

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
	Vertical	2 kg	4 kg
Rated thrust		41 N	69 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.107 for acceleration/deceleration.

Allowable overhang ^{Note}

AGXS05-20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
2kg	898	269	350	2kg	323	234	809	1kg	452	452
5kg	583	112	159	5kg	119	76	427	2kg	217	217

AGXS05-10	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
2kg	2505	382	625	2kg	585	346	2386	1kg	732	732
5kg	1366	149	246	5kg	195	113	1164	2kg	351	351
8kg	1036	90	150	8kg	95	54	745	4kg	160	160

AGXS05-5	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
3kg	4604	281	497	3kg	439	245	4371	4kg	183	183
8kg	2197	101	179	8kg	117	65	1812	6kg	111	111
13kg	1593	59	105	13kg	42	24	1000	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.

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

Specifications

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

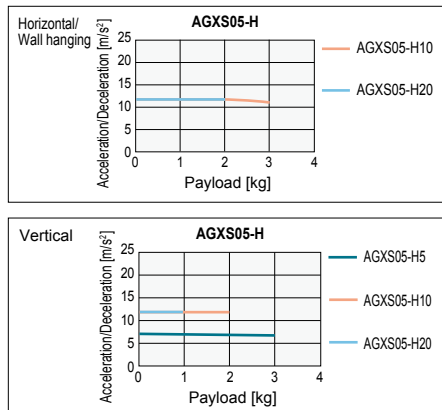
Allowable overhang ^{Note}

AGXS05-H20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
1kg	498	324	323	1kg	297	288	468	1kg	223	223
2kg	230	157	150	2kg	123	120	199			

AGXS05-H10	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
1kg	1159	460	645	1kg	606	424	1129	1kg	396	396
3kg	381	148	206	3kg	163	112	346	2kg	182	182

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
Note. Service life is calculated for 550 mm stroke models.

Payload - Acceleration / Deceleration Graph (Estimate)



Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke	Maximum speed (mm/sec)	50	100	150	200	250	300	350	400	450	500	550
		Lead 20	1333									
	Lead 10	666										
	Lead 5	333										

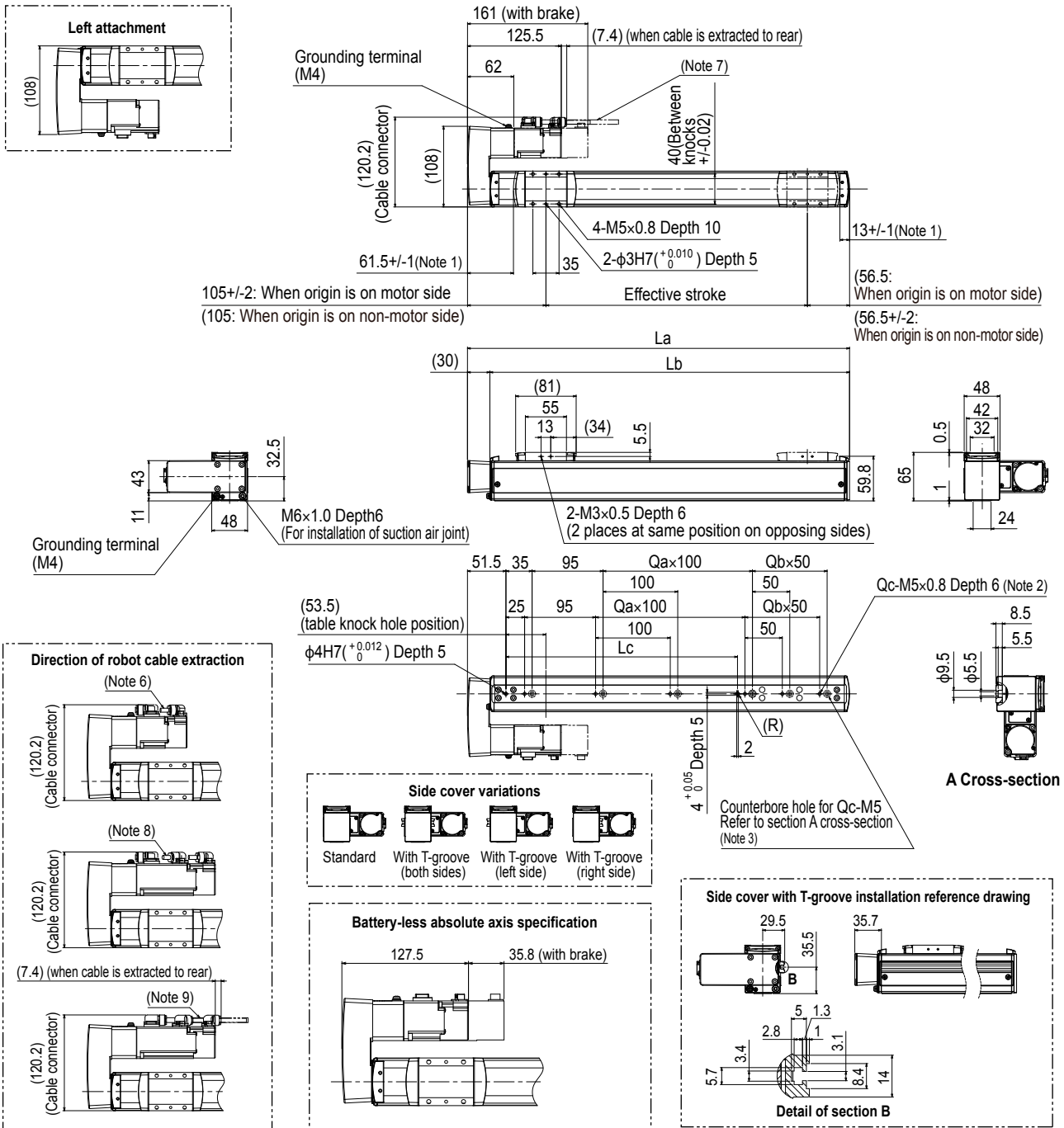
Note. The bending unit cannot be used for the high agility model.
Note. The high agility model is used in an effective stroke range of 50 to 550 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if 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.85.)
Note. See P.108 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.8.

AGXS05 Bending type (R/L)

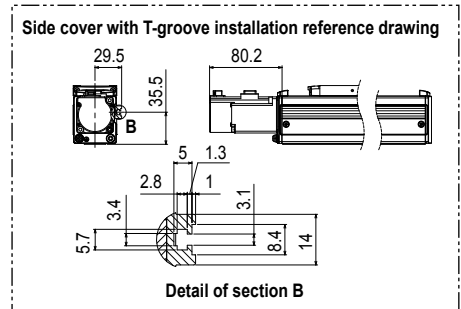
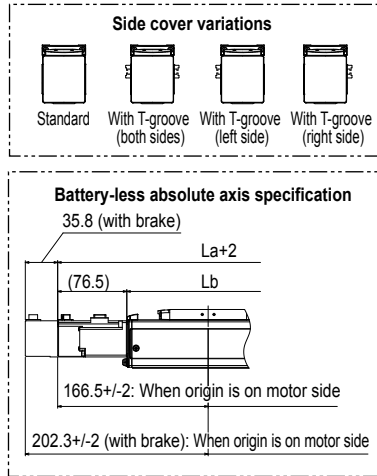
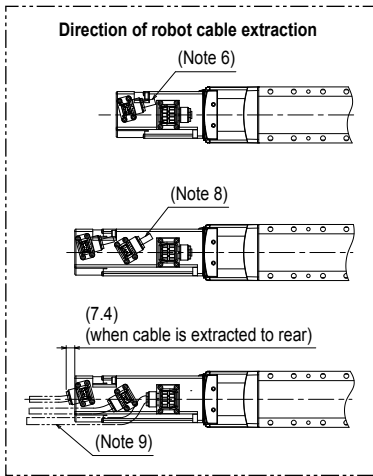
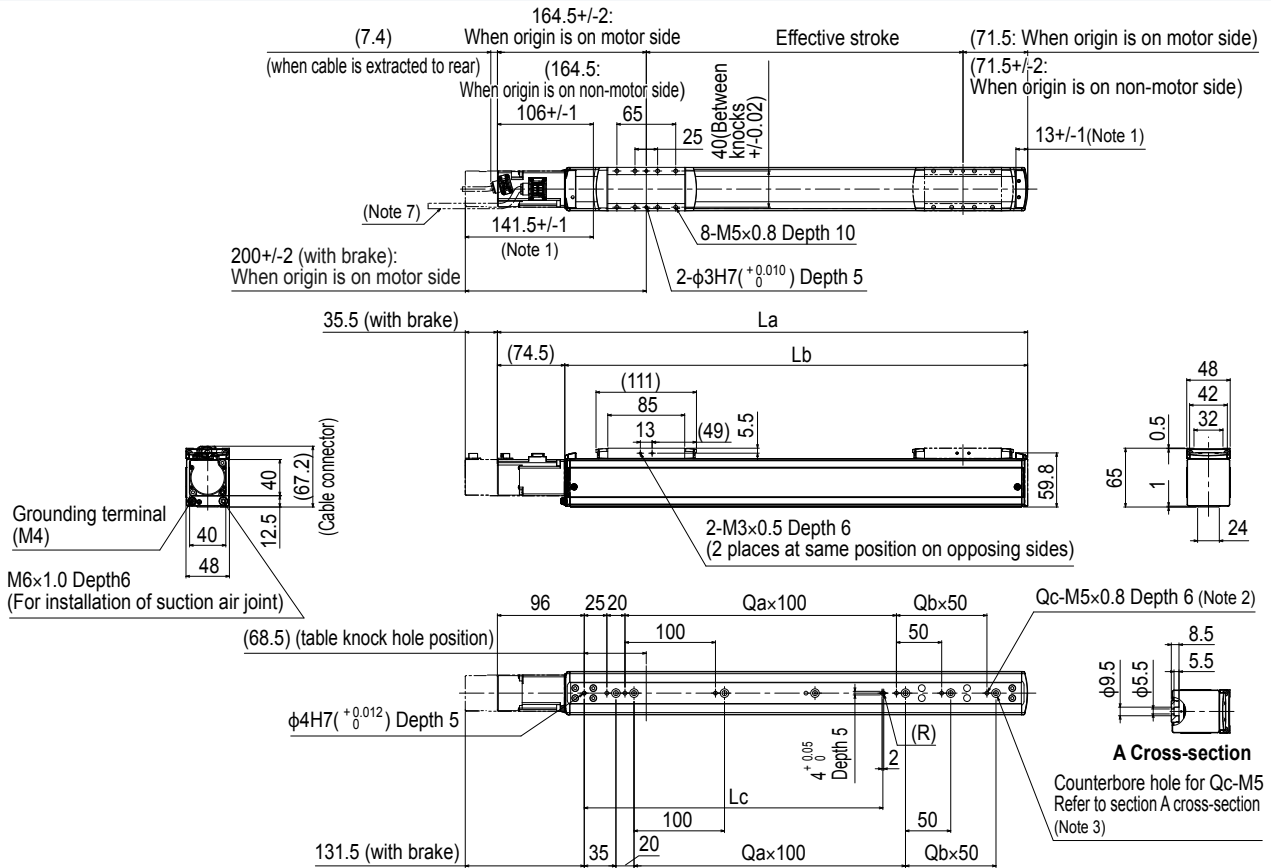


- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
- Note 3. When using the tap holes to mount the body, remove the 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.135 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															
	Lead 10	666															
	Lead 5	333															
	Speed setting	-															
														1066	933	800	666
														532	466	400	333
														266	233	200	166
														80%	70%	60%	50%

AGXS05L Straight type (S)

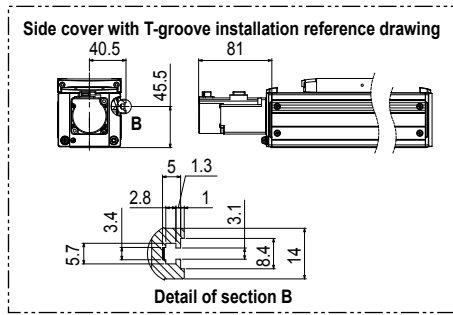
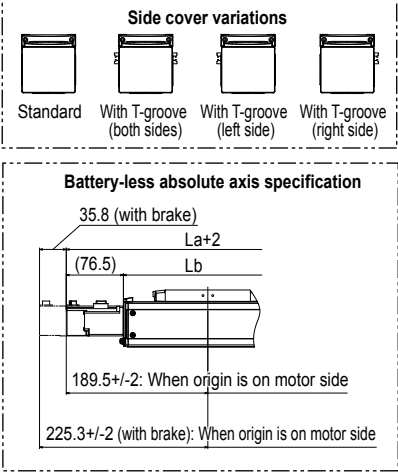
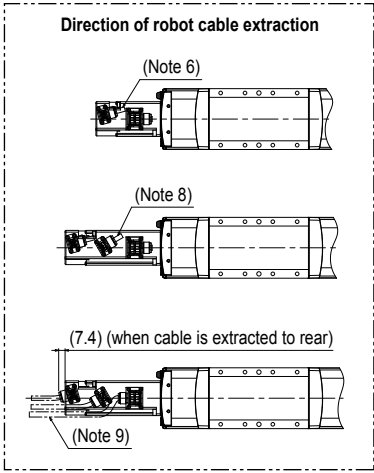
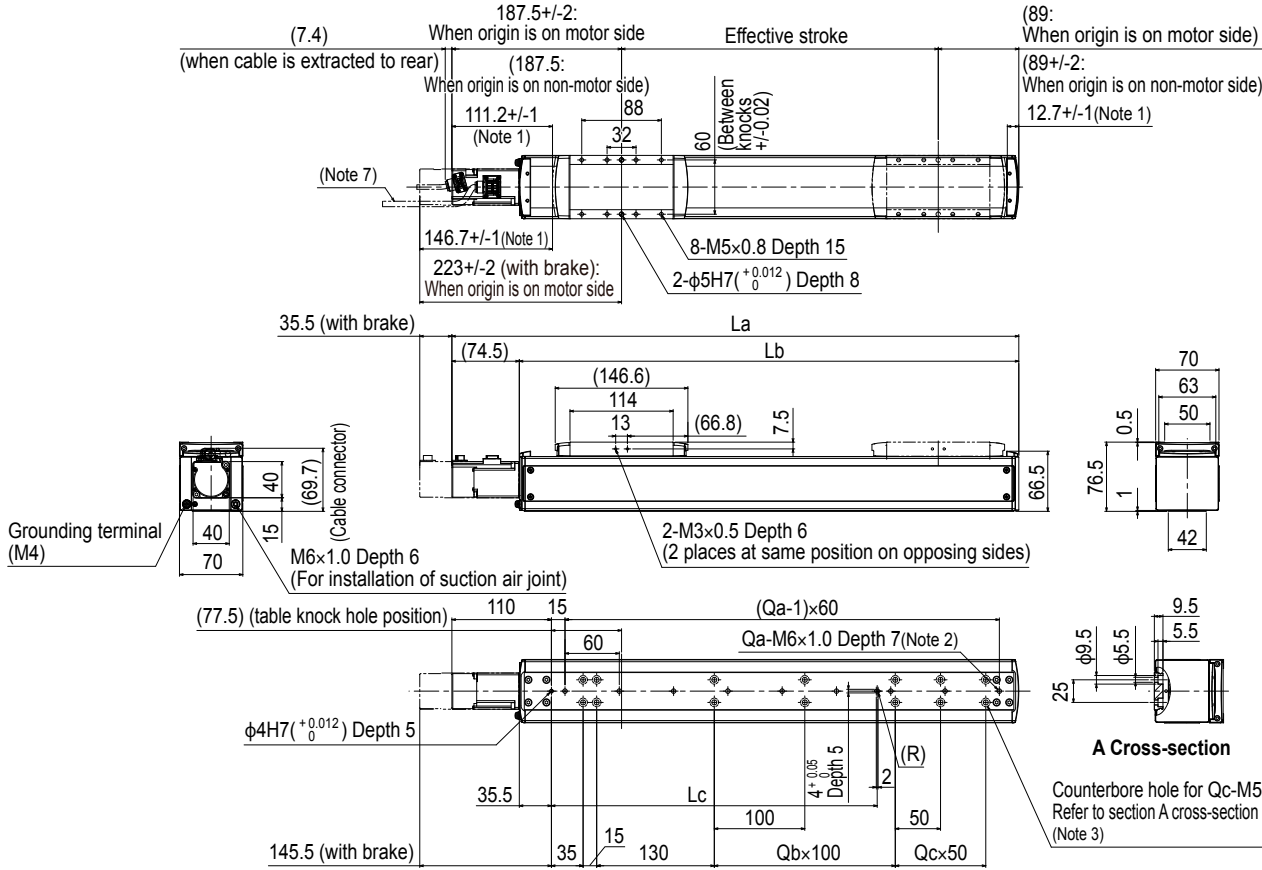


- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
- Note 3. When using the tap holes to mount the body, remove the 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 x 0.8) used must be 15 mm or less.
- Note 5. Weight without brake. The weight with the brake is 0.2 kg heavier than the value in the weight column.
- Note 6. The robot cable is extracted from the front.
- Note 7. The robot cable is extracted from the rear.

- Note 8. The robot cable (with brake) is extracted from the front.
- Note 9. The robot cable (with brake) is extracted from the rear.
- Note 10. The fixed minimum bending radius of the robot cable is R30. When using the robot cable as a flexible cable, use it with a minimum bending radius of R50 or more.
- Note 11. Side cover with T-groove is used to install the sensor.
- Note 12. Grease gun nozzle (recommended) (see P.135 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																
	Lead 10	666																
	Lead 5	333																
	Speed setting	-																
Speed setting	80%												70%		60%		50%	
	1066												933		800		666	
	532												466		400		333	
	266												233		200		166	

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.
- 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.135 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	360	360	360	360	360	360	360	360	360	360			
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	2	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												1530	1350	1170	990	900	810	720	630					
	Lead 20												1020	900	780	660	600	540	480	420					
	Lead 10												510	450	390	330	300	270	240	210					
	Lead 5												255	225	195	165	150	135	120	105					
Speed setting												85%	75%	65%	55%	50%	45%	40%	35%						

Features

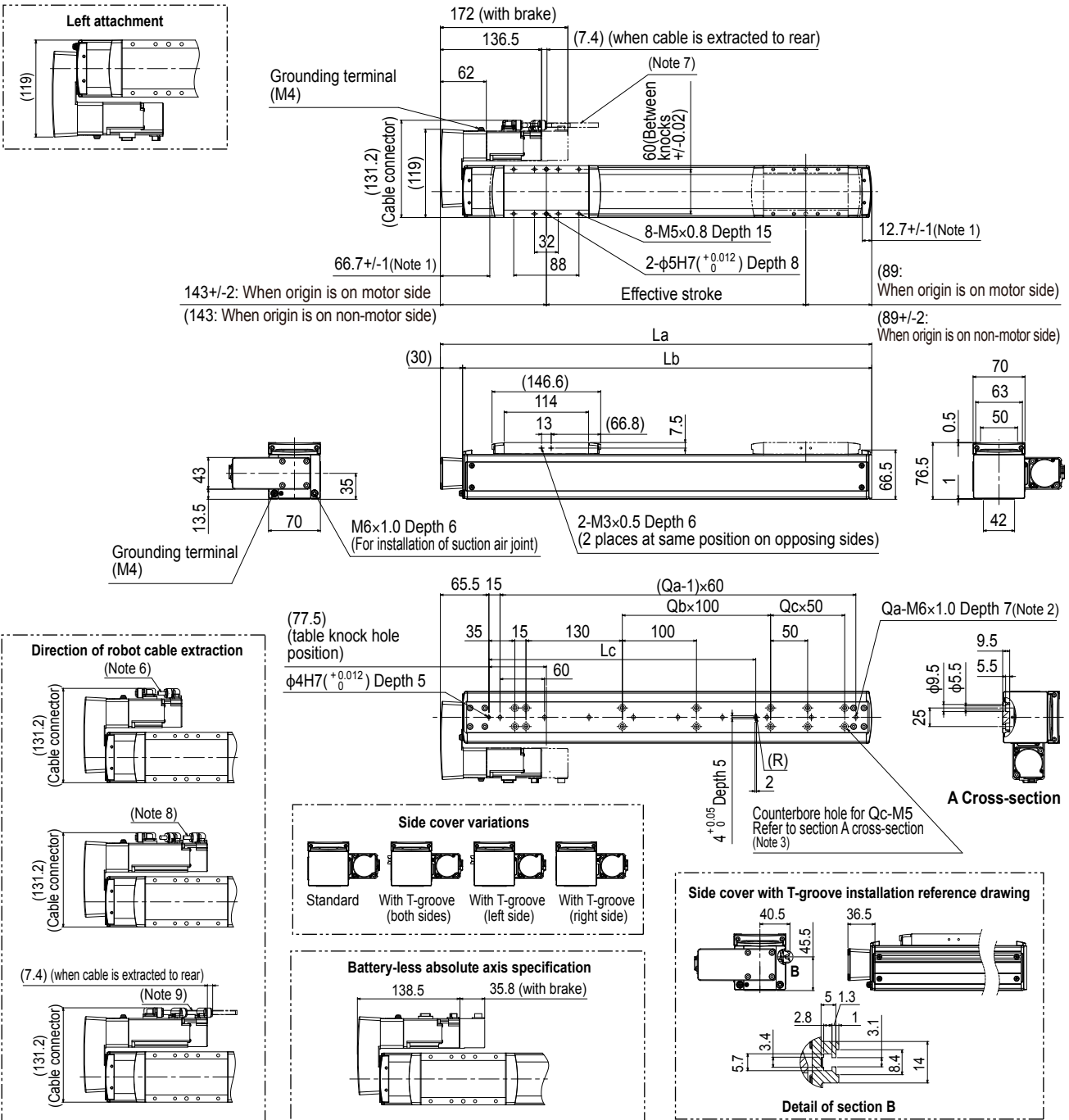
- Basic model: LBAS
- Advanced model: LGXS
- Basic model: LBAR
- Basic model: ABAS
- Advanced model: AGXS
- Basic model: ABAR

Acceleration/Deceleration Inertia Moment

Option

Single axis sensor EP-01

AGXS07 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.135 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	360	360	360	360	360	360	360	360	360	360	360
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	2	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 <small>Note 1</small>	Motor specification	Stroke <small>Note 2</small>	Cable length <small>Note 3</small>	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit <small>Note 4</small>	I/O	Battery <small>Note 5</small>		
	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 100 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 <small>Note 1</small>	+/-0.005 mm
Deceleration mechanism	Ground ball screw ϕ 15 (C5 class)
Stroke	100 mm to 1250 mm(50 mm pitch)
Maximum speed <small>Note 2</small>	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 <small>Note 3</small>	ISO CLASS 3 (ISO14644-1) or equivalent
Intake air <small>Note 4</small>	30 N ℓ /min to 90 N ℓ /min
Position detector	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.114 for acceleration/deceleration.

Allowable overhang

AGXS10-30		AGXS10-20		AGXS10-10		AGXS10-5	
Horizontal installation (Unit: mm)		Horizontal installation (Unit: mm)		Horizontal installation (Unit: mm)		Horizontal installation (Unit: mm)	
	A B C		A B C		A B C		A B C
10kg	878 537 292	15kg	1269 451 282	30kg	1794 298 203	30kg	5605 321 225
20kg	609 256 146	25kg	754 253 158	50kg	1358 162 111	50kg	3694 177 124
25kg	608 211 124	40kg	466 142 88	80kg	1266 86 59	80kg	2619 95 67
				100kg	2224 68 48	100kg	2224 68 48

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

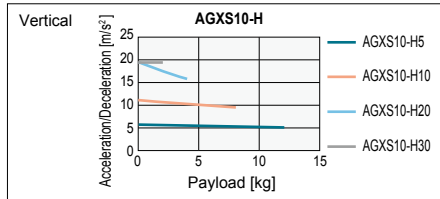
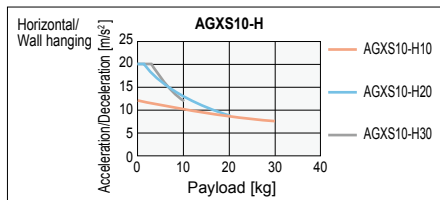
Controller	Operation method
EP-01	I/O point trace/ Remote command

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

Specifications

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

Payload - Acceleration / Deceleration Graph (Estimate)



Allowable overhang

AGXS10-H30		AGXS10-H20		AGXS10-H10		AGXS10-H5	
Horizontal installation (Unit: mm)		Horizontal installation (Unit: mm)		Horizontal installation (Unit: mm)		Vertical installation (Unit: mm)	
	A B C		A B C		A B C		A C
3kg	1041 1117 541	5kg	1218 844 493	10kg	1851 568 383	4kg	1550 1550
6kg	581 534 266	12kg	575 326 193	20kg	973 263 177	8kg	743 743
10kg	384 300 153	20kg	375 177 106	30kg	671 162 109	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

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

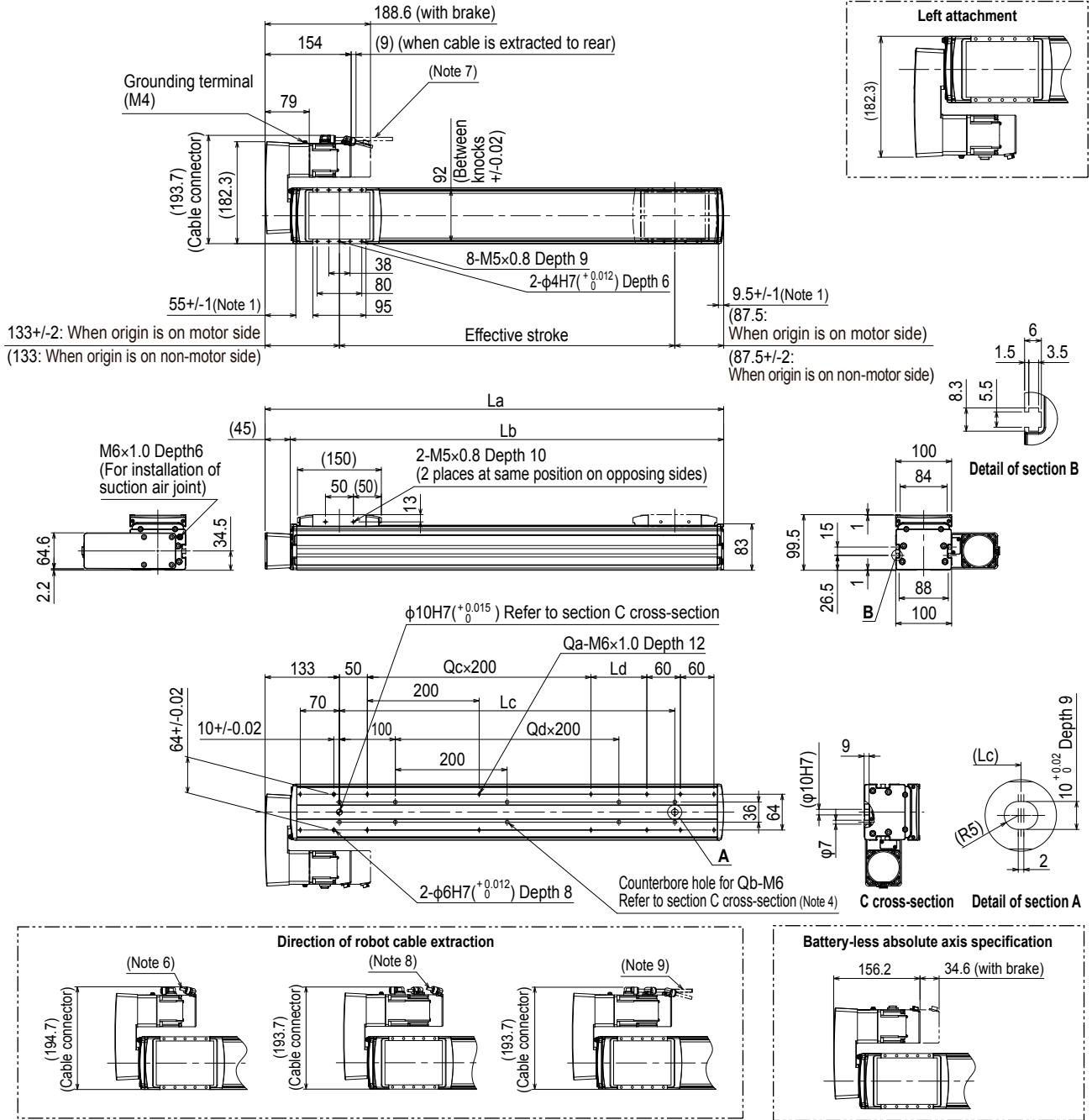
- Note. The bending unit cannot be used for the high agility model.
- Note. The high agility model is used in an effective stroke range of 100 to 650 (50 mm pitch).
- Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
- Note. The speed may not reach the maximum 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.85.)
- Note. See P.116 for acceleration/deceleration.

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.8.

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 $\lt;M6 \times 1.0>$ used to mount the body with the mounting counterbore holes (section C cross-section) must be $\ll 20 \text{ mm or more}>>$. The recommended length under head of the hex socket head bolts $\lt;M6 \times 1.0>$ used to mount the body with the mounting tap hole specifications is $\ll \text{frame thickness} + 10 \text{ mm or less}>>$.
- 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.135 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	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150		
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	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5		
Qd	0	0	0	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	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												1530	1350	1170	990	900	810	720	630	540	450	360	300	250	
	Lead 20												1020	900	780	660	600	540	480	420	360	300	250	210	180	150
	Lead 10												510	450	390	330	300	270	240	210	180	150	120	105	90	75
	Lead 5												255	225	195	165	150	135	120	105	90	75	60	50	40	30
Speed setting												85%	75%	65%	55%	50%	45%	40%	35%	30%	25%					

Features
 LBAS
 LGXS
 LBAR
 ABAS
 AGXS
 ABAR
 Acceleration/Deceleration
 Inertia Moment
 Option
 Single axis speed
 positioner EP-01

AGXS12

Advanced model

Single-axis robots

Slider type



Ordering method

AGXS12

Model	Acceleration/Deceleration specifications	Lead	Shape	Motor specification	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit	I/O	Battery
	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.118 for acceleration/deceleration.

Allowable overhang

AGXS12-30	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
10kg	1796	1074	637	631	1009	1720	3kg	2642	2642
20kg	1300	531	332	316	466	1171	6kg	1289	1289
35kg	1341	334	227	197	269	1130	8kg	951	951

AGXS12-20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
15kg	2231	904	613	591	839	2141	5kg	2424	2424
30kg	1290	428	293	260	363	1167	10kg	1207	1207
50kg	882	237	164	126	172	710	15kg	803	803

AGXS12-10	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
30kg	3109	607	456	413	542	2978	10kg	1862	1862
50kg	2421	345	260	215	280	2208	15kg	1221	1221
80kg	2417	198	150	103	133	1927	25kg	708	708
95kg	2559	159	121	73	95	1830			

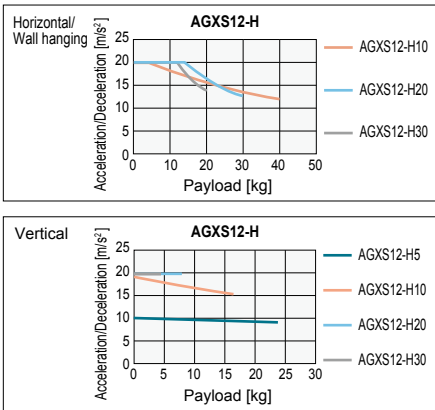
Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
Note. Service life is calculated for 600 mm stroke models.

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

Specifications

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

Payload - Acceleration / Deceleration Graph (Estimate)



Allowable overhang

AGXS12-H30	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
5kg	1216	1297	669	648	1224	1183	2kg	1984	1984
12kg	461	506	252	226	436	427	4kg	960	960
20kg	316	280	147	117	213	266			

AGXS12-H20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
10kg	999	807	489	458	740	966	3kg	2031	2031
20kg	521	378	231	196	311	479	5kg	1193	1193
30kg	382	234	146	109	168	325	8kg	722	722

AGXS12-H10	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
15kg	1668	737	535	491	672	1628	5kg	2071	2071
25kg	1060	423	308	263	358	1012	10kg	1011	1011
40kg	709	246	180	134	181	644	16kg	612	612

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

		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											

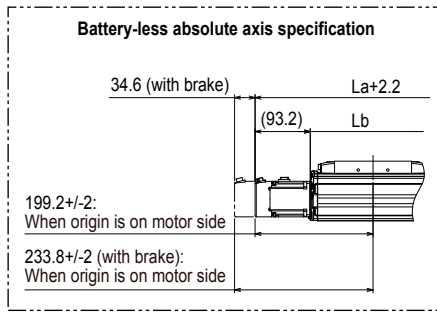
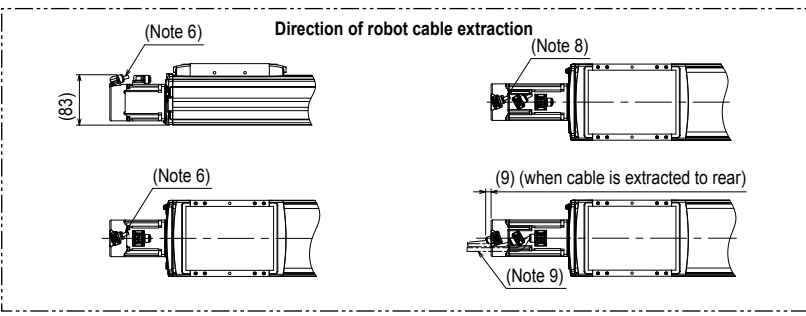
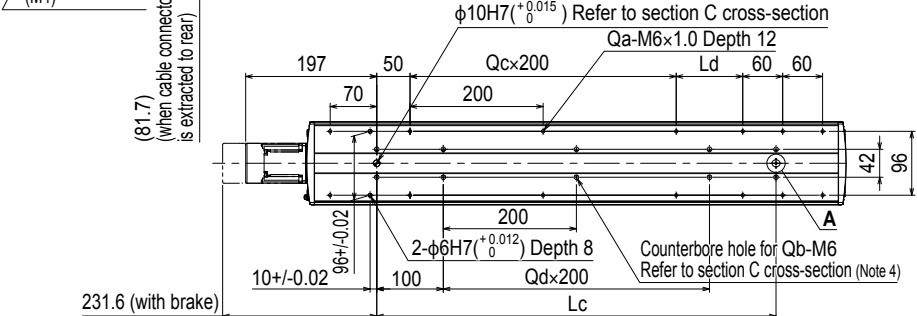
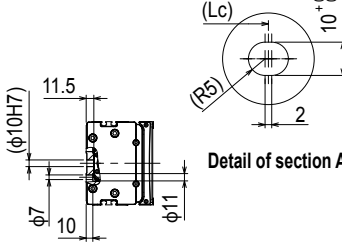
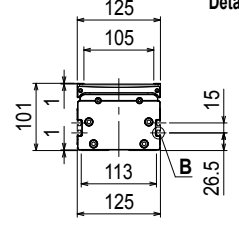
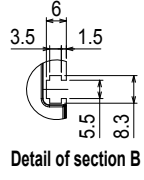
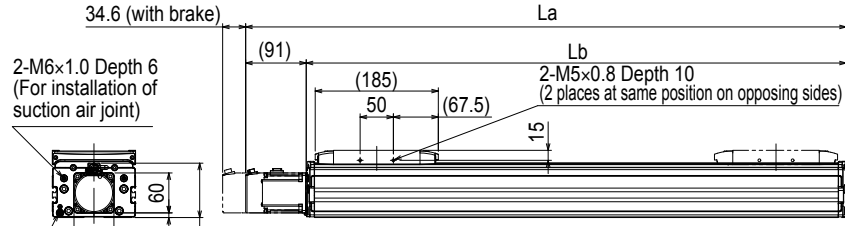
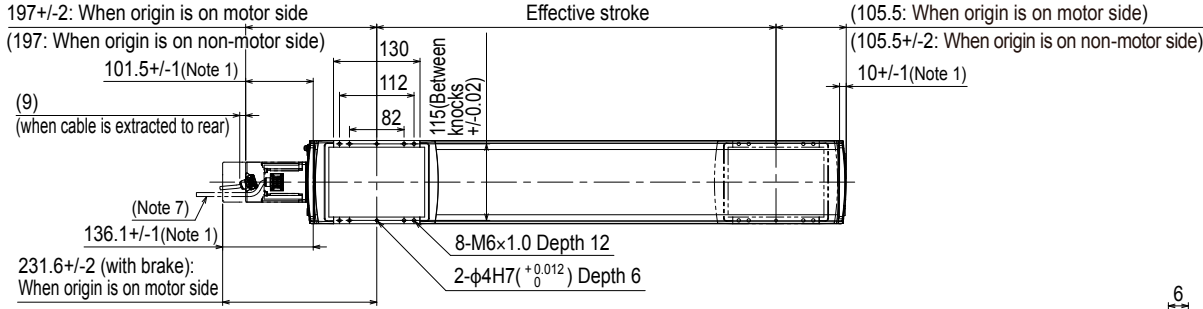
Note. The bending unit cannot be used for the high agility model.
Note. The high agility model is used in an effective stroke range of 100 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if 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.85.)
Note. See P.120 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.8.

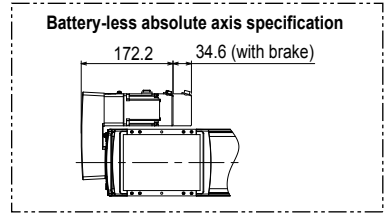
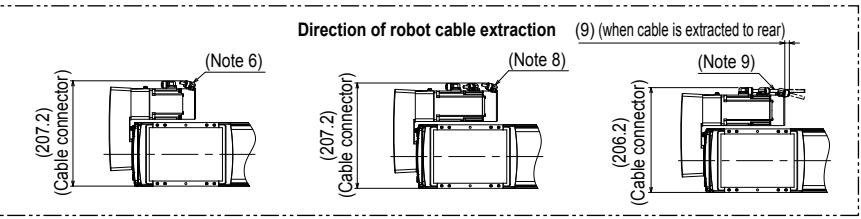
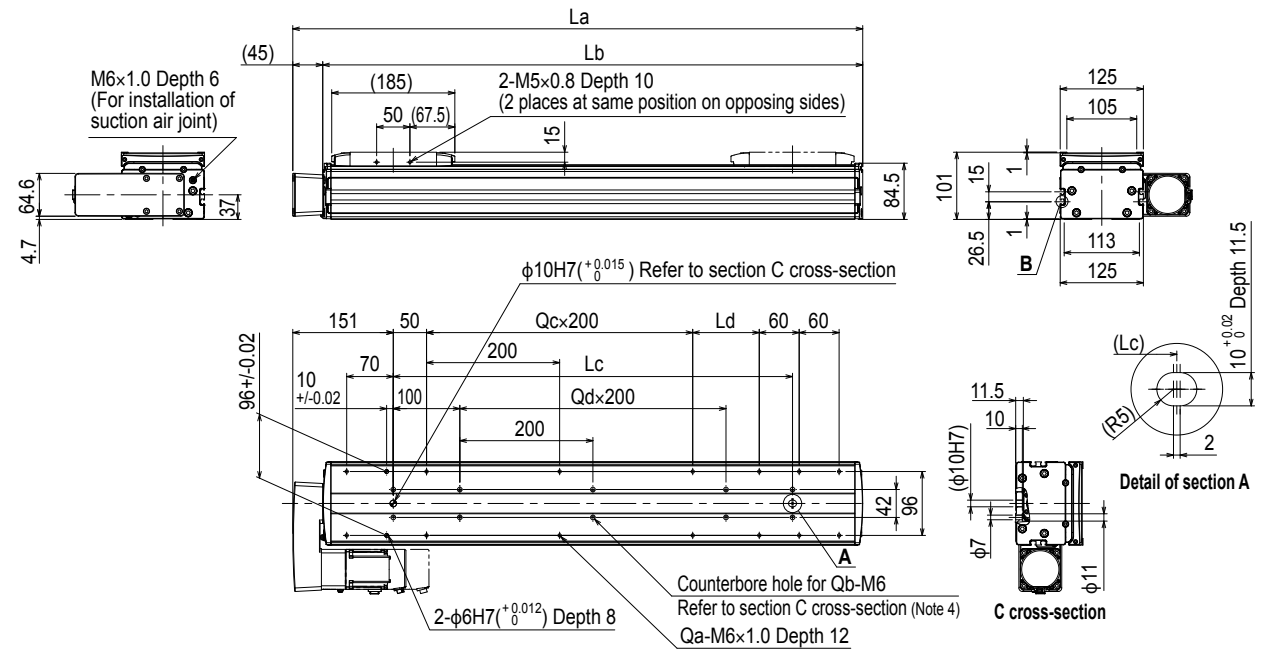
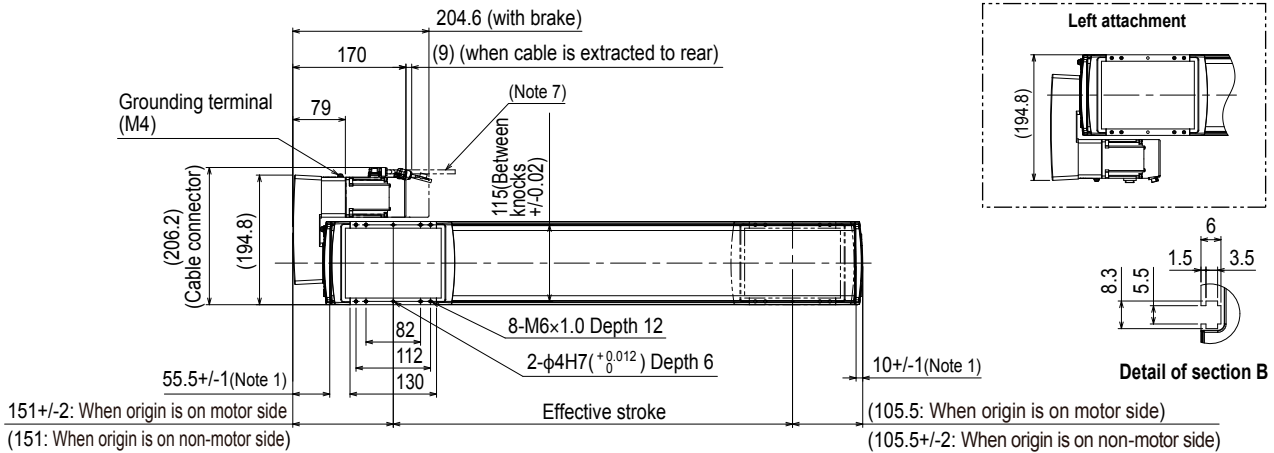
AGXS12 Straight type (S)



- 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 x 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 x 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.135 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	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	
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)	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)



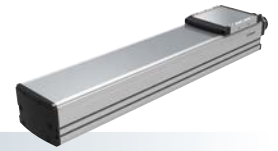
- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
- Note 3. The length under head of the hex socket head bolts <M6 × 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.135 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	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Qa	8	10	10	10	10	12	12	12	12	14	14	14	14	14	16	16	16	16	18	18	18	18	20	20
Qb	4	6	6	6	6	8	8	8	8	10	10	10	10	10	12	12	12	12	14	14	14	14	16	16
Qc	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4	4	5	5
Qd	0	0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3	3	4	4	4	4	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	1530	1350	1170	990	900	810	720	630	540	450	360	270	180	150	120	90	75	60	45	30	15	10	7.5
	Lead 20	1020	900	780	660	600	540	480	420	360	300	240	180	150	120	90	75	60	45	30	15	10	7.5	5
	Lead 10	510	450	390	330	300	270	240	210	180	150	120	90	75	60	45	30	25	20	15	10	7.5	5	3.75
	Lead 5	255	225	195	165	150	135	120	105	90	75	60	45	30	25	20	15	10	7.5	6	4.5	3	2.25	1.875
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 <small>Note 1</small>	Motor specification	Stroke <small>Note 2</small>	Cable length <small>Note 3</small>	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit <small>Note 4</small>	I/O	Battery <small>Note 5</small>		
	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.

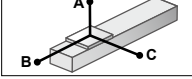
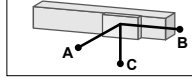
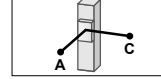
Note 5. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output	750 W		
Repeatability <small>Note 1</small>	+/-0.005 mm		
Deceleration mechanism	Ground ball screw $\phi 20$ (C5 class)		
Stroke	100 mm to 1450 mm (50 mm pitch)		
Maximum speed <small>Note 2</small>	2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead	40 mm	20 mm	10 mm
Maximum payload	Horizontal	Vertical	
	45 kg	95 kg	130 kg
	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 x H 130 mm		
Overall length	Straight	Bending	
	ST + 344.8 mm	ST + 294.5 mm	
Degree of cleanliness <small>Note 3</small>	ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air <small>Note 4</small>	30 N \dot{L} /min to 90 N \dot{L} /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.122 for acceleration/deceleration.

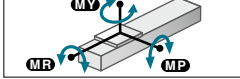
Allowable overhang

	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
AGXS16-40										
15kg	2876	1866	1253	1273	1802	2797	3kg	6605	6605	
30kg	2385	997	776	782	935	2263	6kg	3699	3699	
45kg	2339	720	604	598	658	2174	12kg	2827	2827	
AGXS16-20										
30kg	3862	1255	1106	1102	1192	3742	10kg	3404	3404	
50kg	2568	733	652	630	671	2422	20kg	1740	1740	
80kg	1798	440	394	360	377	1612	28kg	1504	1504	
95kg	1579	362	325	288	300	1373				
AGXS16-10										
50kg	6253	1026	1024	980	964	6089	15kg	3434	3434	
80kg	4447	623	624	573	561	4240	30kg	1684	1684	
100kg	3957	489	490	437	426	3706	55kg	889	889	
130kg	3786	365	367	312	302	3422				

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



	MY	MP	MR
(Unit: N·m)	706	706	620

Controller

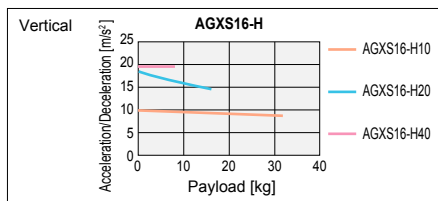
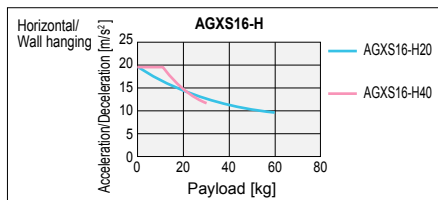
Controller	Operation method
EP-01	I/O point trace/ Remote command

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

Specifications

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

Payload - Acceleration / Deceleration Graph (Estimate)



Allowable overhang

	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	B	C	
AGXS16-H40										
10kg	1271	1669	836	816	1585	1240	3kg	2904	2904	
20kg	725	803	429	404	725	683	5kg	1710	1710	
30kg	534	514	287	259	441	480	8kg	1038	1038	
AGXS16-H20										
20kg	1722	1123	875	842	1056	1679	5kg	3473	3473	
40kg	952	535	428	388	470	895	10kg	1723	1723	
60kg	682	339	276	232	275	611	16kg	1064	1064	

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

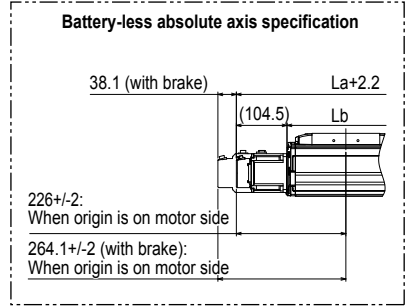
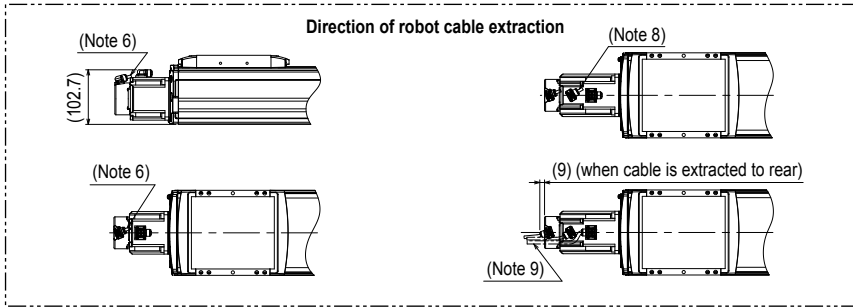
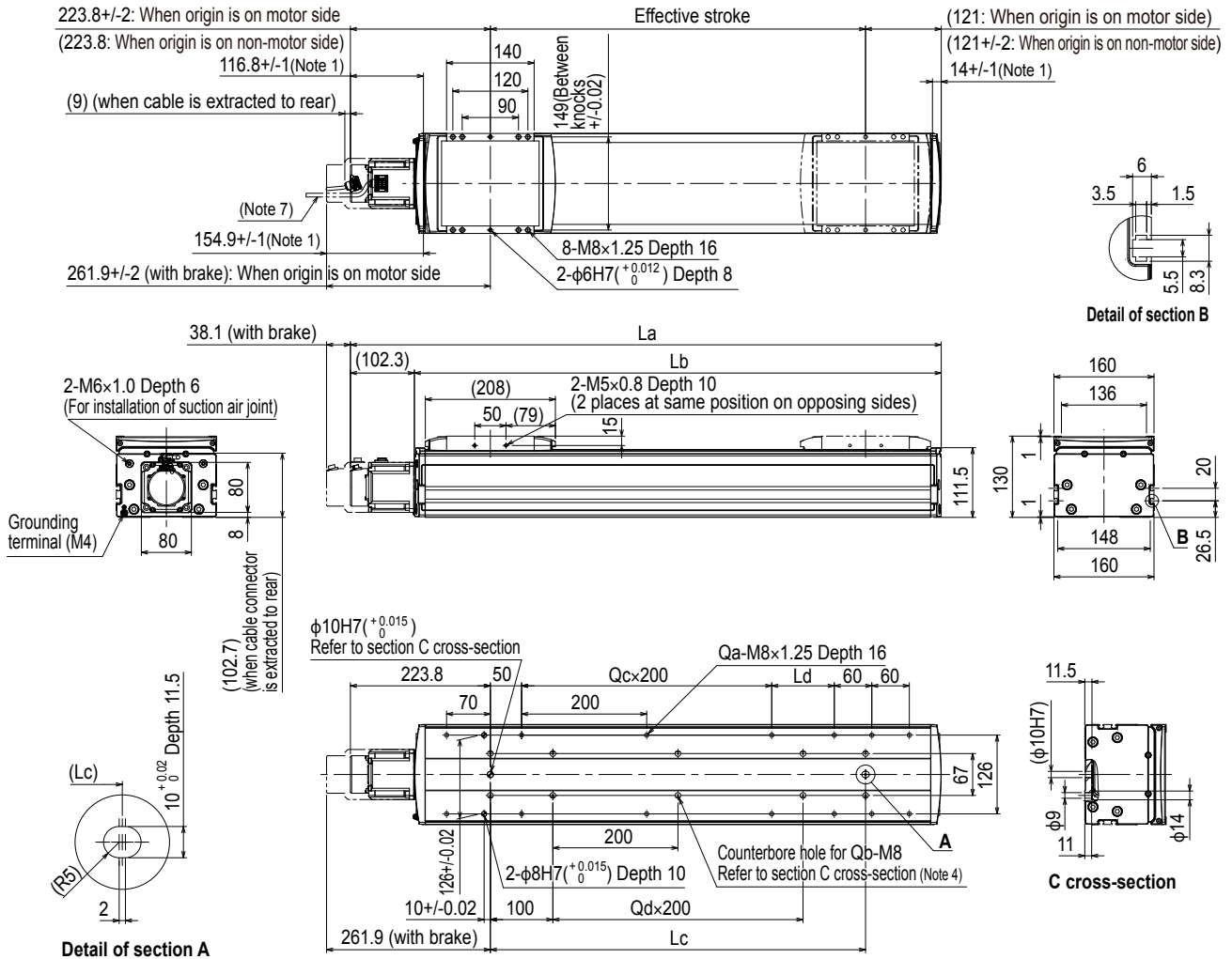
Note. The bending unit cannot be used for the high agility model.
 Note. The high agility model is used in an effective stroke range of 100 to 800 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed 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.85.)
 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.8.

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 $M8 \times 1.25$ used to mount the body with the mounting counterbore holes (section C cross-section) must be $\ll 25 \text{ mm or more}>>.$ The recommended length under head of the hex socket head bolts $M8 \times 1.25$ used to mount the body with the mounting tap hole specifications is $\ll \text{frame thickness} + 15 \text{ mm or less}>>.$
- 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 rear.
- 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.135 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	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	14	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	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	4	5	5	5	5	6	6	6				
Weight (kg)	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																2160	1920	1680	1440	1320	1200	1080	960	840	720	600	540	480	420	360	300	
Speed setting	Lead 20																1080	960	840	720	660	600	540	480	420	360	300	270	240	210	180	150	
	Lead 10																540	480	420	360	330	300	270	240	210	180	150	150	150	150	150	150	150
	Speed setting																90%	80%	70%	60%	55%	50%	45%	40%	35%	30%	25%	25%	25%	25%	25%	25%	

AGXS20

Advanced model

Single-axis robots

Slider type



Ordering method

AGXS20							EP-01				
Model	Lead	Shape	Motor specification	Stroke	Cable length	Cable entry location	Robot positioner	Driver: Power capacity	Regenerative unit	I/O	Battery
	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)	Note 1 R3: 3 m R5: 5 m R10: 10 m	R: From rear of motor F: From front of motor	EP-01	A30: 400W/750W	Note 2 No entry: None R: With EP-RU	EP: EtherNet/IP™ PT: PROFINET ES: EtherCAT NS: NPN CC: CC-Link	Note 3 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
	Vertical	15 kg	35 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.

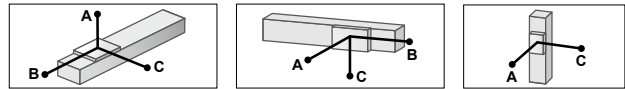
Note 4. The required suction amount will vary according to the operating conditions and operating environment.

Note. See P.125 for acceleration/deceleration.

Controller

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

Allowable overhang



AGXS20-40	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	C		
20kg	5318	2821	2096	20kg	2171	2751	5211	5kg	8187	8187
40kg	4836	1609	1369	40kg	1417	1539	4667	10kg	5203	5203
65kg	4824	1088	1001	65kg	1013	1018	4575	15kg	4810	4810

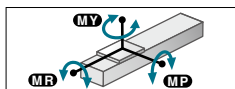
AGXS20-20	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	C		
50kg	5436	1493	1377	50kg	1390	1423	5265	20kg	3436	3436
80kg	4417	911	854	80kg	849	841	4153	30kg	2600	2600
100kg	4592	756	727	100kg	708	686	4253	35kg	3073	3073
130kg	4338	596	584	130kg	550	526	3933			

AGXS20-10	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)			
	A	B	C	A	B	C	A	C		
40kg	22519	2607	2713	40kg	2704	2537	22210	20kg	5157	5157
80kg	16716	1274	1331	80kg	1293	1204	16141	40kg	2553	2553
120kg	14066	830	868	120kg	818	760	13223	65kg	1600	1600
160kg	12284	608	637	160kg	580	538	11190			

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



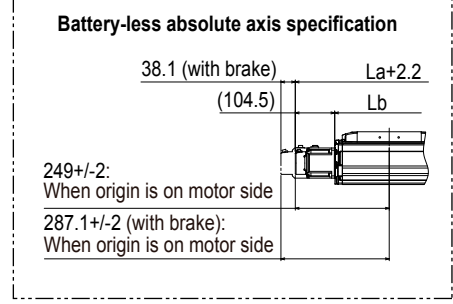
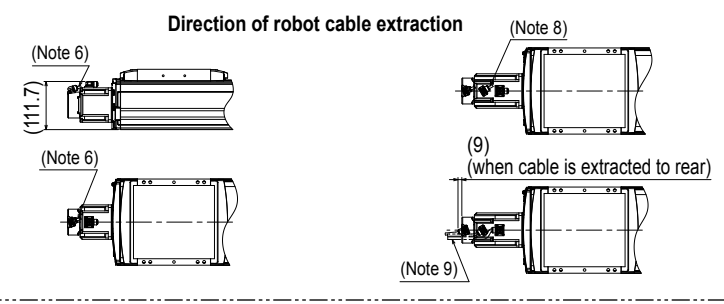
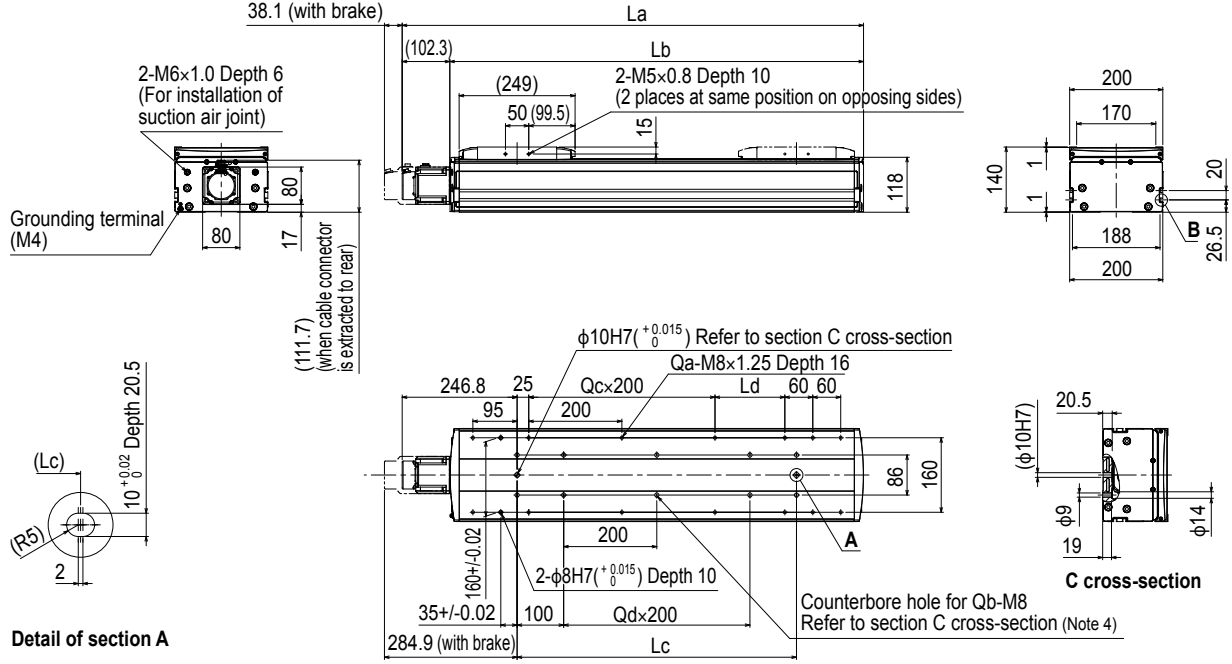
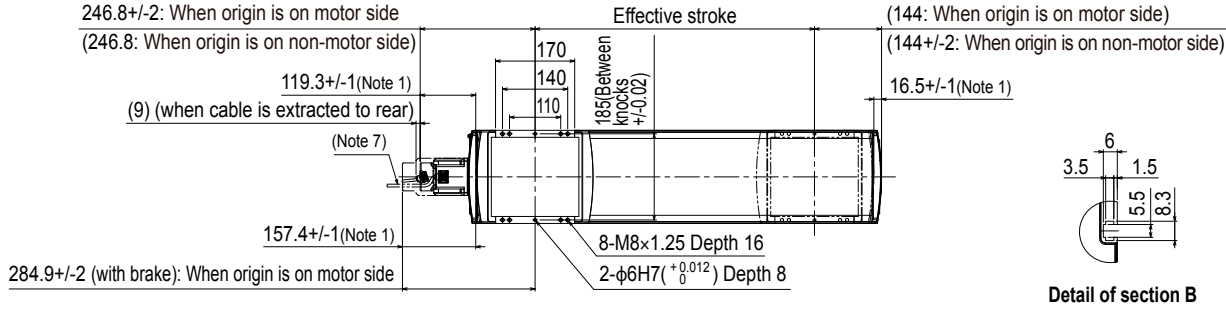
(Unit: N·m)		
MY	MP	MR
1423	1423	1251

Access the website below.



► The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.8.

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 x 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 x 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.135 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	20	20	20	20	22	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	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	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																2160	1920	1680	1440	1320	1200	1080	960	840	720	600	540	480	420	360	300
	Lead 20																1080	960	840	720	660	600	540	480	420	360	300	240	210	180	150	
	Lead 10																540	480	420	360	330	300	270	240	210	180	150	120	100	90	80	70
	Speed setting																90%	80%	70%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%	

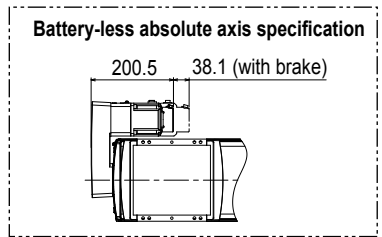
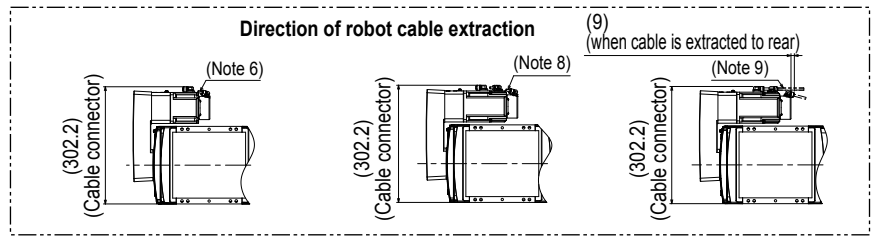
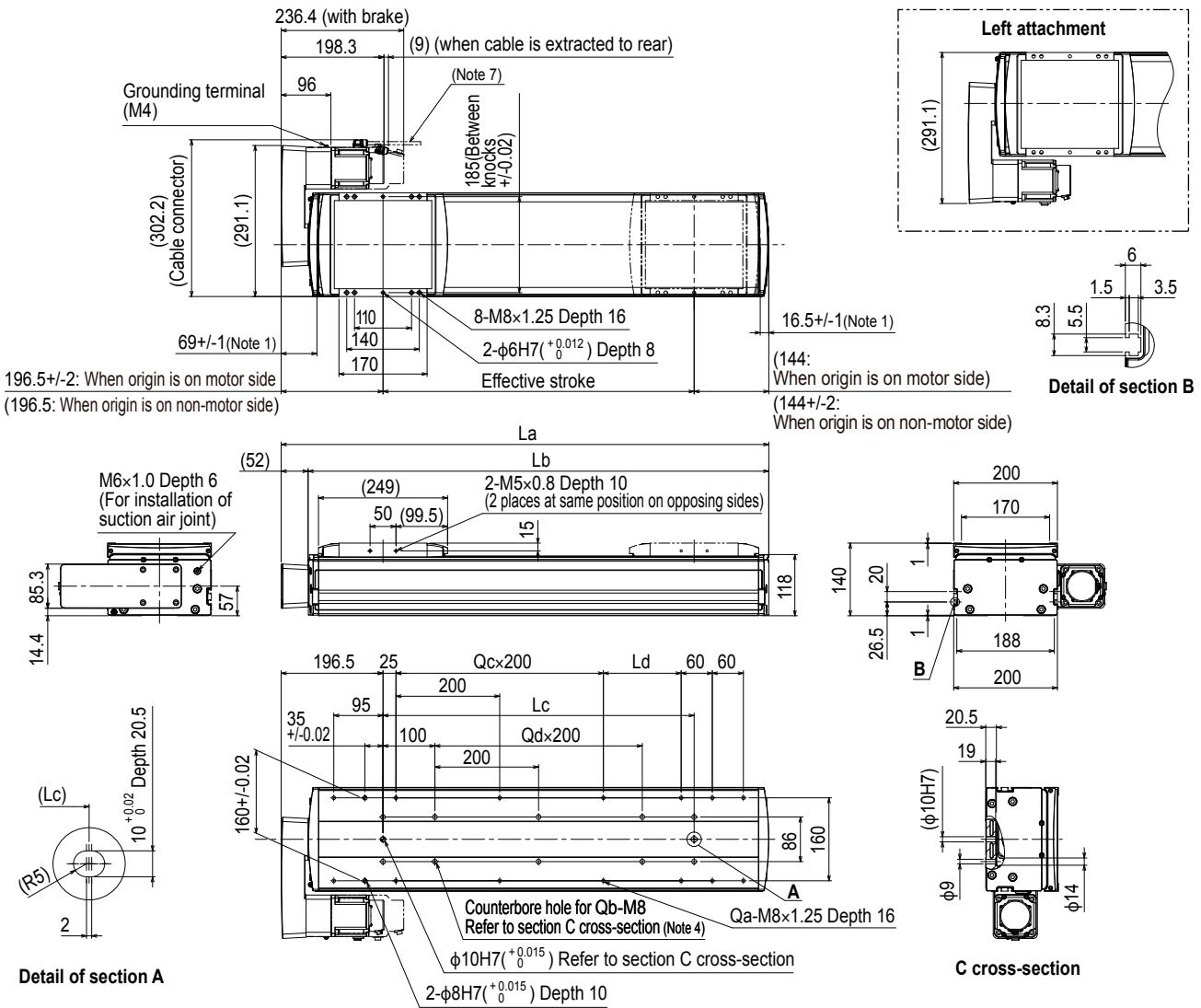
Features

- Basic model: LBAS
- Advanced model: LGXS
- Basic model: LBAR
- Basic model: ABAS
- Advanced model: AGXS
- Basic model: ABAR

Acceleration/Deceleration
Inertia Moment

Option
Single axis speed
positioner EP-01

AGXS20 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 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.135 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	20	20	20	20	22	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	4	4	4	4	5	5	5	5	6	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																2160	1920	1680	1440	1320	1200	1080	960	840	720	600	540	480	420	360	300
	Lead 20																1080	960	840	720	660	600	540	480	420	360	300	270	240	210	180	150
	Lead 10																540	480	420	360	330	300	270	240	210	180	150	135	120	105	90	75
	Speed setting																90%	80%	70%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	5%	

Operating duty and motor load factor

■ For high agility model specifications

As the usable operating duty may vary depending on the payload or acceleration operating conditions, use the operating duty after checking the conditions.

Use the graph of the relationship between the operating duty ratio and continuous operable time as a reference.

For models not described in the graph, investigate an operating duty of 50% or less in the same manner as the standard model.

The actual operation may vary.

Adjust the operating conditions while checking the motor load factor of the controller.

When the operating duty of the robot is high, an error such as “overload” may occur.

In this case, decrease the acceleration/deceleration or increase the stop time to lower the motor load factor.

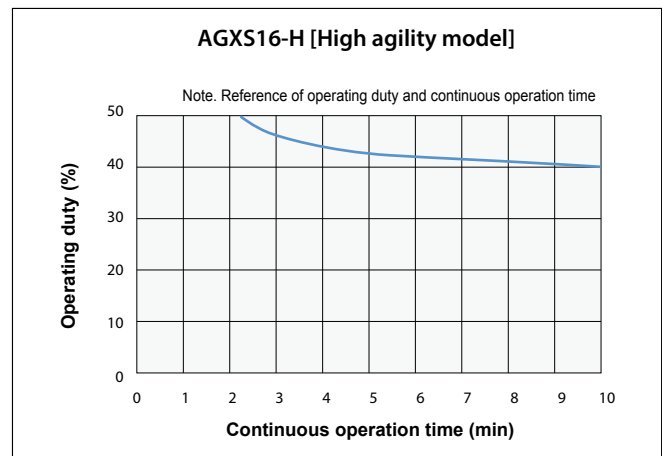
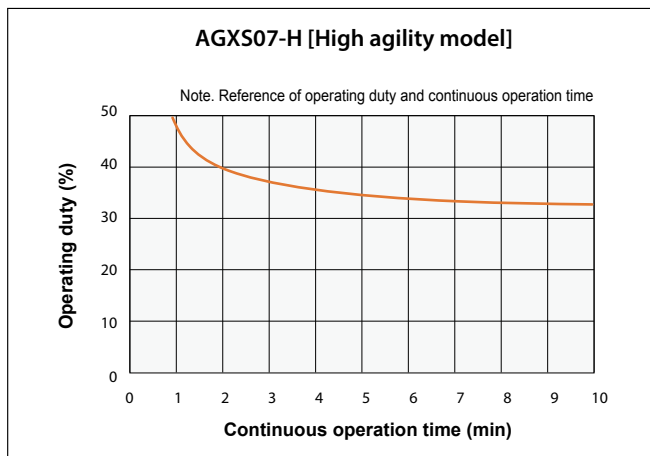
For details about how to check the motor load factor, see the controller manual.

In addition, use the information monitor screen of EP-Manager.

Note. Operating duty

$$\text{Operating duty} = \{ \text{Single-axis operation time} / (\text{Single-axis operation time} + \text{Single-axis stop time}) \} * 100 [\%]$$

■ Operating duty and continuous operation time (reference)



Features
 Motorless
 Silver type Basic model
LBAS
 Motorless
 Silver type Advanced model
LGXS
 Motorless
 Red type Basic model
LBAR
 With motor
 Silver type Basic model
ABAS
 With motor
 Silver type Advanced model
AGXS
 With motor
 Red type Basic model
ABAR
 Acceleration/Deceleration
 Inertia Moment
 Option
 Single-axis robot positioner
EP-01