

## MX\_079 – 9000 – Cost effective Linear Stage

### Rack-Pinion Linear Stage



#### **MX\_079 – 9000 – 12.5mm Linear Stage**

Long life recirculating linear ball bearing guides are distinguished by a beneficial combination of high load capacity, lifetime, maintenance-free operation, and guiding accuracy. This makes the MX\_079-9000 family an attractive solution for cost effective precision industrial applications.

#### **DC Motor with high resolution rotary encoder**

#### **Fields of application**

Industry and research microscopy, optical devices.

- Travel range 12.5 mm
- Max Speed to 10 mm/s
- Bidirectional repeatability to 10 $\mu$ m
- Vertical or horizontal use
- Long life recirculating linear ball bearing guides

## General Specifications

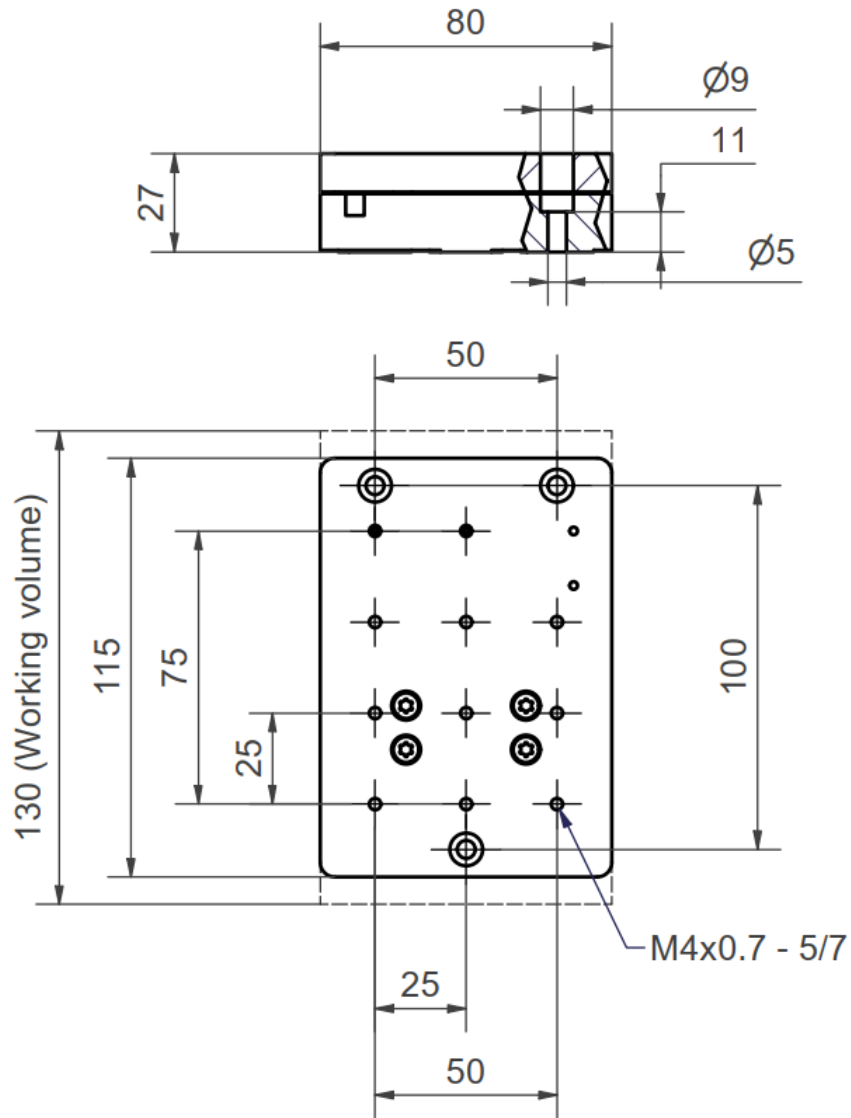
	MX_079-9000 - 12.5			Unit	Tolerances
<b>Motion and position</b>					
Active axis	X (Z with gravity compensation)				
Travel range	12.5			mm	
Integrated sensor	Rotary encoder				
Sensor resolution approx..	60			nm	
Min. incremental motion	1			µm	Typ.
Unidirectional repeatability	3			µm	
Bidirectional repeatability	10			µm	Typ.
Pitch	100			µrad	Typ.
Yaw	100			µrad	Typ.
Horizontal Straightness	±3			µm	Typ.
Vertical Straightness	±2			µm	Typ.
Max Speed	10			mm/s	
<b>Mechanical properties</b>					
Load capacity in Z	10			N	
<b>Drive properties</b>					
Drive type	DC motor, Gearhead 150:1, 1024 imp/rev – line drive				
Nominal voltage	24			V	
Nominal current	0.143			A	
Stall current	0.289			A	
<b>Miscellaneous</b>					
Housing material	Aluminium black anodized				
Operating temperature	18-28			°C	
Humidity	20-80%				

**Mecartex is a cutting-edge company operating in the field of high precision applications.**  
 The company, founded in early 2002 offer micro-positioning devices with high dynamics and precision and base solutions with motion control.

**Customized solutions & manufacturing**  
 Mecartex provides innovative solutions for very high precision applications, offering complete support from development through production while maintaining a short time-to-market.

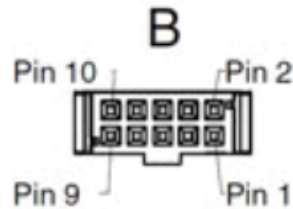
**Flexures technology**  
 Mecartex offers a unique expertise in flexures. This technology enables extremely accurate movements and has numerous advantages like high reliability, frictionless, contamination proof or cleanliness.

**Mechanical Interface – MX\_079-9000-12.5**



## Electrical Interface - MX\_079-9000-12.5

D-Sub	Description
1	Switch GND
2	
3	
4	Switch VDD +5V
5	Mot +
6	
7	Switch NEG
8	Switch POS
9	Mot -



2.54 mm 10-pol	Description
1	NC
2	VCC
3	GND
4	NC
5	Channel A\
6	Channel A
7	Channel B\
8	Channel B
9	Channel I\
10	Channel I

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