

GRAV



Flexiv's revolutionary force-controlled robotic gripper series Grav includes two gripper models: Grav and Grav Enhanced. Featuring Flexiv's industrial-grade force control and an adhesive material based on a gecko's foot pad, Grav is capable of picking up or manipulating practically any object that fits within its grasp.

Ideal for multiple applications, Grav enables robot operators more flexibility in their automation applications and significantly increases production line productivity.

Excellent Versatility

- Embedded advanced grasping-related modules suitable for multiple applications
- Fine-tuned force-control algorithm modules

Great Usability

- Plug-and-play with no complex integration procedures
- Drag-and-drop visual programming interface
- Compatible with standard collaborative robots

Intrinsic Safety

- IP67-protected
- ISO/TS-15066 compliant
- Tens of millions of open/close cycles lifespan and maintenance-free

Powerful Adaptability

- Stable gripping force
- Minimum force control range 1 N
- Adaptable for handling a wide variety of objects
- Two working modes supported (Grav Enhanced)
- Finger closing speed up to 200 mm/s



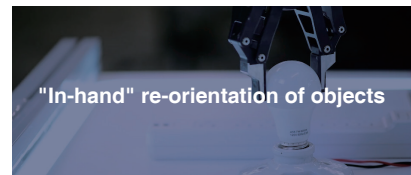
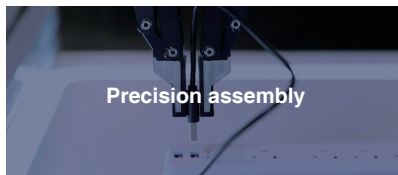
Gripper Type

	Grav	Grav Enhanced
Gripping technology	2-finger force-controlled gripping	P-mode: 2-finger force-controlled gripping V-mode: gecko-inspired adhesive gripping
Stroke per jaw	50 mm	52 mm
Optimal range of applicable force	1 to 100 N	1 N to 30~80 N
Gripping speed	1 to 200 mm/s	1 to 200 mm/s
Finger position repeatability	0.1 mm	0.1 mm
Finger position resolution	0.1 mm	0.1 mm
Force control accuracy	1 N	1 N
Max. permissible finger length	100 mm	100 mm
Max. permissible mass per finger	0.5 kg	N/A
Dimensions (H x L x W)	202 mm x 159 mm x 84 mm	V-mode: 211 mm x 180 mm x 84 mm P-mode: 211 mm x 210 mm x 84 mm
Weight	0.9 kg	1 kg
Protection rating	IP67	IP67
Operating temperature	-20 to 45°C	-20 to 45°C
Working voltage	48 VDC driving voltage 24 VDC control signal voltage	48 VDC driving voltage 24 VDC control signal voltage
Communication	Integrated into robot arm (Modbus RTU)	Integrated into robot arm (Modbus RTU)
Mechanical interface	ISO 9409-1-50-4-M6	ISO 9409-1-50-4-M6

Typical Applications

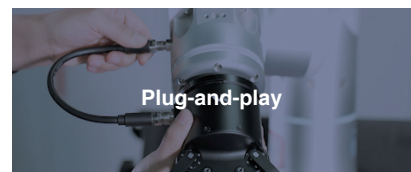
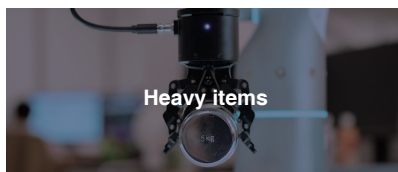
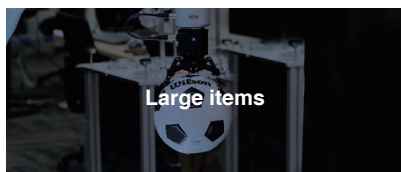
Grav

Grav's industrial-grade force control capability, coupled with its handling flexibility, enables the gripper to maintain a constant grip strength, modify its grip force in a very controllable manner, and pick up delicate or fragile objects at a fast speed without damaging them. With a universal mounting system, Grav is suitable for any modern robotic platform and is ideal for a myriad of applications.



Grav Enhanced

Based on the single driver and composite sensor module of Grav, Grav Enhanced supports two working modes, the two-finger force control mode and the enhanced mode that makes use of the gecko grip super friction, allowing the gripper to pick up almost any item, regardless of its shape or surface texture.





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