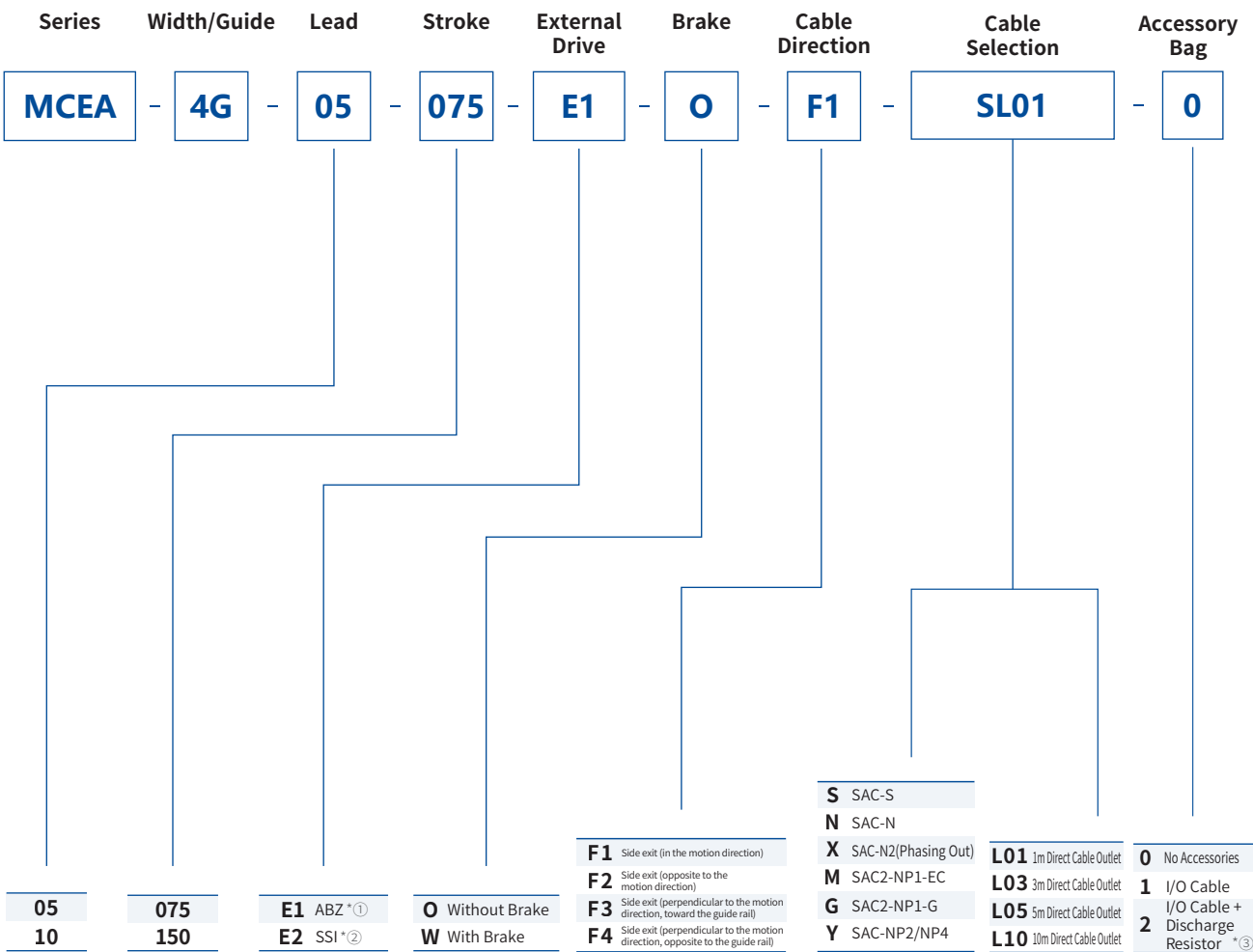


MCEA-4G

Micro Servo Electric Cylinder

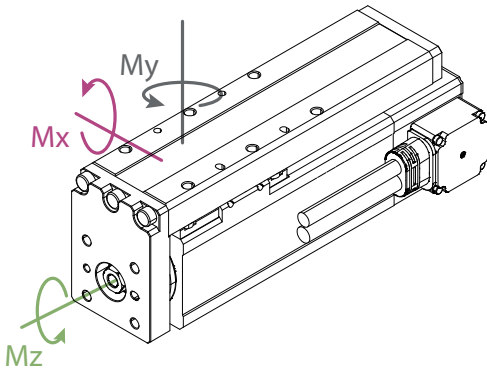


External-Drive Electric Cylinder Selection Method



Note: *① ABZ: Incremental Encoder: Phase search is required after power-up.
*② SSI: Single-Turn Absolute Encoder: Phase search is not required after power-up. (It is recommended to select this type of encoder when the electric cylinder is used as the Z-axis).
*③ When using SAC-S, a discharge resistor must be used.

TECHNICAL SPECIFICATIONS



Technical Parameters

Total stroke	75 mm, 150 mm	
Screw lead	5 mm	10 mm
Rated thrust	170 N	85 N
Min. Thrust	51 N	25.5 N
Max. Speed	165 mm/s	330 mm/s
Max. Acceleration	2000 mm/s ²	3000 mm/s ²
Max. Weight capacity - horizontal	15 kg	15 kg
Max. Weight capacity - vertical	6 kg	3 kg
Positioning repeatability	±0.02 mm	
Mechanical backlash	Less than 0.1mm	
Weight	(O) 75 Total stroke: 1.4 kg	150 Total stroke: 1.65 kg
	(W) 75 Total stroke: 1.47 kg	150 Total stroke: 1.72 kg

Allowable Load Moment

Mx	18.8 N.m
My	18.8 N.m
Mz	30.5 N.m

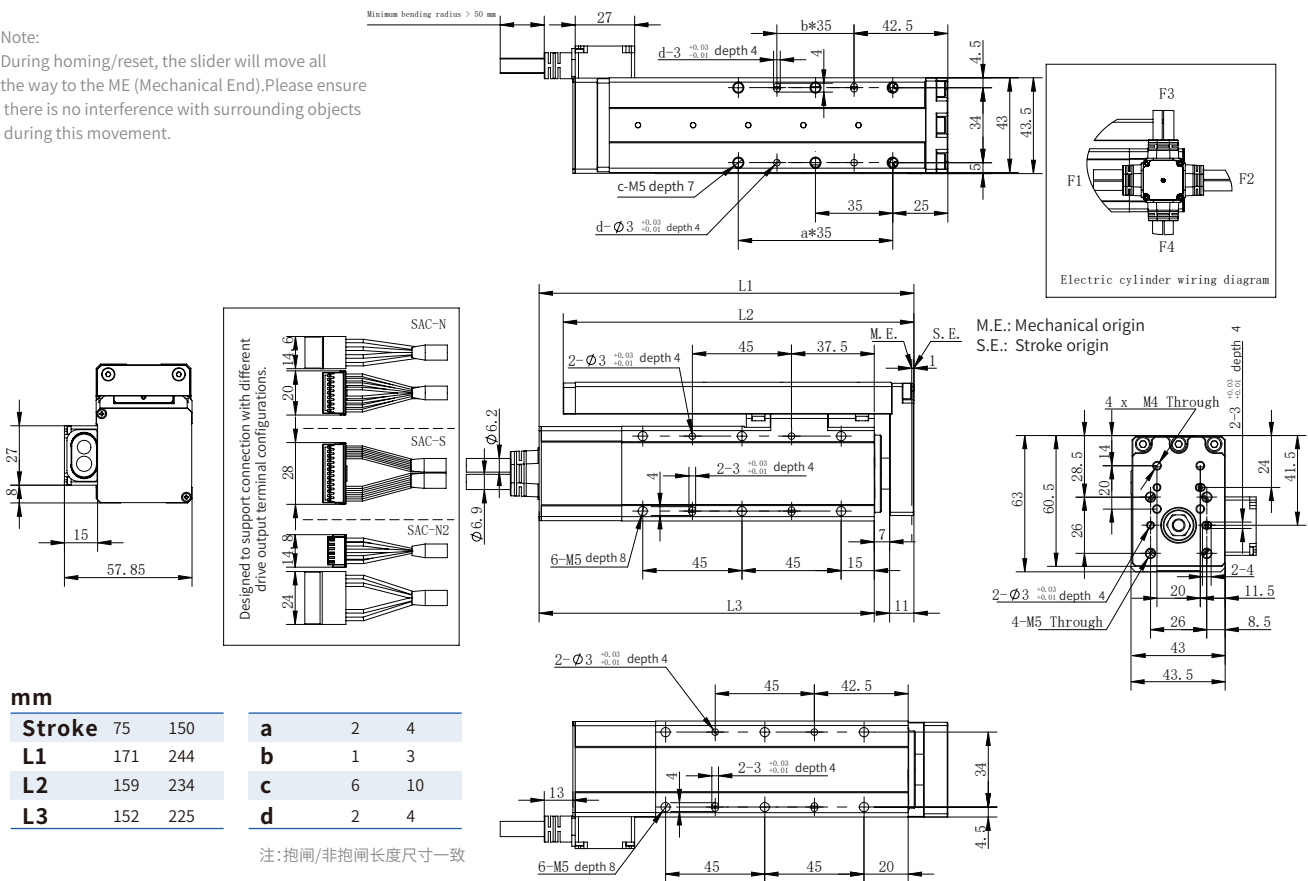
*④ When selecting the power supply, please select according to the peak current. If the current is lower than the parameter, it will cause the product can not work normally.

Operating Environment

Communication protocol	External: Depending on the Selected Driver
Rated voltage	24 V DC ± 10%
Current	2.5 A (Rated) / 7 A (Peak) *④
Protection rating	IP 40
Recommended operating environment	0 to 40°C, Below 85% RH
Compliance with international standards	CE, FCC, RoHS, TUV

Dimensions

Note:
During homing/reset, the slider will move all the way to the ME (Mechanical End). Please ensure there is no interference with surrounding objects during this movement.

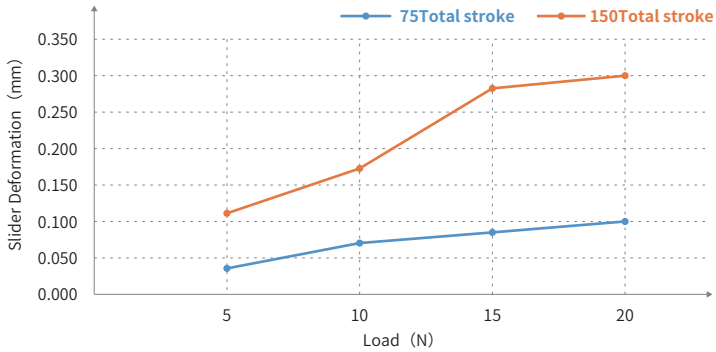
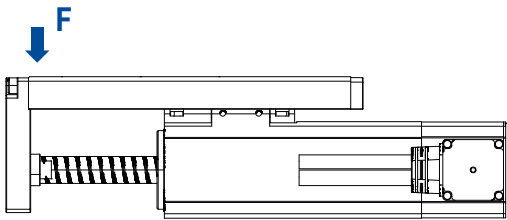


Applicable Drive								
Name	Appearance	Controllable Maxes	Model	Control Methods	Feature	Input voltage	Power Capacity	Reference Page
Small Scale Single-Axis Dedicated Controller		1	SAC-S	RS485	ModbusRTU	DC24V	MAX 72W	SAC-S Selection Page P29-30
				I/O	Up to 16 I/O Points			
				Pulse+I/O	Direction+Pulse			
Single-Axis Dedicated Controller		1	SAC-N	RS485	ModbusRTU	DC24V	MAX 200W	SAC-N Selection Page P31-32
				I/O	Up to 64 I/O Points			
				Pulse+I/O	Direction+Pulse			
Single-Axis Dedicated Force Control Controller		1	SAC-NF	RS485	ModbusRTU	DC24V	MAX 200W	Please Contact us for Force Control Applications.
Single Axis Drive		1	SAC2-NP1	EtherCat	Standard CIA402 Axis Control	DC24V / DC72V	MAX 750W	SAC2-NP1 Selection Page P33-36
				Pulse+I/O	Direction+Pulse			
				RS485	ModbusRTU			
Dual Axis Standard Drive		2	SAC-N2	EtherCat	Standard CIA402 Axis Control	DC24V / DC72V	MAX 240W (24V) /480W (48V)	SAC-N2 Selection Page P37-38
				Pulse+I/O	Direction+Pulse			
				RS485	ModbusRTU			
Dual-Axis Drive		2	SAC-NP2	EtherCat	Standard CIA402 Axis Control	DC24V / DC48V	MAX 240W (24V) /480W (48V)	SAC-N2 Selection Page P39-40
				Pulse+I/O	Direction+Pulse			
Four-Axis Drive		4	SAC-NP4	EtherCat	Standard CIA402 Axis Control	DC24V / DC48V	MAX 480W	SAC-N2 Selection Page P41-42
				Pulse+I/O	Direction+Pulse			

Rigidity Deformation of Electric Cylinder (Reference Value)

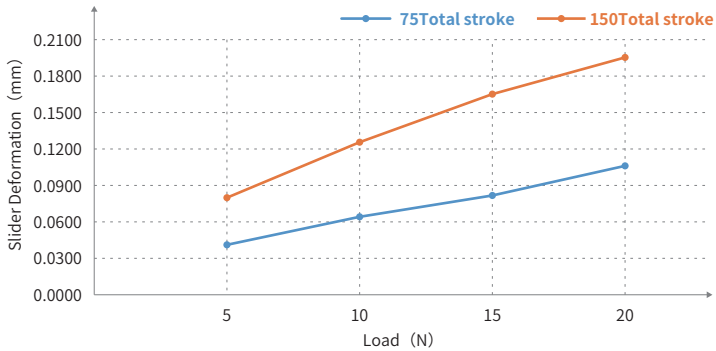
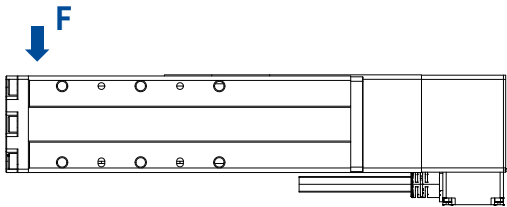
> Axial Bending

The amount of deformation at the tip of the slider due to axial bending moment load when the slider is fully extended and a load is applied at the indicated position (arrow).



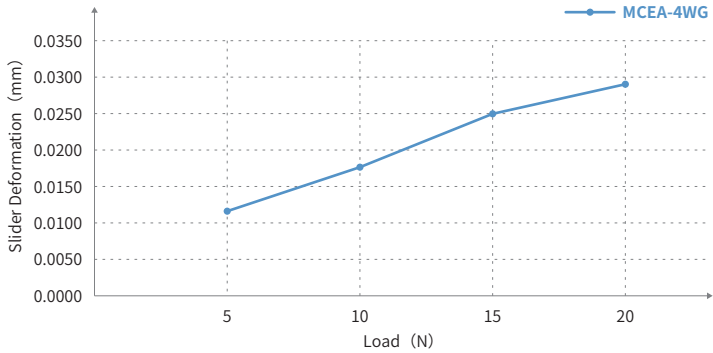
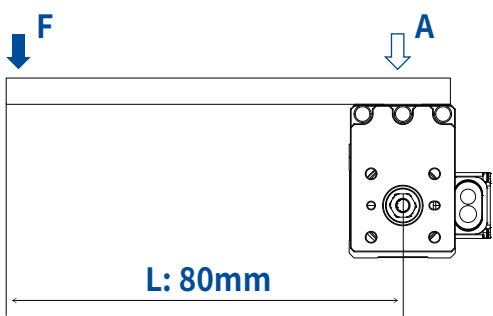
> Offset Load (Eccentric Load)

The amount of deformation at the tip of the slider caused by an offset (eccentric) moment load when the slider is fully extended and a load is applied at the indicated position (arrow).



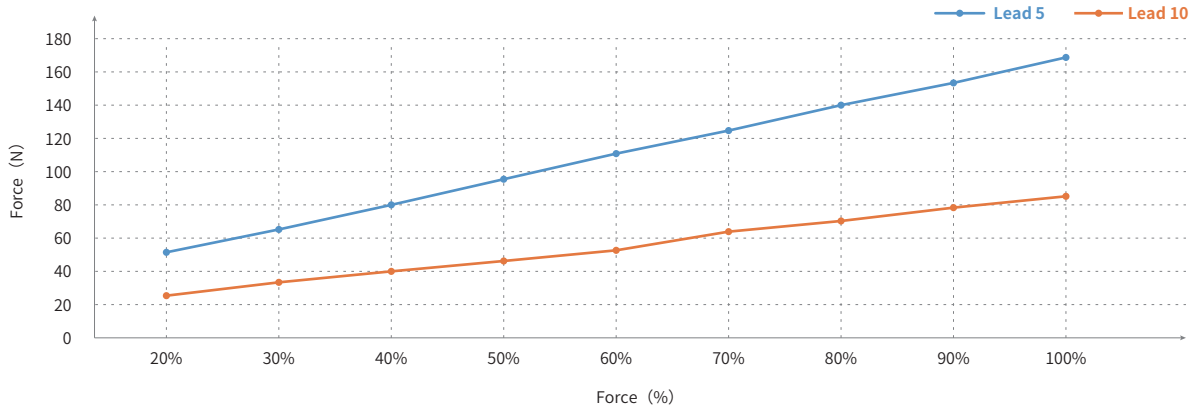
> Torsion (Rotational Moment)

The amount of deformation at point A on the slider caused by a rotational moment load when the slider is fully retracted and a load is applied at point F.



Electric Cylinder Thrust Curve (Reference Value)

Thrust output curves under different load conditions with the electric cylinder mounted horizontally.



Electric Cylinder Cycle Time Curve (Reference Value)

Reference values for maximum load operation cycle time of the electric cylinder. Note: Communication delay of 30 ms is included in the reference values.

