

PGEA-2/15-10

Slim-type Electric Parallel Gripper



Selection Method

Serie	Gripping Force	Stroke	Brake	Cable Direction	Communication Protocol	Cable Selection	Fingertip Selection
PGEA	2	10	O	B	M1	L1	J0
2 15	10	O Without Brake	B Side S Bottom	M1 Modbus (RS485)+I/O (NN) M2 Modbus (RS485)+I/O (PP) M3 Modbus (RS485)+I/O (NP) M4 Modbus (RS485)+I/O (PN)	L1 1m Direct Cable Outlet L3 3m Direct Cable Outlet L5 5m Direct Cable Outlet L10 10m Direct Cable Outlet	J0 Without Fingertip J1 Standard Fingertip	

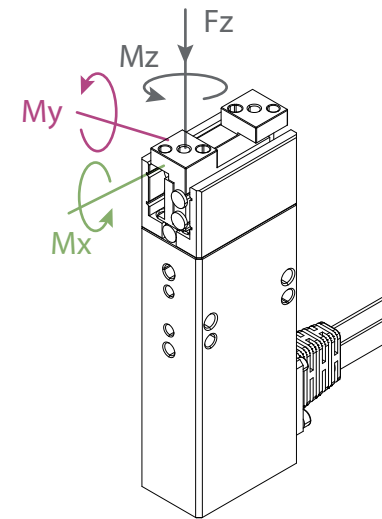
*① I/O(NN): NPN/NPN I/O(PP): PNP/PNP I/O(NP): NPN/PNP I/O(PN): PNP/NPN

*② It is recommended that no more than 4 units of DH-Robotics products be accessed on a single 485 bus, otherwise 485 communication anomalies may occur.

*③ Cables longer than 10 meters pose a risk of communication interference.

Note: The RS485 module option has been removed from the selection parameters. Please purchase separately if needed.

TECHNICAL SPECIFICATIONS



Product Parameter	PGEA-2-10	PGEA-15-10
Gripping force(per jaw)	0.8~2 N	6~15 N
Recommended workpiece weight *④	0.05 kg	0.25 kg
Stroke	10 mm	10 mm
Repeat accuracy (positioning)	± 0.02 mm	± 0.02 mm
Weight	0.15 kg	0.15 kg
Dimensions (L xW x H)	Side: 89mm x 30mm x 18mm Bottom: 94mm x 30mm x 18mm Controller Size:78 mm x 52.4 mm x 27.2 mm	
Noise emission	< 50 dB	
Driving method	Rack and Pinion Crossed Roller Guide	
Working Environment		
Communication interface	Standard: Modbus RTU (RS485)、Digital I/O(2 inputs 2 outputs) Optional: TCP/IP、USB2.0、CAN2.0A、PROFINET、EtherCAT *⑤	
Nominal voltage	24 V DC ± 10%	
Nominal & Max. current	0.1 A ((Rated) 0.2 A (Peak)	0.2 A ((Rated) 0.3 A (Peak) *⑥
Max power	5 W	8 W
IP protection class	IP 40	
Recommended operating environment	0~40℃, under 85% RH	
Overseas standards	CE, FCC, RoHS	

Static Vertical Allowable Load

Fz 35 N

Allowable Loading Moment

Mx 0.45 N · m

My 0.4 N · m

Mz 0.45 N · m

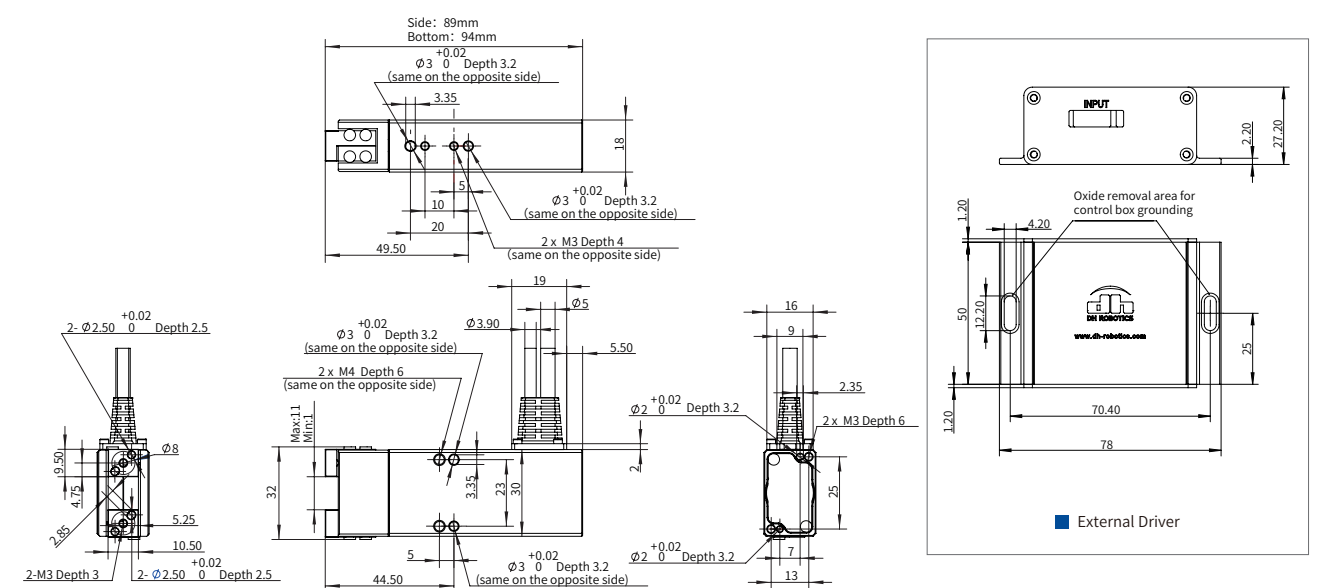
✓ External Driver	✓ Gripping Force Adjustable	✓ Position Adjustable	✓ Speed Adjustable	✓ Drop Detection	✗ Self-locking Mechanism
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*④ The shift in the center of gravity of the object being gripped can also affect the load, depending on factors such as the shape of the object, the material of the contact surface, friction, and the acceleration of movement. If you have any questions, please feel free to contact us.

*⑤ Requires external communication convertor or customization, please contact sales or technical support.

*⑥ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Technical Drawings



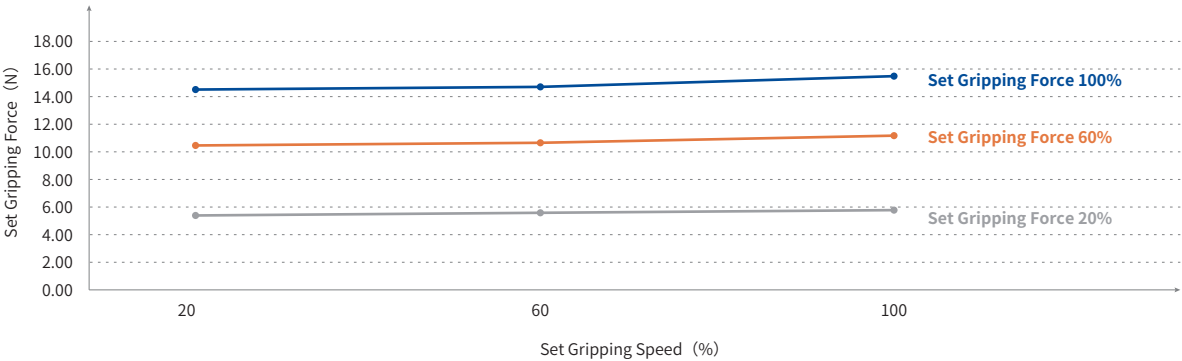
Gripping CT Reference Table

Test Type Test Item Model	Gripping Time (ms) [Impact, gripped object, target position set to 0, 50% force, 100% speed]		Gripping Time (ms) [Impact, gripped object, target position set to 0, 100% force, 100% speed]	
	Side Avoidance 3mm	Full Stroke Clamping	Side Avoidance 3mm	Full Stroke Clamping
PGEA-15-10	266	336	178	236
PGEA-2-10	204	298	141	182

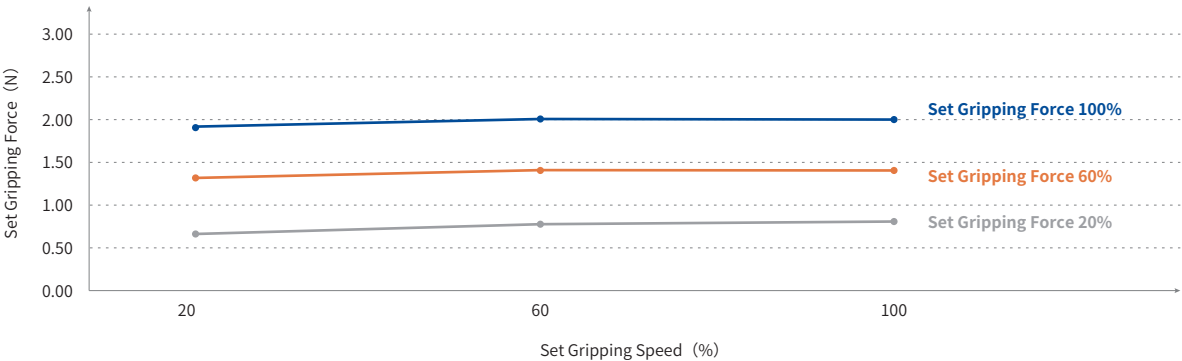
测试类型 Test Item Model	Opening Time (ms) [50% force, 100% speed to position]		Opening Time (ms) [100% force, 100% speed to position]	
	Side Avoidance 3mm	Full Stroke Clamping	Side Avoidance 3mm	Full Stroke Clamping
PGEA-15-10	260	339	186	236
PGEA-2-10	207	298	204	183

Actual Output Reference Curve for Different Force and Speed

PGEA-15-10

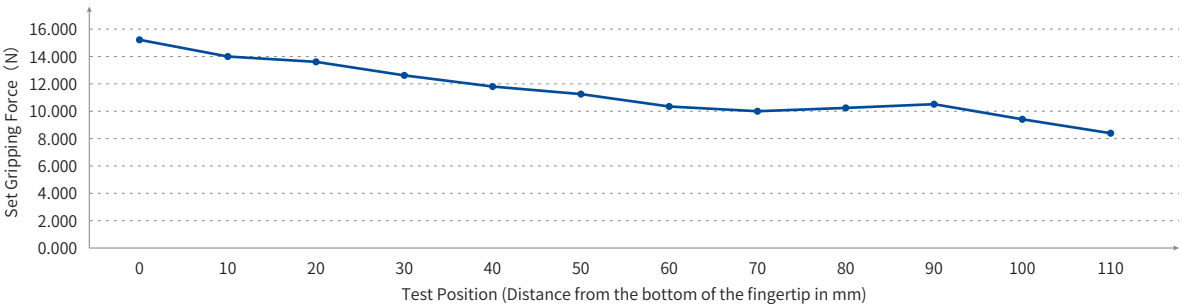


PGEA-2-10

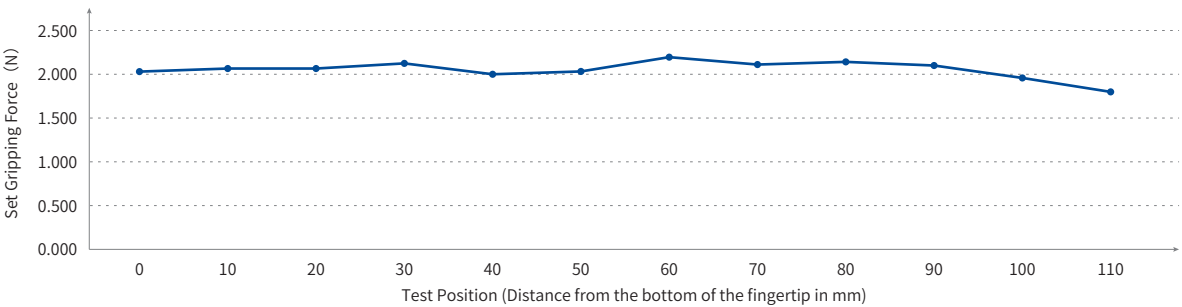


Gripping Distance Force Decay Reference Curve

PGEA-15-10 Finger Length and Gripping Force Test



PGEA-2-10 Finger Length and Gripping Force Test



Gripping Distance Oscillation Reference Curve

