

## Your configured drive

Part number\*: B75D3E107412 Revision 1

**maxon motor**

**driven by precision**

Motor - DCX16L GB KL 24V  
Planetary gearhead - GPX16HP 21:1

maxon motor worldwide  
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### Interactive 3D model

Click on the icon to activate your 3D model



Your configuration can be viewed here:

<http://www.maxonmotor.com/maxon/view/configurator/?ConfigID=B75D3E107412>

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

### Attachments / CAD files

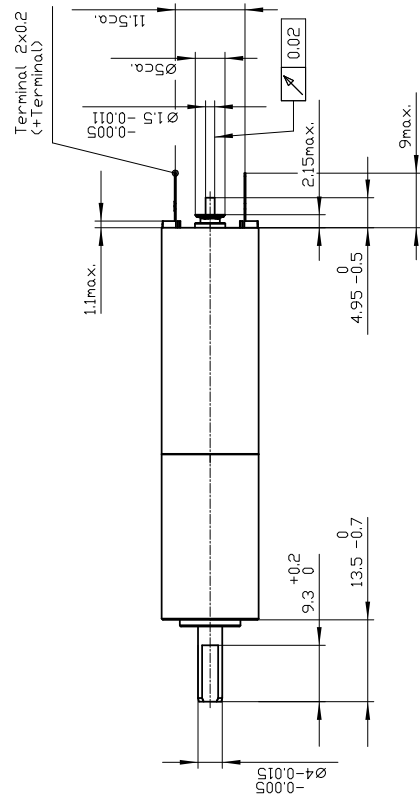
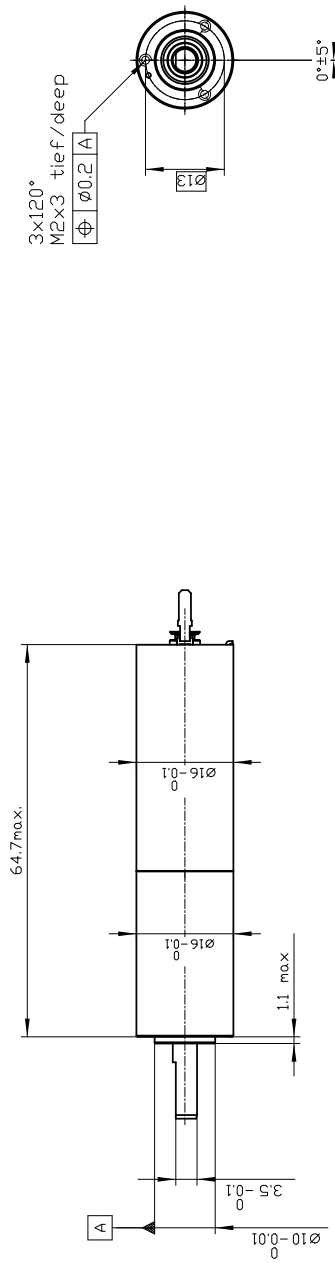
Please double click with left mouse button on a pushpin symbol to open a file. You could also save a file when you click the symbol with the right mouse button.

B75D3E107412.stp (STP AP 214)

**Motor - DCX16L GB KL 24V  
Planetary gearhead - GPX16HP 21:1**

Drawings are not to scale!

Durchmesser über Schweißstellen 16.2 max.  
Diameter at welds 16.2 max.



Beschriftung  
Labeling  
24 v 21 - 1

## Summary of your selected configuration

**Motor - DCX16L GB KL 24V**  
**Planetary gearhead - GPX16HP 21:1**

Total weight of the drive: 72 g

### Motor: DCX16L GB KL 24V

Commutation	Graphite brushes
Nominal voltage	24 V
Motor bearings	Preloaded ball bearing

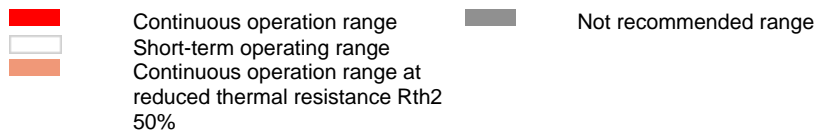
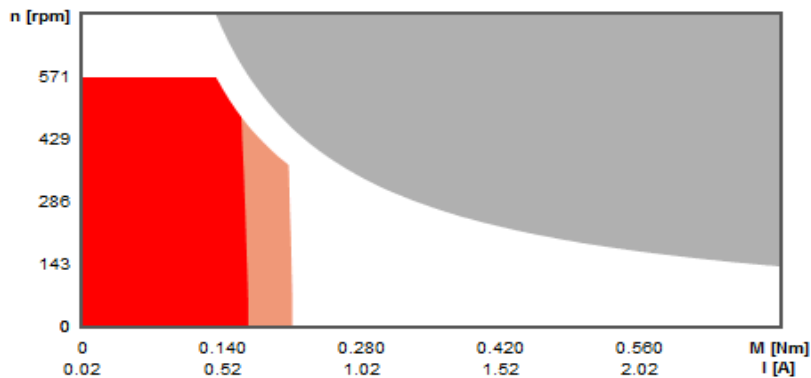
### Labeling

Labeling	Your own text
Your text	24 v 21 - 1

### Gearhead GPX16HP 21:1

Gearhead type	High Power
Reduction	21:1
Number of stages	2

## Operating range



## Motor - DCX16L GB KL 24V



### Values at nominal voltage

Nominal voltage	24 V
No load speed	12800 rpm
No load current	19.8 mA
Nominal speed	10600 rpm
Nominal torque (max. continuous torque)	11.2 mNm
Nominal current (max. continuous current)	0.649 A
Stall torque	68.5 mNm
Stall current	3.86 A
Max. efficiency	85.7 %

### Characteristics

Max. output power	17.2 W
Terminal resistance	6.22 Ohm
Terminal inductance	0.411 mH
Torque constant	17.8 mNm/A
Speed constant	537 rpm/V
Speed/torque gradient	188 rpm/mNm
Mechanical time constant	4.48 ms
Rotor inertia	2.28 gcm <sup>2</sup>

### Thermal data

Thermal resistance housing-ambient	17.9 K/W
Thermal resistance winding-housing	7.21 K/W
Thermal time constant of the winding	17.2 s
Thermal time constant of the motor	294 s
Ambient temperature	-40..100 °C

Max. winding temperature 125 °C

#### Mechanical data

Max. permissible speed	17000 rpm
Min. axial play	0 mm
Max. axial play	0.1 mm
Radial backlash	0.015
Max. axial load (dynamic)	0.8 N
Max. force for press fits (static)	18 N
Max. radial load	10 N

#### Further specifications

Number of pole pairs	1
Number of commutator segments	7
Weight	40 g
Number of autoclave cycles	0
Typical noise level	40 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 - GPX16HP 21:1



### Gearhead data

Reduction	21:1
Absolute reduction	5175/247
Max. transmittable power (continuous)	8 W
Max. transmittable power (intermittent)	10 W
Number of stages	2
Max. continuous torque	0.55 Nm
Max. intermittent torque	0.7 Nm
Direction of rotation, drive to output	=
Max. efficiency	75 %
Weight	32 g
Average backlash no-load	1.2 degree
Mass inertia	0.209 gcm <sup>2</sup>
Gearhead length	25.9 mm

### Technical data

Output shaft bearing	Ball bearings
Gearhead type	GPX
Max. radial backlash	0.1 mm
mm from flange	5 mm
Min. axial play	0 mm
Max. axial play	0.1 mm
Max. permissible radial load	80 N
mm from flange	5 mm
Max. axial load (dynamic)	30 N
Max. force for press fits	100 N
Recommended motor speed	12000 rpm
Max. intermittent input speed	15000 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)