



Ordering method

Model	Acceleration/deceleration specifications	Lead	Shape ^{Note 1}	Motor specification	Side cover	Stroke ^{Note 2}	Cable length ^{Note 3}	Cable entry location	Robot positioner	Driver: Power capacity	I/O	Battery ^{Note 4}
AGXS05	No entry: Standard H: High agility	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight R: Right bending L: Left bending	S: Standard/With no brake BK: Standard/With brake BL: Battery-less absolute/With no brake BKBL: Battery-less absolute/With brake	No entry: Standard W: With T-groove (both sides) R: With T-groove (right side) L: With T-groove (left side)	50 to 800 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200W or less	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.

Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 550 mm (50 mm pitch).

Note 3. The robot cable is flexible and resists bending.

Note 4. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output	50 W
Repeatability ^{Note 1}	+/-0.005 mm
Deceleration mechanism	Ground ball screw $\phi 12$ (C5 class)
Stroke	50 mm to 800 mm (50 mm pitch)
Maximum speed ^{Note 2}	1333 mm/sec 666 mm/sec 333 mm/sec
Ball screw lead	20 mm 10 mm 5 mm
Maximum payload	Horizontal: 5 kg Vertical: 2 kg
Rated thrust	41 N 69 N 138 N
Maximum dimensions of cross section of main unit	W 48 mm × H 65 mm
Overall length	Straight: ST + 195 mm Bending: ST + 161.5 mm
Degree of cleanliness ^{Note 3}	ISO CLASS 3 (ISO14644-1) or equivalent
Intake air ^{Note 4}	30 Nℓ/min to 100 Nℓ/min
Position detector	Absolute encoder Battery-less absolute encoder
Resolution	23 bits
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)

Note 1. Positioning repeatability in one direction.

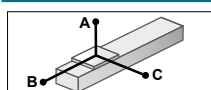
Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed. If the effective stroke exceeds 600 mm, the ball screw may resonate. (Critical speed)

At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.

Note 3. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness level achieved when using at 1000 mm/sec or less.

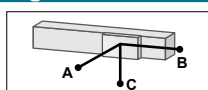
Note 4. The required suction amount will vary according to the operating conditions and operating environment.

Note. See P.115 for acceleration/deceleration.

Allowable overhang ^{Note}

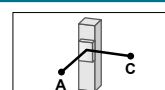
AGXS05-20

Horizontal installation (Unit: mm)	A	B	C
2kg	898	269	350
5kg	583	112	159



Wall installation (Unit: mm)

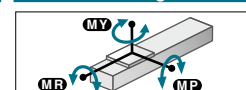
A	B	C
2kg	323	234
5kg	119	76



Vertical installation (Unit: mm)

A	C
1kg	452
2kg	217

Static loading moment



MY	MP	MR
24	27	23

Controller

Controller	Operation method
EP-01	I/O point trace/ Remote command

When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke	50 mm to 550 mm (50 mm pitch)
Ball screw lead	20 mm 10 mm 5 mm
Maximum payload	Horizontal: 2 kg Vertical: 1 kg
Maximum acceleration	Horizontal: 11.77 m/s ² (1.2 G) Vertical: 11.77 m/s ² (1.2 G)
Maximum payload	Horizontal: 3 kg Vertical: 2 kg
Maximum acceleration	Horizontal: 11.77 m/s ² (1.2 G) Vertical: 7.17 m/s ² (0.7 G)

Allowable overhang ^{Note}

Horizontal installation (Unit: mm)	A	B	C
1kg	498	324	323
2kg	230	157	150

Wall installation (Unit: mm)	A	B	C
1kg	297	288	468
2kg	123	120	199

Vertical installation (Unit: mm)	A	C
1kg	223	223

AGXS05-H5 Vertical installation (Unit: mm)	A	C
1kg	478	478
3kg	138	138

Horizontal installation (Unit: mm)	A	B	C
1kg	1159	460	645
3kg	381	148	206

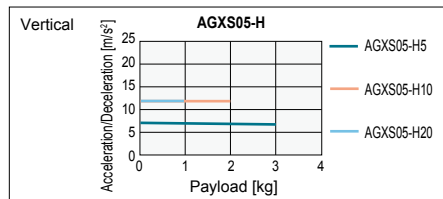
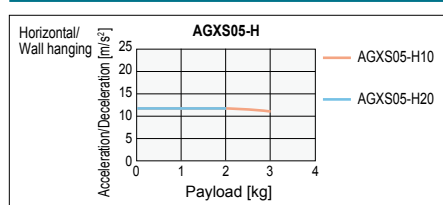
Wall installation (Unit: mm)	A	B	C
1kg	606	424	1129
3kg	163	112	346

Vertical installation (Unit: mm)	A	C
1kg	396	396
2kg	182	182

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

Note. Service life is calculated for 550 mm stroke models.

Payload - Acceleration / Deceleration Graph (Estimate)



Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke	50	100	150	200	250	300	350	400	450	500	550
Maximum speed (mm/sec)	Lead 20										
	Lead 10										
	Lead 5										

Note. The bending unit cannot be used for the high agility mode.

Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).

Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.

The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.

Note. When the actuator is used with the high acceleration/deceleration specifications, the operation duty and motor load factor need to be considered. (See P.93.)

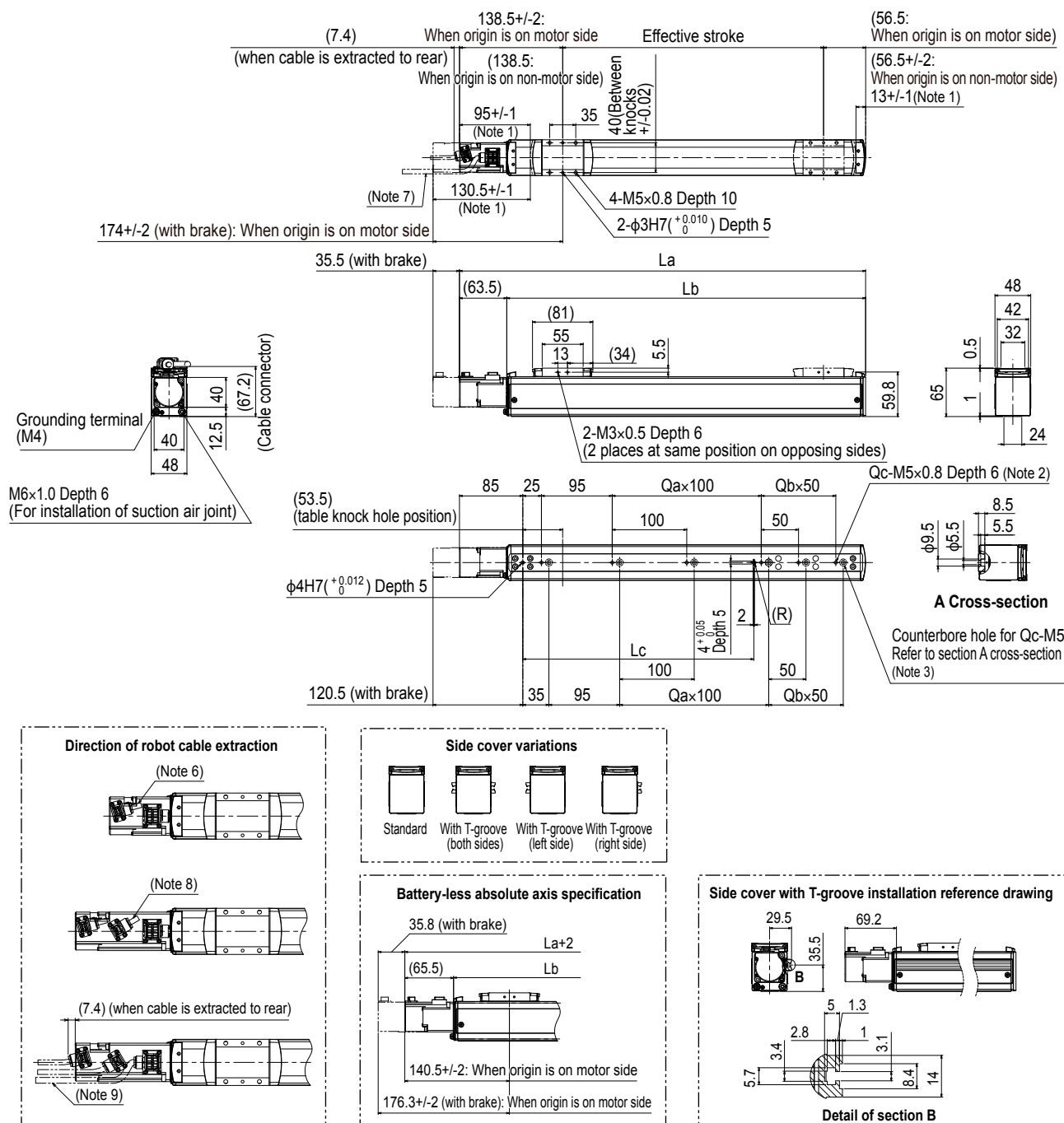
Note. See P.116 for acceleration/deceleration.

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

AGXS05 Straight type (S)



Note 1. Stop positions are determined by the mechanical stoppers at both ends.

Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)

Note 3. When using the tap holes to mount the body, remove the set screws first.

Note 4. When using the counterbore holes (section A cross section) to mount the body, remove the cap from the inner side and then fix. The length under head of the hex socket head bolts (M5 x 0.8) used must be 15 mm or less.

Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.

Note 6. The robot cable is extracted from the front.

Note 7. The robot cable is extracted from the rear.

Note 8. The robot cable (with brake) is extracted from the front.

Note 9. The robot cable (with brake) is extracted from the rear.

Note 10. The fixed minimum bending radius of the robot cable is R30.

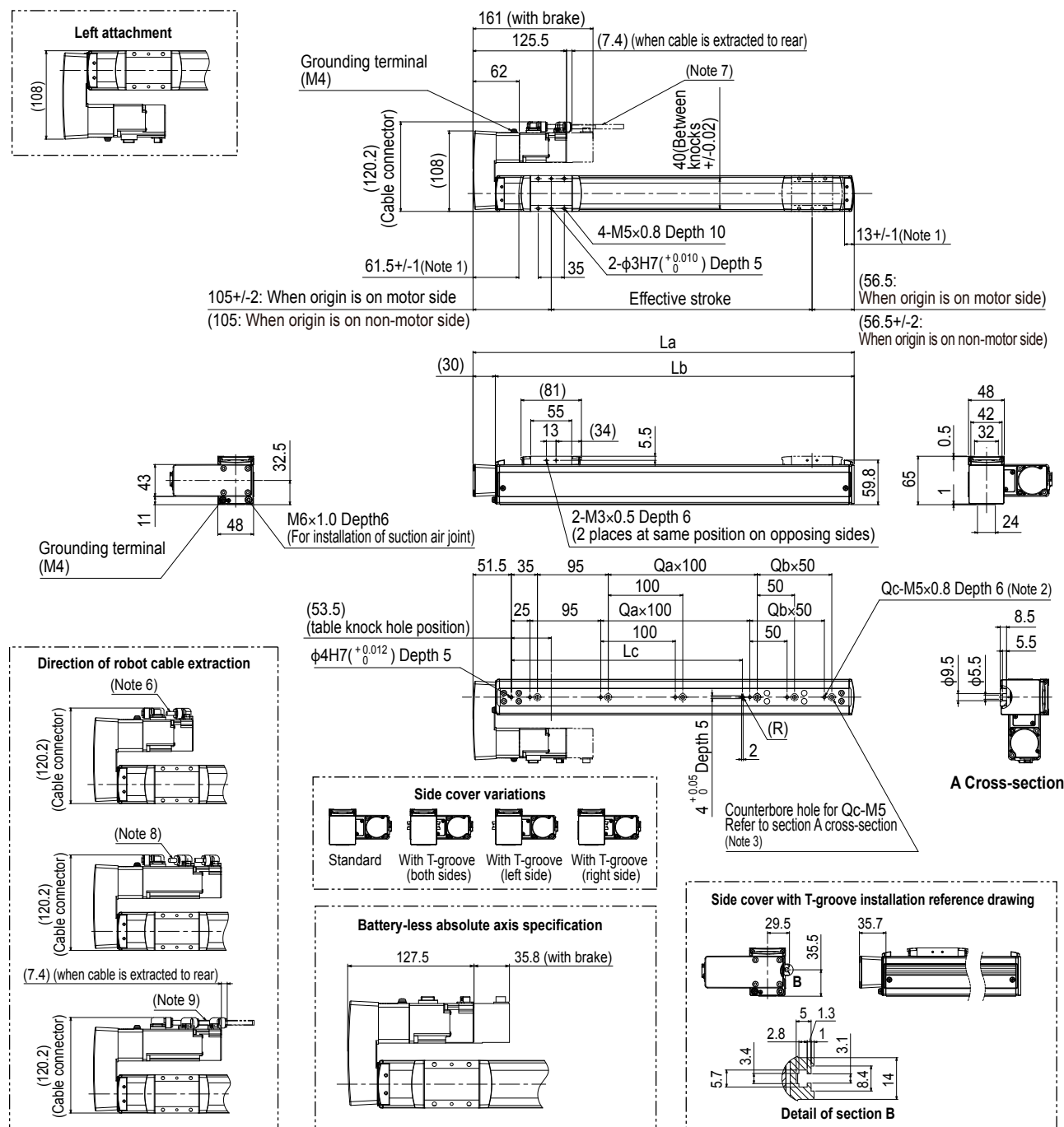
When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Note 11. Side cover with T-groove is used to install the sensor.

Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995
Lb	181.5	231.5	281.5	331.5	381.5	431.5	481.5	531.5	581.5	631.5	681.5	731.5	781.5	831.5	881.5	931.5
Lc	110	110	110	110	310	310	310	310	310	310	610	610	610	610	610	610
Qa	0	0	0	0	2	2	2	2	2	2	5	5	5	5	5	5
Qb	0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5
Qc	2	3	4	5	4	5	6	7	8	9	7	8	9	10	11	12
Weight (kg) <small>Note 5</small>	1.5	1.7	1.8	2.0	2.1	2.3	2.5	2.6	2.8	2.9	3.1	3.2	3.4	3.5	3.7	3.8
Maximum speed (mm/sec)	Lead 20	1333											1066	933	800	666
	Lead 10	666											532	466	400	333
	Lead 5	333											266	233	200	166
	Speed setting	—											80%	70%	60%	50%

AGXS05 Bending type (R/L)



Note 1. Stop positions are determined by the mechanical stoppers at both ends.

Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)

Note 3. When using the tap holes to mount the body, remove the set screws first.

Note 4. When using the counterbore holes (section A cross section) to mount the body, remove the cap from the inner side and then fix. The length under head of the hex socket head bolts (M5 \times 0.8) used must be 15 mm or less.

Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.

Note 6. The robot cable is extracted from the front.

Note 7. The robot cable is extracted from the rear.

Note 8. The robot cable (with brake) is extracted from the front.

Note 9. The robot cable (with brake) is extracted from the rear.

Note 10. The fixed minimum bending radius of the robot cable is R30.

When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.

Note 11. Side cover with T-groove is used to install the sensor.

Note 12. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.

Note 13. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800				
La	211.5	261.5	311.5	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5				
Lb	181.5	231.5	281.5	331.5	381.5	431.5	481.5	531.5	581.5	631.5	681.5	731.5	781.5	831.5	881.5	931.5				
Lc	110	110	110	110	310	310	310	310	310	310	610	610	610	610	610	610				
Qa	0	0	0	0	2	2	2	2	2	2	5	5	5	5	5	5				
Qb	0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5				
Qc	2	3	4	5	4	5	6	7	8	9	7	8	9	10	11	12				
Weight (kg) <small>Note 5</small>	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2				
Maximum speed (mm/sec)	Lead 20	1333											1066					933	800	666
	Lead 10	666											532					466	400	333
	Lead 5	333											266					233	200	166
	Speed setting	—											80%					70%	60%	50%