

## Your configured drive

Part number\*: B75D3C441463 Revision 1

**maxon motor**

**driven by precision**

Motor - DCX22S GB KL 12V  
Planetary gearhead - GPX22HP 231:1

maxon motor worldwide  
[http://www.maxonmotor.com/maxon/view/content/contact\\_page](http://www.maxonmotor.com/maxon/view/content/contact_page)

E-Mail: [e-shop@maxonmotor.com](mailto:e-shop@maxonmotor.com)  
Internet: [www.maxonmotor.com](http://www.maxonmotor.com)

General Terms and Conditions: [http://www.maxonmotor.com/maxon/view/content/terms\\_and\\_conditions\\_page](http://www.maxonmotor.com/maxon/view/content/terms_and_conditions_page)

### Interactive 3D model

Click on the icon to activate your 3D model



Your configuration can be viewed here:

<http://www.maxonmotor.ch/maxon/view/configurator/?ConfigID=B75D3C441463>

\*If the link doesn't work, you can open your configuration with the part number from the catalog.

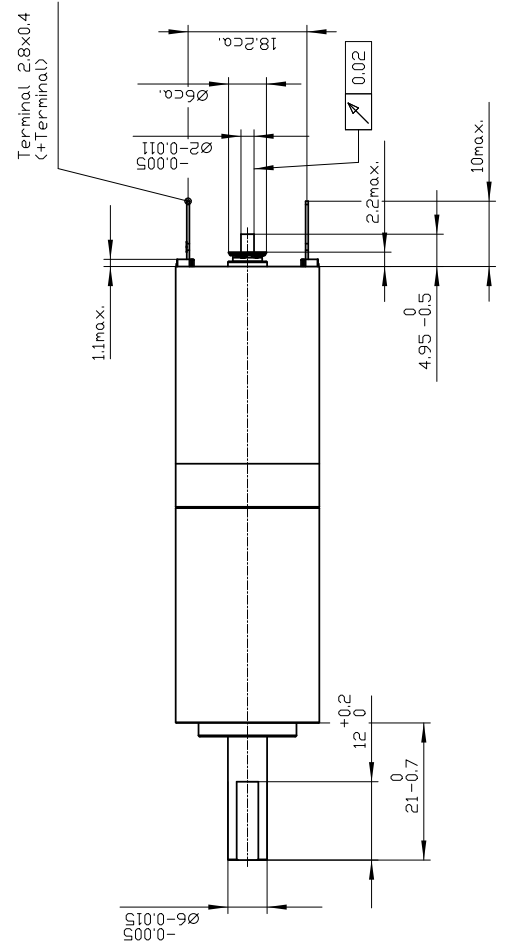
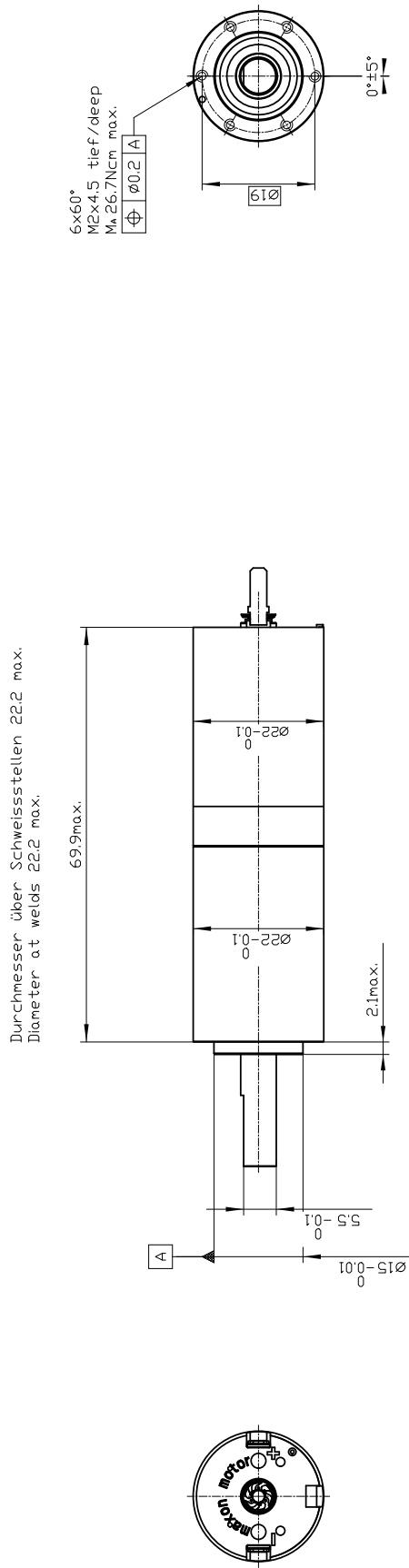
### Attachments / CAD files

Please double click with left mouse button on a pushpin symbol to open a file. You could also save a file when you click the symbol with the right mouse button.

B75D3C441463.stp (STP AP 214)

**Motor - DCX22S GB KL 12V  
Planetary gearhead - GPX22HP 231:1**

Drawings are not to scale!



## Summary of your selected configuration

Motor - DCX22S GB KL 12V  
Planetary gearhead - GPX22HP 231:1

Total weight of the drive: 149 g

### Motor: DCX22S GB KL 12V

Commutation	Graphite brushes
Nominal voltage	12 V
Motor bearings	Preloaded ball bearing

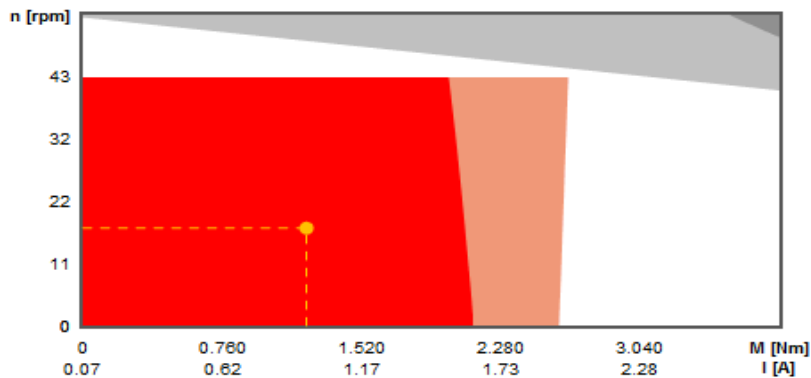
### Labeling

Labeling	Your own text
Your text	12 v 231 - 1

### Gearhead GPX22HP 231:1

Gearhead type	High Power
Reduction	231:1
Number of stages	3
Centering depth	2.1

## Operating range



- Continuous operation range
- Short-term operating range
- Continuous operation range at reduced thermal resistance  $R_{th2}$  50%
- Not recommended range

## Motor - DCX22S GB KL 12V



### Values at nominal voltage

Nominal voltage	12 V
No load speed	12400 rpm
No load current	71.7 mA
Nominal speed	10700 rpm
Nominal torque (max. continuous torque)	14.6 mNm
Nominal current (max. continuous current)	1.65 A
Stall torque	108 mNm
Stall current	11.8 A
Max. efficiency	85.2 %

### Characteristics

Max. output power	22.7 W
Terminal resistance	1.02 Ohm
Terminal inductance	0.0576 mH
Torque constant	9.18 mNm/A
Speed constant	1040 rpm/V
Speed/torque gradient	116 rpm/mNm
Mechanical time constant	6.12 ms
Rotor inertia	5.05 gcm <sup>2</sup>

### Thermal data

Thermal resistance housing-ambient	16 K/W
Thermal resistance winding-housing	7 K/W
Thermal time constant of the winding	18.1 s
Thermal time constant of the motor	528 s
Ambient temperature	-40..100 °C
Max. winding temperature	125 °C

**Mechanical data**

Max. permissible speed	18000 rpm
Min. axial play	0 mm
Max. axial play	0.1 mm
Radial backlash	0.02
Max. axial load (dynamic)	2.5 N
Max. force for press fits (static)	30 N
Max. radial load 5 mm from flange	16 N

**Further specifications**

Number of pole pairs	1
Number of commutator segments	9
Weight	58.7 g
Number of autoclave cycles	0
Typical noise level	41 dBA

Information about motor data: [http://www.maxonmotor.com/medias/CMS\\_Downloads/DIVERSES/12\\_137\\_EN.pdf](http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/12_137_EN.pdf)

## Planetary gearhead - GPX22HP 231:1



### Gearhead data

Reduction	231:1
Absolute reduction	300564/1300
Max. transmittable power (continuous)	15 W
Max. transmittable power (intermittent)	20 W
Number of stages	3
Max. continuous torque	3.3 Nm
Max. intermittent torque	3.8 Nm
Direction of rotation, drive to output	=
Max. efficiency	65 %
Weight	90 g
Average backlash no-load	1.2 degree
Mass inertia	1.191 gcm <sup>2</sup>
Gearhead length	38.2 mm

### Technical data

Output shaft bearing	Ball bearings
Gearhead type	GPX
Max. radial play	0.1 mm
mm from flange	10 mm
Min. axial play	0 mm
Max. axial play	0.2 mm
Max. permissible radial load	150 N
mm from flange	10 mm
Max. axial load (dynamic)	80 N
Max. force for press fits	120 N
Max. continuous input speed	10000 rpm
Max. intermittent input speed	12500 rpm
Min. recommended temperature range	-40..100 °C
Number of autoclave cycles	0

Information about gearhead data: [http://www.maxonmotor.com/medias/CMS\\_Downloads/DIVERSES/12\\_203\\_EN.pdf](http://www.maxonmotor.com/medias/CMS_Downloads/DIVERSES/12_203_EN.pdf)