GYSIN

SWISS GEARS AND GEARBOXES

PRODUCT CATALOG

V 012015
SUBJECT TO CHANGE

GYSIN AG

With over 60 years of experience, GYSIN has manufactured gears and gearboxes for numerous applications. We have utilized this expertise and experience to establish a product line of precision planetary and worm gearboxes that is fully modifiable to customer needs. Our main focus is always on the individual customer's requirements.

GYSIN's experience and competence are a reflection of our highly qualified and thriving employee base. Our employees are our foundation. Along with modern machine tools and manufacturing flexibility, we have the expertise to achieve your design goals.

Our strengths include the ability to advise and support you in finding the best possible gearbox and gear-component solutions to fulfill your specific requirements.

Challenge us with your applications. We guarantee quality and reliable products that meet your specifications.

GEARS

We manufacture gears in accordance with your requirements. Whether your required material is steel, aluminum, a special alloy, or a synthetic material, we will gladly take on your project.

Having long-standing experience with milling and broaching operations, we are qualified to meet your demanding requirements for manufacturing customer-specific precision gears.

- SPUR GEARS, STRAIGHT / SKEW
- HELICAL GEARS, SKEW
- BEVEL GEARS, STRAIGHT
- INNER TOOTHED RIMS, STRAIGHT
- GEAR RACK, STRAIGHT / SKEW
- WORM GEAR SHAFTS
- WORM GEARS
- WORM GEAR SETS
- FLAT ROOT INVOLUTE SPLINES / SERRATIONS
- SPLINE SHAFTS
- SPECIAL / CUSTOM GEARS

SPUR / HELICAL GEARS

SKEW GEAR

Module 0.2 to 2.5

Diameter up to 160 mm

SPUR GEARS

STRAIGHT GEAR

Module 0.2 to 3.0

Diameter up to 160 mm

BEVEL GEARS

STRAIGHT GEAR

Diameter up to 100 mm

System Mikron module 0.2 to 1.5

System Gleason Coniflex module 0.2 to 1.6
(with spherical flanks)

INNER TOOTHED RIMS

STRAIGHT GEAR

Hobbing module 0.2 to 4.0

Diameter up to 250 mm

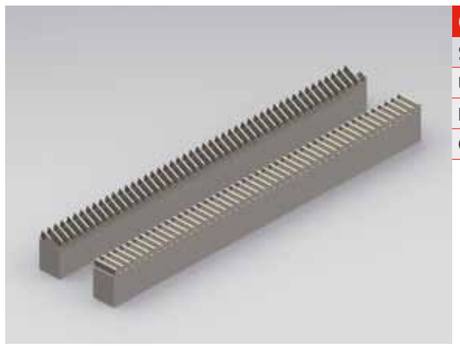
Gear length up to 70 mm (100 mm)

Broaching module 0.25 to 1.0

· Flat Root Involute Splines per DIN 5480

· Serration Splines per DIN 5481

· Inner Toothed Rims with bore diameter up to 80 mm



GEAR RACK

STRAIGHT / SKEW GEAR

Up to ± 30° angle

Module 0.2 to 2.5

Gear length up to 430 mm

WORM GEAR SHAFTS

Module 0.2 to 3.0

Diameter up to 50 mm

Milled, hardened and grinded

WORM GEARS

Module 0.2 to 3.0

Diameter up to 160 mm

WORM GEAR SETS

Module 0.2 to 3.0

Axis-center to center distance 12 to 60 mm

Customer-specific solutions available upon request

FLAT ROOT INVOLUTE SPLINES/SERRATIONS

· Flat Root Involute Splines per DIN 5480

· Serration Splines per DIN 5481

SPLINE SHAFTS

Custom spline shaft profiles available upon request

Customer-specific solutions available upon request

SPECIAL / CUSTOM GEARS

· Ratchet wheels

· Segment gears

· Hitch and clutch gears

· Knurl gears

Other gears profiles upon request

GEARBOXES

GYSIN precision gearboxes are utilized in the drive technologies of many industries including robotics, medical device, optical, oil and gas, aviation and aerospace, and heavy industries.

With decades of experience manufacturing gears and gearboxes, we have the knowledge and expertise to supply products in accordance with your specific requirements.

Design features of GYSIN gearboxes include: compact sizes, optimal power-weight ratios, low noise levels, high efficiency, low backlash, and long service life.

TECHNICAL DATA

The technical data published in specific product data sheets is based upon ideal installation and load conditions.

Ideal installation conditions are defined as:

- The gearbox axes are horizontal.
- The gearbox housing is attached on the output side.
- The driving device (i.e. motor) is assembled with an adapter flange and motor pinion attached to the gearbox.
- The coupling at the output shaft will not generate forces, loads, or torques in excess of the values defined on the data sheets.
- The environmental conditions are within the limits defined on the data sheets.

Ideal load conditions are defined as continuous, steady (uniform motion) and without impact.

It is understood that gearbox selections for any application are to be in accordance with the ratings defined on the specification sheets. Under the ideal installation conditions defined above, the service life is 10,000 hours.

The technical data provided in the product data sheets is for general guideline purposes. It is understood that many applications are unique and can have varying load conditions. Therefore, each application needs to be evaluated individually. Tests may be required to determine load parameters under varying conditions.

We can also design products to perform under non-ideal load conditions. Often such design goals can be achieved with appropriate modifications to a standard product design. Parameters such as ambient temperature ranges, torque loads, dimensional constraints, etc. can often be accommodated with customized designs.

GEARBOX SELECTION

The loads at the gearbox output (output shaft) and the number of revolutions at the gearbox input are the primary consideration for gearbox selections. The gearbox size should not exceed the values applicable on the data sheets. We would be happy to evaluate the requirements if the values of the application exceed the values of a specific gearbox and an alternate gearbox is not available for the application.

ASSEMBLY OF THE GEARBOX TO THE MOTOR

The assembly of the gearbox to the motor is basic. The motor pinion is glued to the motor shaft at a defined distance. The adapter plate, which is available but optional, is assembled to the motor using screws. The provided paper gasket is installed on the adapter plate. The motor with motor pinion is inserted and secured with screws provided within the gearbox kit. The assembly instructions are also included with the gearbox or are available upon request.

GEARBOX TERMINOLOGY

RATED TORQUE CONTINUOUS

Maximum torque load that can be applied to the output shaft for continuous operation under ideal installation conditions. The service life may be compromised if the torque load exceeds this rated value.

RATED TORQUE INTERMITTENT

Maximum torque load that can be applied to the output shaft for intermittent operation under ideal installation conditions. The definition of intermittent operation is 10% of the service life. The service life may be compromised if the torque exceeds the published value.

MAXIMUM EFFICIENCY AT RATED TORQUE

The maximum efficiency will be achieved at the rated continuous torque load with proper lubrication. Lower torque loads decrease the efficiency. If speed is reduced, the efficiency will then remain relatively constant.

AVERAGE BACKLASH AT NO LOAD

The backlash is defined as the recoil angle of the output shaft, when the gearbox input pinion is locked in a fixed position. The recoil angle is the angle through which the output shaft can be rotated back and forth with this condition. The amount of torque used for this validation test is 1-2% of the rated continuous torque.

MAXIMUM RADIAL LOAD

Sudden intermittent hits or impacts can exceed this load value and thereby also compromise the service life.
The maximum radial load is the maximum load that can be applied radially (perpendicular) to the output shaft at the middle of the shaft. This load value is based upon an output shaft reference speed of 100 RPM. The service life may be compromised if this load value is exceeded.

MAXIMUM AXIAL LOAD

The maximum axial load is the maximum load that can be applied axially to the output shaft. This load value is based upon an output shaft reference speed of 100 RPM. The service life may be compromised if this load value is exceeded. Sudden hits or impacts can easily exceed this load value and thereby also compromise the service life.

MAXIMUM CONTINUOUS RATED SPEED AT DRIVE

The maximum continuous rated speed is the maximum speed in revolutions per minute (RPM) at the gearbox input for continuous operation under ideal installation conditions. The service life may be compromised if the speed exceeds this rated value.

MAXIMUM INTERMITTENT RATED SPEED AT DRIVE

The maximum intermittent rated speed is the maximum speed in revolutions per minute (RPM) at the gearbox input for intermittent operation under ideal conditions. The definition of intermittent operation is 10% of the service life. The service life may be compromised if the speed exceeds this rated value.

TYPE STANDARD

The type standard is the standard design version for each model series with regard to average backlash and torque rating. It utilizes synthetic gears in the first stage, which offers the advantage of reduced noise. Steel gears are used in the second and third stages if applicable.

TYPE V HEAVY DUTY

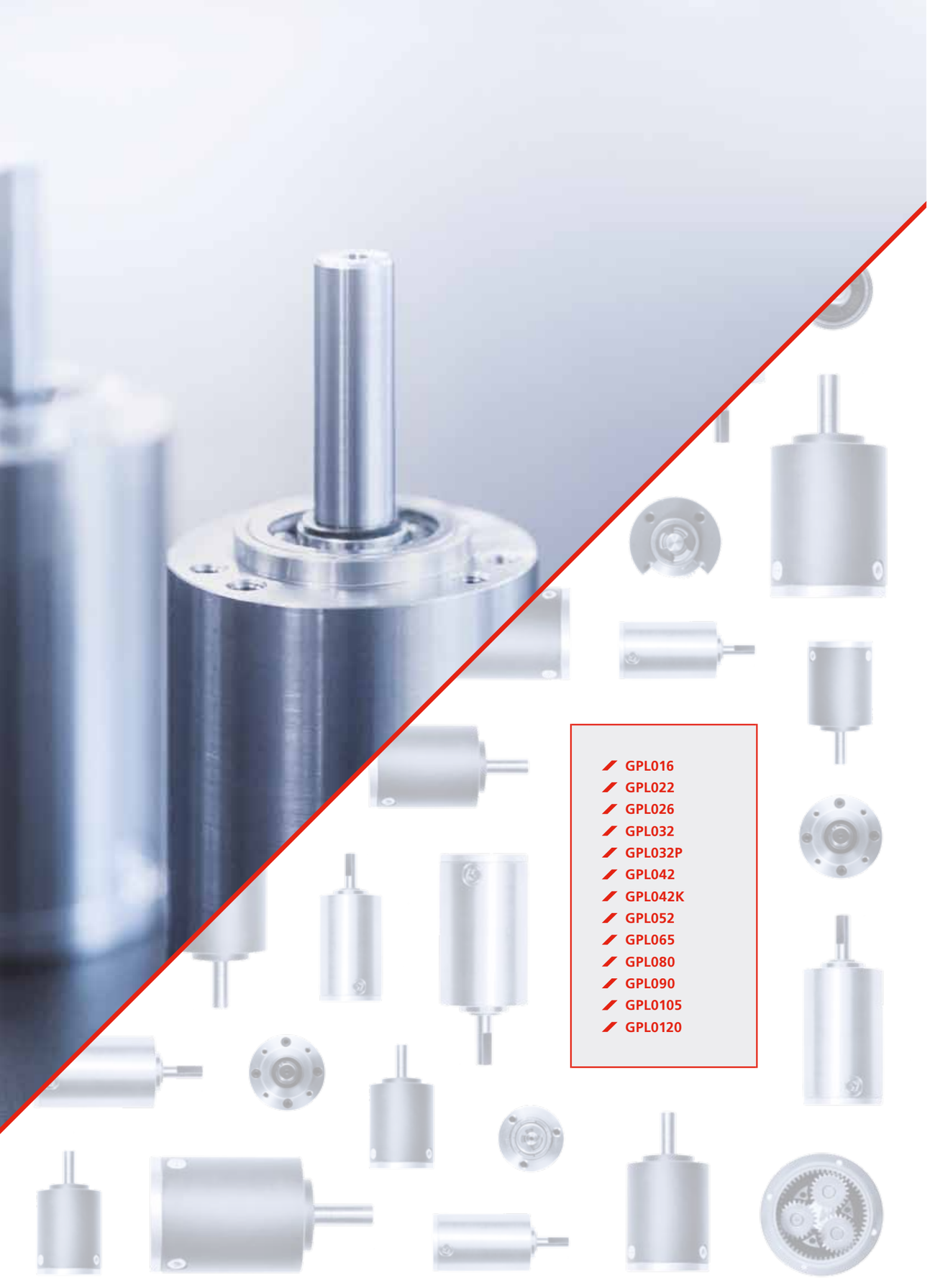
Unlike the standard design version, the heavy duty version also uses planetary gears made of steel in the first stage. This provides higher torque capability with a backlash rating equivalent to the standard version. The heavy duty version is not ideal for continuous operation.

TYPE R REDUCED BACKLASH

The reduced backlash version is similar to the standard version with synthetic gears in the first stage, except with a smaller recoil angle.

TYPE S LOW BACKLASH

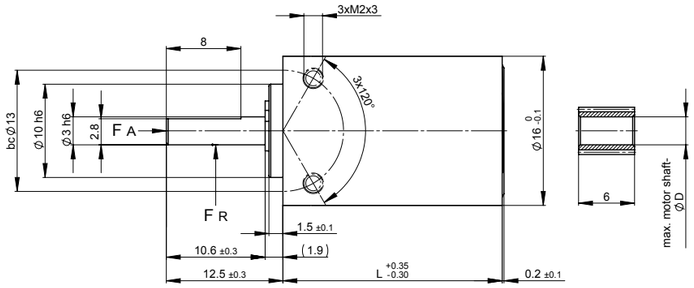
The low backlash version offers the smallest recoil angle. The planetary gears of the low backlash version are always made of steel. The low backlash version is not ideal for continuous operation.

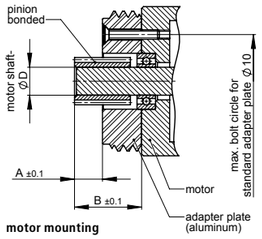


- GPL016
- GPL022
- GPL026
- GPL032
- GPL032P
- GPL042
- GPL042K
- GPL052
- GPL065
- GPL080
- GPL090
- GPL0105
- GPL0120

PLANETARY GEARBOX GPL016

stainless steel version





motor mounting

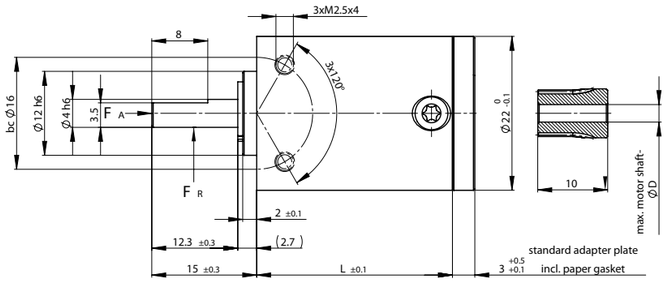
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion and assembly instructions (adapter plate optional).

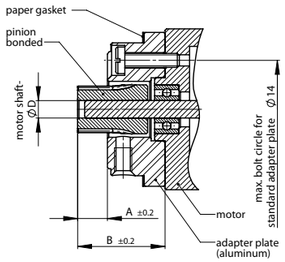
Customized versions also available for small quantities.

				1-STAGE		2-STAGE		3-STAGE	
				Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				3	5	**16**	3	**147**	5
				4	3	**21**	5	**196**	3
				7	1	**28**	3	**343**	1
						9	5	**84**	5
						12	5	**112**	3
								36	5
								48	5
								64	3
Max. rated torque continuous			Nm	0.1		0.3		0.5	
Max. efficiency at max. rated torque continuous			%	90		85		80	
Average backlash at no load			arcmin ≤	20		35		50	
Weight without adapter plate			g	20		25		30	
Dimension L			mm	18.5		23.5		28.5	
Dimension A			mm	3					
Dimension B			mm	7.2					
Max. radial load	F_R	5 mm from shaft end	N	30					
Max. axial load	F_A		N	10					
Max. continuous rated speed at drive			min-1	6000					
Max. intermittent rated speed at drive			min-1	10000					
Temperature range	Type Standard		°C	-30 / +90					
Temperature range	Type **V**		°C	-40 / +90					

PLANETARY GEARBOX GPL022

stainless steel version





motor mounting

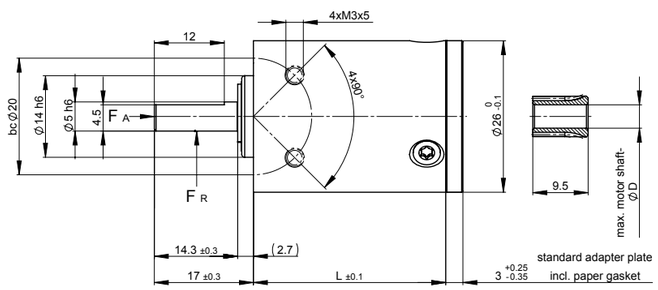
	1-STAGE		2-STAGE		3-STAGE	
	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
			64	4		
			80	4		
			16	4	**112**	4
			20	4	**140**	4
	4	4	**28**	4	**196**	4
	5	3	**35**	3	**245**	3
	7	1.5	**49**	1.5	**343**	1.5

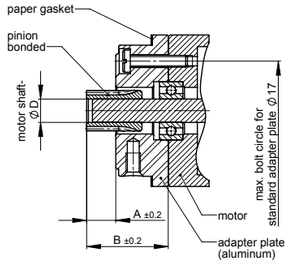
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

Rated torque continuous	Type Standard	Type **R**	Nm	0.1	0.5	1.5
Rated torque intermittent	Type Standard	Type **R**	Nm	0.2	1	3
Rated torque continuous	Type **V**		Nm	0.2	1	1.5
Rated torque intermittent	Type **V**		Nm	0.4	1.5	3
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	10	20	30
Weight without adapter plate			g	50	75	100
Dimension L			mm	21	28	35
Dimension A			mm	4.25		
Dimension B			mm	12.5		
Max. radial load	F_R	6 mm from shaft end	N	30		
Max. axial load	F_A		N	24		
Max. continuous rated speed at drive			min-¹	6000		
Max. intermittent rated speed at drive			min-¹	10000		
Temperature range	Type Standard	Type **R**	°C	-30 / +90		
Temperature range	Type **V**		°C	-40 / +90		

PLANETARY GEARBOX GPL026





motor mounting

	1-STAGE		2-STAGE		3-STAGE	
	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
					81.37	4
					112.67	4
			12.25	4	**143.97**	4
			18.78	4	**199.33**	4
	3.5	4	**26**	4	**216**	2
	4.33	4	**33.22**	4	**276**	2
	6	2	**46**	2	**352.67**	2

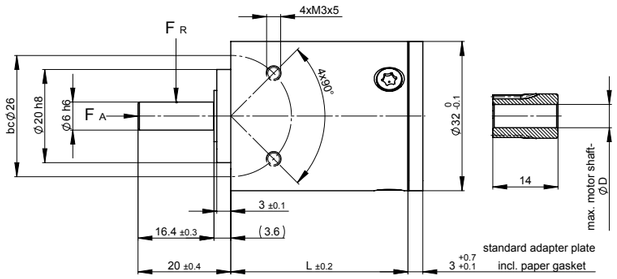
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

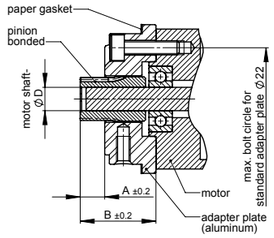
Customized versions also available for small quantities.

Stainless steel version on request.

Rated torque continuous	Type Standard	Type **R**	Nm	0.3	1	3
Rated torque intermittent	Type Standard	Type **R**	Nm	0.6	2	6
Rated torque continuous	Type **V**		Nm	0.6	2	3
Rated torque intermittent	Type **V**		Nm	1.2	3	6
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	10	20	30
Weight without adapter plate			g	70	90	115
Dimension L			mm	25	33	41
Dimension A			mm	5		
Dimension B			mm	14		
Max. radial load	F_R	7 mm from shaft end	N	50		
Max. axial load	F_A		N	40		
Max. continuous rated speed at drive			min-¹	6000		
Max. intermittent rated speed at drive			min-¹	10000		
Temperature range	Type Standard	Typ **R**	°C	-30 / +90		
Temperature range	Type **V**		°C	-40 / +90		

PLANETARY GEARBOX GPL032





motor mounting

1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				64	6
				72	6
				81	6
		12.08	6	100	6
		16	6	130	6
		18	6	144	6
		20.8	6	175.78	5
		25	6	200	6
		29	6	225	5
4	6	32	6	256	6
4.5	5	36	5	288	5
5.2	4	41.6	4	332.8	4
6.25	3	50	3	400	3
8	2	64	2	512	2

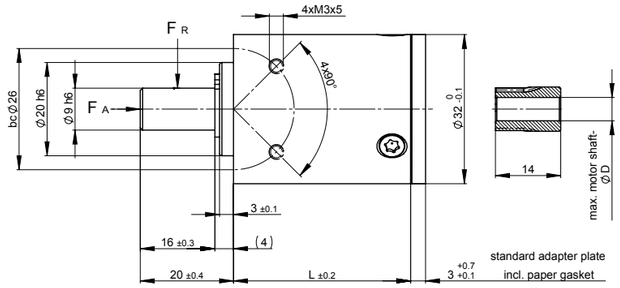
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

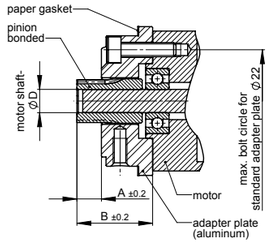
Customized versions also available for small quantities.

Stainless steel version on request.

				1-STAGE	2-STAGE	3-STAGE
Rated torque continuous	Type Standard	Type **R**	Nm	0.4	2	6
Rated torque intermittent	Type Standard	Type **R**	Nm	0.8	4	12
Rated torque continuous	Type **V**	Type **S**	Nm	0.8	4	6
Rated torque intermittent	Type **V**	Type **S**	Nm	1.6	6	12
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	12	20	30
Average backlash at no load	Type **S**		arcmin ≤	8	12	15
Weight without adapter plate			g	135	180	250
Dimension L			mm	29	38	47
Dimension A			mm	5.25		
Dimension B			mm	16.25		
Max. radial load	F_R	8 mm from shaft end	N	80		
Max. axial load	F_A		N	65		
Max. continuous rated speed at drive			min-1	5000		
Max. intermittent rated speed at drive			min-1	8000		
Temperature range	Type Standard	Type **R**	°C	-30 / +90		
Temperature range	Type **V**	Type **S**	°C	-40 / +90		

PLANETARY GEARBOX GPL032P





motor mounting

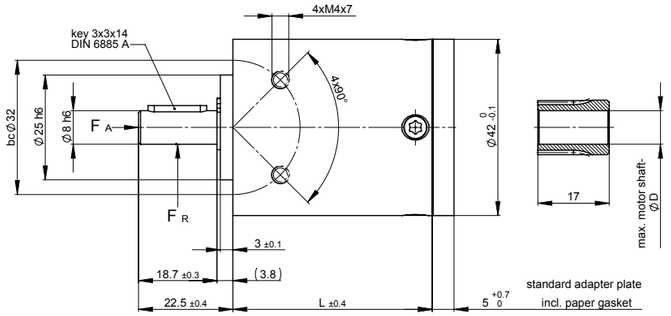
2-STAGE		3-STAGE		4-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				256	6
				288	6
				332.8	6
		64	6	324	6
		72	6	400	6
16	6	81	5	512	6
18	5	100	6	625	6
20.8	4	144	5	800	6
25	3	200	3	1024	6
32	2	256	2	1600	3

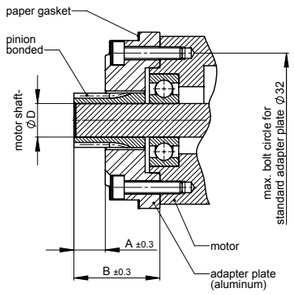
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

				2-STAGE	3-STAGE	4-STAGE
Rated torque continuous	Type Standard		Nm	4	12	12
Rated torque intermittent	Type Standard		Nm	6	16	16
Rated torque continuous	Type **V**		Nm	6	12	12
Rated torque intermittent	Type **V**		Nm	8	16	16
Max. efficiency at rated torque			%	85	80	75
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	35	50	60
Weight without adapter plate			g	180	225	270
Dimension L			mm	38	47	56
Dimension A			mm	5.25		
Dimension B			mm	16.25		
Max. radial load	F_R	8 mm from shaft end	N	80		
Max. axial load	F_A		N	65		
Max. continuous rated speed at drive			min-1	5000		
Max. intermittent rated speed at drive			min-1	8000		
Temperature range	Type Standard		°C	-30 / +90		
Temperature range	Type **V**		°C	-40 / +90		

PLANETARY GEARBOX GPL042





motor mounting

1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	8
				56	8
		12.25	8	64	8
		14	8	70	8
		16	8	80	8
		20	8	100	8
		24	8	120	8
		25	6	144	8
3.5	8	30	6	184	8
4	8	30.67	8	235.11	8
5	6	38.33	6	293.89	6
6	4	46	4	352.67	4
7.67	3	58.78	3	450.63	3

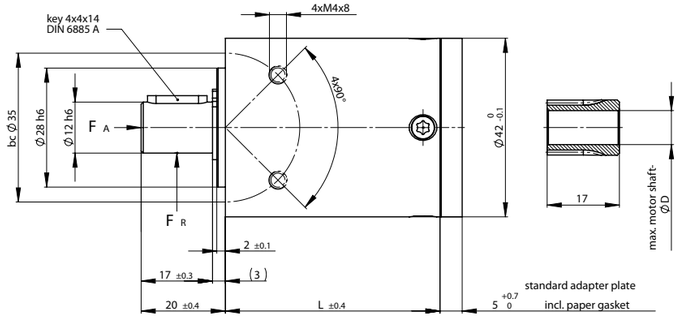
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

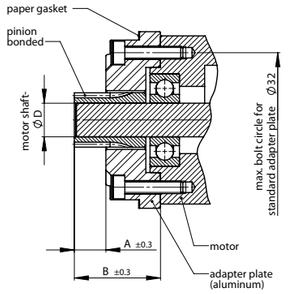
Customized versions also available for small quantities.

Stainless steel version on request.

Rated torque continuous	Type Standard	Type **R**	Nm	0.7	4	12
Rated torque intermittent	Type Standard	Type **R**	Nm	1.4	8	24
Rated torque continuous	Type **V**	Type **S**	Nm	1.4	8	12
Rated torque intermittent	Type **V**	Type **S**	Nm	3	12	24
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	12	20	30
Average backlash at no load	Type **S**		arcmin ≤	8	12	15
Weight without adapter plate			g	275	350	425
Dimension L			mm	35	47.5	60
Dimension A			mm	7.5		
Dimension B			mm	20.5		
Max. radial load	F_R	9.5 mm from shaft end	N	150		
Max. axial load	F_A		N	120		
Max. continuous rated speed at drive			min-1	5000		
Max. intermittent rated speed at drive			min-1	8000		
Temperature range			°C	-25 / +90		

PLANETARY GEARBOX GPL042K





motor mounting

1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	8
				56	8
		12.25	8	64	8
		14	8	70	8
		16	8	80	8
		20	8	100	8
		24	8	120	8
		25	6	144	8
3.5	8	30	6	184	8
4	8	30.67	8	235.11	8
5	6	38.33	6	293.89	6
6	4	46	4	352.67	4
7.67	3	58.78	3	450.63	3

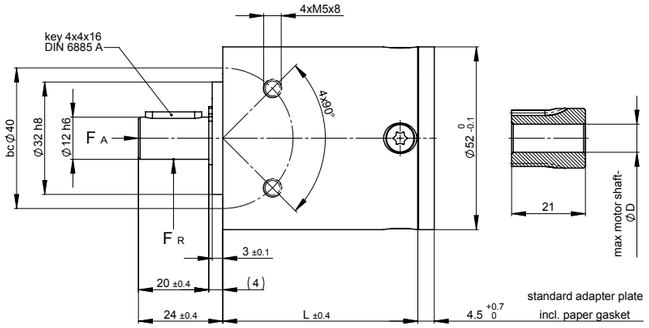
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

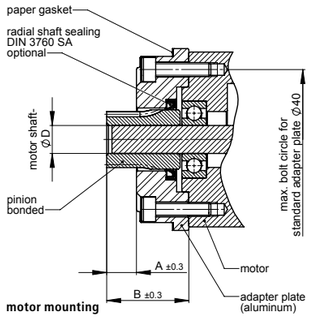
Customized versions also available for small quantities.

Stainless steel version on request.

Rated torque continuous	Type Standard	Type **R**	Nm	0.7	4	15
Rated torque intermittent	Type Standard	Type **R**	Nm	1.4	8	30
Rated torque continuous	Type **V**	Type **S**	Nm	1.4	8	15
Rated torque intermittent	Type **V**	Type **S**	Nm	3	15	30
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	12	20	30
Average backlash at no load	Type **S**		arcmin ≤	8	12	15
Weight without adapter plate			g	315	400	485
Dimension L			mm	38	50.5	63
Dimension A			mm	7.5		
Dimension B			mm	20.5		
Max. radial load	F_R	8.5 mm from shaft end	N	250		
Max. axial load	F_A		N	200		
Max. continuous rated speed at drive			min-1	5000		
Max. intermittent rated speed at drive			min-1	8000		
Temperature range			°C	-25 / +90		

PLANETARY GEARBOX GPL052





1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				64	10
				72	10
				81	10
		12.08	10	100	10
		16	10	130	10
		18	10	144	10
		20.8	10	175.78	9
		25	10	200	10
		29	10	225	9
4	10	32	10	256	10
4.5	9	36	9	288	9
5.2	7	41.6	7	332.8	7
6.25	6	50	6	400	6
8	4	64	4	512	4

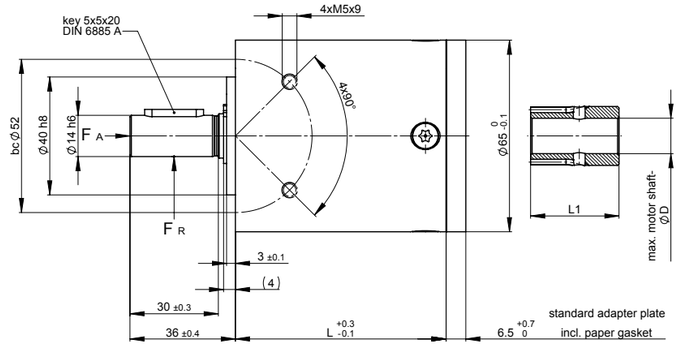
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

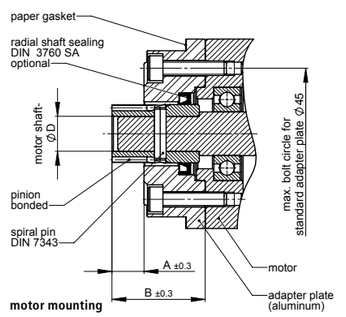
Customized versions also available for small quantities.

Stainless steel version on request.

Rated torque continuous	Type Standard	Type **R**	Nm	1.5	10	30	
Rated torque intermittent	Type Standard	Type **R**	Nm	3	20	60	
Rated torque continuous	Type **V**	Type **S**	Nm	3	15	30	
Rated torque intermittent	Type **V**	Type **S**	Nm	6	30	60	
Max. efficiency at rated torque			%	90	85	80	
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50	
Average backlash at no load	Type **R**		arcmin ≤	10	20	30	
Average backlash at no load	Type **S**		arcmin ≤	6	12	15	
Weight without adapter plate			g	475	600	725	
Dimension L			mm	41	55.5	70	
Dimension A			mm	8.5			
Dimension B			mm	23.5			
Max. radial load	F_R	10 mm from shaft end	N	250			
Max. axial load	F_A		N	200			
Max. continuous rated speed at drive			min-1	5000			
Max. intermittent rated speed at drive			min-1	8000			
Temperature range			°C	-25 / +90			

PLANETARY GEARBOX GPL065





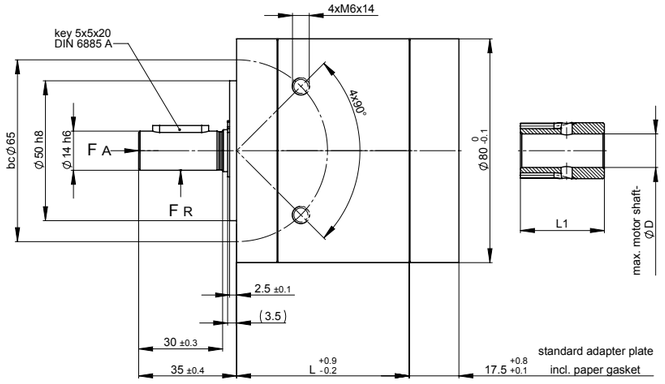
1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	12
				56	12
		12.25	14	64	12
		14	12	70	12
		16	12	80	12
		20	12	100	12
		24	12	120	12
		25	9	144	12
3.5	14	30	9	184	12
4	12	30.67	12	235.11	12
5	9	38.33	9	293.89	9
6	6	46	6	352.67	6
7.67	5	58.78	5	450.63	5

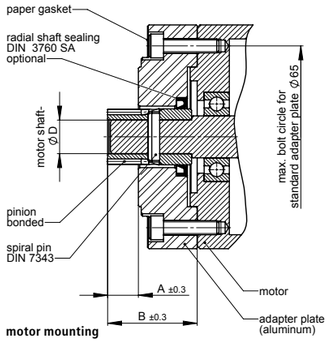
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

Rated torque continuous	Type Standard	Type **R**	Nm	3	15	38	
Rated torque intermittent	Type Standard	Type **R**	Nm	6	30	75	
Rated torque continuous	Type **V**	Type **S**	Nm	6	30	38	
Rated torque intermittent	Type **V**	Type **S**	Nm	12	38	75	
Max. efficiency at rated torque			%	90	85	80	
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50	
Average backlash at no load	Type **R**		arcmin ≤	10	20	30	
Average backlash at no load	Type **S**		arcmin ≤	6	12	15	
Weight without adapter plate			g	1000	1400	1750	
Dimension L			mm	53.5	71.5	89.5	
Dimension L1			mm	32	30		
Dimension A			mm	13	11		
Dimension B			mm	34	32		
Max. radial load	F_R	15 mm from shaft end	N	400			
Max. axial load	F_A		N	320			
Max. continuous rated speed at drive			min-1	4000			
Max. intermittent rated speed at drive			min-1	6000			
Temperature range			°C	-25 / +90			

PLANETARY GEARBOX GPL080





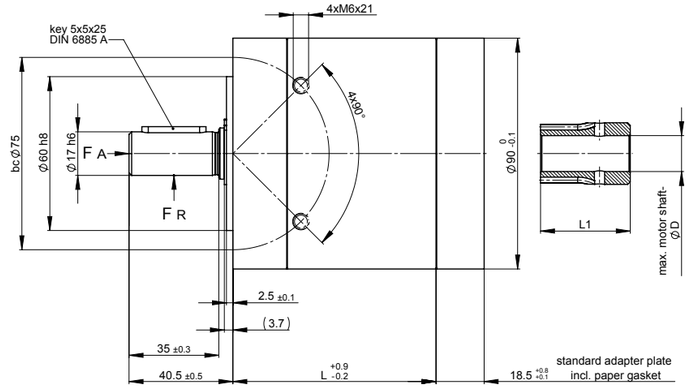
1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	12
				56	12
		12.25	14	64	12
		14	12	70	12
		16	12	80	12
		20	12	100	12
		24	12	120	12
		25	9	144	12
3.5	14	30	9	184	12
4	12	30.67	12	235.11	12
5	9	38.33	9	293.89	9
6	6	46	6	352.67	6
7.67	5	58.78	5	450.63	5

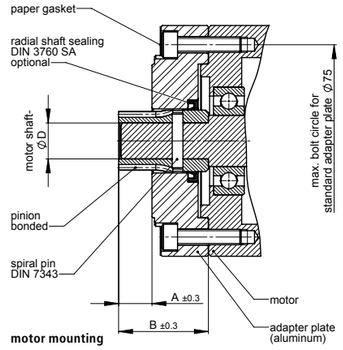
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

Rated torque continuous	Type Standard	Type **R**	Nm	3	15	38
Rated torque intermittent	Type Standard	Type **R**	Nm	6	30	75
Rated torque continuous	Type **V**	Type **S**	Nm	6	30	38
Rated torque intermittent	Type **V**	Type **S**	Nm	12	38	75
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	10	20	30
Average backlash at no load	Type **S**		arcmin ≤	6	12	15
Weight without adapter plate			g	1500	2100	2750
Dimension L			mm	43.5	61.5	79.5
Dimension L1			mm	32	30	
Dimension A			mm	13	11	
Dimension B			mm	34	32	
Max. radial load	F_R	15 mm from shaft end	N		400	
Max. axial load	F_A		N		320	
Max. continuous rated speed at drive			min-¹		4000	
Max. intermittent rated speed at drive			min-¹		6000	
Temperature range			°C		-25 / +90	

PLANETARY GEARBOX GPL090





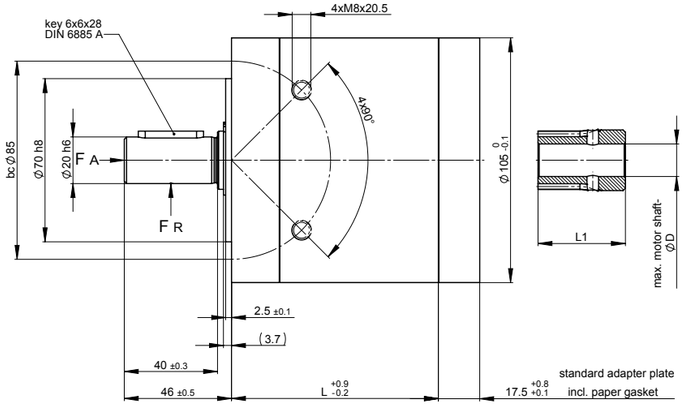
1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	14
				56	14
		12.25	16	64	14
		14	14	70	14
		16	14	80	14
		20	14	100	14
		24	14	120	14
		25	11	144	14
3.5	16	30	11	184	14
4	14	30.67	14	235.11	14
5	11	38.33	11	293.89	11
6	8	46	8	352.67	8
7.67	6	58.78	6	450.63	6

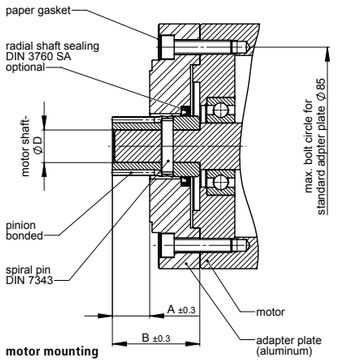
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

Rated torque continuous	Type Standard	Type **R**	Nm	6	30	75
Rated torque intermittent	Type Standard	Type **R**	Nm	12	60	150
Rated torque continuous	Type **V**	Type **S**	Nm	12	60	75
Rated torque intermittent	Type **V**	Type **S**	Nm	24	75	150
Max. efficiency at rated torque			%	90	85	80
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	10	20	30
Average backlash at no load	Type **S**		arcmin ≤	6	12	15
Weight without adapter plate			g	2250	3250	4250
Dimension L			mm	56.5	79	101.5
Dimension L1			mm	38	35	
Dimension A			mm	16	13	
Dimension B			mm	38	35	
Max. radial load	F_R	17.5 mm from shaft end	N		500	
Max. axial load	F_A		N		400	
Max. continuous rated speed at drive			min-¹		4000	
Max. intermittent rated speed at drive			min-¹		6000	
Temperature range			°C		-25 / +90	

PLANETARY GEARBOX GPL0105





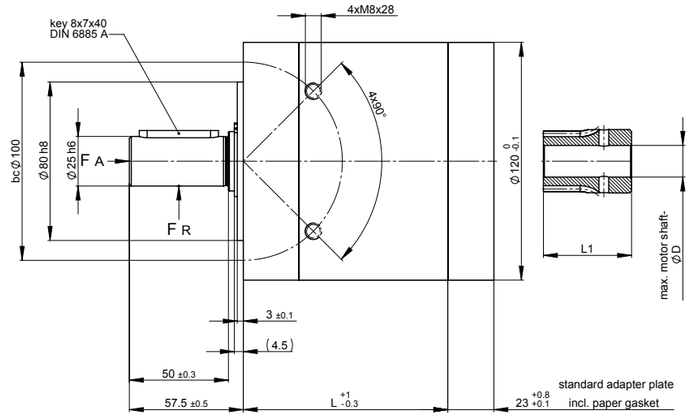
1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	16
				56	16
		12.25	19	64	16
		14	16	70	16
		16	16	80	16
		20	16	100	16
		24	16	120	16
		25	12	144	16
3.5	19	30	12	184	16
4	16	30.67	16	235.11	16
5	12	38.33	12	293.89	12
6	8	46	8	352.67	8
7.67	6	58.78	6	450.63	6

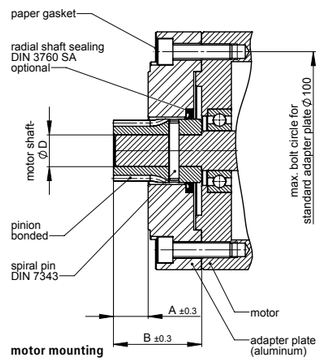
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

				1-STAGE	2-STAGE	3-STAGE
Rated torque continuous	Type Standard	Type **R**	Nm	12	60	150
Rated torque intermittent	Type Standard	Type **R**	Nm	25	120	300
Rated torque continuous	Type **V**	Type **S**	Nm	25	120	150
Rated torque intermittent	Type **V**	Type **S**	Nm	50	150	300
Max. efficiency at rated torque			%	-	-	-
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	10	20	30
Average backlash at no load	Type **S**		arcmin ≤	6	12	15
Weight without adapter plate			g	3250	4750	6250
Dimension L			mm	61.5	88.5	115.5
Dimension L1			mm	40	37.5	
Dimension A			mm	18.5	16	
Dimension B			mm	40	37.5	
Max. radial load	F_R	20 mm from shaft end	N	800		
Max. axial load	F_A		N	640		
Max. continuous rated speed at drive			min-¹	3000		
Max. intermittent rated speed at drive			min-¹	5000		
Temperature range			°C	-25 / +90		

PLANETARY GEARBOX GPL0120



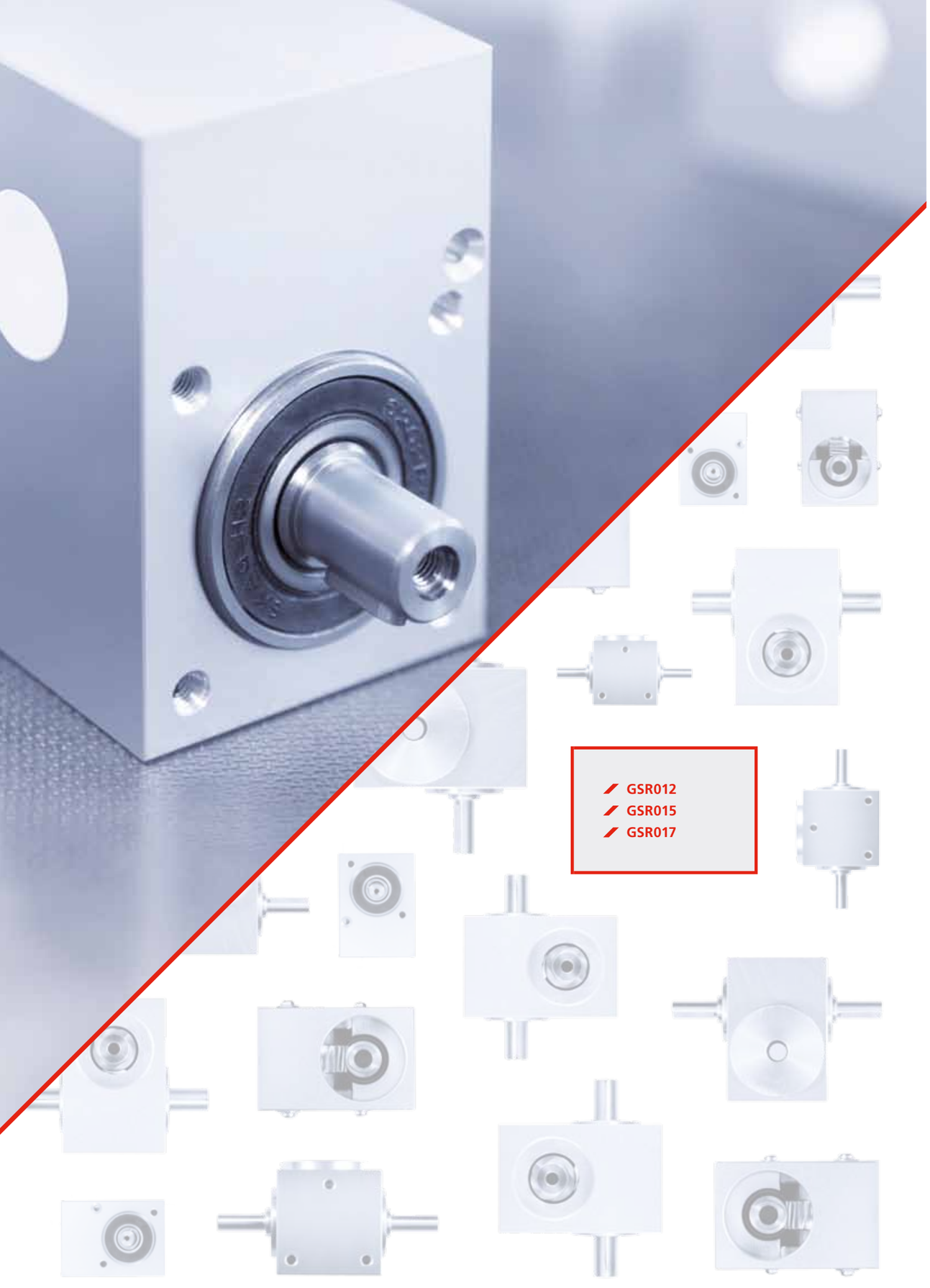


1-STAGE		2-STAGE		3-STAGE	
Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD	Ratio i:1	Max. motor shaft-øD
				49	19
		12.25	24	56	19
		14	19	64	19
		16	19	70	19
		20	19	80	19
3.5	24	24	19	100	19
4	19	25	14	120	19
5	14	30	14	144	19
6	10	36	10	180	14

Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof package, motor pinion, mounting screws, paper gasket and assembly instructions (adapter plate optional).

Customized versions also available for small quantities.

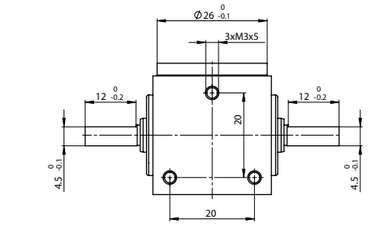
				1-STAGE	2-STAGE	3-STAGE
Rated torque continuous	Type Standard	Type **R**	Nm	25	130	350
Rated torque intermittent	Type Standard	Type **R**	Nm	50	250	600
Rated torque continuous	Type **V**	Type **S**	Nm	50	250	350
Rated torque intermittent	Type **V**	Type **S**	Nm	100	350	600
Max. efficiency at rated torque			%	-	-	-
Average backlash at no load	Type Standard	Type **V**	arcmin ≤	20	35	50
Average backlash at no load	Type **R**		arcmin ≤	10	20	30
Average backlash at no load	Type **S**		arcmin ≤	6	12	15
Weight without adapter plate			g	5000	7250	9500
Dimension L			mm	73	103	133
Dimension L1			mm	48	44.5	
Dimension A			mm	21.0	17.5	
Dimension B			mm	48	44.5	
Max. radial load	F_R	25 mm from shaft end	N	1500		
Max. axial load	F_A		N	1200		
Max. continuous rated speed at drive			min-¹	3000		
Max. intermittent rated speed at drive			min-¹	5000		
Temperature range			°C	-25 / +90		

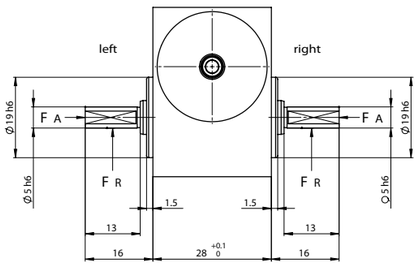


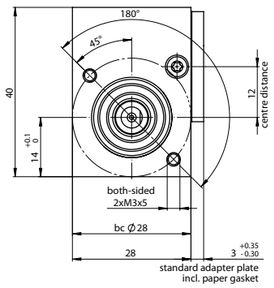
- GSR012
- GSR015
- GSR017

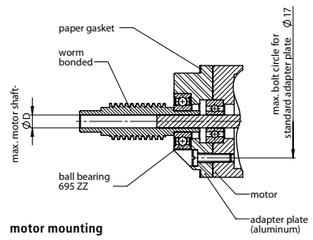
WORM GEARBOX GSR012

1-STAGE









motor mounting

Ratio i:1	Max. efficiency factor (%)
5	75
7	70
10	65
15	55
20	50
25	55
30	40
40	35
50	30
60	30

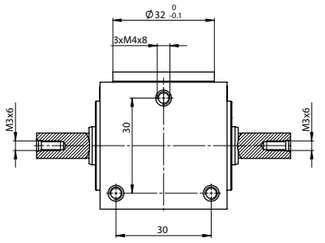
Standard scope of delivery Gearbox lubricated for duration of service life, dust-proof packaged, worm, mounting screws, paper gasket and assembly instructions (adapter plate optional).

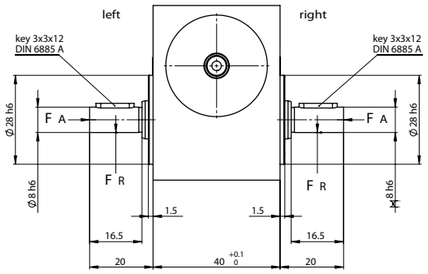
Customized versions also available for small quantities.

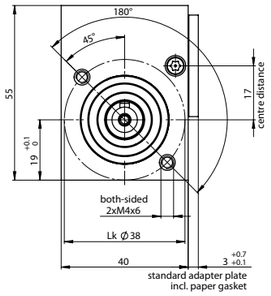
Rated torque continuous			Nm	1
Rated torque intermittent			Nm	1.5
Average backlash at no load	Type Standard		arcmin ≤	30
Average backlash at no load	Type **R**		arcmin ≤	15
Weight without adapter plate			g	140
Standard bore-øD worm			mm	3
Max. motor shaft-øD			mm	4
Max. radial load	F_R	6.5 mm from shaft end	N	50
Max. axial load	F_A		N	40
Max. continuous rated speed at drive			min^{-1}	4000
Max. intermittent rated speed at drive			min^{-1}	6000
Temperature range			°C	-25 / +90

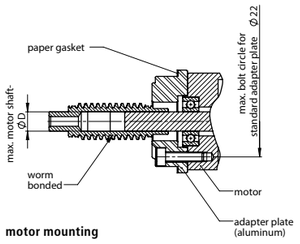
WORM GEARBOX GSR017

1-STAGE









motor mounting

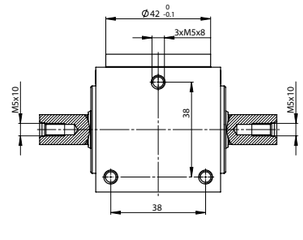
Standard scope of delivery	Gearbox lubricated for duration of service life, dust-proof packaged, worm, mounting screws, paper gasket and assembly instructions (adapter plate optional).			
Customized versions also available for small quantities.				

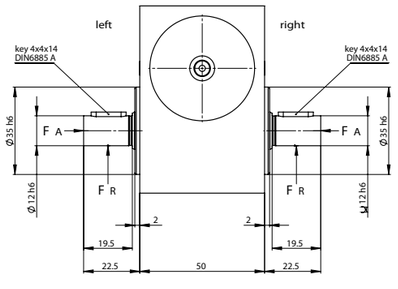
Ratio i:1	Max. efficiency factor (%)
5	75
7	70
10	65
15	55
20	50
25	55
30	40
40	35
50	30
60	30

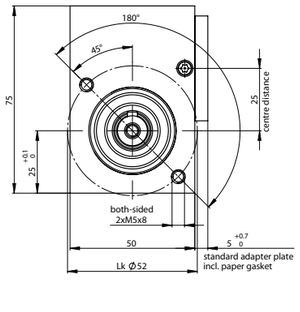
Rated torque continuous			Nm	2
Rated torque intermittent			Nm	3
Average backlash at no load	Type Standard		arcmin ≤	30
Average backlash at no load	Type **R**		arcmin ≤	15
Weight without adapter plate			g	300
Standard bore-øD worm			mm	6
Max. motor shaft-øD			mm	7
Max. radial load	F_R	8 mm from shaft end	N	100
Max. axial load	F_A		N	120
Max. continuous rated speed at drive			min-¹	4000
Max. intermittent rated speed at drive			min-¹	6000
Temperature range			°C	-25 / +90

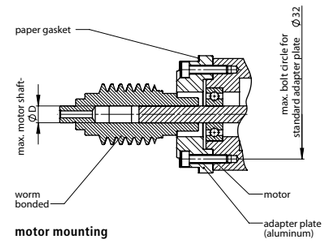
WORM GEARBOX GSR025

1-STAGE







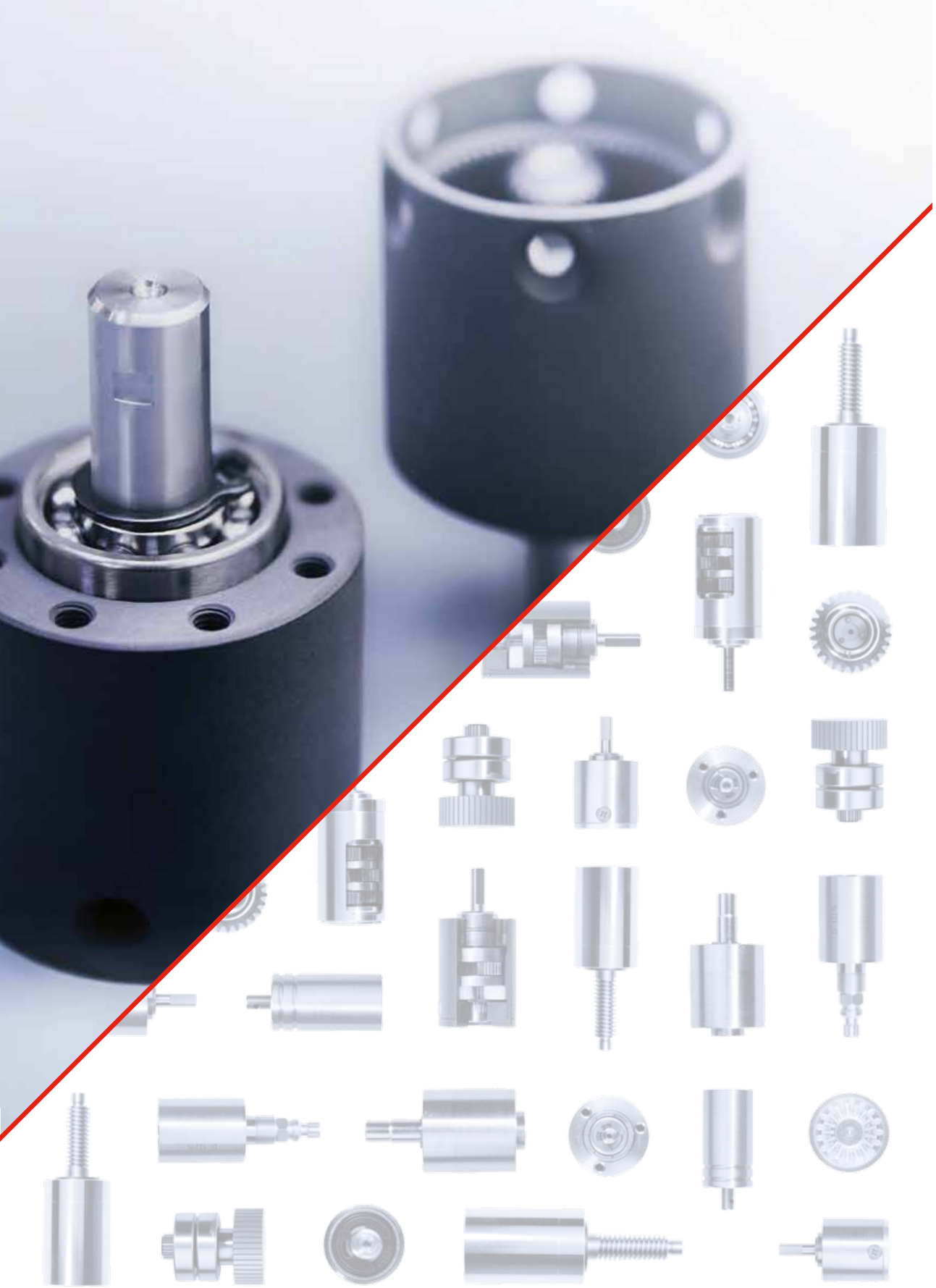


motor mounting

Standard scope of delivery	Gearbox lubricated for duration of service life, dust-proof packaged, worm, mounting screws, paper gasket and assembly instructions (adapter plate optional).			
Customized versions also available for small quantities.				

Ratio i:1	Max. efficiency factor (%)
5	75
7	70
10	65
15	55
20	50
25	55
30	40
40	35
50	30
60	30

Rated torque continuous			Nm	4
Rated torque intermittent			Nm	6
Average backlash at no load	Type Standard		arcmin ≤	30
Average backlash at no load	Type **R**		arcmin ≤	15
Weight without adapter plate			g	620
Standard bore-øD worm			mm	6
Max. motor shaft-øD			mm	8
Max. radial load	F_R	9.5 mm from shaft end	N	150
Max. axial load	F_A		N	200
Max. continuous rated speed at drive			min-¹	4000
Max. intermittent rated speed at drive			min-¹	6000
Temperature range			°C	-25 / +90



SPECIAL / CUSTOM GEARBOXES

Using standard designs as a starting point, we can engineer a custom built unit to meet unique requirements. Examples of such modifications include:

- Custom output / input shafts
- Stainless Steel
- High vacuum / high pressure
- Increased torque
- Increased service life
- Dry lubrication
- High / low temperature
- Withstand high radiation
- Custom gear ratio
- Autoclaveable
- Integrated gear stages
- Custom motor-gearbox coupling

More special and custom versions upon request

GYSIN precision gearboxes are manufactured in accordance with customers' specifications and requirements.

We have decades of experience designing and building unique gearboxes. As a result, we are confident that we have the expertise to manufacture the quality products that you require.

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