

MR20/MR20D



Ordering method

Single carriage model

MR20						SR1-P	20		
Model MR20: Incremental MR20A: Semi-absolute	Cable carrier entry location RH: Horizontal, right LH: Horizontal, left RW: Wall mounted, right LW: Wall mounted, left	Optional cable carrier for users No entry: None S: S type M: M type	Option Origin position: None: Standard change Z: R side Grease type: None: Standard GC: Clean	Stroke 100 to 2000 (100mm pitch)	Cable length 8L: 3.5m (Standard) 5L: 5m 10L: 10m	Controller SR1-P	Driver	Usable for CE No entry: Standard E: CE making	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus YC: YC-Link

Double carriage model

MR20D						RCX221HP			
Model MR20D: Incremental MR20AD: Semi-absolute	Installing direction H: Horizontal installation W: Wall mounted installation	Optional cable carrier for users No entry: None S: S type M: M type	Option Grease type: None: Standard GC: Clean	Stroke 100 to 1700 (100mm pitch)	Cable length 8L: 3.5m (Standard) 5L: 5m 10L: 10m	Controller RCX221HP SR1-P (2 units)	Usable for CE No entry: Standard E: CE making	I/O selection 1 N: NPN P: PNP CC: CC-Link DN: DeviceNet PB: Profibus EN: Ethernet YC: YC-Link	I/O selection 2 No entry: None NF: OP:DI/O24/16 (NPN) PT: OP:DI/O24/17 (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. RDP has an incremental model only.

Note 2. To find RDP selection options, see the ordering method on P. 365.

Note 3. When using the SR1-P or PDP to control a double-carriage robot, two units are required.

Note 4. Available only for the slave.

Note 5. Available only for the master.

Note. 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

Model	MR20	MR20D
Driving method / Shaft diameter	Shaft motor / $\phi 20$	
Repeatability (μm)	+/-5 or less	
Scale (μm)	Magnetic type: resolution of 1	
Maximum speed (mm/sec)	2500	
Rated thrust (N)	70	
Maximum payload (kg)	17	
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

Horizontal installation (Unit: mm)

	A	B	C
5kg	3000	3000	1326
10kg	2458	1744	748
17kg	1979	1055	463

Wall installation (Unit: mm)

	A	B	C
5kg	1328	2650	2736
10kg	702	1202	1876
17kg	389	605	1355

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

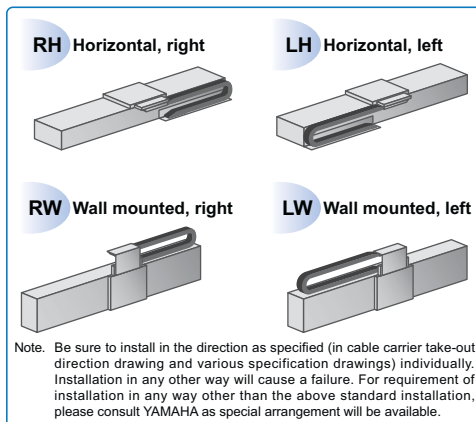
(Unit: N-m)

MY	MP	MR
306	306	269

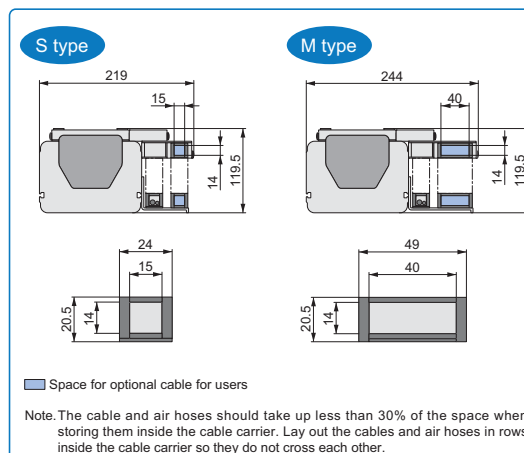
Controller

Controller	Operating method
SR1-P-20	Programming / I/O point trace / Remote command (BCD)/ Operation using RS-232C communication
RCX221HP	

Cable carrier entry location

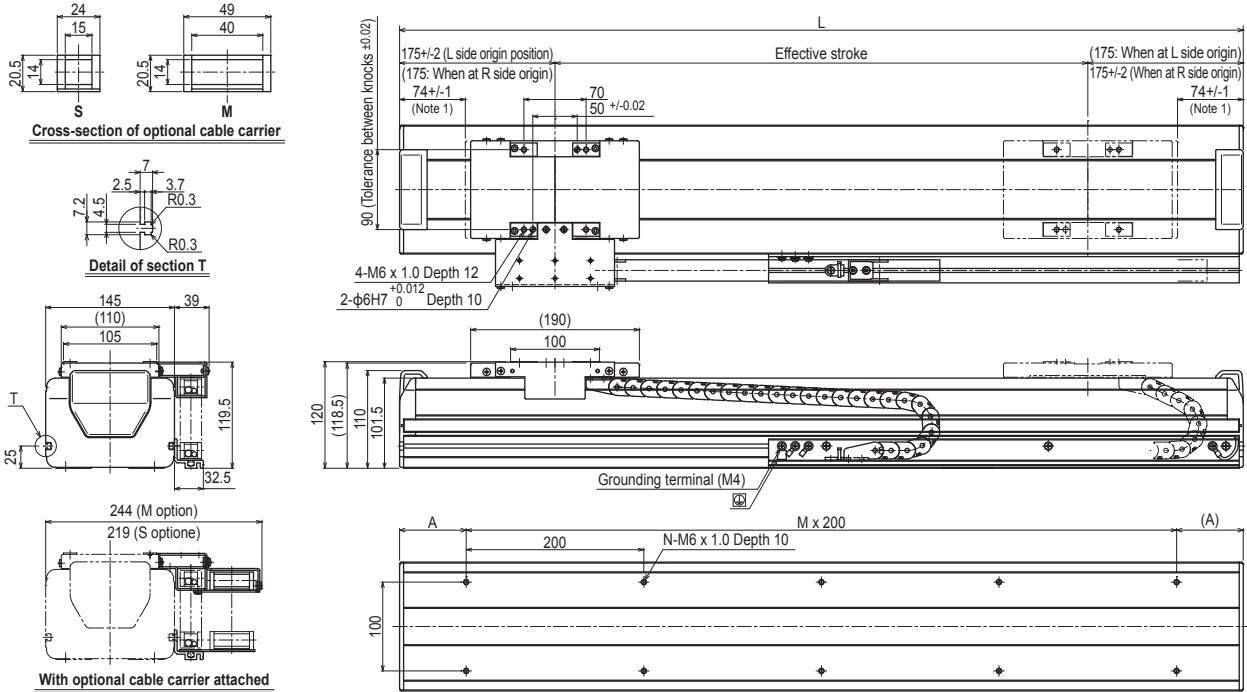


Optional cable carrier for users



MR20/MR20D

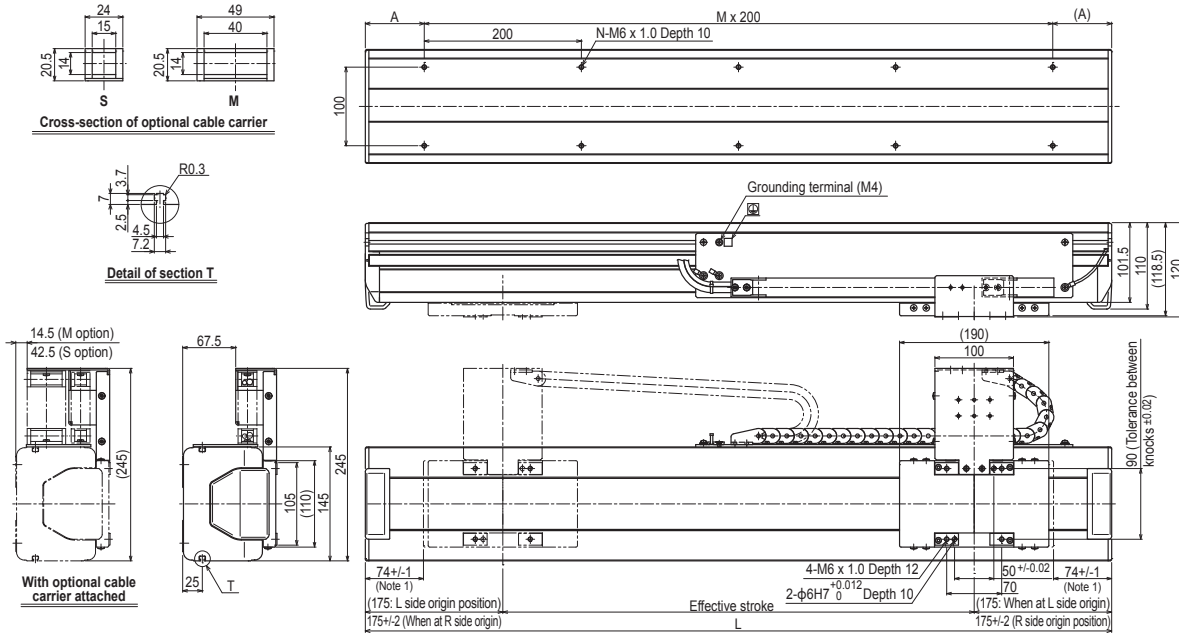
MR20 single carriage horizontal mount model RH



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)	11.5	13.0	14.5	16.0	17.5	19.0	20.5	22.0	23.5	25.0	26.5	28.0	29.5	31.0	32.5	34.0	35.5	37.0	38.5	40.0

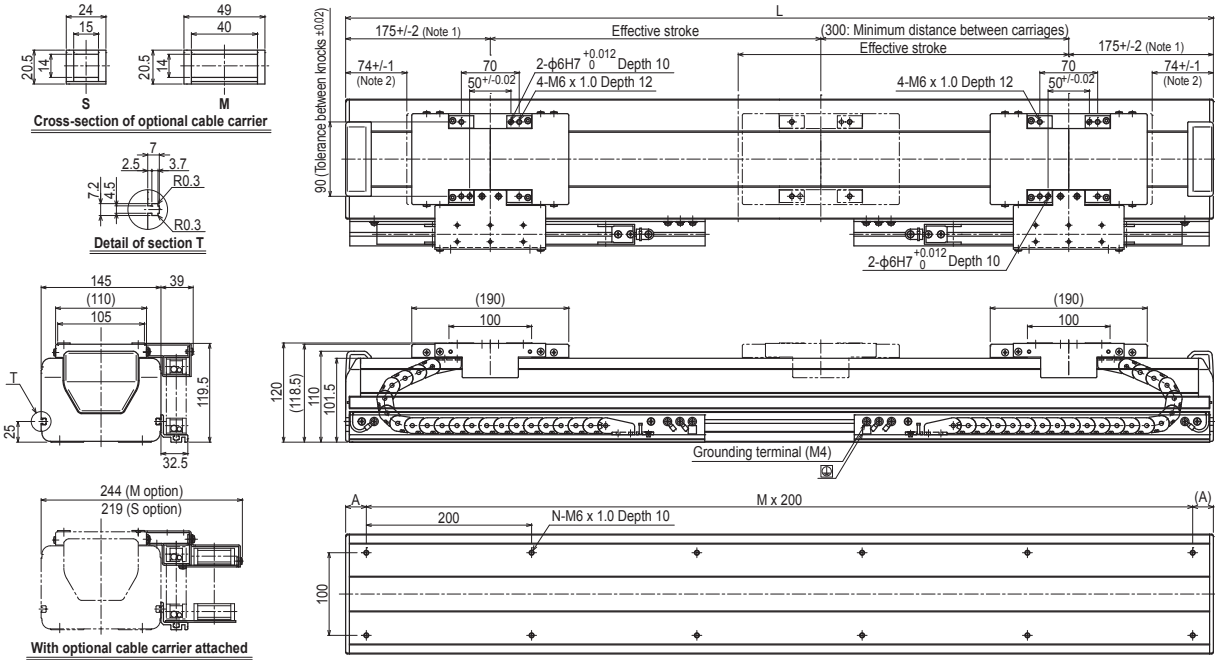
MR20 single carriage wall mount model RW



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)	11.5	13.0	14.5	16.0	17.5	19.0	20.5	22.0	23.5	25.0	26.5	28.0	29.5	31.0	32.5	34.0	35.5	37.0	38.5	40.0

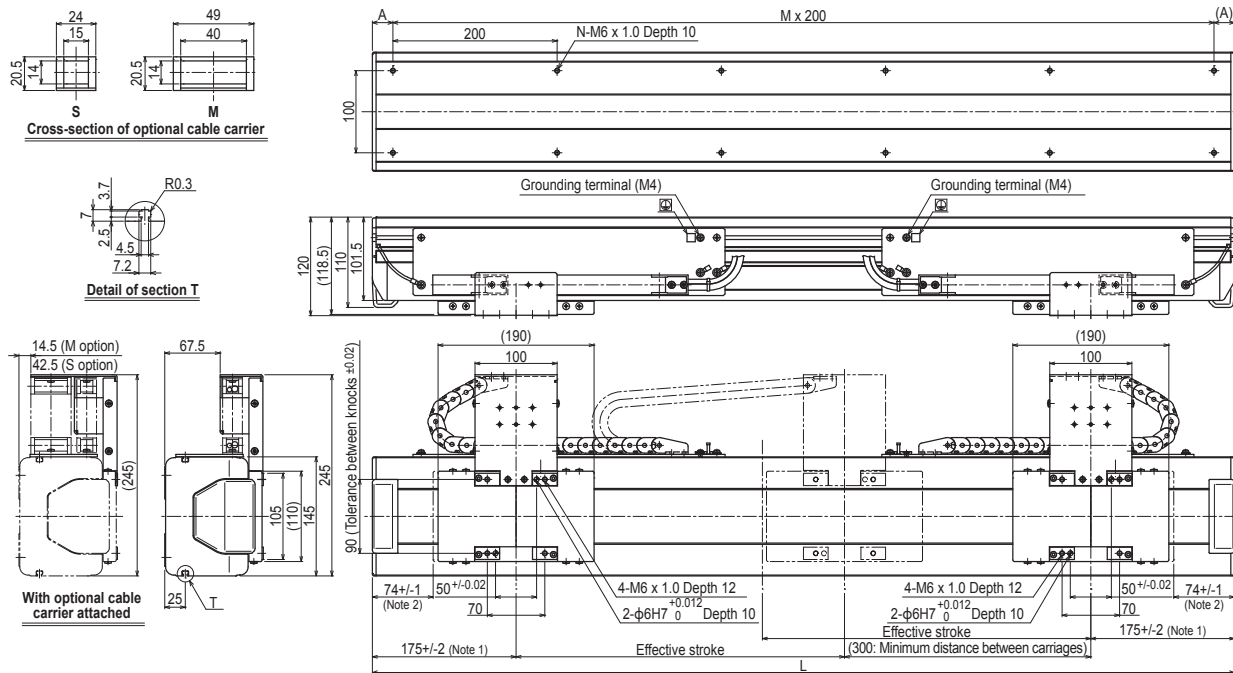
MR20D double carriage horizontal mount model H



Position of the table slider when returned to the origin.
Distance from both ends to the mechanical stopper.

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)	20.0	21.6	23.1	24.7	26.2	27.8	29.3	30.9	32.4	34.0	35.5	37.1	38.6	40.2	41.7	43.3	44.8

MR20D double carriage wall mount model W



Position of the table slider when returned to the origin.
Distance from both ends to the mechanical stopper.

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)	20.0	21.6	23.1	24.7	26.2	27.8	29.3	30.9	32.4	34.0	35.5	37.1	38.6	40.2	41.7	43.3	44.8