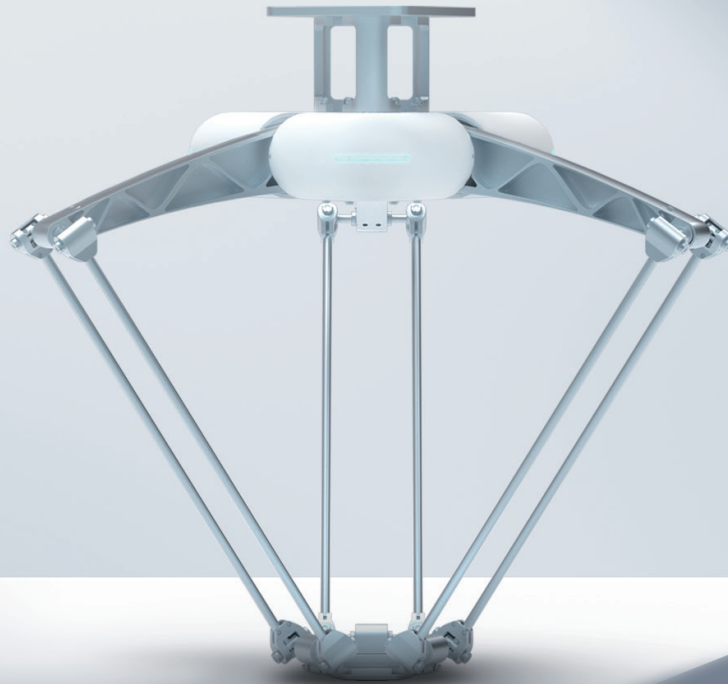


FLEXIV

MOONLIGHT



As the world's first force-controlled parallel robot, Moonlight is designed for applications that require precise motion and force control and only three degrees of freedom. Incorporating Flexiv's innovative force sensing and force control technology, Moonlight can handle delicate objects with great precision and care. The safety features found in the Rizon series were also included in Moonlight, making it PLd, Category 3 compliant.

With a focus on a specific set of tasks, the specialized robot Moonlight will bring increased automation adoption in the cost-effective and creative automation solutions offered by Flexiv.

High-Precision Force Control

- 1 KHz high-frequency response force control
- Ultra-accurate forces measuring down to 0.1 N

Powerful Adaptability

- Hollow flange design
- Rapid deployment
- Built from lightweight aircraft-grade aluminum alloy

Improved Productivity

- Versatile payload and speed solutions
- High-speed force control
- Seamless hardware and software integration

Great Usability

- Drag-and-drop visual programming interface
- Zero-drag teaching mode
- Embedded advanced semi-autonomous programming modules

MOONLIGHT

Force-controlled adaptive parallel robot

Robot

Moonlight

Robot Type	Moonlight
Degrees of freedom	3
Weight	38 kg
Payload	7kg
Maximum working diameter	1200 mm
Maximum working height	660 mm
Installation position	Any
Protection rating	IP65
Pose repeatability (ISO9283)	±0.05 mm
Robot base	Ø215 mm
Mounting flange	ISO 9409-1-50-4-M6
Operating temperature	0 to 45 °C

Typical TCP linear speed/acceleration	1.5 m/s 15 m/s ²
Maximum TCP force	Fxy 150 N, Fz 350 N
Joint motion range	A1/A2/A3: -52.5 ° to 73.5 °
Maximum joint speed/acceleration	A1/A2/A3: 180 °/s , 458 °/s ²
Maximum joint torque	A1/A2/A3: 123 Nm

Control Box

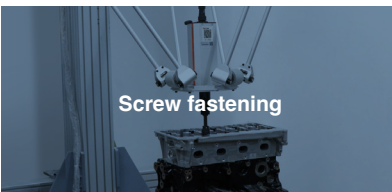
Hesper

Weight	12 kg
Dimensions	423 mm x 230 mm x 230 mm
Power source	100-240 VAC 50-60 Hz, 42-62 VDC (optional)
Power consumption	600W
I/O ports	16 digital inputs 16 digital outputs
Safety system	All 18 safety functions certified according to EN ISO 13849-1 to Cat. 3, PL d
I/O power supply	24 V, 2 A
Communication	Master: Modbus TCP, Ethernet TCP/IP Slave: Modbus TCP, Profinet, EtherNet/IP and CC-link (optional)
Air humidity	20% to 80% non-condensing
Protection rating	IP20
Operating temperature	0 to 45 °C
Cabling	Between manipulator and control box: 6 m Between motion bar and control box: 7 m

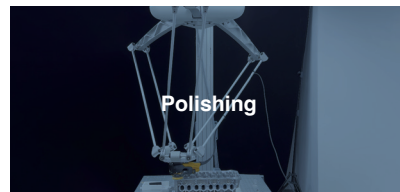
Typical Applications



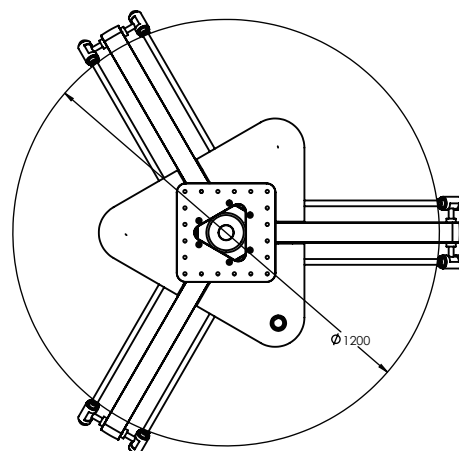
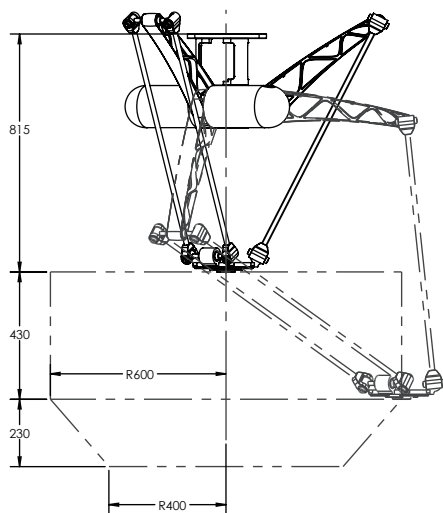
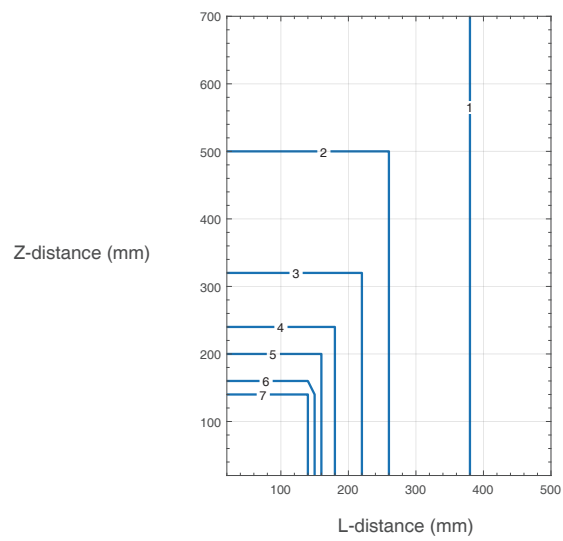
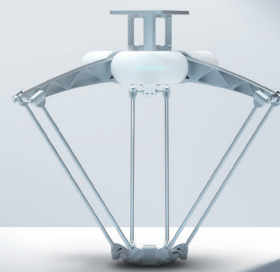
Moonlight can automatically compensate the position errors and adapt to changing environments to complete loading tasks accurately and efficiently.



Thanks to its high-precision force control, force detection, and high tolerance to positional variance, Moonlight can reduce the dependence on screw guns and reduce the rate of floating screws in screw fastening applications. Its fast speed and improved stiffness allow it to complete assembly tasks safely, accurately, and efficiently.



Just like the Rizon series, surface treatment is also a field of expertise of Moonlight. With its increased speed, greater precision, and improved stiffness, Moonlight performs even better at surface treatment applications such as polishing, grinding, deburring, and sanding. It boosts production efficiency while guaranteeing output quality and practically eliminating workpiece damage.





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