



Gearbox brochure



















# Economy Line right angle gearboxes







WPLQE



WPLPE



WPLHE



WPLFE





## Precision Line coaxial gearboxes



PSBN



PSN





PSFN



(P)

# Precision Line right angle gearboxes



WPLN





WGN





## Planetary gearboxes with mounted pinion





PM1





## Application-specific gearboxes

#### Custom made gearboxes







NGV













Economy Line



Spur gear



Round type output flange



Low-friction deep groove ball bearings



High ratio variety i=3 up to i=512



Planet carrier in disc design



Option: Painted surface – RAL 9005 Jet black

Nominal output torque	5 - 800 Nm
Radial force	200 - 5000 N
Axial force	200 - 7000 N
Torsional backlash	6 - 22 arcmin
Protection class	IP54

40 60 80 120 1	60
----------------	----







Economy Line



Spur gear



Square type output flange



Reinforced deep groove ball bearings



High ratio variety i=3 up to i=512



Planet carrier in disc design



Option: Painted surface - RAL 9005 Jet black

Nominal output torque	5 - 260 Nm
Radial force	390 - 2950 N

Axial force	620 - 2500 N

TOTSIOTIAI DACKIASIT	-	15 arcmin

Protection class	IP54

40	60	80	120
J		J	









Economy Line



Spur gear



Round type output flange



Reinforced deep groove ball bearings



Planet carrier in disc design



Option: Planetary gearbox with mounted pinion



Option: Painted surface – RAL 9005 Jet black

Radial force	800 - 5200 N
Axial force	1000 - 7000 N
Torsional backlash	7 - 19 arcmin
Protection class	IP54

#### Frame sizes

Nominal output torque

50	70	90	120	155
----	----	----	-----	-----

5-460 Nm







Spur gear



Square type output flange



Preloaded tapered roller bearings



Rotary shaft seal



Extra long centering collar



Planet carrier in disc design



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black

Nominal output torque	15 - 260 Nm
Radial force	3200 - 6000 N
Axial force	4400 - 8000 N
Torsional backlash	7 - 12 arcmin

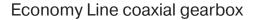
**IP65** 

#### Frame sizes

Protection class

80

120





# **PLFE**







Economy Line



Spur gear



Extra large round type output flange



Low-friction deep groove ball bearings



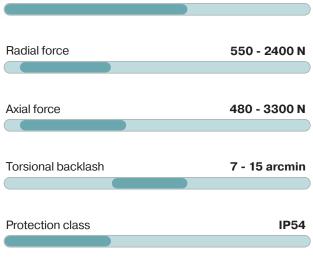
Flange output shaft (ISO 9409)



Planet carrier in disc design



Option: Painted surface - RAL 9005 Jet black



110

#### Frame sizes

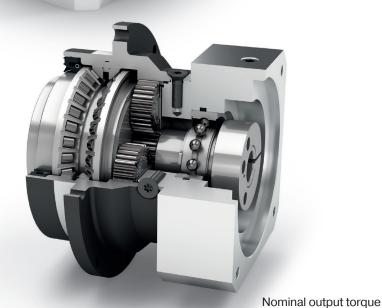
55 64 90



# **PFHE**



The **PFHE** represents an economically attractive alternative for high-load applications in which high radial loads occur. The combination of special pre-stressed inclined roller bearings and a flanged output shaft in accordance with ISO 9409-1 gives the **PFHE** a very high load capacity. Thanks to the radial shaft seal that is used, this gearbox achieves protection class IP65 at the output side and can therefore also withstand adverse usage conditions.





Economy Line



Spur gear



Extra large round type output flange



Preloaded angular contact roller bearings



Rotary shaft seal



Flange output shaft (ISO 9409)



Planet carrier in disc design



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black

D 11.16	
Radial force	2300 - 5150 N
Avial force	2050 6450 N
Axial force	2850 - 6450 N
Torsional backlash	7 - 12 arcmin
TOISIONALDACKIASIT	7 - 12 arcillin
Protection class	IP65
FIOLECTION CIASS	11-05

15-260 Nm

#### Frame sizes

90

110



#### Economy Line right angle gearbox







**Economy Line** 



Spur gear



Bevel gear right angle stage



Round type output flange



Low-friction deep groove ball bearings



High ratio variety i=3 up to i=512



Planet carrier in disc design



Option: Painted surface – RAL 9005 Jet black

Nominal output torque	15-260 Nm
Radial force	200 - 1750 N
Axial force	200 - 2500 N
Torsional backlash	11 - 28 arcmin
Protection class	IP54

40	60	80	120

#### Economy Line right angle gearbox







**Economy Line** 



Spur gear



Bevel gear right angle stage



Square type output flange



Reinforced deep groove ball bearings



High ratio variety i=3 up to i=512  $\,$ 



Planet carrier in disc design



Option: Painted surface – RAL 9005 Jet black

Nominal output torque	14 - 260 Nm
Radial force	900 - 2950 N
Axial force	1000 - 2500 N
Torsional backlash	11 - 21 arcmin
Protection class	IP54

120



#### Economy Line right angle gearbox





**Economy Line** 



Spur gear



Bevel gear right angle stage



Round type output flange



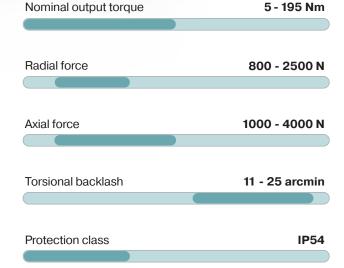
Reinforced deep groove ball bearings



Planet carrier in disc design



Option: Painted surface - RAL 9005 Jet black



#### Frame sizes

50 70 90 120

# NEUGART

#### Economy Line right angle gearbox



60

80

120

14

Option: Painted surface - RAL 9005 Jet black



**WPLFE** 





Economy Line



Spur gear



Bevel gear right angle stage



Extra large round type output flange



Low-friction deep groove ball bearings



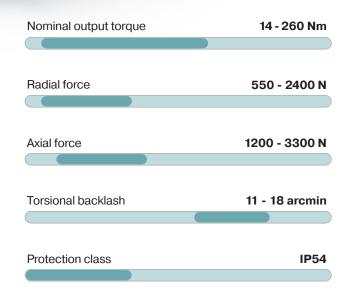
Flange output shaft (ISO 9409)



Planet carrier in disc design

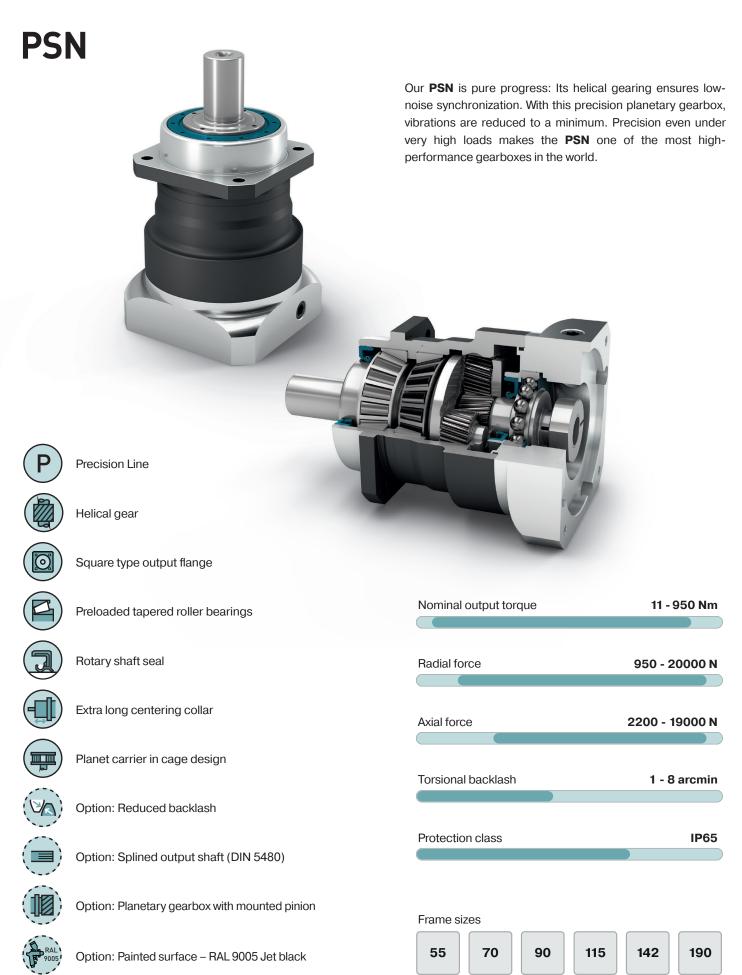


Option: Painted surface - RAL 9005 Jet black



# NEUGART

#### Precision Line coaxial gearbox





#### Precision Line coaxial gearbox







Rotary shaft seal



Extra long centering collar



Planet carrier in cage design



Option: Reduced backlash



Option: Splined output shaft (DIN 5480)



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black

Nominal output torque	27 - 1800 Nm
Radial force	3200 - 21000 N
Axial force	4400 - 21000 N
Torsional backlash	1 - 5 arcmin
Protection class	IP65

70	90	115	142	190
----	----	-----	-----	-----



**PSFN** 





Precision Line



Helical gear



Extra large round type output flange



Preloaded angular contact roller bearings



Rotary shaft seal



Flange output shaft (ISO 9409)



Planet carrier in cage design



Option: Reduced backlash



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black

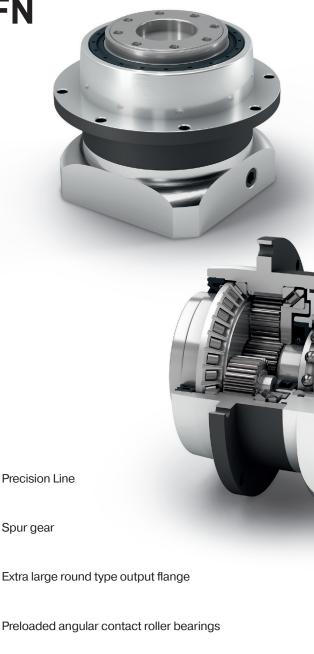
Nominal output torque	14 - 950 Nm
Radial force	1600 - 23000 N
Axial force	3350 - 16000 N
Torsional backlash	1 - 8 arcmin
Protection class	IP65

#### Frame sizes

55	64	90	110	140	200

#### Precision Line coaxial gearbox







Extra large round type output flange





Rotary shaft seal



Flange output shaft (ISO 9409)



Planet carrier in cage design



Option: Reduced backlash



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black

Nominal output torque	27 - 1800 Nm
Radial force	2150 - 33000 N
Axial force	4300 - 15000 N
Axiai force	4300 - 15000 N
Torsional backlash	1 - 5 arcmin
Protection class	IP65

140

110

200

Frame sizes

90

64

Our PLFN has a standardized flange interface, which allows easy mounting. The straight-toothed precision planetary gearbox is designed for high performance and torque. Its high tilting moment allows the best performance even with the

highest radial and axial forces.

#### Precision Line coaxial gearbox





Precision Line



Helical gear



Square type output flange



Reinforced deep groove ball bearings



Rotary shaft seal



Planet carrier in cage design



Option: Reduced backlash



Option: Painted surface – RAL 9005 Jet black

11 - 470 Nm
640 - 5800 N
1100 - 9400 N
1 - 8 arcmin
IP65

55		70	90		115		142
	, ,			,		, ,	



# **WPLN**



Due to its hypoid gearing, our **WPLN** achieves optimal synchronization. Because vibrations are reduced to a minimum, it operates smoothly, precisely and quietly. The right-angle precision gearbox is lubricated for life and can be mounted in a variety of ways.



Precision Line



Counterdirectional rotation



Hypoid gear right angle stage



Square type output flange



Preloaded tapered roller bearings



Rotary shaft seal



Extra long centering collar



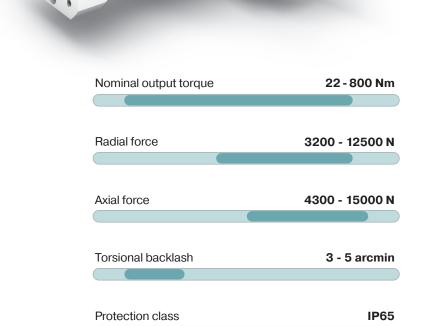
Option: Reduced backlash (2-stage)



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black



70 90	115	142
-------	-----	-----



# **WPSFN**



Our **WPSFN** is particularly easy and quick to integrate thanks to its standardized flange interface and offers high torsional rigidity. With its hypoid gearing, as well as the helical-toothed planetary stage, it achieves optimal synchronization for best surface qualities. The shortest right-angle precision gearbox, in a single-stage design with integrated hollow shaft, offers you new design solutions.



Precision Line



Counterdirectional rotation



Hypoid gear right angle stage



Extra large round type output flange



Preloaded angular contact roller bearings



Rotary shaft seal



Flange output shaft (ISO 9409)



Hollow shaft (1-stage)



Option: Reduced backlash (2-stage)



Option: Planetary gearbox with mounted pinion



Option: Painted surface - RAL 9005 Jet black

Nominal output torque	22 - 625 Nm
Radial force	2150 - 12000 N
Axial force	4200 - 9500 N
Torsional backlash	3 - 5 arcmin
Protection class	IP65

64	90	110	140
----	----	-----	-----



#### Precision Line right angle gearbox







# **HLAE**

Hygienic Design for the Food and Pharmaceutical Industries





Application-specific gearbox



Spur gear



Round type output flange



Low-friction deep groove ball bearings



Rotary shaft seal



Extra long centering collar



Planet carrier in disc design



Option: FFKM seal

450 - 1450 N
550 - 2500 N
7 - 12 arcmin
IP69K

#### Frame sizes

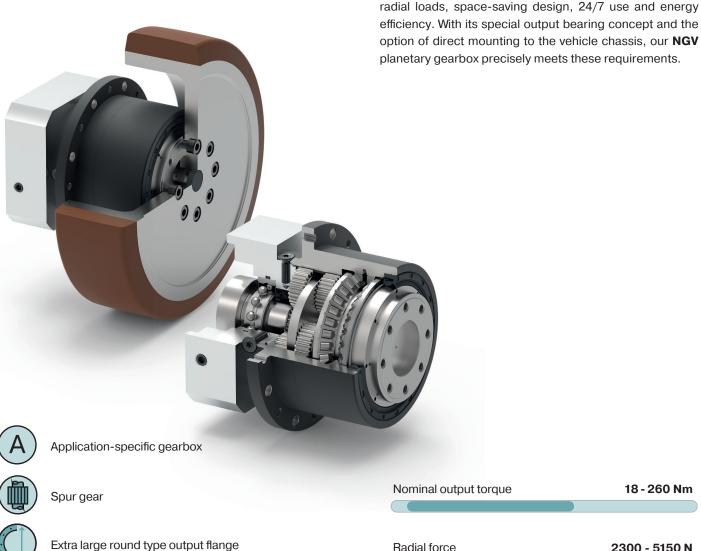
90

110



# NGV

for AGVs



Nominal output torque 18 - 260 Nm Radial force 2300 - 5150 N Axial force 2850 - 6450 N Torsional backlash 9 - 12 arcmin Protection class **IP65** 

Automated guided vehicles have special requirements when it comes to drive technology. These include high



Flange output shaft (ISO 9409)

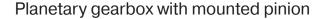
Preloaded angular contact roller bearings

Planet carrier in disc design

Extra long centering collar

Rotary shaft seal

Option: Painted surface - RAL 9005 Jet black



# NEUGART

26-45

2-14 kN

# PK1 - PM1 - PM2



The pinion is the essential element of the rack and pinion drive for converting the rotatory movement of the gearbox into a linear movement. The Neugart pinion is pre-mounted on the gearbox and secure d with screws. This means that the compact unit consisting of the gearbox and the pinion can be quickly installed in the application, and less installation work is required.

Depending on the gearbox selected, the following features are available:



Pinion with straight teeth



Pinion with helical teeth



Coaxial gearbox



Right angle gearbox



Preloaded tapered roller bearings



Preloaded tapered roller bearings



Reinforced deep groove ball bearings



Rotary shaft seal



Option: Reduced backlash

Module	1,5-5
Number of teeth	15-27
Maximum feed force	3-31 kN
PM1	
Module	2-4

PK1

Number of teeth

Maximum feed force

# PM 2 Module 2-5 Number of teeth 14-22 Maximum feed force 6-30 kN



#### Custom made gearboxes



# Innovative and individual: Our custom made gearboxes.

A custom design, specialized performance data, a modified output shaft, safe for use in the food industry: Do you need an individually adapted gearbox? We can meet your requirements. Quickly and easily by modifying one of our standard planetary gearboxes or with a custom gearbox developed specifically for you. The qualified specialists in our Engineering department design gearbox solutions and systems to meet your requirements: in terms of performance, cost and quality.

With the help of the most modern development and design tools, we design gearboxes suitable for the most diverse applications, from all areas of mechanical and plant engineering, robotics, medical, pharmaceutical and food technology or model making. Your innovation advantage: We rely on our many years of experience, while at the same time keeping updated on new developments and integrating them into our customer solutions.



#### Performance classes

- ♣ High efficiency
- ♣ For any mounting position
- ♣ Individual adaptation of the input flange to the motor
- ♣ Lifetime lubrication for maintenance-free operation
- ♠ Clamping systems with optimized mass moment of inertia

Economy L	ine	Nominal output torque	Backlash	Bearing load	Protection class	Running noise	Input speeds	Torsional stiffness	Wide range of ratios
PLE									
PLQE									
PLPE									
PLHE									
PLFE									
PFHE									
WPLE									
WPLQE									
WPLPE									
WPLHE									
WPLFE									



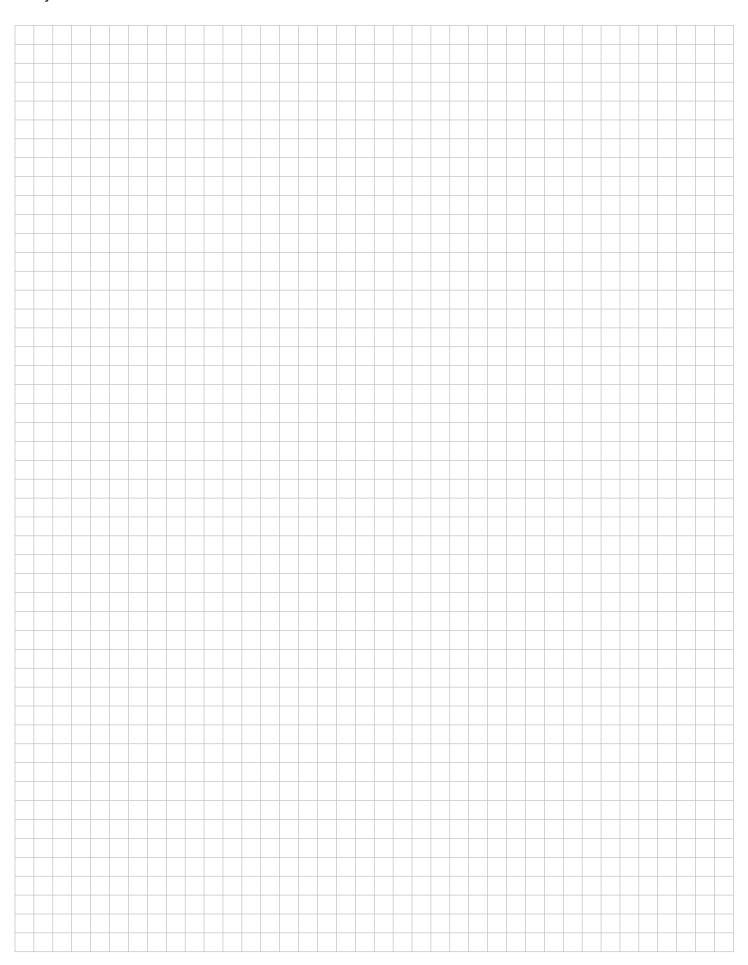
## Performance classes

		Nominal			Protection			Torsional	Wide range
Precision L	ine	output torque	Backlash	Bearing load	Protection class	Running noise	Input speeds	Torsional stiffness	Wide range of ratios
PSBN	Ta								
PSN	Tie								
PLN	Te								
PSFN									
PLFN									
WPLN									
WPSFN									
WGN	900								

Application gearboxes	specific	Nominal output torque	Backlash	Bearing load	Protection class	Running noise	Input speeds	Torsional stiffness	Wide range of ratios
HLAE									
NGV									

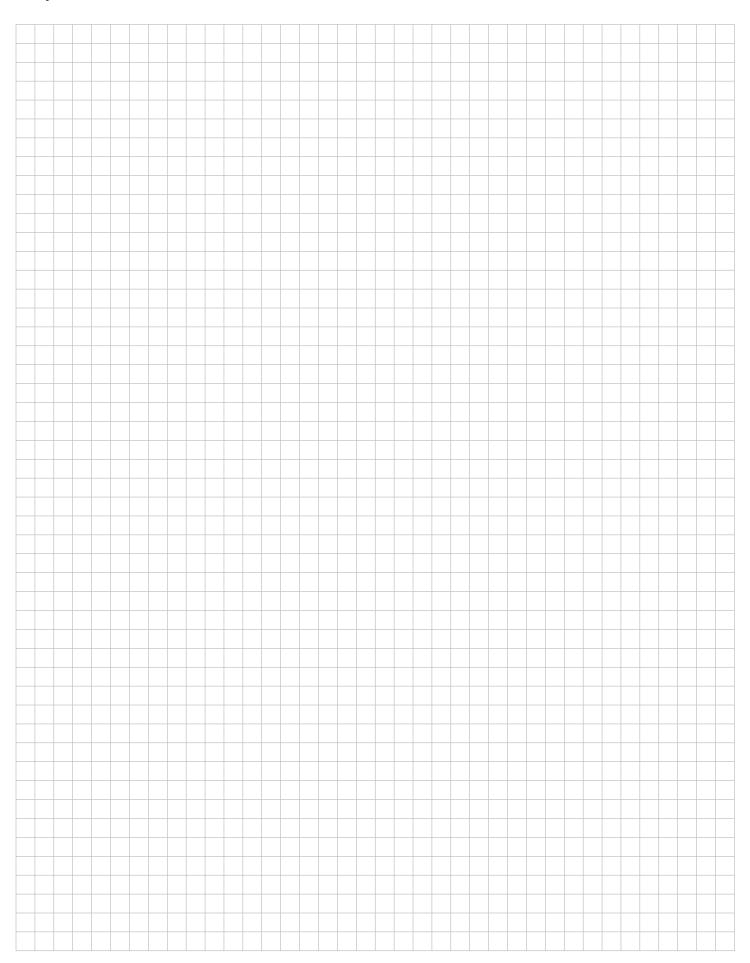


# For your notes





# For your notes





#### Do you have any questions or need further information?

We are happy to advise you on all topics relating to drive technology. You can find your personal contact at: **www.neugart.com** 

#### **Neugart GmbH**

Keltenstraße 16 77971 Kippenheim Germany

Phone: +49 7825 847-0 Fax: +49 7825 847-2999 Email: sales@neugart.com Web: www.neugart.com

#### Neugart USA Corp.

14325 South Lakes Drive Charlotte, NC 28273

USA

Phone: +1 980 299-9800

Fax: +1 980 299-9799

Email: sales@neugartusa.com

Web: www.neugart.com/en-us

#### Neugart Planetary Gearboxes (Shenyang) Co., Ltd.

No.152-1, 22nd road

E&T Development Zone Shenyang, PC 110143

PR China

Phone: +86 24 2537-4959

Fax: +86 24 2537-2552

Email: sales@neugart.net.cn

Web: www.neugart.net.cn