

# Greater precision and flexibility.



**The g7x0 planetary gearboxes and bevel planetary gearboxes as well as the low-backlash g8x0 extend the range of mechanical drives with high-quality servo drives.**

The g7x0 gearboxes are die economic solution for many servo applications. They are characterized by a good price/performance ratio as well as a complete portfolio in combination with the Lenze servo motors.

The g8x0 offer the highest performance and precision. The already very low backlash can optionally be further reduced. The portfolio offers other variants for universal use with precise requirements, with degree of protection IP65.

## Highlights

- Highest mounting flexibility
- Maintenance-free lifetime lubrication for any mounting position
- Degree of protection IP54 and IP65 for universal use, even in rough environments
- Robust planetary gearboxes and bevel planetary gearboxes with output flange, solid shaft or hollow shaft
- High torque range and wide ratio range for highly efficient drive solutions

## g7x0-P planetary gearboxes

Standard gearboxes



**g700-P**

- Basic gearboxes
- Good price/performance ratio
- Continuous high speeds



**g720-P**

- Reinforced deep-groove ball bearing
- Flange on at the output end
- High ratio range



**g730-P**

- Reinforced deep-groove ball bearing
- Reinforced housing



**g750-P**

- Robust position controller
- Protection against dust and water jets
- Degree of protection IP65



**g780-P**

- Flange driven shaft
- Very torsionally stiff
- Compact

## g7x0-B bevel planetary gearboxes

Standard gearboxes



**g700-B**

- Basic gearboxes
- Good price/performance ratio
- Continuous high speeds



**g720-B**

- Reinforced deep-groove ball bearing
- Flange on at the output end
- High ratio range



**g730-B**

- Reinforced deep-groove ball bearing
- Reinforced housing



**g780-B**

- Flange driven shaft
- Very torsionally stiff
- Compact

## g8x0-P planetary gearboxes

### Precision gearboxes



**g820-P**

- Basic gearboxes
- Low noise generation
- High input speed possible



**g840-P**

- Very high rated torque
- Robust position controller
- Very low backlash



**g850-P**

- Low noise generation
- Robust position controller
- Very low backlash



**g870-P**

- Very compact
- Highest bearing forces
- Extremely torsionally stiff



**g880-P**

- Very compact
- Low noise generation
- Extremely torsionally stiff

## g8x0-B bevel planetary gearboxes

### Precision gearboxes



**g850-B**

- Spiral toothed
- 2-stage gearboxes additionally with planetary stages
- Very low backlash



**g860-B**

- Spiral toothed
- Hollow shaft version with shrink disc
- Very low backlash



**g880-B**

- Spiral toothed
- 2-stage gearboxes additionally with planetary stages
- Flange driven shaft

# Servo motors for g7x0/g8x0 gearboxes

When used in combination with the MCS and m850 synchronous servo motors or the MCA and SDSGA asynchronous servo motors, our planetary gearboxes and bevel planetary gearboxes form a compact, powerful drive unit. Numerous options at the input and output ends ensure that the drive can be easily and precisely adjusted to suit your application.

## Types

- With MCS: Power range 0.33 ... 21.18 hp (0.25 ... 15.80 kW)
- With m850: Power range 2.68 ... 12.34 hp (2.00 ... 9.20 kW)
- With MCA: Power range 1.07 ... 72.15 hp (0.80 ... 53.80 kW)
- With SDSGA: Power range 0.10 ... 0.80 hp (0.08 ... 0.60 kW)

The EASY Product Finder helps you to find the right product.



MCS

m850



MCA

SDSGA

## Technical data

### Planetary gearboxes and planetary geared motors

Rated data		g700-P	g720-P	g730-P	g750-P	g780-P
Possible combinations		MCA, MCS, m850, SDSGA				
Rated torque	Nm	5 ... 800	15 ... 260	5 ... 460	15 ... 260	15 ... 260
	lb-in	44 ... 7080	132 ... 2300	44 ... 4070	132 ... 2300	132 ... 2300
Backlash	arcmin	6 ... 22	7 ... 15	7 ... 19	7 ... 12	7 ... 12
Static radial force	N	200 ... 5000	1500 ... 4000	1300 ... 8400	3200 ... 6000	900 ... 3800
Static axial force	N	240 ... 11000	1950 ... 3800	1000 ... 11000	4400 ... 8000	1200 ... 5200

Rated data		g820-P	g840-P	g850-P	g870-P	g880-P
Possible combinations		MCA, MCS, m850				
Rated torque	Nm	28 ... 470	27 ... 1800	28 ... 950	27 ... 1800	28 ... 950
	lb-in	247 ... 4160	239 ... 15930	247 ... 8408	239 ... 16930	247 ... 8408
Backlash	arcmin	1 ... 5	1 ... 5	1 ... 5	1 ... 5	1 ... 5
Static radial force	N	1600 ... 9500	3200 ... 21000	3200 ... 20000	2400 ... 33000	2400 ... 23000
Static axial force	N	1500 ... 9600	4400 ... 21000	4400 ... 19000	4300 ... 15000	4300 ... 16000

### Bevel planetary gearboxes and Bevel planetary geared motors

Rated data		g700-B	g720-B	g730-B	g780-B
Possible combinations		MCA, MCS, m850, SDSGA			
Rated torque	Nm	5 ... 260	14 ... 260	5 ... 195	14 ... 260
	lb-in	44 ... 2300	124 ... 2300	44 ... 1725	124 ... 2300
Backlash	arcmin	11 ... 28	11 ... 21	11 ... 25	11 ... 18
Static radial force	N	200 ... 2000	1500 ... 4000	1300 ... 4000	900 ... 3800
Static axial force	N	240 ... 3800	1950 ... 3800	1000 ... 5900	1200 ... 5200

Rated data		g850-B	g860-B	g880-B
Possible combinations		MCA, MCS, m850		
Rated torque	Nm	22 ... 800	22 ... 320	22 ... 625
	lb-in	194 ... 7080	194 ... 2830	194 ... 5530
Backlash	arcmin	3 ... 5	5	3 ... 5
Static radial force	N	3200 ... 12500	2700 ... 10000	2400 ... 12000
Static axial force	N	4300 ... 15000	4300 ... 14500	4200 ... 9500

# The ultimate in precision and dynamics.



The combination of Vogel MPR/MPG planetary gearboxes with Lenze servo motors represents the optimum solution for dynamic or highly dynamic applications requiring the greatest precision. These solutions cater to various requirements, such as those encountered on a daily basis in the printing and packaging industry, the fields of robot, filling and materials handling technology and, in many cases, also general engineering.

The MPR/MPG planetary gearboxes excel through their extremely high degree of torsional stiffness, combined with backlash as low as one angular minute. In connection with MCS synchronous servo motors and MCA asynchronous servo motors, this allows flexible and particularly energy-efficient solutions to be created that can handle virtually any application.

## Highlights

- Robust planetary gearboxes with solid shaft (MPR) or hollow shaft and flange (MPG)
- High degree of precision for the respective application thanks to low backlash (min.  $\leq 1$  angular minute)
- Efficient drive solution with high efficiency ( $\geq 95\%$  to  $\geq 97\%$ )
- Can be installed in any orientation, which can also subsequently be revised
- IP65 enclosure (dust-tight, protection from spray water at any angle)

- Control system for basic machine requirements
- The planetary gearboxes are maintenance-free and lubricated for life. This ensures maximum availability.
- The dirt does not stand a chance! Thanks to the intelligent design, there are no dirt traps or areas where soiling can accumulate.
- The gearboxes boast high efficiency of  $\geq 95\%$  to  $\geq 97\%$ . In future, it will be possible to determine the cost-cutting potential for the respective application using the Lenze Energy Performance Certificate.
- Long service life of  $\sim 20,000$  hours

## Dimensioning made easy

Planetary gearboxes are very often used for applications that are extremely dynamic and very precise. In many cases, however, it can be difficult to dimension these drives.

Lenze simplifies these calculations for the user and makes the subsequent design process easy. The DSD engineering tool can be used to dimension the necessary drives in a clearly structured process. The necessary engineering information, such as the CAD data, can then be selected from the DSC electronic catalogue.

## Matched to your environmental conditions

Gearboxes with	Servo motors
<b>Degree of protection</b> EN 60529	IP54 / IP65
<b>Approvals</b>	cURus, EAC, CCC and UkrSepro
<b>Climatic conditions</b>	
Storage temperature	-30°C to +60°C
Operating temperature	-20°C to +40°C
<b>Surface and corrosion protection</b>	
OKS-G (primed)	1K primer coat
OKS-S (small)	2K-PUR top coat
OKS-M (medium)	1K primer coat, 2K-PUR top coat
OKS-L (large)	2K-EP primer coat, 2K-PUR top coat