	426	501	277	575	$n_2$			
		213	426	473	277	434	Eck			
							$n_2$			
							th			
							$M_2$			
							c	1.45	226	7.771
							$n_2$			
							Eck			
							$n_2$			
							th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

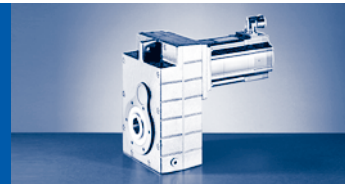
## GFL□□-□S (MCS)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83
7.771	258	1.45	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						
9.010	220	0.95	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				26 6.0 416 416	32 4.8 450 423	38 4.0 450 411
9.010	266	0.95	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						
9.946	243	0.89	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				28 6.0 377 377	35 4.8 407 383	42 4.0 407 373
9.946	275	0.89	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						
11.360	278	1.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					40 4.8 357 308	48 4.0 357 299
12.800	285	1.01	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				37 5.5 293 280	46 4.3 316 269	54 3.7 316 260
14.538	301	0.75	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				42 5.1 258 258	52 4.0 279 255	62 3.4 279 248
15.904	310	0.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				46 4.8 236 236	57 3.8 255 239	68 3.2 255 232
17.920	312	0.61	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			38 5.6 226 226	52 4.3 209 209	64 3.4 226 208	77 2.9 226 202
20.286	333	0.43	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			43 5.3 200 200	59 4.0 185 185	73 3.2 200 200	87 2.7 200 200
22.857	313	0.43	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			49 4.4 177 177	67 3.4 164 164	83 2.7 177 177	99 2.3 177 177
24.850	344	0.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			53 5.1 163 163	73 3.9 151 151	90 3.1 163 163	107 2.6 163 163

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



$M_{2GN} \leq 345 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_M 230$			
5.2	8.8	7.6	10.5		11.8		$I_M 400$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
39	31	74	59	55	100	82	c	1.45	258	7.771
5.7	5.7	3.4	3.4	3.4	2.3	2.2	$n_2 \text{ Eck}$			
251	521	193	386	454	251	521	$n_2 \text{ th}$			
251	466	193	386	424	251	388	$M_2$			
							c	0.95	220	9.010
							$n_2 \text{ Eck}$			
							$n_2 \text{ th}$			
46	36	86	68	64	117	95	$M_2$			
5.1	5.1	3.0	3.0	3.1	2.1	2.0	c	0.95	266	9.010
216	450	167	333	391	216	450	$n_2 \text{ Eck}$			
216	428	166	333	391	216	362	$n_2 \text{ th}$			
							$M_2$			
							c	0.89	243	9.946
							$n_2 \text{ Eck}$			
							$n_2 \text{ th}$			
51	40	95	76	71	129	105	$M_2$			
4.7	4.8	2.9	2.8	2.9	1.9	1.9	c	0.89	275	9.946
196	407	151	302	354	196	407	$n_2 \text{ Eck}$			
196	383	151	302	350	196	317	$n_2 \text{ th}$			
59	46	108	87	81	148	120	$M_2$			
4.2	4.2	2.5	2.5	2.5	1.7	1.7	c	1.08	278	11.360
172	357	132	264	310	172	357	$n_2 \text{ Eck}$			
172	301	132	264	273	172	234	$n_2 \text{ th}$			
66	52	123	98	92	167	136	$M_2$			
3.8	3.8	2.3	2.3	2.3	1.6	1.5	c	1.01	285	12.800
152	316	117	234	275	152	316	$n_2 \text{ Eck}$			
152	263	117	234	237	152	197	$n_2 \text{ th}$			
76	59	139	112	105	190	155	$M_2$			
3.6	3.6	2.1	2.1	2.1	1.5	1.4	c	0.75	301	14.538
134	279	103	206	243	134	279	$n_2 \text{ Eck}$			
134	250	103	206	227	134	188	$n_2 \text{ th}$			
83	65	153	122	115	208	169	$M_2$			
3.4	3.4	2.0	2.0	2.0	1.4	1.3	c	0.60	310	15.904
123	255	94	189	222	123	255	$n_2 \text{ Eck}$			
123	234	94	189	213	123	176	$n_2 \text{ th}$			
94	73	172	138	129	234	191	$M_2$			
3.0	3.0	1.8	1.8	1.8	1.2	1.2	c	0.61	312	17.920
109	226	84	167	197	109	226	$n_2 \text{ Eck}$			
109	204	84	167	180	109	149	$n_2 \text{ th}$			
106	83	195	156	147	265	216	$M_2$			
2.8	2.8	1.7	1.7	1.7	1.2	1.1	c	0.43	333	20.286
96	200	74	148	174	96	200	$n_2 \text{ Eck}$			
96	200	74	148	174	96	151	$n_2 \text{ th}$			
120	94	221	177	166			$M_2$			
2.4	2.4	1.4	1.4	1.4			c	0.43	313	22.857
85	177	66	131	154			$n_2 \text{ Eck}$			
85	177	66	131	149			$n_2 \text{ th}$			
130	102	240	192	180	325	265	$M_2$			
2.6	2.7	1.4	1.6	1.6	1.1	1.1	c	0.35	344	24.850
79	163	60	121	142	79	163	$n_2 \text{ Eck}$			
78	163	60	121	142	78	138	$n_2 \text{ th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

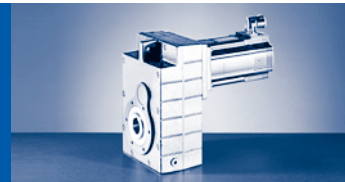
## GFL□□-□S (MCS)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83
28.000	314	0.33	$M_2$			60	82	102	121
			c			4.1	3.1	2.5	2.1
			$n_{2 \text{ Eck}}$			145	134	145	145
			$n_{2 \text{ th}}$			145	134	145	145
32.344	296	0.20	$M_2$		45				
			c		5.1				
			$n_{2 \text{ Eck}}$		125				
			$n_{2 \text{ th}}$		125				
32.344	345	0.20	$M_2$			70	95	118	140
			c			3.9	3.0	2.4	2.0
			$n_{2 \text{ Eck}}$			125	116	125	125
			$n_{2 \text{ th}}$			125	116	125	125
36.444	316	0.20	$M_2$		51	80	108	133	158
			c		4.9	3.2	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$		111	111	103	111	111
			$n_{2 \text{ th}}$		111	111	103	111	111
40.233	307	0.15	$M_2$	45	57				
			c	5.4	4.3				
			$n_{2 \text{ Eck}}$	101	101				
			$n_{2 \text{ th}}$	101	101				
40.233	345	0.15	$M_2$			88	119	147	175
			c			3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$			101	93	101	101
			$n_{2 \text{ th}}$			101	93	101	101
45.333	319	0.14	$M_2$	51	64	100	135	166	197
			c	4.9	4.0	2.6	2.0	1.6	1.3
			$n_{2 \text{ Eck}}$	89	89	89	83	89	89
			$n_{2 \text{ th}}$	89	89	89	83	89	89
52.067	309	0.09	$M_2$	59	74				
			c	4.2	3.3				
			$n_{2 \text{ Eck}}$	78	78				
			$n_{2 \text{ th}}$	78	78				
58.667	322	0.09	$M_2$	66	84				
			c	3.9	3.1				
			$n_{2 \text{ Eck}}$	69	69				
			$n_{2 \text{ th}}$	69	69				
63.190	282	0.07	$M_2$	72	91				
			c	3.1	2.5				
			$n_{2 \text{ Eck}}$	64	64				
			$n_{2 \text{ th}}$	64	64				
71.200	305	0.06	$M_2$	81	102				
			c	3.3	2.7				
			$n_{2 \text{ Eck}}$	57	57				
			$n_{2 \text{ th}}$	57	57				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

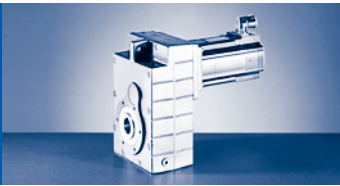


$M_{2GN} \leq 345 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL05-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
148	115	271	217	203			c			
2.1	2.2	1.2	1.3	1.3			$n_2$ Eck	0.33	314	28.000
70	145	54	107	126			$n_2$ th			
70	145	54	107	126			$M_2$			
							c			
							$n_2$ Eck	0.20	296	32.344
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.20	345	32.344
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.20	316	36.444
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.15	307	40.233
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.15	345	40.233
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.14	319	45.333
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.09	309	52.067
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.09	322	58.667
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.07	282	63.190
							$n_2$ th			
							$M_2$			
							c			
							$n_2$ Eck	0.06	305	71.200
							$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

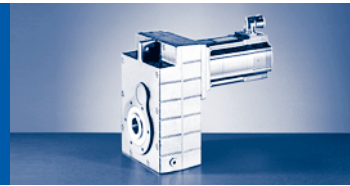
$M_{2GN} \leq 345 \text{ Nm}$

GFL05-3S				06CC41	06FC41	06IC41	09DC41	09FC38
				...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$					
			$n_1$	4050	4050	4050	4050	3750
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5
			$P_N$	0.25	0.51	0.64	1.00	1.20
			$J_M$	0.17	0.25	0.33	1.13	1.53
61.653	207	0.20	$M_2$	34	70	88	135	
			c	4.8	2.4	1.9	1.3	
			$n_{2 \text{ Eck}}$	66	66	66	66	
			$n_{2 \text{ th}}$	66	66	66	66	
78.639	225	0.14	$M_2$	43	89	112	173	
			c	4.5	2.3	1.8	1.2	
			$n_{2 \text{ Eck}}$	52	52	52	52	
			$n_{2 \text{ th}}$	52	52	52	52	
90.123	303	0.20	$M_2$	49	102	128	197	267
			c	5.3	2.7	2.1	1.4	1.1
			$n_{2 \text{ Eck}}$	45	45	45	45	42
			$n_{2 \text{ th}}$	45	45	45	45	42
101.547	328	0.20	$M_2$	56	115	144	222	301
			c	5.1	2.6	2.0	1.3	1.0
			$n_{2 \text{ Eck}}$	40	40	40	40	37
			$n_{2 \text{ th}}$	40	40	40	40	37
114.952	329	0.14	$M_2$	63	130	163	252	
			c	4.5	2.3	1.8	1.2	
			$n_{2 \text{ Eck}}$	35	35	35	35	
			$n_{2 \text{ th}}$	35	35	35	35	
129.524	328	0.14	$M_2$	72	147	185	285	
			c	4.0	2.0	1.6	1.0	
			$n_{2 \text{ Eck}}$	31	31	31	31	
			$n_{2 \text{ th}}$	31	31	31	31	
140.817	345	0.11	$M_2$	78	160	201	309	
			c	3.9	1.9	1.6	1.0	
			$n_{2 \text{ Eck}}$	29	29	29	29	
			$n_{2 \text{ th}}$	29	29	29	29	
158.667	328	0.11	$M_2$	89	181	227		
			c	3.3	1.6	1.3		
			$n_{2 \text{ Eck}}$	26	26	26		
			$n_{2 \text{ th}}$	26	26	26		
177.027	345	0.07	$M_2$	99	202	253		
			c	3.1	1.5	1.2		
			$n_{2 \text{ Eck}}$	23	23	23		
			$n_{2 \text{ th}}$	23	23	23		
199.467	328	0.07	$M_2$	112	228	286		
			c	2.6	1.3	1.0		
			$n_{2 \text{ Eck}}$	20	20	20		
			$n_{2 \text{ th}}$	20	20	20		
227.989	345	0.05	$M_2$	129	261			
			c	2.4	1.2			
			$n_{2 \text{ Eck}}$	18	18			
			$n_{2 \text{ th}}$	18	18			
256.889	328	0.05	$M_2$	146	295			
			c	2.0	1.0			
			$n_{2 \text{ Eck}}$	16	16			
			$n_{2 \text{ th}}$	16	16			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

**GFL [Nm]**  
GFL□□-□S (MCS)





# GFL [Nm]

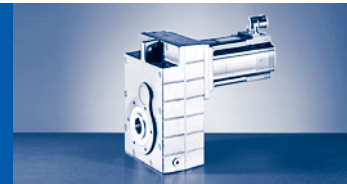
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000	
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5	
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	
3.675	205	7.76	$M_2$									34	27	
			c									5.8	5.7	
			$n_{2 \text{ Eck}}$										408	816
			$n_{2 \text{ th}}$										408	714
3.675	317	7.76	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
5.211	291	6.64	$M_2$									48	38	
			c									5.8	5.7	
			$n_{2 \text{ Eck}}$									288	576	
			$n_{2 \text{ th}}$									288	503	
5.211	424	6.64	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
5.750	321	6.04	$M_2$									53	42	
			c									5.8	5.7	
			$n_{2 \text{ Eck}}$									261	522	
			$n_{2 \text{ th}}$									261	456	
5.750	442	6.04	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
6.450	195	3.65	$M_2$					23	27					
			c					5.9	5.0					
			$n_{2 \text{ Eck}}$					628	628					
			$n_{2 \text{ th}}$					548	531					
6.450	252	3.65	$M_2$									61	49	
			c									4.0	4.0	
			$n_{2 \text{ Eck}}$									233	465	
			$n_{2 \text{ th}}$									233	465	
6.450	352	3.65	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
7.147	333	4.04	$M_2$									67	53	
			c									4.8	4.8	
			$n_{2 \text{ Eck}}$									210	420	
			$n_{2 \text{ th}}$									210	410	
7.147	433	4.04	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											
8.400	469	4.26	$M_2$									78	62	
			c									5.8	5.7	
			$n_{2 \text{ Eck}}$									179	357	
			$n_{2 \text{ th}}$									179	312	
8.400	604	4.26	$M_2$											
			c											
			$n_{2 \text{ Eck}}$											
			$n_{2 \text{ th}}$											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

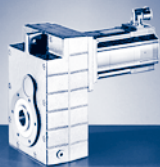


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
25	47	38									c	7.76	205	3.675
5.8	3.9	3.8									$n_2$ Eck			
959	531	1102									$n_2$ th			
715	531	656												
					54	48	80	59	105	73	$M_2$			
					5.6	4.9	3.9	4.0	3.0	3.3	c	7.76	317	3.675
					408	878	408	878	367	878	$n_2$ Eck			
					408	693	408	665	367	637	$n_2$ th			
36	66	54									$M_2$			
5.8	3.9	3.8									c	6.64	291	5.211
676	374	777									$n_2$ Eck			
505	374	463									$n_2$ th			
					77	68	113	84	149	104	$M_2$			
					5.2	4.6	3.6	3.8	2.8	3.1	c	6.64	424	5.211
					288	619	288	619	259	619	$n_2$ Eck			
					288	483	288	463	259	443	$n_2$ th			
40	73	60									$M_2$			
5.8	3.9	3.8									c	6.04	321	5.750
613	339	704									$n_2$ Eck			
457	339	419									$n_2$ th			
					86	75	125	93	165	115	$M_2$			
					5.0	4.4	3.4	3.6	2.6	2.9	c	6.04	442	5.750
					261	561	261	561	235	561	$n_2$ Eck			
					261	433	261	415	235	397	$n_2$ th			
											$M_2$			
											c	3.65	195	6.450
											$n_2$ Eck			
											$n_2$ th			
45	83	68									$M_2$			
4.1	2.7	2.6									c	3.65	252	6.450
547	302	628									$n_2$ Eck			
510	302	468									$n_2$ th			
				45	98	86	142	106	186	130	$M_2$			
				5.6	3.5	3.1	2.4	2.5	1.9	2.1	c	3.65	352	6.450
				558	233	500	233	500	209	500	$n_2$ Eck			
				542	233	484	233	464	209	444	$n_2$ th			
50	91	75									$M_2$			
4.8	3.3	3.1									c	4.04	333	7.147
493	273	567									$n_2$ Eck			
411	273	377									$n_2$ th			
					108	95	157	117	206	144	$M_2$			
					3.9	3.5	2.7	2.8	2.1	2.3	c	4.04	433	7.147
					210	451	210	451	189	451	$n_2$ Eck			
					210	385	210	369	189	353	$n_2$ th			
58	107	87									$M_2$			
5.8	3.9	3.8									c	4.26	469	8.400
420	232	482									$n_2$ Eck			
313	232	287									$n_2$ th			
					126	110	183	137	241	168	$M_2$			
					4.6	4.1	3.2	3.3	2.5	2.7	c	4.26	604	8.400
					179	384	179	384	161	384	$n_2$ Eck			
					179	292	179	280	161	268	$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
9.463	529	3.88	$M_2$									87	70
			c									5.8	5.7
			$n_{2 \text{ Eck}}$									159	317
			$n_{2 \text{ th}}$									159	277
9.463	581	3.88	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
10.092	306	2.52	$M_2$					35	42				
			c					5.9	5.0				
			$n_{2 \text{ Eck}}$					401	401				
			$n_{2 \text{ th}}$					350	339				
10.092	395	2.52	$M_2$									95	76
			c									4.0	4.0
			$n_{2 \text{ Eck}}$									149	297
			$n_{2 \text{ th}}$									149	297
10.092	459	2.52	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
11.520	536	1.73	$M_2$									107	86
			c									4.8	4.8
			$n_{2 \text{ Eck}}$									130	260
			$n_{2 \text{ th}}$									130	255
11.520	632	1.73	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
12.978	592	2.61	$M_2$									121	97
			c									4.7	4.7
			$n_{2 \text{ Eck}}$									116	231
			$n_{2 \text{ th}}$									116	225
14.743	447	1.95	$M_2$					52	62				
			c					5.9	5.0				
			$n_{2 \text{ Eck}}$					275	275				
			$n_{2 \text{ th}}$					240	232				
14.743	577	1.95	$M_2$									139	111
			c									4.0	4.0
			$n_{2 \text{ Eck}}$									102	204
			$n_{2 \text{ th}}$									102	203
14.743	641	1.95	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
16.128	467	1.68	$M_2$					57	68				
			c					5.6	4.8				
			$n_{2 \text{ Eck}}$					251	251				
			$n_{2 \text{ th}}$					224	217				
16.128	603	1.68	$M_2$									152	122
			c									3.9	3.8
			$n_{2 \text{ Eck}}$									93	186
			$n_{2 \text{ th}}$									93	186

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
65	120	98									c	3.88	529	9.463
5.8	3.9	3.8									$n_{2 \text{ Eck}}$			
373	206	428									$n_{2 \text{ th}}$			
278	206	255												
					142	125	207	155	272	190	$M_2$			
					4.0	3.5	2.8	2.9	2.1	2.3	c	3.88	581	9.463
					159	341	159	341	143	341	$n_{2 \text{ Eck}}$			
					159	251	159	240	143	229	$n_{2 \text{ th}}$			
											$M_2$			
											c	2.52	306	10.092
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
71	130	106									$M_2$			
4.1	2.7	2.6									c	2.52	395	10.092
349	193	401									$n_{2 \text{ Eck}}$			
326	193	299									$n_{2 \text{ th}}$			
			86	71	154	135	223	166	292	204	$M_2$			
			5.1	4.7	2.9	2.6	2.0	2.1	1.6	1.7	c	2.52	459	10.092
			149	357	149	320	149	320	134	320	$n_{2 \text{ Eck}}$			
			149	335	149	298	149	285	134	259	$n_{2 \text{ th}}$			
81	147	120									$M_2$			
4.8	3.3	3.1									c	1.73	536	11.520
306	169	352									$n_{2 \text{ Eck}}$			
255	169	234									$n_{2 \text{ th}}$			
				80	174	153	253	189	332	232	$M_2$			
				5.6	3.5	3.1	2.5	2.6	1.9	2.1	c	1.73	632	11.520
				313	130	280	130	280	117	280	$n_{2 \text{ Eck}}$			
				263	130	234	130	224	117	214	$n_{2 \text{ th}}$			
91	166	136	111	91	197	173	286	214	376	262	$M_2$			
4.7	3.2	3.1	5.1	4.7	2.9	2.6	2.0	2.1	1.6	1.7	c	2.61	592	12.978
272	150	312	116	277	116	249	116	249	104	249	$n_{2 \text{ Eck}}$			
226	150	207	116	225	116	199	116	190	104	174	$n_{2 \text{ th}}$			
											$M_2$			
											c	1.95	447	14.743
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
104	190	155									$M_2$			
4.1	2.7	2.6									c	1.95	577	14.743
239	132	275									$n_{2 \text{ Eck}}$			
223	132	205									$n_{2 \text{ th}}$			
			126	103	225	197	326	243	427	298	$M_2$			
			4.9	4.5	2.8	2.5	2.0	2.0	1.5	1.7	c	1.95	641	14.743
			102	244	102	219	102	219	92	219	$n_{2 \text{ Eck}}$			
			102	227	102	202	102	193	92	173	$n_{2 \text{ th}}$			
											$M_2$			
											c	1.68	467	16.128
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
114	208	169									$M_2$			
3.9	2.6	2.5									c	1.68	603	16.128
219	121	251									$n_{2 \text{ Eck}}$			
209	121	192									$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

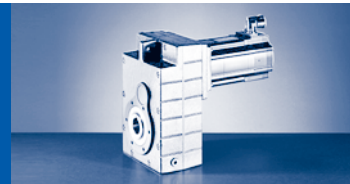
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
16.128	643	1.68	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
18.169	526	1.57	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					64 5.6 223 199	76 4.8 223 193				
18.169	600	1.57	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							92 5.7 107 107	72 5.7 223 199	172 3.4 83 83	138 3.4 165 165
20.571	501	1.19	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				59 6.0 182 182	73 4.8 197 187	87 4.0 197 182				
20.571	645	1.19	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							105 5.4 95 95	82 5.4 197 191	195 3.2 73 73	156 3.2 146 146
23.175	565	1.13	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				66 6.0 162 162	82 4.8 175 166	98 4.0 175 161				
23.175	604	1.13	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							119 4.5 84 84	93 4.5 175 164	221 2.7 65 65	177 2.7 130 129
25.200	527	0.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				72 5.8 149 149	89 4.6 161 161	107 3.9 161 161				
25.200	651	0.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							129 4.8 77 77	101 5.1 161 161	240 2.7 60 60	192 3.0 119 119
28.389	594	0.86	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				81 5.8 132 132	101 4.6 143 143	120 3.9 143 143				
28.389	607	0.86	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							147 4.0 69 69	115 4.2 143 143	272 2.2 53 53	217 2.5 106 106
32.800	550	0.58	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				95 4.7 114 114	118 3.7 124 123	140 3.1 124 123				
32.800	641	0.58	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							170 3.7 60 59	133 3.8 124 123	315 2.0 46 46	251 2.3 92 91

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

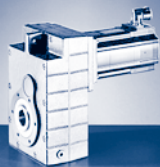


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
			139	114	246	216	357	267	468	327	c	1.68	643	16.128
			4.5	4.1	2.6	2.3	1.8	1.9	1.4	1.5	$n_2$ Eck			
			93	223	93	200	93	200	84	200	$n_2$ th			
			93	211	93	188	93	176	84	157	$M_2$			
											c	1.57	526	18.169
											$n_2$ Eck			
											$n_2$ th			
129	235	191	158	129	279	245	403	302	528	369	$M_2$			
3.4	2.3	2.2	3.7	3.4	2.1	1.9	1.5	1.5	1.1	1.3	c	1.57	600	18.169
194	107	223	83	198	83	178	83	178	74	178	$n_2$ Eck			
181	107	166	83	181	83	158	83	141	74	127	$n_2$ th			
											$M_2$			
											c	1.19	501	20.571
											$n_2$ Eck			
											$n_2$ th			
146	266	217	179	146	316	277	457	342	598	418	$M_2$			
3.2	2.2	2.1	3.5	3.2	2.0	1.8	1.4	1.5	1.1	1.2	c	1.19	645	20.571
171	95	197	73	175	73	157	73	157	66	157	$n_2$ Eck			
171	95	162	73	175	73	152	73	138	66	126	$n_2$ th			
											$M_2$			
											c	1.13	565	23.175
											$n_2$ Eck			
											$n_2$ th			
166	301	245	203	166	357	313	516	386			$M_2$			
2.7	1.8	1.8	2.9	2.7	1.7	1.5	1.2	1.2			c	1.13	604	23.175
152	84	175	65	155	65	139	65	139			$n_2$ Eck			
150	84	134	65	150	65	123	65	113			$n_2$ th			
											$M_2$			
											c	0.90	527	25.200
											$n_2$ Eck			
											$n_2$ th			
180	327	266	221	180	389	340	561	419		513	$M_2$			
3.0	2.0	2.0	2.9	3.0	1.7	1.7	1.2	1.4		1.1	c	0.90	651	25.200
140	77	161	60	143	60	128	60	128		128	$n_2$ Eck			
140	77	154	60	142	60	128	60	127		115	$n_2$ th			
											$M_2$			
											c	0.86	594	28.389
											$n_2$ Eck			
											$n_2$ th			
203	369	301	250	203	439	384		473			$M_2$			
2.5	1.6	1.6	2.4	2.5	1.4	1.4		1.1			c	0.86	607	28.389
124	69	143	53	127	53	114		114			$n_2$ Eck			
124	69	123	53	126	53	113		103			$n_2$ th			
											$M_2$			
											c	0.58	550	32.800
											$n_2$ Eck			
											$n_2$ th			
235	427	348									$M_2$			
2.3	1.5	1.5									c	0.58	641	32.800
108	60	124									$n_2$ Eck			
107	59	119									$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

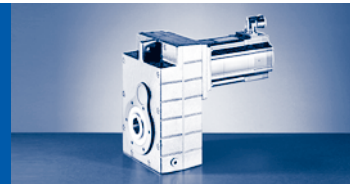
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
36.951	611	0.56	$M_2$				107	132	158	193	151	356	284
			c			4.6	3.7	3.1	3.1	3.2	1.7	1.9	
			$n_{2 \text{ Eck}}$			102	110	110	53	110	41	81	
			$n_{2 \text{ th}}$			101	110	110	53	110	41	81	
40.800	386	0.43	$M_2$		57								
			c		5.3								
			$n_{2 \text{ Eck}}$		99								
			$n_{2 \text{ th}}$		99								
40.800	571	0.43	$M_2$			87	119	147	175				
			c			5.1	3.9	3.1	2.6				
			$n_{2 \text{ Eck}}$			99	92	99	99				
			$n_{2 \text{ th}}$			99	92	99	99				
40.800	657	0.43	$M_2$							213	166	393	314
			c							3.0	3.2	1.7	1.9
			$n_{2 \text{ Eck}}$							48	99	37	74
			$n_{2 \text{ th}}$							48	99	37	74
45.963	435	0.41	$M_2$		64								
			c		5.3								
			$n_{2 \text{ Eck}}$		88								
			$n_{2 \text{ th}}$		88								
45.963	613	0.41	$M_2$			98	134	166	198	241	189	444	355
			c			4.9	3.7	3.0	2.5	2.5	2.6	1.4	1.6
			$n_{2 \text{ Eck}}$			88	82	88	88	42	88	33	65
			$n_{2 \text{ th}}$			88	82	88	88	42	88	33	65
52.800	400	0.26	$M_2$	59	74								
			c	5.3	4.3								
			$n_{2 \text{ Eck}}$	77	77								
			$n_{2 \text{ th}}$	77	77								
52.800	592	0.26	$M_2$			114	155	192	228				
			c			4.1	3.1	2.5	2.1				
			$n_{2 \text{ Eck}}$			77	71	77	77				
			$n_{2 \text{ th}}$			77	71	77	77				
59.481	451	0.25	$M_2$	66	84								
			c	5.3	4.3								
			$n_{2 \text{ Eck}}$	68	68								
			$n_{2 \text{ th}}$	68	68								
59.481	615	0.25	$M_2$			129	175	216	257				
			c			3.8	2.9	2.3	1.9				
			$n_{2 \text{ Eck}}$			68	63	68	68				
			$n_{2 \text{ th}}$			68	63	68	68				
64.080	405	0.19	$M_2$	72	91								
			c	4.4	3.5								
			$n_{2 \text{ Eck}}$	63	63								
			$n_{2 \text{ th}}$	63	63								
64.080	576	0.19	$M_2$			140	190	234	278				
			c			3.3	2.5	2.0	1.7				
			$n_{2 \text{ Eck}}$			63	59	63	63				
			$n_{2 \text{ th}}$			63	59	63	63				
72.189	456	0.19	$M_2$	81	102								
			c	4.9	3.9								
			$n_{2 \text{ Eck}}$	56	56								
			$n_{2 \text{ th}}$	56	56								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

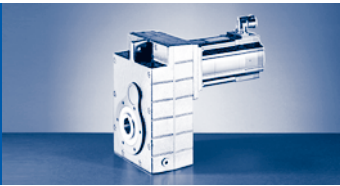


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$I_{M230}$			
	11.8										$I_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
266	483	393									c			
1.9	1.3	1.3									$n_{2Eck}$	0.56	611	36.951
95	53	110									$n_{2th}$			
95	53	99									$M_2$			
											c			
											$n_{2Eck}$	0.43	386	40.800
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.43	571	40.800
											$n_{2th}$			
294	533	434									$M_2$			
1.9	1.2	1.2									c			
86	48	99									$n_{2Eck}$	0.43	657	40.800
86	48	99									$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.41	435	45.963
											$n_{2th}$			
333	602	490									$M_2$			
1.6	1.0	1.0									c			
77	42	88									$n_{2Eck}$	0.41	613	45.963
77	42	86									$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.26	400	52.800
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.26	592	52.800
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.25	451	59.481
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.25	615	59.481
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.19	405	64.080
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.19	576	64.080
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.19	456	72.189
											$n_{2th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

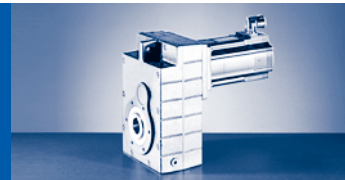
## GFL□□-□S (MCS)

$M_{2GN} \leq 657 \text{ Nm}$

GFL06-2S				06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00
			$n_1$	4050	4050	4050	3750	4050	4050	1950	4050	1500	3000
			$I_{M230}$	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5
			$I_{M400}$	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8	
			$P_N$	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50
			$J_M$	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42
72.189	616	0.19	$M_2$			157	213	263	313				
			c			3.5	2.6	2.1	1.8				
			$n_{2 \text{ Eck}}$			56	52	56	56				
			$n_{2 \text{ th}}$			56	52	56	56				
81.000	400	0.13	$M_2$	92	115								
			c	3.8	3.1								
			$n_{2 \text{ Eck}}$	50	50								
			$n_{2 \text{ th}}$	50	50								
91.250	451	0.12	$M_2$	103	130								
			c	3.8	3.1								
			$n_{2 \text{ Eck}}$	44	44								
			$n_{2 \text{ th}}$	44	44								

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

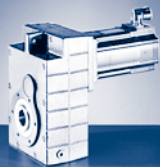


$M_{2GN} \leq 657 \text{ Nm}$

12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	GFL06-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	30.00	21.00	$n_1$			
3525	1950	4050	1500	3600	1500	3225	1500	3225	1350	3225	$i_{M230}$			
	11.8										$i_{M400}$			
5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	10.8	15.6	$P_N$			
2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	4.20	7.10	$J_M$			
7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.74	34.82	$M_2$			
											c			
											$n_{2Eck}$	0.19	616	72.189
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.13	400	81.000
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	0.12	451	91.250
											$n_{2th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

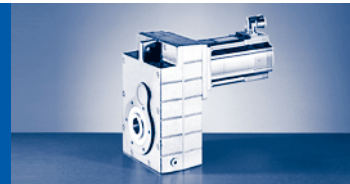
## GFL□□-□S (MCS)

$M_{2GN} \leq 634 \text{ Nm}$

GFL06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
66.213	497	0.29	$M_2$		72	91	142	193	238	283
			c		5.9	4.7	3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$		61	61	61	57	61	61
			$n_{2 \text{ th}}$		61	61	61	57	61	61
72.000	497	0.26	$M_2$		79	100	155	211	260	308
			c		5.4	4.4	2.8	2.2	1.7	1.5
			$n_{2 \text{ Eck}}$		56	56	56	52	56	56
			$n_{2 \text{ th}}$		56	56	56	52	56	56
81.111	497	0.26	$M_2$		89	113	175	238	293	348
			c		4.8	3.9	2.5	1.9	1.5	1.3
			$n_{2 \text{ Eck}}$		50	50	50	46	50	50
			$n_{2 \text{ th}}$		50	50	50	46	50	50
88.200	488	0.19	$M_2$		98	123	191	259	319	379
			c		4.4	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		46	46	46	43	46	46
			$n_{2 \text{ th}}$		46	46	46	43	46	46
99.361	550	0.19	$M_2$		110	139	215	292	359	427
			c		4.4	3.5	2.3	1.7	1.4	1.2
			$n_{2 \text{ Eck}}$		41	41	41	38	41	41
			$n_{2 \text{ th}}$		41	41	41	38	41	41
116.571	528	0.09	$M_2$		130	164				
			c		3.6	2.9				
			$n_{2 \text{ Eck}}$		35	35				
			$n_{2 \text{ th}}$		35	35				
131.323	595	0.21	$M_2$		147	185	286	387	476	
			c		3.6	2.9	1.9	1.4	1.1	
			$n_{2 \text{ Eck}}$		31	31	31	29	31	
			$n_{2 \text{ th}}$		31	31	31	29	31	
144.320	560	0.11	$M_2$		162	204				
			c		3.1	2.5				
			$n_{2 \text{ Eck}}$		28	28				
			$n_{2 \text{ th}}$		28	28				
162.583	613	0.11	$M_2$	88	183	230				
			c	6.0	3.0	2.4				
			$n_{2 \text{ Eck}}$	25	25	25				
			$n_{2 \text{ th}}$	25	25	25				
179.520	605	0.10	$M_2$	98	202	254				
			c	5.3	2.7	2.1				
			$n_{2 \text{ Eck}}$	23	23	23				
			$n_{2 \text{ th}}$	23	23	23				
202.237	611	0.10	$M_2$	111	229	287				
			c	4.8	2.4	1.9				
			$n_{2 \text{ Eck}}$	20	20	20				
			$n_{2 \text{ th}}$	20	20	20				
231.200	634	0.07	$M_2$	128	262	329				
			c	4.3	2.2	1.7				
			$n_{2 \text{ Eck}}$	18	18	18				
			$n_{2 \text{ th}}$	18	18	18				
260.457	613	0.07	$M_2$	145	296	371				
			c	3.7	1.9	1.5				
			$n_{2 \text{ Eck}}$	16	16	16				
			$n_{2 \text{ th}}$	16	16	16				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

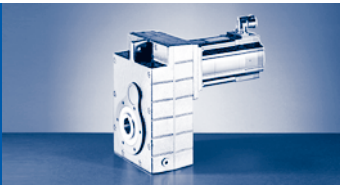


$M_{2GN} \leq 634 \text{ Nm}$

GFL06-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
299.200	613	0.06	$M_2$	168	341	428				
			c	3.2	1.6	1.3				
			$n_{2 \text{ Eck}}$	14	14	14				
			$n_{2 \text{ th}}$	14	14	14				

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
3.350	334	19.57	$M_2$ c $n_{2Eck}$ $n_{2th}$												
3.350	554	19.57	$M_2$ c $n_{2Eck}$ $n_{2th}$												
4.643	410	11.99	$M_2$ c $n_{2Eck}$ $n_{2th}$												
4.643	637	11.99	$M_2$ c $n_{2Eck}$ $n_{2th}$												
5.159	514	11.12	$M_2$ c $n_{2Eck}$ $n_{2th}$												
5.159	850	11.12	$M_2$ c $n_{2Eck}$ $n_{2th}$												
5.695	568	18.09	$M_2$ c $n_{2Eck}$ $n_{2th}$												
5.695	914	18.09	$M_2$ c $n_{2Eck}$ $n_{2th}$												
6.400	296	9.83	$M_2$ c $n_{2Eck}$ $n_{2th}$							60	48	45	82	67	
										4.8	4.7	4.8	3.2	3.1	
										234	469	551	305	633	
										234	457	458	305	420	
6.400	460	9.83	$M_2$ c $n_{2Eck}$ $n_{2th}$												
6.400	662	9.83	$M_2$ c $n_{2Eck}$ $n_{2th}$												
7.150	631	11.88	$M_2$ c $n_{2Eck}$ $n_{2th}$												
7.150	918	11.88	$M_2$ c $n_{2Eck}$ $n_{2th}$												

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]





# GFL [Nm]

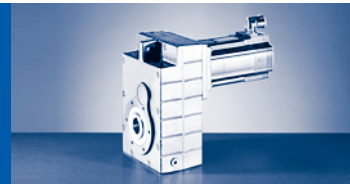
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
8.324	830	13.11	$M_2$ c $n_2$ Eck $n_2$ th												
8.324	993	13.11	$M_2$ c $n_2$ Eck $n_2$ th												
9.379	935	12.04	$M_2$ c $n_2$ Eck $n_2$ th												
9.379	999	12.04	$M_2$ c $n_2$ Eck $n_2$ th												
9.714	475	8.03	$M_2$ c $n_2$ Eck $n_2$ th							90 5.0 154 154	72 5.0 309 293	68 5.1 363 293	124 3.4 201 201	101 3.3 417 268	
9.714	745	8.03	$M_2$ c $n_2$ Eck $n_2$ th												
9.714	969	8.03	$M_2$ c $n_2$ Eck $n_2$ th												
11.538	1018	8.52	$M_2$ c $n_2$ Eck $n_2$ th												
11.538	1080	8.52	$M_2$ c $n_2$ Eck $n_2$ th												
13.000	1089	7.97	$M_2$ c $n_2$ Eck $n_2$ th												
14.200	694	6.35	$M_2$ c $n_2$ Eck $n_2$ th							132 5.0 106 106	106 5.0 211 200	99 5.1 248 201	181 3.4 137 137	148 3.3 285 184	
14.200	1089	6.35	$M_2$ c $n_2$ Eck $n_2$ th												
14.200	1143	6.35	$M_2$ c $n_2$ Eck $n_2$ th												

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

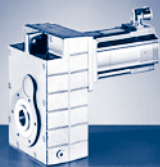


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
		108	179	134	236	165							c	13.11	830	8.324
		5.7	4.5	4.6	3.4	3.8							$n_{2 \text{ Eck}}$			
		387	180	387	162	387							$n_{2 \text{ th}}$			
		270	180	259	162	247										
							210	163	316	229	406	253	$M_2$	13.11	993	8.324
							4.6	4.7	3.1	3.4	2.4	3.1	c			
							171	360	171	360	162	360	$n_{2 \text{ Eck}}$			
							171	259	171	241	162	235	$n_{2 \text{ th}}$			
		121	202	151	266	186							$M_2$	12.04	935	9.379
		5.7	4.5	4.6	3.4	3.8							c			
		344	160	344	144	344							$n_{2 \text{ Eck}}$			
		240	160	229	144	219							$n_{2 \text{ th}}$			
							238	185	357	258	459	286	$M_2$	12.04	999	9.379
							4.1	4.2	2.8	3.0	2.2	2.7	c			
							152	320	152	320	144	320	$n_{2 \text{ Eck}}$			
							152	224	152	208	144	203	$n_{2 \text{ th}}$			
													$M_2$	8.03	475	9.714
													c			
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
	145	127	211	158	278	194							$M_2$	8.03	745	9.714
	4.9	4.4	3.4	3.6	2.6	2.9							c			
	154	332	154	332	139	332							$n_{2 \text{ Eck}}$			
	154	285	154	273	139	261							$n_{2 \text{ th}}$			
							247	192	371	268	476	297	$M_2$	8.03	969	9.714
							3.8	3.9	2.6	2.8	2.0	2.6	c			
							147	309	147	309	139	309	$n_{2 \text{ Eck}}$			
							147	228	147	228	139	228	$n_{2 \text{ th}}$			
	170	150	250	186	329	229							$M_2$	8.52	1018	11.538
	5.7	5.0	4.0	4.1	3.0	3.4							c			
	130	280	130	280	117	280							$n_{2 \text{ Eck}}$			
	130	218	130	209	117	200							$n_{2 \text{ th}}$			
							294	229	441	319	566	353	$M_2$	8.52	1080	11.538
							3.6	3.7	2.4	2.6	1.9	2.4	c			
							124	260	124	260	117	260	$n_{2 \text{ Eck}}$			
							124	192	124	190	117	186	$n_{2 \text{ th}}$			
	193	170	282	210	371	259	333	259	498	361	639	399	$M_2$	7.97	1089	13.000
	5.4	4.8	3.8	3.9	2.9	3.2	3.2	3.3	2.2	2.4	1.7	2.1	c			
	115	248	115	248	104	248	110	231	110	231	104	231	$n_{2 \text{ Eck}}$			
	115	192	115	184	104	176	110	170	110	164	104	160	$n_{2 \text{ th}}$			
													$M_2$	6.35	694	14.200
													c			
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
	211	186	309	231	406	284							$M_2$	6.35	1089	14.200
	4.9	4.4	3.4	3.6	2.6	2.9							c			
	106	227	106	227	95	227							$n_{2 \text{ Eck}}$			
	106	195	106	187	95	179							$n_{2 \text{ th}}$			
							364	283	545	394	698	436	$M_2$	6.35	1143	14.200
							3.1	3.1	2.1	2.3	1.6	2.1	c			
							100	211	100	211	95	211	$n_{2 \text{ Eck}}$			
							100	156	100	156	95	156	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
15.904	735	5.27	$M_2$							148	119	111	204	166	
			c							4.8	4.7	4.8	3.2	3.1	
			$n_{2 \text{ Eck}}$							94	189	222	123	255	
			$n_{2 \text{ th}}$							94	184	184	123	169	
15.904	1143	5.27	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
15.904	1179	5.27	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
17.920	829	4.98	$M_2$							167	134	125	229	187	
			c							4.8	4.7	4.8	3.2	3.1	
			$n_{2 \text{ Eck}}$							84	167	197	109	226	
			$n_{2 \text{ th}}$							84	163	164	109	150	
17.920	1189	4.98	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
20.286	614	3.47	$M_2$			71	85								
			c			5.9	5.0								
			$n_{2 \text{ Eck}}$			200	200								
			$n_{2 \text{ th}}$			175	170								
20.286	789	3.47	$M_2$							191	153	143	261	213	
			c							4.0	4.0	4.0	2.7	2.6	
			$n_{2 \text{ Eck}}$							74	148	174	96	200	
			$n_{2 \text{ th}}$							74	148	163	96	150	
20.286	1092	3.47	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
22.857	691	3.27	$M_2$			80	96								
			c			5.9	5.0								
			$n_{2 \text{ Eck}}$			177	177								
			$n_{2 \text{ th}}$			155	151								
22.857	890	3.27	$M_2$							215	172	161	294	240	
			c							4.0	4.0	4.0	2.7	2.6	
			$n_{2 \text{ Eck}}$							66	131	154	85	177	
			$n_{2 \text{ th}}$							66	131	145	85	133	
22.857	1231	3.27	$M_2$												
			c												
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
24.850	831	2.65	$M_2$							235	187	175	320	261	
			c							3.5	3.9	3.9	2.6	2.6	
			$n_{2 \text{ Eck}}$							60	121	142	79	163	
			$n_{2 \text{ th}}$							60	121	142	78	133	
24.850	1289	2.65	$M_2$												211
			c												5.8
			$n_{2 \text{ Eck}}$												60
			$n_{2 \text{ th}}$												60

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

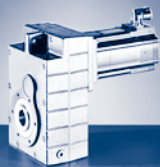


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
													$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
													c	5.27	735	15.904
													$n_2$			
													$n_2$			
													$n_2$			
													$n_2$			
	238	209	347	259	456	318							$M_2$	5.27	1143	15.904
	4.6	4.1	3.2	3.3	2.5	2.7							c			
	94	203	94	203	85	203							$n_2$			
	94	179	94	171	85	164							$n_2$			
							409	318	611	442	783	489	$M_2$			
							2.8	2.9	1.9	2.1	1.5	1.9	c	5.27	1179	15.904
							90	189	90	189	85	189	$n_2$			
							90	139	90	139	85	139	$n_2$			
													$M_2$			
													c	4.98	829	17.920
													$n_2$			
													$n_2$			
													$n_2$			
													$n_2$			
	269	236	392	293	515	359	462	359	690	500	884	552	$M_2$			
	4.3	3.8	3.0	3.1	2.3	2.5	2.5	2.6	1.7	1.9	1.3	1.7	c	4.98	1189	17.920
	84	180	84	180	75	180	80	167	80	167	75	167	$n_2$			
	84	156	84	150	75	143	80	123	80	123	75	123	$n_2$			
													$M_2$			
													c	3.47	614	20.286
													$n_2$			
													$n_2$			
													$n_2$			
													$M_2$			
													c	3.47	789	20.286
													$n_2$			
													$n_2$			
													$n_2$			
													$M_2$			
141	307	270	446	333	585	409							c	3.47	1092	20.286
5.5	3.5	3.1	2.4	2.5	1.9	2.1							$n_2$			
178	74	159	74	159	67	159							$n_2$			
173	74	155	74	148	67	142							$n_2$			
													$M_2$			
													c	3.27	691	22.857
													$n_2$			
													$n_2$			
													$n_2$			
													$M_2$			
													c	3.27	890	22.857
													$n_2$			
													$n_2$			
													$n_2$			
													$M_2$			
159	346	304	503	376	659	461							c	3.27	1231	22.857
5.5	3.5	3.1	2.4	2.5	1.9	2.1							$n_2$			
158	66	141	66	141	59	141							$n_2$			
154	66	137	66	131	59	126							$n_2$			
													$M_2$			
													c	2.65	831	24.850
													$n_2$			
													$n_2$			
													$n_2$			
													$M_2$			
	376	329	547	407	717	500							c	2.65	1289	24.850
	3.3	3.4	2.3	2.7	1.8	2.2							$n_2$			
	60	130	60	130	54	130							$n_2$			
	60	130	60	130	54	130							$n_2$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

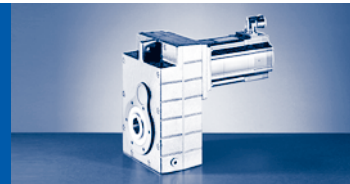
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15		
				...S00	...S10	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00		
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20		
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500		
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5		
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45		
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22		
28.000	936	2.53	$M_2$							265	211	198	361	294			
			c								3.5	3.9	3.9	2.6	2.6		
			$n_{2 \text{ Eck}}$									54	107	126	70	145	
			$n_{2 \text{ th}}$									54	107	126	70	118	
28.000	1242	2.53	$M_2$												240		
			c													5.0	
			$n_{2 \text{ Eck}}$														54
			$n_{2 \text{ th}}$														54
32.344	674	1.69	$M_2$		92	115	137										
			c		5.8	4.6	3.9										
			$n_{2 \text{ Eck}}$		116	125	125										
			$n_{2 \text{ th}}$		116	125	125										
32.344	868	1.69	$M_2$					165	129	308	246	230	419	341			
			c					5.0	5.3	2.8	3.1	3.2	2.1	2.1			
			$n_{2 \text{ Eck}}$					60	125	46	93	109	60	125			
			$n_{2 \text{ th}}$					60	125	46	93	109	60	120			
32.344	1346	1.69	$M_2$												278		
			c													4.7	
			$n_{2 \text{ Eck}}$														46
			$n_{2 \text{ th}}$														46
36.444	760	1.61	$M_2$		104	129	154										
			c		5.8	4.6	3.9										
			$n_{2 \text{ Eck}}$		103	111	111										
			$n_{2 \text{ th}}$		103	111	111										
36.444	978	1.61	$M_2$					186	145	347	277	259	472	385			
			c					5.0	5.3	2.8	3.1	3.2	2.1	2.1			
			$n_{2 \text{ Eck}}$					54	111	41	82	97	54	111			
			$n_{2 \text{ th}}$					54	111	41	82	97	54	106			
36.444	1248	1.61	$M_2$												316		
			c													3.8	
			$n_{2 \text{ Eck}}$														41
			$n_{2 \text{ th}}$														41
39.642	707	1.25	$M_2$		114	142	169										
			c		5.0	4.0	3.3										
			$n_{2 \text{ Eck}}$		95	102	102										
			$n_{2 \text{ th}}$		95	102	102										
39.642	910	1.25	$M_2$					204	159	379	302	283	515	420			
			c					4.3	4.5	2.4	2.7	2.7	1.8	1.8			
			$n_{2 \text{ Eck}}$					49	102	38	76	89	49	102			
			$n_{2 \text{ th}}$					49	102	38	76	89	49	102			
39.642	1378	1.25	$M_2$												343		
			c													3.9	
			$n_{2 \text{ Eck}}$														38
			$n_{2 \text{ th}}$														38
44.667	797	1.20	$M_2$		129	160	190										
			c		5.0	4.0	3.3										
			$n_{2 \text{ Eck}}$		84	91	91										
			$n_{2 \text{ th}}$		84	91	91										
44.667	1025	1.20	$M_2$					230	180	427	341	319	581	473			
			c					4.3	4.5	2.4	2.7	2.7	1.8	1.8			
			$n_{2 \text{ Eck}}$					44	91	34	67	79	44	91			
			$n_{2 \text{ th}}$					44	91	34	67	79	44	91			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
													$M_2$ c	2.53	936	28.000
													$n_2$ Eck			
													$n_2$ th			
195	426	373	618	461	811	565							$M_2$ c	2.53	1242	28.000
5.2	2.9	2.9	2.0	2.3	1.5	1.9							$n_2$ Eck			
129	54	115	54	115	48	115							$n_2$ th			
128	54	115	54	115	48	111							$M_2$ c	1.69	674	32.344
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.69	868	32.344
													$n_2$ Eck			
													$n_2$ th			
226	493	432	715	533	937	654							$M_2$ c	1.69	1346	32.344
4.9	2.7	2.7	1.9	2.2	1.4	1.8							$n_2$ Eck			
111	46	100	46	100	42	100							$n_2$ th			
111	46	100	46	100	42	100							$M_2$ c	1.61	760	36.444
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.61	978	36.444
													$n_2$ Eck			
													$n_2$ th			
257	559	489	809	603	1059	739							$M_2$ c	1.61	1248	36.444
4.0	2.2	2.2	1.5	1.8	1.2	1.5							$n_2$ Eck			
99	41	89	41	89	37	89							$n_2$ th			
99	41	88	41	88	37	88							$M_2$ c	1.25	707	39.642
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.25	910	39.642
													$n_2$ Eck			
													$n_2$ th			
279	608	532	880	656	1152	804							$M_2$ c	1.25	1378	39.642
4.1	2.2	2.3	1.6	1.8	1.2	1.5							$n_2$ Eck			
91	38	81	38	81	34	81							$n_2$ th			
91	38	81	38	81	34	81							$M_2$ c	1.20	797	44.667
													$n_2$ Eck			
													$n_2$ th			
													$M_2$ c	1.20	1025	44.667
													$n_2$ Eck			
													$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

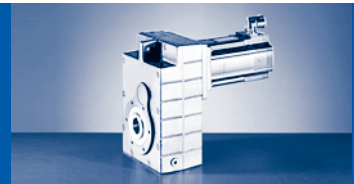
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15		
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00		
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20		
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500		
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5		
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45		
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22		
44.667	1258	1.20	$M_2$												390		
			c													3.2	
			$n_{2 \text{ Eck}}$														34
			$n_{2 \text{ th}}$														34
52.067	726	0.78	$M_2$	111	152	188	224										
			c	5.1	3.9	3.1	2.6										
			$n_{2 \text{ Eck}}$	78	72	78	78										
			$n_{2 \text{ th}}$	78	72	78	78										
52.067	935	0.78	$M_2$					271	212	501	400	375	679	554			
			c					3.4	3.5	1.9	2.1	2.1	1.4	1.4			
			$n_{2 \text{ Eck}}$					38	78	29	58	68	38	78			
			$n_{2 \text{ th}}$					37	78	29	58	68	37	78			
58.667	819	0.75	$M_2$	125	171	212	252										
			c	5.1	3.9	3.1	2.6										
			$n_{2 \text{ Eck}}$	69	64	69	69										
			$n_{2 \text{ th}}$	69	64	69	69										
58.667	1054	0.75	$M_2$					305	238	564	450	422	765	624			
			c					3.4	3.5	1.9	2.1	2.1	1.4	1.4			
			$n_{2 \text{ Eck}}$					33	69	26	51	60	33	69			
			$n_{2 \text{ th}}$					33	69	26	51	60	33	69			
63.190	735	0.57	$M_2$	136	186	229	273										
			c	4.3	3.2	2.6	2.2										
			$n_{2 \text{ Eck}}$	64	59	64	64										
			$n_{2 \text{ th}}$	64	59	64	64										
63.190	946	0.57	$M_2$					331	258	610	487	456	826	673			
			c					2.8	2.9	1.5	1.7	1.8	1.1	1.2			
			$n_{2 \text{ Eck}}$					31	64	24	48	56	31	64			
			$n_{2 \text{ th}}$					31	64	24	47	56	31	64			
71.200	828	0.56	$M_2$	153	208	257	306										
			c	4.7	3.6	2.9	2.4										
			$n_{2 \text{ Eck}}$	57	53	57	57										
			$n_{2 \text{ th}}$	57	53	57	57										
71.200	1066	0.56	$M_2$					373	290	687	547	513	931	758			
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3			
			$n_{2 \text{ Eck}}$					27	57	21	42	50	27	57			
			$n_{2 \text{ th}}$					27	57	21	42	50	27	57			
79.875	744	0.37	$M_2$	173	236	291	345										
			c	3.8	2.9	2.3	1.9										
			$n_{2 \text{ Eck}}$	51	47	51	51										
			$n_{2 \text{ th}}$	51	47	51	51										
90.000	839	0.36	$M_2$	195	265	327	389										
			c	3.8	2.9	2.3	1.9										
			$n_{2 \text{ Eck}}$	45	42	45	45										
			$n_{2 \text{ th}}$	45	42	45	45										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

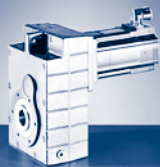


$M_{2GN} \leq 1378 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL07-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
317	688	602	994	742		908							$M_2$			
3.3	1.8	1.8	1.3	1.5		1.2							c	1.20	1258	44.667
81	34	72	34	72		72							$n_{2 \text{ Eck}}$			
80	34	72	34	72		72							$n_{2 \text{ th}}$			
													$M_2$			
													c	0.78	726	52.067
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.78	935	52.067
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.75	819	58.667
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.75	1054	58.667
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.57	735	63.190
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.57	946	63.190
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.56	828	71.200
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.56	1066	71.200
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.37	744	79.875
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			
													$M_2$			
													c	0.36	839	90.000
													$n_{2 \text{ Eck}}$			
													$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

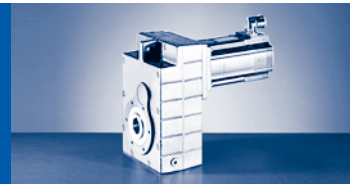
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
65.306	883	0.79	$M_2$				137	187	231	275
			c				5.6	4.2	3.4	2.8
			$n_{2 \text{ Eck}}$				62	57	62	62
			$n_{2 \text{ th}}$				62	57	62	62
72.452	869	0.89	$M_2$				153	208	258	307
			c				4.9	3.8	3.0	2.5
			$n_{2 \text{ Eck}}$				56	52	56	56
			$n_{2 \text{ th}}$				56	52	56	56
81.636	979	0.88	$M_2$				172	235	290	345
			c				4.9	3.8	3.0	2.5
			$n_{2 \text{ Eck}}$				50	46	50	50
			$n_{2 \text{ th}}$				50	46	50	50
92.413	961	0.61	$M_2$				196	267	330	392
			c				4.3	3.3	2.6	2.2
			$n_{2 \text{ Eck}}$				44	41	44	44
			$n_{2 \text{ th}}$				44	41	44	44
104.127	1082	0.60	$M_2$				221	301	372	442
			c				4.3	3.3	2.6	2.2
			$n_{2 \text{ Eck}}$				39	36	39	39
			$n_{2 \text{ th}}$				39	36	39	39
113.206	1040	0.45	$M_2$			154	242	329	406	482
			c			5.8	3.8	2.9	2.3	1.9
			$n_{2 \text{ Eck}}$			36	36	33	36	36
			$n_{2 \text{ th}}$			36	36	33	36	36
127.556	1171	0.44	$M_2$			174	272	370	457	543
			c			5.8	3.8	2.9	2.3	1.9
			$n_{2 \text{ Eck}}$			32	32	29	32	32
			$n_{2 \text{ th}}$			32	32	29	32	32
147.347	1140	0.28	$M_2$			203	316	430	530	630
			c			4.9	3.2	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$			28	28	26	28	28
			$n_{2 \text{ th}}$			27	27	25	27	27
166.025	1248	0.27	$M_2$		181	229	357	485	597	710
			c		5.9	4.8	3.1	2.4	1.9	1.6
			$n_{2 \text{ Eck}}$		24	24	24	23	24	24
			$n_{2 \text{ th}}$		24	24	24	23	24	24
183.285	1236	0.19	$M_2$		201	254	395	537	661	785
			c		5.3	4.3	2.8	2.1	1.7	1.4
			$n_{2 \text{ Eck}}$		22	22	22	21	22	22
			$n_{2 \text{ th}}$		22	22	22	20	22	22
206.519	1248	0.19	$M_2$		227	287	447	606	746	886
			c		4.8	3.8	2.5	1.9	1.5	1.3
			$n_{2 \text{ Eck}}$		20	20	20	18	20	20
			$n_{2 \text{ th}}$		20	20	20	18	20	20
224.636	1343	0.18	$M_2$		248	313	486	659	812	963
			c		4.7	3.8	2.5	1.9	1.5	1.3
			$n_{2 \text{ Eck}}$		18	18	18	17	18	18
			$n_{2 \text{ th}}$		18	18	18	17	18	18
253.111	1258	0.18	$M_2$		281	355	550	745	917	1088
			c		3.9	3.1	2.1	1.6	1.2	1.1
			$n_{2 \text{ Eck}}$		16	16	16	15	16	16
			$n_{2 \text{ th}}$		16	16	16	15	16	16

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

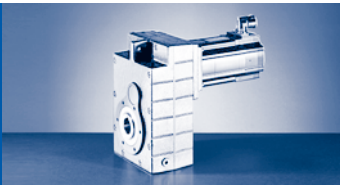


$M_{2GN} \leq 1378 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL07-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$			
338	263	621	495	464	842	685	c	0.79	883	65.306
2.6	3.0	1.4	1.8	1.8	1.1	1.2	$n_{2 \text{ Eck}}$			
30	62	23	46	54	30	62	$n_{2 \text{ th}}$			
30	62	23	46	54	30	62	$M_2$			
376	293	691	551	516		761	c	0.89	869	72.452
2.3	2.6	1.3	1.6	1.6		1.0	$n_{2 \text{ Eck}}$			
27	56	21	41	49		56	$n_{2 \text{ th}}$			
27	56	21	41	49		46	$M_2$			
423	330	778	620	582		858	c	0.88	979	81.636
2.3	2.6	1.3	1.6	1.6		1.0	$n_{2 \text{ Eck}}$			
24	50	18	37	43		50	$n_{2 \text{ th}}$			
24	50	18	37	43		41	$M_2$			
481	375	882	704	660			c	0.61	961	92.413
2.0	2.3	1.1	1.4	1.4			$n_{2 \text{ Eck}}$			
21	44	16	33	38			$n_{2 \text{ th}}$			
21	44	16	32	38			$M_2$			
542	422	994	793	743			c	0.60	1082	104.127
2.0	2.3	1.1	1.4	1.4			$n_{2 \text{ Eck}}$			
19	39	14	29	34			$n_{2 \text{ th}}$			
19	39	14	29	34			$M_2$			
590	460		864	810			c	0.45	1040	113.206
1.8	2.0		1.2	1.2			$n_{2 \text{ Eck}}$			
17	36		27	31			$n_{2 \text{ th}}$			
17	36		27	31			$M_2$			
665	519		973	912			c	0.44	1171	127.556
1.8	2.0		1.2	1.2			$n_{2 \text{ Eck}}$			
15	32		24	28			$n_{2 \text{ th}}$			
15	32		24	28			$M_2$			
							c	0.28	1140	147.347
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.27	1248	166.025
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.19	1236	183.285
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.19	1248	206.519
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.18	1343	224.636
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			
							$M_2$			
							c	0.18	1258	253.111
							$n_{2 \text{ Eck}}$			
							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

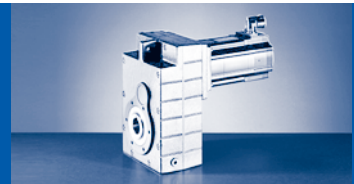
## GFL□□-□S (MCS)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50
			$n_1$	4050	4050	4050	4050	3750	4050	4050
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83
290.706	1378	0.11	$M_2$		324	408				
			c		3.7	3.0				
			$n_{2 \text{ Eck}}$		14	14				
			$n_{2 \text{ th}}$		14	14				
327.556	1258	0.11	$M_2$		368	463				
			c		3.0	2.4				
			$n_{2 \text{ Eck}}$		12	12				
			$n_{2 \text{ th}}$		12	12				
352.811	1378	0.08	$M_2$		396	498				
			c		3.1	2.5				
			$n_{2 \text{ Eck}}$		12	12				
			$n_{2 \text{ th}}$		11	11				
397.533	1258	0.08	$M_2$	218	449	564				
			c	5.0	2.5	2.0				
			$n_{2 \text{ Eck}}$	10	10	10				
			$n_{2 \text{ th}}$	10	10	10				
430.222	1270	0.10	$M_2$	237	487	611				
			c	4.7	2.3	1.9				
			$n_{2 \text{ Eck}}$	9	9	9				
			$n_{2 \text{ th}}$	9	9	9				
522.133	1270	0.08	$M_2$	291	593	744				
			c	3.8	1.9	1.5				
			$n_{2 \text{ Eck}}$	8	8	8				
			$n_{2 \text{ th}}$	8	8	8				
562.391	1128	0.07	$M_2$	315	641	804				
			c	3.2	1.6	1.3				
			$n_{2 \text{ Eck}}$	7	7	7				
			$n_{2 \text{ th}}$	7	7	7				
633.680	1220	0.07	$M_2$	356	723	906				
			c	3.0	1.5	1.2				
			$n_{2 \text{ Eck}}$	6	6	6				
			$n_{2 \text{ th}}$	6	6	6				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

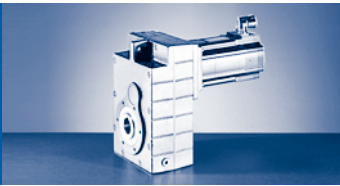


$M_{2GN} \leq 1378 \text{ Nm}$

12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	GFL07-3S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
5.50	4.30	10.00	8.00	7.50	13.50	11.00	$n_1$			
1950	4050	1500	3000	3525	1950	4050	$I_{M230}$			
5.2	8.8	7.6	10.5		11.8		$I_{M400}$			
2.6	4.5	3.8		5.7	5.9	10.2	$P_N$			
1.10	1.80	1.60	2.50	2.80	2.80	4.70	$J_M$			
4.12	4.12	7.42	7.42	7.42	10.72	10.72	$M_2$ c $n_2$ Eck $n_2$ th	0.11	1378	290.706
							$M_2$ c $n_2$ Eck $n_2$ th	0.11	1258	327.556
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	1378	352.811
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	1258	397.533
							$M_2$ c $n_2$ Eck $n_2$ th	0.10	1270	430.222
							$M_2$ c $n_2$ Eck $n_2$ th	0.08	1270	522.133
							$M_2$ c $n_2$ Eck $n_2$ th	0.07	1128	562.391
							$M_2$ c $n_2$ Eck $n_2$ th	0.07	1220	633.680

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

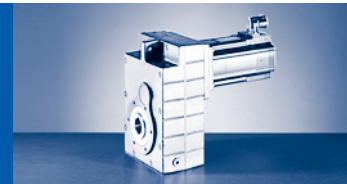
## GFL□□-□S (MCS)

$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
6.864	1207	41.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
7.466	1313	38.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
9.010	860	26.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
9.010	1336	26.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
9.799	935	25.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
9.799	1453	25.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
11.167	976	19.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										165 5.6 134 134
11.167	1516	19.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
12.307	2165	27.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
14.333	1368	20.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
14.333	2125	20.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										
16.333	1427	15.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										241 5.6 92 92
16.333	2217	15.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

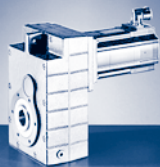


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
							257	185	331	205	$M_2$			
							4.5	5.0	3.6	4.5	c	41.30	1207	6.864
							208	437	197	437	$n_2$ Eck			
							208	294	197	288	$n_2$ th			
							279	201	360	223	$M_2$			
							4.5	5.0	3.6	4.5	c	38.70	1313	7.466
							191	402	181	402	$n_2$ Eck			
							191	271	181	265	$n_2$ th			
117	194	145	256	179							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	26.80	860	9.010
358	167	358	150	358							$n_2$ Eck			
259	166	249	150	238							$n_2$ th			
					225	175	339	245	437	272	$M_2$			
					5.7	5.8	3.8	4.2	3.0	3.8	c	26.80	1336	9.010
					158	333	158	333	150	333	$n_2$ Eck			
					158	245	158	245	150	241	$n_2$ th			
127	211	158	279	194							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	25.30	935	9.799
329	153	329	138	329							$n_2$ Eck			
239	153	229	138	219							$n_2$ th			
					244	190	369	267	475	295	$M_2$			
					5.7	5.8	3.8	4.2	3.0	3.8	c	25.30	1453	9.799
					145	306	145	306	138	306	$n_2$ Eck			
					145	226	145	226	138	221	$n_2$ th			
145	242	180	318	222							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	19.50	976	11.167
289	134	289	121	289							$n_2$ Eck			
225	134	216	121	207							$n_2$ th			
					280	217	422	305	543	338	$M_2$			
					5.2	5.3	3.5	3.8	2.7	3.5	c	19.50	1516	11.167
					128	269	128	269	121	269	$n_2$ Eck			
					128	198	128	198	121	198	$n_2$ th			
							460	332	593	368	$M_2$			
							4.5	5.0	3.6	4.5	c	27.60	2165	12.307
							116	244	110	244	$n_2$ Eck			
							116	164	110	161	$n_2$ th			
186	309	231	407	284							$M_2$			
5.4	4.3	4.4	3.3	3.6							c	20.00	1368	14.333
225	105	225	94	225							$n_2$ Eck			
163	105	156	94	150							$n_2$ th			
					357	278	540	390	695	432	$M_2$			
					5.7	5.8	3.8	4.2	3.0	3.8	c	20.00	2125	14.333
					99	209	99	209	94	209	$n_2$ Eck			
					99	154	99	154	94	151	$n_2$ th			
213	354	264	466	325							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	15.50	1427	16.333
198	92	198	83	198							$n_2$ Eck			
154	92	147	83	141							$n_2$ th			
					409	318	618	446	794	494	$M_2$			
					5.2	5.3	3.5	3.8	2.7	3.5	c	15.50	2217	16.333
					87	184	87	184	83	184	$n_2$ Eck			
					87	135	87	135	83	135	$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

## GFL□□-□S (MCS)

$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
18.407	1608	14.60	$M_2$										272
			c										5.6
			$n_{2 \text{ Eck}}$										82
			$n_{2 \text{ th}}$										81
18.407	2480	14.60	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
19.667	962	12.10	$M_2$			183	146	137	251	205			
			c			5.0	5.0	5.1	3.4	3.3			
			$n_{2 \text{ Eck}}$			76	153	179	99	206			
			$n_{2 \text{ th}}$			76	145	145	99	132			
19.667	1506	12.10	$M_2$										293
			c										4.9
			$n_{2 \text{ Eck}}$										76
			$n_{2 \text{ th}}$										76
19.667	2339	12.10	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
22.164	1084	11.30	$M_2$			206	165	155	283	231			
			c			5.0	5.0	5.1	3.4	3.3			
			$n_{2 \text{ Eck}}$			68	135	159	88	183			
			$n_{2 \text{ th}}$			68	128	129	88	118			
22.164	1697	11.30	$M_2$										330
			c										4.9
			$n_{2 \text{ Eck}}$										68
			$n_{2 \text{ th}}$										68
22.164	2612	11.30	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
24.111	1585	9.04	$M_2$										362
			c										4.2
			$n_{2 \text{ Eck}}$										62
			$n_{2 \text{ th}}$										62
24.111	2463	9.04	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
27.173	1786	8.63	$M_2$										408
			c										4.2
			$n_{2 \text{ Eck}}$										55
			$n_{2 \text{ th}}$										55
27.173	2767	8.63	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
32.667	1074	5.43	$M_2$			309	246	231	421	343			
			c			3.4	3.8	3.9	2.5	2.5			
			$n_{2 \text{ Eck}}$			46	92	108	60	124			
			$n_{2 \text{ th}}$			46	92	108	60	100			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
240	398	298	525	366							$M_2$			
5.0	3.9	4.1	3.0	3.3							c	14.60	1608	18.407
175	82	175	73	175							$n_2$ Eck			
137	81	131	73	125							$n_2$ th			
					462	359	696	503	895	557	$M_2$			
					5.1	5.3	3.5	3.8	2.7	3.4	c	14.60	2480	18.407
					77	163	77	163	73	163	$n_2$ Eck			
					77	120	77	120	73	120	$n_2$ th			
											$M_2$			
											c	12.10	962	19.667
											$n_2$ Eck			
											$n_2$ th			
258	428	320	563	393							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	12.10	1506	19.667
164	76	164	69	164							$n_2$ Eck			
141	76	135	69	129							$n_2$ th			
					496	386	747	540	959	598	$M_2$			
					4.5	4.6	3.1	3.4	2.4	3.0	c	12.10	2339	19.667
					73	153	73	153	69	153	$n_2$ Eck			
					72	112	72	112	69	112	$n_2$ th			
											$M_2$			
											c	11.30	1084	22.164
											$n_2$ Eck			
											$n_2$ th			
291	482	360	634	443							$M_2$			
4.4	3.4	3.6	2.6	2.9							c	11.30	1697	22.164
146	68	146	61	146							$n_2$ Eck			
125	68	119	61	114							$n_2$ th			
					560	435	842	609	1081	674	$M_2$			
					4.5	4.6	3.0	3.3	2.4	3.0	c	11.30	2612	22.164
					64	135	64	135	61	135	$n_2$ Eck			
					64	100	64	100	61	100	$n_2$ th			
317	527	392	693	482							$M_2$			
4.3	3.0	3.5	2.3	2.8							c	9.04	1585	24.111
134	62	134	56	134							$n_2$ Eck			
124	62	119	56	114							$n_2$ th			
					613	473	920	662	1180	733	$M_2$			
					3.9	4.5	2.6	3.3	2.1	3.0	c	9.04	2463	24.111
					59	124	59	124	56	124	$n_2$ Eck			
					59	92	59	92	56	92	$n_2$ th			
357	594	442	781	543							$M_2$			
4.3	3.0	3.5	2.3	2.8							c	8.63	1786	27.173
119	55	119	50	119							$n_2$ Eck			
110	55	105	50	101							$n_2$ th			
					691	534	1037	747	1330	827	$M_2$			
					3.9	4.5	2.6	3.3	2.1	3.0	c	8.63	2767	27.173
					52	110	52	110	50	110	$n_2$ Eck			
					52	81	52	81	50	81	$n_2$ th			
											$M_2$			
											c	5.43	1074	32.667
											$n_2$ Eck			
											$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

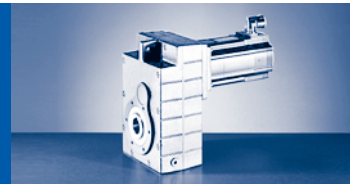
## GFL□□-□S (MCS)

$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00		
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500		
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8						
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6		
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50		
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32		
32.667	1678	5.43	$M_2$								277	225	495		
			c									5.8	6.0	3.3	
			$n_{2 \text{ Eck}}$										46	110	46
			$n_{2 \text{ th}}$										46	110	46
36.815	1211	5.21	$M_2$			348	277	260	475	387					
			c			3.4	3.8	3.9	2.5	2.5					
			$n_{2 \text{ Eck}}$			41	82	96	53	110					
			$n_{2 \text{ th}}$			41	81	96	53	89					
36.815	1891	5.21	$M_2$								313	254	558		
			c									5.8	6.0	3.3	
			$n_{2 \text{ Eck}}$										41	98	41
			$n_{2 \text{ th}}$										41	98	41
39.667	1118	4.07	$M_2$	202	158	377	301	282	513	418					
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2					
			$n_{2 \text{ Eck}}$	49	102	38	76	89	49	102					
			$n_{2 \text{ th}}$	49	102	38	76	89	49	95					
39.667	1743	4.07	$M_2$								340	276	604		
			c									4.9	5.1	2.8	
			$n_{2 \text{ Eck}}$										38	91	38
			$n_{2 \text{ th}}$										38	91	38
44.704	1260	3.92	$M_2$	228	178	425	339	318	579	471					
			c	5.3	5.5	2.9	3.3	3.3	2.2	2.2					
			$n_{2 \text{ Eck}}$	44	91	34	67	79	44	91					
			$n_{2 \text{ th}}$	44	91	34	67	79	44	84					
44.704	1965	3.92	$M_2$								383	311	681		
			c									4.9	5.1	2.8	
			$n_{2 \text{ Eck}}$										34	81	34
			$n_{2 \text{ th}}$										34	80	34
51.333	1160	2.59	$M_2$	265	207	491	392	367	667	544					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_{2 \text{ Eck}}$	38	79	29	58	69	38	79					
			$n_{2 \text{ th}}$	38	79	29	58	69	38	78					
51.333	1808	2.59	$M_2$								444	362	786		
			c									4.0	4.1	2.3	
			$n_{2 \text{ Eck}}$										29	70	29
			$n_{2 \text{ th}}$										29	70	29
57.852	1307	2.50	$M_2$	298	233	554	442	414	752	613					
			c	4.2	4.4	2.3	2.6	2.7	1.7	1.7					
			$n_{2 \text{ Eck}}$	34	70	26	52	61	34	70					
			$n_{2 \text{ th}}$	34	70	26	52	61	34	69					
57.852	2038	2.50	$M_2$								501	407	886		
			c									4.0	4.1	2.3	
			$n_{2 \text{ Eck}}$										26	62	26
			$n_{2 \text{ th}}$										26	62	26
62.300	1174	1.89	$M_2$	324	253	599	478	448	812	662					
			c	3.5	3.7	1.9	2.2	2.2	1.4	1.4					
			$n_{2 \text{ Eck}}$	31	65	24	48	57	31	65					
			$n_{2 \text{ th}}$	31	65	24	48	57	31	65					
62.300	1829	1.89	$M_2$								543	442	958		
			c									3.3	3.4	1.9	
			$n_{2 \text{ Eck}}$										24	58	24
			$n_{2 \text{ th}}$										24	58	24

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

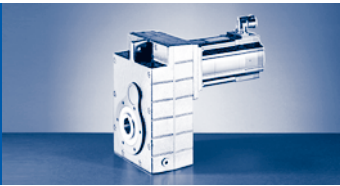


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_M 230$			
											$I_M 400$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
433	719	536	943	657							c			
3.3	2.3	2.7	1.8	2.2							$n_{2 \text{ Eck}}$	5.43	1678	32.667
99	46	99	41	99							$n_{2 \text{ th}}$			
99	46	99	41	98							$M_2$			
											c			
											$n_{2 \text{ Eck}}$	5.21	1211	36.815
											$n_{2 \text{ th}}$			
488	811	604	1063	741							$M_2$			
3.3	2.3	2.7	1.8	2.2							c			
88	41	88	37	88							$n_{2 \text{ Eck}}$	5.21	1891	36.815
88	41	88	37	87							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	4.07	1118	39.667
											$n_{2 \text{ th}}$			
529	876	653	1148	801							$M_2$			
2.9	2.0	2.3	1.5	1.9							c			
81	38	81	34	81							$n_{2 \text{ Eck}}$	4.07	1743	39.667
81	38	81	34	81							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	3.92	1260	44.704
											$n_{2 \text{ th}}$			
596	988	736	1294	902							$M_2$			
2.9	2.0	2.3	1.5	1.9							c			
72	34	72	30	72							$n_{2 \text{ Eck}}$	3.92	1965	44.704
72	34	72	30	72							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	2.59	1160	51.333
											$n_{2 \text{ th}}$			
688	1139	849	1491	1040							$M_2$			
2.3	1.6	1.9	1.2	1.5							c			
63	29	63	26	63							$n_{2 \text{ Eck}}$	2.59	1808	51.333
63	29	63	26	63							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	2.50	1307	57.852
											$n_{2 \text{ th}}$			
775	1283	957	1680	1172							$M_2$			
2.3	1.6	1.9	1.2	1.5							c			
56	26	56	23	56							$n_{2 \text{ Eck}}$	2.50	2038	57.852
56	26	56	23	56							$n_{2 \text{ th}}$			
											$M_2$			
											c			
											$n_{2 \text{ Eck}}$	1.89	1174	62.300
											$n_{2 \text{ th}}$			
838	1386	1034	1813	1266							$M_2$			
1.9	1.3	1.6	1.0	1.3							c			
52	24	52	22	52							$n_{2 \text{ Eck}}$	1.89	1829	62.300
52	24	52	22	52							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

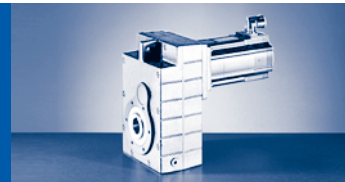
## GFL□□-□S (MCS)

$M_{2GN} \leq 2767 \text{ Nm}$

GFL09-2S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
70.211	1324	1.83	$M_2$	365	284	675	537	503	915	745			
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6			
			$n_{2 \text{ Eck}}$	28	58	21	43	50	28	58			
			$n_{2 \text{ th}}$	28	58	21	43	50	28	58			
70.211	2061	1.83	$M_2$								612	496	1080
			c								3.3	3.8	1.9
			$n_{2 \text{ Eck}}$								21	51	21
			$n_{2 \text{ th}}$								21	51	21
78.750	1190	1.25	$M_2$	412	321	760	605	567	1030	838			
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3			
			$n_{2 \text{ Eck}}$	25	51	19	38	45	25	51			
			$n_{2 \text{ th}}$	25	51	19	38	45	25	51			
88.750	1341	1.21	$M_2$	465	362	856	682	639	1161	944			
			c	2.8	3.3	1.6	2.0	2.0	1.2	1.3			
			$n_{2 \text{ Eck}}$	22	46	17	34	40	22	46			
			$n_{2 \text{ th}}$	22	46	17	34	40	22	46			

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

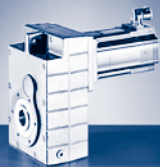


$M_{2GN} \leq 2767 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL09-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
											$M_2$ c $n_{2Eck}$ $n_{2th}$	1.83	1324	70.211
943	1562	1163	2043	1425							$M_2$ c $n_{2Eck}$ $n_{2th}$	1.83	2061	70.211
2.1	1.3	1.7	1.0	1.4							$M_2$ c $n_{2Eck}$ $n_{2th}$	1.25	1190	78.750
46	21	46	19	46							$M_2$ c $n_{2Eck}$ $n_{2th}$	1.21	1341	88.750
46	21	46	19	46										

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

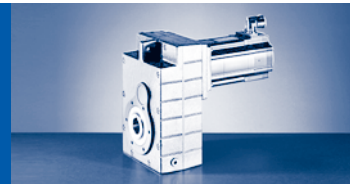
## GFL□□-□S (MCS)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15		
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500		
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00		
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500		
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6		
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8		
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60		
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42		
63.326	1510	2.34	$M_2$						219	262	321	250	596		
			c						5.4	4.5	4.5	4.7	2.5		
			$n_{2 \text{ Eck}}$							64	64	31	64	24	
			$n_{2 \text{ th}}$							64	64	31	64	24	
73.173	1517	2.47	$M_2$						254	304	373	289	691		
			c						5.2	4.4	4.0	4.6	2.2		
			$n_{2 \text{ Eck}}$							55	55	27	55	21	
			$n_{2 \text{ th}}$							55	55	27	55	21	
82.465	1710	2.43	$M_2$						286	342	420	326	778		
			c						5.2	4.4	4.0	4.6	2.2		
			$n_{2 \text{ Eck}}$							49	49	24	49	18	
			$n_{2 \text{ th}}$							49	49	24	49	18	
93.333	1692	1.68	$M_2$					263	326	390	478	372	884		
			c					5.7	4.5	3.8	3.5	4.0	1.9		
			$n_{2 \text{ Eck}}$							40	43	43	21	43	16
			$n_{2 \text{ th}}$							40	43	43	21	43	16
105.185	1907	1.65	$M_2$					296	368	439	539	419	996		
			c					5.7	4.5	3.8	3.5	4.0	1.9		
			$n_{2 \text{ Eck}}$							36	39	39	19	39	14
			$n_{2 \text{ th}}$							36	39	39	19	39	14
114.333	1847	1.23	$M_2$					324	402	479	588	457	1085		
			c					5.1	4.0	3.4	3.1	3.6	1.7		
			$n_{2 \text{ Eck}}$							33	35	35	17	35	13
			$n_{2 \text{ th}}$							33	35	35	17	35	13
128.852	2082	1.21	$M_2$					366	453	540	663	515	1223		
			c					5.1	4.0	3.4	3.1	3.6	1.7		
			$n_{2 \text{ Eck}}$							29	31	31	15	31	12
			$n_{2 \text{ th}}$							29	31	31	15	31	12
148.815	2053	0.77	$M_2$				311	426	527	627	769	598	1416		
			c				5.7	4.3	3.4	2.9	2.6	3.0	1.4		
			$n_{2 \text{ Eck}}$							27	25	27	13	27	10
			$n_{2 \text{ th}}$							27	25	27	13	27	10
167.712	2314	0.76	$M_2$				351	480	594	707	867	674	1595		
			c				5.7	4.3	3.4	2.9	2.6	3.0	1.4		
			$n_{2 \text{ Eck}}$							24	22	24	12	24	9
			$n_{2 \text{ th}}$							24	22	24	12	24	9
185.111	1724	0.55	$M_2$			252									
			c			5.9									
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
185.111	2232	0.55	$M_2$				390	532	658	783	960	748	1764		
			c				5.0	3.8	3.0	2.5	2.3	2.7	1.3		
			$n_{2 \text{ Eck}}$							22	20	22	11	22	8
			$n_{2 \text{ th}}$							22	20	22	11	22	8
208.617	1943	0.54	$M_2$			284									
			c			5.9									
			$n_{2 \text{ Eck}}$												
			$n_{2 \text{ th}}$												
208.617	2515	0.54	$M_2$				440	600	742	883	1082	842	1988		
			c				5.0	3.8	3.0	2.5	2.3	2.7	1.3		
			$n_{2 \text{ Eck}}$							19	18	19	9	19	7
			$n_{2 \text{ th}}$							19	18	19	9	19	7

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

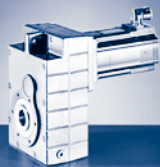


$M_{2GN} \leq 3170 \text{ Nm}$

12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC32	GFL09-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
8.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	$n_1$			
3000	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	$I_{M230}$			
10.5		11.8									$I_{M400}$			
	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	$P_N$			
2.50	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	$J_M$			
7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	$M_2$			
475	445	810	660	547	445	963	842	1391	1038	1270	c			
2.8	2.8	1.9	1.9	2.7	2.8	1.6	1.6	1.1	1.3	1.1	$n_{2\text{ Eck}}$	2.34	1510	63.326
47	56	31	64	24	57	24	51	24	51	51	$n_{2\text{ th}}$			
47	56	31	64	24	57	24	51	24	51	51				
549	515	938	763	634	515	1115	974		1200	1468	$M_2$			
2.7	2.7	1.6	1.8	2.4	2.7	1.4	1.5		1.2	1.0	c	2.47	1517	73.173
41	48	27	55	21	49	21	44		44	44	$n_{2\text{ Eck}}$			
41	48	27	49	21	49	21	44		41	37	$n_{2\text{ th}}$			
619	580	1057	860	715	580	1256	1097		1352	1655	$M_2$			
2.7	2.7	1.6	1.8	2.4	2.7	1.4	1.5		1.2	1.0	c	2.43	1710	82.465
36	43	24	49	18	44	18	39		39	39	$n_{2\text{ Eck}}$			
36	43	24	44	18	44	18	39		36	33	$n_{2\text{ th}}$			
703	659	1199	975	811	659	1424	1245		1533		$M_2$			
2.4	2.4	1.4	1.6	2.1	2.4	1.2	1.3		1.1		c	1.68	1692	93.333
32	38	21	43	16	39	16	35		35		$n_{2\text{ Eck}}$			
32	38	21	41	16	38	16	35		35		$n_{2\text{ th}}$			
793	743	1351	1099	915	743	1605	1403		1728		$M_2$			
2.4	2.4	1.4	1.6	2.1	2.4	1.2	1.3		1.1		c	1.65	1907	105.185
29	34	19	39	14	34	14	31		31		$n_{2\text{ Eck}}$			
29	34	19	36	14	34	14	31		31		$n_{2\text{ th}}$			
864	810	1471	1197	996	810	1747	1527				$M_2$			
2.1	2.1	1.3	1.4	1.8	2.1	1.1	1.2				c	1.23	1847	114.333
26	31	17	35	13	32	13	28				$n_{2\text{ Eck}}$			
26	31	17	35	13	31	13	28				$n_{2\text{ th}}$			
974	913	1658	1349	1123	913	1969	1721				$M_2$			
2.1	2.1	1.3	1.4	1.8	2.1	1.1	1.2				c	1.21	2082	128.852
23	27	15	31	12	28	12	25				$n_{2\text{ Eck}}$			
23	27	15	31	12	28	12	25				$n_{2\text{ th}}$			
1128	1057	1919	1561								$M_2$			
1.8	1.8	1.1	1.2								c	0.77	2053	148.815
20	24	13	27								$n_{2\text{ Eck}}$			
20	24	13	27								$n_{2\text{ th}}$			
1271	1192	2162	1760								$M_2$			
1.8	1.8	1.1	1.2								c	0.76	2314	167.712
18	21	12	24								$n_{2\text{ Eck}}$			
18	21	12	24								$n_{2\text{ th}}$			
											$M_2$			
											c	0.55	1724	185.111
											$n_{2\text{ Eck}}$			
											$n_{2\text{ th}}$			
1407	1319		1945								$M_2$			
1.6	1.6		1.0								c	0.55	2232	185.111
16	19		22								$n_{2\text{ Eck}}$			
16	19		22								$n_{2\text{ th}}$			
											$M_2$			
											c	0.54	1943	208.617
											$n_{2\text{ Eck}}$			
											$n_{2\text{ th}}$			
1585	1486		2192								$M_2$			
1.6	1.6		1.0								c	0.54	2515	208.617
14	17		19								$n_{2\text{ Eck}}$			
14	17		19								$n_{2\text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

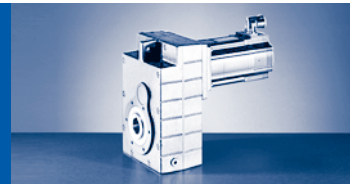
## GFL□□-□S (MCS)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42
224.778	2093	0.51	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			306 5.9 18 18							
224.778	2407	0.51	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				476 4.4 18 18	650 3.4 17 17	802 2.7 18 18	954 2.3 18 18	1169 2.0 9 9	911 2.4 18 18	2145 1.1 7 7
253.321	2359	0.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			345 5.9 16 16							
253.321	2712	0.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				537 4.4 16 16	732 3.4 15 15	904 2.7 16 16	1075 2.3 16 16	1317 2.0 8 8	1026 2.4 16 16	2418 1.1 6 6
290.889	2172	0.31	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$		317 5.9 14 14	401 4.7 14 14							
290.889	2640	0.31	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				621 3.7 14 14	845 2.8 13 13	1042 2.3 14 14	1239 1.9 14 14			
327.827	2447	0.31	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$		357 5.9 12 12	452 4.7 12 12							
327.827	2976	0.31	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				700 3.7 12 12	952 2.8 11 11	1175 2.3 12 12	1396 1.9 12 12			
353.033	2197	0.23	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$		388 4.9 12 11	491 3.9 12 11							
353.033	2813	0.23	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				757 3.3 12 11	1030 2.5 11 11	1269 2.0 12 11	1507 1.7 12 11			
397.863	2476	0.22	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$		438 4.9 10 10	553 3.9 10 10							
397.863	3170	0.22	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				854 3.3 10 10	1160 2.5 9 9	1430 2.0 10 10	1699 1.7 10 10			
424.247	2724	0.29	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$		466 5.1 10 10	589 4.1 10 10	916 2.6 10 10	1244 2.0 9 9	1531 1.6 10 10	1818 1.4 10 10			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

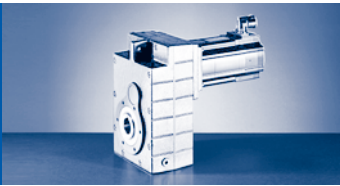


$M_{2GN} \leq 3170 \text{ Nm}$

12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC32	GFL09-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
8.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	$n_1$			
3000	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	$I_{M230}$			
10.5		11.8									$I_{M400}$			
	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	$P_N$			
2.50	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	$J_M$			
7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	$M_2$			
											c	0.51	2093	224.778
											$n_2$			
											Eck			
											$n_2$			
											th			
1711	1604										$M_2$			
1.4	1.4										c	0.51	2407	224.778
13	16										$n_2$			
13	16										Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.50	2359	253.321
											$n_2$			
											Eck			
											$n_2$			
											th			
1929	1808										$M_2$			
1.4	1.4										c	0.50	2712	253.321
12	14										$n_2$			
12	14										Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.31	2172	290.889
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.31	2640	290.889
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.31	2447	327.827
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.31	2976	327.827
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.23	2197	353.033
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.23	2813	353.033
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.22	2476	397.863
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.22	3170	397.863
											$n_2$			
											Eck			
											$n_2$			
											th			
											$M_2$			
											c	0.29	2724	424.247
											$n_2$			
											Eck			
											$n_2$			
											th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

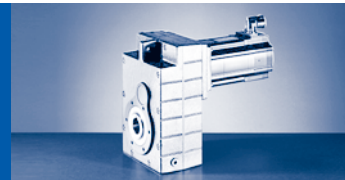
## GFL□□-□S (MCS)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3S				06CC41	06FC41	06IC41	09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	0.60	1.20	1.50	2.30	3.10	3.80	4.50	5.50	4.30	10.00
			$n_1$	4050	4050	4050	4050	3750	4050	4050	1950	4050	1500
			$I_{M230}$	2.6	2.9	3.2	4.6	5.0	6.8	8.4	5.2	8.8	7.6
			$I_{M400}$	1.3	1.5	1.6	2.3	2.5	3.4	4.2	2.6	4.5	3.8
			$P_N$	0.25	0.51	0.64	1.00	1.20	1.60	1.90	1.10	1.80	1.60
			$J_M$	0.17	0.25	0.33	1.13	1.53	1.93	2.83	4.12	4.12	7.42
514.881	2724	0.21	$M_2$		571	720	1118	1515	1864	2212			
			c		4.2	3.3	2.2	1.7	1.3	1.1			
			$n_{2 \text{ Eck}}$		8	8	8	7	8	8			
			$n_{2 \text{ th}}$		8	8	8	7	8	8			
554.470	2113	0.20	$M_2$		623	783	1211	1639					
			c		3.0	2.4	1.6	1.2					
			$n_{2 \text{ Eck}}$		7	7	7	7					
			$n_{2 \text{ th}}$		7	7	7	7					
624.879	2273	0.20	$M_2$	341	703	884	1366	1849					
			c	5.7	2.9	2.3	1.5	1.1					
			$n_{2 \text{ Eck}}$	7	7	7	7	6					
			$n_{2 \text{ th}}$	6	6	6	6	6					
700.875	2113	0.13	$M_2$	386	792	995							
			c	4.8	2.4	1.9							
			$n_{2 \text{ Eck}}$	6	6	6							
			$n_{2 \text{ th}}$	6	6	6							
789.875	2273	0.13	$M_2$	436	894	1123							
			c	4.5	2.3	1.8							
			$n_{2 \text{ Eck}}$	5	5	5							
			$n_{2 \text{ th}}$	5	5	5							

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

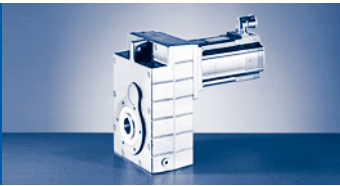


$M_{2GN} \leq 3170 \text{ Nm}$

12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC32	GFL09-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
8.00	7.50	13.50	11.00	9.20	7.50	16.00	14.00	23.00	17.20	21.00	$n_1$			
3000	3525	1950	4050	1500	3600	1500	3225	1500	3225	3225	$I_{M230}$			
10.5		11.8									$I_{M400}$			
	5.7	5.9	10.2	4.5	7.5	6.6	11.9	9.7	15.0	15.6	$P_N$			
2.50	2.80	2.80	4.70	1.45	2.80	2.50	4.70	3.60	5.80	7.10	$J_M$			
7.42	7.42	10.72	10.72	8.22	8.22	14.32	14.32	23.44	23.44	34.82	$M_2$			
											c	0.21	2724	514.881
											$n_2$			
											$n_2$			
											$n_2$			
											$M_2$	0.20	2113	554.470
											c			
											$n_2$			
											$n_2$			
											$n_2$			
											$M_2$	0.20	2273	624.879
											c			
											$n_2$			
											$n_2$			
											$M_2$	0.13	2113	700.875
											c			
											$n_2$			
											$n_2$			
											$M_2$	0.13	2273	789.875
											c			
											$n_2$			
											$n_2$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

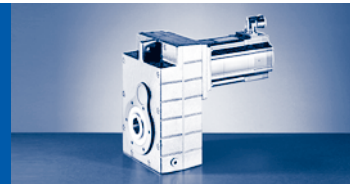
## GFL□□-□S (MCS)

$M_{2GN} \leq 3833 \text{ Nm}$

GFL11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
6.864	1502	124.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
7.466	1634	116.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
9.010	1663	79.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
9.799	1808	74.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
10.720	1872	65.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
12.480	2732	81.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
14.538	2683	58.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
15.904	2778	51.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
17.920	3130	48.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
20.286	1921	36.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				263 5.4 159 115	438 4.2 74 74	327 4.4 159 111	577 3.3 67 67
20.286	2984	36.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
22.857	2165	34.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$				296 5.4 141 102	493 4.2 66 66	368 4.4 141 98	650 3.3 59 59
22.857	3362	34.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

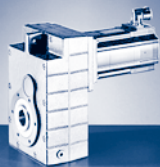


$M_{2GN} \leq 3833 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL11-2S			
...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04				
			254		328	203	$M_2$			
			5.6		4.4	5.6	c	124.00	1502	6.864
			208		197	437	$n_{2 \text{ Eck}}$			
			208		197	253	$n_{2 \text{ th}}$			
			276		356	221	$M_2$			
			5.6		4.4	5.6	c	116.00	1634	7.466
			191		181	402	$n_{2 \text{ Eck}}$			
			191		181	233	$n_{2 \text{ th}}$			
			336	243	433	269	$M_2$			
			4.8	5.2	3.7	4.7	c	79.60	1663	9.010
			158	333	150	333	$n_{2 \text{ Eck}}$			
			158	221	150	216	$n_{2 \text{ th}}$			
			366	264	471	293	$M_2$			
			4.8	5.2	3.7	4.7	c	74.80	1808	9.799
			145	306	138	306	$n_{2 \text{ Eck}}$			
			145	203	138	199	$n_{2 \text{ th}}$			
			401	289	517	321	$M_2$			
			4.5	4.9	3.5	4.5	c	65.00	1872	10.720
			133	280	126	280	$n_{2 \text{ Eck}}$			
			133	189	126	185	$n_{2 \text{ th}}$			
			461		596	369	$M_2$			
			5.6		4.4	5.6	c	81.50	2732	12.480
			114		108	240	$n_{2 \text{ Eck}}$			
			114		108	139	$n_{2 \text{ th}}$			
			542	391	699	434	$M_2$			
			4.8	5.2	3.7	4.7	c	58.40	2683	14.538
			98	206	93	206	$n_{2 \text{ Eck}}$			
			98	137	93	134	$n_{2 \text{ th}}$			
			595	429	766	476	$M_2$			
			4.5	4.9	3.5	4.5	c	51.30	2778	15.904
			90	189	85	189	$n_{2 \text{ Eck}}$			
			90	127	85	125	$n_{2 \text{ th}}$			
			670	484	864	536	$M_2$			
			4.5	4.9	3.5	4.5	c	48.30	3130	17.920
			80	167	75	167	$n_{2 \text{ Eck}}$			
			80	113	75	111	$n_{2 \text{ th}}$			
402							$M_2$			
3.6							c	36.10	1921	20.286
159							$n_{2 \text{ Eck}}$			
106							$n_{2 \text{ th}}$			
	506	393	765	552	983	612	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	36.10	2984	20.286
	70	148	70	148	67	148	$n_{2 \text{ Eck}}$			
	70	109	70	109	67	107	$n_{2 \text{ th}}$			
453							$M_2$			
3.6							c	34.30	2165	22.857
141							$n_{2 \text{ Eck}}$			
94							$n_{2 \text{ th}}$			
	570	443	862	622	1108	689	$M_2$			
	5.6	5.7	3.8	4.2	3.0	3.8	c	34.30	3362	22.857
	62	131	62	131	59	131	$n_{2 \text{ Eck}}$			
	62	97	62	97	59	95	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

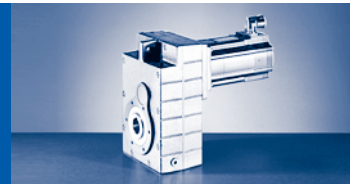
## GFL□□-□S (MCS)

$M_{2GN} \leq 3833 \text{ Nm}$

GFL11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	9.20	7.50	16.00	14.00	23.00	17.20	30.00
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
24.850	3142	26.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
28.000	3540	25.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
32.739	2135	17.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			491 4.2 46 46	430 4.2 99 91	716 2.9 46 46	533 3.4 99 88	941 2.2 41 41
32.739	3319	17.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
36.889	2406	16.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			554 4.2 41 41	484 4.2 87 81	807 2.9 41 41	600 3.4 87 78	1060 2.2 37 37
36.889	3740	16.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
40.233	2189	12.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			608 3.5 37 37	532 3.5 80 80	885 2.4 37 37	658 2.9 80 80	1161 1.9 34 34
40.233	3402	12.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
45.333	2467	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$			686 3.5 33 33	600 3.5 71 71	997 2.4 33 33	742 2.9 71 71	1308 1.9 30 30
45.333	3833	12.20	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
52.067	2270	8.08	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	446 4.9 29 29	363 5.1 69 69	793 2.8 29 29	694 2.8 62 62	1150 2.0 29 29	857 2.3 62 62	1508 1.5 26 26
58.667	2557	7.81	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	503 4.9 26 26	409 5.1 61 61	894 2.8 26 26	782 2.8 55 55	1296 2.0 26 26	966 2.3 55 55	1699 1.5 23 23
63.190	2297	5.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	546 4.1 24 24	444 4.2 57 57	967 2.3 24 24	846 2.4 51 51	1401 1.6 24 24	1045 1.9 51 51	1835 1.3 21 21

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

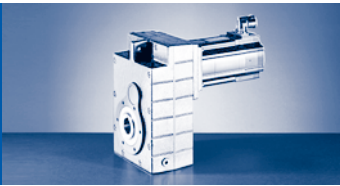


$M_{2GN} \leq 3833 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL11-2S			
...500	...500	...500	...500	...500	...500	...500				
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$M_1$	$J_G$	$M_{2GN}$	$i$
3225	1425	3000	1425	3000	1350	3000	$n_1$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
	625	482	942	677	1210	750	$M_2$			
	4.8	5.6	3.3	4.1	2.6	3.7	c	26.90	3142	24.850
	57	121	57	121	54	121	$n_{2 \text{ Eck}}$			
	57	89	57	89	54	89	$n_{2 \text{ th}}$			
	705	543	1061	763	1363	845	$M_2$			
	4.8	5.6	3.3	4.1	2.6	3.7	c	25.70	3540	28.000
	51	107	51	107	48	107	$n_{2 \text{ Eck}}$			
	51	79	51	79	48	79	$n_{2 \text{ th}}$			
655							$M_2$			
2.8							c	17.10	2135	32.739
99							$n_{2 \text{ Eck}}$			
84							$n_{2 \text{ th}}$			
	832	643	1249	900	1602	996	$M_2$			
	3.9	4.5	2.6	3.3	2.1	3.0	c	17.10	3319	32.739
	44	92	44	92	41	92	$n_{2 \text{ Eck}}$			
	44	68	44	68	41	68	$n_{2 \text{ th}}$			
738							$M_2$			
2.8							c	16.50	2406	36.889
87							$n_{2 \text{ Eck}}$			
75							$n_{2 \text{ th}}$			
	938	725	1408	1014	1806	1122	$M_2$			
	3.9	4.5	2.6	3.3	2.1	3.0	c	16.50	3740	36.889
	39	81	39	81	37	81	$n_{2 \text{ Eck}}$			
	39	60	39	60	37	60	$n_{2 \text{ th}}$			
808							$M_2$			
2.4							c	12.60	2189	40.233
80							$n_{2 \text{ Eck}}$			
77							$n_{2 \text{ th}}$			
	1030	797	1542	1112	1976	1230	$M_2$			
	3.2	3.7	2.2	2.7	1.7	2.5	c	12.60	3402	40.233
	35	75	35	75	34	75	$n_{2 \text{ Eck}}$			
	35	55	35	55	34	55	$n_{2 \text{ th}}$			
911							$M_2$			
2.4							c	12.20	2467	45.333
71							$n_{2 \text{ Eck}}$			
68							$n_{2 \text{ th}}$			
	1160	898	1738	1253	2227	1386	$M_2$			
	3.2	3.7	2.2	2.7	1.7	2.5	c	12.20	3833	45.333
	31	66	31	66	30	66	$n_{2 \text{ Eck}}$			
	31	49	31	49	30	49	$n_{2 \text{ th}}$			
1051							$M_2$			
1.9							c	8.08	2270	52.067
62							$n_{2 \text{ Eck}}$			
62							$n_{2 \text{ th}}$			
1184							$M_2$			
1.9							c	7.81	2557	58.667
55							$n_{2 \text{ Eck}}$			
55							$n_{2 \text{ th}}$			
1280							$M_2$			
1.6							c	5.90	2297	63.190
51							$n_{2 \text{ Eck}}$			
51							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

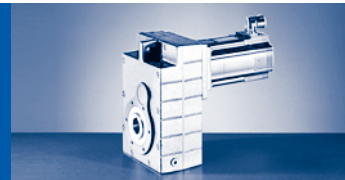
## GFL□□-□S (MCS)

$M_{2GN} \leq 3833 \text{ Nm}$

GFL11-2S				14DC15	14DC36	14HC15	14HC32	14LC15	14LC32	14PC14
				...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$							
			$n_1$	1500	3600	1500	3225	1500	3225	1350
			$I_{M400}$	4.5	7.5	6.6	11.9	9.7	15.0	10.8
			$P_N$	1.45	2.80	2.50	4.70	3.60	5.80	4.20
			$J_M$	8.22	8.22	14.32	14.32	23.44	23.44	34.74
71.200	2588	5.72	$M_2$	615	498	1090	951	1579	1174	2067
			c	4.1	4.7	2.3	2.6	1.6	2.1	1.3
			$n_{2 \text{ Eck}}$	21	51	21	45	21	45	19
			$n_{2 \text{ th}}$	21	50	21	45	21	45	19
79.875	2325	3.87	$M_2$	696	565	1229	1073	1777	1323	2325
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	19	45	19	40	19	40	17
			$n_{2 \text{ th}}$	19	45	19	40	19	40	17
90.000	2620	3.76	$M_2$	785	636	1385	1209	2002	1491	2620
			c	3.3	3.8	1.9	2.1	1.3	1.7	1.0
			$n_{2 \text{ Eck}}$	17	40	17	36	17	36	15
			$n_{2 \text{ th}}$	17	40	17	36	17	36	15

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 3833 \text{ Nm}$

14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL11-2S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1425	3000	1425	3000	1350	3000	$I_{M400}$			
15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
34.82	65.12	65.04	105.04	105.12	160.12	160.04				
1440							$M_2$			
1.7							$c$	5.72	2588	71.200
45							$n_{2 \text{ Eck}}$			
45							$n_{2 \text{ th}}$			
1621							$M_2$			
1.4							$c$	3.87	2325	79.875
40							$n_{2 \text{ Eck}}$			
40							$n_{2 \text{ th}}$			
1826							$M_2$			
1.4							$c$	3.76	2620	90.000
36							$n_{2 \text{ Eck}}$			
36							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

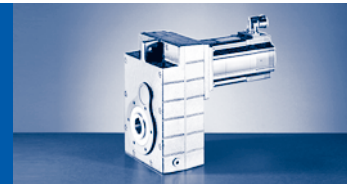
## GFL□□-□S (MCS)

$M_{2GN} \leq 5950 \text{ Nm}$

GFL11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15		
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00		
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20		
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500		
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5		
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45		
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22		
65.306	2503	6.97	$M_2$								604	478	448	825	670		
			c								4.0	5.0	5.1	3.0	3.3		
			$n_{2 \text{ Eck}}$									23	46	54	30	62	
			$n_{2 \text{ th}}$									23	46	54	30	62	
65.306	2891	6.97	$M_2$												550		
			c													5.0	
			$n_{2 \text{ Eck}}$														23
			$n_{2 \text{ th}}$														23
73.335	2875	7.84	$M_2$							678	536	503	926	752	621		
			c								4.1	5.1	5.2	3.0	3.4	4.5	
			$n_{2 \text{ Eck}}$									21	41	48	27	55	21
			$n_{2 \text{ th}}$									20	41	48	27	48	20
82.631	3240	7.71	$M_2$							764	604	566	1043	847	700		
			c								4.1	5.1	5.2	3.0	3.4	4.5	
			$n_{2 \text{ Eck}}$									18	36	43	24	49	18
			$n_{2 \text{ th}}$									18	36	43	24	43	18
93.540	3206	5.05	$M_2$							870	689	646	1186	963	797		
			c								3.6	4.5	4.5	2.7	3.0	3.9	
			$n_{2 \text{ Eck}}$									16	32	38	21	43	16
			$n_{2 \text{ th}}$									16	32	38	21	43	16
105.397	3613	4.97	$M_2$							980	776	728	1336	1085	899		
			c								3.6	4.5	4.5	2.7	3.0	3.9	
			$n_{2 \text{ Eck}}$									14	29	34	19	38	14
			$n_{2 \text{ th}}$									14	28	33	19	38	14
114.586	3501	3.71	$M_2$					572		1070	849	795	1457	1184	981		
			c					5.8			3.2	4.0	4.0	2.4	2.6	3.5	
			$n_{2 \text{ Eck}}$					17			13	26	31	17	35	13	
			$n_{2 \text{ th}}$					17			13	26	31	17	35	13	
129.111	3945	3.66	$M_2$					644		1206	956	896	1642	1334	1106		
			c					5.8			3.2	4.0	4.0	2.4	2.6	3.5	
			$n_{2 \text{ Eck}}$					15			12	23	27	15	31	12	
			$n_{2 \text{ th}}$					15			12	23	27	15	31	12	
149.144	3063	2.30	$M_2$			518	619										
			c			5.1	4.3										
			$n_{2 \text{ Eck}}$			27	27										
			$n_{2 \text{ th}}$			27	27										
149.144	3894	2.30	$M_2$					751	582	1399	1111	1042	1904	1547	1284		
			c					5.0	5.8	2.7	3.4	3.5	2.0	2.3	3.0		
			$n_{2 \text{ Eck}}$					13	27	10	20	24	13	27	10		
			$n_{2 \text{ th}}$					13	27	10	20	24	13	27	10		
168.049	3451	2.27	$M_2$			584	698										
			c			5.1	4.3										
			$n_{2 \text{ Eck}}$			24	24										
			$n_{2 \text{ th}}$			24	24										
168.049	4387	2.27	$M_2$					847	656	1577	1252	1174	2145	1744	1447		
			c					5.0	5.8	2.7	3.4	3.5	2.0	2.3	3.0		
			$n_{2 \text{ Eck}}$					12	24	9	18	21	12	24	9		
			$n_{2 \text{ th}}$					12	24	9	18	21	12	24	9		
182.792	3211	1.66	$M_2$		516	640	764										
			c		5.5	4.4	3.7										
			$n_{2 \text{ Eck}}$		21	22	22										
			$n_{2 \text{ th}}$		21	22	22										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

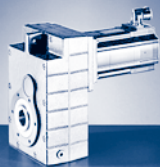


$M_{2GN} \leq 5950 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC30	GFL11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.04	$J_M$			
												$M_2$			
												c	6.97	2503	65.306
												$n_2$			
												Eck			
												$n_2$			
												th			
445	979	853	1420	1055	1862	1295						$M_2$			
5.8	2.9	3.2	2.0	2.6	1.5	2.2						c	6.97	2891	65.306
55	23	49	23	49	21	49						$n_2$			
55	23	49	23	49	21	49						Eck			
												$n_2$			
												th			
503	1103	962	1599	1189	2094	1458	1882	1457	2803	2024	2236	$M_2$			
5.2	2.6	2.9	1.8	2.3	1.4	1.9	1.5	2.0	1.0	1.4	1.3	c	7.84	2875	73.335
49	21	44	21	44	18	44	19	41	19	41	41	$n_2$			
49	20	44	20	44	18	42	19	30	19	30	30	Eck			
												$n_2$			
												th			
567	1243	1084	1801	1339	2360	1643	2121	1642	3158	2280	2520	$M_2$			
5.2	2.6	2.9	1.8	2.3	1.4	1.9	1.5	2.0	1.0	1.4	1.3	c	7.71	3240	82.631
44	18	39	18	39	16	39	17	36	17	36	36	$n_2$			
43	18	39	18	39	16	37	17	27	17	27	27	Eck			
												$n_2$			
												th			
646	1412	1232	2044	1521	2676	1864						$M_2$			
4.5	2.2	2.5	1.6	2.0	1.2	1.7						c	5.05	3206	93.540
39	16	35	16	35	14	35						$n_2$			
38	16	34	16	34	14	34						Eck			
												$n_2$			
												th			
728	1591	1388	2303	1714	3016	2100						$M_2$			
4.5	2.2	2.5	1.6	2.0	1.2	1.7						c	4.97	3613	105.397
34	14	31	14	31	13	31						$n_2$			
34	14	31	14	31	13	31						Eck			
												$n_2$			
												th			
795	1734	1513	2508	1867	3283	2288						$M_2$			
4.0	2.0	2.2	1.4	1.8	1.1	1.5						c	3.71	3501	114.586
31	13	28	13	28	12	28						$n_2$			
31	13	28	13	28	12	28						Eck			
												$n_2$			
												th			
896	1954	1705	2826	2104	3699	2578						$M_2$			
4.0	2.0	2.2	1.4	1.8	1.1	1.5						c	3.66	3945	129.111
28	12	25	12	25	11	25						$n_2$			
28	12	25	12	25	10	25						Eck			
												$n_2$			
												th			
												$M_2$			
												c	2.30	3063	149.144
												$n_2$			
												Eck			
												$n_2$			
												th			
1042	2264	1977	3272	2437		2985						$M_2$			
3.4	1.7	1.9	1.2	1.6		1.3						c	2.30	3894	149.144
24	10	22	10	22		22						$n_2$			
24	10	22	10	22		22						Eck			
												$n_2$			
												th			
												$M_2$			
												c	2.27	3451	168.049
												$n_2$			
												Eck			
												$n_2$			
												th			
1174	2551	2227	3687	2746		3363						$M_2$			
3.4	1.7	1.9	1.2	1.6		1.3						c	2.27	4387	168.049
21	9	19	9	19		19						$n_2$			
21	9	19	9	19		19						Eck			
												$n_2$			
												th			
												$M_2$			
												c	1.66	3211	182.792
												$n_2$			
												Eck			
												$n_2$			
												th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

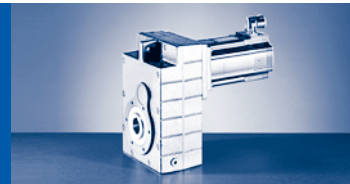
## GFL□□-□S (MCS)

$M_{2GN} \leq 5950 \text{ Nm}$

GFL11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8		
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22
182.792	4131	1.66	$M_2$					928	720	1722	1369	1283	2340	1903	
			c				4.3	5.0	2.4	3.0	3.0	1.8	2.0		
			$n_{2 \text{ Eck}}$				11	22	8	16	19	11	22		
			$n_{2 \text{ th}}$				11	22	8	16	19	11	22		
182.792	4233	1.66	$M_2$												1580
			c												2.6
			$n_{2 \text{ Eck}}$												8
			$n_{2 \text{ th}}$												8
205.963	3618	1.64	$M_2$		581	722	861								
			c		5.5	4.4	3.7								
			$n_{2 \text{ Eck}}$		18	20	20								
			$n_{2 \text{ th}}$		18	20	20								
205.963	4655	1.64	$M_2$					1045	811	1940	1542	1446	2636	2144	
			c					4.3	5.0	2.4	3.0	3.0	1.8	2.0	
			$n_{2 \text{ Eck}}$					10	20	7	15	17	10	20	
			$n_{2 \text{ th}}$					9	20	7	15	17	9	20	
205.963	4769	1.64	$M_2$												1780
			c												2.6
			$n_{2 \text{ Eck}}$												7
			$n_{2 \text{ th}}$												7
224.636	3946	1.52	$M_2$		634	787	939								
			c		5.5	4.4	3.7								
			$n_{2 \text{ Eck}}$		17	18	18								
			$n_{2 \text{ th}}$		17	18	18								
224.636	4523	1.52	$M_2$					1146	890	2122	1688	1582	2881	2343	1948
			c					3.8	4.4	2.1	2.6	2.7	1.6	1.7	2.3
			$n_{2 \text{ Eck}}$					9	18	7	13	16	9	18	7
			$n_{2 \text{ th}}$					9	18	7	13	16	9	18	7
253.111	4446	1.50	$M_2$		715	887	1058								
			c		5.5	4.4	3.7								
			$n_{2 \text{ Eck}}$		15	16	16								
			$n_{2 \text{ th}}$		15	16	16								
253.111	5097	1.50	$M_2$					1291	1003	2391	1902	1783	3246	2640	2195
			c					3.8	4.4	2.1	2.6	2.7	1.6	1.7	2.3
			$n_{2 \text{ Eck}}$					8	16	6	12	14	8	16	6
			$n_{2 \text{ th}}$					8	16	6	12	14	8	16	6
267.259	5106	1.87	$M_2$		750	932	1113	1366	1061	2527	2011	1885	3431	2791	2321
			c		6.0	4.8	4.0	3.6	4.2	2.0	2.5	2.5	1.5	1.6	2.2
			$n_{2 \text{ Eck}}$		14	15	15	7	15	6	11	13	7	15	6
			$n_{2 \text{ th}}$		14	15	15	7	15	6	11	13	7	15	6
327.556	5523	1.37	$M_2$		927	1150	1371	1682	1308	3105	2473	2318	4212	3427	2852
			c		5.3	4.2	3.6	3.2	3.7	1.8	2.2	2.2	1.3	1.5	1.9
			$n_{2 \text{ Eck}}$		12	12	12	6	12	5	9	11	6	12	5
			$n_{2 \text{ th}}$		11	12	12	6	12	5	9	11	6	12	5
358.077	4103	0.68	$M_2$	756	1032	1275	1517								
			c	4.7	3.6	2.9	2.4								
			$n_{2 \text{ Eck}}$	11	11	11	11								
			$n_{2 \text{ th}}$	11	10	11	11								
358.077	5280	0.68	$M_2$					1847	1437	3403	2711	2541	4613	3754	
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3	
			$n_{2 \text{ Eck}}$					6	11	4	8	10	6	11	
			$n_{2 \text{ th}}$					5	11	4	8	10	5	11	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

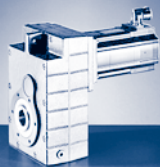


$M_{2GN} \leq 5950 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC30	GFL11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	3000	$I_{M230}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	19.0	$I_{M400}$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	10.00	$P_N$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.04	$J_M$			
												$M_2$			
												c	1.66	4131	182.792
												$n_2$			
												Eck			
												$n_2$			
												th			
1282	2780	2428	4016	2993		3664						$M_2$			
3.0	1.5	1.7	1.1	1.4		1.1						c	1.66	4233	182.792
20	8	18	8	18		18						$n_2$			
20	8	18	8	18		18						Eck			
												$n_2$			
												th			
												$M_2$			
												c	1.64	3618	205.963
												$n_2$			
												Eck			
												$n_2$			
												th			
												$M_2$			
												c	1.64	4655	205.963
												$n_2$			
												Eck			
												$n_2$			
												th			
1445	3132	2736	4525	3372		4128						$M_2$			
3.0	1.5	1.7	1.1	1.4		1.1						c	1.64	4769	205.963
18	7	16	7	16		16						$n_2$			
17	7	16	7	16		16						Eck			
												$n_2$			
												th			
												$M_2$			
												c	1.52	3946	224.636
												$n_2$			
												Eck			
												$n_2$			
												th			
1582	3423	2991		3685								$M_2$			
2.6	1.3	1.5		1.2								c	1.52	4523	224.636
16	7	14		14								$n_2$			
16	7	14		14								Eck			
												$n_2$			
												th			
												$M_2$			
												c	1.50	4446	253.111
												$n_2$			
												Eck			
												$n_2$			
												th			
1783	3857	3370		4152								$M_2$			
2.6	1.3	1.5		1.2								c	1.50	5097	253.111
14	6	13		13								$n_2$			
14	6	13		13								Eck			
												$n_2$			
												th			
1885	4076	3561		4387								$M_2$			
2.5	1.3	1.4		1.1								c	1.87	5106	267.259
14	6	12		12								$n_2$			
13	6	12		12								Eck			
												$n_2$			
												th			
2318	5003	4372		5384								$M_2$			
2.2	1.1	1.2		1.0								c	1.37	5523	327.556
11	5	10		10								$n_2$			
11	5	10		10								Eck			
												$n_2$			
												th			
												$M_2$			
												c	0.68	4103	358.077
												$n_2$			
												Eck			
												$n_2$			
												th			
												$M_2$			
												c	0.68	5280	358.077
												$n_2$			
												Eck			
												$n_2$			
												th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

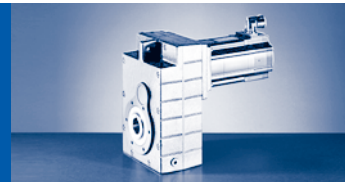
## GFL□□-□S (MCS)

$M_{2GN} \leq 5950 \text{ Nm}$

GFL11-3S				09DC41	09FC38	09HC41	09LC41	12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15			
				...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00			
i	$M_{2GN}$	$J_G$	$M_1$	2.30	3.10	3.80	4.50	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20			
			$n_1$	4050	3750	4050	4050	1950	4050	1500	3000	3525	1950	4050	1500			
			$I_{M230}$	4.6	5.0	6.8	8.4	5.2	8.8	7.6	10.5		11.8					
			$I_{M400}$	2.3	2.5	3.4	4.2	2.6	4.5	3.8		5.7	5.9	10.2	4.5			
			$P_N$	1.00	1.20	1.60	1.90	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45			
			$J_M$	1.13	1.53	1.93	2.83	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22			
403.467	4623	0.67	$M_2$	852	1163	1437	1710											
			c	4.7	3.6	2.9	2.4											
			$n_{2 \text{ Eck}}$	10	9	10	10											
			$n_{2 \text{ th}}$	10	9	10	10											
403.467	5950	0.67	$M_2$					2081	1619	3834	3055	2863	5198	4229				
			c					2.8	3.3	1.5	1.9	2.0	1.1	1.3				
			$n_{2 \text{ Eck}}$					5	10	4	7	9	5	10				
			$n_{2 \text{ th}}$					5	10	4	7	9	5	10				
430.222	5912	0.85	$M_2$	900	1230	1523	1814											
			c	5.7	4.3	3.4	2.9											
			$n_{2 \text{ Eck}}$	9	9	9	9											
			$n_{2 \text{ th}}$	9	9	9	9											
430.222	5942	0.85	$M_2$					2223	1730	4092	3261	3057	5546	4514				
			c					2.6	3.0	1.5	1.8	1.8	1.1	1.2				
			$n_{2 \text{ Eck}}$					5	9	4	7	8	5	9				
			$n_{2 \text{ th}}$					5	9	3	7	8	5	9				
522.133	5942	0.62	$M_2$	1103	1505	1860	2213	2711	2112	4980	3972	3723						
			c	4.7	3.6	2.8	2.4	2.2	2.5	1.2	1.5	1.5						
			$n_{2 \text{ Eck}}$	8	7	8	8	4	8	3	6	7						
			$n_{2 \text{ th}}$	8	7	8	8	4	8	3	6	7						
562.391	5319	0.60	$M_2$	1199	1632	2013	2394	2931	2285		4289	4020						
			c	3.9	3.0	2.4	2.0	1.8	2.1		1.2	1.3						
			$n_{2 \text{ Eck}}$	7	7	7	7	4	7		5	6						
			$n_{2 \text{ th}}$	7	7	7	7	3	7		5	6						
633.680	5844	0.60	$M_2$	1352	1840	2270	2698	3304	2576		4834	4532						
			c	3.8	2.9	2.3	1.9	1.8	2.0		1.2	1.2						
			$n_{2 \text{ Eck}}$	6	6	6	6	3	6		5	6						
			$n_{2 \text{ th}}$	6	6	6	6	3	6		5	6						
710.888	5319	0.39	$M_2$	1529	2076	2558	3039											
			c	3.1	2.4	1.9	1.6											
			$n_{2 \text{ Eck}}$	6	5	6	6											
			$n_{2 \text{ th}}$	6	5	6	6											
801.000	5844	0.38	$M_2$	1724	2341	2884	3425											
			c	3.0	2.3	1.8	1.5											
			$n_{2 \text{ Eck}}$	5	5	5	5											
			$n_{2 \text{ th}}$	5	5	5	5											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

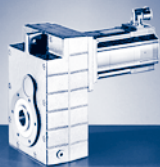


$M_{2GN} \leq 5950 \text{ Nm}$

14DC36	14HC15	14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC30	GFL11-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
7.50	16.00	14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	32.00	$n_1$			
3600	1500	3225	1500	3225	1350	3225	1425	3000	1425	3000	3000	$I_{M230}$			
												$I_{M400}$			
7.5	6.6	11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	19.0	$P_N$			
2.80	2.50	4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	10.00	$J_M$			
8.22	14.32	14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.04	$M_2$			
												c	0.67	4623	403.467
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.67	5950	403.467
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.85	5912	430.222
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.85	5942	430.222
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.62	5942	522.133
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.60	5319	562.391
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.60	5844	633.680
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.39	5319	710.888
												c			
												$n_2$ Eck			
												$n_2$ th			
												$M_2$	0.38	5844	801.000
												c			
												$n_2$ Eck			
												$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

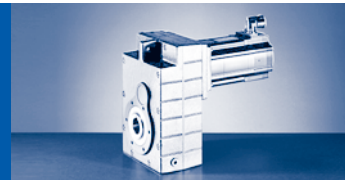
## GFL□□-□S (MCS)

$M_{2GN} \leq 4971 \text{ Nm}$

GFL14-2S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	27.00	21.00	40.00	29.00	51.00	32.00
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
8.800	2033	247.00	$M_2$			324		419	259
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			162		153	341
			$n_{2 \text{ th}}$			162		153	194
9.571	2211	232.00	$M_2$			352		456	282
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			149		141	313
			$n_{2 \text{ th}}$			149		141	178
14.200	3280	625.00	$M_2$			523		676	419
			c			6.0		4.7	5.9
			$n_{2 \text{ Eck}}$			100		95	211
			$n_{2 \text{ th}}$			100		95	120
15.620	3389	156.00	$M_2$			578		746	462
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			91		86	192
			$n_{2 \text{ th}}$			91		86	111
17.600	3818	146.00	$M_2$			651		840	521
			c			5.6		4.4	5.6
			$n_{2 \text{ Eck}}$			81		77	171
			$n_{2 \text{ th}}$			81		77	99
19.948	3646	111.00	$M_2$			745	537	960	596
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			71	150	68	150
			$n_{2 \text{ th}}$			71	99	68	97
22.476	4108	105.00	$M_2$			839	605	1081	671
			c			4.7	5.2	3.7	4.7
			$n_{2 \text{ Eck}}$			63	134	60	134
			$n_{2 \text{ th}}$			63	88	60	86
24.456	3842	83.20	$M_2$	608		919	659	1183	731
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	58		58	123	55	123
			$n_{2 \text{ th}}$	58		58	90	55	89
27.556	4328	79.40	$M_2$	685		1036	743	1333	824
			c	6.0		4.1	5.0	3.2	4.6
			$n_{2 \text{ Eck}}$	52		52	109	49	109
			$n_{2 \text{ th}}$	52		52	80	49	79
32.344	4045	52.90	$M_2$	814	628	1227	882	1575	977
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	44	93	44	93	42	93
			$n_{2 \text{ th}}$	44	68	44	68	42	68
36.444	4558	50.70	$M_2$	918	708	1382	994	1775	1101
			c	4.8	5.5	3.2	4.0	2.5	3.6
			$n_{2 \text{ Eck}}$	39	82	39	82	37	82
			$n_{2 \text{ th}}$	39	61	39	61	37	61
39.642	4238	38.00	$M_2$	1005	777	1511	1087	1938	1204
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_{2 \text{ Eck}}$	36	76	36	76	34	76
			$n_{2 \text{ th}}$	36	56	36	56	34	56
44.667	4776	36.60	$M_2$	1133	875	1702	1225	2184	1357
			c	4.1	4.7	2.8	3.4	2.2	3.1
			$n_{2 \text{ Eck}}$	32	67	32	67	30	67
			$n_{2 \text{ th}}$	32	49	32	49	30	49

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

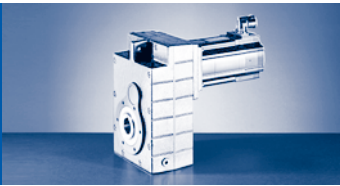


$M_{2GN} \leq 4971 \text{ Nm}$

GFL14-2S				19FC14	19FC30	19JC14	19JC30	19PC14	19PC30
				...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$						
			$n_1$	1425	3000	1425	3000	1350	3000
			$I_{M400}$	8.6	14.0	12.3	18.5	14.3	19.0
			$P_N$	4.00	6.60	6.00	9.10	7.20	10.00
			$J_M$	65.12	65.04	105.04	105.12	160.12	160.04
52.067	4358	24.60	$M_2$	1333	1031	1997	1440	2558	1593
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_{2Eck}$	27	58	27	58	26	58
			$n_{2th}$	27	42	27	42	26	42
58.667	4911	23.80	$M_2$	1502	1162	2250	1622	2882	1795
			c	3.2	3.7	2.2	2.7	1.7	2.4
			$n_{2Eck}$	24	51	24	51	23	51
			$n_{2th}$	24	38	24	38	23	38
63.190	4412	18.00	$M_2$	1627	1260	2432	1755	3113	1941
			c	2.7	3.1	1.8	2.2	1.4	2.0
			$n_{2Eck}$	23	48	23	48	21	48
			$n_{2th}$	23	35	23	35	21	35
71.200	4971	17.40	$M_2$	1833	1414	2740	1973	3508	2182
			c	2.7	3.4	1.8	2.5	1.4	2.3
			$n_{2Eck}$	20	42	20	42	19	42
			$n_{2th}$	20	31	20	31	19	31

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

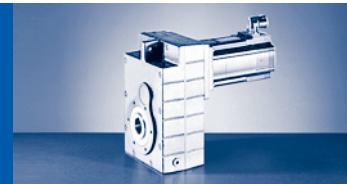
## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
64.296	5534	26.32	$M_2$										936
			c										5.6
			$n_{2 \text{ Eck}}$										23
			$n_{2 \text{ th}}$										23
64.296	5610	26.32	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
68.708	3311	19.86	$M_2$			629			861	699			
			c			5.0			3.7	4.2			
			$n_{2 \text{ Eck}}$			22			28	59			
			$n_{2 \text{ th}}$			22			28	52			
68.708	5182	19.86	$M_2$										1007
			c										4.9
			$n_{2 \text{ Eck}}$										22
			$n_{2 \text{ th}}$										22
68.708	5416	19.86	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
77.418	3730	19.38	$M_2$			709			970	787			
			c			5.0			3.7	4.2			
			$n_{2 \text{ Eck}}$			19			25	52			
			$n_{2 \text{ th}}$			19			25	46			
77.418	5839	19.38	$M_2$										1135
			c										4.9
			$n_{2 \text{ Eck}}$										19
			$n_{2 \text{ th}}$										19
77.418	6103	19.38	$M_2$										
			c										
			$n_{2 \text{ Eck}}$										
			$n_{2 \text{ th}}$										
85.037	6276	21.59	$M_2$										1248
			c										4.8
			$n_{2 \text{ Eck}}$										18
			$n_{2 \text{ th}}$										18
104.889	3398	9.32	$M_2$			977	775	726	1332	1082			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			14	29	34	19	39			
			$n_{2 \text{ th}}$			14	29	34	19	39			
104.889	5307	9.32	$M_2$								876		1565
			c								5.8		3.3
			$n_{2 \text{ Eck}}$								14		14
			$n_{2 \text{ th}}$								14		14
114.126	3697	8.32	$M_2$			1063	843	790	1449	1177			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			13	26	31	17	36			
			$n_{2 \text{ th}}$			13	26	31	17	35			
114.126	5774	8.32	$M_2$								953		1703
			c								5.8		3.3
			$n_{2 \text{ Eck}}$								13		13
			$n_{2 \text{ th}}$								13		13

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]



$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
818	1370	1017	1805	1253							$M_2$			
5.7	3.9	4.6	3.0	3.8							c	26.32	5534	64.296
50	23	50	21	50							$n_{2 \text{ Eck}}$			
50	23	50	21	48							$n_{2 \text{ th}}$			
					1618	1251	2425	1748	3108	1934	$M_2$			
					3.4	3.9	2.3	2.8	1.8	2.6	c	26.32	5610	64.296
					22	47	22	47	21	47	$n_{2 \text{ Eck}}$			
					22	34	22	34	21	34	$n_{2 \text{ th}}$			
											$M_2$			
											c	19.86	3311	68.708
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
876	1472	1088	1936	1340							$M_2$			
5.5	3.4	4.5	2.6	3.7							c	19.86	5182	68.708
47	22	47	20	47							$n_{2 \text{ Eck}}$			
47	22	47	20	47							$n_{2 \text{ th}}$			
					1735	1337	2597	1867	3327	2067	$M_2$			
					3.1	3.9	2.1	2.8	1.6	2.6	c	19.86	5416	68.708
					21	44	21	44	20	44	$n_{2 \text{ Eck}}$			
					21	32	21	32	20	32	$n_{2 \text{ th}}$			
											$M_2$			
											c	19.38	3730	77.418
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
987	1658	1226	2182	1510							$M_2$			
5.5	3.4	4.5	2.6	3.7							c	19.38	5839	77.418
42	19	42	17	42							$n_{2 \text{ Eck}}$			
42	19	42	17	42							$n_{2 \text{ th}}$			
					1955	1506	2927	2104	3749	2328	$M_2$			
					3.1	3.9	2.1	2.8	1.6	2.6	c	19.38	6103	77.418
					18	39	18	39	17	39	$n_{2 \text{ Eck}}$			
					18	29	18	29	17	29	$n_{2 \text{ th}}$			
1086	1823	1348	2398	1660	2152	1659	3219	2316	4122	2562	$M_2$			
5.4	3.4	4.4	2.6	3.6	2.9	3.7	1.9	2.7	1.5	2.4	c	21.59	6276	85.037
38	18	38	16	38	17	35	17	35	16	35	$n_{2 \text{ Eck}}$			
38	18	37	16	36	17	26	17	26	16	26	$n_{2 \text{ th}}$			
											$M_2$			
											c	9.32	3398	104.889
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1364	2274	1688	2983	2073							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	9.32	5307	104.889
31	14	31	13	31							$n_{2 \text{ Eck}}$			
31	14	31	13	31							$n_{2 \text{ th}}$			
											$M_2$			
											c	8.32	3697	114.126
											$n_{2 \text{ Eck}}$			
											$n_{2 \text{ th}}$			
1484	2474	1837	3246	2255							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	8.32	5774	114.126
28	13	28	12	28							$n_{2 \text{ Eck}}$			
28	13	28	12	28							$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

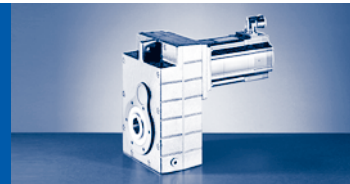
## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
128.593	4166	8.14	$M_2$			1198	950	890	1633	1327			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			12	23	27	15	32			
			$n_{2 \text{ th}}$			12	23	27	15	31			
128.593	6506	8.14	$M_2$								1074		1919
			c								5.8		3.3
			$n_{2 \text{ Eck}}$								12		12
			$n_{2 \text{ th}}$								12		12
136.889	7359	16.78	$M_2$										2038
			c										3.5
			$n_{2 \text{ Eck}}$										11
			$n_{2 \text{ th}}$										11
156.148	4335	5.92	$M_2$	784		1463	1161	1088	1990	1618			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	13		10	19	23	13	26			
			$n_{2 \text{ th}}$	12		10	19	23	12	26			
156.148	6760	5.92	$M_2$								1317	1064	2342
			c								4.9	5.7	2.8
			$n_{2 \text{ Eck}}$								10	23	10
			$n_{2 \text{ th}}$								10	23	10
170.074	5510	6.96	$M_2$			1585	1256	1177	2160	1754			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			9	18	21	12	24			
			$n_{2 \text{ th}}$			9	18	21	11	24			
170.074	8408	6.96	$M_2$								1423		2540
			c								5.6		3.2
			$n_{2 \text{ Eck}}$								9		9
			$n_{2 \text{ th}}$								9		9
202.074	4498	3.69	$M_2$	1026	797	1904	1514	1419	2587	2104			
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9			
			$n_{2 \text{ Eck}}$	10	20	7	15	17	10	20			
			$n_{2 \text{ th}}$	10	20	7	15	17	10	20			
202.074	7010	3.69	$M_2$								1722	1395	3049
			c								4.0	4.6	2.3
			$n_{2 \text{ Eck}}$								7	18	7
			$n_{2 \text{ th}}$								7	18	7
224.636	6236	4.74	$M_2$	1128		2104	1670	1565	2863	2327			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	9		7	13	16	9	18			
			$n_{2 \text{ th}}$	9		7	13	16	9	18			
224.636	8739	4.74	$M_2$								1904	1541	3379
			c								4.4	5.1	2.5
			$n_{2 \text{ Eck}}$								7	16	7
			$n_{2 \text{ th}}$								7	16	7
253.111	7027	4.70	$M_2$	1271		2371	1882	1763	3226	2622			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	8		6	12	14	8	16			
			$n_{2 \text{ th}}$	8		6	12	14	8	16			
253.111	9846	4.70	$M_2$								2146	1736	3808
			c								4.4	5.1	2.5
			$n_{2 \text{ Eck}}$								6	14	6
			$n_{2 \text{ th}}$								6	14	6

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

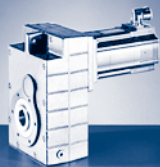


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
											$M_2$			
											c	8.14	4166	128.593
											$n_2$			
											Eck			
											$n_2$			
											th			
1672	2788	2069	3657	2541							$M_2$			
3.7	2.3	3.0	1.8	2.5							c	8.14	6506	128.593
25	12	25	11	25							$n_2$			
25	12	25	11	25							Eck			
											$n_2$			
											th			
1775	2963	2198	3889	2701	3492	2699	5211	3757	6665	4153	$M_2$			
3.9	2.5	3.2	1.9	2.6	2.1	2.7	1.4	1.9	1.1	1.8	c	16.78	7359	136.889
24	11	24	10	24	10	22	10	22	10	22	$n_2$			
23	11	22	10	21	10	16	10	16	10	16	Eck			
											$n_2$			
											th			
											$M_2$			
											c	5.92	4335	156.148
											$n_2$			
											Eck			
											$n_2$			
											th			
2042	3397	2525	4453	3097							$M_2$			
3.2	2.0	2.6	1.5	2.1							c	5.92	6760	156.148
21	10	21	9	21							$n_2$			
21	10	21	9	21							Eck			
											$n_2$			
											th			
											$M_2$			
											c	6.96	5510	170.074
											$n_2$			
											Eck			
											$n_2$			
											th			
2213	3689	2739	4839	3363							$M_2$			
3.6	2.3	2.9	1.7	2.4							c	6.96	8408	170.074
19	9	19	8	19							$n_2$			
19	9	19	8	19							Eck			
											$n_2$			
											th			
											$M_2$			
											c	3.69	4498	202.074
											$n_2$			
											Eck			
											$n_2$			
											th			
2660	4415	3285	5781	4026							$M_2$			
2.5	1.6	2.1	1.2	1.7							c	3.69	7010	202.074
16	7	16	7	16							$n_2$			
16	7	16	7	16							Eck			
											$n_2$			
											th			
											$M_2$			
											c	4.74	6236	224.636
											$n_2$			
											Eck			
											$n_2$			
											th			
2948	4898	3642	6416	4466							$M_2$			
2.8	1.8	2.3	1.4	1.9							c	4.74	8739	224.636
14	7	14	6	14							$n_2$			
14	7	14	6	14							Eck			
											$n_2$			
											th			
											$M_2$			
											c	4.70	7027	253.111
											$n_2$			
											Eck			
											$n_2$			
											th			
3321	5519	4103	7230	5032							$M_2$			
2.8	1.8	2.3	1.4	1.9							c	4.70	9846	253.111
13	6	13	5	13							$n_2$			
13	6	13	5	13							Eck			
											$n_2$			
											th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

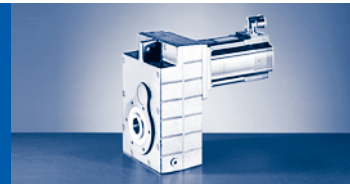
## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
273.778	8870	5.76	$M_2$			2551	2022	1895	3476	2824			
			c			3.4	4.2	4.3	2.5	2.8			
			$n_{2 \text{ Eck}}$			6	11	13	7	15			
			$n_{2 \text{ th}}$			5	11	13	7	15			
273.778	9753	5.76	$M_2$								2330	1887	4128
			c								4.1	4.7	2.3
			$n_{2 \text{ Eck}}$								6	13	6
			$n_{2 \text{ th}}$								5	13	5
332.444	9229	4.30	$M_2$	1669		3114	2472	2316	4237	3444			
			c	5.3		2.9	3.6	3.7	2.2	2.4			
			$n_{2 \text{ Eck}}$	6		5	9	11	6	12			
			$n_{2 \text{ th}}$	6		5	9	11	6	12			
332.444	10550	4.30	$M_2$								2843	2304	5026
			c								3.6	4.2	2.1
			$n_{2 \text{ Eck}}$								5	11	5
			$n_{2 \text{ th}}$								5	11	5
352.811	6551	2.16	$M_2$	1805	1403	3338	2657	2490	4531	3686			
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6			
			$n_{2 \text{ Eck}}$	6	12	4	9	10	6	12			
			$n_{2 \text{ th}}$	6	11	4	9	10	6	11			
352.811	10203	2.16	$M_2$								3028	2455	5344
			c								3.3	3.8	1.9
			$n_{2 \text{ Eck}}$								4	10	4
			$n_{2 \text{ th}}$								4	10	4
397.533	7382	2.15	$M_2$	2034	1581	3762	2994	2806	5105	4153			
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6			
			$n_{2 \text{ Eck}}$	5	10	4	8	9	5	10			
			$n_{2 \text{ th}}$	5	10	4	8	9	5	10			
397.533	11496	2.15	$M_2$								3411	2766	6022
			c								3.3	3.8	1.9
			$n_{2 \text{ Eck}}$								4	9	4
			$n_{2 \text{ th}}$								4	9	4
430.222	9576	2.73	$M_2$	2185	1696	4054	3223	3021	5508	4479			
			c	4.2	4.9	2.3	2.9	2.9	1.7	1.9			
			$n_{2 \text{ Eck}}$	5	9	4	7	8	5	9			
			$n_{2 \text{ th}}$	5	9	3	7	8	5	9			
430.222	10560	2.73	$M_2$								3712	3012	6537
			c								2.8	3.2	1.6
			$n_{2 \text{ Eck}}$								4	8	4
			$n_{2 \text{ th}}$								3	8	3
522.133	9695	1.98	$M_2$	2672	2076	4941	3932	3685	6705	5455			
			c	3.5	4.1	1.9	2.4	2.5	1.4	1.6			
			$n_{2 \text{ Eck}}$	4	8	3	6	7	4	8			
			$n_{2 \text{ th}}$	4	8	3	6	7	4	8			
522.133	10560	1.98	$M_2$								4528	3678	7957
			c								2.3	2.7	1.3
			$n_{2 \text{ Eck}}$								3	7	3
			$n_{2 \text{ th}}$								3	7	3
562.391	9036	1.91	$M_2$	2892	2250	5336	4250	3984	7237	5888	4902	3984	8595
			c	3.1	3.5	1.7	2.1	2.1	1.3	1.4	1.8	2.1	1.1
			$n_{2 \text{ Eck}}$	4	7	3	5	6	4	7	3	6	3
			$n_{2 \text{ th}}$	3	7	3	5	6	3	7	3	6	3

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

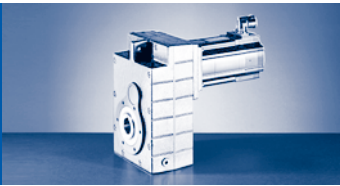


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	...500	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$I_{M400}$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$P_N$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$J_M$			
											$M_2$			
											c	5.76	8870	273.778
											$n_2$			
											Eck			
											$n_2$			
											th			
3602	5979	4448	7829	5452							$M_2$			
2.6	1.6	2.1	1.2	1.7							c	5.76	9753	273.778
12	6	12	5	12							$n_2$			
12	5	12	5	12							Eck			
											$n_2$			
											th			
											$M_2$			
											c	4.30	9229	332.444
											$n_2$			
											Eck			
											$n_2$			
											th			
4387	7273	5414	9521	6634							$M_2$			
2.3	1.4	1.9	1.1	1.5							c	4.30	10550	332.444
10	5	10	4	10							$n_2$			
10	5	10	4	10							Eck			
											$n_2$			
											th			
											$M_2$			
											c	2.16	6551	352.811
											$n_2$			
											Eck			
											$n_2$			
											th			
4666	7729	5756	10114	7050							$M_2$			
2.1	1.3	1.7	1.0	1.4							c	2.16	10203	352.811
9	4	9	4	9							$n_2$			
9	4	9	4	9							Eck			
											$n_2$			
											th			
											$M_2$			
											c	2.15	7382	397.533
											$n_2$			
											Eck			
											$n_2$			
											th			
5257	8709	6485	11396	7944							$M_2$			
2.1	1.3	1.7	1.0	1.4							c	2.15	11496	397.533
8	4	8	3	8							$n_2$			
8	4	8	3	8							Eck			
											$n_2$			
											th			
											$M_2$			
											c	2.73	9576	430.222
											$n_2$			
											Eck			
											$n_2$			
											th			
5708	9445	7038		8617							$M_2$			
1.8	1.1	1.5		1.2							c	2.73	10560	430.222
8	4	8		8							$n_2$			
8	3	8		8							Eck			
											$n_2$			
											th			
											$M_2$			
											c	1.98	9695	522.133
											$n_2$			
											Eck			
											$n_2$			
											th			
6951		8565									$M_2$			
1.5		1.2									c	1.98	10560	522.133
6		6									$n_2$			
6		6									Eck			
											$n_2$			
											th			
7511											$M_2$			
1.2											c	1.91	9036	562.391
6											$n_2$			
6											Eck			
											$n_2$			
											th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

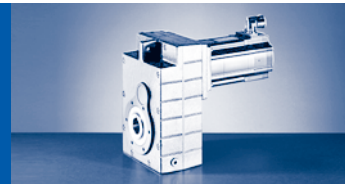
## GFL□□-□S (MCS)

$M_{2GN} \leq 11496 \text{ Nm}$

GFL14-3S				12DC20	12DC41	12HC15	12HC30	12HC35	12LC20	12LC41	14DC15	14DC36	14HC15
				...500	...500	...500	...500	...500	...500	...500	...500	...500	...500
i	$M_{2GN}$	$J_G$	$M_1$	5.50	4.30	10.00	8.00	7.50	13.50	11.00	9.20	7.50	16.00
			$n_1$	1950	4050	1500	3000	3525	1950	4050	1500	3600	1500
			$I_{M230}$	5.2	8.8	7.6	10.5		11.8				
			$I_{M400}$	2.6	4.5	3.8		5.7	5.9	10.2	4.5	7.5	6.6
			$P_N$	1.10	1.80	1.60	2.50	2.80	2.80	4.70	1.45	2.80	2.50
			$J_M$	4.12	4.12	7.42	7.42	7.42	10.72	10.72	8.22	8.22	14.32
633.680	9811	1.90	$M_2$	3263	2538	6017	4793	4492	8158	6638	5527	4493	9688
			c	3.0	3.4	1.6	2.0	2.1	1.2	1.3	1.8	2.0	1.0
			$n_{2 \text{ Eck}}$	3	6	2	5	6	3	6	2	6	2
			$n_{2 \text{ th}}$	3	6	2	5	6	3	6	2	6	2
710.888	9036	1.26	$M_2$	3681	2866	6770	5397	5059		7466			
			c	2.4	2.8	1.3	1.7	1.7		1.1			
			$n_{2 \text{ Eck}}$	3	6	2	4	5		6			
			$n_{2 \text{ th}}$	3	6	2	4	5		6			
801.000	9811	1.25	$M_2$	4152	3233	7632	6085	5704		8416			
			c	2.3	2.7	1.3	1.6	1.6		1.1			
			$n_{2 \text{ Eck}}$	2	5	2	4	4		5			
			$n_{2 \text{ th}}$	2	5	2	4	4		5			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

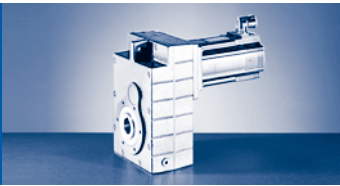


$M_{2GN} \leq 11496 \text{ Nm}$

14HC32	14LC15	14LC32	14PC14	14PC32	19FC14	19FC30	19JC14	19JC30	19PC14	19PC30	GFL14-3S			
...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
14.00	23.00	17.20	30.00	21.00	27.00	21.00	40.00	29.00	51.00	32.00	$n_1$			
3225	1500	3225	1350	3225	1425	3000	1425	3000	1350	3000	$I_{M230}$			
											$I_{M400}$			
11.9	9.7	15.0	10.8	15.6	8.6	14.0	12.3	18.5	14.3	19.0	$P_N$			
4.70	3.60	5.80	4.20	7.10	4.00	6.60	6.00	9.10	7.20	10.00	$J_M$			
14.32	23.44	23.44	34.74	34.82	65.12	65.04	105.04	105.12	160.12	160.04	$M_2$			
8467											c			
1.1											$n_{2Eck}$	1.90	9811	633.680
5											$n_{2th}$			
5											$M_2$			
											c			
											$n_{2Eck}$	1.26	9036	710.888
											$n_{2th}$			
											$M_2$			
											c			
											$n_{2Eck}$	1.25	9811	801.000
											$n_{2th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

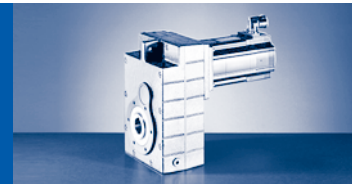
## GFL□□-□A (MCA)

$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
3.659	109	1.51	$M_2$		22	14
			c		3.7	5.5
			$n_{2 \text{ Eck}}$		932	1107
			$n_{2 \text{ th}}$		932	1003
5.018	111	0.86	$M_2$		30	19
			c		2.8	4.1
			$n_{2 \text{ Eck}}$		680	807
			$n_{2 \text{ th}}$		680	769
5.833	153	0.93	$M_2$		35	22
			c		3.3	4.9
			$n_{2 \text{ Eck}}$		585	694
			$n_{2 \text{ th}}$		572	616
6.422	113	0.56	$M_2$		39	24
			c		2.2	3.2
			$n_{2 \text{ Eck}}$		531	631
			$n_{2 \text{ th}}$		531	631
7.025	113	0.47	$M_2$	13	42	27
			c	6.0	2.0	3.0
			$n_{2 \text{ Eck}}$	562	485	577
			$n_{2 \text{ th}}$	562	485	576
8.379	179	0.67	$M_2$		50	32
			c		2.7	3.9
			$n_{2 \text{ Eck}}$		407	483
			$n_{2 \text{ th}}$		382	413
9.333	165	0.61	$M_2$		56	35
			c		2.2	3.3
			$n_{2 \text{ Eck}}$		365	434
			$n_{2 \text{ th}}$		330	358
10.238	159	0.37	$M_2$	19	62	39
			c	5.8	1.9	2.9
			$n_{2 \text{ Eck}}$	386	333	396
			$n_{2 \text{ th}}$	386	333	396
11.491	181	0.41	$M_2$	21	70	44
			c	5.9	2.0	2.9
			$n_{2 \text{ Eck}}$	344	297	353
			$n_{2 \text{ th}}$	344	294	317
12.800	166	0.38	$M_2$	24	78	49
			c	4.8	1.6	2.4
			$n_{2 \text{ Eck}}$	309	266	316
			$n_{2 \text{ th}}$	309	240	274
14.706	182	0.28	$M_2$	27	89	56
			c	4.6	1.5	2.3
			$n_{2 \text{ Eck}}$	269	232	275
			$n_{2 \text{ th}}$	269	232	275
16.087	182	0.25	$M_2$	30	98	62
			c	4.2	1.4	2.1
			$n_{2 \text{ Eck}}$	246	212	252
			$n_{2 \text{ th}}$	246	212	252
17.920	167	0.23	$M_2$	34	109	69
			c	3.5	1.2	1.7
			$n_{2 \text{ Eck}}$	220	190	226
			$n_{2 \text{ th}}$	220	181	217

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

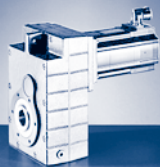


$M_{2GN} \leq 187 \text{ Nm}$

GFL04-2A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	3950	3410	4050
			$I_{M400}$	2.4	6.0	4.4
			$P_N$	0.80	2.20	1.70
			$J_M$	2.44	8.34	8.34
20.519	183	0.17	$M_2$	39	125	79
			c	3.3	1.1	1.7
			$n_{2 \text{ Eck}}$	193	166	197
			$n_{2 \text{ th}}$	193	166	197
			$M_2$	44		88
22.857	167	0.16	c	2.7		1.4
			$n_{2 \text{ Eck}}$	173		177
			$n_{2 \text{ th}}$	173		174
			$M_2$	48	154	97
			c	3.1	1.0	1.5
25.136	183	0.13	$n_{2 \text{ Eck}}$	157	136	161
			$n_{2 \text{ th}}$	157	136	161
			$M_2$	53		108
			c	2.5		1.3
			$n_{2 \text{ Eck}}$	141		145
28.000	168	0.12	$n_{2 \text{ th}}$	141		145
			$M_2$	60		
			c	2.5		
			$n_{2 \text{ Eck}}$	125		
			$n_{2 \text{ th}}$	125		
31.600	185	0.09	$M_2$	68		
			c	2.1		
			$n_{2 \text{ Eck}}$	112		
			$n_{2 \text{ th}}$	112		
			$M_2$	78		
35.200	170	0.08	c	2.0		
			$n_{2 \text{ Eck}}$	97		
			$n_{2 \text{ th}}$	97		
			$M_2$	87		
			c	1.6		
40.697	187	0.06	$n_{2 \text{ Eck}}$	87		
			$n_{2 \text{ th}}$	87		
			$M_2$	87		
			c	87		
			$n_{2 \text{ Eck}}$	87		
45.333	172	0.06	$n_{2 \text{ th}}$	87		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

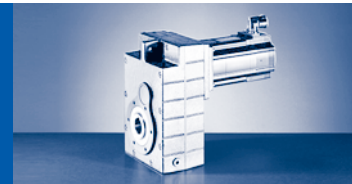
## GFL□□-□A (MCA)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
i	$M_{2GN}$	$J_G$	$M_1$	...S00	...F10	...S00	...F10	...S00	...F10	...S00
			$n_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$I_{M400}$	3950	3410	4050	1635	2000	3455	4100
			$P_N$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$J_M$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$M_2$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
			c		20					
3.333	138	1.68	$n_{2 \text{ Eck}}$		5.1					
			$n_{2 \text{ th}}$		1023					
					910					
			$M_2$				38		34	
3.333	166	1.68	c				4.2		3.6	
			$n_{2 \text{ Eck}}$				491		1037	
			$n_{2 \text{ th}}$				491		849	
			$M_2$		27		52	28	47	23
4.571	170	2.13	c		4.6		3.1	5.2	2.7	5.1
			$n_{2 \text{ Eck}}$		746		358	438	756	897
			$n_{2 \text{ th}}$		746		358	438	686	775
			$M_2$		30					
5.133	212	2.37	c		5.1					
			$n_{2 \text{ Eck}}$		664					
			$n_{2 \text{ th}}$		591					
			$M_2$				58		53	26
5.133	223	2.37	c				3.6		3.1	5.9
			$n_{2 \text{ Eck}}$				319		673	799
			$n_{2 \text{ th}}$				319		536	607
			$M_2$		33		64	35	58	28
5.667	233	2.33	c		5.1		3.4	5.7	3.0	5.6
			$n_{2 \text{ Eck}}$		602		289	353	610	724
			$n_{2 \text{ th}}$		535		289	353	480	544
			$M_2$		38	24	74	40	66	33
6.400	173	0.82	c		3.4	5.0	2.3	3.8	2.0	3.7
			$n_{2 \text{ Eck}}$		533	633	256	313	540	641
			$n_{2 \text{ th}}$		533	621	255	313	527	561
			$M_2$		42		80	44	73	35
7.040	248	1.47	c		4.4		2.9	4.9	2.6	4.8
			$n_{2 \text{ Eck}}$		484		232	284	491	582
			$n_{2 \text{ th}}$		484		232	284	440	498
			$M_2$		46		89	49	80	39
7.771	258	1.45	c		4.1		2.8	4.7	2.4	4.5
			$n_{2 \text{ Eck}}$		439		210	257	445	528
			$n_{2 \text{ th}}$		439		210	257	394	447
			$M_2$		54	33	103	57	93	46
9.010	266	0.95	c		3.7	5.5	2.5	4.1	2.1	4.0
			$n_{2 \text{ Eck}}$		379	450	182	222	384	455
			$n_{2 \text{ th}}$		378	433	181	222	366	399
			$M_2$		59	37	114	63	103	51
9.946	275	0.89	c		3.4	5.1	2.3	3.9	2.0	3.8
			$n_{2 \text{ Eck}}$		343	407	164	201	347	412
			$n_{2 \text{ th}}$		343	388	164	201	329	361
			$M_2$		68	42	131	72	118	58
11.360	278	1.08	c		3.1	4.5	2.1	3.4	1.8	3.4
			$n_{2 \text{ Eck}}$		300	357	144	176	304	361
			$n_{2 \text{ th}}$		283	305	144	176	243	288
			$M_2$		77	48	148	81	133	66
12.800	285	1.01	c		2.8	4.1	1.9	3.1	1.6	3.0
			$n_{2 \text{ Eck}}$		266	316	128	156	270	320
			$n_{2 \text{ th}}$		246	266	128	156	204	251

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

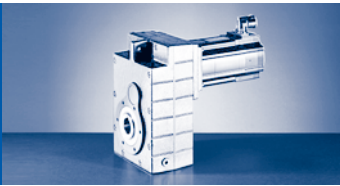


$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
14.538	301	0.75	$M_2$		87	55	168	93	152	75
			c		2.6	3.8	1.7	2.9	1.5	2.8
			$n_{2 \text{ Eck}}$		235	279	113	138	238	282
			$n_{2 \text{ th}}$		235	253	112	138	195	239
15.904	310	0.60	$M_2$		96	60	184	102	166	82
			c		2.4	3.6	1.6	2.7	1.4	2.7
			$n_{2 \text{ Eck}}$		214	255	103	126	217	258
			$n_{2 \text{ th}}$		214	237	103	126	181	225
17.920	312	0.61	$M_2$		108	68	208	115	187	93
			c		2.2	3.2	1.5	2.4	1.3	2.4
			$n_{2 \text{ Eck}}$		190	226	91	112	193	229
			$n_{2 \text{ th}}$		190	206	91	112	154	195
20.286	333	0.43	$M_2$		123	77	235	130	212	105
			c		2.0	3.0	1.4	2.3	1.2	2.2
			$n_{2 \text{ Eck}}$		168	200	81	99	170	202
			$n_{2 \text{ th}}$		168	200	81	99	155	177
22.857	313	0.43	$M_2$	42	139	87	266	147		119
			c	5.1	1.7	2.5	1.1	1.9		1.9
			$n_{2 \text{ Eck}}$	173	149	177	72	88		179
			$n_{2 \text{ th}}$	173	149	177	72	88		157
24.850	344	0.35	$M_2$	46	150	95	289	160	260	129
			c	5.9	2.0	2.9	1.2	2.1	1.1	2.2
			$n_{2 \text{ Eck}}$	159	137	163	66	81	139	165
			$n_{2 \text{ th}}$	159	137	163	66	80	139	144
28.000	314	0.33	$M_2$	52	170	107		181		146
			c	4.8	1.6	2.4		1.7		1.7
			$n_{2 \text{ Eck}}$	141	122	145		71		146
			$n_{2 \text{ th}}$	141	122	145		71		128
32.344	345	0.20	$M_2$	60	197	124				
			c	4.5	1.5	2.2				
			$n_{2 \text{ Eck}}$	122	105	125				
			$n_{2 \text{ th}}$	122	105	125				
36.444	316	0.20	$M_2$	69	222	140				
			c	3.7	1.2	1.8				
			$n_{2 \text{ Eck}}$	108	94	111				
			$n_{2 \text{ th}}$	108	94	111				
40.233	345	0.15	$M_2$	76	245	155				
			c	3.6	1.2	1.8				
			$n_{2 \text{ Eck}}$	98	85	101				
			$n_{2 \text{ th}}$	98	85	101				
45.333	319	0.14	$M_2$	86		175				
			c	3.0		1.5				
			$n_{2 \text{ Eck}}$	87		89				
			$n_{2 \text{ th}}$	87		89				
52.067	309	0.09	$M_2$	99						
			c	2.5						
			$n_{2 \text{ Eck}}$	76						
			$n_{2 \text{ th}}$	76						
58.667	322	0.09	$M_2$	112						
			c	2.3						
			$n_{2 \text{ Eck}}$	67						
			$n_{2 \text{ th}}$	67						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

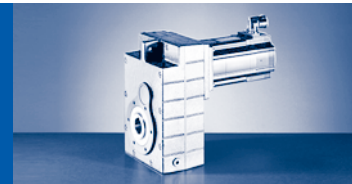
## GFL□□-□A (MCA)

$M_{2GN} \leq 345 \text{ Nm}$

GFL05-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
63.190	282	0.07	$M_2$	121						
			c	1.9						
			$n_{2Eck}$	63						
			$n_{2th}$	63						
71.200	305	0.06	$M_2$	137						
			c	2.0						
			$n_{2Eck}$	56						
			$n_{2th}$	55						

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

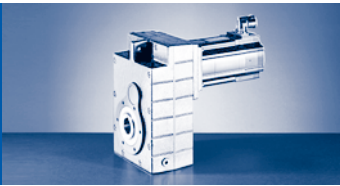


$M_{2GN} \leq 345 \text{ Nm}$

GFL05-3A				10IC40
				...500
i	$M_{2GN}$	$J_G$	$M_1$	
			$n_1$	2.00
			$I_{M400}$	3950
			$P_N$	2.4
			$J_M$	0.80
			$M_2$	2.44
			c	117
61.653	207	0.20	$n_{2 \text{ Eck}}$	1.5
			$n_{2 \text{ th}}$	64
			$M_2$	64
			c	150
78.639	225	0.14	$n_{2 \text{ Eck}}$	1.4
			$n_{2 \text{ th}}$	50
			$M_2$	50
			c	171
90.123	303	0.20	$n_{2 \text{ Eck}}$	1.6
			$n_{2 \text{ th}}$	44
			$M_2$	44
			c	193
101.547	328	0.20	$n_{2 \text{ Eck}}$	1.5
			$n_{2 \text{ th}}$	39
			$M_2$	39
			c	219
114.952	329	0.14	$n_{2 \text{ Eck}}$	1.4
			$n_{2 \text{ th}}$	34
			$M_2$	34
			c	247
129.524	328	0.14	$n_{2 \text{ Eck}}$	1.2
			$n_{2 \text{ th}}$	31
			$M_2$	31
			c	269
140.817	345	0.11	$n_{2 \text{ Eck}}$	1.2
			$n_{2 \text{ th}}$	28
			$M_2$	28

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

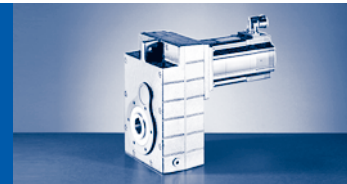
## GFL□□-□A (MCA)

$M_{2GN} \leq 660 \text{ Nm}$

GFL06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
3.675	266	7.76	$M_2$						37						
			c						52						
			$n_{2 \text{ Eck}}$						940						
			$n_{2 \text{ th}}$						702						
3.675	311	7.76	$M_2$								74		66		
			c								3.9		3.5		
			$n_{2 \text{ Eck}}$								457		947		
			$n_{2 \text{ th}}$								457		645		
5.211	377	6.64	$M_2$						52						
			c						5.2						
			$n_{2 \text{ Eck}}$						663						
			$n_{2 \text{ th}}$						495						
5.211	424	6.64	$M_2$								106		94		
			c								3.8		3.3		
			$n_{2 \text{ Eck}}$								322		668		
			$n_{2 \text{ th}}$								322		451		
5.750	416	6.04	$M_2$						58						
			c						5.2						
			$n_{2 \text{ Eck}}$						601						
			$n_{2 \text{ th}}$						448						
5.750	442	6.04	$M_2$								117		104	50	
			c								3.6		3.2	6.0	
			$n_{2 \text{ Eck}}$								292		605	715	
			$n_{2 \text{ th}}$								292		403	460	
6.450	263	3.65	$M_2$		38										
			c		5.1										
			$n_{2 \text{ Eck}}$		529										
			$n_{2 \text{ th}}$		529										
6.450	352	3.65	$M_2$				72		66		132	65	117	57	
			c				4.6		3.9		2.5	4.5	2.2	4.2	
			$n_{2 \text{ Eck}}$				254		536		261	357	540	637	
			$n_{2 \text{ th}}$				253		507		260	357	451	482	
7.147	433	4.04	$M_2$				80		72		146	72	130	63	
			c				5.1		4.4		2.8	5.0	2.5	4.7	
			$n_{2 \text{ Eck}}$				229		483		235	322	487	575	
			$n_{2 \text{ th}}$				229		404		235	322	359	409	
8.400	604	4.26	$M_2$				93		84		171	84	152	74	
			c				6.0		5.2		3.3	6.0	3.0	5.6	
			$n_{2 \text{ Eck}}$				195		411		200	274	414	489	
			$n_{2 \text{ th}}$				195		307		200	274	272	311	
9.463	581	3.88	$M_2$				105		96		194	95	172	84	
			c				5.1		4.4		2.8	5.1	2.5	4.8	
			$n_{2 \text{ Eck}}$				173		365		178	243	368	434	
			$n_{2 \text{ th}}$				173		264		178	243	233	267	
10.092	412	2.52	$M_2$		59										
			c		5.1										
			$n_{2 \text{ Eck}}$		338										
			$n_{2 \text{ th}}$		338										
10.092	459	2.52	$M_2$				114		103		208	103	184	91	
			c				3.8		3.3		2.1	3.8	1.9	3.5	
			$n_{2 \text{ Eck}}$				162		342		167	228	345	407	
			$n_{2 \text{ th}}$				162		313		166	228	271	308	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

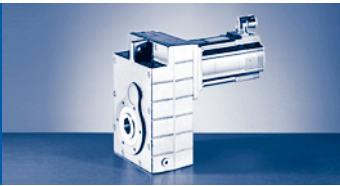


$M_{2GN} \leq 660 \text{ Nm}$

GFL06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
11.520	632	1.73	$M_2$				129		117		237	116	210	103	
			c				4.6		4.0		2.5	4.5	2.3	4.3	
			$n_{2 \text{ Eck}}$				142		300		146		200	302	357
			$n_{2 \text{ th}}$				142		246		146		200	217	249
12.978	592	2.61	$M_2$				147		133		268	132	237	116	
			c				3.8		3.3		2.1	3.8	1.9	3.5	
			$n_{2 \text{ Eck}}$				126		266		130		177	268	317
			$n_{2 \text{ th}}$				126		210		129		177	182	213
14.743	602	1.95	$M_2$		86										
			c		5.1										
			$n_{2 \text{ Eck}}$		231										
			$n_{2 \text{ th}}$		231										
14.743	641	1.95	$M_2$				167		151	73	304	150	270	133	
			c				3.6		3.1	5.9	2.0	3.6	1.8	3.4	
			$n_{2 \text{ Eck}}$				111		234	278	114	156	236	279	
			$n_{2 \text{ th}}$				111		212	240	114	156	181	211	
16.128	643	1.68	$M_2$		95		183	100	166	81	334	165	295	145	
			c		5.0		3.3	5.6	2.9	5.4	1.8	3.3	1.6	3.1	
			$n_{2 \text{ Eck}}$		211		101	124	214	254	104	143	216	255	
			$n_{2 \text{ th}}$		211		101	124	197	223	104	143	164	193	
18.169	600	1.57	$M_2$		108		208	114	188	92	377	187	334	165	
			c		4.1		2.8	4.6	2.4	4.5	1.5	2.7	1.4	2.6	
			$n_{2 \text{ Eck}}$		188		90	110	190	226	93	127	192	226	
			$n_{2 \text{ th}}$		188		90	110	168	191	92	127	132	171	
20.571	645	1.19	$M_2$		122	76	236	129	213	104	427	212	378	187	
			c		3.9	5.8	2.6	4.4	2.3	4.3	1.5	2.6	1.3	2.4	
			$n_{2 \text{ Eck}}$		166	197	80	97	168	199	82	112	169	200	
			$n_{2 \text{ th}}$		166	193	79	97	164	175	82	112	130	151	
23.175	604	1.13	$M_2$		138	86	267	147	241	118	482	240	427	211	
			c		3.2	4.8	2.2	3.6	1.9	3.6	1.2	2.2	1.1	2.0	
			$n_{2 \text{ Eck}}$		147	175	71	86	149	177	73	99	150	177	
			$n_{2 \text{ th}}$		147	166	71	86	138	155	72	99	107	134	
25.200	651	0.90	$M_2$		150	93	290	159	261	128	524	260	464	229	
			c		3.7	5.4	2.2	4.0	2.1	4.0	1.2	2.4	1.2	2.3	
			$n_{2 \text{ Eck}}$		135	161	65	79	137	163	67	91	138	163	
			$n_{2 \text{ th}}$		135	161	65	79	137	142	67	91	119	123	
28.389	607	0.86	$M_2$		170	106	328	180	295	145	592	294		259	
			c		3.0	4.5	1.8	3.3	1.8	3.3	1.0	2.0		1.9	
			$n_{2 \text{ Eck}}$		120	143	58	71	122	144	59	81		145	
			$n_{2 \text{ th}}$		120	143	58	70	122	126	59	81		110	
32.800	641	0.58	$M_2$		197	123	379	209	342	168					
			c		2.8	4.1	1.7	3.0	1.6	3.0					
			$n_{2 \text{ Eck}}$		104	124	50	61	105	125					
			$n_{2 \text{ th}}$		104	123	50	61	105	109					
36.951	611	0.56	$M_2$		223	140	428	236	386	190					
			c		2.3	3.5	1.4	2.5	1.4	2.6					
			$n_{2 \text{ Eck}}$		92	110	44	54	94	111					
			$n_{2 \text{ th}}$		92	110	44	54	94	97					
40.800	657	0.43	$M_2$		246	154	473	261	426	210					
			c		2.3	3.4	1.4	2.5	1.3	2.5					
			$n_{2 \text{ Eck}}$		84	99	40	49	85	101					
			$n_{2 \text{ th}}$		84	99	40	49	85	88					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

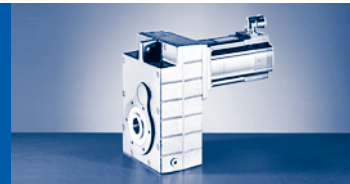
## GFL□□-□A (MCA)

$M_{2GN} \leq 660 \text{ Nm}$

GFL06-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
45.963	613	0.41	$M_2$	85	278	175	534	296	481	238				
			c	5.7	1.9	2.8	1.2	2.1	1.1	2.1				
			$n_{2 \text{ Eck}}$	86	74	88	36	44	75	89				
			$n_{2 \text{ th}}$	86	74	88	36	44	75	78				
52.800	660	0.26	$M_2$	98	320	201								
			c	5.3	1.8	2.6								
			$n_{2 \text{ Eck}}$	75	65	77								
			$n_{2 \text{ th}}$	75	65	77								
59.481	615	0.25	$M_2$	111	362	228								
			c	4.4	1.5	2.2								
			$n_{2 \text{ Eck}}$	66	57	68								
			$n_{2 \text{ th}}$	66	57	68								
64.080	576	0.19	$M_2$	121	391	246								
			c	3.8	1.3	1.9								
			$n_{2 \text{ Eck}}$	62	53	63								
			$n_{2 \text{ th}}$	62	53	63								
72.189	616	0.19	$M_2$	136	440	277								
			c	4.0	1.3	2.0								
			$n_{2 \text{ Eck}}$	55	47	56								
			$n_{2 \text{ th}}$	55	47	56								
81.000	435	0.13	$M_2$	155										
			c	2.5										
			$n_{2 \text{ Eck}}$	49										
			$n_{2 \text{ th}}$	49										
91.250	476	0.12	$M_2$	174										
			c	2.5										
			$n_{2 \text{ Eck}}$	43										
			$n_{2 \text{ th}}$	43										

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

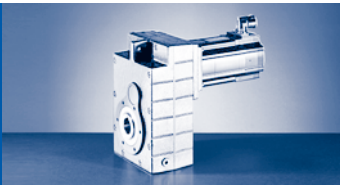


$M_{2GN} \leq 634 \text{ Nm}$

GFL06-3A				10IC40	13IC34	13IC41
				...500	...F10	...500
i	$M_{2GN}$	$J_G$	$M_1$			
			$n_1$	2.00	6.30	4.00
			$I_{M400}$	3950	3410	4050
			$P_N$	2.4	6.0	4.4
			$J_M$	0.80	2.20	1.70
			$M_2$	2.44	8.34	8.34
66.213	497	0.29	$c$	123	398	251
			$n_{2 \text{ Eck}}$	3.6	1.2	1.8
			$n_{2 \text{ th}}$	60	52	61
				60	52	61
72.000	497	0.26	$M_2$	134	433	273
			$c$	3.3	1.1	1.6
			$n_{2 \text{ Eck}}$	55	47	56
			$n_{2 \text{ th}}$	55	47	56
81.111	497	0.26	$M_2$	152		309
			$c$	2.9		1.5
			$n_{2 \text{ Eck}}$	49		50
			$n_{2 \text{ th}}$	49		50
88.200	488	0.19	$M_2$	166		336
			$c$	2.6		1.3
			$n_{2 \text{ Eck}}$	45		46
			$n_{2 \text{ th}}$	45		46
99.361	550	0.19	$M_2$	187		379
			$c$	2.6		1.3
			$n_{2 \text{ Eck}}$	40		41
			$n_{2 \text{ th}}$	40		41
116.571	528	0.09	$M_2$	220		
			$c$	2.2		
			$n_{2 \text{ Eck}}$	34		
			$n_{2 \text{ th}}$	34		
131.323	595	0.21	$M_2$	248		502
			$c$	2.2		1.1
			$n_{2 \text{ Eck}}$	30		31
			$n_{2 \text{ th}}$	30		31
144.320	560	0.11	$M_2$	273		
			$c$	1.9		
			$n_{2 \text{ Eck}}$	27		
			$n_{2 \text{ th}}$	27		
162.583	613	0.11	$M_2$	308		
			$c$	1.8		
			$n_{2 \text{ Eck}}$	24		
			$n_{2 \text{ th}}$	24		
179.520	605	0.10	$M_2$	341		
			$c$	1.6		
			$n_{2 \text{ Eck}}$	22		
			$n_{2 \text{ th}}$	22		
202.237	611	0.10	$M_2$	385		
			$c$	1.4		
			$n_{2 \text{ Eck}}$	20		
			$n_{2 \text{ th}}$	20		
231.200	634	0.07	$M_2$	440		
			$c$	1.3		
			$n_{2 \text{ Eck}}$	17		
			$n_{2 \text{ th}}$	17		
260.457	613	0.07	$M_2$	497		
			$c$	1.1		
			$n_{2 \text{ Eck}}$	15		
			$n_{2 \text{ th}}$	15		

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	
				...500	...F10	...500	...F10	...500	...F10	...500	...F10	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	
3.350	349	19.57	$M_2$								67	
			c								4.8	
			$n_{2 \text{ Eck}}$									502
			$n_{2 \text{ th}}$									502
3.350	639	19.57	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
4.643	483	11.99	$M_2$								93	
			c								4.8	
			$n_{2 \text{ Eck}}$									362
			$n_{2 \text{ th}}$									362
4.643	653	11.99	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
5.159	537	11.12	$M_2$								103	
			c								4.8	
			$n_{2 \text{ Eck}}$									326
			$n_{2 \text{ th}}$									326
5.159	850	11.12	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
5.695	592	18.09	$M_2$								114	
			c								4.8	
			$n_{2 \text{ Eck}}$									295
			$n_{2 \text{ th}}$									295
5.695	914	18.09	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
6.400	463	9.83	$M_2$						64			
			c						5.2			
			$n_{2 \text{ Eck}}$						540			
			$n_{2 \text{ th}}$						466			
6.400	541	9.83	$M_2$								130	
			c								3.9	
			$n_{2 \text{ Eck}}$									263
			$n_{2 \text{ th}}$									263
6.400	662	9.83	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									
7.150	744	11.88	$M_2$								143	
			c								4.8	
			$n_{2 \text{ Eck}}$									235
			$n_{2 \text{ th}}$									235
7.150	918	11.88	$M_2$									
			c									
			$n_{2 \text{ Eck}}$									
			$n_{2 \text{ th}}$									

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

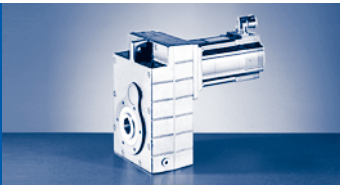


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	i
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
60									c			
4.3									$n_{2 \text{ Eck}}$	19.57	349	3.350
1039									$n_{2 \text{ th}}$			
631									$M_2$			
		113	113		195		176		c			
		5.2	4.1		3.1		2.7		$n_{2 \text{ Eck}}$	19.57	639	3.350
		508	1048		511		1051		$n_{2 \text{ th}}$			
		508	626		510		567		$M_2$			
83									c			
4.3									$n_{2 \text{ Eck}}$	11.99	483	4.643
750									$n_{2 \text{ th}}$			
524									$M_2$			
		159	159		273	106	245		c			
		3.8	3.0		2.3	5.0	2.0		$n_{2 \text{ Eck}}$	11.99	653	4.643
		366	756		368	536	758		$n_{2 \text{ th}}$			
		366	487		368	434	434		$M_2$			
92									c			
4.3									$n_{2 \text{ Eck}}$	11.12	537	5.159
675									$n_{2 \text{ th}}$			
410									$M_2$			
		175	175		302	117	272		c			
		4.5	3.6		2.7	5.8	2.3		$n_{2 \text{ Eck}}$	11.12	850	5.159
		330	680		332	483	682		$n_{2 \text{ th}}$			
		330	393		331	390	354		$M_2$			
101									c			
4.3									$n_{2 \text{ Eck}}$	18.09	592	5.695
611									$n_{2 \text{ th}}$			
371									$M_2$			
		194	194		334	129	300		c			
		4.4	3.5		2.6	5.7	2.3		$n_{2 \text{ Eck}}$	18.09	914	5.695
		299	616		300	437	618		$n_{2 \text{ th}}$			
		299	354		300	354	319		$M_2$			
									c			
									$n_{2 \text{ Eck}}$	9.83	463	6.400
									$n_{2 \text{ th}}$			
115									$M_2$			
3.5									c			
544									$n_{2 \text{ Eck}}$	9.83	541	6.400
429									$n_{2 \text{ th}}$			
		221	221		379	149	340	102	$M_2$			
		2.8	2.2		1.7	3.7	1.5	4.5	c			
		266	548		267	389	550	650	$n_{2 \text{ Eck}}$	9.83	662	6.400
		266	383		267	315	315	315	$n_{2 \text{ th}}$			
127									$M_2$			
4.3									c			
487									$n_{2 \text{ Eck}}$	11.88	744	7.150
341									$n_{2 \text{ th}}$			
		245	245		421	164	378	112	$M_2$			
		3.5	2.8		2.1	4.6	1.8	5.5	c			
		238	491		239	348	492	582	$n_{2 \text{ Eck}}$	11.88	918	7.150
		238	310		239	282	271	282	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

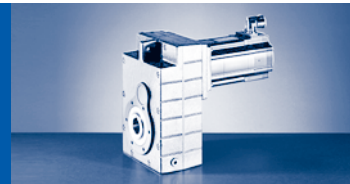
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...500	...F10	...500	...F10	...500	...F10	...500	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
8.324	866	13.11	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								167 4.8 202 202
8.324	993	13.11	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
9.379	976	12.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								188 4.8 179 179
9.379	999	12.04	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
9.714	757	8.03	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						97 5.6 356 300		
9.714	885	8.03	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								196 4.2 173 173
9.714	969	8.03	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
11.538	1080	8.52	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								232 4.3 146 146
13.000	1089	7.97	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								263 3.9 129 129
14.200	1106	6.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						142 5.6 243 205		
14.200	1143	6.35	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								288 3.7 118 118
15.904	1150	5.27	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$						159 5.2 217 187		
15.904	1179	5.27	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								323 3.4 106 106

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

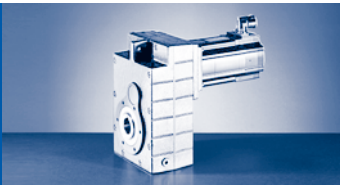


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	i
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
148									c	13.11	866	8.324
4.3									$n_{2 \text{ Eck}}$			
418		286	286		491	192	441	131	$n_{2 \text{ th}}$			
254		3.3	2.6		1.9	4.2	1.7	5.2	$M_2$	13.11	993	8.324
		204	422		205	299	423	500	c			
		204	225		205	242	191	242	$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
167									$M_2$	12.04	976	9.379
4.3									c			
371									$n_{2 \text{ Eck}}$			
225									$n_{2 \text{ th}}$			
		324	323		555	217	498	149	$M_2$	12.04	999	9.379
		2.9	2.3		1.7	3.8	1.5	4.6	c			
		181	374		182	266	375	444	$n_{2 \text{ Eck}}$			
		181	194		171	215	159	215	$n_{2 \text{ th}}$			
									$M_2$	8.03	757	9.714
									c			
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
174									$M_2$	8.03	885	9.714
3.7									c			
358									$n_{2 \text{ Eck}}$			
276									$n_{2 \text{ th}}$			
		336	335		575	226	516	155	$M_2$	8.03	969	9.714
		2.7	2.2		1.6	3.5	1.4	4.3	c			
		175	361		176	256	362	428	$n_{2 \text{ Eck}}$			
		175	243		176	207	195	207	$n_{2 \text{ th}}$			
206		400	399	128	684	269	614	184	$M_2$	8.52	1080	11.538
3.8		2.6	2.0	5.7	1.5	3.3	1.3	4.0	c			
302		147	304	360	148	216	305	361	$n_{2 \text{ Eck}}$			
206		147	178	212	148	175	141	175	$n_{2 \text{ th}}$			
234		452	450	145	772	304	692	209	$M_2$	7.97	1089	13.000
3.4		2.3	1.8	5.1	1.4	3.0	1.2	3.6	c			
268		131	270	319	132	192	271	320	$n_{2 \text{ Eck}}$			
179		131	149	188	126	155	118	155	$n_{2 \text{ th}}$			
									$M_2$	6.35	1106	14.200
									c			
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
256		494	492	159	843	332	757	228	$M_2$	6.35	1143	14.200
3.3		2.2	1.7	4.9	1.3	2.9	1.1	3.5	c			
245		120	247	292	120	175	248	293	$n_{2 \text{ Eck}}$			
184		120	151	172	120	142	120	142	$n_{2 \text{ th}}$			
									$M_2$	5.27	1150	15.904
									c			
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
287	139	554	552	178	946	373	848	256	$M_2$	5.27	1179	15.904
3.0	5.8	2.0	1.6	4.5	1.2	2.6	1.1	3.2	c			
219	258	107	221	261	108	157	221	262	$n_{2 \text{ Eck}}$			
168	191	107	135	154	108	127	110	127	$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

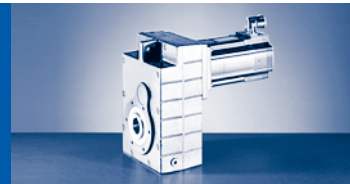
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
17.920	1189	4.98	$M_2$				199		180		366
			c					4.8			3.1
			$n_{2 \text{ Eck}}$				91		193		94
			$n_{2 \text{ th}}$				91		164		94
20.286	828	3.47	$M_2$		119						
			c		5.1						
			$n_{2 \text{ Eck}}$		168						
			$n_{2 \text{ th}}$		168						
20.286	1233	3.47	$M_2$				226		205		
			c				5.1		4.4		
			$n_{2 \text{ Eck}}$				81		170		
			$n_{2 \text{ th}}$				81		166		
20.286	1262	3.47	$M_2$								415
			c								2.9
			$n_{2 \text{ Eck}}$								83
			$n_{2 \text{ th}}$								83
22.857	933	3.27	$M_2$		134						
			c		5.1						
			$n_{2 \text{ Eck}}$		149						
			$n_{2 \text{ th}}$		149						
22.857	1240	3.27	$M_2$				256		232		469
			c				4.5		3.9		2.5
			$n_{2 \text{ Eck}}$				72		151		74
			$n_{2 \text{ th}}$				72		144		74
24.850	1295	2.65	$M_2$				279		252		
			c				4.5		4.3		
			$n_{2 \text{ Eck}}$				66		139		
			$n_{2 \text{ th}}$				66		139		
24.850	1337	2.65	$M_2$								510
			c								2.6
			$n_{2 \text{ Eck}}$								68
			$n_{2 \text{ th}}$								68
28.000	1242	2.53	$M_2$				317		285		577
			c				3.8		3.6		2.1
			$n_{2 \text{ Eck}}$				58		123		60
			$n_{2 \text{ th}}$				58		123		60
32.344	1048	1.69	$M_2$		190						
			c		4.6						
			$n_{2 \text{ Eck}}$		105						
			$n_{2 \text{ th}}$		105						
32.344	1358	1.69	$M_2$				366		330		
			c				3.6		3.5		
			$n_{2 \text{ Eck}}$				51		107		
			$n_{2 \text{ th}}$				51		107		
32.344	1370	1.69	$M_2$								668
			c								2.0
			$n_{2 \text{ Eck}}$								52
			$n_{2 \text{ th}}$								52
36.444	1181	1.61	$M_2$		215						
			c		4.6						
			$n_{2 \text{ Eck}}$		94						
			$n_{2 \text{ th}}$		94						

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

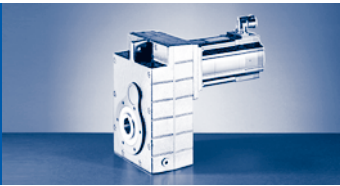


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
324	158	626	623	202	1067	422		290	c	4.98	1189	17.920
2.7	5.2	1.8	1.4	4.1	1.1	2.4		2.9	$n_{2 \text{ Eck}}$			
194	229	95	196	232	95	139		232	$n_{2 \text{ th}}$			
146	166	95	113	137	95	112		112				
									$M_2$			
									c	3.47	828	20.286
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	3.47	1233	20.286
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
368	180	709	706	229					$M_2$			
2.6	4.8	1.7	1.3	3.8					c	3.47	1262	20.286
172	203	84	173	205					$n_{2 \text{ Eck}}$			
149	153	84	113	121					$n_{2 \text{ th}}$			
									$M_2$			
									c	3.27	933	22.857
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
416	204	801	797	260					$M_2$			
2.2	4.2	1.5	1.2	3.3					c	3.27	1240	22.857
152	180	74	154	182					$n_{2 \text{ Eck}}$			
128	136	74	94	107					$n_{2 \text{ th}}$			
									$M_2$			
									c	2.65	1295	24.850
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
451	220	870	865	281					$M_2$			
2.5	4.7	1.5	1.3	3.7					c	2.65	1337	24.850
140	165	68	141	167					$n_{2 \text{ Eck}}$			
125	125	68	99	99					$n_{2 \text{ th}}$			
510	250	983	977	319					$M_2$			
2.1	3.9	1.3	1.1	3.1					c	2.53	1242	28.000
124	147	61	125	148					$n_{2 \text{ Eck}}$			
111	111	61	84	87					$n_{2 \text{ th}}$			
									$M_2$			
									c	1.69	1048	32.344
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	1.69	1358	32.344
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
590	290								$M_2$			
2.0	3.7								c	1.69	1370	32.344
108	127								$n_{2 \text{ Eck}}$			
96	96								$n_{2 \text{ th}}$			
									$M_2$			
									c	1.61	1181	36.444
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

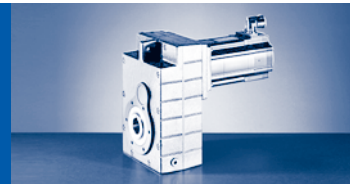
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...500	...F10	...500	...F10	...500	...F10	...500	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
36.444	1248	1.61	$M_2$				416	226	375	182	755
			c				2.9	5.3	2.8	5.3	1.6
			$n_{2 \text{ Eck}}$				45	55	95	113	46
			$n_{2 \text{ th}}$				45	55	95	99	46
39.642	1093	1.25	$M_2$		235	146					
			c		3.9	5.8					
			$n_{2 \text{ Eck}}$		86	102					
			$n_{2 \text{ th}}$		86	102					
39.642	1378	1.25	$M_2$				452	246	407	198	821
			c				3.0	5.4	2.9	5.4	1.7
			$n_{2 \text{ Eck}}$				41	51	87	103	42
			$n_{2 \text{ th}}$				41	50	87	91	42
44.667	1231	1.20	$M_2$		265	165					
			c		3.9	5.8					
			$n_{2 \text{ Eck}}$		76	91					
			$n_{2 \text{ th}}$		76	91					
44.667	1258	1.20	$M_2$				512	280	462	226	928
			c				2.4	4.3	2.3	4.4	1.4
			$n_{2 \text{ Eck}}$				37	45	77	92	38
			$n_{2 \text{ th}}$				37	45	77	80	38
52.067	1127	0.78	$M_2$		311	195					
			c		3.1	4.6					
			$n_{2 \text{ Eck}}$		66	78					
			$n_{2 \text{ th}}$		65	78					
52.067	1342	0.78	$M_2$				599	328	539	264	
			c				2.2	4.0	2.1	4.0	
			$n_{2 \text{ Eck}}$				31	38	66	79	
			$n_{2 \text{ th}}$				31	38	66	69	
58.667	1270	0.75	$M_2$		351	219	677	372	610	300	
			c		3.1	4.6	1.9	3.3	1.8	3.4	
			$n_{2 \text{ Eck}}$		58	69	28	34	59	70	
			$n_{2 \text{ th}}$		58	69	28	34	59	61	
63.190	792	0.57	$M_2$	117							
			c	5.3							
			$n_{2 \text{ Eck}}$	63							
			$n_{2 \text{ th}}$	63							
63.190	1145	0.57	$M_2$		380	238					
			c		2.6	3.8					
			$n_{2 \text{ Eck}}$		54	64					
			$n_{2 \text{ th}}$		54	64					
63.190	1240	0.57	$M_2$				731	402	658	324	
			c				1.7	3.0	1.6	3.1	
			$n_{2 \text{ Eck}}$				26	32	55	65	
			$n_{2 \text{ th}}$				26	32	55	57	
71.200	893	0.56	$M_2$	131							
			c	5.9							
			$n_{2 \text{ Eck}}$	56							
			$n_{2 \text{ th}}$	55							
71.200	1280	0.56	$M_2$		427	267	824	454	741	365	
			c		2.8	4.2	1.5	2.8	1.6	3.1	
			$n_{2 \text{ Eck}}$		48	57	23	28	49	58	
			$n_{2 \text{ th}}$		48	57	23	28	49	50	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

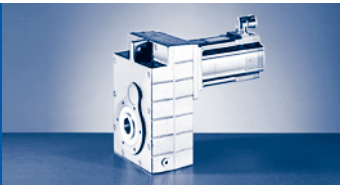


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
668	329								c			
1.6	3.0								$n_{2Eck}$	1.61	1248	36.444
96	113								$n_{2th}$			
85	85								$M_2$			
									c			
									$n_{2Eck}$	1.25	1093	39.642
									$n_{2th}$			
726	358								$M_2$			
1.6	3.1								c	1.25	1378	39.642
88	104								$n_{2Eck}$			
78	78								$n_{2th}$			
									$M_2$			
									c	1.20	1231	44.667
									$n_{2Eck}$			
									$n_{2th}$			
821	405								$M_2$			
1.3	2.5								c	1.20	1258	44.667
78	92								$n_{2Eck}$			
70	70								$n_{2th}$			
									$M_2$			
									c	0.78	1127	52.067
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.78	1342	52.067
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.75	1270	58.667
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.57	792	63.190
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.57	1145	63.190
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.57	1240	63.190
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.56	893	71.200
									$n_{2Eck}$			
									$n_{2th}$			
									$M_2$			
									c	0.56	1280	71.200
									$n_{2Eck}$			
									$n_{2th}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

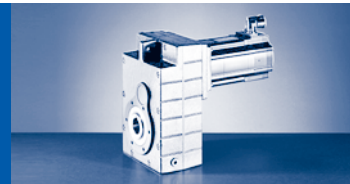
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-2A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...500	...F10	...500	...F10	...500	...F10	...500	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
79.875	796	0.37	$M_2$	149							
			c	4.7							
			$n_{2Eck}$	50							
			$n_{2th}$	49							
79.875	854	0.37	$M_2$		485	305					
			c		1.7	2.5					
			$n_{2Eck}$		43	51					
			$n_{2th}$		43	51					
90.000	897	0.36	$M_2$	168							
			c	4.7							
			$n_{2Eck}$	44							
			$n_{2th}$	44							
90.000	930	0.36	$M_2$		547	344					
			c		1.6	2.4					
			$n_{2Eck}$		38	45					
			$n_{2th}$		38	45					

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

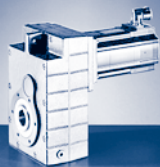


$M_{2GN} \leq 1378 \text{ Nm}$

17NC35	17NC41	19SC17	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL07-2A			
...F10	...S00	...F10	...F10	...S00	...F10	...S00	...F10	...S00	$M_1$	$J_G$	$M_{2GN}$	$i$
19.00	9.50	36.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
3480	4110	1700	3510	4150	1710	2490	3520	4160	$I_{M400}$			
15.8	10.2	13.9	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.90	4.10	6.40	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	36.04	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
									$n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.37	796	79.875
									$M_2$ c			
									$n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.37	854	79.875
									$M_2$ c			
									$n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.36	897	90.000
									$M_2$ c			
									$n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$	0.36	930	90.000

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

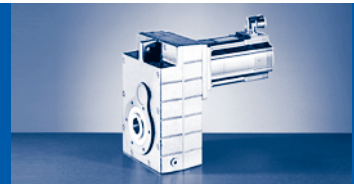
## GFL□□-□A (MCA)

$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
65.306	883	0.79	$M_2$		388	244	748	413	672	332
			c		2.2	3.2	1.2	2.1	1.3	2.4
			$n_{2 \text{ Eck}}$		52	62	25	31	53	63
			$n_{2 \text{ th}}$		52	62	25	31	53	55
72.452	869	0.89	$M_2$	132	432	272	830	460	747	370
			c	5.7	1.9	2.8	1.1	1.9	1.1	2.1
			$n_{2 \text{ Eck}}$	55	47	56	23	28	48	57
			$n_{2 \text{ th}}$	55	47	56	23	28	47	50
81.636	979	0.88	$M_2$	148	487	306	936	518	842	416
			c	5.7	1.9	2.8	1.1	1.9	1.1	2.1
			$n_{2 \text{ Eck}}$	48	42	50	20	25	42	50
			$n_{2 \text{ th}}$	48	42	50	20	25	42	44
92.413	961	0.61	$M_2$	169	553	348		588		473
			c	5.0	1.7	2.5		1.6		1.8
			$n_{2 \text{ Eck}}$	43	37	44		22		44
			$n_{2 \text{ th}}$	43	37	44		22		39
104.127	1082	0.60	$M_2$	191	623	392		662		533
			c	5.0	1.7	2.5		1.6		1.8
			$n_{2 \text{ Eck}}$	38	33	39		19		39
			$n_{2 \text{ th}}$	38	33	39		19		34
113.206	1040	0.45	$M_2$	209	678	427		722		581
			c	4.4	1.5	2.2		1.4		1.6
			$n_{2 \text{ Eck}}$	35	30	36		18		36
			$n_{2 \text{ th}}$	35	30	36		18		32
127.556	1171	0.44	$M_2$	235	764	482		813		654
			c	4.4	1.5	2.2		1.4		1.6
			$n_{2 \text{ Eck}}$	31	27	32		16		32
			$n_{2 \text{ th}}$	31	27	32		16		28
147.347	1140	0.28	$M_2$	274	885	558				
			c	3.7	1.2	1.8				
			$n_{2 \text{ Eck}}$	27	23	28				
			$n_{2 \text{ th}}$	27	23	27				
166.025	1248	0.27	$M_2$	309	998	629				
			c	3.6	1.2	1.8				
			$n_{2 \text{ Eck}}$	24	21	24				
			$n_{2 \text{ th}}$	24	21	24				
183.285	1236	0.19	$M_2$	342	1103	696				
			c	3.2	1.1	1.6				
			$n_{2 \text{ Eck}}$	22	19	22				
			$n_{2 \text{ th}}$	22	19	22				
206.519	1248	0.19	$M_2$	387		786				
			c	2.9		1.4				
			$n_{2 \text{ Eck}}$	19		20				
			$n_{2 \text{ th}}$	19		20				
224.636	1343	0.18	$M_2$	421		855				
			c	2.9		1.4				
			$n_{2 \text{ Eck}}$	18		18				
			$n_{2 \text{ th}}$	18		18				
253.111	1258	0.18	$M_2$	477		966				
			c	2.4		1.2				
			$n_{2 \text{ Eck}}$	16		16				
			$n_{2 \text{ th}}$	16		16				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]

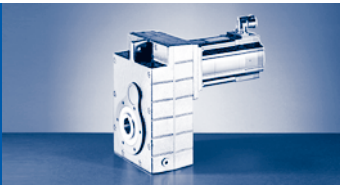


$M_{2GN} \leq 1378 \text{ Nm}$

GFL07-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41
				...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40
			$n_1$	3950	3410	4050	1635	2000	3455	4100
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24
290.706	1378	0.11	$M_2$	548						
			c	2.3						
			$n_{2Eck}$	14						
			$n_{2th}$	14						
327.556	1258	0.11	$M_2$	621						
			c	1.8						
			$n_{2Eck}$	12						
			$n_{2th}$	12						
352.811	1378	0.08	$M_2$	668						
			c	1.9						
			$n_{2Eck}$	11						
			$n_{2th}$	11						
397.533	1258	0.08	$M_2$	756						
			c	1.5						
			$n_{2Eck}$	10						
			$n_{2th}$	10						
430.222	1270	0.10	$M_2$	819						
			c	1.4						
			$n_{2Eck}$	9						
			$n_{2th}$	9						
522.133	1270	0.08	$M_2$	996						
			c	1.2						
			$n_{2Eck}$	8						
			$n_{2th}$	8						

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

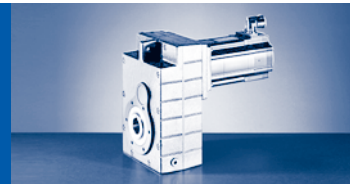
## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
6.864	1662	41.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
6.864	2089	41.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
7.466	1807	38.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
7.466	2156	38.70	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
9.010	1037	26.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					180 5.3 187 186		160 4.7 386 252	
9.010	2040	26.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
9.010	2230	26.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
9.799	1128	25.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					195 5.3 171 171		174 4.7 355 232	
9.799	2219	25.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
9.799	2310	25.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
11.167	1156	19.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					224 4.8 151 150		199 4.2 312 218	
11.167	2303	19.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								
12.307	2223	27.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$								

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

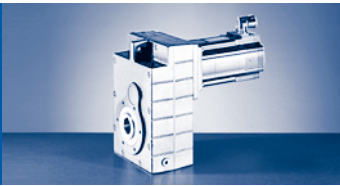


$M_{2GN} \leq 3107 \text{ Nm}$

19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
		229						c			
		5.2						$n_{2\text{ Eck}}$	41.30	1662	6.864
		511						$n_{2\text{ th}}$			
		298						$M_2$			
				393		354		c	41.30	2089	6.864
				4.9		4.3		$n_{2\text{ Eck}}$			
				249		513		$n_{2\text{ th}}$			
				249		285		$M_2$			
		249						c	38.70	1807	7.466
		5.2						$n_{2\text{ Eck}}$			
		470						$n_{2\text{ th}}$			
		274						$M_2$			
				428		386		c	38.70	2156	7.466
				4.6		4.1		$n_{2\text{ Eck}}$			
				229		472		$n_{2\text{ th}}$			
				229		259		$M_2$			
								c	26.80	1037	9.010
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
		302						$M_2$			
		4.9						c	26.80	2040	9.010
		390						$n_{2\text{ Eck}}$			
		254						$n_{2\text{ th}}$			
				520		468		$M_2$			
				4.0		3.5		c	26.80	2230	9.010
				190		391		$n_{2\text{ Eck}}$			
				190		223		$n_{2\text{ th}}$			
								$M_2$			
								c	25.30	1128	9.799
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
		329						$M_2$			
		4.9						c	25.30	2219	9.799
		358						$n_{2\text{ Eck}}$			
		233						$n_{2\text{ th}}$			
				567		510		$M_2$			
				3.8		3.3		c	25.30	2310	9.799
				175		359		$n_{2\text{ Eck}}$			
				175		205		$n_{2\text{ th}}$			
								$M_2$			
								c	19.50	1156	11.167
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
375		376		649		584		$M_2$			
5.6		4.5		3.3		2.9		c	19.50	2303	11.167
152		314		153		315		$n_{2\text{ Eck}}$			
152		219		153		180		$n_{2\text{ th}}$			
416		417		719		646		$M_2$			
4.9		3.9		2.9		2.6		c	27.60	2223	12.307
138		285		139		286		$n_{2\text{ Eck}}$			
138		156		139		141		$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

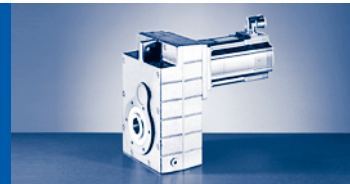
## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
14.333	1650	20.00	c					286		254	
			$n_{2 \text{ Eck}}$					5.3		4.7	
			$n_{2 \text{ th}}$					117		243	
			$n_{2 \text{ th}}$					117		158	
14.333	2374	20.00	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
16.333	1692	15.50	$M_2$					327		291	
			c					4.8		4.2	
			$n_{2 \text{ Eck}}$					103		213	
			$n_{2 \text{ th}}$					103		149	
16.333	2461	15.50	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
18.407	1906	14.60	$M_2$					369		328	
			c					4.8		4.2	
			$n_{2 \text{ Eck}}$					91		189	
			$n_{2 \text{ th}}$					91		132	
18.407	2480	14.60	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
19.667	1524	12.10	$M_2$			196					
			c			5.6					
			$n_{2 \text{ Eck}}$			176					
			$n_{2 \text{ th}}$			148					
19.667	1784	12.10	$M_2$					397		352	
			c					4.2		3.7	
			$n_{2 \text{ Eck}}$					85		177	
			$n_{2 \text{ th}}$					85		136	
19.667	2563	12.10	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
22.164	1717	11.30	$M_2$			221					
			c			5.6					
			$n_{2 \text{ Eck}}$			156					
			$n_{2 \text{ th}}$			131					
22.164	2010	11.30	$M_2$					447		397	
			c					4.2		3.7	
			$n_{2 \text{ Eck}}$					76		157	
			$n_{2 \text{ th}}$					76		121	
22.164	2612	11.30	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
24.111	1876	9.04	$M_2$					489		432	
			c					3.7		3.6	
			$n_{2 \text{ Eck}}$					70		144	
			$n_{2 \text{ th}}$					70		120	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

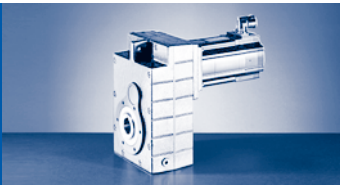


$M_{2GN} \leq 3107 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
								c	20.00	1650	14.333
								$n_2$ Eck			
								$n_2$ th			
487		487		839	325	754		$M_2$	20.00	2374	14.333
4.5		3.6		2.7	5.9	2.3		c			
119		245		119	174	246		$n_2$ Eck			
119		149		119	140	135		$n_2$ th			
								$M_2$	15.50	1692	16.333
								c			
								$n_2$ Eck			
								$n_2$ th			
557		557		959	372	861		$M_2$	15.50	2461	16.333
4.1		3.3		2.4	5.3	2.1		c			
104		215		105	153	216		$n_2$ Eck			
104		140		105	123	123		$n_2$ th			
								$M_2$	14.60	1906	18.407
								c			
								$n_2$ Eck			
								$n_2$ th			
630		630		1083	422	973	289	$M_2$	14.60	2480	18.407
3.7		2.9		2.2	4.8	1.9	5.8	c			
92		191		93	135	191	226	$n_2$ Eck			
92		122		93	109	108	109	$n_2$ th			
								$M_2$	12.10	1524	19.667
								c			
								$n_2$ Eck			
								$n_2$ th			
								$M_2$	12.10	1784	19.667
								c			
								$n_2$ Eck			
								$n_2$ th			
674		674		1158	452	1040	309	$M_2$	12.10	2563	19.667
3.6		2.8		2.1	4.6	1.8	5.6	c			
86		179		87	127	179	212	$n_2$ Eck			
86		125		87	102	102	102	$n_2$ th			
								$M_2$	11.30	1717	22.164
								c			
								$n_2$ Eck			
								$n_2$ th			
								$M_2$	11.30	2010	22.164
								c			
								$n_2$ Eck			
								$n_2$ th			
763		762		1308	512	1175	350	$M_2$	11.30	2612	22.164
3.2		2.5		1.9	4.2	1.7	5.1	c			
77		158		77	112	159	188	$n_2$ Eck			
77		110		77	91	91	91	$n_2$ th			
								$M_2$	9.04	1876	24.111
								c			
								$n_2$ Eck			
								$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



# GFL [Nm]

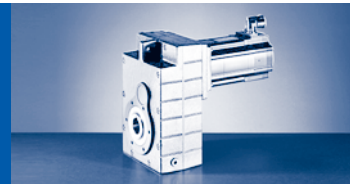
## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c								
24.111	2722	9.04	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$					551		487	
			c					3.7		3.6	
27.173	2114	8.63	$n_{2 \text{ Eck}}$					62		128	
			$n_{2 \text{ th}}$					62		106	
			$M_2$								
			c								
27.173	2767	8.63	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	367		331					
			c	4.5		4.3					
32.667	1699	5.43	$n_{2 \text{ Eck}}$	50		106					
			$n_{2 \text{ th}}$	50		106					
			$M_2$					668	326	591	288
			c					2.9	5.7	2.8	5.4
32.667	1990	5.43	$n_{2 \text{ Eck}}$					51	70	107	126
			$n_{2 \text{ th}}$					51	70	95	95
			$M_2$								
			c								
32.667	2990	5.43	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	413		373					
			c	4.5		4.3					
36.815	1915	5.21	$n_{2 \text{ Eck}}$	44		94					
			$n_{2 \text{ th}}$	44		94					
			$M_2$					753	367	666	324
			c					2.9	5.7	2.8	5.4
36.815	2242	5.21	$n_{2 \text{ Eck}}$					46	63	95	112
			$n_{2 \text{ th}}$					46	62	85	85
			$M_2$								
			c								
36.815	3018	5.21	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	448		404					
			c	3.8		3.7					
39.667	1761	4.07	$n_{2 \text{ Eck}}$	41		87					
			$n_{2 \text{ th}}$	41		87					
			$M_2$					815	399	721	352
			c					2.5	4.9	2.4	4.6
39.667	2061	4.07	$n_{2 \text{ Eck}}$					42	58	88	104
			$n_{2 \text{ th}}$					42	58	78	78
			$M_2$								
			c								
39.667	3107	4.07	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	505		456					
			c	3.8		3.7					
44.704	1985	3.92	$n_{2 \text{ Eck}}$	37		77					
			$n_{2 \text{ th}}$	37		77					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i \dots$  [-]  
 $c \dots$  [-]

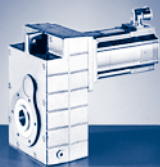


$M_{2GN} \leq 3107 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
830		827		1423	554	1276	379	$c$	9.04	2722	24.111
3.2		2.8		1.9	4.5	1.8	5.5	$n_{2 \text{ Eck}}$			
71		146		71	103	146	173	$n_{2 \text{ th}}$			
71		102		71	84	84	84	$M_2$			
								$c$	8.63	2114	27.173
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
938		934		1607	628	1441	430	$M_2$			
2.9		2.5		1.7	4.1	1.6	5.0	$c$	8.63	2767	27.173
63		129		63	92	130	153	$n_{2 \text{ Eck}}$			
63		90		63	74	74	74	$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.43	1699	32.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.43	1990	32.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1132	492	1126						$M_2$			
2.6	5.7	2.2						$c$	5.43	2990	32.667
52	72	108						$n_{2 \text{ Eck}}$			
52	72	75						$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.21	1915	36.815
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	5.21	2242	36.815
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1279	558	1273	408					$M_2$			
2.3	5.1	2.0	5.7					$c$	5.21	3018	36.815
46	64	95	113					$n_{2 \text{ Eck}}$			
46	64	67	67					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.07	1761	39.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$			
								$c$	4.07	2061	39.667
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
1379	602	1372	441					$M_2$			
2.2	4.9	1.9	5.5					$c$	4.07	3107	39.667
43	59	89	105					$n_{2 \text{ Eck}}$			
43	59	62	62					$n_{2 \text{ th}}$			
								$M_2$			
								$c$	3.92	1985	44.704
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

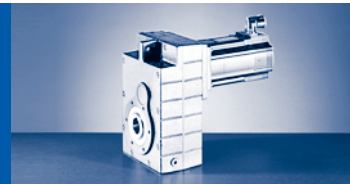
## GFL□□-□A (MCA)

$M_{2GN} \leq 3107 \text{ Nm}$

GFL09-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
44.704	2323	3.92	$M_2$					918	450	812	397
			c				2.5	4.9	2.4	4.6	
			$n_{2Eck}$				38	52	78	92	
			$n_{2th}$				38	51	70	70	
44.704	3027	3.92	$M_2$								
			c								
			$n_{2Eck}$								
			$n_{2th}$								
51.333	1825	2.59	$M_2$	585	318	527	256				
			c	3.1	5.5	2.9	5.5				
			$n_{2Eck}$	32	39	67	80				
			$n_{2th}$	32	39	67	70				
51.333	2136	2.59	$M_2$					1060	522	937	460
			c					2.0	3.9	1.9	3.7
			$n_{2Eck}$					33	45	68	80
			$n_{2th}$					33	45	61	61
57.852	2057	2.50	$M_2$	659	359	594	289				
			c	3.1	5.5	2.9	5.5				
			$n_{2Eck}$	28	35	60	71				
			$n_{2th}$	28	35	60	62				
57.852	2407	2.50	$M_2$					1194	588	1056	519
			c					2.0	3.9	1.9	3.7
			$n_{2Eck}$					29	40	60	71
			$n_{2th}$					29	40	54	54
62.300	1854	1.89	$M_2$	714	390	643	314				
			c	2.6	4.6	2.4	4.6				
			$n_{2Eck}$	26	32	56	66				
			$n_{2th}$	26	32	55	58				
62.300	2170	1.89	$M_2$					1291	637	1141	562
			c					1.7	3.3	1.6	3.1
			$n_{2Eck}$					27	37	56	66
			$n_{2th}$					27	37	50	50
70.211	2090	1.83	$M_2$	804	440	723	352				
			c	2.6	4.6	2.7	5.1				
			$n_{2Eck}$	23	29	49	58				
			$n_{2th}$	23	28	49	51				
70.211	2445	1.83	$M_2$					1454	718	1284	631
			c					1.7	3.3	1.8	3.4
			$n_{2Eck}$					24	33	50	59
			$n_{2th}$					24	33	44	44
78.750	1631	1.25	$M_2$	910	500	818	402				
			c	1.8	3.2	1.9	3.6				
			$n_{2Eck}$	21	25	44	52				
			$n_{2th}$	21	25	44	46				
88.750	1781	1.21	$M_2$	1026	565	922	453				
			c	1.7	3.1	1.8	3.5				
			$n_{2Eck}$	18	23	39	46				
			$n_{2th}$	18	23	39	40				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

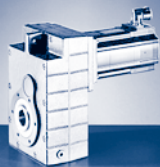


$M_{2GN} \leq 3107 \text{ Nm}$

19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL09-2A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
								$n_2$ Eck	3.92	2323	44.704
								$n_2$ th			
1559	684	1551	501					$M_2$ c			
1.9	4.2	1.7	4.7					$n_2$ Eck	3.92	3027	44.704
38	52	79	93					$n_2$ th			
38	52	55	55					$M_2$ c			
								$n_2$ Eck	2.59	1825	51.333
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	2.59	2136	51.333
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	2.50	2057	57.852
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	2.50	2407	57.852
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.89	1854	62.300
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.89	2170	62.300
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.83	2090	70.211
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.83	2445	70.211
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.25	1631	78.750
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	1.21	1781	88.750
								$n_2$ th			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

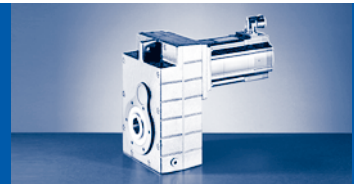
## GFL□□-□A (MCA)

$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
63.326	1510	2.34	$M_2$		372	232	718	394	647	317	1299	645	1148	568	
			c		3.4	5.1	2.1	3.7	2.0	3.8	1.2	2.3	1.1	2.1	
			$n_{2 \text{ Eck}}$		54	64	26	32	55	65	27	36	55	65	65
			$n_{2 \text{ th}}$		54	64	26	32	55	65	27	36	55	65	65
73.173	1517	2.47	$M_2$		430	268	832	458	748	367	1503	747	1327	657	
			c		3.3	4.9	1.8	3.2	1.9	3.6	1.0	2.0	1.1	2.1	
			$n_{2 \text{ Eck}}$		47	55	22	27	47	56	23	31	48	56	
			$n_{2 \text{ th}}$		47	55	22	27	47	56	23	31	48	56	
82.465	1710	2.43	$M_2$		485	302	938	516	843	414	1694	842	1496	740	
			c		3.3	4.9	1.8	3.2	1.9	3.6	1.0	2.0	1.1	2.1	
			$n_{2 \text{ Eck}}$		41	49	20	24	42	50	20	28	42	50	
			$n_{2 \text{ th}}$		41	49	20	24	42	50	20	28	42	50	
93.333	1692	1.68	$M_2$		551	344	1064	586	957	471		956		840	
			c		2.9	4.3	1.6	2.8	1.7	3.2	1.8	1.8	1.8		
			$n_{2 \text{ Eck}}$		37	43	18	21	37	44	25	25	44		
			$n_{2 \text{ th}}$		37	43	18	21	37	44	25	25	44		
105.185	1907	1.65	$M_2$		621	388	1199	661	1078	531		1077		947	
			c		2.9	4.3	1.6	2.8	1.7	3.2	1.8	1.8	1.8		
			$n_{2 \text{ Eck}}$		32	39	16	19	33	39	22	22	39		
			$n_{2 \text{ th}}$		32	39	16	19	33	39	22	22	39		
114.333	1847	1.23	$M_2$		677	424	1306	720	1174	579		1173		1031	
			c		2.6	3.8	1.4	2.5	1.5	2.8	1.6	1.6	1.6		
			$n_{2 \text{ Eck}}$		30	35	14	18	30	36	20	20	36		
			$n_{2 \text{ th}}$		30	35	14	17	30	31	20	20	36		
128.852	2082	1.21	$M_2$		763	478	1471	812	1323	652		1322		1162	
			c		2.6	3.8	1.4	2.5	1.5	2.8	1.6	1.6	1.6		
			$n_{2 \text{ Eck}}$		27	31	13	16	27	32	18	18	32		
			$n_{2 \text{ th}}$		26	31	13	16	27	28	18	18	32		
148.815	2053	0.77	$M_2$		885	555	1703	941	1532	757					
			c		2.2	3.3	1.2	2.2	1.3	2.4					
			$n_{2 \text{ Eck}}$		23	27	11	13	23	28					
			$n_{2 \text{ th}}$		23	27	11	13	23	24					
167.712	2314	0.76	$M_2$		997	626	1919	1061	1726	853					
			c		2.2	3.3	1.2	2.2	1.3	2.4					
			$n_{2 \text{ Eck}}$		20	24	10	12	21	25					
			$n_{2 \text{ th}}$		20	24	10	12	21	21					
185.111	2232	0.55	$M_2$	336	1104	694	2122	1174	1908	944					
			c	5.8	1.9	2.9	1.1	1.9	1.1	2.1					
			$n_{2 \text{ Eck}}$	21	18	22	9	11	19	22					
			$n_{2 \text{ th}}$	21	18	22	9	11	19	19					
208.617	2515	0.54	$M_2$	379	1244	782	2391	1323	2151	1064					
			c	5.8	1.9	2.9	1.1	1.9	1.1	2.1					
			$n_{2 \text{ Eck}}$	19	16	19	8	10	17	20					
			$n_{2 \text{ th}}$	19	16	19	8	10	17	17					
224.778	2407	0.51	$M_2$	411	1343	845		1429		1149					
			c	5.1	1.7	2.5		1.7		1.9					
			$n_{2 \text{ Eck}}$	18	15	18		9		18					
			$n_{2 \text{ th}}$	18	15	18		9		16					
253.321	2712	0.50	$M_2$	463	1514	953		1611		1295					
			c	5.1	1.7	2.5		1.7		1.9					
			$n_{2 \text{ Eck}}$	16	14	16		8		16					
			$n_{2 \text{ th}}$	16	13	16		8		14					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

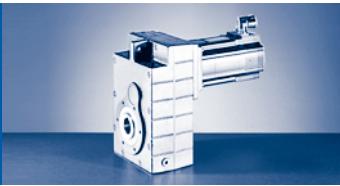


$M_{2GN} \leq 3170 \text{ Nm}$

GFL09-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41	
				...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00	
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50	
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680	2300	3480	4110	
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2	
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10	
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04	
290.889	2640	0.31	$M_2$	537	1743	1099									
			c	4.3	1.5	2.2									
			$n_{2 \text{ Eck}}$	14	12	14									
			$n_{2 \text{ th}}$	14	12	14									
327.827	2976	0.31	$M_2$	605	1965	1238									
			c	4.3	1.5	2.2									
			$n_{2 \text{ Eck}}$	12	10	12									
			$n_{2 \text{ th}}$	12	10	12									
353.033	2813	0.23	$M_2$	655	2120	1337									
			c	3.8	1.3	1.9									
			$n_{2 \text{ Eck}}$	11	10	12									
			$n_{2 \text{ th}}$	11	10	11									
397.863	3170	0.22	$M_2$	738	2389	1507									
			c	3.8	1.3	1.9									
			$n_{2 \text{ Eck}}$	10	9	10									
			$n_{2 \text{ th}}$	10	9	10									
424.247	2724	0.29	$M_2$	793	2554	1613									
			c	3.1	1.0	1.5									
			$n_{2 \text{ Eck}}$	9	8	10									
			$n_{2 \text{ th}}$	9	8	10									
514.881	2724	0.21	$M_2$	968		1963									
			c	2.5		1.3									
			$n_{2 \text{ Eck}}$	8		8									
			$n_{2 \text{ th}}$	8		8									
554.470	2113	0.20	$M_2$	1051											
			c	1.8											
			$n_{2 \text{ Eck}}$	7											
			$n_{2 \text{ th}}$	7											
624.879	2273	0.20	$M_2$	1185											
			c	1.7											
			$n_{2 \text{ Eck}}$	6											
			$n_{2 \text{ th}}$	6											
700.875	2113	0.13	$M_2$	1333											
			c	1.4											
			$n_{2 \text{ Eck}}$	6											
			$n_{2 \text{ th}}$	6											
789.875	2273	0.13	$M_2$	1504											
			c	1.4											
			$n_{2 \text{ Eck}}$	5											
			$n_{2 \text{ th}}$	5											

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

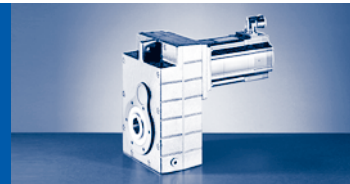
## GFL□□-□A (MCA)

$M_{2GN} \leq 5561 \text{ Nm}$

GFL11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35
				...F10	...S00	...F10	...S00	...F10	...S00	...F10
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00
			$n_1$	1635	2000	3455	4100	1680	2300	3480
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04
9.010	3570	79.60	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
9.799	3767	74.80	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
10.720	2595	65.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
10.720	3818	65.00	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
12.480	3466	81.50	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
14.538	3718	58.40	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
15.904	3800	51.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
17.920	3789	48.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
20.286	2281	36.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					405 5.2 83 83		360 4.6 172 112
20.286	4045	36.10	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
22.857	2570	34.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$					456 5.2 74 74		406 4.6 152 99
22.857	4037	34.30	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							
24.850	4268	26.90	$M_2$ c $n_{2 \text{ Eck}}$ $n_{2 \text{ th}}$							

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

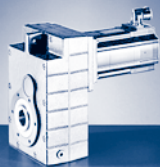


$M_{2GN} \leq 5561 \text{ Nm}$

17NC41	19SC17	19SC23	19SC35	21XC17	21XC25	21XC35	21XC42	GFL11-2A			
...500	...F10	...500	...F10	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	180.04	180.04	180.04	180.04	$M_2$			
						458		c			
						5.6		$n_{2\text{ Eck}}$	79.60	3570	9.010
						391		$n_{2\text{ th}}$			
						223					
						499		$M_2$			
						5.4		c	74.80	3767	9.799
						359		$n_{2\text{ Eck}}$			
						205		$n_{2\text{ th}}$			
			358					$M_2$			
			5.2					c	65.00	2595	10.720
			327					$n_{2\text{ Eck}}$			
			191					$n_{2\text{ th}}$			
				608		548		$M_2$			
				5.7		5.0		c	65.00	3818	10.720
				160		328		$n_{2\text{ Eck}}$			
				160		188		$n_{2\text{ th}}$			
				717		646		$M_2$			
				4.5		3.9		c	81.50	3466	12.480
				137		282		$n_{2\text{ Eck}}$			
				132		128		$n_{2\text{ th}}$			
				838		755		$M_2$			
				4.1		3.6		c	58.40	3718	14.538
				118		242		$n_{2\text{ Eck}}$			
				118		126		$n_{2\text{ th}}$			
			532	920		828		$M_2$			
			5.2	3.8		3.4		c	51.30	3800	15.904
			221	108		221		$n_{2\text{ Eck}}$			
			128	108		117		$n_{2\text{ th}}$			
	600		603	1041		937		$M_2$			
	5.8		4.6	3.4		3.0		c	48.30	3789	17.920
	95		196	95		196		$n_{2\text{ Eck}}$			
	95		111	95		101		$n_{2\text{ th}}$			
								$M_2$			
								c	36.10	2281	20.286
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
	682		684	1181		1062		$M_2$			
	5.4		4.3	3.2		2.8		c	36.10	4045	20.286
	84		173	84		174		$n_{2\text{ Eck}}$			
	84		110	84		99		$n_{2\text{ th}}$			
								$M_2$			
								c	34.30	2570	22.857
								$n_{2\text{ Eck}}$			
								$n_{2\text{ th}}$			
	773		775	1336		1201		$M_2$			
	4.8		3.8	2.8		2.5		c	34.30	4037	22.857
	74		154	75		154		$n_{2\text{ Eck}}$			
	74		95	75		86		$n_{2\text{ th}}$			
	840		839	1452		1302		$M_2$			
	4.9		4.2	2.9		2.8		c	26.90	4268	24.850
	68		141	69		142		$n_{2\text{ Eck}}$			
	68		99	69		81		$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

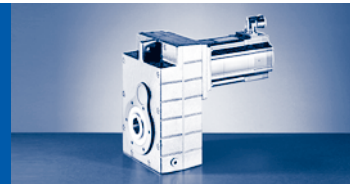
## GFL□□-□A (MCA)

$M_{2GN} \leq 5561 \text{ Nm}$

GFL11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...S00	...F10	...S00	...F10	...S00	...F10
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04
			c							
28.000	4263	25.70	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$					664		587
			c					3.7		3.6
32.739	2533	17.10	$n_{2 \text{ Eck}}$					51		106
			$n_{2 \text{ th}}$					51		88
			$M_2$							
			c							
32.739	4603	17.10	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$					748		662
			c					3.7		3.6
36.889	2855	16.50	$n_{2 \text{ Eck}}$					46		94
			$n_{2 \text{ th}}$					46		78
			$M_2$							
			c							
36.889	4601	16.50	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$					821		726
			c					3.1		3.0
40.233	2607	12.60	$n_{2 \text{ Eck}}$					42		87
			$n_{2 \text{ th}}$					42		77
			$M_2$							
			c							
40.233	4882	12.60	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$					925		818
			c					3.1		3.0
45.333	2938	12.20	$n_{2 \text{ Eck}}$					37		77
			$n_{2 \text{ th}}$					37		69
			$M_2$							
			c							
45.333	4881	12.20	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$	589		531				
			c	3.8		3.6				
52.067	2307	8.08	$n_{2 \text{ Eck}}$	31		66				
			$n_{2 \text{ th}}$	31		66				
			$M_2$					1069	524	946
			c					2.5	4.9	2.4
52.067	2701	8.08	$n_{2 \text{ Eck}}$					32	44	67
			$n_{2 \text{ th}}$					32	44	60
			$M_2$							
			c							
52.067	5251	8.08	$n_{2 \text{ Eck}}$							
			$n_{2 \text{ th}}$							
			$M_2$	663		598				
			c	3.8		3.6				
58.667	2599	7.81	$n_{2 \text{ Eck}}$	28		59				
			$n_{2 \text{ th}}$	28		59				

M ... [Nm]  
 n ... [r/min]  
 J ... [kgcm<sup>2</sup>]

P ... [kW]  
 I ... [A]  
 i [-]  
 c [-]



$M_{2GN} \leq 5561 \text{ Nm}$

17NC41	19SC17	19SC23	19SC35	21XC17	21XC25	21XC35	21XC42	GFL11-2A			
...500	...F10	...500	...F10	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	180.04	180.04	180.04	180.04	$M_2$			
	952		950	1641		1472		c	25.70	4263	28.000
	4.3		3.7	2.6		2.4		$n_{2 \text{ Eck}}$			
	61		125	61		126		$n_{2 \text{ th}}$			
	61		87	61		72		$M_2$	17.10	2533	32.739
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
	1117		1115	1923	744	1724		$M_2$	17.10	4603	32.739
	4.0		3.5	2.4	5.7	2.3		c			
	52		107	52	76	108		$n_{2 \text{ Eck}}$			
	52		75	52	62	62		$n_{2 \text{ th}}$			
								$M_2$	16.50	2855	36.889
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
	1265		1261	2173	844	1948		$M_2$	16.50	4601	36.889
	3.5		3.1	2.1	5.0	2.0		c			
	46		95	46	68	95		$n_{2 \text{ Eck}}$			
	46		66	46	55	55		$n_{2 \text{ th}}$			
353								$M_2$	12.60	2607	40.233
5.7								c			
102								$n_{2 \text{ Eck}}$			
77								$n_{2 \text{ th}}$			
	1381		1377	2371	922	2126	630	$M_2$	12.60	4882	40.233
	3.5		3.0	2.0	4.9	1.9	6.0	c			
	42		87	43	62	88	103	$n_{2 \text{ Eck}}$			
	42		61	43	50	50	50	$n_{2 \text{ th}}$			
398								$M_2$	12.20	2938	45.333
5.7								c			
91								$n_{2 \text{ Eck}}$			
69								$n_{2 \text{ th}}$			
	1563		1557	2678	1045	2401	715	$M_2$	12.20	4881	45.333
	3.1		2.6	1.8	4.3	1.7	5.3	c			
	38		77	38	55	78	92	$n_{2 \text{ Eck}}$			
	38		54	38	44	44	44	$n_{2 \text{ th}}$			
								$M_2$	8.08	2307	52.067
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
462								$M_2$	8.08	2701	52.067
4.6								c			
79								$n_{2 \text{ Eck}}$			
60								$n_{2 \text{ th}}$			
	1799		1791					$M_2$	8.08	5251	52.067
	2.9		2.5					c			
	33		67					$n_{2 \text{ Eck}}$			
	33		47					$n_{2 \text{ th}}$			
								$M_2$	7.81	2599	58.667
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

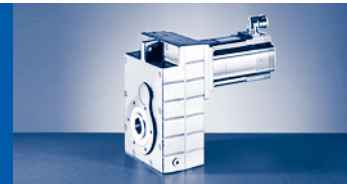
## GFL□□-□A (MCA)

$M_{2GN} \leq 5561 \text{ Nm}$

GFL11-2A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...500	...F10	...500	...F10	...500	...F10	
			$n_1$	1635	2000	3455	4100	1680	2300	3480	
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	
58.667	3044	7.81	$M_2$					1205	590	1066	
			c					2.5	4.9	2.4	
			$n_{2 \text{ Eck}}$						29	39	59
			$n_{2 \text{ th}}$						29	39	53
58.667	5254	7.81	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
63.190	2344	5.90	$M_2$	719	391	648	315				
			c	3.2	5.7	3.1	5.8				
			$n_{2 \text{ Eck}}$	26	32	55	65				
			$n_{2 \text{ th}}$	26	32	55	57				
63.190	2745	5.90	$M_2$					1303	641	1153	
			c						2.1	4.1	2.0
			$n_{2 \text{ Eck}}$						27	36	55
			$n_{2 \text{ th}}$						27	36	49
63.190	5557	5.90	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
71.200	2641	5.72	$M_2$	810	440	728					
			c	3.2	5.7	3.4					
			$n_{2 \text{ Eck}}$	23	28	49					
			$n_{2 \text{ th}}$	23	28	49					
71.200	3093	5.72	$M_2$					1469	722	1296	
			c						2.1	4.2	2.2
			$n_{2 \text{ Eck}}$						24	32	49
			$n_{2 \text{ th}}$						24	32	44
71.200	5561	5.72	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
79.875	2381	3.87	$M_2$	915	500	822	401				
			c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	21	25	43	51				
			$n_{2 \text{ th}}$	20	25	43	45				
79.875	2789	3.87	$M_2$					1655	817	1460	
			c						1.7	3.3	1.8
			$n_{2 \text{ Eck}}$						21	29	44
			$n_{2 \text{ th}}$						21	29	39
90.000	2683	3.76	$M_2$	1031	563	926	451				
			c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	18	22	38	46				
			$n_{2 \text{ th}}$	18	22	38	40				
90.000	3143	3.76	$M_2$					1864	920	1645	
			c						1.7	3.3	1.8
			$n_{2 \text{ Eck}}$						19	26	39
			$n_{2 \text{ th}}$						19	26	35

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 5561 \text{ Nm}$

17NC41	19SC17	19SC23	19SC35	21XC17	21XC25	21XC35	21XC42	GFL11-2A			
...500	...F10	...500	...F10	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
9.50	36.30	16.30	36.00	61.40	24.60	55.00	17.00	$n_1$			
4110	1700	2340	3510	1710	2490	3520	4160	$I_{M400}$			
10.2	13.9	8.2	28.7	22.5	13.5	42.5	19.8	$P_N$			
4.10	6.40	4.00	13.20	11.00	6.40	20.30	7.40	$J_M$			
36.04	72.12	72.12	72.04	180.04	180.04	180.04	180.04	$M_2$			
521								c			
4.6								$n_{2\text{ Eck}}$	7.81	3044	58.667
70								$n_{2\text{ th}}$			
53								$M_2$			
	2033	884	2024					c			
	2.5	5.6	2.2					$n_{2\text{ Eck}}$	7.81	5254	58.667
	29	40	60					$n_{2\text{ th}}$			
	29	40	42					$M_2$			
								c			
								$n_{2\text{ Eck}}$	5.90	2344	63.190
								$n_{2\text{ th}}$			
565								$M_2$			
3.8								c			
65								$n_{2\text{ Eck}}$	5.90	2745	63.190
49								$n_{2\text{ th}}$			
	2191	954	2181					$M_2$			
	2.5	5.5	2.2					c			
	27	37	56					$n_{2\text{ Eck}}$	5.90	5557	63.190
	27	37	39					$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	5.72	2641	71.200
								$n_{2\text{ th}}$			
634								$M_2$			
4.2								c			
58								$n_{2\text{ Eck}}$	5.72	3093	71.200
44								$n_{2\text{ th}}$			
	2476	1080	2458					$M_2$			
	2.2	4.9	2.1					c			
	24	33	49					$n_{2\text{ Eck}}$	5.72	5561	71.200
	24	33	34					$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	3.87	2381	79.875
								$n_{2\text{ th}}$			
718								$M_2$			
3.4								c			
52								$n_{2\text{ Eck}}$	3.87	2789	79.875
39								$n_{2\text{ th}}$			
								$M_2$			
								c			
								$n_{2\text{ Eck}}$	3.76	2683	90.000
								$n_{2\text{ th}}$			
809								$M_2$			
3.4								c			
46								$n_{2\text{ Eck}}$	3.76	3143	90.000
35								$n_{2\text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

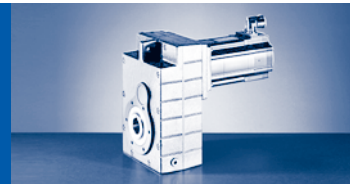
## GFL□□-□A (MCA)

$M_{2GN} \leq 5952 \text{ Nm}$

GFL11-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...500	...F10	...500	...F10	...500	...F10	...500	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
65.306	2891	6.97	$M_2$				727		652		1326
			c				3.9		4.1		2.2
			$n_{2 \text{ Eck}}$				25		53		26
			$n_{2 \text{ th}}$				25		53		26
73.335	2875	7.84	$M_2$				820		736		1492
			c				3.4		3.6		1.9
			$n_{2 \text{ Eck}}$				22		47		23
			$n_{2 \text{ th}}$				22		47		23
82.631	3240	7.71	$M_2$				924		829		1682
			c				3.4		3.6		1.9
			$n_{2 \text{ Eck}}$				20		42		20
			$n_{2 \text{ th}}$				20		42		20
93.540	3206	5.05	$M_2$		537		1050	572	944	458	1909
			c		5.5		3.0	5.4	3.2	6.0	1.7
			$n_{2 \text{ Eck}}$		37		18	21	37	44	18
			$n_{2 \text{ th}}$		36		17	21	37	38	18
105.397	3613	4.97	$M_2$		605		1184	644	1063	516	2150
			c		5.5		3.0	5.4	3.2	6.0	1.7
			$n_{2 \text{ Eck}}$		32		16	19	33	39	16
			$n_{2 \text{ th}}$		32		16	19	33	34	16
114.586	3501	3.71	$M_2$				1291	705	1160	565	2342
			c				2.7	4.8	2.8	5.3	1.5
			$n_{2 \text{ Eck}}$				14	18	30	36	15
			$n_{2 \text{ th}}$				14	17	30	31	15
129.111	3945	3.66	$M_2$				1455	794	1307	636	2639
			c				2.7	4.8	2.8	5.3	1.5
			$n_{2 \text{ Eck}}$				13	16	27	32	13
			$n_{2 \text{ th}}$				13	15	27	28	13
149.144	3894	2.30	$M_2$		868		1688	924	1517	741	3056
			c		4.2		2.3	4.1	2.4	4.6	1.3
			$n_{2 \text{ Eck}}$		23		11	13	23	28	11
			$n_{2 \text{ th}}$		23		11	13	23	24	11
168.049	4387	2.27	$M_2$		978		1901	1041	1709	835	3443
			c		4.2		2.3	4.1	2.4	4.6	1.3
			$n_{2 \text{ Eck}}$		20		10	12	21	24	10
			$n_{2 \text{ th}}$		20		10	12	21	21	10
182.792	4233	1.66	$M_2$		1070	666	2074	1138	1864	913	3751
			c		3.7	5.5	2.0	3.6	2.1	4.0	1.1
			$n_{2 \text{ Eck}}$		19	22	9	11	19	22	9
			$n_{2 \text{ th}}$		19	22	9	11	19	20	9
205.963	4769	1.64	$M_2$		1205	750	2337	1283	2100	1029	4226
			c		3.7	5.5	2.0	3.6	2.1	4.0	1.1
			$n_{2 \text{ Eck}}$		17	20	8	10	17	20	8
			$n_{2 \text{ th}}$		17	20	8	10	17	17	8
224.636	4523	1.52	$M_2$		1321	825	2556	1406	2298	1129	
			c		3.2	4.8	1.8	3.2	1.9	3.5	
			$n_{2 \text{ Eck}}$		15	18	7	9	15	18	
			$n_{2 \text{ th}}$		15	18	7	9	15	16	
253.111	5097	1.50	$M_2$		1489	929	2880	1584	2589	1272	
			c		3.2	4.8	1.8	3.2	1.9	3.5	
			$n_{2 \text{ Eck}}$		14	16	7	8	14	16	
			$n_{2 \text{ th}}$		13	16	6	8	14	14	

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]



$M_{2GN} \leq 5952 \text{ Nm}$

17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC25	21XC42	GFL11-3A			
...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
10.80	19.00	9.50	36.30	16.30	36.00	12.00	24.60	17.00	$n_1$			
2300	3480	4110	1700	2340	3510	4150	2490	4160	$n_1$			
5.5	15.8	10.2	13.9	8.2	28.7	14.0	13.5	19.8	$I_{M400}$			
2.60	6.90	4.10	6.40	4.00	13.20	5.20	6.40	7.40	$P_N$			
36.04	36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04	$J_M$			
651	1169	572	2259	998	2242	730			$M_2$			
4.3	2.3	4.4	1.3	2.8	1.2	3.5			c	6.97	2891	65.306
35	53	63	26	36	54	64			$n_{2 \text{ Eck}}$			
35	48	48	26	36	37	37			$n_{2 \text{ th}}$			
735	1317	646	2541	1124	2521	823	1712	1177	$M_2$			
3.8	2.1	3.9	1.1	2.5	1.1	3.1	1.7	2.2	c	7.84	2875	73.335
31	48	56	23	32	48	57	34	57	$n_{2 \text{ Eck}}$			
31	42	42	23	32	31	33	27	27	$n_{2 \text{ th}}$			
828	1484	728	2863	1267	2840	927	1929	1326	$M_2$			
3.8	2.1	3.9	1.1	2.5	1.1	3.1	1.7	2.2	c	7.71	3240	82.631
28	42	50	21	28	43	50	30	50	$n_{2 \text{ Eck}}$			
28	38	38	21	28	28	30	24	24	$n_{2 \text{ th}}$			
942	1684	828		1439		1054			$M_2$			
3.3	1.8	3.4		2.2		2.7			c	5.05	3206	93.540
25	37	44		25		44			$n_{2 \text{ Eck}}$			
25	33	33		25		26			$n_{2 \text{ th}}$			
1061	1898	933		1621		1187			$M_2$			
3.3	1.8	3.4		2.2		2.7			c	4.97	3613	105.397
22	33	39		22		39			$n_{2 \text{ Eck}}$			
22	30	30		22		23			$n_{2 \text{ th}}$			
1158	2068	1018		1767		1295			$M_2$			
3.0	1.6	3.0		2.0		2.4			c	3.71	3501	114.586
20	30	36		20		36			$n_{2 \text{ Eck}}$			
20	27	27		20		21			$n_{2 \text{ th}}$			
1305	2330	1147		1991		1459			$M_2$			
3.0	1.6	3.0		2.0		2.4			c	3.66	3945	129.111
18	27	32		18		32			$n_{2 \text{ Eck}}$			
18	24	24		18		19			$n_{2 \text{ th}}$			
1515	2698	1332							$M_2$			
2.5	1.4	2.6							c	2.30	3894	149.144
15	23	28							$n_{2 \text{ Eck}}$			
15	21	21							$n_{2 \text{ th}}$			
1707	3040	1500							$M_2$			
2.5	1.4	2.6							c	2.27	4387	168.049
14	21	25							$n_{2 \text{ Eck}}$			
14	19	19							$n_{2 \text{ th}}$			
1862	3312	1637							$M_2$			
2.2	1.2	2.3							c	1.66	4233	182.792
13	19	23							$n_{2 \text{ Eck}}$			
13	17	17							$n_{2 \text{ th}}$			
2098	3731	1845							$M_2$			
2.2	1.2	2.3							c	1.64	4769	205.963
11	17	20							$n_{2 \text{ Eck}}$			
11	15	15							$n_{2 \text{ th}}$			
2295	4077	2018							$M_2$			
2.0	1.1	2.0							c	1.52	4523	224.636
10	16	18							$n_{2 \text{ Eck}}$			
10	14	14							$n_{2 \text{ th}}$			
2586	4593	2274							$M_2$			
2.0	1.1	2.0							c	1.50	5097	253.111
9	14	16							$n_{2 \text{ Eck}}$			
9	12	12							$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

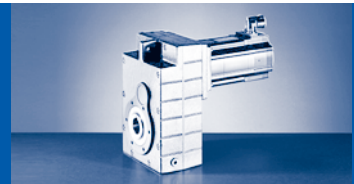
## GFL□□-□A (MCA)

$M_{2GN} \leq 5952 \text{ Nm}$

GFL11-3A				10IC40	13IC34	13IC41	14LC16	14LC20	14LC35	14LC41	17NC17
				...500	...F10	...500	...F10	...500	...F10	...500	...F10
i	$M_{2GN}$	$J_G$	$M_1$	2.00	6.30	4.00	12.00	6.70	10.80	5.40	21.50
			$n_1$	3950	3410	4050	1635	2000	3455	4100	1680
			$I_{M400}$	2.4	6.0	4.4	4.8	3.3	9.1	5.8	8.5
			$P_N$	0.80	2.20	1.70	2.10	1.40	3.90	2.30	3.80
			$J_M$	2.44	8.34	8.34	19.32	19.24	19.24	19.24	36.04
267.259	5106	1.87	$M_2$		1575	984	3044	1676	2736	1346	
			c		3.0	4.5	1.7	3.0	1.8	3.3	
			$n_{2 \text{ Eck}}$		13	15	6	8	13	15	
			$n_{2 \text{ th}}$		13	15	6	7	13	13	
327.556	5523	1.37	$M_2$		1937	1213	3738	2061	3361	1656	
			c		2.7	4.0	1.5	2.6	1.6	2.9	
			$n_{2 \text{ Eck}}$		10	12	5	6	11	13	
			$n_{2 \text{ th}}$		10	12	5	6	11	11	
358.077	4423	0.68	$M_2$	649							
			c	5.9							
			$n_{2 \text{ Eck}}$	11							
			$n_{2 \text{ th}}$	11							
358.077	5283	0.68	$M_2$		2125	1333	4094	2261	3682	1817	
			c		2.4	3.5	1.3	2.3	1.4	2.6	
			$n_{2 \text{ Eck}}$		10	11	5	6	10	12	
			$n_{2 \text{ th}}$		10	11	5	6	10	10	
403.467	4984	0.67	$M_2$	732							
			c	5.9							
			$n_{2 \text{ Eck}}$	10							
			$n_{2 \text{ th}}$	10							
403.467	5952	0.67	$M_2$		2395	1502	4613	2548	4148	2048	
			c		2.4	3.5	1.3	2.3	1.4	2.6	
			$n_{2 \text{ Eck}}$		9	10	4	5	9	10	
			$n_{2 \text{ th}}$		8	10	4	5	9	9	
430.222	5942	0.85	$M_2$		2558	1606	4923	2721	4428	2187	
			c		2.2	3.3	1.2	2.2	1.3	2.4	
			$n_{2 \text{ Eck}}$		8	9	4	5	8	10	
			$n_{2 \text{ th}}$		8	9	4	5	8	8	
522.133	5942	0.62	$M_2$	952	3117	1961		3316	5386	2667	
			c	5.4	1.8	2.7		1.8	1.1	2.0	
			$n_{2 \text{ Eck}}$	8	7	8		4	7	8	
			$n_{2 \text{ th}}$	8	7	8		4	7	7	
562.391	5319	0.60	$M_2$	1035	3368	2122		3583		2883	
			c	4.5	1.5	2.2		1.5		1.7	
			$n_{2 \text{ Eck}}$	7	6	7		4		7	
			$n_{2 \text{ th}}$	7	6	7		4		6	
633.680	5844	0.60	$M_2$	1168	3797	2392		4039		3249	
			c	4.4	1.5	2.2		1.4		1.6	
			$n_{2 \text{ Eck}}$	6	5	6		3		7	
			$n_{2 \text{ th}}$	6	5	6		3		6	
710.888	5319	0.39	$M_2$	1322	4272	2696					
			c	3.6	1.2	1.8					
			$n_{2 \text{ Eck}}$	6	5	6					
			$n_{2 \text{ th}}$	6	5	6					
801.000	5844	0.38	$M_2$	1491	4814	3039					
			c	3.5	1.2	1.7					
			$n_{2 \text{ Eck}}$	5	4	5					
			$n_{2 \text{ th}}$	5	4	5					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

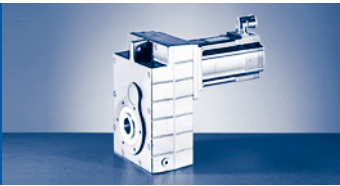


$M_{2GN} \leq 5952 \text{ Nm}$

17NC23	17NC35	17NC41	19SC17	19SC23	19SC35	19SC42	21XC25	21XC42	GFL11-3A			
...S00	...F10	...S00	...F10	...S00	...F10	...S00	...S00	...S00	$M_1$	$J_G$	$M_{2GN}$	i
10.80	19.00	9.50	36.30	16.30	36.00	12.00	24.60	17.00	$n_1$			
2300	3480	4110	1700	2340	3510	4150	2490	4160	$I_{M400}$			
5.5	15.8	10.2	13.9	8.2	28.7	14.0	13.5	19.8	$P_N$			
2.60	6.90	4.10	6.40	4.00	13.20	5.20	6.40	7.40	$J_M$			
36.04	36.04	36.04	72.12	72.12	72.04	72.12	180.04	180.04				
2734	4853	2404							$M_2$			
1.9	1.0	1.9							c	1.87	5106	267.259
9	13	15							$n_{2 \text{ Eck}}$			
9	12	12							$n_{2 \text{ th}}$			
3358		2953							$M_2$			
1.6		1.7							c	1.37	5523	327.556
7		13							$n_{2 \text{ Eck}}$			
7		10							$n_{2 \text{ th}}$			
									$M_2$			
									c	0.68	4423	358.077
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.68	5283	358.077
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.67	4984	403.467
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.67	5952	403.467
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.85	5942	430.222
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.62	5942	522.133
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.60	5319	562.391
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.60	5844	633.680
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.39	5319	710.888
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			
									$M_2$			
									c	0.38	5844	801.000
									$n_{2 \text{ Eck}}$			
									$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

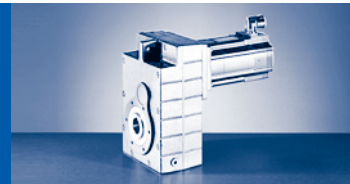
## GFL□□-□A (MCA)

$M_{2GN} \leq 10639 \text{ Nm}$

GFL14-2A				19SC17	19SC23	19SC35	21XC17	21XC35	
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...500	...F10	...F10	...F10	
			$n_1$	1700	2340	3510	1710	3520	
			$I_{M400}$	13.9	8.2	28.7	22.5	42.5	
			$P_N$	6.40	4.00	13.20	11.00	20.30	
			$J_M$	72.12	72.12	72.04	180.04	180.04	
19.948	7873	111.00	$M_2$					1014	
			c					5.6	
			$n_{2 \text{ Eck}}$						177
			$n_{2 \text{ th}}$						101
22.476	8870	105.00	$M_2$					1143	
			c					5.6	
			$n_{2 \text{ Eck}}$						157
			$n_{2 \text{ th}}$						90
24.456	8282	83.20	$M_2$				1387	1245	
			c				5.7	5.4	
			$n_{2 \text{ Eck}}$				70	144	
			$n_{2 \text{ th}}$				70	82	
27.556	9331	79.40	$M_2$				1562	1403	
			c				5.7	5.4	
			$n_{2 \text{ Eck}}$				62	128	
			$n_{2 \text{ th}}$				62	73	
32.344	6387	52.90	$M_2$	1085		1085			
			c	5.6		4.8			
			$n_{2 \text{ Eck}}$	53		109			
			$n_{2 \text{ th}}$	53		76			
32.344	8734	52.90	$M_2$				1857	1667	
			c				4.5	4.3	
			$n_{2 \text{ Eck}}$				53	109	
			$n_{2 \text{ th}}$				53	62	
36.444	7196	50.70	$M_2$	1223		1223			
			c	5.6		4.8			
			$n_{2 \text{ Eck}}$	47		96			
			$n_{2 \text{ th}}$	47		67			
36.444	9841	50.70	$M_2$				2092	1878	
			c				4.5	4.3	
			$n_{2 \text{ Eck}}$				47	97	
			$n_{2 \text{ th}}$				47	55	
39.642	6916	38.00	$M_2$	1339		1338			
			c	5.0		4.3			
			$n_{2 \text{ Eck}}$	43		89			
			$n_{2 \text{ th}}$	43		62			
39.642	9101	38.00	$M_2$				2292	2057	
			c				3.9	3.7	
			$n_{2 \text{ Eck}}$				43	89	
			$n_{2 \text{ th}}$				43	51	
44.667	7793	36.60	$M_2$	1509		1507			
			c	5.0		4.3			
			$n_{2 \text{ Eck}}$	38		79			
			$n_{2 \text{ th}}$	38		55			
44.667	10254	36.60	$M_2$				2583	2318	
			c				3.9	3.7	
			$n_{2 \text{ Eck}}$				38	79	
			$n_{2 \text{ th}}$				38	45	
52.067	7136	24.60	$M_2$	1779		1774			
			c	3.9		3.4			
			$n_{2 \text{ Eck}}$	33		67			
			$n_{2 \text{ th}}$	33		47			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

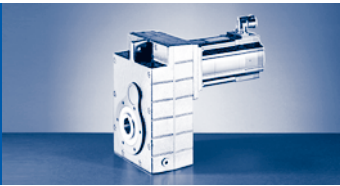


$M_{2GN} \leq 10639 \text{ Nm}$

GFL14-2A				19SC17	19SC23	19SC35	21XC17	21XC35
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...500	...F10	...F10	...F10
			$n_1$	1700	2340	3510	1710	3520
			$I_{M400}$	13.9	8.2	28.7	22.5	42.5
			$P_N$	6.40	4.00	13.20	11.00	20.30
			$J_M$	72.12	72.12	72.04	180.04	180.04
52.067	9389	24.60	$M_2$				3037	2724
			c				3.0	2.9
			$n_{2 \text{ Eck}}$				33	68
			$n_{2 \text{ th}}$				33	39
58.667	8041	23.80	$M_2$	2005		1999		
			c	3.9		3.4		
			$n_{2 \text{ Eck}}$	29		60		
			$n_{2 \text{ th}}$	29		42		
58.667	10579	23.80	$M_2$				3422	3070
			c				3.0	2.9
			$n_{2 \text{ Eck}}$				29	60
			$n_{2 \text{ th}}$				29	34
63.190	7250	18.00	$M_2$	2174		2166		
			c	3.3		2.8		
			$n_{2 \text{ Eck}}$	27		56		
			$n_{2 \text{ th}}$	27		39		
63.190	9540	18.00	$M_2$				3705	3323
			c				2.5	2.4
			$n_{2 \text{ Eck}}$				27	56
			$n_{2 \text{ th}}$				27	32
71.200	8169	17.40	$M_2$	2449		2433		
			c	3.3		3.1		
			$n_{2 \text{ Eck}}$	24		49		
			$n_{2 \text{ th}}$	24		34		
71.200	10639	17.40	$M_2$				4176	3735
			c				2.5	2.7
			$n_{2 \text{ Eck}}$				24	49
			$n_{2 \text{ th}}$				24	28
79.875	7015	11.80	$M_2$	2770	1204	2750		
			c	2.5	5.6	2.4		
			$n_{2 \text{ Eck}}$	21	29	44		
			$n_{2 \text{ th}}$	21	29	31		
90.000	7905	11.50	$M_2$	3121	1357	3099		
			c	2.5	5.6	2.4		
			$n_{2 \text{ Eck}}$	19	26	39		
			$n_{2 \text{ th}}$	19	26	27		

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

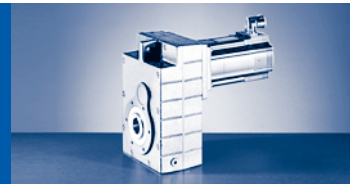
## GFL□□-□A (MCA)

$M_{2GN} \leq 11615 \text{ Nm}$

GFL14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
			c					1276		1129	
64.296	5610	26.32	$n_{2 \text{ Eck}}$					4.3		4.1	
			$n_{2 \text{ th}}$					26		54	
			$M_2$					26		48	
			c					1370		1207	
68.708	5416	19.86	$n_{2 \text{ Eck}}$					3.8		4.1	
			$n_{2 \text{ th}}$					25		51	
			$M_2$					24		45	
			c					1543		1360	
77.418	6103	19.38	$n_{2 \text{ Eck}}$					3.8		4.1	
			$n_{2 \text{ th}}$					22		45	
			$M_2$					22		40	
			c					1700		1498	
85.037	6276	21.59	$n_{2 \text{ Eck}}$					3.6		3.9	
			$n_{2 \text{ th}}$					20		41	
			$M_2$					20		36	
			c	1159		1040					
104.889	5375	9.32	$n_{2 \text{ Eck}}$	4.5		4.7					
			$n_{2 \text{ th}}$	16		33					
			$M_2$	16		33					
			c					2112	1028	1862	903
104.889	6292	9.32	$n_{2 \text{ Eck}}$					2.9	5.8	3.1	6.0
			$n_{2 \text{ th}}$					16	22	33	39
			$M_2$					16	22	30	30
			c								
104.889	6888	9.32	$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
			$M_2$	1261		1132					
114.126	5848	8.32	c	4.5		4.7					
			$n_{2 \text{ Eck}}$	14		30					
			$n_{2 \text{ th}}$	14		30					
			$M_2$					2299	1120	2027	984
114.126	6719	8.32	c					2.9	5.7	3.1	5.8
			$n_{2 \text{ Eck}}$					15	20	31	36
			$n_{2 \text{ th}}$					15	20	27	27
			$M_2$	1421		1275					
128.593	6589	8.14	c	4.5		4.7					
			$n_{2 \text{ Eck}}$	13		27					
			$n_{2 \text{ th}}$	13		27					
			$M_2$					2591	1262	2284	1108
128.593	7571	8.14	c					2.9	5.7	3.1	5.8
			$n_{2 \text{ Eck}}$					13	18	27	32
			$n_{2 \text{ th}}$					13	18	24	24
			$M_2$					2765	1351	2438	1186
136.889	7359	16.78	c					2.6	5.2	2.8	5.3
			$n_{2 \text{ Eck}}$					12	17	25	30
			$n_{2 \text{ th}}$					12	17	21	23
			$M_2$	1738		1560					
156.148	6830	5.92	c	3.8		4.0					
			$n_{2 \text{ Eck}}$	11		22					
			$n_{2 \text{ th}}$	10		22					

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

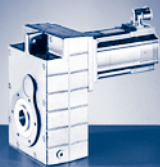


$M_{2GN} \leq 11615 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL14-3A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$l_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$			
2195	955	2185		3754	1471	3365	1008	c	26.32	5610	64.296
2.5	5.5	2.2		1.5	3.6	1.4	4.3	$n_{2 \text{ Eck}}$			
26	36	55		27	39	55	65	$n_{2 \text{ th}}$			
26	36	38		27	31	31	31				
2352	1025	2335		4017	1576	3596	1077	$M_2$	19.86	5416	68.708
2.3	5.1	2.2		1.3	3.4	1.4	4.4	c			
25	34	51		25	36	51	61	$n_{2 \text{ Eck}}$			
25	34	36		25	29	29	29	$n_{2 \text{ th}}$			
2650	1155	2631		4526	1775	4051	1214	$M_2$	19.38	6103	77.418
2.3	5.1	2.2		1.3	3.4	1.4	4.4	c			
22	30	45		22	32	46	54	$n_{2 \text{ Eck}}$			
22	30	32		22	26	26	26	$n_{2 \text{ th}}$			
2915	1273	2894	926	4976	1954	4454	1337	$M_2$	21.59	6276	85.037
2.1	4.7	2.0	5.8	1.3	3.1	1.3	4.1	c			
20	28	41	49	20	29	41	49	$n_{2 \text{ Eck}}$			
20	28	29	29	20	24	24	24	$n_{2 \text{ th}}$			
								$M_2$	9.32	5375	104.889
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
								$M_2$	9.32	6292	104.889
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
3605	1579	3578	1151					$M_2$	9.32	6888	104.889
1.9	4.2	1.8	5.1					c			
16	22	34	40					$n_{2 \text{ Eck}}$			
16	22	23	23					$n_{2 \text{ th}}$			
								$M_2$	8.32	5848	114.126
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
3930	1726	3901	1259					$M_2$	8.32	6719	114.126
1.7	3.8	1.6	4.6					c			
15	21	31	36					$n_{2 \text{ Eck}}$			
15	21	21	21					$n_{2 \text{ th}}$			
								$M_2$	8.14	6589	128.593
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			
4428	1945	4395	1419					$M_2$	8.14	7571	128.593
1.7	3.8	1.6	4.6					c			
13	18	27	32					$n_{2 \text{ Eck}}$			
13	18	19	19					$n_{2 \text{ th}}$			
4721	2078	4686	1517		3175		2178	$M_2$	16.78	7359	136.889
1.6	3.5	1.5	4.2		2.3		3.0	c			
12	17	26	30		18		30	$n_{2 \text{ Eck}}$			
12	17	16	18		15		15	$n_{2 \text{ th}}$			
								$M_2$	5.92	6830	156.148
								c			
								$n_{2 \text{ Eck}}$			
								$n_{2 \text{ th}}$			

M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [Nm]

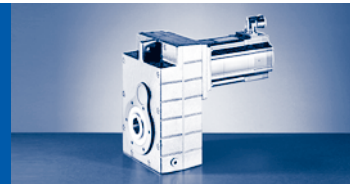
## GFL□□-□A (MCA)

$M_{2GN} \leq 11615 \text{ Nm}$

GFL14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
i	$M_{2GN}$	$J_G$	$M_1$	...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
			$n_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$I_{M400}$	1635	2000	3455	4100	1680	2300	3480	4110
			$P_N$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$J_M$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$M_2$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
156.148	7992	5.92	c					3158	1545	2785	1357
			$n_{2 \text{ Eck}}$					2.5	5.0	2.7	5.1
			$n_{2 \text{ th}}$					11	15	22	26
								11	15	20	20
156.148	8227	5.92	$M_2$								
			c								
			$n_{2 \text{ Eck}}$								
			$n_{2 \text{ th}}$								
170.074	8408	6.96	$M_2$	1883		1690		3443	1686	3037	1481
			c	4.3		4.6		2.4	4.8	2.6	4.9
			$n_{2 \text{ Eck}}$	10		20		10	14	21	24
			$n_{2 \text{ th}}$	10		20		10	14	18	18
202.074	7076	3.69	$M_2$	2268	1233	2037					
			c	3.1	5.5	3.2					
			$n_{2 \text{ Eck}}$	8	10	17					
			$n_{2 \text{ th}}$	8	10	17					
202.074	8281	3.69	$M_2$					4109	2021	3625	1776
			c					2.0	4.0	2.2	4.1
			$n_{2 \text{ Eck}}$					8	11	17	20
			$n_{2 \text{ th}}$					8	11	15	15
224.636	8739	4.74	$M_2$	2512		2256		4572	2251	4035	1978
			c	3.4		3.6		1.9	3.8	2.0	3.9
			$n_{2 \text{ Eck}}$	7		15		8	10	16	18
			$n_{2 \text{ th}}$	7		15		7	10	14	14
253.111	9846	4.70	$M_2$	2830		2541		5152	2537	4546	2229
			c	3.4		3.6		1.9	3.8	2.0	3.9
			$n_{2 \text{ Eck}}$	7		14		7	9	14	16
			$n_{2 \text{ th}}$	6		14		7	9	12	12
273.778	9753	5.76	$M_2$	3071	1669	2758		5582	2753	4926	2420
			c	3.1	5.6	3.3		1.7	3.5	1.9	3.5
			$n_{2 \text{ Eck}}$	6	7	13		6	8	13	15
			$n_{2 \text{ th}}$	6	7	13		6	8	11	11
332.444	10550	4.30	$M_2$	3742	2041	3362	1634	6792	3357	5995	2950
			c	2.8	5.0	2.9	5.5	1.5	3.1	1.7	3.2
			$n_{2 \text{ Eck}}$	5	6	10	12	5	7	11	12
			$n_{2 \text{ th}}$	5	6	10	11	5	7	9	9
352.811	10343	2.16	$M_2$	3980	2174	3576	1742				
			c	2.6	4.6	2.7	5.1				
			$n_{2 \text{ Eck}}$	5	6	10	12				
			$n_{2 \text{ th}}$	5	6	10	10				
352.811	10389	2.16	$M_2$					7216	3571	6370	3139
			c					1.4	2.9	1.5	2.9
			$n_{2 \text{ Eck}}$					5	7	10	12
			$n_{2 \text{ th}}$					5	7	9	9
397.533	11615	2.15	$M_2$	4485	2451	4030	1963	8132	4024	7178	3537
			c	2.6	4.6	2.7	5.1	1.4	2.8	1.5	2.9
			$n_{2 \text{ Eck}}$	4	5	9	10	4	6	9	10
			$n_{2 \text{ th}}$	4	5	9	9	4	6	8	8
430.222	10560	2.73	$M_2$	4875	2673	4381	2144	8822	4376	7788	3847
			c	2.1	3.8	2.3	4.3	1.2	2.4	1.3	2.4
			$n_{2 \text{ Eck}}$	4	5	8	10	4	5	8	10
			$n_{2 \text{ th}}$	4	5	8	8	4	5	7	7

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$

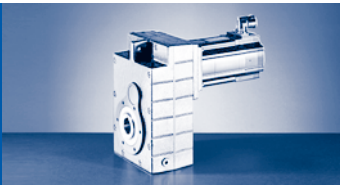


$M_{2GN} \leq 11615 \text{ Nm}$

195C17	195C23	195C35	195C42	21XC17	21XC25	21XC35	21XC42	GFL14-3A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
								$n_2$ Eck	5.92	7992	156.148
								$n_2$ th			
5388	2372	5347	1732					$M_2$ c			
1.5	3.4	1.5	4.1					$n_2$ Eck	5.92	8227	156.148
11	15	23	27					$n_2$ th			
11	15	16	16					$M_2$ c			
5874	2589	5829	1892					$n_2$ Eck	6.96	8408	170.074
1.4	3.2	1.4	3.9					$n_2$ th			
10	14	21	24					$M_2$ c			
10	14	14	14					$n_2$ Eck	3.69	7076	202.074
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	3.69	8281	202.074
								$n_2$ th			
7783	3444	7723	2521					$M_2$ c			
1.1	2.5	1.1	3.0					$n_2$ Eck	4.74	8739	224.636
8	10	16	19					$n_2$ th			
8	10	11	11					$M_2$ c			
8769	3881	8701	2841					$n_2$ Eck	4.70	9846	253.111
1.1	2.5	1.1	3.0					$n_2$ th			
7	9	14	16					$M_2$ c			
7	9	10	10					$n_2$ Eck	5.76	9753	273.778
9495	4207		3081					$n_2$ th			
1.0	2.3		2.8					$M_2$ c			
6	9		15					$n_2$ Eck	4.30	10550	332.444
6	9		9					$n_2$ th			
	5122		3753					$M_2$ c			
	2.0		2.5					$n_2$ Eck	2.16	10343	352.811
	7		13					$n_2$ th			
	7		7					$M_2$ c			
								$n_2$ Eck	2.16	10389	352.811
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	2.15	11615	397.533
								$n_2$ th			
								$M_2$ c			
								$n_2$ Eck	2.73	10560	430.222
								$n_2$ th			

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i [-]$   
 $c [-]$



# GFL [Nm]

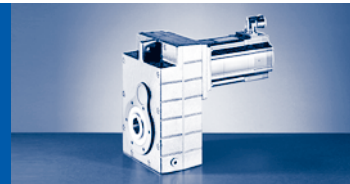
## GFL□□-□A (MCA)

$M_{2GN} \leq 11615 \text{ Nm}$

GFL14-3A				14LC16	14LC20	14LC35	14LC41	17NC17	17NC23	17NC35	17NC41
				...F10	...S00	...F10	...S00	...F10	...S00	...F10	...S00
i	$M_{2GN}$	$J_G$	$M_1$	12.00	6.70	10.80	5.40	21.50	10.80	19.00	9.50
			$n_1$	1635	2000	3455	4100	1680	2300	3480	4110
			$I_{M400}$	4.8	3.3	9.1	5.8	8.5	5.5	15.8	10.2
			$P_N$	2.10	1.40	3.90	2.30	3.80	2.60	6.90	4.10
			$J_M$	19.32	19.24	19.24	19.24	36.04	36.04	36.04	36.04
522.133	10560	1.98	$M_2$	5940	3268	5340	2623		5335	9475	4690
			c	1.8	3.2	1.9	3.5		2.0	1.1	2.0
			$n_{2 \text{ Eck}}$	3	4	7	8		4	7	8
			$n_{2 \text{ th}}$	3	4	7	7		4	6	6
562.391	9036	1.91	$M_2$	6422	3544	5775	2847		5771		5074
			c	1.4	2.5	1.5	2.8		1.6		1.6
			$n_{2 \text{ Eck}}$	3	4	6	7		4		7
			$n_{2 \text{ th}}$	3	4	6	6		4		6
633.680	9811	1.90	$M_2$	7240	3997	6511	3212		6506		5721
			c	1.4	2.4	1.4	2.7		1.5		1.5
			$n_{2 \text{ Eck}}$	3	3	6	7		4		7
			$n_{2 \text{ th}}$	3	3	5	6		4		5
710.888	9036	1.26	$M_2$	8143	4505	7324	3622				
			c	1.1	2.0	1.2	2.2				
			$n_{2 \text{ Eck}}$	2	3	5	6				
			$n_{2 \text{ th}}$	2	3	5	5				
801.000	9811	1.25	$M_2$	9179	5080	8256	4084				
			c	1.1	1.9	1.1	2.1				
			$n_{2 \text{ Eck}}$	2	3	4	5				
			$n_{2 \text{ th}}$	2	3	4	4				

$M \dots$  [Nm]  
 $n \dots$  [r/min]  
 $J \dots$  [kgcm<sup>2</sup>]

$P \dots$  [kW]  
 $I \dots$  [A]  
 $i$  [-]  
 $c$  [-]

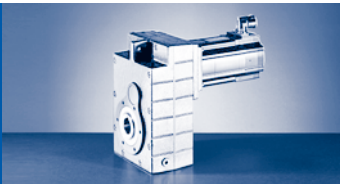


$M_{2GN} \leq 11615 \text{ Nm}$

19SC17	19SC23	19SC35	19SC42	21XC17	21XC25	21XC35	21XC42	GFL14-3A			
...F10	...500	...F10	...500	...F10	...500	...F10	...500	$M_1$	$J_G$	$M_{2GN}$	$i$
36.30	16.30	36.00	12.00	61.40	24.60	55.00	17.00	$n_1$			
1700	2340	3510	4150	1710	2490	3520	4160	$I_{M400}$			
13.9	8.2	28.7	14.0	22.5	13.5	42.5	19.8	$P_N$			
6.40	4.00	13.20	5.20	11.00	6.40	20.30	7.40	$J_M$			
72.12	72.12	72.04	72.12	180.04	180.04	180.04	180.04	$M_2$ c			
								$n_{2 \text{ Eck}}$	1.98	10560	522.133
								$n_{2 \text{ th}}$			
								$M_2$ c			
								$n_{2 \text{ Eck}}$	1.91	9036	562.391
								$n_{2 \text{ th}}$			
								$M_2$ c			
								$n_{2 \text{ Eck}}$	1.90	9811	633.680
								$n_{2 \text{ th}}$			
								$M_2$ c			
								$n_{2 \text{ Eck}}$	1.26	9036	710.888
								$n_{2 \text{ th}}$			
								$M_2$ c			
								$n_{2 \text{ Eck}}$	1.25	9811	801.000
								$n_{2 \text{ th}}$			

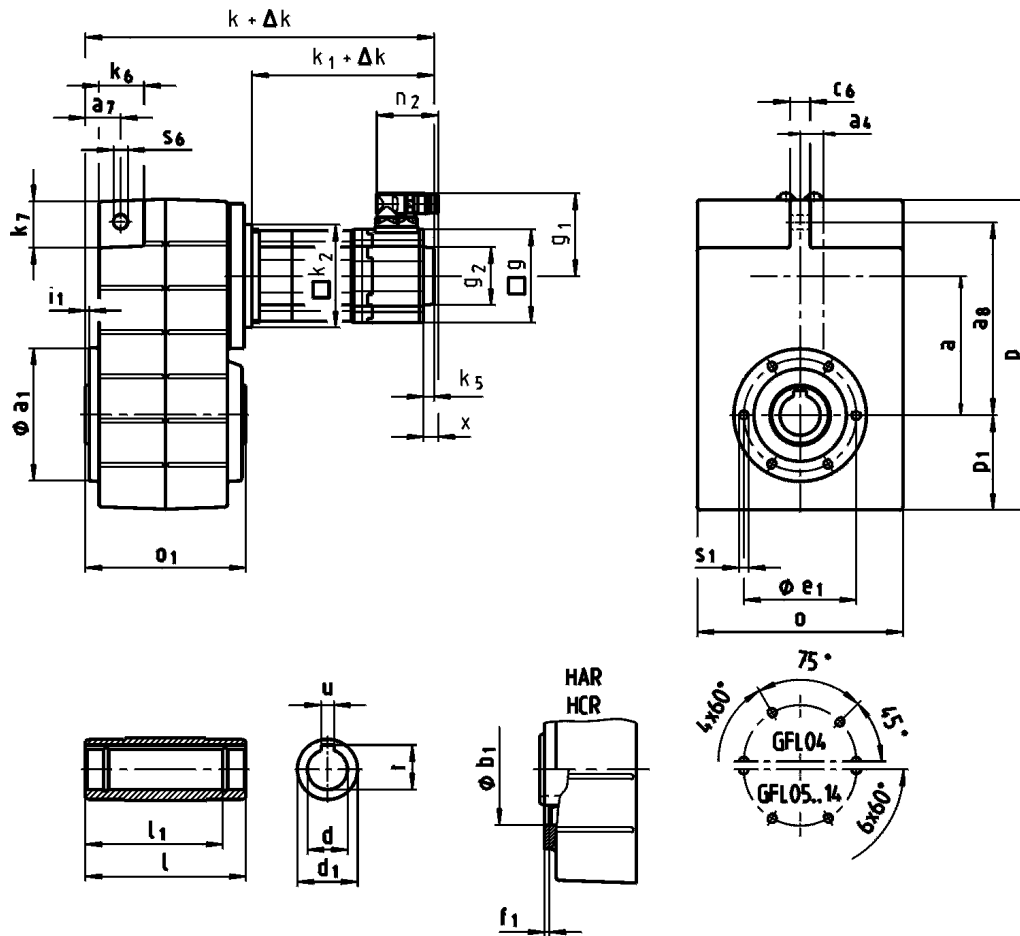
M ... [Nm]  
n ... [r/min]  
J ... [kgcm<sup>2</sup>]

P ... [kW]  
I ... [A]  
i [-]  
c [-]



# GFL [mm]

## GFL□□-2S (MCS)

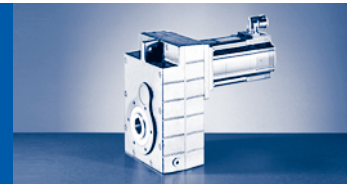


### GFL□□-2S H□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL04...	k	260	290	320	312	332	352	392								
GFL05...	k	281	311	341	334	354	374	414	351			391			431	
GFL06...	k	294	324	354	347	367	387	427	364			404			444	
GFL07...	k				380	400	420	460	397			437			477	
GFL09...	k								431			471			511	
...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>2)</sup>	$\Delta k$	19			20											
...RSO	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91						118					
	$g$	62			89						116					
	$k_5$	0			13						14					
	$g_2$	□ 62			Ø 67						Ø 72					
	$g_1$	76			90						105					
	$n_2$	64			78											
$x$					21								18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL05: 12DC20 ... 12LC41



GFL□□-2S H□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL06...	k	379		419		459		499								
GFL07...	k	412		452		492		532		451		491		551		
GFL09...	k	446		486		526		566		485		525		585		
GFL11...	k	487		527		567		607		526		566		626		
GFL14...	k									571		611		671		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

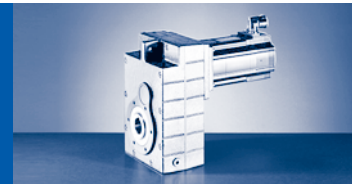
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-2S H□R

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	115	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	140	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	160	315	98	140	22	35	195	20		46	46
GFL07...	256	200	386	118	173	29	44	240	25	18	56	56
GFL09...	318	240	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	290	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	350	740	228	339	65	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				
GFL04...	25	115	45	100	8	28.3	110	75	90	3	2.5	M6x12
	30					33.3						
GFL05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GFL06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GFL07...	55	200	75	175	16	59.3	165	115	140	6	6	M12x18
	60					64.4						
GFL09...	70	240	95	210	20	74.9	205	145	175	7	7	M16x24
	80					85.4						
GFL11...	80	290	105	250	22	85.4	240	140	205	6	6	M20x32
GFL14...	100	350	135	305	28	106.4	290	170	250	7	7	M24x35





### GFL□□-2S HCK ... RSO

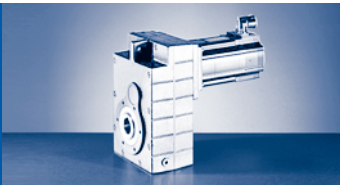
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GFL06...	k	422		462		502		542											
GFL07...	k	468		508		548		588		507		547		607					
GFL09...	k	507		547		587		627		546		586		646					
GFL11...	k	548		588		628		668		587		627		687					
GFL14...	k									632		672		732					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

### GFL□□-2S HCK

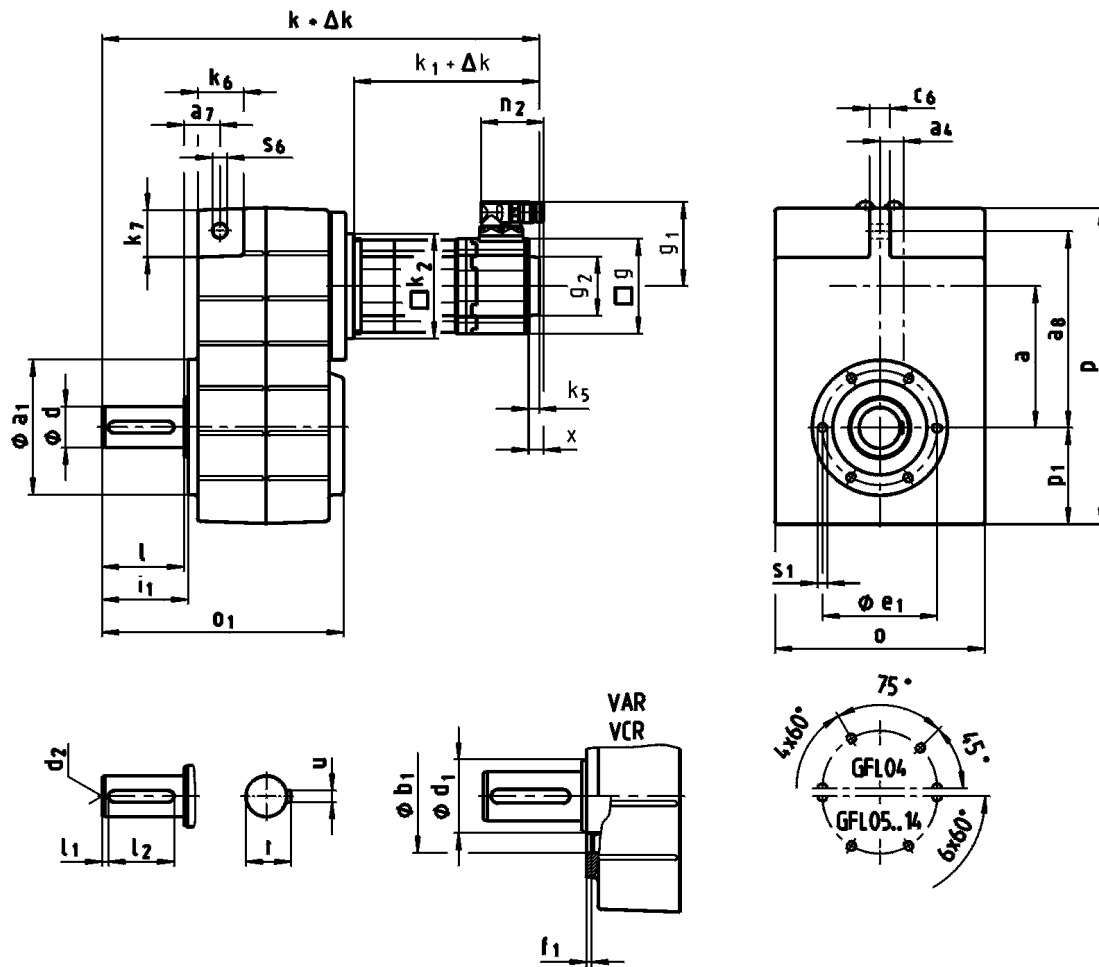
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>g</sub>
GFL04...	148	148	214	69	90.5	12.5	42
GFL05...	165	173	252	78	112.5	18.5	46
GFL06...	206	201	315	98	140	22	56
GFL07...	256	255	386	118	173	29	73
GFL09...	318	300	486	149	220	37.5	78
GFL11...	395	350	600	181	276.5	50	86
GFL14...	490	410	740	228	339	65	90

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GFL05...	35	140	50	124	10	38.3	200	130	12	165	4	42.5	4 x 11
	40					43.3							
GFL06...	45	160	65	140	14	48.8	250	180	15	215	4	41.5	4 x 14
	50					53.8							
GFL07...	55	200	75	175	16	59.3	300	230	17	265	4	55.5	4 x 17.5
	60					64.4							
GFL09...	70	240	95	210	20	74.9	350	250	18	300	5	60.5	4 x 17.5
	80					85.4							
GFL11...	80	290	105	250	22	85.4	400	300	20	350	5	60.5	4 x 17.5
	100					106.4							
GFL14...	100	350	135	305	28	106.4	450	350	22	400	5	60.5	8 x 17.5



# GFL [mm]

## GFL□□-2S (MCS)

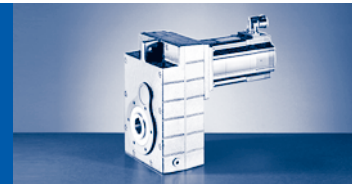


### GFL□□-2S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GFL04...	k	310	340	370	362	382	402	442									
GFL05...	k	341	371	401	394	414	434	474	411		451			491			
GFL06...	k	374	404	434	427	447	467	507	444		484			524			
GFL07...	k				480	500	520	560	497		537			577			
GFL09...	k								551		591			631			
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>2)</sup>	$\Delta k$	19								20							
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268			
	$k_2$	66			91								118 145 <sup>2)</sup>				
	g	62			89								116				
	$k_5$	0			13								14				
	$g_2$	□ 62			Ø 67								Ø 72				
	$g_1$	76			90								105				
	$n_2$	64							78								
	x				21								18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL05: 12DC20 ... 12LC41



GFL□□-2S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL06...	k	459		499		539		579								
GFL07...	k	512		552		592		632		551		591		651		
GFL09...	k	566		606		646		686		605		645		705		
GFL11...	k	647		687		727		767		686		726		786		
GFL14...	k									771		811		871		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

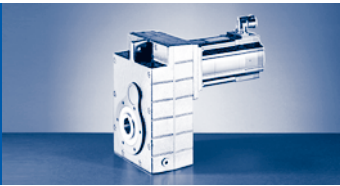
<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-2S V□R

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	163	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	197	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	236	315	98	140	22	35	195	20		46	46
GFL07...	256	296	386	118	173	29	44	240	25	18	56	56
GFL09...	318	356	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	445	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	544	740	228	339	65	80	455	50	32	100	114

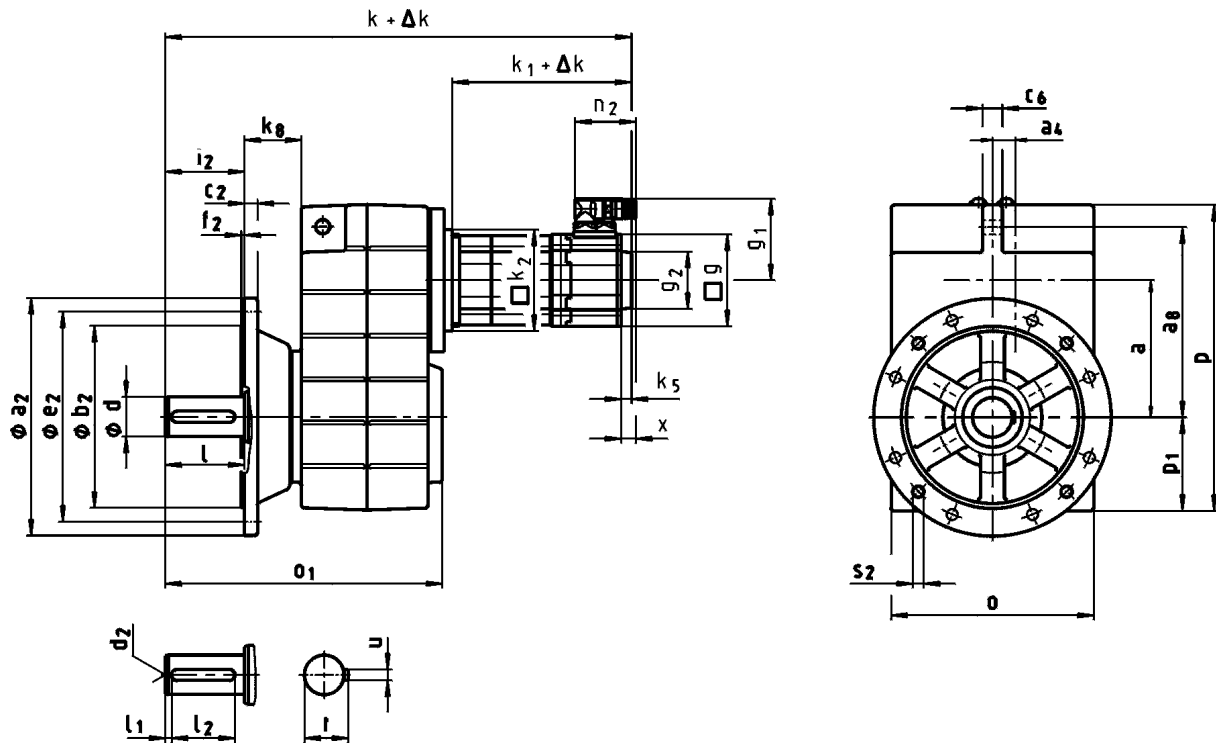
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				
GFL04...	25	50	45	4	40	M10	8	28	110	75	90	3	52.5	M6x12
GFL05...	30	60	50	6	45			33	118	80	100	4	64	M8x15
GFL06...	40	80	65	7	63	M16	12	43	140	100	120		5	85
GFL07...	50	100	75	8	80			14	53.5	165	115	140		175
GFL09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GFL11...	80	160	105	15	125		22	85	240	140	205		166	M20x32
GFL14...	100	200	135	18	160	M24	28	106	290	170	250	207	M24x35	

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

## GFL□□-2S (MCS)

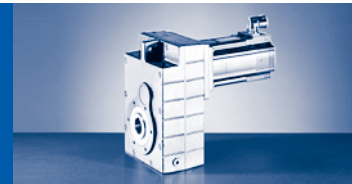


### GFL□□-2S VCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41		
GFL04...	k	343	373	403	396	416	436	476									
GFL05...	k	374	404	434	427	447	467	507	444		484			524			
GFL06...	k	415	445	475	468	488	508	548	485		525			565			
GFL07...	k				535	555	575	615	552		592			632			
GFL09...	k								611		651			691			
...RSO B0 <sup>1)</sup>	$\Delta k$	0															
...RSO P□ <sup>2)</sup>	$\Delta k$	19								20							
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268			
	$k_2$	66			91				118				145 <sup>2)</sup>				
	g	62			89				116								
	$k_5$	0			13				14								
	$g_2$	□ 62			Ø 67				Ø 72								
	$g_1$	76			90				105								
	$n_2$	64							78								
	x				21								18				

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL05: 12DC20 ... 12LC41



GFL□□-2S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL06...	k	500		540		580		620								
GFL07...	k	567		607		647		687		606		646		706		
GFL09...	k	626		666		706		746		665		705		765		
GFL11...	k	707		747		787		827		746		786		846		
GFL14...	k									831		871		931		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

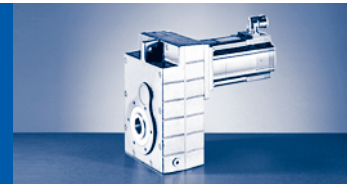
GFL□□-2S VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>g</sub>
GFL04...	148	196	214	69	90.5	12.5	42
GFL05...	165	230	252	78	112.5	18.5	46
GFL06...	206	277	315	98	140	22	56
GFL07...	256	351	386	118	173	29	73
GFL09...	318	416	486	149	220	37.5	78
GFL11...	395	505	600	181	276.5	50	86
GFL14...	490	604	740	228	339	65	90

	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GFL05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GFL06...	40	80	7	63	M16	14	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80			53.5	300	230	17	265		100	
GFL09...	60	120		100			18	64	350	250	18		300	
GFL11...	80	160	15	125	M20	22	85	400	300	20	350	5	160	4 x 17.5
GFL14...	100	200	18	160			M24	28	106	450	350		22	

d ≤ 50 mm: k6; d > 50 mm: m6





GFL□□-3S H□R ... RSO

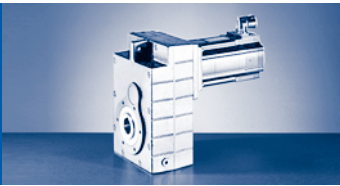
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL09...	k	569		609		649		689								
GFL11...	k	629		669		709		749		668		708		768		
GFL14...	k	708		748		788		828		747		787		847		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-3S H□R

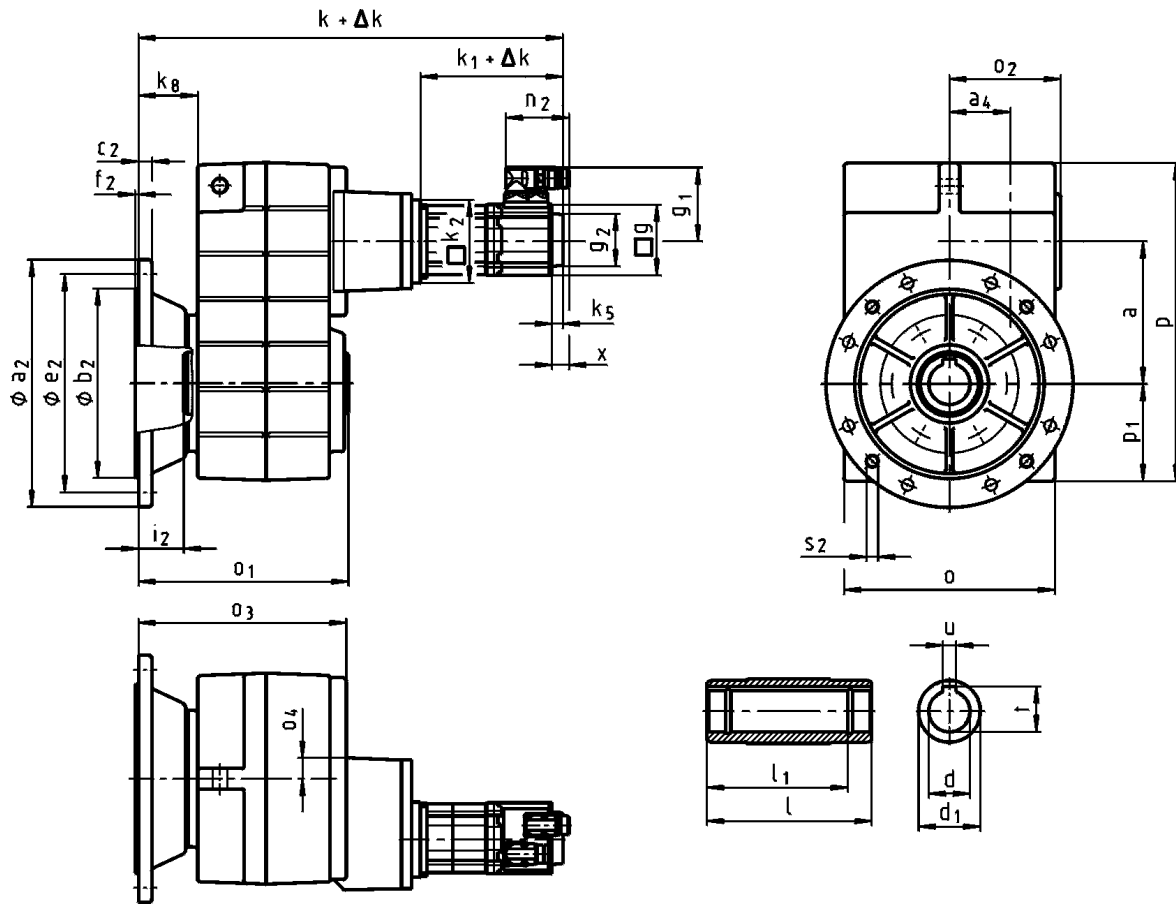
	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	140	107	141	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	160	111	160	20	315	98	140	58	35	195	20		46	46
GFL07...	256	200	135	199	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	240	170	238	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	290	216	285	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	350	271	340	38	740	228	339	154	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GFL05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15
	35				10	38.3						
GFL06...	40	160	65	140	12	43.3	140	100	120			
	45				14	48.8						
GFL07...	50	200	75	175	14	53.8	165	115	140	5	5	M12x18
	55				16	59.3						
GFL09...	60	240	95	210	18	64.4	205	145	175	6	6	M16x24
	70				20	74.9						
GFL11...	80	290	105	250	22	85.4	240	140	205			
	80				22	85.4						
GFL14...	100	350	135	305	28	106.4	290	170	250	7	7	M24x35



# GFL [mm]

## GFL□□-3S (MCS)

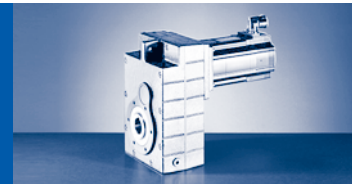


### GFL□□-3S HCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GFL05...	k	391	421	451	444	464	484	524							
GFL06...	k	430	460	490	483	503	523	563							
GFL07...	k	487	517	547	540	560	580	620	557		597			637	
GFL09...	k	544	574	604	597	617	637	677	614		654			694	
GFL11...	k				657	677	697	737	674		714			754	
GFL14...	k								753		793			833	
...RSO B0 <sup>1)</sup>	$\Delta k$	0													
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20									
...RSO	$k_1$	132	162	192	183	203	223	263	188		228			268	
	$k_2$	66			91				118				145 <sup>2)</sup>		
	g	62			89				116						
	$k_5$	0			13				14						
	$g_2$	□ 62			Ø 67				Ø 72						
	$g_1$	76			90				105						
	$n_2$	64			78										
	x	21							18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41



### GFL□□-3S HCK ... RSO

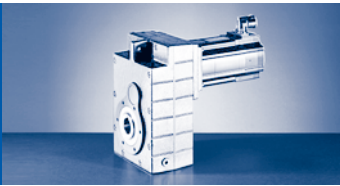
		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30				
GFL09...	k	629		669		709		749											
GFL11...	k	689		729		769		809		728		768		828					
GFL14...	k	768		808		848		888		807		847		907					
...RSO B0 <sup>1)</sup>	Δ k	0																	
...RSO P□ <sup>1)</sup>	Δ k	28						34			44								
	k <sub>1</sub>	201		241		281		321		220		260		320					
	k <sub>2</sub>	145						195											
	g	143						192											
...RSO	k <sub>5</sub>	24						15											
	g <sub>2</sub>	Ø 78																	
	g <sub>1</sub>	116				147		116		147		141		172		141		172	
	n <sub>2</sub>	78				94		78		94		78		94		78		94	
	x	16				38		16		38		16		36		16		36	

<sup>1)</sup> →  801 - SRS/SRM/ECN/EQN/EQI/C20

### GFL□□-3S HCK

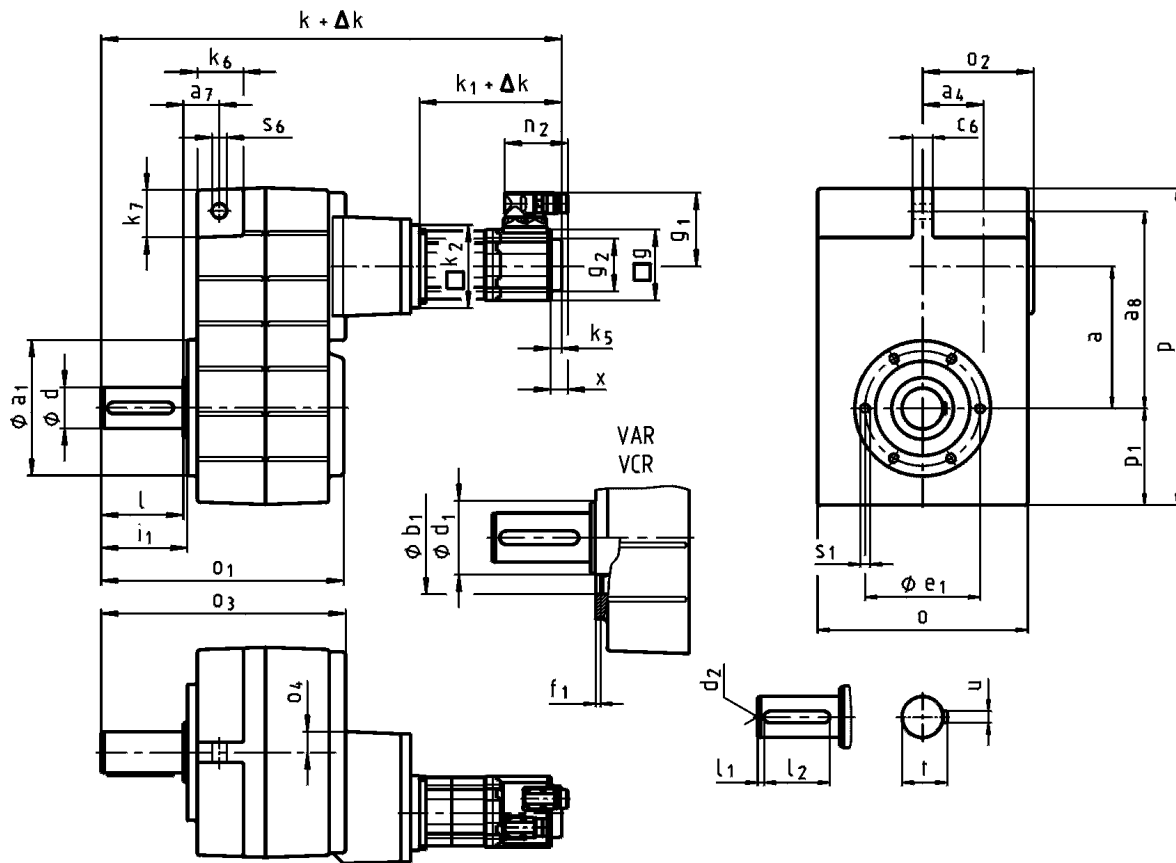
	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	173	107	174	23	252	78	112.5	54.5	46
GFL06...	206	201	111	201	20	315	98	140	58	56
GFL07...	256	255	135	254	24	386	118	173	74	73
GFL09...	318	300	170	298	27	486	149	220	93.5	78
GFL11...	395	350	216	345	34	600	181	276.5	120	86
GFL14...	490	410	271	400	38	740	228	339	154	90

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11
	35				38.3	42.5							
GFL06...	40	160	65	140	12	43.3	250	180	15	215	4	41.5	4 x 14
	45				48.8	55.5							
GFL07...	50	200	75	175	14	53.8	300	230	17	265	4	60.5	4 x 17.5
	55				59.3								
GFL09...	60	240	95	210	18	64.4	350	250	18	300	5	60.5	4 x 17.5
	70				74.9								
GFL11...	80	290	105	250	22	85.4	400	300	20	350	5	60.5	8 x 17.5
	80				85.4								
GFL14...	100	350	135	305	28	106.4	450	350	22	400	5	60.5	8 x 17.5



# GFL [mm]

## GFL□□-3S (MCS)



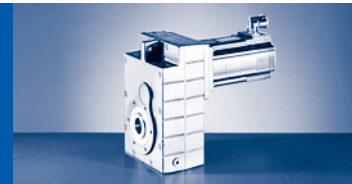
### GFL□□-3S V□R ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GFL05...	k	418	448	478	470	490	510	550							
GFL06...	k	468	498	528	520	540	560	600							
GFL07...	k	532	562	592	584	604	624	664	601		641			681	
GFL09...	k	604	634	664	656	676	696	736	673		713			753	
GFL11...	k				756	776	796	836	773		813			853	
GFL14...	k								892		932			972	

...RSO B0 <sup>1)</sup>	$\Delta k$	0														
...RSO P□ <sup>1)</sup>	$\Delta k$	19				20										
	$k_1$	132	162	192	183	203	223	263	188			228			268	
	$k_2$	66			91							118		145 <sup>2)</sup>		
	g	62				89				116						
...RSO	$k_5$	0				13				14						
	$g_2$	□ 62				Ø 67				Ø 72						
	$g_1$	76				90				105						
	$n_2$	64								78						
	x					21				18						

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41



GFL□□-3S V□R ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL09...	k	689		729		769		809								
GFL11...	k	789		829		869		909		828		868		928		
GFL14...	k	908		948		988		1028		947		987		1047		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

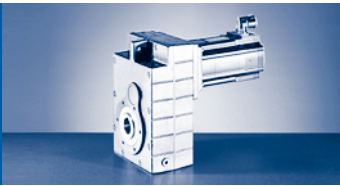
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-3S V□R

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	197	107	201	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	236	111	240	20	315	98	140	58	35	195	20		46	46
GFL07...	256	296	135	299	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	356	170	358	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	445	216	445	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	544	271	540	38	740	228	339	154	80	455	50	32	100	114

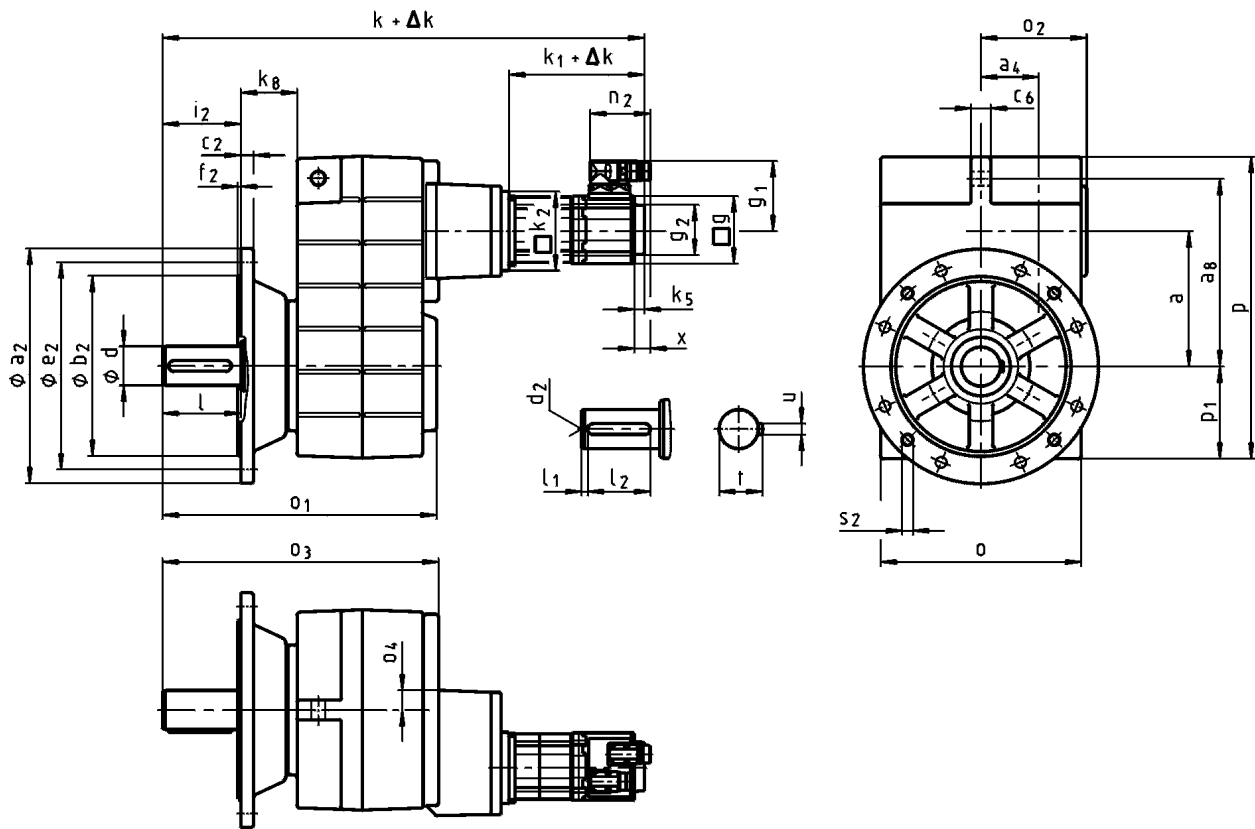
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GFL05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GFL06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GFL07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18
GFL09...	60	120	95		100	M20	18	64	205	145	175	6	125	M16x24
GFL11...	80	160	105	125	22		85	240	140	205	166		M20x32	
GFL14...	100	200	135	18	160	M24	28	106	290	170	250	207	M24x35	

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

## GFL□□-3S (MCS)

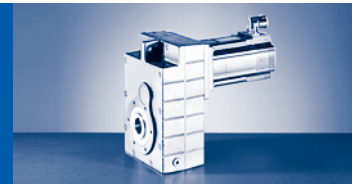


### GFL□□-3S VCK ... RSO

		06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41	
GFL05...	k	451	481	511	504	524	544	584								
GFL06...	k	509	539	569	562	582	602	642								
GFL07...	k	587	617	647	640	660	680	720	657		697			737		
GFL09...	k	664	694	724	717	737	757	797	734		774			814		
GFL11...	k				817	837	857	897	834		874			914		
GFL14...	k								953		993			1033		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>2)</sup>	Δ k	19				20										
	k <sub>1</sub>	132	162	192	183	203	223	263	188			228		268		
	k <sub>2</sub>	66			91							118		145 <sup>2)</sup>		
	g	62			89							116				
...RSO	k <sub>5</sub>	0			13							14				
	g <sub>2</sub>	□ 62			Ø 67							Ø 72				
	g <sub>1</sub>	76			90							105				
	n <sub>2</sub>	64							78							
	x	21											18			

<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

<sup>2)</sup> GFL07: 12DC20 ... 12LC41



GFL□□-3S VCK ... RSO

		14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30	
GFL09...	k	749		789		829		869								
GFL11...	k	849		889		929		969		888		928		988		
GFL14...	k	968		1008		1048		1088		1007		1047		1107		
...RSO B0 <sup>1)</sup>	Δ k	0														
...RSO P□ <sup>1)</sup>	Δ k	28						34			44					
	k <sub>1</sub>	201		241		281		321		220		260		320		
	k <sub>2</sub>	145						195								
	g	143						192								
...RSO	k <sub>5</sub>	24						15								
	g <sub>2</sub>	Ø 78														
	g <sub>1</sub>	116				147		116	147	141	172	141	172	141	172	
	n <sub>2</sub>	78				94		78	94	78	94	78	94	78	94	
	x	16				38		16	38	16	36	16	36	16	36	

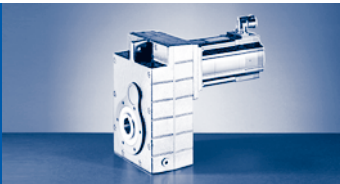
<sup>1)</sup> → 801 - SRS/SRM/ECN/EQN/EQI/C20

GFL□□-3S VCK

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	230	107	234	23	252	78	112.5	54.5	46
GFL06...	206	277	111	281	20	315	98	140	58	56
GFL07...	256	351	135	354	24	386	118	173	74	73
GFL09...	318	416	170	418	27	486	149	220	93.5	78
GFL11...	395	505	216	505	34	600	181	276.5	120	86
GFL14...	490	604	271	600	38	740	228	339	154	90

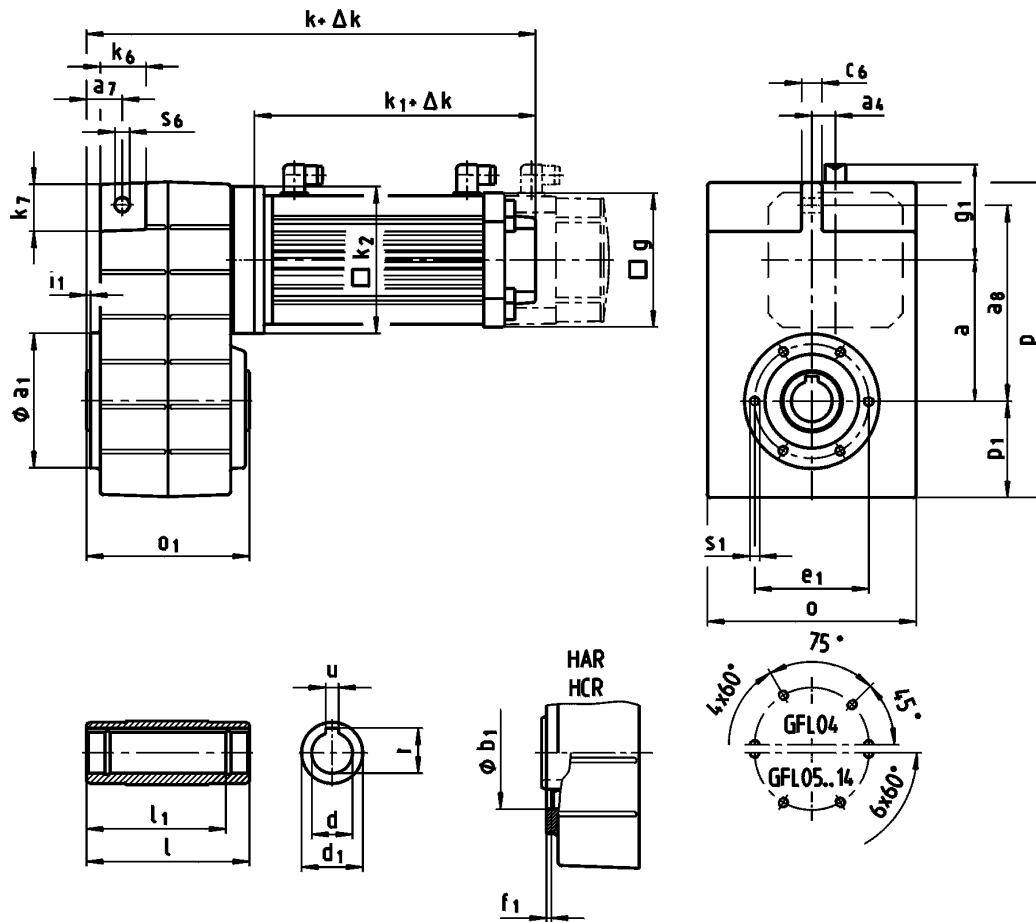
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
								j7						
GFL05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GFL06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80		14	53.5	300	230	17	265		100	
GFL09...	60	120		100	M20	18	64	350	250	18	300	5	120	4 x 17.5
GFL11...	80	160	15	125		22	85	400	300	20	350		160	
GFL14...	100	200	18	160		M24	28	106	450	350	22		400	200

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

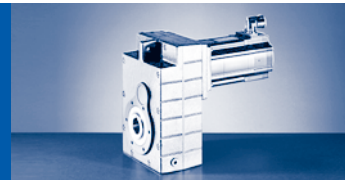
## GFL□□-2A (MCA)



### GFL□□-2A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	388	396	464						
GFL05...	k	409	418	486	468		530			
GFL06...	k	422	431	499	481		543		520	
GFL07...	k	455	464	532	514		576		553	
GFL09...	k				548		610		587	
GFL11...	k				589		651		628	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35
	$k_1$	258	267	335	307		369			346
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-2A H□R ... RSO

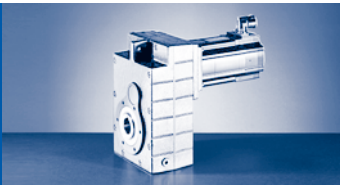
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10	
GFL06...	k	609										
GFL07...	k	642		621		718		700		796		
GFL09...	k	676		655		752		734		830		
GFL11...	k	717		696		793		775		871		
GFL14...	k			741		838		820		916		
...RSO B0 <sup>1)</sup>	Δ k	0										
...RSO P□ <sup>1)</sup>	Δ k	35			38			42				
	k <sub>1</sub>	435		408		505		479		575		
	k <sub>2</sub>	180				222				265		
	g	165				192				214		
	g <sub>1</sub>	118				161				172		

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-2A H□R

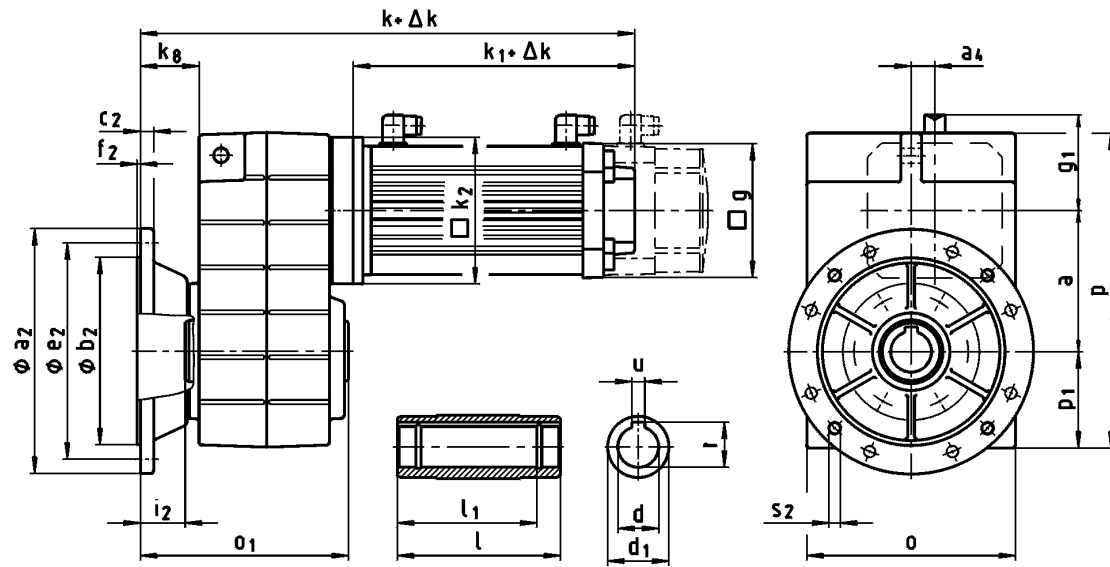
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	115	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	140	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	160	315	98	140	22	35	195	20		46	46
GFL07...	256	200	386	118	173	29	44	240	25	18	56	56
GFL09...	318	240	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	290	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	350	740	228	339	65	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				
GFL04...	25	115	45	100	8	28.3	110	75	90	3	2.5	M6x12
	30					33.3						
GFL05...	35	140	50	124	10	38.3	118	80	100	4	4	M8x15
	40					43.3						
GFL06...	45	160	65	140	14	48.8	140	100	120	5	5	M10x16
	50					53.8						
GFL07...	55	200	75	175	16	59.3	165	115	140	6	6	M12x18
	60					64.4						
GFL09...	70	240	95	210	20	74.9	205	145	175	7	7	M16x24
	80					85.4						
GFL11...	80	290	105	250	22	85.4	240	140	205	8	8	M20x32
	100					106.4						
GFL14...	100	350	135	305	28	106.4	290	170	250	9	9	M24x35



# GFL [mm]

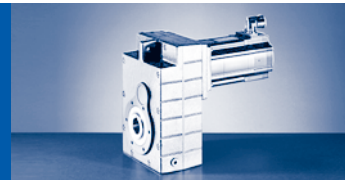
## GFL□□-2A (MCA)



### GFL□□-2A HCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	421	430	498			563			
GFL05...	k	443	451	519	501		563		562	
GFL06...	k	465	473	541	523		585		562	
GFL07...	k	511	519	587	569		631		608	
GFL09...	k				608		670		647	
GFL11...	k				649		711		688	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-2A HCK ... RSO

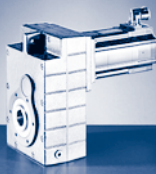
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	k	651									
GFL07...	k	697		677		774		755		851	
GFL09...	k	736		716		813		794		890	
GFL11...	k	777		757		854		835		931	
GFL14...	k			802		899		880		976	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35			38				42		
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180			222			265			
	g	165			192			214			
	g <sub>1</sub>	118			161			172			

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-2A HCK

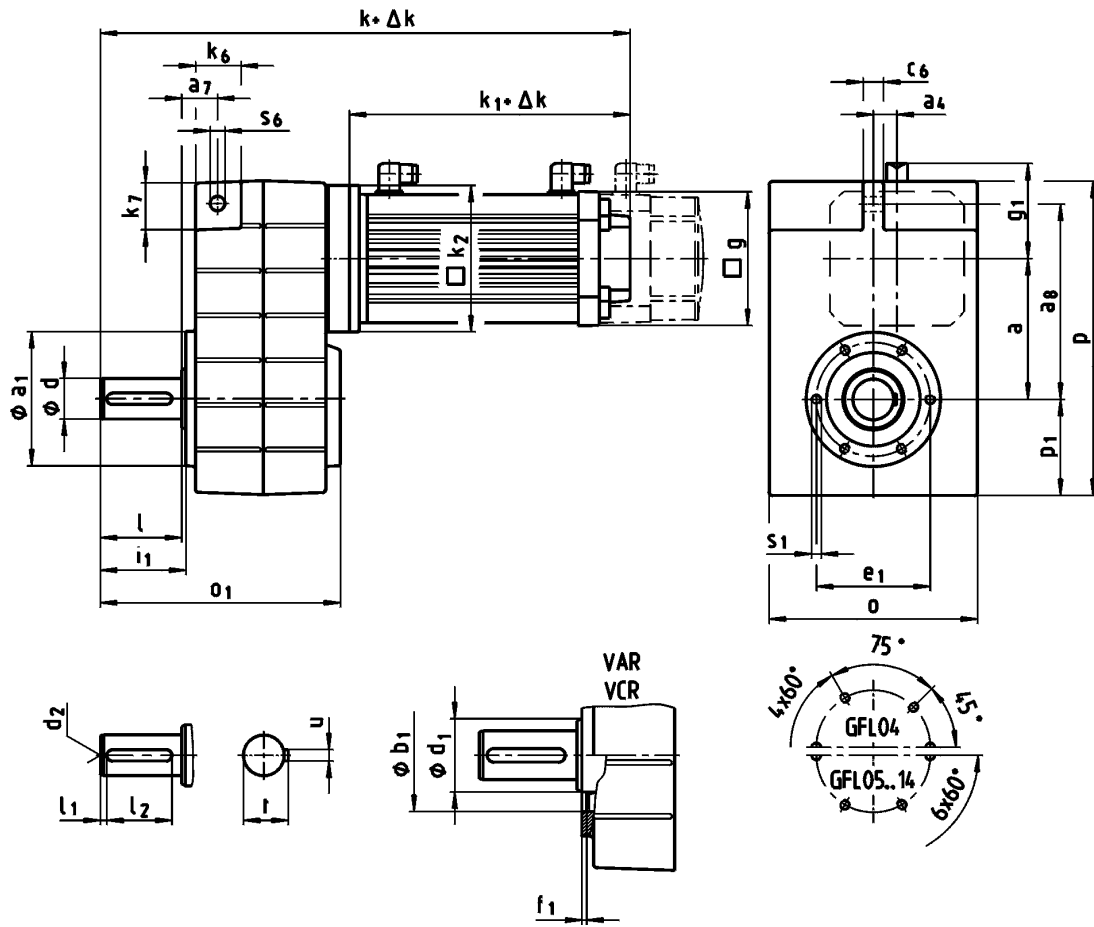
	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL04...	148	148	214	69	90.5	12.5	42
GFL05...	165	173	252	78	112.5	18.5	46
GFL06...	206	201	315	98	140	22	56
GFL07...	256	255	386	118	173	29	73
GFL09...	318	300	486	149	220	37.5	78
GFL11...	395	350	600	181	276.5	50	86
GFL14...	490	410	740	228	339	65	90

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
	H7				JS9	+0,2		j7					
GFL04...	25	115	45	100	8	28.3	160	110	10	130	3.5	33.5	4 x 9
	30					33.3							
GFL05...	35	140	50	124	10	38.3	200	130	12	165			4 x 11
GFL06...	40	160	65	140	12	43.3	250	180	15	215	4	42.5	4 x 14
	45				48.8	41.5							
GFL07...	50	200	75	175	14	53.8	300	230	17	265	4	55.5	4 x 17.5
	55				59.3								
GFL09...	60	240	95	210	18	64.4	350	250	18	300	5	60.5	4 x 17.5
	70				74.9								
GFL11...	80	290	105	250	22	85.4	400	300	20	350	5	60.5	4 x 17.5
	80				85.4								
GFL14...	100	350	135	305	28	106.4	450	350	22	400			8 x 17.5



# GFL [mm]

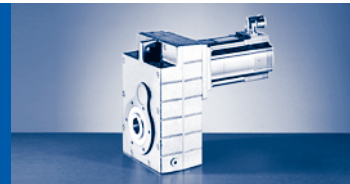
## GFL□□-2A (MCA)



### GFL□□-2A V□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	438	446	514						
GFL05...	k	469	478	546	528		590			
GFL06...	k	502	511	579	561		623		600	
GFL07...	k	555	564	632	614		676		653	
GFL09...	k				668		730		707	
GFL11...	k				749		811		788	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



**GFL□□-2A V□R ... RSO**

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	k	689									
GFL07...	k	742		721		818		800		896	
GFL09...	k	796		775		872		854		950	
GFL11...	k	877		856		953		935		1031	
GFL14...	k			941		1038		1020		1116	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35			38				42		
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180			222			265			
	g	165			192			214			
	g <sub>1</sub>	118			161			172			

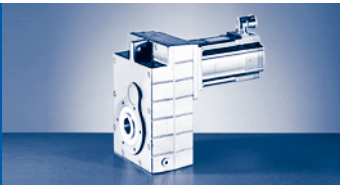
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

**GFL□□-2A V□R**

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL04...	148	163	214	69	90.5	12.5	22.5	128	14	12.5	32	35
GFL05...	165	197	252	78	112.5	18.5	29	155	16	14	35	38
GFL06...	206	236	315	98	140	22	35	195	20		46	46
GFL07...	256	296	386	118	173	29	44	240	25	18	56	56
GFL09...	318	356	486	149	220	37.5	50	300	32	22	70	70
GFL11...	395	445	600	181	276.5	50	65	375	40	26	84	90
GFL14...	490	544	740	228	339	65	80	455	50	32	100	114

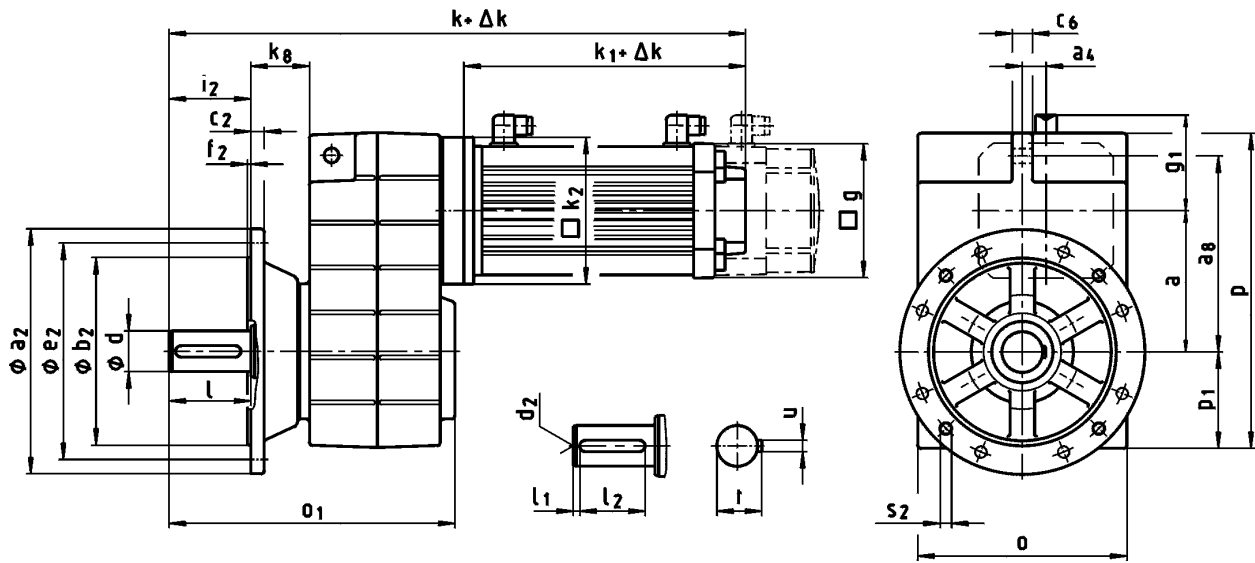
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
GFL04...	25	50	45	4	40	M10	8	28	110	75	90	3	52.5	M6x12
GFL05...	30	60	50	6	45			33	118	80	100		4	64
GFL06...	40	80	65	7	63	M16	12	43	140	100	120	5		85
GFL07...	50	100	75	8	80			14	53.5	165	115		140	6
GFL09...	60	120	95		100	M20	18	64	205	145	175	6	125	
GFL11...	80	160	105	15	125				22	85	240		140	205
GFL14...	100	200	135	18	160	M24	28	106	290	170	250	6	207	M24x35

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

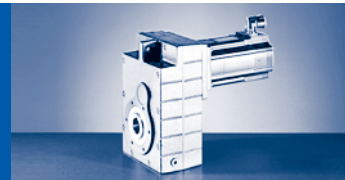
## GFL□□-2A (MCA)



### GFL□□-2A VCK ... RSO

		10L C40 ...S00	13L C41 ...S00	13L C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL04...	k	471	480	548						
GFL05...	k	502	511	579	561		623			
GFL06...	k	543	552	620	602		664		641	
GFL07...	k	610	619	687	669		731		708	
GFL09...	k				728		790		767	
GFL11...	k				809		871		848	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-2A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GFL06...	k	730											
GFL07...	k	797		776		873		855		951			
GFL09...	k	856		835		932		914		1010			
GFL11...	k	937		916		1013		995		1091			
GFL14...	k			1001		1098		1080		1176			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

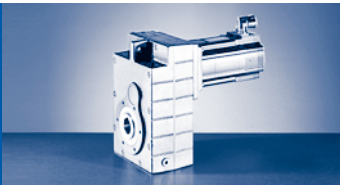
<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-2A VCK

	o	o <sub>1</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL04...	148	196	214	69	90.5	12.5	42
GFL05...	165	230	252	78	112.5	18.5	46
GFL06...	206	277	315	98	140	22	56
GFL07...	256	351	386	118	173	29	73
GFL09...	318	416	486	149	220	37.5	78
GFL11...	395	505	600	181	276.5	50	86
GFL14...	490	604	740	228	339	65	90

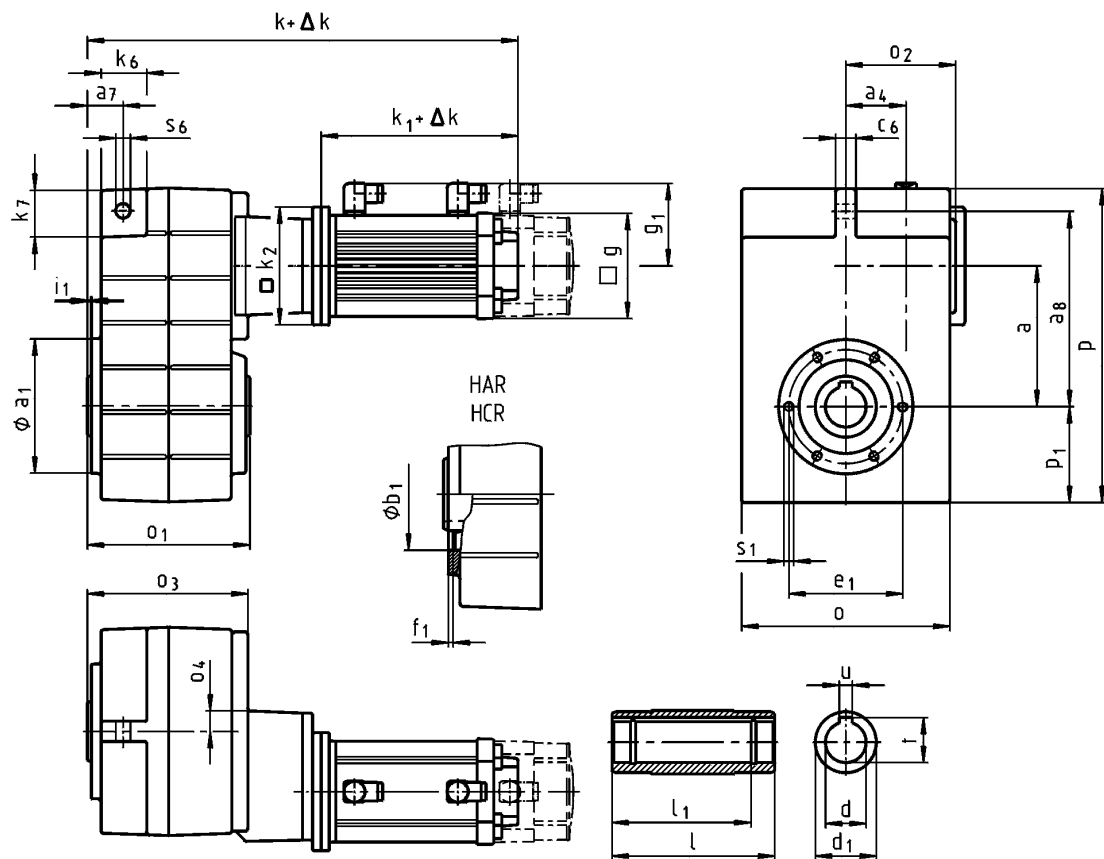
	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL04...	25	50	4	40	M10	8	28	160	110	10	130	3.5	50	4 x 9
GFL05...	30	60	6	45			33	200	130	12	165		60	4 x 11
GFL06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80			53.5	300	230	17	265		100	
GFL09...	60	120		100	M20	18	64	350	250	18	300	5	120	4 x 17.5
GFL11...	80	160	15	125			85	400	300	20	350		160	
GFL14...	100	200	18	160	M24	28	106	450	350	22	400		200	8 x 17.5

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

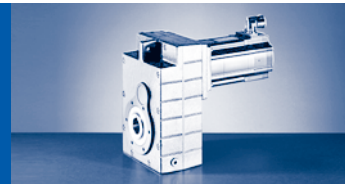
## GFL□□-3A (MCA)



### GFL□□-3A H□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	486	494	562						
GFL06...	k	516	524	592						
GFL07...	k	560	568	636	618		680			
GFL09...	k	612	620	688	670		732		709	
GFL11...	k	672	680	748	730		792		769	
GFL14...	k				809		871		848	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35
	$k_1$	258	267	335	307		369			346
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



GFL□□-3A H□R ... RSO

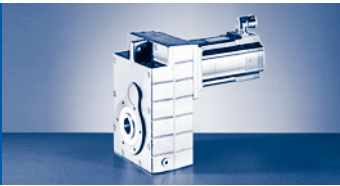
		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GFL09...	k	798											
GFL11...	k	858		838		935		916		1012			
GFL14...	k	937		917		1014		995		1091			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180				222				265			
	g	165				192				214			
	g <sub>1</sub>	118				161				172			

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

GFL□□-3A H□R

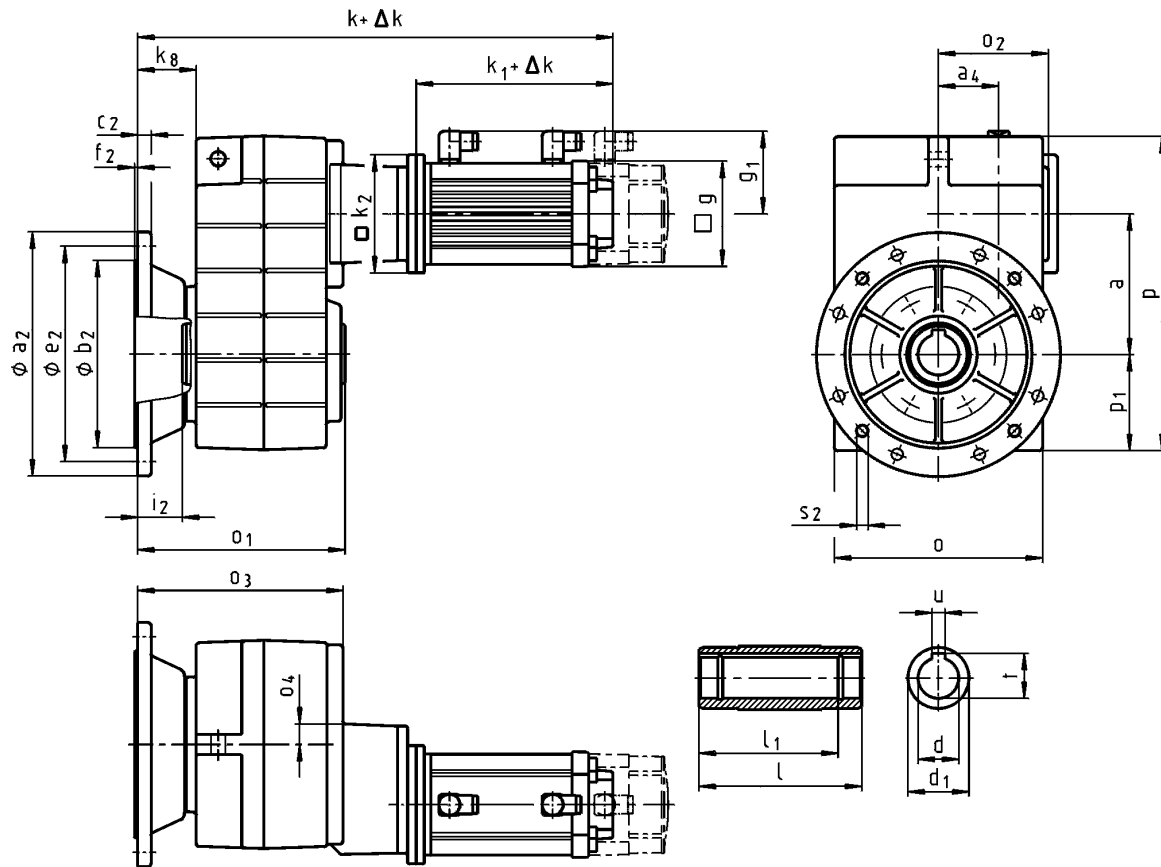
	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	140	107	141	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	160	111	160	20	315	98	140	58	35	195	20		46	46
GFL07...	256	200	135	199	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	240	170	238	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	290	216	285	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	350	271	340	38	740	228	339	154	80	455	50	32	100	114

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
	H7				JS9	+0,2		H7				6x60°
GFL05...	30	140	50	124	8	33.3	118	80	100	4	4	M8x15
	35				10	38.3						
GFL06...	40	160	65	140	12	43.3	140	100	120			
	45				14	48.8						
GFL07...	50	200	75	175	14	53.8	165	115	140	5	5	M12x18
	55				16	59.3						
GFL09...	60	240	95	210	18	64.4	205	145	175	6	6	M16x24
	70				20	74.9						
GFL11...	80	290	105	250	22	85.4	240	140	205			
	80				22	85.4						
GFL14...	100	350	135	305	28	106.4	290	170	250	7	7	M24x35



# GFL [mm]

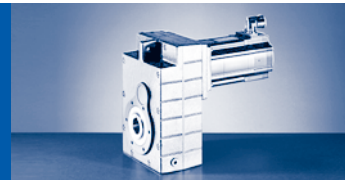
## GFL□□-3A (MCA)



### GFL□□-3A HCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	519	528	596						
GFL06...	k	558	567	635						
GFL07...	k	615	624	692	674		736			
GFL09...	k	672	681	749	731		793		770	
GFL11...	k	732	741	809	791		853		830	
GFL14...	k				870		932		909	
...RSO B0 <sup>1)</sup>	$\Delta k$	0								
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33				35
	$k_1$	258	267	335		307		369		346
	$k_2$	145					180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-3A HCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	k	859									
GFL11...	k	919		898		995		977		1073	
GFL14...	k	998		977		1074		1056		1152	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180		222				265			
	g	165		192				214			
	g <sub>1</sub>	118		161				172			

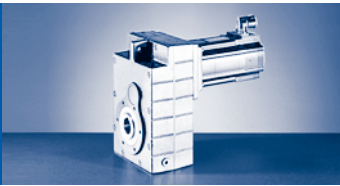
<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

### GFL□□-3A HCK

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	173	107	174	23	252	78	112.5	54.5	46
GFL06...	206	201	111	201	20	315	98	140	58	56
GFL07...	256	255	135	254	24	386	118	173	74	73
GFL09...	318	300	170	298	27	486	149	220	93.5	78
GFL11...	395	350	216	345	34	600	181	276.5	120	86
GFL14...	490	410	271	400	38	740	228	339	154	90

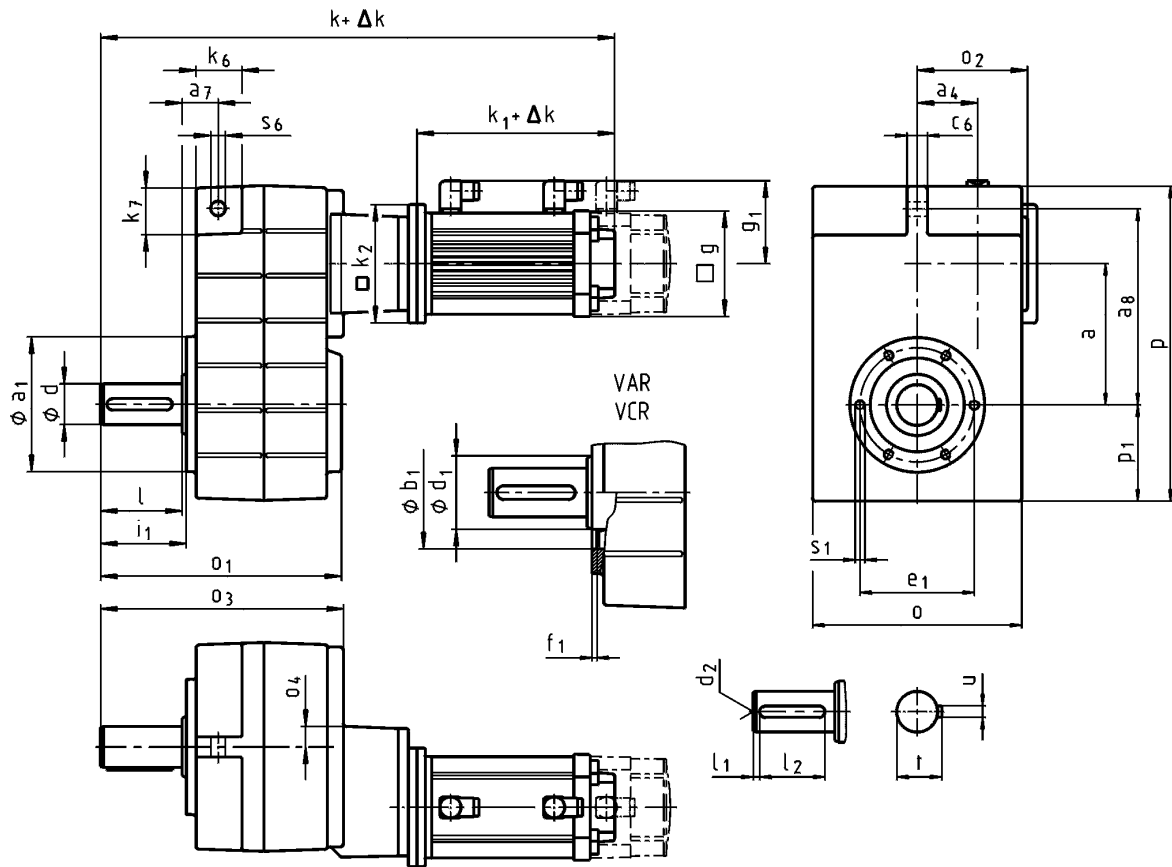
  

	d	l	d <sub>1</sub>	l <sub>1</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>	
	H7				JS9	+0,2		j7						
GFL05...	30	140	50	124	8	33.3	200	130	12	165	3.5	33.5	4 x 11	
	35				10	38.3								
GFL06...	40	160	65	140	12	43.3	250	180	15	215	4	42.5		4 x 14
	45				14	48.8								
GFL07...	50	200	75	175	16	53.8	300	230	17	265	4	55.5	4 x 17.5	
	55				18	64.4								
GFL09...	60	240	95	210	20	74.9	350	250	18	300	5	60.5		8 x 17.5
GFL11...	70				22	85.4	400	300	20	350				
	80	290	105	250	22	85.4	450	350	22	400	5	60.5		
GFL14...	100	350	135	305	28	106.4								



# GFL [mm]

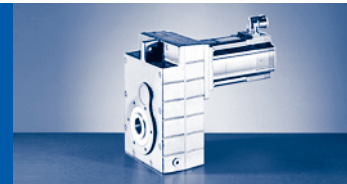
## GFL□□-3A (MCA)



### GFL□□-3A V□R ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	546	554	622						
GFL06...	k	596	604	672						
GFL07...	k	660	668	736	718		780			
GFL09...	k	732	740	808	790		852		829	
GFL11...	k	832	840	908	890		952		929	
GFL14...	k				1009		1071		1048	
...RSO B0 <sup>1)</sup>	Δ k	0								
...RSO P□ <sup>1)</sup>	Δ k	25	35			33				35
	k <sub>1</sub>	258	267	335	307		369			346
	k <sub>2</sub>	145					180			
	g	102	131			142				165
	g <sub>1</sub>	90	102			109				118

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



**GFL□□-3A V□R ... RSO**

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10		
GFL09...	k	918											
GFL11...	k	1018		998		1095		1076		1172			
GFL14...	k	1137		1117		1214		1195		1291			
...RSO B0 <sup>1)</sup>	Δ k	0											
...RSO P□ <sup>1)</sup>	Δ k	35			38			42					
	k <sub>1</sub>	435		408		505		479		575			
	k <sub>2</sub>	180		222						265			
	g	165		192						214			
	g <sub>1</sub>	118		161						172			

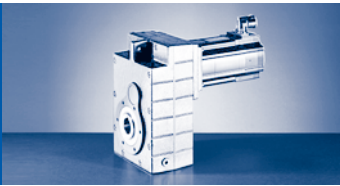
<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

**GFL□□-3A V□R**

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	a <sub>7</sub>	a <sub>8</sub>	c <sub>6</sub>	s <sub>6</sub>	k <sub>6</sub>	k <sub>7</sub>
GFL05...	165	197	107	201	23	252	78	112.5	54.5	29	155	16	14	35	38
GFL06...	206	236	111	240	20	315	98	140	58	35	195	20		46	46
GFL07...	256	296	135	299	24	386	118	173	74	44	240	25	18	56	56
GFL09...	318	356	170	358	27	486	149	220	93.5	50	300	32	22	70	70
GFL11...	395	445	216	445	34	600	181	276.5	120	65	375	40	26	84	90
GFL14...	490	544	271	540	38	740	228	339	154	80	455	50	32	100	114

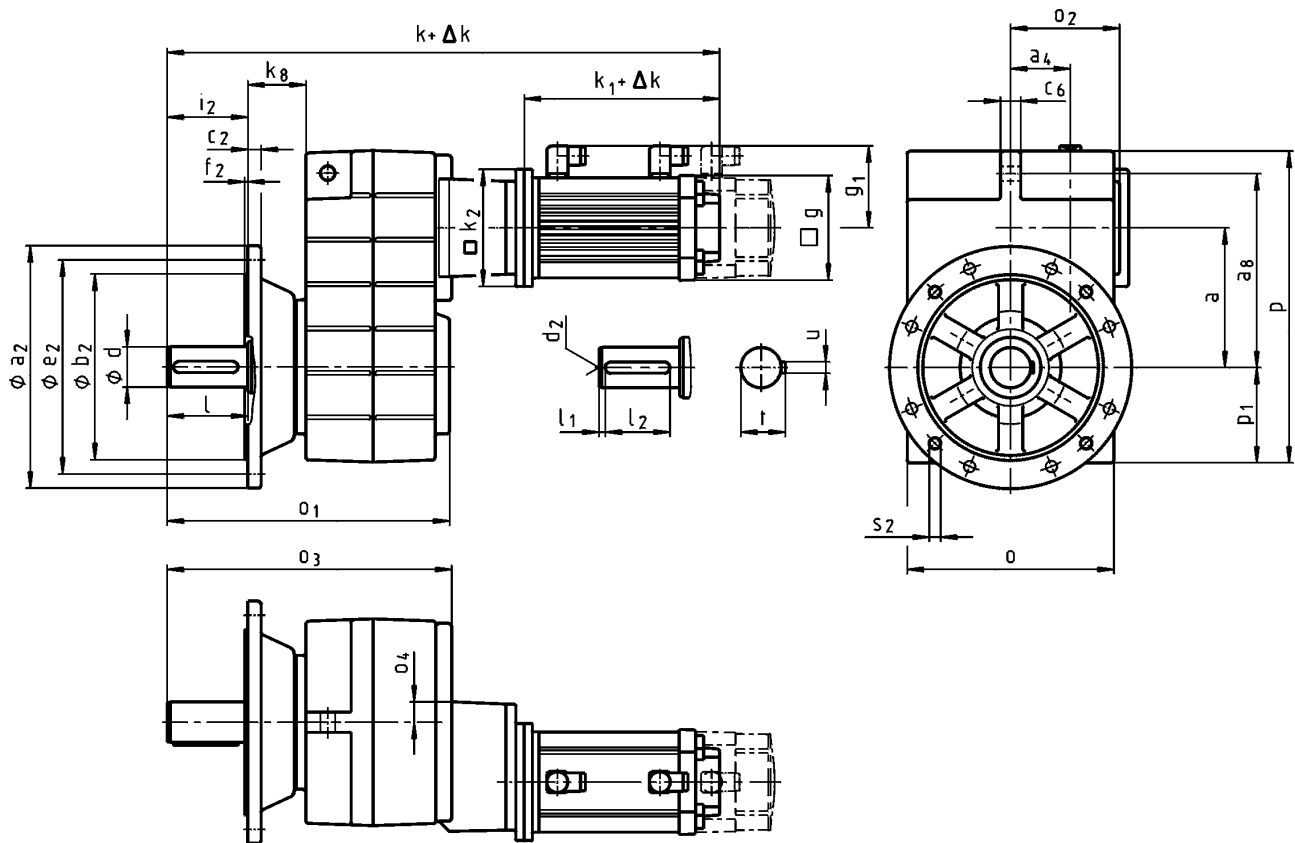
	d	l	d <sub>1</sub>	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>1</sub>	b <sub>1</sub>	e <sub>1</sub>	f <sub>1</sub>	i <sub>1</sub>	s <sub>1</sub>
										H7				6x60°
GFL05...	30	60	50	6	45	M10	8	33	118	80	100	4	64	M8x15
GFL06...	40	80	65	7	63	M16	12	43	140	100	120		85	M10x16
GFL07...	50	100	75	8	80		14	53.5	165	115	140	5	105	M12x18
GFL09...	60	120	95		100	M20	18	64	205	145	175		125	M16x24
GFL11...	80	160	105	15	125		22	85	240	140	205	6	166	M20x32
GFL14...	100	200	135	18	160	M24	28	106	290	170	250		207	M24x35

d ≤ 50 mm: k6; d > 50 mm: m6



# GFL [mm]

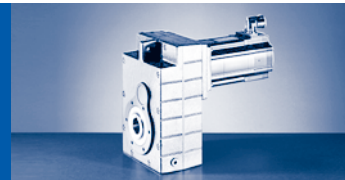
## GFL□□-3A (MCA)



### GFL□□-3A VCK ... RSO

		10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL05...	k	579	588	656						
GFL06...	k	637	646	714						
GFL07...	k	715	724	792	774		836			
GFL09...	k	792	801	869	851		913		890	
GFL11...	k	892	901	969	951		1013		990	
GFL14...	k				1070		1132		1109	
...RSO B0 <sup>1)</sup>	$\Delta k$					0				
...RSO P□ <sup>1)</sup>	$\Delta k$	25	35			33			35	
	$k_1$	258	267	335	307		369		346	
	$k_2$		145				180			
	g	102	131			142			165	
	$g_1$	90	102			109			118	

<sup>1)</sup> → 803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD



### GFL□□-3A VCK ... RSO

		17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL09...	k	979									
GFL11...	k	1079		1058		1155		1137		1233	
GFL14...	k	1198		1177		1274		1256		1352	
...RSO B0 <sup>1)</sup>	Δ k	0									
...RSO P□ <sup>1)</sup>	Δ k	35		38				42			
	k <sub>1</sub>	435		408		505		479		575	
	k <sub>2</sub>	180				222				265	
	g	165				192				214	
	g <sub>1</sub>	118				161				172	

<sup>1)</sup> →  803 - SRS/SRM/ECN/EQN/EQI/S20/T20/CDD

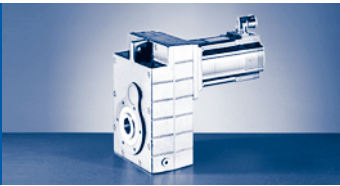
### GFL□□-3A VCK

	o	o <sub>1</sub>	o <sub>2</sub>	o <sub>3</sub>	o <sub>4</sub>	p	p <sub>1</sub>	a	a <sub>4</sub>	k <sub>8</sub>
GFL05...	165	230	107	234	23	252	78	112.5	54.5	46
GFL06...	206	277	111	281	20	315	98	140	58	56
GFL07...	256	351	135	354	24	386	118	173	74	73
GFL09...	318	416	170	418	27	486	149	220	93.5	78
GFL11...	395	505	216	505	34	600	181	276.5	120	86
GFL14...	490	604	271	600	38	740	228	339	154	90

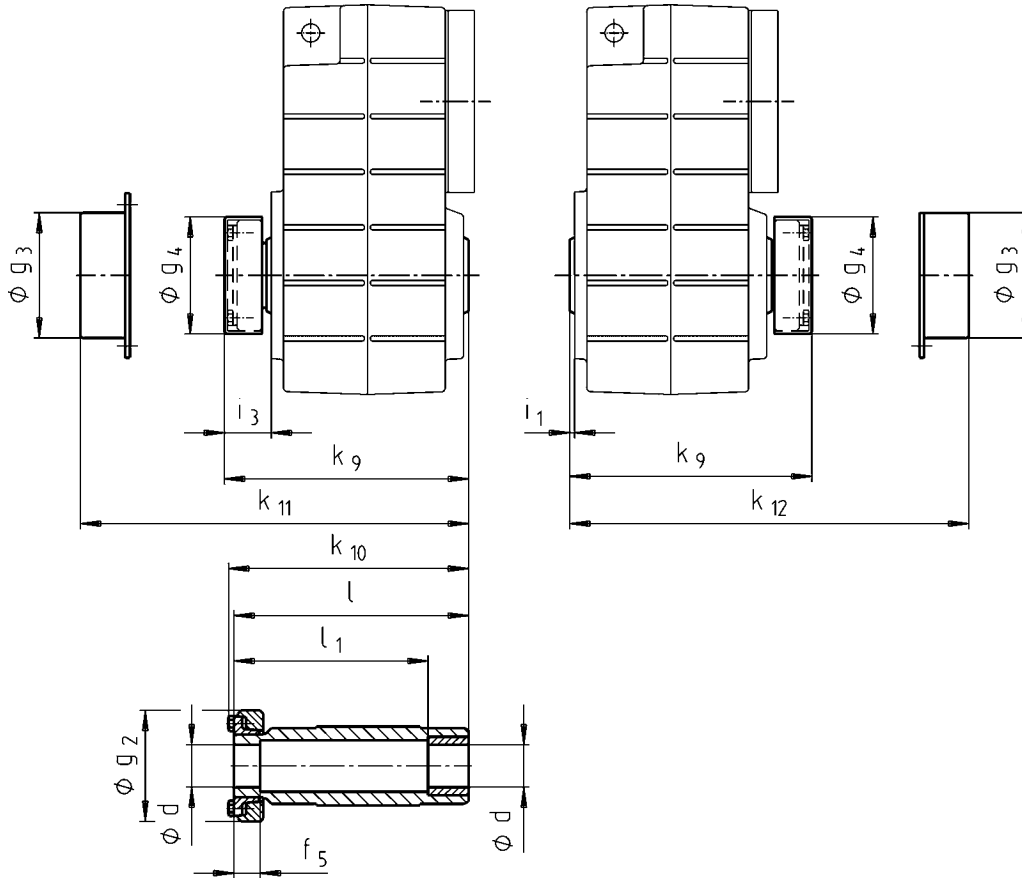
  

	d	l	l <sub>1</sub>	l <sub>2</sub>	d <sub>2</sub>	u	t	a <sub>2</sub>	b <sub>2</sub>	c <sub>2</sub>	e <sub>2</sub>	f <sub>2</sub>	i <sub>2</sub>	s <sub>2</sub>
									j7					
GFL05...	30	60	6	45	M10	8	33	200	130	12	165	3.5	60	4 x 11
GFL06...	40	80	7	63	M16	12	43	250	180	15	215	4	80	4 x 14
GFL07...	50	100	8	80		14	53.5						300	
GFL09...	60	120		100	M20	18	64	350	250	18	300		120	4 x 17.5
GFL11...	80	160	15	125		22	85	400	300	20	350		160	
GFL14...	100	200	18	160	M24	28	106	450	350	22	400	5	200	8 x 17.5

d ≤ 50 mm: k6; d > 50 mm: m6

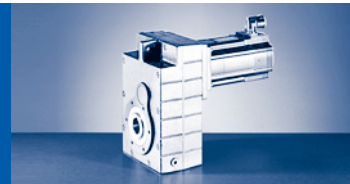


Hollow shaft with shrink disc



	Machine shaft	Hollow shaft with shrink disc						Protective cap			Cover		
	d	i <sub>1</sub>	k <sub>10</sub>	g <sub>2</sub>	l	l <sub>1</sub>	f <sub>5</sub>	i <sub>3</sub>	k <sub>9</sub>	g <sub>4</sub>	k <sub>11</sub>	k <sub>12</sub>	g <sub>3</sub>
	h6												
GFL04...	25 30	2.5	148	72	142	122	26	37	150	76	154	154	79
GFL05...	35	4	174	80	168	148	28	39.5	176	84	179	180	90
GFL06...	40	5	200	90	194	164	30	46.5	202	94	204	205	100
GFL07...	50		238	110	232	192	26	45.5	241	116	244	245	124
GFL09...	65		285	141	278	228	30	53	288	147	287	288	159
GFL11...	80	6	344	170	338	238	42	63	347	176	349	350	191
GFL14...	100	7	415	215	407	307	55	75	418	221	421	422	253

- ▶ Ensure that the strength of the shaft material is adequate in shrink disc designs.  
When using typical steels (e.g. C45, 42CrMo4), the torques listed in the selection tables can be used without restriction.  
When using material that is considerably weaker, please consult us. Medium surface roughness Rz must not exceed 15 µm (turning operation is sufficient).



**Possible combinations with shrink disc in position 1 (drive end)**

**GFL□□-2S with motor frame size**

	06C C41	06F C41	06I C41	09D C41	09F C38	09H C41	09L C41	12D C20	12D C41	12H C15	12H C30	12H C35	12L C20	12L C41
GFL04...	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)							
GFL05...	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)							
GFL06...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL07...				●	●	●	●	●	●	●	●	●	●	●
GFL09...								●	●	●	●	●	●	●

	14D C15	14D C36	14H C15	14H C32	14L C15	14L C32	14P C14	14P C32	19F C14	19F C30	19J C14	19J C30	19P C14	19P C30
GFL06...	●	●	●	●	●	●	●	●						
GFL07...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL09...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL11...	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GFL14...									●	●	●	●	●	●

**GFL□□-2A with motor frame size**

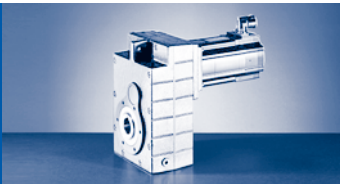
	10I C40 ...S00	13I C41 ...S00	13I C34 ...F10	14L C20 ...S00	14L C41 ...S00	14L C16 ...F10	14L C35 ...F10	17N C23 ...S00	17N C41 ...S00
GFL06...	●	●	●	● 1)	● 1)	● 1)	● 1)	● 1)	● 1)
GFL07...	●	●	●	●	●	●	●	●	●
GFL09...				●	●	●	●	●	●
GFL11...				●	●	●	●	●	●

	17N C17 ...F10	17N C35 ...F10	19S C23 ...S00	19S C42 ...S00	19S C17 ...F10	19S C35 ...F10	21X C25 ...S00	21X C42 ...S00	21X C17 ...F10	21X C35 ...F10
GFL06...	● 1)	● 1)								
GFL07...	●	●	● 1)	● 1)	● 1)	● 1)				
GFL09...	●	●	●	●	●	●	●	●	●	●
GFL11...	●	●	●	●	●	●	●	●	●	●
GFL14...			●	●	●	●	●	●	●	●

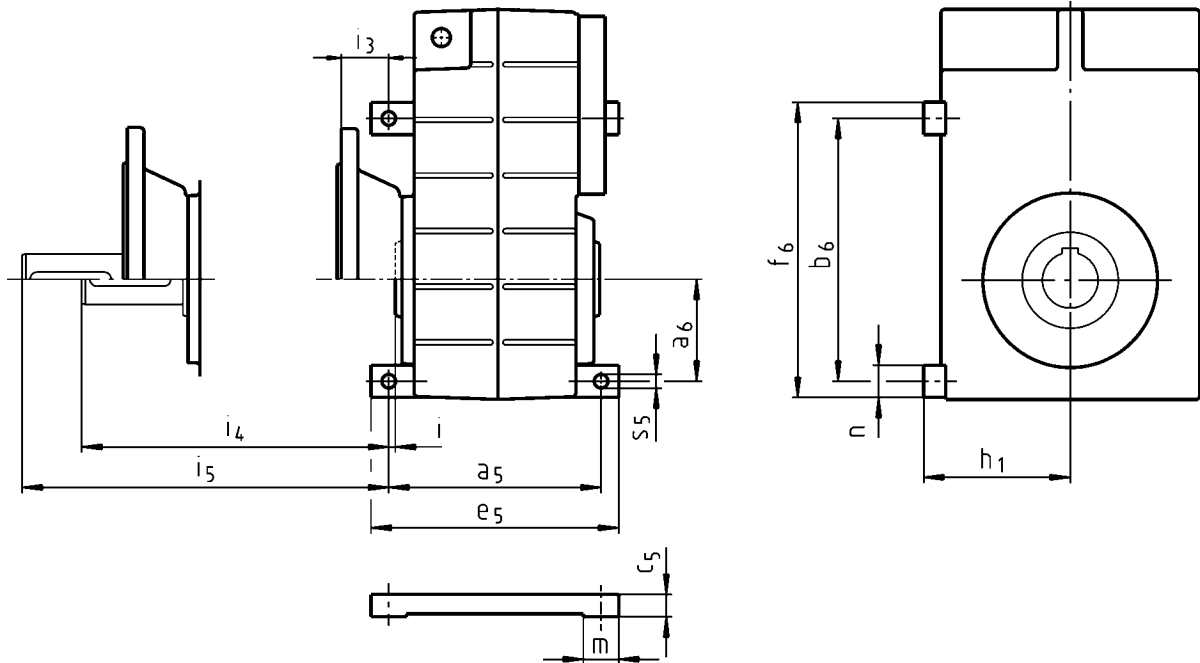
1) Only possible without cover.

- ▶ GFL□□-2S: Terminal box in position 4 on request only.
- GFL□□-2A: Connector/terminal box in position 4 not possible.
- GFL□□-3□: All versions are possible.



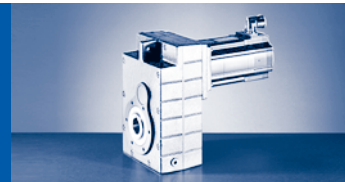
# GFL & [mm]

## Foot mounting in position 3

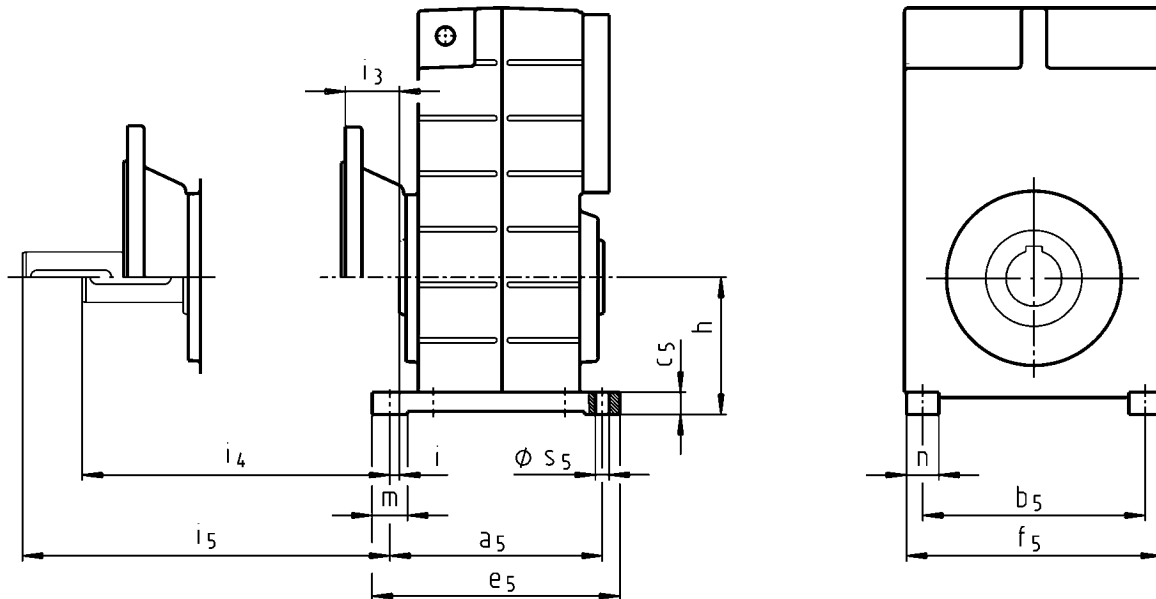


			HAR HBR SAR SBR	HAK SAK	VAR VBR	VAK								
	a <sub>6</sub>	h <sub>1</sub>	i	i <sub>3</sub>	i <sub>4</sub>	i <sub>5</sub>	a <sub>5</sub>	b <sub>6</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>6</sub>	n	m	s <sub>5</sub>
<b>GFL04...</b>	47	90	4.5	28.5	45.5	78.5	130	115	18	152	140	25	22	6.6
<b>GFL05...</b>	65	100	2	31	58	91	160	167	21	185	192		25	9
<b>GFL06...</b>	80	125		3	39	78	119	175	205	27	205	233	28	30
<b>GFL07...</b>	100	155	52		97	152	220	260	31	255	292	32	35	13.5
<b>GFL09...</b>	125	190	117		177	260	335	36	300	375	40	40	17.5	
<b>GFL11...</b>	155	240	57		157	217	315	435	48	365	485	50	50	22
<b>GFL14...</b>	200	295		197	257	375	540	57	430	600	60	55	26	

► Terminal box position 3 is not possible for GFL04...06-2A.

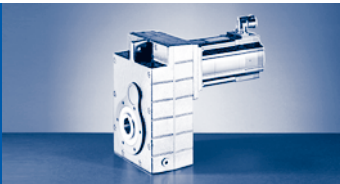


Foot mounting in position 4

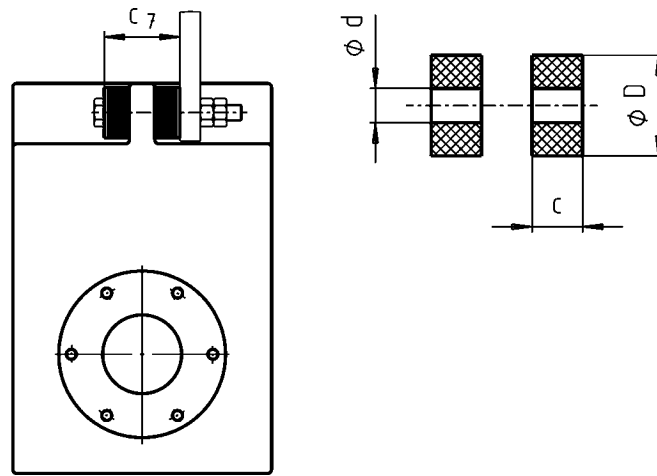


		HAR HBR SAR SBR	HAK SAK	VAR VBR	VAK								
	h	i	i <sub>3</sub>	i <sub>4</sub>	i <sub>5</sub>	a <sub>5</sub>	b <sub>5</sub>	c <sub>5</sub>	e <sub>5</sub>	f <sub>5</sub>	n	m	s <sub>5</sub>
GFL04...	85	4.5	28.5	45.5	78.5	130	108	18	152	133	25	22	6.6
GFL05...	95	2	31	58	91	160	140	21	185	165		25	9
GFL06...	120		39	78	119	175	175	27	205	203	28	30	11
GFL07...	145	3	52	97	152	220	220	31	255	252	32	35	13.5
GFL09...	180		117	177	260	275	36	300	315	40	40	17.5	
GFL11...	224		57	157	217	315	340	48	365	390	50	50	22
GFL14...	278		197	257	375	425	57	430	485	60	55	26	

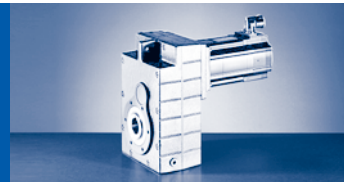
► In mounting positions E and F, the oil check bore hole/oil-sight glass are located between the feet in position 4!



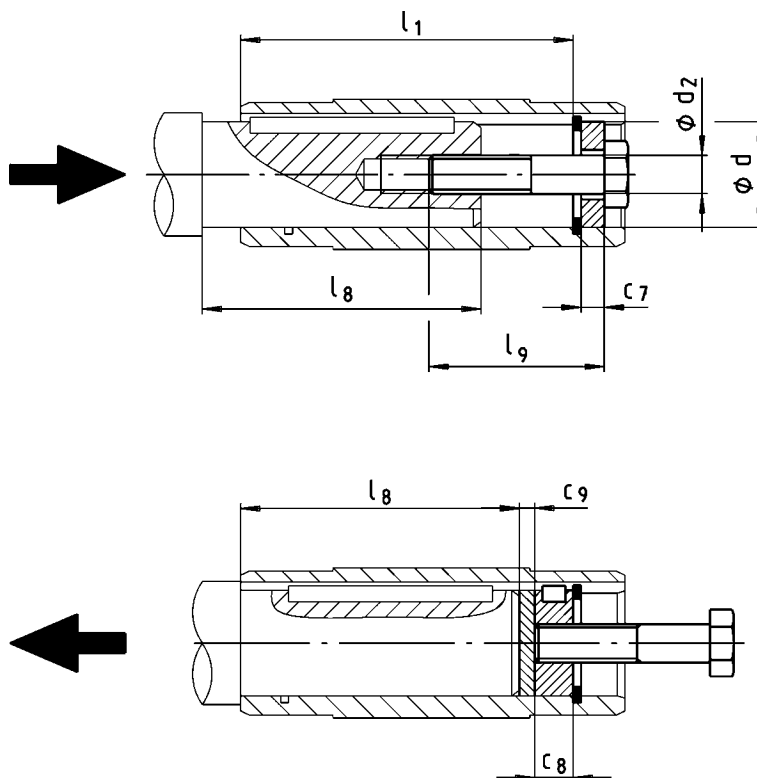
Rubber buffer for torque plate



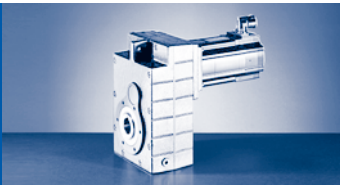
	d	D	c	c <sub>7</sub>
GFL04...	11	30	14.5	43
GFL05...				45
GFL06...	13	40	15	50
GFL07...	17	50	27	79
GFL09...	21	60	28	88
GFL11...	26	72	29	98
GFL14...	33	92	30	110



**Mounting set for hollow shaft circlip  
Proposed design for auxiliary tools**



	Hollow shaft		Hollow shaft circlip mounting set (Assembly auxiliaries)			Auxiliary tools Disassembly		Machine shaft
	d	l <sub>1</sub>	d <sub>2</sub>	l <sub>9</sub>	c <sub>7</sub>	c <sub>8</sub>	c <sub>9</sub>	max l <sub>8</sub>
	H7							
GFL04...	25	100	M10	40	5	10	3	85
GFL05...	30				6			
	35	124	M12	50	7	12	4	107
GFL06...	40				8			
	45	140	M16	60	9	16	5	118
GFL07...	50				10			
	55	175	M20	80	11	20	6	148
GFL09...	60				13			
	70	210	M20	80	14	20	6	182
GFL11...	80				16			
	80	250	M24	100	16	24	8	221
GFL14...	100				20			
	100	305	M24	100	20	24	8	270



GFL & [mm]