

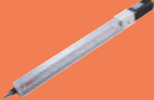
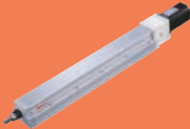
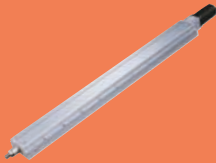


GTY Series

Standard Environment
Integrated Linear Bearing Ball Screw Actuator

CONTENTS

Standard/Ball Screw

SMALL GTY4		Width 44mm Max. stroke 500mm087 Max. payload 25kg
SMALL GTY5		Width 54mm Max. stroke 600mm095 Max. payload 30kg
MEDIUM GTY8		Width 82mm Max. stroke 800mm099 Max. payload 50kg
LARGE GTY12		Width 120mm Max. stroke 800mm107 Max. payload 110kg

Memo

Spec Index of Electric Actuator

GTH Built - in Linear Motion Guide Ball Screw Actuator - Slider Type

Env.	Drive Type	Model No.	Motor Output (w)	Width (mm)	Repeatability (mm)	Ball Screw Spec		Maximum Payload(kg)		Max. Speed ^{*1} (mm/s)
						Outer Dia.(mm)	Lead(mm)	Horizontal	Vertical	
Standard Environment	Ball screw	GTY4	50W	44	±0.01	10	2	25	8	100
							6	20	5	360
							12	12	2	720
			100W				2	25	8	100
							6	20	8	360
							12	12	3.5	720
		GTY5	100W	54	±0.01	12	2	30	10	100
							5	30	10	300
							10	15	5	600
							20	10	2.5	1200
		GTY8	200W	82	±0.01	16	5	50	15	300
							10	30	8	600
							20	18	3	120
		GTY12	400W	120	±0.01	16	5	110	33	300
							10	88	22	600
							20	40	10	1200
							32	30	8	1920

*1:The highest speed is based on the maximum servo motor's rpm (3000 or 3600).

*2:Max RPM is based on limitations of the ballnut or suggested servo motor limits.

*3:Max speed is based on max RPM of the ballscrew before whipping occurs. This could permanently damage the ballscrew.

免費服務專線：大陸 400-875-0009 台灣 0800-800-893
Toll-Free Number China Taiwan

Application	Standard Ball Screw Type GTT	Standard Belt Type ETB / M	Cleanroom Ball Screw Type GCH / ECH	Cleanroom Belt Type ECB	Reference
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Stroke(mm) & Maximum Speed(mm/s) ^{*2}																												Speed	Page
Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1200	1300	1400	1500	1600		
			100																									087	
			360							330																			
			720							660																			
			100																									095	
			360							330																			
			720							660																			
			100																									099	
			300								292	250																	
			600								583	500																	
			1200								1167	1000																107	
			300										292	250	225														
			600										583	500	450														
			1200										1167	1000	900														
			300												250														
			600												500														
			1200												1000														
			1920												1600														



螺桿驅動



皮帶驅動



無塵室



軌道內嵌

軌道內嵌型

■ GTY系列



±0.01mm				重複精度
720 mm/s	1200 mm/s	1200 mm/s	1920 mm/s	最高速度
25 kg	40 kg	110 kg	110 kg	最大荷重
50~500 mm	50~600 mm	50~800 mm	50~800 mm	行程範圍

經濟型

■ Y系列



大推力

±0.01mm					重複精度
720 mm/s	720 mm/s	720 mm/s	720 mm/s	600 mm/s	最高速度
40 kg	40 kg	100 kg	100 kg	1200 kg	最大荷重
50~500 mm	50~500 mm	50~700 mm	50~700 mm	50~800 mm	行程範圍

搭配步進馬達

■ CY系列



TC100控制器

±0.01mm				重複精度
600 mm/s	600 mm/s	240 mm/s	240 mm/s	最高速度
40 kg	40 kg	80 kg	80 kg	最大荷重
50~500 mm	50~500 mm	50~700 mm	50~700 mm	行程範圍

大推力

■ YH系列



大推力

YH95		重複精度
±0.01mm		最高速度
42 mm/s		最大荷重
3000 kg		行程範圍
50~800 mm		

推桿式

滾珠螺桿驅動

滾柱螺桿驅動



Memo



Please consult our company website for a detailed description on selection requirements and nominal life calculations.

Ordering Method

GTY4 - L2 - 100 - BC - M05B - C4 - 0001

Model

Stroke

50-500mm

50mm increments

Attachment kit for motor

With Attachment kit

M	Mitsubishi	05	50W	B ^{*3}
P	Panasonic	10	-	
Y	Yaskawa	20	-	
T	Delta	40	-	

35M500

35□ Shaft Ø5

35M500A

35□ Shaft Ø5^{*2}

42M500

42□ Shaft Ø5

42M500A

42□ Shaft Ø5^{*2}

X

Others^{*1}

Without Attachment kit

K

No Motor Flange & Coupling^{*4}

Motor Position

BC	Motor Exposed
BM	Motor Bottom Side
BL	Motor Left Side
BR	Motor Right Side
- ^{*4}	No Motor Position

Ball Screw Lead

2	2mm
6	6mm
12	12mm

Home Sensor

Outside	
C	Motor Side
D	Opposite Motor Side
No Sensor	
E	No Sensor

Limit Sensor

Outside	
3	1 Pc
4	2 Pc
No Sensor	
5	No Sensor

Special Order No.

Specification

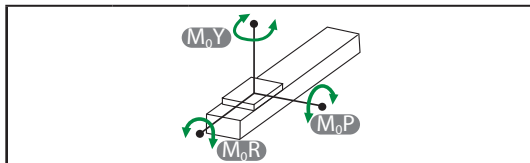
Item

Ball screw	Outer dia. & Precision grade		mm	Ø10 & C7 Rolled Ballscrews		
	Lead		mm	2	6	12
	Maximum Rotating speed※1		rpm	3000	3600	3600
	Maximum linear speed※1		mm/s	100	360	720
	Basic dynamic load rating Ca		N	2265	2537	1740
	Basic static load rating Coa		N	4839	4569	3052
	Load factor			1.2	1.35	1.35
Linear Guide	Dynamic horizontal	100 Km of travel	N	4835		
		1000 Km of travel	N	2246		
		10000 Km of travel	N	1040		
	Static horizontal		N	12678		
Fixed bearing	Basic dynamic load rating Cr		N	1730		
	Static load rating Cor		N	3800		
Common Spec	Repeatability		mm	±0.01		
	Start torque		N.cm	2		
	Allowable input torque		N.m	1.1		
	Maximum acceleration		m/s ²	10		
	Friction coefficient			0.03		
	Stroke (increments)		mm	50-500 (50 increments)		
	Ambient temperature※2		°C	0~+40		

※1 The maximum rotating and linear speed has changed due to differences in the lead. The ball screw has a slightly axial runout with a longer stroke and the speed must turn down. (Please read the diagram below for dimensions of the linear speed)

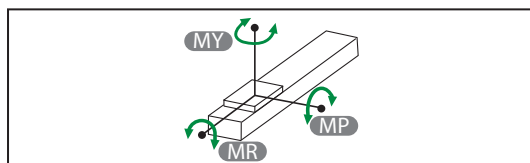
※2 For extreme temperatures: -20C ~80C special greases are required.

Static Loading Moment



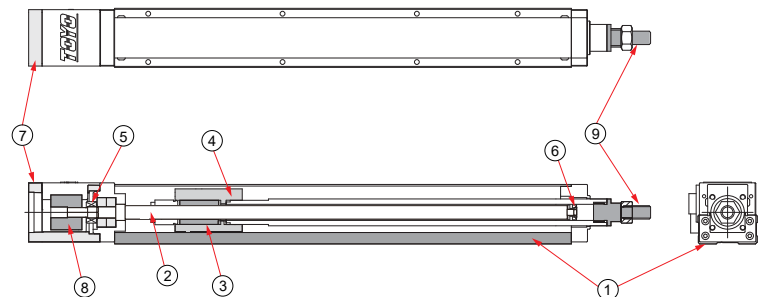
M_{0Y}	N.m	79
M_{0P}	N.m	79
M_{0R}	N.m	116

Dynamic Loading Moment



Travel	km	100	1000	10000
MY	N.m	24.9	11.6	5.4
MP	N.m	24.9	11.6	5.4
MR	N.m	37.5	17.4	8.1

Parts list



No.	Part Description	Material
1	Base Extrusion	AL6463
2	Ball Screw	S45C
3	Ball Screw Nut	S45C
4	Carriage	SNCM21H
5	Ball Bearing Dual Arrangement	SUJ2
6	Ball Bearing	SUJ2
7	Fixed Support Block-Inline Motor Mounting Bracket	AL6061
8	Coupling- Clamping	AL6061
9	Rod End Screw	S45C

GTY Series

GTY4

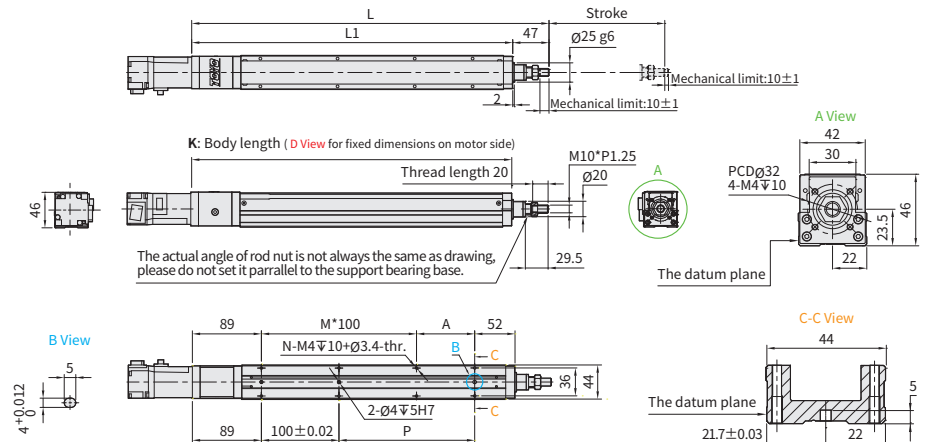
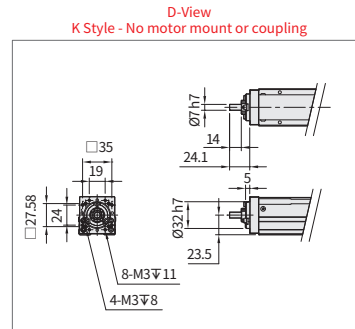
GTY5

GTY8

GTY12

BC Motor Exposed   Download CAD data at www.toyorobot.com

Unit : mm

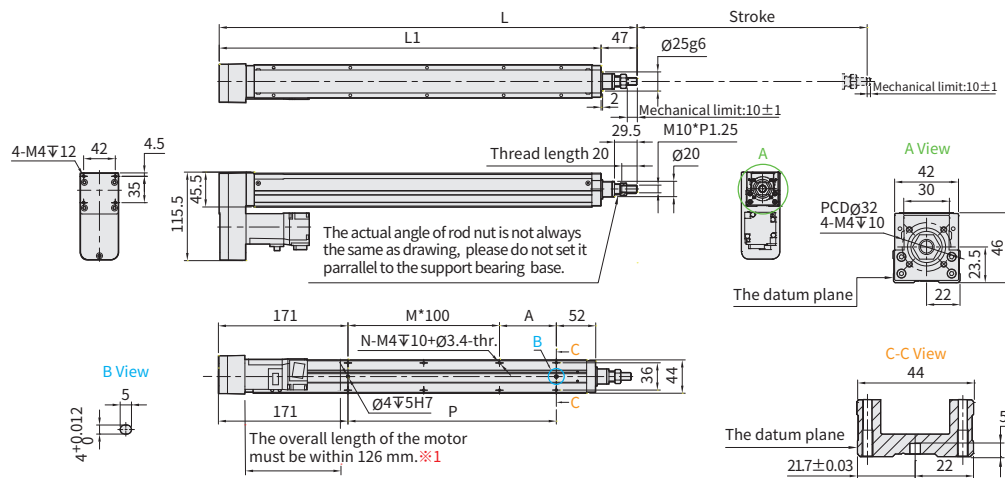


Stroke	50	100	150	200	250	300	350	400	450	500
Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520
L	313	363	413	463	513	563	613	663	713	763
L1	266	316	366	416	466	516	566	616	666	716
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
KG ^{※1}	0.7	0.87	1.04	1.22	1.4	1.58	1.76	1.94	2.12	2.3
K	213	263	313	363	413	463	513	563	613	663
Linear Speed mm/s	Lead 2									
	100									
	Lead 6									
	360									
	Lead 12									
	720									
	330									
	660									

※1 KG refers to the weight with motor related accessories (excluding motor), not corresponding to K Type.

BM Motor Bottom Side   Download CAD data at www.toyorobot.com

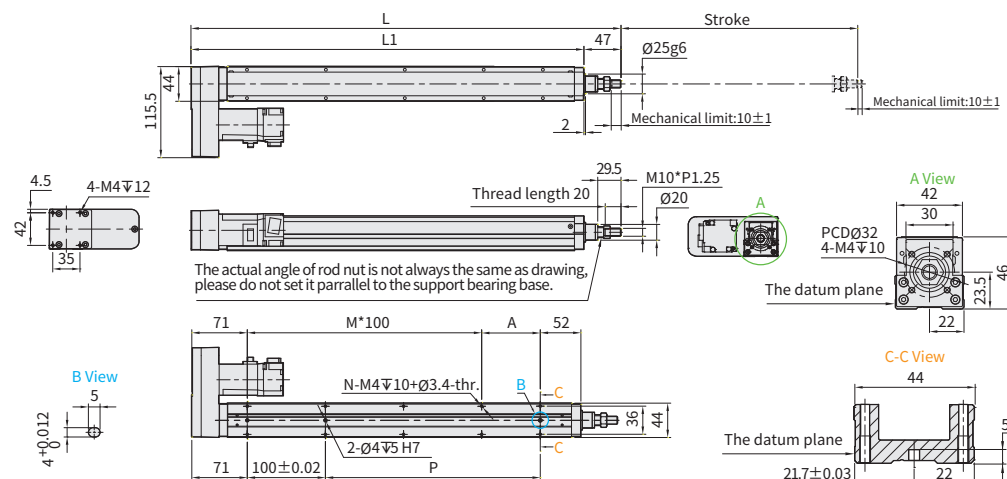
Unit : mm



Stroke	50	100	150	200	250	300	350	400	450	500
Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520
L	295	345	395	445	495	545	595	645	695	745
L1	248	298	348	398	448	498	548	598	648	698
A	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4
N	4	4	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375	425	475
KG ^{※1}	0.7	0.88	1.06	1.24	1.42	1.6	1.78	1.96	2.14	2.32
Linear Speed mm/s	Lead 2									
	100									
	Lead 6									
	360									
	Lead 12									
	720									
	330									
	660									

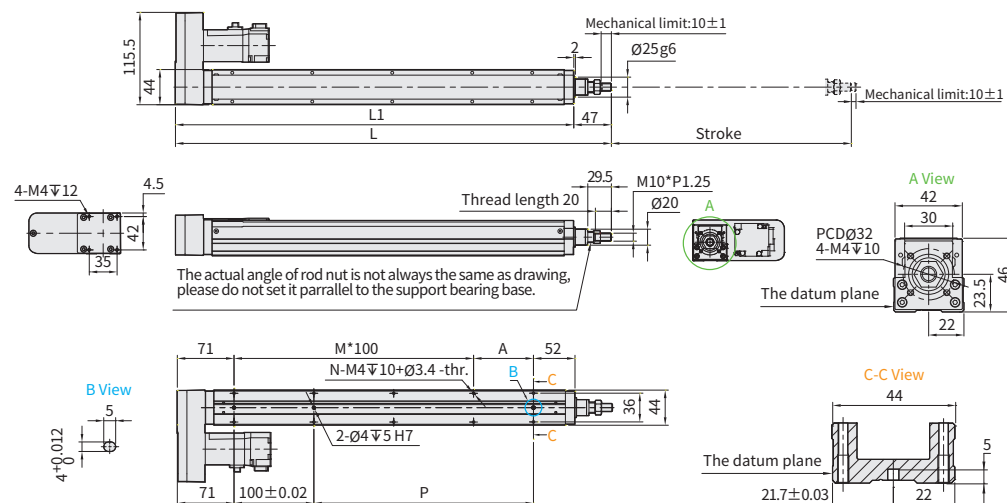
※1 When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

Unit : mm

[illegible]

Unit : mm

• Download CAD data at www.toyorobot.com •

[illegible]

GTY Series

GTY4

GTY5

GTY8

GTY12



Please consult our company website for a detailed description on selection requirements and nominal life calculations.

Ordering Method

GTY4 - L2 - 100 - BC - M10B - C4 - 0001

Model

Stroke

50-500mm
50mm increments

Special Order No.

Attachment kit for motor

With Attachment kit				
M	Mitsubishi	05	-	B ³
P	Panasonic	10	100W	
Y	Yaskawa	20	-	
T	Delta	40	-	
35M500	35□ Shaft Ø5			
35M500A	35□ Shaft Ø5 ^{*2}			
42M500	42□ Shaft Ø5			
42M500A	42□ Shaft Ø5 ^{*2}			
X	Others ^{*1}			
Without Attachment kit				
K	No Motor Flange & Coupling ^{*4}			

Motor Position

BC	Motor Exposed
BM	Motor Bottom Side
BL	Motor Left Side
BR	Motor Right Side
- ^{*4}	No Motor Position

Ball Screw Lead

2	2mm
6	6mm
12	12mm

Home Sensor

Outside	
C	Motor Side
D	Opposite Motor Side
	No Sensor
E	No Sensor

Limit Sensor

Outside	
3	1 Pc
4	2 Pc
	No Sensor
5	No Sensor

^{*1} When choosing non-standard motor X, the motor spec must be provided and confirmed by TOYO for installation before the order is established.

^{*2} Please refer to description on page 465.

^{*3} If No Brake, No Description.

^{*4} When K is selected the motor position section is left blank.

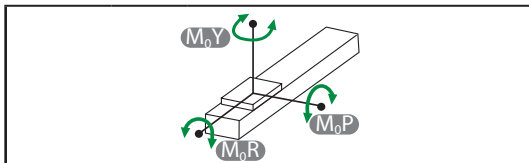
Specification

Item	Ball screw		Outer dia. & Precision grade	mm	Ø10 & C7 Rolled Ballscrews			
			Lead	mm	2	6	12	
			Maximum Rotating speed※1	rpm	3000	3600	3600	
			Maximum linear speed※1	mm/s	100	360	720	
			Basic dynamic load rating Ca	N	2265	2537	1740	
			Basic static load rating Coa	N	4839	4569	3052	
			Load factor		1.2	1.35	1.35	
	Linear Guide		Dynamic horizontal	100 Km of travel	N	4835		
				1000 Km of travel	N	2246		
				10000 Km of travel	N	1040		
			Static horizontal		N	12678		
	Fixed bearing		Basic dynamic load rating Cr		N	1730		
			Static load rating Cor		N	3800		
	Common Spec		Repeatability		mm	±0.01		
			Start torpue		N.cm	2		
			Allowable input torque		N.m	1.1		
			Maximum acceleration		m/s ²	10		
			Friction coefficient			0.03		
			Stroke (increments)		mm	50-500 (50 increments)		
			Ambient temperature※2		°C	0~+40		

※1 The maximum rotating and linear speed has changed due to differences in the lead. The ball screw has a slightly axial runout with a longer stroke and the speed must turn down. (Please read the diagram below for dimensions of the linear speed)

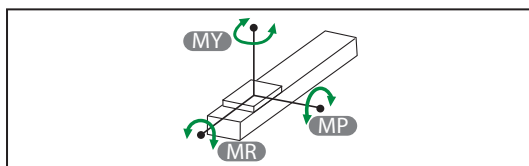
※2 For extreme temperatures: -20C ~80C special greases are required.

Static Loading Moment



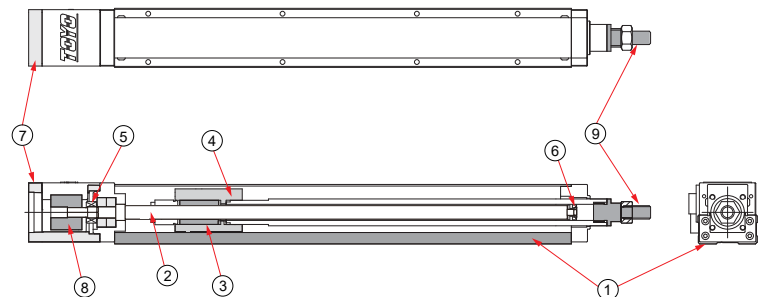
M₀Y	N.m	79
M₀P	N.m	79
M₀R	N.m	116

Dynamic Loading Moment



Travel	km	100	1000	10000
MY	N.m	24.9	11.6	5.4
MP	N.m	24.9	11.6	5.4
MR	N.m	37.5	17.4	8.1

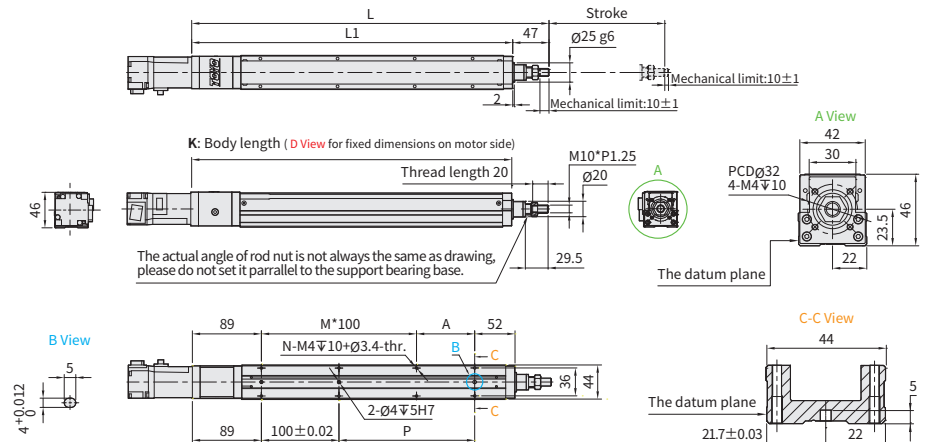
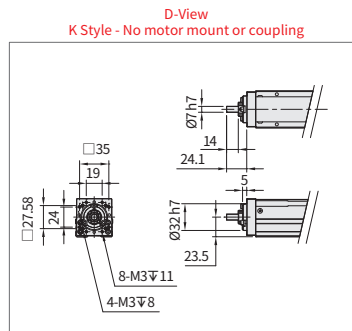
Parts list



No.	Part Description	Material
1	Base Extrusion	AL6463
2	Ball Screw	S45C
3	Ball Screw Nut	S45C
4	Carriage	SNCM21H
5	Ball Bearing Dual Arrangement	SUJ2
6	Ball Bearing	SUJ2
7	Fixed Support Block-Inline Motor Mounting Bracket	AL6061
8	Coupling- Clamping	AL6061
9	Rod End Screw	S45C

GT_Y SeriesGT_Y4GT_Y5GT_Y8GT_Y12

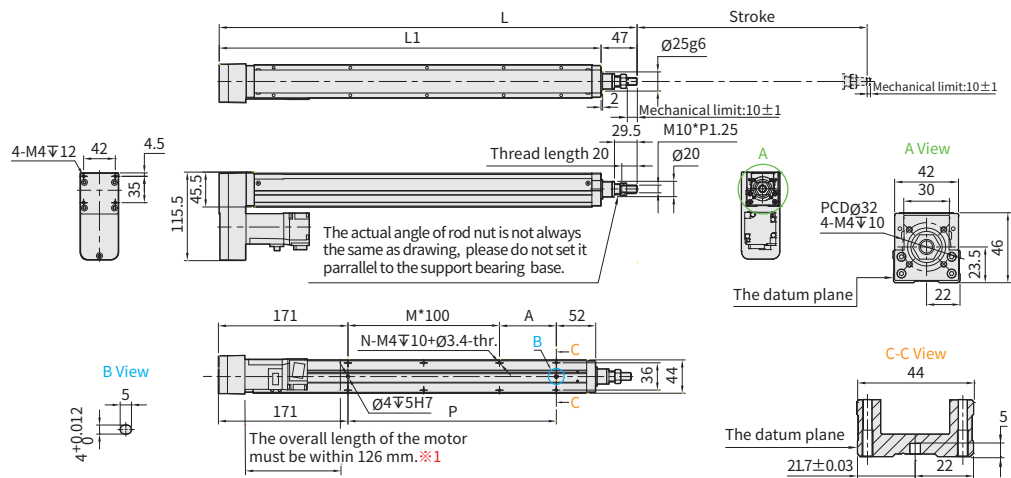
Unit : mm

[illegible]

※1 KG refers to the weight with motor related accessories (excluding motor), not corresponding to K Type.

● Download CAD data at www.toyorobot.com ●

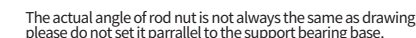
Unit : mm

[illegible]

※1 When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pinhole.
Please contact our sales department if you need more information & requirement.



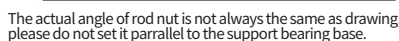
• Download CAD data at www.toyorobot.com •



Linear Speed mm/s	Lead 2	100	
	Lead 6	360	330
	Lead 12	720	660



2D CAD 3D CAD



Linear Speed mm/s	Lead 2	100	
	Lead 6	360	330
	Lead 12	720	660



Please consult our company website for a detailed description on selection requirements and nominal life calculations.

Ordering Method

GTY5 - L 5 - 100 - BC - M10B - C4 - 0001

Model

Ball Screw Lead

2	2mm
5	5mm
10	10mm
20	20mm

Motor Position

BC	Motor Exposed
BM	Motor Bottom Side
BL	Motor Left Side
BR	Motor Right Side
- ^{*4}	No Motor Position

Stroke

50-600mm
50mm increments

Attachment kit for motor

With Attachment kit				
M	Mitsubishi	05	-	B ^{*3}
P	Panasonic	10	100W	
Y	Yaskawa	20	-	
T	Delta	40	-	
42M500 42□ Shaft Ø5				
42M500A 42□ Shaft Ø5 ^{*2}				
57M635 57□ Shaft Ø6.35				
57M800 57□ Shaft Ø8				
X Others ^{*1}				
Without Attachment kit				
K No Motor Flange & Coupling ^{*4}				

Home Sensor

Outside	
C	Motor Side
D	Opposite Motor Side
No Sensor	
E	No Sensor

Limit Sensor

Outside	
3	1 Pc
4	2 Pc
No Sensor	
5	No Sensor

Special Order No.

^{*1} When choosing non-standard motor X, the motor spec must be provided and confirmed by TOYO for installation before the order is established.

^{*2} Please refer to description on page 465.

^{*3} If No Brake, No Description.

^{*4} When K is selected the motor position section is left blank.

Specification

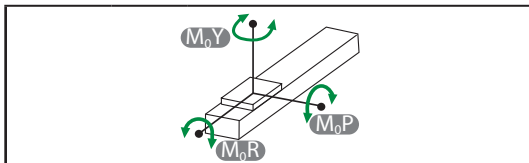
Item

	Ball screw	Outer dia. & Precision grade		mm	Ø12 & C7 Rolled Ballscrews			
		Lead		mm	2	5	10	20
		Maximum Rotating speed※1		rpm	3000	3600	3600	3600
		Maximum linear speed※1		mm/s	100	300	600	1200
		Basic dynamic load rating Ca		N	2411	4829	4680	11284
		Basic static load rating Coa		N	5779	7836	7649	20410
		Load factor			1.2	1.2	1.35	1.35
	Linear Guide	Dynamic horizontal	100 Km of travel	N	5904			
			1000 Km of travel	N	2736			
			10000 Km of travel	N	1275			
		Static horizontal		N	16904			
	Fixed bearing	Basic dynamic load rating Cr		N	1730			
		Static load rating Cor		N	3800			
	Common Spec	Repeatability		mm	±0.01			
		Start torpue		N.cm	7			
		Allowable input torque		N.m	1.1			
		Maximum acceleration		m/s ²	10			
		Friction coefficient			0.03			
		Stroke (increments)		mm	50-600 (50 increments)			
		Ambient temperature※2		°C	0~+40			

※1 The maximum rotating and linear speed has changed due to differences in the lead. The ball screw has a slightly axial runout with a longer stroke and the speed must turn down. (Please read the diagram below for dimensions of the linear speed)

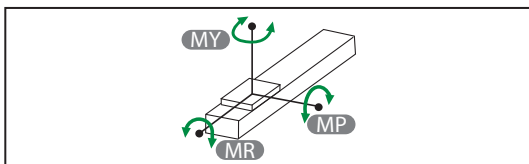
※2 For extreme temperatures: -20C ~80C special greases are required.

Static Loading Moment



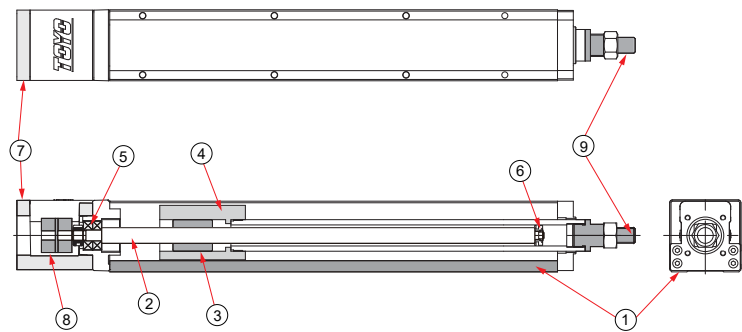
M₀Y	N.m	103
M₀P	N.m	103
M₀R	N.m	144

Dynamic Loading Moment



Travel	km	100	1000	10000
MY	N.m	40.8	18.9	8.8
MP	N.m	40.8	18.9	8.8
MR	N.m	58.5	27.2	12.6

Parts list



No.	Part Description	Material
1	Base Extrusion	AL6463
2	Ball Screw	S45C
3	Ball Screw Nut	S45C
4	Carriage	SNCM21H
5	Ball Bearing Dual Arrangement	SUJ2
6	Ball Bearing	SUJ2
7	Fixed Support Block-Inline Motor Mounting Bracket	AL6061
8	Coupling- Clamping	AL6061
9	Rod End Screw	S45C

GTy Series

GTy4

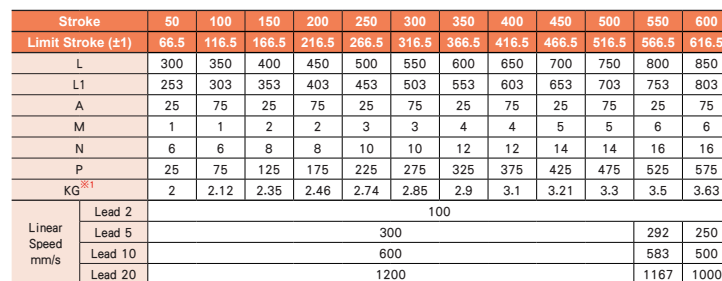
GTy5

GTy8

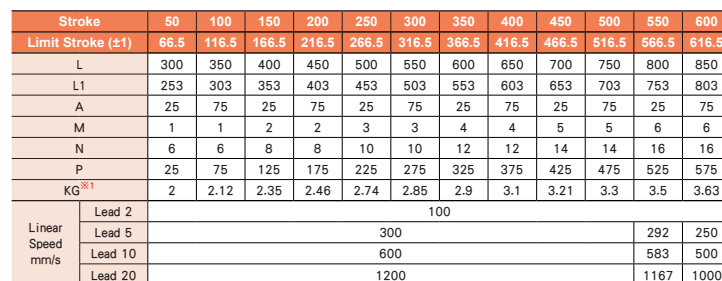
GTy12



Unit : mm



Unit : mm



GTY12



Please consult our company website for a detailed description on selection requirements and nominal life calculations.

Ordering Method

GTY8 - L10 - 100 - BC - M20B - C4 - 0001

Model

Ball Screw Lead

5	5mm
10	10mm
20	20mm

Motor Position

BC	Motor Exposed
BM	Motor Bottom Side
BL	Motor Left Side
BR	Motor Right Side
-*2	No Motor Position

Stroke

50-800mm
50mm increments

Attachment kit for motor

With Attachment kit				
M	Mitsubishi	05	-	B*3
P	Panasonic	10	-	
Y	Yaskawa	20	200W	
T	Delta	40	-	
57M635 57□ Shaft Ø6.35				
57M800 57□ Shaft Ø8				
X	Others	*1		
Without Attachment kit				
K	No Motor Flange & Coupling *2			

Special Order No.

Home Sensor

Outside	
C	Motor Side
D	Opposite Motor Side
No Sensor	
E	No Sensor

Limit Sensor

Outside	
3	1 Pc
4	2 Pc
No Sensor	
5	No Sensor

*1 When choosing non-standard motor X, the motor spec must be provided and confirmed by TOYO for installation before the order is established.

*2 When K is selected the motor position section is left blank.

*3 If No Brake, No Description.

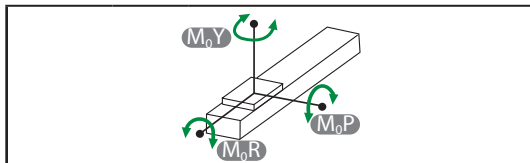
Specification

Item	Ball screw	Outer dia. & Precision grade		mm	Ø16 & C7 Rolled Ballscrews		
		Lead		mm	5	10	20
		Maximum Rotating speed ^{※1}		rpm	3600	3600	3600
		Maximum linear speed ^{※1}		mm/s	300	600	1200
		Basic dynamic load rating Ca		N	8042	6300	4152
		Basic static load rating Coa		N	15088	11596	7439
		Load factor			1.2	1.35	1.35
	Linear Guide	Dynamic horizontal	100 Km of travel	N	18620		
			1000 Km of travel	N	8643		
			10000 Km of travel	N	4012		
		Static horizontal		N	34230		
	Fixed bearing	Basic dynamic load rating Cr		N	2600		
		Static load rating Cor		N	4750		
	Common Spec	Repeatability		mm	±0.01		
		Start torque		N.cm	10		
		Allowable input torque		N.m	2.2		
		Maximum acceleration		m/s ²	10		
		Friction coefficient			0.03		
		Stroke (increments)		mm	50-800 (50 increments)		
		Ambient temperature ^{※2}		°C	0~+40		

※1 The maximum rotating and linear speed has changed due to differences in the lead. The ball screw has a slightly axial runout with a longer stroke and the speed must turn down. (Please read the diagram below for dimensions of the linear speed)

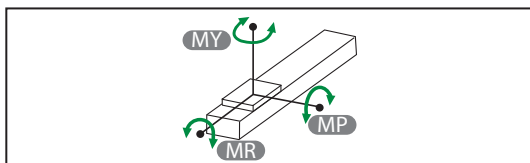
※2 For extreme temperatures: -20C ~80C special greases are required.

Static Loading Moment



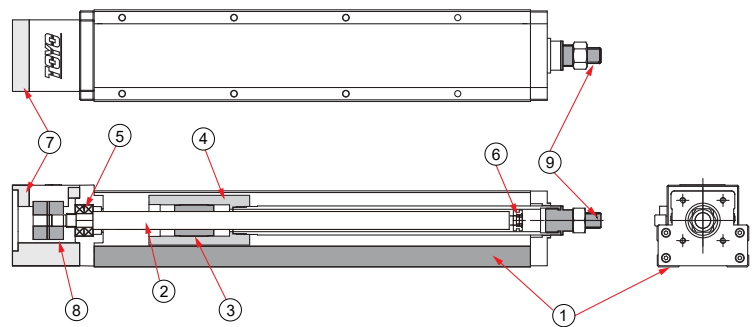
M₀Y	N.m	318
M₀P	N.m	318
M₀R	N.m	626

Dynamic Loading Moment



Travel	km	100	1000	10000
MY	N.m	121.6	56.5	26.2
MP	N.m	121.6	56.5	26.2
MR	N.m	201.9	93.7	43.5

Parts list



No.	Part Description	Material
1	Base Extrusion	AL6463
2	Ball Screw	S45C
3	Ball Screw Nut	S45C
4	Carriage	SNCM21H
5	Ball Bearing Dual Arrangement	SUJ2
6	Ball Bearing	SUJ2
7	Fixed Support Block-Inline Motor Mounting Bracket	AL6061
8	Coupling- Clamping	AL6061
9	Rod End Screw	S45C

GTU Series

GTU4

GTU5

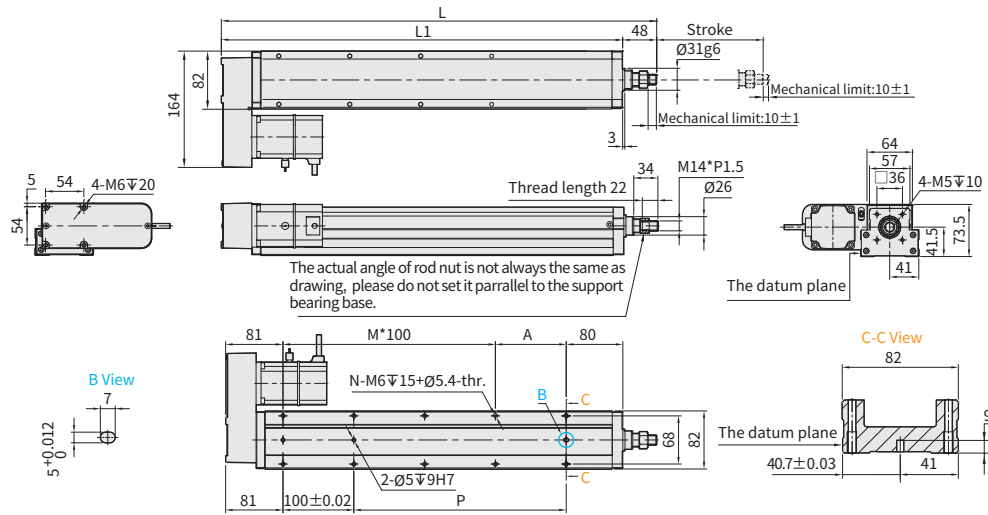
GTU8

GTU12

BL Motor Left Side

Download CAD data at www.toyorobot.com

Unit : mm

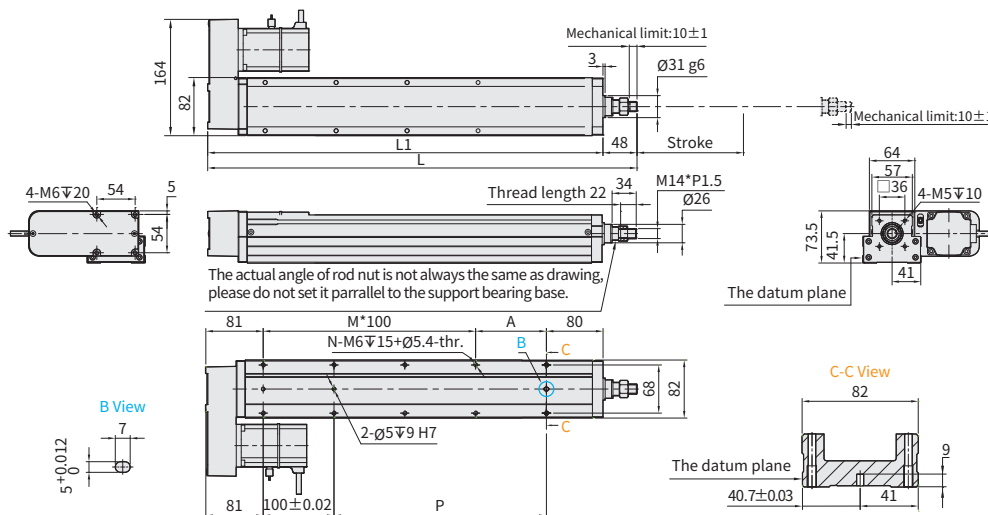


Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG ^{※1}	4.16	4.54	4.95	5.3	5.6	5.93	6.25	6.6	6.89	7.22	7.66	7.96	8.37	8.66	8.9	9.21
Linear Speed mm/s	Lead 5												292	250	225	225
	Lead 10												583	500	450	450
	Lead 20												1167	1000	900	900

BR Motor Right Side

Download CAD data at www.toyorobot.com

Unit : mm



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG ^{※1}	4.16	4.54	4.95	5.3	5.6	5.93	6.25	6.6	6.89	7.22	7.66	7.96	8.37	8.66	8.9	9.21
Linear Speed mm/s	Lead 5												292	250	225	225
	Lead 10												583	500	450	450
	Lead 20												1167	1000	900	900

GT^Y Series

GT^Y4

GT^Y5

GT^Y8

GT^Y12



Please consult our company website for a detailed description on selection requirements and nominal life calculations.

Ordering Method

GTY8 - L10 - 100 - BC - M40B - C4 - 0001

Model		Special Order No.																																																									
Ball Screw Lead <table border="1"> <tr><td>5</td><td>5mm</td></tr> <tr><td>10</td><td>10mm</td></tr> <tr><td>20</td><td>20mm</td></tr> </table>		5	5mm	10	10mm	20	20mm	Attachment kit for motor <table border="1"> <thead> <tr> <th colspan="5">With Attachment kit</th> </tr> </thead> <tbody> <tr><td>M</td><td>Mitsubishi</td><td>05</td><td>-</td><td>B^{*3}</td></tr> <tr><td>P</td><td>Panasonic</td><td>10</td><td>-</td><td></td></tr> <tr><td>Y</td><td>Yaskawa</td><td>20</td><td>-</td><td></td></tr> <tr><td>T</td><td>Delta</td><td>40</td><td>400W</td><td></td></tr> <tr><td colspan="5">57M635 57□ Shaft Ø6.35</td></tr> <tr><td colspan="5">57M800 57□ Shaft Ø8</td></tr> <tr><td colspan="5">X Others ^{*1}</td></tr> <tr> <th colspan="5">Without Attachment kit</th> </tr> <tr><td>K</td><td colspan="4">No Motor Flange & Coupling ^{*2}</td></tr> </tbody> </table>		With Attachment kit					M	Mitsubishi	05	-	B ^{*3}	P	Panasonic	10	-		Y	Yaskawa	20	-		T	Delta	40	400W		57M635 57□ Shaft Ø6.35					57M800 57□ Shaft Ø8					X Others ^{*1}					Without Attachment kit					K	No Motor Flange & Coupling ^{*2}			
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Motor Position <table border="1"> <tr><td>BC</td><td>Motor Exposed</td></tr> <tr><td>BM</td><td>Motor Bottom Side</td></tr> <tr><td>BL</td><td>Motor Left Side</td></tr> <tr><td>BR</td><td>Motor Right Side</td></tr> <tr><td>-^{*2}</td><td>No Motor Position</td></tr> </table>		BC	Motor Exposed	BM	Motor Bottom Side	BL	Motor Left Side	BR	Motor Right Side	- ^{*2}	No Motor Position	Home Sensor <table border="1"> <tr><th colspan="2">Outside</th></tr> <tr><td>C</td><td>Motor Side</td></tr> <tr><td>D</td><td>Opposite Motor Side</td></tr> <tr><td colspan="2">No Sensor</td></tr> <tr><td>E</td><td>No Sensor</td></tr> </table>		Outside		C	Motor Side	D	Opposite Motor Side	No Sensor		E	No Sensor																																				
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Stroke <table border="1"> <tr><td>50-800mm</td></tr> <tr><td>50mm increments</td></tr> </table>		50-800mm	50mm increments	Limit Sensor <table border="1"> <tr><th colspan="2">Outside</th></tr> <tr><td>3</td><td>1 Pc</td></tr> <tr><td>4</td><td>2 Pc</td></tr> <tr><td colspan="2">No Sensor</td></tr> <tr><td>5</td><td>No Sensor</td></tr> </table>		Outside		3	1 Pc	4	2 Pc	No Sensor		5	No Sensor																																												
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^{*1} When choosing non-standard motor X, the motor spec must be provided and confirmed by TOYO for installation before the order is established.

^{*2} When K is selected the motor position section is left blank.

^{*3} If No Brake.No Description.

Specification

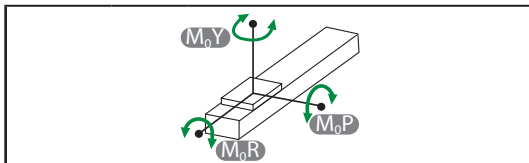
Item

Ball screw	Outer dia. & Precision grade		mm	Ø16 & C7 Rolled Ballscrews		
	Lead		mm	5	10	20
	Maximum Rotating speed※1		rpm	3600	3600	3600
	Maximum linear speed※1		mm/s	300	600	1200
	Basic dynamic load rating Ca		N	8042	6300	4152
	Basic static load rating Coa		N	15088	11596	7439
	Load factor			1.2	1.35	1.35
Linear Guide	Dynamic horizontal	100 Km of travel	N	18620		
		1000 Km of travel	N	8643		
		10000 Km of travel	N	4012		
	Static horizontal		N	34230		
Fixed bearing	Basic dynamic load rating Cr		N	2600		
	Static load rating Cor		N	4750		
Common Spec	Repeatability		mm	±0.01		
	Start torpue		N.cm	10		
	Allowable input torque		N.m	2.2		
	Maximum acceleration		m/s ²	10		
	Friction coefficient			0.03		
	Stroke (increments)		mm	50-800 (50 increments)		
	Ambient temperature※2		°C	0~+40		

※1 The maximum rotating and linear speed has changed due to differences in the lead. The ball screw has a slightly axial runout with a longer stroke and the speed must turn down. (Please read the diagram below for dimensions of the linear speed)

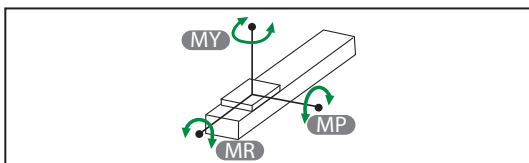
※2 For extreme temperatures: -20C ~80C special greases are required.

Static Loading Moment



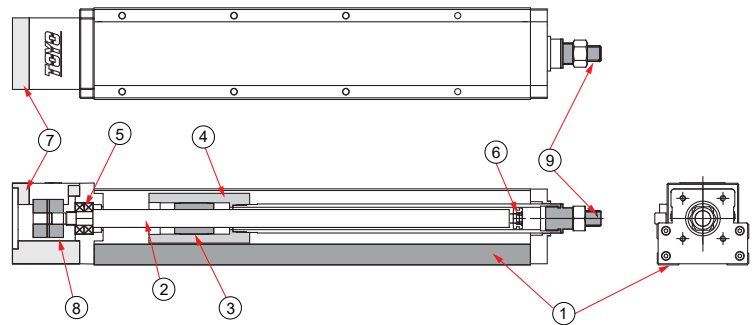
M₀Y	N.m	318
M₀P	N.m	318
M₀R	N.m	626

Dynamic Loading Moment



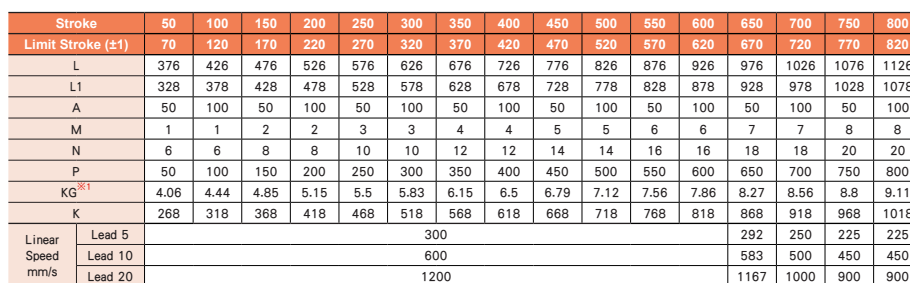
Travel	km	100	1000	10000
MY	N.m	121.6	56.5	26.2
MP	N.m	121.6	56.5	26.2
MR	N.m	201.9	93.7	43.5

Parts list

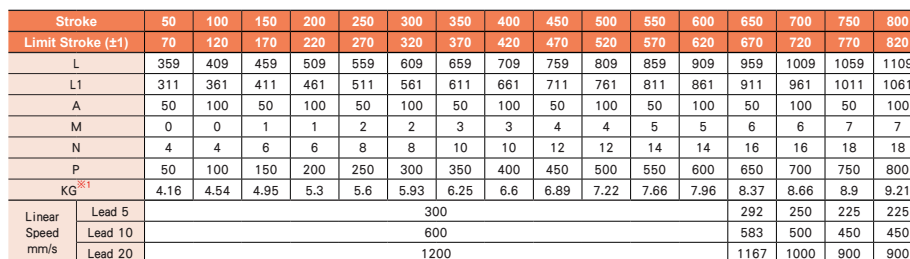


No.	Part Description	Material
1	Base Extrusion	AL6463
2	Ball Screw	S45C
3	Ball Screw Nut	S45C
4	Carriage	SNCM21H
5	Ball Bearing Dual Arrangement	SUJ2
6	Ball Bearing	SUJ2
7	Fixed Support Block-Inline Motor Mounting Bracket	AL6061
8	Coupling- Clamping	AL6061
9	Rod End Screw	S45C

GT_Y SeriesGT_Y4GT_Y5GT_Y8GT_Y12



※ 1 KG refers to the weight with motor related accessories (excluding motor), not corresponding to K Type.

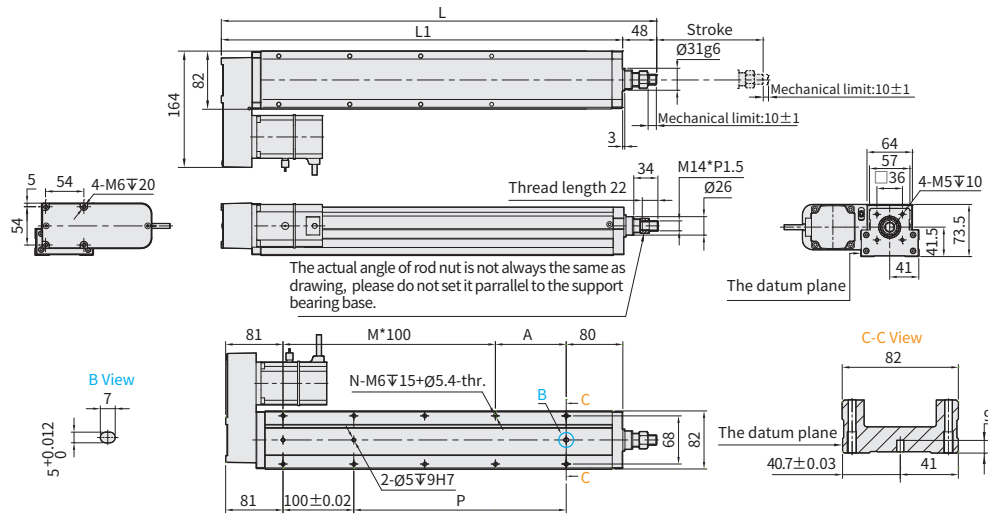


※1 When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL Motor Left Side

Download CAD data at www.toyorobot.com

Unit : mm

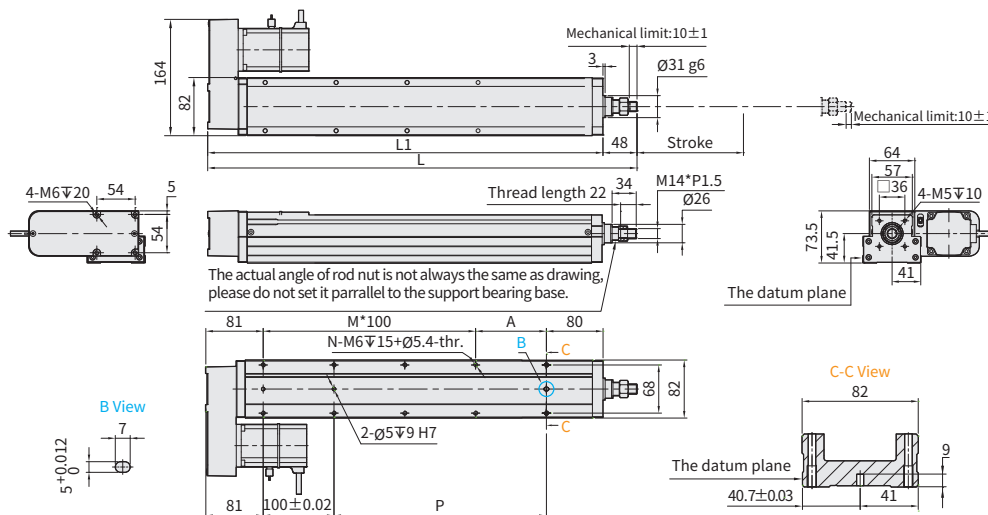


Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG ^{*1}	4.16	4.54	4.95	5.3	5.6	5.93	6.25	6.6	6.89	7.22	7.66	7.96	8.37	8.66	8.9	9.21
Linear Speed mm/s	Lead 5												292	250	225	225
	Lead 10												583	500	450	450
	Lead 20												1167	1000	900	900

BR Motor Right Side

Download CAD data at www.toyorobot.com

Unit : mm



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961	1011	1061
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
KG ^{*1}	4.16	4.54	4.95	5.3	5.6	5.93	6.25	6.6	6.89	7.22	7.66	7.96	8.37	8.66	8.9	9.21
Linear Speed mm/s	Lead 5												292	250	225	225
	Lead 10												583	500	450	450
	Lead 20												1167	1000	900	900

GT^Y Series

GT^Y4

GT^Y5

GT^Y8

GT^Y12



Please consult our company website for a detailed description on selection requirements and nominal life calculations.

Ordering Method

GTY12 - L10 - 100 - BC - M40B - C4 - 0001

Model

Ball Screw Lead

5	5mm
10	10mm
20	20mm
32	32mm

Attachment kit for motor

With Attachment kit				
M	Mitsubishi	05	-	B ^{*3}
P	Panasonic	10	-	
Y	Yaskawa	20	-	
T	Delta	40	400W	
57M635	57□ Shaft Ø6.35			
57M800	57□ Shaft Ø8			
85M1270	85□ Shaft Ø12.7			
85M1400	85□ Shaft Ø14			
85M1270D	85□ Shaft Ø12.7 with a longer coupling			
85M1588D	85□ Shaft Ø15.88 with a longer coupling			
X	Others ^{*1}			
Without Attachment kit				
K	No Motor Flange & Coupling ^{*2}			

Special Order No.

Motor Position

BC	Motor Exposed
BM	Motor Bottom Side
BL	Motor Left Side
BR	Motor Right Side
- ^{*2}	No Motor Position

Stroke

50-800mm
50mm increments

Home Sensor

Outside	
C	Motor Side
D	Opposite Motor Side
No Sensor	
E	No Sensor

Limit Sensor

Outside	
3	1 Pc
4	2 Pc
No Sensor	
5	No Sensor

^{*1} When choosing non-standard motor X, the motor spec must be provided and confirmed by TOYO for installation before the order is established.

^{*2} When K is selected the motor position section is left blank.

^{*3} If No Brake, No Description.

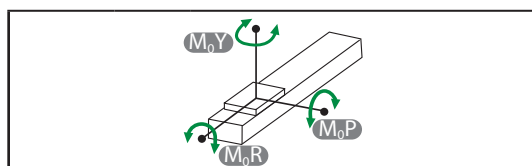
Specification

Item	Ball screw		Outer dia. & Precision grade	mm	Ø16 & C7 Rolled Ballscrews			
			Lead	mm	5	10	20	32
			Maximum Rotating speed ^{※1}	rpm	3600	3600	3600	3600
			Maximum linear speed ^{※1}	mm/s	300	600	1200	1920
			Basic dynamic load rating Ca	N	11570	6300	4152	7326
			Basic static load rating Coa	N	23030	11596	7439	14157
			Load factor		1.2	1.35	1.35	1.75
	Linear Guide	Dynamic horizontal	100 Km of travel	N	55304			
			1000 Km of travel	N	25670			
			10000 Km of travel	N	11915			
		Static horizontal		N	95083			
	Fixed bearing	Basic dynamic load rating Cr		N	2600			
		Static load rating Cor		N	4750			
	Common Spec	Repeatability		mm	±0.01			
		Start torque		N.cm	10			
		Allowable input torque		N.m	3.1			
		Maximum acceleration		m/s ²	10			
		Friction coefficient			0.03			
		Stroke (increments)		mm	50-800 (50 increments)			
		Ambient temperature ^{※2}		°C	0~+40			

※1 The maximum rotating and linear speed has changed due to differences in the lead. The ball screw has a slightly axial runout with a longer stroke and the speed must turn down. (Please read the diagram below for dimensions of the linear speed)

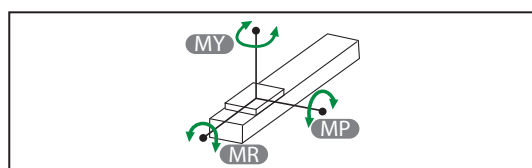
※2 For extreme temperatures: -20C ~80C special greases are required.

Static Loading Moment



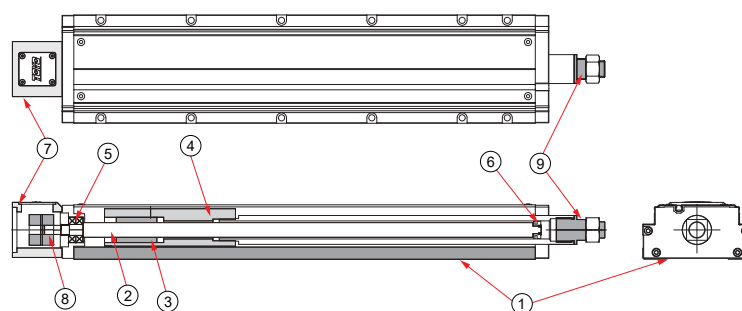
M₀Y	N.m	606
M₀P	N.m	606
M₀R	N.m	1168

Dynamic Loading Moment



Travel	km	100	1000	10000
MY	N.m	602.1	279.5	129.7
MP	N.m	602.1	279.5	129.7
MR	N.m	1037	481.3	233.4

Parts list



No.	Part Description	Material
1	Base Extrusion	AL6463
2	Ball Screw	S45C
3	Ball Screw Nut	S45C
4	Carriage	AL6463
5	Ball Bearing Dual Arrangement	SUJ2
6	Ball Bearing	SUJ2
7	Fixed Support Block-Inline Motor Mounting Bracket	AL6061
8	Coupling- Clamping	AL6061
9	Rod End Screw	S45C

GT_Y SeriesGT_Y4GT_Y5GT_Y8GT_Y12

BC

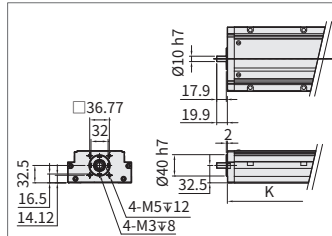
Motor Exposed



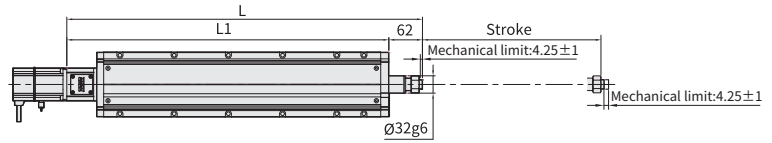
Download CAD data at www.toyorobot.com

Unit : mm

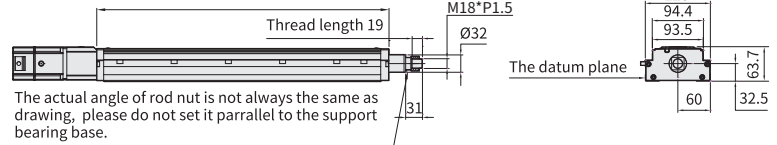
D-View
K Style - No motor mount or coupling



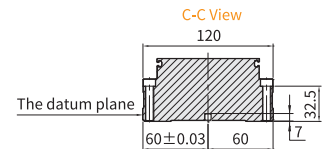
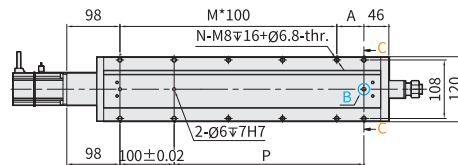
B View



K: Body length (D View for fixed dimensions on motor side)



The actual angle of rod nut is not always the same as drawing, please do not set it parallel to the support bearing base.



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5
L	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156
L1	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
KG ^{※1}	4.86	5.36	5.86	6.36	6.86	7.36	7.86	8.36	8.86	9.36	9.86	10.36	10.86	11.36	11.86	12.36
K	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039
Linear Speed mm/s	Lead 5												250			
	Lead 10												500			
	Lead 20												1000			
	Lead 32												1600			

※1 KG refers to the weight with motor related accessories (excluding motor), not corresponding to K Type.

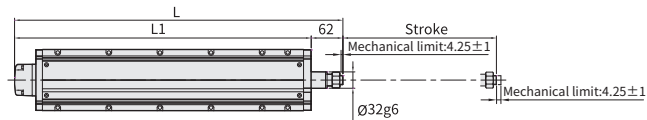
BM

Motor Bottom Side



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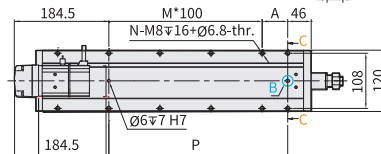
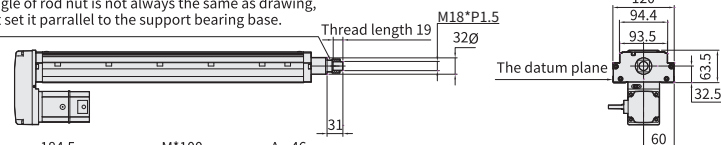
Unit : mm



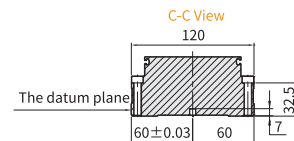
The actual angle of rod nut is not always the same as drawing, please do not set it parallel to the support bearing base.



B View



The overall length of the motor must be within 132 mm.※1

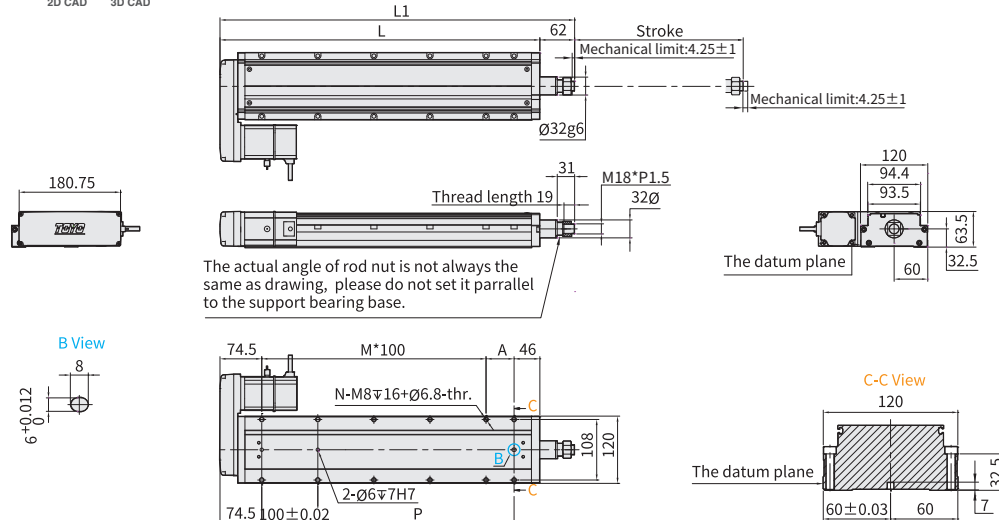


Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5
L	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5
L1	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5	980.5	1030.5	1080.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
N	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
KG ^{※1}	5.32	5.8	6.29	6.77	7.26	7.74	8.23	8.71	9.2	9.68	10.17	10.65	11.14	11.62	12.11	12.59
Linear Speed mm/s	Lead 5												250			
	Lead 10												500			
	Lead 20												1000			
	Lead 32												1600			

※1 When motor with brake assembled on lower side, or the total length over than spec limit, it may not use standard pinhole. Please contact our sales department if you need more information & requirement.

BL Motor Left Side
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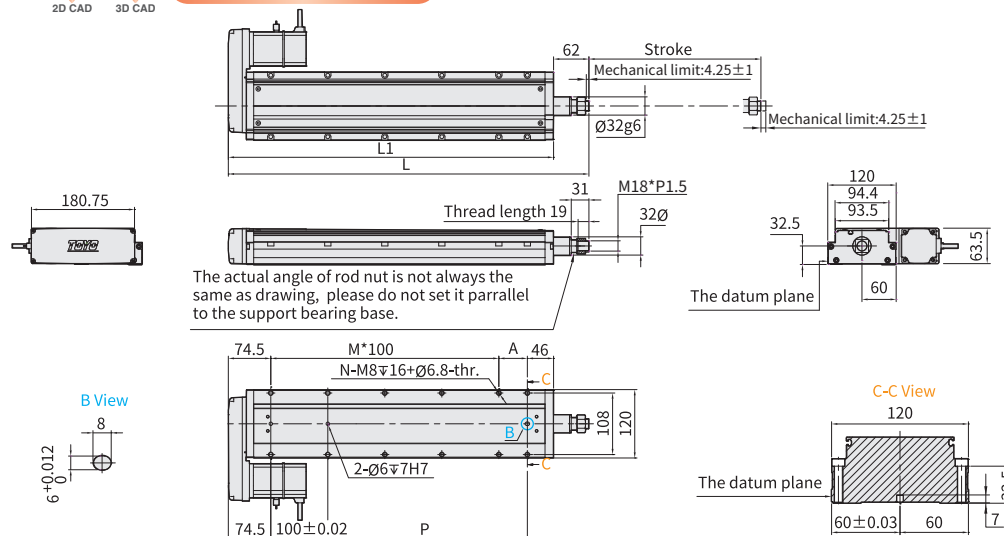
Unit : mm



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5
L	382.5	432.5	482.5	532.5	582.5	632.5	682.5	732.5	782.5	832.5	882.5	932.5	982.5	1032.5	1082.5	1132.5
L1	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
KG ^{※1}	5.32	5.8	6.29	6.77	7.26	7.74	8.23	8.71	9.2	9.68	10.17	10.65	11.14	11.62	12.11	12.59
Linear Speed mm/s	Lead 5															250
	Lead 10															500
	Lead 20															1000
	Lead 32															1600

BR Motor Right Side
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Unit : mm



Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Limit Stroke (±1)	58.5	108.5	158.5	208.5	258.5	308.5	358.5	408.5	458.5	508.5	558.5	608.5	658.5	708.5	758.5	808.5
L	382.5	432.5	482.5	532.5	582.5	632.5	682.5	732.5	782.5	832.5	882.5	932.5	982.5	1032.5	1082.5	1132.5
L1	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
KG ^{※1}	5.32	5.8	6.29	6.77	7.26	7.74	8.23	8.71	9.2	9.68	10.17	10.65	11.14	11.62	12.11	12.59
Linear Speed mm/s	Lead 5															250
	Lead 10															500
	Lead 20															1000
	Lead 32															1600

GT^Y SeriesGT^Y4GT^Y5GT^Y8GT^Y12