YAMAHA
Revs Your Heart

New product information

NEW
Rod type / Slider type [Slim type]

High agility mode
Maximum acceleration **2G!**

Intuitive
Durability
Economy

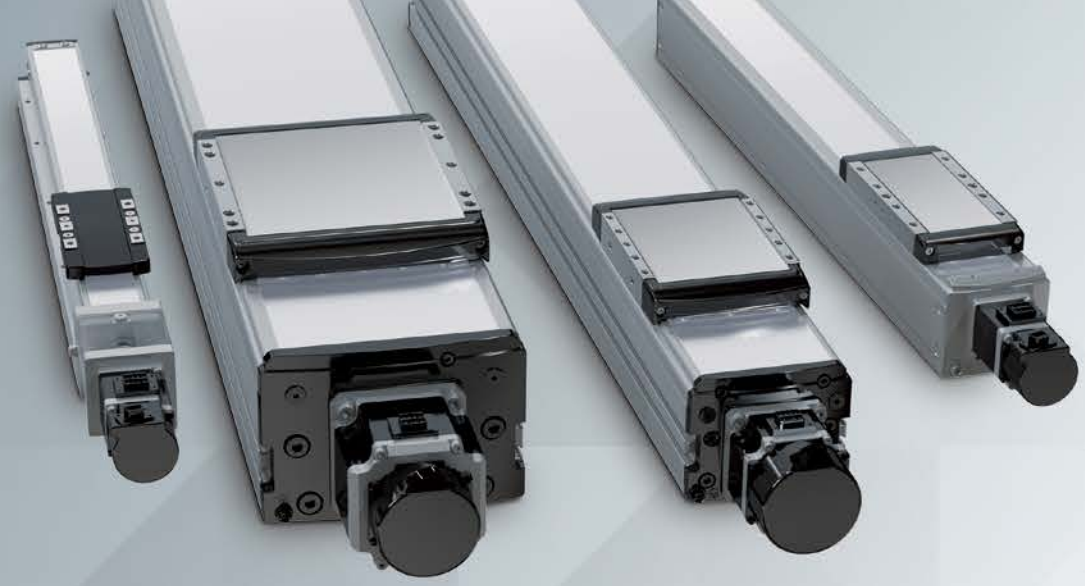
Single-axis robots

Motor-less single axis actuator

Robot positioner

Motor-less single axis actuator / Single-axis robots

Robonity
series



Intuitive

Durability

Economy

Robonity

Single-axis robots

Both can

\ Usability is pursuit. /

Robot positioner

EP-01 series

- Same price as parallel I/O and industrial Ethernet
- Absolute battery function
- Support software is provided free of charge.
- Industry-leading compactness

EP-01-A10

EP-01-A30

Intuitively usable

Reliability unique to YAMAHA

Excellent cost performance

series

Motor-less single axis actuator

LBAS

LGXS

LBAR

be selected.

Products have passed strict evaluation criteria unique to “YAMAHA”, a vehicle equipment manufacturer, that protects peoples lives. Yamaha designs products with high longevity so that people are able to use them for a long time.

Slider type

Basic model

Integrated guide rail and frame design.
High moment rigidity in a compact design.

Motor-less single axis actuator
LBAS

Single-axis robots
ABAS

Maximum payload	~ 115kg
Maximum speed	300 ~ 1,800mm/sec
Stroke	50 ~ 1,250mm

High Rigidity | Compact | Low Cost

Compact and high rigidity

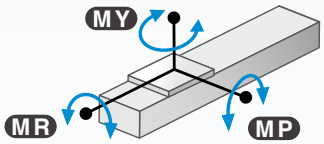
Even though the product is more compact than the conventional product, it achieves a higher rigidity.

	Conventional product T6L	LBAS05/ABAS05
MY	35	59
MP	40	63
MR	50	103

(N · m)

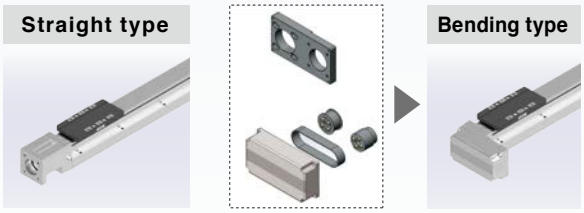
	Conventional product T9H	LBAS08/ABAS08
MY	86	221
MP	133	309
MR	117	343

(N · m)



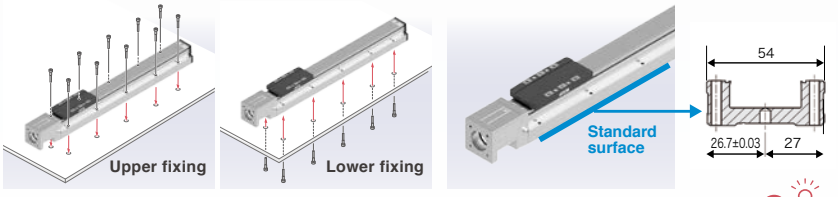
Overall length can be shortened by motor bending specifications.

Motor bending specifications can also be selected, expanding the range of design.



First-class usability even at a low cost.

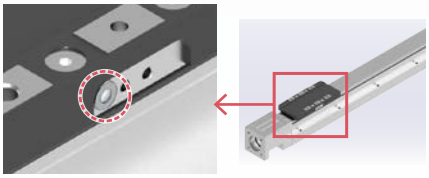
Reference surfaces are provided on the sides of the main body and knock holes are provided on the bottom to reduce design and assembly man-hours.



Installation is possible from either the top or bottom without removing any exterior parts.

Easy Maintenance

Greasing work that tends to be troublesome,such as opening the covers, can be performed easily.

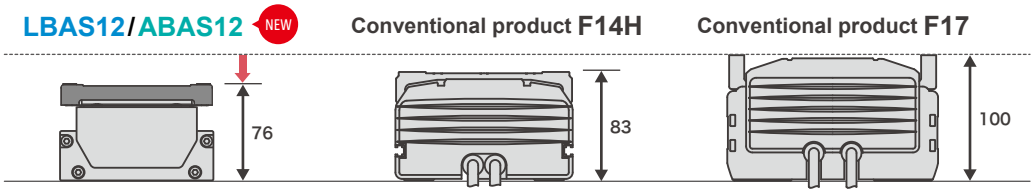


Grease nipple on the slider side surface

NEW

Suitable for the X-axis of Cartesian robots! Slim type “LBAS12/ABAS12” is added to the lineup.

The slim type structure achieves a low center of gravity, making it suitable for the X-axis of Cartesian robots.
The overall height can be suppressed, contributing to equipment downsizing.

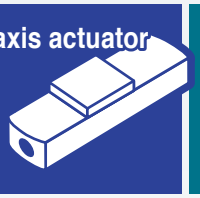


With the same frame width, the product can be used for both 200W and 400W motors, making it suitable for a wide range of situations.

Advanced model

Ground ball screw is standard.
High precision model with high reliability and durability.

Motor-less single axis actuator
LGXS



Single-axis robots
AGXS

Maximum payload	~ 160kg
Maximum speed	300 ~ 2,400mm/sec
Stroke	50 ~ 1,450mm

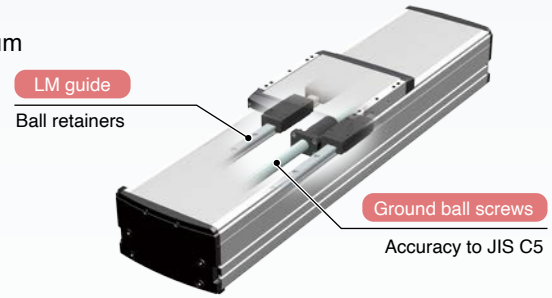
High Precision Accuracy Class C5

High Durability

Clean room specification as a standard feature

High quality model with high accuracy.

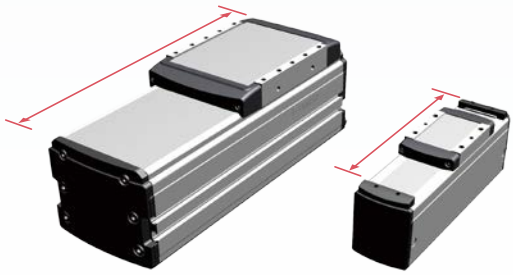
- Adopted ground ball screws
  Ball screw : Accuracy class C5
- Positioning repeatability: +/-5 μm



There are other advantages besides high accuracy. For details, see the next page!

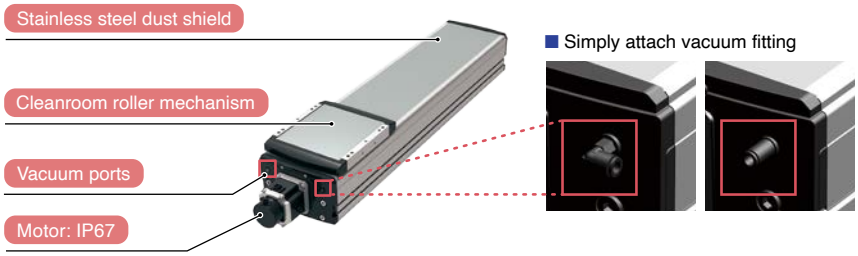
Overall length for effective stroke is the shortest class in the industry.

Overall length for the effective stroke is the shortest in class for the industry.



This product can used in a wide range of situations.

Dust-proof stainless steel sheet is used on the top surface of the main body.
Products can be used in a clean environment by attaching a pipe joint and suctioning.
Air purging can also be used as anti-contamination measures.
Of course, the product can be used as it is without attaching any joint.



One standard product can be used in a wide range of applications.

Slider type

LGXS AGXS

Motor-less | With motor

Maximum acceleration 2G!

YAMAHA quality makes it possible.

With the recent improvements in KAIZEN awareness, we have received many requests from manufacturing sites.
"We need a faster single-axis robot to further improve productivity! Of course, we want to use this robot for an extended period of time with confidence."
To respond to such a request, "High agility mode" has been added to the Advanced model lineup of the Robonity series.

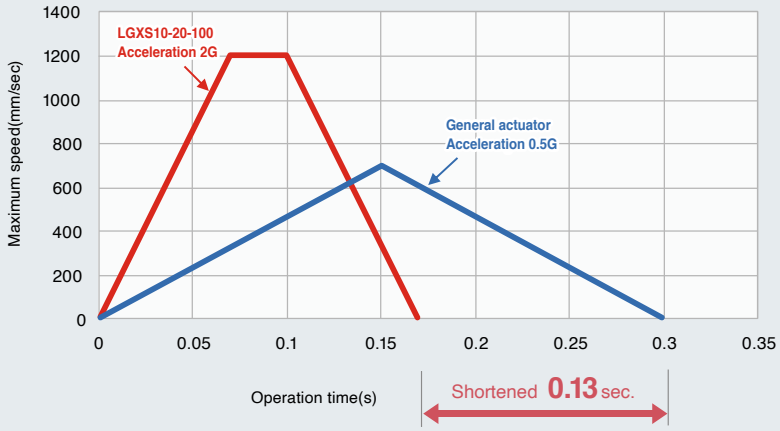
Why does faster acceleration/deceleration benefit the customer?

1. The robot operation time can be shortened.
2. Therefore, the product manufacturing time can be shortened.
3. That is, the daily production quantity can be increased and more production can be performed in the same time.

» Large difference! Effect of acceleration/deceleration!

Comparison of movement time when the payload is 1kg.

For LGXS10-20-100 **Comparison of high acceleration/deceleration operation tact time**



Production volume is increased only by increasing the acceleration/deceleration of the single-axis robot!

Improvement effect

< Example > Movement stroke is 100 mm. Payload is 1 kg. Robot operates 8 times per cycle.
Daily operation hours are 8 hours. Robot operates for 20 days every month. Operating ratio is 100%.
The estimation is made under the above conditions.

	Work time	Robot operation time	Total time	Production volume per hour	Production volume per day	Production volume per month
0.5G	8 sec.	0.3 sec.	10.4 sec.	346 pcs.	2768 pcs.	55360 pcs.
2.0G	8 sec.	0.17 sec.	9.36 sec.	384 pcs.	3072 pcs.	61440 pcs.

As a result, there is a difference of **about 6,000 pcs. (about 10%)** in one month under exactly the same operating conditions.

Even with single-axis robots,

Productivity is improved with confidence.

Why is this improvement achieved!? YAMAHA's Advanced model

Advanced model uses a ground ball screw (C5 class) as standard. So, this model can be used at high acceleration/deceleration for an extended period of time with confidence.

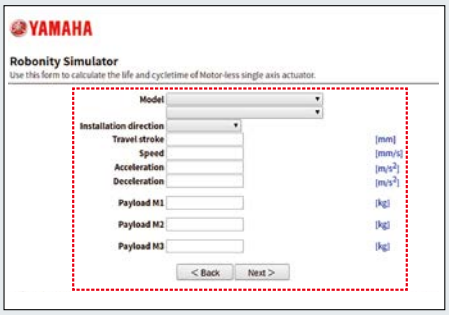
Simulation results of 1 kg transfer

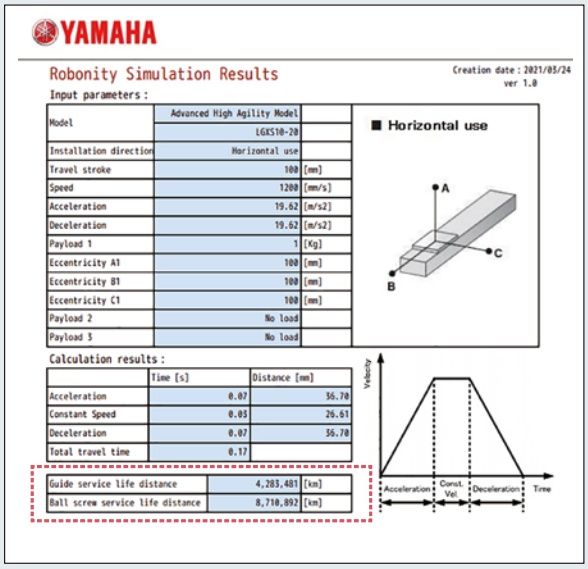
For LGXS10-20-100

< Example >

Overhang amount

A：100mm　B：100mm　C：100mm





Safety and long service life even during high acceleration and deceleration!

Developer's voice

Yamaha's single-axis robots have excellent durability and long product service life. The "Robonity" series has been evolved further. By utilizing our accumulated know-how and the features of each component to the maximum extent, the products confidently meet various needs of our customers, such as low cost, productivity, space saving, and quality improvement.
Please try the excellent product performance of the "Robonity" series.

NEW

Rod type

Basic model

High rigidity structure that follows the slider type.
Compatible with a long stroke of up to 800 mm.

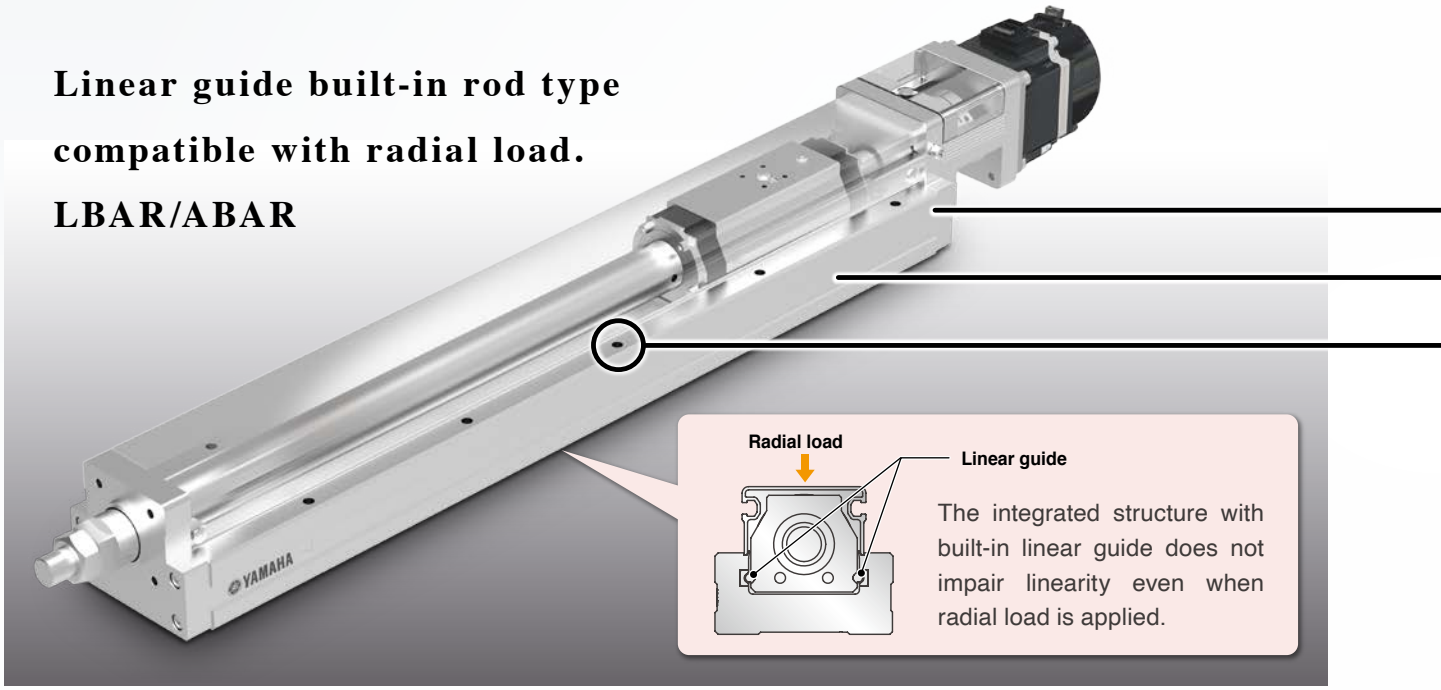
Motor-less single axis actuator
LBAR

Single-axis robots
ABAR

Maximum payload	~ 80kg
Maximum speed	~ 1200mm/sec
Stroke	50 ~ 800mm

High Rigidity | Compact | Long stroke

Linear guide built-in rod type compatible with radial load.
LBAR/ABAR



The integrated structure with built-in linear guide does not impair linearity even when radial load is applied.

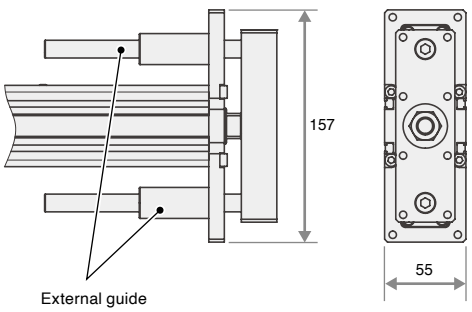
No external guide is needed.

External guide is not needed since the linear guide is built-in.

* An external guide may be recommended when a certain stroke is exceeded.

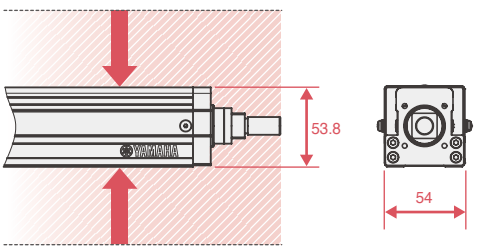
Conventional product
TRANSERVO series
SRD05

External guide is needed.



NEW
Robonity series
LBAR05/ABAR05

Linear guide is built-in.



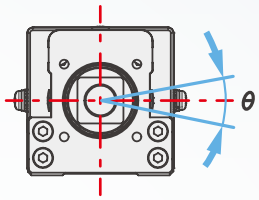
Width size
Reduced approx.
65%
when compared to conventional products.

Contributes to equipment downsizing!

Rod non-rotation accuracy ±0°

The built-in linear guide suppresses rattling in the rotation direction.
The working accuracy of the tool attached to the tip of the rod is maintained.

Conventional product SRD05	LBAR05/ABAR05
±0.05°	±0°

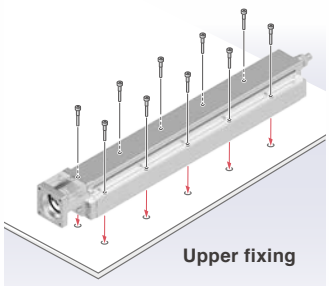


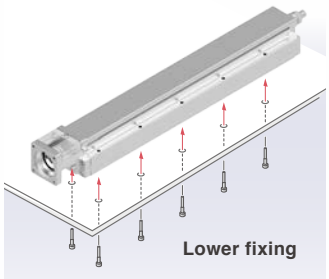
Compatible with a long stroke.

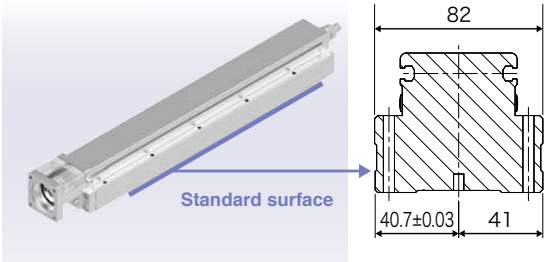
Compatible with a long stroke of up to 800 mm.
The corresponding stroke has doubled when compared to the conventional product with the same size.
This product can be used in a wide range of situations.

Conventional product SRD05	LBAR05/ABAR05
300St	600St

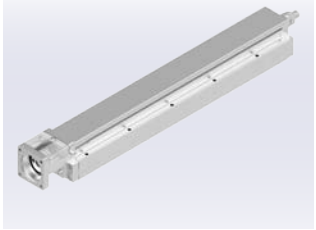
Easy installation and specification change

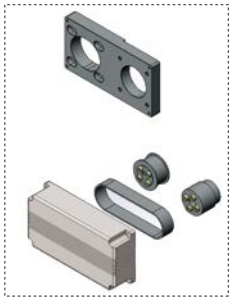




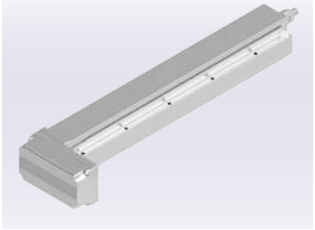


Straight type





Motor bending type



Ease of use is also inherited from the slider type!

Single-axis robots

Slider type

ABAS
With motor

AGXS
With motor

NEW
Rod type

ABAR
With motor

Robot positioner EP-01


EP-01-A10


EP-01-A30

YAMAHA single-axis robot featuring ease of use and long service life.
New single-axis robots "Robonity series ABAS/AGXS" have been developed as more affordable single-axis robots by revising the controller design for more affordable system with reliability.

ABAS04 ▶P.58
ABAS05 ▶P.61
ABAS08 ▶P.64
ABAS12 ▶P.67

POINT 1 Low cost high performance line-up

Easy operation and affordable system with Industrial Ethernet

Robot positioner “EP-01” is a newly designed positioner for a better Ethernet platform and the cost performance. As a result the price of Ethernet is now offered at the same price level as parallel I/O (NPN). While achieving a lower cost design, “EP-01” positioner has expanded features such as standard Ethernet, feedback pulse output, direct value control function, and real-time output.

[Supported field networks]

EtherNet/IP™
PROFINET®
EtherCAT®

Parallel I/O and industrial Ethernet are the same price!

POINT 2 High reliability that YAMAHA is proud of.

For safe and long-term use

We design our products for long-term use even at a low price.
The customer can use the product safely for a long time since it is evaluated according to YAMAHA's own strict evaluation criteria.

Developer's voice

As the single-axis controller is a “simple” function, we manufactured it with “persistence and care”. To achieve both low price and easy-to-use, we have fundamentally reviewed the design and thoroughly evaluated the product until it is broken so that our customers can use the product safely for a long time.
Additionally, the design has been redesigned to make it more compact, while the intuitive interface has been adopted to improve the workability for customers.

Intuitive
Single-axis robot with controller in pursuit of ultimate ease of use

Durability
YAMAHA quality cultivated with more than 40 years of experience

Economy
Industrial Ethernet at the same price as the parallel I/O

AGXS05 ▶P.72
AGXS05L ▶P.75
AGXS07 ▶P.78
AGXS10 ▶P.81
AGXS12 ▶P.84
AGXS16 ▶P.87
AGXS20 ▶P.90
ABAR04 ▶P.94
ABAR05 ▶P.98
ABAR08 ▶P.102

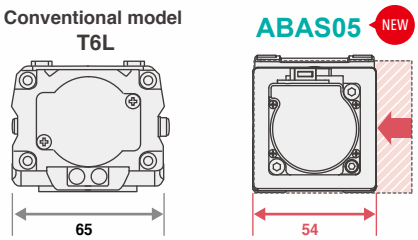
POINT 3

Space efficient compact design.

Industry-leading compact design

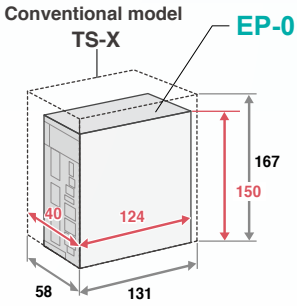
Compact design for machine size reduction.

Basic model (ABAS)



Width
Reduced approx. 17% compared to the conventional model.

Robot positioner EP-01

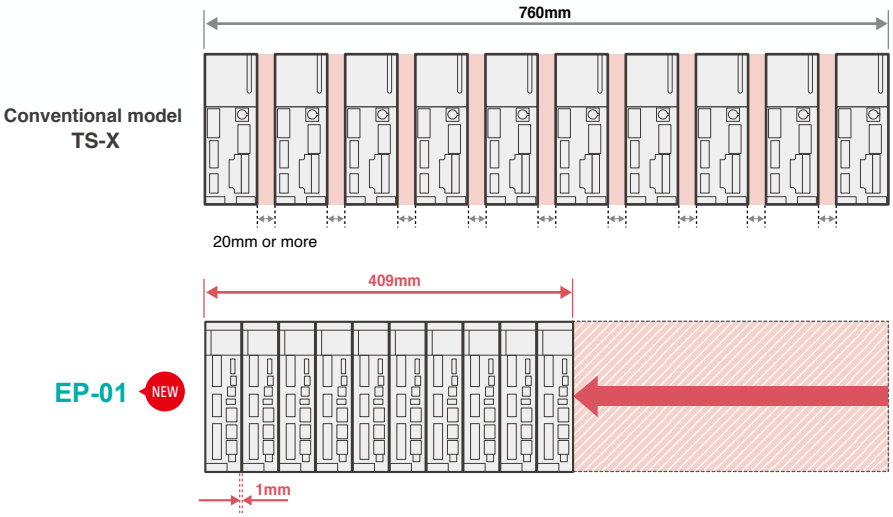


Capacity
Reduced approx. 37% compared to the conventional model.

Installation space comparison

Saves spaces inside a control panel

* For details about the installation conditions, see P.149.



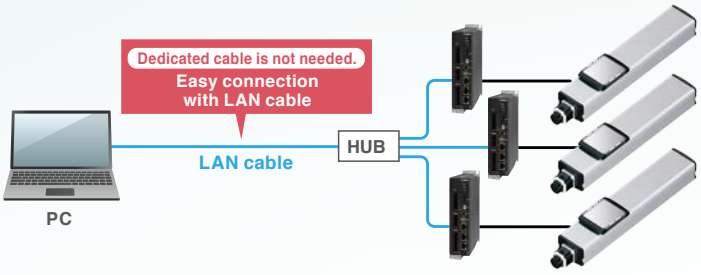
Installation area
Reduced approx. 47% compared to the conventional model.

Significant downsizing is possible by shortening to the installation width!

POINT 4 User friendly setup

The hassle of startup is reduced.

Ethernet port is standard on a controller and dedicated PC programming cable is no longer required. Startup procedure is reduced and simplified.

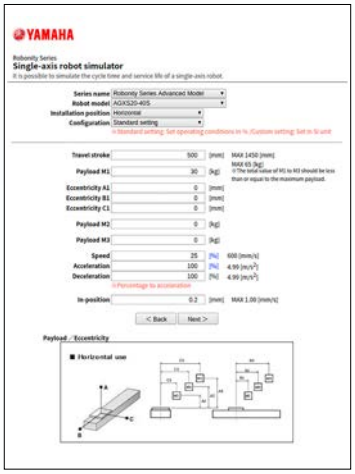


POINT 5 Easy model selection

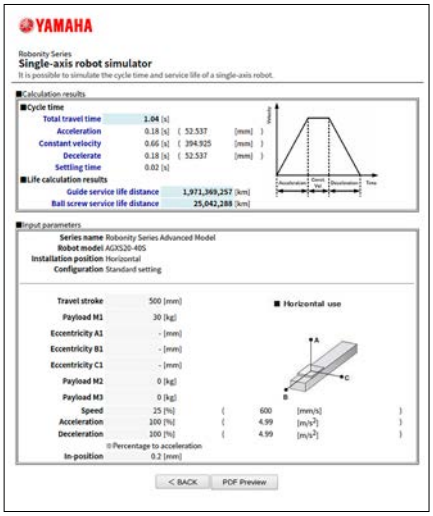
Simple cycle time and service life calculation.

The service life and cycle time can be calculated at the same time by simply entering the required information at the website.
The result can be conveniently saved as PDF file.

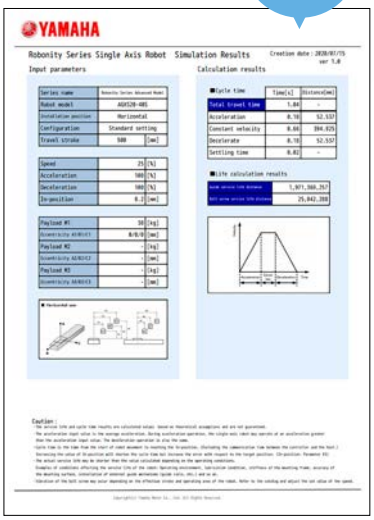
Entry screen



Results



PDF



POINT 6 For stable and constant operation

Contribution to early recovery from line stop

Battery-less absolute method

Because the single-axis controller supports the battery-less absolute method, the battery replacement is not needed.

Calendar function

The controller has clock function internally and histories like alarm are recorded chronologically. Such information is retained for over one year without power and no need for resetting at system startup after long holidays.

Absolute battery is installed on the cable section.

Position data will be retained even when replacing a absolute controller.

The cause that took a long time to recover can be solved.

POINT 7

Industrial Ethernet achieves higher-grade equipment.

Robot status monitoring with real-time output function

It is useful to check the conditions of the robot and as a guide for maintenance timing.

- **Current position**
- **Current speed**
- **Motor current**
- **Alarm code when an alarm occurs.**
- **Overload integration ratio** (Overload occurs at 100%.)
- **Movement distance** (When the servo is ON.)
- **Movement time** (When the servo is ON.)
- **Motor load factor**

EtherNet/IP™
PROFINET®
EtherCAT®

POINT 8

To meet a wide range of needs

Used for a wider range of applications with expanded functions and new functions.

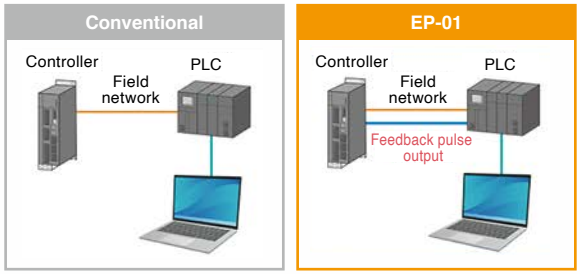
Acceleration and deceleration designation type was added to the positioning operation command from the PLC.

Direct value position designation	Position data	Speed	Acceleration	Deceleration
Data designation type 1	○			
Data designation type 2	○	○		
Data designation type 3	○	○	○	○

When the custom setting is selected, the speed and acceleration can be designated to (mm/s) and (m/s^2) from the PLC!

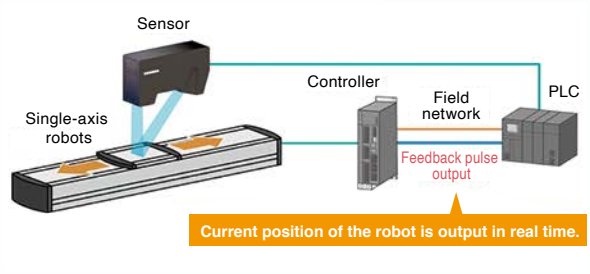
Feedback pulse function has been added to enable use in conjunction with external devices.

Feedback pulse output



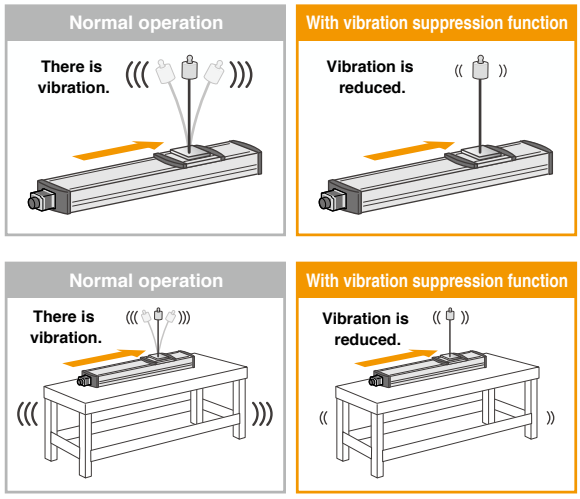
Exact current location is understood without communication delay

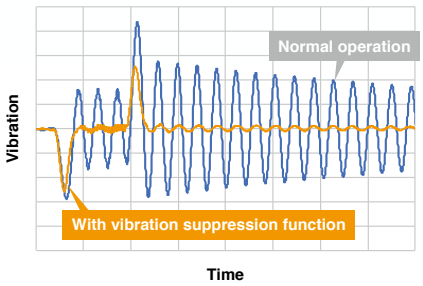
Usage example of feedback pulse output



Speed ripple can be corrected.

New vibration suppression function has been added to achieve vibration suppression!





It can be adjusted according to the number of vibrations that need to be suppressed, such as tool vibrations and installation base vibrations!

POINT 9

Free download

Free of charge

PC Programming software “EP-Manager”

Support software “EP-Manager” that allows you to perform “Setting” → “Pre-check” → “Debug” → “Maintenance” in a single step is provided free of charge.
Easy edit for robot operation, positioning, timing, or monitoring motor load.

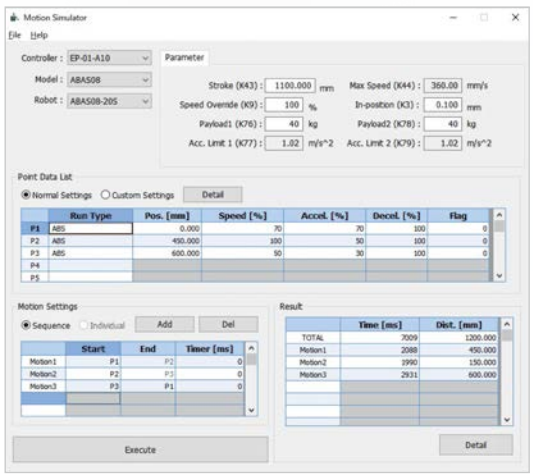
Download from website (member site)

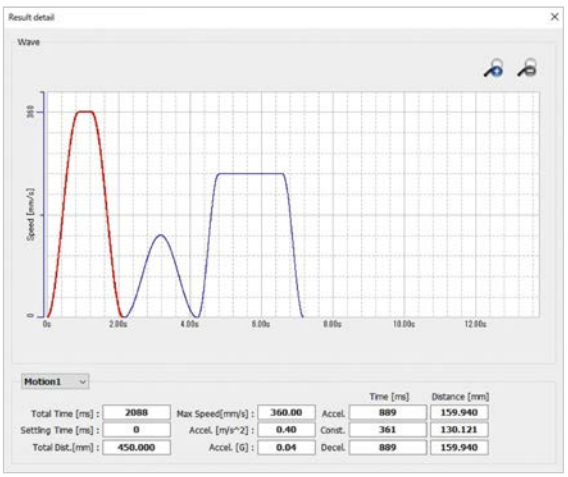
What you can do with EP-Manager.

- Parameter setting
- Point setting
- Robot operation
- Operation simulation
- Debug (Real-time trace)
- Maintenance (Alarm history check)

Pre-check Operation simulator

Operation simulator function is included to enable offline simulation.





Offline pre-check and examination with actual teaching data is also possible!

Debug — Real-time trace

This function traces the current position, speed, load percentage, current, and voltage at real-time. Additionally,once trigger conditions are set, data can be automatically obtained when these conditions are met. Furthermore, by specifying a zone from the monitor results, the maximum value, minimum value, and average value can be calculated. These values are handy for trouble shooting.

Current position
Current speed
Voltage
CPU temperature

Calculation Dialog A B Show on click

Calculation Dialog

Calculation Range 1s - 3.6s Calculate Setup...

CH	Max. Value	Time of Max...	Min. Value	Time of Min...	Average	RMS
1	100	2.25s	-0.001	1s	55.797	69.7845
2	406.34	3.29s	-416.03	2.73s	38.3145	174.4773
3	294.3	3.42s	278.4	2.65s	287.8165	287.835
4	34	1s	34	1s	34	34

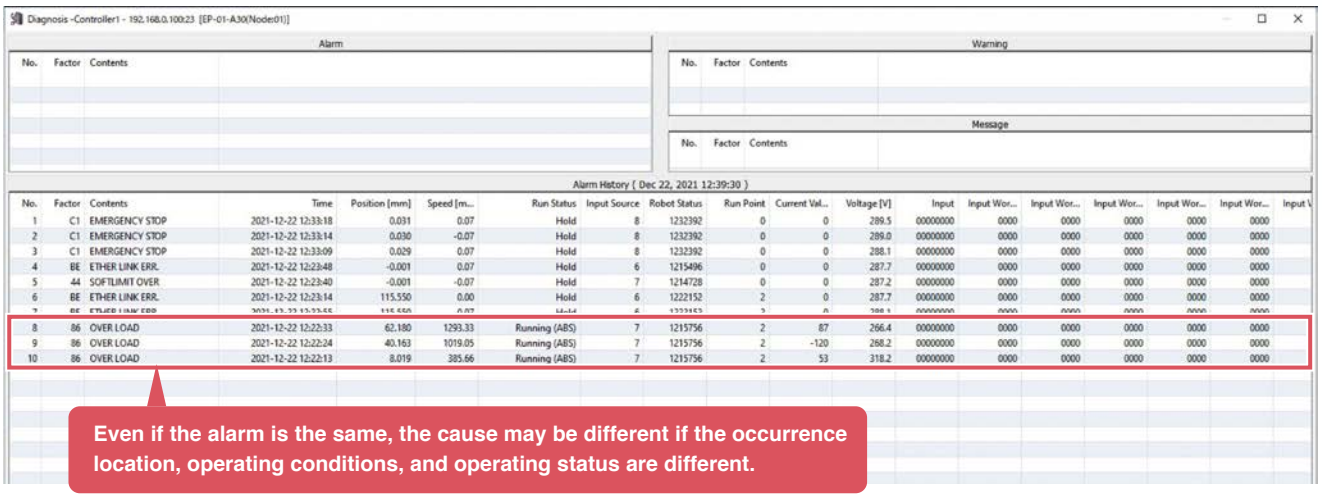
Items that can be traced in real time

Instructed position	Current speed	load percentage	Input information	Word input information
Current position	Command current	Voltage	Output information	Word output information
Command speed	Present current	CPU temperature	Option information	Always output information

Information necessary for debugging can be checked!

Maintenance — Alarm history check

In addition to the position, speed, operation status, current value, and voltage value in case of an alarm, the I/O status of the input/output is displayed.
This contributes to analysis of the status.



Even if the alarm is the same, the cause may be different if the occurrence location, operating conditions, and operating status are different.

Details can be checked when an error occurs, which is useful for recovery and corrective action.

Motor-less single axis actuator

Slider type

LBAS Motor-less

LGXS Motor-less

NEW

Rod type

LBAR Motor-less

Wide range of selection for transfer and positioning application
Wide variety of ball screw lead and stroke length to choose from

LBAS04 ▶P.18 | LBAS05 ▶P.21 | LBAS08 ▶P.24 | LBAS12 ▶P.27 | LGXS05 ▶P.32 | LGXS05L ▶P.34 | LGXS07 ▶P.36 | LGXS10 ▶P.38 | LGXS12 ▶P.40 | LGXS16 ▶P.42 | LGXS20 ▶P.44 | LBAR04 ▶P.46 | LBAR05 ▶P.50 | LBAR08 ▶P.54

POINT 1 Supports major brands and standards

Build a system with motor/driver of your choice

In addition to the conventional servomotors, stepping motors are also newly supported and actuators can be used in accordance with customers' needs. * For the compatible models and capacities, see the detailed page of each model in this catalog.

LBAS | **Compatible motor manufacturers and standards**

[Servo motor]

Yasukawa Electric
Mitsubishi Electric
KEYENCE
OMRON
SANYO DENKI
TAMAGAWA SEIKI
DELTA ELECTRONICS
Panasonic
FANUC
Siemens AG
Rockwell Automation, Inc.
Schneider Electric SA
KINGSERVO Hoof automation CO., LTD.
Beckhoff Automation GmbH & Co. KG

[Stepping motor]

Oriental Motor

[NEMA standards]

NEMA17
NEMA23

LGXS | **Compatible motor manufacturers**

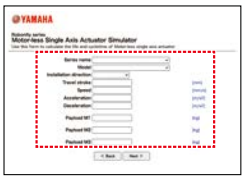
[Servo motor]

Yasukawa Electric
Mitsubishi Electric
KEYENCE
OMRON
Panasonic

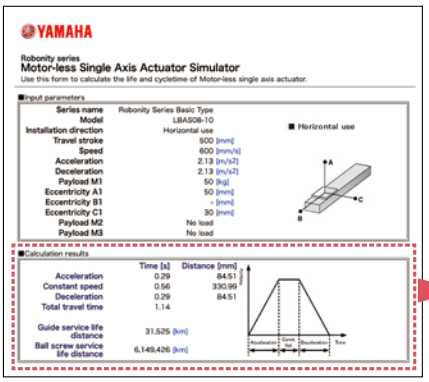
POINT 2 Easy selection

Easy simulation of cycle time and service life of motorless single axis actuator.

Simulator on web site will provide cycle time and service life of ball screw or guide.
Selection of most suitable model with confidence.



Just enter simple parameters ...



Easy Automatic calculation

- Acceleration/deceleration time
- Uniform velocity time
- Total movement time
- Uniform velocity distance
- Life distance of guide
- Life distance of ball screw

Access the website below.

YAMAHA

https://robot.yamaha-motor.co.jp/robot/member/motorless_eng/motorless.php

* These contents are not available on smartphones.

MEMO

LBAS04

Basic model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LBAS04 – [ ] [ ] [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	12: 12 mm 6: 6 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) A: A specification (see below) S: S specification (see below) N: N specification (see below)	50 to 800 (50 mm pitch)

[Caution]

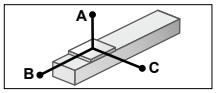
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

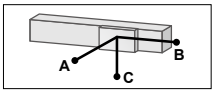
Specifications

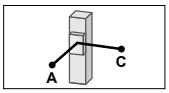
Applicable motor		50 W	
Repeatability Note 1		+/-0.01 mm	
Deceleration mechanism		Shifting position ball screw ϕ 10 (C7 class)	
Stroke		50 mm to 800 mm (50 mm pitch)	
Maximum speed Note 2 **(or equivalent)**		800 mm/sec	400 mm/sec
Ball screw lead		12 mm	6 mm
Maximum payload Note 3 **(or equivalent)**	**Horizontal**	12 kg	20 kg
	Vertical	2 kg	5 kg
Rated thrust Note 3 **(or equivalent)**		71 N	141 N
Maximum dimensions of cross section of main unit		W 44 mm × H 52 mm	
Overall length	**Straight**	ST + 214 mm	
	Bending	ST + 196 mm	
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 500 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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note. See P.106 for acceleration/deceleration and inertia moment.

Allowable overhang Note







LBAS04-12

Horizontal installation (Unit: mm)

	A	B	C
2kg	1187	271	325
8kg	473	62	77
12kg	431	41	53

Wall installation (Unit: mm)

	A	B	C
2kg	325	271	1187
8kg	77	62	473
12kg	53	41	431

Vertical installation (Unit: mm)

	A	C
1kg	534	534
2kg	265	265

LBAS04-6

Horizontal installation (Unit: mm)

	A	B	C
4kg	1808	155	217
12kg	801	47	65
20kg	546	25	35

Wall installation (Unit: mm)

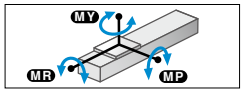
	A	B	C
4kg	217	155	1808
12kg	65	47	801
20kg	35	25	546

Vertical installation (Unit: mm)

	A	C
1kg	639	639
3kg	208	208
5kg	122	122

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 500 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
54	54	75

Applicable motor

• Applicable servo motor

Specification	**Flange size**	□ 40
	Wattage	50 W

Note. Motor models marked with * may not be 50W, but can be installed.

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-A5
		SGM7J-A5
	Keyence Corp.	SV- □ 005
		SV2- □ 005
	Mitsubishi Electric Corp.	HF-KP053
		HG-KR053
		HK-KT053
	Omron Electronics	R88M-K05030
		R88M-1M05030
	Panasonic Corp.	MHMF5A
	Sanyo Denki	R2 □ A04005
	Tamagawa Seiki	TSM3102
	Delta Electronics	ECMA-C1040F
	Fanuc Corp.	β iS0.2/5000
	Siemens	1FK2102-0AG
		1FL6022-2AF
	Schneider	BCH2MBA53
	Beckhoff	AM3011B*
	Allen-Bradley	TLY-A120*
P	Panasonic Corp.	MSMD5A
		MSMF5A

• Applicable stepping motor

Specification	Flange size	□ 42

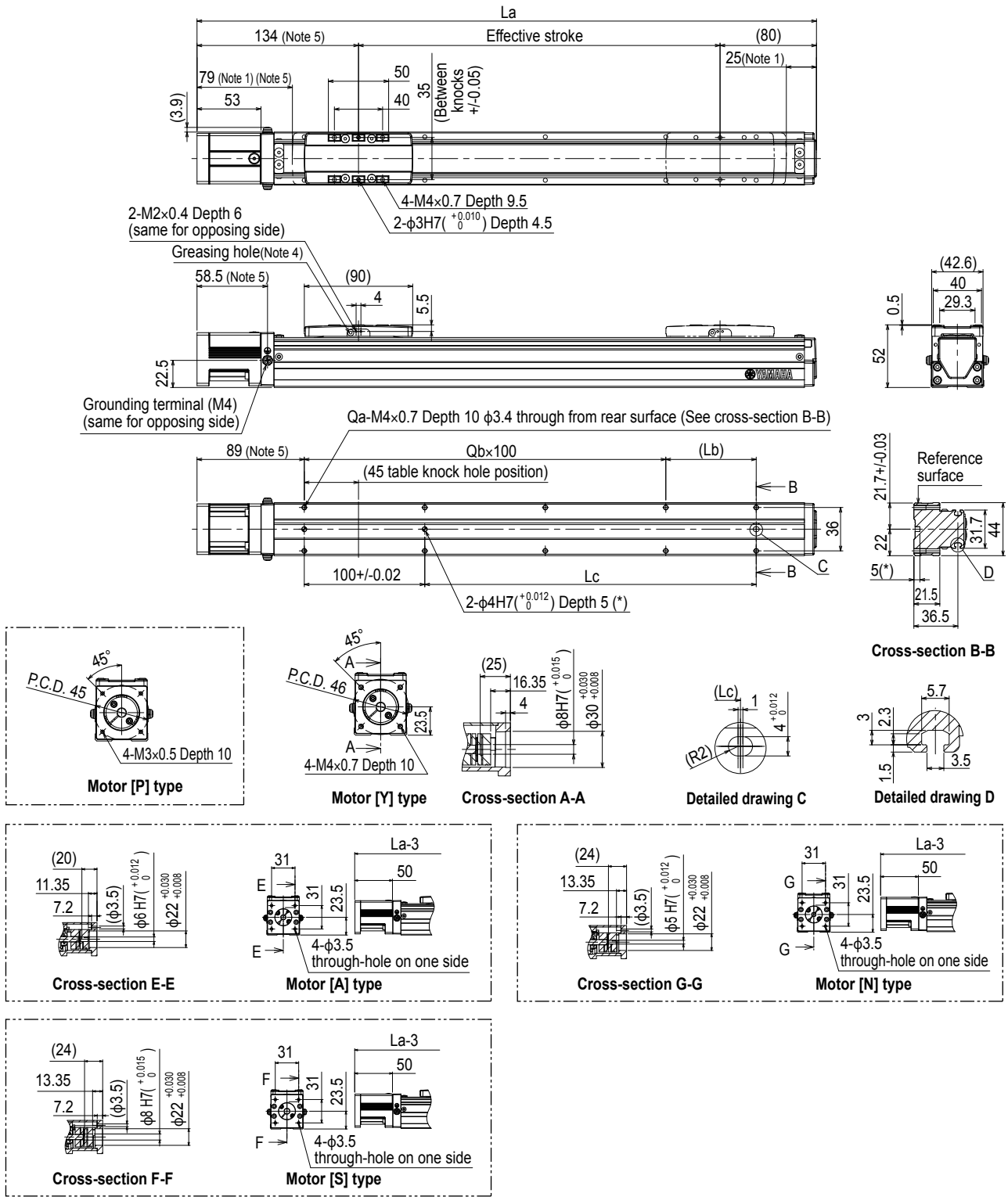
Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
		ARM46
		RKS54
S	Oriental Motor	AZM48
N	NEMA standard	NEMA17

Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.

Access the website below.

▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

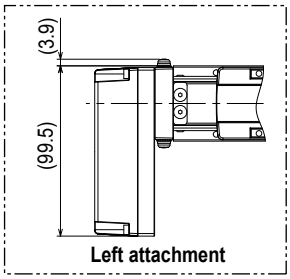
LBAS04 Straight type (S)



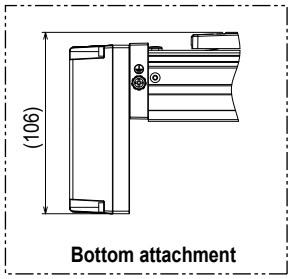
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
Note 5. For the motor specifications A, S, and N, the dimensions are that those stated in the table <<-3 mm>>.

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		264	314	364	414	464	514	564	614	664	714	764	814	864	914	964	1014
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		0.9	1.1	1.3	1.5	1.6	1.8	2	2.2	2.4	2.5	2.7	2.9	3.1	3.3	3.4	3.6
Maximum speed (mm/sec)	Lead 12	800										720	600	480	400	360	320
	Lead 6	400										360	300	240	200	180	160
	Speed setting	–										90%	75%	60%	50%	45%	40%

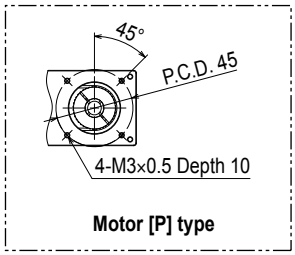
LBAS04 Bending type (A)



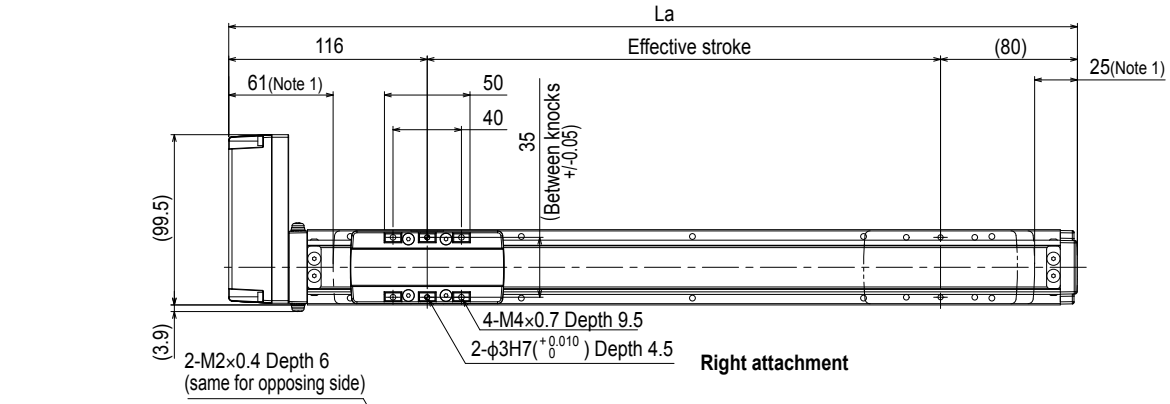
Left attachment



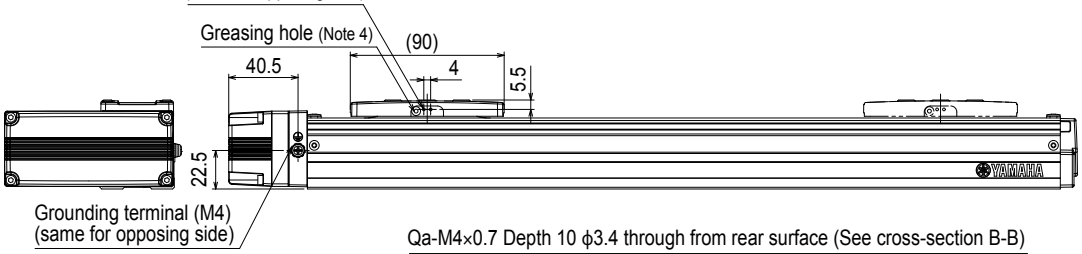
Bottom attachment

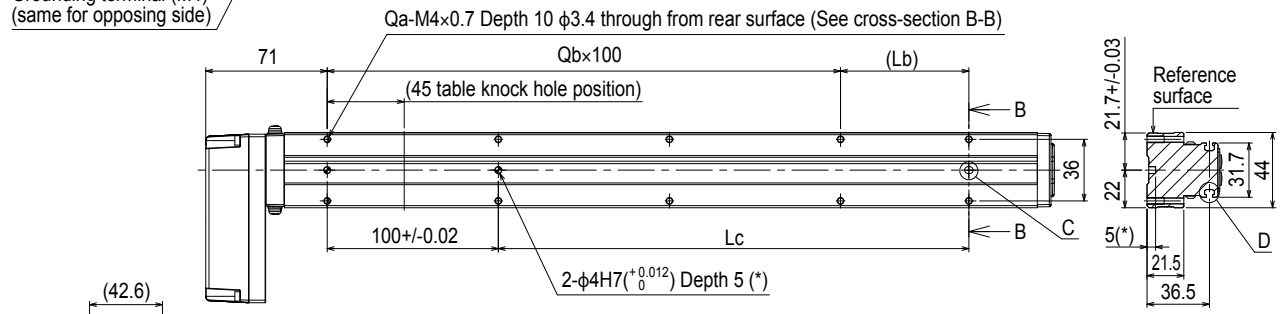


Motor [P] type

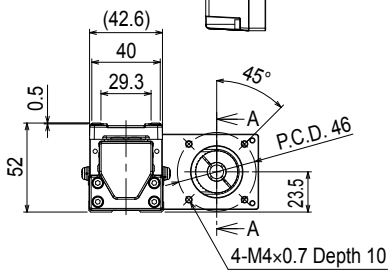


Right attachment

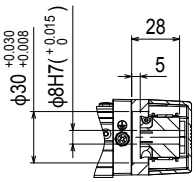




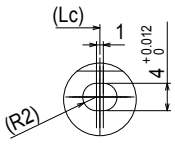
Cross-section B-B



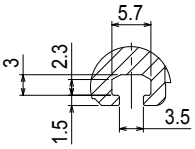
Motor [Y] type



Cross-section A-A



Detailed drawing C



Detailed drawing D

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		1.1	1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.7	2.8	3	3.2	3.4	3.6	3.7
Maximum speed (mm/sec)	Lead 12	800										720	600	480	400	360	320
	Lead 6	400										360	300	240	200	180	160
	Speed setting	–										90%	75%	60%	50%	45%	40%

LBAS05

Basic model **Motor-less Single Axis Actuator**

● Slider type

Ordering method

LBAS05 – [ ] – [ ] – [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) A: A specification (see below) S: S specification (see below) N: N specification (see below)	50 to 800 (50 mm pitch)

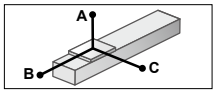
[Caution]
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

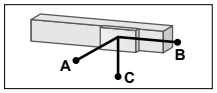
Specifications

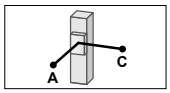
Applicable motor		100 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 12 (C7 class)		
Stroke		50 mm to 800 mm (50 mm pitch)		
Maximum speed Note 2 **(or equivalent)**		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3 **(or equivalent)**	**Horizontal**	12 kg	24 kg	40 kg
	Vertical	3 kg	6 kg	12 kg
Rated thrust Note 3 **(or equivalent)**		84 N	169 N	339 N
Maximum dimensions of cross section of main unit		W 54 mm × H 60 mm		
Overall length	**Straight**	ST + 220.5 mm		
	Bending	ST + 200 mm		
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 550 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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note. See P.107 for acceleration/deceleration and inertia moment.

Allowable overhang Note







LBAS05-20

Horizontal installation (Unit: mm)	A	B	C
2kg	549	324	272
8kg	155	73	65
12kg	117	46	42

Wall installation (Unit: mm)	A	B	C
2kg	272	324	549
8kg	65	73	155
12kg	42	46	117

Vertical installation (Unit: mm)	A	C
1kg	544	544
2kg	276	276
3kg	195	195

LBAS05-10

Horizontal installation (Unit: mm)	A	B	C
5kg	769	178	213
15kg	314	53	64
24kg	216	29	36

Wall installation (Unit: mm)	A	B	C
5kg	213	178	769
15kg	64	53	314
24kg	36	29	216

Vertical installation (Unit: mm)	A	C
2kg	443	443
4kg	218	218
6kg	142	142

LBAS05-5

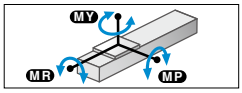
Horizontal installation (Unit: mm)	A	B	C
10kg	921	97	131
25kg	459	33	45
40kg	436	17	23

Wall installation (Unit: mm)	A	B	C
10kg	131	97	921
25kg	45	33	459
40kg	23	17	436

Vertical installation (Unit: mm)	A	C
3kg	345	345
8kg	124	124
12kg	79	79

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 500 mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
59	63	103

Applicable motor

● Applicable servo motor

Specification		
	Flange size	□ 40
	Wattage	100 W

Note. Motor models marked with * may not be 100W, but can be installed.

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-01
		SGM7J-01
	Keyence Corp.	SV- □ 010
		SV2- □ 010
	Mitsubishi Electric Corp.	HF-KP13
		HG-KR13
		HK-KT13
	Omron Electronics	R88M-K10030
		R88M-1M10030
	Panasonic Corp.	MHMF01
	Sanyo Denki	R2 □ A04010
	Tamagawa Seiki	TSM3104
	Delta Electronics	ECMA-C10401
	Fanuc Corp.	β iS0.3/5000
	Kingservo	KSMA01LI □ S
		KSMA01LG
	Siemens	1FK2102-1AG
		1FL6024-2AF
	Schneider	BCH2MB013
	Beckhoff	AM3012C*
	Allen-Bradley	TLY-A130*
P	Panasonic Corp.	MSMD01
		MSMF01

● Applicable stepping motor

Specification	Flange size	□ 42

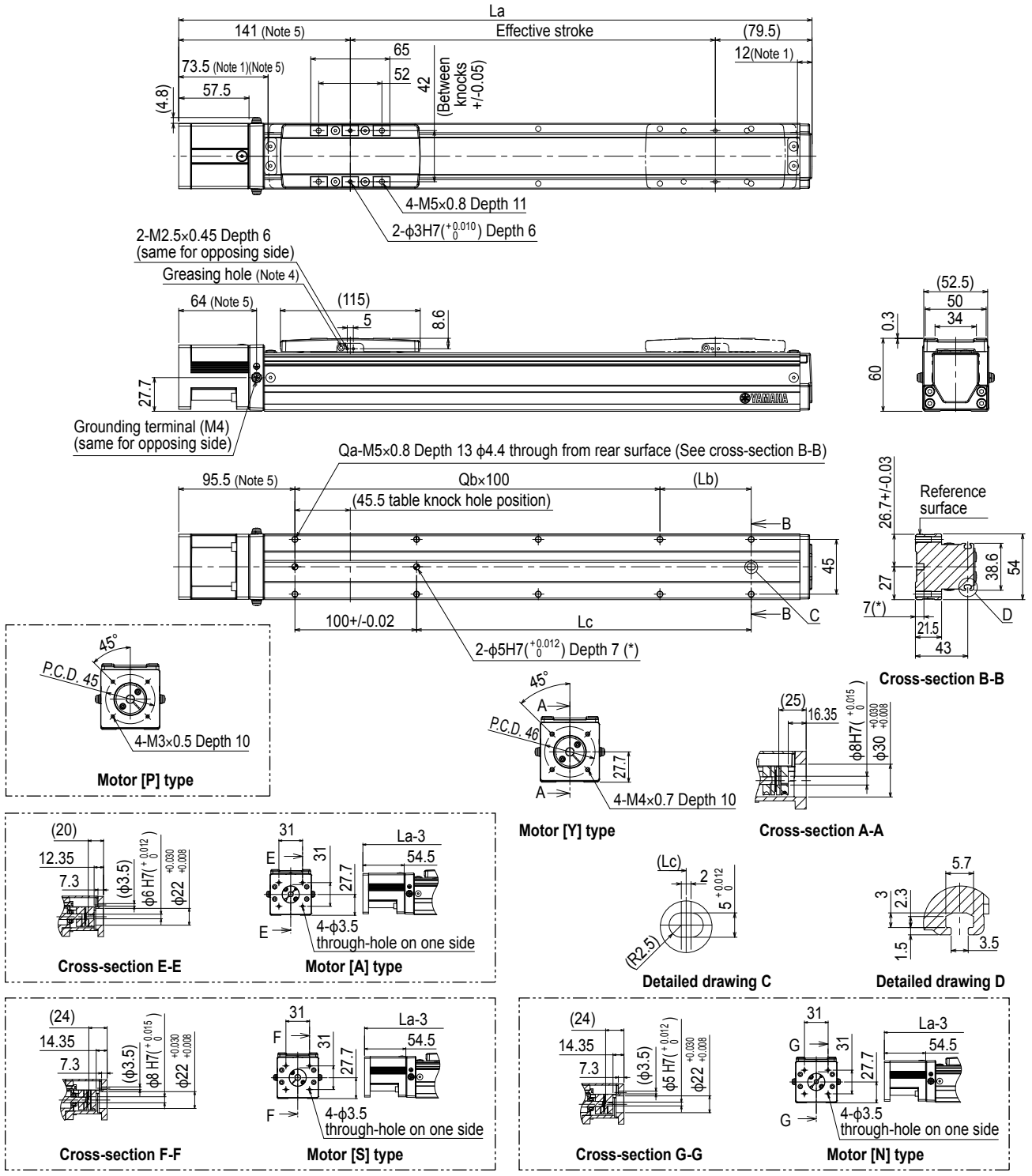
Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
		ARM46
		RKS54
S	Oriental Motor	AZM48
N	NEMA standard	NEMA17

Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.

Access the website below.

▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

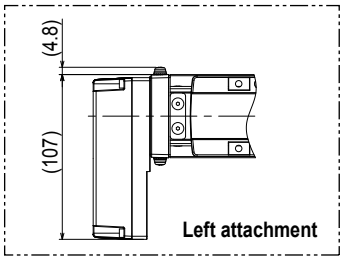
LBAS05 Straight type (S)



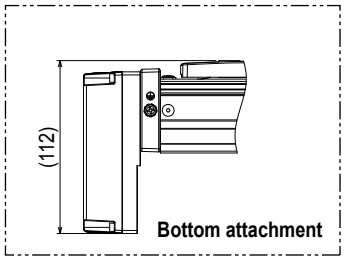
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
Note 5. For the motor specifications A, S, and N, the dimensions are that those stated in the table <<-3 mm>>.

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		270.5	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
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		1.6	1.8	1.9	2.1	2.4	2.5	2.5	2.7	2.8	2.9	3.1	3.3	3.4	3.6	3.7	4.1
Maximum speed (mm/sec)	Lead 20	1333											1133	933	799	666	599
	Lead 10	666											566	466	399	333	299
	Lead 5	333											283	233	199	166	149
	Speed setting	–											85%	70%	60%	50%	45%

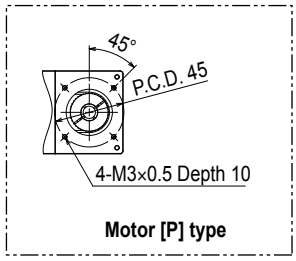
LBAS05 Bending type (A)



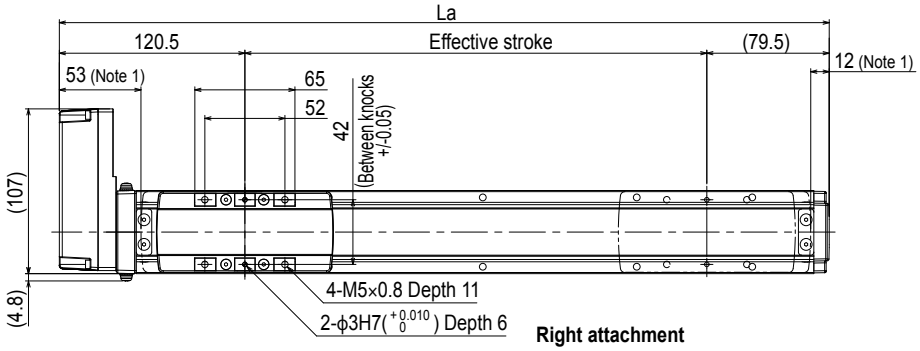
Left attachment



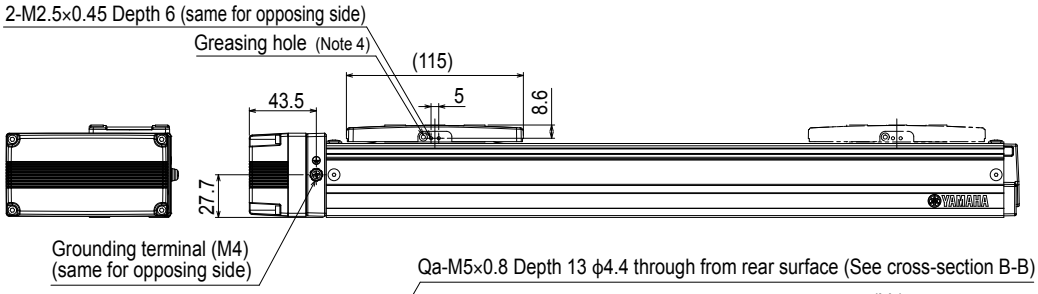
Bottom attachment

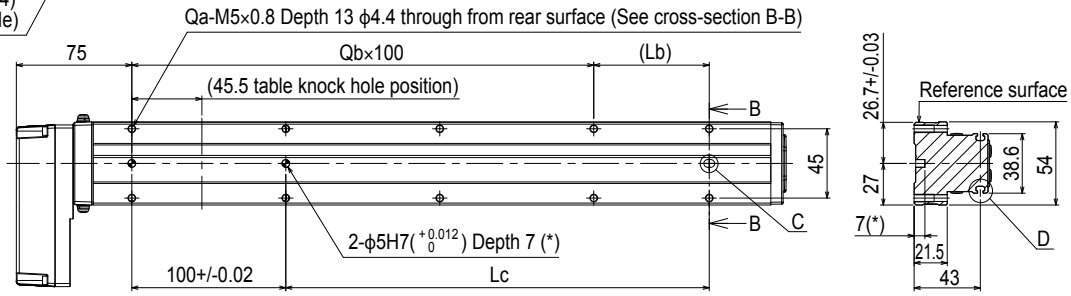


Motor [P] type

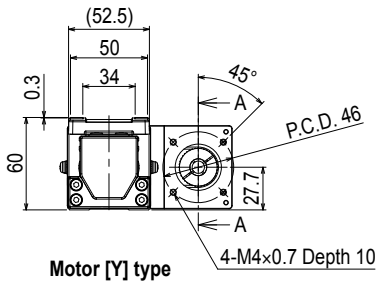


Right attachment

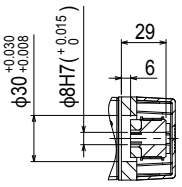




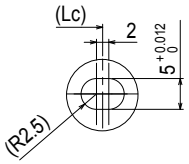
Cross-section B-B



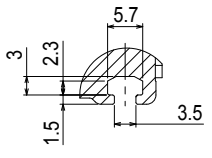
Motor [Y] type



Cross-section A-A



Detailed drawing C



Detailed drawing D

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		1.7	1.8	2	2.2	2.4	2.6	2.6	2.8	2.9	3	3.2	3.3	3.5	3.6	3.8	4.1
Maximum speed (mm/sec)	Lead 20	1333											1133	933	799	666	599
	Lead 10	666											566	466	399	333	299
	Lead 5	333											283	233	199	166	149
	Speed setting	–											85%	70%	60%	50%	45%

LBAS08

Basic model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LBAS08 – [ ] [ ] [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) K: K specification (see below) A: A specification (see below) N: N specification (see below)	50 to 1100 (50 mm pitch)

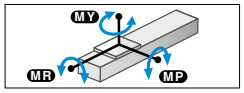
[Caution]
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

Specifications

Applicable motor		200 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)		
Stroke		50 mm to 1100 mm (50 mm pitch)		
Maximum speed Note 2 **(or equivalent)**		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3 **(or equivalent)**	**Horizontal**	40 kg	80 kg	100 kg
	Vertical	8 kg	20 kg	30 kg
Rated thrust Note 3 **(or equivalent)**		174 N	341 N	683 N
Maximum dimensions of cross section of main unit		W 82 mm × H 78 mm		
Overall length	**Straight**	ST + 278 mm		
	Bending	ST + 264.5 mm		
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 650 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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note. See P.109 for acceleration/deceleration and inertia moment.

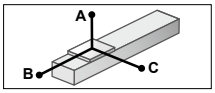
Static loading moment

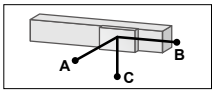


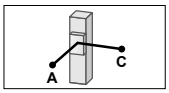
(Unit: N·m)

MY	MP	MR
221	309	343

Allowable overhang Note







LBAS08-20

Horizontal installation (Unit: mm)			
	A	B	C
15kg	356	131	146
25kg	278	73	86
40kg	517	54	76

Wall installation (Unit: mm)			
	A	B	C
15kg	146	131	356
25kg	86	73	278
40kg	76	54	517

Vertical installation (Unit: mm)		
	A	C
3kg	634	634
6kg	321	321
8kg	240	240

LBAS08-10

Horizontal installation (Unit: mm)			
	A	B	C
30kg	465	83	120
50kg	341	44	65
80kg	228	22	34

Wall installation (Unit: mm)			
	A	B	C
30kg	120	83	465
50kg	65	44	341
80kg	34	22	228

Vertical installation (Unit: mm)		
	A	C
5kg	551	551
10kg	270	270
20kg	129	129

LBAS08-5

Horizontal installation (Unit: mm)			
	A	B	C
30kg	1604	95	153
50kg	1035	52	83
80kg	719	27	44
100kg	608	19	31

Wall installation (Unit: mm)			
	A	B	C
30kg	153	95	1604
50kg	83	52	1035
80kg	44	27	719
100kg	31	19	608

Vertical installation (Unit: mm)		
	A	C
10kg	312	312
20kg	149	149
30kg	95	95

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.

Applicable motor

• Applicable servo motor

Specification		
Flange size		□ 60
Wattage		200 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-02
		SGM7J-02
	Keyence Corp.	SV- □ 020
		SV2- □ 020
	Mitsubishi Electric Corp.	HF-KP23
		HG-KR23
		HK-KT23
	Sanyo Denki	R2 □ A06020
	Tamagawa Seiki	TSM3202
	Delta Electronics	ECMA-C10602
	Siemens	1FL6032-2AF
	Schneider	BCH2LD023
P	Omron Electronics	R88M-K20030
		R88M-1M20030
	Panasonic Corp.	MSMD02
		MSMF02
		MHMF02
K	Kingservo	KSMA02LI
		KSMA02LG

• Applicable stepping motor

Specification		
Flange size		□ 60
		□ 56(NEMA)

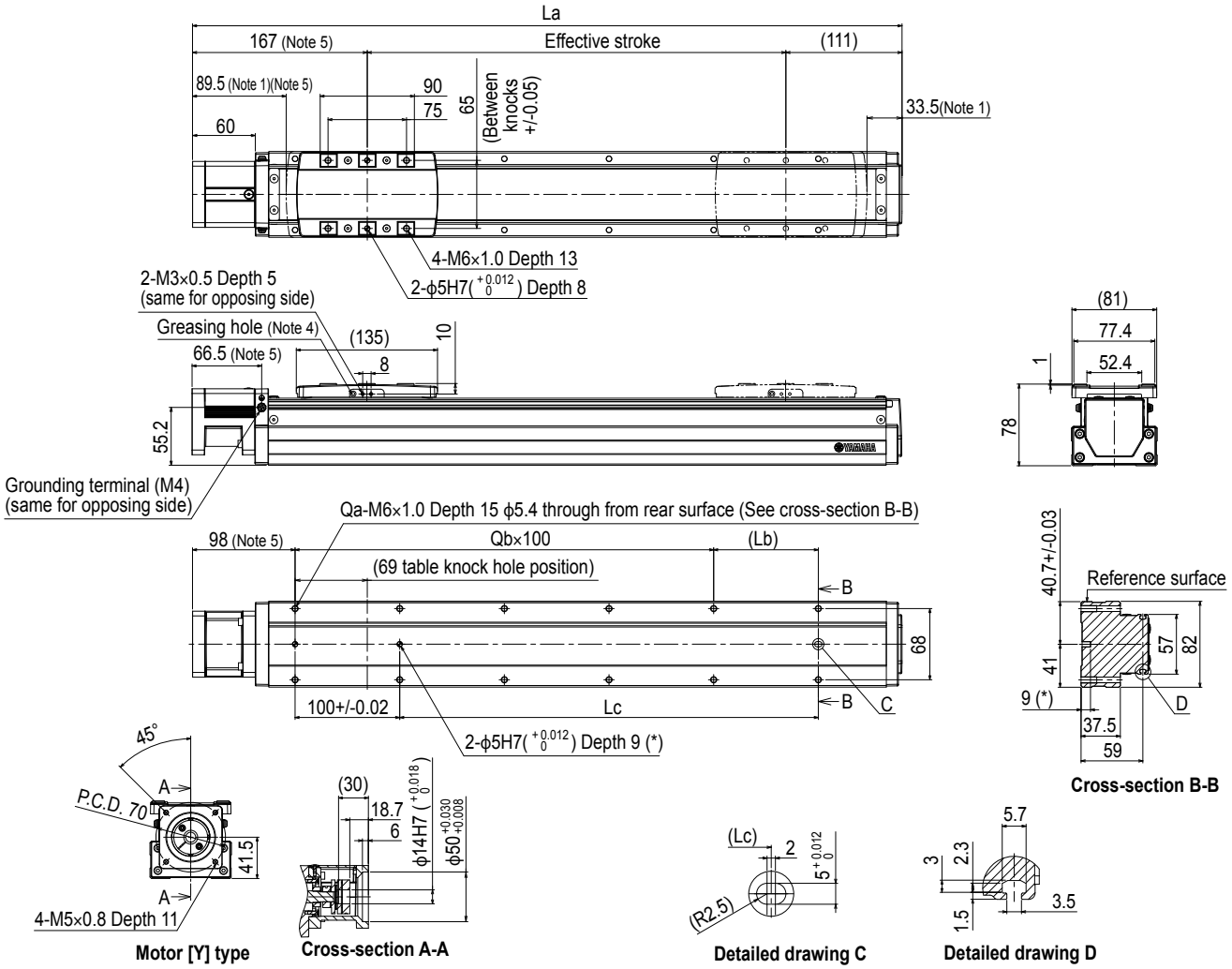
Motor specification	Manufacturer	Model
A	Oriental Motor	AZM66
		AZM69
		ARM66
		ARM69
		RKS56
N	NEMA standard	NEMA23

Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A and N, the parts dedicated for bending cannot be used.

Access the website below.

▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

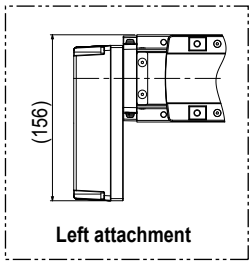
LBAS08 Straight type (S)



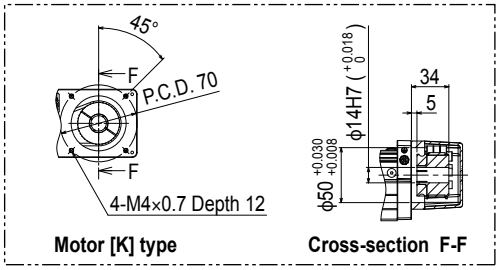
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
Note 5. For the motor specifications A and N the dimensions are that those stated in the table <<-3 mm>>.

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		328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
Weight (kg)		3.7	4.1	4.5	4.8	5.2	5.5	5.8	6.2	6.5	6.8	7.2	7.5	7.9	8.2	8.5	8.8	9.2	9.4	9.8	10.1	10.5	10.9
Maximum speed (mm/sec)	Lead 20	1200													1020	900	780	660	600	540	480	420	360
	Lead 10	600													510	450	390	330	300	270	240	210	180
	Lead 5	300													255	225	195	165	150	135	120	105	90
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%

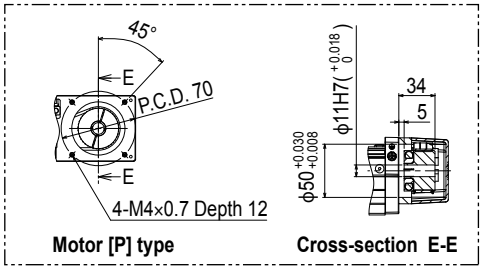
LBAS08 Bending type (A)



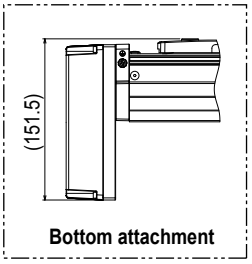
Left attachment



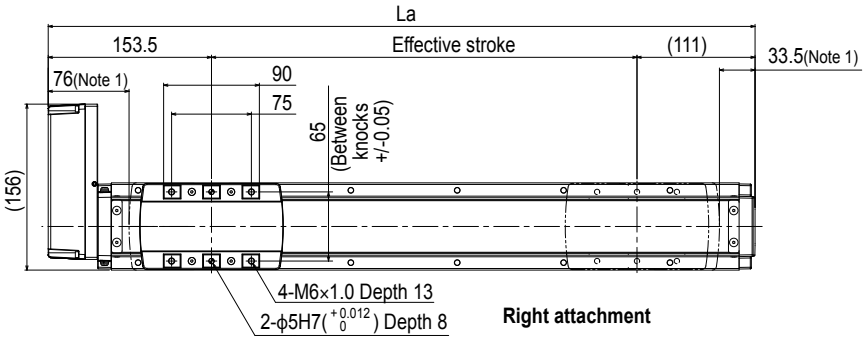
Motor [K] type　Cross-section F-F



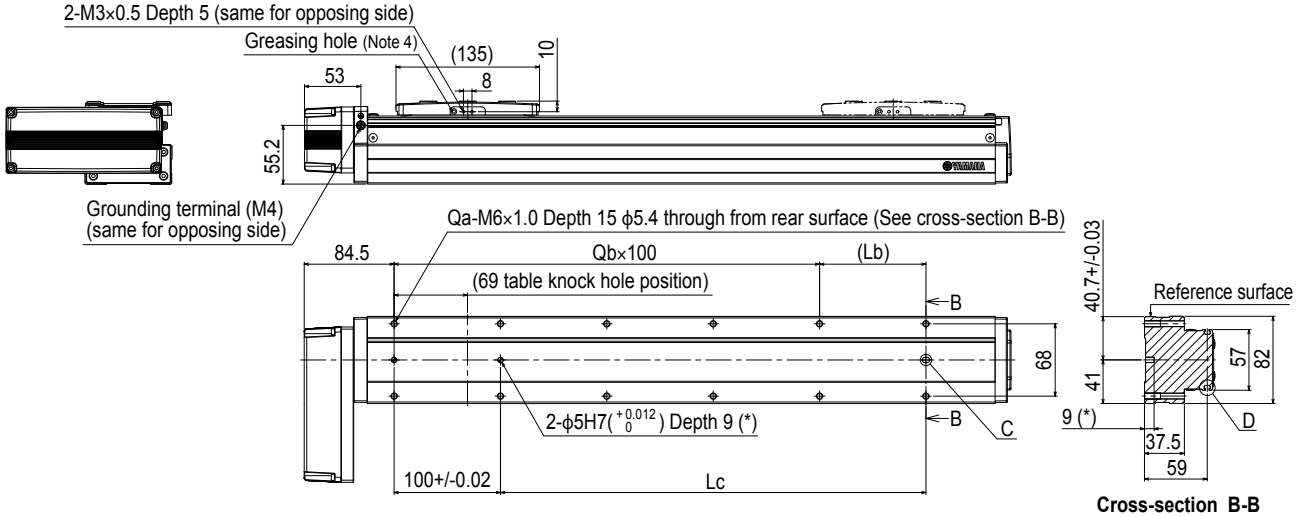
Motor [P] type　Cross-section E-E



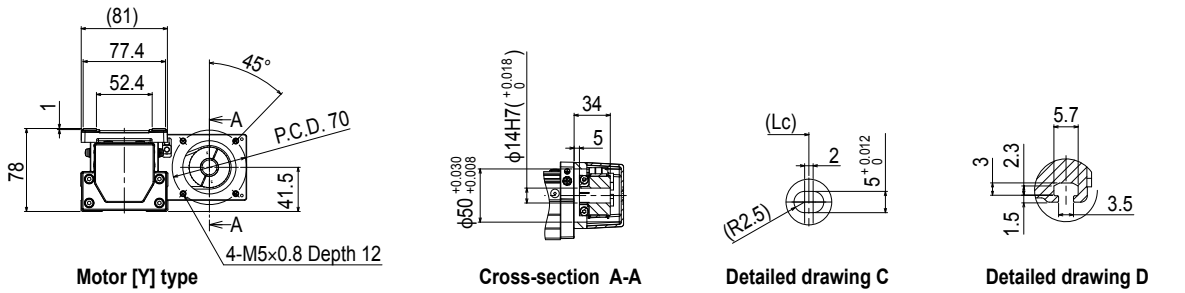
Bottom attachment



Right attachment



Cross-section B-B



Motor [Y] type　Cross-section A-A　Detailed drawing C　Detailed drawing D

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

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		314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
Weight (kg)		4.1	4.5	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.2	7.6	7.9	8.3	8.6	8.9	9.2	9.6	9.8	10.2	10.5	10.9	11.3
Maximum speed (mm/sec)	Lead 20	1200													1020	900	780	660	600	540	480	420	360
	Lead 10	600													510	450	390	330	300	270	240	210	180
	Lead 5	300													255	225	195	165	150	135	120	105	90
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%

LBAS12

Basic model **Motor-less Single Axis Actuator**

● Slider type ● Slim type

Ordering method

LBAS12 – [ ] – [ ] – [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	32: 32 mm 20: 20 mm 10: 10 mm 5: 5 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) K: K specification (see below)	50 to 1250 (50 mm pitch)

[Caution]
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

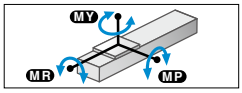
LBAS12 (200W)

Specifications

Applicable motor		200 W			
Repeatability Note 1		+/-0.01 mm			
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)			
Stroke		50 mm to 1250 mm (50 mm pitch)			
Maximum speed Note 2 (or equivalent)		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		32 mm	20 mm	10 mm	5 mm
Maximum payload Note 3 (or equivalent)	Horizontal	20 kg	40 kg	80 kg	100 kg
	Vertical	3 kg	8 kg	20 kg	30 kg
Rated thrust Note 3 (or equivalent)		105 N	170 N	341 N	683 N
Maximum dimensions of cross section of main unit		W 120 mm × H 76 mm			
Overall length	Straight	ST + 294 mm			
	Bending	ST + 270.5 mm			
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note. See P.111 for acceleration/deceleration and inertia moment.

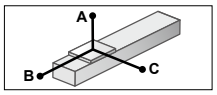
Static loading moment

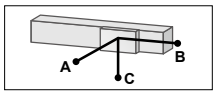


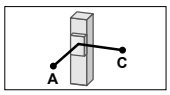
(Unit: N·m)

MY	MP	MR
573	606	606

Allowable overhang Note







LBAS12-32 (200W)

Horizontal installation (Unit: mm)

	A	B	C
5kg	2079	1694	1224
10kg	1134	834	627
20kg	843	422	362

Wall installation (Unit: mm)

	A	B	C
5kg	1224	1694	2079
10kg	627	834	1134
20kg	362	422	843

Vertical installation (Unit: mm)

	A	C
1kg	6201	6201
3kg	2057	2057

LBAS12-20 (200W)

Horizontal installation (Unit: mm)

	A	B	C
15kg	946	548	445
25kg	591	321	266
40kg	442	206	182

Wall installation (Unit: mm)

	A	B	C
15kg	445	548	946
25kg	266	321	591
40kg	182	206	442

Vertical installation (Unit: mm)

	A	C
3kg	2174	2174
5kg	1315	1315
8kg	833	833

LBAS12-10 (200W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	729	299	278
50kg	788	207	223
80kg	1325	157	200

Wall installation (Unit: mm)

	A	B	C
30kg	278	299	729
50kg	223	207	788
80kg	200	157	1325

Vertical installation (Unit: mm)

	A	C
5kg	1934	1934
10kg	978	978
20kg	503	503

LBAS12-5 (200W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	2478	430	513
50kg	1820	258	320
80kg	1522	160	208
100kg	1443	127	168

Wall installation (Unit: mm)

	A	B	C
30kg	513	430	2478
50kg	320	258	1820
80kg	208	160	1522
100kg	168	127	1443

Vertical installation (Unit: mm)

	A	C
10kg	1317	1317
20kg	670	670
30kg	456	456

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.

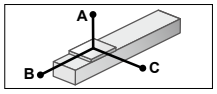
LBAS12 (400W)

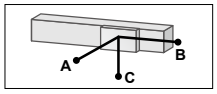
Specifications

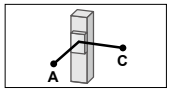
Applicable motor		400 W			
Ball screw lead		32 mm	20 mm	10 mm	5 mm
Maximum payload Note 1 (or equivalent)	Horizontal	35 kg	50 kg	95 kg	115 kg
	Vertical	8 kg	15 kg	25 kg	40 kg
Rated thrust Note 1 (or equivalent)		218 N	339 N	678 N	1360 N

Note 1. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note. See P.113 for acceleration/deceleration and inertia moment.
Note. The specifications and static loading moment, etc. not described here are common to LBAS12 (200 W).

Allowable overhang Note







LBAS12-32 (400W)

Horizontal installation (Unit: mm)

	A	B	C
10kg	1134	834	627
20kg	843	422	362
35kg	926	286	294

Wall installation (Unit: mm)

	A	B	C
10kg	627	834	1134
20kg	362	422	843
35kg	294	286	926

Vertical installation (Unit: mm)

	A	C
3kg	2057	2057
5kg	1228	1228
8kg	762	762

LBAS12-20 (400W)

Horizontal installation (Unit: mm)

	A	B	C
15kg	826	548	427
30kg	485	263	218
50kg	433	172	162

Wall installation (Unit: mm)

	A	B	C
15kg	427	548	826
30kg	218	263	485
50kg	162	172	433

Vertical installation (Unit: mm)

	A	C
5kg	1315	1315
10kg	672	672
15kg	522	522

LBAS12-10 (400W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	528	270	230
60kg	667	171	185
95kg	1350	132	173

Wall installation (Unit: mm)

	A	B	C
30kg	230	270	528
60kg	185	171	667
95kg	173	132	1350

Vertical installation (Unit: mm)

	A	C
5kg	1934	1934
15kg	660	660
25kg	409	409

LBAS12-5 (400W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	2478	430	513
60kg	1668	215	270
90kg	1475	142	186
115kg	1384	109	146

Wall installation (Unit: mm)

	A	B	C
30kg	513	430	2478
60kg	270	215	1668
90kg	186	142	1475
115kg	146	109	1384

Vertical installation (Unit: mm)

	A	C
15kg	885	885
25kg	541	541
40kg	350	350

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.

Access the website below.

▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

Applicable motor (200W)

• Applicable servo motor

Specification		
	Flange size	□ 60
	Wattage	200 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-02
		SGM7J-02
	Keyence Corp.	SV- □ 020
		SV2- □ 020
	Mitsubishi Electric Corp.	HF-KP23
		HG-KR23
		HK-KT23
	Sanyo Denki	R2 □ A06020
	Tamagawa Seiki	TSM3202
	Delta Electronics	ECMA-C10602
	Siemens	1FL6032-2AF
	Schneider	BCH2LD023
P	Omron Electronics	R88M-K20030
		R88M-1M20030
	Panasonic Corp.	MSMD02
		MSMF02
		MHMF02
K	Kingservo	KSMA02LI
		KSMA02LG

Applicable motor (400W)

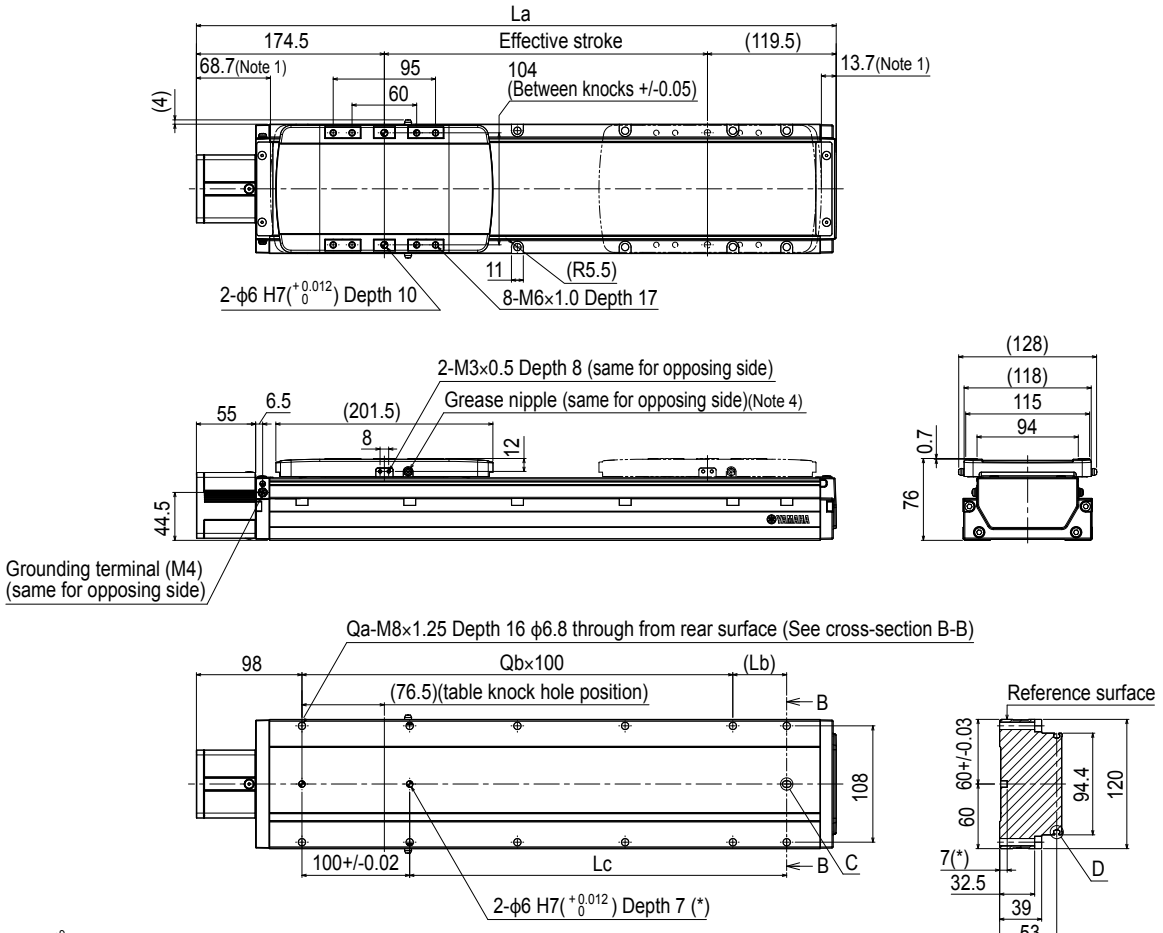
• Applicable servo motor

Specification		
	Flange size	□ 60
	Wattage	400 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-04
		SGM7J-04
	Keyence Corp.	SV- □ 040
		SV2- □ 040
	Mitsubishi Electric Corp.	HF-KP43
		HG-KR43
		HK-KT43
	Sanyo Denki	R2 □ A06040
	Tamagawa Seiki	TSM3204
	Delta Electronics	ECMA-C10604
	Siemens	1FL6034-2AF
	Schneider	BCH2LD043
K	Omron Electronics	R88M-K40030
		R88M-1M40030
	Panasonic Corp.	MSMD04
		MSMF04
		MHMF04
	Kingservo	KSMA04LI
		KSMA04LG

LBAS12 Straight type (S)

Note. The external views of LBAS12 (200 W) and LBAS12 (400 W) are the same.

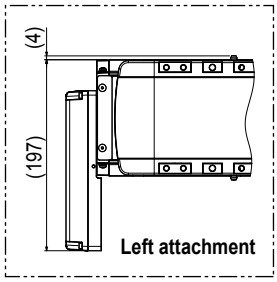


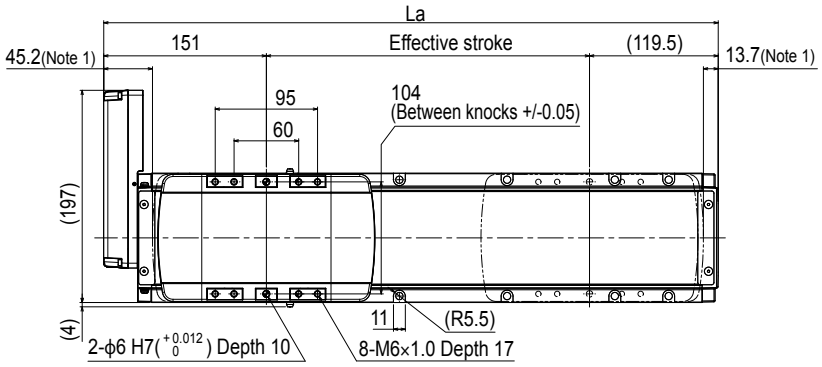
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head <<thickness of stand +16 mm or less>> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
Note 4. 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	1150	1200	1250
La		344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544
Lb		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
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
Qa		6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg)		4.5	4.9	5.3	5.7	6.1	6.5	6.9	7.3	7.7	8.1	8.6	9	9.4	9.9	10.3	10.7	11.2	11.6	12.1	12.5	12.9	13.4	13.8	14.3	14.7
Maximum speed (mm/sec)	Lead 32	1800												1620	1440	1260	1080	990	810	720	630	630	540	450	360	360
	Lead 20	1200												1080	960	840	720	660	540	480	420	420	360	300	240	240
	Lead 10	600												540	480	420	360	330	270	240	210	210	180	150	120	120
	Lead 5	300												270	240	210	180	165	135	120	105	105	90	75	60	60
	Speed setting	–												90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%

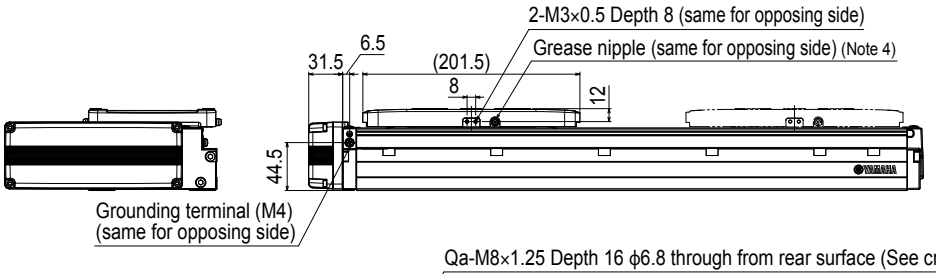
LBAS12 Bending type (A)

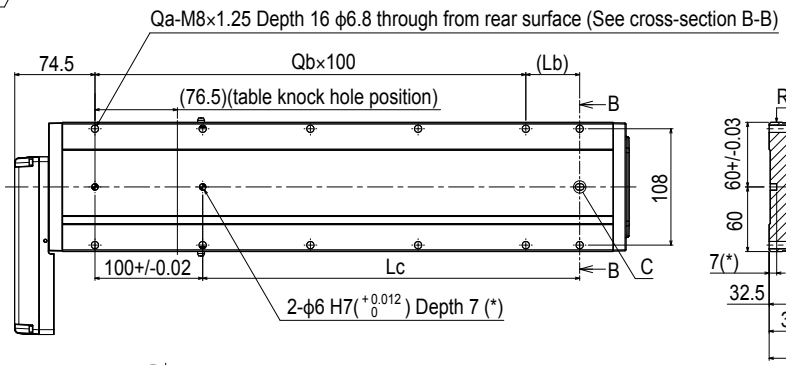
Note. The external views of LBAS12 (200 W) and LBAS12 (400 W) are the same.

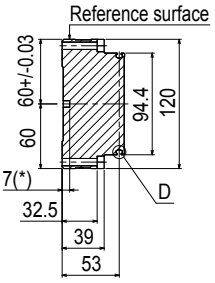




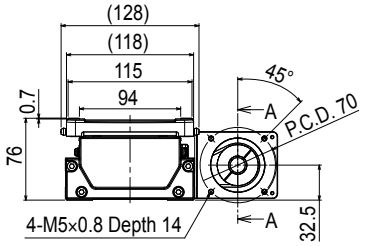
Right attachment



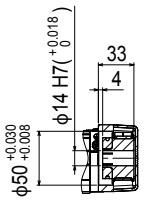




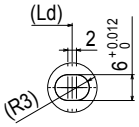
Cross-section B-B



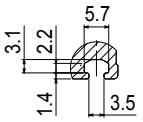
Motor [Y] type



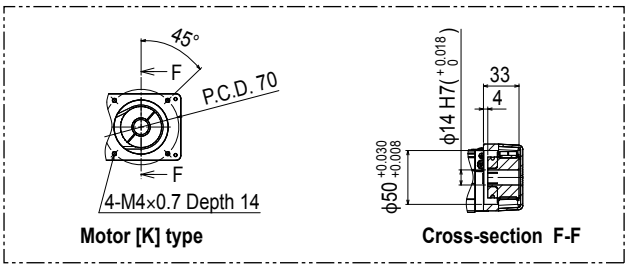
Cross-section A-A



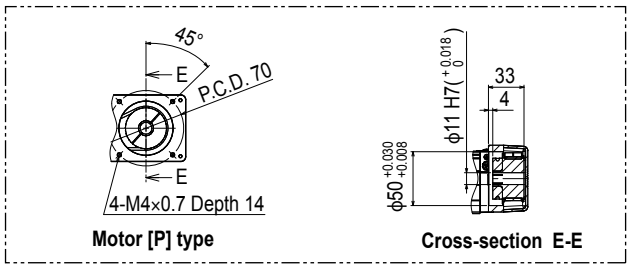
Detailed drawing C



Detailed drawing D



Motor [K] type　Cross-section F-F



Motor [P] type　Cross-section E-E

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head <<thickness of stand +16 mm or less>> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
Note 4. 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	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	1520.5
Lb		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
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
Qa		6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg)		4.5	4.9	5.3	5.7	6.1	6.5	6.9	7.3	7.7	8.2	8.6	9.1	9.5	9.9	10.4	10.8	11.2	11.7	12.1	12.6	13	13.4	13.9	14.3	14.8
Maximum speed (mm/sec)	Lead 32	1800												1620	1440	1260	1080	990	810	720	630	630	540	450	360	360
	Lead 20	1200												1080	960	840	720	660	540	480	420	420	360	300	240	240
	Lead 10	600												540	480	420	360	330	270	240	210	210	180	150	120	120
	Lead 5	300												270	240	210	180	165	135	120	105	105	90	75	60	60
	Speed setting	–												90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%

MEMO

LGXS05

Advanced model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LGXS05 – [ ] – [ ] – [ ]

Model	Lead	Side cover	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard W: With T-groove (both sides) R: With T-groove (right side) L: With T-groove (left side)	50 to 800 (50 mm pitch)

[Caution]

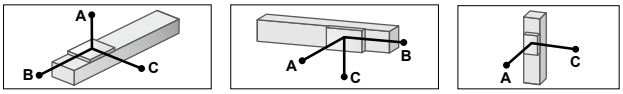
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
The bending unit cannot be used for the high agility mode.

Specifications

Applicable motor		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 (or equivalent) Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload (or equivalent) Note 3	Horizontal	5 kg	8 kg	13 kg
	Vertical	2 kg	4 kg	8 kg
Rated thrust (or equivalent) Note 3		41 N	69 N	138 N
Maximum dimensions of cross section of main unit		W 48 mm × H 65 mm		
Overall length		ST + 131.5 mm		
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 5		30 Nℓ/min to 100 Nℓ/min		
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.115 for acceleration/deceleration and inertia moment.

Allowable overhang Note



LGXS05-20

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

LGXS05-10

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

LGXS05-5

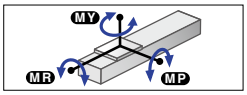
Horizontal installation (Unit: mm)			
	A	B	C
3kg	4604	281	497
8kg	2197	101	179
13kg	1593	59	105

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

Adaptable Servo Motor

Specification	
Flange size	□40
Wattage	50 W

Manufacturer	Model
Yaskawa Electric Corp.	SGMJV-A5
	SGM7J-A5
Keyence Corp.	SV-□005
	SV2-□005
Mitsubishi Electric Corp.	HF-KP053 Note
	HG-KR053 Note
	HK-KT053 Note
Omron Electronics	R88M-K05030
	R88M-1M05030 Note
Panasonic Corp.	MHMF5A

Conversion adapter product model	Shim plate part number
GX-BEND-40	KES-M2295-00

Note. To combine with the conversion adapter <GX-BEND-40>, the shim plate (t1) is necessary.

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	Horizontal	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	Vertical	11.77 m/s² (1.2 G)	11.77 m/s² (1.2 G)	7.17 m/s² (0.7 G)

Allowable overhang Note

LGXS05-20

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

LGXS05-10

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

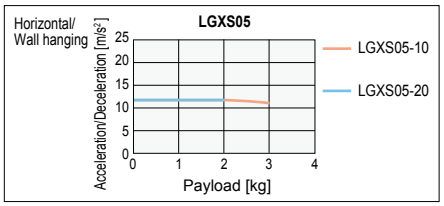
Vertical installation (Unit: mm)		
	A	C
1kg	396	396
2kg	182	182

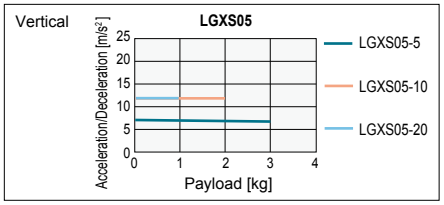
LGXS05-5

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										

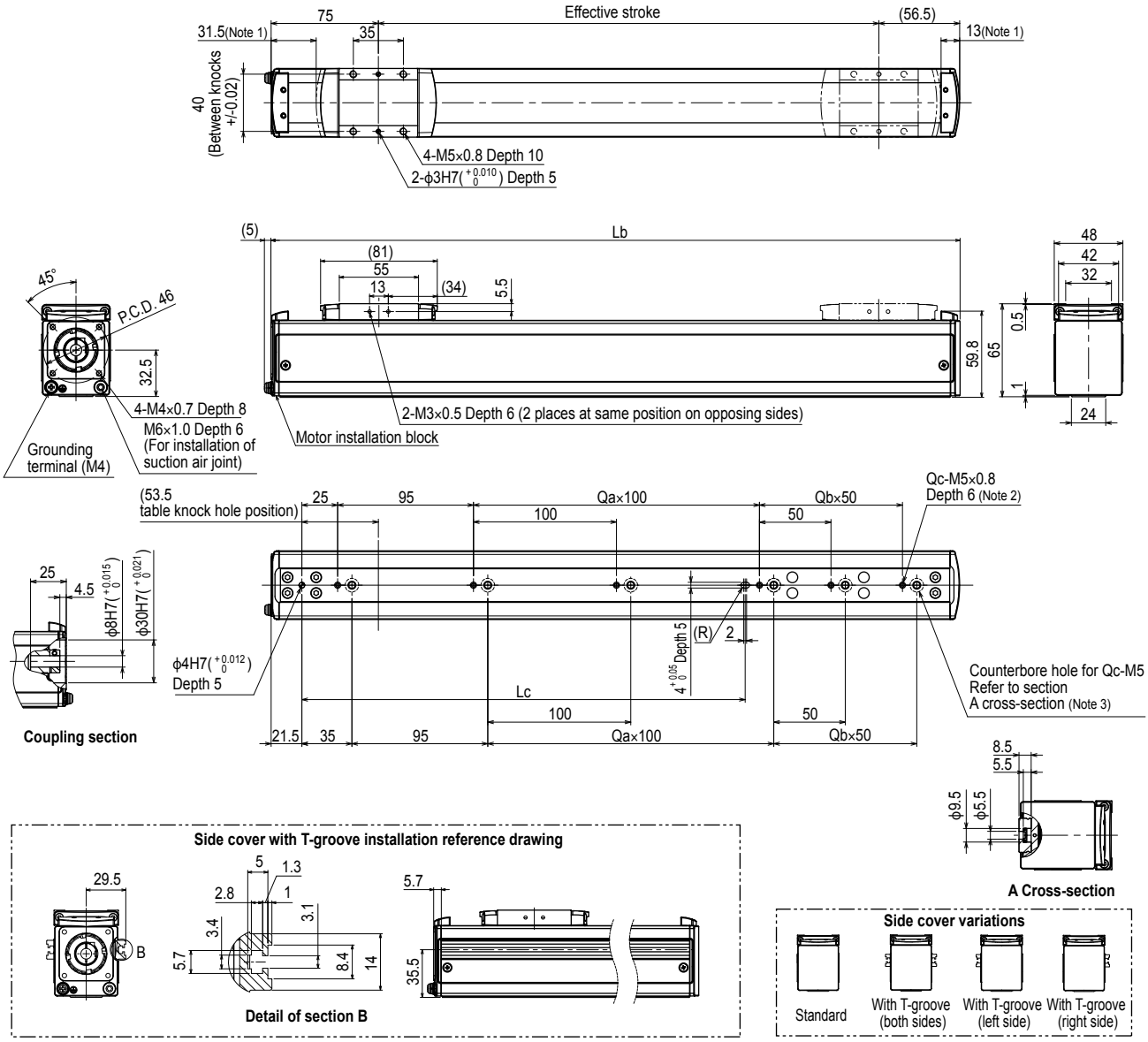
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
Note. See P.116 for acceleration/deceleration and inertia moment.

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.16.**

LGXS05



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When using the tap holes to mount the body, remove the set screws first.
Note 3. 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 4. Side cover with T-groove is used to install the sensor.
Note 5. 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
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)		1.2	1.4	1.5	1.7	1.9	2.0	2.2	2.3	2.5	2.6	2.8	2.9	3.1	3.2	3.4	3.5
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%

LGXS05L

Advanced model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LGXS05L – [ ] – [ ] – [ ]

Model	Lead	Side cover	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard W: With T-groove (both sides) R: With T-groove (right side) L: With T-groove (left side)	50 to 800 (50 mm pitch)

[Caution]

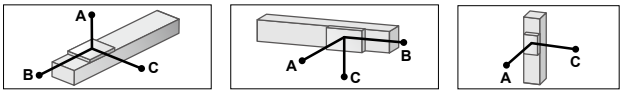
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
The bending unit cannot be used for the high agility mode.

Specifications

Applicable motor		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 (or equivalent) Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload (or equivalent) Note 3	Horizontal	12 kg	24 kg	32 kg
	Vertical	3 kg	6 kg	12 kg
Rated thrust (or equivalent) Note 3		84 N	169 N	339 N
Maximum dimensions of cross section of main unit		W 48 mm × H 65 mm		
Overall length		ST + 161.5 mm		
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 5		30 Nℓ/min to 100 Nℓ/min		
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.117 for acceleration/deceleration and inertia moment.

Allowable overhang Note



LGXS05L-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

LGXS05L-10

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

LGXS05L-5

Horizontal installation (Unit: mm)

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

Wall installation (Unit: mm)

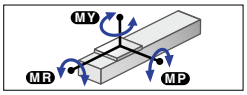
	A	B	C
10kg	162	181	2800
20kg	42	47	1273
32kg	0	0	0

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

Adaptable Servo Motor

Specification		
	Flange size	□40
	Wattage	100 W

Manufacturer	Model
Yaskawa Electric Corp.	SGMJV-01
	SGM7J-01
Keyence Corp.	SV-□010
	SV2-□010
Mitsubishi Electric Corp.	HF-KP13 Note
	HG-KR13 Note
	HK-KT13 Note
Omron Electronics	R88M-K10030
	R88M-1M10030 Note
Panasonic Corp.	MHMF01

Conversion adapter product model	Shim plate part number
GX-BEND-40	KES-M2295-00

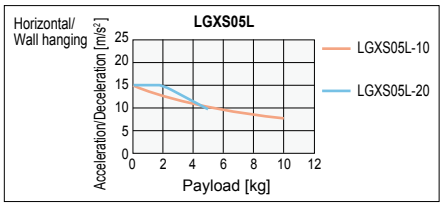
Note. To combine with the conversion adapter <GX-BEND-40>, the shim plate (t1) is necessary.

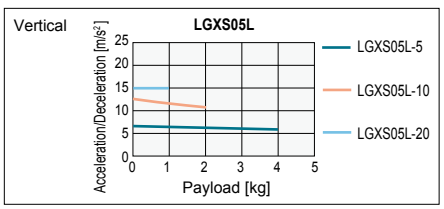
When used with high acceleration or deceleration (High agility mode)

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	Horizontal	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	Vertical	14.72 m/s² (1.5 G)	12.68 m/s² (1.3 G)	6.65 m/s² (0.7 G)

Payload – Acceleration / Deceleration Graph (Estimate)





Allowable overhang Note

LGXS05L-20

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

LGXS05L-10

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

LGXS05L-5

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.

Effective stroke and maximum speed during high acceleration or deceleration

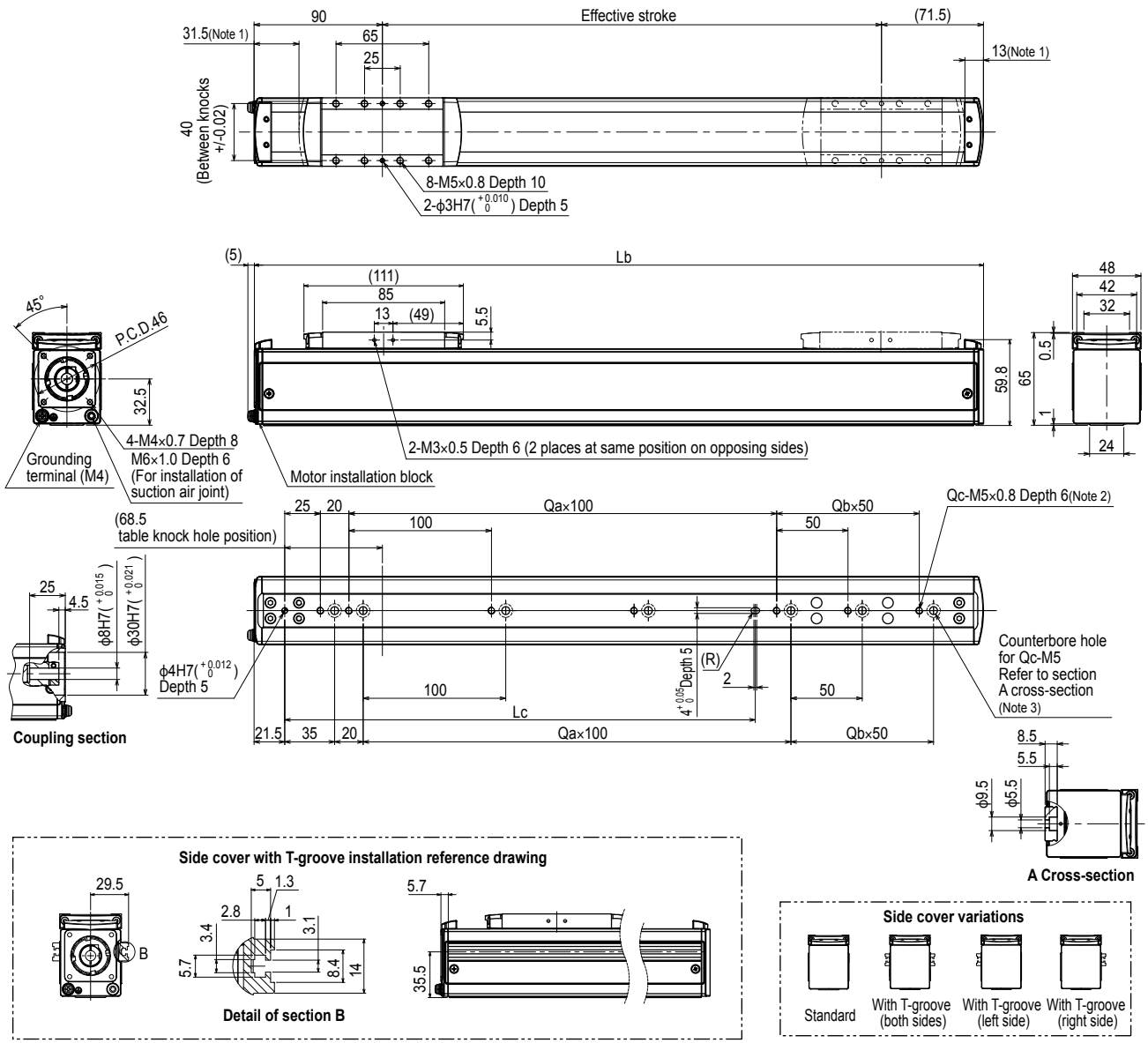
Effective stroke		50	100	150	200	250	300	350	400	450	500	550
Maximum speed (mm/sec)	Lead 20	1333										
	Lead 10	666										
	Lead 5	333										

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. See P.118 for acceleration/deceleration and inertia moment.

Access the website below.

▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

LGXS05L



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When using the tap holes to mount the body, remove the set screws first.
Note 3. 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 4. Side cover with T-groove is used to install the sensor.
Note 5. 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
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)		1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.6	2.8	2.9	3.1	3.2	3.4	3.5	3.7
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%

LGXS07

Advanced model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LGXS07 – [ ] – [ ] – [ ]

Model	Lead	Side cover	Stroke
	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard W: With T-groove (both sides) R: With T-groove (right side) L: With T-groove (left side)	50 to 1100 (50 mm pitch)

[Caution]

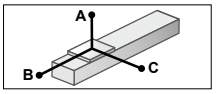
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
The bending unit cannot be used for the high agility mode.

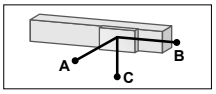
Specifications

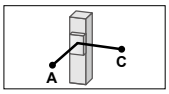
Applicable motor		100 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		50 mm to 1100 mm (50 mm pitch)			
Maximum speed (or equivalent) Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload (or equivalent) Note 3	Horizontal	10 kg	25 kg	45 kg	85 kg
	Vertical	2 kg	4 kg	8 kg	16 kg
Rated thrust Note 3 **(or equivalent)**		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		ST + 202 mm			
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent			
Intake air Note 5		30 Nℓ/min to 115 Nℓ/min			
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.119 for acceleration/deceleration and inertia moment.

Allowable overhang Note







LGXS07-30

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

LGXS07-20

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

LGXS07-10

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

LGXS07-5

Horizontal installation (Unit: mm)

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

Wall installation (Unit: mm)

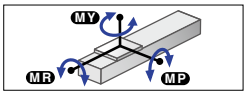
	A	B	C
30kg	122	106	2458
50kg	34	30	1476
85kg	0	0	0

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

Adaptable Servo Motor

Specification		
	Flange size	□40
	Wattage	100 W

Manufacturer	Model
Yaskawa Electric Corp.	SGMJV-01
	SGM7J-01
Keyence Corp.	SV-□010
	SV2-□010
Mitsubishi Electric Corp.	HF-KP13 Note
	HG-KR13 Note
	HK-KT13 Note
Omron Electronics	R88M-K10030
	R88M-1M10030 Note
Panasonic Corp.	MHMF01

Conversion adapter product model	Shim plate part number
GX-BEND-40	KES-M2295-00

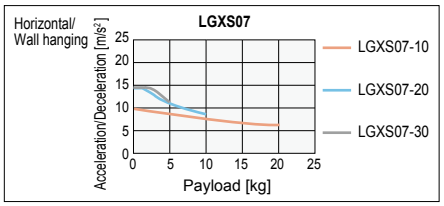
Note. To combine with the conversion adapter <GX-BEND-40>, the shim plate (t1) is necessary.

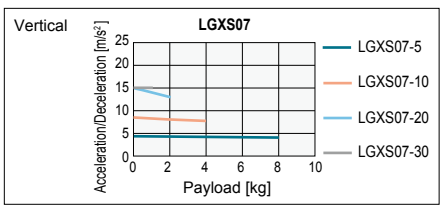
When used with high acceleration or deceleration (High agility mode)

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		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		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

LGXS07-30

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

LGXS07-20

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

LGXS07-10

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

LGXS07-5

Vertical installation (Unit: mm)

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

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		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												

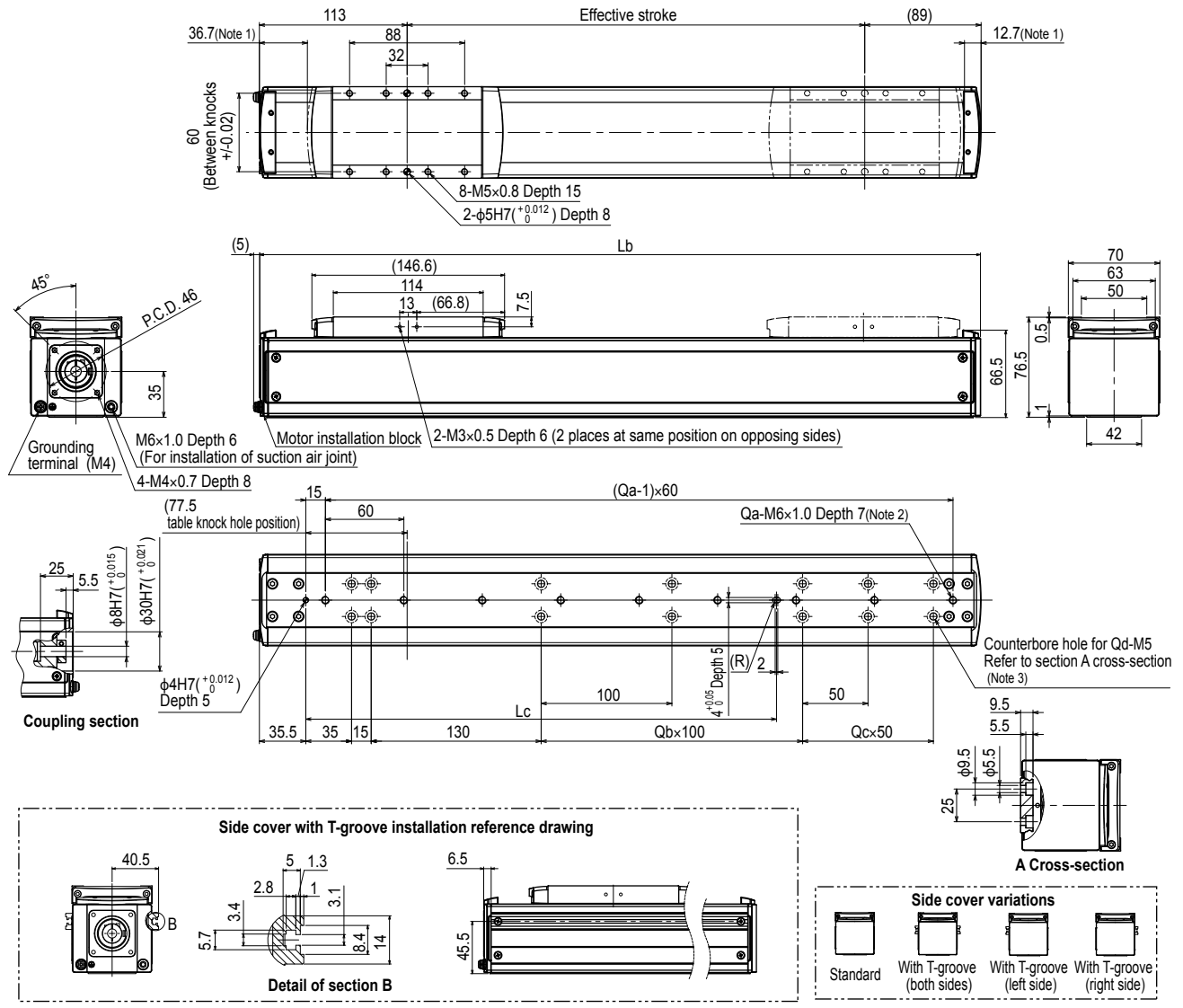
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
Note. See P.121 for acceleration/deceleration and inertia moment.

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.16.

LGXS07



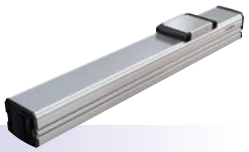
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When using the tap holes to mount the body, remove the set screws first.
Note 3. When using the counterbore holes (section A cross section) to mount the body, remove the cap from the inner side and then fix.
Note 4. Side cover with T-groove is used to install the sensor.
Note 5. 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
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)		3.2	3.4	3.7	4.0	4.3	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.2	7.5	7.8	8.1	8.3	8.6	8.9
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%

LGXS10

Advanced model **Motor-less Single Axis Actuator**

Slider type



Ordering method

LGXS10 – [ ] [ ] – [ ]

Model	Lead	Motor specification	Stroke
	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard P: P specification (see below)	100 to 1250 (50 mm pitch)

[Caution]

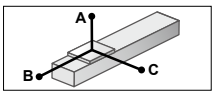
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
The bending unit cannot be used for the high agility mode.

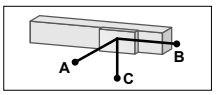
Specifications

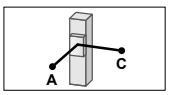
Applicable motor		200 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		100 mm to 1250 mm (50 mm pitch)			
Maximum speed (or equivalent) Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload (or equivalent) Note 3	Horizontal	25 kg	40 kg	80 kg	100 kg
	Vertical	4 kg	8 kg	20 kg	30 kg
Rated thrust (or equivalent) Note 3		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		ST + 175.5 mm			
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent			
Intake air Note 5		30 Nℓ/min to 90 Nℓ/min			
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.122 for acceleration/deceleration and inertia moment.

Allowable overhang Note







LGXS10-30

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

LGXS10-20

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

LGXS10-10

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

LGXS10-5

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)

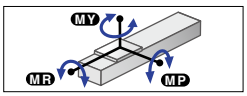
	A	B	C
30kg	181	258	5195
50kg	79	113	3111
80kg	22	31	1557
100kg	0	0	0

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

Adaptable Servo Motor

Specification		
Flange size		□60
Wattage		200 W

Motor specification	Manufacturer	Model
No entry	Yaskawa Electric Corp.	SGMJV-02
		SGM7J-02
	Keyence Corp.	SV-□020
		SV2-□020
	Mitsubishi Electric Corp.	HF-KP23
		HG-KR23 Note 1
		HK-KT23 Note 1
P	Omron Electronics	R88M-K20030
		R88M-1M20030
	Panasonic Corp.	MSMD02
		MSMF02
		MHMF02

Conversion adapter product model	Shim plate part number
GX-BEND-60 Note 2	KEV-M2295-00

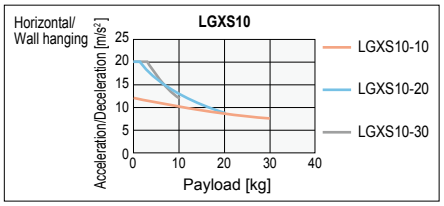
Note 1.To combine with the conversion adapter <GX-BEND-60>, the shim plate (t1) is necessary.
Note 2.For the specifications P, the bending unit cannot be used.

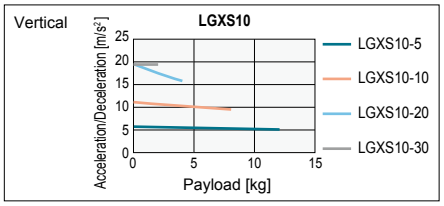
When used with high acceleration or deceleration (High agility mode)

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		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		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

LGXS10-30

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

LGXS10-20

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

LGXS10-10

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

LGXS10-5

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

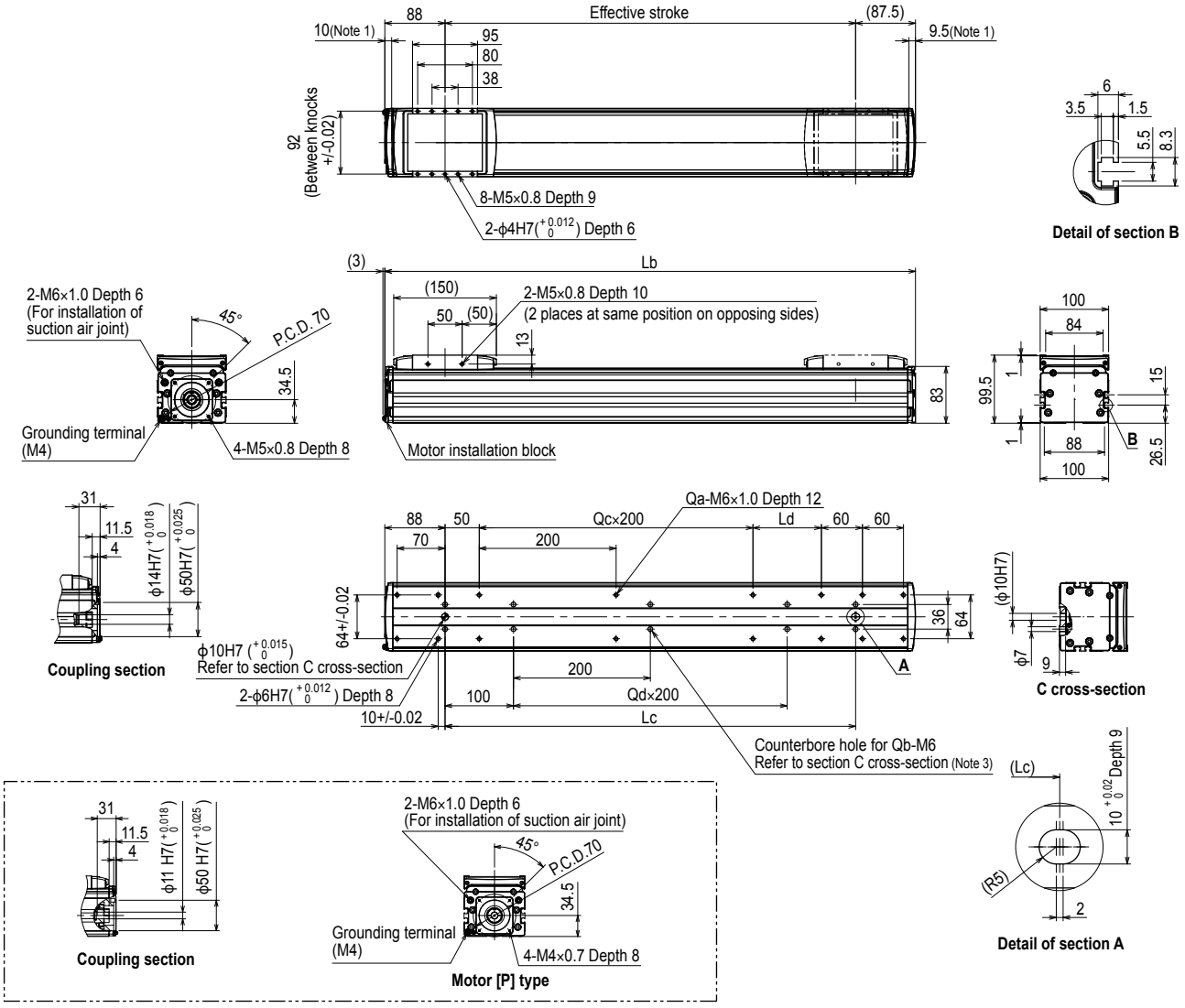
Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650
Maximum speed (mm/sec)	Lead 30	1800											
	Lead 20	1200											
	Lead 10	600											
	Lead 5	300											

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. See P.124 for acceleration/deceleration and inertia moment.

Access the website below.

▶ **The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.**

LGXS10



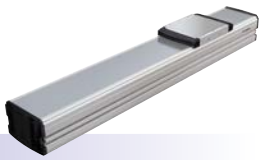
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>.
The recommended length under head of the 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 3. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 4. 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
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)		4.6	5.1	5.6	6.1	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
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%

LGXS12

Advanced model **Motor-less Single Axis Actuator**

Slider type



Ordering method

LGXS12 – [ ] – [ ] – [ ]

Model	Lead	Motor specification	Stroke
	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard P: P specification (see below)	100 to 1250 (50 mm pitch)

[Caution]

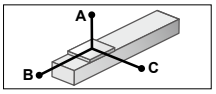
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
The bending unit cannot be used for the high agility mode.

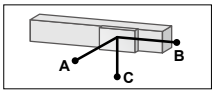
Specifications

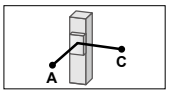
Applicable motor		400 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		100 mm to 1250 mm (50 mm pitch)			
Maximum speed (or equivalent) Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload (or equivalent) Note 3	Horizontal	35 kg	50 kg	95 kg	115 kg
	Vertical	8 kg	15 kg	25 kg	45 kg
Rated thrust (or equivalent) Note 3		225 N	339 N	678 N	1360 N
Maximum dimensions of cross section of main unit		W 125 mm × H 101 mm			
Overall length		ST + 211.5 mm			
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent			
Intake air Note 5		30 Nℓ/min to 90 Nℓ/min			
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.126 for acceleration/deceleration and inertia moment.

Allowable overhang Note







LGXS12-30

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

LGXS12-20

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

LGXS12-10

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

LGXS12-5

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)

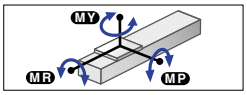
	A	B	C
30kg	456	588	10692
50kg	239	308	6935
80kg	117	150	4713
115kg	55	71	3221

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

Adaptable Servo Motor

Specification		
Flange size		□60
Wattage		400 W

Motor specification	Manufacturer	Model
No entry	Yaskawa Electric Corp.	SGMJV-04
		SGM7J-04
	Keyence Corp.	SV-□040
		SV2-□040
	Mitsubishi Electric Corp.	HF-KP43
		HG-KR43 Note 1
		HK-KT43 Note 1
P	Omron Electronics	R88M-K40030
		R88M-1M40030
	Panasonic Corp.	MSMD04
		MSMS04
		MHMF04

Conversion adapter product model	Shim plate part number
GX-BEND-60 Note 2	KEV-M2295-00

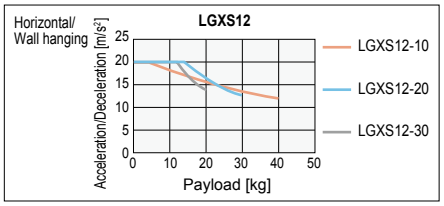
Note 1.To combine with the conversion adapter <GX-BEND-60>, the shim plate (t1) is necessary.
Note 2.For the specifications P, the bending unit cannot be used.

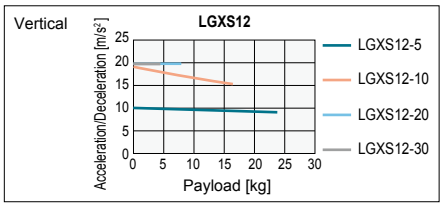
When used with high acceleration or deceleration (High agility mode)

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		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		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

LGXS12-30

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

LGXS12-20

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

LGXS12-10

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

LGXS12-5

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											

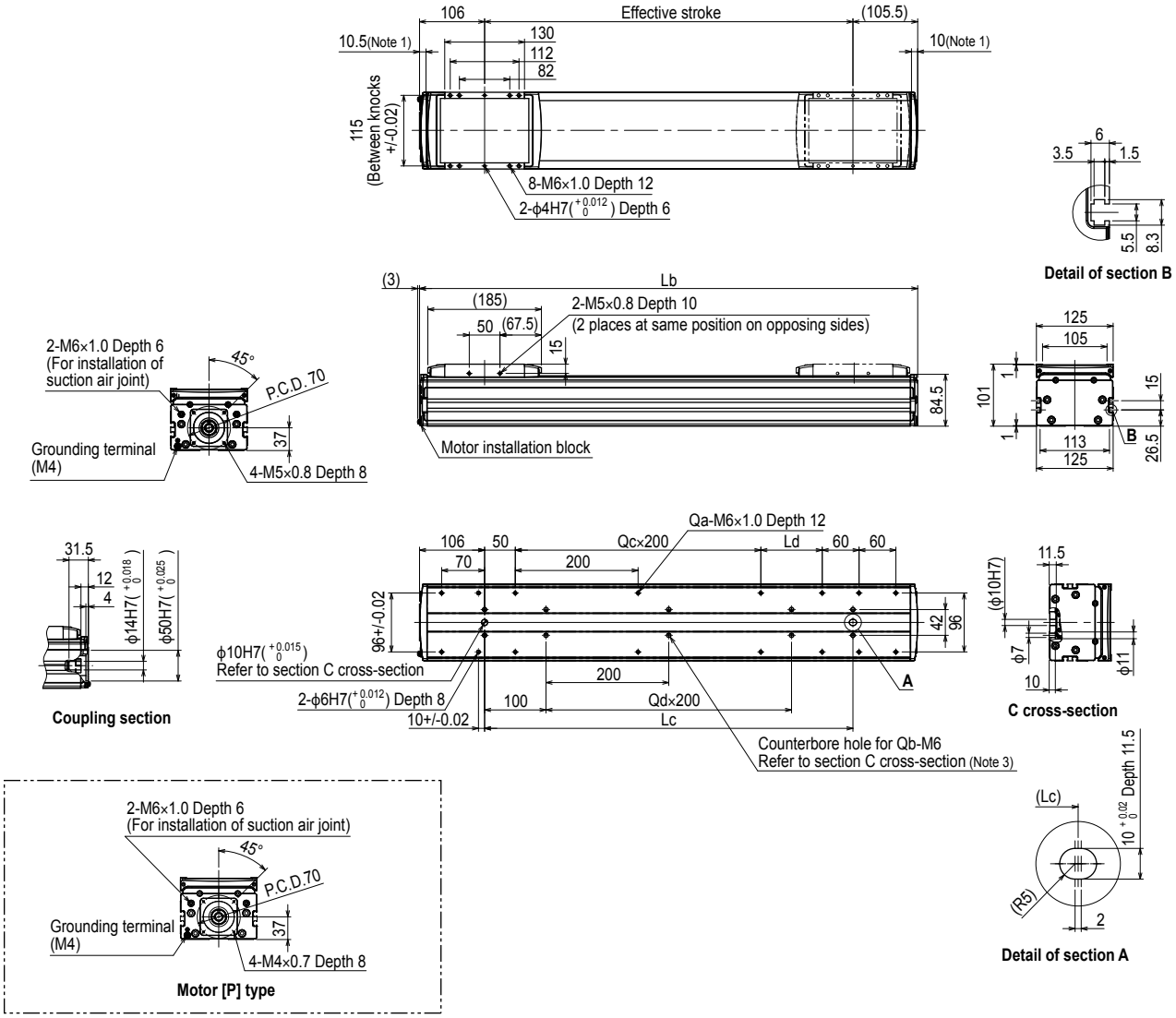
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
Note. See P.128 for acceleration/deceleration and inertia moment.

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.16.**

LGXS12



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. 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 3. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 4. 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
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)		6.5	7.1	7.8	8.5	9.1	9.8	10.5	11.2	11.8	12.5	13.2	13.9	14.5	15.2	15.9	16.5	17.2	17.9	18.6	19.2	19.9	20.6	21.3	21.9
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%

LGXS16

Advanced model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LGXS16 – [ ] [ ] – [ ]

Model	Lead	Motor specification	Stroke
	40: 40 mm 20: 20 mm 10: 10 mm	No entry: Standard P: P specification (see below)	100 to 1450 (50 mm pitch)

[Caution]

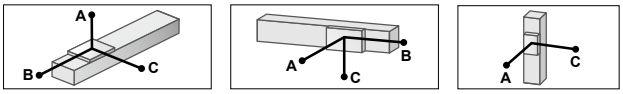
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
The bending unit cannot be used for the high agility mode.

Specifications

Applicable motor		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 (or equivalent) Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload (or equivalent) Note 3	Horizontal	45 kg	95 kg	130 kg
	Vertical	12 kg	28 kg	55 kg
Rated thrust (or equivalent) Note 3		320 N	640 N	1280 N
Maximum dimensions of cross section of main unit		W 160 mm × H 130 mm		
Overall length		ST + 242.5 mm		
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 5		30 Nℓ/min to 90 Nℓ/min		
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.130 for acceleration/deceleration and inertia moment.

Allowable overhang Note



LGXS16-40

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

LGXS16-20

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

LGXS16-10

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)

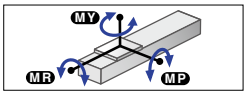
	A	B	C
50kg	980	964	6089
80kg	573	561	4240
100kg	437	426	3706
130kg	312	302	3422

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

Adaptable Servo Motor

Specification		
Flange size		□80
Wattage		750 W

Motor specification	Manufacturer	Model
No entry	Yaskawa Electric Corp.	SGMJV-08
		SGM7J-08
	Keyence Corp.	SV-□075
		SV2-□075
	Mitsubishi Electric Corp.	HF-KP73
		HG-KR73 Note 1
		HK-KT7M3 Note 1
P	Omron Electronics	R88M-K75030
		R88M-1M75030
	Panasonic Corp.	MSMD08
		MSMF08
		MHMF08

Conversion adapter product model	Shim plate part number
GX-BEND-80 Note 2	KEX-M2295-00

Note 1.To combine with the conversion adapter <GX-BEND-80>, the shim plate (t1) is necessary.
Note 2.For the specifications P, the bending unit cannot be used.

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	Horizontal	19.62 m/s² (2 G)	19.84 m/s² (2 G)	-
Maximum payload	Vertical	8 kg	16 kg	32 kg
Maximum acceleration	Vertical	19.62 m/s² (2 G)	18.43 m/s² (1.9 G)	11.17 m/s² (1.1 G)

Allowable overhang Note

LGXS16-40

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

LGXS16-20

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

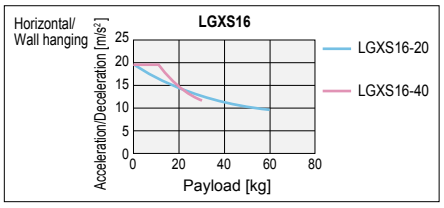
LGXS16-10

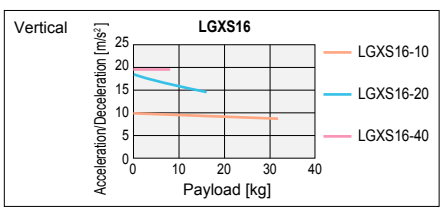
Vertical installation (Unit: mm)

	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														

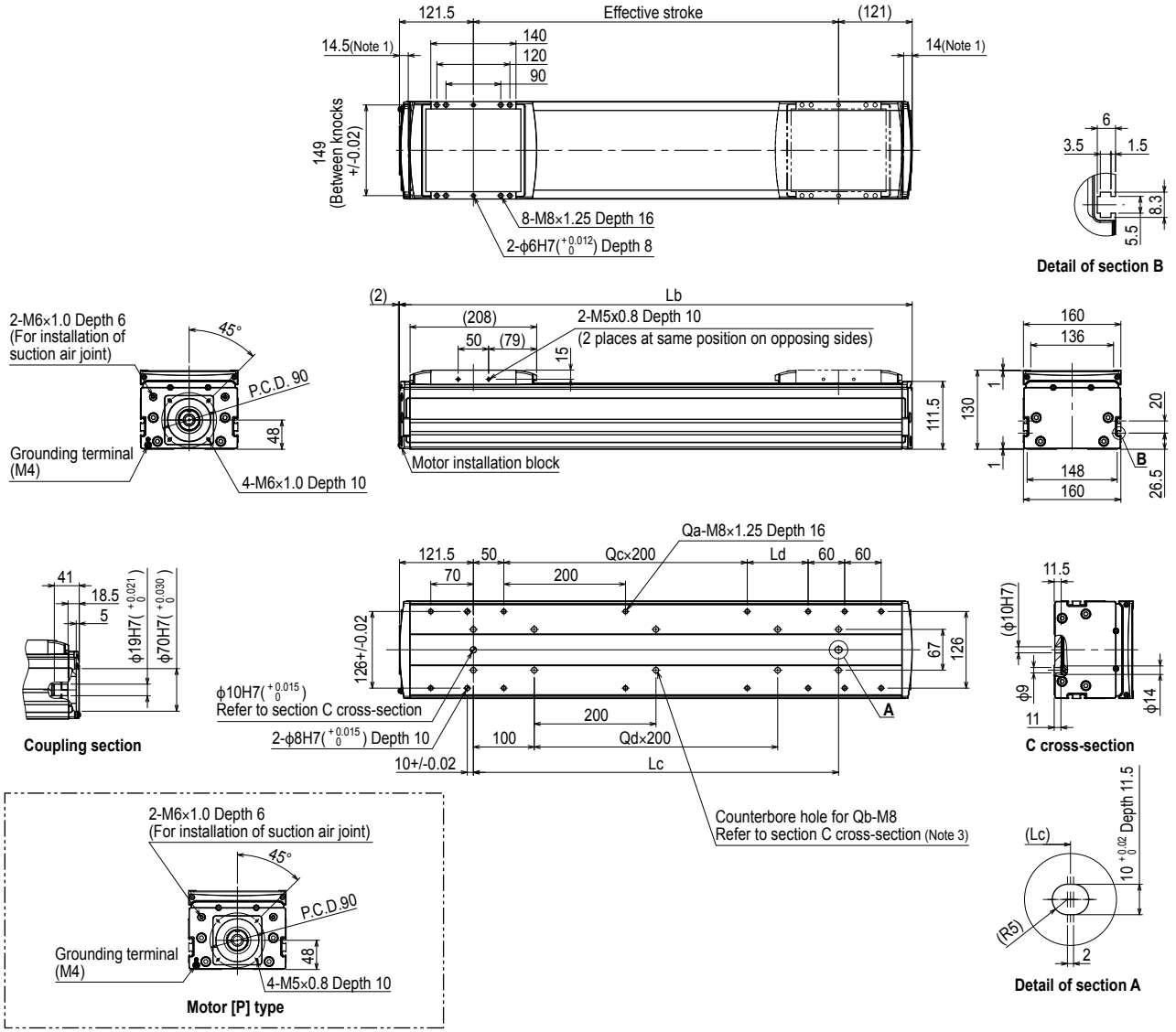
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 800 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
Note. See P.132 for acceleration/deceleration and inertia moment.

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.16.

LGXS16



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. 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 3. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 4. 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
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)		11.7	12.7	13.7	14.7	15.7	16.6	17.6	18.6	19.6	20.6	21.5	22.5	23.5	24.5	25.5	26.5	27.4	28.4	29.4	30.4	31.4	32.4	33.3	34.3	35.3	36.3	37.3	38.2
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%

LGXS20

Advanced model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LGXS20 – [ ] – [ ] – [ ]

Model	Lead	Motor specification	Stroke
	40: 40 mm 20: 20 mm 10: 10 mm	No entry: Standard P: P specification (see below)	100 to 1450 (50 mm pitch)

[Caution]

This system is provided as mechanical actuator unit and not including any adopters or electric components.

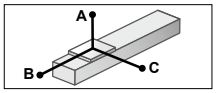
Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment.
Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.

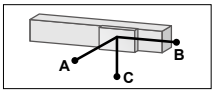
Specifications

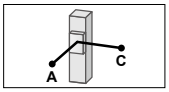
Applicable motor		750 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 20 (C5 class)		
Stroke		100 mm to 1450 mm (50 mm pitch)		
Maximum speed Note 2 **(or equivalent)**		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload Note 3 **(or equivalent)**	**Horizontal**	65 kg	130 kg	160 kg
	Vertical	15 kg	35 kg	65 kg
Rated thrust Note 3 **(or equivalent)**		320 N	640 N	1280 N
Maximum dimensions of cross section of main unit		W 200 mm × H 140 mm		
Overall length		ST + 288.5 mm		
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 5		30 Nℓ/min to 90 Nℓ/min		
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. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Note 4. 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 5. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.133 for acceleration/deceleration and inertia moment.

Allowable overhang Note







LGXS20-40

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

LGXS20-20

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

LGXS20-10

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)

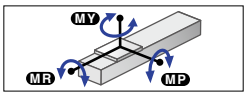
	A	B	C
40kg	2704	2537	22210
80kg	1293	1204	16141
120kg	818	760	13223
160kg	580	538	11190

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.

Static loading moment



(Unit: N·m)

MY	MP	MR
1423	1423	1251

Adaptable Servo Motor

Specification		
	Flange size	□ 80
	Wattage	750 W

Motor specification	Manufacturer	Model
No entry	Yaskawa Electric Corp.	SGMJV-08
		SGM7J-08
	Keyence Corp.	SV- □ 075
		SV2- □ 075
	Mitsubishi Electric Corp.	HF-KP73
		HG-KR73 Note 1
		HK-KT7M3 Note 1
P	Omron Electronics	R88M-K75030
		R88M-1M75030
	Panasonic Corp.	MSMD08
		MSMF08
		MHMF08

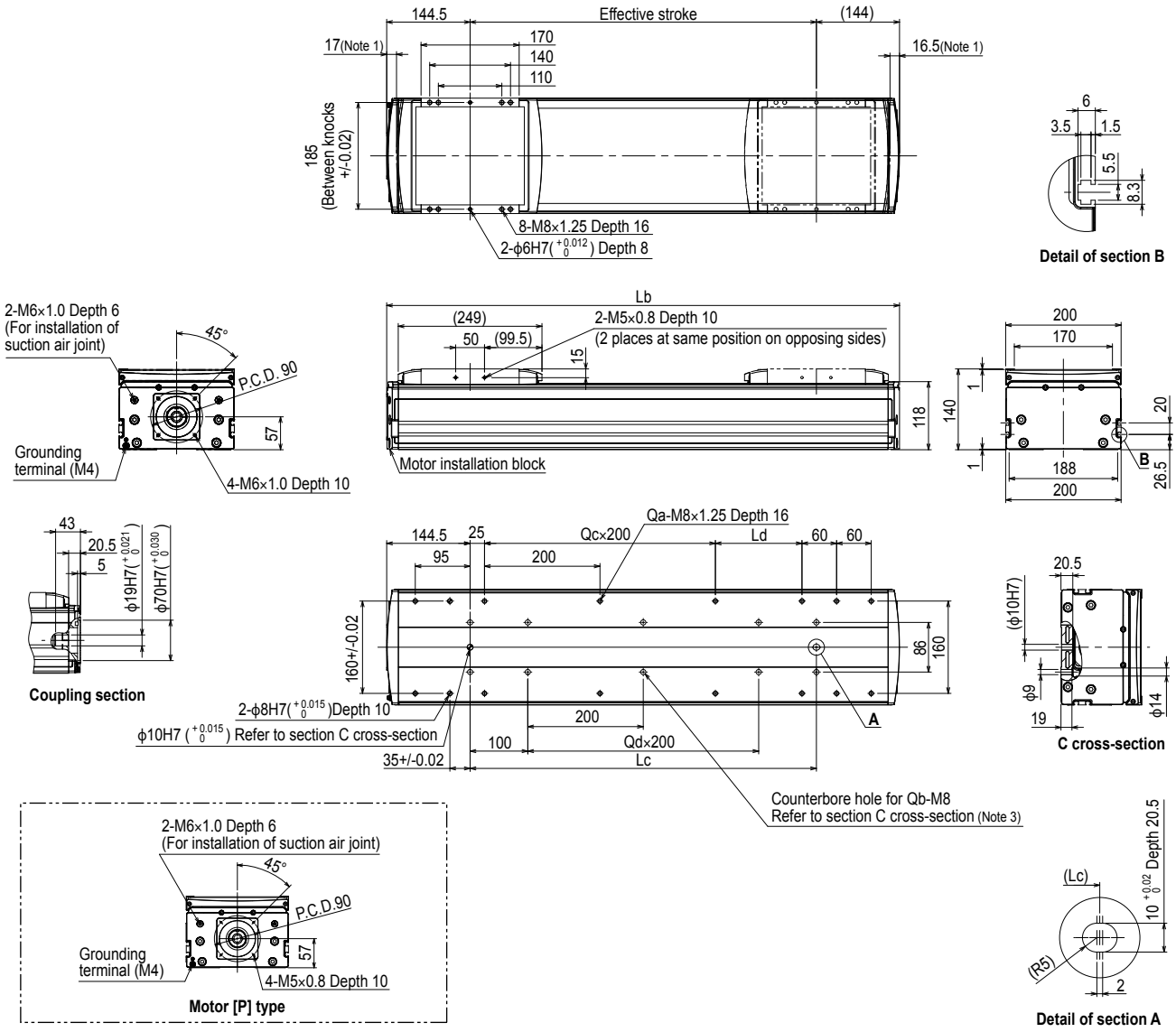
Conversion adapter product model	Shim plate part number
GX-BEND-80 Note 2	KEX-M2295-00

Note 1.To combine with the conversion adapter <GX-BEND-80>, the shim plate (t1) is necessary.
Note 2.For the specifications P, the bending unit cannot be used.

Access the website below.

▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

LGXS20



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. 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 3. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
Note 4. 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
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)		17.2	18.5	19.8	21.1	22.4	23.7	25.0	26.3	27.6	28.8	30.1	31.4	32.7	34.0	35.3	36.6	37.9	39.2	40.4	41.7	43.0	44.3	45.6	46.9	48.2	49.5	50.8	52.0
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%

LBAR04

Basic model **Motor-less Single Axis Actuator**

Rod type

Ordering method

LBAR04 – [ ] [ ] [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	12: 12 mm 6: 6 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) A: A specification (see below) S: S specification (see below) N: N specification (see below)	50 to 500 (50 mm pitch)

[Caution]

This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

Specifications

Applicable motor		50 W	
Repeatability Note 1		+/-0.01 mm	
Deceleration mechanism		Shifting position ball screw ϕ 10 (C7 class)	
Stroke		50 mm to 500 mm (50 mm pitch)	
Maximum speed Note 2 Note 3		720 mm/sec	360 mm/sec
Ball screw lead		12 mm	6 mm
Maximum payload Note 3	**Horizontal**	15 kg	25 kg
	Vertical	3 kg	5 kg
Max. pressing force Note 3		83 N	167 N
Rotating backlash		+/-0 °	
Maximum dimensions of cross section of main unit		W 44 mm × H 46 mm	
Overall length	**Straight**	ST + 263 mm	
	Bending	ST + 245 mm	
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 300 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. The described specifications may not be satisfied depending on the installed motor.
Note. See P.135 for acceleration/deceleration and inertia moment.

Applicable motor

Applicable servo motor

Specification		
Specification	**Flange size**	□ 40
	Wattage	50 W

Note. Motor models marked with * may not be 50W, but can be installed.

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-A5
		SGM7J-A5
	Keyence Corp.	SV- □ 005
		SV2- □ 005
	Mitsubishi Electric Corp.	HF-KP053
		HG-KR053
		HK-KT053
	Omron Electronics	R88M-K05030
		R88M-1M05030
	Panasonic Corp.	MHMF5A
	Sanyo Denki	R2 □ A04005
	Tamagawa Seiki	TSM3102
	Delta Electronics	ECMA-C1040F
	Fanuc Corp.	βiS0.2/5000
	Siemens	1FK2102-0AG
		1FL6022-2AF
	Schneider	BCH2MBA53
	Beckhoff	AM3011B*
	Allen-Bradley	TLY-A120*
P	Panasonic Corp.	MSMD5A
		MSMF5A

Applicable stepping motor

Specification		
Specification	**Flange size**	□ 42

Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
		ARM46
		RKS54
S	Oriental Motor	AZM48
N	NEMA standard	NEMA17

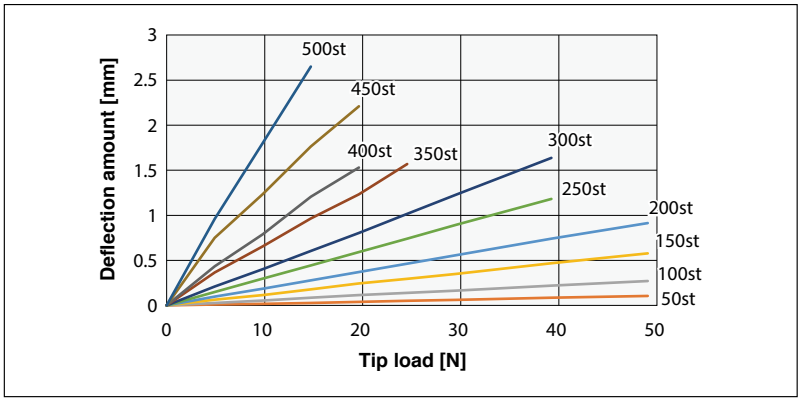
Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.

Access the website below.

▶ The cycle time simulation can be performed easily from our member site. For details, see P.16.

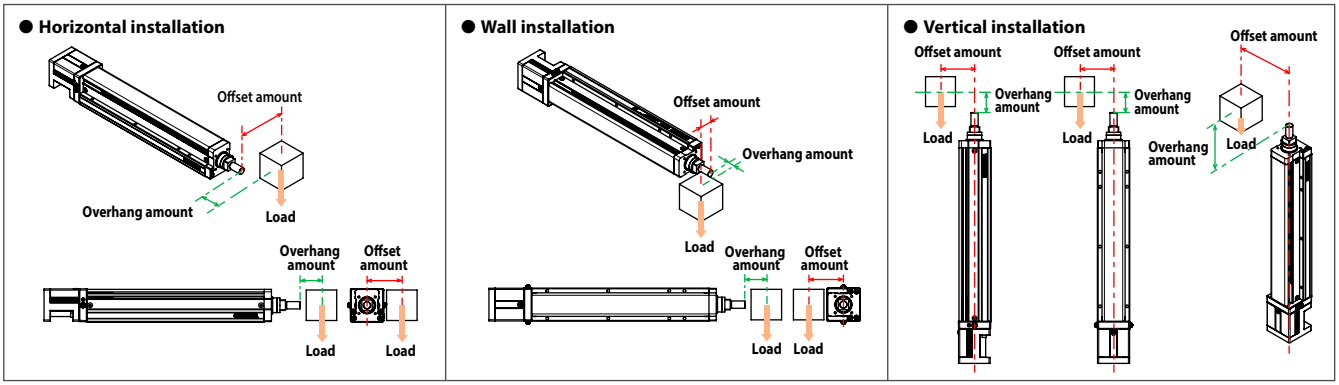
Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.

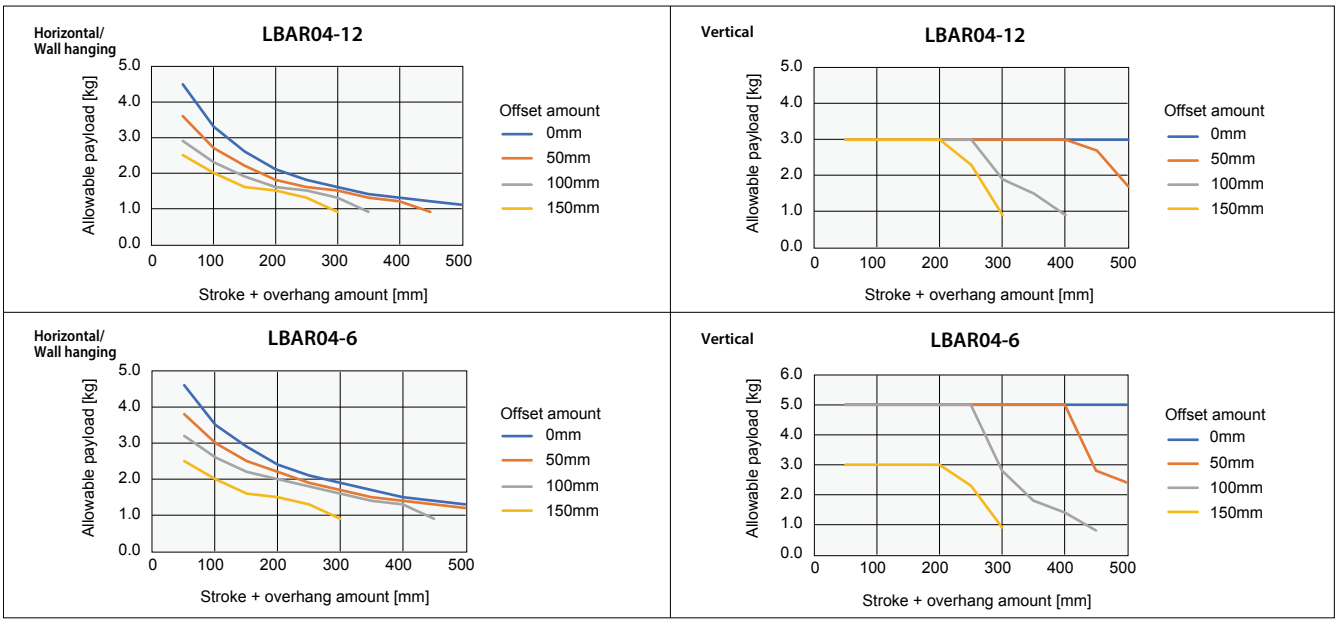


Allowable payload

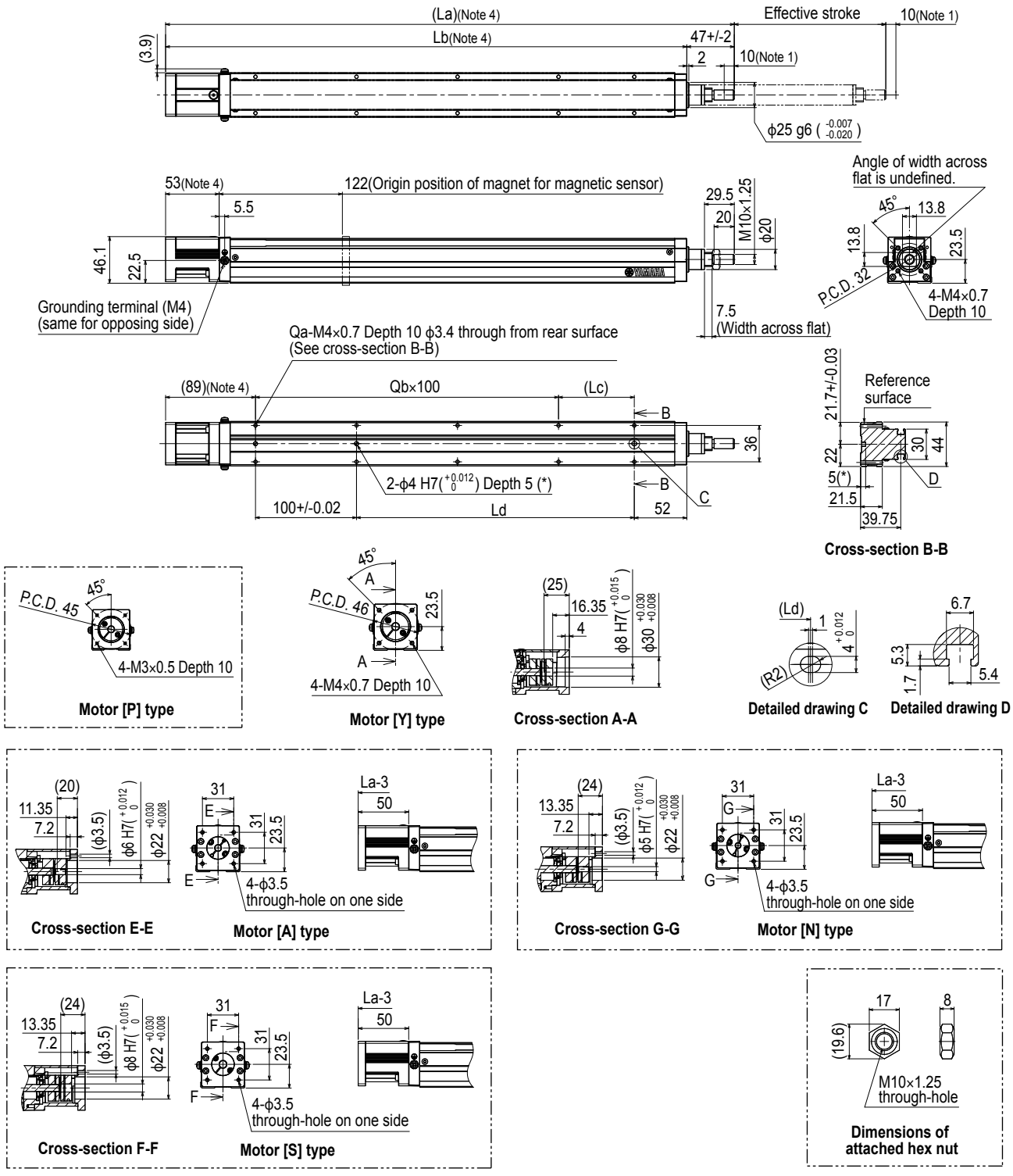
For the allowable payload per offset amount, see the graph below.



Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.



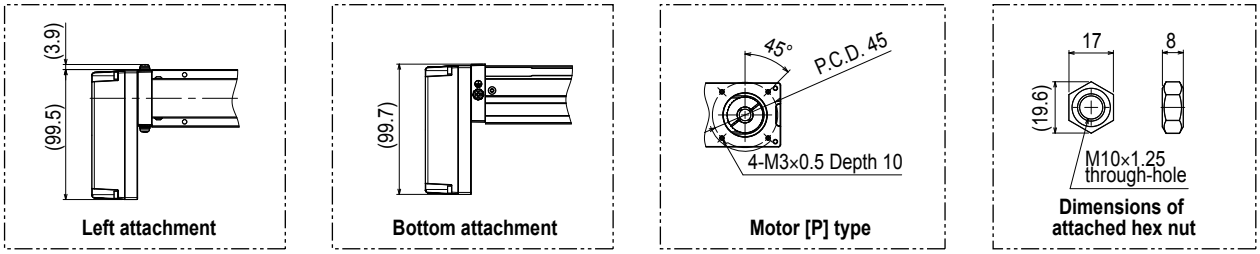
LBAR04 Straight type (S)

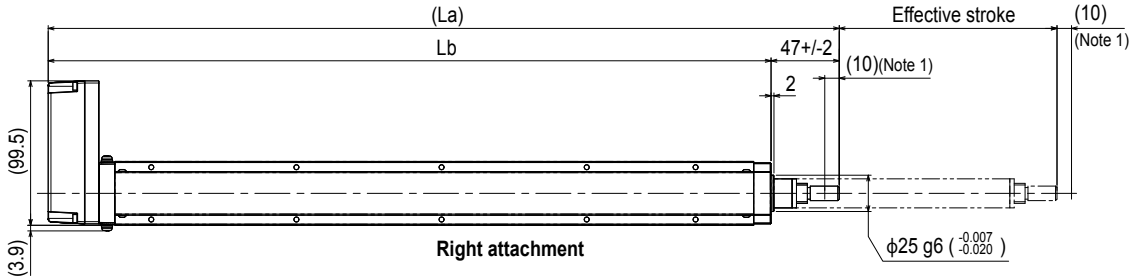


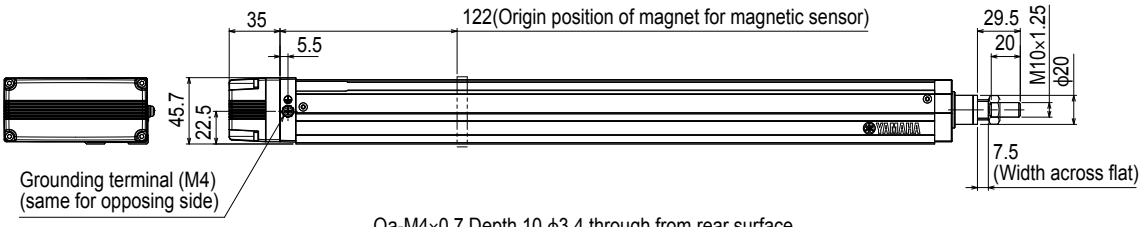
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. For the motor specifications A, S, and N, the dimensions are that those stated in the table <<-3 mm>>.
Note 5. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

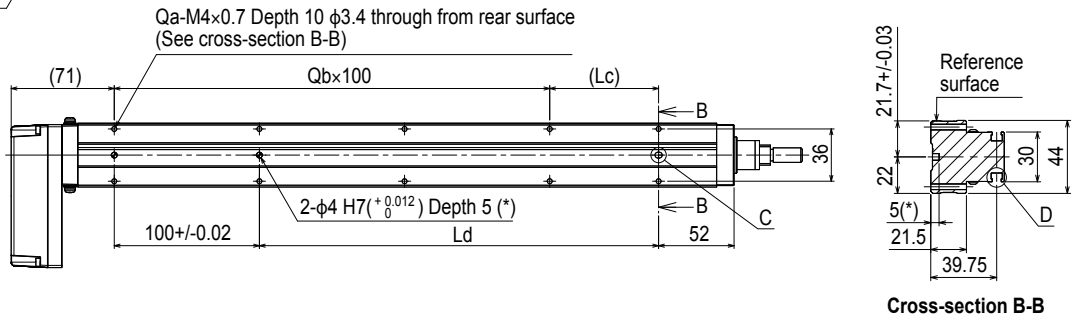
Effective stroke		50	100	150	200	250	300	350	400	450	500
La		313	363	413	463	513	563	613	663	713	763
Lb		266	316	366	416	466	516	566	616	666	716
Lc		25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475
Qa		6	6	8	8	10	10	12	12	14	14
Qb		1	1	2	2	3	3	4	4	5	5
Weight (kg)		0.9	1	1.2	1.4	1.6	1.7	1.9	2.1	2.3	2.5
Maximum speed (mm/sec)	Lead 12	720						648	504	396	324
	Lead 6	360						324	252	198	162
	Speed setting	–						90%	70%	55%	45%

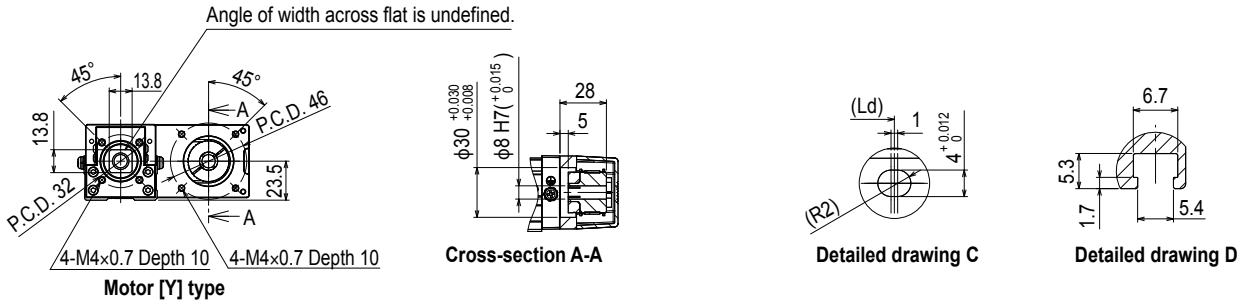
LBAR04 Bending type (A)











Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500
La		295	345	395	445	495	545	595	645	695	745
Lb		248	298	348	398	448	498	548	598	648	698
Lc		25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475
Qa		6	6	8	8	10	10	12	12	14	14
Qb		1	1	2	2	3	3	4	4	5	5
Weight (kg)		1	1.1	1.3	1.5	1.7	1.9	2	2.2	2.4	2.6
Maximum speed (mm/sec)	Lead 12	720						648	504	396	324
	Lead 6	360						324	252	198	162
	Speed setting	–						90%	70%	55%	45%

LBAR05

Basic model **Motor-less Single Axis Actuator**

Rod type

Ordering method

LBAR05 – [ ] [ ] [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) A: A specification (see below) S: S specification (see below) N: N specification (see below)	50 to 600 (50 mm pitch)

[Caution]

This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

Specifications

Applicable motor		100 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 12 (C7 class)		
Stroke		50 mm to 600 mm (50 mm pitch)		
Maximum speed Note 2 Note 3		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3	**Horizontal**	15 kg	25 kg	50 kg
	Vertical	4 kg	8 kg	16 kg
Max. pressing force Note 3		100 N	200 N	400 N
Rotating backlash		+/-0 °		
Maximum dimensions of cross section of main unit		W 54 mm × H 54.7 mm		
Overall length	**Straight**	ST + 269.5 mm		
	Bending	ST + 249 mm		
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 350 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. The described specifications may not be satisfied depending on the installed motor.
Note. See P.136 for acceleration/deceleration and inertia moment.

Applicable motor

Applicable servo motor

Specification		
	Flange size	□ 40
	Wattage	100 W

Note. Motor models marked with * may not be 50W, but can be installed.

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-01
		SGM7J-01
	Keyence Corp.	SV- □ 010
		SV2- □ 010
	Mitsubishi Electric Corp.	HF-KP13
		HG-KR13
		HK-KT13
	Omron Electronics	R88M-K10030
		R88M-1M10030
	Panasonic Corp.	MHMF01
	Sanyo Denki	R2 □ A04010
	Tamagawa Seiki	TSM3104
	Delta Electronics	ECMA-C10401
	Fanuc Corp.	βiS0.3/5000
	Kingservo	KSMA01LI □ S
		KSMA01LG
	Siemens	1FK2102-1AG
		1FL6024-2AF
	Schneider	BCH2MB013
	Beckhoff	AM3012C*
	Allen-Bradley	TLY-A130*
P	Panasonic Corp.	MSMD01
		MSMF01

Applicable stepping motor

Specification	Flange size	□ 42

Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
		ARM46
		RKS54
S	Oriental Motor	AZM48
N	NEMA standard	NEMA17

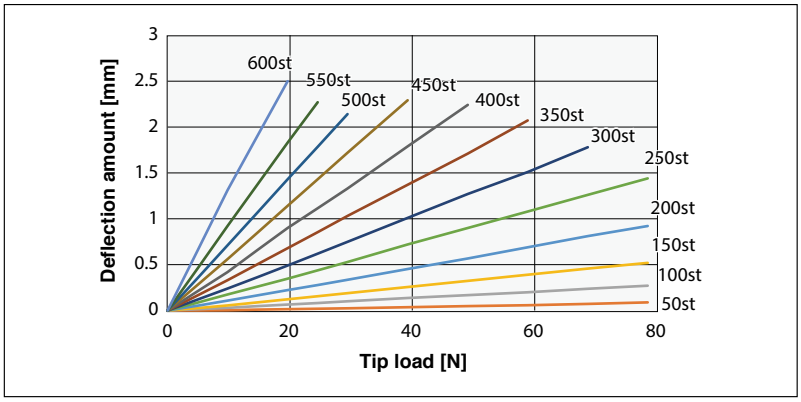
Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.

Access the website below.

▶ The cycle time simulation can be performed easily from our member site. For details, see P.16.

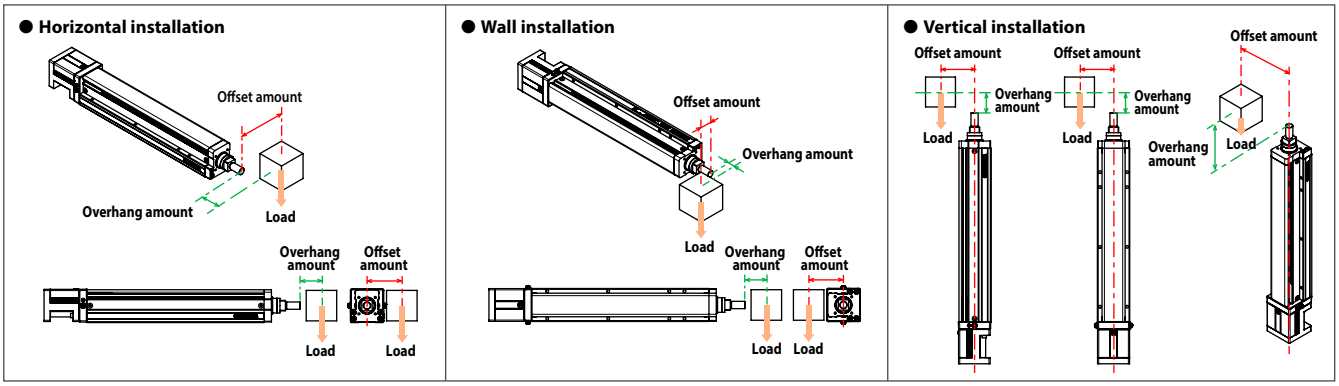
Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.

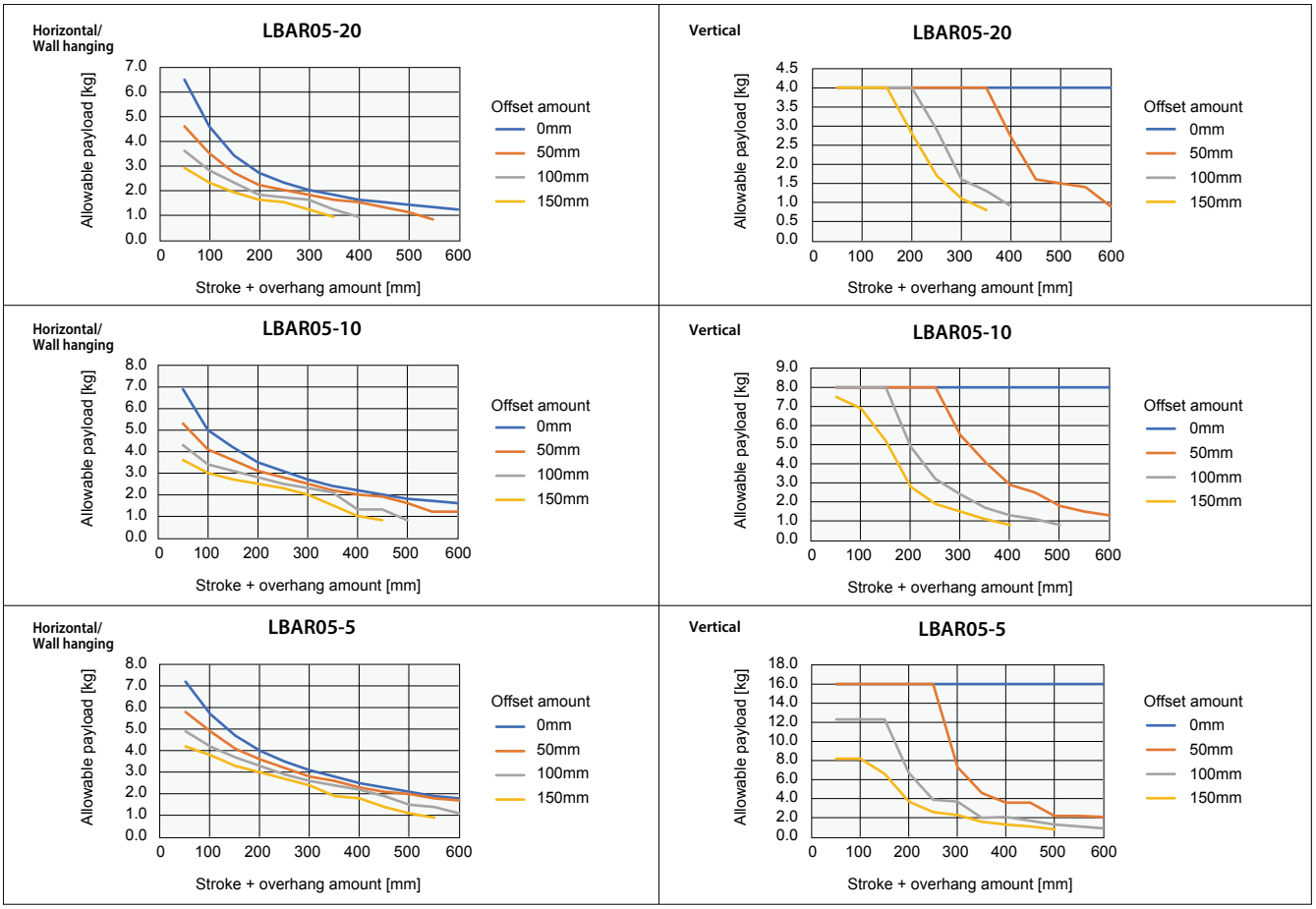


Allowable payload

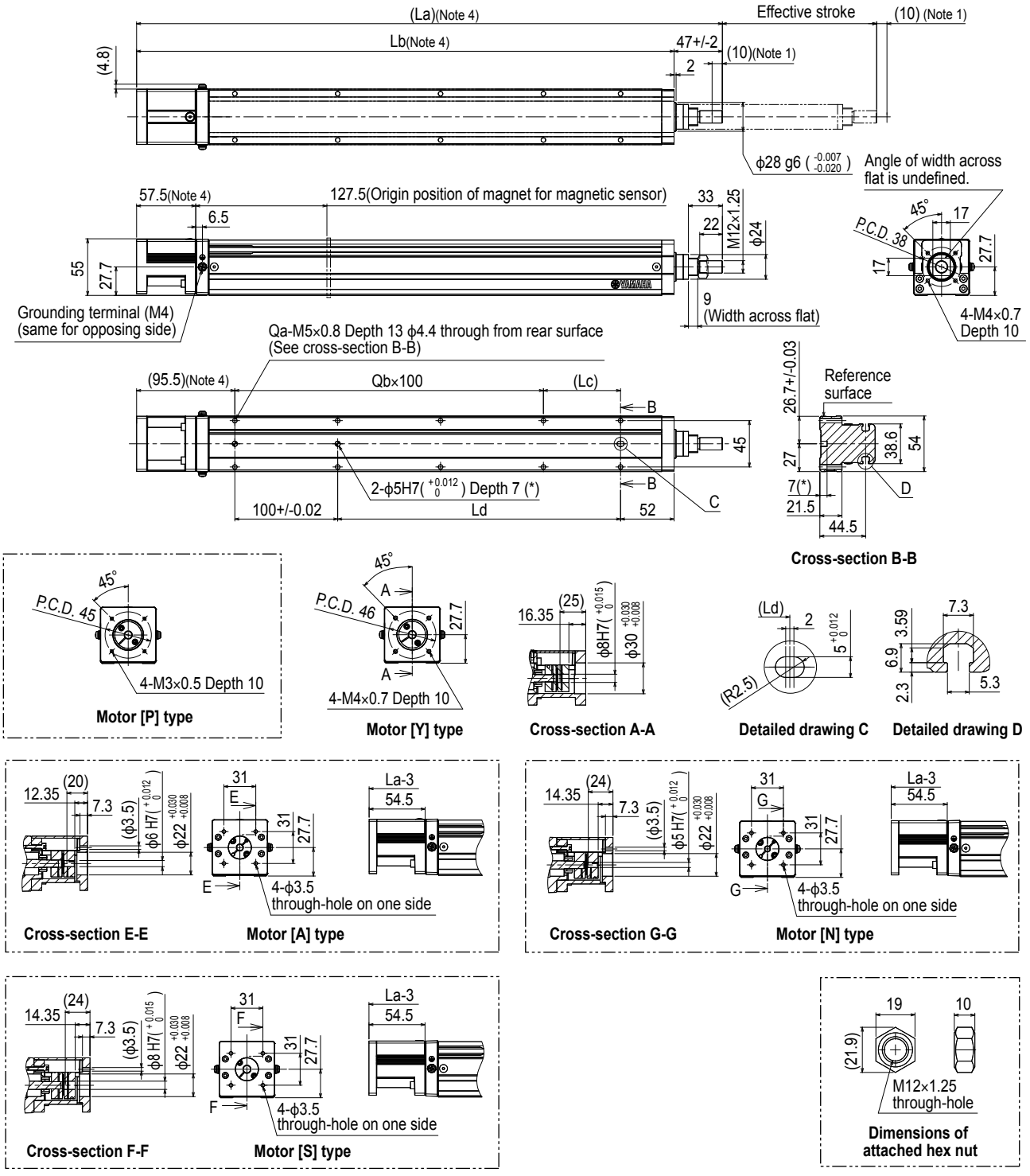
For the allowable payload per offset amount, see the graph below.



Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.



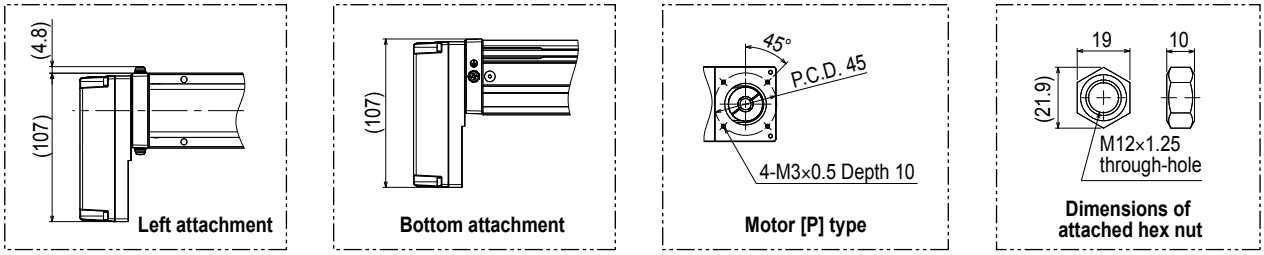
LBAR05 Straight type (S)

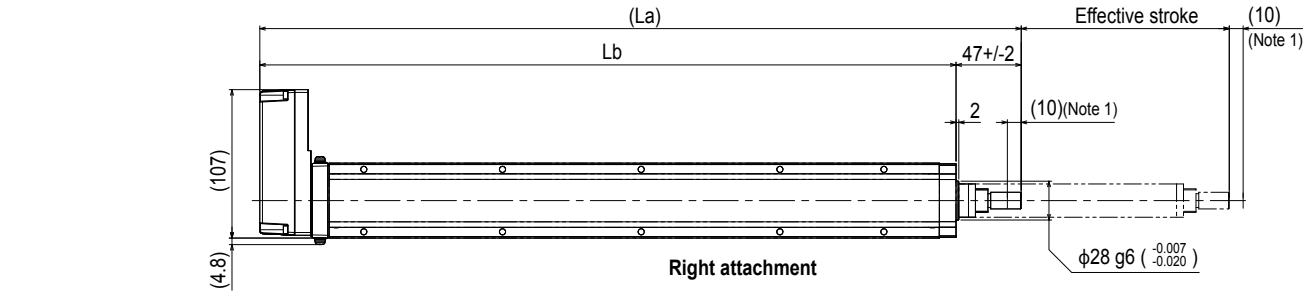


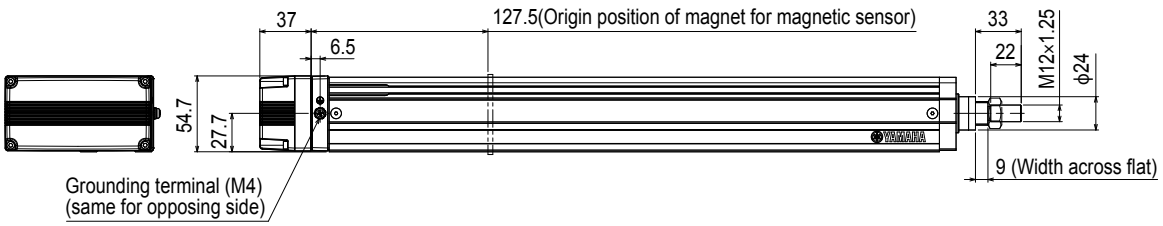
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> used to install the main unit.
Note 4. For the motor specifications A, S, and N, the dimensions are that those stated in the table <<-3 mm>>.
Note 5. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

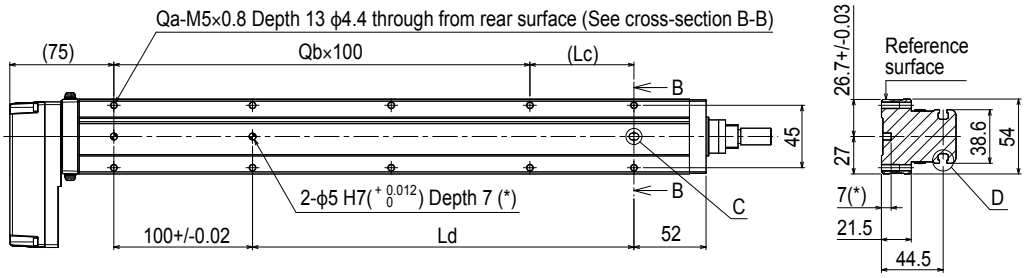
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600
La		319.5	369.5	419.5	469.5	519.5	569.5	619.5	669.5	719.5	769.5	819.5	869.5
Lb		272.5	322.5	372.5	422.5	472.5	522.5	572.5	622.5	672.5	722.5	772.5	822.5
Lc		25	75	25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475	525	575
Qa		6	6	8	8	10	10	12	12	14	14	16	16
Qb		1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg)		1.7	1.9	2	2.2	2.4	2.6	2.7	2.8	2.9	3	3.2	3.4
Maximum speed (mm/sec)	Lead 20	1200							960	780	600	480	420
	Lead 10	600							480	390	300	240	210
	Lead 5	300							240	195	150	120	105
	Speed setting	–							80%	65%	50%	40%	35%

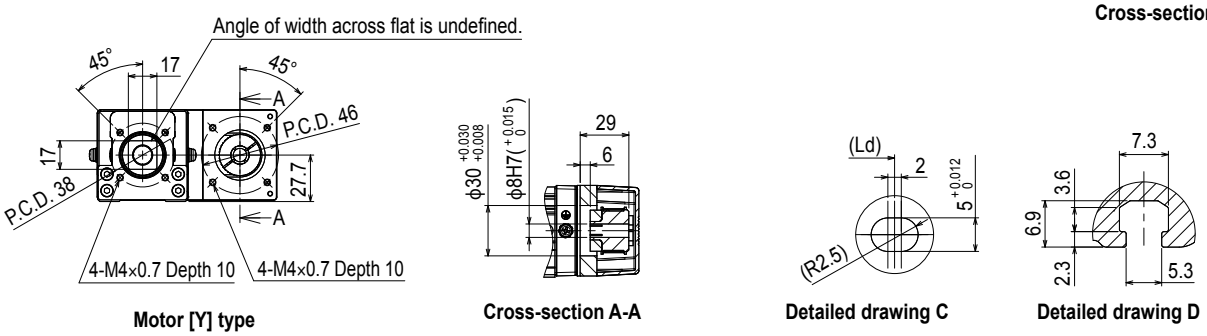
LBAR05 Bending type (A)











Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600
La		299	349	399	449	499	549	599	649	699	749	799	849
Lb		252	302	352	402	452	502	552	602	652	702	752	802
Lc		25	75	25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475	525	575
Qa		6	6	8	8	10	10	12	12	14	14	16	16
Qb		1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg)		1.8	1.9	2.1	2.3	2.5	2.7	2.8	2.9	3	3.1	3.3	3.4
Maximum speed (mm/sec)	Lead 20	1200							960	780	600	480	420
	Lead 10	600							480	390	300	240	210
	Lead 5	300							240	195	150	120	105
	Speed setting	–							80%	65%	50%	40%	35%

LBAR08

Basic model | **Motor-less Single Axis Actuator** | **Rod type**

Ordering method

LBAR08 – [ ] – [ ] – [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) K: K specification (see below) A: A specification (see below) N: N specification (see below)	50 to 800 (50 mm pitch)

[Caution]
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator.
The product performance may not be satisfied depending on the compatible motor.
For special parts for motor installation, install and adjust on your side.

Specifications

Applicable motor		200 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)		
Stroke		50 mm to 800 mm (50 mm pitch)		
Maximum speed Note 2 Note 3		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3	**Horizontal**	30 kg	60 kg	80 kg
	Vertical	8 kg	20 kg	30 kg
Max. pressing force Note 3		201 N	402 N	804 N
Rotating backlash		+/-0 °		
Maximum dimensions of cross section of main unit		W 82 mm × H 73.5 mm		
Overall length	**Straight**	ST + 326 mm		
	Bending	ST + 312.5 mm		
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 400 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. The described specifications may not be satisfied depending on the installed motor.
Note. See P.138 for acceleration/deceleration and inertia moment.

Applicable motor

Applicable servo motor

Specification		
Flange size		□ 60
Wattage		200 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-02
		SGM7J-02
	Keyence Corp.	SV- □ 020
		SV2- □ 020
	Mitsubishi Electric Corp.	HF-KP23
		HG-KR23
		HK-KT23
	Sanyo Denki	R2 □ A06020
	Tamagawa Seiki	TSM3202
	Delta Electronics	ECMA-C10602
	Siemens	1FL6032-2AF
	Schneider	BCH2LD023
P	Omron Electronics	R88M-K20030
		R88M-1M20030
	Panasonic Corp.	MSMD02
		MSMF02
		MHMF02
K	Kingservo	KSMA02LI
		KSMA02LG

Applicable stepping motor

Specification	
Flange size	□ 60
	□ 56 (NEMA)

Motor specification	Manufacturer	Model
A	Oriental Motor	AZM66
		AZM69
		ARM66
		ARM69
		RKS56
N	NEMA standard	NEMA23

Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A and N, the parts dedicated for bending cannot be used.

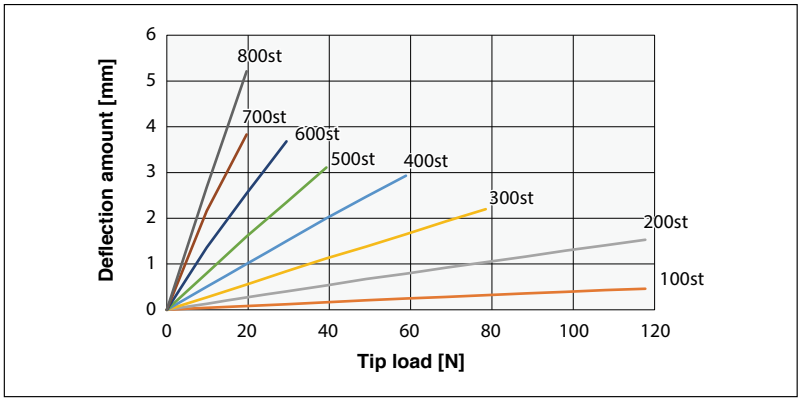
Access the website below.

YAMAHA

▶ The cycle time simulation can be performed easily from our member site. For details, see P.16.

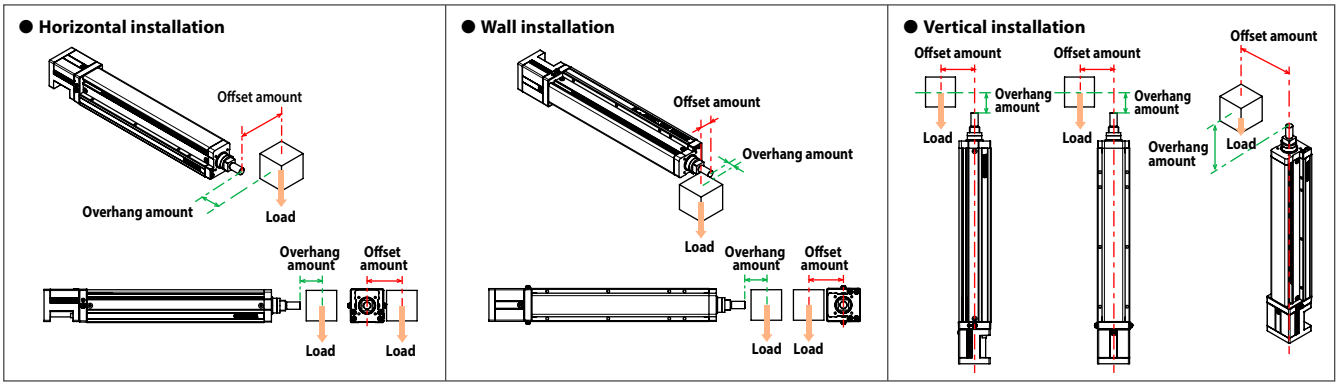
Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.

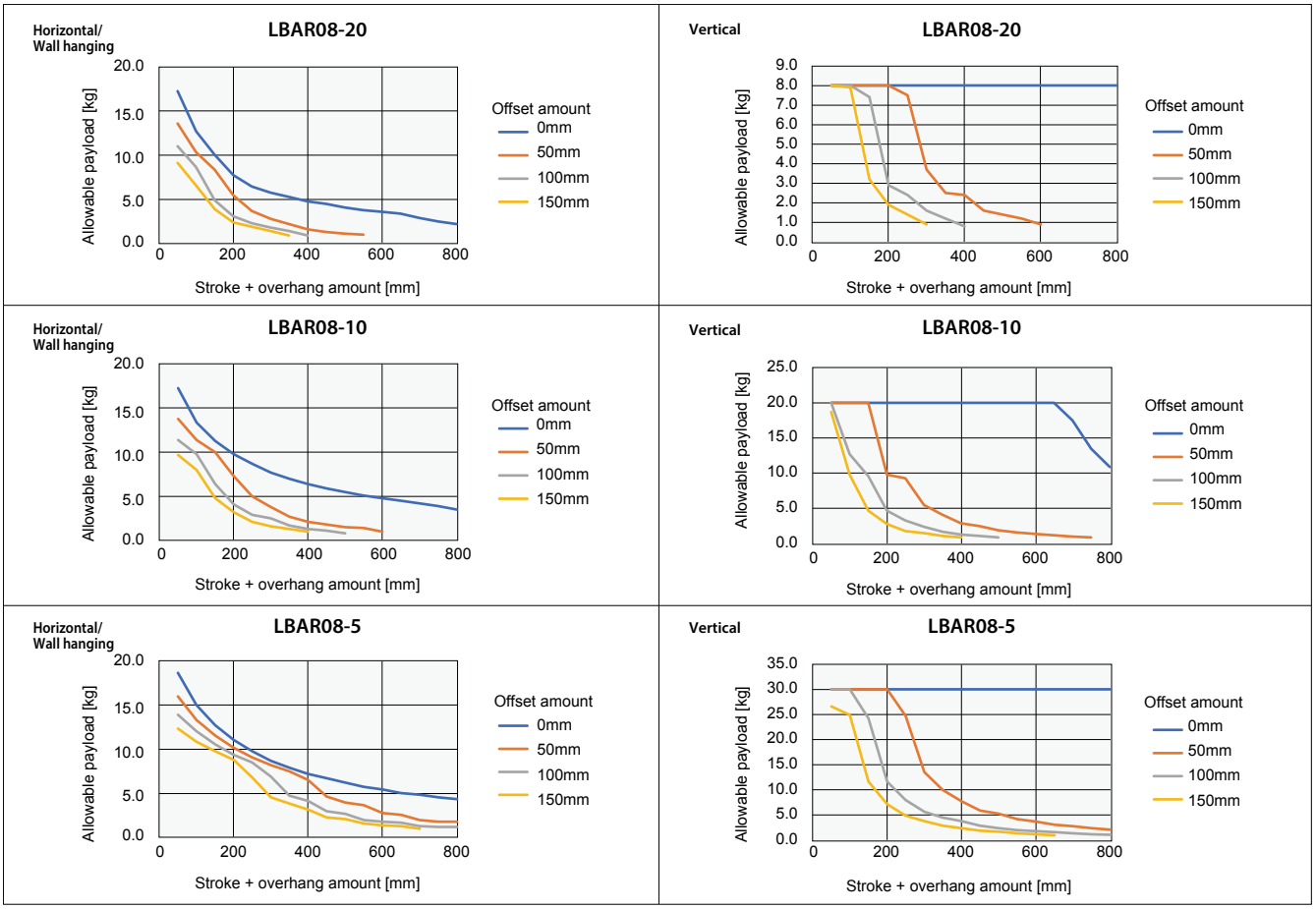


Allowable payload

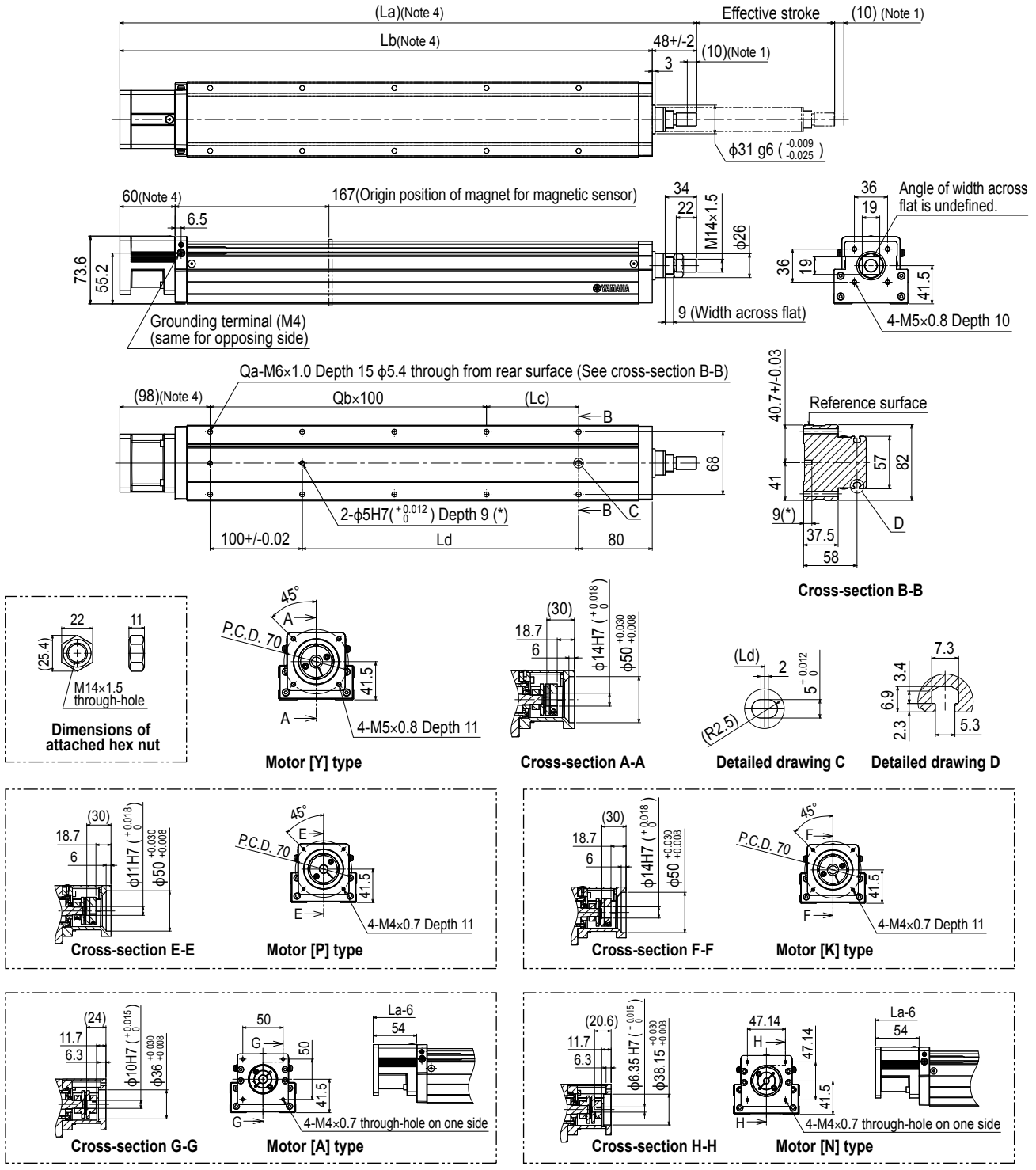
For the allowable payload per offset amount, see the graph below.



Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.



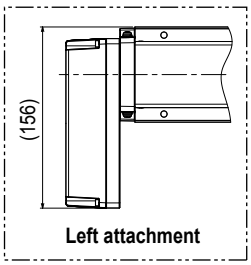
LBAR08 Straight type (S)



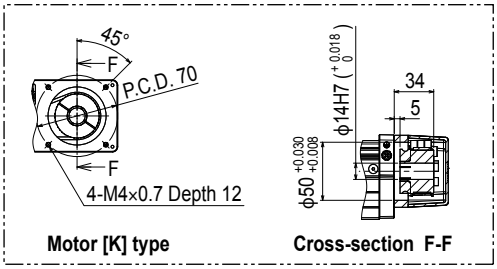
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. For the motor specifications A and N the dimensions are that those stated in the table <<-6 mm>>.
Note 5. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Lb		328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078
Lc		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Ld		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		3.9	4.3	4.7	5	5.3	5.7	6	6.3	6.6	7	7.4	7.7	8.1	8.4	8.6	8.9
Maximum speed (mm/sec)	Lead 20	1200								900	720	600	480	420	360	300	240
	Lead 10	600								450	360	300	240	210	180	150	120
	Lead 5	300								225	180	150	120	105	90	75	60
	Speed setting	–								75%	60%	50%	40%	35%	30%	25%	20%

LBAR08 Bending type (A)

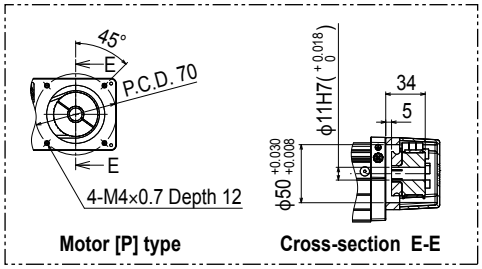


Left attachment



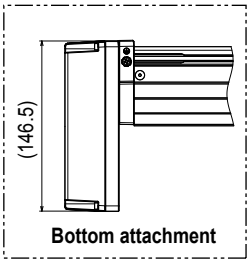
Motor [K] type

Cross-section F-F

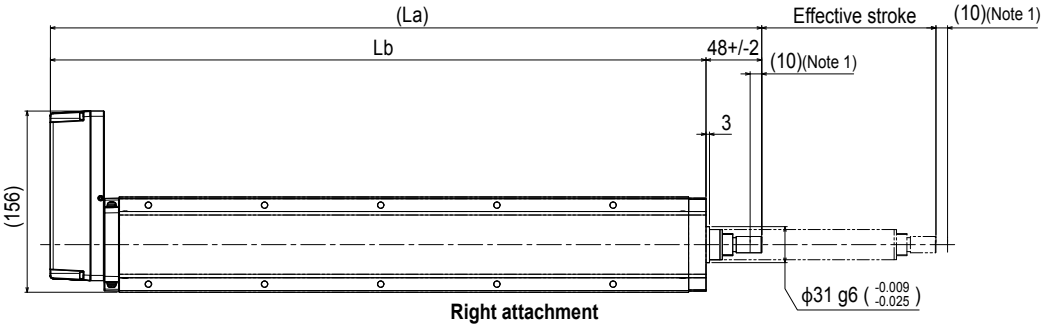


Motor [P] type

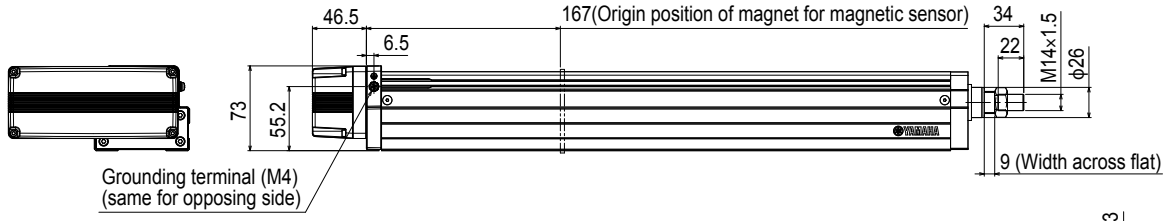
Cross-section E-E

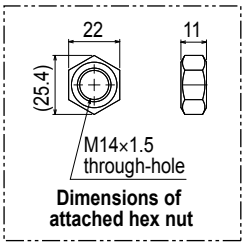


Bottom attachment

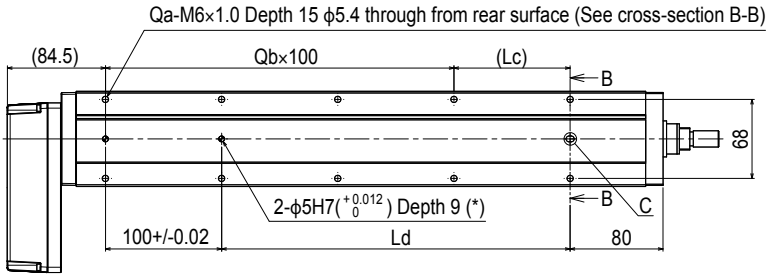


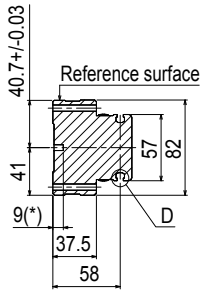
Right attachment



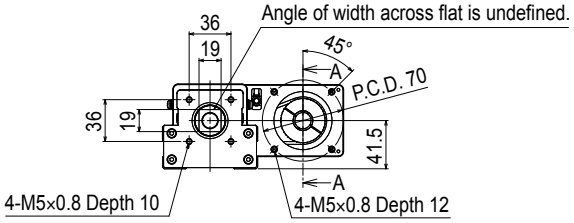


Dimensions of attached hex nut

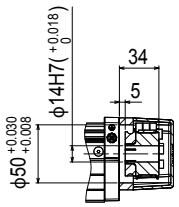




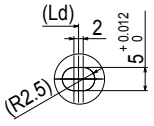
Cross-section B-B



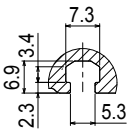
Motor [Y] type



Cross-section A-A



Detailed drawing C



Detailed drawing D

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5
Lb		314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5
Lc		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Ld		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		4.3	4.7	5.1	5.4	5.7	6.1	6.4	6.7	7	7.4	7.8	8.1	8.5	8.8	9	9.3
Maximum speed (mm/sec)	Lead 20	1200								900	720	600	480	420	360	300	240
	Lead 10	600								450	360	300	240	210	180	150	120
	Lead 5	300								225	180	150	120	105	90	75	60
	Speed setting	–								75%	60%	50%	40%	35%	30%	25%	20%

ABAS04

Basic model **Single-axis robots**

Slider type

Ordering method

ABAS04 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – **EP-01** – [ ] – [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke	Cable length Note 1	Cable entry location	Robot positioner	Driver: Power capacity	I/O	Battery Note 2
	12: 12 mm 6: 6 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	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

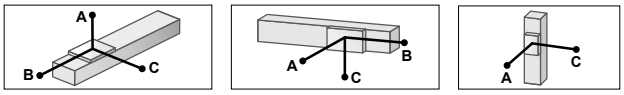
Note 1. The robot cable is flexible and resists bending.
Note 2. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

Specifications

AC servo motor output		50 W	
Repeatability Note 1		+/-0.01 mm	
Deceleration mechanism		Shifting position ball screw ϕ 10 (C7 class)	
Stroke		50 mm to 800 mm (50mm pitch)	
Maximum speed Note 2		800 mm/sec	400 mm/sec
Ball screw lead		12 mm	6 mm
Maximum payload	**Horizontal**	12 kg	20 kg
	Vertical	2 kg	5 kg
Rated thrust		71 N	141 N
Maximum dimensions of cross section of main unit		W 44 mm × H 52 mm	
Overall length	**Straight**	ST + 277.5 mm	
	Bending	ST + 196 mm	
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 500 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. See P.106 for acceleration/deceleration.

Allowable overhang Note



ABAS04-12

Horizontal installation (Unit: mm)

	A	B	C
2kg	1187	271	325
8kg	473	62	77
12kg	431	41	53

Wall installation (Unit: mm)

	A	B	C
2kg	325	271	1187
8kg	77	62	473
12kg	53	41	431

Vertical installation (Unit: mm)

	A	C
1kg	534	534
2kg	265	265

ABAS04-6

Horizontal installation (Unit: mm)

	A	B	C
4kg	1808	155	217
12kg	801	47	65
20kg	546	25	35

Wall installation (Unit: mm)

	A	B	C
4kg	217	155	1808
12kg	65	47	801
20kg	35	25	546

Vertical installation (Unit: mm)

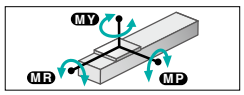
	A	C
1kg	639	639
3kg	208	208
5kg	122	122

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.
Note. Service life is calculated for 500mm stroke models.

Controller

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

Static loading moment



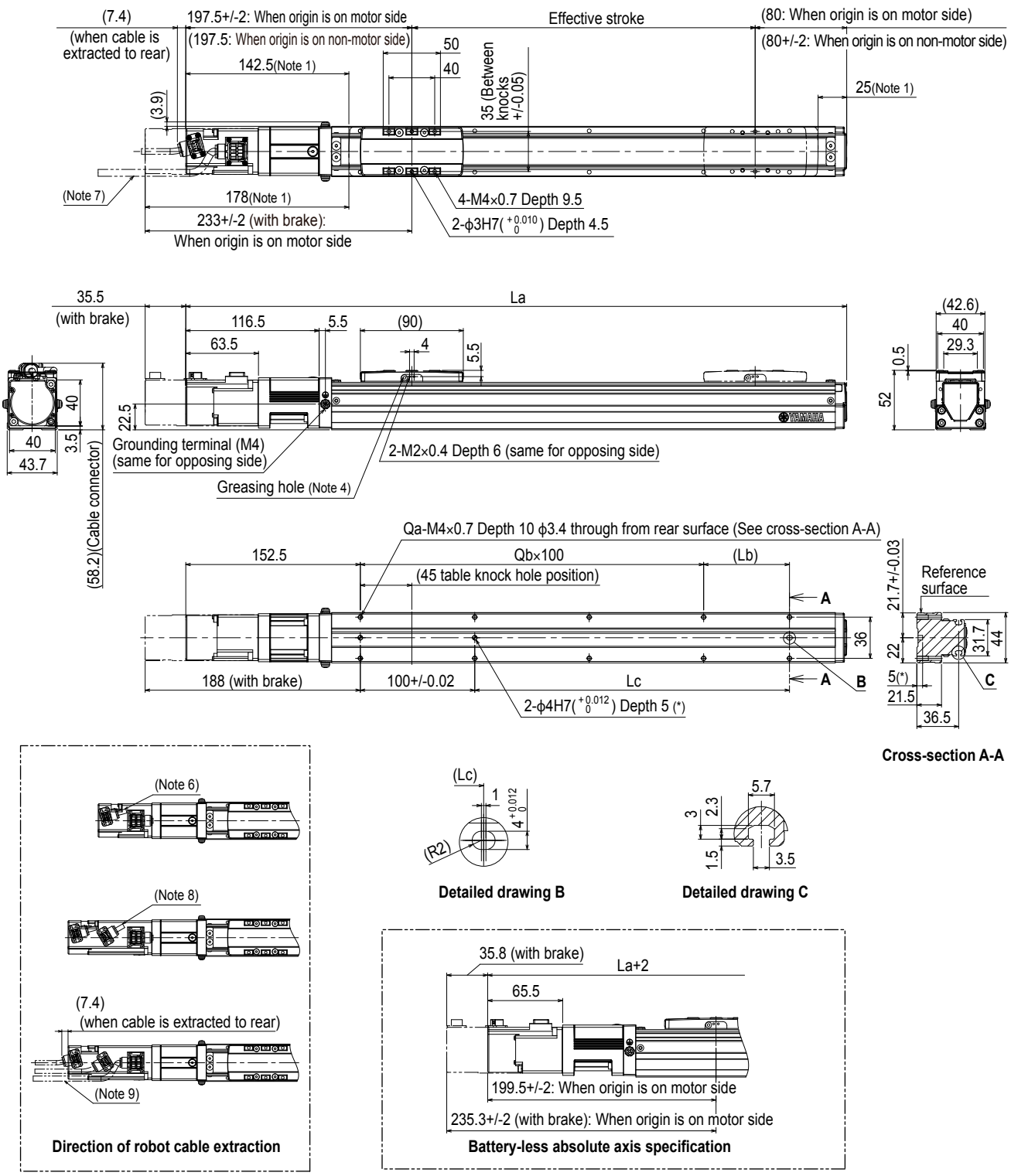
(Unit: N·m)

MY	MP	MR
54	54	75

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.**

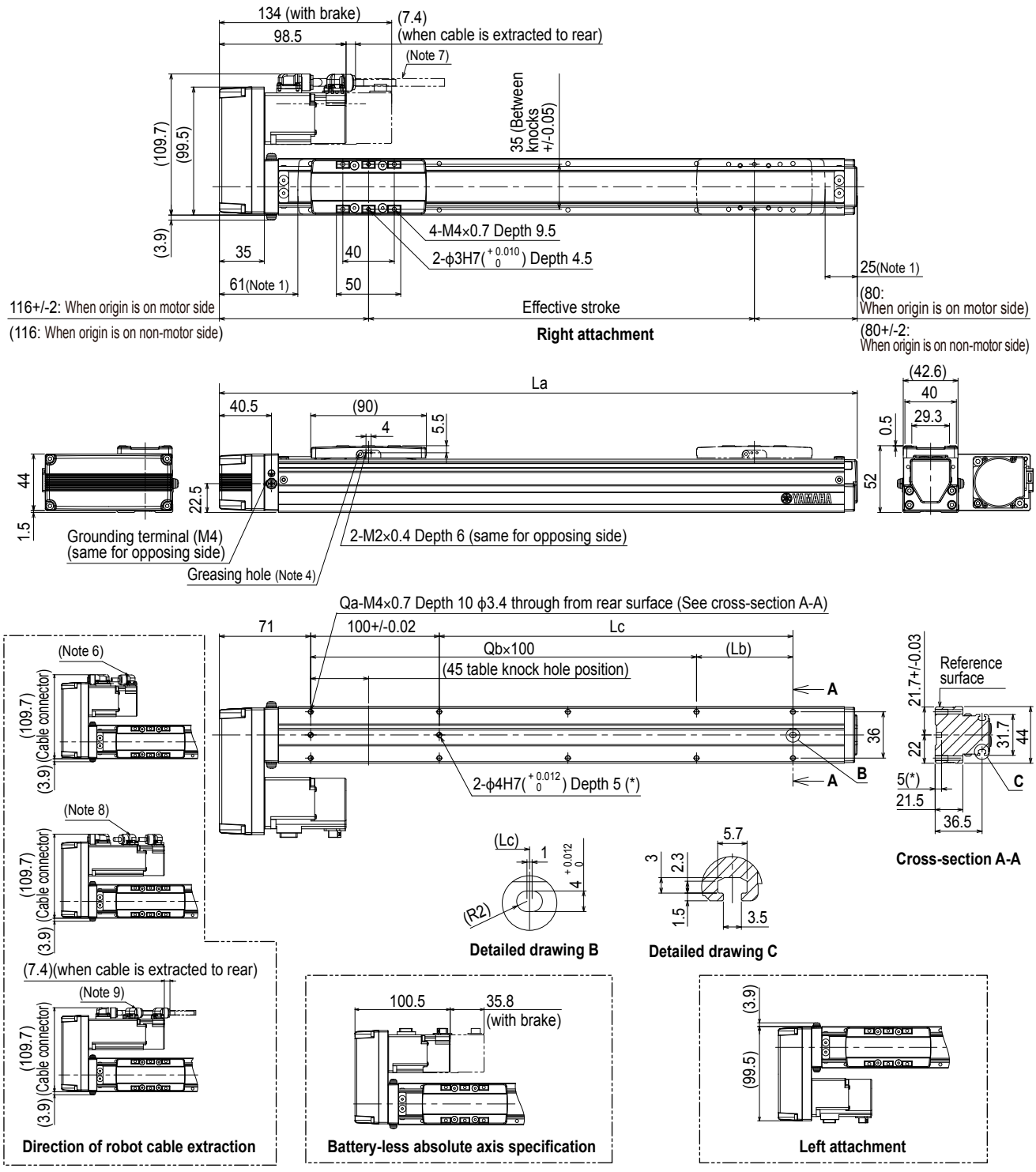
ABAS04 Straight type (S)



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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
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.

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		327.5	377.5	427.5	477.5	527.5	577.5	627.5	677.5	727.5	777.5	827.5	877.5	927.5	977.5	1027.5	1077.5
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5		1.2	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.7	2.8	3	3.2	3.4	3.6	3.7	3.9
Maximum speed (mm/sec)	Lead 12	800										720	600	480	400	360	320
	Lead 6	400										360	300	240	200	180	160
	Speed setting	–										90%	75%	60%	50%	45%	40%

ABAS04 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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
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.

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5		1.4	1.5	1.7	1.9	2.1	2.2	2.4	2.6	2.8	3	3.1	3.3	3.5	3.7	3.9	4
Maximum speed (mm/sec)	Lead 12	800										720	600	480	400	360	320
	Lead 6	400										360	300	240	200	180	160
	Speed setting	–										90%	75%	60%	50%	45%	40%

ABAS05

Basic model **Single-axis robots**

Slider type

Ordering method

ABAS05 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – **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
	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	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

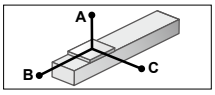
Note 1. The robot cable is flexible and resists bending.
Note 2. When the actuator is used vertically, lead 5 or 10 is selected, and the stroke is 650 mm or more, the regenerative unit is needed.
Note 3. When the motor specification is the standard (S, BK), whether to use the battery needs to be selected.

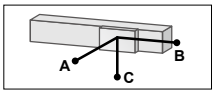
Specifications

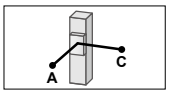
AC servo motor output		100 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 12 (C7 class)		
Stroke		50 mm to 800 mm (50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	**Horizontal**	12 kg	24 kg	40 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 54 mm × H 60 mm		
Overall length	**Straight**	ST + 295 mm		
	Bending	ST + 200 mm		
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 550 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. See P.107 for acceleration/deceleration.

Allowable overhang Note







ABAS05-20

Horizontal installation (Unit: mm)	A	B	C
2kg	549	324	272
8kg	155	73	65
12kg	117	46	42

Wall installation (Unit: mm)	A	B	C
2kg	272	324	549
8kg	65	73	155
12kg	42	46	117

Vertical installation (Unit: mm)	A	C
1kg	544	544
2kg	276	276
3kg	195	195

ABAS05-10

Horizontal installation (Unit: mm)	A	B	C
5kg	769	178	213
15kg	314	53	64
24kg	216	29	36

Wall installation (Unit: mm)	A	B	C
5kg	213	178	769
15kg	64	53	314
24kg	36	29	216

Vertical installation (Unit: mm)	A	C
2kg	443	443
4kg	218	218
6kg	142	142

ABAS05-5

Horizontal installation (Unit: mm)	A	B	C
10kg	921	97	131
25kg	459	33	45
40kg	436	17	23

Wall installation (Unit: mm)	A	B	C
10kg	131	97	921
25kg	45	33	459
40kg	23	17	436

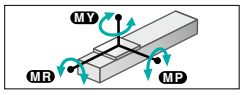
Vertical installation (Unit: mm)	A	C
3kg	345	345
8kg	124	124
12kg	79	79

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.
Note. Service life is calculated for 500mm stroke models.

Controller

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

Static loading moment



(Unit: N·m)

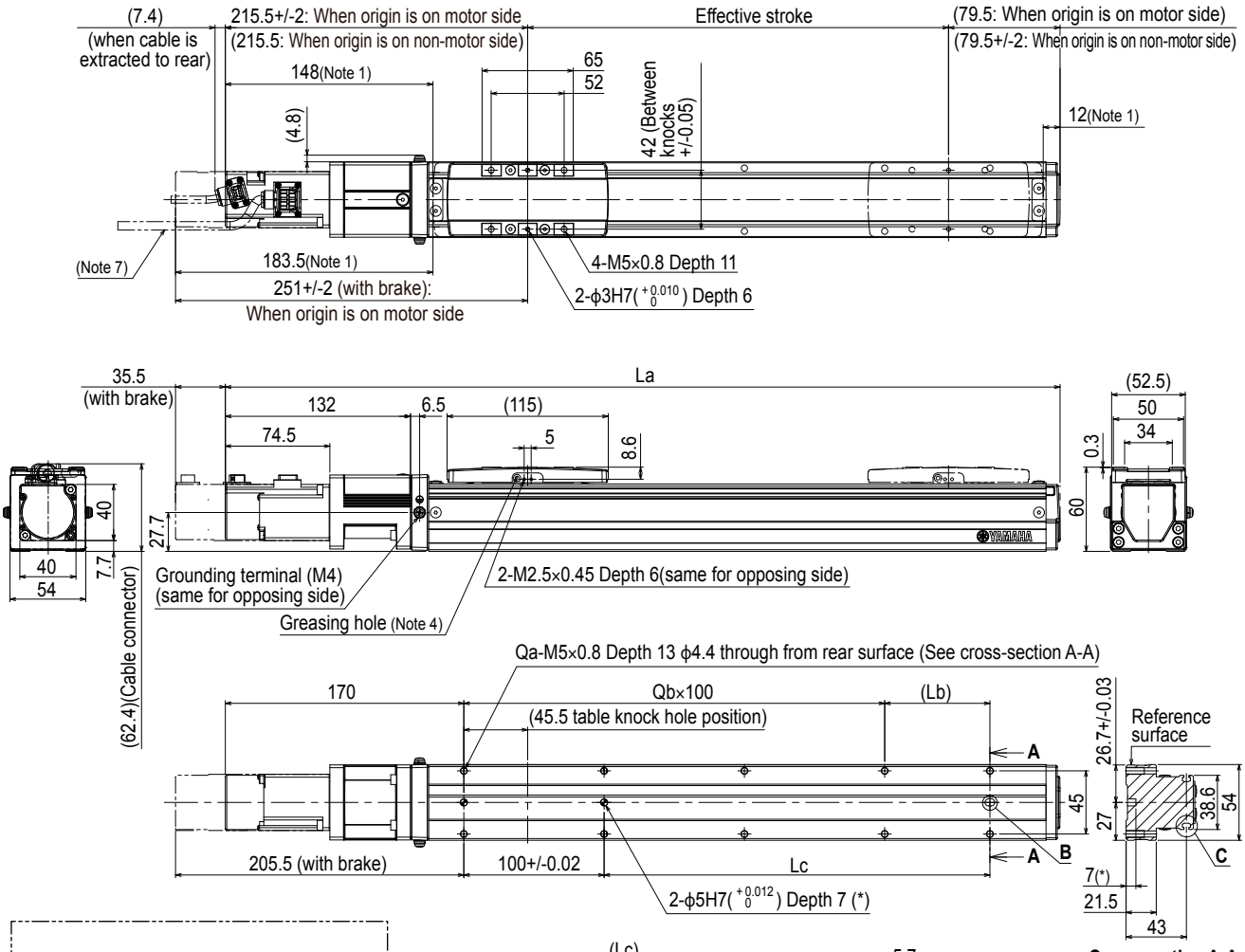
MY	MP	MR
59	63	103

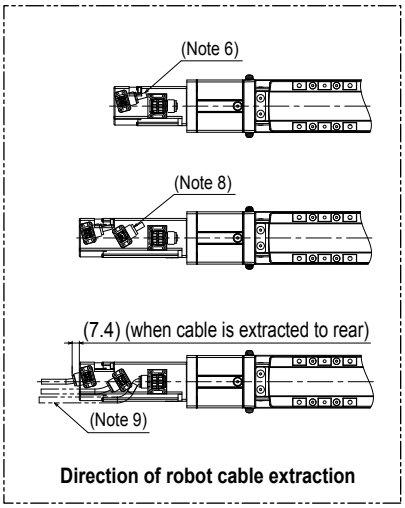
Access the website below.

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

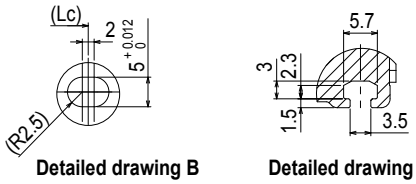
Controller EP-01 ▶ 146

ABAS05 Straight type (S)

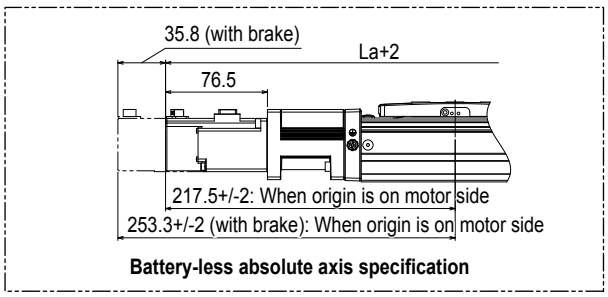




Direction of robot cable extraction



Detailed drawing B **Detailed drawing C**

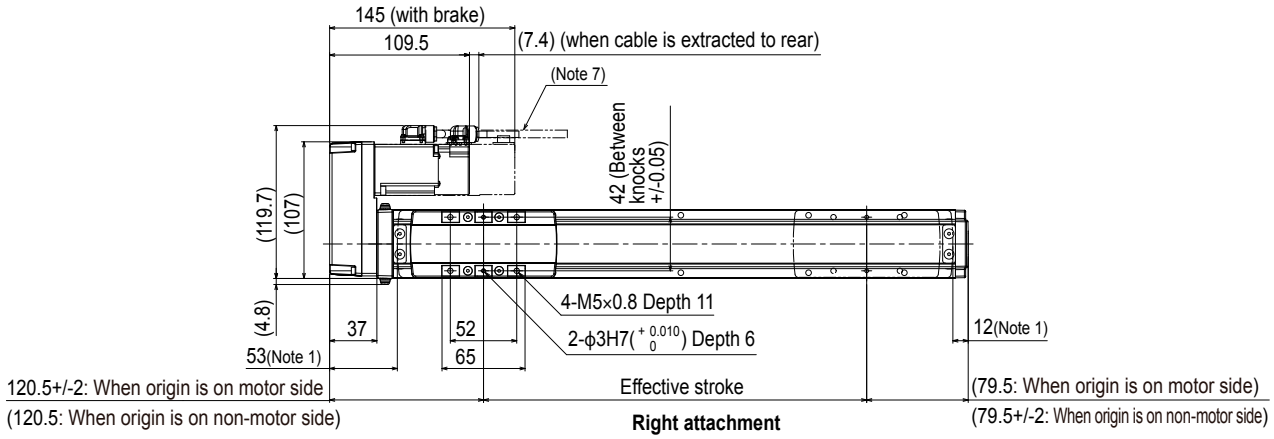


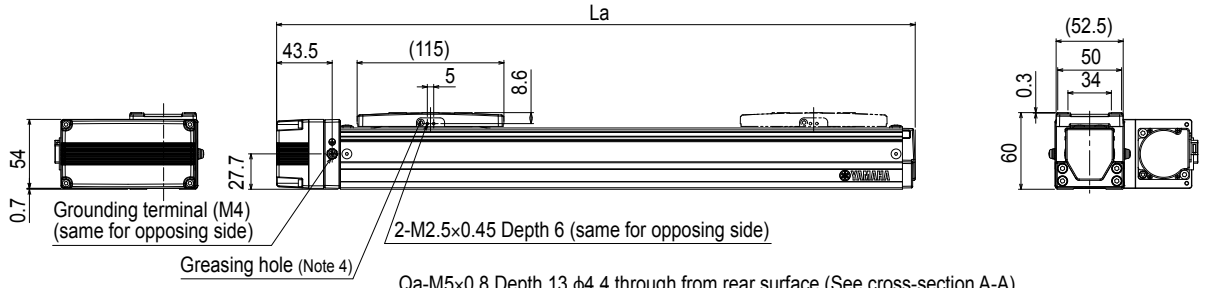
Battery-less absolute axis specification

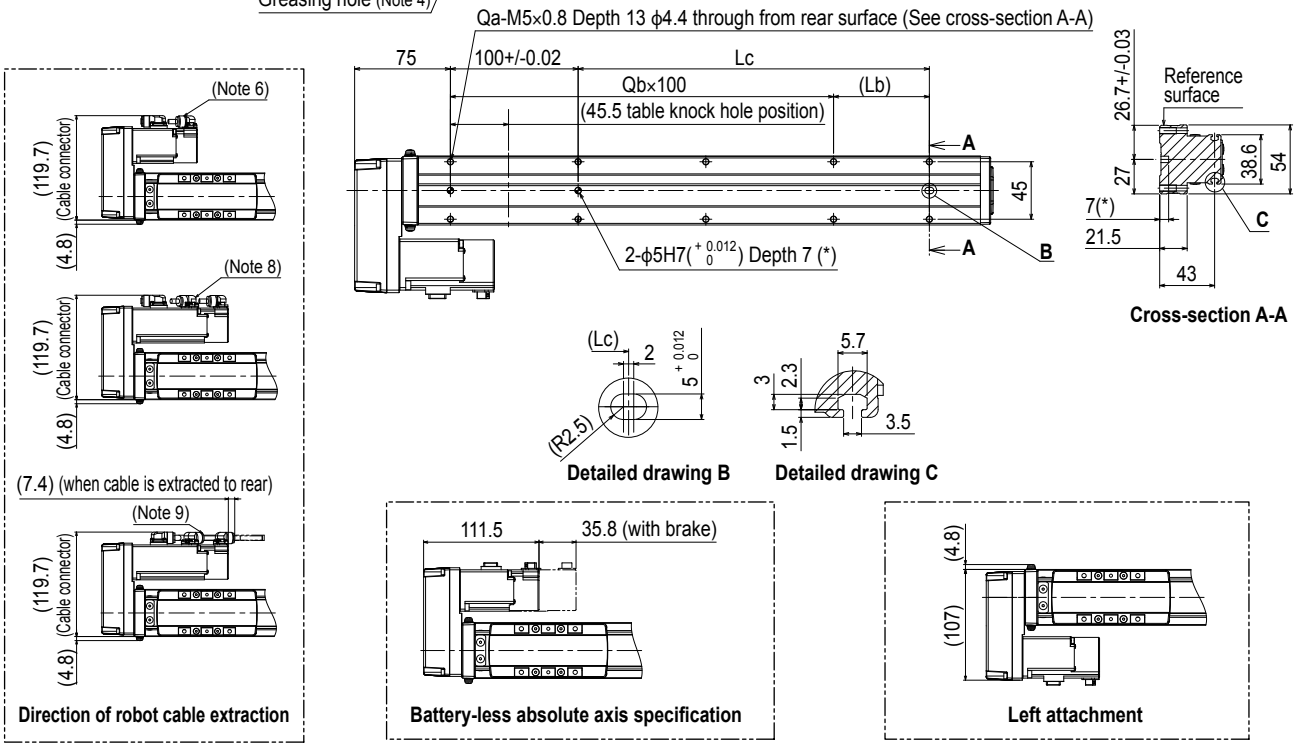
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
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.

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		345	395	445	495	545	595	645	695	745	795	845	895	945	995	1045	1095
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5		2	2.2	2.3	2.5	2.8	2.9	2.9	3.1	3.2	3.3	3.5	3.7	3.8	4	4.1	4.5
Maximum speed (mm/sec)	Lead 20	1333											1133	933	799	666	599
	Lead 10	666											566	466	399	333	299
	Lead 5	333											283	233	199	166	149
	Speed setting	–											85%	70%	60%	50%	45%

ABAS05 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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
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.

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Lb		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
Lc		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 5		2.1	2.2	2.4	2.6	2.8	3	3	3.2	3.3	3.4	3.6	3.7	3.9	4	4.2	4.5
Maximum speed (mm/sec)	Lead 20	1333											1133	933	799	666	599
	Lead 10	666											566	466	399	333	299
	Lead 5	333											283	233	199	166	149
	Speed setting	–											85%	70%	60%	50%	45%

ABAS08

Basic model **Single-axis robots**

Slider type

Ordering method

ABAS08 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - **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
	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	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

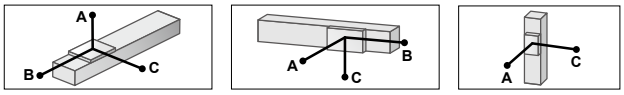
Note 1. The robot cable is flexible and resists bending.
Note 2. When the actuator is used vertically and the stroke of lead 5 or 20 is 450 mm or more or the stroke of lead 10 is 150 mm or more, the regenerative unit is needed.
When the actuator is used horizontally and the stroke of lead 20 is 250 to 750 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		200 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)		
Stroke		50 mm to 1100 mm (50 mm pitch)		
Maximum speed Note 2		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	**Horizontal**	40 kg	80 kg	100 kg
	Vertical	8 kg	20 kg	30 kg
Rated thrust		174 N	341 N	683 N
Maximum dimensions of cross section of main unit		W 82 mm × H 78 mm		
Overall length	**Straight**	ST + 353 mm		
	Bending	ST + 264.5 mm		
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 650 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. See P.109 for acceleration/deceleration.

Allowable overhang Note



ABAS08-20

Horizontal installation (Unit: mm)

	A	B	C
15kg	356	131	146
25kg	278	73	86
40kg	517	54	76

Wall installation (Unit: mm)

	A	B	C
15kg	146	131	356
25kg	86	73	278
40kg	76	54	517

Vertical installation (Unit: mm)

	A	C
3kg	634	634
6kg	321	321
8kg	240	240

ABAS08-10

Horizontal installation (Unit: mm)

	A	B	C
30kg	465	83	120
50kg	341	44	65
80kg	228	22	34

Wall installation (Unit: mm)

	A	B	C
30kg	120	83	465
50kg	65	44	341
80kg	34	22	228

Vertical installation (Unit: mm)

	A	C
5kg	551	551
10kg	270	270
20kg	129	129

ABAS08-5

Horizontal installation (Unit: mm)

	A	B	C
30kg	1604	95	153
50kg	1035	52	83
80kg	719	27	44
100kg	608	19	31

Wall installation (Unit: mm)

	A	B	C
30kg	153	95	1604
50kg	83	52	1035
80kg	44	27	719
100kg	31	19	608

Vertical installation (Unit: mm)

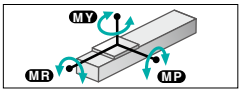
	A	C
10kg	312	312
20kg	149	149
30kg	95	95

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.
Note. Service life is calculated for 600mm stroke models.

Controller

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

Static loading moment



(Unit: N·m)

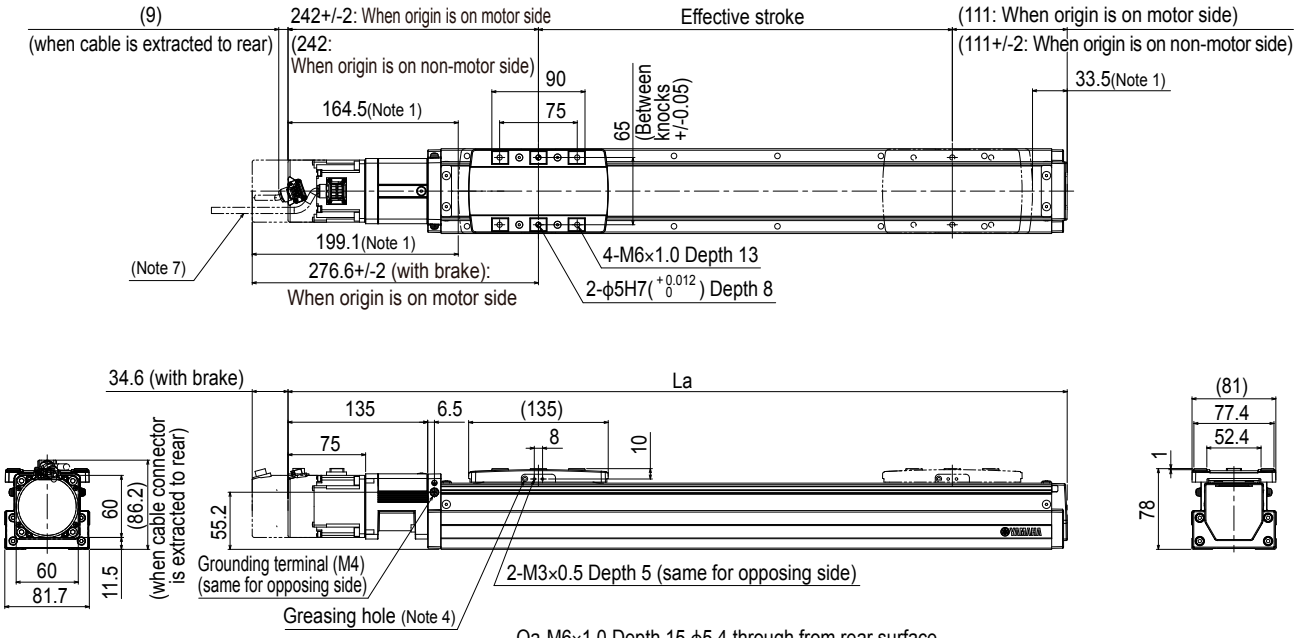
MY	MP	MR
221	309	343

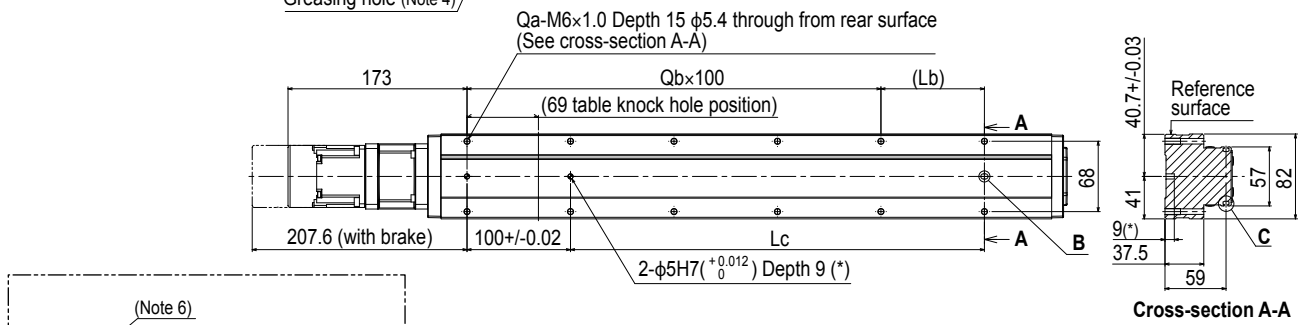
Access the website below.

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

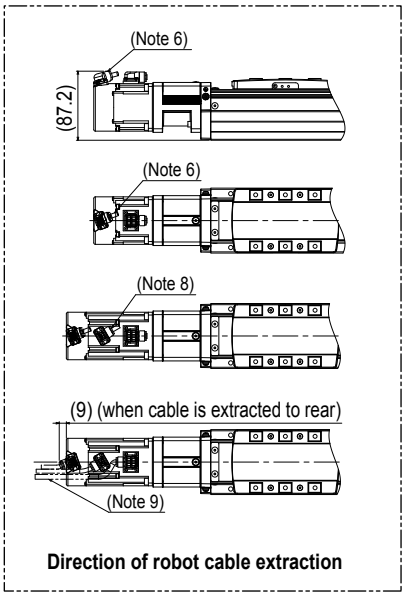
Controller EP-01 ▶ 146

ABAS08 Straight type (S)

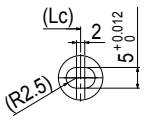




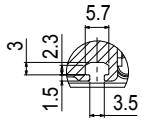
Cross-section A-A



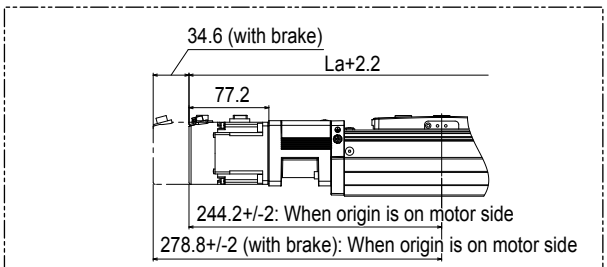
Direction of robot cable extraction



Detailed drawing B



Detailed drawing C

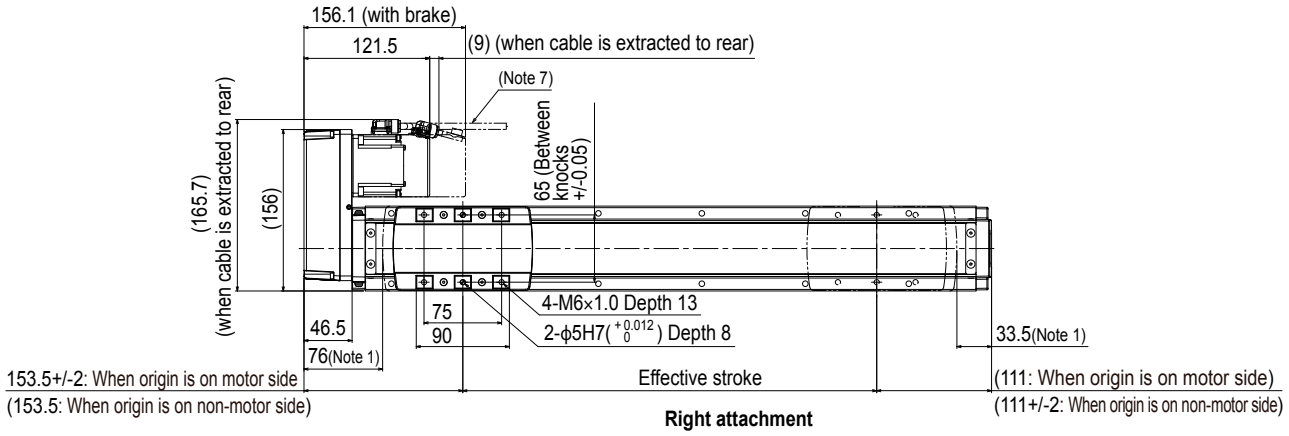


Battery-less absolute axis specification

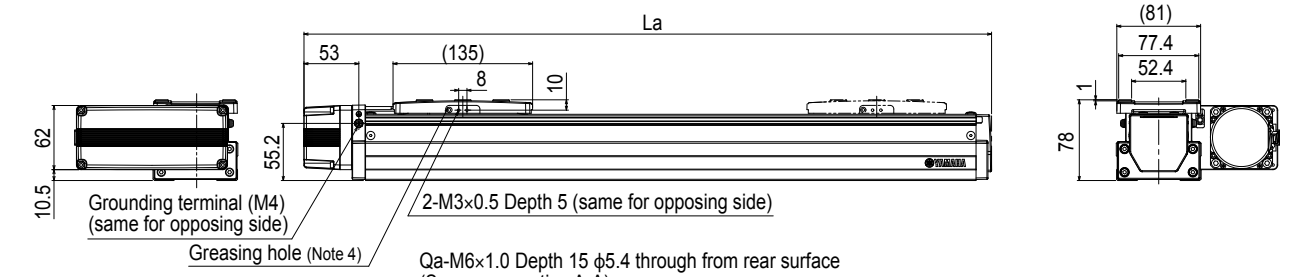
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
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.

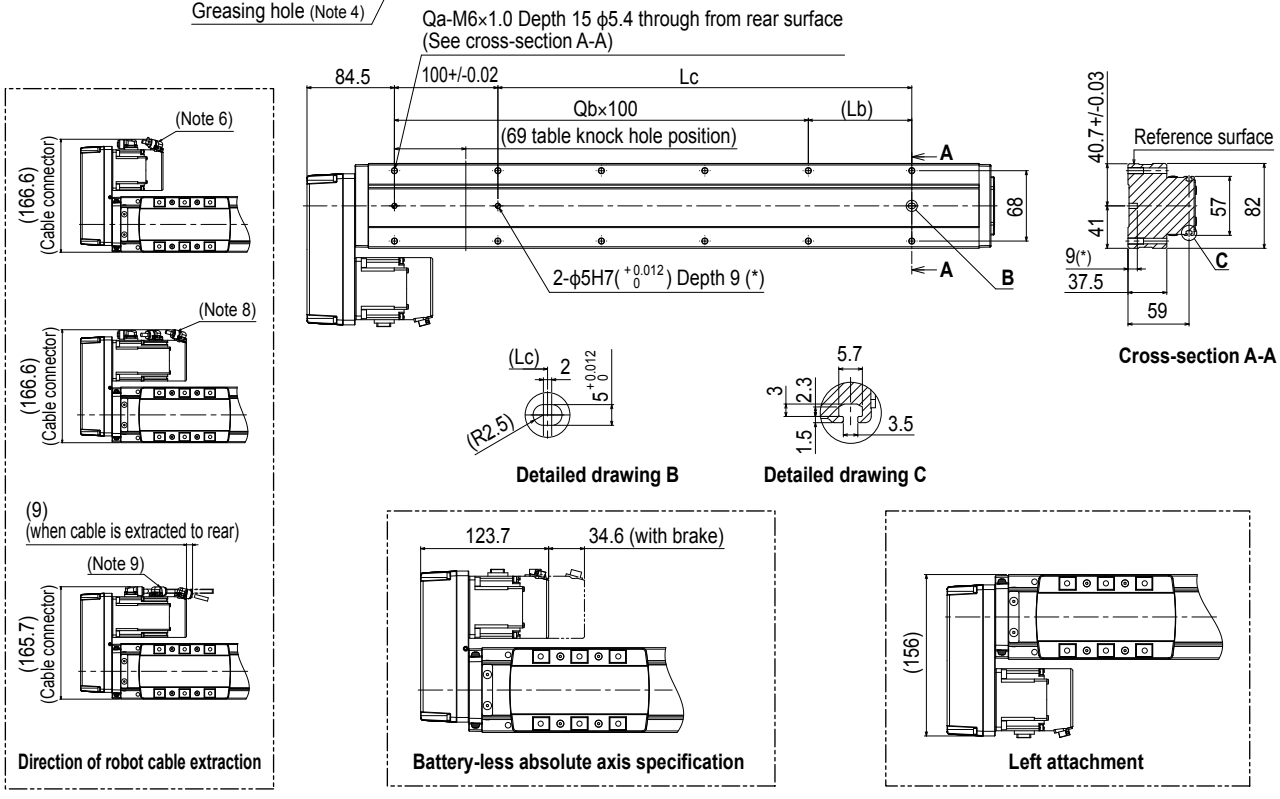
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
La		403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153	1203	1253	1303	1353	1403	1453
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
Weight (kg) Note 5		4.5	4.9	5.3	5.6	6	6.3	6.6	7	7.3	7.6	8	8.3	8.7	9	9.3	9.6	10	10.2	10.6	10.9	11.3	11.7
Maximum speed (mm/sec)	Lead 20	1200													1020	900	780	660	600	540	480	420	360
	Lead 10	600													510	450	390	330	300	270	240	210	180
	Lead 5	300													255	225	195	165	150	135	120	105	90
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%

ABAS08 Bending type (R/L)



Right attachment





Cross-section A-A

Detailed drawing B

Detailed drawing C

Direction of robot cable extraction

Battery-less absolute axis specification

Left attachment

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. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00
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.

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		314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
Weight (kg) Note 5		4.9	5.3	5.7	6	6.4	6.7	7	7.4	7.7	8	8.4	8.7	9.1	9.4	9.7	10	10.4	10.6	11	11.3	11.7	12.1
Maximum speed (mm/sec)	Lead 20	1200													1020	900	780	660	600	540	480	420	360
	Lead 10	600													510	450	390	330	300	270	240	210	180
	Lead 5	300													255	225	195	165	150	135	120	105	90
	Speed setting	–													85%	75%	65%	55%	50%	45%	40%	35%	30%

ABAS12/ABAS12H

Basic model **Single-axis robots**
Slider type **Slim type**

Ordering method

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
ABAS12: 200W ABAS12H: 400W	32: 32 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	50 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: 200W or less 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. [For ABAS12]
When the actuator is used vertically and the stroke of lead 5, 10, or 20 is 150 mm or more or the stroke of lead 32 is 300 to 750 mm, the regenerative unit is needed.
When the actuator is used horizontally and the stroke of lead 10 or 20 is 250 to 750 mm or the stroke of lead 32 is 400 to 750 mm, the regenerative unit is needed.
[For ABAS12H]
When the actuator is used vertically and the stroke of lead 5, 10, or 20 is 300 mm or more or the stroke of lead 32 is 300 to 750 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.

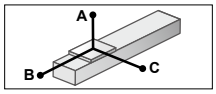
ABAS12 (200W)

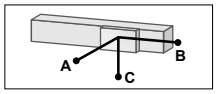
Specifications

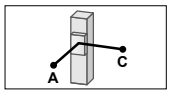
AC servo motor output		200 W			
Repeatability Note 1		+/-0.01 mm			
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)			
Stroke		50 mm to 1250 mm (50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		32 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	20 kg	40 kg	80 kg	100 kg
	Vertical	3 kg	8 kg	20 kg	30 kg
Rated thrust		105 N	170 N	341 N	683 N
Maximum dimensions of cross section of main unit		W 120 mm × H 76 mm			
Overall length	Straight	ST + 369 mm			
	Bending	ST + 270.5 mm			
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. See P.111 for acceleration/deceleration.

Allowable overhang Note







ABAS12-32

Horizontal installation (Unit: mm)	A	B	C
5kg	2079	1694	1224
10kg	1135	834	627
20kg	842	422	362

Wall installation (Unit: mm)	A	B	C
5kg	1224	1694	2079
10kg	627	834	1135
20kg	362	422	842

Vertical installation (Unit: mm)	A	C
1kg	6201	6201
3kg	2057	2057

ABAS12-20

Horizontal installation (Unit: mm)	A	B	C
15kg	946	548	445
25kg	591	321	266
40kg	441	205	182

Wall installation (Unit: mm)	A	B	C
15kg	445	548	946
25kg	266	321	591
40kg	182	205	441

Vertical installation (Unit: mm)	A	C
3kg	2174	2174
5kg	1315	1315
8kg	833	833

ABAS12-10

Horizontal installation (Unit: mm)	A	B	C
30kg	729	299	278
50kg	786	207	223
80kg	1328	157	200

Wall installation (Unit: mm)	A	B	C
30kg	278	299	729
50kg	223	207	786
80kg	200	157	1328

Vertical installation (Unit: mm)	A	C
5kg	1933	1933
10kg	977	977
20kg	503	503

ABAS12-5

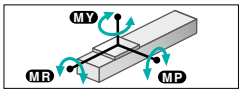
Horizontal installation (Unit: mm)	A	B	C
30kg	2476	430	513
50kg	1817	258	320
80kg	1517	160	208
100kg	1436	127	168

Wall installation (Unit: mm)	A	B	C
30kg	513	430	2476
50kg	320	258	1817
80kg	208	160	1517
100kg	168	127	1436

Vertical installation (Unit: mm)	A	C
10kg	1317	1317
20kg	670	670
30kg	455	455

Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.
Note. Service life is calculated for 600mm stroke models.

Static loading moment



(Unit: N·m)

MY	MP	MR
573	606	606

Controller

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

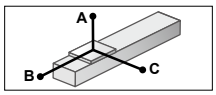
ABAS12H (400W)

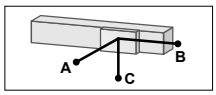
Specifications

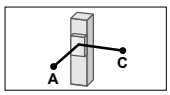
AC servo motor output		400 W			
Ball screw lead		32 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	35 kg	50 kg	95 kg	115 kg
	Vertical	8 kg	15 kg	25 kg	40 kg
Rated thrust		218 N	339 N	678 N	1360 N
Overall length	Straight	ST + 385 mm			
	Bending	ST + 270.5 mm			

Note. See P.113 for acceleration/deceleration.
Note. The specifications and static loading moment, etc. not described here are common to ABAS12.

Allowable overhang Note







ABAS12H-32

Horizontal installation (Unit: mm)	A	B	C
10kg	1135	834	627
20kg	842	422	362
35kg	925	286	294

Wall installation (Unit: mm)	A	B	C
10kg	627	834	1135
20kg	362	422	842
35kg	294	286	925

Vertical installation (Unit: mm)	A	C
3kg	2057	2057
5kg	1228	1228
8kg	762	833

ABAS12H-20

Horizontal installation (Unit: mm)	A	B	C
15kg	826	548	427
30kg	485	263	218
50kg	433	172	162

Wall installation (Unit: mm)	A	B	C
15kg	427	548	826
30kg	218	263	485
50kg	162	172	433

Vertical installation (Unit: mm)	A	C
5kg	1315	1315
10kg	672	672
15kg	522	660

ABAS12H-10

Horizontal installation (Unit: mm)	A	B	C
30kg	528	270	230
60kg	665	171	185
95kg	1347	132	173

Wall installation (Unit: mm)	A	B	C
30kg	230	270	528
60kg	185	171	665
95kg	173	132	1347

Vertical installation (Unit: mm)	A	C
5kg	1933	1933
15kg	660	660
25kg	409	541

ABAS12H-5

Horizontal installation (Unit: mm)	A	B	C
30kg	2476	430	513
60kg	1672	215	270
90kg	1474	141	186
115kg	1378	109	146

Wall installation (Unit: mm)	A	B	C
30kg	513	430	2476
60kg	270	215	1672
90kg	186	141	1474
115kg	146	109	1378

Vertical installation (Unit: mm)	A	C
15kg	885	885
25kg	541	541
40kg	350	350

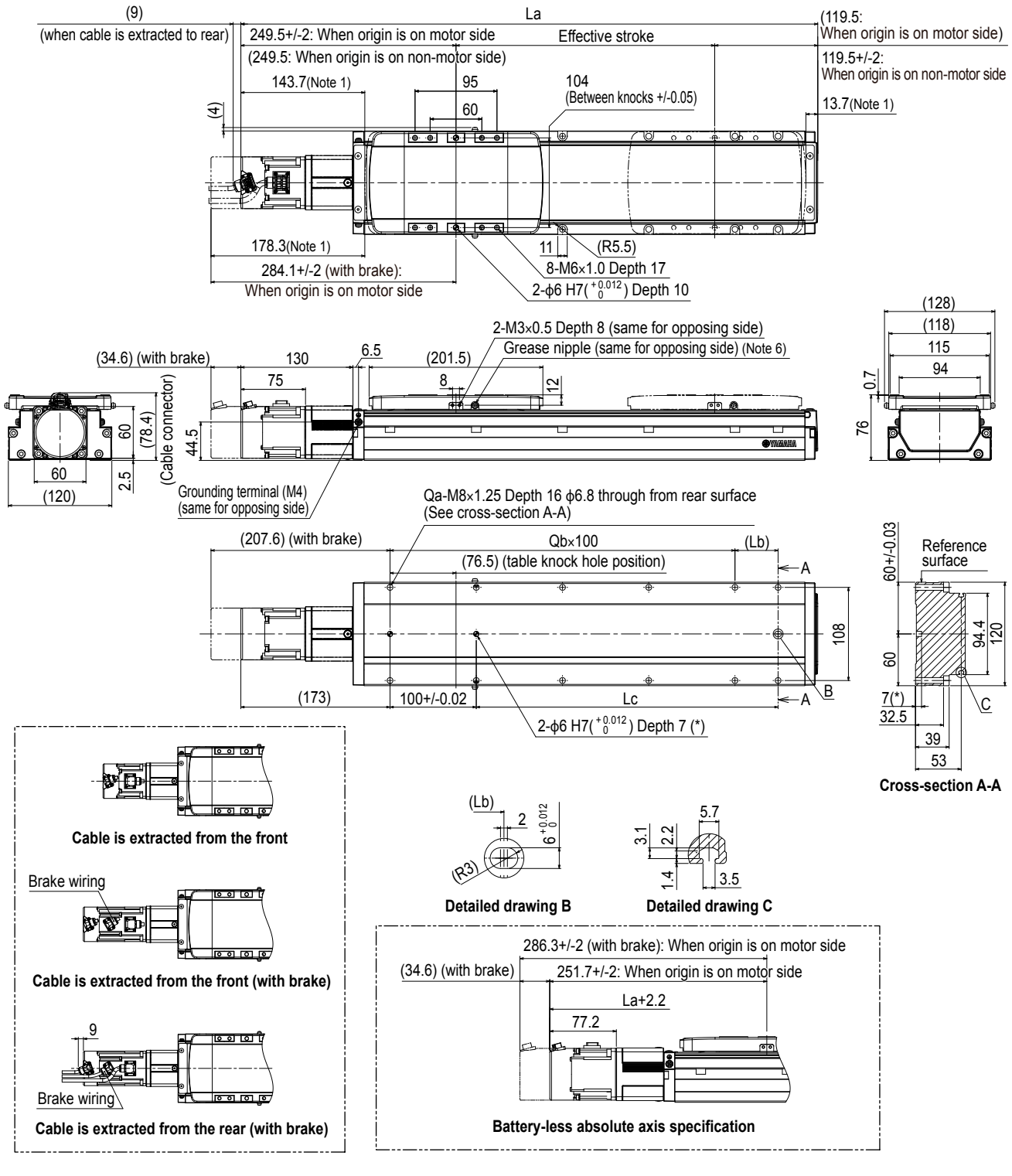
Note. Distance from center of slider upper surface to carrier center-of-gravity at a guide service life of 10,000 km.
Note. Service life is calculated for 600mm stroke models.

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

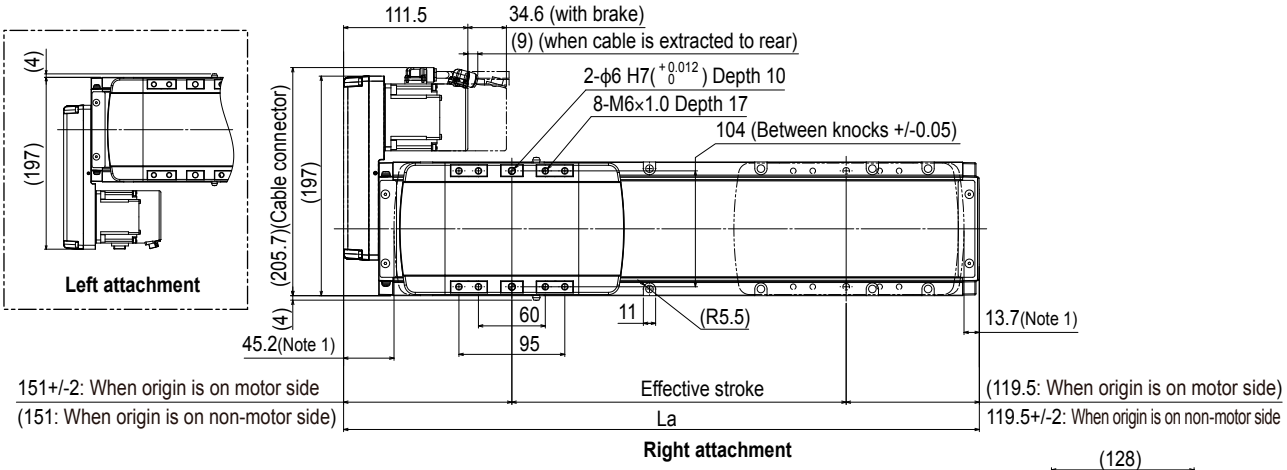
ABAS12 Straight type (S)

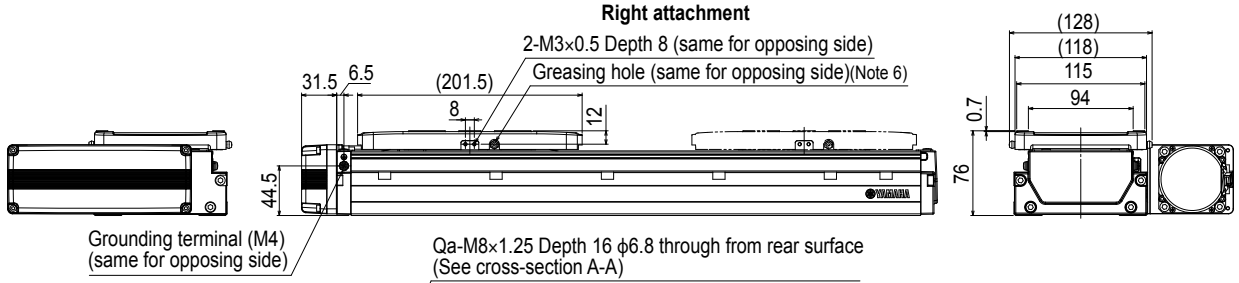


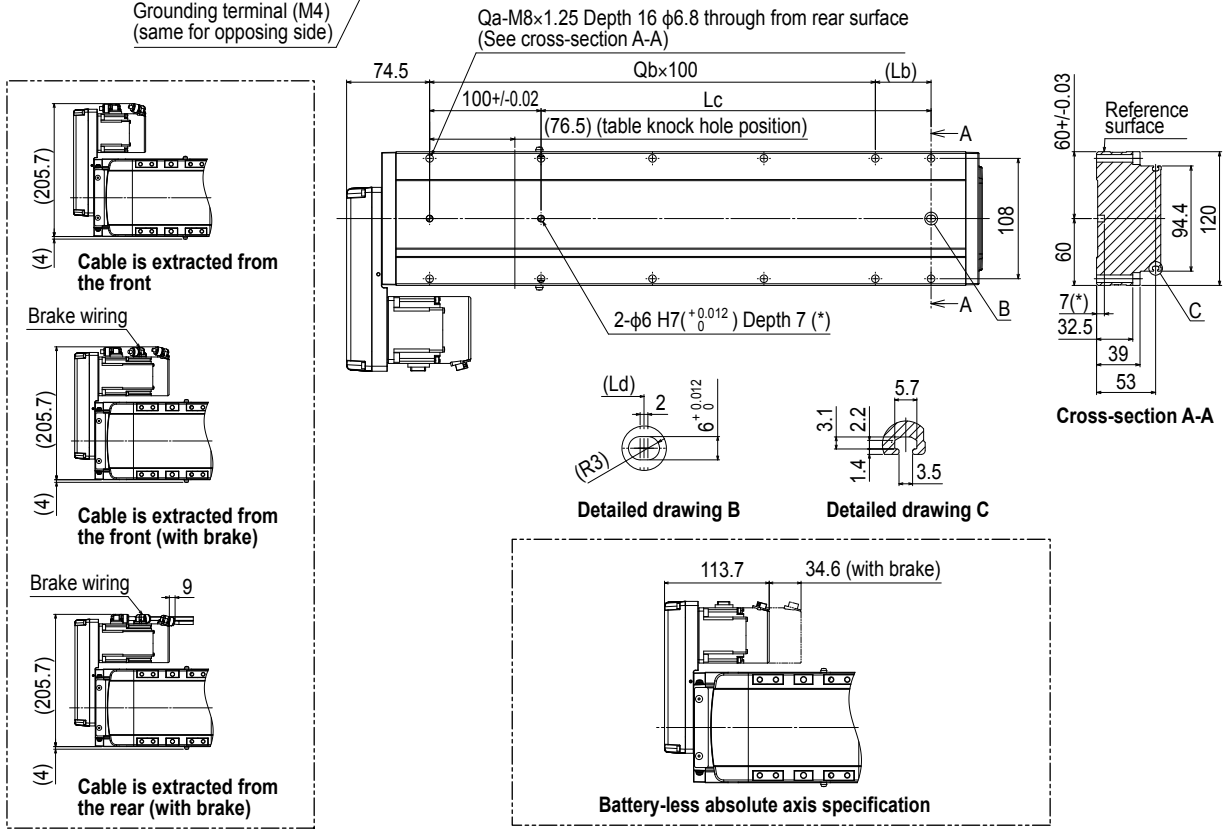
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head <<thickness of stand +16 mm or less>> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. 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	1150	1200	1250
La		419	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569	1619
Lb		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
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
Qa		6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4		5.3	5.7	6.1	6.5	6.9	7.3	7.7	8.1	8.5	8.9	9.4	9.8	10.2	10.7	11.1	11.5	12	12.4	12.9	13.3	13.7	14.2	14.6	15.1	15.5
Maximum speed (mm/sec)	Lead 32	1800												1620	1440	1260	1080	990	810	720	630	630	540	450	360	360
	Lead 20	1200												1080	960	840	720	660	540	480	420	420	360	300	240	240
	Lead 10	600												540	480	420	360	330	270	240	210	210	180	150	120	120
	Lead 5	300												270	240	210	180	165	135	120	105	105	90	75	60	60
	Speed setting	–												90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%

ABAS12 Bending type (R/L)





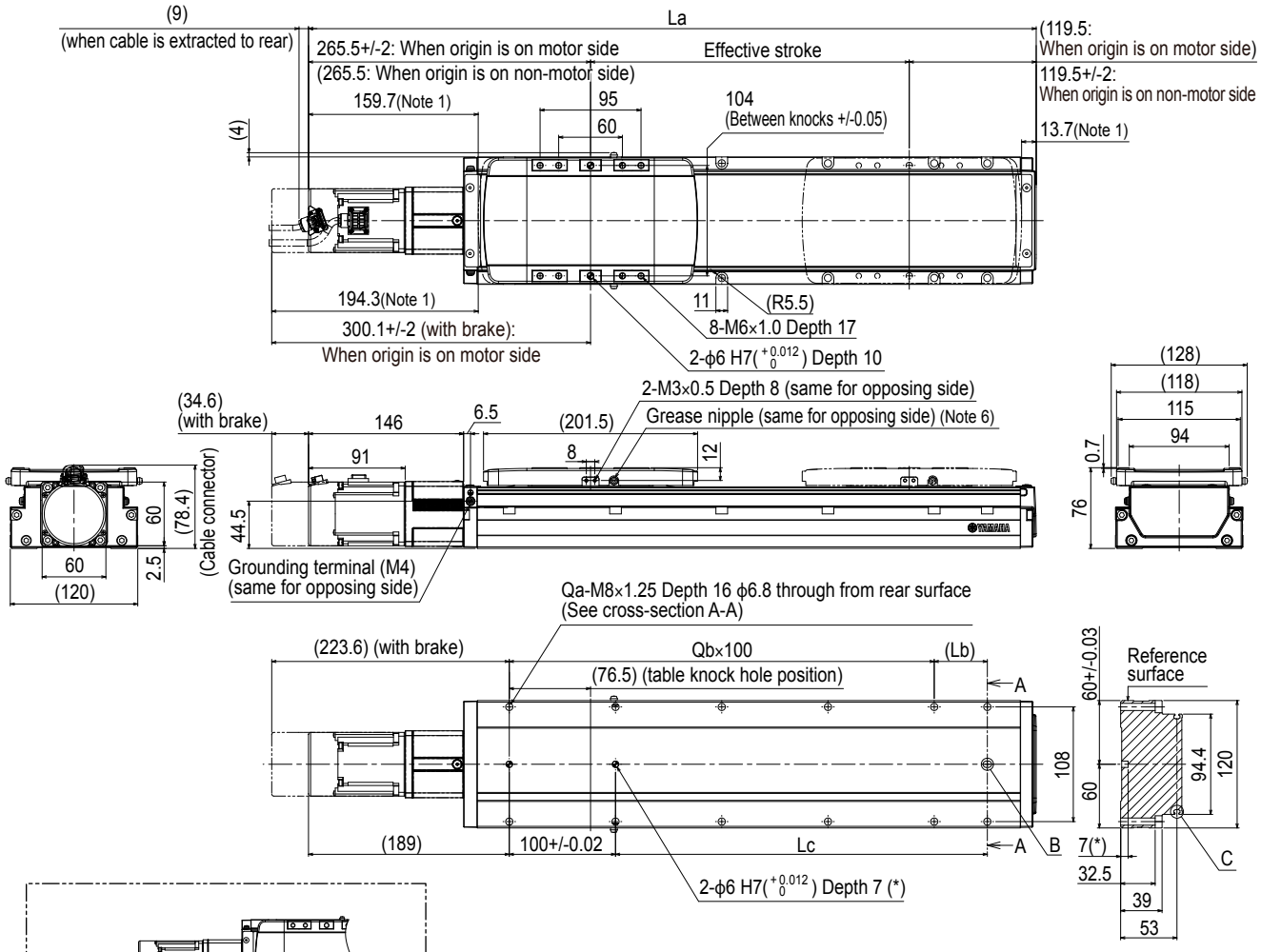


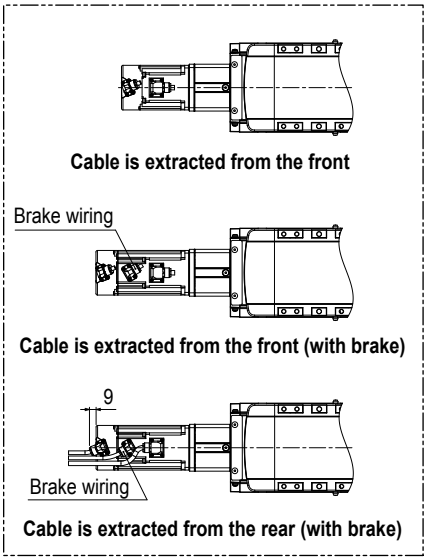
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head <<thickness of stand +16 mm or less>> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)

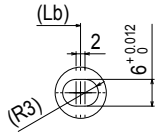
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
Lb		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
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
Qa		6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4		5.3	5.7	6.1	6.5	6.9	7.3	7.7	8.1	8.5	9	9.4	9.9	10.3	10.7	11.2	11.6	12	12.5	12.9	13.4	13.8	14.2	14.7	15.1	15.6
Maximum speed (mm/sec)	Lead 32	1800												1620	1440	1260	1080	990	810	720	630	630	540	450	360	360
	Lead 20	1200												1080	960	840	720	660	540	480	420	420	360	300	240	240
	Lead 10	600												540	480	420	360	330	270	240	210	210	180	150	120	120
	Lead 5	300												270	240	210	180	165	135	120	105	105	90	75	60	60
	Speed setting	–												90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%

Features
Motorless Slidertype Basic model LBAS
Motorless Slidertype Advanced model LGXS
Motorless Rodtype Basic model LBAR
With motor Slidertype Basic model ABAS
With motor Slidertype Advanced model AGXS
With motor Rodtype Basic model ABAR
Acceleration/Deceleration Inertia Moment
Option
Single-axis Robot positioner EP-01

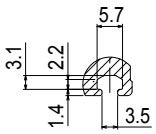
ABAS12H Straight type (S)



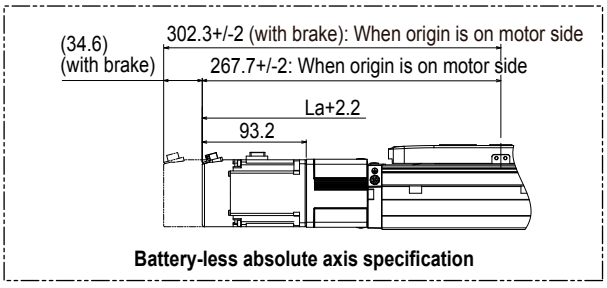




Detailed drawing B



Detailed drawing C

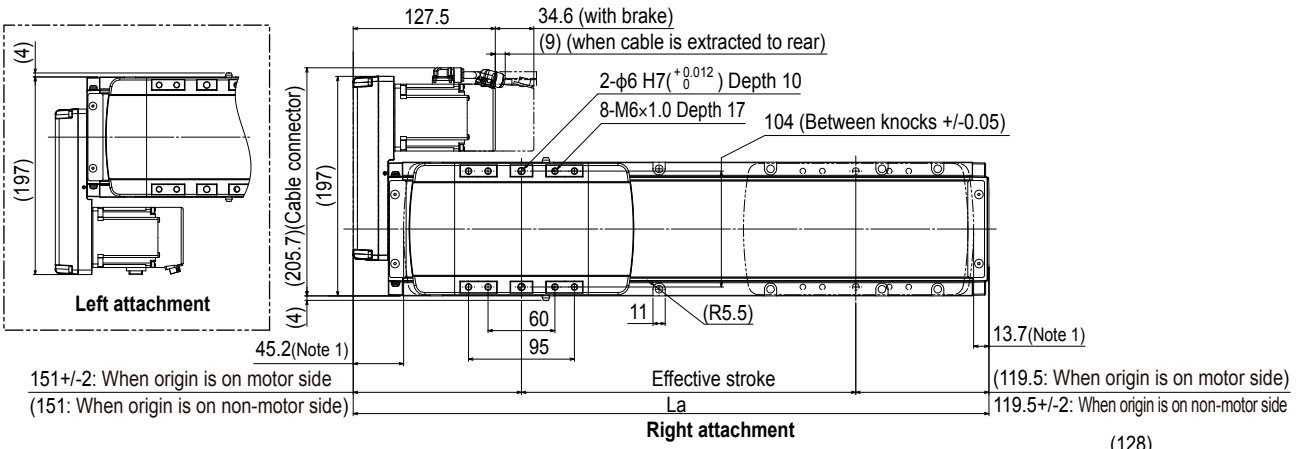


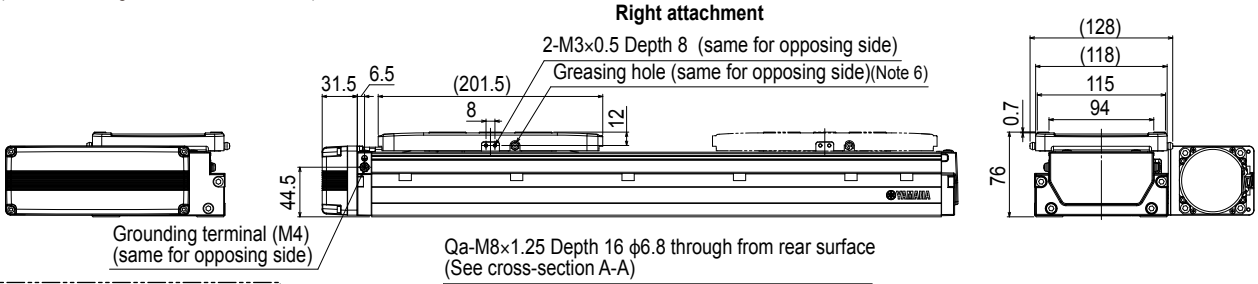
Battery-less absolute axis specification

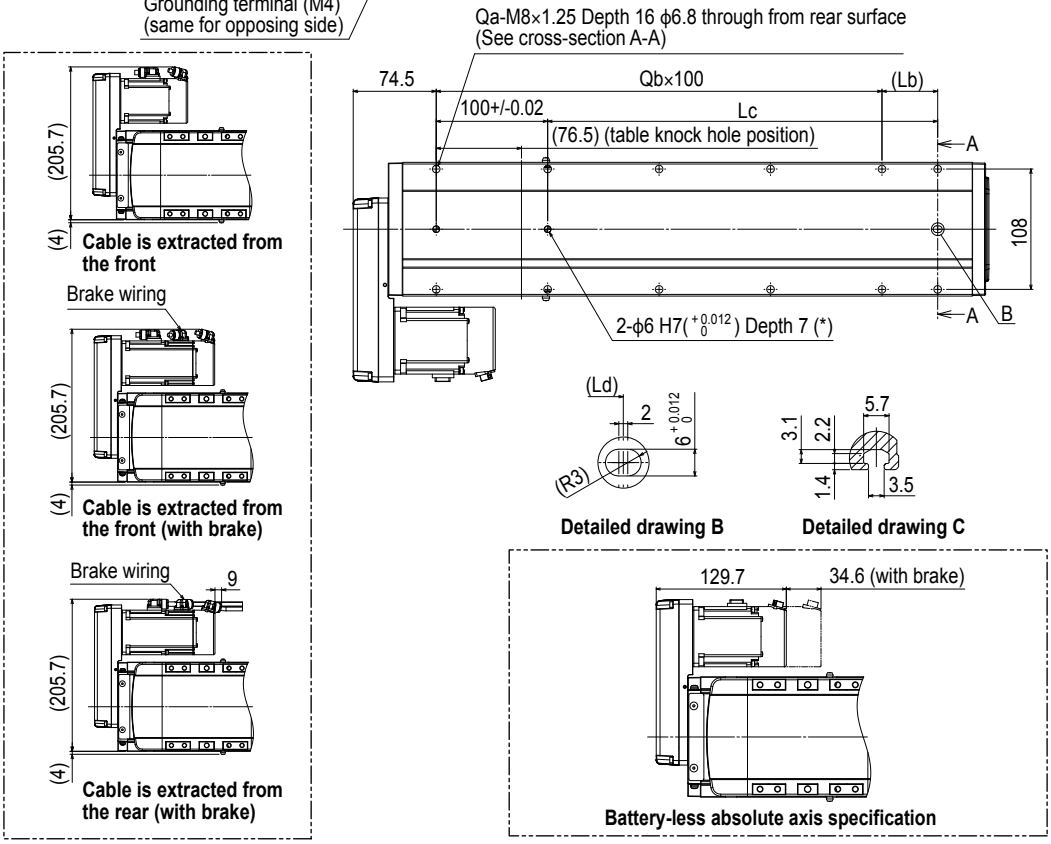
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head <<thickness of stand +16 mm or less>> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)

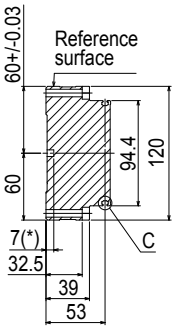
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435	1485	1535	1585	1635
Lb		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
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
Qa		6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4		5.6	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.2	9.7	10.1	10.5	11	11.4	11.8	12.3	12.7	13.2	13.6	14	14.5	14.9	15.4	15.8
Maximum speed (mm/sec)	Lead 32	1800												1620	1440	1260	1080	990	810	720	630	630	540	450	360	360
	Lead 20	1200												1080	960	840	720	660	540	480	420	420	360	300	240	240
	Lead 10	600												540	480	420	360	330	270	240	210	210	180	150	120	120
	Lead 5	300												270	240	210	180	165	135	120	105	105	90	75	60	60
	Speed setting	–												90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%

ABAS12H Bending type (R/L)









Cross-section A-A

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. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M6 × 1.0>. In the installation tap hole, the length under head <<thickness of stand +16 mm or less>> is recommended for the hex socket head bolts <M8 × 1.25> used to install the main unit.
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. 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	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	1520.5
Lb		100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
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
Qa		6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
Qb		1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
Weight (kg) Note 4		5.6	6	6.4	6.8	7.2	7.6	8	8.4	8.8	9.3	9.7	10.2	10.6	11	11.5	11.9	12.3	12.8	13.2	13.7	14.1	14.5	15	15.4	15.9
Maximum speed (mm/sec)	Lead 32	1800												1620	1440	1260	1080	990	810	720	630	630	540	450	360	360
	Lead 20	1200												1080	960	840	720	660	540	480	420	420	360	300	240	240
	Lead 10	600												540	480	420	360	330	270	240	210	210	180	150	120	120
	Lead 5	300												270	240	210	180	165	135	120	105	105	90	75	60	60
	Speed setting	–												90%	80%	70%	60%	55%	45%	40%	35%	35%	30%	25%	20%	20%

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

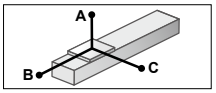
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 550 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the motor specification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

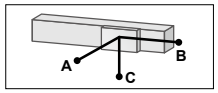
Specifications

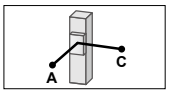
AC servo motor output		50 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 12 (C5 class)		
Stroke		50 mm to 800 mm(50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	Horizontal	5 kg	8 kg	13 kg
	Vertical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

AGXS05-5

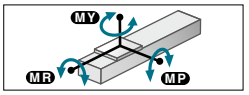
Horizontal installation (Unit: mm)			
	A	B	C
3kg	4604	281	497
8kg	2197	101	179
13kg	1593	59	105

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

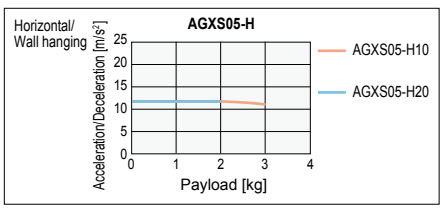
Vertical installation (Unit: mm)		
	A	C
1kg	396	396
2kg	182	182

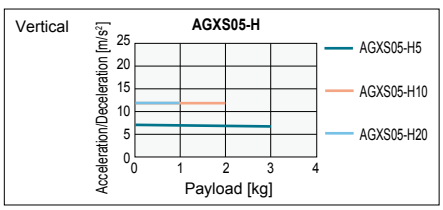
AGXS05-H5

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										

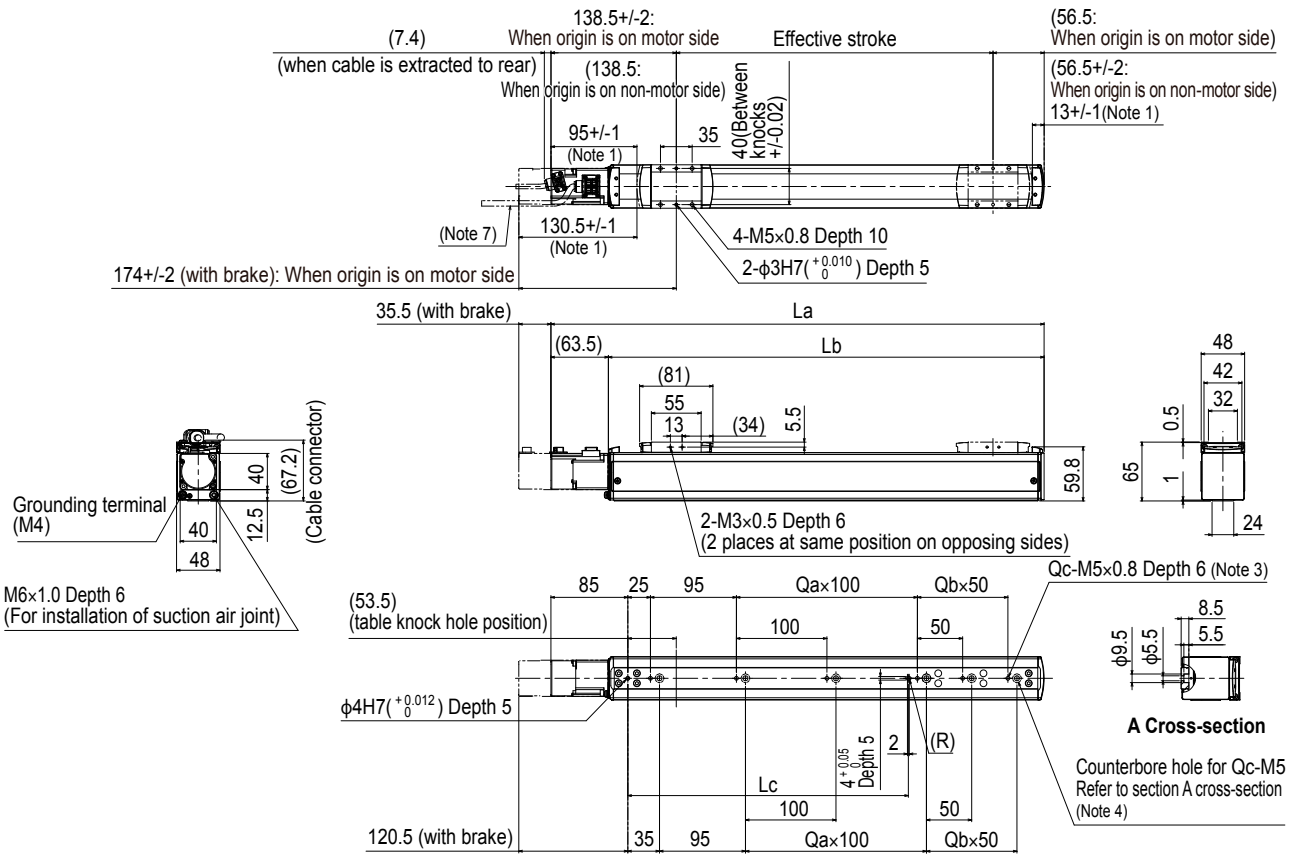
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
The speed may not reach the maximum speed if the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

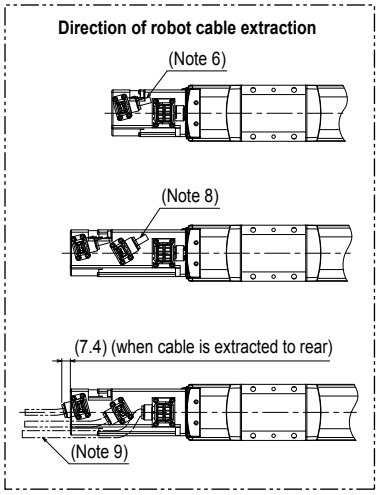
Access the website below.

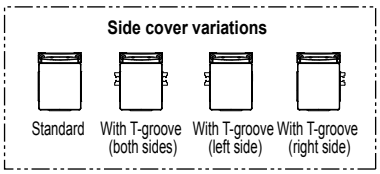
YAMAHA

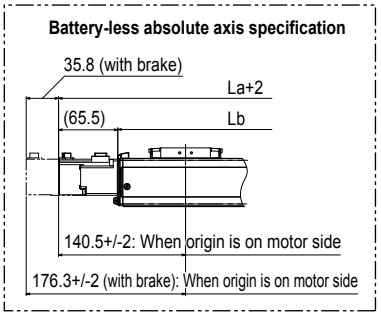
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

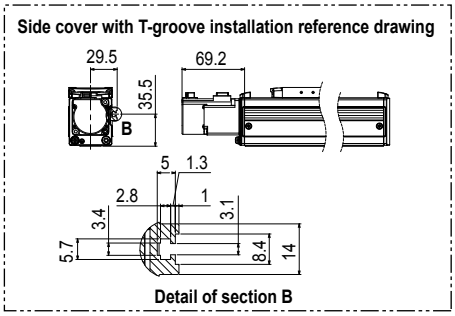
AGXS05 Straight type (S)







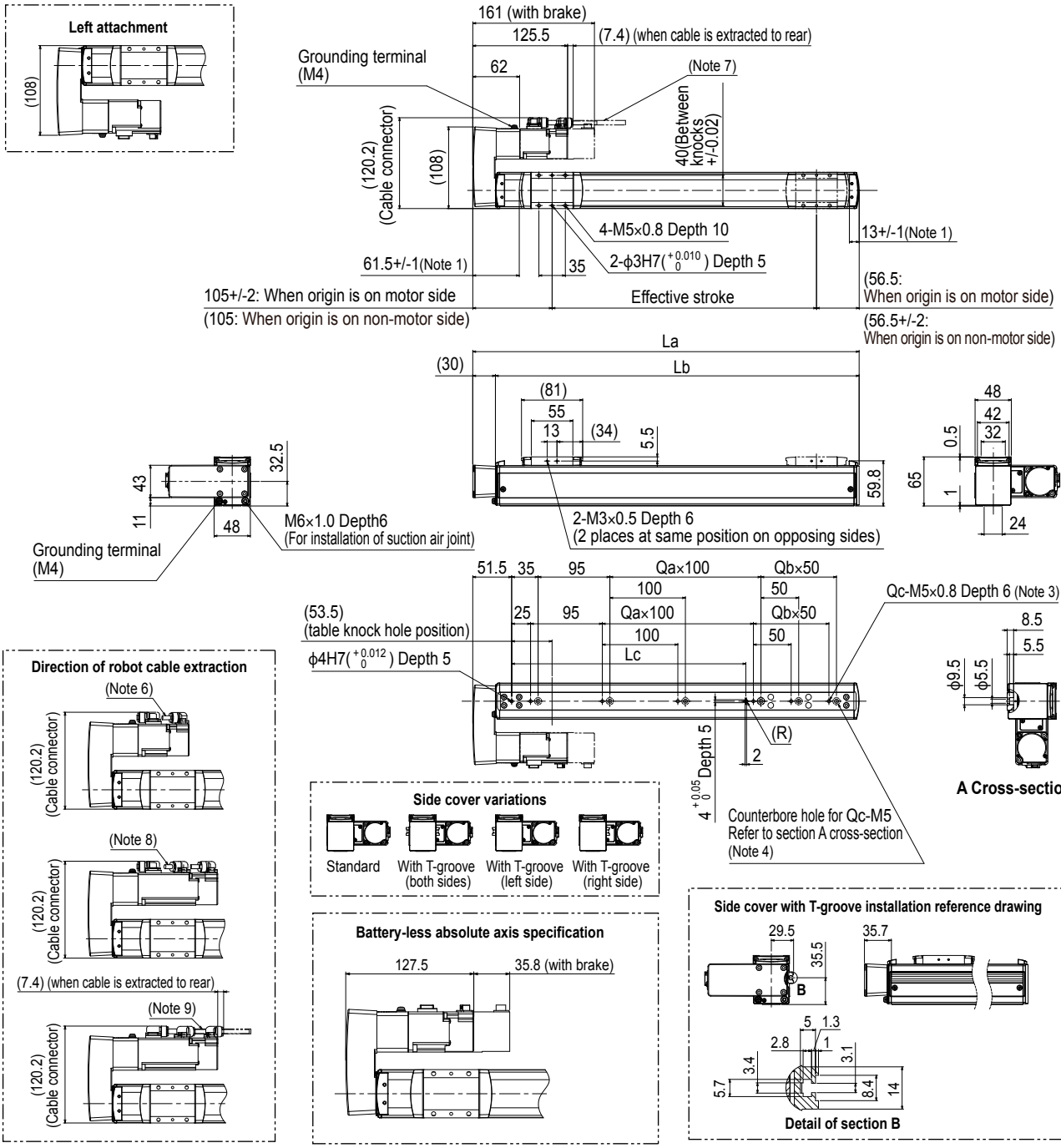




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. When using the tap holes to mount the body, remove the set screws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

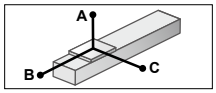
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 550 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is 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.

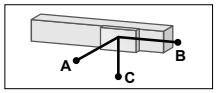
Specifications

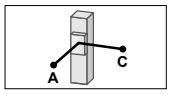
AC servo motor output		100 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 12 (C5 class)		
Stroke		50 mm to 800 mm(50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	Horizontal	12 kg	24 kg	32 kg
	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

AGXS05L-10

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

AGXS05L-5

Horizontal installation (Unit: mm)

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

Wall installation (Unit: mm)

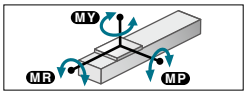
	A	B	C
10kg	162	181	2800
20kg	42	47	1273
32kg	0	0	0

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

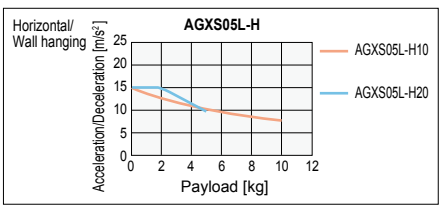
AGXS05L-H5

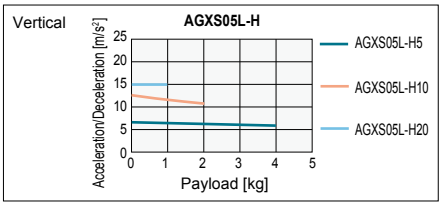
Vertical installation (Unit: mm)

	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										

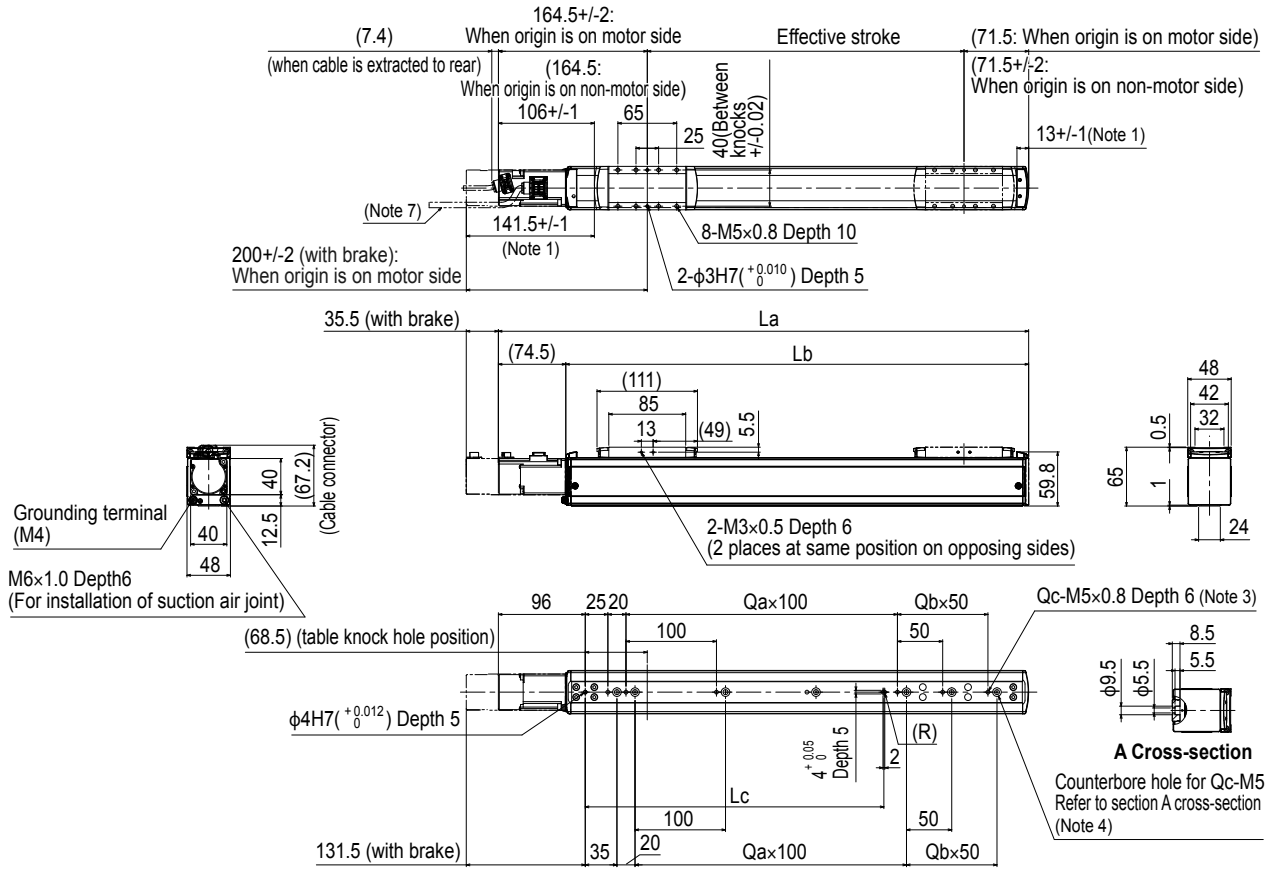
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the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

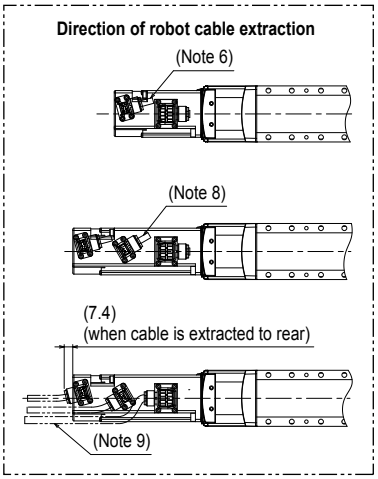
Access the website below.

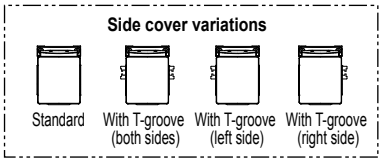
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

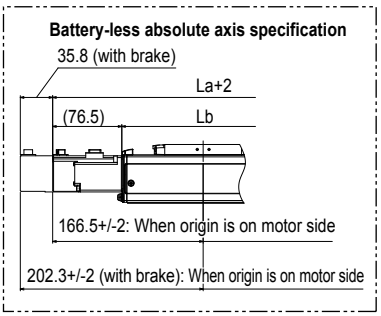
Controller EP-01 ▶ 146

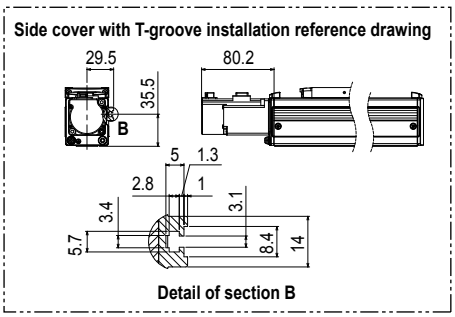
AGXS05L Straight type (S)







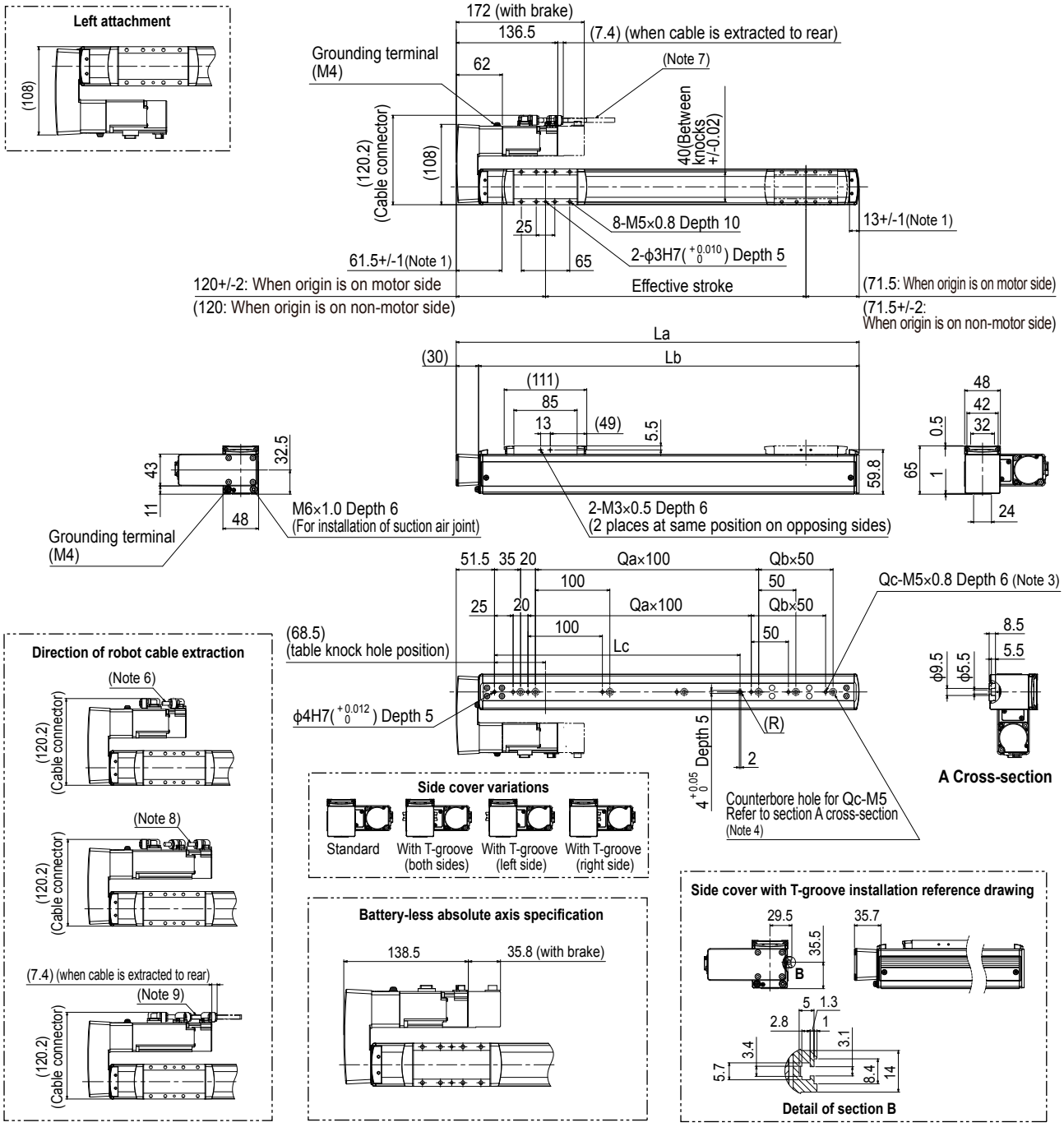




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. When using the tap holes to mount the body, remove the set screws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

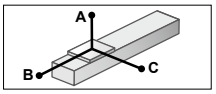
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 50 to 650 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator is 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.

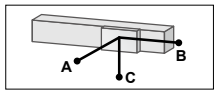
Specifications

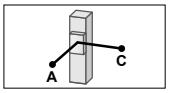
AC servo motor output		100 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		50 mm to 1100 mm(50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	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)

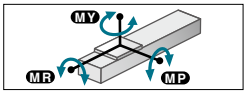
	A	B	C
30kg	122	106	2458
50kg	34	30	1476
85kg	0	0	0

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

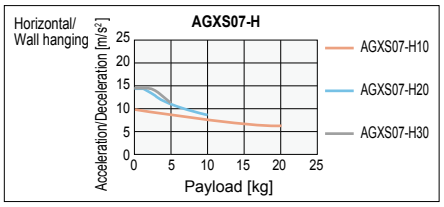
Controller	Operation method
EP-01	I/O point trace/ Remote command

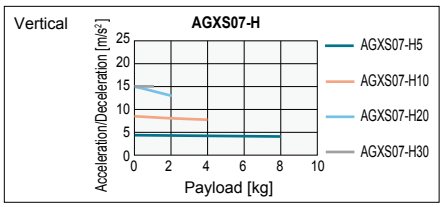
When used with high acceleration or deceleration (High agility mode)

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												

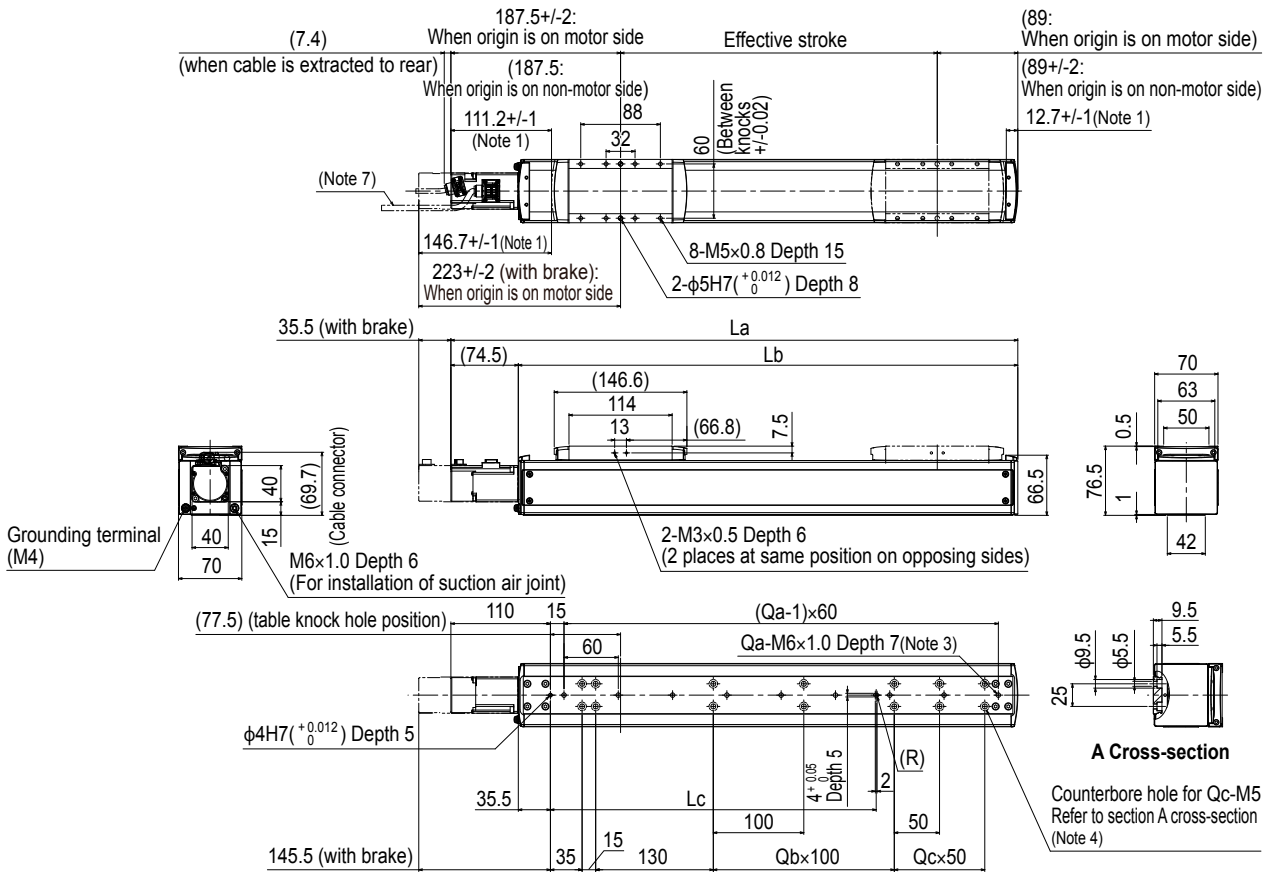
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 50 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the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

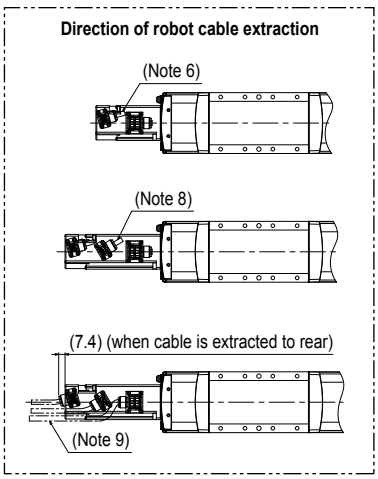
Access the website below.

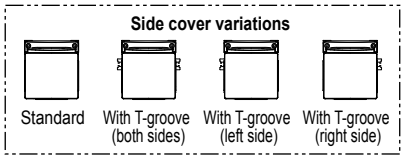
YAMAHA

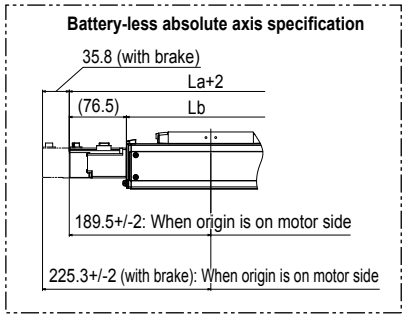
▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.

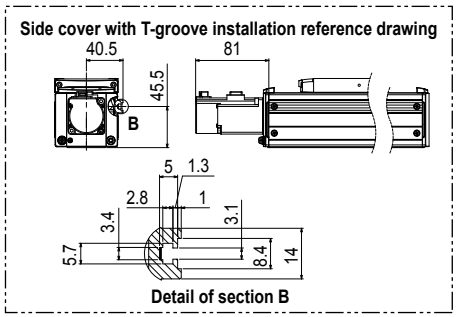
AGXS07 Straight type (S)







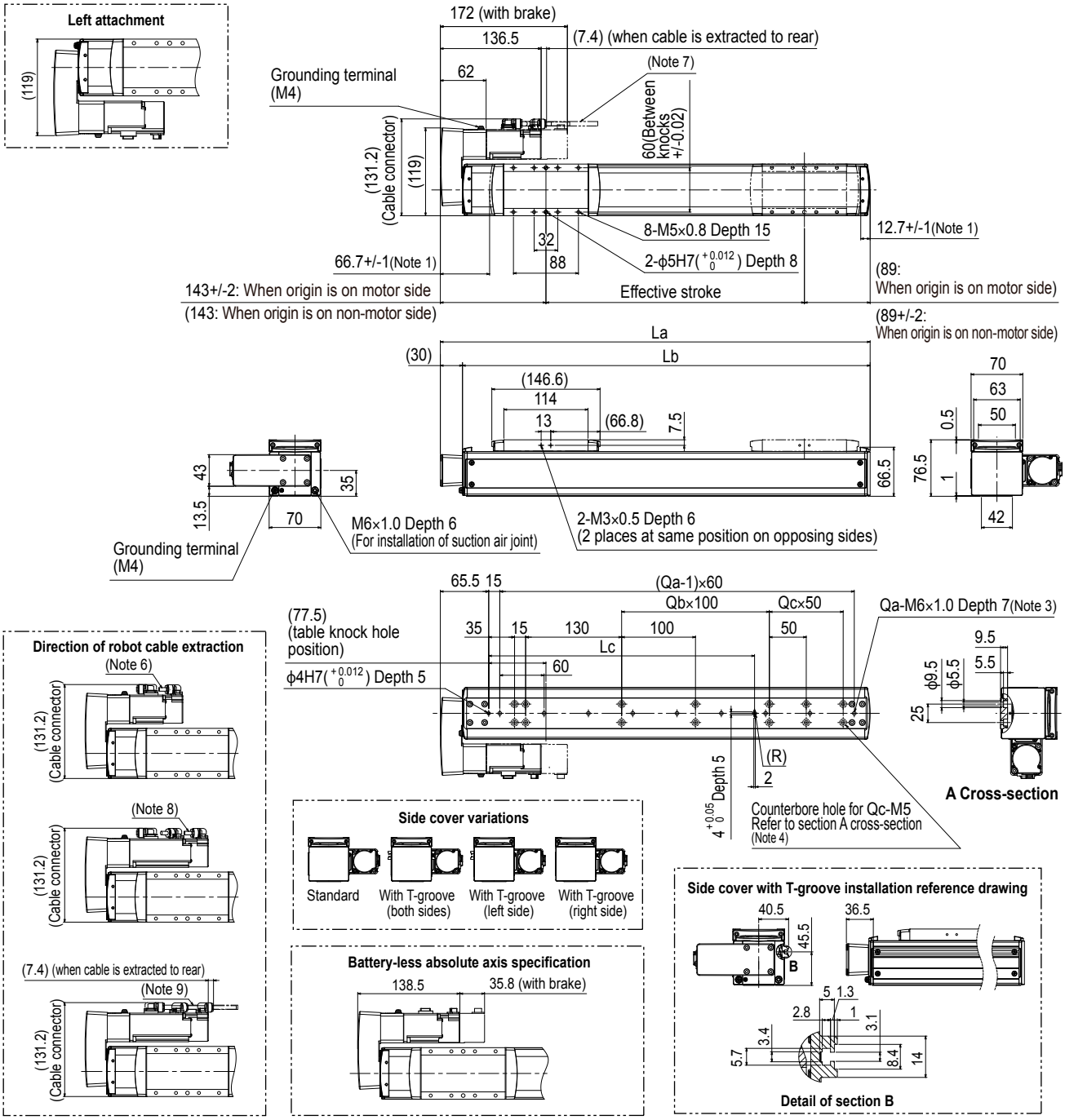




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. When using the tap holes to mount the body, remove the set screws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



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	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

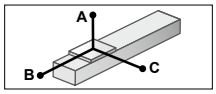
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 650 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator 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.

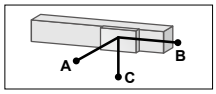
Specifications

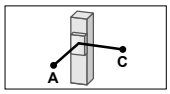
AC servo motor output		200 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		100 mm to 1250 mm(50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	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)

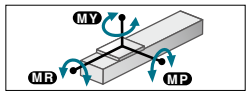
	A	B	C
30kg	181	258	5195
50kg	79	113	3111
80kg	22	31	1557
100kg	0	0	0

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

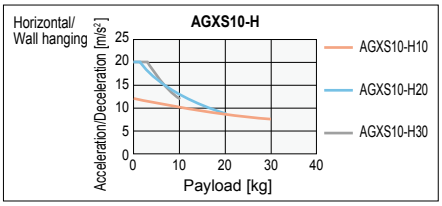
Controller	Operation method
EP-01	I/O point trace/ Remote command

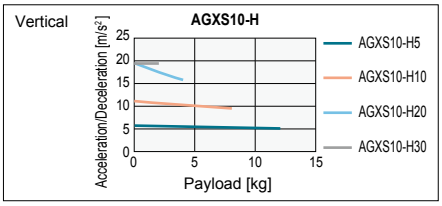
When used with high acceleration or deceleration (High agility mode)

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											

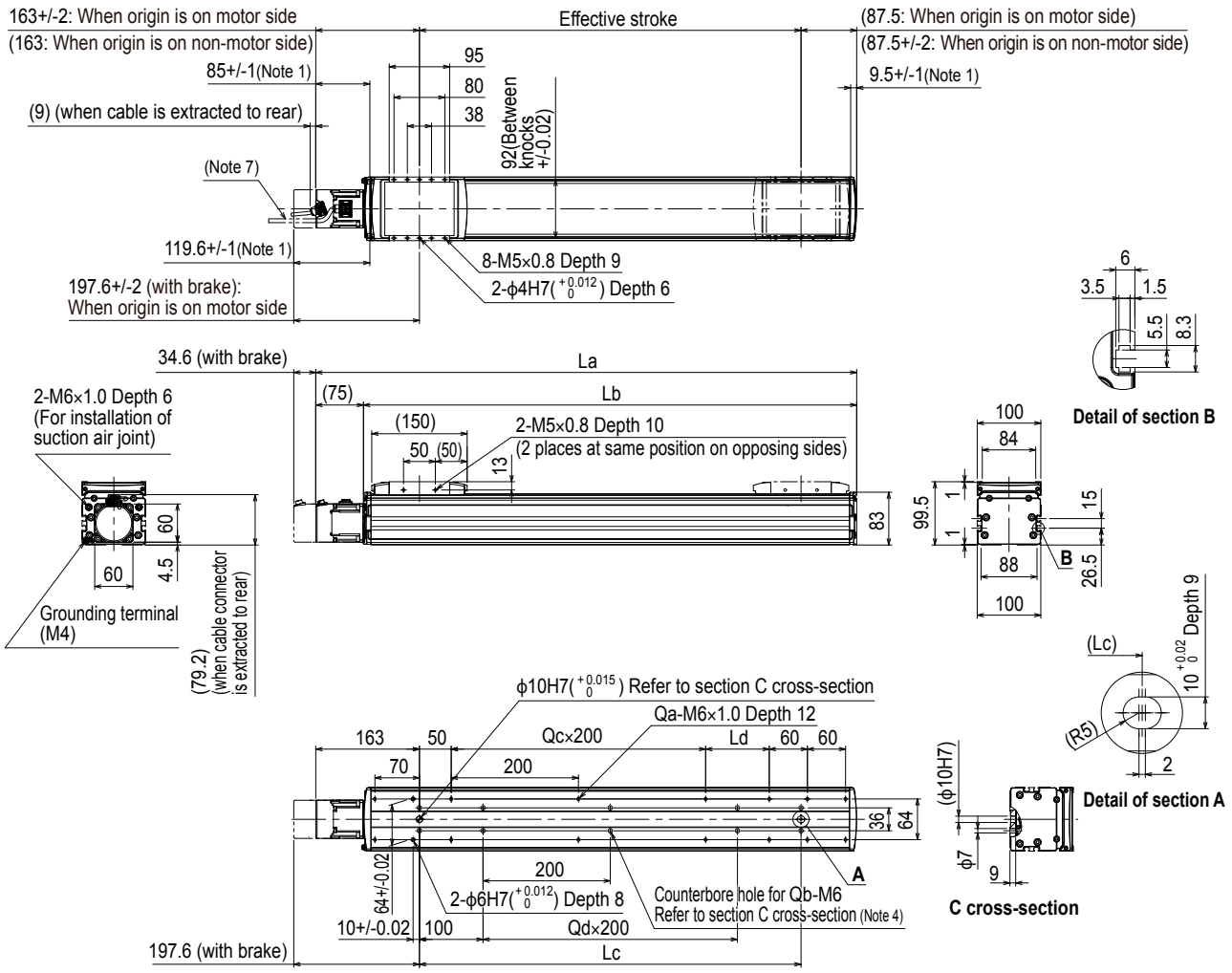
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the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

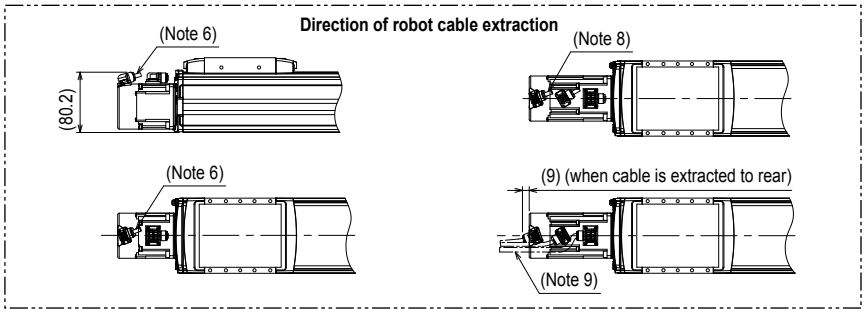
Access the website below.

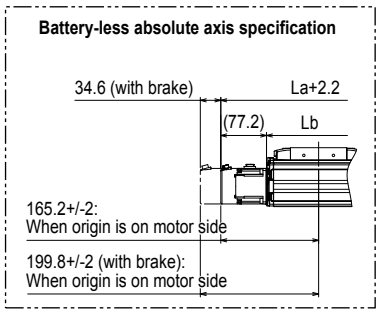
▶ **The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.**

Controller EP-01 ▶ 146

AGXS10 Straight type (S)



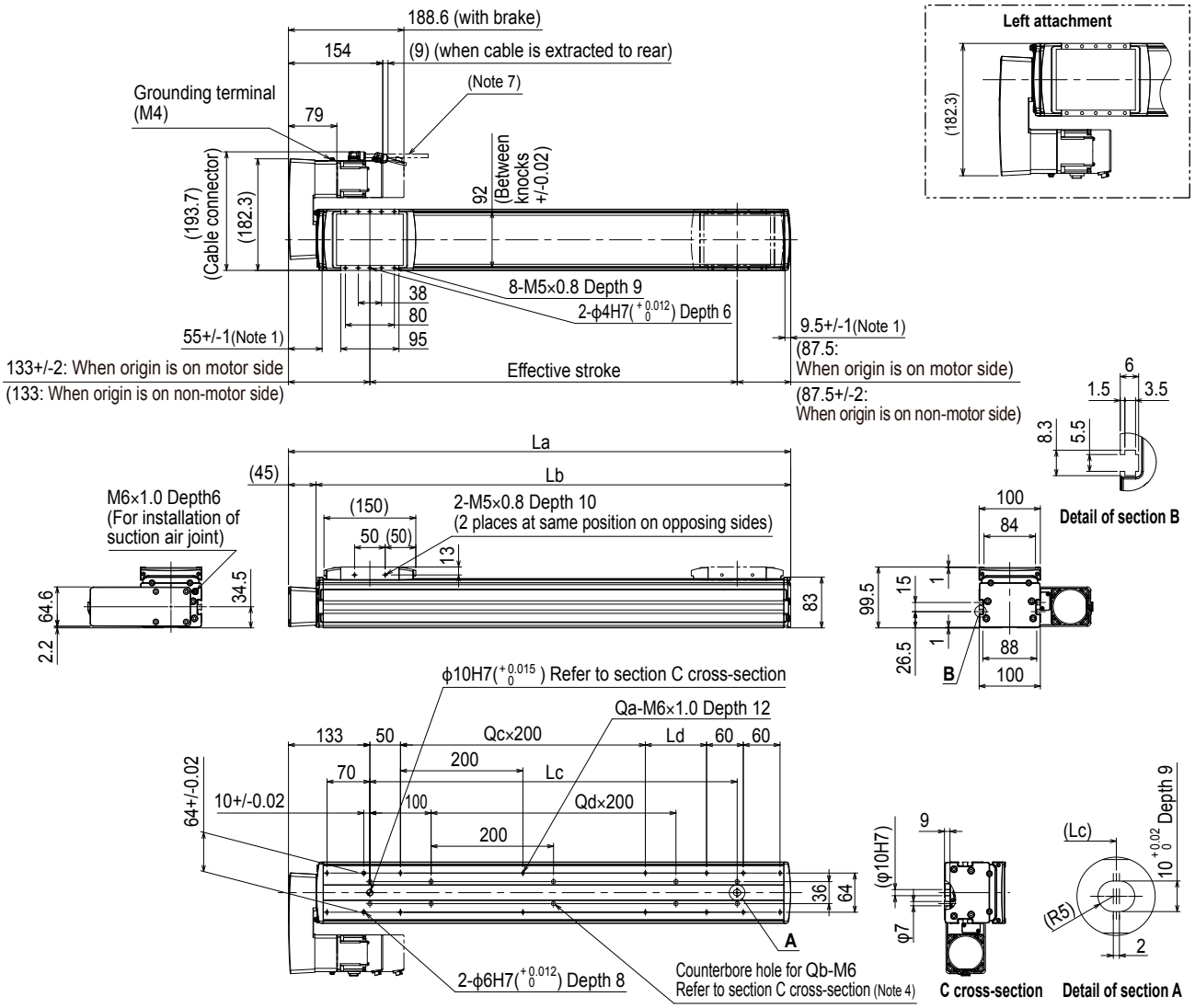


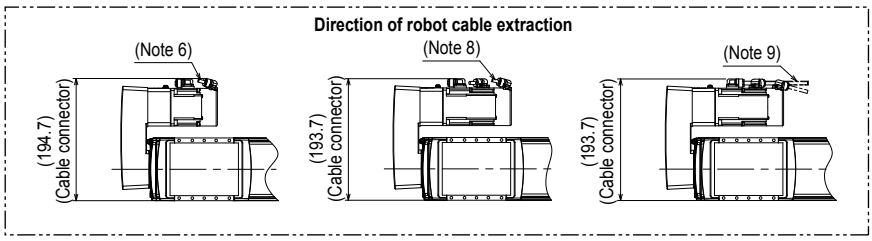


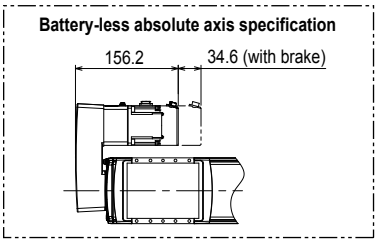
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M6 × 1.0> 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

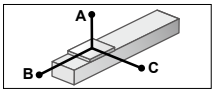
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 650 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator 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.

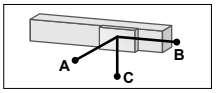
Specifications

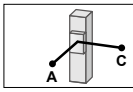
AC servo motor output		400 W			
Repeatability Note 1		+/-0.005 mm			
Deceleration mechanism		Ground ball screw ϕ 15 (C5 class)			
Stroke		100 mm to 1250 mm(50 mm pitch)			
Maximum speed Note 2		1800 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	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

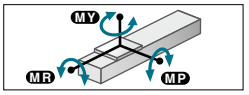
Horizontal installation (Unit: mm)			
	A	B	C
30kg	11079	653	504
50kg	7434	373	288
80kg	5458	215	166
115kg	4364	136	105

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

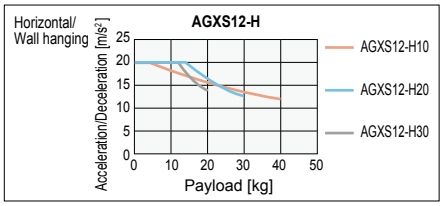
Controller	Operation method
EP-01	I/O point trace/ Remote command

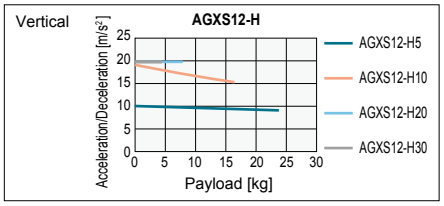
When used with high acceleration or deceleration (High agility mode)

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											

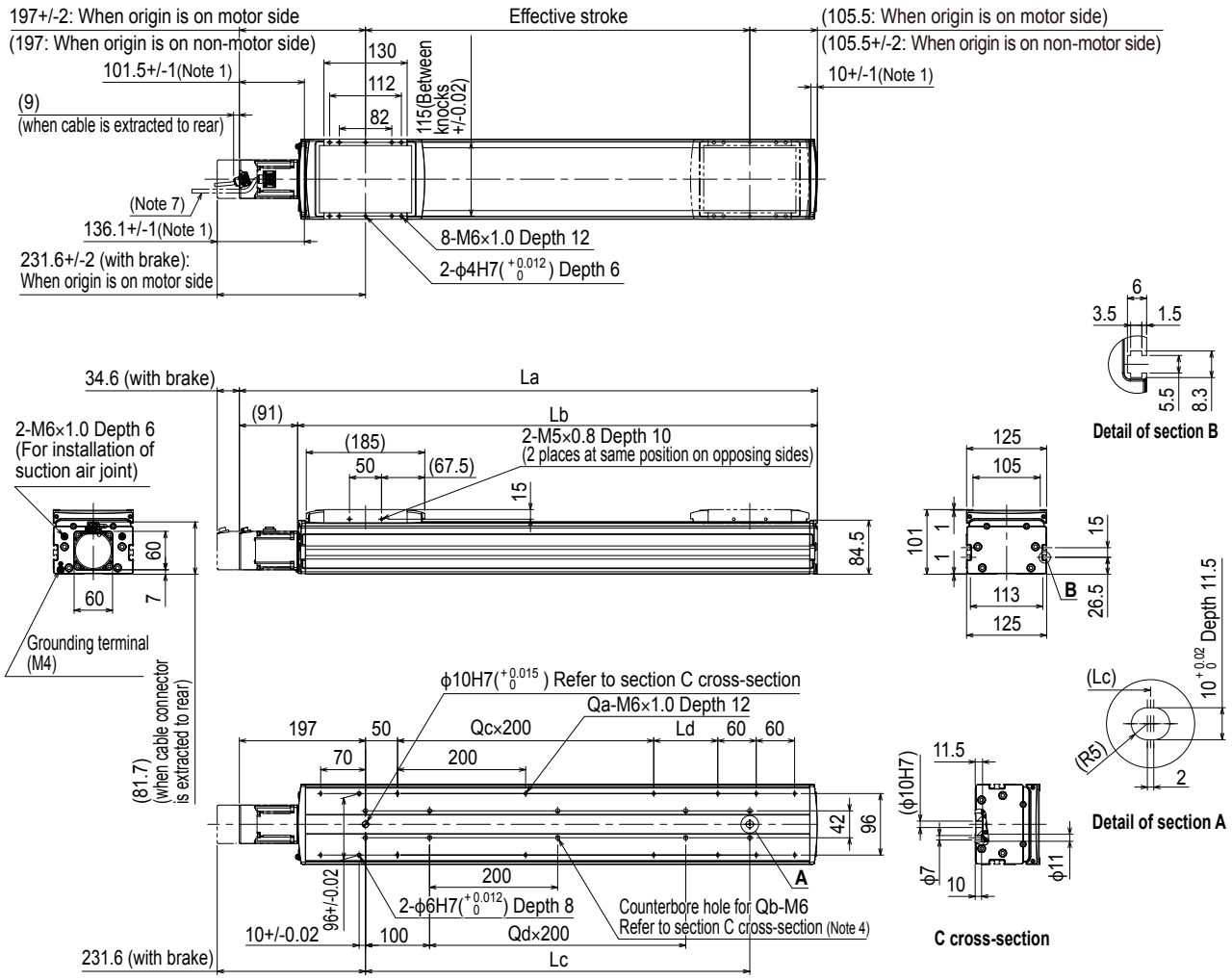
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the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

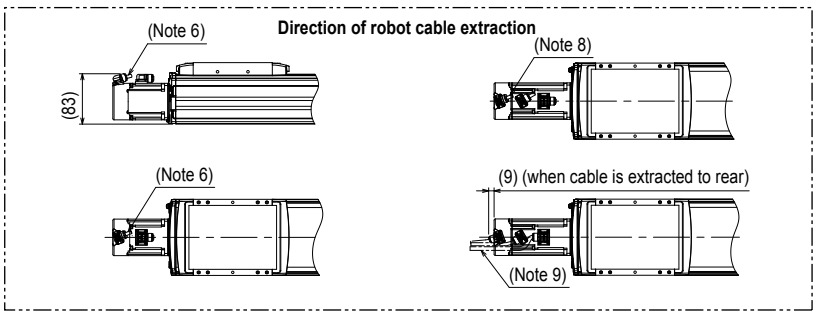
Access the website below.

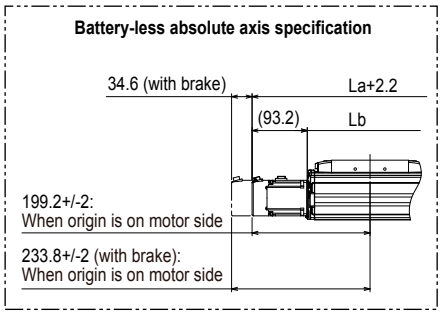
YAMAHA

▶ 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)



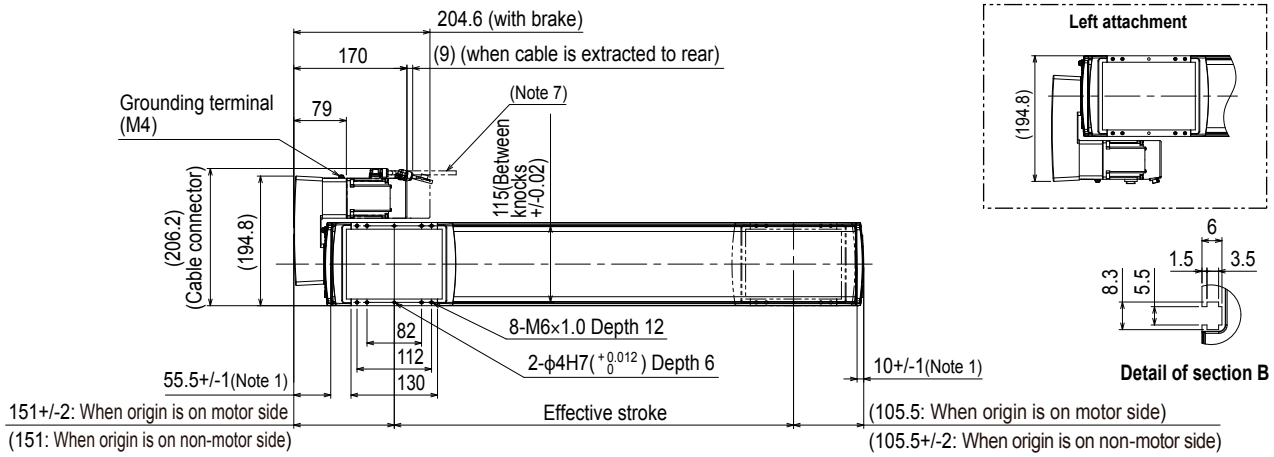


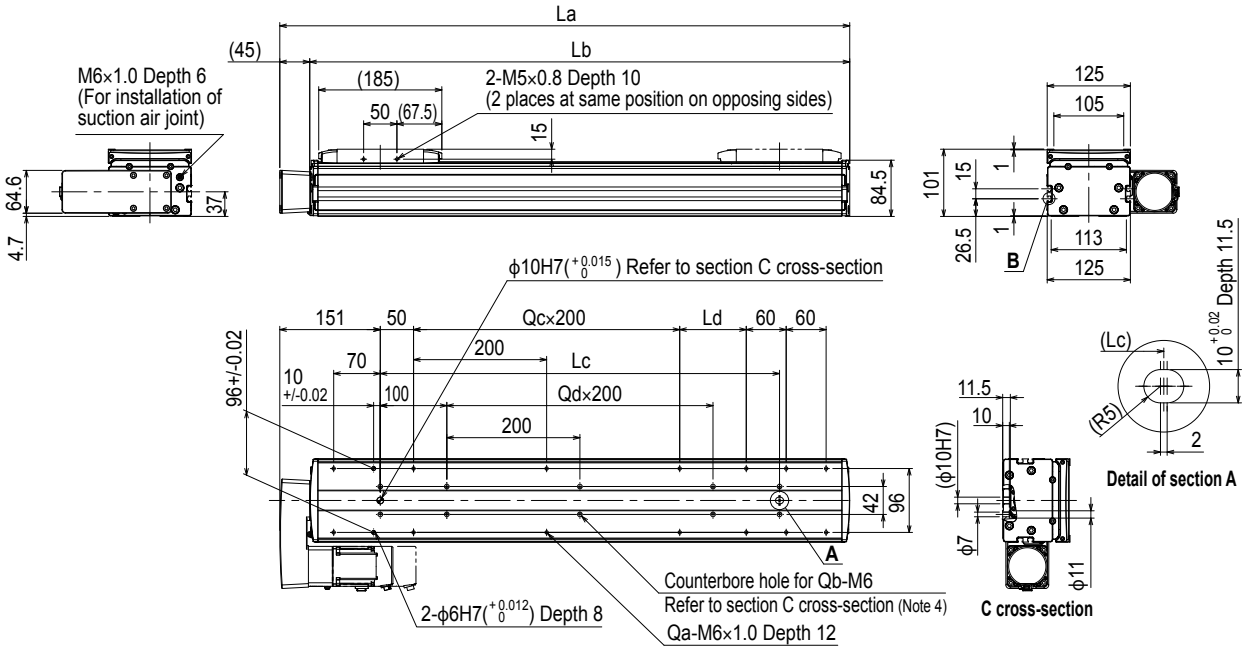


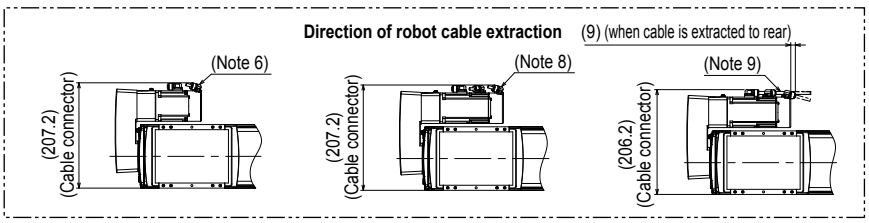
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M6 × 1.0> 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)

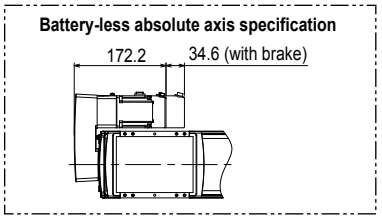
Effective stroke		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
La		402.5	452.5	502.5	552.5	602.5	652.5	702.5	752.5	802.5	852.5	902.5	952.5	1002.5	1052.5	1102.5	1152.5	1202.5	1252.5	1302.5	1352.5	1402.5	1452.5	1502.5	1552.5
Lb		311.5	361.5	411.5	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

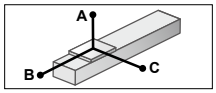
Note 1. When the shape is bending (R, L), the high acceleration/deceleration specifications cannot be selected.
Note 2. For the high acceleration/deceleration specifications, the stroke is 100 to 800 mm (50 mm pitch).
Note 3. The robot cable is flexible and resists bending.
Note 4. When the actuator 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.

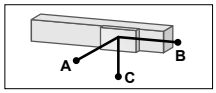
Specifications

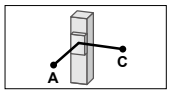
AC servo motor output		750 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ20 (C5 class)		
Stroke		100 mm to 1450 mm(50 mm pitch)		
Maximum speed Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload	Horizontal	45 kg	95 kg	130 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)

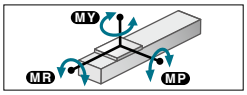
	A	B	C
50kg	980	964	6089
80kg	573	561	4240
100kg	437	426	3706
130kg	312	302	3422

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

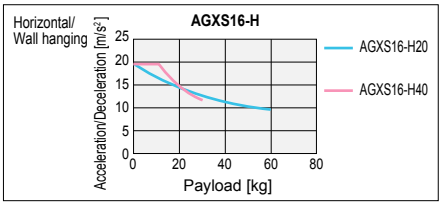
AGXS16-H10

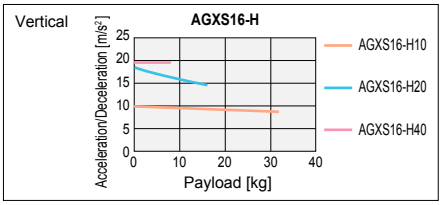
Vertical installation (Unit: mm)

	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														

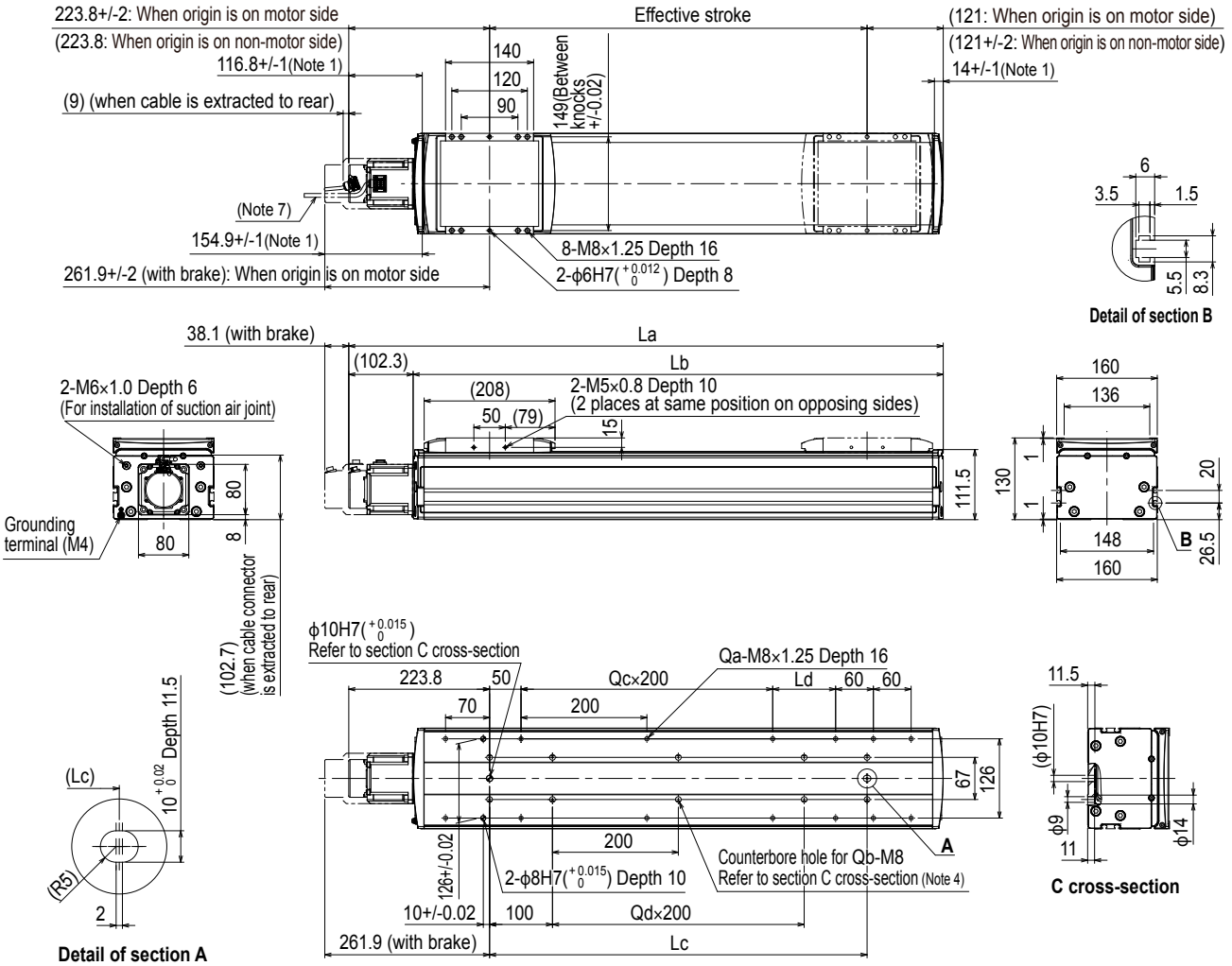
Note. The bending unit cannot be used for the high agility mode.
Note. The high agility mode is used in an effective stroke range of 100 to 800 (50 mm pitch).
Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke. The speed may not reach the maximum speed if the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

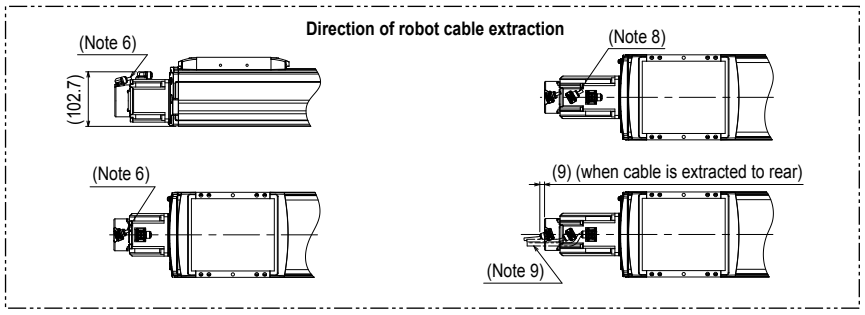
Access the website below.

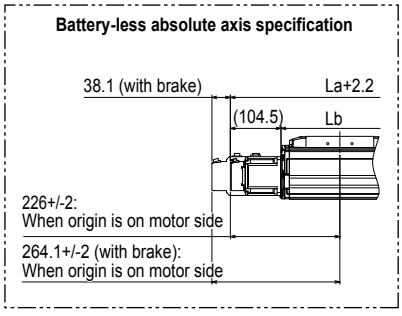
▶ **The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.12.**

Controller EP-01 ▶ 146

AGXS16 Straight type (S)



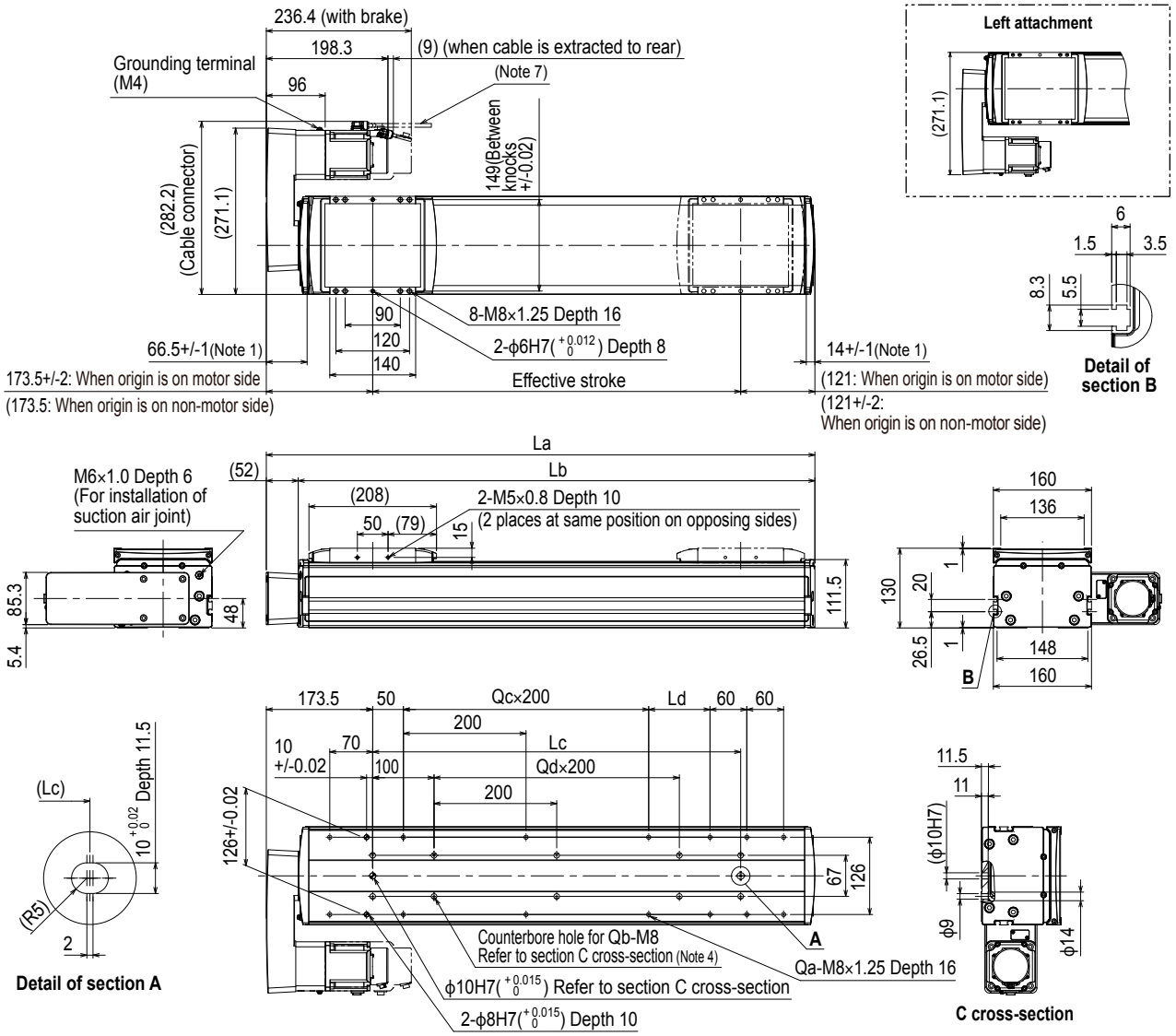




Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M8 × 1.25> 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

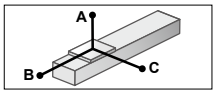
Note 1. The robot cable is flexible and resists bending.
Note 2. When the actuator is used vertically, the regenerative unit is needed.
When the actuator is used horizontally and the stroke of lead 20 is 400 to 850 mm or the stroke of lead 40 is 600 to 950 mm, the regenerative unit is needed.
Note 3.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

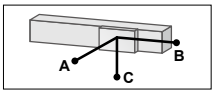
Specifications

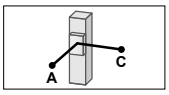
AC servo motor output		750 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 20 (C5 class)		
Stroke		100 mm to 1450 mm(50 mm pitch)		
Maximum speed Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload	Horizontal	65 kg	130 kg	160 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)

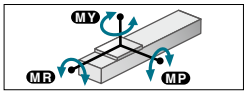
	A	C
20kg	5157	5157
40kg	2553	2553
65kg	1600	1600

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



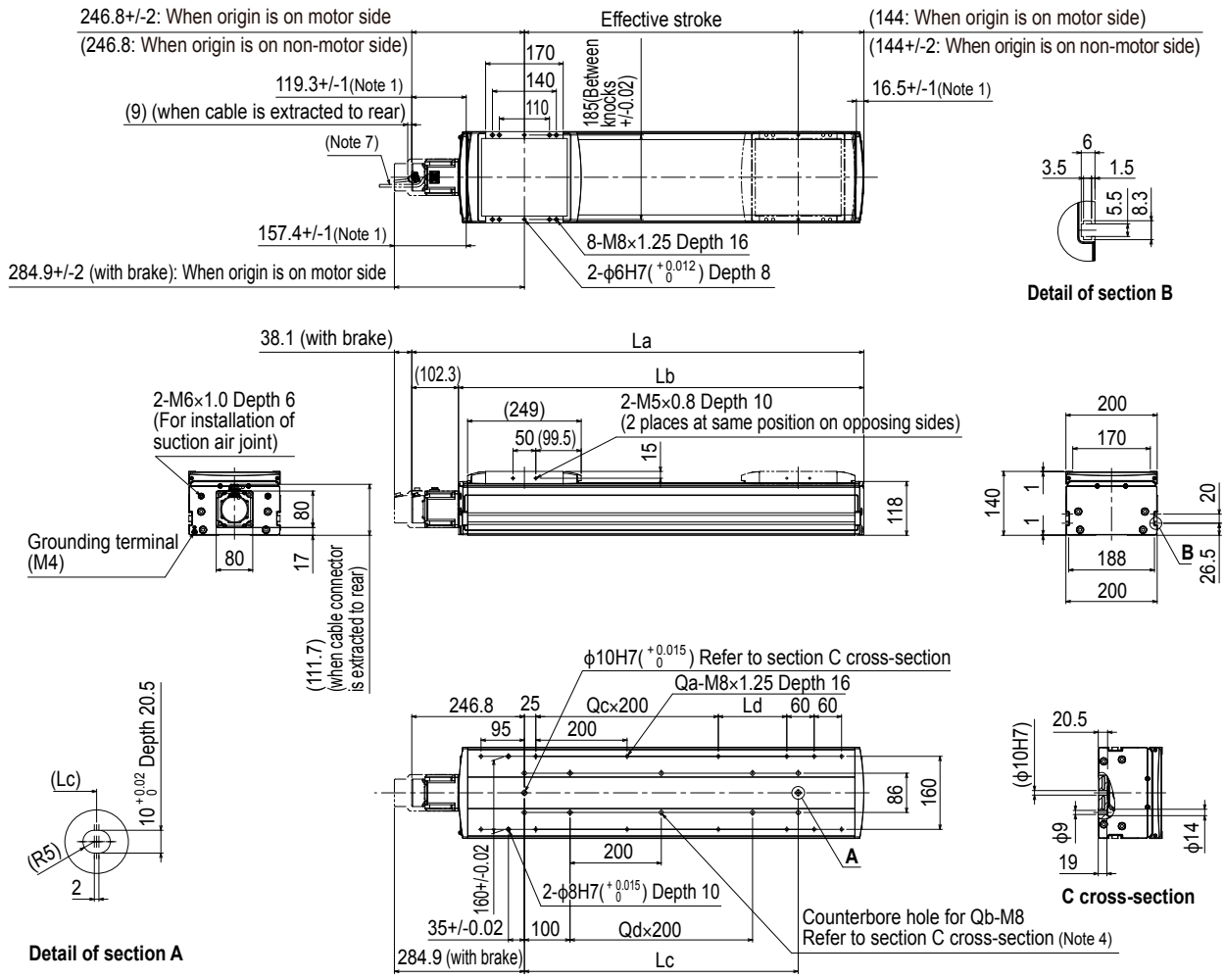
(Unit: N·m)

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.**

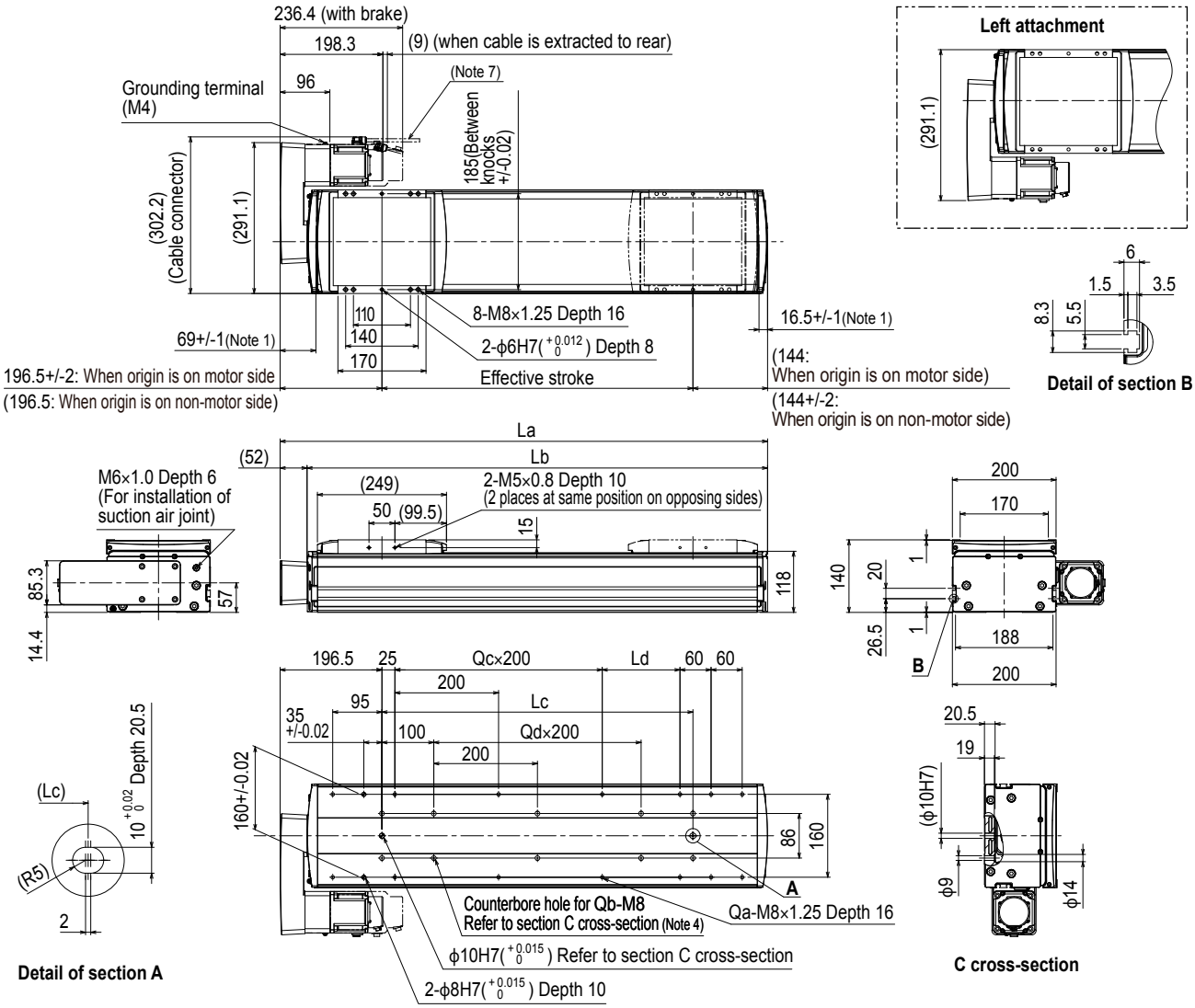
AGXS20 Straight type (S)

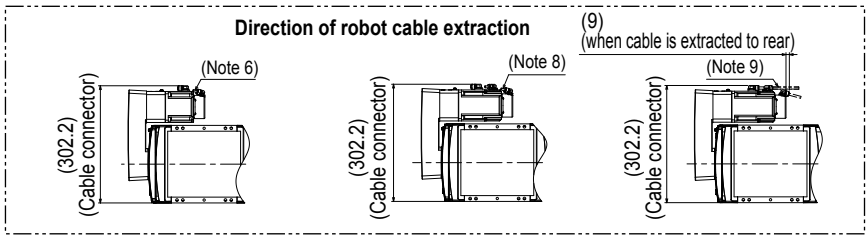


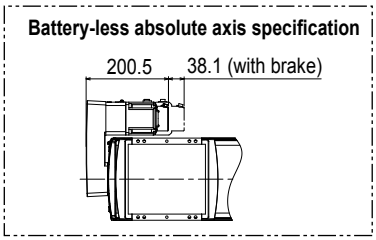
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When changing the return-to-origin direction, the parameter needs to be changed. (The standard is that the origin is located on the motor side.)
Note 3. The length under head of the hex socket head bolts <M8 × 1.25> 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)







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		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%

Controller EP-01 ▶ 146

Operating duty and motor load factor

For high agility mode 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.

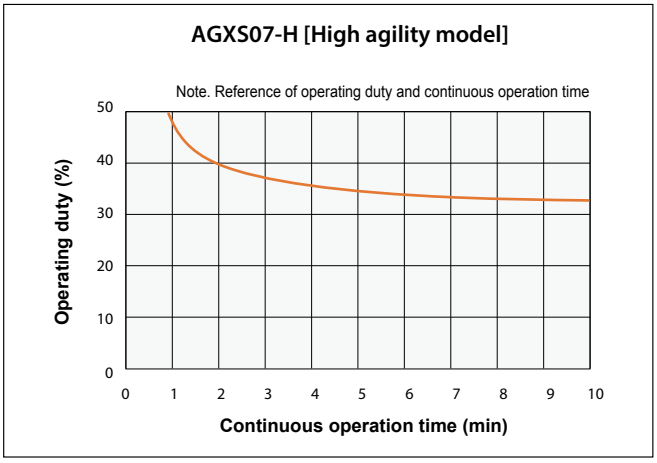
For details about how to check the motor load factor, see the controller manual.
In addition, use the information monitor screen of EP-Manager.

Note. Operating duty

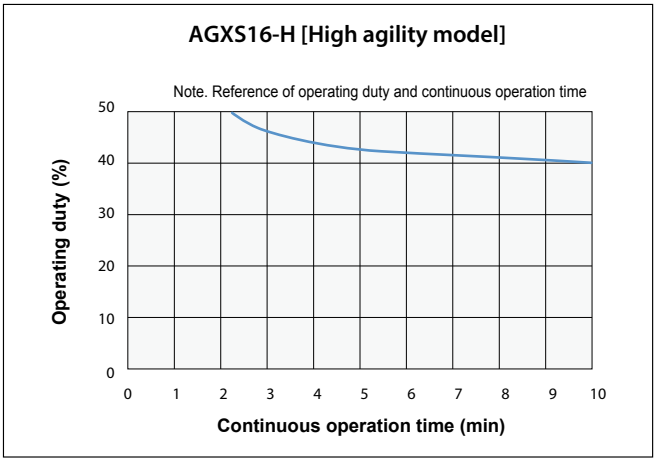
Operating duty = {Sigle-axis operation time / (Single-axis operation time + Single-axis stop time)} * 100 [%]

Operating duty and continuous operation time (reference)

AGXS07-H [High agility model]



AGXS16-H [High agility model]



ABAR04

Basic model **Single-axis robots**

Rod type

Ordering method

ABAR04 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – **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
	12: 12 mm 6: 6 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	50 to 500 (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. The robot cable is flexible and resists bending.
Note 2. When the actuator is used vertically and the stroke is 250 mm or more, 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		50 W	
Repeatability Note 1		+/-0.01 mm	
Deceleration mechanism		Shifting position ball screw ϕ 10 (C7 class)	
Stroke		50 mm to 500 mm (50mm pitch)	
Maximum speed Note 2		720 mm/sec	360 mm/sec
Ball screw lead		12 mm	6 mm
Maximum payload	**Horizontal**	15 kg	25 kg
	Vertical	3 kg	5 kg
Max. pressing force		83 N	167 N
Rotating backlash		+/-0 °	
Maximum dimensions of cross section of main unit		W 44 mm × H 46 mm	
Overall length	**Straight**	ST + 326.5 mm	
	Bending	ST + 245 mm	
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 300 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. See P.135 for acceleration/deceleration.

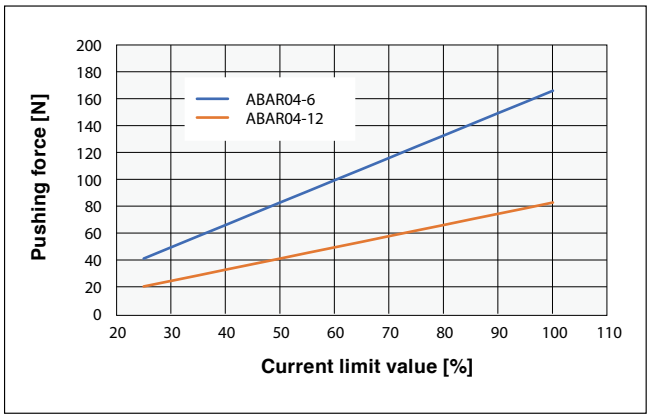
Controller

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

Pushing force (reference value)

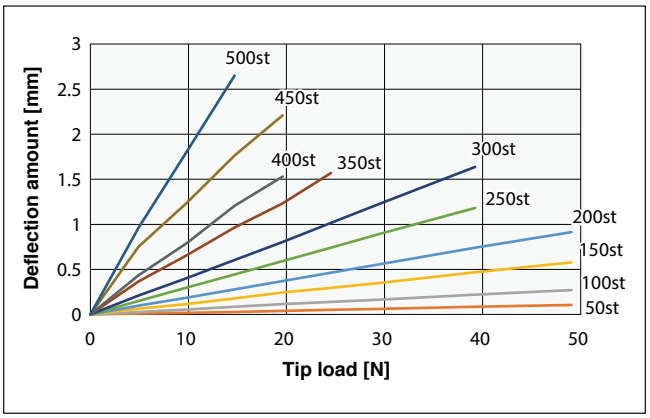
For the pushing force during pushing operation, see the graph below.

Note. The operable time (pushing judgement time) depends on the current limit value.
Use the pushing force under the conditions that no overload error occurs.



Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.

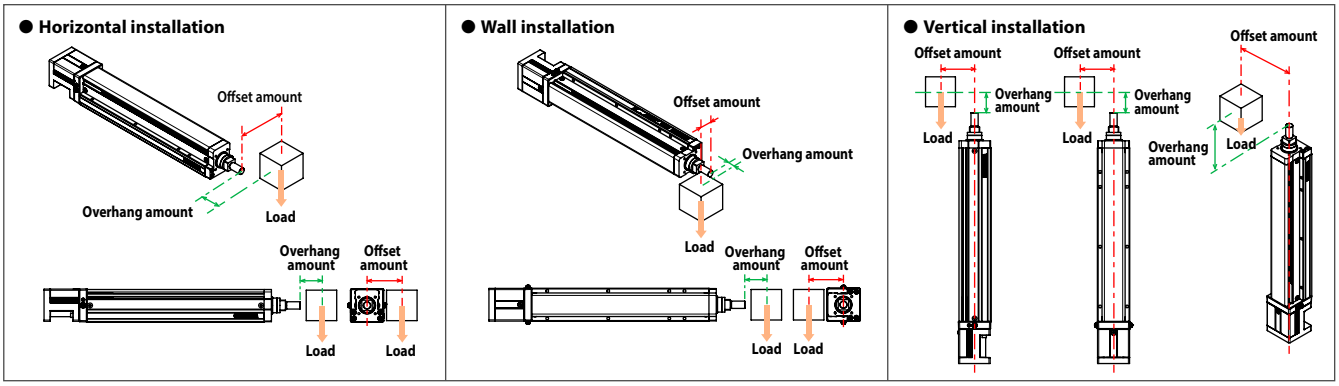


Access the website below.

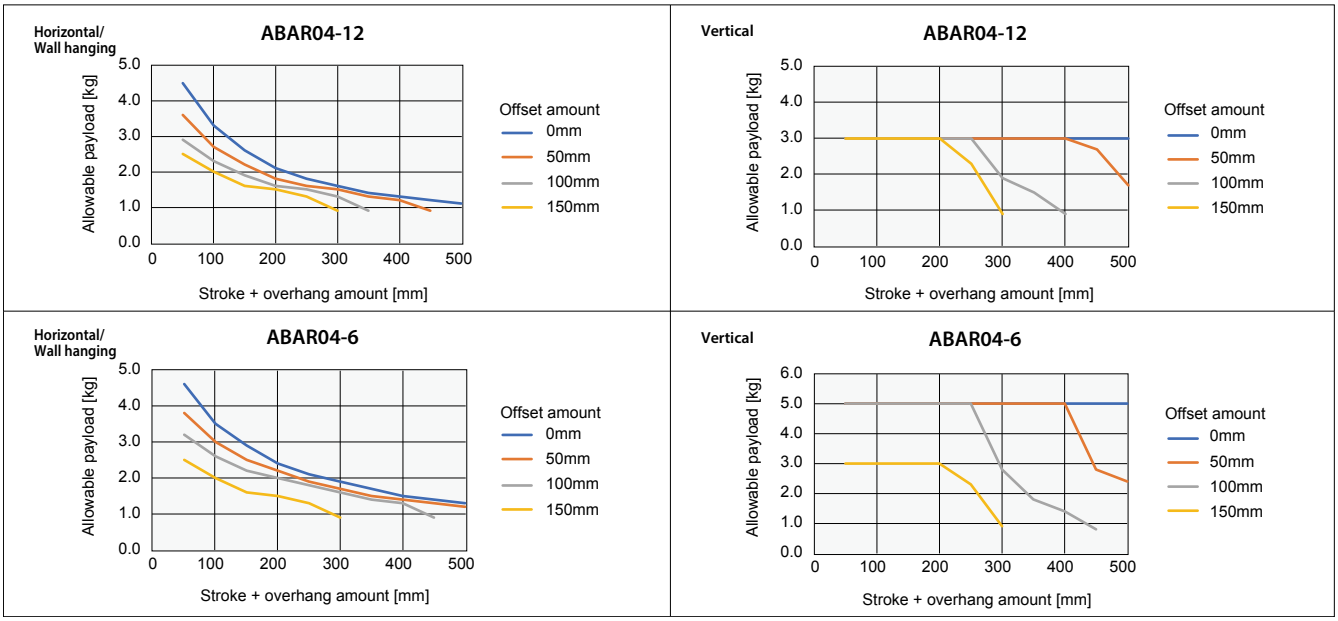
▶ **The cycle time simulation can be performed easily from our member site. For details, see P.12.**

Allowable payload

For the allowable payload per offset amount, see the graph below.

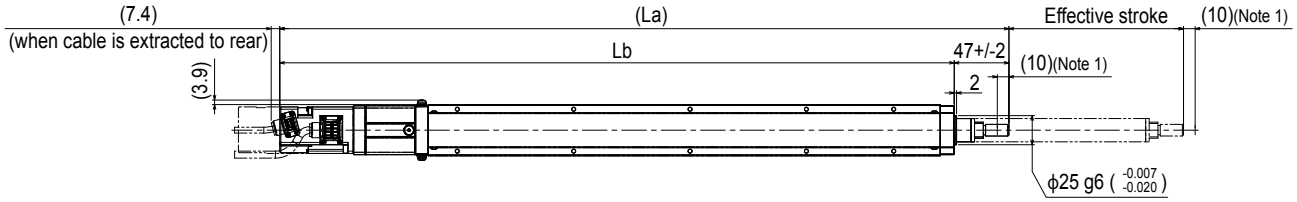


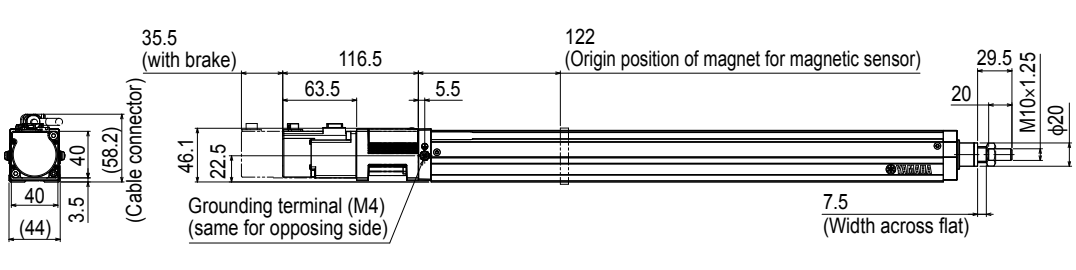
Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.

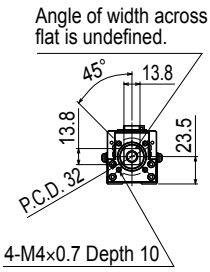


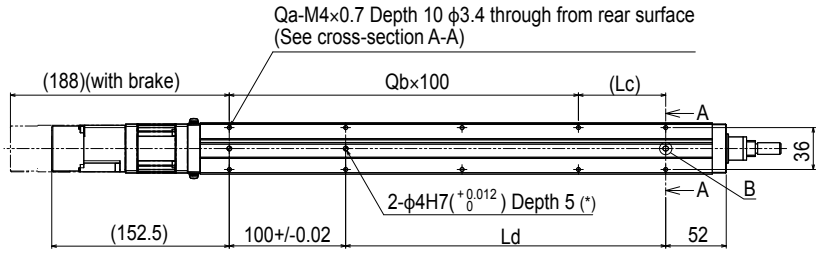
Controller EP-01 ▶ 146

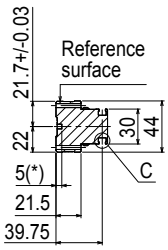
ABAR04 Straight type (S)



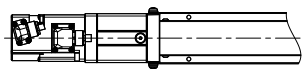




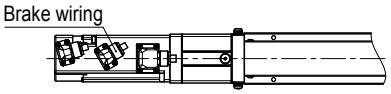




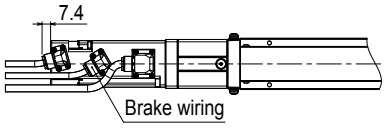
Cross-section A-A



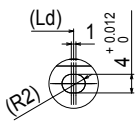
Cable is extracted from the front



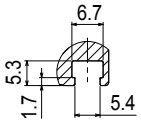
Cable is extracted from the front (with brake)



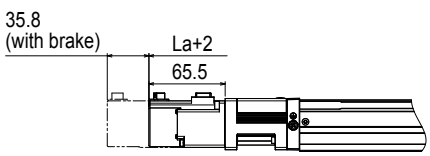
Cable is extracted from the rear (with brake)



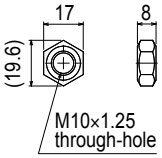
Detailed drawing B



Detailed drawing C



Battery-less absolute axis specification



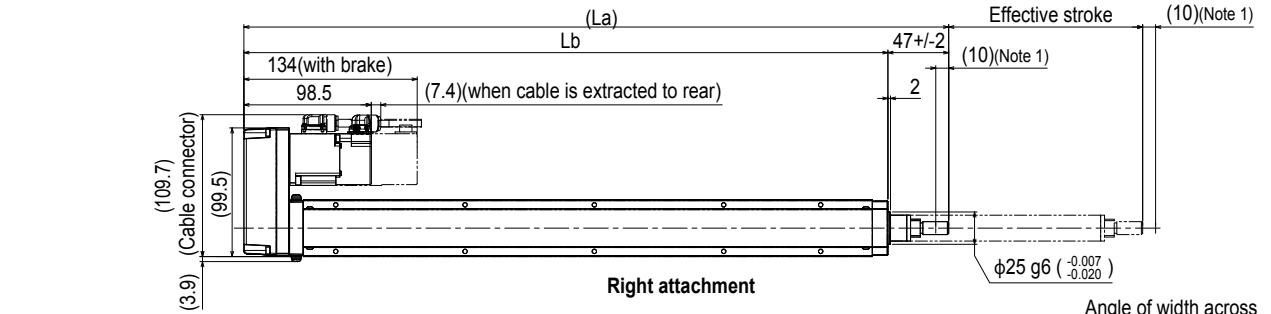
Dimensions of attached hex nut

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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. The weight with the brake is 0.2 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

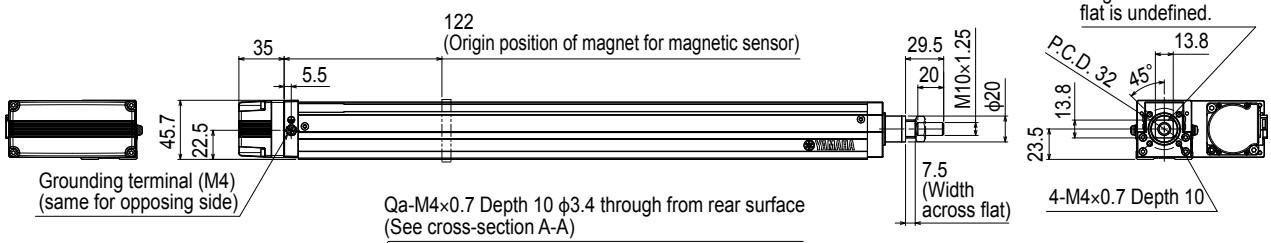
Effective stroke		50	100	150	200	250	300	350	400	450	500
La		376.5	426.5	476.5	526.5	576.5	626.5	676.5	726.5	776.5	826.5
Lb		329.5	379.5	429.5	479.5	529.5	579.5	629.5	679.5	729.5	779.5
Lc		25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475
Qa		6	6	8	8	10	10	12	12	14	14
Qb		1	1	2	2	3	3	4	4	5	5
Weight (kg) Note 4		1.2	1.3	1.5	1.7	1.9	2	2.2	2.4	2.6	2.8
Maximum speed (mm/sec)	Lead 12	720						648	504	396	324
	Lead 6	360						324	252	198	162
	Speed setting	–						90%	70%	55%	45%

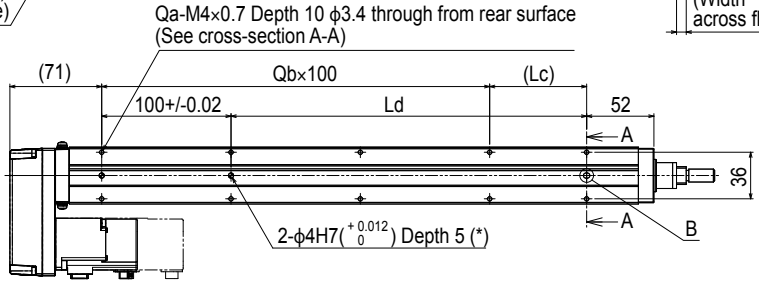
Controller EP-01 ▶ 146

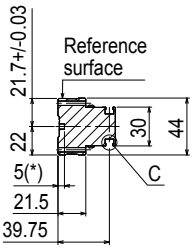
ABAR04 Bending type (R/L)



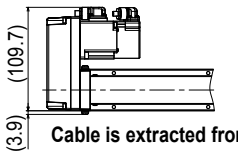
Right attachment



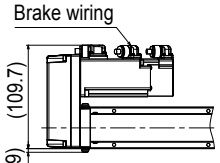




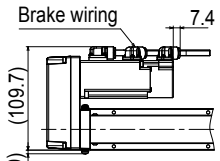
Cross-section A-A



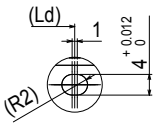
Cable is extracted from the front



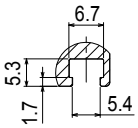
Cable is extracted from the front (with brake)



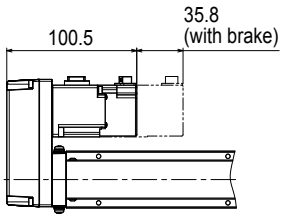
Cable is extracted from the rear (with brake)



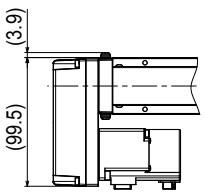
Detailed drawing B



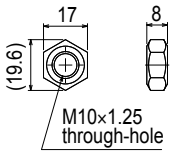
Detailed drawing C



Battery-less absolute axis specification



Left attachment



Dimensions of attached hex nut

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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. The weight with the brake is 0.2 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500
La		295	345	395	445	495	545	595	645	695	745
Lb		248	298	348	398	448	498	548	598	648	698
Lc		25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475
Qa		6	6	8	8	10	10	12	12	14	14
Qb		1	1	2	2	3	3	4	4	5	5
Weight (kg) Note 4		1.3	1.4	1.6	1.8	2	2.2	2.3	2.5	2.7	2.9
Maximum speed (mm/sec)	Lead 12	720						648	504	396	324
	Lead 6	360						324	252	198	162
	Speed setting	–						90%	70%	55%	45%

ABAR05

Basic model **Single-axis robots**

Rod type

Ordering method

ABAR05 – [ ] – [ ] – [ ] – [ ] – [ ] – [ ] – **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
	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	50 to 600 (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. The robot cable is flexible and resists bending.
Note 2. When the actuator is used vertically and the stroke is 150 mm or more, the regenerative unit is needed.
When the actuator is used horizontally and the stroke of lead 20 is 300 to 400 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		100 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 12 (C7 class)		
Stroke		50 mm to 600 mm (50mm pitch)		
Maximum speed Note 2		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	**Horizontal**	15 kg	25 kg	50 kg
	Vertical	4 kg	8 kg	16 kg
Max. pressing force		100 N	200 N	400 N
Rotating backlash		+/-0 °		
Maximum dimensions of cross section of main unit		W 54 mm × H 54.7 mm		
Overall length	**Straight**	ST + 344 mm		
	Bending	ST + 249 mm		
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 350 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. See P.136 for acceleration/deceleration.

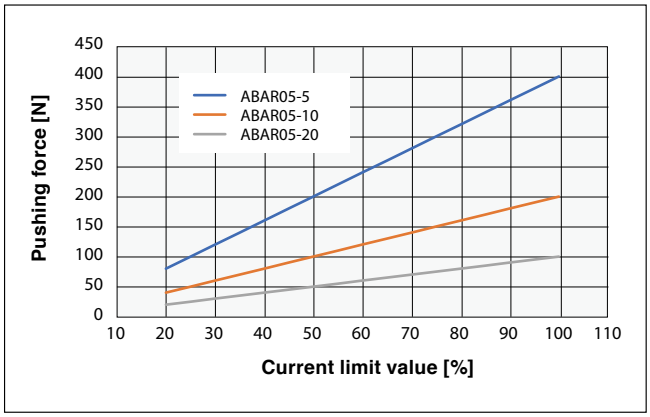
Controller

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

Pushing force (reference value)

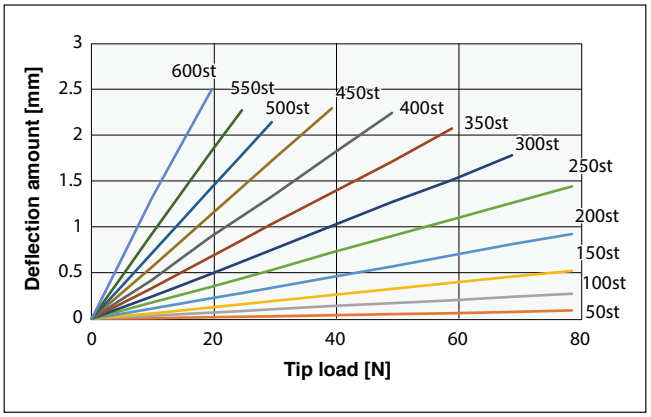
For the pushing force during pushing operation, see the graph below.

Note. The operable time (pushing judgement time) depends on the current limit value.
Use the pushing force under the conditions that no overload error occurs.



Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.



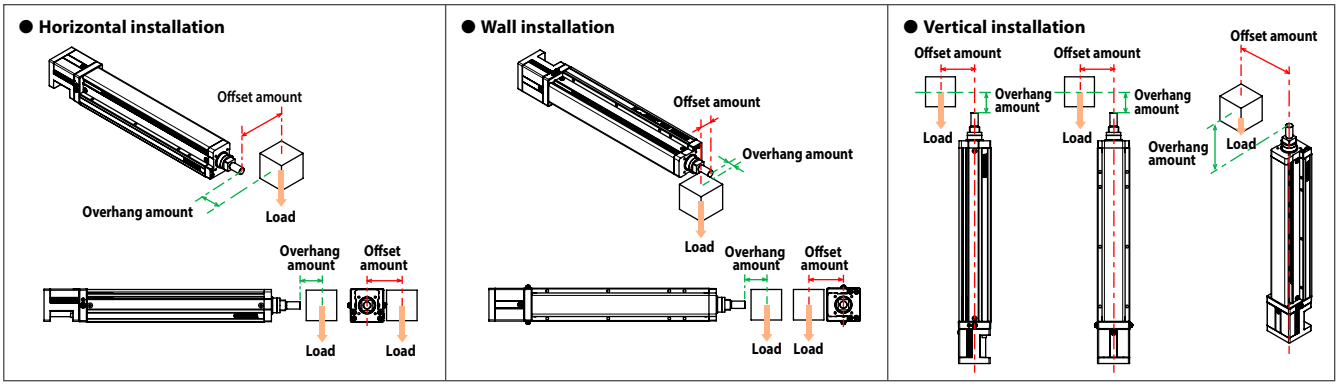
Access the website below.

YAMAHA

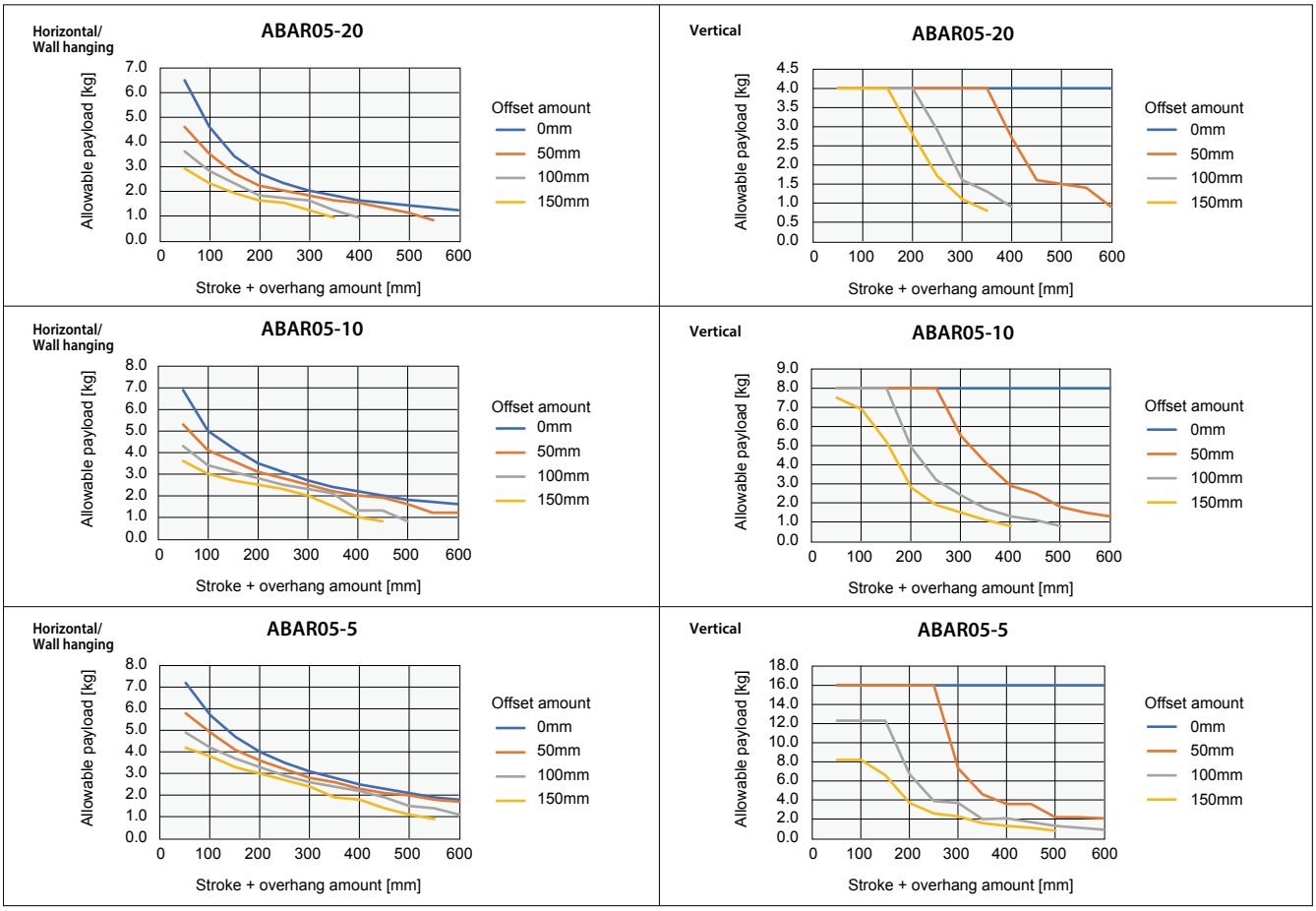
▶ **The cycle time simulation can be performed easily from our member site. For details, see P.12.**

Allowable payload

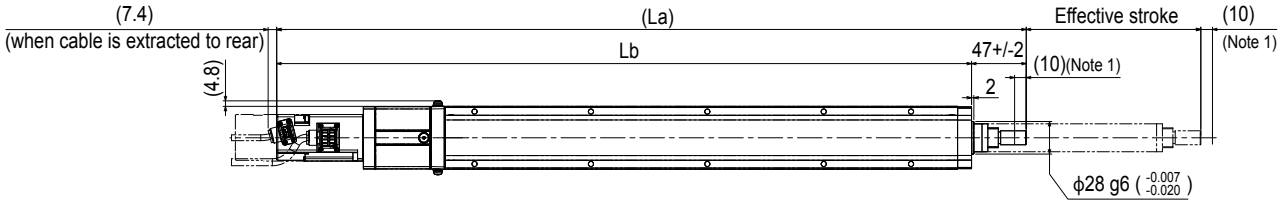
For the allowable payload per offset amount, see the graph below.

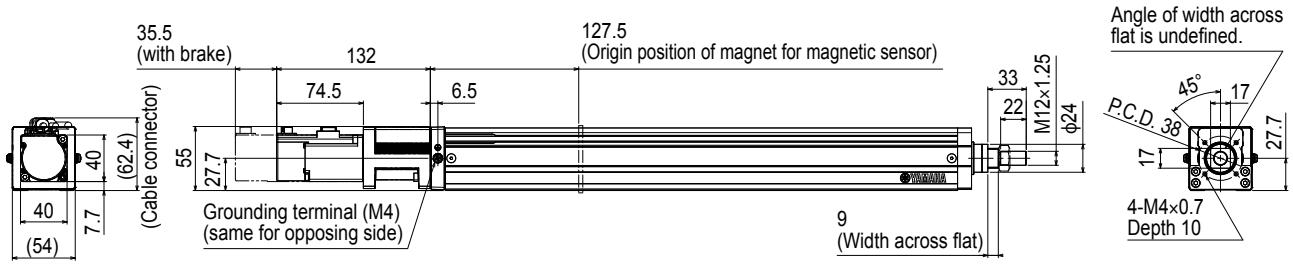


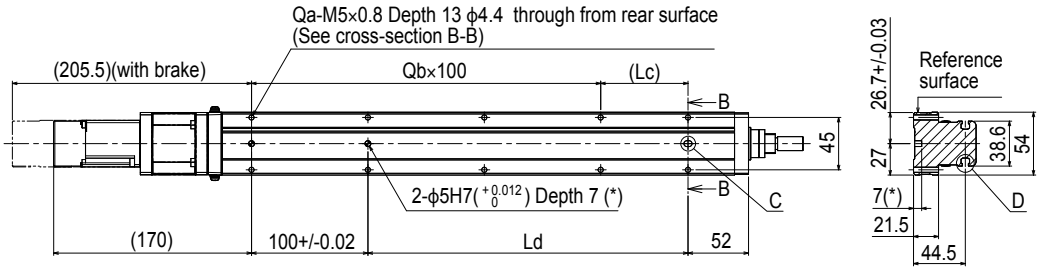
Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.



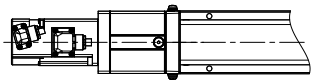
ABAR05 Straight type (S)



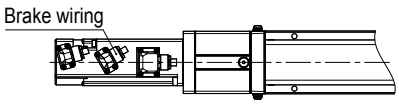




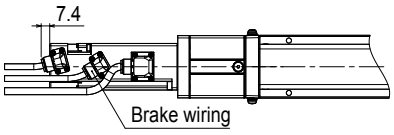
Cross-section B-B



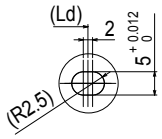
Cable is extracted from the front



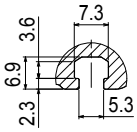
Cable is extracted from the front (with brake)



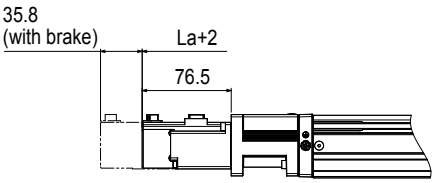
Cable is extracted from the rear (with brake)



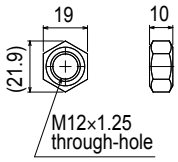
Detailed drawing C



Detailed drawing D



Battery-less absolute axis specification

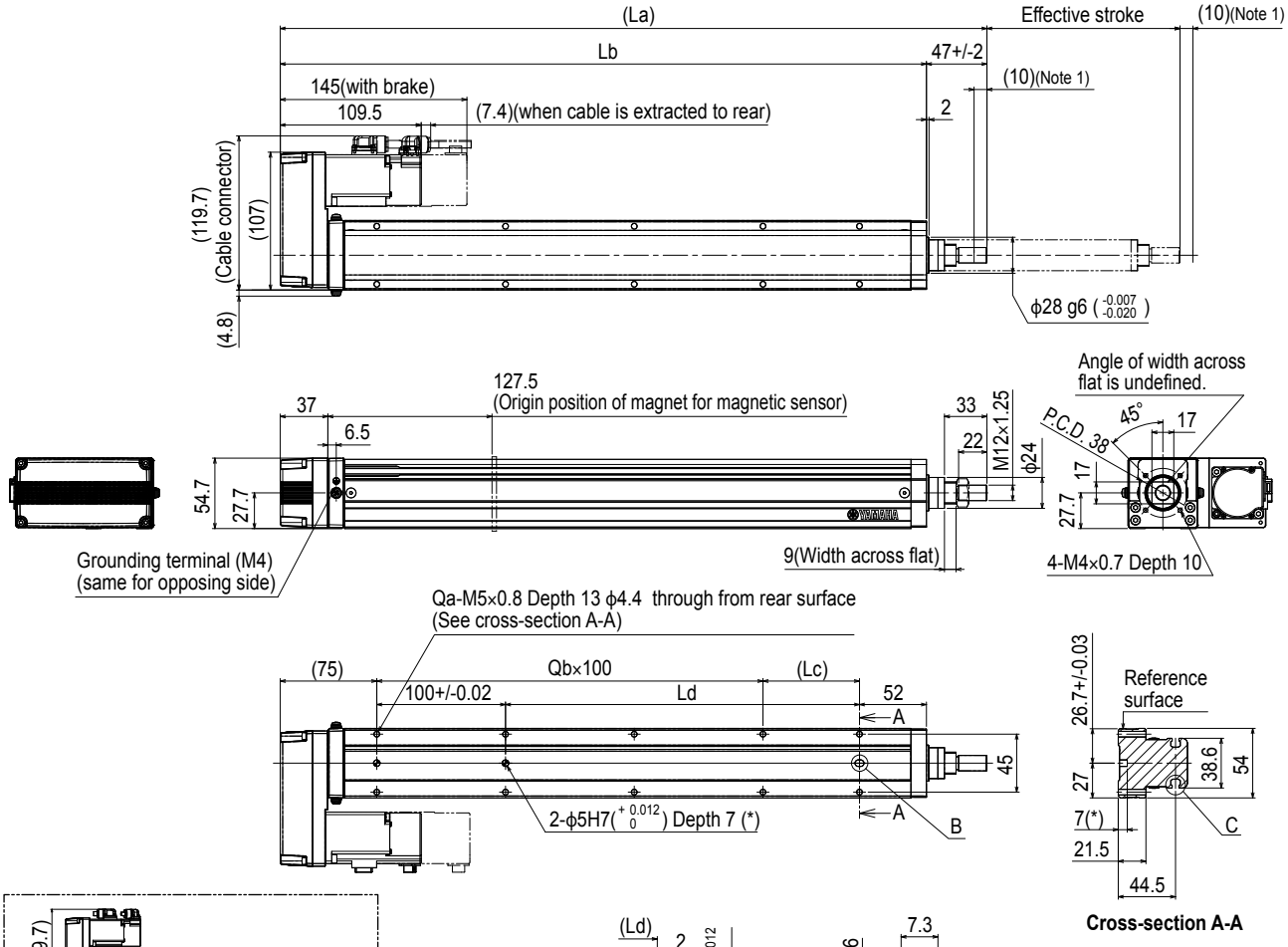


Dimensions of attached hex nut

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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. The weight with the brake is 0.2 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600
La		394	444	494	544	594	644	694	744	794	844	894	944
Lb		347	397	447	497	547	597	647	697	747	797	847	897
Lc		25	75	25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475	525	575
Qa		6	6	8	8	10	10	12	12	14	14	16	16
Qb		1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg) Note 4		2.1	2.3	2.4	2.6	2.8	3	3.1	3.2	3.3	3.4	3.6	3.8
Maximum speed (mm/sec)	Lead 20	1200							960	780	600	480	420
	Lead 10	600							480	390	300	240	210
	Lead 5	300							240	195	150	120	105
	Speed setting	–							80%	65%	50%	40%	35%

ABAR05 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. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
Note 4. The weight with the brake is 0.2 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600
La		299	349	399	449	499	549	599	649	699	749	799	849
Lb		252	302	352	402	452	502	552	602	652	702	752	802
Lc		25	75	25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475	525	575
Qa		6	6	8	8	10	10	12	12	14	14	16	16
Qb		1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg) Note 4		2.2	2.3	2.5	2.7	2.9	3.1	3.2	3.3	3.4	3.5	3.7	3.8
Maximum speed (mm/sec)	Lead 20	1200							960	780	600	480	420
	Lead 10	600							480	390	300	240	210
	Lead 5	300							240	195	150	120	105
	Speed setting	–							80%	65%	50%	40%	35%

ABAR08

Basic model **Single-axis robots**

Rod type

Ordering method

ABAR08 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - **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
	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	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. 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 10 or 20 is 150 to 500 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		200 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)		
Stroke		50 mm to 800 mm (50mm pitch)		
Maximum speed Note 2		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload	Horizontal	30 kg	60 kg	80 kg
	Vertical	8 kg	20 kg	30 kg
Max. pressing force		201 N	402 N	804 N
Rotating backlash		+/-0 °		
Maximum dimensions of cross section of main unit		W 82 mm × H 73.5 mm		
Overall length	Straight	ST + 401 mm		
	Bending	ST + 312.5 mm		
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 400 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. See P.138 for acceleration/deceleration.

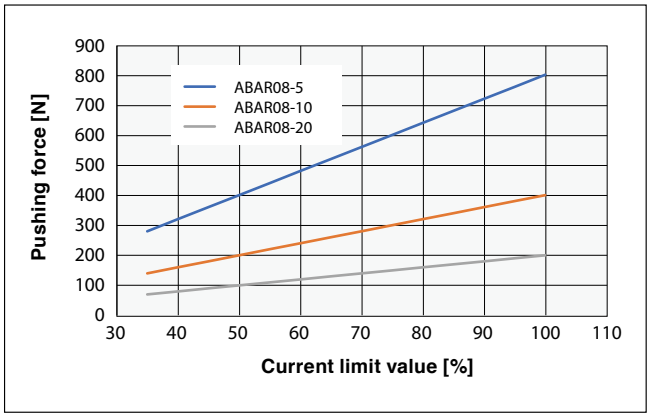
Controller

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

Pushing force (reference value)

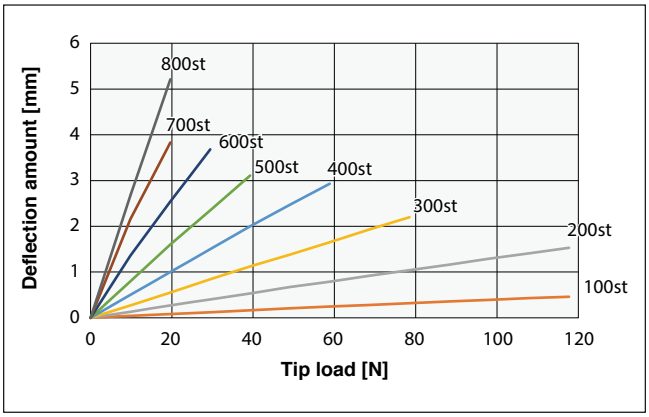
For the pushing force during pushing operation, see the graph below.

Note. The operable time (pushing judgement time) depends on the current limit value.
Use the pushing force under the conditions that no overload error occurs.



Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.

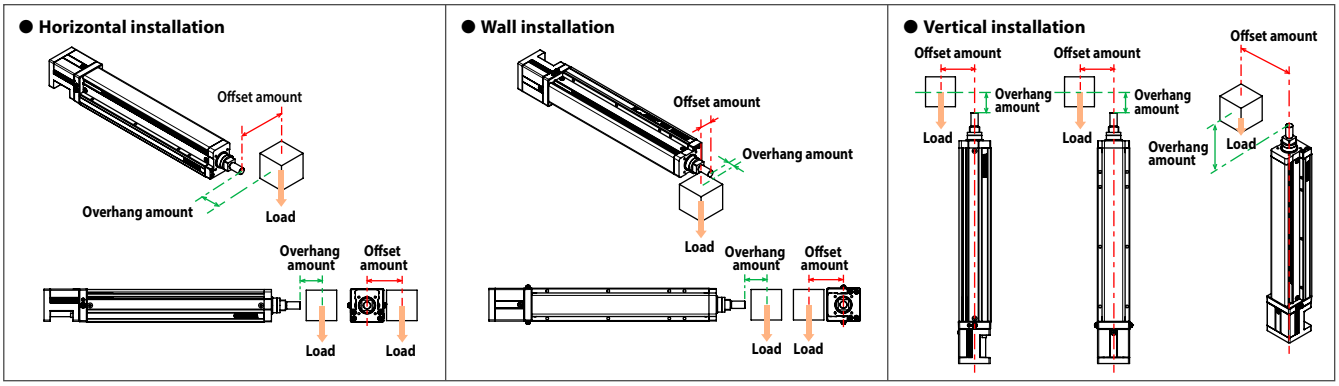


Access the website below.

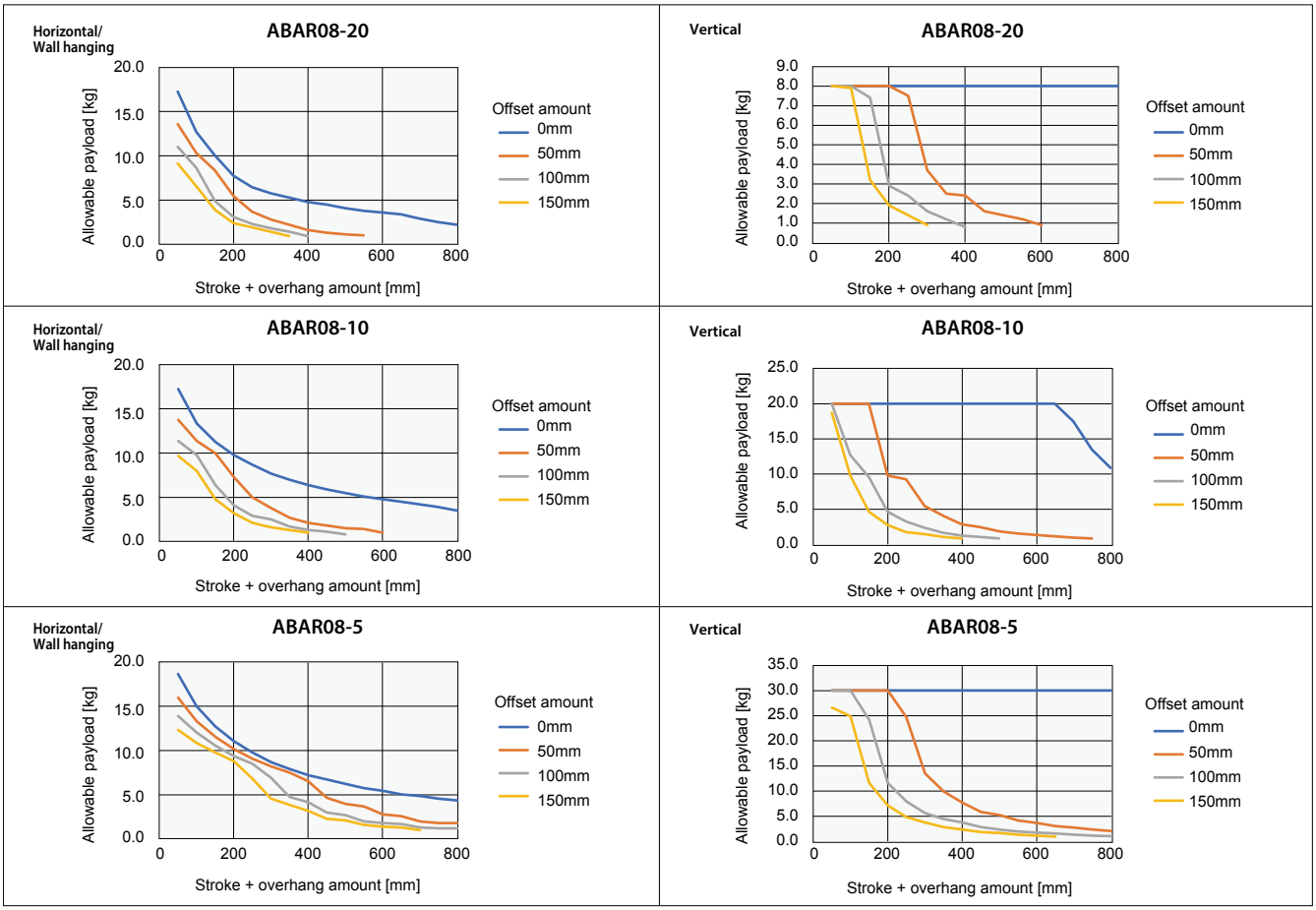
▶ **The cycle time simulation can be performed easily from our member site. For details, see P.12.**

Allowable payload

For the allowable payload per offset amount, see the graph below.



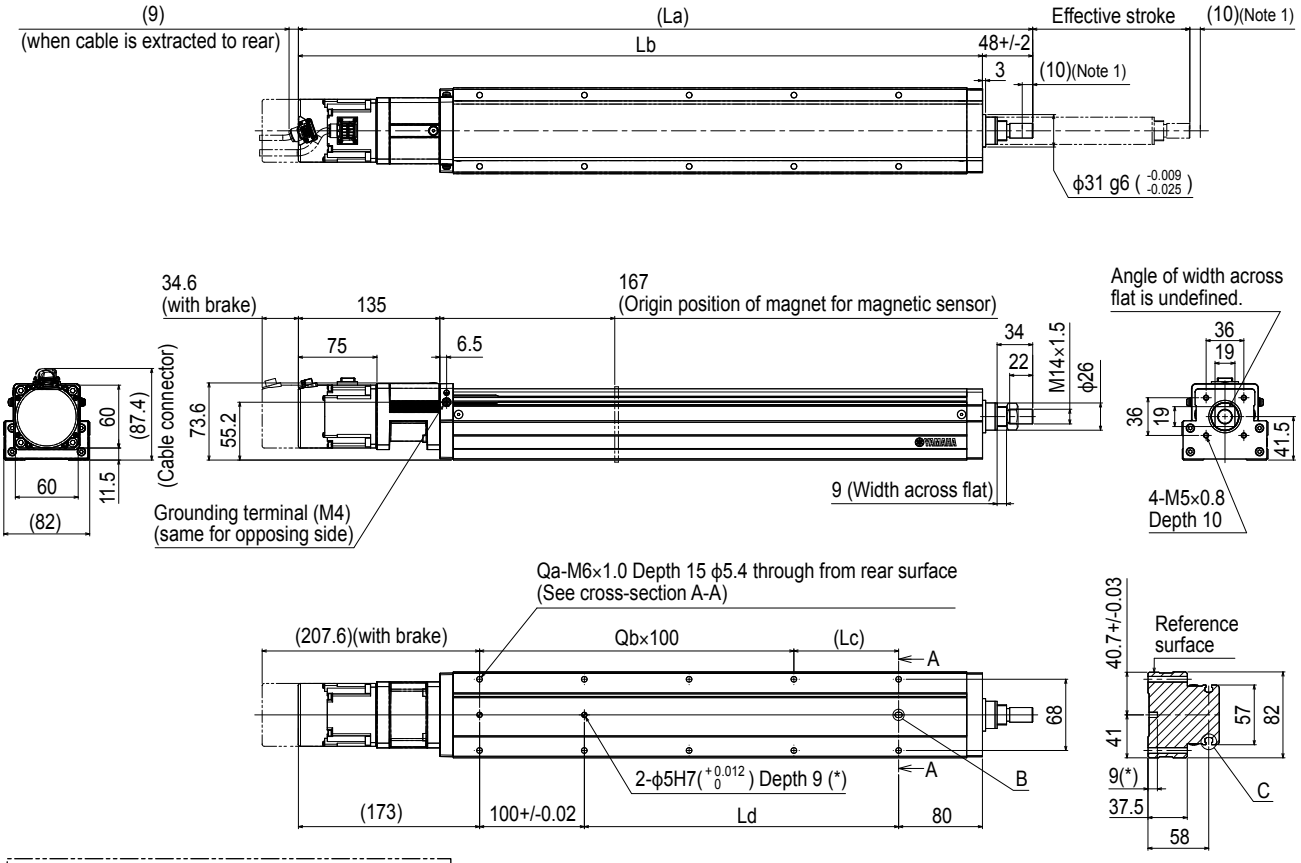
Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.

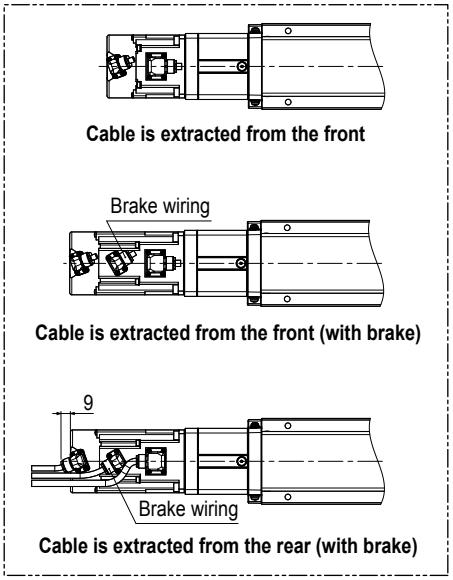


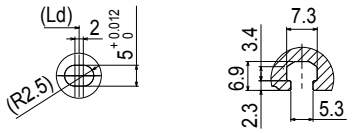
Features
Motorless Slidertype Basic model LBAS
Motorless Slidertype Advanced model LGXS
Motorless Rodtype Basic model LBAR
With motor Slidertype Basic model ABAS
With motor Slidertype Advanced model AGXS
With motor Rodtype Basic model ABAR
Acceleration/Deceleration Inertia Moment
Option
Single-axis Robot positioner EP-01

Controller EP-01 ▶ 146

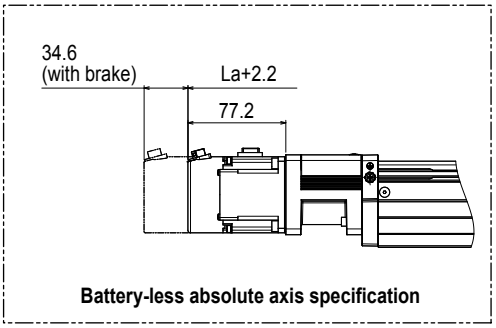
ABAR08 Straight type (S)



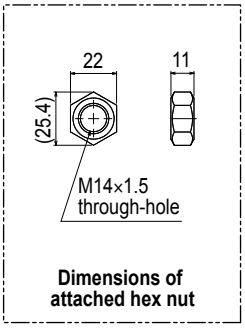




Detailed drawing B **Detailed drawing C**



Battery-less absolute axis specification

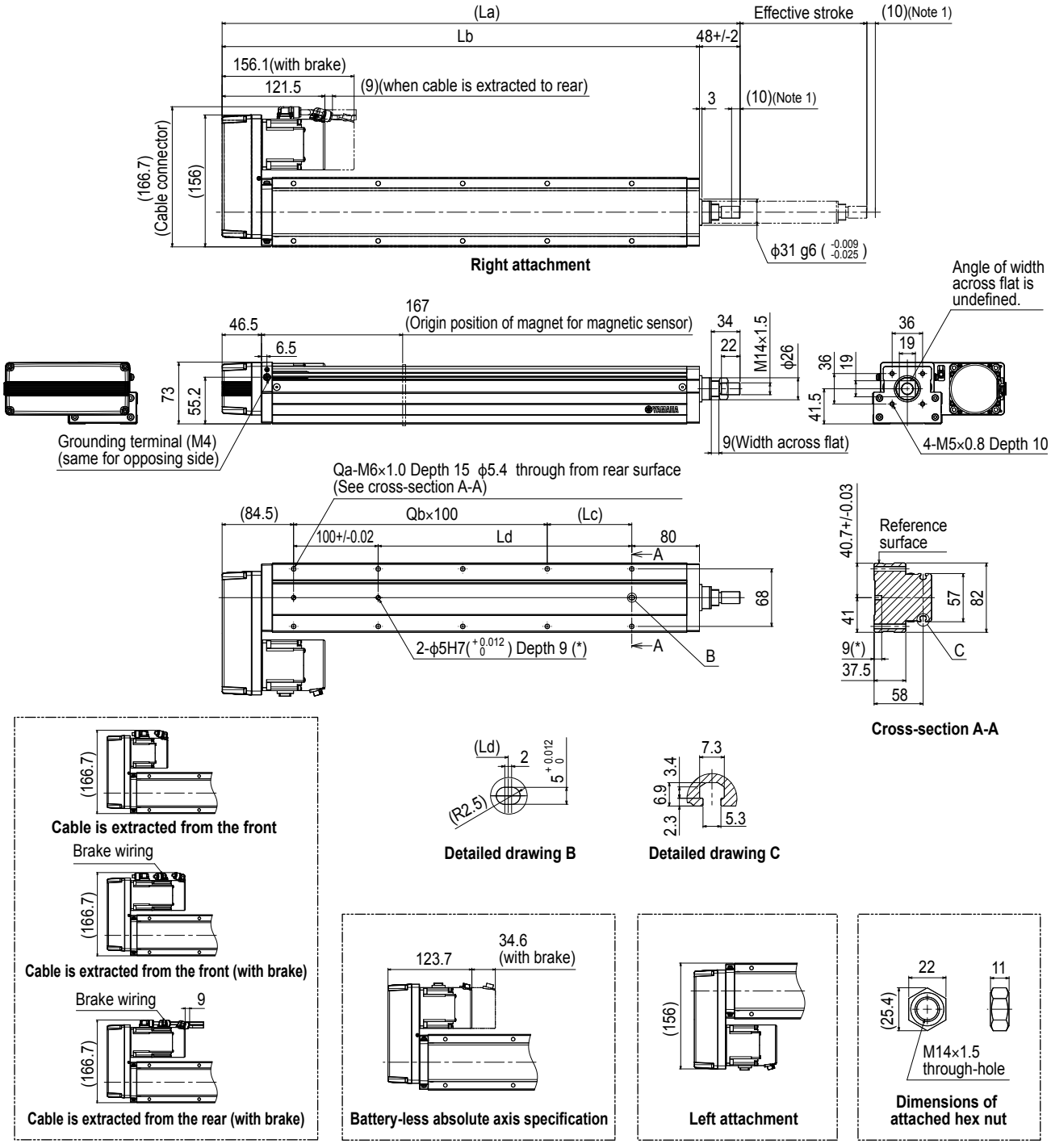


Dimensions of attached hex nut

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. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		451	501	551	601	651	701	751	801	851	901	951	1001	1051	1101	1151	1201
Lb		403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103	1153
Lc		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Ld		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 4		4.7	5.1	5.5	5.8	6.1	6.5	6.8	7.1	7.4	7.8	8.2	8.5	8.9	9.2	9.4	9.7
Maximum speed (mm/sec)	Lead 20	1200								900	720	600	480	420	360	300	240
	Lead 10	600								450	360	300	240	210	180	150	120
	Lead 5	300								225	180	150	120	105	90	75	60
	Speed setting	–								75%	60%	50%	40%	35%	30%	25%	20%

ABAR08 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. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. The weight with the brake is 0.4 kg heavier than the value in the weight column.
Note 5. The minimum bending radius of the robot cable is R30 on the fixed side or R50 on the movable side. The cable extraction direction may vary depending on the specifications.
Note 6. Grease gun nozzle (recommended) (see P.143 for detail)
Part number: KFU-M3861-00

Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5
Lb		314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5
Lc		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Ld		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg) Note 4		5.1	5.5	5.9	6.2	6.5	6.9	7.2	7.5	7.8	8.2	8.6	8.9	9.3	9.6	9.8	10.1
Maximum speed (mm/sec)	Lead 20	1200								900	720	600	480	420	360	300	240
	Lead 10	600								450	360	300	240	210	180	150	120
	Lead 5	300								225	180	150	120	105	90	75	60
	Speed setting	–								75%	60%	50%	40%	35%	30%	25%	20%

LBAS04

Inertia Moment

[kg·m^2×10^{-4}]	Effective stroke [mm]															
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
LBAS04-6	0.060	0.063	0.067	0.071	0.075	0.079	0.083	0.087	0.090	0.094	0.098	0.102	0.106	0.110	0.114	0.117
LBAS04-12	0.069	0.072	0.076	0.080	0.084	0.088	0.092	0.096	0.099	0.103	0.107	0.111	0.115	0.119	0.123	0.126

LBAS04 ABAS04

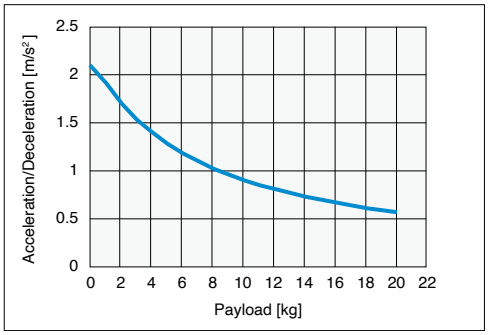
Acceleration/Deceleration

Model	LBAS04-6/ABAS04-6		LBAS04-12/ABAS04-12	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]	
0	2.1	2.1	4.2	3.6
1	1.91	2.1	3.84	2.4
2	1.7	1.64	2.99	1.8
3	1.53	1.34	2.45	
4	1.4	1.14	2.07	
5	1.28	0.99	1.8	
6	1.18		1.58	
7	1.1		1.42	
8	1.02		1.28	
9	0.96		1.17	
10	0.9		1.08	
11	0.85		1	
12	0.81		0.93	
13	0.77			
14	0.73			
15	0.7			
16	0.67			
17	0.64			
18	0.61			
19	0.59			
20	0.57			

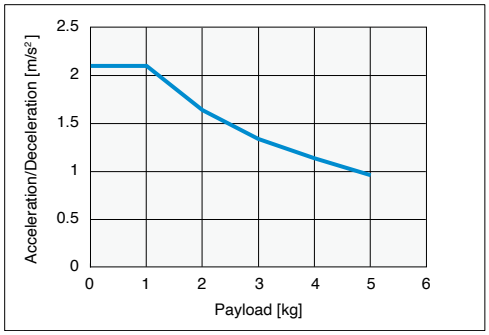
Payload – Acceleration/Deceleration Graph (Estimate)

LBAS04-6 / ABAS04-6

Horizontal/ Wall hanging

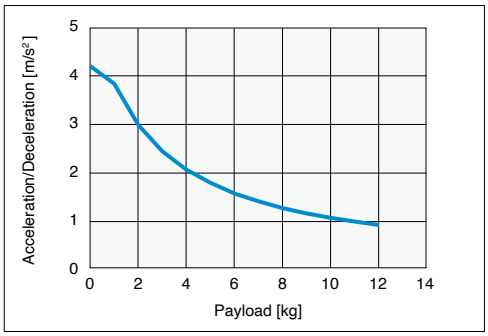


Vertical

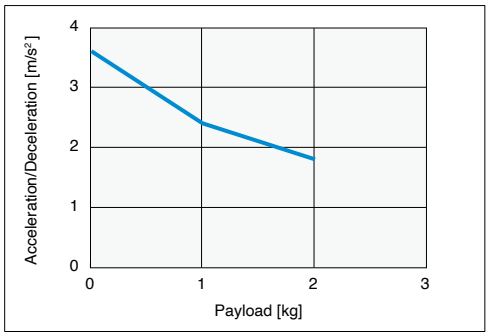


LBAS04-12 / ABAS04-12

Horizontal/ Wall hanging



Vertical



LBAS05

Inertia Moment

[kg·m^2×10^{-4}]	Effective stroke [mm]															
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
LBAS05-5	0.085	0.093	0.101	0.109	0.117	0.125	0.133	0.141	0.149	0.157	0.165	0.173	0.181	0.189	0.197	0.205
LBAS05-10	0.097	0.105	0.113	0.121	0.129	0.137	0.145	0.153	0.161	0.169	0.177	0.185	0.193	0.201	0.209	0.217
LBAS05-20	0.145	0.153	0.161	0.169	0.177	0.185	0.193	0.201	0.209	0.217	0.224	0.232	0.240	0.248	0.256	0.264

LBAS05 ABAS05

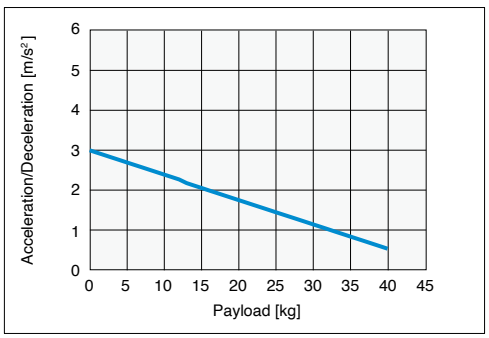
Acceleration/Deceleration

Model	LBAS05-5/ABAS05-5		LBAS05-10/ABAS05-10		LBAS05-20/ABAS05-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]	
0	3.04	3.34	4.64	4.86	7.44	7.44
1	2.97	3.18	4.44	4.56	7.44	6.99
2	2.91	3.03	4.25	4.3	7.44	5.65
3	2.85	2.88	4.07	4.06	7.44	3.42
4	2.79	2.73	3.9	3.85	7.44	
5	2.73	2.58	3.73	3.66	7.44	
6	2.67	2.43	3.57	3.49	6.64	
7	2.61	2.28	3.41		6	
8	2.55	2.13	3.27		5.47	
9	2.49	1.98	3.12		5.02	
10	2.43	1.83	2.99		4.65	
11	2.37	1.68	2.86		4.32	
12	2.31	1.53	2.74		4.04	
13	2.24		2.62			
14	2.18		2.51			
15	2.12		2.41			
16	2.06		2.31			
17	2		2.22			
18	1.94		2.14			
19	1.88		2.06			
20	1.82		1.99			
21	1.76		1.93			
22	1.7		1.87			
23	1.64		1.82			
24	1.58		1.77			
25	1.52					
26	1.45					
27	1.39					
28	1.33					
29	1.27					
30	1.21					
31	1.15					
32	1.09					
33	1.03					
34	0.97					
35	0.91					
36	0.85					
37	0.79					
38	0.72					
39	0.66					
40	0.6					

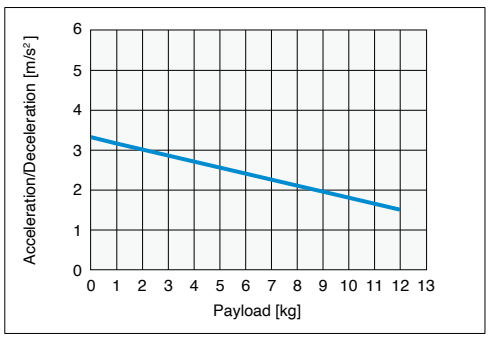
Payload – Acceleration/Deceleration Graph (Estimate)

LBAS05-5 / ABAS05-5

Horizontal/ Wall hanging



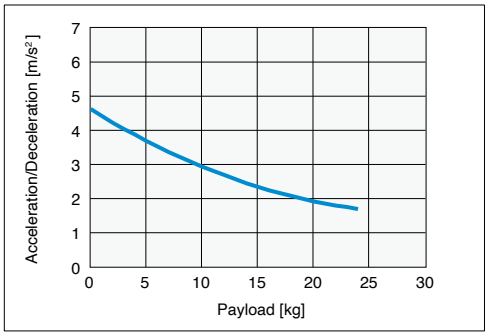
Vertical



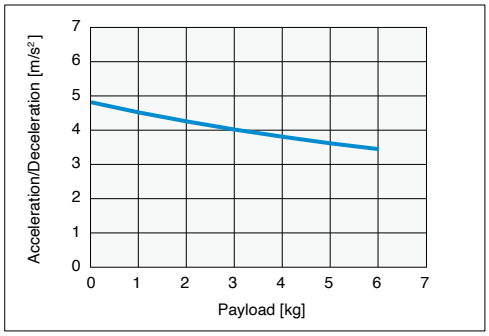
Payload – Acceleration/Deceleration Graph (Estimate)

LBAS05-10 / ABAS05-10

Horizontal/ Wall hanging

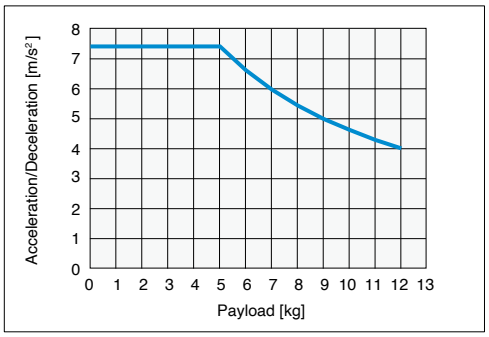


Vertical



LBAS05-20 / ABAS05-20

Horizontal/ Wall hanging



Vertical

LBAS08

Inertia Moment

[kg·m^2×10^{-4}]	Effective stroke [mm]																						
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
LBAS08-5	0.160	0.168	0.176	0.184	0.192	0.200	0.208	0.216	0.224	0.232	0.240	0.248	0.256	0.263	0.271	0.279	0.287	0.295	0.303	0.311	0.319	0.327
LBAS08-10	0.190	0.198	0.206	0.214	0.222	0.230	0.238	0.246	0.254	0.261	0.269	0.277	0.285	0.293	0.301	0.309	0.317	0.325	0.333	0.341	0.349	0.357
LBAS08-20	0.309	0.317	0.325	0.333	0.341	0.349	0.357	0.365	0.373	0.381	0.389	0.397	0.405	0.413	0.421	0.429	0.437	0.445	0.453	0.461	0.469	0.477

LBAS08 ABAS08

Acceleration/Deceleration

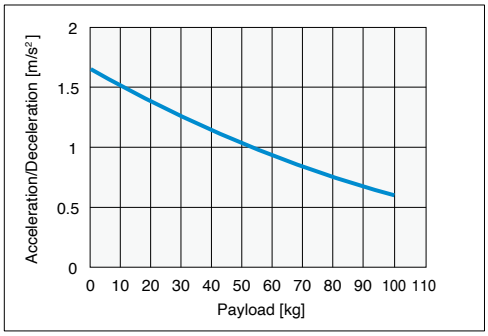
Model	LBAS08-5/ABAS08-5		LBAS08-10/ABAS08-10		LBAS08-20/ABAS08-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]	
0	1.65	1.65	6.09	4.79	8.51	8.5
1	1.63	1.62	5.97	4.54	8.2	7.39
2	1.62	1.59	5.86	4.31	7.9	6.42
3	1.6	1.57	5.74	4.09	7.61	5.59
4	1.59	1.54	5.63	3.88	7.33	4.89
5	1.58	1.51	5.52	3.68	7.05	4.33
6	1.56	1.49	5.42	3.5	6.77	3.91
7	1.55	1.46	5.31	3.32	6.51	3.62
8	1.54	1.44	5.21	3.16	6.24	3.46
9	1.52	1.41	5.1	3.01	5.99	
10	1.51	1.38	5	2.87	5.74	
11	1.5	1.36	4.9	2.74	5.5	
12	1.49	1.33	4.8	2.62	5.26	
13	1.47	1.3	4.7	2.52	5.03	
14	1.46	1.28	4.61	2.42	4.8	
15	1.45	1.25	4.51	2.34	4.58	
16	1.43	1.23	4.42	2.27	4.37	
17	1.42	1.2	4.33	2.21	4.16	
18	1.41	1.17	4.24	2.16	3.96	
19	1.4	1.15	4.15	2.13	3.76	
20	1.38	1.12	4.06	2.1	3.57	
21	1.37	1.09	3.98		3.38	
22	1.36	1.07	3.89		3.21	
23	1.35	1.04	3.81		3.03	
24	1.34	1.02	3.73		2.87	
25	1.32	0.99	3.65		2.71	
26	1.31	0.96	3.57		2.55	
27	1.3	0.94	3.49		2.4	
28	1.29	0.91	3.42		2.26	
29	1.28	0.88	3.34		2.13	
30	1.26	0.86	3.27		1.99	
31	1.25		3.2		1.87	
32	1.24		3.13		1.75	
33	1.23		3.06		1.64	
34	1.22		2.99		1.53	
35	1.21		2.93		1.43	
36	1.19		2.86		1.34	
37	1.18		2.8		1.25	
38	1.17		2.74		1.16	
39	1.16		2.68		1.09	
40	1.15		2.62		1.02	
41	1.14		2.57			
42	1.13		2.51			
43	1.12		2.46			
44	1.11		2.41			
45	1.09		2.36			
46	1.08		2.31			
47	1.07		2.26			
48	1.06		2.21			
49	1.05		2.17			
50	1.04		2.12			
51	1.03		2.08			
52	1.02		2.04			
53	1.01		2			
54	1		1.96			
55	0.99		1.93			
56	0.98		1.89			
57	0.97		1.86			
58	0.96		1.83			
59	0.95		1.8			
60	0.94		1.77			
61	0.93		1.74			
62	0.92		1.72			
63	0.91		1.69			
64	0.9		1.67			
65	0.89		1.65			
66	0.88		1.63			
67	0.87		1.61			
68	0.86		1.59			
69	0.85		1.57			
70	0.84		1.56			
71	0.84		1.55			
72	0.83		1.54			
73	0.82		1.53			
74	0.81		1.52			
75	0.8		1.51			
76	0.79		1.51			
77	0.78		1.5			

Model	LBAS08-5/ABAS08-5	LBAS08-10/ABAS08-10	LBAS08-20/ABAS08-20
	Horizontal/ Wall hanging / Vertical	Horizontal/ Wall hanging / Vertical	Horizontal/ Wall hanging / Vertical
Payload [kg]	Acceleration/Deceleration [m/s^2]	Acceleration/Deceleration [m/s^2]	Acceleration/Deceleration [m/s^2]
78	0.77	1.5	
79	0.76	1.5	
80	0.76	1.5	
81	0.75		
82	0.74		
83	0.73		
84	0.72		
85	0.71		
86	0.71		
87	0.7		
88	0.69		
89	0.68		
90	0.67		
91	0.67		
92	0.66		
93	0.65		
94	0.64		
95	0.63		
96	0.63		
97	0.62		
98	0.61		
99	0.6		
100	0.6		

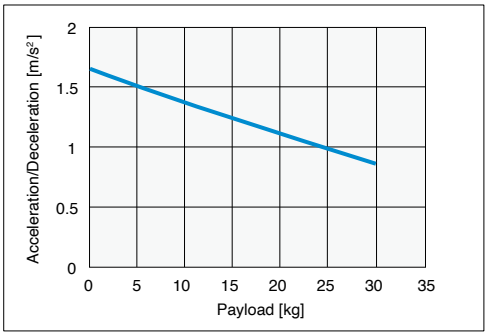
Payload – Acceleration/Deceleration Graph (Estimate)

LBAS08-5 / ABAS08-5

Horizontal/ Wall hanging

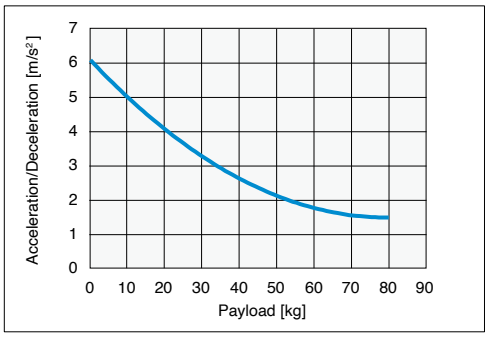


Vertical

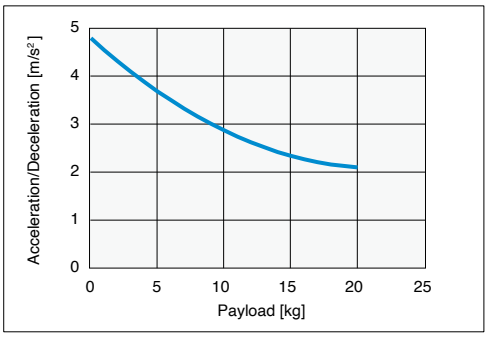


LBAS08-10 / ABAS08-10

Horizontal/ Wall hanging

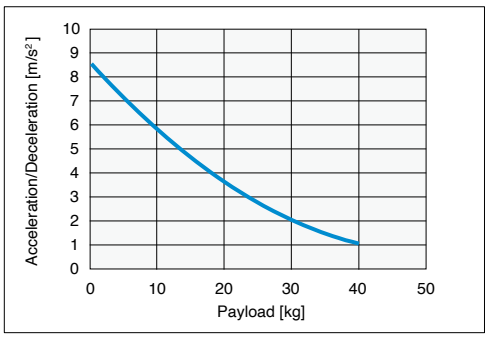


Vertical

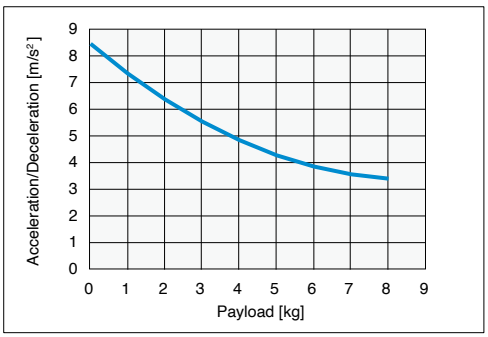


LBAS08-20 / ABAS08-20

Horizontal/ Wall hanging



Vertical



LBAS12

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]																									
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
LBAS12-5	0.396	0.422	0.447	0.472	0.497	0.523	0.548	0.573	0.598	0.624	0.649	0.674	0.699	0.725	0.750	0.775	0.800	0.826	0.851	0.876	0.901	0.927	0.952	0.977	1.002
LBAS12-10	0.426	0.451	0.477	0.502	0.527	0.552	0.578	0.603	0.628	0.653	0.679	0.704	0.729	0.754	0.780	0.805	0.830	0.855	0.881	0.906	0.931	0.956	0.982	1.007	1.032
LBAS12-20	0.548	0.573	0.598	0.623	0.649	0.674	0.699	0.724	0.750	0.775	0.800	0.826	0.851	0.876	0.901	0.927	0.952	0.977	1.002	1.028	1.053	1.078	1.103	1.129	1.154
LBAS12-32	0.799	0.824	0.849	0.875	0.900	0.925	0.951	0.976	1.001	1.026	1.052	1.077	1.102	1.127	1.153	1.178	1.203	1.228	1.254	1.279	1.304	1.329	1.355	1.380	1.405

LBAS12 (200W) ABAS12

Acceleration/Deceleration

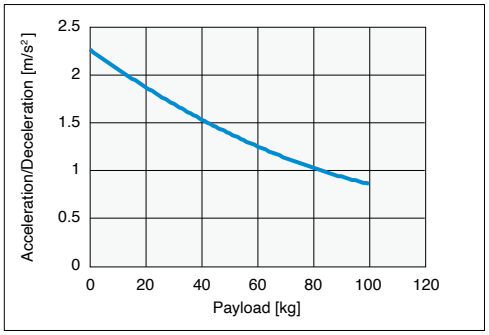
Model	LBAS12-5/ ABAS12-5		LBAS12-10/ ABAS12-10		LBAS12-20/ ABAS12-20		LBAS12-32/ ABAS12-32	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]	
0	2.27	1.9	6.89	3.29	6.59	8.11	9.75	9.75
1	2.24	1.87	6.78	3.26	6.53	7.85	9.75	9.75
2	2.22	1.84	6.67	3.24	6.48	7.6	9.75	9.75
3	2.2	1.82	6.56	3.22	6.43	7.34	9.75	9.75
4	2.18	1.79	6.45	3.19	6.38	7.09	9.75	
5	2.16	1.77	6.35	3.17	6.33	6.84	9.75	
6	2.14	1.74	6.24	3.15	6.28	6.58	9.75	
7	2.12	1.72	6.14	3.12	6.23	6.33	9.75	
8	2.1	1.69	6.03	3.1	6.18	6.07	9.75	
9	2.08	1.67	5.93	3.07	6.13		9.01	
10	2.06	1.64	5.83	3.05	6.08		8.37	
11	2.04	1.62	5.73	3.02	6.03		7.82	
12	2.02	1.59	5.63	3	5.98		7.34	
13	2	1.57	5.53	2.97	5.93		6.91	
14	1.98	1.54	5.44	2.94	5.88		6.53	
15	1.96	1.52	5.34	2.92	5.82		6.19	
16	1.95	1.49	5.24	2.89	5.77		5.88	
17	1.93	1.47	5.15	2.86	5.72		5.6	
18	1.91	1.44	5.06	2.83	5.67		5.35	
19	1.89	1.41	4.96	2.81	5.62		5.12	
20	1.87	1.39	4.87	2.78	5.57		4.91	
21	1.85	1.36	4.78		5.52			
22	1.84	1.34	4.69		5.47			
23	1.82	1.31	4.6		5.42			
24	1.8	1.29	4.52		5.37			
25	1.78	1.26	4.43		5.32			
26	1.76	1.24	4.34		5.27			
27	1.75	1.21	4.26		5.22			
28	1.73	1.19	4.18		5.17			
29	1.71	1.16	4.09		5.12			
30	1.7	1.14	4.01		5.06			
31	1.68		3.93		5.01			
32	1.66		3.85		4.96			
33	1.65		3.77		4.91			
34	1.63		3.69		4.86			
35	1.61		3.62		4.81			
36	1.6		3.54		4.76			
37	1.58		3.47		4.71			
38	1.57		3.39		4.66			
39	1.55		3.32		4.61			
40	1.53		3.25		4.56			
41	1.52		3.18					
42	1.5		3.11					
43	1.49		3.04					
44	1.47		2.97					
45	1.46		2.9					
46	1.44		2.83					
47	1.43		2.77					
48	1.42		2.7					
49	1.4		2.64					
50	1.39		2.58					
51	1.37		2.52					
52	1.36		2.46					
53	1.35		2.4					
54	1.33		2.34					
55	1.32		2.28					
56	1.3		2.22					
57	1.29		2.17					
58	1.28		2.11					
59	1.27		2.06					
60	1.25		2.01					
61	1.24		1.95					
62	1.23		1.9					
63	1.22		1.85					
64	1.2		1.81					
65	1.19		1.76					
66	1.18		1.71					
67	1.17		1.66					
68	1.16		1.62					
69	1.14		1.57					
70	1.13		1.53					
71	1.12		1.49					
72	1.11		1.45					
73	1.1		1.41					

Model	LBAS12-5/ ABAS12-5		LBAS12-10/ ABAS12-10		LBAS12-20/ ABAS12-20		LBAS12-32/ ABAS12-32	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]	
74	1.09		1.37					
75	1.08		1.33					
76	1.07		1.29					
77	1.06		1.26					
78	1.05		1.22					
79	1.04		1.19					
80	1.03		1.15					
81	1.02							
82	1.01							
83	1							
84	0.99							
85	0.98							
86	0.97							
87	0.96							
88	0.95							
89	0.94							
90	0.94							
91	0.93							
92	0.92							
93	0.91							
94	0.9							
95	0.9							
96	0.89							
97	0.88							
98	0.87							
99	0.87							
100	0.86							

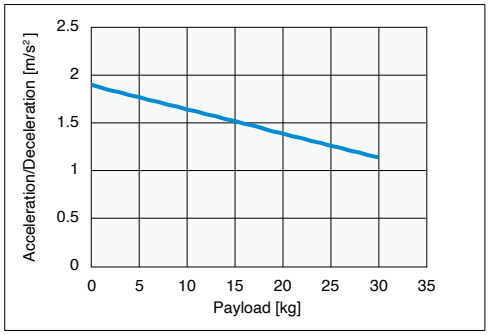
Payload – Acceleration/Deceleration Graph (Estimate)

LBAS12-5 (200W) / ABAS12-5

Horizontal/ Wall hanging

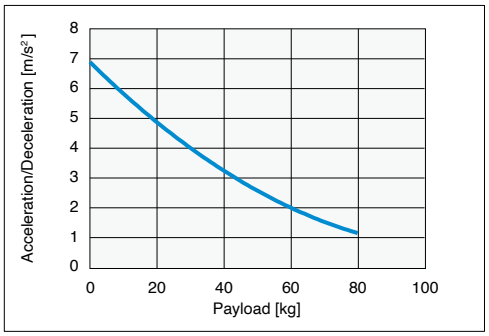


Vertical

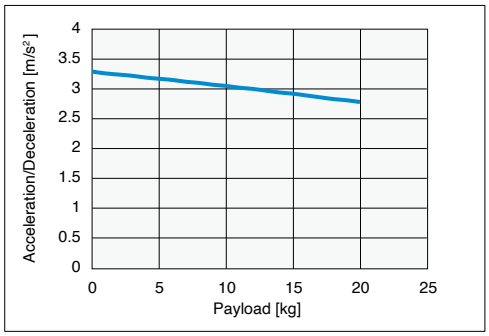


LBAS12-10 (200W) / ABAS12-10

Horizontal/ Wall hanging

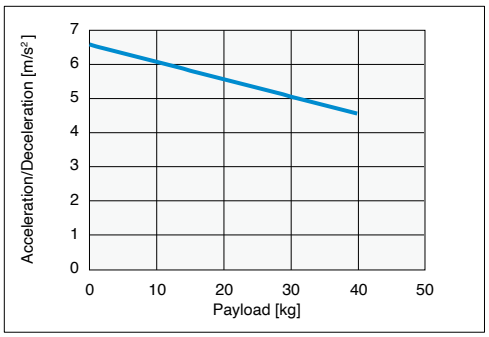


Vertical

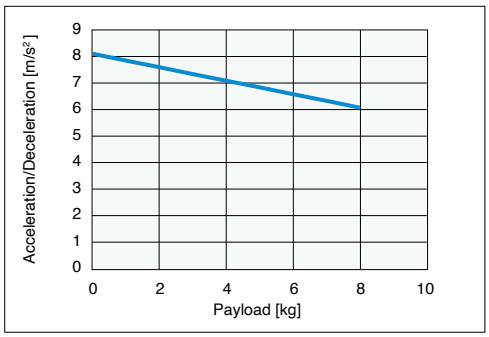


LBAS12-20 (200W) / ABAS12-20

Horizontal/ Wall hanging

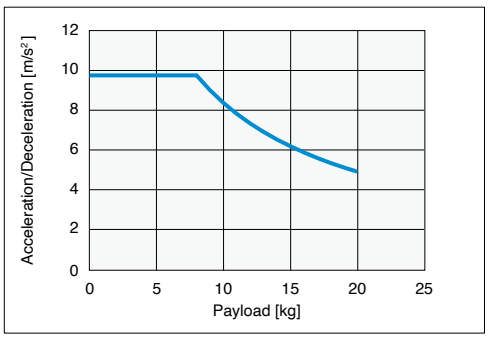


Vertical

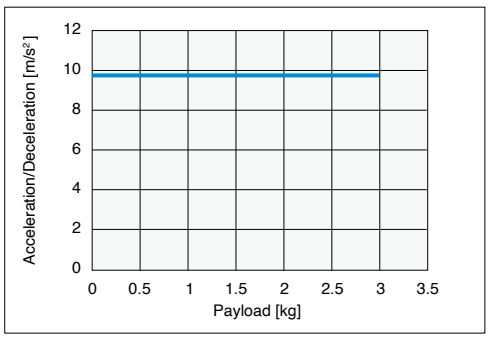


LBAS12-32 (200W) / ABAS12-32

Horizontal/ Wall hanging



Vertical



LBAS12 (400W) ABAS12H

Acceleration/Deceleration

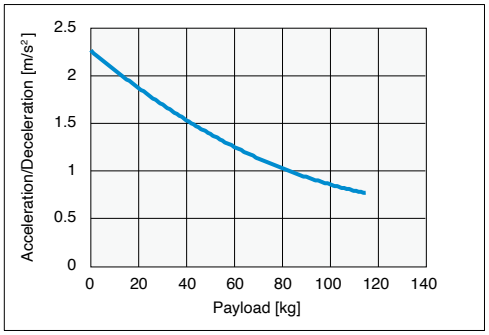
Model	LBAS12-5/ ABAS12H-5		LBAS12-10/ ABAS12H-10		LBAS12-20/ ABAS12H-20		LBAS12-32/ ABAS12H-32	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]	
0	2.27	1.9	8.61	3.29	9.73	8.11	9.75	9.75
1	2.24	1.87	8.47	3.26	9.53	7.85	9.75	9.75
2	2.22	1.84	8.33	3.24	9.35	7.6	9.75	9.75
3	2.2	1.82	8.2	3.22	9.16	7.34	9.75	9.75
4	2.18	1.79	8.06	3.19	8.98	7.09	9.75	9.75
5	2.16	1.77	7.93	3.17	8.8	6.84	9.75	9.75
6	2.14	1.74	7.8	3.15	8.62	6.58	9.75	9.75
7	2.12	1.72	7.67	3.12	8.45	6.33	9.75	9.75
8	2.1	1.69	7.54	3.1	8.28	6.07	9.75	9.75
9	2.08	1.67	7.41	3.07	8.11	5.82	9.01	
10	2.06	1.64	7.29	3.05	7.95	5.57	8.37	
11	2.04	1.62	7.16	3.02	7.79	5.31	7.82	
12	2.02	1.59	7.04	3	7.63	5.06	7.34	
13	2	1.57	6.92	2.97	7.48	4.81	6.91	
14	1.98	1.54	6.79	2.94	7.33	4.55	6.53	
15	1.96	1.52	6.67	2.92	7.18	4.3	6.19	
16	1.95	1.49	6.56	2.89	7.03		5.88	
17	1.93	1.47	6.44	2.86	6.89		5.6	
18	1.91	1.44	6.32	2.83	6.75		5.35	
19	1.89	1.41	6.21	2.81	6.61		5.12	
20	1.87	1.39	6.09	2.78	6.48		4.91	
21	1.85	1.36	5.98	2.75	6.35		4.71	
22	1.84	1.34	5.87	2.72	6.22		4.53	
23	1.82	1.31	5.76	2.69	6.1		4.37	
24	1.8	1.29	5.65	2.66	5.98		4.21	
25	1.78	1.26	5.54	2.63	5.86		4.07	
26	1.76	1.24	5.43		5.74		3.93	
27	1.75	1.21	5.32		5.63		3.81	
28	1.73	1.19	5.22		5.52		3.69	
29	1.71	1.16	5.12		5.41		3.58	
30	1.7	1.14	5.01		5.31		3.47	
31	1.68	1.11	4.91		5.21		3.37	
32	1.66	1.09	4.81		5.11		3.28	
33	1.65	1.06	4.72		5.02		3.19	
34	1.63	1.04	4.62		4.93		3.11	
35	1.61	1.01	4.52		4.84		3.03	
36	1.6	0.99	4.43		4.76			
37	1.58	0.96	4.33		4.67			
38	1.57	0.93	4.24		4.6			
39	1.55	0.91	4.15		4.52			
40	1.53	0.88	4.06		4.45			
41	1.52		3.97		4.38			
42	1.5		3.88		4.31			
43	1.49		3.8		4.25			
44	1.47		3.71		4.19			
45	1.46		3.63		4.13			
46	1.44		3.54		4.07			
47	1.43		3.46		4.02			
48	1.42		3.38		3.97			
49	1.4		3.3		3.93			
50	1.39		3.22		3.89			
51	1.37		3.15					
52	1.36		3.07					
53	1.35		3					
54	1.33		2.92					
55	1.32		2.85					
56	1.3		2.78					
57	1.29		2.71					
58	1.28		2.64					
59	1.27		2.58					
60	1.25		2.51					
61	1.24		2.44					
62	1.23		2.38					
63	1.22		2.32					
64	1.2		2.26					
65	1.19		2.2					
66	1.18		2.14					
67	1.17		2.08					
68	1.16		2.02					
69	1.14		1.97					
70	1.13		1.92					
71	1.12		1.86					
72	1.11		1.81					
73	1.1		1.76					
74	1.09		1.71					
75	1.08		1.66					
76	1.07		1.62					
77	1.06		1.57					
78	1.05		1.53					
79	1.04		1.48					
80	1.03		1.44					
81	1.02		1.4					
82	1.01		1.36					
83	1		1.32					
84	0.99		1.29					
85	0.98		1.25					
86	0.97		1.22					
87	0.96		1.18					
88	0.95		1.15					
89	0.94		1.12					

Model	LBAS12-5/ ABAS12H-5		LBAS12-10/ ABAS12H-10		LBAS12-20/ ABAS12H-20		LBAS12-32/ ABAS12H-32	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]		Acceleration/ Deceleration [m/s²]	
90	0.94		1.09					
91	0.93		1.06					
92	0.92		1.03					
93	0.91		1.01					
94	0.9		0.98					
95	0.9		0.96					
96	0.89							
97	0.88							
98	0.87							
99	0.87							
100	0.86							
101	0.85							
102	0.84							
103	0.84							
104	0.83							
105	0.82							
106	0.82							
107	0.81							
108	0.81							
109	0.8							
110	0.79							
111	0.79							
112	0.78							
113	0.78							
114	0.77							
115	0.77							

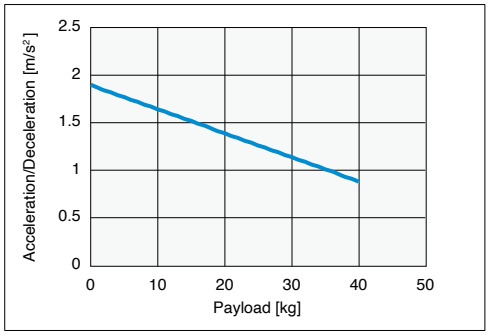
Payload – Acceleration/Deceleration Graph (Estimate)

LBAS12-5 (400W) / ABAS12H-5

Horizontal/ Wall hanging

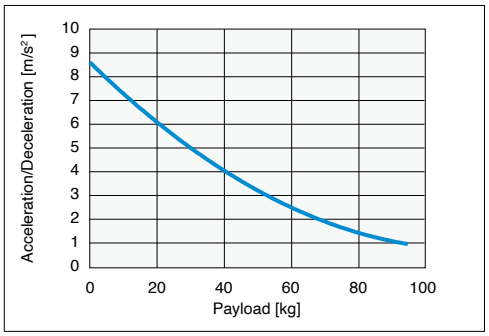


Vertical

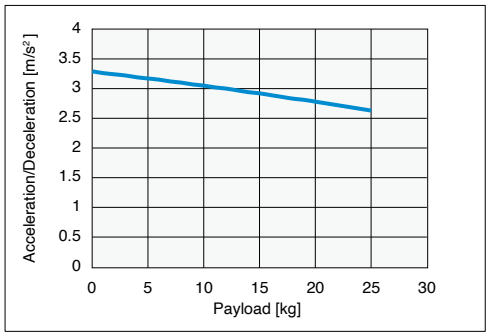


LBAS12-10 (400W) / ABAS12H-10

Horizontal/ Wall hanging

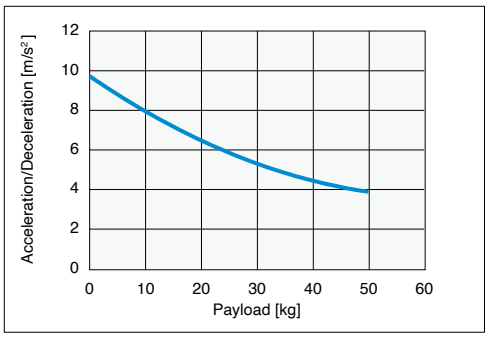


Vertical

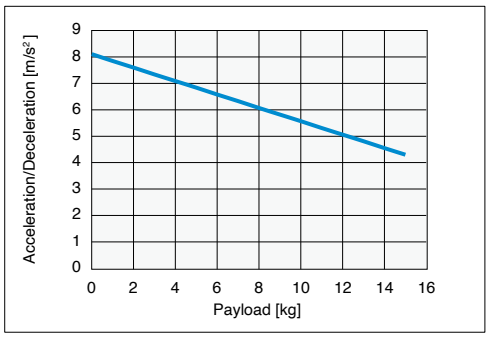


LBAS12-20 (400W) / ABAS12H-20

Horizontal/ Wall hanging

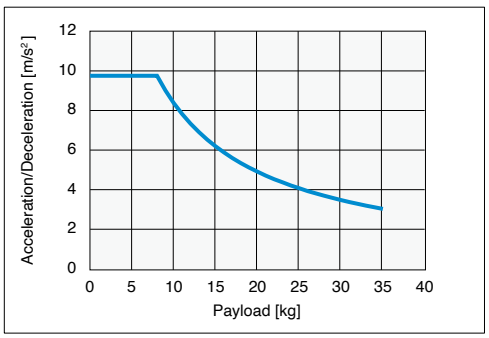


Vertical

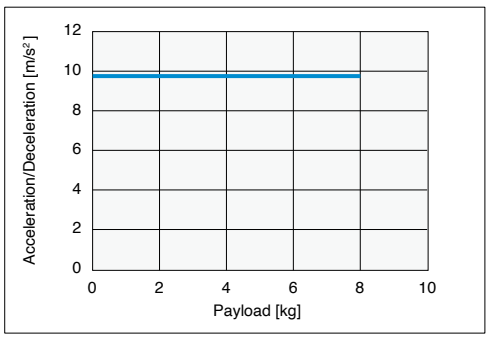


LBAS12-32 (400W) / ABAS12H-32

Horizontal/ Wall hanging



Vertical



LGXS05

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]															
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
LGXS05-5	0.139	0.147	0.155	0.163	0.171	0.179	0.187	0.195	0.203	0.211	0.219	0.227	0.235	0.243	0.251	0.259
LGXS05-10	0.146	0.154	0.162	0.170	0.178	0.186	0.194	0.202	0.210	0.218	0.226	0.234	0.242	0.250	0.258	0.266
LGXS05-20	0.177	0.185	0.193	0.201	0.209	0.217	0.225	0.233	0.241	0.249	0.257	0.265	0.273	0.281	0.289	0.297

LGXS05 AGXS05

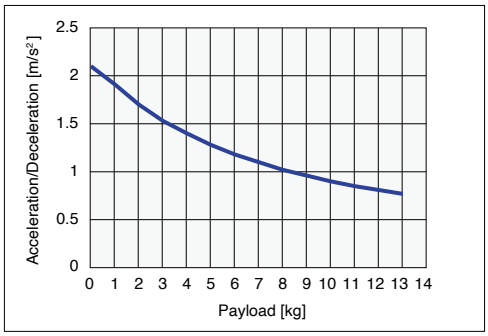
Acceleration/Deceleration

Model	LGXS05-5/AGXS05-5		LGXS05-10/AGXS05-10		LGXS05-20/AGXS05-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	2.1	2.1	4.2	3.6	5.3	5.3
1	1.91	2.1	3.84	2.4	5.3	5.3
2	1.7	1.64	2.99	1.8	3.98	3.98
3	1.53	1.34	2.45	1.44	3.19	
4	1.4	1.14	2.07	1.2	2.66	
5	1.28	0.99	1.8		2.28	
6	1.18	0.87	1.58			
7	1.1	0.78	1.42			
8	1.02	0.7	1.28			
9	0.96					
10	0.9					
11	0.85					
12	0.81					
13	0.77					

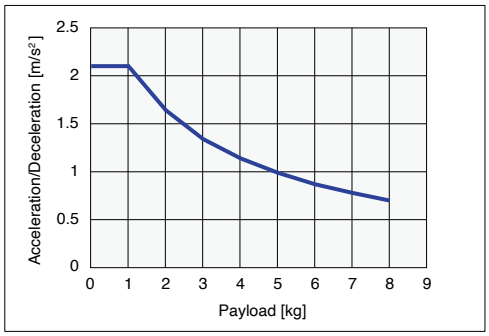
Payload – Acceleration/Deceleration Graph (Estimate)

LGXS05-5 / AGXS05-5

Horizontal/ Wall hanging



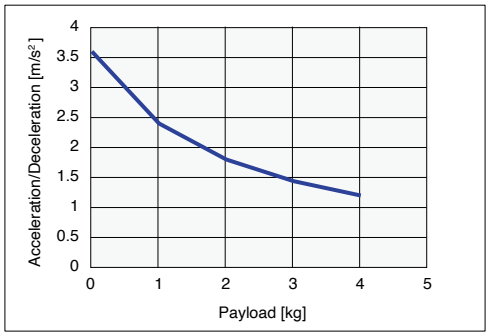
Vertical



LGXS05-10 / AGXS05-10

Horizontal/ Wall hanging

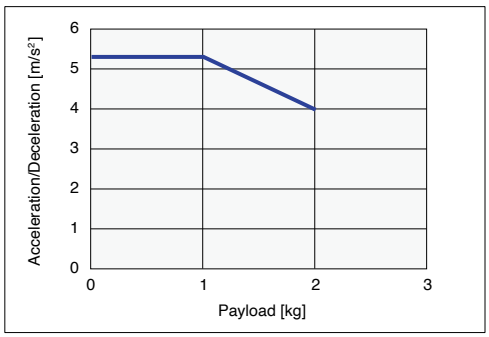
Vertical



LGXS05-20 / AGXS05-20

Horizontal/ Wall hanging

Vertical



LGXS05 **AGXS05-H** **High agility mode**

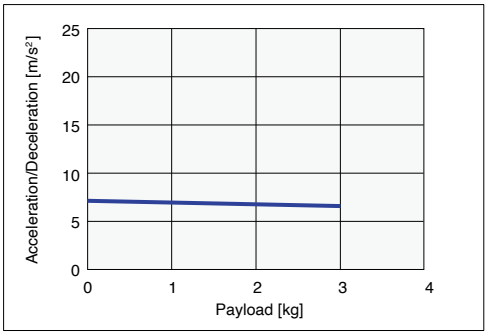
Acceleration/Deceleration

Model	LGXS05-5/ AGXS05-H5	LGXS05-10/ AGXS05-H10		LGXS05-20/ AGXS05-H20	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	7.17	11.77	11.77	11.77	11.77
1	6.99	11.77	11.77	11.77	11.77
2	6.82	11.77	11.58	11.77	
3	6.66	10.91			

Payload – Acceleration/Deceleration Graph (Estimate)

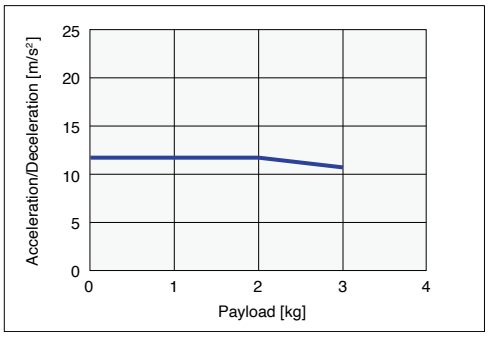
LGXS05-5 / AGXS05-H5

Vertical

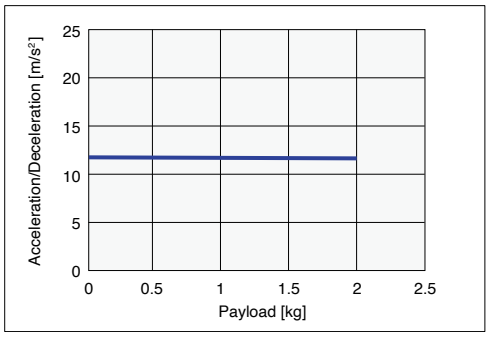


LGXS05-10 / AGXS05-H10

Horizontal/ Wall hanging

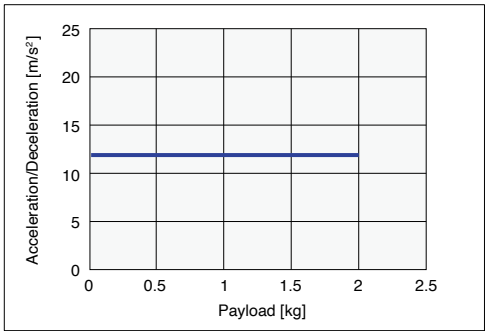


Vertical

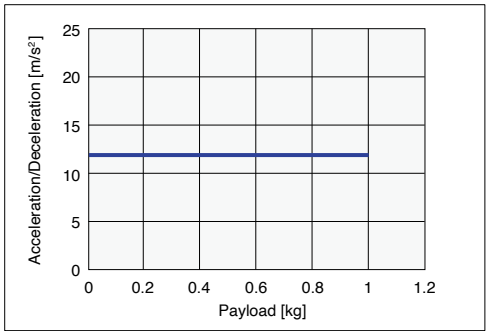


LGXS05-20 / AGXS05-H20

Horizontal/ Wall hanging



Vertical



LGXS05L

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]															
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
LGXS05L-5	0.144	0.152	0.160	0.168	0.176	0.184	0.192	0.200	0.208	0.216	0.224	0.232	0.240	0.248	0.256	0.264
LGXS05L-10	0.153	0.161	0.169	0.177	0.185	0.193	0.201	0.209	0.217	0.225	0.233	0.241	0.249	0.257	0.265	0.273
LGXS05L-20	0.192	0.200	0.208	0.216	0.224	0.232	0.240	0.248	0.256	0.264	0.271	0.279	0.287	0.295	0.303	0.311

LGXS05L AGXS05L

Acceleration/Deceleration

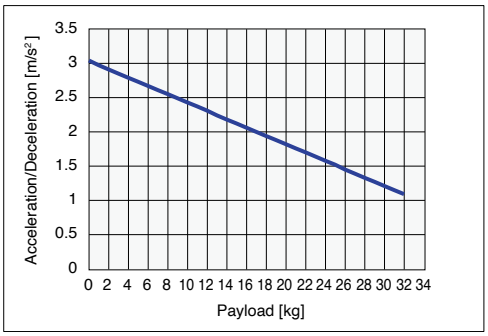
Model	LGXS05L-5/ AGXS05L-5		LGXS05L-10/ AGXS05L-10		LGXS05L-20/ AGXS05L-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	3.04	3.34	4.26	4.86	5.07	5.07
1	2.97	3.18	4.08	4.56	4.86	4.86
2	2.91	3.03	3.9	4.3	4.66	4.66
3	2.85	2.88	3.74	4.06	4.46	4.46
4	2.79	2.73	3.58	3.85	4.25	
5	2.73	2.58	3.42	3.66	4.05	
6	2.67	2.43	3.28	3.49	3.85	
7	2.61	2.28	3.13		3.65	
8	2.55	2.13	3		3.44	
9	2.49	1.98	2.87		3.24	
10	2.43	1.83	2.74		3.04	
11	2.37	1.68	2.62		2.83	
12	2.31	1.53	2.51		2.63	
13	2.24		2.41			
14	2.18		2.3			
15	2.12		2.21			
16	2.06		2.12			
17	2		2.04			

Model	LGXS05L-5/ AGXS05L-5		LGXS05L-10/ AGXS05L-10		LGXS05L-20/ AGXS05L-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
18	1.94		1.96			
19	1.88		1.89			
20	1.82		1.83			
21	1.76		1.77			
22	1.7		1.72			
23	1.64		1.67			
24	1.58		1.63			
25	1.52					
26	1.45					
27	1.39					
28	1.33					
29	1.27					
30	1.21					
31	1.15					
32	1.09					

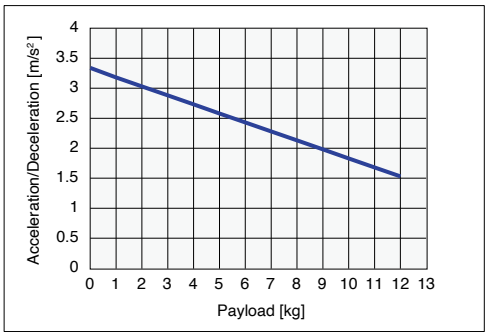
Payload – Acceleration/Deceleration Graph (Estimate)

LGXS05L-5 / AGXS05L-5

Horizontal/ Wall hanging

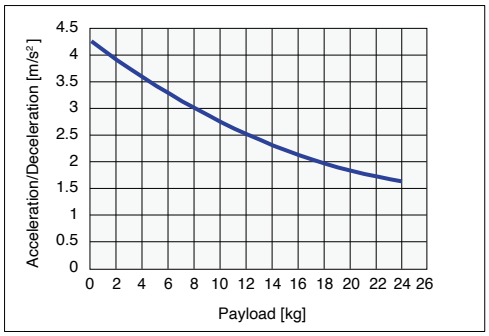


Vertical

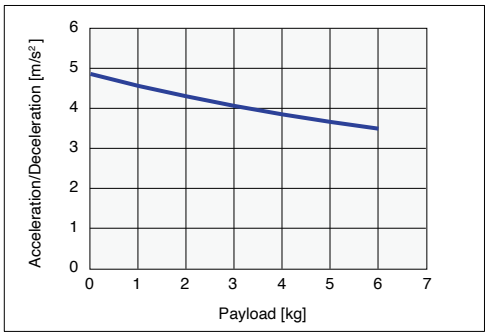


LGXS05L-10 / AGXS05L-10

Horizontal/ Wall hanging

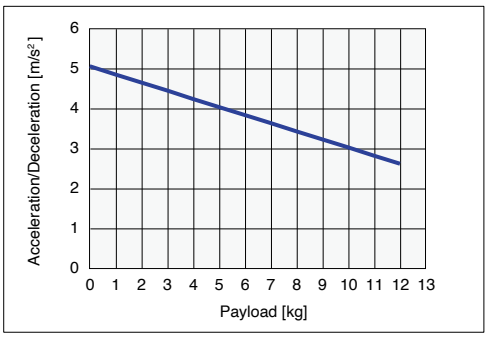


Vertical

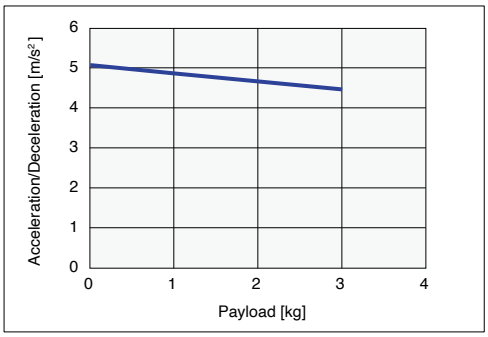


LGXS05L-20 / AGXS05L-20

Horizontal/ Wall hanging



Vertical



LGXS05L **AGXS05L-H** **High agility mode**

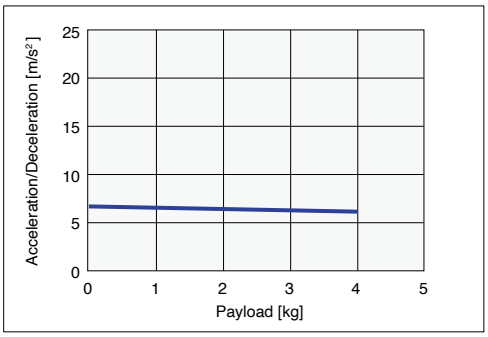
Acceleration/Deceleration

Model	LGXS05L-5/ AGXS05L-H5	LGXS05L-10/ AGXS05L-H10		LGXS05L-20/ AGXS05L-H20	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	6.65	14.72	12.68	14.72	14.72
1	6.50	13.50	11.65	14.72	14.72
2	6.35	12.46	10.78	14.72	
3	6.22	11.58		12.93	
4	6.08	10.81		11.16	
5		10.13		9.81	
6		9.54			
7		9.01			
8		8.54			
9		8.11			
10		7.73			

Payload – Acceleration/Deceleration Graph (Estimate)

LGXS05L-5 / AGXS05L-H5

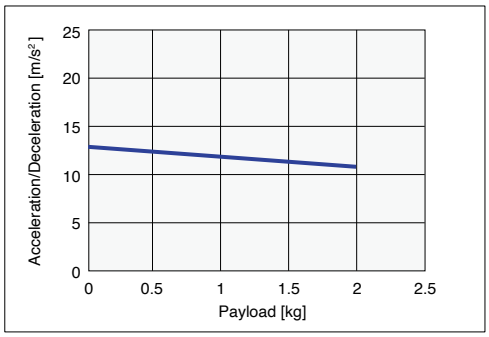
Vertical



LGXS05L-10 / AGXS05L-H10

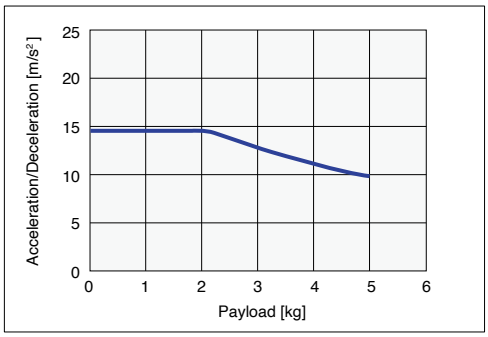
Horizontal/ Wall hanging

Vertical

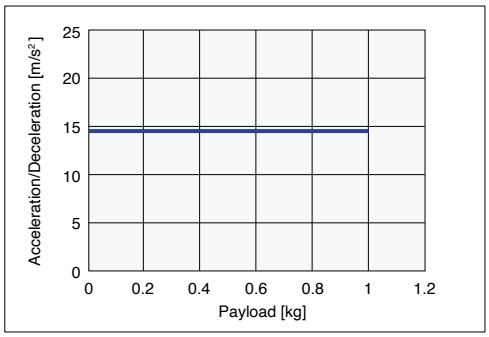


LGXS05L-20 / AGXS05L-H20

Horizontal/ Wall hanging



Vertical



LGXS07

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]																					
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
LGXS07-5	0.623	0.643	0.662	0.682	0.701	0.721	0.740	0.760	0.779	0.799	0.818	0.838	0.857	0.877	0.896	0.916	0.935	0.955	0.974	0.994	1.013	1.033
LGXS07-10	0.644	0.663	0.683	0.702	0.722	0.741	0.761	0.780	0.800	0.819	0.839	0.858	0.878	0.897	0.917	0.936	0.956	0.975	0.995	1.014	1.034	1.053
LGXS07-20	0.728	0.747	0.767	0.787	0.806	0.826	0.845	0.865	0.884	0.904	0.923	0.943	0.962	0.982	1.001	1.021	1.040	1.060	1.079	1.099	1.118	1.138
LGXS07-30	0.885	0.905	0.924	0.944	0.963	0.983	1.002	1.022	1.041	1.061	1.080	1.100	1.119	1.139	1.158	1.178	1.197	1.217	1.236	1.256	1.275	1.295

LGXS07 AGXS07

Acceleration/Deceleration

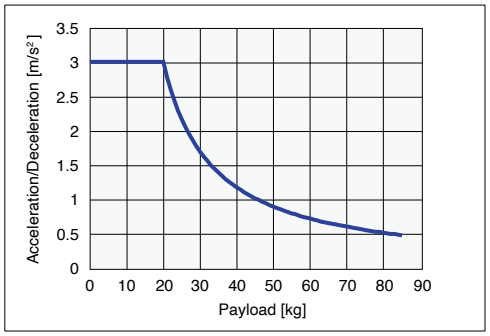
Model	LGXS07-5/ AGXS07-5		LGXS07-10/ AGXS07-10		LGXS07-20/ AGXS07-20		LGXS07-30/ AGXS07-30	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	3.04	2.53	6.08	5.57	7.09	6.08	6.99	6.99
1	3.04	2.47	5.68	5.29	6.74	5.57	6.64	6.64
2	3.04	2.42	5.33	5.02	6.4	5.15	6.31	6.31
3	3.04	2.37	5.02	4.75	6.07	4.78	5.98	
4	3.04	2.32	4.75	4.5	5.75	4.47	5.67	
5	3.04	2.27	4.5	4.24	5.44		5.36	
6	3.04	2.22	4.28	3.99	5.14		5.06	
7	3.04	2.17	4.08	3.75	4.85		4.78	
8	3.04	2.12	3.89	3.52	4.57		4.5	
9	3.04	2.07	3.73		4.3		4.24	
10	3.04	2.02	3.57		4.04		3.98	
11	3.04	1.97	3.43		3.79			
12	3.04	1.92	3.3		3.55			
13	3.04	1.87	3.18		3.32			
14	3.04	1.82	3.07		3.09			
15	3.04	1.77	2.96		2.88			
16	3.04	1.72	2.86		2.68			
17	3.04		2.77		2.49			
18	3.04		2.69		2.31			
19	3.04		2.6		2.14			
20	3.04		2.53		1.98			
21	2.82		2.46		1.83			
22	2.64		2.39		1.69			
23	2.48		2.32		1.56			
24	2.33		2.26		1.44			
25	2.21		2.21		1.32			
26	2.09		2.15					
27	1.99		2.1					
28	1.9		2.05					
29	1.81		2					
30	1.73		1.96					
31	1.66		1.91					
32	1.6		1.87					
33	1.53		1.83					
34	1.48		1.79					
35	1.43		1.76					
36	1.38		1.72					
37	1.33		1.69					
38	1.29		1.66					
39	1.25		1.63					
40	1.21		1.6					
41	1.18		1.57					
42	1.14		1.54					
43	1.11		1.51					
44	1.08		1.49					
45	1.05		1.46					
46	1.03							
47	1							
48	0.98							
49	0.95							
50	0.93							
51	0.91							
52	0.89							
53	0.87							
54	0.85							
55	0.83							
56	0.82							
57	0.8							
58	0.78							
59	0.77							
60	0.76							
61	0.74							
62	0.73							
63	0.71							
64	0.7							
65	0.69							
66	0.68							
67	0.67							
68	0.66							
69	0.65							
70	0.64							
71	0.63							
72	0.62							
73	0.61							
74	0.6							
75	0.59							

Model	LGXS07-5/ AGXS07-5		LGXS07-10/ AGXS07-10		LGXS07-20/ AGXS07-20		LGXS07-30/ AGXS07-30	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
76	0.58							
77	0.57							
78	0.56							
79	0.56							
80	0.55							
81	0.54							
82	0.53							
83	0.53							
84	0.52							
85	0.51							

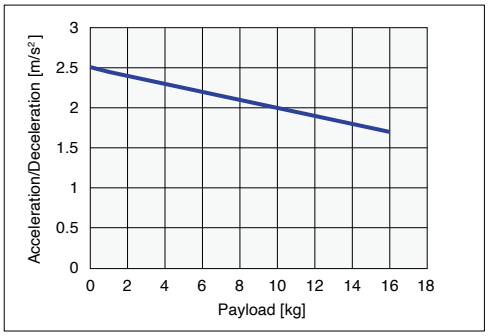
Payload – Acceleration/Deceleration Graph (Estimate)

LGXS07-5 / AGXS07-5

Horizontal/ Wall hanging

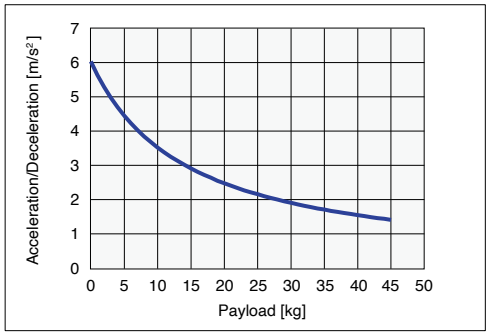


Vertical



LGXS07-10 / AGXS07-10

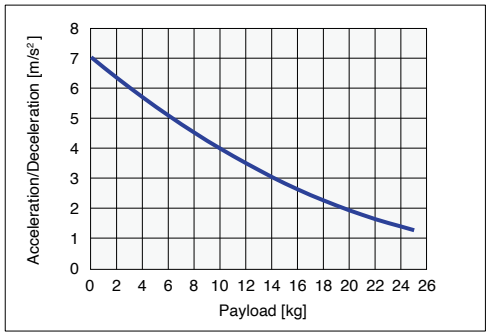
Horizontal/ Wall hanging



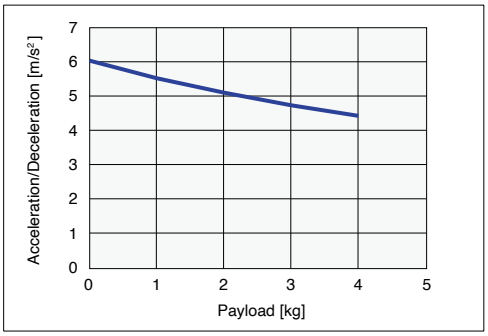
Vertical

LGXS07-20 / AGXS07-20

Horizontal/ Wall hanging



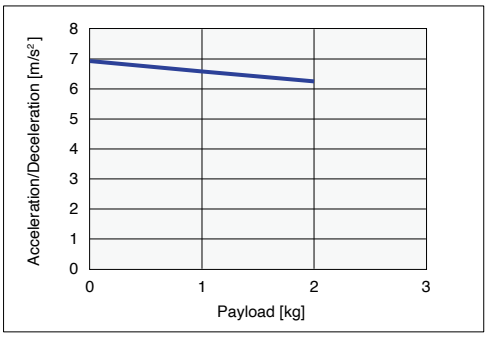
Vertical



LGXS07-30 / AGXS07-30

Horizontal/ Wall hanging

Vertical



LGXS07 **AGXS07-H** **High agility mode**

Acceleration/Deceleration

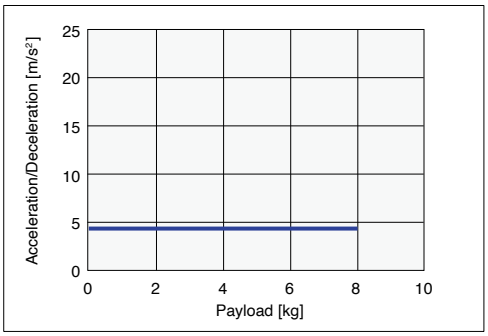
Model	LGXS07-5/ AGXS07-H5	LGXS07-10/ AGXS07-H10		LGXS07-20/ AGXS07-H20		LGXS07-30/ AGXS07-H30	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	4.32	9.64	8.44	14.72	14.72	14.72	14.72
1	4.29	9.36	8.20	14.72	13.96	14.72	14.72
2	4.26	9.10	7.97	14.47	12.71	14.72	
3	4.23	8.85	7.75	13.26		14.03	
4	4.20	8.61	7.54	12.23		12.39	
5	4.17	8.39		11.36		11.09	
6	4.14	8.17		10.59			
7	4.11	7.97		9.93			
8	4.08	7.78		9.34			
9		7.59		8.82			
10		7.42		8.36			

Model	LGXS07-5/ AGXS07-H5	LGXS07-10/ AGXS07-H10		LGXS07-20/ AGXS07-H20		LGXS07-30/ AGXS07-H30	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
11		7.25					
12		7.09					
13		6.94					
14		6.79					
15		6.65					
16		6.52					
17		6.39					
18		6.26					
19		6.14					
20		6.03					

Payload – Acceleration/Deceleration Graph (Estimate)

LGXS07-5 / AGXS07-H5

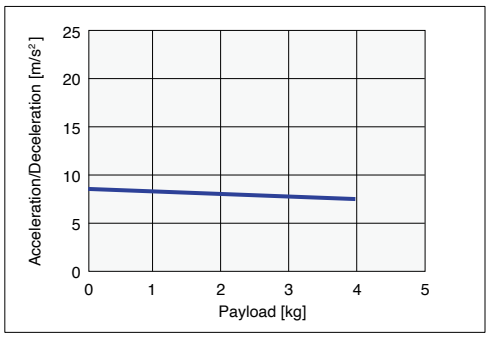
Vertical



LGXS07-10 / AGXS07-H10

Horizontal/ Wall hanging

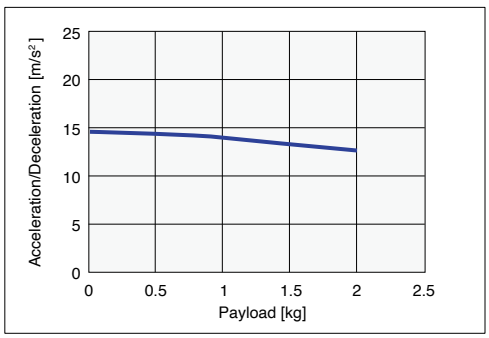
Vertical



LGXS07-20 / AGXS07-H20

Horizontal/ Wall hanging

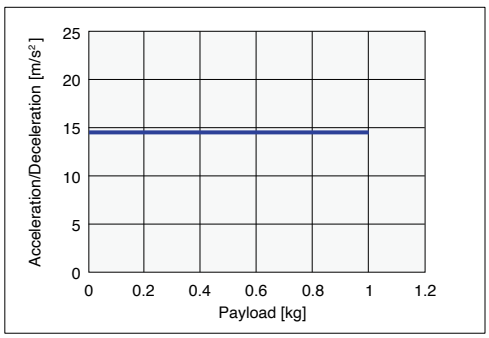
Vertical



LGXS07-30 / AGXS07-H30

Horizontal/ Wall hanging

Vertical



LGXS10

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]																								
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
LGXS10-5	-	0.686	0.706	0.726	0.745	0.765	0.784	0.804	0.823	0.843	0.862	0.882	0.901	0.921	0.940	0.960	0.979	0.999	1.018	1.038	1.057	1.077	1.096	1.116	1.135
LGXS10-10	-	0.707	0.726	0.746	0.765	0.785	0.804	0.824	0.843	0.863	0.882	0.902	0.921	0.941	0.960	0.980	0.999	1.019	1.038	1.058	1.077	1.097	1.116	1.136	1.155
LGXS10-20	-	0.789	0.809	0.828	0.848	0.867	0.887	0.906	0.926	0.945	0.965	0.984	1.004	1.023	1.043	1.062	1.082	1.101	1.121	1.140	1.160	1.179	1.199	1.218	1.238
LGXS10-30	-	0.944	0.963	0.983	1.002	1.022	1.041	1.061	1.080	1.100	1.119	1.139	1.158	1.178	1.197	1.217	1.236	1.256	1.275	1.295	1.314	1.334	1.353	1.373	1.392

LGXS10 AGXS10

Acceleration/Deceleration

Model	LGXS10-5/ AGXS10-5		LGXS10-10/ AGXS10-10		LGXS10-20/ AGXS10-20		LGXS10-30/ AGXS10-30	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	2.27	1.9	6.89	3.29	6.59	8.11	9.75	9.75
1	2.25	1.87	6.78	3.27	6.54	7.86	9.75	9.75
2	2.23	1.85	6.67	3.24	6.49	7.6	9.75	9.75
3	2.21	1.82	6.56	3.22	6.44	7.35	9.75	9.75
4	2.19	1.8	6.46	3.2	6.39	7.09	9.75	9.75
5	2.17	1.77	6.35	3.17	6.34	6.84	9.75	
6	2.15	1.75	6.25	3.15	6.29	6.59	9.75	
7	2.13	1.72	6.14	3.13	6.24	6.33	9.75	
8	2.11	1.7	6.04	3.1	6.18	6.08	9.75	
9	2.09	1.67	5.94	3.08	6.13		9.01	
10	2.07	1.65	5.84	3.05	6.08		8.38	
11	2.05	1.62	5.74	3.03	6.03		7.83	
12	2.03	1.6	5.64	3	5.98		7.34	
13	2.01	1.57	5.54	2.97	5.93		6.91	
14	1.99	1.55	5.44	2.95	5.88		6.53	
15	1.97	1.52	5.34	2.92	5.83		6.19	
16	1.95	1.5	5.25	2.89	5.78		5.89	
17	1.93	1.47	5.16	2.87	5.73		5.61	
18	1.91	1.45	5.06	2.84	5.68		5.36	
19	1.9	1.42	4.97	2.81	5.63		5.13	
20	1.88	1.39	4.88	2.78	5.58		4.91	
21	1.86	1.37	4.79		5.53		4.72	
22	1.84	1.34	4.7		5.48		4.54	
23	1.82	1.32	4.61		5.42		4.37	
24	1.8	1.29	4.52		5.37		4.22	
25	1.79	1.27	4.44		5.32		4.07	
26	1.77	1.24	4.35		5.27			
27	1.75	1.22	4.27		5.22			
28	1.74	1.19	4.18		5.17			
29	1.72	1.17	4.1		5.12			
30	1.7	1.14	4.02		5.07			
31	1.68		3.94		5.02			
32	1.67		3.86		4.97			
33	1.65		3.78		4.92			
34	1.63		3.7		4.87			
35	1.62		3.62		4.82			
36	1.6		3.55		4.77			
37	1.59		3.47		4.71			
38	1.57		3.4		4.66			
39	1.55		3.32		4.61			
40	1.54		3.25		4.56			
41	1.52		3.18					
42	1.51		3.11					
43	1.49		3.04					
44	1.48		2.97					
45	1.46		2.91					
46	1.45		2.84					
47	1.43		2.77					
48	1.42		2.71					
49	1.41		2.65					
50	1.39		2.58					
51	1.38		2.52					
52	1.36		2.46					
53	1.35		2.4					
54	1.34		2.34					
55	1.32		2.29					
56	1.31		2.23					
57	1.3		2.17					
58	1.28		2.12					
59	1.27		2.06					
60	1.26		2.01					
61	1.25		1.96					
62	1.23		1.91					
63	1.22		1.86					
64	1.21		1.81					
65	1.2		1.76					
66	1.18		1.72					
67	1.17		1.67					
68	1.16		1.62					
69	1.15		1.58					
70	1.14		1.54					
71	1.13		1.49					
72	1.12		1.45					
73	1.11		1.41					
74	1.09		1.37					
75	1.08		1.33					

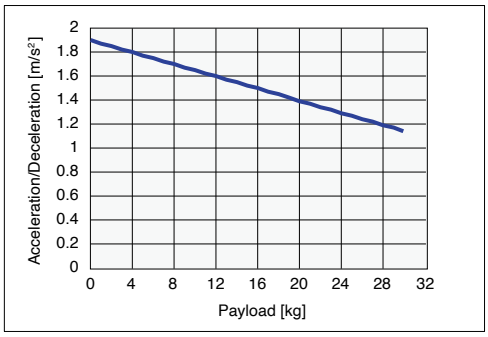
Model	LGXS10-5/ AGXS10-5		LGXS10-10/ AGXS10-10		LGXS10-20/ AGXS10-20		LGXS10-30/ AGXS10-30	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
76	1.07		1.3					
77	1.06		1.26					
78	1.05		1.23					
79	1.04		1.19					
80	1.03		1.16					
81	1.02							
82	1.01							
83	1							
84	0.99							
85	0.99							
86	0.98							
87	0.97							
88	0.96							
89	0.95							
90	0.94							
91	0.93							
92	0.92							
93	0.92							
94	0.91							
95	0.9							
96	0.89							
97	0.89							
98	0.88							
99	0.87							
100	0.86							

Payload – Acceleration/Deceleration Graph (Estimate)

LGXS10-5 / AGXS10-5

Horizontal/ Wall hanging

Vertical



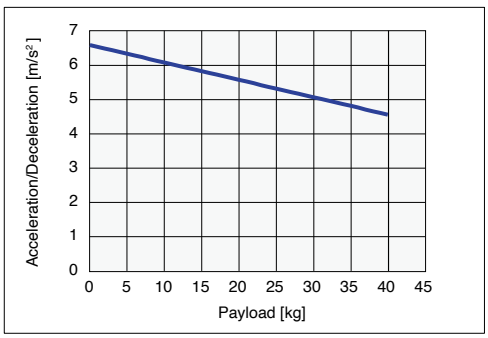
LGXS10-10 / AGXS10-10

Horizontal/ Wall hanging

Vertical

LGXS10-20 / AGXS10-20

Horizontal/ Wall hanging

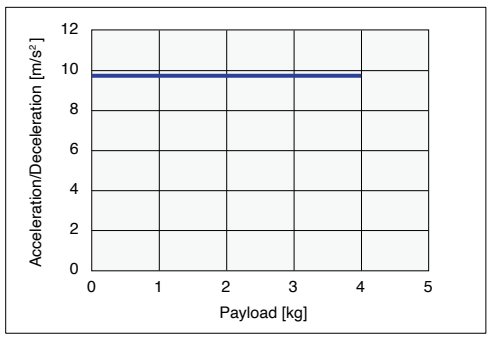


Vertical

LGXS10-30 / AGXS10-30

Horizontal/ Wall hanging

Vertical



LGXS10 **AGXS10-H** **High agility mode**

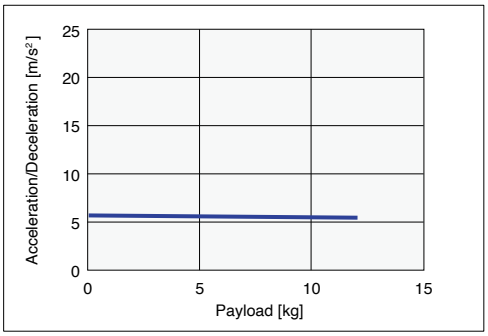
Acceleration/Deceleration

Model	LGXS10-5/ AGXS10-H5	LGXS10-10/ AGXS10-H10		LGXS10-20/ AGXS10-H20		LGXS10-30/ AGXS10-H30	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	5.53	11.71	10.84	19.62	19.62	19.62	19.62
1	5.51	11.47	10.63	19.62	18.69	19.62	19.62
2	5.48	11.25	10.44	18.66	17.55	19.62	19.62
3	5.46	11.03	10.26	17.52	16.54	19.55	
4	5.43	10.82	10.08	16.52	15.65	17.74	
5	5.41	10.62	9.90	15.62		16.24	
6	5.38	10.43	9.74	14.81		14.96	
7	5.36	10.24	9.57	14.09		13.88	
8	5.33	10.06	9.42	13.43		12.94	
9	5.31	9.89		12.83		12.12	
10	5.28	9.72		12.28		11.40	
11	5.26	9.56		11.78			
12	5.23	9.40		11.32			
13		9.25		10.89			
14		9.10		10.49			
15		8.96		10.12			
16		8.82		9.78			
17		8.69		9.45			
18		8.56		9.15			
19		8.43		8.87			
20		8.31		8.60			
21		8.19					
22		8.07					
23		7.96					
24		7.85					
25		7.75					
26		7.64					
27		7.54					
28		7.44					
29		7.35					
30		7.26					

Payload – Acceleration/Deceleration Graph (Estimate)

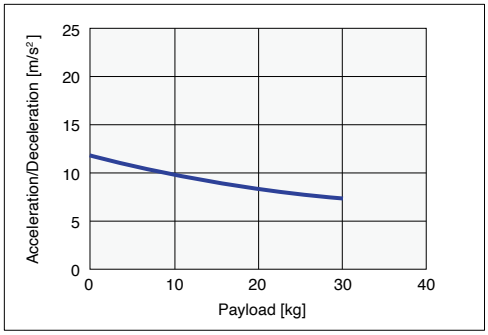
LGXS10-5 / AGXS10-H5

Vertical

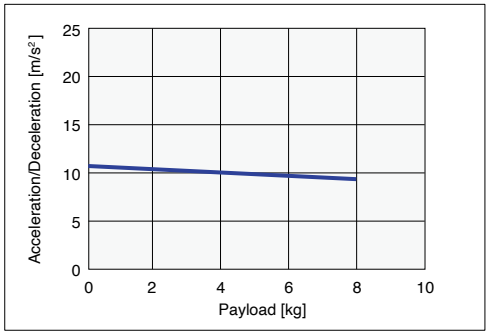


LGXS10-10 / AGXS10-H10

Horizontal/ Wall hanging



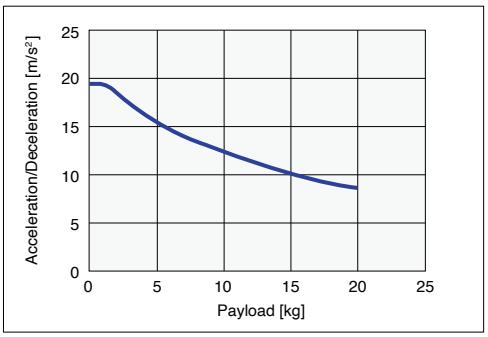
Vertical



Payload – Acceleration/Deceleration Graph (Estimate)

LGXS10-20 / AGXS10-H20

Horizontal/
Wall hanging

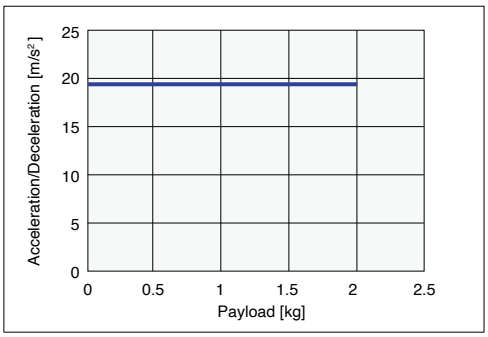


Vertical

LGXS10-30 / AGXS10-H30

Horizontal/
Wall hanging

Vertical



LGXS12

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]																									
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
LGXS12-5	-	0.702	0.721	0.741	0.761	0.780	0.800	0.819	0.839	0.858	0.878	0.897	0.917	0.936	0.956	0.975	0.995	1.014	1.034	1.053	1.073	1.092	1.112	1.131	1.151
LGXS12-10	-	0.733	0.753	0.772	0.792	0.811	0.831	0.850	0.870	0.889	0.909	0.928	0.948	0.967	0.987	1.006	1.026	1.045	1.065	1.085	1.104	1.124	1.143	1.163	1.182
LGXS12-20	-	0.862	0.881	0.901	0.920	0.940	0.959	0.979	0.998	1.018	1.037	1.057	1.076	1.096	1.115	1.135	1.154	1.174	1.193	1.213	1.232	1.252	1.271	1.291	1.310
LGXS12-30	-	1.092	1.111	1.131	1.150	1.170	1.189	1.209	1.228	1.248	1.267	1.287	1.306	1.326	1.345	1.365	1.384	1.404	1.423	1.443	1.462	1.482	1.501	1.521	1.540

LGXS12 AGXS12

Acceleration/Deceleration

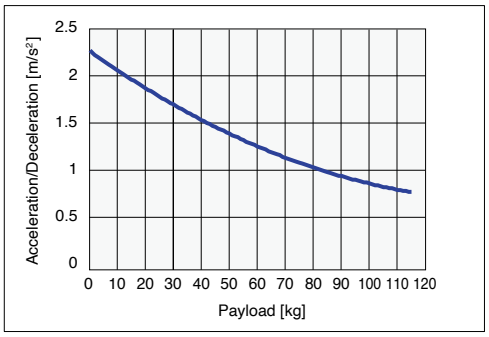
Model	LGXS12-5/ AGXS12-5		LGXS12-10/ AGXS12-10		LGXS12-20/ AGXS12-20		LGXS12-30/ AGXS12-30	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	2.27	1.9	8.61	3.29	9.73	8.11	9.75	9.75
1	2.24	1.87	8.47	3.26	9.53	7.85	9.75	9.75
2	2.22	1.84	8.33	3.24	9.35	7.6	9.75	9.75
3	2.2	1.82	8.2	3.22	9.16	7.34	9.75	9.75
4	2.18	1.79	8.06	3.19	8.98	7.09	9.75	9.75
5	2.16	1.77	7.93	3.17	8.8	6.84	9.75	9.75
6	2.14	1.74	7.8	3.15	8.62	6.58	9.75	9.75
7	2.12	1.72	7.67	3.12	8.45	6.33	9.75	9.75
8	2.1	1.69	7.54	3.1	8.28	6.07	9.75	9.75
9	2.08	1.67	7.41	3.07	8.11	5.82	9.01	
10	2.06	1.64	7.29	3.05	7.95	5.57	8.37	
11	2.04	1.62	7.16	3.02	7.79	5.31	7.82	
12	2.02	1.59	7.04	3	7.63	5.06	7.34	
13	2	1.57	6.92	2.97	7.48	4.81	6.91	
14	1.98	1.54	6.79	2.94	7.33	4.55	6.53	
15	1.96	1.52	6.67	2.92	7.18	4.3	6.19	
16	1.95	1.49	6.56	2.89	7.03		5.88	
17	1.93	1.47	6.44	2.86	6.89		5.6	
18	1.91	1.44	6.32	2.83	6.75		5.35	
19	1.89	1.41	6.21	2.81	6.61		5.12	
20	1.87	1.39	6.09	2.78	6.48		4.91	
21	1.85	1.36	5.98	2.75	6.35		4.71	
22	1.84	1.34	5.87	2.72	6.22		4.53	
23	1.82	1.31	5.76	2.69	6.1		4.37	
24	1.8	1.29	5.65	2.66	5.98		4.21	
25	1.78	1.26	5.54	2.63	5.86		4.07	
26	1.76	1.24	5.43		5.74		3.93	
27	1.75	1.21	5.32		5.63		3.81	
28	1.73	1.19	5.22		5.52		3.69	
29	1.71	1.16	5.12		5.41		3.58	
30	1.7	1.14	5.01		5.31		3.47	
31	1.68	1.11	4.91		5.21		3.37	
32	1.66	1.09	4.81		5.11		3.28	
33	1.65	1.06	4.72		5.02		3.19	
34	1.63	1.04	4.62		4.93		3.11	
35	1.61	1.01	4.52		4.84		3.03	
36	1.6	0.99	4.43		4.76			
37	1.58	0.96	4.33		4.67			
38	1.57	0.93	4.24		4.6			
39	1.55	0.91	4.15		4.52			
40	1.53	0.88	4.06		4.45			
41	1.52	0.86	3.97		4.38			
42	1.5	0.83	3.88		4.31			
43	1.49	0.81	3.8		4.25			
44	1.47	0.78	3.71		4.19			
45	1.46	0.76	3.63		4.13			
46	1.44		3.54		4.07			
47	1.43		3.46		4.02			
48	1.42		3.38		3.97			
49	1.4		3.3		3.93			
50	1.39		3.22		3.89			
51	1.37		3.15					
52	1.36		3.07					
53	1.35		3					
54	1.33		2.92					
55	1.32		2.85					
56	1.3		2.78					
57	1.29		2.71					
58	1.28		2.64					
59	1.27		2.58					
60	1.25		2.51					
61	1.24		2.44					
62	1.23		2.38					
63	1.22		2.32					
64	1.2		2.26					
65	1.19		2.2					
66	1.18		2.14					
67	1.17		2.08					
68	1.16		2.02					
69	1.14		1.97					
70	1.13		1.92					
71	1.12		1.86					
72	1.11		1.81					
73	1.1		1.76					
74	1.09		1.71					
75	1.08		1.66					
76	1.07		1.62					

Model	LGXS12-5/ AGXS12-5		LGXS12-10/ AGXS12-10		LGXS12-20/ AGXS12-20		LGXS12-30/ AGXS12-30	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
77	1.06		1.57					
78	1.05		1.53					
79	1.04		1.48					
80	1.03		1.44					
81	1.02		1.4					
82	1.01		1.36					
83	1		1.32					
84	0.99		1.29					
85	0.98		1.25					
86	0.97		1.22					
87	0.96		1.18					
88	0.95		1.15					
89	0.94		1.12					
90	0.94		1.09					
91	0.93		1.06					
92	0.92		1.03					
93	0.91		1.01					
94	0.9		0.98					
95	0.9		0.96					
96	0.89							
97	0.88							
98	0.87							
99	0.87							
100	0.86							
101	0.85							
102	0.84							
103	0.84							
104	0.83							
105	0.82							
106	0.82							
107	0.81							
108	0.81							
109	0.8							
110	0.79							
111	0.79							
112	0.78							
113	0.78							
114	0.77							
115	0.77							

Payload – Acceleration/Deceleration Graph (Estimate)

LGXS12-5 / AGXS12-5

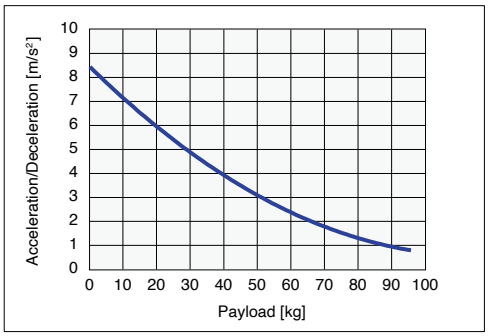
Horizontal/ Wall hanging



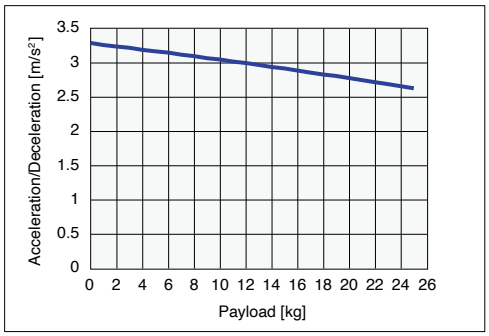
Vertical

LGXS12-10 / AGXS12-10

Horizontal/ Wall hanging

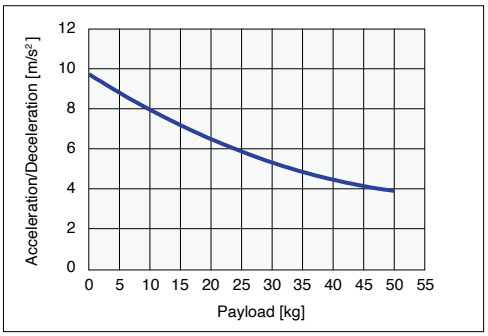


Vertical

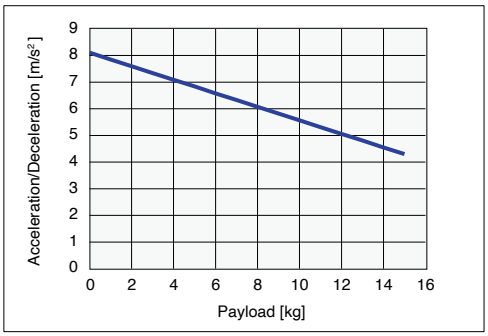


LGXS12-20 / AGXS12-20

Horizontal/ Wall hanging

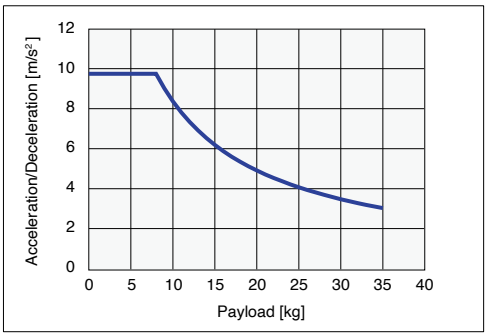


Vertical

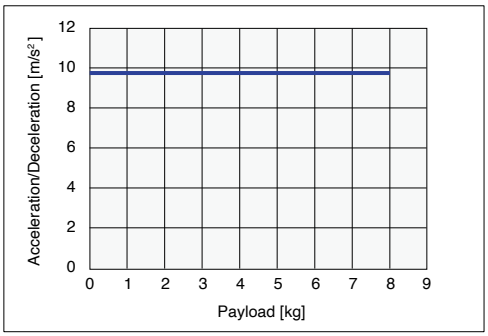


LGXS12-30 / AGXS12-30

Horizontal/ Wall hanging



Vertical



LGXS12 **AGXS12-H** **High agility mode**

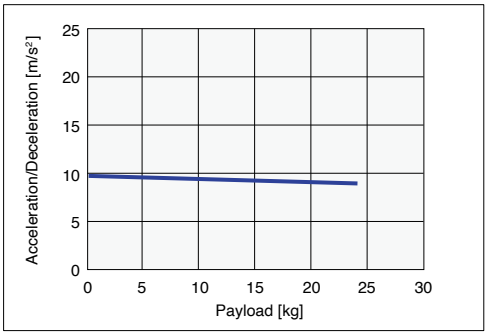
Acceleration/Deceleration

Model	LGXS12-5/ AGXS12-H5	LGXS12-10/ AGXS12-H10		LGXS12-20/ AGXS12-H20		LGXS12-30/ AGXS12-H30	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	9.85	19.62	19.21	19.62	19.62	19.62	19.62
1	9.81	19.62	18.90	19.62	19.62	19.62	19.62
2	9.77	19.62	18.59	19.62	19.62	19.62	19.62
3	9.73	19.62	18.29	19.62	19.62	19.62	19.62
4	9.69	19.62	18.00	19.62	19.62	19.62	19.62
5	9.65	19.53	17.72	19.62	19.62	19.62	
6	9.61	19.20	17.45	19.62	19.62	19.62	
7	9.57	18.89	17.19	19.62	19.62	19.62	
8	9.53	18.58	16.94	19.62	19.62	19.62	
9	9.49	18.28	16.69	19.62		19.62	
10	9.45	17.99	16.45	19.62		19.62	
11	9.41	17.71	16.21	19.62		19.62	
12	9.37	17.44	15.99	19.62		19.31	
13	9.34	17.18	15.77	19.62		18.37	
14	9.30	16.93	15.55	19.62		17.53	
15	9.26	16.68	15.34	19.06		16.75	
16	9.22	16.44	15.14	18.45		16.05	
17	9.19	16.21		17.87		15.40	
18	9.15	15.98		17.33		14.80	
19	9.11	15.76		16.83		14.24	
20	9.08	15.54		16.35		13.73	
21	9.04	15.33		15.89			
22	9.01	15.13		15.47			
23	8.97	14.93		15.06			
24	8.94	14.74		14.67			
25		14.55		14.31			
26		14.37		13.96			
27		14.19		13.63			
28		14.02		13.31			
29		13.85		13.01			
30		13.68		12.72			
31		13.52					
32		13.36					
33		13.21					
34		13.06					
35		12.91					
36		12.76					
37		12.62					
38		12.48					
39		12.35					
40		12.22					

Payload – Acceleration/Deceleration Graph (Estimate)

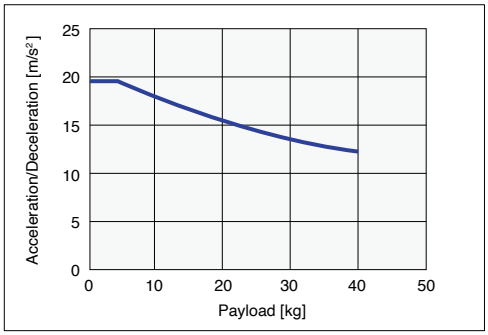
LGXS12-5 / AGXS12-H5

Vertical

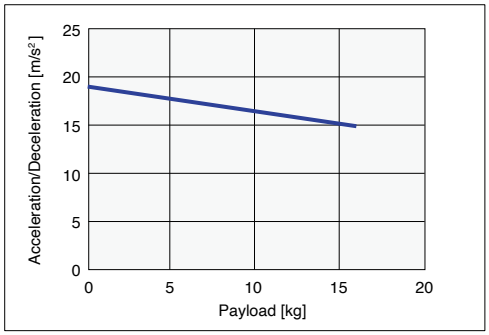


LGXS12-10 / AGXS12-H10

Horizontal/ Wall hanging



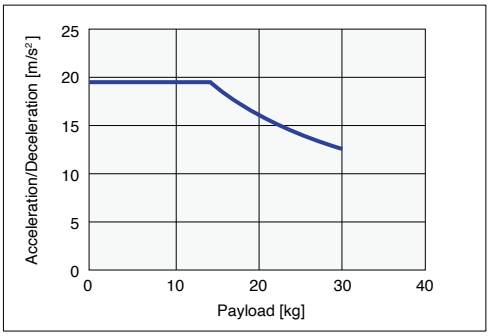
Vertical



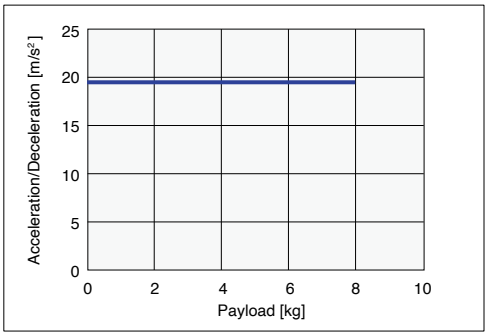
● Payload – Acceleration/Deceleration Graph (Estimate)

LGXS12-20 / AGXS12-H20

Horizontal/
Wall hanging



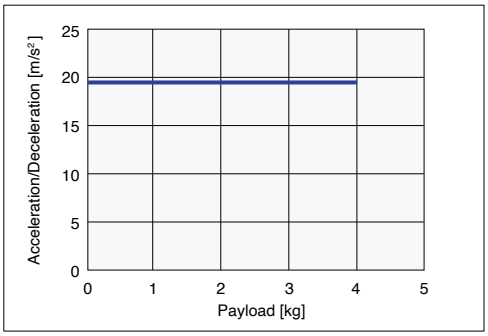
Vertical



LGXS12-30 / AGXS12-H30

Horizontal/
Wall hanging

Vertical



LGXS16

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]																													
Model	50	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
LGXS16-10	-	2.433	2.495	2.557	2.618	2.680	2.742	2.803	2.865	2.927	2.988	3.050	3.112	3.173	3.235	3.297	3.358	3.420	3.482	3.543	3.605	3.667	3.728	3.790	3.851	3.913	3.975	4.036	4.098
LGXS16-20	-	2.653	2.715	2.777	2.838	2.900	2.961	3.023	3.085	3.146	3.208	3.270	3.331	3.393	3.455	3.516	3.578	3.640	3.701	3.763	3.825	3.886	3.948	4.010	4.071	4.133	4.195	4.256	4.318
LGXS16-40	-	3.624	3.685	3.747	3.809	3.870	3.932	3.994	4.055	4.117	4.179	4.240	4.302	4.364	4.425	4.487	4.548	4.610	4.672	4.733	4.795	4.857	4.918	4.980	5.042	5.103	5.165	5.227	5.288

LGXS16 AGXS16

Acceleration/Deceleration

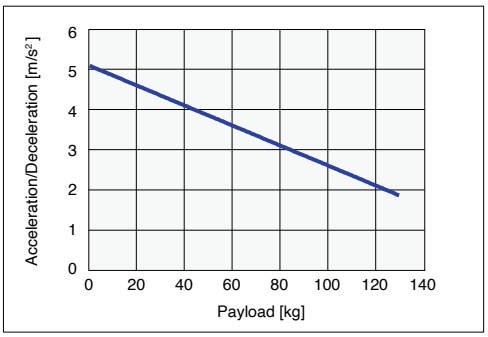
Model	LGXS16-10/ AGXS16-10		LGXS16-20/ AGXS16-20		LGXS16-40/ AGXS16-40	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	5.07	3.8	7.6	7.99	9.6	9.6
1	5.04	3.74	7.48	7.73	9.6	9.02
2	5.01	3.69	7.36	7.47	9.6	8.45
3	4.99	3.64	7.25	7.22	9.6	7.87
4	4.96	3.59	7.14	6.97	9.6	7.3
5	4.94	3.54	7.03	6.72	9.6	6.74
6	4.91	3.49	6.93	6.47	9.6	6.17
7	4.89	3.44	6.83	6.22	9.6	5.61
8	4.86	3.39	6.73	5.97	9.6	5.04
9	4.84	3.34	6.64	5.73	9.6	4.48
10	4.81	3.29	6.55	5.48	9.6	3.92
11	4.79	3.24	6.46	5.24	9.18	3.36
12	4.76	3.19	6.37	5	8.8	2.81
13	4.74	3.14	6.29	4.76	8.45	
14	4.71	3.09	6.2	4.53	8.13	
15	4.68	3.04	6.12	4.29	7.83	
16	4.66	2.99	6.05	4.05	7.55	
17	4.63	2.94	5.97	3.82	7.3	
18	4.61	2.89	5.9	3.59	7.05	
19	4.58	2.83	5.82	3.36	6.83	
20	4.56	2.78	5.75	3.13	6.62	
21	4.53	2.73	5.68	2.9	6.42	
22	4.51	2.68	5.62	2.68	6.23	
23	4.48	2.63	5.55	2.45	6.05	
24	4.46	2.58	5.49	2.23	5.88	
25	4.43	2.53	5.42	2.01	5.73	
26	4.41	2.48	5.36	1.79	5.58	
27	4.38	2.43	5.3	1.57	5.43	
28	4.36	2.38	5.24	1.35	5.3	
29	4.33	2.33	5.19		5.17	
30	4.3	2.28	5.13		5.05	
31	4.28	2.23	5.08		4.93	
32	4.25	2.18	5.02		4.82	
33	4.23	2.13	4.97		4.71	
34	4.2	2.08	4.92		4.61	
35	4.18	2.03	4.87		4.51	
36	4.15	1.98	4.82		4.42	
37	4.13	1.93	4.77		4.33	
38	4.1	1.87	4.72		4.24	
39	4.08	1.82	4.67		4.16	
40	4.05	1.77	4.63		4.08	
41	4.03	1.72	4.58		4	
42	4	1.67	4.54		3.93	
43	3.97	1.62	4.5		3.86	
44	3.95	1.57	4.46		3.79	
45	3.92	1.52	4.41		3.72	
46	3.9	1.47	4.37			
47	3.87	1.42	4.33			
48	3.85	1.37	4.29			
49	3.82	1.32	4.26			
50	3.8	1.27	4.22			
51	3.77	1.22	4.18			
52	3.75	1.17	4.14			
53	3.72	1.12	4.11			
54	3.7	1.07	4.07			
55	3.67	1.02	4.04			
56	3.65		4			
57	3.62		3.97			
58	3.59		3.94			
59	3.57		3.9			
60	3.54		3.87			
61	3.52		3.84			
62	3.49		3.81			
63	3.47		3.78			
64	3.44		3.75			
65	3.42		3.72			
66	3.39		3.69			
67	3.37		3.66			
68	3.34		3.63			
69	3.32		3.61			
70	3.29		3.58			
71	3.27		3.55			
72	3.24		3.53			
73	3.21		3.5			
74	3.19		3.47			
75	3.16		3.45			
76	3.14		3.42			
77	3.11		3.4			

Model	LGXS16-10/ AGXS16-10		LGXS16-20/ AGXS16-20		LGXS16-40/ AGXS16-40	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
78	3.09		3.38			
79	3.06		3.35			
80	3.04		3.33			
81	3.01		3.31			
82	2.99		3.28			
83	2.96		3.26			
84	2.94		3.24			
85	2.91		3.22			
86	2.88		3.19			
87	2.86		3.17			
88	2.83		3.15			
89	2.81		3.13			
90	2.78		3.11			
91	2.76		3.09			
92	2.73		3.07			
93	2.71		3.05			
94	2.68		3.03			
95	2.66		3.01			
96	2.63					
97	2.61					
98	2.58					
99	2.56					
100	2.53					
101	2.5					
102	2.48					
103	2.45					
104	2.43					
105	2.4					
106	2.38					
107	2.35					
108	2.33					
109	2.3					
110	2.28					
111	2.25					
112	2.23					
113	2.2					
114	2.18					
115	2.15					
116	2.12					
117	2.1					
118	2.07					
119	2.05					
120	2.02					
121	2					
122	1.97					
123	1.95					
124	1.92					
125	1.9					
126	1.87					
127	1.85					
128	1.82					
129	1.79					
130	1.77					

Payload – Acceleration/Deceleration Graph (Estimate)

LGXS16-10 / AGXS16-10

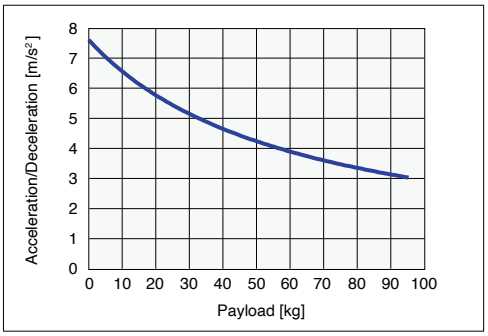
Horizontal/ Wall hanging



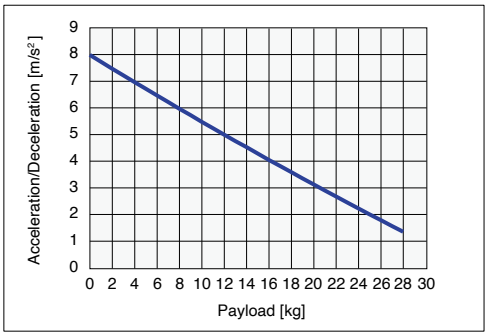
Vertical

LGXS16-20 / AGXS16-20

Horizontal/ Wall hanging



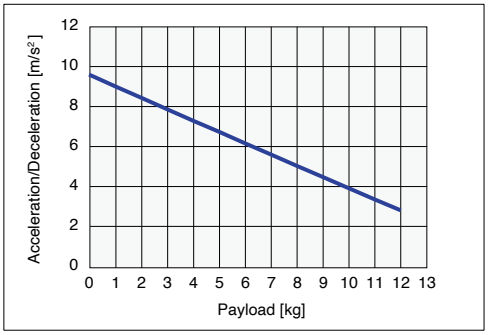
Vertical



LGXS16-40 / AGXS16-40

Horizontal/ Wall hanging

Vertical



LGXS16 **AGXS16-H** **High agility mode**

Acceleration/Deceleration

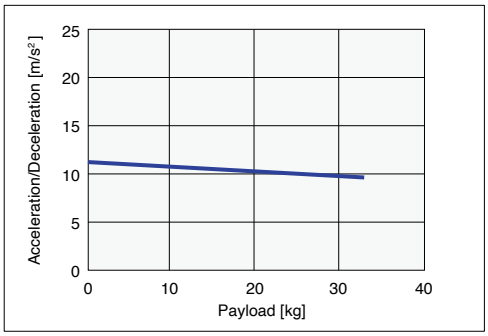
Model	LGXS16-10/ AGXS16-H10	LGXS16-20/ AGXS16-H20		LGXS16-40/ AGXS16-H40	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	11.17	19.48	18.43	19.62	19.62
1	11.11	19.14	18.11	19.62	19.62
2	11.07	18.80	17.81	19.62	19.62
3	11.02	18.48	17.52	19.62	19.62
4	10.97	18.16	17.24	19.62	19.62
5	10.92	17.86	16.97	19.62	19.62
6	10.87	17.57	16.70	19.62	19.62
7	10.82	17.28	16.45	19.62	19.62
8	10.78	17.01	16.20	19.62	19.62
9	10.73	16.74	15.96	19.62	
10	10.68	16.49	15.72	19.62	
11	10.64	16.24	15.50	19.30	
12	10.59	15.99	15.27	18.63	
13	10.55	15.76	15.06	18.00	
14	10.50	15.53	14.85	17.42	
15	10.46	15.31	14.65	16.87	
16	10.41	15.09	14.45	16.35	
17	10.37	14.88		15.87	
18	10.33	14.68		15.41	
19	10.28	14.48		14.98	
20	10.24	14.29		14.57	
21	10.20	14.10		14.19	
22	10.16	13.91		13.82	
23	10.12	13.74		13.47	
24	10.07	13.56		13.14	
25	10.03	13.39		12.83	
26	9.99	13.23		12.53	
27	9.95	13.07		12.24	
28	9.91	12.91		11.97	
29	9.87	12.75		11.71	
30	9.83	12.60		11.46	
31	9.79	12.46			

Model	LGXS16-10/ AGXS16-H10	LGXS16-20/ AGXS16-H20		LGXS16-40/ AGXS16-H40	
	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/ Deceleration [m/s²]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
32	9.76	12.31			
33		12.17			
34		12.04			
35		11.90			
36		11.77			
37		11.64			
38		11.52			
39		11.40			
40		11.28			
41		11.16			
42		11.04			
43		10.93			
44		10.82			
45		10.71			
46		10.61			
47		10.50			
48		10.40			
49		10.30			
50		10.20			
51		10.11			
52		10.01			
53		9.92			
54		9.83			
55		9.74			
56		9.65			
57		9.56			
58		9.48			
59		9.40			
60		9.31			

Payload – Acceleration/Deceleration Graph (Estimate)

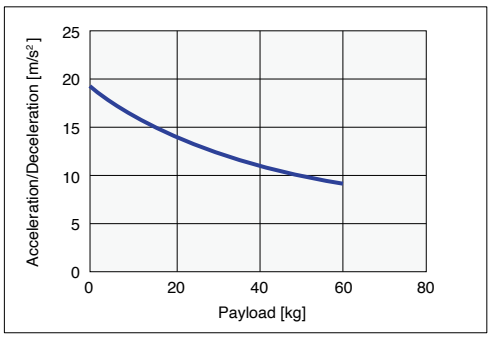
LGXS16-10 / AGXS16-H10

Vertical



LGXS16-20 / AGXS16-H20

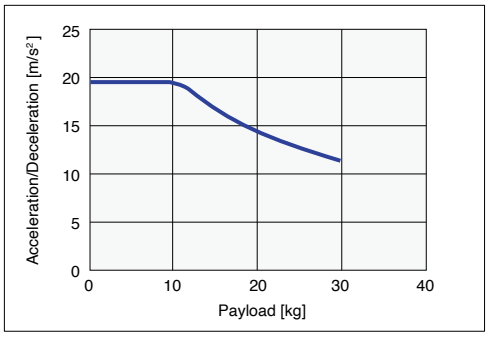
Horizontal/ Wall hanging



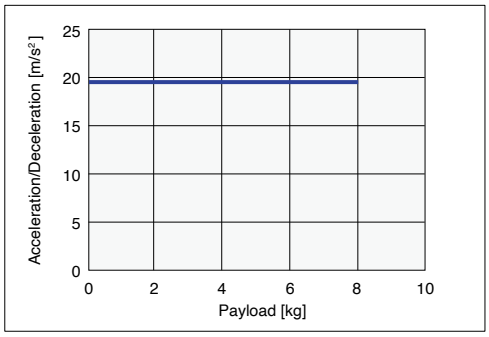
Vertical

LGXS16-40 / AGXS16-H40

Horizontal/ Wall hanging



Vertical



LGXS20

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]																														
Model	50	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
LGXS20-10	-	2.524	2.585	2.647	2.709	2.770	2.832	2.894	2.955	3.017	3.079	3.140	3.202	3.264	3.325	3.387	3.448	3.510	3.572	3.633	3.695	3.757	3.818	3.880	3.942	4.003	4.065	4.127	4.188
LGXS20-20	-	2.863	2.924	2.986	3.048	3.109	3.171	3.232	3.294	3.356	3.417	3.479	3.541	3.602	3.664	3.726	3.787	3.849	3.911	3.972	4.034	4.096	4.157	4.219	4.281	4.342	4.404	4.466	4.527
LGXS20-40	-	4.309	4.371	4.433	4.494	4.556	4.618	4.679	4.741	4.803	4.864	4.926	4.988	5.049	5.111	5.173	5.234	5.296	5.357	5.419	5.481	5.542	5.604	5.666	5.727	5.789	5.851	5.912	5.974

LGXS20 AGXS20

Acceleration/Deceleration

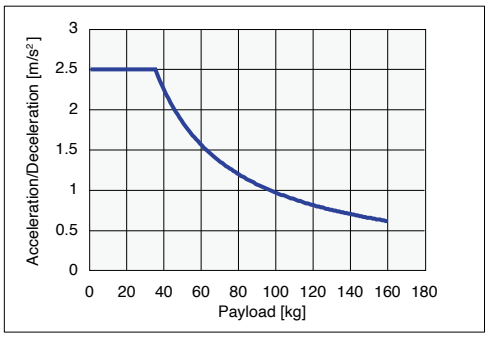
Model	LGXS20-10/AGXS20-10		LGXS20-20/AGXS20-20		LGXS20-40/AGXS20-40	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	2.5	3.8	7.8	9.95	9.61	9.61
1	2.5	3.74	7.7	9.67	9.61	9.12
2	2.5	3.69	7.61	9.4	9.61	8.64
3	2.5	3.64	7.52	9.13	9.61	8.16
4	2.5	3.59	7.43	8.86	9.61	7.68
5	2.5	3.54	7.34	8.59	9.61	7.2
6	2.5	3.49	7.25	8.32	9.61	6.72
7	2.5	3.44	7.16	8.05	9.61	6.24
8	2.5	3.39	7.07	7.78	9.61	5.76
9	2.5	3.34	6.98	7.51	9.61	5.28
10	2.5	3.29	6.89	7.24	9.2	4.8
11	2.5	3.24	6.81	6.97	8.83	4.32
12	2.5	3.19	6.72	6.7	8.48	3.84
13	2.5	3.14	6.64	6.43	8.17	3.36
14	2.5	3.09	6.55	6.16	7.87	2.88
15	2.5	3.04	6.47	5.89	7.6	2.4
16	2.5	2.99	6.39	5.62	7.34	
17	2.5	2.94	6.31	5.35	7.1	
18	2.5	2.89	6.23	5.08	6.88	
19	2.5	2.83	6.15	4.81	6.67	
20	2.5	2.78	6.07	4.54	6.47	
21	2.5	2.73	5.99	4.27	6.28	
22	2.5	2.68	5.91	4	6.11	
23	2.5	2.63	5.83	3.73	5.94	
24	2.5	2.58	5.76	3.46	5.78	
25	2.5	2.53	5.68	3.19	5.63	
26	2.5	2.48	5.6	2.92	5.49	
27	2.5	2.43	5.53	2.65	5.36	
28	2.5	2.38	5.46	2.38	5.23	
29	2.5	2.33	5.38	2.11	5.11	
30	2.5	2.28	5.31	1.84	4.99	
31	2.5	2.23	5.24	1.57	4.88	
32	2.5	2.18	5.17	1.3	4.77	
33	2.5	2.13	5.1	1.03	4.67	
34	2.5	2.08	5.03	0.76	4.57	
35	2.5	2.03	4.96	0.5	4.48	
36	2.44	1.98	4.89		4.39	
37	2.38	1.93	4.82		4.3	
38	2.33	1.87	4.76		4.22	
39	2.28	1.82	4.69		4.14	
40	2.23	1.77	4.63		4.06	
41	2.18	1.72	4.56		3.99	
42	2.14	1.67	4.5		3.91	
43	2.09	1.62	4.43		3.85	
44	2.05	1.57	4.37		3.78	
45	2.01	1.52	4.31		3.71	
46	1.97	1.47	4.25		3.65	
47	1.94	1.42	4.19		3.59	
48	1.9	1.37	4.13		3.53	
49	1.87	1.32	4.07		3.48	
50	1.83	1.27	4.01		3.42	
51	1.8	1.22	3.95		3.37	
52	1.77	1.17	3.9		3.32	
53	1.74	1.12	3.84		3.27	
54	1.71	1.07	3.79		3.22	
55	1.68	1.02	3.73		3.17	
56	1.66	0.96	3.68		3.13	
57	1.63	0.91	3.63		3.08	
58	1.61	0.86	3.57		3.04	
59	1.58	0.81	3.52		3	
60	1.56	0.76	3.47		2.96	
61	1.53	0.71	3.42		2.92	
62	1.51	0.66	3.37		2.88	
63	1.49	0.61	3.32		2.84	
64	1.47	0.56	3.27		2.8	
65	1.45	0.51	3.23		2.77	
66	1.43		3.18			
67	1.41		3.13			
68	1.39		3.09			
69	1.37		3.04			
70	1.35		3			
71	1.34		2.96			
72	1.32		2.92			
73	1.3		2.87			
74	1.29		2.83			
75	1.27		2.79			
76	1.26		2.75			
77	1.24		2.72			
78	1.23		2.68			
79	1.21		2.64			
80	1.2		2.6			

Model	LGXS20-10/AGXS20-10		LGXS20-20/AGXS20-20		LGXS20-40/AGXS20-40	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
81	1.18		2.57			
82	1.17		2.53			
83	1.16		2.5			
84	1.14		2.46			
85	1.13		2.43			
86	1.12		2.4			
87	1.11		2.37			
88	1.1		2.34			
89	1.08		2.31			
90	1.07		2.28			
91	1.06		2.25			
92	1.05		2.22			
93	1.04		2.19			
94	1.03		2.17			
95	1.02		2.14			
96	1.01		2.12			
97	1		2.09			
98	0.99		2.07			
99	0.98		2.05			
100	0.97		2.02			
101	0.96		2			
102	0.95		1.98			
103	0.94		1.96			
104	0.94		1.94			
105	0.93		1.92			
106	0.92		1.9			
107	0.91		1.89			
108	0.9		1.87			
109	0.9		1.86			
110	0.89		1.84			
111	0.88		1.83			
112	0.87		1.81			
113	0.87		1.8			
114	0.86		1.79			
115	0.85		1.78			
116	0.84		1.77			
117	0.84		1.76			
118	0.83		1.75			
119	0.82		1.74			
120	0.82		1.73			
121	0.81		1.72			
122	0.8		1.72			
123	0.8		1.71			
124	0.79		1.71			
125	0.79		1.7			
126	0.78		1.7			
127	0.77		1.69			
128	0.77		1.69			
129	0.76		1.69			
130	0.76		1.69			
131	0.75					
132	0.75					
133	0.74					
134	0.74					
135	0.73					
136	0.73					
137	0.72					
138	0.72					
139	0.71					
140	0.71					
141	0.7					
142	0.7					
143	0.69					
144	0.69					
145	0.68					
146	0.68					
147	0.67					
148	0.67					
149	0.66					
150	0.66					
151	0.66					
152	0.65					
153	0.65					
154	0.64					
155	0.64					
156	0.64					
157	0.63					
158	0.63					
159	0.62					
160	0.62					

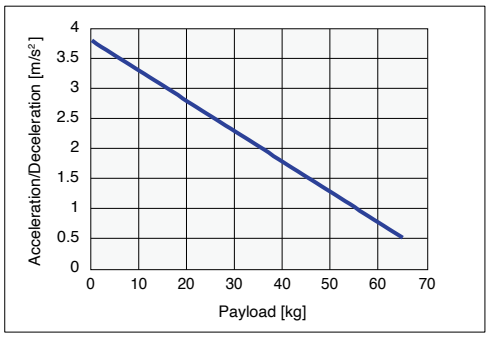
Payload – Acceleration/Deceleration Graph (Estimate)

LGXS20-10 / AGXS20-10

Horizontal/ Wall hanging

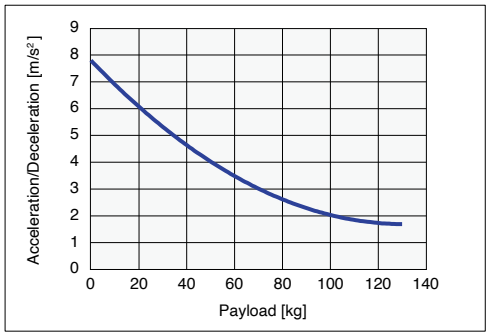


Vertical

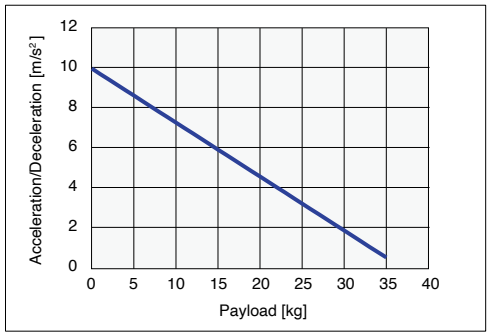


LGXS20-20 / AGXS20-20

Horizontal/ Wall hanging

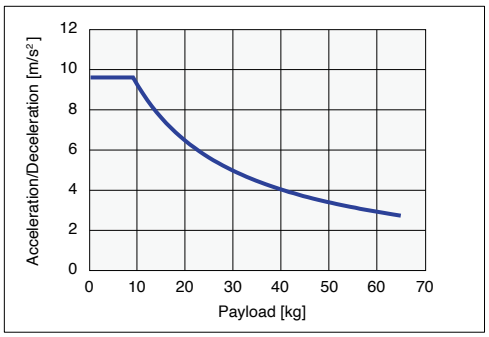


Vertical



LGXS20-40 / AGXS20-40

Horizontal/ Wall hanging



Vertical

LBAR04

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]									
Model	50	100	150	200	250	300	350	400	450	500
LBAR04-6	0.063	0.067	0.071	0.075	0.079	0.083	0.087	0.091	0.096	0.100
LBAR04-12	0.068	0.072	0.077	0.082	0.087	0.092	0.097	0.101	0.106	0.111

LBAR04 ABAR04

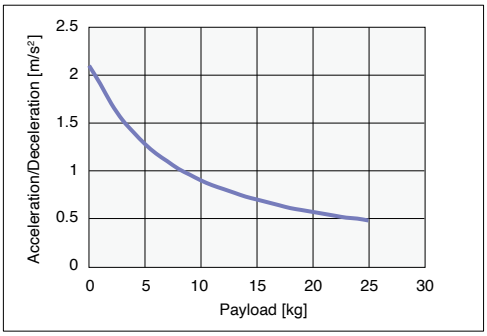
Acceleration/Deceleration

Model	LBAR04-6/ABAR04-6		LBAR04-12/ABAR04-12	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	2.1	2.1	4.2	3.6
1	1.91	2.1	3.84	2.4
2	1.7	1.64	2.99	1.8
3	1.53	1.34	2.45	1.44
4	1.4	1.14	2.07	
5	1.28	0.99	1.8	
6	1.18		1.58	
7	1.1		1.42	
8	1.02		1.28	
9	0.96		1.17	
10	0.9		1.08	
11	0.85		1	
12	0.81		0.93	
13	0.77		0.87	
14	0.73		0.81	
15	0.7		0.77	
16	0.67			
17	0.64			
18	0.61			
19	0.59			
20	0.57			
21	0.55			
22	0.53			
23	0.51			
24	0.5			
25	0.48			

Payload – Acceleration/Deceleration Graph (Estimate)

LBAR04-6 / ABAR04-6

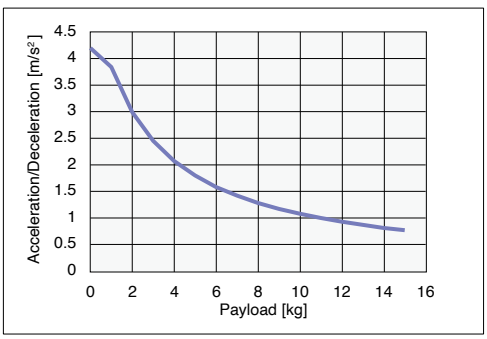
Horizontal/ Wall hanging



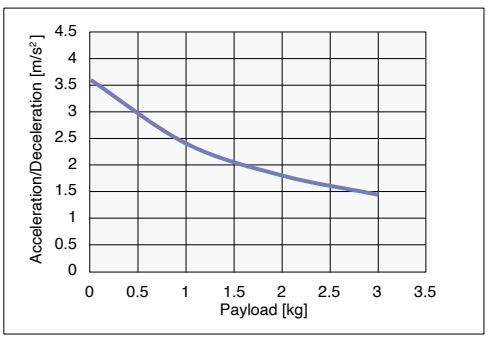
Vertical

LBAR04-12 / ABAR04-12

Horizontal/ Wall hanging



Vertical



LBAR05

Inertia Moment

[kg·m^2×10^{-4}]	Effective stroke [mm]											
Model	50	100	150	200	250	300	350	400	450	500	550	600
LBAR05-5	0.081	0.090	0.098	0.106	0.114	0.122	0.131	0.139	0.147	0.155	0.163	0.172
LBAR05-10	0.107	0.115	0.124	0.133	0.142	0.151	0.160	0.169	0.177	0.186	0.195	0.204
LBAR05-20	0.208	0.219	0.230	0.242	0.253	0.265	0.276	0.288	0.299	0.310	0.322	0.333

LBAR05 ABAR05

Acceleration/Deceleration

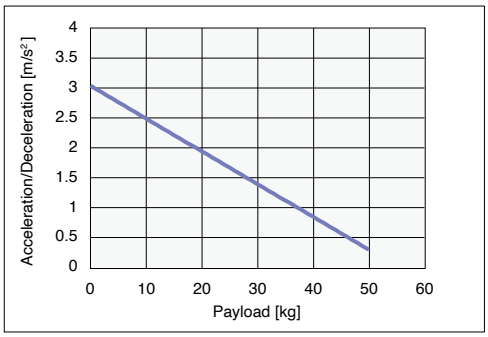
Model	LBAR05-5/ABAR05-5		LBAR05-10/ABAR05-10		LBAR05-20/ABAR05-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]	
0	3.04	3.34	4.64	4.86	7.44	7.44
1	2.98	3.18	4.44	4.56	7.44	6.42
2	2.93	3.03	4.25	4.3	7.44	5.41
3	2.87	2.88	4.07	4.06	7.44	4.4
4	2.82	2.73	3.9	3.85	7.44	3.39
5	2.76	2.58	3.73	3.66	7.44	
6	2.71	2.43	3.57	3.49	6.64	
7	2.65	2.28	3.41	3.34	6	
8	2.6	2.13	3.27	3.19	5.47	
9	2.54	1.98	3.12		5.02	
10	2.49	1.83	2.99		4.65	
11	2.43	1.68	2.86		4.32	
12	2.38	1.53	2.74		4.04	
13	2.32	1.38	2.62		3.79	
14	2.27	1.23	2.51		3.57	
15	2.21	1.08	2.41		3.38	
16	2.16	0.93	2.31			
17	2.1		2.22			
18	2.05		2.14			
19	2		2.06			
20	1.94		1.99			
21	1.89		1.93			
22	1.83		1.87			
23	1.78		1.82			
24	1.72		1.77			
25	1.67		1.74			
26	1.61					
27	1.56					
28	1.5					
29	1.45					
30	1.39					
31	1.34					
32	1.28					
33	1.23					
34	1.17					
35	1.12					
36	1.07					
37	1.01					
38	0.96					
39	0.9					
40	0.85					
41	0.79					

Model	LBAR05-5/ABAR05-5		LBAR05-10/ABAR05-10		LBAR05-20/ABAR05-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]		Acceleration/Deceleration [m/s^2]	
42	0.74					
43	0.68					
44	0.63					
45	0.57					
46	0.52					
47	0.46					
48	0.41					
49	0.35					
50	0.3					

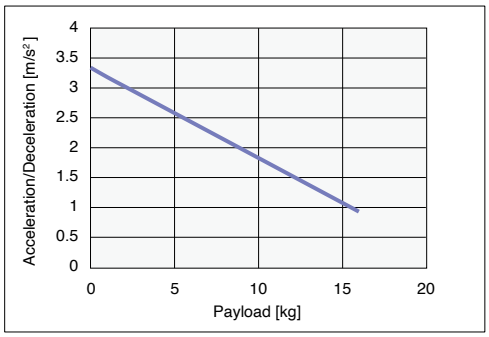
Payload – Acceleration/Deceleration Graph (Estimate)

LBAR05-5 / ABAR05-5

Horizontal/ Wall hanging



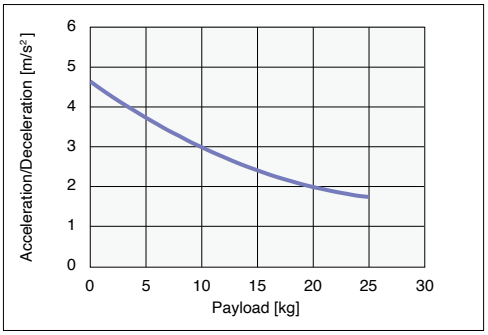
Vertical



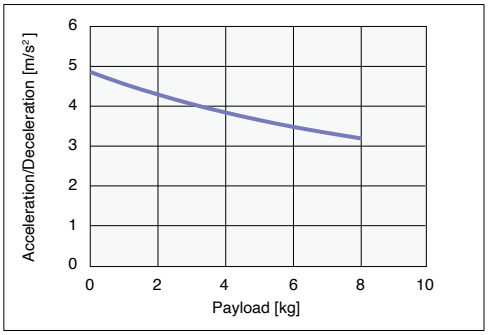
Payload – Acceleration/Deceleration Graph (Estimate)

LBAR05-10 / ABAR05-10

Horizontal/ Wall hanging



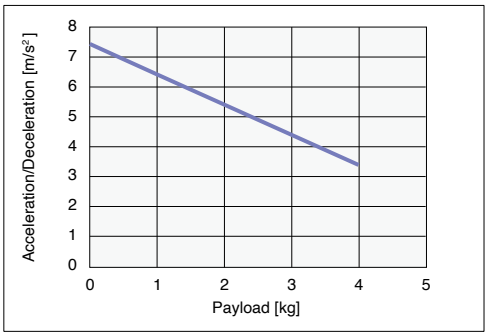
Vertical



LBAR05-20 / ABAR05-20

Horizontal/ Wall hanging

Vertical



LBAR08

Inertia Moment

[kg·m²×10⁻⁴]	Effective stroke [mm]															
Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
LBAR08-5	0.252	0.278	0.303	0.329	0.354	0.379	0.405	0.430	0.456	0.481	0.507	0.532	0.558	0.583	0.608	0.634
LBAR08-10	0.288	0.314	0.340	0.366	0.392	0.418	0.444	0.470	0.496	0.522	0.548	0.574	0.600	0.626	0.652	0.678
LBAR08-20	0.436	0.464	0.492	0.520	0.549	0.577	0.605	0.633	0.661	0.690	0.718	0.746	0.774	0.802	0.831	0.859

LBAR08 ABAR08

Acceleration/Deceleration

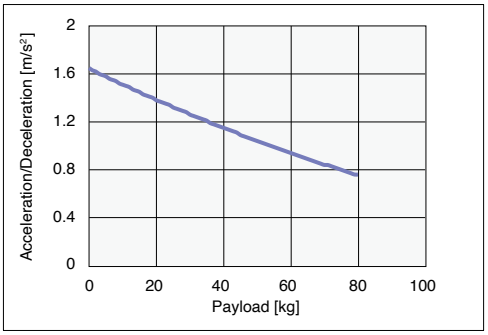
Model	LBAR08-5/ABAR08-5		LBAR08-10/ABAR08-10		LBAR08-20/ABAR08-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
0	1.65	1.65	6.09	4.79	8.51	8.5
1	1.63	1.62	5.97	4.54	8.2	7.39
2	1.62	1.59	5.86	4.31	7.9	6.42
3	1.6	1.57	5.74	4.09	7.61	5.59
4	1.59	1.54	5.63	3.88	7.33	4.89
5	1.58	1.51	5.52	3.68	7.05	4.33
6	1.56	1.49	5.42	3.5	6.77	3.91
7	1.55	1.46	5.31	3.32	6.51	3.62
8	1.54	1.44	5.21	3.16	6.24	3.46
9	1.52	1.41	5.1	3.01	5.99	
10	1.51	1.38	5	2.87	5.74	
11	1.5	1.36	4.9	2.74	5.5	
12	1.49	1.33	4.8	2.62	5.26	
13	1.47	1.3	4.7	2.52	5.03	
14	1.46	1.28	4.61	2.42	4.8	
15	1.45	1.25	4.51	2.34	4.58	
16	1.43	1.23	4.42	2.27	4.37	
17	1.42	1.2	4.33	2.21	4.16	
18	1.41	1.17	4.24	2.16	3.96	
19	1.4	1.15	4.15	2.13	3.76	
20	1.38	1.12	4.06	2.1	3.57	
21	1.37	1.09	3.98		3.38	
22	1.36	1.07	3.89		3.21	
23	1.35	1.04	3.81		3.03	
24	1.34	1.02	3.73		2.87	
25	1.32	0.99	3.65		2.71	
26	1.31	0.96	3.57		2.55	
27	1.3	0.94	3.49		2.4	
28	1.29	0.91	3.42		2.26	
29	1.28	0.88	3.34		2.13	
30	1.26	0.86	3.27		1.99	
31	1.25		3.2			
32	1.24		3.13			
33	1.23		3.06			
34	1.22		2.99			
35	1.21		2.93			
36	1.19		2.86			
37	1.18		2.8			
38	1.17		2.74			
39	1.16		2.68			
40	1.15		2.62			
41	1.14		2.57			
42	1.13		2.51			
43	1.12		2.46			
44	1.11		2.41			
45	1.09		2.36			
46	1.08		2.31			
47	1.07		2.26			
48	1.06		2.21			
49	1.05		2.17			
50	1.04		2.12			
51	1.03		2.08			
52	1.02		2.04			
53	1.01		2			
54	1		1.96			
55	0.99		1.93			
56	0.98		1.89			
57	0.97		1.86			
58	0.96		1.83			
59	0.95		1.8			
60	0.94		1.77			
61	0.93					
62	0.92					
63	0.91					
64	0.9					
65	0.89					
66	0.88					
67	0.87					
68	0.86					
69	0.85					
70	0.84					
71	0.84					
72	0.83					
73	0.82					
74	0.81					
75	0.8					
76	0.79					
77	0.78					

Model	LBAR08-5/ABAR08-5		LBAR08-10/ABAR08-10		LBAR08-20/ABAR08-20	
	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical	Horizontal/ Wall hanging	Vertical
Payload [kg]	Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]		Acceleration/Deceleration [m/s²]	
78	0.77					
79	0.76					
80	0.76					

● Payload – Acceleration/Deceleration Graph (Estimate)

LBAR08-5 / ABAR08-5

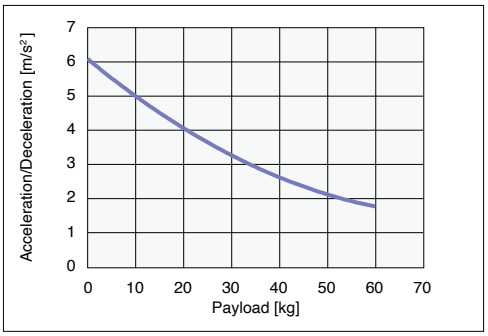
Horizontal/ Wall hanging



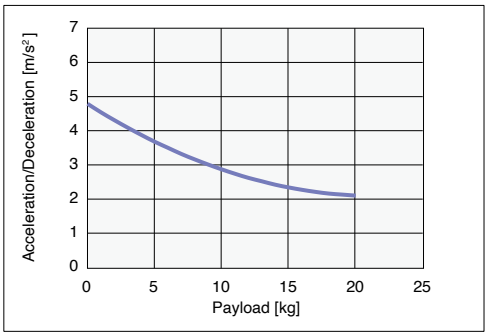
Vertical

LBAR08-10 / ABAR08-10

Horizontal/ Wall hanging



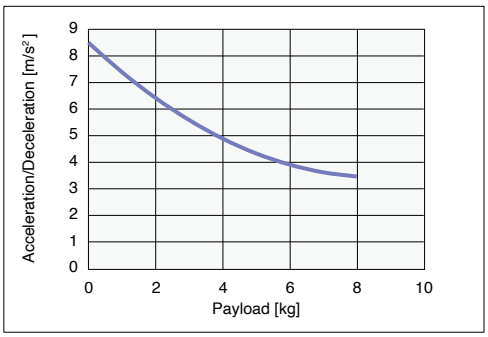
Vertical



LBAR08-20 / ABAR08-20

Horizontal/ Wall hanging

Vertical



Sensor Spec

Item	Specification	
Manufacturer	Panasonic Industrial Device SUNX, Co., Ltd.	
Model	GX-F8A	GX-F8B
Output method	NPN type	
Output action	ON when approaching	ON when leaving
Power voltage	DC12 to 24V	
Load current	100 mA or less	
Consumption current	15 mA or less	

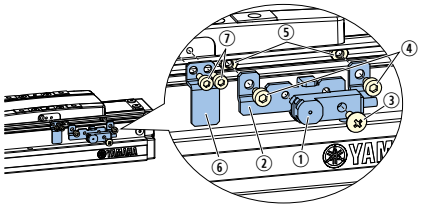
Item	Specification
Display lamp	Orange LED (ON when output ON)
Ambient environment and humidity	-25 to +75 °C, 35 to 85 %RH
Protection structure	IP68
Cable length	5 m

[Caution]

- Bracket screw tightening torque: 0.5 N·m
- The detection surface of the sensor and sensor plate clearance is approx. 1 mm.
- Be aware that separate sensor cable and connector are needed when connecting the external sensor to the EP-01.

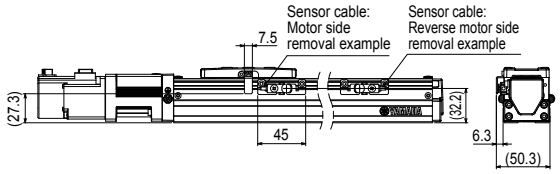
Example of proximity sensor attachment (Example of LBAS/ABAS left attachment)

Note 1. The sensor option is common to the LBAS and ABAS.
Note 2. Installation is users' responsibility.
Note 3. Mounting hardware included.
Note 4. Sensor cable is 5 m. Adjust as needed.
Note 5. Sensor cable outlet can be either motor end or no motor end of actuator.



①	Proximity sensor
②	Sensor Bracket
③	Bracket screw
④	Bracket bolt
⑤	Bracket nut
⑥	Switch target plate
⑦	Target plate bolt

LBAS04 ABAS04



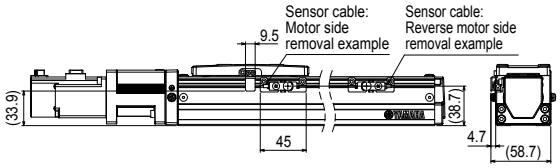
Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KFU-M2205-10	KFU-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KFU-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-03005		2	M3 × 0.5 Length 5
	⑤	Bracket nut	95302-03700		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KFT-M2206-00		
Component	⑥	Switch target plate	KFT-M22G5-00	1	
	⑦	Target plate bolt	90112-02J005	2	M2 × 0.4 Length 5

LBAS05 ABAS05



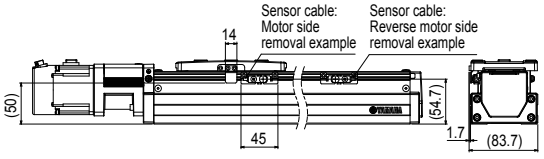
Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KFU-M2205-10	KFU-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KFU-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-03005		2	M3 × 0.5 Length 5
	⑤	Bracket nut	95302-03700		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KFU-M2206-00		
Component	⑥	Switch target plate	KFU-M22G5-00	1	
	⑦	Target plate bolt	90112-2AJ005	2	M2.5 × 0.4 Length 5

LBAS08 ABAS08



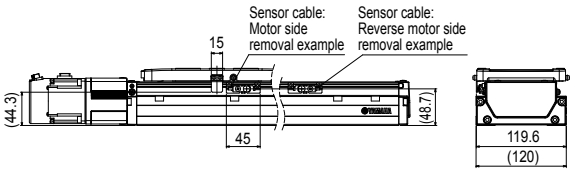
Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KFU-M2205-10	KFU-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KFU-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-03005		2	M3 × 0.5 Length 5
	⑤	Bracket nut	95302-03700		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KFV-M2206-00		
Component	⑥	Switch target plate	KFV-M22G5-00	1	
	⑦	Target plate bolt	91312-03005	2	M3 × 0.5 Length 5

LBAS12 ABAS12



Proximity sensor option

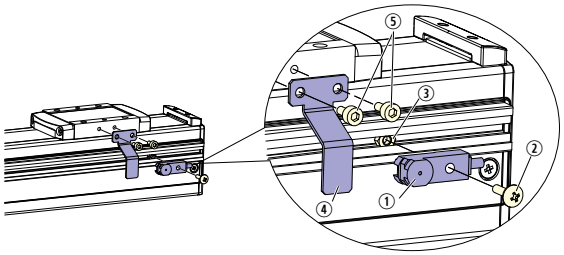
Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KFU-M2205-10	KFU-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KFU-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-03005		2	M3 × 0.5 Length 5
	⑤	Bracket nut	95302-03700		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KFY-M2206-00		
Component	⑥	Switch target plate	KFY-M22G5-00	1	
	⑦	Target plate bolt	91312-03006	2	M3 × 0.5 Length 6

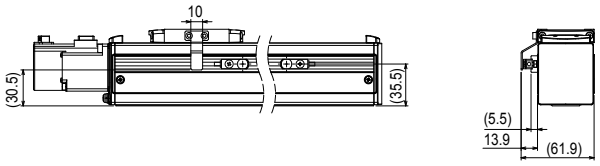
Example of proximity sensor attachment (Example of compact LGXS/AGXS left attachment)

Note 1. The sensor option is common to the LGXS and AGXS.
Note 2. Installation is users' responsibility.
Note 3. Mounting hardware included.
Note 4. Sensor cable is 5 m. Adjust as needed.
Note 5. To install the sensor option, side cover with T groove is needed.
Note 6. Sensor cable outlet can be either motor end or no motor end of actuator.



① Proximity sensor
② Bracket screw
③ Bracket nut
④ Switch target plate
⑤ Target plate bolt

LGXS05 AGXS05



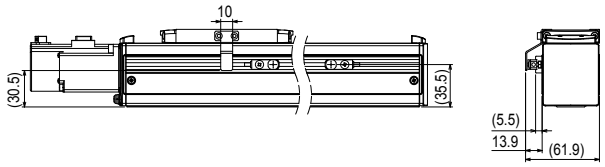
Proximity sensor option

Class		Name	Number		Qty	Remarks
			ON when approaching (NO, Normally Open)	ON when leaving (NC, Normally Closed)		
Assy		Proximity sensor option	KES-M2205-10	KES-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Bracket screw	90990-66J025		1	M3 × 0.5 Length 10
	③	Bracket nut	95302-03600		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KES-M2206-00		
Component	④	Switch target plate	KES-M22G5-00	1	
	⑤	Target plate bolt	91312-03006	2	M3 × 0.5 Length 6

LGXS05L AGXS05L



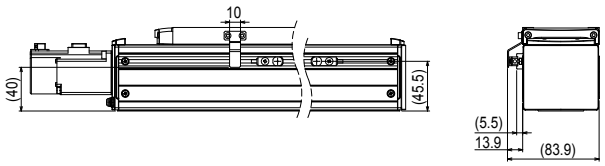
Proximity sensor option

Class		Name	Number		Qty	Remarks
			ON when approaching (NO, Normally Open)	ON when leaving (NC, Normally Closed)		
Assy		Proximity sensor option	KES-M2205-10	KES-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Bracket screw	90990-66J025		1	M3 × 0.5 Length 10
	③	Bracket nut	95302-03600		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KES-M2206-00		
Component	④	Switch target plate	KES-M22G5-00	1	
	⑤	Target plate bolt	91312-03006	2	M3 × 0.5 Length 6

LGXS07 AGXS07



Proximity sensor option

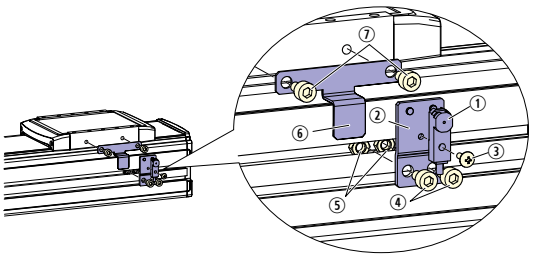
Class		Name	Number		Qty	Remarks
			ON when approaching (NO, Normally Open)	ON when leaving (NC, Normally Closed)		
Assy		Proximity sensor option	KES-M2205-10	KES-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Bracket screw	90990-66J025		1	M3 × 0.5 Length 10
	③	Bracket nut	95302-03600		2	M3

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KES-M2206-00		
Component	④	Switch target plate	KES-M22G5-00	1	
	⑤	Target plate bolt	91312-03006	2	M3 × 0.5 Length 6

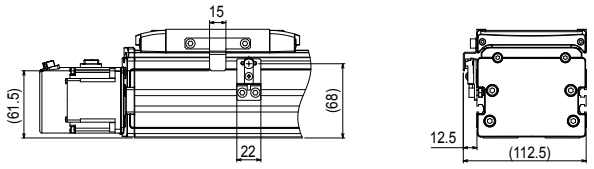
■ Example of proximity sensor attachment (Example of medium or large LGXS/AGXS left attachment)

Note 1. The sensor option is common to the LGXS and AGXS.
Note 2. Installation is users' responsibility.
Note 3. Mounting hardware included.
Note 4. Sensor cable is 5 m. Adjust as needed.



①	Proximity sensor
②	Sensor Bracket
③	Bracket screw
④	Bracket bolt
⑤	Bracket nut
⑥	Switch target plate
⑦	Target plate bolt

LGXS10 AGXS10



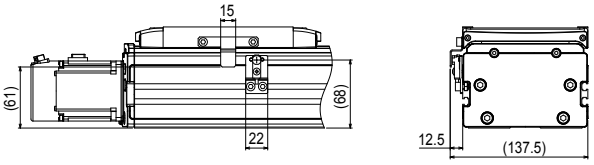
Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KEV-M2205-10	KEV-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KEV-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-05008		2	M5 × 0.8 Length 8
	⑤	Bracket nut	95302-05700		2	M5

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KEV-M2206-00		
Component	⑥	Switch target plate	KEV-M22G5-00	1	
	⑦	Target plate bolt	91312-05008	2	M5 × 0.8 Length 8

LGXS12 AGXS12



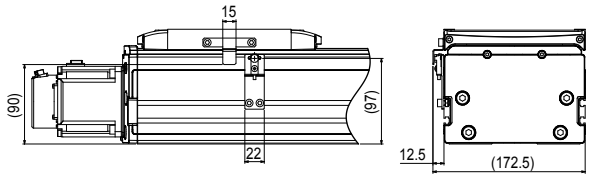
Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KEV-M2205-10	KEV-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KEV-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-05008		2	M5 × 0.8 Length 8
	⑤	Bracket nut	95302-05700		2	M5

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KEV-M2206-00		
Component	⑥	Switch target plate	KEV-M22G5-00	1	
	⑦	Target plate bolt	91312-05008	2	M5 × 0.8 Length 8

LGXS16 AGXS16



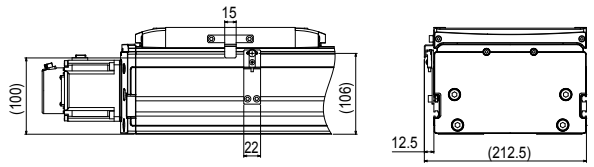
Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KEX-M2205-10	KEX-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KEX-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-05008		2	M5 × 0.8 Length 8
	⑤	Bracket nut	95302-05700		2	M5

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KEV-M2206-00		
Component	⑥	Switch target plate	KEV-M22G5-00	1	
	⑦	Target plate bolt	91312-05008	2	M5 × 0.8 Length 8

LGXS20 AGXS20



Proximity sensor option

Class		Name	Number: ON when approaching (NO, Normally Open)	Number: ON when leaving (NC, Normally Closed)	Qty	Remarks
Assy		Proximity sensor option	KEY-M2205-10	KEY-M2205-00		
Component	①	Proximity sensor	KES-M4855-00	KP6-M4855-01	1	
	②	Sensor Bracket	KEY-M22FF-00		1	
	③	Bracket screw	90990-66J004		1	M3 × 0.5 Length 8
	④	Bracket bolt	91312-05008		2	M5 × 0.8 Length 8
	⑤	Bracket nut	95302-05700		2	M5

Target plate option

Class		Name	Number	Qty	Remarks
Assy		Target plate option	KEV-M2206-00		
Component	⑥	Switch target plate	KEV-M22G5-00	1	
	⑦	Target plate bolt	91312-05008	2	M5 × 0.8 Length 8

Sensor Spec

Item	Specification
Manufacturer	KITA
Model	KT-32N
Output method	NPN type
Output action	ON when approaching
Power voltage	DC10 to 30V
Load current	100 mA or less

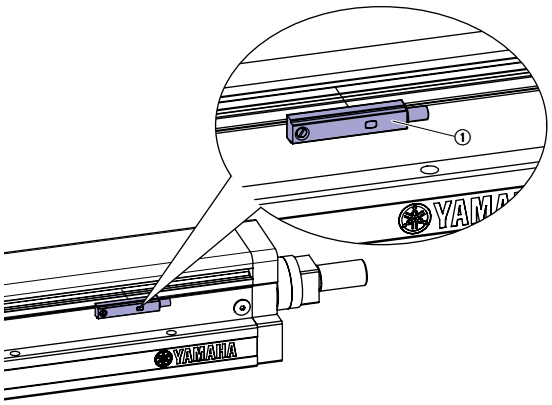
Item	Specification
Consumption current	17 mA or less (at DC24V)
Display lamp	Red LED (Lit when the output is ON.)
Ambient environment	-10 to +70 °C
Protection structure	IP67
Cable length	2 m

[Caution]

- For details about the sensor detection range, see the manual.
- For details about the sensor specifications, contact the manufacturer.
- Be aware that separate sensor cable and connector are needed when connecting the external sensor to the EP-01.

Example of magnetic sensor attachment (Example of LBAR/ABAR left attachment)

Note 1. The sensor option is common to the LBAR and ABAR.
Note 2. Installation is users' responsibility.
Refer to the manual for detail.
Note 3. The sensor can be secured with the screws supplied with the sensor.
Note 4. Sensor cable is 2 m. Adjust as needed.
Note 5. Sensor cable outlet can be either motor end or no motor end of actuator.



	Name	Number	Q'ty
①	Magnetic sensor option	KNB-M2205-00	1

Grease Gun Nozzle (for LBAS/ABAS/LBAR/ABAR)

Dedicated grease gun nozzles that supply the grease to the ball screws and linear guides of the Basic models LBAS/ABAS/LBAR/ABAR except for LBAS12/ABAS12(H).

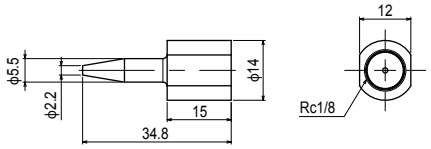
* It can be used by attaching to a commercially available general grease gun.

● Lubrication Kit

Grease nozzle and nozzle tip

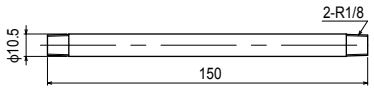
Part number	KFU-M3861-00

● Nozzle tip



Part number	KFU-M2941-00

● Grease nozzle



Part number	KFU-M2942-00

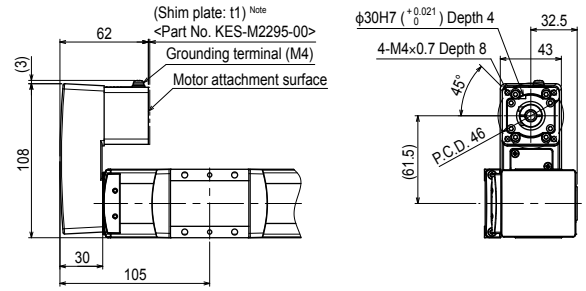
Grease Gun Nozzle (for LBAS12/ABAS12(H)/LGXS/AGXS)

The following shows the recommended grease gun nozzles that supply the grease to the ball screws and linear guides of the Basic models LBAS12/ABAS12(H) and Advanced models LGXS/AGXS.

● Recommended grease gun nozzles

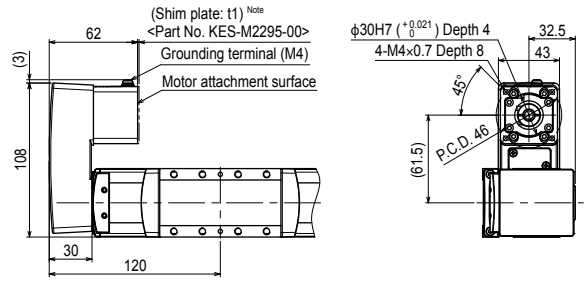
LBAS12/ABAS12(H)	Yamada Corporation CNP-2 or its equivalent
LGXS05/LGXS05L/LGXS07/LGXS10/LGXS12/ AGXS05/AGXS05L/AGXS07/AGXS10/AGXS12	NSK HGP NZ4 tip nozzle or its equivalent
LGXS16/LGXS20/AGXS16/AGXS20	Tip nozzle, outside diameter ϕ10, inside diameter ϕ6.5 to ϕ7

LGXS05



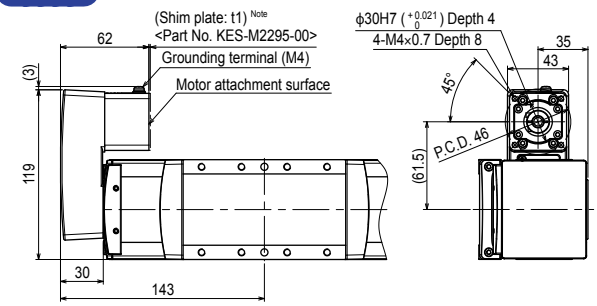
Note. For the availability of shim plate, see the adaptable servo motor table (P.32).

LGXS05L



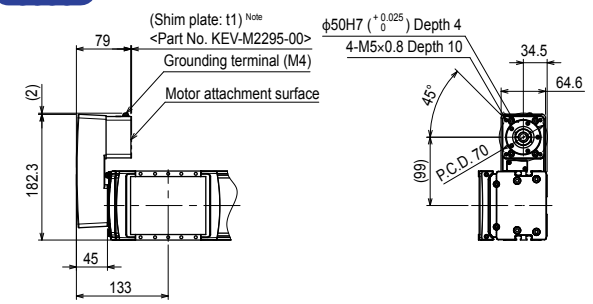
Note. For the availability of shim plate, see the adaptable servo motor table (P.34).

LGXS07



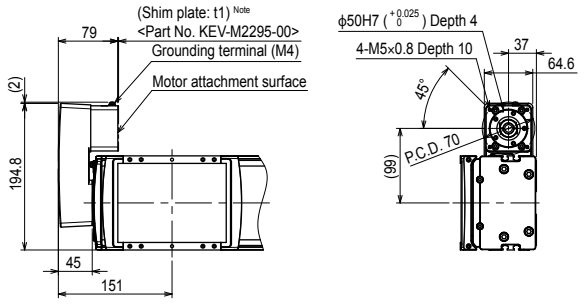
Note. For the availability of shim plate, see the adaptable servo motor table (P.36).

LGXS10



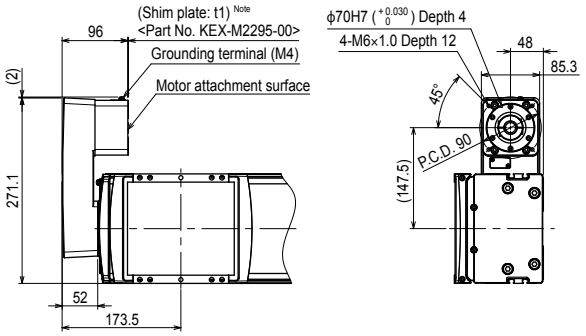
Note. For the availability of shim plate, see the adaptable servo motor table (P.38).

LGXS12



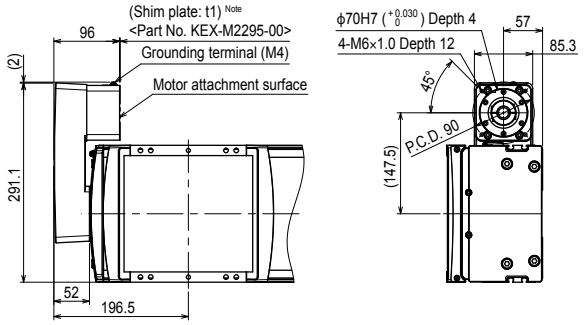
Note. For the availability of shim plate, see the adaptable servo motor table (P.40).

LGXS16



Note. For the availability of shim plate, see the adaptable servo motor table (P.42).

LGXS20



Note. For the availability of shim plate, see the adaptable servo motor table (P.44).

Note 1. Use by attaching the conversion adapter to the main unit. Refer to the manual for the attachment method.

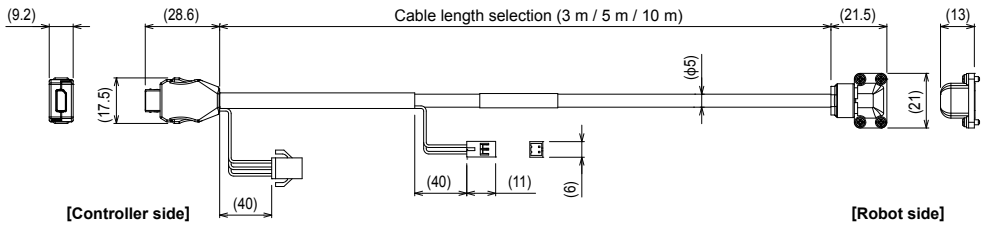
Note 2. A motor is not included in the conversion adapter. Remove a motor from the main unit, and install the conversion adapter.

Note 3. Right installation and left installation are possible.

Model	Product model	Part No.	Weight
LGXS05, LGXS05L, LGXS07	GX-BEND-40	KES-M221M-00	0.4 kg
LGXS10, LGXS12	GX-BEND-60	KEV-M221M-00	1.2 kg
LGXS16, LGXS20	GX-BEND-80	KEX-M221M-00	2.7 kg

* All cables are bending cables.

Encoder cable



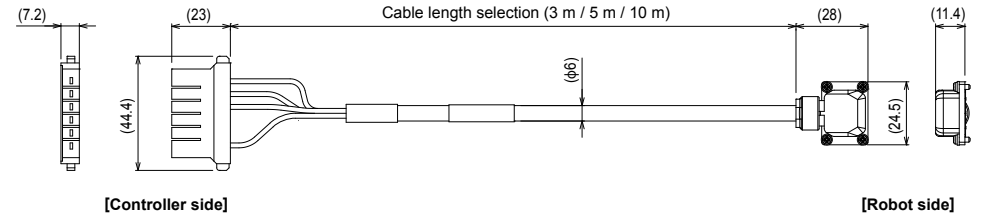
Rear Extraction specifications

Cable length	Part No.	Name
3m	KFT-M4751-30	CABLE ENC
5m	KFT-M4751-50	CABLE ENC
10m	KFT-M4751-A0	CABLE ENC

Front Extraction specifications

Cable length	Part No.	Name
3m	KFT-M4754-30	CABLE ENC
5m	KFT-M4754-50	CABLE ENC
10m	KFT-M4754-A0	CABLE ENC

Power cable



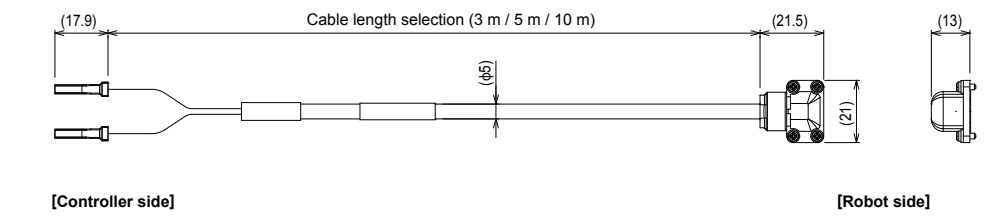
Rear Extraction specifications

Cable length	Part No.	Name
3m	KFT-M4752-30	CABLE UVW
5m	KFT-M4752-50	CABLE UVW
10m	KFT-M4752-A0	CABLE UVW

Front Extraction specifications

Cable length	Part No.	Name
3m	KFT-M4755-30	CABLE UVW
5m	KFT-M4755-50	CABLE UVW
10m	KFT-M4755-A0	CABLE UVW

Brake wiring



Rear Extraction specifications

Cable length	Part No.	Name
3m	KFT-M4753-30	CABLE BK
5m	KFT-M4753-50	CABLE BK
10m	KFT-M4753-A0	CABLE BK

Front Extraction specifications

Cable length	Part No.	Name
3m	KFT-M4756-30	CABLE BK
5m	KFT-M4756-50	CABLE BK
10m	KFT-M4756-A0	CABLE BK

EP-01

CE compliance

Single-axis robot positioner for single-axis robot Robonity series "ABAS", "AGXS", and "ABAR". This robot positioner supports Ethernet, is equipped with an Ethernet port as standard, and achieves 37 % size reduction when compared to the conventional robot positioner. Following the TS series, usability is greatly improved.

EP-01


Handy terminal
▶ HT2 / HT2-D

Support software for PC
▶ EP-Manager
* Free download is available at the member site.

Basic specifications

	Item		EP-01	
Basic specifications	Driver model		EP-01-A10	EP-01-A30
	Number of controllable axes		Single-axis	
	Controllable robots		Single-axis robot Robonity series ABAS / AGXS / ABAR	
	Power capacity		420 VA	1600 VA
	Dimensions		W 40 × H 150 × D 130 mm	W 55 × H 150 × D 130 mm
	Weight		Approx. 0.6 kg	Approx. 1 kg
	Input power supply	Control power supply	Single phase AC200 to 230V +/-10% 50/60Hz	
		Motor power supply	Single phase AC200 to 230V +/-10% 50/60Hz	
Axis control	Control method		Closed loop vector control method	
	Operating method		I/O point tracing (Positioning operation by specifying point number) / Remote command	
	Operation types		Positioning, merge-positioning, push, and jog operations	
	Position detection method		Optical encoder, battery absolute encoder, or battery-less absolute encoder is selected.	
	Resolution		8,388,608 pulses/rev.	
	Origin search method		Absolute	
Points	Number of points		255 points	
	Point type setting		(1) Standard setting: Set speed and acceleration in percent of the respective maximum settings. (2) Custom setting: Set speed and acceleration in SI units.	
	Point teaching method		Manual data input (coordinates input) , Teaching, Direct teaching	
External input/output	I/O interface		Selectable from the following: EtherNet/IP™, PROFINET, EtherCAT, NPN, CC-Link	
	Input		Servo ON (SERVO), reset (RESET), start (START), interlock (/LOCK) origin search (ORG), teaching mode (TMODE), jog motion - (JOG-), jog motion + (JOG+), point number selection (PIN0 to PIN7)	
	Output		Servo status (SRV-S), alarm (/ALM), operation end (END), operation in-progress (BUSY), control outputs (OUT0 to 3), point number output 0 to 7 (POUT0 to POUT7), feedback pulse output (A/B/Z) (option)	
	External communications		Ethernet (In conformity with IEEE802.3 100BASE-TX, Applicable to Auto Negotiation)	
	Power supply for brake		DC24V +/-10% 300mA (prepared by the customer)	
	Safety circuit		Emergency stop input, main power input ready output, emergency stop contact output (1 system: When the HT2 is used.)	
Options	Handy terminal		HT2, HT2-D (with enable switch)	
	Support software for PC		EP-Manager	
General specifications	Operating temperature / Operating humidity		0°C to 40°C, 35% to 85%RH (non-condensing)	
	Storage temperature / Storage humidity		-10°C to 65°C, 10% to 85%RH (non-condensing)	
	Atmosphere		Indoor location not exposed to direct sunlight. No corrosive , flammable gases, oil mist, or dust particles	
	Anti-vibration		All XYZ directions 10 to 57Hz unidirectional amplitude 0.075mm 57 to 150Hz 9.8m/s^2	
	Protective functions		Position detection error, power module error, temperature error, overload, overvoltage, low voltage, excessive position deviation, overcurrent, motor current error	
	Protective structure		IP20	

Controllable robot	EP-01 ▶ Robonity (ABAS, AGXS, ABAR)
CE marking	◯
Field networks	EtherNet/IP, PROFINET, EtherCAT, CC-Link V2

Model Overview

Name		EP-01
Controllable robot		Single-axis robot Robonity (ABAS / AGXS / ABAR)
Input power	Main power supply	Single phase AC200 to 230V +/-10% 50/60Hz
	Control power supply	Single phase AC200 to 230V +/-10% 50/60Hz
Operating method		I/O point tracing (Positioning operation by specifying point number) / Remote command
Maximum number of controllable axes		Single-axis
Origin search method		Absolute

Ordering method

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

Controller	Driver: Power capacity	Regenerative	I/O
	A10: 200W or less	No entry: None	EP: EtherNet/IP™
	A30: 400W/750W	R: With EP-RU	PT: PROFINET
			ES: EtherCAT
			NS: NPN
			CC: CC-Link

Note. Whether the battery is provided with the robot positioner is selected by the robot order model.

Specification selection table

Note. Conditions required for regenerative unit are only for reference and may vary depending on the actual operating conditions.

<Standard acceleration/deceleration specifications>

		Basic								Advanced						
		ABAS04	ABAS05	ABAS08	ABAS12	ABAS12H	ABAR04	ABAR05	ABAR08	AGXS05	AGXS05L	AGXS07	AGXS10	AGXS12	AGXS16	AGXS20
Driver	EP-01-A10	●	●	●	●		●	●	●	●	●	●	●			
	EP-01-A30					●								●	●	●
Regenerative unit EP-RU	Vertical		(1)	(2)	(4)	(6)	(7)	(8)	(10)		(12)	(12)	(10)	(14)	(10)	(10)
	Horizontal			(3)	(5)			(9)	(11)				(13)	(14)	(15)	(15)

Conditions required for regenerative unit

(1) Stroke of lead 5 or 10 is 650 mm or more.
(2) Stroke of lead 5 or 20 is 450 mm or more and stroke of lead 10 is 150 mm or more.
(3) Stroke of lead 20 is 250 to 750 mm.
(4) Stroke of lead 5, 10, or 20 is 150 mm or more and stroke of lead 32 is 300 to 750 mm.
(5) Stroke of lead 10 or 20 is 250 to 750 mm and stroke of lead 32 is 400 to 750 mm.
(6) Stroke of lead 5, 10, or 20 is 300 mm or more and stroke of lead 32 is 300 to 750 mm.
(7) Stroke of all leads is 250 mm or more.
(8) Stroke of all leads is 150 mm or more.
(9) Stroke of lead 20 is 300 to 400 mm.
(10) All strokes of all leads
(11) Stroke of lead 10 or 20 is 150 to 500 mm.
(12) Stroke of all leads is 500 mm or more.
(13) Stroke of lead 10, 20, or 30 is 300 to 800 mm.
(14) Stroke of all leads is 400 mm or more.
(15) Stroke of lead 20 is 400 to 850 mm and stroke of lead 40 is 600 to 950 mm.

<High acceleration/deceleration specifications>

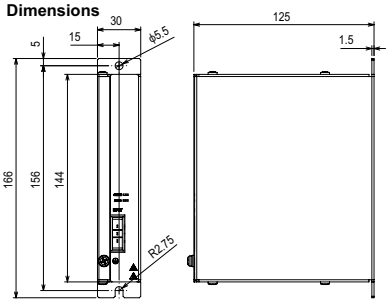
		Advanced					
		AGXS05-H	AGXS05L-H	AGXS07-H	AGXS10-H	AGXS12-H	AGXS16-H
Driver	EP-01-A10	●	●	●	●		
	EP-01-A30					●	●
Regenerative unit EP-RU	Vertical				(1)	(3)	(4)
	Horizontal				(2)		(5)

Conditions required for regenerative unit

(1) Stroke of lead 10 is 400 mm or more and stroke of lead 20 is 450 mm or more.
(2) Stroke of lead 20 is 250 mm or more and stroke of lead 30 is 450 mm or more.
(3) Stroke of lead 5 or 20 is 650 mm or more and stroke of lead 10 is 450 mm or more.
(4) All strokes of leads 10 and 20 and stroke of lead 40 is 300 mm or more.
(5) Stroke of lead 20 is 150 mm or more and stroke of lead 40 is 450 mm or more.

Regenerative unit EP-RU

Dimensions



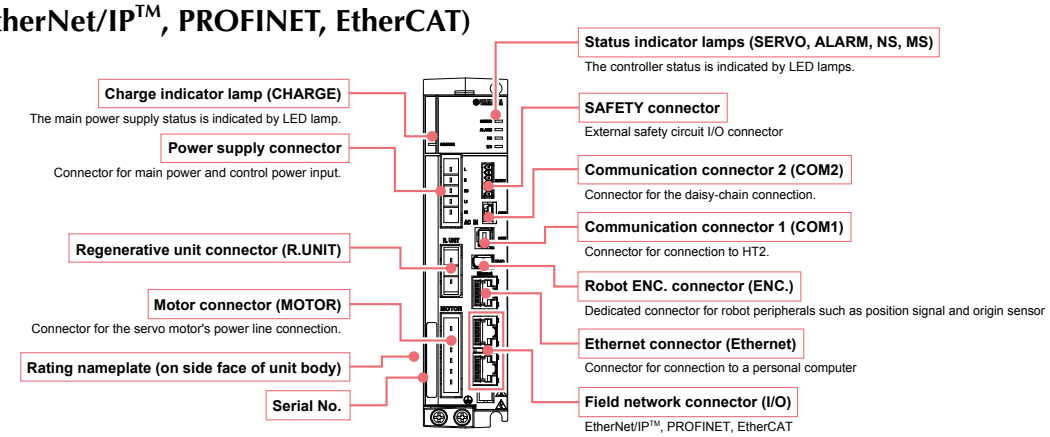
Basic specifications

Item	EP-RU
Model	KFX-M5850-00
Dimensions	W30 × H144 (Not including installation stay) × D125 mm
Weight	650 g
Regenerative voltage	Approx. 380V or more
Regenerative stop voltage	Approx. 360V or less
Absorbable electric power	40W
Accessory	Cable for connection with controller (300 mm)

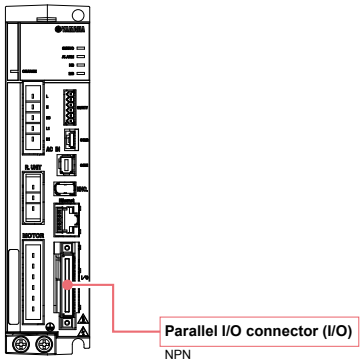
Note. Always leave an empty space (gap of about 20 mm) between this unit and the adjacent controller.
Also, always use the dedicated cable when connecting the controller.

Part names

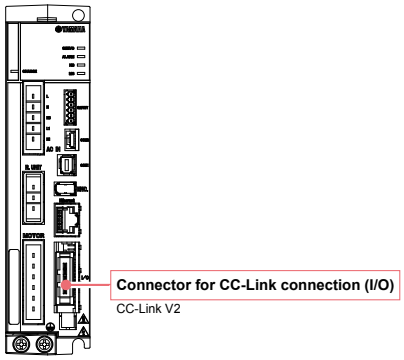
EP-01 (EtherNet/IP™, PROFINET, EtherCAT)



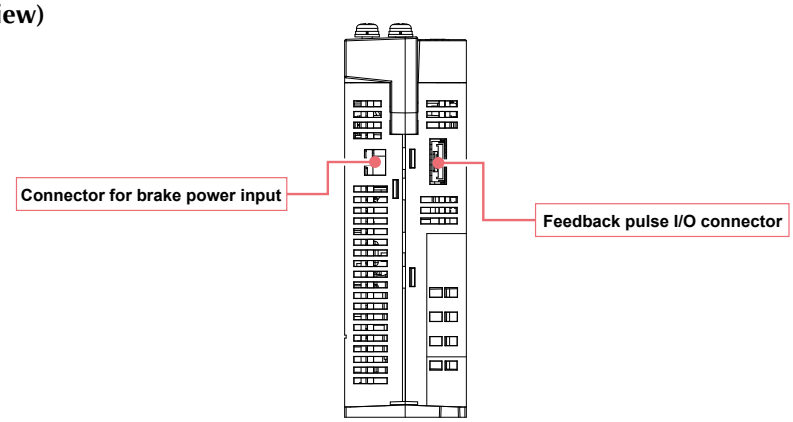
EP-01 (NPN)



EP-01 (CC-Link)

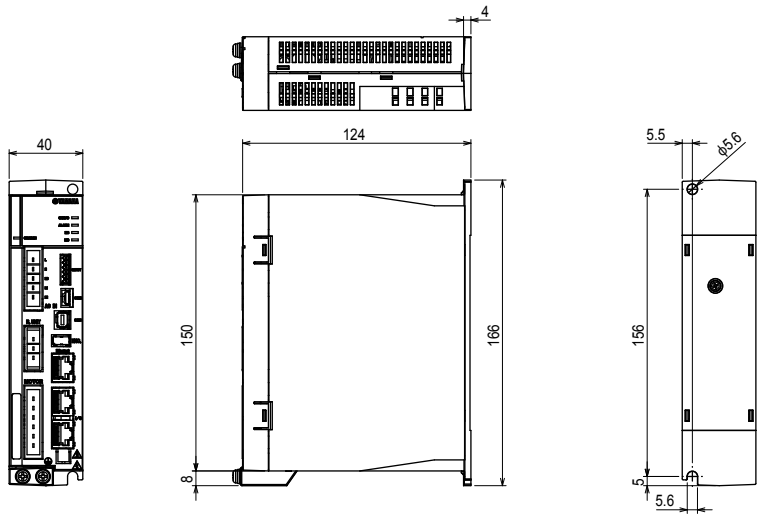


EP-01 (Bottom view)

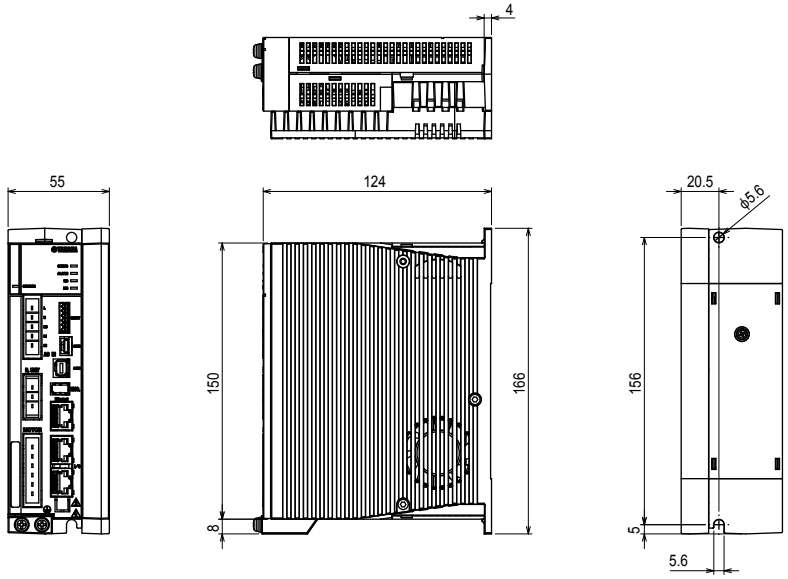


Dimensions

EP-01-A10



EP-01-A30



Installation conditions

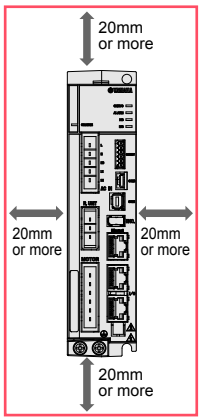
- Install the EP-01 inside the control panel.
- Install the EP-01 on a metal wall vertically.
- Install the EP-01 in a well ventilated location, with space on all sides of the EP-01 (See fig. at right.).

- Ambient temperature : 0 to 40˚C
- Ambient humidity : 35 to 85% RH (no condensation)

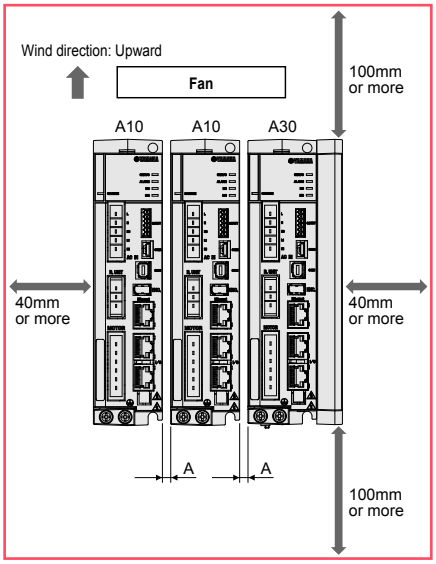
[When multiple EP-01 robot positioners are used]

- Install a fan to cool the controller main body sufficiently.
- When installing multiple controllers, keep at least 1 mm between the controllers.
- Install the controllers in a well-ventilated area with sufficient space around them. (See figure 2.)
- If the distance to the adjacent EP-01 is 20 mm or less (A in figure 2), set the effective load factor to 75% or less.

(Fig. 1)



(Fig. 2)



Data overview

Point data and parameter data settings must be specified in order to operate a robot from a EP series controller.

Point data

The point data used in positioning operations includes items such as the “RUN type”, “Position”, and “Speed”, etc.
Up to 255 points (P1 to P255) can be registered. There are two point data setting types: “Standard setting” type that automatically defines optimal positioning simply by specifying the payload and “Custom setting” type that allows setting the speed (mm/s) and acceleration (m/s^2) in SI units. Select the desired setting type according to the application.

Parameter data

The parameter data is classified into “RUN parameter”, “I/O parameter”, “Option parameter”, “Servo parameter”, and “Controller parameter”.

Data structure

Data

- **Point data** — **P1 to P255**

1	RUN type	7	Zone (-)
2	Position	8	Zone (+)
3	Speed	9	Near width
4	Accel.	10	Jump
5	Decel.	11	Flag
6	Push	12	Timer

Sets the point data to be used in positioning.
Select the desiredsetting type (“standard setting” or “custom setting”) according to the application.

(1) Standard setting
Optimum positioning is provided simply by specifying the payload.

(2) Custom setting
Speed and acceleration can be set in SI units.

- **Parameter data**
  - RUN parameter — Specifies parameter settings related to positioning and return to-origin operations.
  - I/O parameter — Specifies parameter settings related to terminal assignments and I/O function selection.
  - Option parameter — Specifies parameter settings related to options such as EtherNet/IP™, etc.
  - Servo parameter — Specifies parameter settings specified to the connected robot. These parameters are specified during initial processing.
  - Controller parameter — Specifies parameter settings related to the communication with the controller to be connected.

Point data

Point data item list

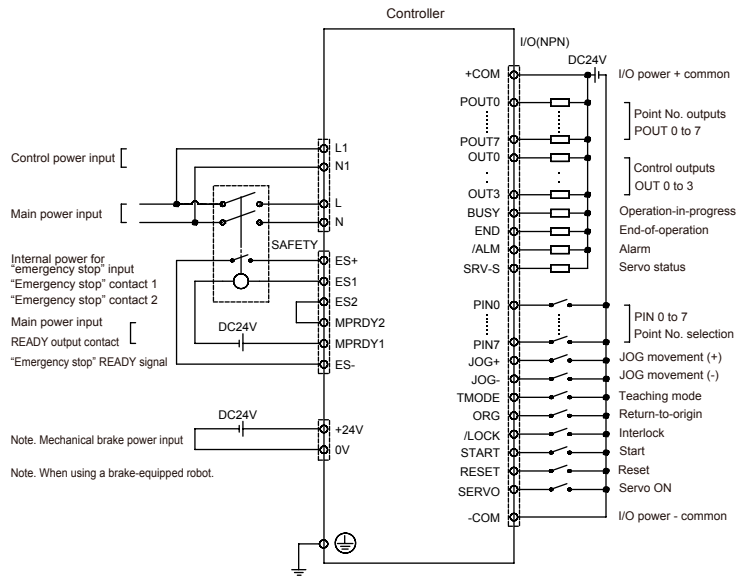
P1 to P255		
Item		Description
1	RUN type	Specifies the positioning operation pattern.
2	Position	Specifies the positioning target position or movement amount.
3	Speed	Specifies the positioning speed.
4	Accel.	Specifies the positioning acceleration.
5	Decel.	Specifies the positioning deceleration (as a percentage of the acceleration).
6	Push	Specifies the electrical current limit value for “Push” operations.
7	Zone (-)	Specifies the “personal zone” output range.
8	Zone (+)	
9	Near width	Specifies the “near width” zone (distance tolerance relative to target position).
10	Jump	Specifies the next movement destination, or the next merge operation merge destination point No. following positioning completion.
11	Flag	Specifies other information related to the positioning operation.
12	Timer	Specifies the waiting time (delay) after positioning completion.

“Standard setting” and “custom setting”

There are 2 setting types for point data (“standard setting” or “custom setting”). Select the desired setting type according to the application.
The maximum number of setting points for both setting types is 255 points (P1 to P255).

Setting Type	Description
Standard setting	Optimum positioning is provided simply by specifying the payload. This setting type is well-suited to assembly and transport applications.
Custom setting	Since the speed and acceleration can be changed arbitrarily in SI units, the positioning can be set freely. This setting type is suited for machining and inspection systems.

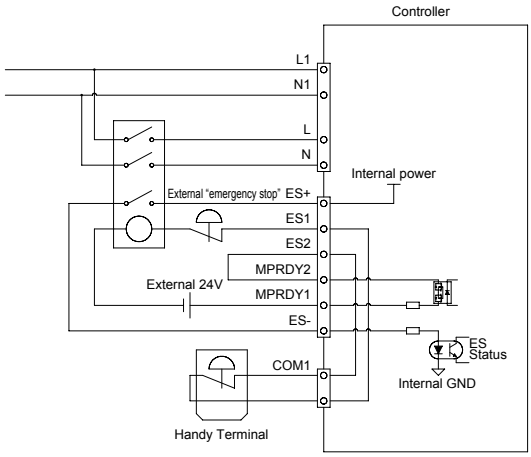
NPN type input / output wiring diagram



I/O Specifications

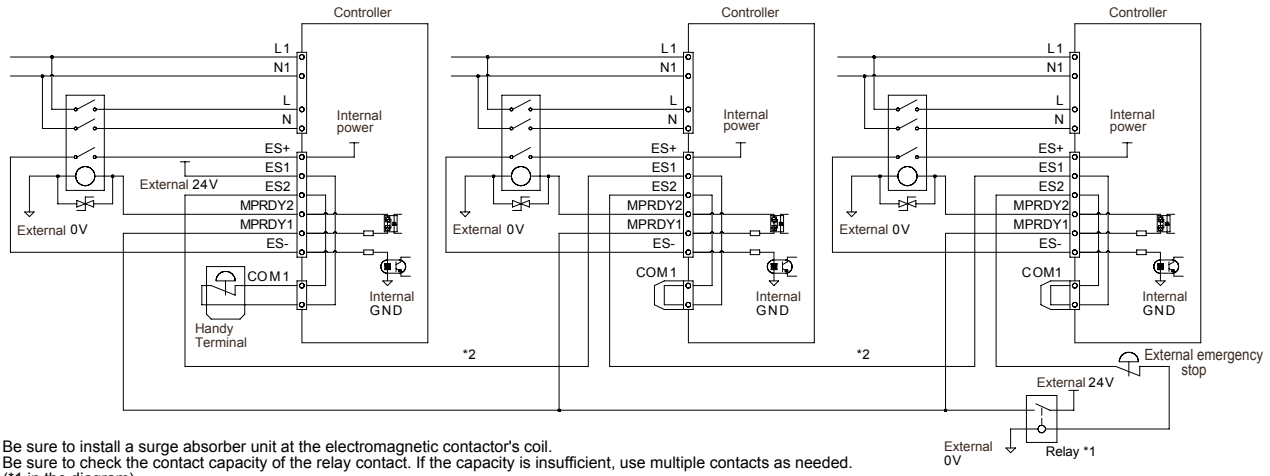
Item	Description
EtherNet/IP™	EtherNet/IP™ adapter (2 ports)
PROFINET	PROFINET Slave 1 node
EtherCAT	EtherCAT Slave 1 node
NPN	Input 16 points, 24VDC +/-10%, 5.1mA/point, positive common Output 16 points, 24VDC +/-10%, 50mA/point, sink type
CC-Link	CC-Link Ver.2.00 compatible, Remote station device (1 station double setting)

Emergency stop circuit example



Note. Always connect a surge absorber unit to the coil on the electromagnetic contactor.

Emergency stop circuit example (Daisy chain)



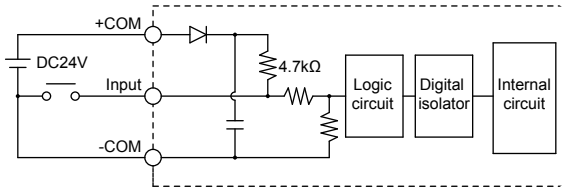
- Be sure to install a surge absorber unit at the electromagnetic contactor's coil.
- Be sure to check the contact capacity of the relay contact. If the capacity is insufficient, use multiple contacts as needed. (*1 in the diagram)
- Connect a load with a current of 300 mA or less to the emergency stop wiring using ES1 and ES2. If a load with a current of more than 300 mA is connected or if a current of more than 300 mA flows without connecting any load, the controller may malfunction. (*2 in the diagram.)

I/O signals (NPN)

No.	Signal Name		Description		No.	Signal Name	Description	
A1	+COM		I/O power input, positive common		B1	POUT0	Outputs	Point No. outputs
A2					B2	POUT1		
A3	NC		No connection		B3	POUT2		
A4	NC				B4	POUT3		
A5	PIN0	Inputs	Point No. select		B5	POUT4		
A6	PIN1				B6	POUT5		
A7	PIN2				B7	POUT6		
A8	PIN3				B8	POUT7		
A9	PIN4				B9	OUT0		OUT0 to OUT3 assignments include: • Zone output • Personal zone output • Teaching mode status • Return-to-origin end status • NEAR output • Movement-in-progress • Push status • Warning output
A10	PIN5				B10	OUT1		
A11	PIN6				B11	OUT2		
A12	PIN7				B12	OUT3		
A13	JOG+ (A15: ON)	SPD (A15: OFF)	JOG movement (+ direction)	Speed switching	B13	BUSY		Operation-in-progress
A14	JOG-		JOG movement (- direction)		B14	END		Operation-end
A15	TMODE		Teaching mode (ON: I/O teaching mode OFF: I/O positioning mode)		B15	/ALM		Alarm
A16	ORG		Return-to-origin		B16	SRV-S		Servo status
A17	/LOCK		Interlock		B17	NC	No connection	
A18	TEACH (A15: ON)	START (A15: OFF)	Current position teaching	Start	B18	NC		
A19	RESET		Reset		B19	-COM	I/O power input, negative common	
A20	SERVO		Servo ON		B20			

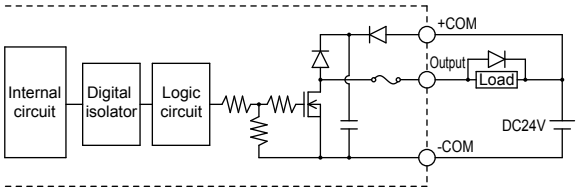
NPN type I/O circuit details

Input circuit



Type: DC input (plus common type)
Digital isolator method
Load: 24VDC +/- 10%, 5.1mA
OFF voltage 19.2 Vmin (1.0 mA)
ON voltage 7.4 Vmax (3.4 mA)

Output circuit



Type: NPN open collector output
(Minus common type)
Digital isolator method
Load: 24VDC, 50mA/point

Feedback pulse I/O signal table

Basic specifications

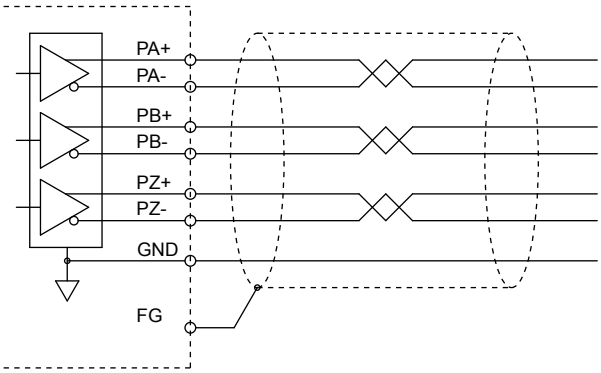
Item	Specification
Output signal	ABZ-phase pulse
Number of pulses per rotation	Variably changed in a range of 4 to 16384
Maximum rotation speed	6000 rpm
Maximum operating frequency	2 Mbps

Signal table

Signal name	Description	Wire color	Remarks
GND	Signal ground	White	
PA+	A-phase plus signal	Yellow	Twist pair (1)
PA-	A-phase minus signal	White	
PB+	B-phase plus signal	Green	Twist pair (2)
PB-	B-phase minus signal	White	
PZ+	Z-phase plus signal	Red	Twist pair (3)
PZ-	Z-phase minus signal	White	
FG	Frame ground	(Shield)	

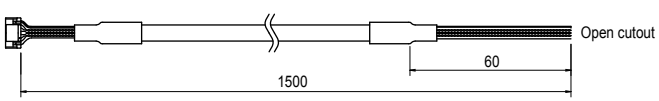
Details of feedback pulse output circuit

Output circuit



Line driver (equivalent to AM26LV31)
Maximum output current: 30 mA

Feedback pulse output cable



Model	KFX-M532M-00

Accessories and part options

EP-01

Standard accessories

The icons indicated at the right end show the controllers that each component can use.

Power connector + Operation lever

Model	Power connector	KFX-M5382-00
	Operation lever	KEF-M657M-00

EP-01

Regeneration unit short-circuit connector

Model	KEK-M4431-00

EP-01
YHX
RCX320

HT2 dummy connector

Model	KEK-M5869-00

EP-01
YHX

SAFETY connector

Model	KEK-M4432-10

EP-01
YHX

Brake power cable (1 m) Note

Note. Included in the robot with brake.

Model	KFX-M532K-10

EP-01

I/O cables (2 m/20-core×2) Note

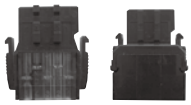
Note. Included in the robot with NPN specifications.

Model	KCA-M4421-20

EP-01
TS-S2
TS-SH
TS-X
TS-P

CC-Link connector Note

Note. Included in the robot with CC-Link specifications.



Connector Jump socket

Model	Connector Note.	KCA-M4872-00
	Jump socket	KCA-M4873-00

Note. This is a single connector type. (Insert two connectors into a branching socket.)

EP-01
TS-S2
TS-SH
TS-X
TS-P

Ferrite core Note

Note. Shipped with the ferrite core attached to the robot cable.

Model	KK1-M6563-200

EP-01

See next page for optional parts

Options

The icons indicated at the right end show the controllers that each component can use.

Handy terminal HT2/HT2-D

		HT2	HT2-D
Model	3.5m	KFX-M5110-0E	KFX-M5110-1E
	10m	KFX-M5110-2E	KFX-M5110-3E
Enable switch		–	Available
CE marking		Not supported	Applicable

EP-01

Support software EP-Manager

Download from website (member site)

Model	KFX-M4990-00

EP-Manager environment

OS	Microsoft Windows 10 (32bit/64bit)
CPU	Exceeding the environment recommended by the OS being used
Memory	Exceeding the environment recommended by the OS being used
Communication port	Ethernet port (100BASE-TX) Ethernet cable (category 5 or higher)
Display	1024×768 or higher resolution, 256 colors or higher
Applicable controllers	EP-01

Note. Windows is the registered trademark of US Microsoft Corporation in U.S.A. and other countries.
Note. Ethernet is a registered trademark of the XEROX Corporation, USA.

EP-01

Absolute battery

Absolute battery basic specifications

Item	Absolute battery
Battery type	Lithium metallic battery
Battery capacity	3.6V/2700 mAh
Data holding time	About 10 years
Dimensions	ϕ17 × L47 mm
Weight	20.3 g

Model	KFX-M53G0-00

Note. The absolute battery is subject to wear and requires replacement.

EP-01

Battery holder kit

Model	KFX-M53G7-00

Note. Set number containing the battery holder and two tie-up bands.

EP-01

CC-Link termination connector

Model	KCA-M4874-00

EP-01
TS-S2
TS-SH
TS-X
TS-P

Feedback pulse output cable

Model	KFX-M532M-00

EP-01

Daisy chain and gateway connection cable

Model	KFX-M532L-00

EP-01

Safety Precautions

Read the instruction manual thoroughly to operate the robot in a correct manner.

YAMAHA

YAMAHA MOTOR CO., LTD.

Robotics Operations
Sales & Marketing Section
FA Sales & Marketing Division
127 Toyooka, Kita-ku, Hamamatsu, Shizuoka 433-8103, Japan
Tel. +81-53-525-8350 Fax. +81-53-525-8378

URL https://global.yamaha-motor.com/business/robot/

202211-DE