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TECHNICAL SPECIFICATIONS

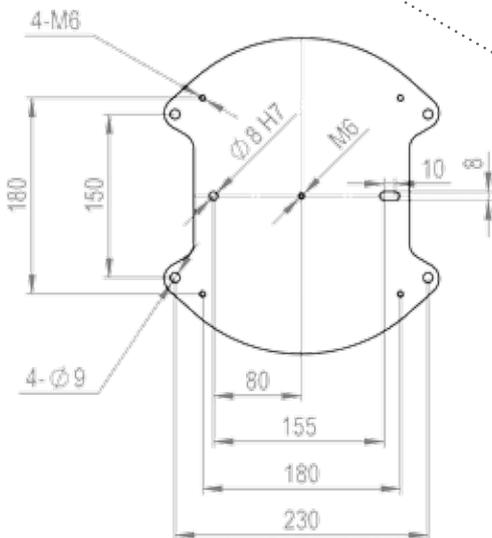
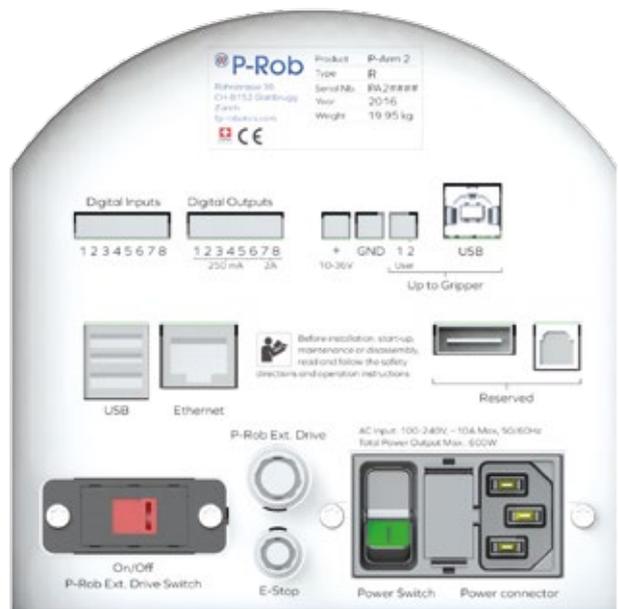
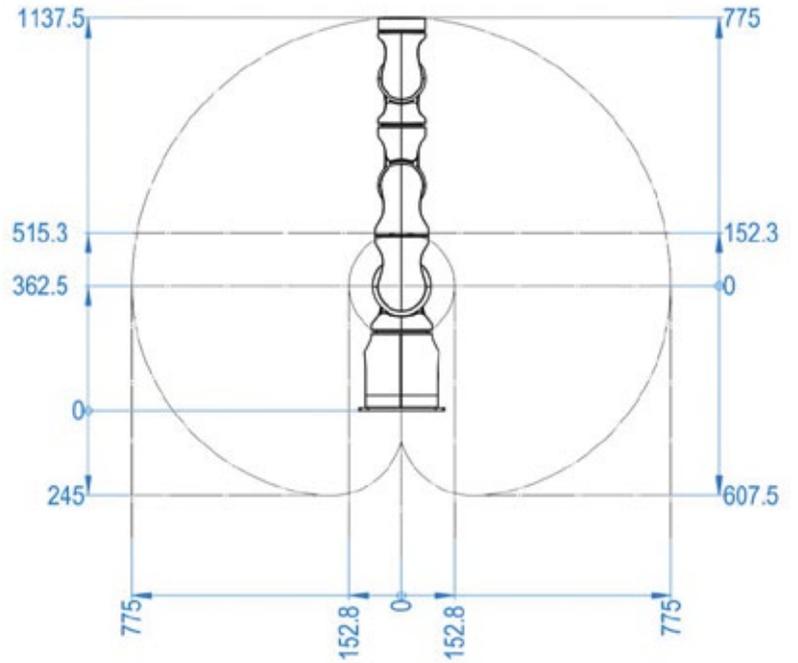
# P-Arm<sup>®</sup> 2R

6-axis collaborative and  
lightweight robot arm

# Technical Data

<b>Weight</b>	20 kg					
<b>Payload</b>	3 kg					
<b>Footprint</b>	290 mm x 250 mm					
<b>Mounting position</b>	Floor, table, wall, ceiling, linear axis, mobile platform					
<b>Height</b>	1137.5 mm					
<b>Reach</b>	775 mm					
<b>Performance</b>	<b>Joint 1</b>	<b>Joint 2</b>	<b>Joint 3</b>	<b>Joint 4</b>	<b>Joint 5</b>	<b>Joint 6</b>
<b>Working range</b>	±140°	±110°	±115°	±162°	±115°	±162°
<b>Max. velocity</b>	100 °/s	100 °/s	140 °/s	160 °/s	160 °/s	160 °/s
<b>Max. acceleration</b>	150 °/s <sup>2</sup>	150 °/s <sup>2</sup>	250 °/s <sup>2</sup>	200 °/s <sup>2</sup>	200 °/s <sup>2</sup>	500 °/s <sup>2</sup>
<b>Position repeatability</b>	±0.1mm					
<b>Controller</b>	Embedded PC and distributed controller in each joint using CAN2.0b					
<b>Motors and gears</b>	Maxon Brushless motors and Harmonic Drive gearboxes					
<b>Skeleton and covers</b>	Aluminum skeleton, polyamide stiff cover, Polyether foam and rubber, oil resistant and antimicrobial vinyl soft cover					
<b>Power input</b>	AC 100-240V, ~10A max., 50/60 Hz (DC input 24-48V, 12.5A on request)					
<b>Integrated power supply</b>	48V, 12.5A max. (24V, 36V supply optional)					
<b>Power consumption</b>	Approx. 350W using a typical program					
<b>Communication</b>	TCP/IP 100 Mbit: IEEE 802.3u, Ethernet socket & Modbus TCP (WIFI optional)					
<b>Programming</b>	Web browser interface using Python programming Web services (XML RPC, ROS package, HTML5, Javascript)					
<b>Temperature</b>	P-Arm can work in a temperature range of 0-50°C					
<b>Noise</b>	Approx. 65 dB using a typical program					
<b>IP classification</b>	IP40 (IP54 with protection cover on request)					
<b>Hardware interface</b>						
<b>I/O</b>	8 digital inputs 10-36V 8 digital outputs 10-36V (2x2A, 6x250mA)					
<b>User lines</b>	2 wires up to end effector, 0-48V, 1A max.					
<b>USB</b>	1 USB2 up to end effector, 2 USB2 to Embedded PC					
<b>P-Rob Ext. Drive</b>	P-Rob optional feature on request					

# Product overview



# Interactive Robots, Made Easy

F&P Robotics AG develops and produces innovative lightweight robot manipulators that cooperate with humans in their professional environment. The company focuses on reducing complexity in automation for the benefit of small, medium and large enterprises by providing all in one robotic solutions.

## Investment with Short Payback Period

F&P robots and grippers are deployed in new as well as in existing working environments. Ready-to-use solutions including sensor-equipped end tools contribute to the reduction of costs in flexible automation. The payback period is typically 6 to 12 months. F&P robots are easy to redeploy or adapt to new tasks, so they fit to ever changing business requirements.

## Intrinsically Safe and Context Aware

The design of the F&P robots is based on a consistent safety concept that enables direct human-robot collaboration. Soft materials, limited forces and collision detection allow operations without additional protection devices. As working environments are more and more dynamic, robots are equipped with Artificial Intelligence algorithms. They generate alternative solutions when the context changes or exceptions occur.

## Swiss Company, International Talents



F&P Robotics AG is a Swiss company headquartered in Zurich, Switzerland and leverages very strong professional and academic worldwide networks. The company combines experienced high-tech and robotics professionals with a young team of international talents. Together we strive for continuous product innovations that create unique value for our customers.



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