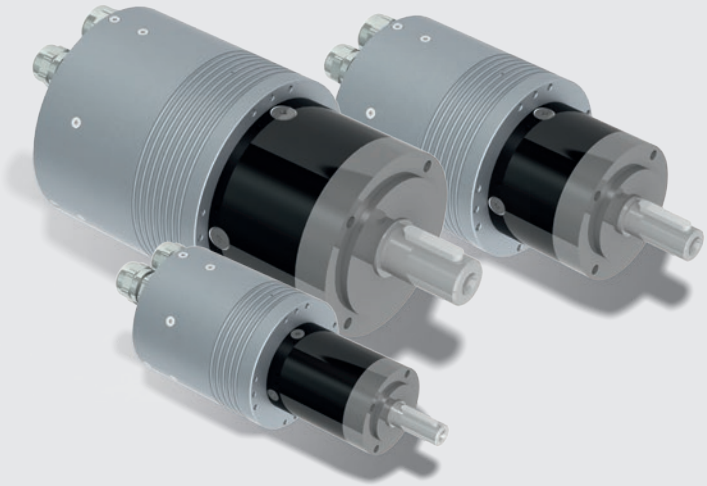


Gear motors RD50/70/85-PG

Compact drive units with industry-leading power density and a wide range of applications

The planetary motor gear units RD-PG provide a standardized drive solution with the powerful gearheads from Neugart. Depending on the number of stages the transmission ratio ranges from 1:3 to 1:512.

The gear units have a minimal, inherent backlash. RoboDrive technology allows the performance features of the gearheads to be exploited to their full extent in both: speed and torque.

On request alternative voltage levels, increased speeds and optional integrated safety brakes can be realized.
Planetary gearheads from other well-known manufacturers like Gysin or Maxon can be integrated.

Key features:

- Industry-leading power density
- Compact design
- Absolute Sin-Cos encoder, accuracy ±0.5°
- Integrated safety brake optional
- Wide range of transmission ratios: i=1:3,...,512
- Minimum backlash
- High output torque
- Flexible mounting on gear or housing flange

Basic data

Gear motor with single stage PLE-gear i = 1:8

	RD50x08-PG	RD50x14-PG	RD70x10-PG	RD70x18-PG	RD85x13-PG	RD85x26-PG
Power P [W]	155	180	270	275	430	410
Rated output torque T_r [Nm]	2.1	3.9	5.7	9.7	11.1	20.2
Peak output torque T_{max} [Nm]	7.0	10.0	17.8	29.0	34.9	64.0
Output speed n_{max} * at U_r [rpm]	690	440	440	260	360	190
Gear ratio **	1:8	1:8	1:8	1:8	1:8	1:8
Motor diameter D [mm]	61	61	80	80	96	96
Total length w/o brake [mm] with brake [mm]	87.3 103.1	93.7 109.5	101.5 119.4	109.4 127.3	118.8 136.7	132.2 150.1
Weight m w/o brake [g] with brake [g]	645 810	710 875	1,385 1,665	1,510 1,895	2,495 2,895	2,825 3,235

* Theoretical no-load rotation speeds at U_r = 48 V. Variations can arise from operation with different inverters.
Higher rotation speeds or change of the voltage level can be achieved by adapting the interconnection scheme.
** Other gear ratios are available on request. For gearbox selection. see: http://www.neugart.de/index.php/us/Produkte/Standardgetriebe

Electrical data

	RD50x08-PG	RD50x14-PG	RD70x10-PG	RD70x18-PG	RD85x13-PG	RD85x26-PG
Rated voltage U_r [V]	48	48	48	48	48	48
Rated current I_r [A]	4.8	5.0	7.0	7.0	11.0	11.0
Torque constant k_T [Nm/A]	0.057	0.098	0.106	0.180	0.130	0.244
Terminal resistance R_{TT} [mΩ]	552	800	470	655	210	323
Terminal inductance L_{TT} [µH]	720	820	800	1,350	470	920
Number of pole pairs	10	10	10	10	10	10
Sensor type*	Magnetic encoder, differential Sin-Cos-signal, signal amplitude 1 V_{pp}, signal offset $U_{dd}/2$, accuracy ± 0.5°, supply voltage U_{dd} = 5 V					

All data relate to star-serial interconnection at U_r = 48 V. The voltage level can be adapted on request.
* SSI, linear voltage, absolute parallel or incremental RS422 communication interface with resolution up to 8,192 inc/rev are available on request.

Safety brake data

	RD50x08-PG	RD50x14-PG	RD70x10-PG	RD70x18-PG	RD85x13-PG	RD85x26-PG
Braking torque $M_{B,r}/M_{B,max}$ [Nm]	0.30/0.75	0.60/1.50	0.84/2.10	1.44/3.60	1.68/4.20	3.12/7.80
Thermal losses $P_{B,L}$ at $U_{B,r}$ [W]	2.6	2.6	3.7	3.7	5.0	5.0

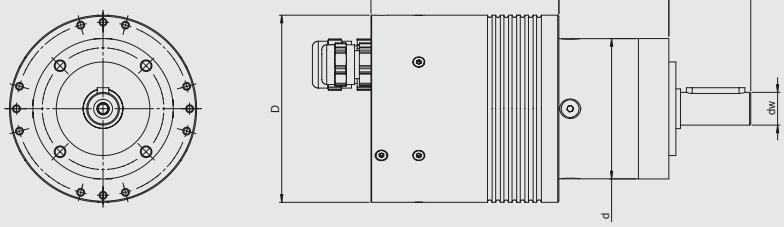
All brakes are operated with a rated voltage of $U_{B,r}$ = 10 V, to open the brake an over-excitation voltage of 30 V is required.
Adaption of voltage level can be realized on request.

Gear data

	RD50x08-PG/RD50x14-PG	RD70x10-PG/RD70x18-PG	RD85x13-PG/RD85x26-PG
Type	PLE040	PLE060	PLE080
Torsional stiffness [Nm/arcmin]	1.0	2.3	5.8
Backlash [arcmin] 1/2/3 stages	< 15/< 19/< 22	< 10/ < 12/< 15	< 7/< 9/< 11

Dimensions

	RD50x08-PG	RD50x14-PG	RD70x10-PG	RD70x18-PG	RD85x13-PG	RD85x26-PG
Motor diameter D [mm]	61	61	80	80	96	96
Motor length L [mm] w/o brake with brake	48.3 64.1	54.7 70.5	54.5 72.4	62.4 80.3	58.8 76.7	72.2 90.1
Gearbox diameter d [mm]	40	40	60	60	80	80
Gearbox length LG [mm] 1/2/3 stages	39/52/64.5	39/52/64.5	47/59.5/72	47/59.5/72	60/77.5/95	60/77.5/95
Shaft diameter dw [mm]	10 h7	10 h7	14 h7	14 h7	20 h7	20 h7
Shaft length lw [mm]	26	26	35	35	40	40



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