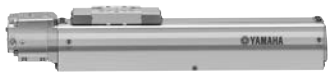
# C5L

- High lead: Lead 20
- Origin on the non-motor side is selectable



## Ordering method

C5L – [Lead designation] – [Brake Note 1] – [Direction of air coupler installation] – [Origin position change] – [Stroke] – [Cable length Note 2] – ERCD – [I/O connector specification]

| Model | Lead designation | Brake Note 1 | Direction of air coupler installation | Origin position change | Stroke | Cable length Note 2 | Controller | I/O connector specification |
|---|---|---|---|---|---|---|---|---|
| | 20: 20mm<br>12: 12mm<br>6: 6mm | No entry: With no brake<br>BK: With brake | LJ: Left (Standard)<br>RJ: Right | None: Standard<br>Z: Non-motor side | 50 to 800<br>(50mm pitch) | 1K: 1m<br>3K: 3.5m<br>5K: 5m<br>10K: 10m | | CN1: I/O flat cable 1m (Standard)<br>CN2: Twisted-pair cable 2m (pulse train function) |

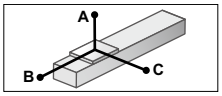
Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).
Note 2. The robot cable is flexible and resists bending. See P.614 for details on robot cable.

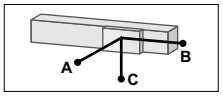
## Basic specifications

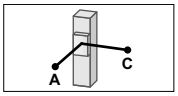
| | | | | |
|---|---|---|---|---|
| AC servo motor output (W) | | 30 | | |
| Repeatability Note 1 (mm) | | +/-0.02 | | |
| Deceleration mechanism | | Ball screw ϕ12 | | |
| Ball screw lead (mm) | | 20 | 12 | 6 |
| Maximum speed (mm/sec) | | 1000 | 800 | 400 |
| Maximum payload (kg) | Horizontal | 3 | 5 | 9 |
| | Vertical | - | 1.2 | 2.4 |
| Rated thrust (N) | | 19 | 32 | 64 |
| Stroke (mm) | | 50 to 800 (50mm pitch) | | |
| Overall length (mm) | Horizontal | Stroke+201.5 | | |
| | Vertical | Stroke+239.5 | | |
| Maximum outside dimension of body cross-section (mm) | | W55×H65 | | |
| Cable length (m) | | Standard: 3.5 / Option: 1,5, 10 | | |
| Degree of cleanliness | | ISO CLASS 3 (ISO14644-1) Note 2 | | |
| Intake air (Nℓ/min) Note 3 | | 80 | 50 | 30 |

Note 1. Positioning repeatability in one direction.
Note 2. CLASS 10 (0.1μm) FED-STD-209D or equivalent when a suction blower is used.
Note 3. The necessary intake amount varies depending on the use conditions and environment.

## Allowable overhang Note




Horizontal installation (Unit: mm)

| | | A | B | C |
|---|---|---|---|---|
| Lead 20 | 1kg | 1584 | 324 | 745 |
| | 3kg | 699 | 104 | 251 |
| | 2kg | 1166 | 159 | 406 |
| Lead 12 | 5kg | 551 | 59 | 155 |
| | 3kg | 1194 | 104 | 294 |
| Lead 6 | 9kg | 624 | 31 | 89 |

Wall installation (Unit: mm)

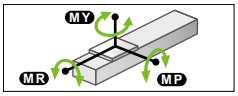
| | | A | B | C |
|---|---|---|---|---|
| Lead 20 | 1kg | 679 | 303 | 1505 |
| | 3kg | 215 | 87 | 605 |
| | 2kg | 364 | 126 | 1073 |
| Lead 12 | 5kg | 123 | 28 | 438 |
| | 3kg | 259 | 72 | 354 |
| Lead 6 | 9kg | 50 | 0 | 154 |

Vertical installation (Unit: mm)

| | | A | C |
|---|---|---|---|
| Lead 12 | 1.2kg | 246 | 245 |
| Lead 6 | 2.4kg | 110 | 110 |

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 600mm stroke models.

## Static loading moment



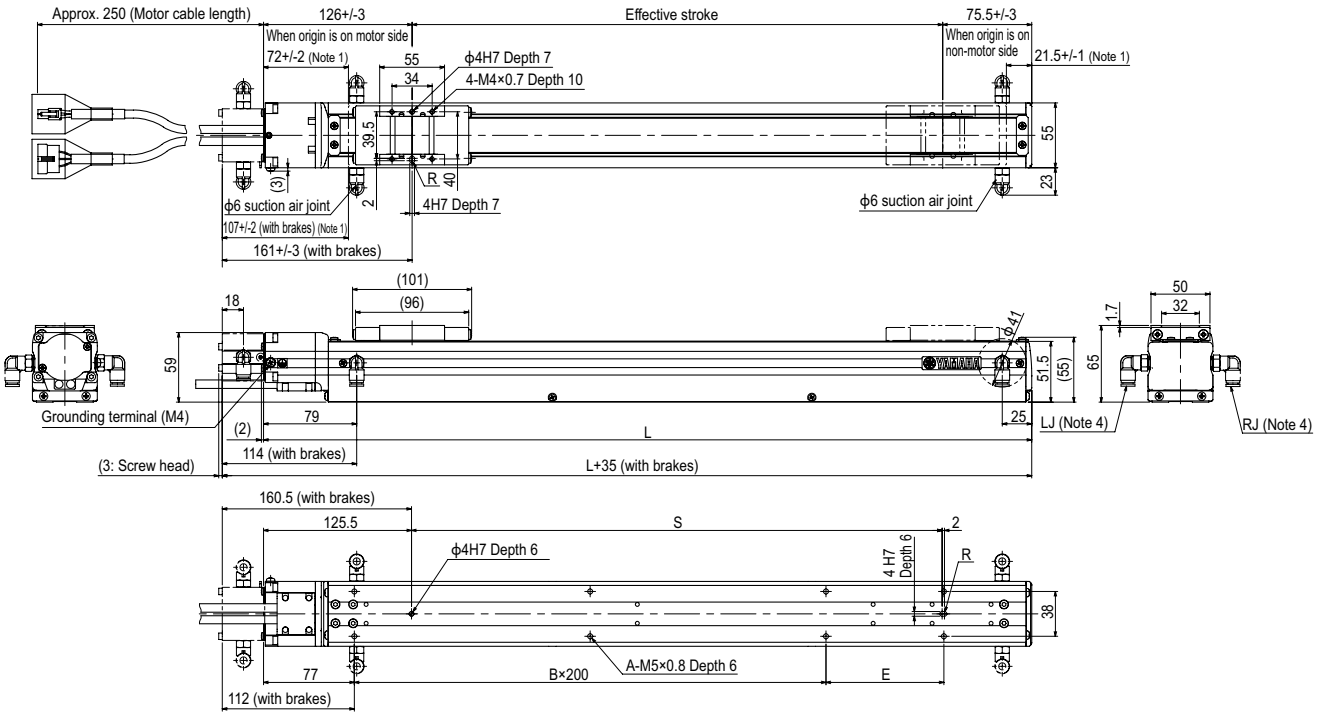

(Unit: N·m)

| MY | MP | MR |
|---|---|---|
| 30 | 34 | 40 |

## Controller

| Controller | Operation method |
|---|---|
| ERCD | Pulse train control / Programming / I/O point trace / Remote command / Operation using RS-232C communication |

## C5L




| Effective stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 251.5 | 301.5 | 351.5 | 401.5 | 451.5 | 501.5 | 551.5 | 601.5 | 651.5 | 701.5 | 751.5 | 801.5 | 851.5 | 901.5 | 951.5 | 1001.5 |
| A | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 10 | 10 | 10 | 12 |
| B | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 |
| E | 100 | 200 | 200 | 100 | 100 | 200 | 200 | 100 | 100 | 200 | 200 | 100 | 100 | 200 | 200 | 100 |
| S | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| Weight (kg) Note 3 | 1.7 | 2.0 | 2.2 | 2.5 | 2.7 | 3.0 | 3.2 | 3.4 | 3.7 | 3.9 | 4.2 | 4.4 | 4.7 | 4.9 | 5.1 | 5.4 |
| Maximum speed for each stroke Note 5 (mm/sec) Lead 20 | 1000 | | | | | | | | | | | | | 900 | 800 | 700 |
| Speed setting | - | | | | | | | | | | | | | 90% | 80% | 70% |
| Lead 12 | 800 | | | | | | | | | | | | 640 | 560 | 480 | 440 |
| Lead 6 | 400 | | | | | | | | | | | | 320 | 280 | 240 | 220 |
| Speed setting | - | | | | | | | | | | | | 80% | 70% | 60% | 55% |

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Minimum bend radius of motor cable is R30.
Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.
Note 4. Either right or left can be selected for the installation direction for the ϕ6 intake air joint. (The left side is the standard.)
Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.
Note 6. External view of C5LH is identical to C5L.



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