



# Single Axis Robots RSH5 - Linear -



Dedicated Website: <http://www.misumi.com/robot/>  
Useful Selection Software and Instruction Manuals can be downloaded.

CE Compliant

See notes on CE Marking. P.456



**Components:** Actuator, Controller, Cable, (Battery), (Noise Filter)  
**Accessories**

Controller I/O Specifications			
Accessories	NPN, PNP	CC-Link	DeviceNet
	Instruction Manual (CD-ROM), Power Connector, EXT Connector, Dummy Connector	CC-Link Connector	DeviceNet Connector

**Robot Material / Surface Treatment**

Components	Base Frame	Guide Rail	Slider	Side Cover
M Material	Aluminum	Steel	Aluminum	Aluminum
S Surface Treatment	Anodize	-	Anodize	Anodize

**General Specifications**

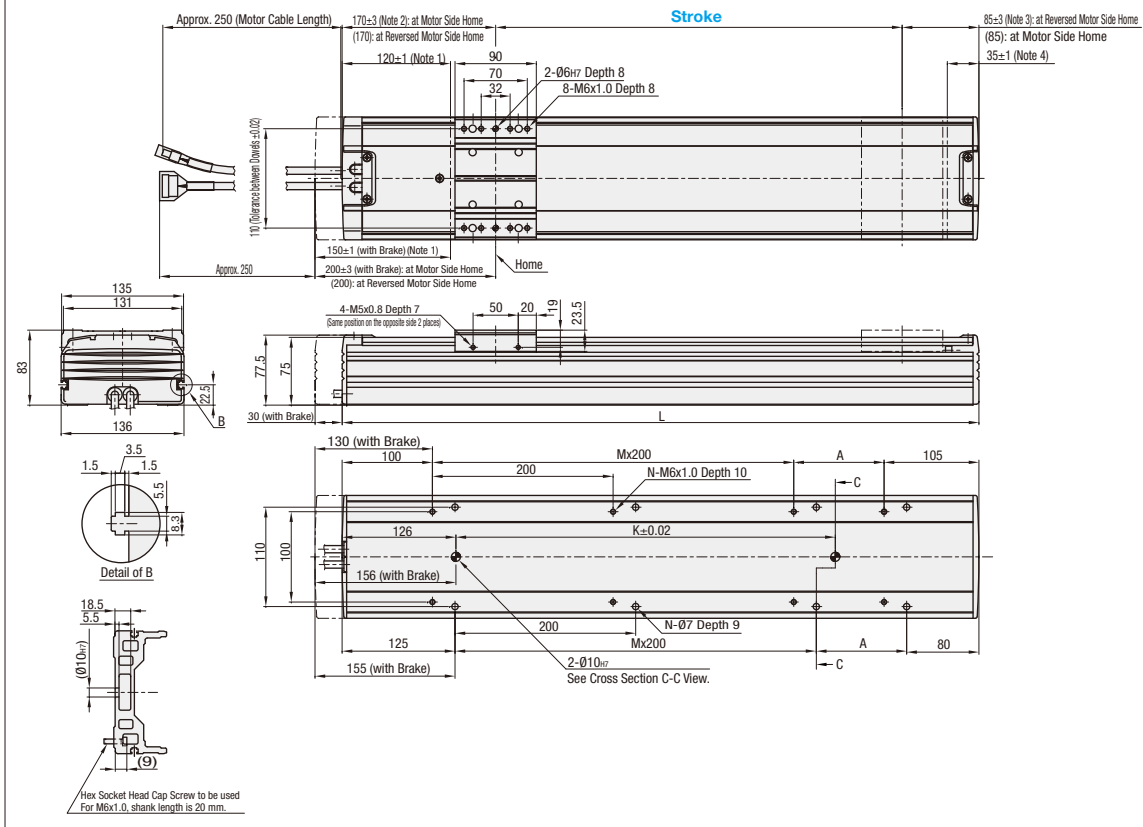
Ball Screw	Motor	Position Detector	Operating Ambient Temperature, Humidity
Ø15 (C7 Rolled)	AC Servo 100W	Resolver	0~40°C, 35~85%RH (No Condensation)

Controller Specifications P.497-506

Standard Specifications FAQ P.504

Type	Lead (mm)	Positioning Repeatability (mm)	Max Load Capacity (kg)		Rated Force (N)	Max. Velocity (Note) (mm/sec)	Stroke (mm)	Rated Running Life	Input Power Supply	Maximum Positioning Point	
			Horizontal	Vertical							
RSH5	05	±0.01	80	20	339	~300	150~1050 (50 Pitch)	10,000km or More	Single-phase AC 100~115V 200~230V ±10%	255 points	
	10		55	10	169	~600					
	20		30	4	84	~1200					~1800
	30		15	-	56	~1800					

(Note) The maximum velocities may vary depending on the load capacity. Please refer to the "Recommended Maximum Velocities" table.



Note 1. Mechanical stopper position from the ends.  
 Note 2. For Large Lead Type (Lead 30), 172.5±4.  
 Note 3. For Large Lead Type (Lead 30), 85±4.  
 Note 4. For Large Lead Type (Lead 30), 32.5±1.  
 Note 5. The minimum bending radius of the motor cable is 50mm.

### Dimensions / Mass

Type	Dimensions / Mass	Stroke (mm)																		
		150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
RSH5	L (mm)	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305
	A (mm)	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
	M (mm)	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	5	5
	N (mm)	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
	K (mm)	240	240	240	240	420	420	420	420	600	600	600	600	780	780	780	780	960	960	960
	Mass (kg)	6.2	6.9	7.5	8.2	8.8	9.5	10.1	10.8	11.4	12.1	12.6	13.4	13.9	14.6	15.2	15.9	16.5	17.2	17.8

Part Number	Selection											
	Type	Lead (mm)	With or w/o Brake (P1)	Controller			I/O Module	W/ or w/o Noise Filter (P3)	Cable Length (m)		Stroke (mm)	Regenerative unit
RSH5	05	None: Leave blank Included: B	Specifications Power Supply AC100~115V AC200~230V	Absolute Encoders (w/ Data Storage Battery)		Incremental Type	NPN: N PNP: P CC-Link: C DeviceNet: D	None: F0 Included: F1 Specifications: P.508	Standard	Flexible	150~1050 (50mm Increment)	RGT Always select this option when using 700mm or more strokes in vertical applications.
	10			C21A	C21B	3.5m: R3			3.5m: R5			
	20			C22A	C22B	5m: R5			5m: R10			
	30					10m: R10			10m: R10			

(P1) Choose the "Brake" option for use in vertical applications. (W/ brake type is not available for Lead 30)  
 (P2) Controllers are shipped with preset parameters for each type. Data storage batteries are outside the scope of RoHS Directive.  
 (P3) A noise filter is required for this product. When the customer is purchasing the noise filter separately, please select "none". Be sure to install a surge absorber on the primary side of a noise filter. For details, please see the Instruction Manual.

**Ordering Example** Part Number - Controller - I/O Module - W/ or w/o Noise Filter - Cable Length - Stroke Days to Ship

RSH520B - C22A - N - F1 - 3 - 200

**Robot Body Price**

Part Number	Unit Price 1 ~ 5 pc(s).									
	Stroke (mm)									
	150	200/250	300/350	400/450	500/550	600/650	700/750	800/850	900/950	1000/1050
RSH5										
RSH5										

**Controller Price**

I/O Type	Unit Price 1 ~ 5 pc(s).	
	C21A/C22A Absolute Encoders (w/ Data Storage Battery)	C21B/C22B Incremental Type
N		
P		
C		
D		

**Cable Price**

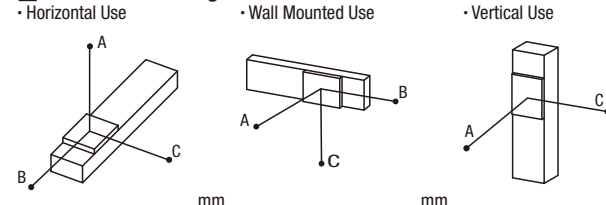
Cable (Standard)	Unit Price 1 ~ 5 pc(s).	
	Cable (Flexible)	Unit Price 1 ~ 5 pc(s).
3	R3	
5	R5	
10	R10	

**Noise Filter Price**

W/ or w/o Noise Filter	Unit Price 1 ~ 5 pc(s).	
	None: F0	Included: F1

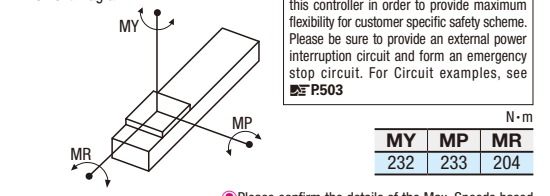
(Robot Body Price) + (Controller Price) + (Cable Price) + (Noise Filter) = Total Price  
 <Ex.> For RSH520-C-22A-N-F1-3-200,

### Allowable Overhang Load



Lead	Mass	mm		
		A	B	C
05	50kg	1575	158	222
	60kg	1493	135	194
	80kg	1466	107	159
10	15kg	1132	353	361
	40kg	872	183	218
	55kg	946	140	184
20	5kg	2153	1366	980
	15kg	1193	465	430
	30kg	1266	245	294
30	5kg	1756	1364	863
	15kg	1236	467	438
	15kg	408	277	803

### Allowable Static Moment



Please confirm the details of the Max. Speeds based on various strokes with MISUMI Web Simulator.

**Max. Velocity (mm/sec)**

Type	Lead (mm)	Stroke (mm)							
		150-700	750	800	850	900	950	1000	1050
RSH5	05	300	240	195	150	135			
	10	600	480	390	300	270			
	20	1000~1200	960	780	600	540			
	30	900~1800	1440	1170	900	810			

For stroke ranges 650mm or more, ball screws may resonate in certain operation areas (critical speed). In that case, reduce the operation speed by referring to the Max. Velocity shown in the table above.

<Price Example> The prices are for the part numbers on the left.  
 (Actuator) + (Controller) + (Cable) + (Noise Filter) +

(Grease Type Alteration) + (Change of Home Position) = Total Price

**Alterations** Part Number - Controller Type - I/O Type - Noise Filter Presence - Cable Length - Stroke - (G, E, etc.)

RSH520B - C22A - N - F1 - 3 - 200 - G-E

Alterations	Grease Type Alteration	Change of Home Position	Handset Terminal Standard Specification	Handset Terminal w/ Deadman's Switch	Support Software w/ USB Communication Cable	Support Software w/ D-Sub Communication Cable	I/O Cable	Cable for daisy-chain connection	Instruction Manual
Code	G	E	H	D	S	R	T	C	MJ5/KJ3
Spec.	Grease is changed to low particle generation grease. (NSK LG2)	The home position is relocated to the opposite side of the motor.	Handset Terminal is included. Specifications P.503, 507	Handset Terminal w/ Deadman's Switch is included. Specifications P.503, 507	Support Software w/ USB Communication Cable is included. Specifications P.503, 507	Support Software w/ D-Sub Communication Cable is included. Specifications P.507	I/O Cable is included. Required for NPN/PNP configurations. Specifications P.507	A cable to connect multiple controllers. It can connect maximum 16 controllers. Specifications P.507	Operation Manual is included. For Actuator MJ5: For Controller KJ3:

For optional items, see P.507. It is more economical to order the optional items as alterations than purchasing them individually.  
 Entering point data requires the handy terminal or the support software. An I/O Cable is required for Parallel Communication I/O Control.  
 For details on daisy-chain, see P.505