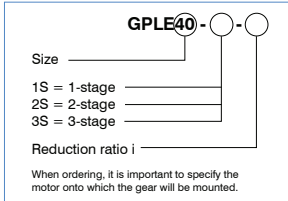


■ Precision planetary gear GPL

The low-play planetary gear from Nanotec are developed to state of the art in gearing technology and are manufactured to DIN/ISO 9001.

Order identifier

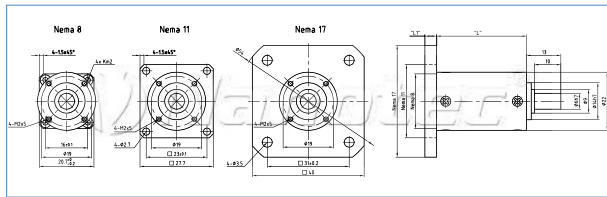


Advantages

- High output torques
- High torsional rigidity
- Low circumferential backlash
- High admissible axial and radial shaft loading
- Low running noise
- Easy motor/gear assembly
- Protection class IP54
- 30,000 hours service life, 10,000 hours for GPL22

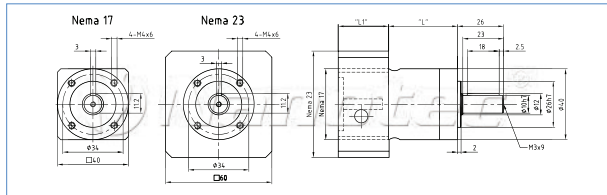
GPL22

Dimension image (mm)



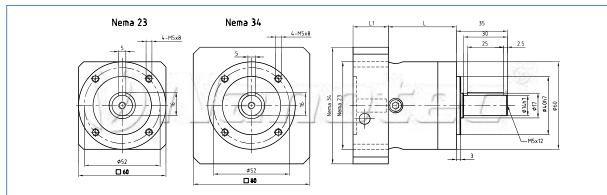
GPL40

Dimension image (mm)



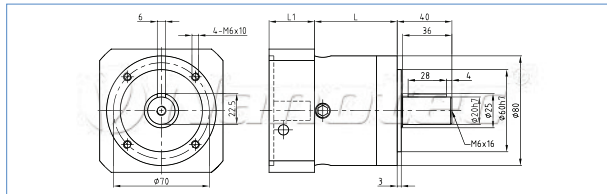
GPL60

Dimension image (mm)



GPL80

Dimension image (mm)



■ Precision planetary gear GPL

Available versions (others on request)																				
Type	Backlash Angular minutes	Weight kg	Length L mm	Efficiency at full load % (*3)	Reduction ratio	Output torque Nm Nominal value(*1)	Output torque Nm Max. value (*2)	Moment of Inertia kg mm ²	Intermediate flange L1 mm	Combination option with motor	admissible radial/axial shaft load (N) 10,000 h service life (30,000 h service life)									
GPL22	2-stage	<55	0,1	34	80	9	1,5	n.a.	0,09	ST20, ST28 ST41, ST42... (Nema 8,11,17)	20/20									
						12														
GPL40	1-stage	<15	0,35	39	98	3	11,0	17,6	3,1	ST41, ST42, DB42... (Nema 17)	200/200									
						4	15,0	24	2,2											
						5	14,0	22	1,9											
						8	6,0	10	1,7											
						9	6,5	26	3,0											
						12	20,0	32	2,9											
	2-stage	<19	0,45	52	96	15	15	18,0	29			2,3								
							16	20,0	32			2,2								
							20	20,0	32			1,9								
							25	18,0	29			1,9								
							32	20,0	32			1,7								
							40	18,0	29			1,6								
	3-stage	<22	0,55	64,5	96	15	64	7,5	12			1,6								
							60	20,0	32			2,9								
							80	20,0	32			1,9								
							100	20,0	32			1,9								
							120	18,0	29			2,9								
							160	20,0	32			1,6								
200							18,0	29	1,6											
256							20,0	32	1,6											
320							18,0	29	1,6											
512							7,5	12	1,6											
GPL60							1-stage	<12	0,9	47	98	3	28,0	45	13,5	ST59, ST60, PD4-N59/N60 (Nema23) (cannot be combined with ST5918D)	500/600			
												4	38,0	61	9,3					
	5	40,0	64	7,8																
	8	18,0	29	6,5																
	9	44,0	70	13,1																
	12	44,0	70	12,7																
	2-stage	<15	1,1	59	96	15	15	44,0	70	7,7										
							16	44,0	70	8,8										
							20	44,0	70	7,5										
							25	40,0	64	7,5										
							32	44,0	70	6,4										
							40	40,0	64	6,4										
	3-stage	<18	1,3	72	87	15	64	18,0	29	6,4										
							60	44,0	70	7,5										
							80	44,0	70	7,5										
							100	44,0	70	7,5										
							120	44,0	70	6,4										
							160	44,0	70	6,4										
							200	40,0	64	6,4										
							256	44,0	70	6,4										
							320	40,0	64	6,4										
							512	18,0	29	6,4										
							GPL80	1-stage	<8	2,1	60	98	3	85,0	126			77,0	ST89... (Nema 34)	950/1200
													4	115,0	184			52,0		
5	110,0	176	45,0																	
8	50,0	80	39,0																	
9	130,0	208	74,0																	
12	120,0	192	72,0																	
2-stage	<12	2,6	77,5	96	15	15		110,0	176	71,0										
						16		120,0	192	50,0										
						20		110,0	192	44,0										
						25		110,0	176	44,0										
						32		120,0	192	39,0										
						40		110,0	176	39,0										
3-stage	<14	3,1	95	89	15	64		50,0	80	39,0										
						60		110,0	176	51,0										
						80		120,0	192	50,0										
						100		120,0	192	44,0										
						120		110,0	176	70,0										
						160		120,0	192	39,0										
						200		110,0	176	39,0										
						256		120,0	192	39,0										
						320		110,0	176	39,0										
						512		50,0	80	39,0										

Long-term gearing rated, hardened Working temperature: -25 to 90 °C Service life lubricated, protection class IP54

*1. Continuous drive torque on the output shaft with swelling load of 100 rpm and application factor KA=1 an operating type S1.

*2. Admissible for 30,000 revolutions of output shaft *3. At T2N, reference temperature 70° and n1=1000 rpm

■ Economy planetary gear GPLL



The GPLL series economy planetary gear is ideal for applications in which the increased torque of a motor with gearing is needed with the same construction volumes. The slightly higher circumferential backlash is not relevant for many applications such as transport drives or positioning in one rotation direction, many motor controllers also already offer automatic play compensation (such as SMCi, etc.) and hence compensates the backlash electronically.

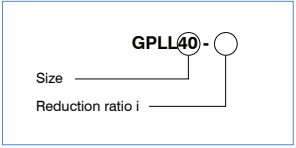
Gear

Circumferential backlash: Axial/radial clearance:

GPLL22	2.5°	<= 0.3 / <= 0.04 mm
GPLL40	3°	<= 0.3 / <= 0.04 mm
GPLL52	3°	<= 0.3 / <= 0.04 mm

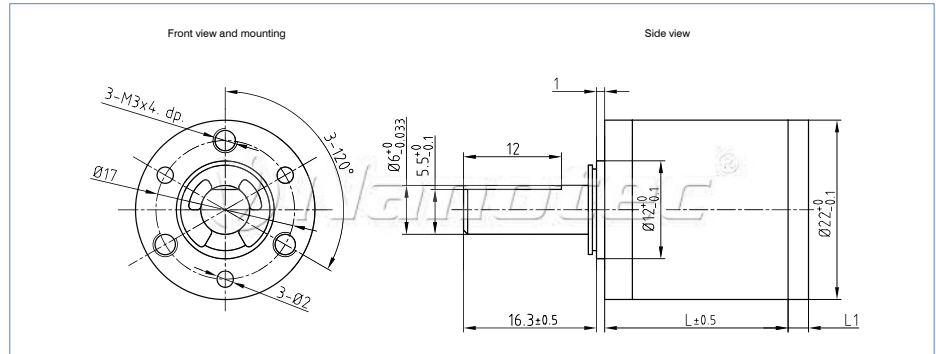
Service life Lh10 > 1000 h

Order identifier

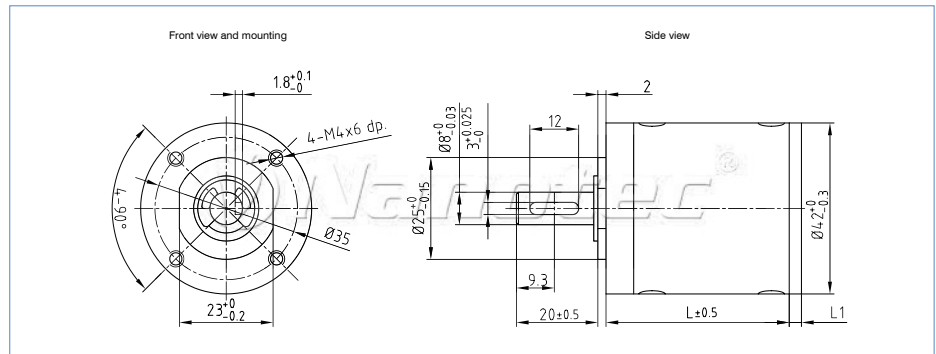


Available versions (others on request)									
Type	Reduction ratio	Nom. Torque Ncm	max. torque Ncm	Efficiency	Weight kg	Length mm	Intermediate flange L1 mm	Combination option with motor	axial/radial force N
GPLL22-5	5:1(4:as:1)	20	60	80%	0,046	23,3	without	DB26	7,2
GPLL22-25	25:1(25:as:1)	30	90	70%	0,051	29,5			
GPLL22-90	90:1(89:as:1)	40	120	60%	0,058	35,7			
GPLL40-14	14:1(14:1)	100	300	70%	0,191	39,2	6,0	ST40, 41, 42	30/80
GPLL40-24	24:1(24:1)	100	300	70%	0,191	39,2			
GPLL40-49	49:1(49:1)	180	540	60%	0,231	45,9			
GPLL52-4	4:1(4:as:1)	150	450	80%	0,475	53,0	6,0	ST57, 58, 59, 60	100/200
GPLL52-15	15:1(15:as:1)	500	1500	70%	0,660	68,5			
GPLL52-53	53:1(53:as:1)	1000	3000	60%	0,850	84,0			
GPLL52-100	100:1(100:as:1)	1000	3000	60%	0,850	84,0			

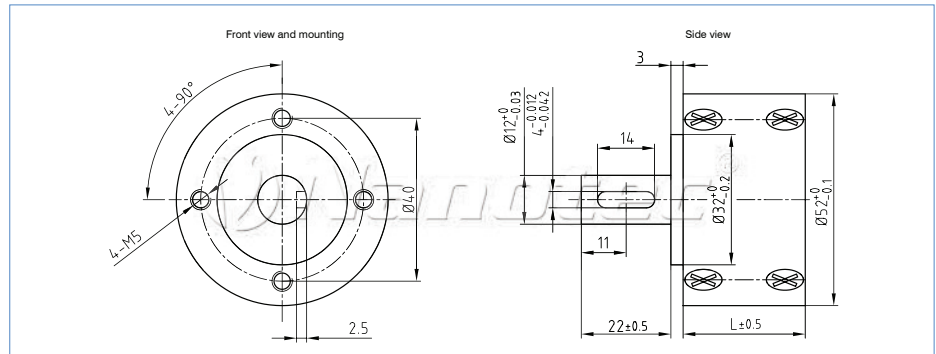
GPLL22 dimension image (in mm)



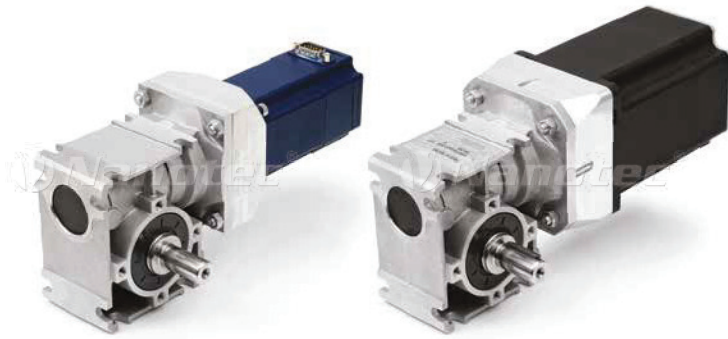
GPLL40 dimension image (in mm)



GPLL52 dimension image (in mm)



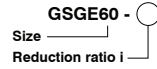
Worm gear GSGE



The maximum Mmax output torques represent the load limit in continuous operation at an even load.

The output torque limits Mgrenz are statically and for short terms reliable when running, without damage to the gear occurring. The output torque limits Mgrenz represent the upper limits of the admissible load and should also not be exceeded during shocks.

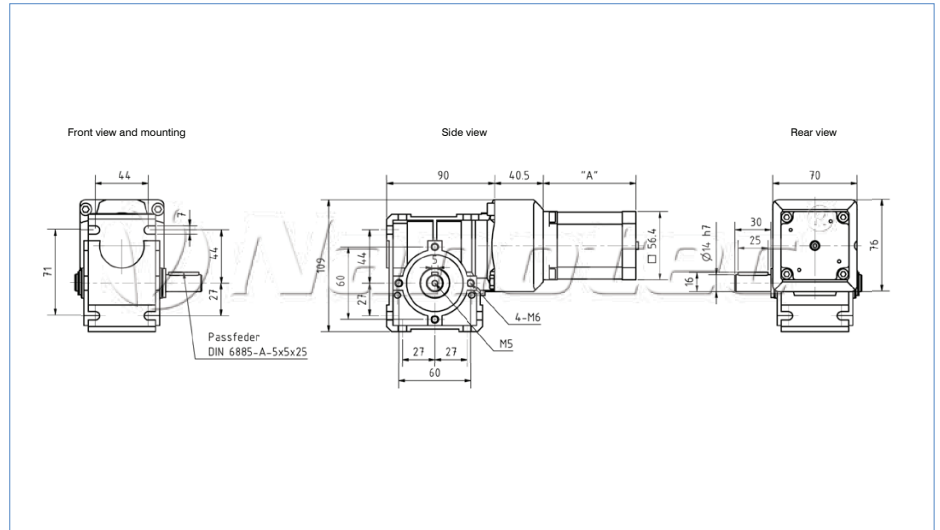
Order identifier



- Available as options:
- Double shaft (order number: MG-DW-GSGE60)
 - Cover hood (order number: MG-D-GSGE60)

Available versions (others on request)							
Type	Reduction ratio	Mgrenz output torque limit Ncm	Mmax max. output torques Ncm	Efficiency	Weight kg	Self-locking torque	Combination option with motor
GSGE60-5-1	5 : 1	7500	3000	86%	2,0	No	(Nema 23)
GSGE60-15-1	15 : 1	7500	3000	71%	2,0	No	(Nema 23)
GSGE60-25-1	25 : 1	7500	3000	63%	2,0	No	(Nema 23)
GSGE60-50-1	50 : 1	7500	3000	45%	2,0	Yes	(Nema 23)
GSGE80-12.5-1	12.5 : 1	12500	5000	80%	3,0	No	(Nema 34)
GSGE80-25-1	25 : 1	12500	5000	68%	3,0	No	(Nema 34)
GSGE80-50-1	50 : 1	12500	5000	50%	3,0	Yes	(Nema 34)

GSGE 60 dimension image (in mm)



GSGE 80 dimension image (in mm)

