AGXS05

Advanced model **Single-axis robots**

Slider type

Ordering method

AGXS05 -										EP-01 -			
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
	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

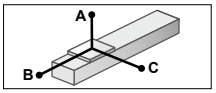
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 550 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

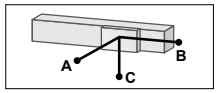
Specifications

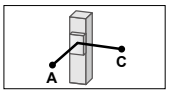
AC servo motor output		50 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 12 (C5 class)		
Stroke		50 mm to 800 mm(50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	Horizontal	5 kg	8 kg	13 kg
	Vertical	2 kg	4 kg	8 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	809
5kg	119	76	427

Vertical installation (Unit: mm)		
	A	C
1kg	452	452
2kg	217	217

AGXS05-10

Horizontal installation (Unit: mm)			
	A	B	C
2kg	2505	382	625
5kg	1366	149	246
8kg	1036	90	150

Wall installation (Unit: mm)			
	A	B	C
2kg	585	346	2386
5kg	195	113	1164
8kg	95	54	745

Vertical installation (Unit: mm)		
	A	C
1kg	732	732
2kg	351	351
4kg	160	160

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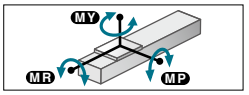
Horizontal installation (Unit: mm)			
	A	B	C
3kg	4604	281	497
8kg	2197	101	179
13kg	1593	59	105

Wall installation (Unit: mm)			
	A	B	C
3kg	439	245	4371
8kg	117	65	1812
13kg	42	24	1000

Vertical installation (Unit: mm)		
	A	C
4kg	183	183
6kg	111	111
8kg	75	75

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 600 mm stroke models.

Static loading moment



(Unit: N·m)

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	3 kg	-
Maximum acceleration		11.77 m/s² (1.2 G)	11.77 m/s² (1.2 G)	-
Maximum payload	Vertical	1 kg	2 kg	3 kg
Maximum acceleration		11.77 m/s² (1.2 G)	11.77 m/s² (1.2 G)	7.17 m/s² (0.7 G)

Allowable overhang Note

AGXS05-H20

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-H10

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

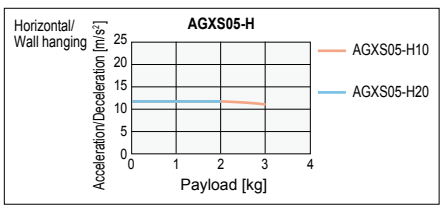
Vertical installation (Unit: mm)		
	A	C
1kg	396	396
2kg	182	182

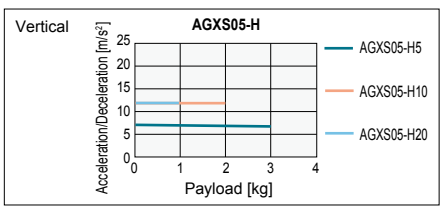
AGXS05-H5

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

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	1333										
	Lead 10	666										
	Lead 5	333										

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.

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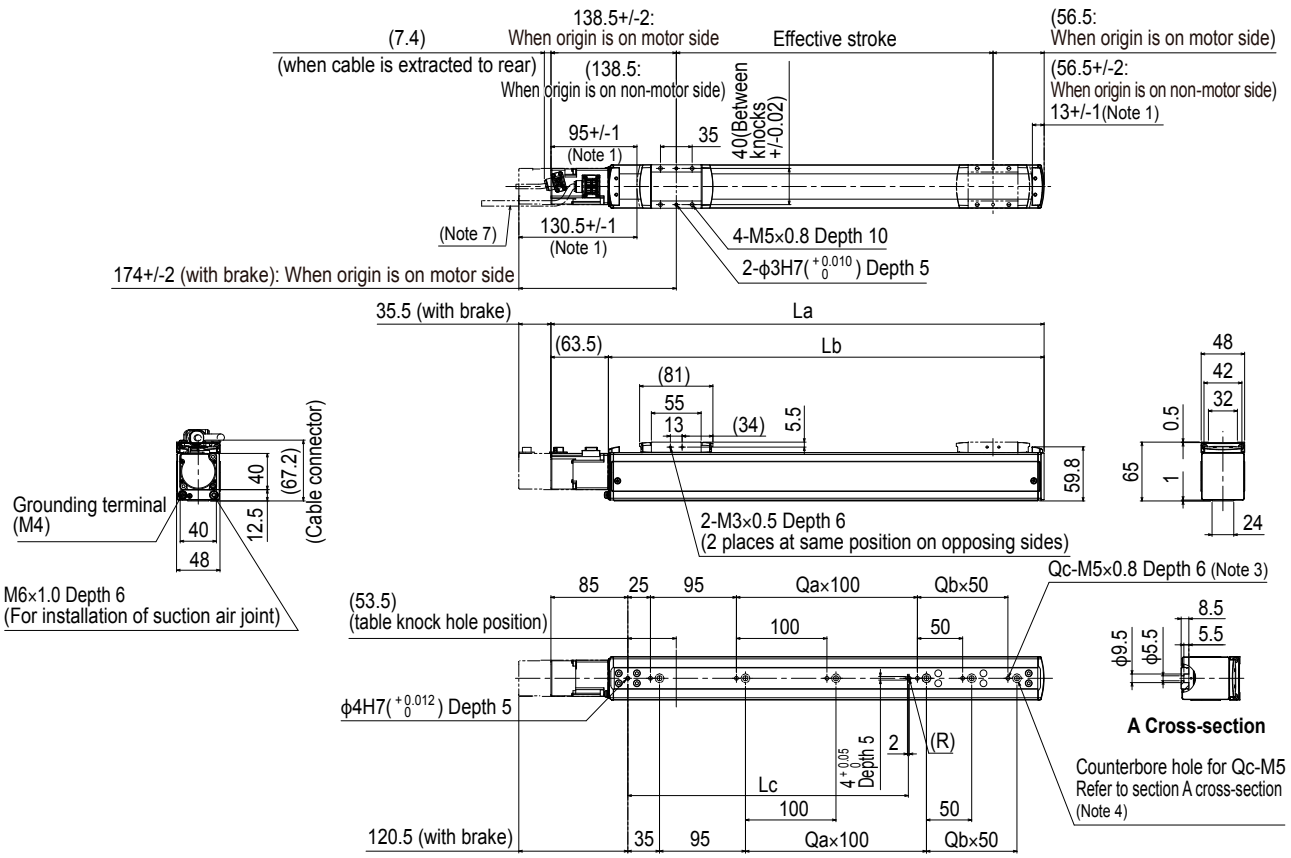
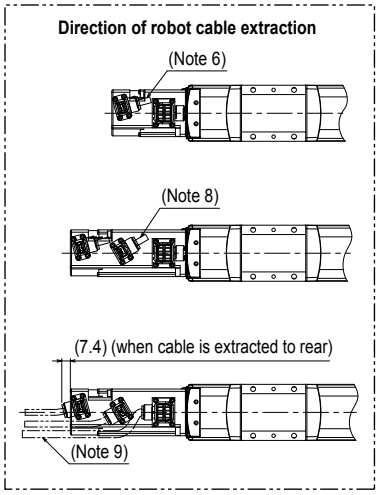
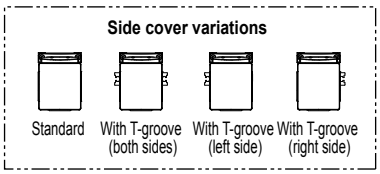
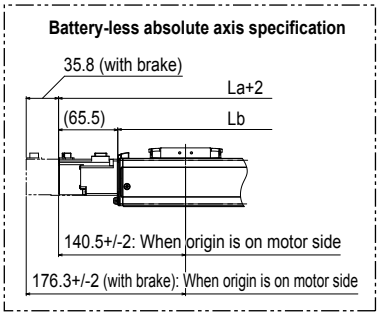
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

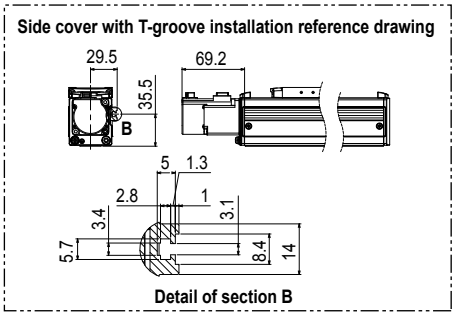
AGXS05 Straight type (S)







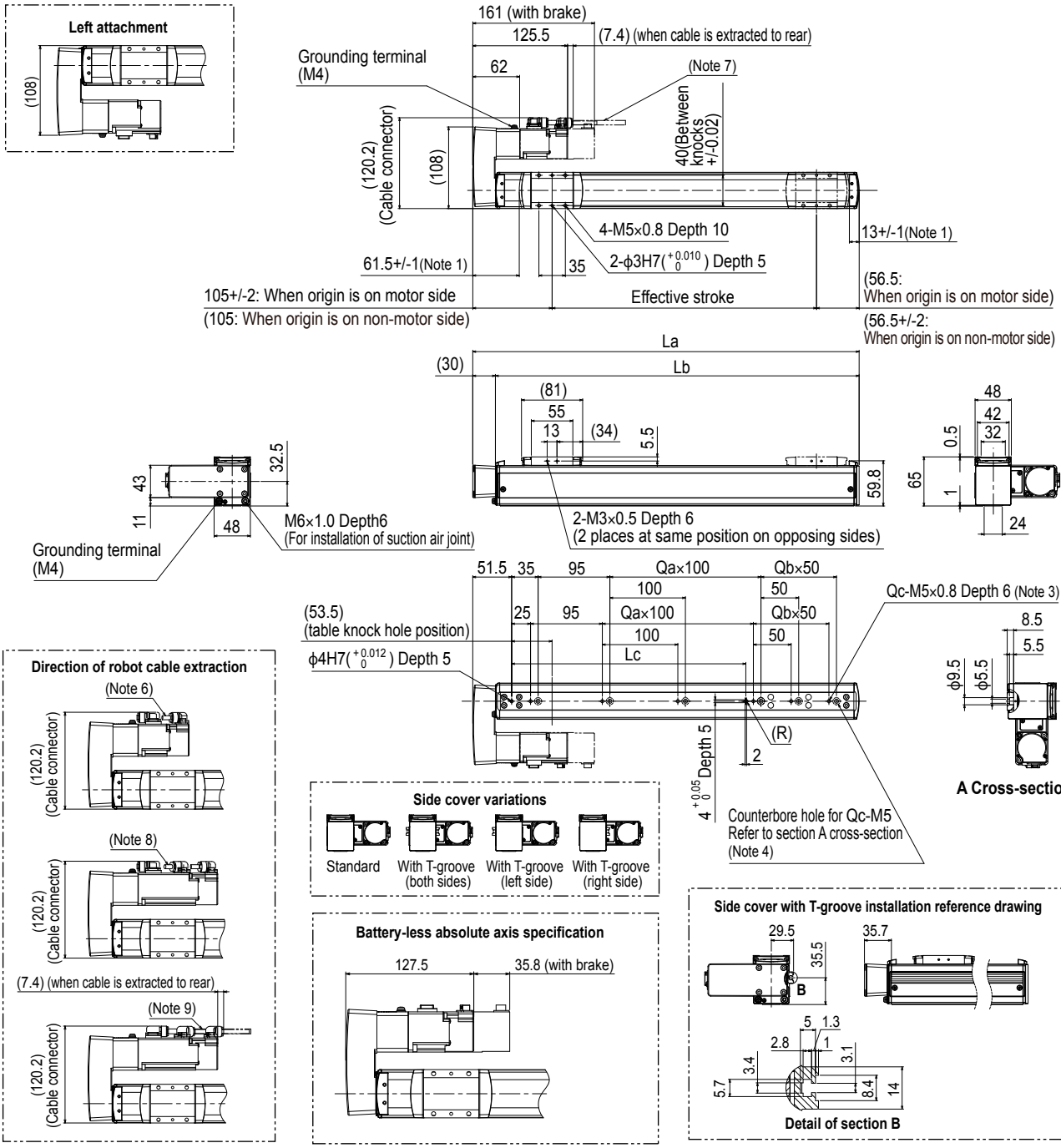




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. When using the tap holes to mount the body, remove the set screws 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 × 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) Note 5		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 × 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) Note 5		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%

AGXS05L

Advanced model **Single-axis robots**

Slider type

Ordering method

AGXS05L – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] **EP-01** – [ ] – [ ] – [ ] – [ ]

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	Regenerative unit Note 4	I/O	Battery Note 5
	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	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

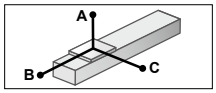
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 550 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is used vertically and the stroke is 500 mm or more, the regenerative unit is needed.
Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

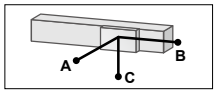
Specifications

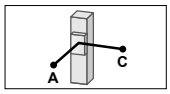
AC servo motor output		100 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 12 (C5 class)		
Stroke		50 mm to 800 mm(50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	Horizontal	12 kg	24 kg	32 kg
	Vertical	3 kg	6 kg	12 kg
Rated thrust		84 N	169 N	339 N
Maximum dimensions of cross section of main unit		W 48 mm × H 65 mm		
Overall length	Straight	ST + 236 mm		
	Bending	ST + 191.5 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.117 for acceleration/deceleration.

Allowable overhang Note







AGXS05L-20

Horizontal installation (Unit: mm)

	A	B	C
3kg	1755	559	426
8kg	737	200	153
12kg	608	133	104

Wall installation (Unit: mm)

	A	B	C
3kg	396	486	1594
8kg	106	128	525
12kg	52	61	329

Vertical installation (Unit: mm)

	A	C
1kg	1486	1486
2kg	730	730
3kg	478	478

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Horizontal installation (Unit: mm)

	A	B	C
6kg	2416	389	333
12kg	1397	187	161
24kg	875	87	74

Wall installation (Unit: mm)

	A	B	C
6kg	277	316	2192
12kg	101	115	1084
24kg	12	14	276

Vertical installation (Unit: mm)

	A	C
4kg	555	555
6kg	360	360

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Horizontal installation (Unit: mm)

	A	B	C
10kg	3127	254	225
20kg	1841	120	106
32kg	1554	70	62

Wall installation (Unit: mm)

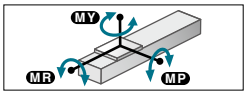
	A	B	C
10kg	162	181	2800
20kg	42	47	1273
32kg	0	0	0

Vertical installation (Unit: mm)

	A	C
5kg	501	501
10kg	235	235
12kg	190	190

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 600 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
72	72	64

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	5 kg	10 kg	-
Maximum acceleration		14.72 m/s² (1.5 G)	14.72 m/s² (1.5 G)	-
Maximum payload	Vertical	1 kg	2 kg	4 kg
Maximum acceleration		14.72 m/s² (1.5 G)	12.68 m/s² (1.3 G)	6.65 m/s² (0.7 G)

Allowable overhang Note

AGXS05L-H20

Horizontal installation (Unit: mm)

	A	B	C
2kg	675	501	332
5kg	330	191	131

Wall installation (Unit: mm)

	A	B	C
2kg	294	428	626
5kg	87	118	251

Vertical installation (Unit: mm)

	A	C
1kg	728	728

AGXS05L-H10

Horizontal installation (Unit: mm)

	A	B	C
3kg	1208	469	385
6kg	665	227	188
10kg	441	130	108

Wall installation (Unit: mm)

	A	B	C
3kg	331	396	1144
6kg	131	155	580
10kg	49	58	315

Vertical installation (Unit: mm)

	A	C
1kg	1298	1298
2kg	636	636

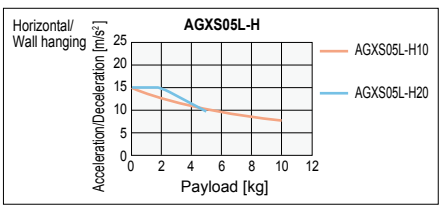
AGXS05L-H5

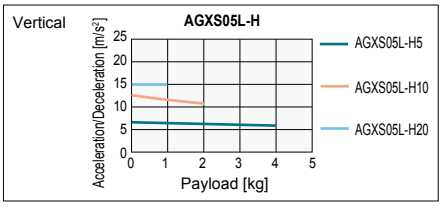
Vertical installation (Unit: mm)

	A	C
1kg	1555	1555
2kg	762	762
4kg	365	365

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	1333										
	Lead 10	666										
	Lead 5	333										

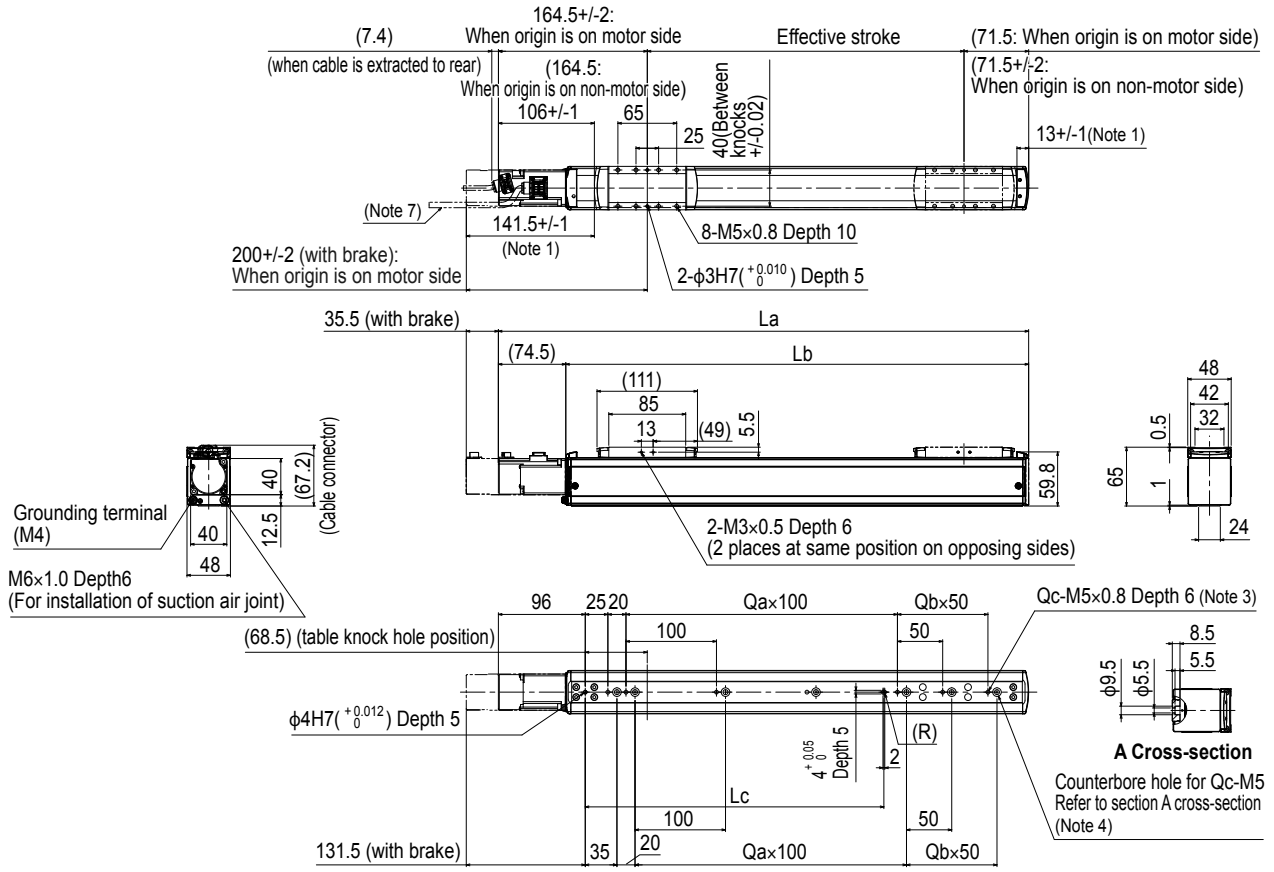
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the 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.118 for acceleration/deceleration.

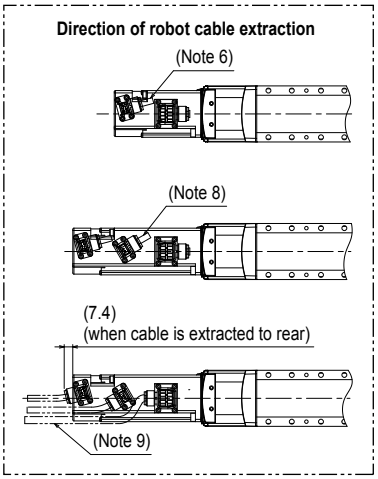
Access the website below.

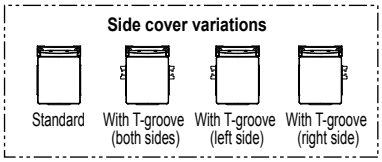
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

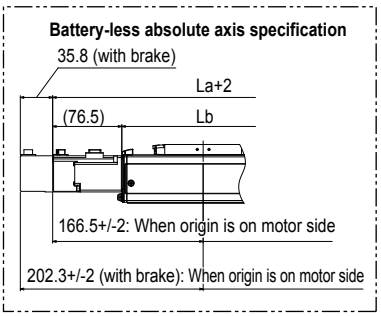
Controller EP-01 ▶ 146

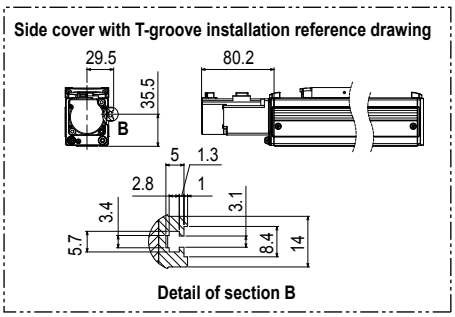
AGXS05L Straight type (S)







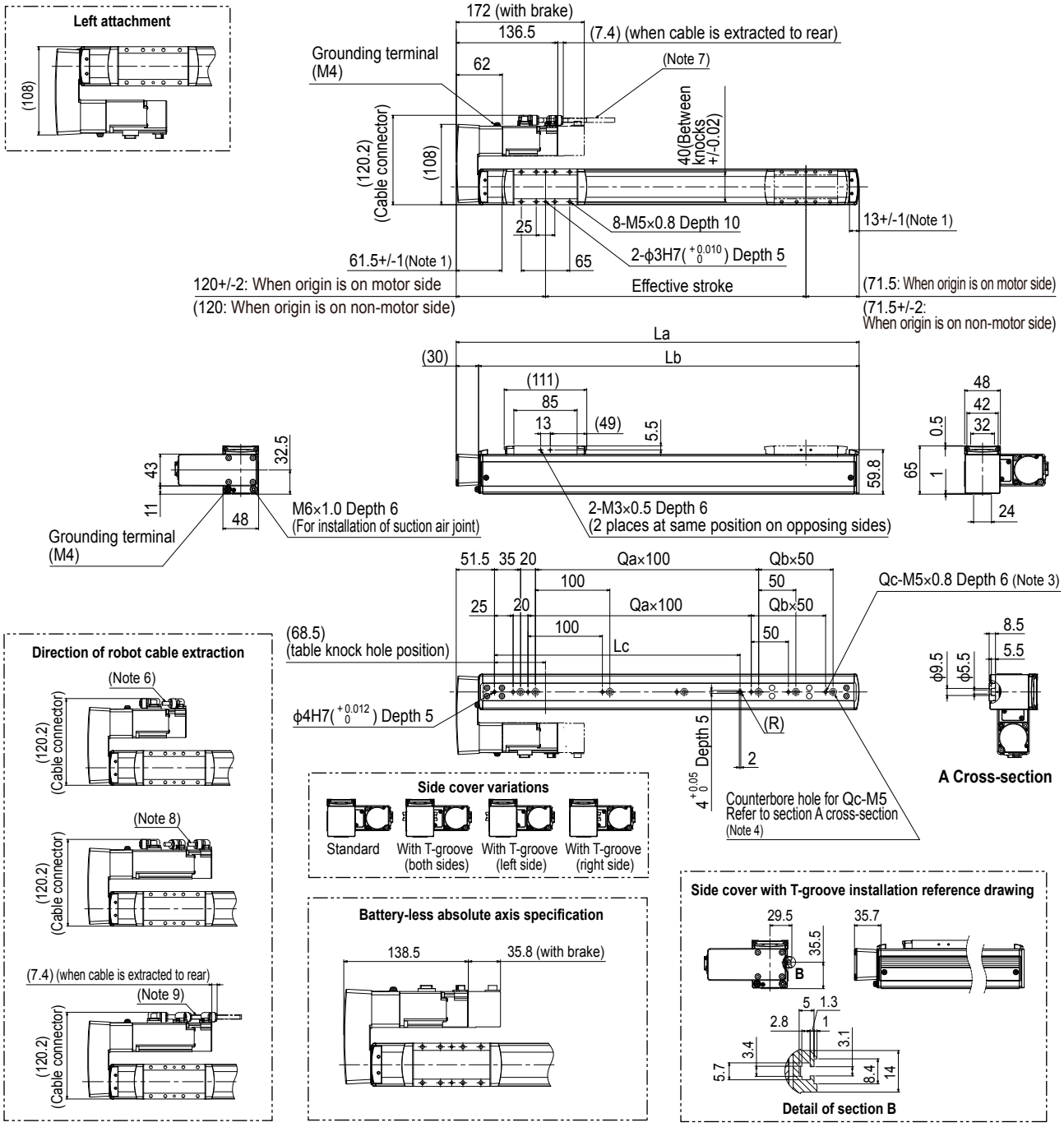




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. When using the tap holes to mount the body, remove the set screws 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 × 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		286	336	386	436	486	536	586	636	686	736	786	836	886	936	986	1036
Lb		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
Lc		130	130	130	130	330	330	330	330	330	330	630	630	630	630	630	630
Qa		1	1	1	1	3	3	3	3	3	3	6	6	6	6	6	6
Qb		0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5
Qc		3	4	5	6	5	6	7	8	9	10	8	9	10	11	12	13
Weight (kg) Note 5		1.8	1.9	2.1	2.2	2.4	2.6	2.7	2.9	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1
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%

AGXS05L 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 × 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.
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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		241.5	291.5	341.5	391.5	4415	491.5	541.5	591.5	641.5	691.5	741.5	791.5	841.5	891.5	941.5	991.5
Lb		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
Lc		130	130	130	130	330	330	330	330	330	330	630	630	630	630	630	630
Qa		1	1	1	1	3	3	3	3	3	3	6	6	6	6	6	6
Qb		0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5
Qc		3	4	5	6	5	6	7	8	9	10	8	9	10	11	12	13
Weight (kg) Note 5		2.2	2.3	2.5	2.6	2.8	3.0	3.1	3.3	3.4	3.6	3.7	3.9	4.0	4.2	4.3	4.5
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%

AGXS07

Advanced model **Single-axis robots** **Slider type**

Ordering method

AGXS07 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - EP-01 - [ ] - [ ] - [ ] - [ ]

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	Regenerative unit Note 4	I/O	Battery Note 5
AGXS07	No entry: Standard H: High agility	30: 30 mm 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 1100 (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	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

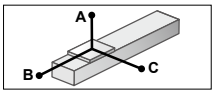
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 650 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is used vertically and the stroke is 500 mm or more, the regenerative unit is needed.
Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

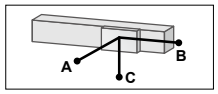
Specifications

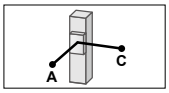
AC servo motor output		100 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		50 mm to 1100 mm(50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	10 kg	25 kg	45 kg	85 kg
	Vertical	2 kg	4 kg	8 kg	16 kg
Rated thrust		56 N	84 N	169 N	339 N
Maximum dimensions of cross section of main unit		W 70 mm × H 76.5 mm			
Overall length	Straight	ST + 276.5 mm			
	Bending	ST + 232 mm			
Degree of cleanliness Note 3		ISO CLASS 3 (ISO14644-1) or equivalent			
Intake air Note 4		30 Nℓ/min to 115 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 700 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.119 for acceleration/deceleration.

Allowable overhang Note







AGXS07-30

Horizontal installation (Unit: mm)

	A	B	C
2kg	3078	1509	1221
6kg	1191	501	418
10kg	957	317	282

Wall installation (Unit: mm)

	A	B	C
2kg	1237	1442	2975
6kg	393	435	1062
10kg	244	251	793

Vertical installation (Unit: mm)

	A	C
1kg	2335	2335
2kg	1158	1158

AGXS07-20

Horizontal installation (Unit: mm)

	A	B	C
10kg	1327	370	358
20kg	1136	186	188
25kg	1509	163	173

Wall installation (Unit: mm)

	A	B	C
10kg	313	304	1164
20kg	131	119	804
25kg	109	97	1010

Vertical installation (Unit: mm)

	A	C
1kg	3416	3416
2kg	1701	1701
4kg	841	841

AGXS07-10

Horizontal installation (Unit: mm)

	A	B	C
15kg	2420	338	372
30kg	1531	160	176
45kg	1181	101	111

Wall installation (Unit: mm)

	A	B	C
15kg	306	271	2192
30kg	106	94	1155
45kg	39	34	623

Vertical installation (Unit: mm)

	A	C
3kg	1688	1688
6kg	827	827
8kg	612	612

AGXS07-5

Horizontal installation (Unit: mm)

	A	B	C
30kg	2915	172	197
50kg	2535	96	110
85kg	2024	49	56

Wall installation (Unit: mm)

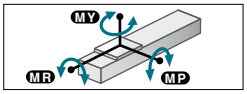
	A	B	C
30kg	122	106	2458
50kg	34	30	1476
85kg	0	0	0

Vertical installation (Unit: mm)

	A	C
6kg	907	907
9kg	591	591
16kg	314	314

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 600 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
138	121	121

Controller

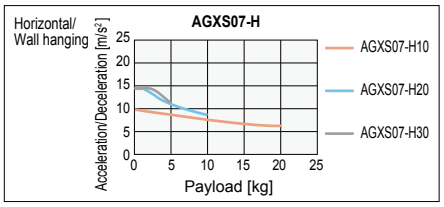
Controller	Operation method
EP-01	I/O point trace/ Remote command

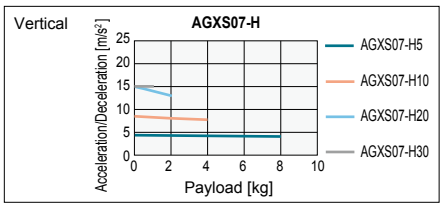
When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke		50 mm to 650 mm (50 mm pitch)			
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	5 kg	10 kg	20 kg	-
Maximum acceleration	Horizontal	14.72 m/s² (1.5 G)	14.72 m/s² (1.5 G)	9.64 m/s² (1 G)	-
Maximum payload	Vertical	1 kg	2 kg	4 kg	8 kg
Maximum acceleration	Vertical	14.72 m/s² (1.5 G)	14.72 m/s² (1.5 G)	8.44 m/s² (0.9 G)	4.32 m/s² (0.4 G)

Payload – Acceleration / Deceleration Graph (Estimate)





Allowable overhang Note

AGXS07-H30

Horizontal installation (Unit: mm)

	A	B	C
2kg	1020	897	608
5kg	461	346	245

Wall installation (Unit: mm)

	A	B	C
2kg	579	830	976
5kg	208	279	401

Vertical installation (Unit: mm)

	A	C
1kg	1165	1165

AGXS07-H20

Horizontal installation (Unit: mm)

	A	B	C
3kg	1224	758	640
6kg	684	369	321
10kg	459	214	190

Wall installation (Unit: mm)

	A	B	C
3kg	600	692	1175
6kg	274	303	621
10kg	138	147	376

Vertical installation (Unit: mm)

	A	C
1kg	1793	1793
2kg	891	891

AGXS07-H10

Horizontal installation (Unit: mm)

	A	B	C
5kg	2208	622	665
12kg	991	249	266
20kg	637	142	152

Wall installation (Unit: mm)

	A	B	C
5kg	603	556	2129
12kg	200	182	890
20kg	83	75	497

Vertical installation (Unit: mm)

	A	C
1kg	3012	3012
2kg	1487	1487
4kg	725	725

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 600 mm stroke models.

AGXS07-H5

Vertical installation (Unit: mm)

	A	C
3kg	1093	1093
5kg	639	639
8kg	384	384

Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650
Maximum speed (mm/sec)	Lead 30	1800												
	Lead 20	1200												
	Lead 10	600												
	Lead 5	300												

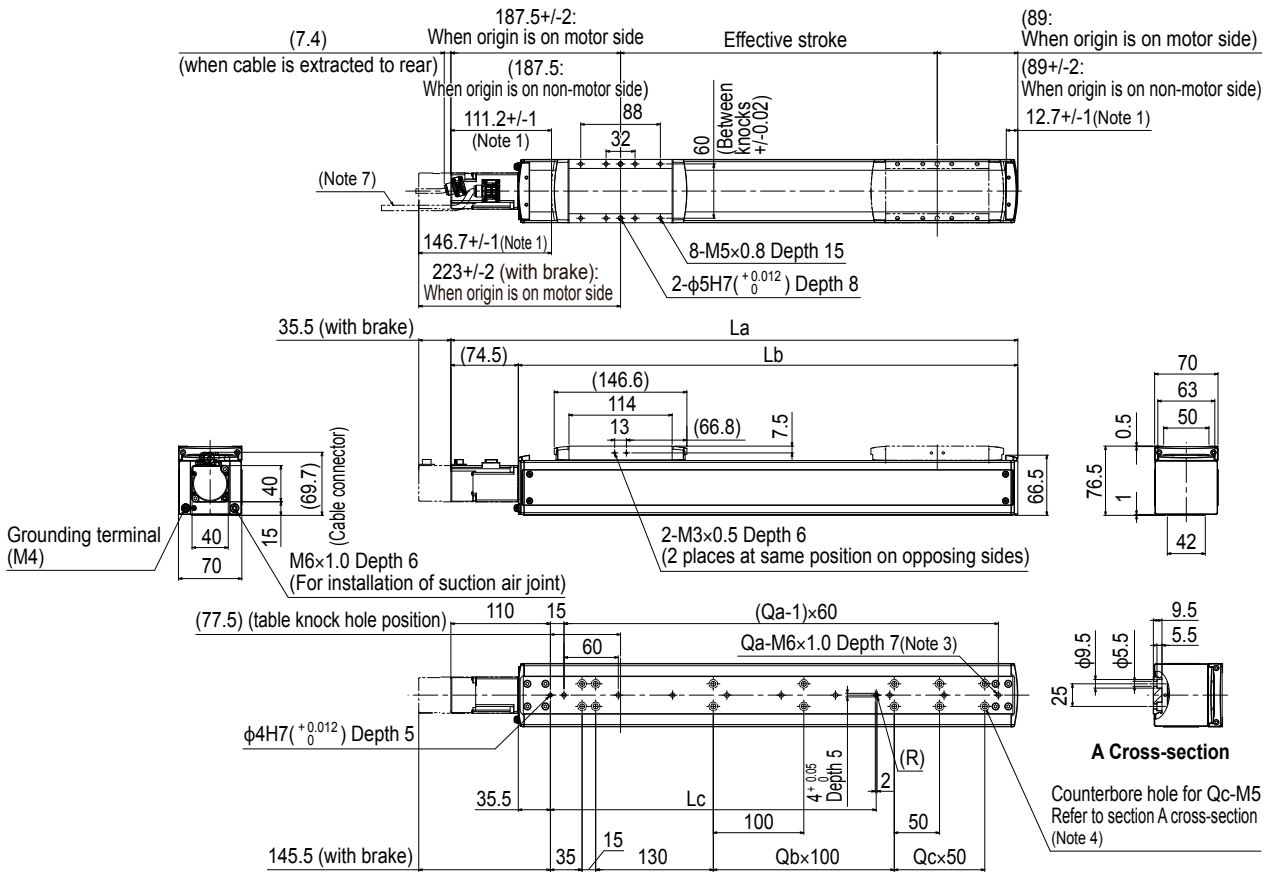
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the 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.121 for acceleration/deceleration.

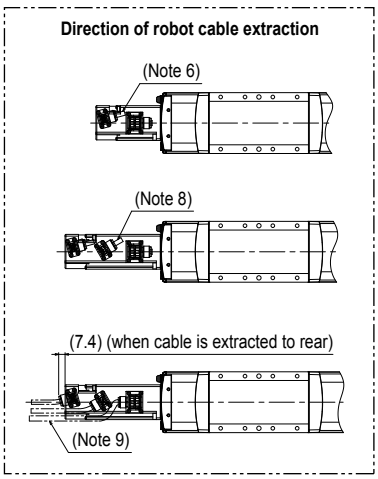
Access the website below.

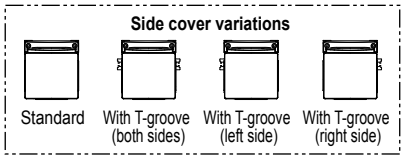
YAMAHA

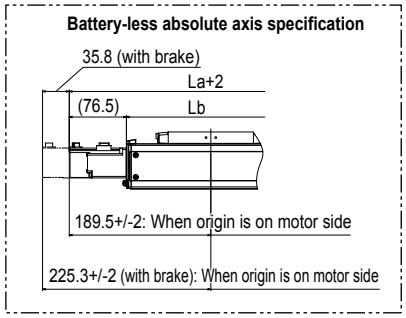
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

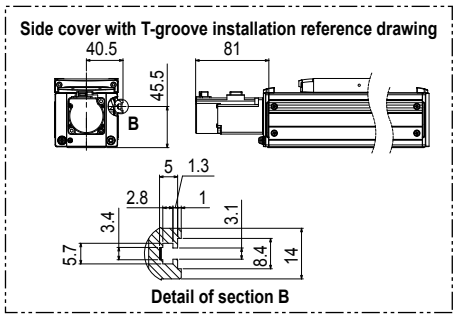
AGXS07 Straight type (S)











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 × 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.
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Note 8. The robot cable (with brake) is extracted from the front.
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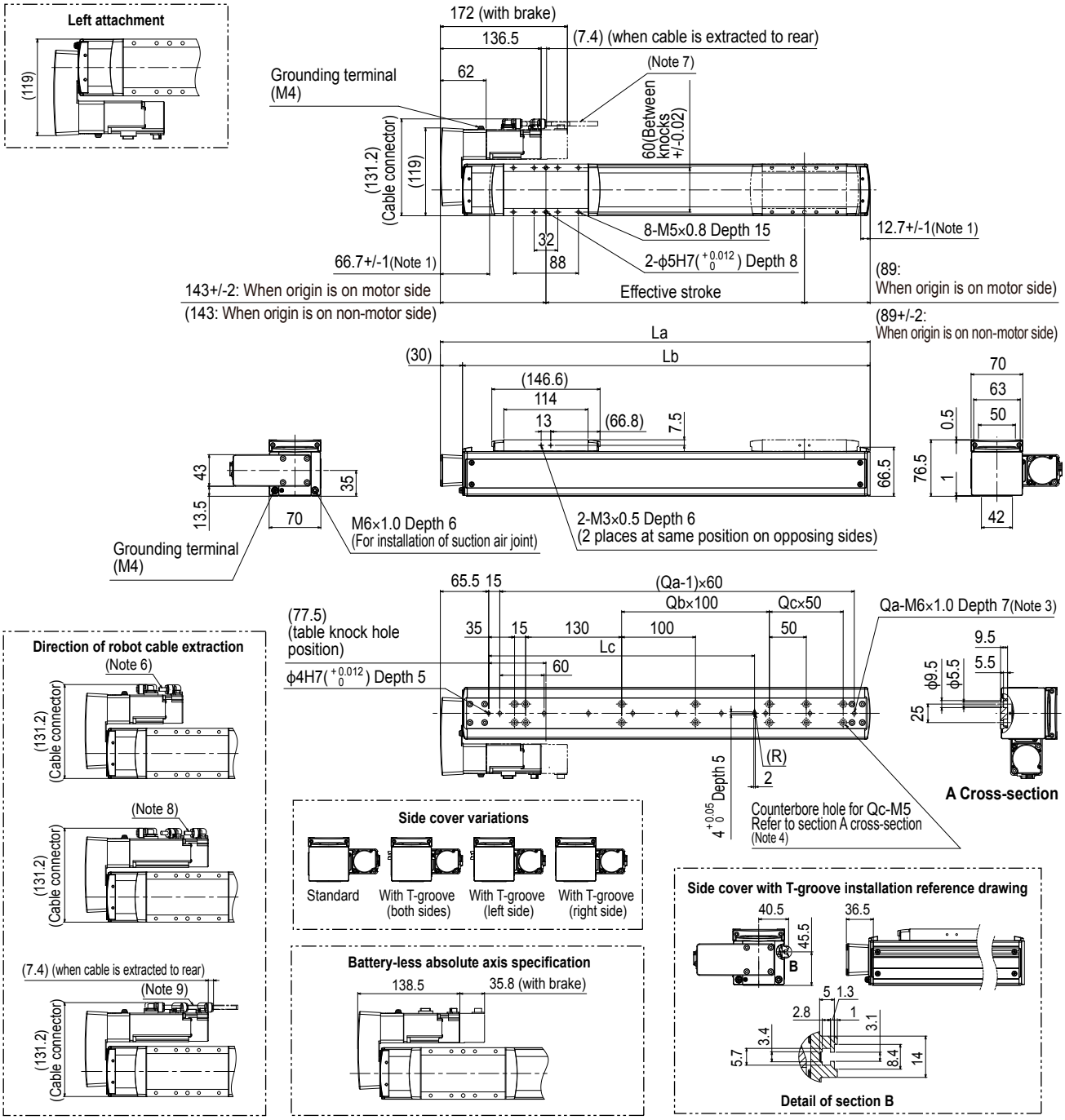
Note 10. The fixed minimum bending radius of the robot cable is R30. When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.
Note 11. Side cover with T-groove is used to install the sensor.
Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
La		326.5	376.5	426.5	476.5	526.5	576.5	626.5	676.5	726.5	776.5	826.5	876.5	926.5	976.5	1026.5	1076.5	1126.5	1176.5	1226.5	1276.5	1326.5	1376.5
Lb		252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202	1252	1302
Lc		160	160	160	160	360	360	360	360	360	360	360	360	760	760	760	760	760	760	760	760	760	760
Qa		4	5	5	6	7	8	9	10	10	11	12	13	14	15	15	16	17	18	19	20	20	21
Qb		0	0	0	0	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	6	6
Qc		0	1	2	3	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	8	9
Qd		6	8	10	12	10	12	14	16	18	20	22	24	18	20	22	24	26	28	30	32	34	36
Weight (kg) Note 5		3.6	3.8	4.1	4.4	4.7	4.9	5.2	5.5	5.7	6.0	6.3	6.6	6.8	7.1	7.4	7.6	7.9	8.2	8.5	8.7	9.0	9.3
Maximum speed (mm/sec)	Lead 30	1800														1530	1350	1170	990	900	810	720	630
	Lead 20	1200														1020	900	780	660	600	540	480	420
	Lead 10	600														510	450	390	330	300	270	240	210
	Lead 5	300														255	225	195	165	150	135	120	105
	Speed setting	–														85%	75%	65%	55%	50%	45%	40%	35%

AGXS07 Bending type (R/L)



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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	850	900	950	1000	1050	1100
La		282	332	382	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	3321
Lb		252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202	1252	1302
Lc		160	160	160	160	360	360	360	360	360	360	360	360	760	760	760	760	760	760	760	760	760	760
Qa		4	5	5	6	7	8	9	10	10	11	12	13	14	15	15	16	17	18	19	20	20	21
Qb		0	0	0	0	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	6	6
Qc		0	1	2	3	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	8	9
Qd		6	8	10	12	10	12	14	16	18	20	22	24	18	20	22	24	26	28	30	32	34	36
Weight (kg) Note 5		4.0	4.2	4.5	4.8	5.1	5.3	5.6	5.9	6.1	6.4	6.7	7.0	7.2	7.5	7.8	8.0	8.3	8.6	8.9	9.1	9.4	9.7
Maximum speed (mm/sec)	Lead 30	1800														1530	1350	1170	990	900	810	720	630
	Lead 20	1200														1020	900	780	660	600	540	480	420
	Lead 10	600														510	450	390	330	300	270	240	210
	Lead 5	300														255	225	195	165	150	135	120	105
	Speed setting	–														85%	75%	65%	55%	50%	45%	40%	35%

AGXS10

Advanced model **Single-axis robots**

Slider type

Ordering method

AGXS10 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – **EP-01** – [ ] – [ ] – [ ] – [ ]

Model	Acceleration/ deceleration specifications	Lead	Shape Note 1	Motor specification	Stroke Note 2	Cable length Note 3	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit Note 4	I/O	Battery Note 5
AGXS10	No entry: Standard H: High agility	30: 30 mm 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	100 to 1250 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A10: 200 W or less	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

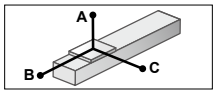
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 650 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is used vertically, the regenerative unit is needed. When the actuator is used horizontally and the stroke of lead 10, 20, or 30 is 300 to 800 mm, the regenerative unit is needed.
Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

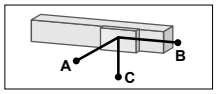
Specifications

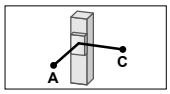
AC servo motor output		200 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		100 mm to 1250 mm(50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	25 kg	40 kg	80 kg	100 kg
	Vertical	4 kg	8 kg	20 kg	30 kg
Rated thrust		113 N	170 N	341 N	683 N
Maximum dimensions of cross section of main unit		W 100 mm × H 99.5 mm			
Overall length	Straight	ST + 250.5 mm			
	Bending	ST + 220.5 mm			
Degree of cleanliness Note 3		ISO CLASS 3 (ISO14644-1) or equivalent			
Intake air Note 4		30 Nℓ/min to 90 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 700 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.122 for acceleration/deceleration.

Allowable overhang Note







AGXS10-30

Horizontal installation (Unit: mm)

	A	B	C
10kg	878	537	292
20kg	609	256	146
25kg	608	211	124

Wall installation (Unit: mm)

	A	B	C
10kg	271	473	803
20kg	118	192	481
25kg	93	147	454

Vertical installation (Unit: mm)

	A	C
1kg	4135	4135
4kg	985	985

AGXS10-20

Horizontal installation (Unit: mm)

	A	B	C
15kg	1269	451	282
25kg	754	253	158
40kg	466	142	88

Wall installation (Unit: mm)

	A	B	C
15kg	252	387	1159
25kg	123	189	629
40kg	51	78	311

Vertical installation (Unit: mm)

	A	C
3kg	2062	2062
6kg	1012	1012
8kg	750	750

AGXS10-10

Horizontal installation (Unit: mm)

	A	B	C
30kg	1794	298	203
50kg	1358	162	111
80kg	1266	86	59

Wall installation (Unit: mm)

	A	B	C
30kg	162	234	1623
50kg	68	98	1060
80kg	16	22	552

Vertical installation (Unit: mm)

	A	C
5kg	1926	1926
10kg	931	931
20kg	434	434

AGXS10-5

Horizontal installation (Unit: mm)

	A	B	C
30kg	5605	321	225
50kg	3694	177	124
80kg	2619	95	67
100kg	2224	68	48

Wall installation (Unit: mm)

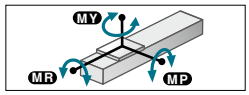
	A	B	C
30kg	181	258	5195
50kg	79	113	3111
80kg	22	31	1557
100kg	0	0	0

Vertical installation (Unit: mm)

	A	C
10kg	1018	1018
20kg	477	477
30kg	296	296

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 600 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
274	274	241

Controller

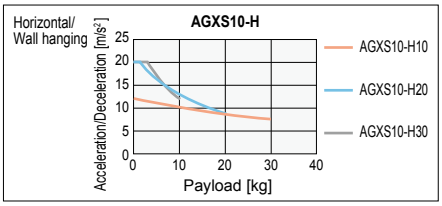
Controller	Operation method
EP-01	I/O point trace/ Remote command

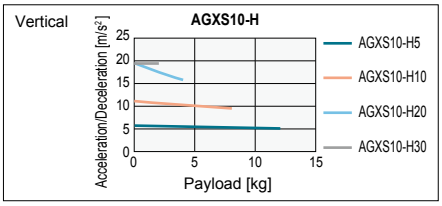
When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke		100 mm to 650 mm (50 mm pitch)			
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	10 kg	20 kg	30 kg	-
Maximum acceleration	Horizontal	19.62 m/s² (2 G)	19.62 m/s² (2 G)	11.71 m/s² (1.2 G)	-
Maximum payload	Vertical	2 kg	4 kg	8 kg	12 kg
Maximum acceleration	Vertical	19.62 m/s² (2 G)	19.62 m/s² (2 G)	10.84 m/s² (1.1 G)	5.53 m/s² (0.6 G)

Payload – Acceleration / Deceleration Graph (Estimate)





Allowable overhang Note

AGXS10-H30

Horizontal installation (Unit: mm)

	A	B	C
3kg	1041	1117	541
6kg	581	534	266
10kg	384	300	153

Wall installation (Unit: mm)

	A	B	C
3kg	521	1046	1009
6kg	241	466	539
10kg	125	235	327

Vertical installation (Unit: mm)

	A	C
1kg	2054	2054
2kg	994	994

AGXS10-H20

Horizontal installation (Unit: mm)

	A	B	C
5kg	1218	844	493
12kg	575	326	193
20kg	375	177	106

Wall installation (Unit: mm)

	A	B	C
5kg	464	778	1177
12kg	159	261	516
20kg	70	113	290

Vertical installation (Unit: mm)

	A	C
2kg	1602	1602
4kg	788	788

AGXS10-H10

Horizontal installation (Unit: mm)

	A	B	C
10kg	1851	568	383
20kg	973	263	177
30kg	671	162	109

Wall installation (Unit: mm)

	A	B	C
10kg	343	504	1784
20kg	136	199	885
30kg	67	98	552

Vertical installation (Unit: mm)

	A	C
3kg	1849	1849
5kg	1086	1086
8kg	656	656

AGXS10-H5

Vertical installation (Unit: mm)

	A	C
4kg	1550	1550
8kg	743	743
12kg	474	474

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 600 mm stroke models.

Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650
Maximum speed (mm/sec)	Lead 30	1800											
	Lead 20	1200											
	Lead 10	600											
	Lead 5	300											

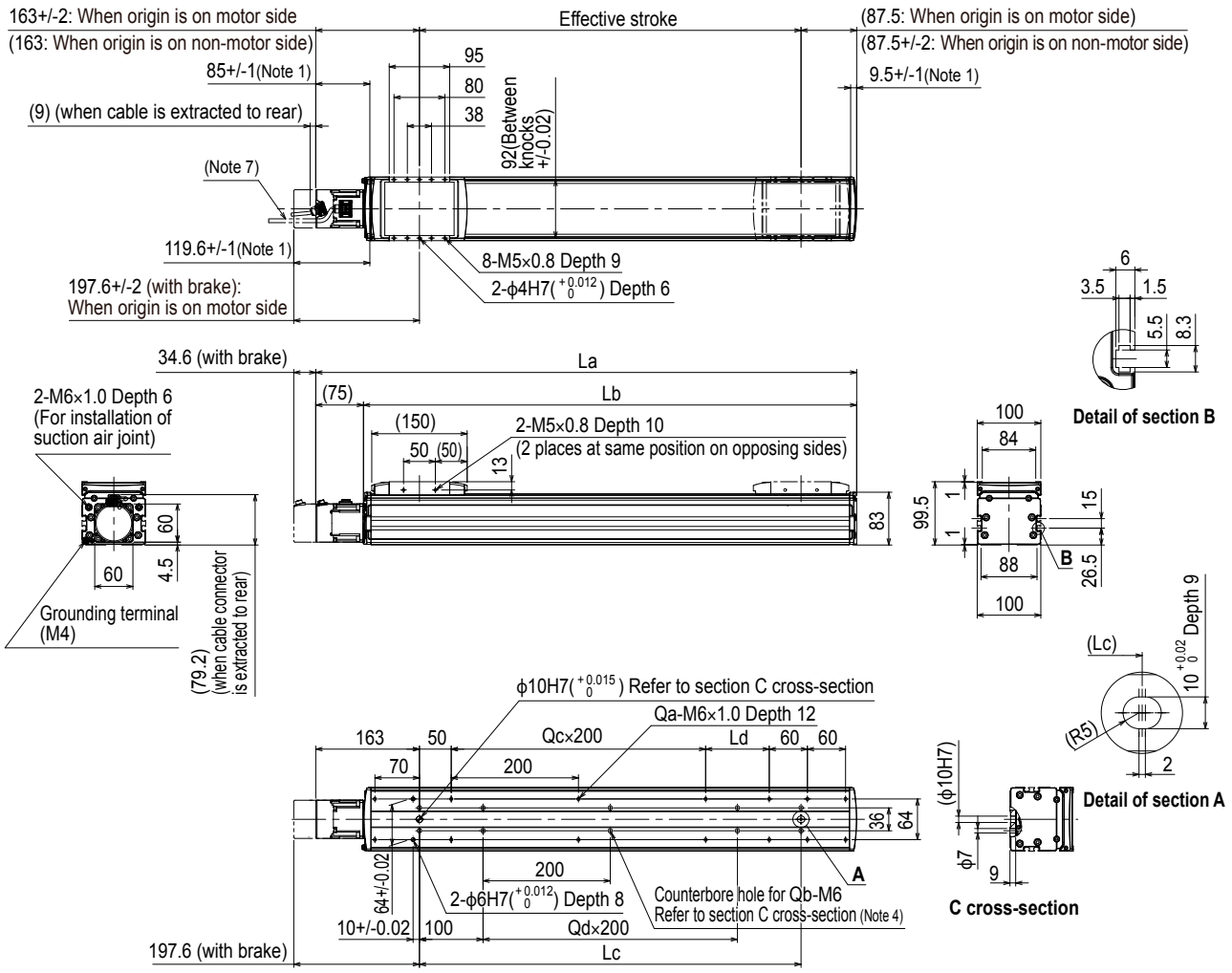
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the 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.124 for acceleration/deceleration.

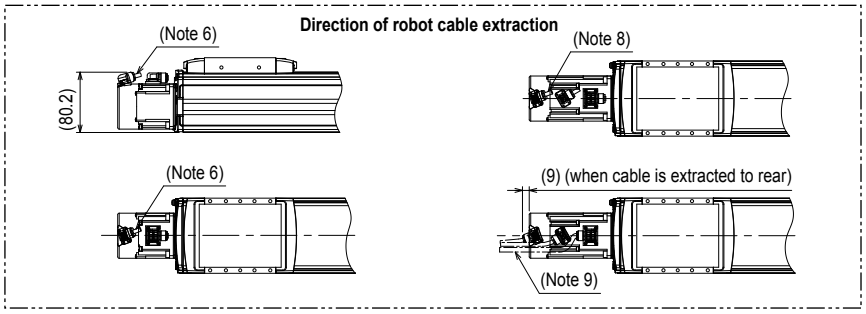
Access the website below.

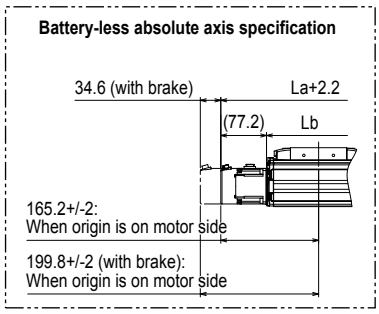
▶ **The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.**

Controller EP-01 ▶ 146

AGXS10 Straight type (S)



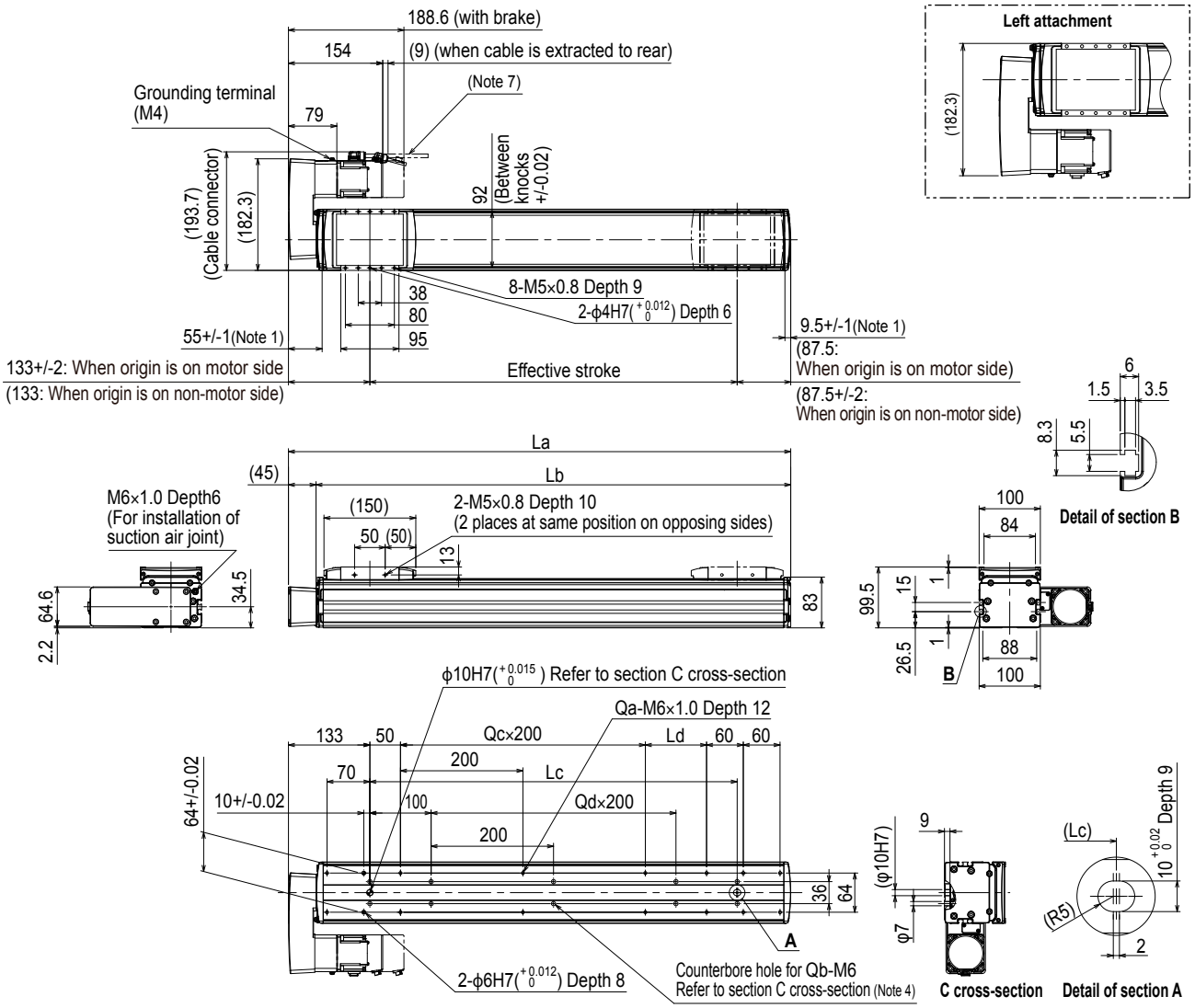


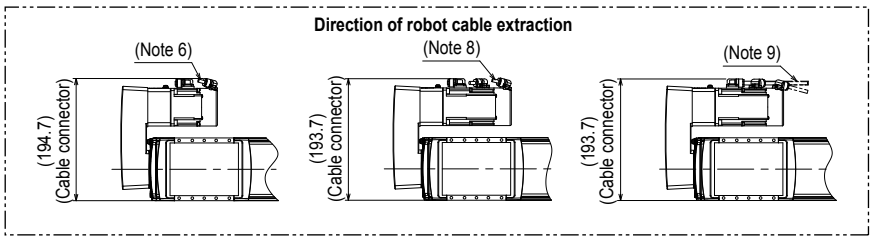


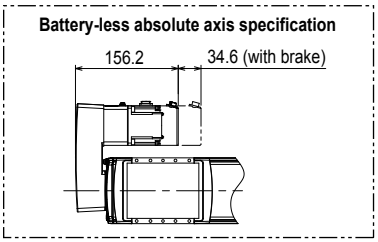
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 0.4 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. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5	1200.5	1250.5	1300.5	1350.5	1400.5	1450.5	1500.5
Lb		275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Ld		0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
Qa		8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
Qc		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Weight (kg) Note 5		5.4	5.9	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.4	11.9	12.4	12.9	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9
Maximum speed (mm/sec)	Lead 30	1800													1530	1350	1170	990	900	810	720	630	540		450
	Lead 20	1200													1020	900	780	660	600	540	480	420	360		300
	Lead 10	600													510	450	390	330	300	270	240	210	180		150
	Lead 5	300													255	225	195	165	150	135	120	105	90		75
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%		25%

AGXS10 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. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 0.4 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. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5
Lb		275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Ld		0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
Qa		8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
Qc		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Weight (kg) Note 5		6.6	7.1	7.6	8.1	8.6	9.1	9.6	10.1	10.6	11.1	11.6	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.1	16.6	17.1	17.6	18.1
Maximum speed (mm/sec)	Lead 30	1800													1530	1350	1170	990	900	810	720	630	540		450
	Lead 20	1200													1020	900	780	660	600	540	480	420	360		300
	Lead 10	600													510	450	390	330	300	270	240	210	180		150
	Lead 5	300													255	225	195	165	150	135	120	105	90		75
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%		25%

AGXS12

Advanced model **Single-axis robots** **Slider type**

Ordering method

AGXS12 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - **EP-01** - [ ] - [ ] - [ ] - [ ]

Model	Acceleration/ deceleration specifications	Lead	Shape Note 1	Motor specification	Stroke Note 2	Cable length Note 3	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit Note 4	I/O	Battery Note 5
	No entry: Standard H: High agility	30: 30 mm 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	100 to 1250 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A30: 400W/750W	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

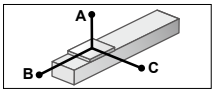
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 650 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is used vertically or horizontally and the stroke is 400 mm or more, the regenerative unit is needed.
Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

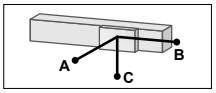
Specifications

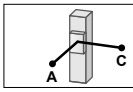
AC servo motor output		400 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		100 mm to 1250 mm(50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	35 kg	50 kg	95 kg	115 kg
	Vertical	8 kg	15 kg	25 kg	45 kg
Rated thrust		225 N	339 N	678 N	1360 N
Maximum dimensions of cross section of main unit		W 125 mm × H 101 mm			
Overall length	Straight	ST + 302.5 mm			
	Bending	ST + 256.5 mm			
Degree of cleanliness Note 3		ISO CLASS 3 (ISO14644-1) or equivalent			
Intake air Note 4		30 Nℓ/min to 90 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 700 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.126 for acceleration/deceleration.

Allowable overhang Note







AGXS12-30

Horizontal installation (Unit: mm)			
	A	B	C
10kg	1796	1074	637
20kg	1300	531	332
35kg	1341	334	227

Wall installation (Unit: mm)			
	A	B	C
10kg	631	1009	1720
20kg	316	466	1171
35kg	197	269	1130

Vertical installation (Unit: mm)		
	A	C
3kg	2642	2642
6kg	1289	1289
8kg	951	951

AGXS12-20

Horizontal installation (Unit: mm)			
	A	B	C
15kg	2231	904	613
30kg	1290	428	293
50kg	882	237	164

Wall installation (Unit: mm)			
	A	B	C
15kg	591	839	2141
30kg	260	363	1167
50kg	126	172	710

Vertical installation (Unit: mm)		
	A	C
5kg	2424	2424
10kg	1207	1207
15kg	803	803

AGXS12-10

Horizontal installation (Unit: mm)			
	A	B	C
30kg	3109	607	456
50kg	2421	345	260
80kg	2417	198	150
95kg	2559	159	121

Wall installation (Unit: mm)			
	A	B	C
30kg	413	542	2978
50kg	215	280	2208
80kg	103	133	1927
95kg	73	95	1830

Vertical installation (Unit: mm)		
	A	C
10kg	1862	1862
15kg	1221	1221
25kg	708	708

AGXS12-5

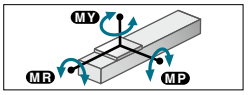
Horizontal installation (Unit: mm)			
	A	B	C
30kg	11079	653	504
50kg	7434	373	288
80kg	5458	215	166
115kg	4364	136	105

Wall installation (Unit: mm)			
	A	B	C
30kg	456	588	10692
50kg	239	308	6935
80kg	117	150	4713
115kg	55	71	3221

Vertical installation (Unit: mm)		
	A	C
15kg	1332	1332
30kg	634	634
45kg	402	402

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 600 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
334	334	294

Controller

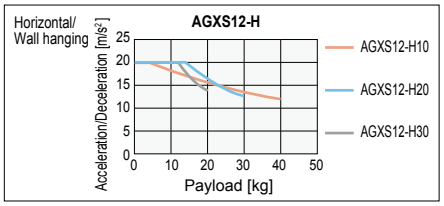
Controller	Operation method
EP-01	I/O point trace/ Remote command

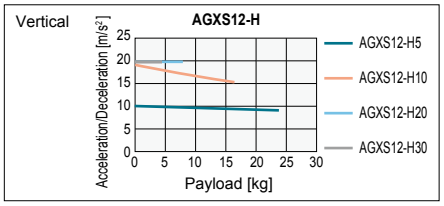
When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke		100 mm to 650 mm (50 mm pitch)			
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	20 kg	30 kg	40 kg	-
Maximum acceleration	Horizontal	19.62 m/s² (2 G)	19.62 m/s² (2 G)	19.62 m/s² (2 G)	-
Maximum payload	Vertical	4 kg	8 kg	16 kg	24 kg
Maximum acceleration	Vertical	19.62 m/s² (2 G)	19.62 m/s² (2 G)	19.62 m/s² (2 G)	9.85 m/s² (1 G)

Payload – Acceleration / Deceleration Graph (Estimate)





Allowable overhang Note

AGXS12-H30

Horizontal installation (Unit: mm)			
	A	B	C
5kg	1216	1297	669
12kg	461	506	252
20kg	316	280	147

Wall installation (Unit: mm)			
	A	B	C
5kg	648	1224	1183
12kg	226	436	427
20kg	117	213	266

Vertical installation (Unit: mm)		
	A	C
2kg	1984	1984
4kg	960	960

AGXS12-H20

Horizontal installation (Unit: mm)			
	A	B	C
10kg	999	807	489
20kg	521	378	231
30kg	382	234	146

Wall installation (Unit: mm)			
	A	B	C
10kg	458	740	966
20kg	196	311	479
30kg	109	168	325

Vertical installation (Unit: mm)		
	A	C
3kg	2031	2031
5kg	1193	1193
8kg	722	722

AGXS12-H10

Horizontal installation (Unit: mm)			
	A	B	C
15kg	1668	737	535
25kg	1060	423	308
40kg	709	246	180

Wall installation (Unit: mm)			
	A	B	C
15kg	491	672	1628
25kg	263	358	1012
40kg	134	181	644

Vertical installation (Unit: mm)		
	A	C
5kg	2071	2071
10kg	1011	1011
16kg	612	612

AGXS12-H5

Vertical installation (Unit: mm)		
	A	C
8kg	1487	1487
16kg	712	712
24kg	454	454

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 600 mm stroke models.

Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650
Maximum speed (mm/sec)	Lead 30	1800											
	Lead 20	1200											
	Lead 10	600											
	Lead 5	300											

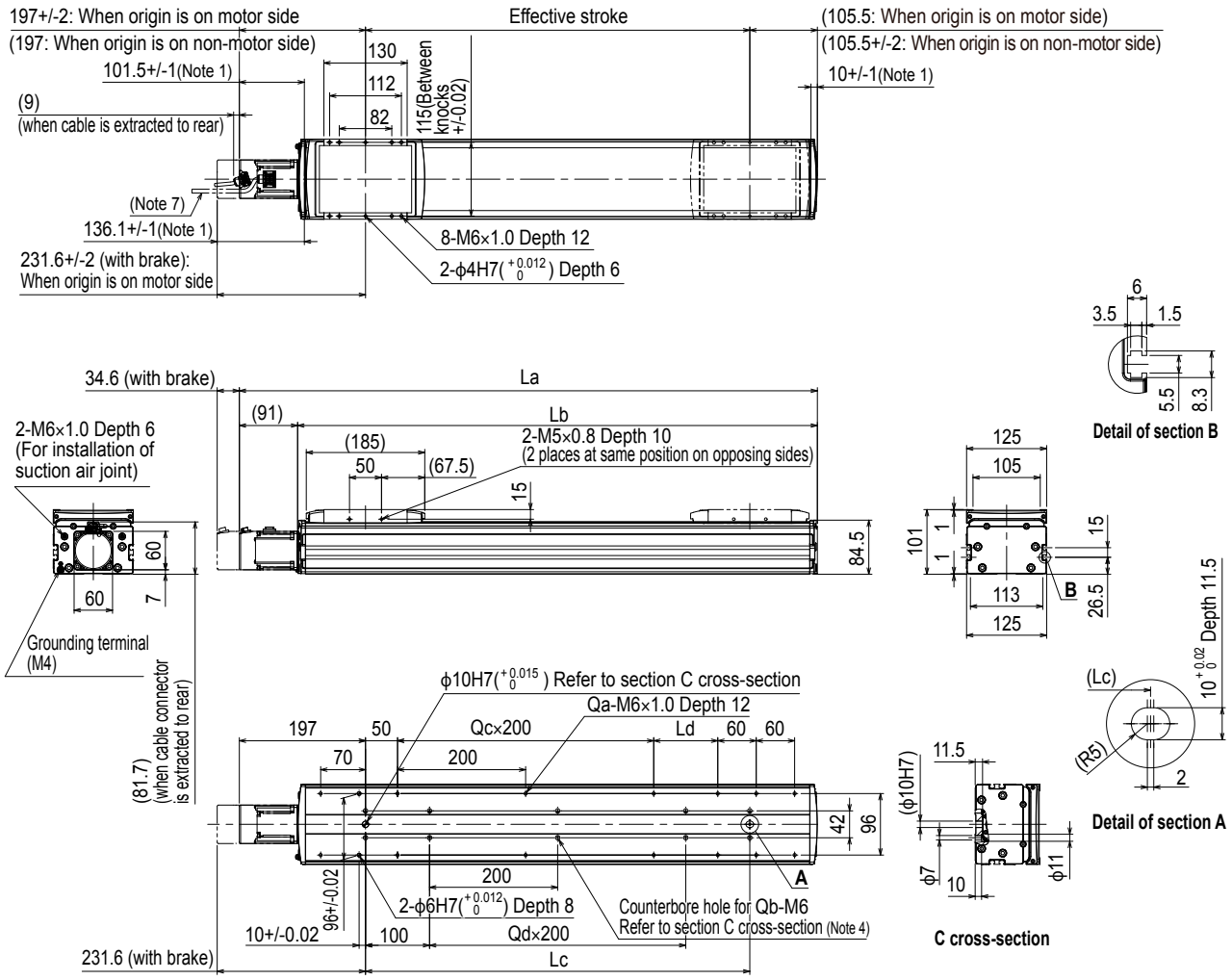
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the 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.128 for acceleration/deceleration.

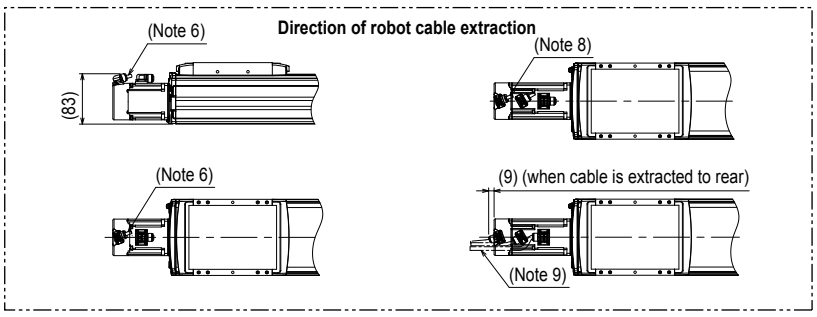
Access the website below.

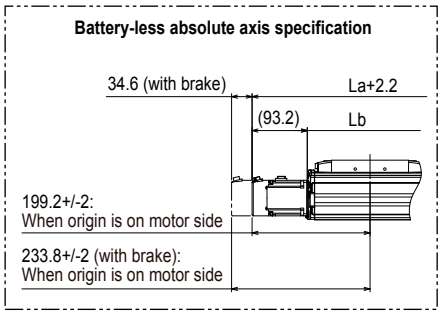
YAMAHA

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

AGXS12 Straight type (S)



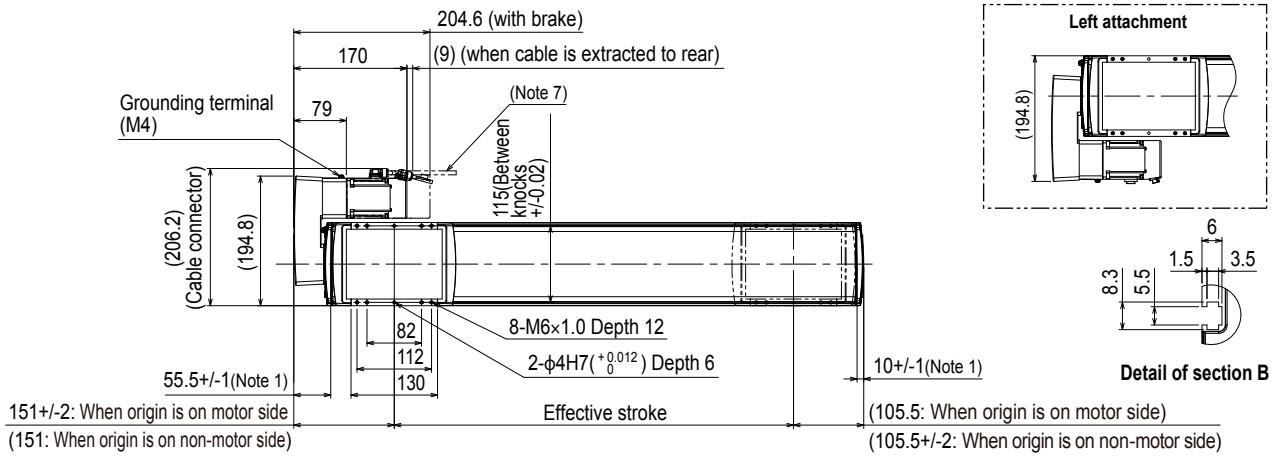


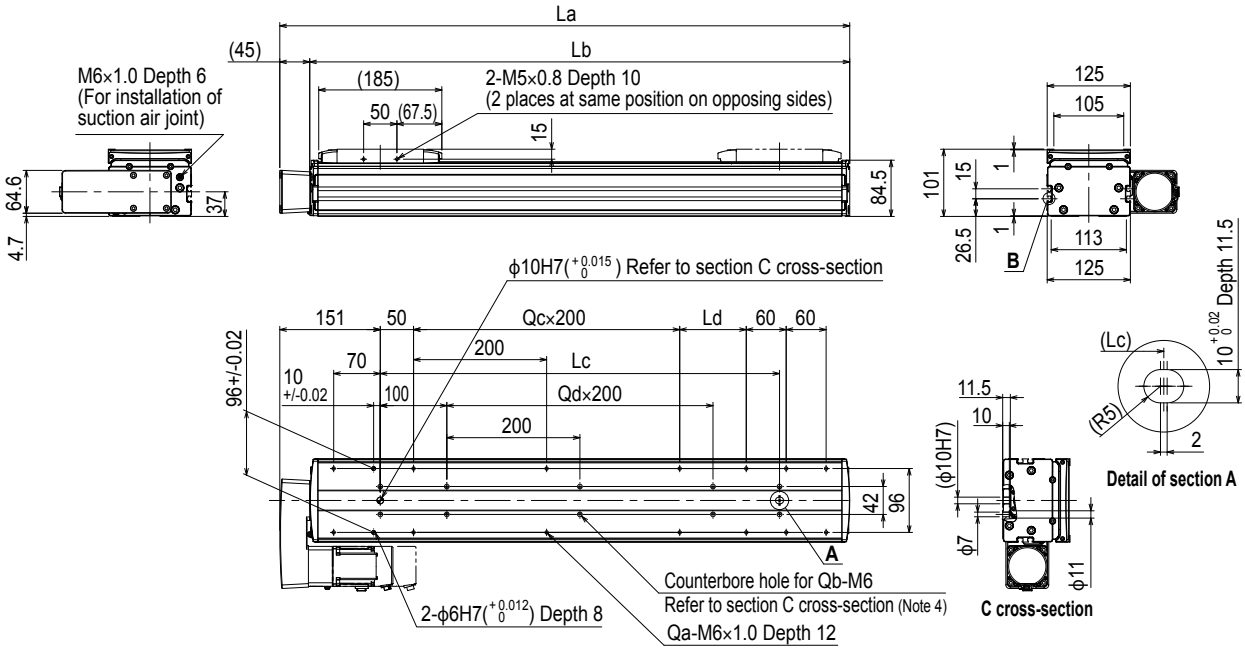


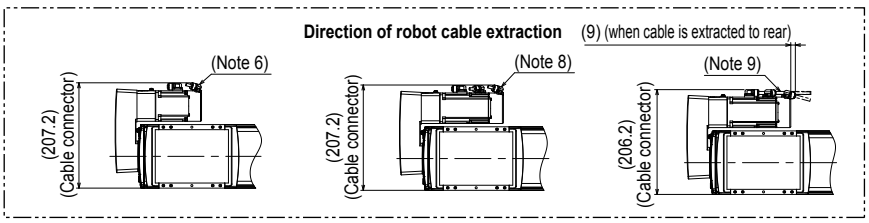
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 0.4 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. Grease gun nozzle (recommended) (see P.143 for detail)

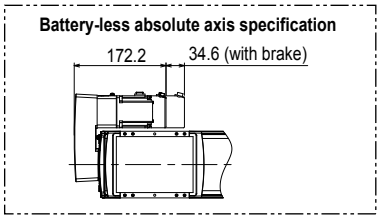
Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		402.5	452.5	502.5	552.5	602.5	652.5	702.5	752.5	802.5	852.5	902.5	952.5	1002.5	1052.5	1102.5	1152.5	1202.5	1252.5	1302.5	1352.5	1402.5	1452.5	1502.5	1552.5
Lb		311.5	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5	1011.5	1061.5	1111.5	1161.5	1211.5	1261.5	1311.5	1361.5	1411.5	1461.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Ld		0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
Qa		8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
Qc		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Weight (kg) Note 5		7.6	8.2	8.9	9.6	10.2	10.9	11.6	12.3	12.9	13.6	14.3	15.0	15.6	16.3	17.0	17.6	18.3	19.0	19.7	20.3	21.0	21.7	22.4	23.0
Maximum speed (mm/sec)	Lead 30	1800													1530	1350	1170	990	900	810	720	630	540		450
	Lead 20	1200													1020	900	780	660	600	540	480	420	360		300
	Lead 10	600													510	450	390	330	300	270	240	210	180		150
	Lead 5	300													255	225	195	165	150	135	120	105	90		75
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%		25%

AGXS12 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. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 0.4 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. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		356.5	406.5	456.5	506.5	556.5	605.5	656.5	706.5	756.5	806.5	856.5	906.5	956.5	1006.5	1056.5	1106.5	1156.5	1206.5	1256.5	1306.5	1356.5	1406.5	1456.5	1506.5
Lb		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	1011.5	1061.5	1111.5	1161.5	1211.5	1261.5	1311.5	1361.5	1411.5	1461.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Ld		0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
Qa		8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
Qc		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
Weight (kg) Note 5		8.8	9.4	10.1	10.8	11.4	12.1	12.8	13.5	14.1	14.8	15.5	16.2	16.8	17.5	18.2	18.8	19.5	20.2	20.9	21.5	22.2	22.9	23.6	24.2
Maximum speed (mm/sec)	Lead 30	1800													1530	1350	1170	990	900	810	720	630	540		450
	Lead 20	1200													1020	900	780	660	600	540	480	420	360		300
	Lead 10	600													510	450	390	330	300	270	240	210	180		150
	Lead 5	300													255	225	195	165	150	135	120	105	90		75
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%		25%

AGXS16

Advanced model **Single-axis robots**

Slider type

Ordering method

AGXS16 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – **EP-01** – [ ] – [ ] – [ ] – [ ]

Model	Acceleration/ deceleration specifications	Lead	Shape Note 1	Motor specification	Stroke Note 2	Cable length Note 3	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit Note 4	I/O	Battery Note 5
AGXS16	No entry: Standard H: High agility	40: 40 mm 20: 20 mm 10: 10 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	100 to 1450 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A30: 400W/750W	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

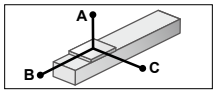
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 800 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is used vertically, the regenerative unit is needed. When the actuator is used horizontally and the stroke of lead 20 is 400 to 850 mm or the stroke of lead 40 is 600 to 950 mm, the regenerative unit is needed.
Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

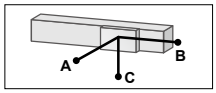
Specifications

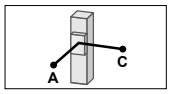
AC servo motor output		750 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ20 (C5 class)		
Stroke		100 mm to 1450 mm(50 mm pitch)		
Maximum speed Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload	Horizontal	45 kg	95 kg	130 kg
	Vertical	12 kg	28 kg	55 kg
Rated thrust		320 N	640 N	1280 N
Maximum dimensions of cross section of main unit		W 160 mm × H 130 mm		
Overall length	Straight	ST + 344.8 mm		
	Bending	ST + 294.5 mm		
Degree of cleanliness Note 3		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 4		30 Nℓ/min to 90 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 800 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.130 for acceleration/deceleration.

Allowable overhang Note







AGXS16-40

Horizontal installation (Unit: mm)

	A	B	C
15kg	2876	1866	1253
30kg	2385	997	776
45kg	2339	720	604

Wall installation (Unit: mm)

	A	B	C
15kg	1273	1802	2797
30kg	782	935	2263
45kg	598	658	2174

Vertical installation (Unit: mm)

	A	C
3kg	6605	6605
6kg	3699	3699
12kg	2827	2827

AGXS16-20

Horizontal installation (Unit: mm)

	A	B	C
30kg	3862	1255	1106
50kg	2568	733	652
80kg	1798	440	394
95kg	1579	362	325

Wall installation (Unit: mm)

	A	B	C
30kg	1102	1192	3742
50kg	630	671	2422
80kg	360	377	1612
95kg	288	300	1373

Vertical installation (Unit: mm)

	A	C
10kg	3404	3404
20kg	1740	1740
28kg	1504	1504

AGXS16-10

Horizontal installation (Unit: mm)

	A	B	C
50kg	6253	1026	1024
80kg	4447	623	624
100kg	3957	489	490
130kg	3786	365	367

Wall installation (Unit: mm)

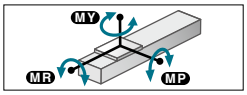
	A	B	C
50kg	980	964	6089
80kg	573	561	4240
100kg	437	426	3706
130kg	312	302	3422

Vertical installation (Unit: mm)

	A	C
15kg	3434	3434
30kg	1684	1684
55kg	889	889

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 600 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
706	706	620

Controller

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

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

Specifications

Stroke		100 mm to 800 mm (50 mm pitch)		
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload	Horizontal	30 kg	60 kg	-
Maximum acceleration		19.62 m/s² (2 G)	19.84 m/s² (2 G)	-
Maximum payload	Vertical	8 kg	16 kg	32 kg
Maximum acceleration		19.62 m/s² (2 G)	18.43 m/s² (1.9 G)	11.17 m/s² (1.1 G)

Allowable overhang Note

AGXS16-H40

Horizontal installation (Unit: mm)

	A	B	C
10kg	1271	1669	836
20kg	725	803	429
30kg	534	514	287

Wall installation (Unit: mm)

	A	B	C
10kg	816	1585	1240
20kg	404	725	683
30kg	259	441	480

Vertical installation (Unit: mm)

	A	C
3kg	2904	2904
5kg	1710	1710
8kg	1038	1038

AGXS16-H20

Horizontal installation (Unit: mm)

	A	B	C
20kg	1722	1123	875
40kg	952	535	428
60kg	682	339	276

Wall installation (Unit: mm)

	A	B	C
20kg	842	1056	1679
40kg	388	470	895
60kg	232	275	611

Vertical installation (Unit: mm)

	A	C
5kg	3473	3473
10kg	1723	1723
16kg	1064	1064

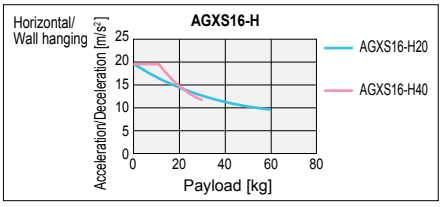
AGXS16-H10

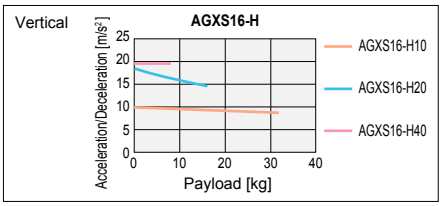
Vertical installation (Unit: mm)

	A	C
10kg	2951	2951
20kg	1438	1438
32kg	870	870

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 600 mm stroke models.

Payload – Acceleration / Deceleration Graph (Estimate)





Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Maximum speed (mm/sec)	Lead 40	2400														
	Lead 20	1200														
	Lead 10	600														

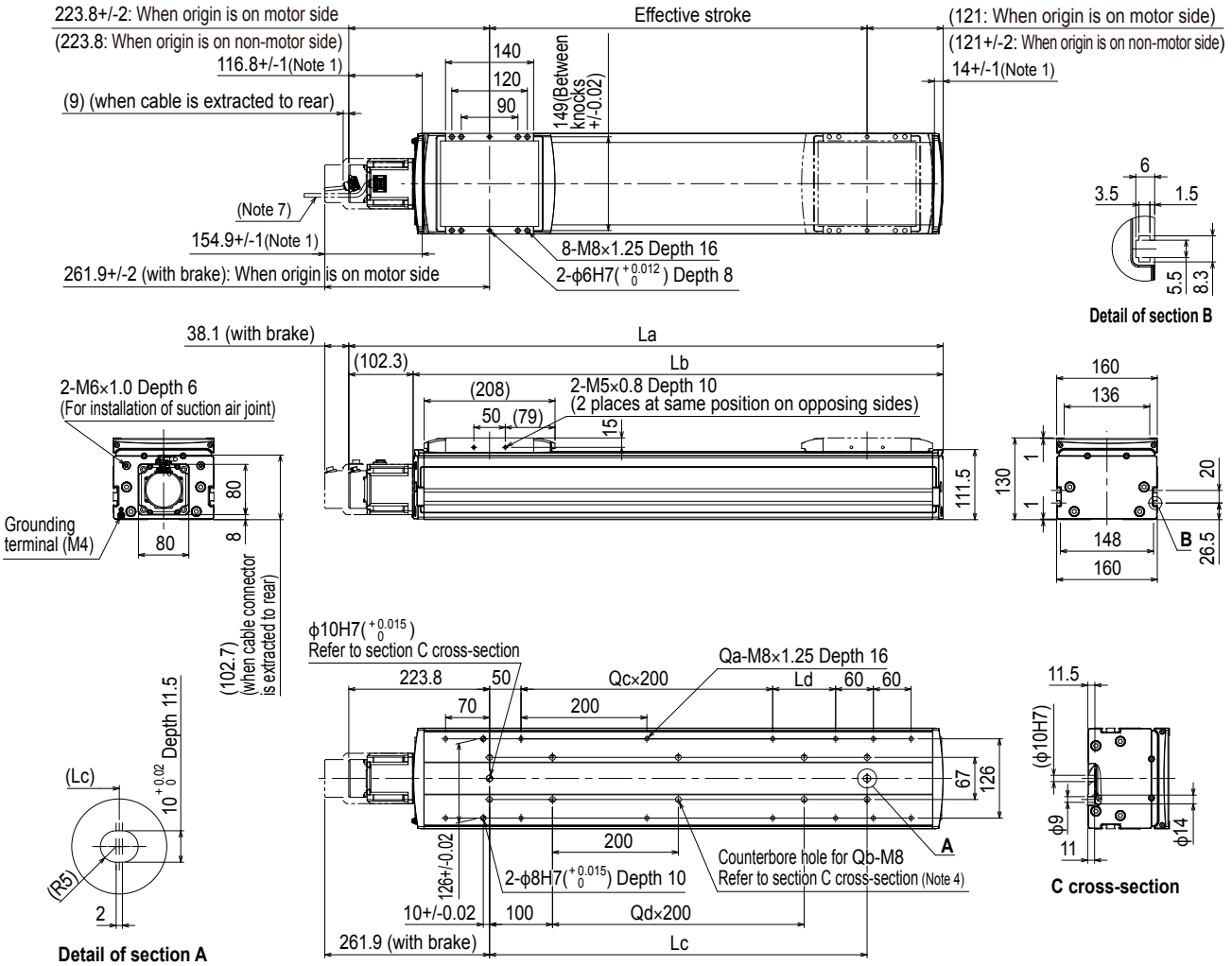
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 800 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the 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.132 for acceleration/deceleration.

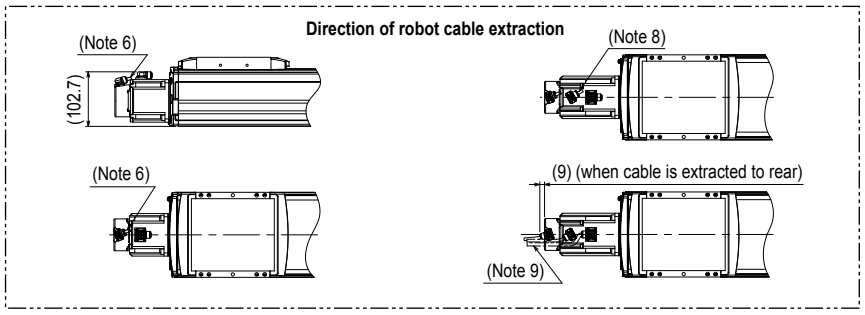
Access the website below.

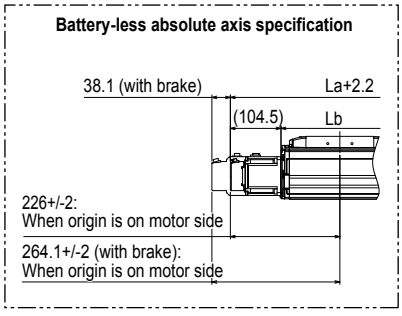
▶ **The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.**

Controller EP-01 ▶ 146

AGXS16 Straight type (S)



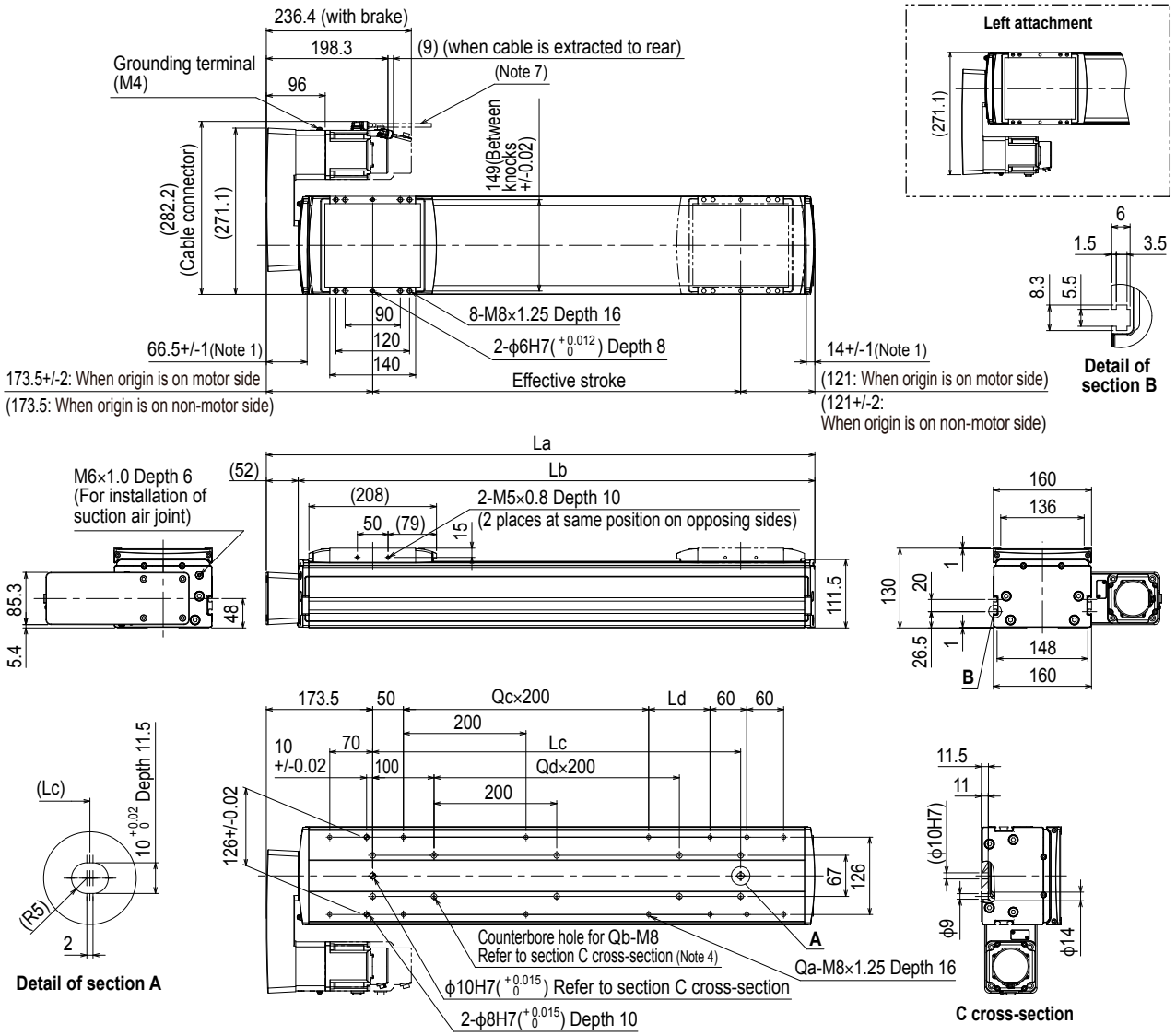




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<25 mm or more>>. The recommended length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting tap hole specifications is <<frame thickness + 15 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 0.9 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. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
La		444.8	494.8	544.8	594.8	644.8	694.8	744.8	794.8	844.8	894.8	944.8	994.8	1044.8	1094.8	1144.8	1194.8	1244.8	1294.8	1344.8	1394.8	1444.8	1494.8	1544.8	1594.8	1644.8	1694.8	1744.8	1794.8
Lb		342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5	1192.5	1242.5	1292.5	1342.5	1392.5	1442.5	1492.5	1542.5	1592.5	1642.5	1692.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Ld		0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
Qa		8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Qc		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
Weight (kg) Note 5		13.6	14.6	15.6	16.6	17.6	18.5	19.5	20.5	21.5	22.5	23.4	24.4	25.4	26.4	27.4	28.4	29.3	30.3	31.3	32.3	33.3	34.3	35.2	36.2	37.2	38.2	39.2	40.1
Maximum speed (mm/sec)	Lead 40	2400															2160	1920	1680	1440	1320	1200	1080	960		840	720		600
	Lead 20	1200															1080	960	840	720	660	600	540	480		420	360		300
	Lead 10	600															540	480	420	360	330	300	270	240		210	180		150
	Speed setting	–															90%	80%	70%	60%	55%	50%	45%	40%		35%	30%		25%

AGXS16 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. The length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<25 mm or more>>. The recommended length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting tap hole specifications is <<frame thickness + 15 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 0.9 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. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 12. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
La		394.5	444.5	494.5	544.5	594.5	644.5	694.5	744.5	794.5	844.5	894.5	944.5	994.5	1044.5	1094.5	1144.5	1194.5	1244.5	1294.5	1344.5	1394.5	1444.5	1494.5	1544.5	1594.5	1644.5	1694.5	1744.5
Lb		342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5	1192.5	1242.5	1292.5	1342.5	1392.5	1442.5	1492.5	1542.5	1592.5	1642.5	1692.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Ld		0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
Qa		8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Qc		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
Weight (kg) Note 5		16.3	17.3	18.3	19.3	20.3	21.2	22.2	23.2	24.2	25.2	26.1	27.1	28.1	29.1	30.1	31.1	32.0	33.0	34.0	35.0	36.0	37.0	37.9	38.9	39.9	40.9	41.9	42.8
Maximum speed (mm/sec)	Lead 40	2400															2160	1920	1680	1440	1320	1200	1080	960		840	720		600
	Lead 20	1200															1080	960	840	720	660	600	540	480		420	360		300
	Lead 10	600															540	480	420	360	330	300	270	240		210	180		150
	Speed setting	–															90%	80%	70%	60%	55%	50%	45%	40%		35%	30%		25%

AGXS20

Advanced model **Single-axis robots**

Slider type

Ordering method

AGXS20 -				-			- EP-01 -				-
Model	Lead	Shape	Motor specification	Stroke	Cable length Note 1	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit Note 2	I/O	Battery Note 3
	40: 40 mm 20: 20 mm 10: 10 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	100 to 1450 (50mm pitch)	R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A30: 400W/750W	No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	B: With battery N: None

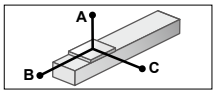
Note 1. The robot cable is flexible and resists bending.
Note 2. When the actuator is used vertically, the regenerative unit is needed.
When the actuator is used horizontally and the stroke of lead 20 is 400 to 850 mm or the stroke of lead 40 is 600 to 950 mm, the regenerative unit is needed.
Note 3. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

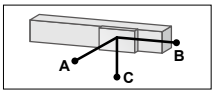
Specifications

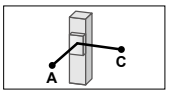
AC servo motor output		750 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 20 (C5 class)		
Stroke		100 mm to 1450 mm(50 mm pitch)		
Maximum speed Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload	Horizontal	65 kg	130 kg	160 kg
	Vertical	15 kg	35 kg	65 kg
Rated thrust		320 N	640 N	1280 N
Maximum dimensions of cross section of main unit		W 200 mm × H 140 mm		
Overall length	Straight	ST + 390.8 mm		
	Bending	ST + 340.5 mm		
Degree of cleanliness Note 3		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 4		30 Nℓ/min to 90 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 800 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.133 for acceleration/deceleration.

Allowable overhang Note







AGXS20-40

Horizontal installation (Unit: mm)

	A	B	C
20kg	5318	2821	2096
40kg	4836	1609	1369
65kg	4824	1088	1001

Wall installation (Unit: mm)

	A	B	C
20kg	2171	2751	5211
40kg	1417	1539	4667
65kg	1013	1018	4575

Vertical installation (Unit: mm)

	A	C
5kg	8187	8187
10kg	5203	5203
15kg	4810	4810

AGXS20-20

Horizontal installation (Unit: mm)

	A	B	C
50kg	5436	1493	1377
80kg	4417	911	854
100kg	4592	756	727
130kg	4338	596	584

Wall installation (Unit: mm)

	A	B	C
50kg	1390	1423	5265
80kg	849	841	4153
100kg	708	686	4253
130kg	550	526	3933

Vertical installation (Unit: mm)

	A	C
20kg	3436	3436
30kg	2600	2600
35kg	3073	3073

AGXS20-10

Horizontal installation (Unit: mm)

	A	B	C
40kg	22519	2607	2713
80kg	16716	1274	1331
120kg	14066	830	868
160kg	12284	608	637

Wall installation (Unit: mm)

	A	B	C
40kg	2704	2537	22210
80kg	1293	1204	16141
120kg	818	760	13223
160kg	580	538	11190

Vertical installation (Unit: mm)

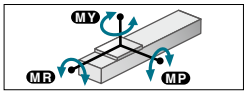
	A	C
20kg	5157	5157
40kg	2553	2553
65kg	1600	1600

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 600 mm stroke models.

Controller

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

Static loading moment



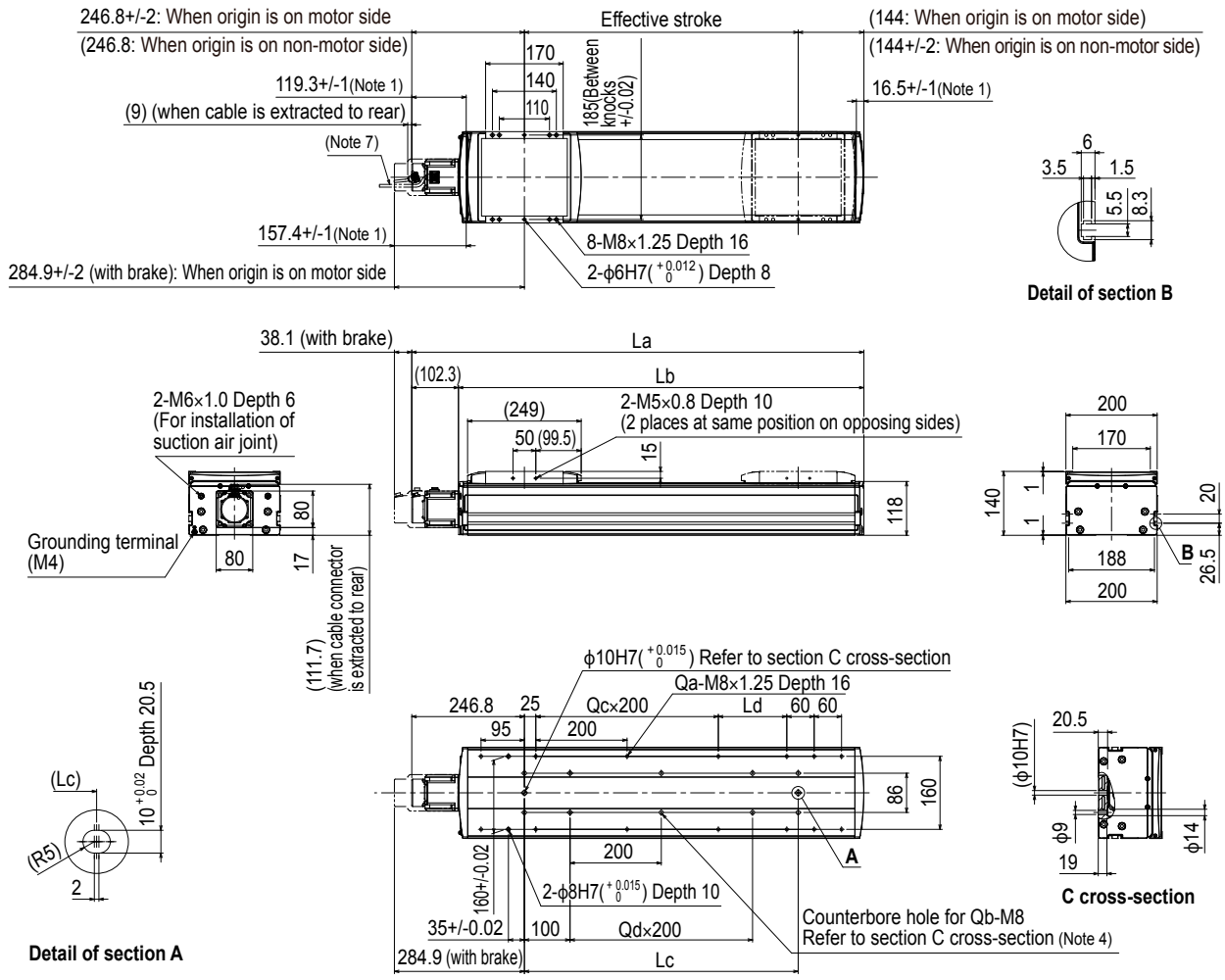
(Unit: N·m)

MY	MP	MR
1423	1423	1251

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.**

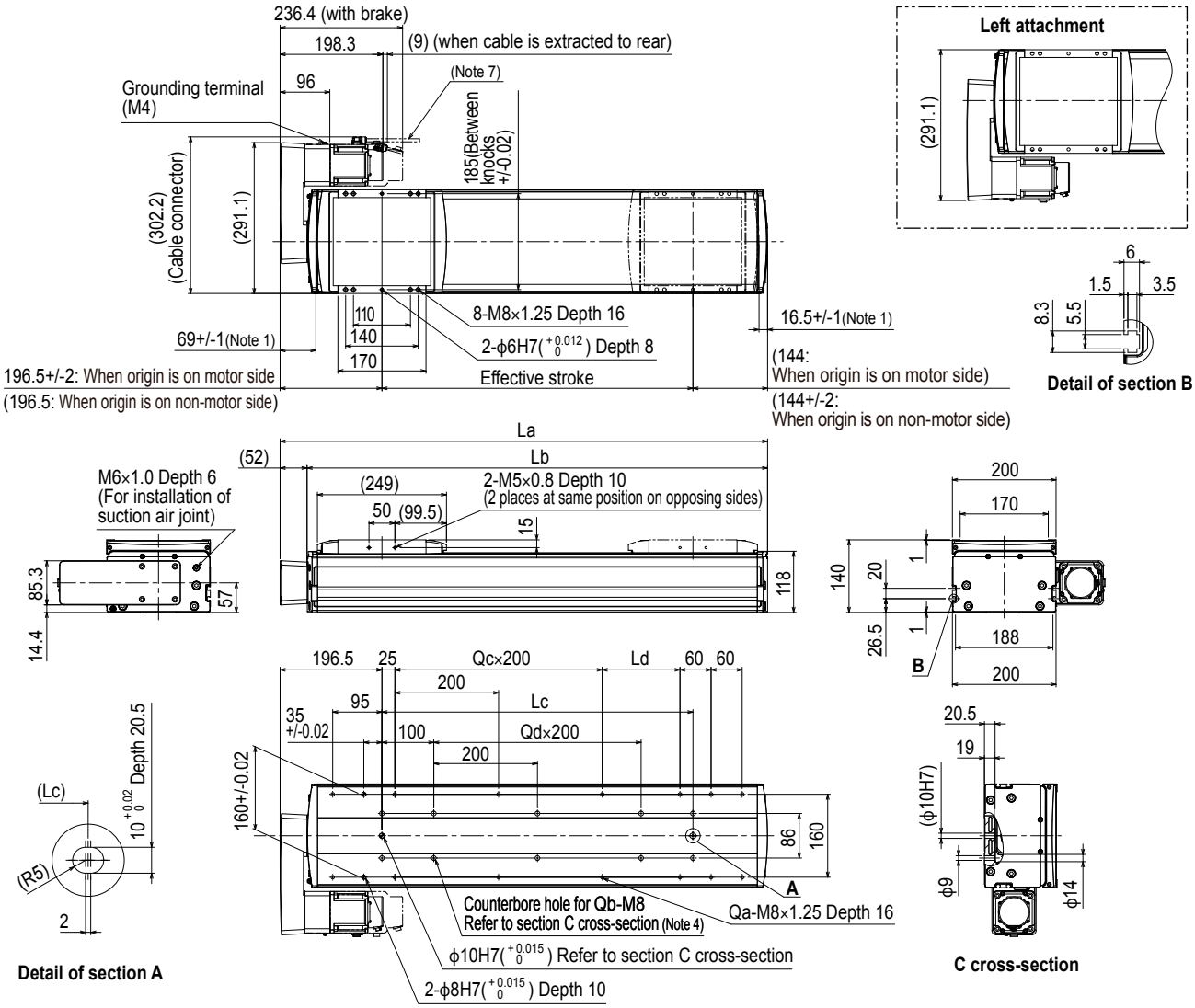
AGXS20 Straight type (S)

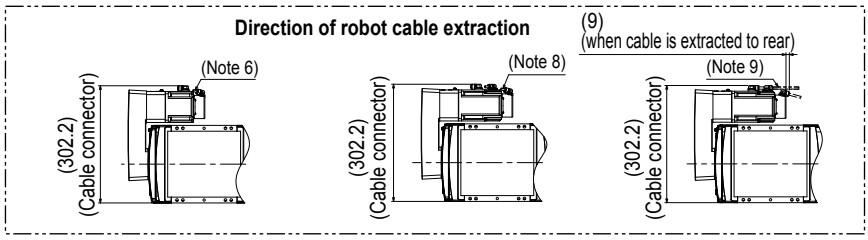


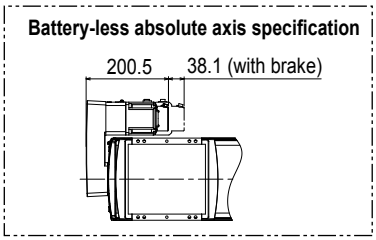
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<25 mm or more>>. The recommended length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting tap hole specifications is <<frame thickness + 15 mm or less>>.
Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 5. Weight without brake. The weight with the brake is 1.1 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. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
La		490.8	540.8	590.8	640.8	690.8	740.8	790.8	840.8	890.8	940.8	990.8	1040.8	1090.8	1140.8	1190.8	1240.8	1290.8	1340.8	1390.8	1440.8	1490.8	1540.8	1590.8	1640.8	1690.8	1740.8	1790.8	1840.8
Lb		388.5	438.5	488.5	538.5	588.5	638.5	688.5	738.5	788.5	838.5	888.5	938.5	988.5	1038.5	1088.5	1138.5	1188.5	1238.5	1288.5	1338.5	1388.5	1438.5	1488.5	1538.5	1588.5	1638.5	1688.5	1738.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Ld		50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
Qa		10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22	22
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Qc		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
Weight (kg) Note 5		19.1	20.4	21.7	23.0	24.3	25.6	26.9	28.2	29.5	30.7	32.0	33.3	34.6	35.9	37.2	38.5	39.8	41.1	42.3	43.6	44.9	46.2	47.5	48.8	50.1	51.4	52.7	53.9
Maximum speed (mm/sec)	Lead 40	2400															2160	1920	1680	1440	1320	1200	1080	960		840	720		600
	Lead 20	1200															1080	960	840	720	660	600	540	480		420	360		300
	Lead 10	600															540	480	420	360	330	300	270	240		210	180		150
	Speed setting	–															90%	80%	70%	60%	55%	50%	45%	40%		35%	30%		25%

AGXS20 Bending type (R/L)







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Note 4. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
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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. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
La		440.5	490.5	540.5	590.5	640.5	690.5	740.5	790.5	840.5	890.5	940.5	990.5	1040.5	1090.5	1140.5	1190.5	1240.5	1290.5	1340.5	1390.5	1440.5	1490.5	1540.5	1590.5	1640.5	1690.5	1740.5	1790.5
Lb		388.5	438.5	488.5	538.5	588.5	638.5	688.5	738.5	788.5	838.5	888.5	938.5	988.5	1038.5	1088.5	1138.5	1188.5	1238.5	1288.5	1338.5	1388.5	1438.5	1488.5	1538.5	1588.5	1638.5	1688.5	1738.5
Lc		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Ld		50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
Qa		10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22	22
Qb		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18
Qc		0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
Qd		0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
Weight (kg) Note 5		21.8	23.1	24.4	25.7	27.0	28.3	29.6	30.9	32.2	33.4	34.7	36.0	37.3	38.6	39.9	41.2	42.5	43.8	45.0	46.3	47.6	48.9	50.2	51.5	52.8	54.1	55.4	56.6
Maximum speed (mm/sec)	Lead 40	2400															2160	1920	1680	1440	1320	1200	1080	960		840	720		600
	Lead 20	1200															1080	960	840	720	660	600	540	480		420	360		300
	Lead 10	600															540	480	420	360	330	300	270	240		210	180		150
	Speed setting	–															90%	80%	70%	60%	55%	50%	45%	40%		35%	30%		25%

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