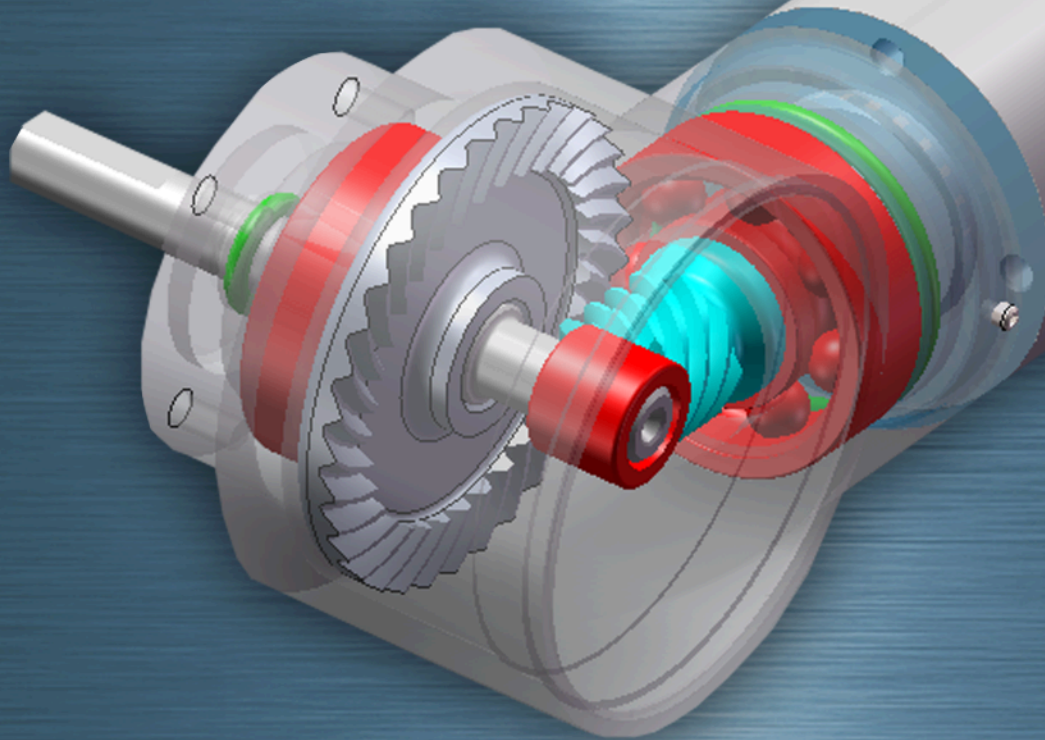


NEW



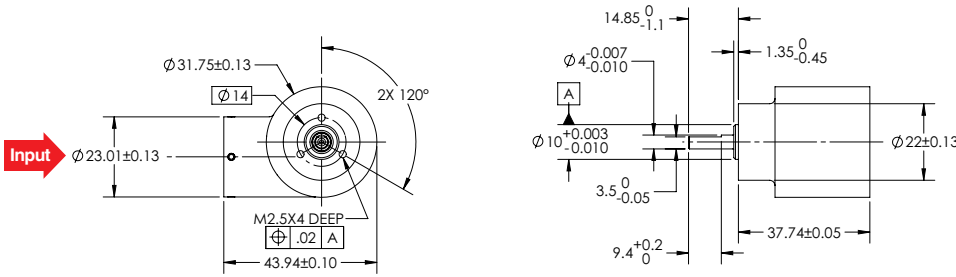
Why a right-angle Spiroid[®] gear?

Our gearhead will achieve maximum torque in minimum space.

- Mountable on a variety of maxon motors and gears
- Versions available:
 - Back-drivable (4.125:1 ratio)
 - Non-back drivable (31:1 ratio)
- 1 or 2 shaft configurations available
- Low backlash
- Up to 3:1 contact ratio
- Compact and lightweight
- Extremely high torque transmission capabilities
- High stiffness / low deflection with large applied loads
- Quiet operation
- Absolute output shaft position achievable with encoder mounting option

Please call us or visit our website for technical assistance
www.maxonmotorusa.com ■ 800-865-7540 ■ info@maxonmotorusa.com

Right Angle Gearhead $\varnothing 22$ mm, 0.5 - 0.7 Nm

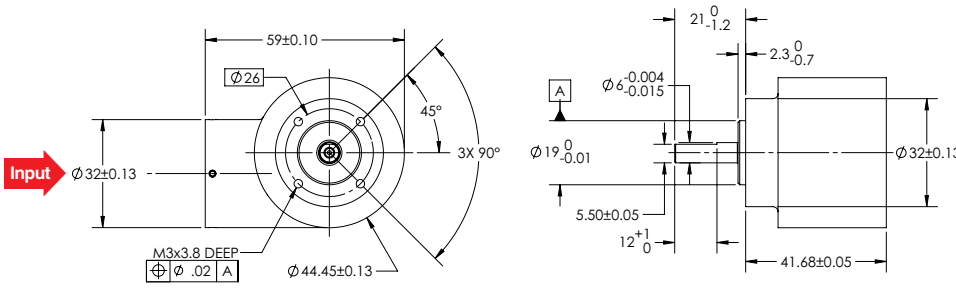


Technical Data	
Gearhead Type	Right Angle
Tooth Form	Helicon®
Output Shaft	Alloy Steel
Bearing Type	Sealed Ball
Output Shaft Radial Play 6 mm from Flange	0.060 mm
Output Shaft Axial Play	0.063 mm
Maximum Radial Load 6 mm from flange	100 N
Maximum Axial Load	100 N
Maximum Permissible force for Press Fit	100 N
Sense of rotation, drive to Output	≠
Maximum Recommended Input Speed	6000 rpm
Recommended Temperature Range	-40...+100°C

M 1:2

Gearhead Data	Article Number			
	450463	450464	450458	450460
Input speed > 1K rpm, oil	450469	450470	450465	450466
Input speed < 1K rpm, grease				
1 Reduction	4.125 : 1	31 : 1	4.125 : 1	31 : 1
2 Reduction absolute	$\frac{33}{8}$	$\frac{31}{1}$	$\frac{33}{8}$	$\frac{31}{1}$
3 Max. motor shaft diameter	mm 3 (D 2.5)	3 (D 2.5)	4 (D 3.5)	4 (D 3.5)
4 Number of stages	1	1	1	1
5 Max. continuous torque	Nm 0.54	0.71	0.54	0.71
6 Intermittently permissible torque at gear output	Nm 1.69	2.00	1.69	2.00
7 Max. efficiency	% 83	30	83	30
8 Weight	g 190	190	190	190
9 Average backlash no load	° 0.35	0.35	0.35	0.35
10 Mass inertia	gcm ² 17.3	17.3	17.3	17.3

Right Angle Gearhead $\varnothing 32$ mm, 1.8 - 2.4 Nm

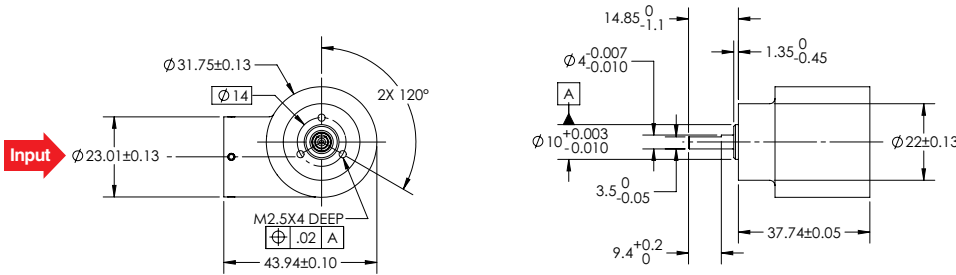


Technical Data	
Gearhead Type	Right Angle
Tooth Form	Helicon®
Output Shaft	Alloy Steel
Bearing Type	Sealed Ball
Output Shaft Radial Play 6 mm from Flange	0.060 mm
Output Shaft Axial Play	0.063 mm
Maximum Radial Load 6 mm from flange	140 N
Maximum Axial Load	140 N
Maximum Permissible force for Press Fit	140 N
Sense of rotation, drive to Output	≠
Maximum Recommended Input Speed	6000 rpm
Recommended Temperature Range	-40...+100°C

M 1:2

Gearhead Data	Article Number	
	450461	450462
Input speed > 1K rpm, oil	450467	450468
Input speed < 1K rpm, grease		
1 Reduction	4.125 : 1	31 : 1
2 Reduction absolute	$\frac{33}{8}$	$\frac{31}{1}$
3 Max. motor shaft diameter	mm 6 (D 5.5)	6 (D 5.5)
4 Number of stages	1	1
5 Max. continuous torque	Nm 1.81	2.37
6 Intermittently permissible torque at gear output	Nm 6.00	9.26
7 Max. efficiency	% 90	30
8 Weight	g 210	210
9 Average backlash no load	° 0.25	0.25
10 Mass inertia	gcm ² 53.7	53.7

Right Angle Gearhead $\varnothing 22$ mm, 0.5 - 0.7 Nm



Technical Data

Gearhead Type	Right Angle
Tooth Form	Helicon®
Output Shaft	Alloy Steel
Bearing Type	Sealed Ball
Output Shaft Radial Play 6 mm from Flange	0.060 mm
Output Shaft Axial Play	0.063 mm
Maximum Radial Load 6 mm from flange	100 N
Maximum Axial Load	100 N
Maximum Permissible force for Press Fit	100 N
Sense of rotation, drive to Output	≠
Maximum Recommended Input Speed	6000 rpm
Recommended Temperature Range	-40...+100°C

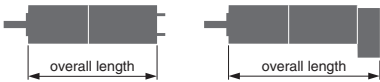
M 1:2

Article Number

Input speed > 1K rpm, oil
Input speed < 1K rpm, grease

450463	450464	450458	450460
450469	450470	450465	450466

Gearhead Data		Article Number			
		450463	450464	450458	450460
1	Reduction	4.125 : 1	31 : 1	4.125 : 1	31 : 1
2	Reduction absolute	$\frac{33}{8}$	$\frac{31}{1}$	$\frac{33}{8}$	$\frac{31}{1}$
3	Max. motor shaft diameter	mm 3 (D 2.5)	3 (D 2.5)	4 (D 3.5)	4 (D 3.5)
4	Number of stages	1	1	1	1
5	Max. continuous torque	Nm 0.54	0.71	0.54	0.71
6	Intermittently permissible torque at gear output	Nm 1.69	2.00	1.69	2.00
7	Max. efficiency	% 83	30	83	30
8	Weight	g 190	190	190	190
9	Average backlash no load	° 0.35	0.35	0.35	0.35
10	Mass inertia	gcm ² 17.3	17.3	17.3	17.3

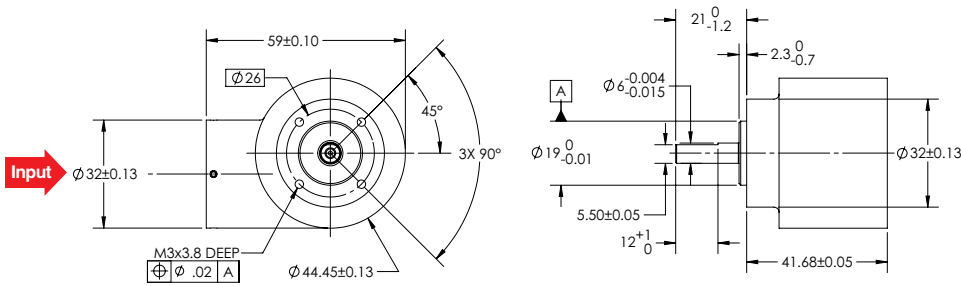


maxon Modular System

+ brushed motor (oil lube recommended)		Page				
RE 25 (10 W)		77	•	•		
RE 25 (20 W, short version)		78	•	•		
RE 25 (20 W, long version)		79	•	•		
RE 30** (60 W)		80			•	•
A-max 26 (4 W - 11 W)			•	•		
A-max 32 (15 W)		109/110			•	•
A-max 32 (20 W)		111/112			•	•
+ brushless motor (oil lube recommended)		Page				
EC 22 (100 W) brushless		151			•	•
EC 22 HD (80 W)		153			•	•
EC-max 22 (12 W)		166	•	•		
EC-max 22 (25 W)		167	•	•		
EC-max 30 (40 W)		168			•	•
EC-max 30 (60 W)		169			•	•
EC 32 flat (15 W)		188			•	•
EC 45 flat (30 W)		193			•	•
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EC 45 flat (30 W, IE)		195			•	•
EC 45 flat (50 W, IE)		196			•	•
EC 45 flat (70 W)		197			•	•
+ Gearboxes (grease lube recommended)		Page				
GP 22 A		224			•	•
GP 22 C		225			•	•

** shaft ground to 4 mm dia +3.5 mm height flat

Right Angle Gearhead $\varnothing 32$ mm, 1.8 - 2.4 Nm

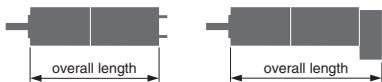


Technical Data

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Maximum Axial Load	140 N
Maximum Permissible force for Press Fit	140 N
Sense of rotation, drive to Output	≠
Maximum Recommended Input Speed	6000 rpm
Recommended Temperature Range	-40...+100°C

M 1:2

Gearhead Data	Article Number	
	450461	450462
Input speed > 1K rpm, oil	450467	450468
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1 Reduction	4.125 : 1	31 : 1
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8 Weight	g 210	210
9 Average backlash no load	° 0.25	0.25
10 Mass inertia	gcm ² 53.7	53.7



maxon Modular System

+ brushed motor (oil lube recommended)		Page		
RE 35 (90 W)		81	•	•
RE 40 (150 W)		82	•	•
+ brushless motor (oil lube recommended)		Page		
EC 40 (170 W)		157	•	•
ECmax 40 (70 W)		170	•	•
EC-max 40 (120 W)		171	•	•
EC-i 40 (50 W)		190	•	•
EC-i 40 (70 W)		191	•	•
+ Gearboxes (grease lube recommended)		Page		
GP 32 A		235	•	•
GP 32 C		237	•	•