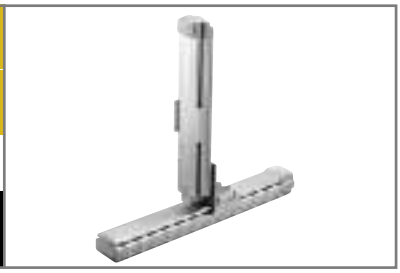
# ICSA2-Z1CM
Cartesian Robot: X-Z 2-Axes Configuration, XZ (Z-Axis Base Mount) Type

# ICSPA2-Z1CM
Cartesian Robot: X-Z 2-Axes Configuration, XZ (Z-Axis Base Mount) Type High-Precision Specification



Type: XZ type | Stroke: X-axis: 200~800mm Z-axis: 100~400mm | Load capacity: 19kg ~ 12kg

■ Model specification items

| Series | Type | Encoder type | X-axis stroke + options | Z-axis stroke + options | Applicable controller | Cable length | Cable management |
|---|---|---|---|---|---|---|---|
| ICSA2 – Z1CM – | A | – 80AQLNM | – 40AQBL | – T1 | – 5L | – CT | |

* Refer to page 61 for the details of model specification items.

## Models/Specifications

| Model | Axis configuration | | Encoder type | Motor output (W) | Lead (mm) | Stroke (mm) In increments of 100mm | Speed (mm/s) (Note 1) | Load capacity (Note 2) | Positioning repeatability (mm) (Note 3) |
|---|---|---|---|---|---|---|---|---|---|
| ICSA2 [ICSPA2] -Z1CM-A-＊＊＊-＊＊＊B-T1-△-CT | X-axis | ISA [ISPA] -MXM-A-100-10-＊＊＊-T1 | Absolute | 100 | 10 | 200 ~ 800 | 1 ~ 500 | 19 ~ 12 | ±0.02 [±0.01] |
| | Z-axis | ISA [ISPA] -MZM-A-100-5-＊＊＊-T1-B | | | 5 | 100 ~ 400 | 1 ~ 250 | | |
| ICSA2 [ICSPA2] -Z1CM-I-＊＊＊-＊＊＊B-T1-△-CT | X-axis | ISA [ISPA] -MXM-I-100-10-＊＊＊-T1 | Incremental | | 10 | 200 ~ 800 | 1 ~ 500 | | |
| | Z-axis | ISA [ISPA] -MZM-I-100-5-＊＊＊-T1-B | | | 5 | 100 ~ 400 | 1 ~ 250 | | |

* In the above model names, ＊＊＊ indicates the stroke/applicable options (stroke is specified in centimeters), and △ the cable length.

## Options

| Name | Code | Page | Remarks |
|---|---|---|---|
| AQ seal | AQ | ➔ P13 | |
| Brake | B | ➔ P13 | Standard equipment on Z-axis |
| Creep sensor | C | ➔ P13 | |
| Home limit switch | L | ➔ P14 | |
| Reverse homing specification | NM | ➔ P14 | |
| Guide with ball-retaining mechanism | RT | ➔ P14 | |

## Common Specifications

| | |
|---|---|
| Drive system (Note 4) | Ball screw, rolled C10 [equivalent to rolled C5] |
| Backlash (Note 5) | 0.05mm or less [0.02mm or less] |
| Guide | Integrated with base |
| Base | Material: Aluminum with white alumite treatment |
| Cable length (Note 6) | 3L: 3m, 5L: 5m, □L : Length specification |
| Cable management | CT: Cable track |

## Load Capacity by Acceleration (kg)

| Acceleration (G) \ Z-axis stroke (mm) | 100 | 200 | 300 | 400 |
|---|---|---|---|---|
| 0.3 | 19.0 | 17.0 | 14.0 | 12.0 |
| 0.4 | 18.5 | 14.0 | 11.0 | 9.0 |
| 0.5 | 12.5 | 11.5 | 9.0 | 7.0 |
| 0.6 | 8.5 | 7.5 | 6.5 | 5.0 |
| 0.7 | | | | |
| 0.8 | | | | |
| 0.9 | | | | |
| 1.0 | | | | |

* Assuming operation of the Z axis at its rated acceleration of 0.15 G, the load capacity varies according to the changes in acceleration of the X axis.

## Maximum Speed by Stroke (mm/sec)

| Axis \ Stroke (mm) | 100 | 200 ~ 400 | 500 ~ 600 | 700 | 800 |
|---|---|---|---|---|---|
| X-axis | – | 500 | | 480 | 380 |
| Z-axis | 250 | | – | – | – |

## Applicable Controller Specifications

| Applicable controller | Controller type | Model | Page |
|---|---|---|---|
| X-SEL | General-purpose type | XSEL-K-2-100□-100B□-□-□□□-□-□ | ➔ P241 |
| | Compact type | XSEL-J-2-100□-100B□-□-□□□-□-□ | ➔ P241 |

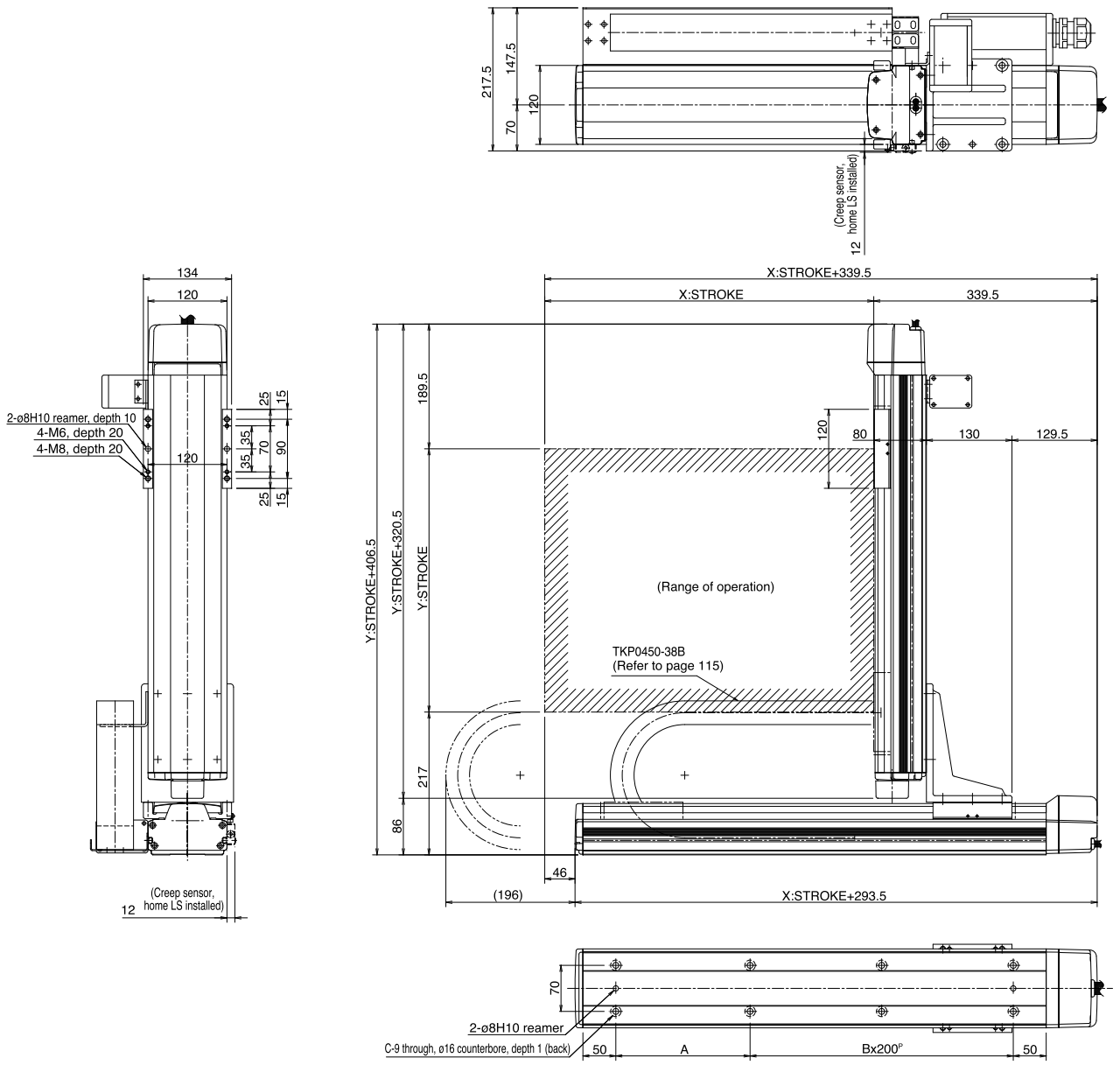
**Caution**

(Note 1) The maximum speed will vary depending on the stroke. (Refer to the table of maximum speed by stroke.)
(Note 2) The load capacity assumes operation at the rated acceleration (0.3 G for the X-axis, 0.15 G for the Z-axis). The actuator can be operated at accelerations beyond the rated acceleration, but the load capacity will decrease (refer to the table of load capacity by acceleration).
(Notes 3, 4, 5) The figures in brackets apply to the ICSPA2.
(Note 6) The cable length measures from the X-axis connector box to the controller. The standard lengths are 3 m and 5 m, but other lengths can also be specified in meters up to 20 m (e.g., 10L = 10 m).

* Refer to page 59 for other points to note.

# Cable Track Specification (Cable Management Code: CT)

## Dimensions




| X stroke | 200 | 300 | 400 | 500 | 600 | 700 | 800 |
|---|---|---|---|---|---|---|---|
| A | 104 | 204 | 104 | 204 | 104 | 204 | 104 |
| B | 1 | 1 | 2 | 2 | 3 | 3 | 4 |
| C | 6 | 6 | 8 | 8 | 10 | 10 | 12 |