

MR25/MR25D



Ordering method

Single carriage model

| MR25 | | | | | | SR1-P | 10 | | | |
|---|--|--|---|------------------------------|---|------------|--------|------------------------------------|-------------------|---|
| Model | Cable carrier entry location | Optional cable carrier for users | Option | Stroke | Cable length | Controller | Driver | Usable for CE | Regenerative unit | I/O selection |
| MR25: Incremental MR25A: Semi-absolute ^{Note 1} | RH: Horizontal, right LH: Horizontal, left RW: Wall mounted, right LW: Wall mounted, left | No entry: None S: S type M: M type | Origin position change None: Standard Z: R side Grease type None: Standard GC: Clean | 100 to 2000 (100mm pitch) | 3L: 3.5m (Standard) 5L: 5m 10L: 10m | SR1-P | | No entry: Standard E: CE making | No entry: None | N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus YC: YC-Link ^{Note 3} |

Double carriage model

| MR25D | | | | | | RCX221 | | R | | |
|---|--|--|--|------------------------------|---|---|------------------------------------|-------------------|--|---|
| Model | Installing direction | Optional cable carrier for users | Option | Stroke | Cable length | Controller | Usable for CE | Regenerative unit | I/O selection 1 | I/O selection 2 |
| MR25D: Incremental MR25AD: Semi-absolute ^{Note 1} | H: Horizontal installation W: Wall mounted installation | No entry: None S: S type M: M type | Grease type None: Standard GC: Clean | 100 to 1700 (100mm pitch) | 3L: 3.5m (Standard) 5L: 5m 10L: 10m | RCX221 SR1-P (2 units) ^{Note 2} | No entry: Standard E: CE making | R: RC2 | N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus EN: Ethernet YC: YC-Link ^{Note 3, 4} | No entry: None NP: NPN NT: OP.DIO24/16 (PNP) PT: OP.DIO24/17 (PNP) EN: Ethernet |

- Note 1. Semi-absolute models are supported by the SR1-P and RCX221. For the details of the semi-absolute model, please refer to P.018.
 Note 2. When using the SR1-P or PDP to control a double-carriage robot, two units are required.
 Note 3. Available only for the slave.
 Note 4. Available only for the master.
 Note 5. It is possible to provide the model without a cable carrier. To find information on wiring (cable terminals) within the cable carrier see P. 427.

Specification ^{Note}

| Model | MR25 | MR25D |
|---|---|------------------------------|
| Driving method / Shaft diameter | Shaft motor / ϕ 25 | |
| Repeatability (μ m) | +/-5 or less | |
| Scale (μ m) | Magnetic type: resolution of 1 | |
| Maximum speed ^{Note 1} (mm/sec) | 2500 | |
| Rated thrust (N) | 90 | |
| Maximum payload ^{Note 2} (kg) | 23 | |
| Stroke (mm) | 100 to 2000 (100mm pitch) | 100 to 1700 (100mm pitch) |
| Linear guide | 4 rows of circular arc grooves x 2 rail | |
| Maximum cross-section outside dimensions (mm) | W145 x H120 (except the cable carrier section) | |
| Total length (mm) | Stroke+350 | Stroke+650 |
| Cable length (m) | Standard: 3.5 / Option: 5,10 | |

- Note. A vertical model (with brake) is not available with the PHASER series.
 Note. The basic specifications of semi-absolute model are the same as those of the incremental model.
 Note 1. Maximum speed may not be obtained depending on operating conditions.
 Note 2. Maximum payload per carriage.

Allowable overhang ^{Note}

Horizontal installation (Unit: mm)

| | A | B | C |
|------|------|------|------|
| 5kg | 3000 | 3000 | 1286 |
| 10kg | 2478 | 1745 | 749 |
| 17kg | 1943 | 1056 | 426 |
| 23kg | 2248 | 801 | 379 |

Wall installation (Unit: mm)

| | A | B | C |
|------|------|------|------|
| 5kg | 1288 | 2650 | 2556 |
| 10kg | 703 | 1202 | 1886 |
| 17kg | 394 | 606 | 1444 |
| 23kg | 279 | 385 | 1409 |

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

Static loading moment

(Unit: N·m)

| MY | MP | MR |
|-----|-----|-----|
| 306 | 306 | 269 |

Controller

| Controller | Operating method |
|------------|---|
| SR1-P-10 | Programming / I/O point trace (BCD)/ Remote command / |
| RCX221-R | Operation using RS-232C communication |

Cable carrier entry location

RH Horizontal, right

LH Horizontal, left

RW Wall mounted, right

LW Wall mounted, left

Note. Be sure to install in the direction as specified (in cable carrier take-out direction drawing and various specification drawings) individually. Installation in any other way will cause a failure. For requirement of installation in any way other than the above standard installation, please consult YAMAHA as special arrangement will be available.

Optional cable carrier for users

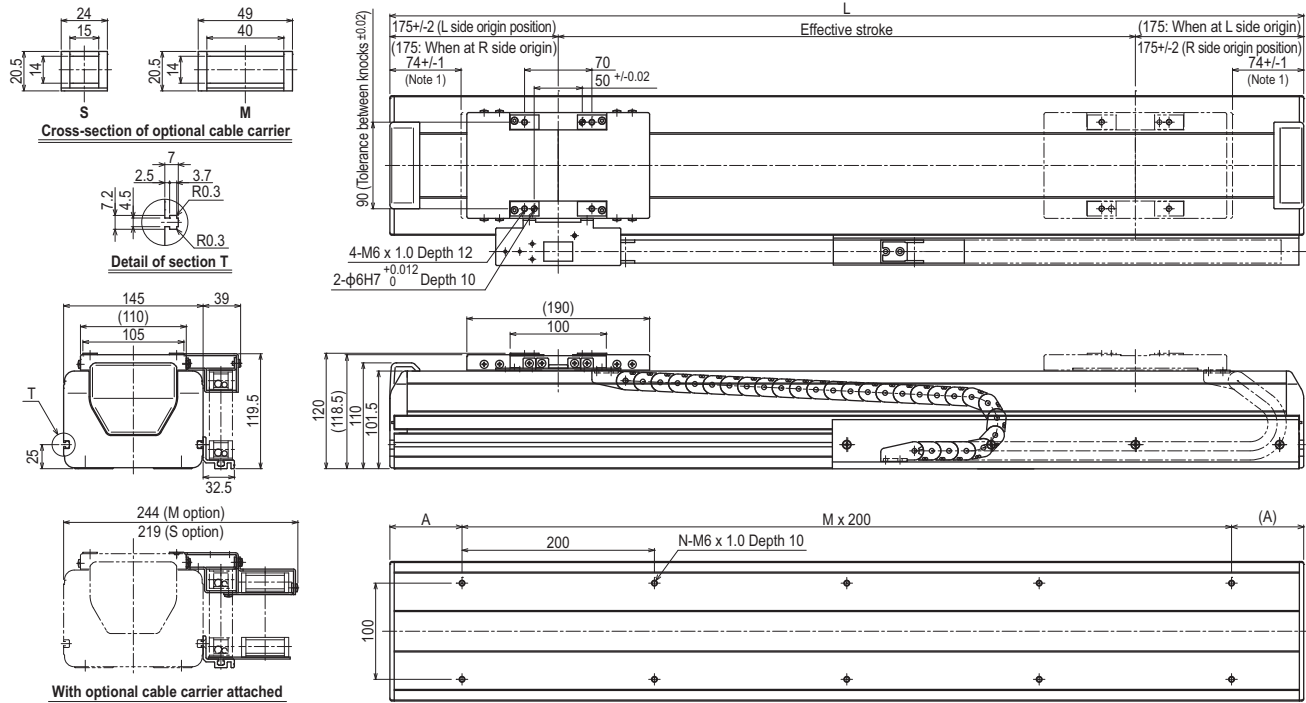
S type

M type

Space for optional cable for users

Note. The cable and air hoses should take up less than 30% of the space when storing them inside the cable carrier. Lay out the cables and air hoses in rows inside the cable carrier so they do not cross each other.

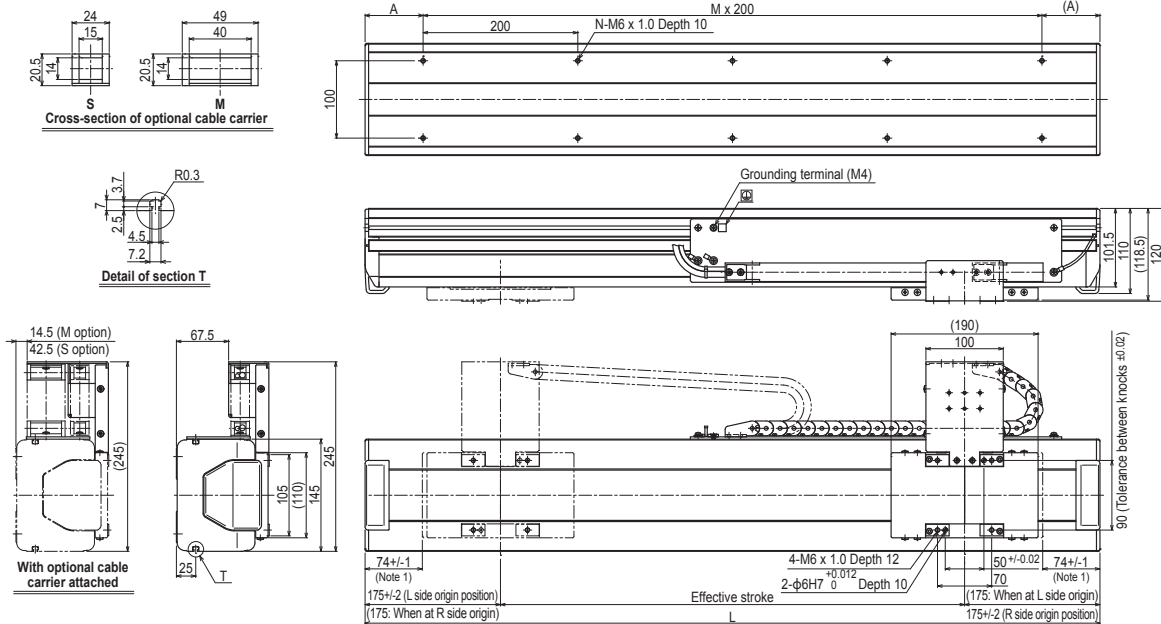
MR25 single carriage horizontal mount model RH



Distance from both ends to the mechanical stopper.
The origin is set on the L side at the time of shipment. It can be changed to the R side by parameter setting.

| Effective stroke | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 450 | 550 | 650 | 750 | 850 | 950 | 1050 | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 |
| A | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 |
| N | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 |
| Weight (kg) | 11.6 | 13.5 | 15.3 | 17.2 | 19.0 | 20.9 | 22.7 | 24.6 | 26.4 | 28.3 | 30.1 | 32.0 | 33.8 | 35.7 | 37.5 | 39.4 | 41.2 | 43.1 | 44.9 | 46.8 |

MR25 single carriage wall mount model RW

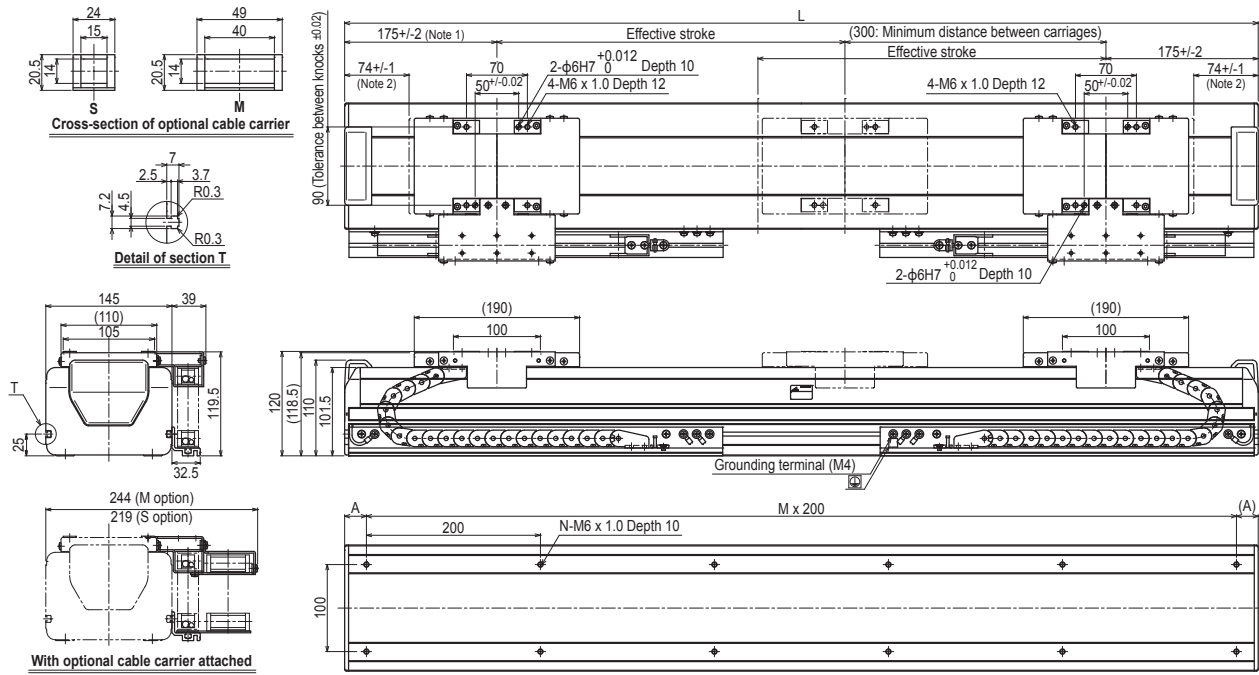


Distance from both ends to the mechanical stopper.
The origin is set on the R side at the time of shipment. It can be changed to the L side by parameter setting.

| Effective stroke | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 450 | 550 | 650 | 750 | 850 | 950 | 1050 | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 |
| A | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 |
| N | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 |
| Weight (kg) | 11.6 | 13.5 | 15.3 | 17.2 | 19.0 | 20.9 | 22.7 | 24.6 | 26.4 | 28.3 | 30.1 | 32.0 | 33.8 | 35.7 | 37.5 | 39.4 | 41.2 | 43.1 | 44.9 | 46.8 |

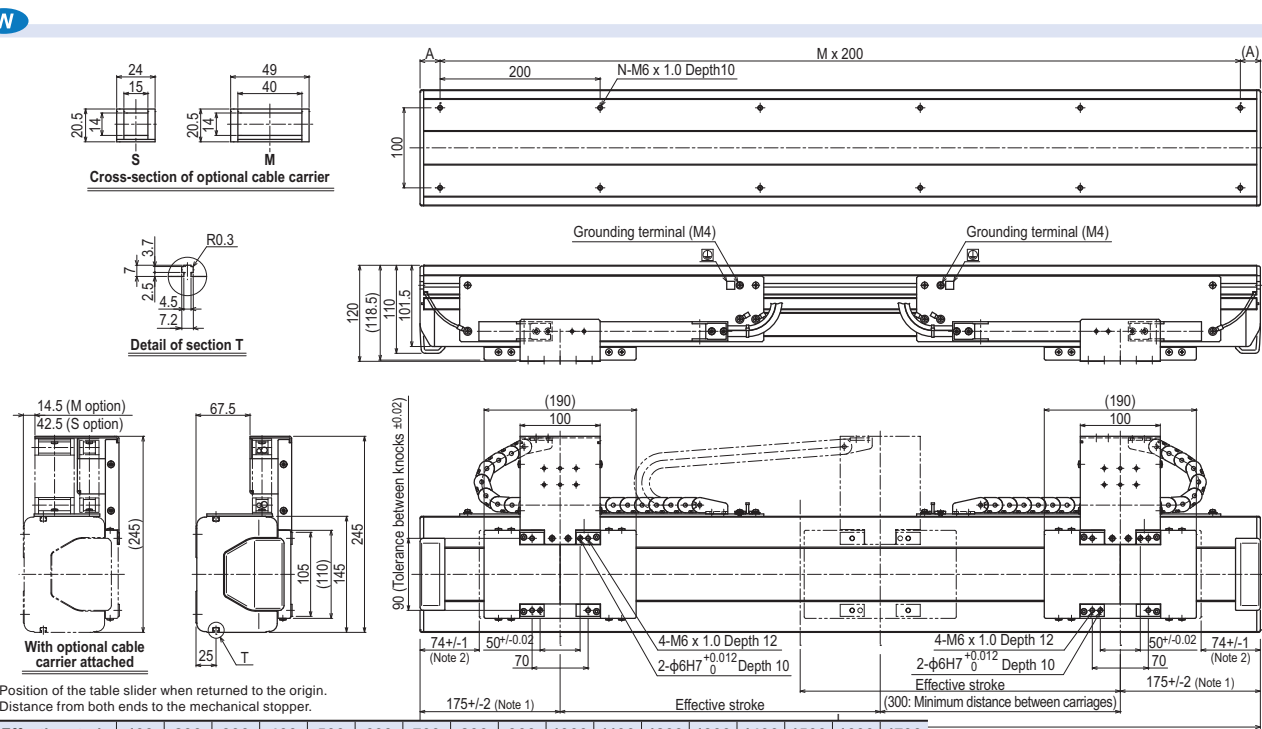
MR25/MR25D

MR25D double carriage horizontal mount model H



| Effective stroke | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 750 | 850 | 950 | 1050 | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 |
| A | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 |
| N | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 |
| Weight (kg) | 21.3 | 23.2 | 25.1 | 27.0 | 28.9 | 30.8 | 32.7 | 34.6 | 36.5 | 38.4 | 40.3 | 42.2 | 44.1 | 46.0 | 47.9 | 49.8 | 51.7 |

MR25D double carriage wall mount model W



| Effective stroke | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| L | 750 | 850 | 950 | 1050 | 1150 | 1250 | 1350 | 1450 | 1550 | 1650 | 1750 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 |
| A | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 | 25 | 75 |
| M | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 |
| N | 8 | 10 | 10 | 12 | 12 | 14 | 14 | 16 | 16 | 18 | 18 | 20 | 20 | 22 | 22 | 24 | 24 |
| Weight (kg) | 21.3 | 23.2 | 25.1 | 27.0 | 28.9 | 30.8 | 32.7 | 34.6 | 36.5 | 38.4 | 40.3 | 42.2 | 44.1 | 46.0 | 47.9 | 49.8 | 51.7 |