

# Basic specifications of LCMR200

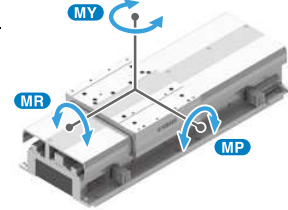
## Basic specifications of LCMR200

Drive method	Linear motor with moving magnet type core	
Position Search	Magnetic absolute position sensor	
Maximum payload	30 kg	
Maximum speed	2,500 mm/sec <sup>*1</sup>	
Repeatability	±5 μm	
Mechanical tolerance between robot sliders	±30 μm (Dowel hole standard)	
Total stroke limit	25.5 m <sup>*2</sup>	
Maximum number of robot sliders	64 units <sup>*2</sup>	
Minimum spacing between robot sliders	210 mm <sup>*3</sup>	
Main frame dimensions	Max. external size of frame cross-section	W175 × H109 mm (Including robot slider)
	Linear module length	200 mm / 300 mm / 500 mm / 1000 mm
	Robot slider length	198 mm
Weight	Linear module	Approx 20 kg (Per 1 m of linear module)
	Robot slider	2.4 kg
Power supply	Control power supply	48 VDC Required power [W] = 75 [W/m] × Overall length of module [m] <sup>*4</sup>
	Motor power supply	48 VDC Yamaha's designated model <sup>*5</sup>
Operating environment	Operating temperature	0 °C to 40 °C <sup>*6</sup>
	Storage temperature	-10 °C to 65 °C
	Operating humidity	35 % to 85 %RH (No condensation)
Controller	YHX controller <sup>*7</sup>	

- \*1. When the conveying weight exceeds 10 kg, it will drop to 1,000 mm/sec according to the weight.
- \*2. It may differ depending on the system configuration.
- \*3. When the jig palette to equip to the robot slider is longer, it shall be the jig palette length + 10 mm.
- \*4. The option 600 W power source supplies the power to the linear module with a length of up to 8 m while the 1000 W power source supplies the power to the linear module with a length of up to 13.3 m.
- \*5. The option power source can supply the power to up to two robot sliders. (When AC 200 to 240 V is input.)
- \*6. Operate LCMR200 in the temperature environment (±5 °C) that installation and adjustment were performed.
- \*7. The YHX controller requires a separate electrical power supply.

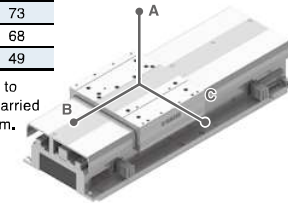
## Static loading moment

Static loading moment [N·m]		
MP	MY	MR
47.0	35.7	31.4



## Allowable overhang

payload [kg]	Allowable overhang [mm]		
	A	B	C
5	760	405	239
10	762	231	158
15	700	173	122
20	648	117	73
25	509	82	68
30	453	58	49

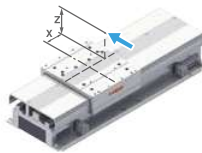


\* Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.

# Allowable Load of LCMR200

- \* When center of slider is center of gravity.
- \* Allowable load in the moving direction of slider is always 28 N regardless of the loading position.
- \* Any load cannot be applied to the slider on the movable module of YAMAHA's circulation unit in both the horizontal and vertical directions.
- Vertical load variation within the slider payload is possible due to loading or unloading of workpieces to or from the slider on the movable module. However, do not insert or eject the slider to or from the movable module while the load is varying.
- \* Only vertical load can be applied to the slider on the movable module of YAMAHA's traverse unit within the range shown in the table below.
- Do not insert or eject the slider to or from the movable module while the load is being applied.

## Load: Horizontal Direction



### ■ Payload: Common up to 30 kg.

Loading Position X [mm]	Loading Position Z [mm]					
	0	20	40	60	80	100
0	611	514	443	390	348	314
20	517	445	391	349	315	287
40	447	393	350	316	288	264
60	394	352	317	289	265	245
80	353	318	289	266	245	228
100	319	290	266	246	229	214

Unit: [N]

## Load: Vertical Direction

### ■ Payload: 5 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	924	687	546	453	387	339
20	760	593	485	411	356	314
40	647	521	436	375	328	293
60	562	465	396	345	305	274
80	498	420	362	319	285	258
100	446	382	335	297	268	243

### ■ Payload: 10 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	874	650	517	429	367	320
20	721	561	459	389	337	297
40	613	493	413	355	311	277
60	533	440	375	327	289	260
80	471	397	343	303	270	244
100	423	362	317	282	254	231

### ■ Payload: 15 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	826	614	488	406	347	303
20	680	529	433	367	318	281
40	578	466	390	335	294	261
60	503	416	354	309	273	245
80	445	375	324	285	255	231
100	399	342	299	266	239	217

Unit: [N]

### ■ Payload: 20 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	777	578	459	381	326	285
20	640	498	408	345	299	264
40	544	438	367	315	277	246
60	473	391	333	290	257	231
80	419	353	305	269	240	217
100	376	322	281	250	225	205

### ■ Payload: 25 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	728	540	431	358	305	267
20	599	466	382	323	281	247
40	509	410	344	295	259	231
60	443	366	312	272	240	216
80	392	331	286	252	225	203
100	352	302	264	234	211	192

### ■ Payload: 30 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	678	505	401	333	285	249
20	560	435	356	302	261	231
40	476	382	321	276	241	215
60	413	341	291	253	225	201
80	366	309	266	235	210	190
100	328	281	246	219	197	179

Unit: [N]