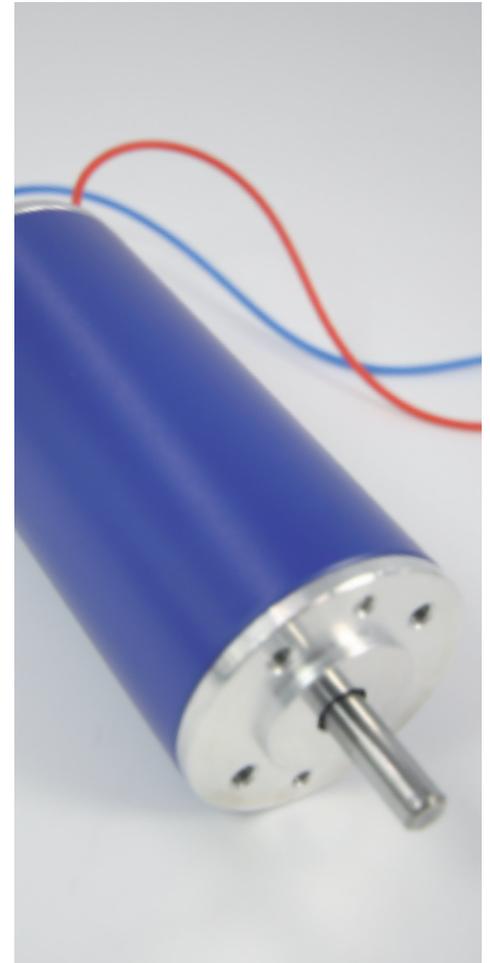
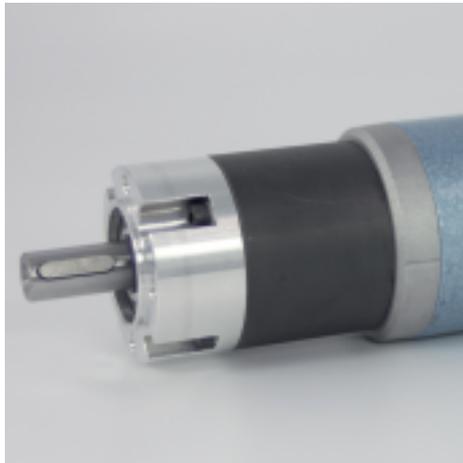
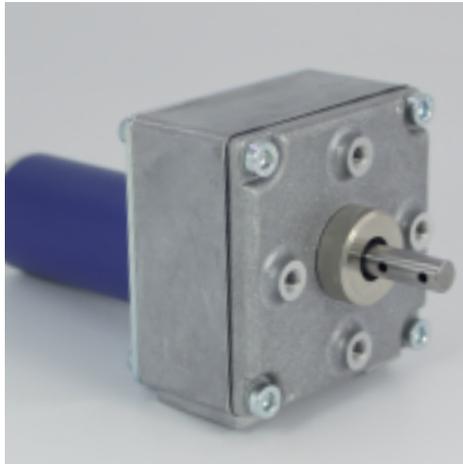


GNM Series

DC motors with permanent magnet field
Brushed DC motors

High Quality • Customizable • Flexible



Your trusted partner for durable drive solutions since 1923

GNM DC motors

- Brushed DC-motors
- Flexible/ modular designs, long lifetime, adaptable to customer requirements
- Six sizes, each with several lengths – depending on duty-level
- Sizes GNM21../ GNM26../ GNM31../ GNM 41../ GNM54../ GNM80..
- Rated power range (S1) of 11W - 500W (in intermittent operation up to more than 1.000W)
- Rated voltage standard 12V_{DC}/24V_{DC}/42V_{DC} (e.g. 180V_{DC} possible on request)
- Available on request with planetary gear, worm gear or spur gear

We have summarised the initial product information with the most relevant data appertaining to the standard versions to give an overview of the advantages that this series offers.

The GNM series are brushed permanent magnet DC motors.

The modular design of the GNM motors enables the combination with various gearboxes, holding brakes, encoder systems or other attachments – all according to requirements and customer demands.

High demands on accuracy of speed and control dynamics, e.g. when using positioning control, necessitate the installation of a suitable encoder system, either incremental or absolute encoders, according to customer requirements. Various incremental encoders with 5V_{TTL} or 24V_{HTL} level are available. Two or three signal tracks in the most common resolutions are possible.

Customized modifications are also among our core strengths in this series!



GNM31..
with connector



GNM31..
with incremental encoder



GNM31..
with holding brake

Type	Size	Voltage (V _{DC})	Rated power (W)	Speed (rpm)	Nominal torque (Nm)	Housing Ø	Length (mm)	Shaft Ø	Length (mm)
GNM21..	GNM2130C	12/24	11	6000	0,0175	34	78,0	5	16
	GNM2145C	12/24	16	6000	0,0255	34	94,0	5	16
GNM26..	GNM2636A	24	22/28	3000 / 4000	0,07/0,0067	45	107,0	8	30
	GNM2670A	24	40/50	3000 / 4000	0,127/0,12	45	151,0	8	30
GNM31..	GNM3125	24/42	30/38	3000 / 4000	0,096/0,091	55	96,5	8	30
	GNM3150	24/42	55/70	3000 / 4000	0,175/0,167	55	121,5	8	30
	GNM3175	24/42	75/90	3000 / 4000	0,239/0,215	55	147,5	8	30
GNM41..	GNM4125A	24/42	35/60	1600 / 3000	0,209/0,191	70	118,0	9	30
	GNM4150A	24/42	58/100	1600 / 3000	0,346/0,318	70	143,0	9	30
	GNM4175A	24/42	85/140	1600 / 3000	0,507/0,446	70	168,0	9	30
GNM54..	GNM5440E	24/42	95/150	1600 / 3000	0,567/0,477	83	167,0	11	32
	GNM5480E	24/42	160/250	1600 / 3000	0,955/0,796	83	207,0	11	32
GNM80..	GNM8035/4	24	280	3000	0,9	110	147,0	14	30
	GNM8070/4	24	500	3000	1,6	110	202,0	14	30

Examples of our standard variants

... with planetary gear

Compatible with the GNM21 – GNM54 series of DC motors, our planetary gears are available as attachments in various sizes. The gearboxes are built to be robust. The output shaft is mounted on ball bearings, except for the G5 gearbox. Most of the planetary gear wheels are mounted on roller bearings. It is possible to achieve peak torques of up to 130 Nm. ENGEL planetary gears are used in applications where high torques are required in a compact design.

Type	Rated voltage (V _{DC})	Output speed from - to (rpm)	Gear reduction from - to (i)	Gearbox limiting load	
				Max. continuous torque (Nm)	Max. starting torque (Nm)
GNM21.. – G5	12/24	200 - 0,2	30:1 - 30870:1	0,46 - 5	0,6 - 5
GNM26.. – GP48	24	600 - 6,7	5:1 - 450:1	1 - 10,5	3 - 20
GNM31.. – GP48	24/42	600 - 6,7	5:1 - 450:1	1 - 10,5	3 - 20
GNM41.. – GP48	24/42	600 - 44	5:1 - 36:1	2,2 - 16,5	8 - 25
GNM54.. – GP80	24/42	517 - 10	5,8:1 - 302:1	20 - 100	40 - 120

... with spur gear

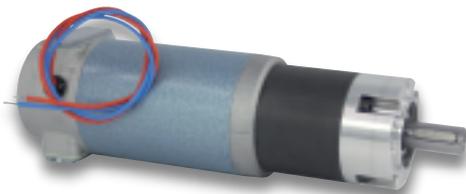
ENGEL DC motors are designed on a modular concept and can be combined with spur gears. The modified gearboxes are extremely versatile in terms of ratios. Base and/or flange mounting is also possible.

Type	Rated voltage (V _{DC})	Output speed from - to (rpm)	Gear reduction from - to (i)	Gearbox limiting load	
				Max. continuous torque (Nm)	Max. starting torque (Nm)
GNM21.. – G4	12/24	400 - 0,1	15:1 - 43740:1	0,3 - 2,4	0,4 - 3
GNM21.. – G4A	12/24	100 - 0,6	60:1 - 9720:1	0,8 - 3,2	1,5 - 4
GNM3125 – G24	24/42	267 - 5,6	15:1 - 540:1	1 - 10	1,6 - 12
GNM4125 – G8N	24/42	200 - 4,0	15:1 - 405:1	9 - 21	5 - 21

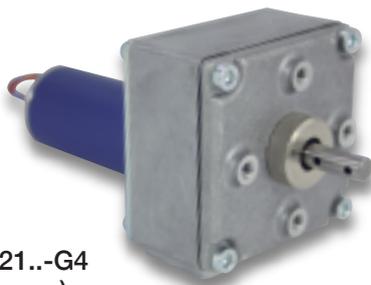
... with worm gear

DC motors with worm gears of various sizes are also part of the standard range. The gearboxes are built to be robust. The single stage worm gears that have been adapted to the motors are mounted on ball bearings, are low-noise and have a long lifetime. They are mounted using threads on the gearbox base or, occasionally, also on the output flange.

Type	Rated voltage (V _{DC})	Output speed from - to (rpm)	Gear reduction from - to (i)	Gearbox limiting load	
				Max. continuous torque (Nm)	Max. starting torque (Nm)
GNM21.. – G1.3	12/24	822 - 158	7,3:1 - 38:1	0,2 - 0,65	1,2 - 2
GNM26.. – G1.4	24	411 - 79	7,3:1 - 38:1	0,35 - 1,1	1,2 - 2
GNM3150 – G2.6	24/42	833 - 83	4,8:1 - 36:1	0,7 - 3,2	5 - 8
GNM4150 – G3.1	24/42	536 - 46	5,6:1 - 35:1	1,8 - 8	13
GNM5440 – G3.1	24/42	536 - 46	5,6:1 - 35:1	1,8 - 8	13



GNM31..-GP48
(planetary gear)



GNM21..-G4
(spur gear)



GNM4150A-G3.1
(worm gear)

We are glad to answer your questions promptly and are always available for a personal consultation. Contact us via email at kontakt@engel-elektromotoren.de or by telephone under +49 (6123) 994-400.



This flyer only presents an excerpt from our product range. Further information and the data sheets for the complete product range can be found at www.engel-elektromotoren.de

Alternatively please use our personal consultation service.



We will find the most optimum drive for your requirements.

We offer a wide range of standard versions of brushed and brushless electric motors, gearboxes and drive controllers, as well as technical advice on special designs. Our technically experienced employees will develop the best possible drive solution. While always with a focussing on achieving the best possible savings potential in your application.



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