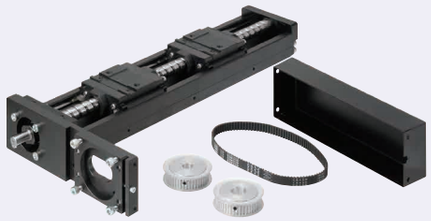
Single Axis Actuators LX45 Motor Folded Type

For Single Axis Actuator LX Series selections, please use our 2D and 3D CAD data and Technical Calculation Software (free of charge).
http://download.misumi.jp/mol/fa_soft.html

LX Related Information
Specifications P411 ~ P414
Selection / Life Calculation Example P.2235~P.2238

Convenient Sensor Sets are also available. P.432



RoHS10

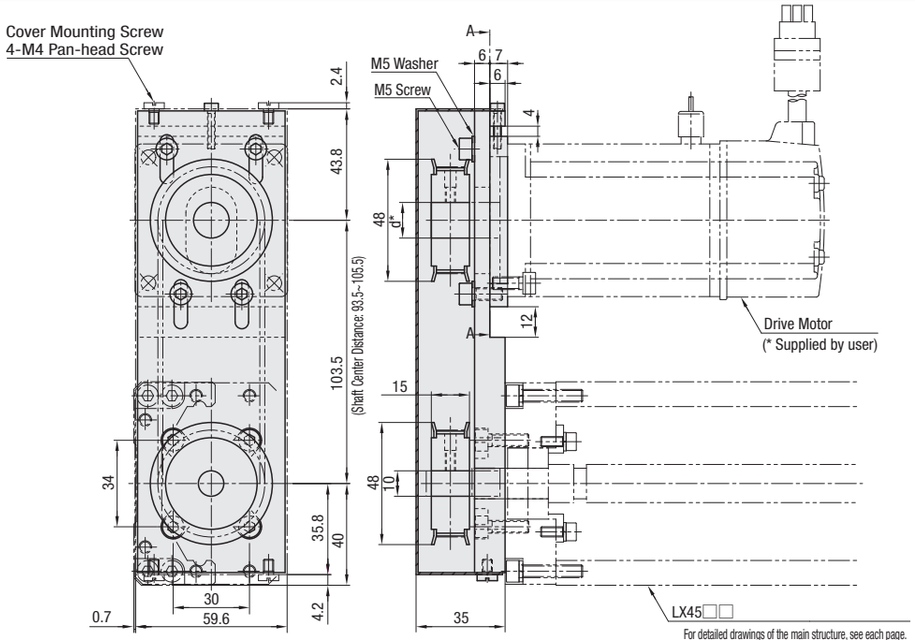
Specifications	
LX45	
Standard / Cover	
Screw Shaft Dia. (mm)	15
Lead (mm)	10, 20
Accuracy	High Grade

A Accessory

① Motor Adapter Plates
M Steel S Low Temperature Black Chrome Plating
② Adapter Plate Screw 4 pcs. M SUSXM7
③ High Torque Timing Pulley Part Number: HTPA44S3M100
④ High Torque Timing Belt Part Number: HTBN339S3M-100

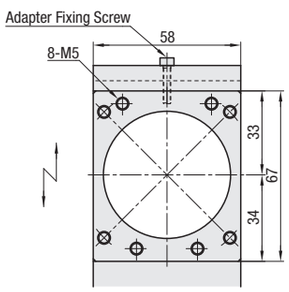
Part Number	Standard Grease		Lubrication Unit MX-equipped (Standard Grease)	
	High Grade Standard	High Grade with Cover	High Grade Standard	High Grade with Cover
Lead 10	LXR4510	LXR4510C	LXR4510-MX	LXR4510C-MX
Lead 20	LXR4520	LXR4520C	LXR4520-MX	LXR4520C-MX

Components	Base (Rail)	Block	Motor Bracket	Support Side Bearing with Housing	Cover	Stopper	Precision Ball Screw (Ground)
M Material	Carbon Steel	SCM Material	A5052	A5052	A6063	NBR	SCM415
S Surface Treatment	Low Temperature Black Chrome Plating	Low Temperature Black Chrome Plating	Black Baked Paint	Black Anodize	Black Anodize	-	-
H Hardness	Induction Hardened HRC58 ~ 64	HRC58~62	-	-	-	-	HRC58~62



For detailed drawings of the main structure, see each page.
Standard Type P.429
Cover Type P.429

* d is Pulley Inner Dia..
Ø14 for Servo Motor Type and Ø8 for Stepping Motor Type. Selectable for No Adapter Plate Type. Selectable for No Adapter Plate Type.



Arrow View A-A

<Motor Adapter Plates>
*For details of motor adapter plate dimensions, see the right-hand page.

For recommended shaft center distance for belt tension 103.5mm, deflection when the center of belt is pressed with less than 3N is 1.7mm.

Precision specification value is the value achieved after fixing rails. (It is not a value before tightening the rail screws.) For values, see P.413.

The actuator shaft end is of D cut specification.

Included High Torque Timing Pulley Part Number

Pulley mounting side		Part Number
Actuator mounting side		HTPA44S3M100-A-P10
Motor Side	For Adapter Plate RA4560	HTPA44S3M100-A-N14
	For Adapter Plate RT4560	HTPA44S3M100-A-P10
	No Adapter Plate N8	HTPA44S3M100-A-P8
	No Adapter Plate N10	HTPA44S3M100-A-P10
	No Adapter Plate N14	HTPA44S3M100-A-N14

Part numbers with P at the end are of round hole+tap type.
Part numbers with N at the end are of Key-slot hole+tap type.

Part Number		Block Qty.	Motor Adapter Plates	Base Length (L)	Details of Mounting Hole Dimensions P.429, 430					
					A	P1	P2	B	Number of Pitches	Number of Holes (N)
(High Grade Standard) LXR4510 LXR4520	(High Grade with Cover) LXR4510C LXR4520C	Long Blocks (1 pc.)B1 (2 pcs.)B2	(Servo) RA4560	340	70	100	100	70	2	6
				390			50		3	8
		Short Blocks (1 pc.)S1 (2 pcs.)S2	(Stepping) RT4560	440			100			
(Lubrication Unit MX Standard) LXR4510-MX LXR4520-MX	(Lubrication Unit MX with Cover) LXR4510C-MX LXR4520C-MX	*Lubrication Units MX-equipped types are available in B1/S1 only.	*(No Adapter Plate) N8(Pulley Inner Dia. Ø8) N10(Pulley Inner Dia. Ø10) N14(Pulley Inner Dia. Ø14)	490			50		4	10
				540			100			
				590			50		5	12

* Motor adapter plate and mounting screws are not included with No Adapter Plate Type.

Effective Stroke / Mass

Base Length (L)	* Effective Stroke						Total Mass (kg)							
	MX-unequipped				MX-equipped		LXR45□□				LXR45□□C			
	B1	B2	S1	S2	B1	S1	B1	B2	S1	S2	B1	B2	S1	S2
340	210.4	88.8	247.9	163.8	194.4	231.9	6.42	7.34	6.02	6.56	7.24	8.74	6.59	7.43
390	260.4	138.8	297.9	213.8	244.4	281.9	7.02	7.94	6.63	7.16	7.88	9.38	7.22	8.06
440	310.4	188.8	347.9	263.8	294.4	331.9	7.62	8.55	7.23	7.76	8.51	10.01	7.85	8.69
490	360.4	238.8	397.9	313.8	344.4	381.9	8.22	9.15	7.83	8.36	9.14	10.64	8.49	9.33
540	410.4	288.8	447.9	363.8	394.4	431.9	8.83	9.75	8.43	8.96	9.78	11.28	9.12	9.96
590	460.4	338.8	497.9	413.8	444.4	481.9	9.43	10.35	9.04	9.57	10.41	11.91	9.75	10.59

* Effective stroke is indicated in dimensions with a margin of 2.5mm each from the ends.

0.024kg will be added to MX-equipped types.

Accuracy Standards

Accuracy Standards	High Grade
Positioning (mm)	0.1
Backlash (mm)	0.02
Positioning Repeatability (mm)	±0.005
Running Parallelism (mm)	0.035
Starting Torque (N・cm)	10

Static Load Capacity / Allowable Moment

Block Qty.	Block Qty.	Static Load Capacity (N)	Allowable Static Moment (N・m)		
			Ma	Mb	Mc
Long Block	B1	32441	291	291	972
	B2	64882	3945	3945	1944
Short Block	S1	17175	145	145	515
	S2	34350	1444	1444	1029

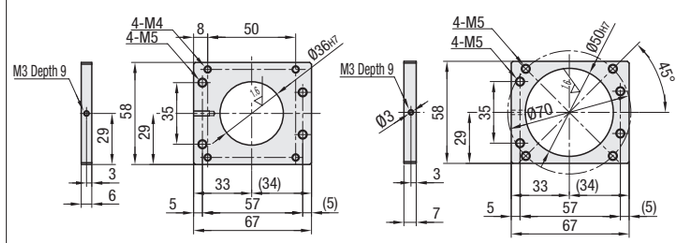
Reference values are for a static state. For life calculation, use our technical calculation software.
For Allowable Static Moment, see P.411.

Max. Velocity

Max. Velocity (mm/s)	
LXR4510□	550
LXR4520□	1110

The Max. Velocity is reference values derived from ball screw critical speeds and DN values but not guarantee data considering the motor's conditions.

Motor Adapter Plate Dimensional Drawing



Adapter Plate Part Number: RT4560
Adapter Plate Part Number: RA4560

Servo Motor Application Table

Part Number	Flange Size	Manufacturer	Product Number	Wattage	Applicable Motor Shaft Dia.
RA4560	□60	Yasukawa Electric Corporation	SGMJV-02	200W	Ø14
			SGMJV-04	400W	
		Mitsubishi Electric Corporation	HG-MR23	200W	
			HG-KR23		
			HG-MR43	400W	
			HG-KR43		
		Sanyo Denki Co., Ltd.	Q1AA06020D	200W	
			Q1AA06040D	400W	
		Omron Corporation	R88M-K20030	200W	
			R88M-K40030	400W	
		Keyence Corporation	MV-M20	200W	
			SV-M020		
			MV-M40	400W	
			SV-M040		

Stepping Motor Application Table

Part Number	Flange Size	Manufacturer	Product Number	Type	Applicable Motor Shaft Dia.
RT4560	□60	Oriental Motor Motor	RKS56*	5-phase	Ø10
			AR6	α-Step	

* When selecting the motor shaft diameter Ø8, please select the alteration NBP (No Belt / No Pulley) and purchase the pulley and belt separately.
LXR45□□-□□-RT4560-□□□-NBP
High Torque Timing Pulley: HTPA44S3M100-A-P8
High Torque Timing Belt: HTBN339S3M-100
Not compatible with geared motors made by Oriental Motor.

Ordering Example

Part Number		Block Qty.		Motor Adapter Plates		Base Length (L)		
LXR4510	-	B1	-	RA4560	-	540		
LXR4510C-MX	-	B1	-	RA4560	-	540		
Part Number	**-**	**Block Qty.**	**-**	**Motor Adapter Plates**	**-**	**Base Length (L)**	**-**	**(NBP)**
LXR4510	-	B1	-	RA4560	-	540	-	NBP

Alterations

Alteration	Code	Spec.
No Belt / No Pulley	NBP	Excluded from the set.

Sensor Set P.432

Part Number	High Grade Unit Price						Motor Adapter Plates	Block Qty.	Screw Shaft Dia.	Lead
	L=340	L=390	L=440	L=490	L=540	L=590				
LXR45□□-B1/S1-□							Servo Stepping No Adapter Stepping	1	15	10
LXR45□□-B2/S2-□								2		
LXR45□□C-B1/S1-□							No Adapter Plate	1		20
LXR45□□C-B2/S2-□								2		