MOTOR-LESS SINGLE AXIS ACTUATOR
Your choice of Motor and Driver System

Wide selection of payload and speed requirements
Choice of ball screw leads

Wide selection stroke range
Choice of stroke range from 50 mm up to 1450 mm
(Advanced model LGXS only)

Robonity Series
Product Lineup

LBAS Basic model
LGXS Advanced model
For a wide range of usage from positioning to conveyance.

### Basic model LBAS

<table>
<thead>
<tr>
<th>Model</th>
<th>Adaptable motor (W)</th>
<th>Stroke (mm)</th>
<th>Maximum speed (mm/sec.) (or equivalent)</th>
<th>Ball screw lead (mm)</th>
<th>Maximum payload (kg) (or equivalent)</th>
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<tbody>
<tr>
<td>LBAS04</td>
<td>50</td>
<td>50 to 800 (50 pitch)</td>
<td>800 12 12 2</td>
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### Advanced model LGXS

<table>
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<th>Stroke (mm)</th>
<th>Maximum speed (mm/sec.) (or equivalent)</th>
<th>Ball screw lead (mm)</th>
<th>Maximum payload (kg) (or equivalent)</th>
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<tbody>
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<td>1333 5 12 3</td>
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<td>P146</td>
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</table>

**Note 1.** When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.

**Note 2.** The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
Basic model LBAS

Newly designed integrated guide rail/frame structure. Improved moment load capacity in compact frame size. Designed to accommodate motors from most leading manufacturers.

**POINT 1**

High Rigidity

Moment rigidity is increased approximately three times from current models.

**POINT 2**

High Precision

Straightness (running parallelism): +/-0.02/800 mm

**POINT 3**

Compact

Frame width is reduced by approximately 20% from current models.

**POINT 4**

Motor attaching direction, Easily changeable with the special bending part

**POINT 5**

Installation process is simple and easy

1. Mounting holes are accessible from top or bottom without disassembling actuator unit.
2. Standard surface on the side and dowel pin holes on the bottom.

**POINT 6**

Easy Maintenance

Moving parts can be lubricated from outside without opening actuator unit.
**Advanced model LGXS**

Higher efficiency, accuracy, and reliability from ground ball screw. Ideal for base axis of multi-axis configuration.

**POINT 1**
**Shortest Overall Length**
The industry’s shortest class is achieved for the total length in relation to the effective stroke.

![Image of LGXS model showing shortest overall length](image)

**POINT 2**
**High Precision**
- Adopted ground ball screws
- Ball screw Remove Accuracy: Accuracy class C5
- Positioning Remove Accuracy repeatability: +/-5 μm

![Image of LGXS model showing high precision](image)

**POINT 3**
**Cleanroom Ready Design**
- Protective stainless dust shield
- Ports are ready for vacuum fittings

![Image of LGXS cleanroom ready design](image)

**POINT 4**
**Motor orientation is changeable with optional conversion unit**
Motor unit of standard straight type can be used for side-mount setup.

![Image of LGXS motor orientation change](image)
MOTOR-LESS SINGLE AXIS ACTUATOR

Robonity SERIES

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<td>LBAS05</td>
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<td>145</td>
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<td>LGXS20</td>
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Main functions ▶ P.16
**Motor-less Single Axis Actuator**

### Ordering method

**LBAS04**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead designation</th>
<th>Shape</th>
<th>Motor specification</th>
<th>Stroke</th>
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<td>LBAS04-12</td>
<td>LBASLGXS</td>
<td></td>
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</table>

### Specifications

**Adaptable motor**
- 50 W

**Repeatability**
- ±0.01 mm

**Deceleration mechanism**
- Shifting position ball screw + 10 (C7 class)

**Stroke**
- 50 mm to 800 mm (50 mm pitch)

**Maximum speed**
- 800 mm/sec

**Ball screw lead**
- 12 mm

**Maximum payload**
- 12 kg

**Rated thrust**
- 71 N

**Maximum dimensions of cross section of main unit**
- W 44 mm × H 52 mm

**Overall length**
- 91 to 214 mm

**Using ambient temperature and humidity**
- 0 to 40 °C, 35 to 80 %RH (non-condensing)

**Ball screw lead**
- 8 mm

**Allowable overhang**

- 2 kg
- 8 kg
- 12 kg

**Effective stroke**
- 50 to 800 mm

**Weight (kg)**
- 2 kg
- 8 kg
- 12 kg

**Maximum speed (mm/sec)**
- 2 kg
- 8 kg
- 12 kg

**Rate of speed settling**
- 2 kg
- 8 kg
- 12 kg

---

**Adaptable Servo Motor**

**Specification**

- Flange size: 46
- Voltage: 50 W

**Motor specification**

- Manufacturer
  - Toshiba Electric Corp.
  - SGMV
  - SGM72-AS
  - SGMV100-1
  - YRV-100V
  - RYV-100V
  - H7K-060S
  - R7K-060S
  - RM4-0100B
  - RM4-0101B
  - RM4-0102B
  - RM4-0103B
  - RM4-0104B

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

---

**Static loading moment**

**MY** | **MP** | **MR** |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>54</td>
<td>54</td>
<td>75</td>
</tr>
</tbody>
</table>

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**Effective stroke**

- 50 mm to 800 mm

**Weight (kg)**

- 25 kg
- 90 kg
- 150 kg

**Maximum speed (mm/sec)**

- 5 kg
- 10 kg
- 15 kg

**Rated thrust (N)**

- 10 kg
- 20 kg
- 30 kg

---

**[Caution]**

This system is provided as mechanical actuator unit and not including any adapters or electric components. Motor, driver and other components required for installation are user’s responsibility. 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.

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**Note.** See P.624 for detail.

**Note 1.** Motor models marked with * may not be 50 W, but can be installed.

**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 bolt = M3 + 0.5. In the installation tap hole, the length under head < depth of thread of the tap hole. The recommended depth hole = M4 + 0.7 used to install the main unit.

**Note 4.** Nozzle set for greasing (recommended) (see P.147 for detail). Part number: KFU-M3861-00
Articulated robots

Linear conveyor modules

Compact single-axis robots

Motor-less single-axis robots

Phaseless Cartesian robots

XY-X

SCARA robots

YK-X

Pick & place robots

YP-X

Controller information

iS0.3/5000

Stroke (mm)

Lead designation

Shape

Option

LBAS05

Motor-less Single Axis Actuator

Ordering method

LBAS05

Motor specification

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.

Note 3. The rated thrust and maximum transferable weight values are assuming the attached motor outputs the rated torque.

Note. See P.G.6 for acceleration/deceleration and inertia moment.

Specifications

Adaptable motor 100 W

Repeatability +/-0.1 mm

Deceleration mechanism Shifting position ball screw 9-12 (CT class)

Stroke 50 mm to 800 mm (50 mm pitch)

Maximum speed (or equivalent) 1333 nm/sec 666 nm/sec 333 nm/sec 133 nm/sec

Ball screw lead 20 mm 10 mm 5 mm 2 mm

Maximum payload (or equivalent) Horizontal 12 kg 24 kg 40 kg 45 kg Vertical 3 kg 9 kg 12 kg 15 kg

Rated thrusts (or equivalent) 84 N 169 N 339 N 854 N

Maximum dimensions of cross section of main unit W 54 mm x H 60 mm

Overall length ST + 220.5 mm

Using ambient temperature and humidity 0 to 40°C. 35 to 80% RH (non-condensing)

Note 1. Ordering method

Motor specification

Motor-LBASLGXS

Option

Note 1. Stop positions are determined by the mechanical slugsigers 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 bolt (M4 = 0.7). In the installation tap hole, the length under head must be within a 8mm of stand +10 mm or less <= is recommended for the hex socket head bolt (M5 = 0.8) used to install the main unit.

Note 4. Nozzle set for greasing (recommended) (see P.147 for detail)
LBAS05 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 and max <= is recommended for the hex socket head bolts <M4 × 0.8> used to install the main unit. 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. Nozzle set for greasing (recommended) (see P.147 for detail).

Part number: KFU-M3861-00
**LBAS08 Basic model**

### Ordering method

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead designation</th>
<th>Shape</th>
<th>Motor specification</th>
<th>Stroke (x or y mm)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Specifications

- **Adaptable motor**: 200 W
- **Repeatability**: +/-0.01 mm
- **Deceleration mechanism**: Shifting position ball screw 9 \( \times \) 16 (CL class). 20 mm 10 mm 5 mm
- **Stroke**: 50 mm to 1100 mm (50 mm pitch)
- **Maximum speed**: 1200 mm/sec, 600 mm/sec, 300 mm/sec
- **Rated thrust**: 45 kg, 20 kg, 10 kg
- **Rated thrust (or equivalent)**: 65 kg, 30 kg, 15 kg
- **Rated speed (or equivalent)**: 25 N, 50 N, 80 N
- **Rated thrust (or equivalent)**: 40 kg, 80 kg, 100 kg

### Allowable overhang

#### Horizontal installation

<table>
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<th>Notes</th>
<th>Wall installation (unit: mm)</th>
<th>Vertical installation (unit: mm)</th>
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<td>100kg</td>
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#### Horizontal installation

<table>
<thead>
<tr>
<th>Notes</th>
<th>Wall installation (unit: mm)</th>
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<tr>
<td>100kg</td>
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### Static loading moment

<table>
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<th>MY</th>
<th>MP</th>
<th>MR</th>
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<tr>
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### Motor-less Single Axis Actuator

- **Motor-less Single Axis Actuator**
- **Ordering method**

#### Specifications

- **Motor specification**

<table>
<thead>
<tr>
<th>Note</th>
<th>Specification</th>
<th>Flange size</th>
<th>Voltage</th>
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#### Adaptable Servo Motor

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#### Notes

1. **Positioning repeatability** in one direction.
2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.
3. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.

### LBAS08 Straight type (S)

- **Effective stroke** (111)
- **Effective stroke** (111)

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 bolt <M8 >. In the installation tap hole, the length under head <thickness of thread 15 mm or less is recommended for the hex socket head bolts <M8 > 1.0 x 1.0 > used to install the main unit.
Note 4: Nozzle set for greasing (recommended) (see P147 for detail)
Part number: KFU-M3285-00
LBAS08 Bending type (A)

Effective stroke

<table>
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</table>

Maximum speed (mm/sec) | Lead 20 | Lead 10 | Lead 5 | speed setting |
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<td>85% 75% 65% 55% 45% 35% 25% 15% 5%</td>
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<tr>
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<td>85% 75% 65% 55% 45% 35% 25% 15% 5%</td>
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<tr>
<td>speed setting</td>
<td>–</td>
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</tbody>
</table>

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. Nozzle set for greasing (recommended) (see P.147 for detail)
Part number: KFU-M3861-00
**Ordering method**

**LGXS05**

<table>
<thead>
<tr>
<th>Model</th>
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**Specifications**

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**Allowable overhang**

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

**Static loading moment**

Note: To combine with the conversion adapter <GX-BEND-40>, the shim plate (11) is necessary.

**Motor-less Single Axis Actuator**

**LGXS05-20**

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**Ordering method**

**LGXS05**

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LGXS05L Advanced model

Motor-less Single Axis Actuator

Ordering method

LGXS05L

Model

Motor designation

Stroke

50-500 mm pitch

Specifications

Adaptable motor
100 W

Repeatability
+/-0.005 mm

Deceleration mechanism
Ground belt screw 9/12 (50 class)

Horizontal stroke (or equivalent)
50 mm to 800 mm (50 mm pitch)

Ball screw lead
20 mm 10 mm 5 mm

Maximum payload
Horizontal (or equivalent)
12 kg 24 kg 32 kg

Vertical (or equivalent)
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 x H 65 mm

Overall length
91 + 161.5 mm

Degree of cleanliness (or equivalent)
ISO CLASS 3 (ISO 14644-1) or equivalent.

Intake air temperature and humidity
30 Nm N/min to 100 Nm N/min

Using ambient temperature and humidity
0 to 40 °C or equivalent

Allowable overhang

Vertical installation (Unit: mm)

LGXS05L-20

A B C
3kg 1750 560 427
3kg 3971 488 1599
3kg 1480 1490

BGXS05L-10

A B C
3kg 2149 388 333
6kg 2771 216 2104
4kg 554 554

Wall installation (Unit: mm)

LGXS05L-20

A B C
3kg 1791 560 427
3kg 3971 488 1599
3kg 1480 1490

BGXS05L-10

A B C
3kg 1400 187 161
6kg 2000 160 1068
4kg 360 360

Static loading moment

MY MP MR
72 72 64

Adequate overhang

Note 1. Positioning repeatability in one direction.

Note 2. When using a moving distance is short and depending on an operation condition, it may not reach the maximum speed.

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.

Rated thrust
84 N 169 N 339 N

Rated torque
20-100 N·m

Rated speed
1000 mm/sec

Rated torque...
LGXS07

Motor-less Single Axis Actuator

■ Specifications
Adaptable motor
100 W
Repeatability (mm)
+/-0.005 mm
Deceleration mechanism
Ground ball screw 9.15
Stoke
50 mm to 1100 mm (50 mm pitch)
Maximum speed (mm/sec or equivalent)
1800 1200 600 500
Ball screw lead
30 mm 20 mm 10 mm 5 mm
Maximum payload (kg or equivalent)
10 kg 25 kg 45 kg 85 kg
Rated thrust (kgf or equivalent)
2 kg 4 kg 8 kg 10 kg
Rated thrust (kgf or equivalent)
56 N 84 N 169 N 339 N
Maximum dimensions of cross section of main unit
W 70 mm x H 76.5 mm
Overall length
ST + 202 mm
Degree of cleanliness
ISO 14644-1 (or equivalent)
Intake air temperature and humidity
30 °C (or equivalent)
Using ambient temperature and humidity
90% RH (non-condensing)

Note 1. Positioning repeatability in one direction.
Note 2. 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 3. The required suction amount will vary according to the operating conditions and operating environment.
Note. See P.62 for acceleration/deceleration and inertia moment.

■ Allowable overhang

LGXS07-30
Horizontal installation
Wall installation
Vertical installation
2kg 1008 1512 1223
2kg 1240 1445 2681
2kg 2340 2340
6kg 1191 502 418
6kg 383 435 1063
6kg 1160 1160
10kg 931 318 292
10kg 345 245 2784
10kg 1160 1160

Note. See P.632 for acceleration/deceleration and inertia moment.

■ Static loading moment

Note. To combine with the conversion adapter <GX-BEND-40>, the Shim plate (11) is necessary.

■ Adaptable Servo Motor

Specification
Flange size
[40]
Wattage
100 W
Manufacturer
Mitsubishi Electric Corp.
Model
Yasukawa Electric Corp.
SGMJV-01
SGM3S-01
Keyence Corp.
SVV-1-010
Adaptable Servo Motor
SGMJV-01
SGM7J-01
SGM7J-01

Note 1. Step positions are determined by the mechanical stoppers at both ends.
Note 2. When attaching the tap holes to mount the body, remove the set screws first.
Note 3. When using the countersunk holes (section A) to mount the body, remove the cap from the inner side and then fix.

LGXS07-7-20
Horizontal installation
Wall installation
Vertical installation
2kg 1057 318 282
2kg 1057 318 282
2kg 1057 318 282
6kg 117 103 1249
6kg 117 103 1249
6kg 117 103 1249
10kg 132 120 812
10kg 132 120 812
10kg 132 120 812

Note. See P.639 for acceleration/deceleration and inertia moment.

Note. Service life is calculated for 600 mm stroke models.
### Specifications

- **Adaptable motor**: 400 W
- **Repeatability** \(\pm 0.005\) mm
- **Deceleration mechanism**: Ground ball screw 9 15 (CS class)
- **Stroke**: 100 mm to 1250 mm (50 mm pitch)
- **Maximum speed** (or equivalent): 1800, 1200, 600, 300 mm/sec
- **Ball screw lead**: 30 mm
- **Maximum payload** (or equivalent): 35 kg
- **Rated thrust** (or equivalent): 225 N
- **Maximum dimensions of cross section of main unit**: W 125 mm × H 101 mm
- **Overall length**: Σ 1.0 mm
- **Degree of cleanliness** for non-condensing: ISO 14644-1 or equivalent
- **Intake air temperature and humidity**: 30 °C, 60 %RH
- **Rated speed**: 4600 W

**Notes**:
1. Positioning repeatability in one direction.
2. When using the mounting plate (t1) is necessary.
3. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount must be <<20 mm or more>>.
4. The recommended length under head of the hex socket head bolts <M8 × 1.0> used to mount must be <<30 mm or more>>.
5. Using ambient temperature and humidity: 30 °C, 60 %RH (non-condensing).

### Allowable overhang

- **LXGXS12-30**
  - **Horizontal installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg
  - **Wall installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg
  - **Vertical installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg

### Static loading moment

- **LXGXS12-30**
  - **Horizontal installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg
  - **Wall installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg
  - **Vertical installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg

### Optional adaptors

- **LXGXS12-30**
  - **Horizontal installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg
  - **Wall installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg
  - **Vertical installation**
    - A: 10 kg
    - B: 14 kg
    - C: 20 kg

**Note**: The service life is calculated for the horizontal installation (600 mm stroke models).
Ordering method

LGXS16

Model Lead designation Stroke (mm pitch)

30 60 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450

Specifications

Adaptable motor
750 W

Repeatability (mm)
+/-0.005 mm

Deceleration mechanism
Ground ball screw 1/20

Stroke
200 mm to 1450 mm (50 mm pitch)

Ball screw lead
40 mm 20 mm 10 mm

Maximum payload (Lb)
Horizontal 45 kg 95 kg 130 kg
Vertical 12 kg 28 kg 55 kg

Rated thrust (or equivalent)
320 N 640 N 1280 N

Maximum dimensions of cross section of main unit
W 160 mm x H 130 mm

Overall length
91 + 242.5 mm

Degree of cleanliness (or equivalent)
ISO CLASS 3 (ISO14644-1)

Intake air
30 Nl/min to 90 Nl/min

Using ambient temperature and humidity
0 to 40°C 35 to 80%RH (non-condensing)

Allowable overhang (Note)
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.
Note 3. When using in a clean environment, attach a suction joint (or equivalent).
Note 4. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).
Note 5. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).

Maximum dimensions of cross section of main unit
W 160 mm x H 130 mm

Overall length
91 + 242.5 mm

Degree of cleanliness (or equivalent)
ISO CLASS 3 (ISO14644-1)

Intake air
30 Nl/min to 90 Nl/min

Using ambient temperature and humidity
0 to 40°C 35 to 80%RH (non-condensing)

Allowable overhang (Note)
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.
Note 3. When using in a clean environment, attach a suction joint (or equivalent).
Note 4. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).
Note 5. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).

Effective stroke
112.5 mm (Note 1)

Effective stroke
121.5 mm (Note 2)

Motor installation block
4-M8 x 1.0 Depth 10

Grounding terminal
1-M8 (2 places at same position on opposing sides)

Coupling section
5-M5 x 0.8 Depth 10

P.C.D. 90

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 = Mounting - 125 used to mount the body with the mounting countersunk holes (section C cross-section) must be <25 mm or more.
Note 3. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).

Effective stroke
112.5 mm (Note 1)

Effective stroke
121.5 mm (Note 2)

Motor installation block
4-M8 x 1.0 Depth 10

Grounding terminal
1-M8 (2 places at same position on opposing sides)

Coupling section
5-M5 x 0.8 Depth 10

P.C.D. 90

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 = Mounting - 125 used to mount the body with the mounting countersunk holes (section C cross-section) must be <25 mm or more.
Note 3. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).

Effective stroke
112.5 mm (Note 1)

Effective stroke
121.5 mm (Note 2)

Motor installation block
4-M8 x 1.0 Depth 10

Grounding terminal
1-M8 (2 places at same position on opposing sides)

Coupling section
5-M5 x 0.8 Depth 10

P.C.D. 90

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 = Mounting - 125 used to mount the body with the mounting countersunk holes (section C cross-section) must be <25 mm or more.
Note 3. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).

Effective stroke
112.5 mm (Note 1)

Effective stroke
121.5 mm (Note 2)

Motor installation block
4-M8 x 1.0 Depth 10

Grounding terminal
1-M8 (2 places at same position on opposing sides)

Coupling section
5-M5 x 0.8 Depth 10

P.C.D. 90

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 = Mounting - 125 used to mount the body with the mounting countersunk holes (section C cross-section) must be <25 mm or more.
Note 3. When using the mounting countersunk holes (section C cross-section) to mount the body, remove the shim plate part (Note 3).
**Ordering method**

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**Specifications**

- **Adaptable motor**: 750 W
- **Repeatability**
  - +1.0 mm
- **Deceleration mechanism**: Ground ball screw 4-20 (C5 class)
- **Maximum speed** (or equivalent)
  - 2400 mm/sec
  - 1200 mm/sec
  - 600 mm/sec
- **Ball screw lead**: 40 mm
- **Maximum payload** (or equivalent)
  - Vertical: 65 kg
  - Horizontal: 65 kg
- **Rated Thrust** (or equivalent)
  - 320 N
- **Maximum dimensions of cross section of main unit**
  - W: 200 mm + H: 140 mm
- **Overall length**: 262.5 mm to 350 mm
- **Degree of cleanliness**: ISO CLASS 1, (or equivalent)
- **Intake air**
  - Nj: 30 Nm/sec to 90 Nm/sec
- **Using ambient temperature and humidity**
  - 60 ± 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.

**Note 3**: The rated thrust and maximum transferable weight are values assuming the attached motor output is 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 microns or less.

**Note 5**: The required suction amount will vary according to the operating conditions and operating environment.

**Note**: See P.640 for acceleration/deceleration and inertia moment.

**Allowable overhang**

- **Wall installation**
  - A: 110 mm
  - B: 100 mm
  - C: 90 mm
- **Vertical installation**
  - A: 120 mm
  - B: 110 mm
  - C: 100 mm

**Static loading moment**

- **Motor installation block**
  - A: 218 mm
  - B: 200 mm
  - C: 185 mm

**Adaptable Servo Motor**

- **Manufacturer Model**
  - MY, MP, MR

**Specifications**

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**Total overhang**

- **Horizontal**
  - 600 mm

**Conversion adapter product model**

- **GX-BEND-80**

**Note**: Static life is calculated for 600 mm stroke models.
### Sensor Spec

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<td>Model</td>
<td>GX-F8B</td>
</tr>
<tr>
<td>Output method</td>
<td>NPN type</td>
</tr>
<tr>
<td>Output action</td>
<td>ON released</td>
</tr>
<tr>
<td>Power voltage</td>
<td>DC12 to 24V</td>
</tr>
<tr>
<td>Load current</td>
<td>160 mA or less</td>
</tr>
<tr>
<td>Consumption current</td>
<td>15 mA or less</td>
</tr>
</tbody>
</table>

**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.

---

### Grease Gun Nozzle (LBAS Model)

Specially designed for LBAS model for lubrication on ball screw and linear guide.

* 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

![Nozzle tip diagram]

- Part number: KFU-M2941-00

#### Grease nozzle

![Grease nozzle diagram]

- Part number: KFU-M2942-00

---
### Robonity series

#### External Sensor Installation Guide (Left side shown) (Advanced Model)

<table>
<thead>
<tr>
<th>Sensor Spec</th>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>Panasonic Industrial Device SUNX, Co., Ltd.</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>GX-FBB</td>
<td></td>
</tr>
<tr>
<td>Output method</td>
<td>NPN type</td>
<td></td>
</tr>
<tr>
<td>Output action</td>
<td>ON released</td>
<td></td>
</tr>
<tr>
<td>Power voltage</td>
<td>DC12 to 24V</td>
<td></td>
</tr>
<tr>
<td>Load current</td>
<td>100 mA or less</td>
<td></td>
</tr>
<tr>
<td>Consumption current</td>
<td>15 mA or less</td>
<td></td>
</tr>
</tbody>
</table>

### Sensor Spec

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<td>Protection structure</td>
<td>IP68</td>
</tr>
<tr>
<td>Cable length</td>
<td>5 m</td>
</tr>
</tbody>
</table>

**Note:**
1. Installation is user's responsibility
2. Mounting hardware included
3. Sensor cable is 5 m. Adjust as needed.

---

**Proximity sensor option (No. KEV-M2205-00)**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
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<th>Qty</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Proximity sensor</td>
<td>KP6-M4855-01</td>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
<td>Sensor Bracket</td>
<td>KEV-M22FF-00</td>
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<tr>
<td>3</td>
<td>Bracket screw</td>
<td>00990-66J004</td>
<td>1 M3 × 0.5 Length 8</td>
<td></td>
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**Target plate option (No. KEV-M2206-00)**

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**[Caution]**

- Bracket screw tightening torque: 0.5 N·m
- The detection surface of the sensor and sensor plate clearance is approx. 1 mm.
Robonity series

**LGXS05**

![Diagram of LGXS05]

Note. For the availability of shim plate, see the adaptable servo motor table (P.140).

**LGXS05L**

![Diagram of LGXS05L]

Note. For the availability of shim plate, see the adaptable servo motor table (P.141).

**LGXS07**

![Diagram of LGXS07]

Note. For the availability of shim plate, see the adaptable servo motor table (P.142).

**LGXS10**

![Diagram of LGXS10]

Note. For the availability of shim plate, see the adaptable servo motor table (P.143).

**LGXS12**

![Diagram of LGXS12]

Note. For the availability of shim plate, see the adaptable servo motor table (P.144).

**LGXS16**

![Diagram of LGXS16]

Note. For the availability of shim plate, see the adaptable servo motor table (P.145).

**LGXS20**

![Diagram of LGXS20]

Note. For the availability of shim plate, see the adaptable servo motor table (P.146).

---

**Notes:**

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

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

3. Right installation and left installation are possible.

---

### Reference guide for right angle motor mount (right side shown) Advanced Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Product model</th>
<th>Part No.</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGXS05</td>
<td>GX-BEND-40</td>
<td>KES-M221M-00</td>
<td>0.4 kg</td>
</tr>
<tr>
<td>LGXS05L</td>
<td>LGXS05L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGXS07</td>
<td>GX-BEND-80</td>
<td>KVE-M221M-00</td>
<td>1.2 kg</td>
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<tr>
<td>LGXS10</td>
<td>LGXS12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LGXS16</td>
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