

## Your configured drive

Part number\*: B7744E74073C Revision 1

**maxon motor**

**driven by precision**

Motor - DC-max16S EB SL 24V  
Planetary gearhead - GPX16 C 21:1

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)

After an order is placed at the e-shop, the product is manufactured in Switzerland and delivered after 11 working days.  
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.co.uk/maxon/view/configurator/?ConfigID=B7744E74073C>

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

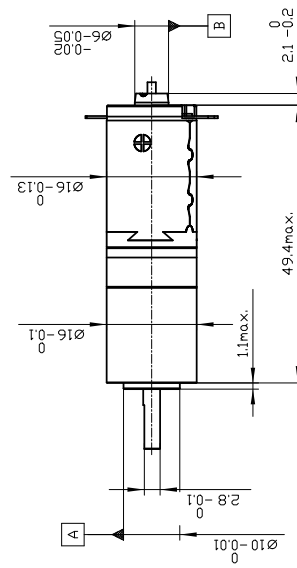
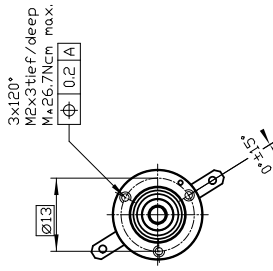
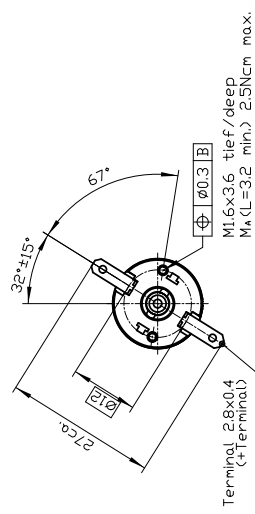
### Attachments / CAD files

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.

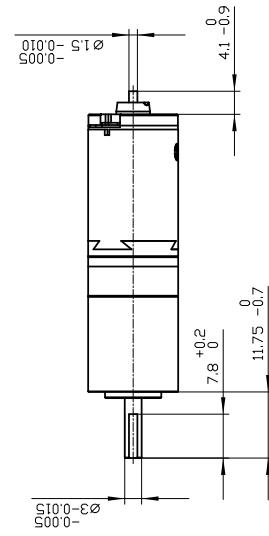
B7744E74073C.stp (STP AP 214)

**Motor - DC-max16S EB SL 24V  
Planetary gearhead - GPX16 C 21:1**

Drawings are not to scale!



Durchmesser über Schweisstellen 16,2 max.  
Diameter at welds 16,2 max.



## Summary of your selected configuration

**Motor - DC-max16S EB SL 24V**  
**Planetary gearhead - GPX16 C 21:1**

Total weight of the drive: 45 g

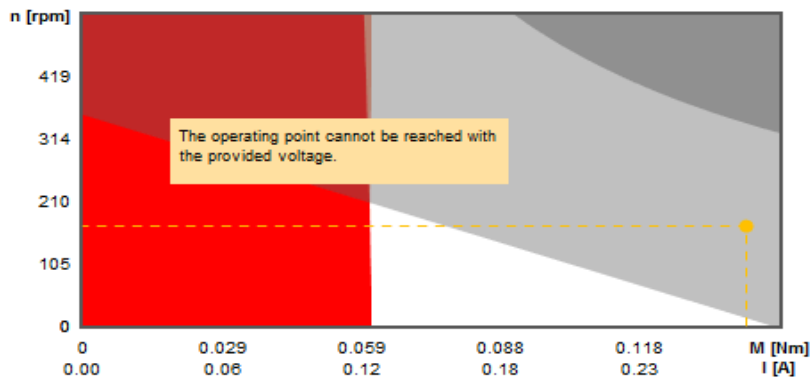
### Motor: DC-max16S EB SL 24V

Commutation	Precious metal brushes
Nominal voltage	24 V
Motor bearings	Sintered sleeve bearings
Spark suppression (CLL)	with CLL

### Gearhead GPX16 C 21:1

Gearhead type	Ceramic version
Reduction	21:1
Number of stages	2

## Operating range



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

## Motor - DC-max16S EB SL 24V



### Values at nominal voltage

Nominal voltage	24 V
No load speed	7470 rpm
No load current	3.4 mA
Nominal speed	4210 rpm
Nominal torque (max. continuous torque)	3.8 mNm
Nominal current (max. continuous current)	0.128 A
Stall torque	8.75 mNm
Stall current	0.289 A
Max. efficiency	79.8 %

### Characteristics

Max. output power	4.07 W
Terminal resistance	83.2 Ohm
Terminal inductance	2.49 mH
Torque constant	30.3 mNm/A
Speed constant	315 rpm/V
Speed/torque gradient	864 rpm/mNm
Mechanical time constant	9 ms
Rotor inertia	0.994 gcm <sup>2</sup>

### Thermal data

Thermal resistance housing-ambient	29.8 K/W
Thermal resistance winding-housing	5.5 K/W
Thermal time constant of the winding	4.81 s
Thermal time constant of the motor	288 s
Ambient temperature	-30..65 °C
Max. winding temperature	85 °C

**Mechanical data**

Max. permissible speed	11000 rpm
Min. axial play	0.05 mm
Max. axial play	0.15 mm
Radial backlash	0.012
Max. axial load (dynamic)	0.8 N
Max. force for press fits (static)	35 N
Max. radial load 5 mm from flange	1.4 N

**Further specifications**

Number of pole pairs	1
Number of commutator segments	7
Weight	19.8 g
Number of autoclave cycles	0
Typical noise level	36 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 - GPX16 C 21:1



### Gearhead data

Reduction	21:1
Absolute reduction	5175/247
Max. transmittable power (continuous)	3.8 W
Max. transmittable power (intermittent)	5 W
Number of stages	2
Max. continuous torque	0.33 Nm
Max. intermittent torque	0.42 Nm
Direction of rotation, drive to output	=
Max. efficiency	80 %
Weight	25 g
Average backlash no-load	1.2 degree
Mass inertia	0.11 gcm <sup>2</sup>
Gearhead length	20.8 mm

### Technical data

Output shaft bearing	KL
Gearhead type	GPX
Max. radial play	0.1 mm
mm from flange	5 mm
Min. axial play	0 mm
Max. axial play	0.1 mm
Max. permissible radial load	45 N
mm from flange	5 mm
Max. axial load (dynamic)	20 N
Max. force for press fits	60 N
Max. continuous input speed	14000 rpm
Max. intermittent input speed	17500 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)