



# LARA

**Lightweight Agile  
Robotic Assistant**

## Data sheet

**Combining lightweight design and industrial performance with an intuitive user interface.**

LARA, the Lightweight Agile Robotic Assistant, is a six-degree-of-freedom collaborative robot that combines the agility of lightweight design with industrial performance. With unmatched speed, precision and protection, LARA bridges the gap between the world of collaborative and industrial robots. This way, LARA allows you to automate any production process in a cost-efficient way. Its intuitive user interface enables anyone to create programs for LARA, easily automating simple and repetitive tasks in any production environment.

Specifications	LARA 3	LARA 5	LARA 8	LARA 10
<b>Payload</b>	3 kg	5 kg	8 kg	10 kg
<b>Reach</b>	590 mm	800 mm	1300 mm	1000 mm
<b>Degrees of Freedom</b>	6 rotary joints	6 rotary joints	6 rotary joints	6 rotary joints
<b>Weight</b>	18 kg	26 kg	48 kg	45 kg
<b>Robot mounting</b>	any orientation	any orientation	any orientation	any orientation
<b>IP classification</b>	IP66	IP66	IP66	IP66
<b>Ambient working temperature</b>	0 °C–50 °C	0 °C–50 °C	0 °C–50 °C	0 °C–50 °C
<b>Data &amp; power cables</b>	complete inner harness	complete inner harness	complete inner harness	complete inner harness
<b>Footprint base</b>	Ø 156 mm	Ø 156 mm	Ø 200 mm	Ø 200 mm
<b>Tool connector type</b>	M12 12-pole	M12 12-pole	M12 12-pole	M12 12-pole
<b>Status indicator</b>	RGB LED on flange	RGB LED on flange	RGB LED on flange	RGB LED on flange
<b>Tgt. Perf. Level</b>	PLd Cat.3 / SIL3	PLd Cat.3 / SIL3	PLd Cat.3 / SIL3	PLd Cat.3 / SIL3
<b>Repeatability</b>	± 0.02 mm	± 0.02 mm	± 0.02 mm	± 0.02 mm

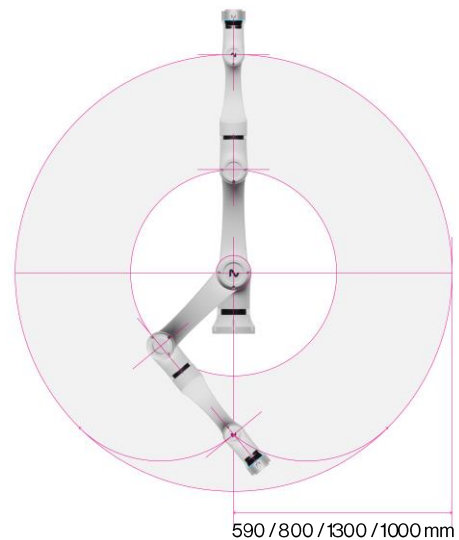
## Movement

Axis	Working angles		Maximum Speed	
	LARA 3/5/8/10	LARA 3	LARA 5	LARA 8/10
A1	± 180°	180 °/s	170°/s	130°/s
A2	± 135°	180 °/s	170°/s	130°/s
A3	± 150°	180 °/s	180 °/s	150°/s
A4	± 180°	180 °/s	180 °/s	150°/s
A5	± 180°	200°/s	200°/s	180°/s
A6	± 360° (opt.)	200°/s	200°/s	180°/s

\*Maximum factory speed for all axes is 90°/s. Activation possible on request. Exceeding 90°/s can have a negative impact on the lifespan of the axes.

## TCP Connector Flange

Hole pattern	DIN ISO 9409-1-50-4-M6
GPIO	3x digital in, 3x digital out, 2x analog in
I/O port	M12 12-pin-A-M / IEC 61076-2-101
I/O power supply	24V, max. 1000mA
Electrical interfaces	GPIO, Modbus RTU, 24V PSU
Control functions	2 programmable buttons on flange



## Software & Controller

Motion controller	Real-Time NR-Motion Master
Software interfaces	NeuraPy API
Safety architecture	Safe Master
Safety features	Safe position, speed, torque, limits, I/Os

## Programming features

Smart GUI	Neura easy programming interface
Fast programming	2 programmable buttons on flange, ZeroG, path recording
Human-robot interaction	GUI, force-feedback, LED indicator on flange

### Control box (NRLCC)

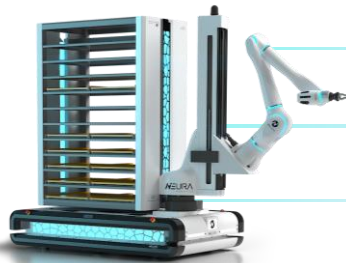
<b>Dimensions</b>	536 mm x 470 mm x 243 mm
<b>Weight</b>	20 kg
<b>Power supply</b>	100-240 VAC, 50/60 Hz, max.1.5 kW
<b>Interfaces</b>	8x GPIO, Modbus TCP, Ethernet IP, USB 3.0, Safe I/Os

### Tech pendant (NRLTP)

<b>Dimensions</b>	258 mm x 239 mm x 133 mm
<b>Resolution</b>	2560 x 1600 px
<b>Weight</b>	1.5 kg (without cable) 2.5 kg (incl. 5 m cable)
<b>Cable length</b>	5 m

Contact us to learn more about MAV+

## Mobile manipulator solution **MAV+**

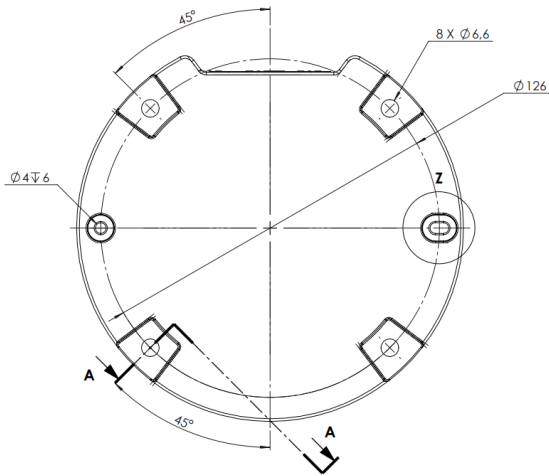


Combination with  
MAiRA or LARA

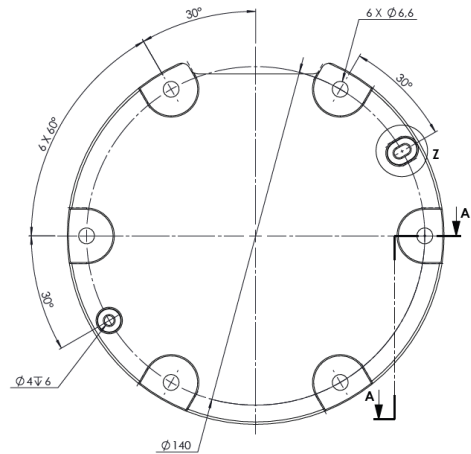
Flexible rotating axis

Pallet-sized shelf

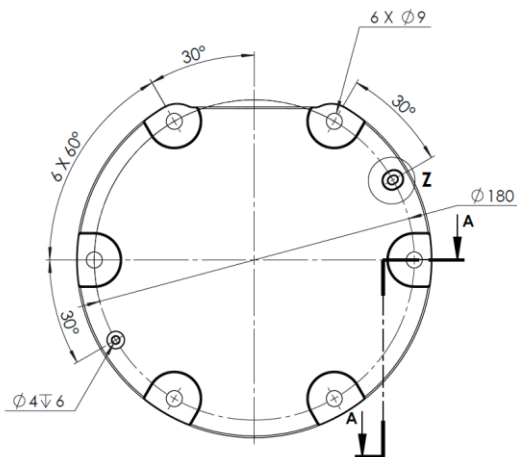
### Hole pattern of robot base LARA 3



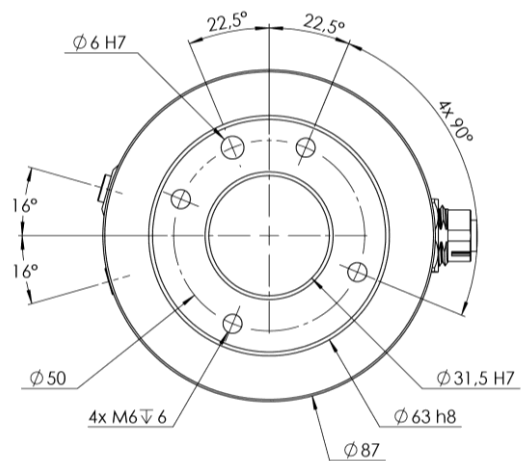
### Hole pattern of robot base LARA 5



### Hole pattern of robot base LARA 8 & 10



### Hole pattern of TCP flange



### NEURA Robotics GmbH

Gutenbergstraße 44  
72555 Metzingen | Germany  
Phone: +49 (0) 7123 87970 0  
E-Mail: info@neura-robotics.com  
www.neura-robotics.com

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