

Articulated robots  
YA

Linear conveyor  
modules  
LCM100

Motor-less single  
axis actuator  
Robonity

Compact  
single-axis robots  
TRANSEVO

Single-axis robots  
FLIP-X

Linear motor  
single-axis robots  
PHASER

Cartesian  
robots  
XY-X

SCARA  
robots  
YK-X

Pick & place  
robots  
YP-X

CLEAN

CONTROLLER

INFORMATION

T type

F type

GF type

N type

B/R type

# T4L

● Origin on the non-motor side is selectable

● Controller: 24V



## Ordering method

T4L						ERCD	
Model	Lead designation	Brake	Origin position change	Grease type	Stroke	Cable length <sup>Note 1</sup>	I/O connector specification
	12: 12mm 6: 6mm 2: 2mm	No entry: No brakes BK: Brakes provided	None: Standard Z: Non-motor side	None: Standard GC: Clean	50 to 400 (50mm pitch)	1K: 1m 3K: 3.5m 5K: 5m 10K: 10m	CN1: I/O flat cable 1m (Standard) CN2: Twisted-pair cable 2m (pulse train function)

Note 1. The robot cable is flexible and resists bending. See P.614 for details on robot cable.

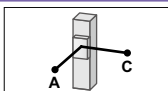
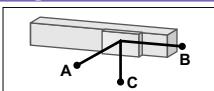
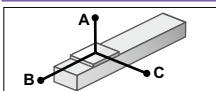
## Specifications

AC servo motor output (W)		30		
Repeatability <sup>Note 1</sup> (mm)		±0.02		
Deceleration mechanism		Ball screw φ8		
Ball screw lead (mm)		12	6	2
Maximum speed (mm/sec)		720	360	120
Maximum payload (kg)	Horizontal	4.5	6	6
	Vertical	1.2	2.4	7.2
Rated thrust (N)		32	64	153
Stroke (mm)		50 to 400 (50mm pitch)		
Overall length (mm)	Horizontal	Stroke+198		
	Vertical	Stroke+236		
Maximum dimensions of cross section of main unit (mm)		W45 × H53		
Cable length (m)		Standard: 3.5 / Option: 1.5, 10		
Linear guide type		2 rows of gothic arch grooves × 1 rail		
Position detector		Resolvers <sup>Note 2</sup>		
Resolution (Pulse/rotation)		16384		

Note 1. Positioning repeatability in one direction.

Note 2. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

## Allowable overhang<sup>Note</sup>



Horizontal installation (Unit: mm)		A	B	C
Lead 12	2kg	433	87	180
	4.5kg	223	33	75
Lead 6	3kg	515	58	135
	6kg	340	26	62
Lead 2	3kg	1585	58	142
	6kg	755	27	66

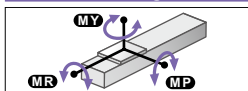
Wall installation (Unit: mm)		A	B	C
Lead 12	2kg	149	54	376
	4.5kg	50	1	148
Lead 6	3kg	107	24	380
	6kg	31	0	195
Lead 2	3kg	113	24	1180
	6kg	32	0	440

Vertical installation (Unit: mm)		A	C
Lead 12	1.2kg	125	125
	2.4kg	56	57
Lead 2	3kg	41	42
	7.2kg	0	0

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

Note. Service life is calculated for 300mm stroke models.

## Static loading moment

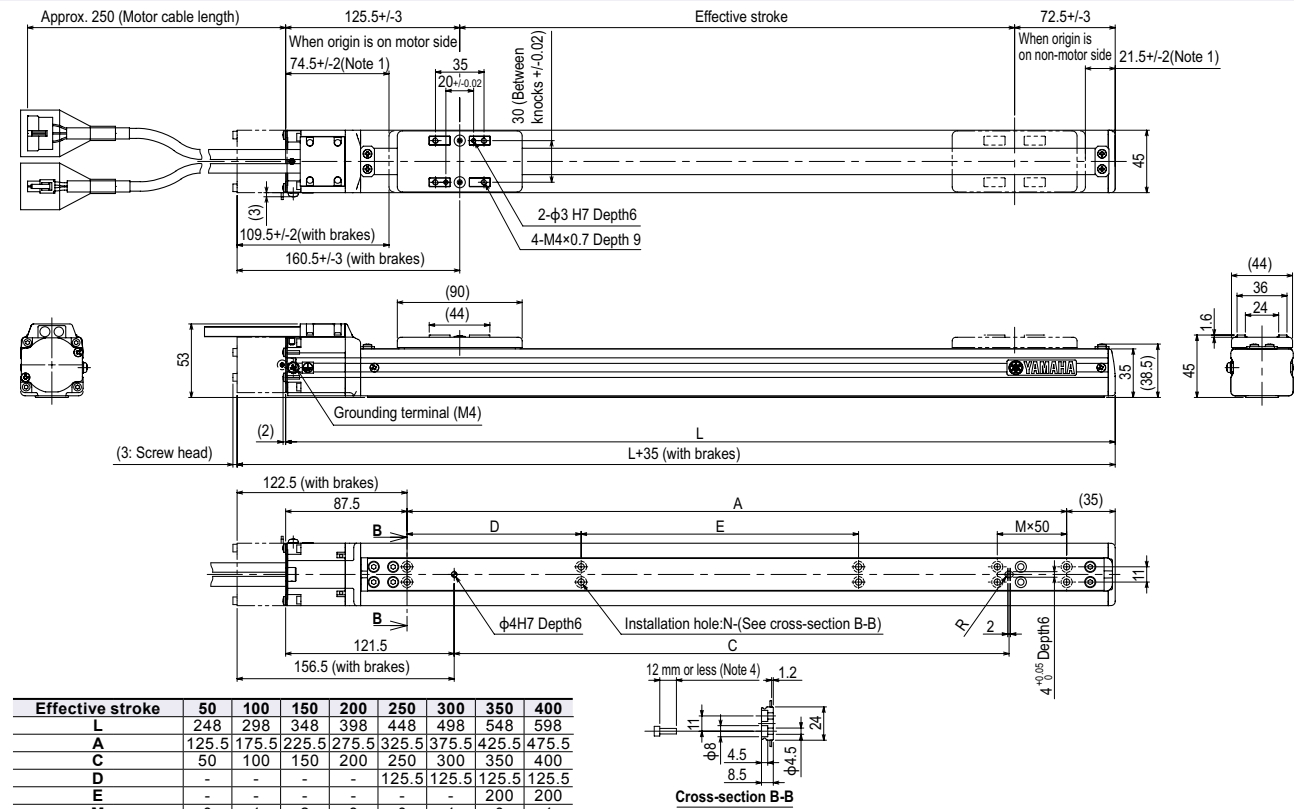


(Unit: N·m)		
MY	MP	MR
15	19	18

## Controller

Controller	Operation method
ERCD	Pulse train control / Programming / I/O point trace / Remote command / Operation using RS-232C communication

## T4L



Effective stroke	50	100	150	200	250	300	350	400
L	248	298	348	398	448	498	548	598
A	125.5	175.5	225.5	275.5	325.5	375.5	425.5	475.5
C	50	100	150	200	250	300	350	400
D	-	-	-	-	125.5	125.5	125.5	125.5
E	-	-	-	-	-	-	200	200
M	0	1	2	3	0	1	0	1
N	4	6	8	10	6	8	8	10
Weight (kg)	1.1	1.2	1.4	1.5	1.6	1.7	1.8	1.9
Maximum speed for each stroke (mm/sec)	Lead 12	720						
	Lead 6	360						
	Lead 2	120						

Note 1. Stop positions are determined by the mechanical stoppers at both ends.

Note 2. Minimum bend radius of motor cable is R30.

Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.

Note 4. The under-head length of the hex socket-head bolt (M4×0.7) to be used for the installation work is 12mm or less.

Note 5. External view of T4LH is identical to T4L.



● **Controller: 100V / 200V**



Note 3. Select this selection when using the gateway function. For details, see P.66.



# T5L

- High lead: Lead 20
- Origin on the non-motor side is selectable
- Controller: 24V



## Ordering method

T5L						ERCD	
Model	Lead designation	Brake <sup>Note 1</sup>	Origin position change	Grease type	Stroke	Cable length <sup>Note 2</sup>	I/O connector specification
	20: 20mm 12: 12mm 6: 6mm	No entry: No brakes BK: Brakes provided	None: Standard Z: Non-motor side	None: Standard GC: Clean	50 to 800 (50mm pitch)	1K: 1m 3K: 3.5m 5K: 5m 10K: 10m	CN1: I/O flat cable 1m (Standard) CN2: Twisted-pair cable 2m (pulse train function)

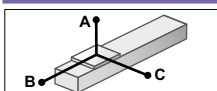
Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).  
Note 2. The robot cable is flexible and resists bending. See P.614 for details on robot cable.

## Specifications

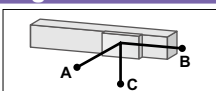
AC servo motor output (W)	30
Repeatability <sup>Note 1</sup> (mm)	+/-0.02
Deceleration mechanism	Ball screw $\phi 12$
Ball screw lead (mm)	20 12 6
Maximum speed <sup>Note 2</sup> (mm/sec)	1200 800 400
Maximum payload (kg)	Horizontal 3 5 9 Vertical - 1.2 2.4
Rated thrust (N)	19 32 64
Stroke (mm)	50 to 800 (50mm pitch)
Overall length (mm)	Horizontal Stroke+201.5 Vertical Stroke+239.5
Maximum dimensions of cross section of main unit (mm)	W55×H52
Cable length (m)	Standard: 3.5 / Option: 1.5, 10
Linear guide type	2 rows of gothic arch grooves × 1 rail
Position detector	Resolvers <sup>Note 3</sup>
Resolution (Pulse/rotation)	16384

Note 1. Positioning repeatability in one direction.  
Note 2. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
Note 3. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

## Allowable overhang <sup>Note</sup>



Horizontal installation				(Unit: mm)
		A	B	C
Lead 20	1kg	600	323	683
	3kg	675	103	247
Lead 12	2kg	1170	159	406
	5kg	555	59	155
Lead 6	3kg	1498	104	294
	9kg	628	31	89

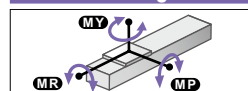


Wall installation		(Unit: mm)		
		A	B	C
Lead 20	1kg	600	291	600
	3kg	215	73	589
Lead 12	2kg	368	127	1082
	5kg	127	30	449
Lead 6	3kg	263	73	970
	9kg	54	0	400

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

Note. Service life is calculated for 600mm stroke models.

## Static loading moment

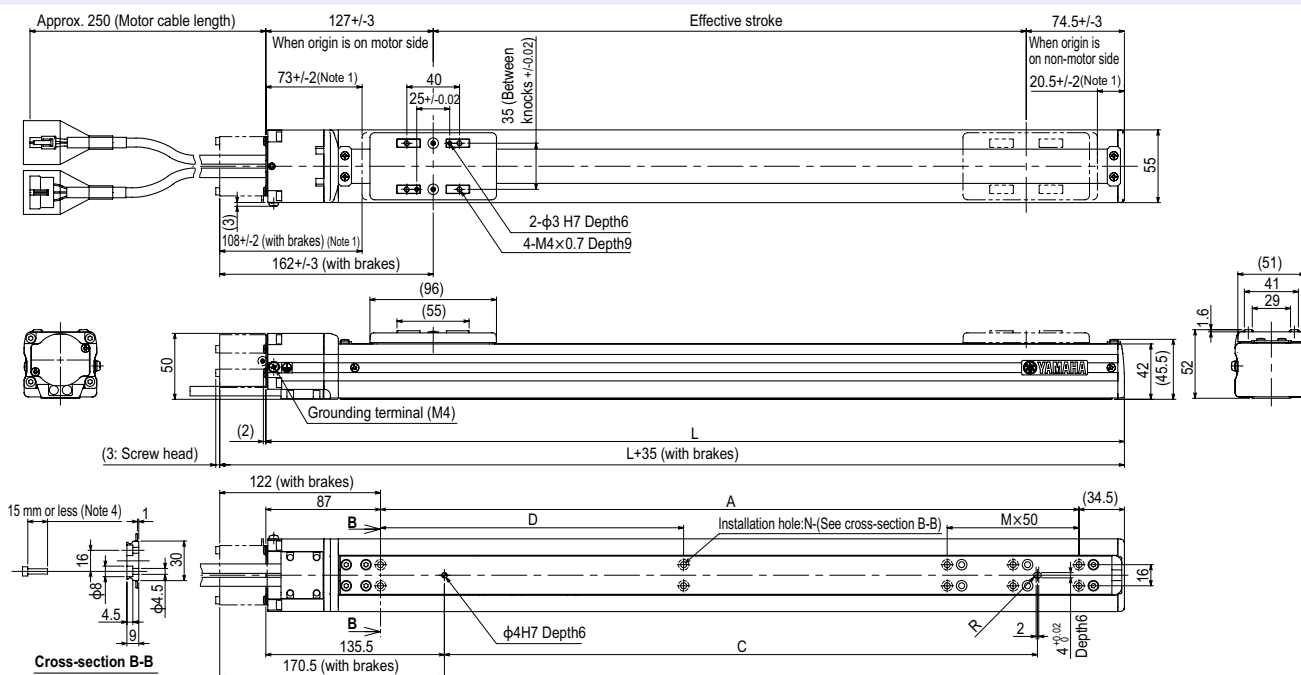


(Unit: N·m)	MY	MP	MR
30	34	40	

## Controller

Controller	Operation method
ERCD	Pulse train control / Programming / I/O point trace / Remote command / Operation using RS-232C communication

## T5L



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	251.5	301.5	351.5	401.5	451.5	501.5	551.5	601.5	651.5	701.5	751.5	801.5	851.5	901.5	951.5	1001.5
A	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880
C	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
D	-	-	-	-	-	230	230	230	230	230	230	230	230	230	230	230
M	0	1	2	3	4	5	0	1	2	3	4	5	6	7	8	9
N	4	6	8	10	12	14	6	8	10	12	14	16	18	20	22	24
Weight (kg) <sup>Note 3</sup>	1.7	1.8	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.3	3.5	3.7	3.8	4.0	4.2
Maximum speed <sup>Note 5</sup>	Lead 20	1200														
Lead 12	800															
Lead 6	400															
Speed setting													80%	70%	60%	55%

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
Note 2. Minimum bend radius of motor cable is R30.  
Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.  
Note 4. The under-head length of the hex socket-head bolt (M4×0.7) to be used for the installation work is 15mm or less.  
Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.  
Note 6. External view of T5LH is identical to T5L.



☒ High lead: Lead 20     ☐ Origin on the non-motor side is selectable  
☒ Controller: 100V / 200V



### Ordering method

T5LH									
Model	Lead designation	Brake <sup>Note 1</sup>	Origin position change	Grease type	Stroke	Cable length <sup>Note 2</sup>	TSX		
	20: 20mm 12: 12mm 6: 6mm	No entry: No brakes BK: Brakes provided	None: Standard Z: Non-motor side	None: Standard GC: Clean	50 to 800 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	Positioner <sup>Note 3</sup>	Driver: Power-supply voltage / Power capacity	LCD monitor
							TS-X	10S: 100V/100W or less 20S: 200V/100W or less	No entry: None L: With LCD
									I/O selection
									NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <sup>Note 4</sup>
									Battery
									B: With battery (Absolute) N: None (Incremental)

SR1-X									
Controller	05						RDV-X		
	Driver: Power capacity 05: 100W or less	Usable for CE					Driver	2	05
		No entry: Standard E: CE marking						Power-supply voltage 2: AC200V	Driver: Power capacity 05: 100W or less
									I/O selection
									N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS
									Battery
									B: With battery (Absolute) N: None (Incremental)

Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).

Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.614 for details on robot cable.

Note 3. See P.522 for DIN rail mounting bracket.

Note 4. Select this selection when using the gateway function. For details, see P.66

## Specifications

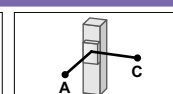
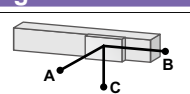
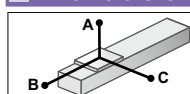
<b>AC servo motor output (W)</b>	30		
<b>Repeatability <sup>Note 1</sup> (mm)</b>	±/-0.02		
<b>Deceleration mechanism</b>	Ball screw φ12		
<b>Ball screw lead (mm)</b>	20	12	6
<b>Maximum speed <sup>Note 2</sup> (mm/sec)</b>	1200	800	400
<b>Maximum payload (kg)</b>	<b>Horizontal</b>	3	9
	<b>Vertical</b>	-	1.2
<b>Rated thrust (N)</b>		19	32
<b>Stroke (mm)</b>		64	
<b>Overall length (mm)</b>	<b>Horizontal</b>	50 to 800 (50mm pitch)	
	<b>Vertical</b>	Stroke+201.5	
		Stroke+239.5	
<b>Maximum dimensions of cross section of main unit (mm)</b>	W55×H52		
<b>Cable length (m)</b>	Standard: 3.5 / Option: 5.10		
<b>Linear guide type</b>	2 rows of gothic arch grooves × 1 rail		
<b>Position detector</b>	Resolvers <sup>Note 3</sup>		
<b>Resolution (Pulse/rotation)</b>	16384		

Note 1. Positioning repeatability in one direction.

Note 2. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.

Note 3. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

**Allowable overhang** <sup>Note</sup>

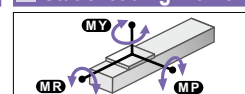


Horizontal installation				(Unit: mm)	Wall installation				(Unit: mm)
	A	B	C			A	B	C	
Lead 20	1kg	967	324	598	Lead 20	1kg	551	304	925
	3kg	429	104	226		3kg	185	89	378
	2kg	916	159	398		2kg	347	141	800
	5kg	436	60	152		5kg	119	44	355
	3kg	1194	105	294		3kg	259	87	950
Lead 6	9kg	624	31	89	Lead 6	9kg	50	15	385

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

Note. Service life is calculated for 600mm stroke models.

■ **Static loading moment**

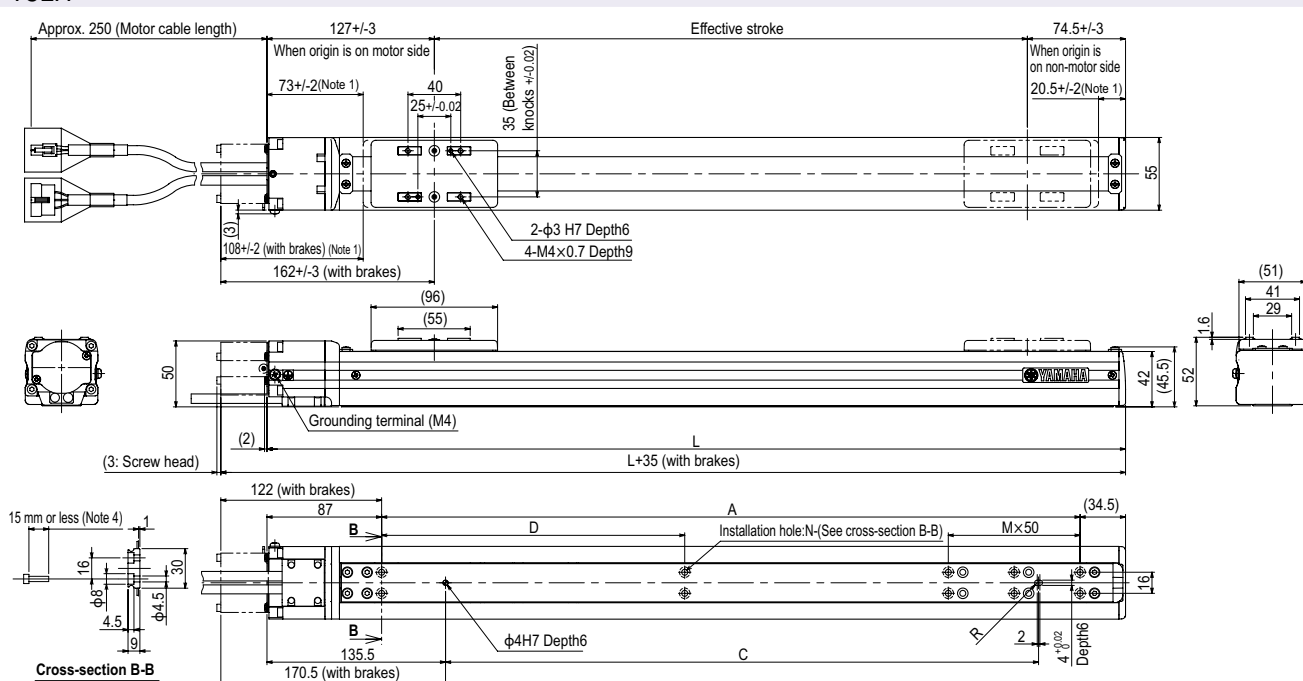


(Unit: N.m)		
MY	MP	MR
30	34	40

**Controller**

Controller	Operation method
SR1-X05 RCX320 RCX221/222 RCX340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105 TS-X205	I/O point trace / Remote command
RDV-X205	Pulse train control

## T5LH



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	251.5	301.5	351.5	401.5	451.5	501.5	551.5	601.5	651.5	701.5	751.5	801.5	851.5	901.5	951.5	1001.5
A	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880
C	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
D	-	-	-	-	-	-	230	230	230	230	230	230	230	230	230	230
M	0	1	2	3	4	5	0	1	2	3	4	5	6	7	8	9
N	4	6	8	10	12	14	6	8	10	12	14	16	18	20	22	24
Weight (kg)	1.7	1.8	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.3	3.5	3.7	3.8	4.0	4.2
Maximum speed for each stroke <sup>Notes 4, 5</sup> (mm/sec)	Lead 20												960	840	720	660
	Lead 12												640	560	480	440
	Lead 6												320	280	240	220
	Speed setting												80%	70%	60%	55%

Note 1.	Stop positions are determined by the mechanical stoppers at both ends.
Note 2.	Minimum bend radius of motor cable is R30.
Note 3.	Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.
Note 4.	The under-head length of the hex socket-head bolt (M4×0.7) to be used for the installation work is 15mm or less.
Note 5.	When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.
Note 6.	External view of T5LH is identical to T5L.



# T6L

- High lead: Lead 20
- Origin on the non-motor side is selectable
- Controller: 100V / 200V

## Ordering method

### T6L

Model	Lead designation	Brake	Origin position change	Grease type	Stroke	Cable length
	20: 20mm 12: 12mm 6: 6mm	No entry: No brakes BK: Brakes provided	None: Standard Z: Non-motor side	None: Standard GC: Clean	50 to 800 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

### TSX

Positioner	Driver: Power supply voltage / Power capacity	LCD monitor	I/O selection	Battery
TS-X	105: 100V/100W or less 205: 200V/100W or less	No entry: None L: With LCD	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	B: With battery (Absolute) N: None (Incremental)

### SR1-X

Controller	Driver: Power capacity	Usable for CE	I/O selection	Battery
05	05: 100W or less	No entry: Standard E: CE marking	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	B: With battery (Absolute) N: None (Incremental)

### RDV-X

Driver	Power supply voltage	Driver: Power capacity	Regenerative unit
	2: AC200V	05: 100W or less	

- Note 1. The model with a lead of 20mm cannot select specifications with brake (vertical specifications).  
Note 2. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.614 for details on robot cable.  
Note 3. See P.522 for DIN rail mounting bracket.  
Note 4. Select this selection when using the gateway function. For details, see P.66.

## Specifications

AC servo motor output (W)	60
Repeatability (mm)	+/-0.02
Deceleration mechanism	Ball screw $\phi 12$
Ball screw lead (mm)	20 12 6
Maximum speed (mm/sec)	1333 800 400
Maximum payload (kg)	Horizontal 10 12 30 Vertical - 4 8
Rated thrust (N)	51 85 170
Stroke (mm)	50 to 800 (50mm pitch)
Overall length (mm)	Horizontal Stroke+247.5 Vertical Stroke+285.5
Maximum dimensions of cross section of main unit (mm)	W65×H56
Cable length (m)	Standard: 3.5 / Option: 5, 10
Linear guide type	2 rows of gothic arch grooves × 1 rail
Position detector	Resolvers
Resolution (Pulse/rotation)	16384

- Note 1. Positioning repeatability in one direction.  
Note 2. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
Note 3. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

## Allowable overhang

Horizontal installation (Unit: mm)				Wall installation (Unit: mm)				Vertical installation (Unit: mm)			
	A	B	C		A	B	C		A	C	
Lead 20	2kg 319	184	234	Lead 20	2kg 234	152	265	Lead 12	1kg 355	352	
6kg 98	37	77	6kg 61	13	71	2kg 165	165				
10kg 64	0	55	10kg 30	0	42	4kg 70	72				
Lead 12	3kg 624	125	335	Lead 12	3kg 293	96	510	Lead 6	2kg 171	172	
8kg 273	41	121	8kg 89	14	210	4kg 73	74				
12kg 216	24	77	12kg 43	0	130	8kg 23	26				
Lead 6	5kg 694	73	236	Lead 6	5kg 204	45	530				
10kg 374	33	109	10kg 72	0	245						
30kg 159	0	25	30kg 0	0	0						

- Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.  
Note. Service life is calculated for 600mm stroke models.

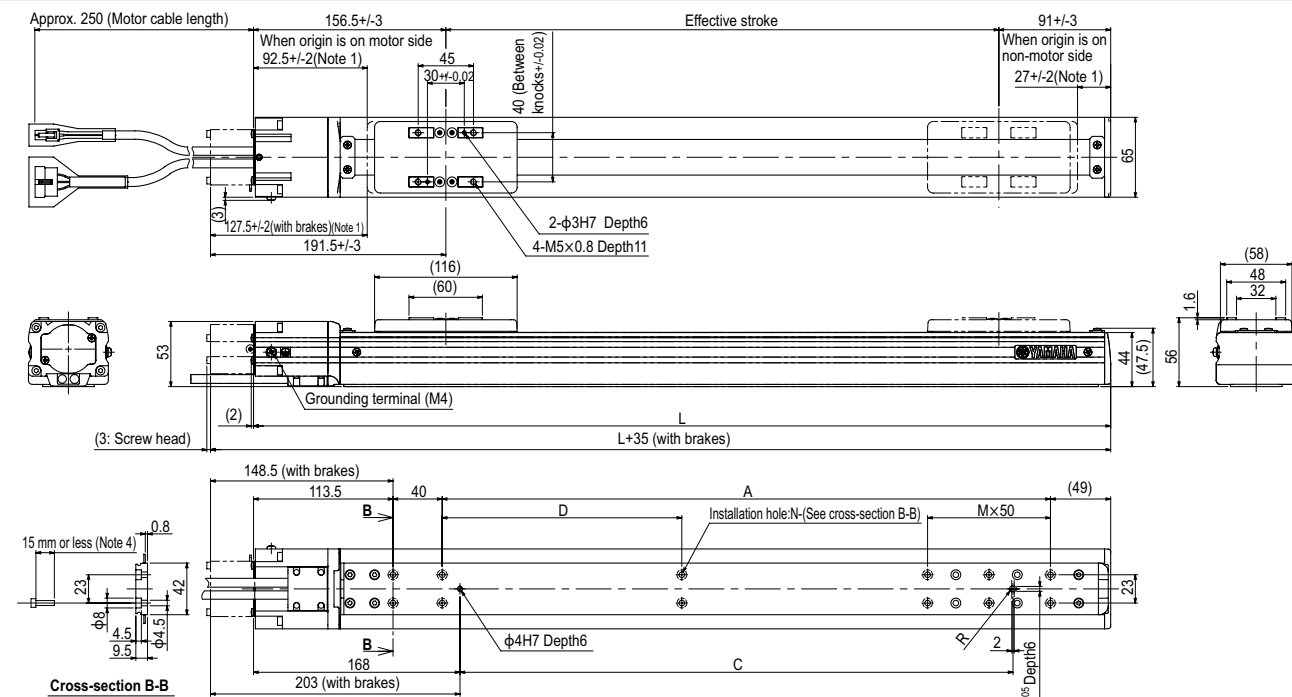
## Static loading moment

(Unit: N·m)		
MY	MP	MR
35	40	50

## Controller

Controller	Operation method
SR1-X05	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105	I/O point trace / Remote command
TS-X205	Pulse train control
RDV-X205-RBR1	

## T6L



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	297.5	347.5	397.5	447.5	497.5	547.5	597.5	647.5	697.5	747.5	797.5	847.5	897.5	947.5	997.5	1047.5
A	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845
C	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
D	-	-	-	-	-	-	195	195	195	195	195	195	195	195	195	195
M	0	1	2	3	4	5	0	1	2	3	4	5	6	7	8	9
N	6	8	10	12	14	16	8	10	12	14	16	18	20	22	24	26
Weight (kg)	2.4	2.6	2.8	3.1	3.3	3.5	3.7	4.0	4.2	4.4	4.6	4.8	5.1	5.3	5.5	5.7
Maximum speed for each stroke (mm/sec)	Lead 20 1333	Lead 12 800	Lead 6 400													
Speed setting													85%	75%	65%	60%

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
Note 2. Minimum bend radius of motor cable is R30.  
Note 3. Weight of models with no brake. The weight of brake-attached models is 0.2 kg heavier than the models with no brake shown in the table.  
Note 4. The under-head length of the hex socket-head bolt (M4×0.7) to be used for the installation work is 15mm or less.  
Note 5. When the stroke is longer than 600mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table at the left.



Note. Strokes longer than 1050mm are special order items. Please consult us for delivery time.

## Ordering method

<b>T9</b>	<b>Model</b>	<b>Lead designation</b> 30: 30mm 20: 20mm 10: 10mm 5: 5mm	<b>Brake</b> None: No brakes BK: Brakes provided	<b>Origin position change</b> None: Standard Z: Non-motor side	<b>Grease type</b> None: Standard GC: Clean	<b>Stroke</b> Lead 20-10-5: 150 to 1050 (50mm pitch) Lead 30: 150 to 1250 (50mm pitch)	<b>Cable length</b> 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	<b>TSX</b>	<b>Positioner</b> TS-X	<b>Driver: Power-supply voltage</b> Power capacity 105: 100V/100W or less 205: 200V/100W or less	<b>Regenerative unit</b> No entry: None R: With RGT	<b>LCD monitor</b> No entry: None L: With LCD	<b>I/O selection</b> NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)
	<b>SR1-X</b>	<b>05</b>						<b>Controller</b>	<b>Driver: Power capacity</b> 05: 100W or less	<b>Usable for CE</b> No entry: Standard E: CE marking	<b>Regenerative unit</b> No entry: None R: With RGT	<b>I/O selection</b> N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	<b>Battery</b> B: With battery (Absolute) N: None (Incremental)	
	<b>RDV-X</b>	<b>2</b>						<b>Driver</b>	<b>Power-supply voltage</b> 2: AC200V		<b>Driver: Power capacity</b> 05: 100W or less	<b>RBR1</b>	<b>Regenerative unit</b>	

- Note 1. The model with a lead of 30mm cannot select specifications with brake (vertical specifications).  
 Note 2. If selecting 5mm lead specifications then the origin point cannot be changed to the non-motor side.  
 Note 3. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.614 for details on robot cable.  
 Note 4. See P.522 for DIN rail mounting bracket.  
 Note 5. Select this selection when using the gateway function. For details, see P.66.

## Specifications

AC servo motor output (W)	100
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw φ15
Ball screw lead (mm)	30 20 10 5
Maximum speed (mm/sec)	1800 1200 600 300
Maximum payload (kg)	Horizontal 15 30 55 80 Vertical — 4 10 20
Rated thrust (N)	56 84 169 339
Stroke (mm)	150 to 1250 (50mm pitch)
Overall length (mm)	Horizontal Stroke+259 Vertical Stroke+289
Maximum dimensions of cross section of main unit (mm)	W94 × H98
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves × 1 rail
Position detector	Resolvers
Resolution (Pulse/rotation)	16384

- Note 1. Positioning repeatability in one direction.  
 Note 2. When the stroke is longer than 700mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.  
 Note 3. Strokes longer than 1050mm are available only for high lead (Lead 30). (Special order item)  
 Note 4. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

## Allowable overhang

**Horizontal installation (Unit: mm)**

	A	B	C
Lead 30			
5kg	864	501	383
15kg	491	156	140
30kg	455	73	75
Lead 20			
5kg	1292	505	462
15kg	572	158	151
30kg	455	73	75
Lead 10			
20kg	617	119	127
40kg	422	53	59
55kg	420	36	40
Lead 5			
50kg	722	42	47
60kg	657	33	37
80kg	577	23	25

**Wall installation (Unit: mm)**

	A	B	C
Lead 30			
5kg	348	384	776
15kg	87	40	306
30kg	416	388	1186
Lead 20			
15kg	92	42	386
30kg	0	0	61
Lead 10			
10kg	193	132	910
20kg	53	0	400
30kg	0	0	109
Lead 5			
10kg	197	133	2360
20kg	54	0	985
30kg	0	0	427

**Vertical installation (Unit: mm)**

	A	C
Lead 20		
1kg	600	600
2kg	1098	1098
4kg	545	545
Lead 10		
4kg	594	594
8kg	280	280
Lead 5		
10kg	217	217
20kg	221	221
Lead 5		
15kg	135	135
20kg	92	92

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

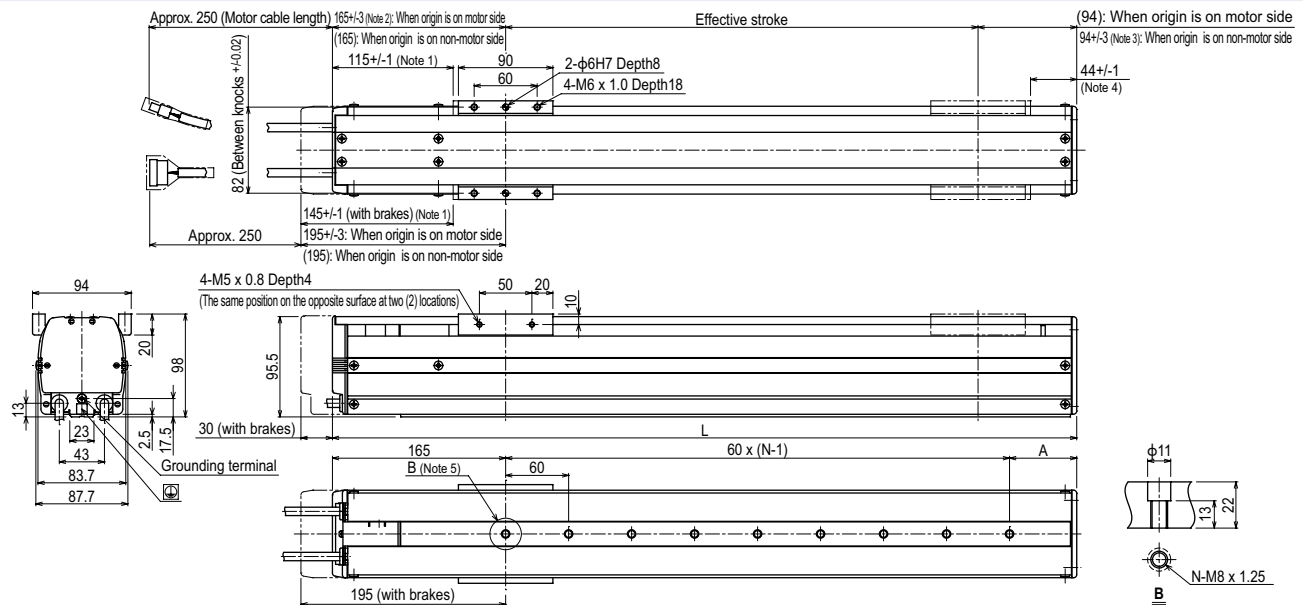
	MY	MP	MR
	86	133	117

## Controller

Controller	Operation method
SR1-X05	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105	I/O point trace / Remote command
TS-X205	Pulse train control
RDV-X205-RBR1	

Note. Regenerative unit is required when the models used vertically and with 700mm or larger stroke.

## T9



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. 167.5±4 when the high lead specification (Lead 30) is used.  
 Note 3. 94±4 when the high lead specification (Lead 30) is used.  
 Note 4. 41.5±1 when the high lead specification (Lead 30) is used.  
 Note 5. When installing the unit, washers, etc., cannot be used in the φ11 counter bore hole.  
 Note 6. Minimum bend radius of motor cable is R5.  
 Note 7. Weight of models with no brake. The weight of brake-attached models is 0.5 kg heavier than the models with no brake shown in the table.

Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	409	459	509	559	609	659	709	759	809	859	909	959	1009	1059	1109	1159	1209	1259	1309	1359	1409	1459	1509
A	64	54	44	94	84	74	64	54	44	94	84	74	64	54	44	94	84	74	64	54	44	94	84
N	4	5	6	6	7	8	9	10	11	11	12	13	14	15	16	16	17	18	19	20	21	21	22
Weight (kg)	5.5	5.9	6.2	6.6	6.9	7.3	7.6	8.0	8.3	8.7	9.0	9.4	9.7	10.0	10.3	10.7	11.0	11.4	11.7	12.1	12.5	12.9	13.3
Maximum speed (mm/sec)	Lead 30	1800										1440										810	
	Lead 20	1200										960										540	
	Lead 10	600										480										270	
	Lead 5	300										240										135	
	Speed setting	—										80%										45%	

- Note 8. When the stroke is longer than 700mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table above.  
 Note 9. Strokes longer than 1050mm are special order items. Please contact us for speed setting.



# T9H

● High lead: Lead 30

● Origin on the non-motor side is selectable: Lead 20-30

Note. Strokes longer than 1050mm are special order items. Please consult us for delivery time.



## Ordering method

T9H						TSX					
Model	Lead designation	Brake	Origin position change	Grease type	Stroke	Cable length	Positioner	Driver: Power-supply voltage	Regenerative unit	LCD monitor	I/O selection
	30: 30mm 20: 20mm 10: 10mm 5: 5mm	No entry: No brakes BK: Brakes provided	None: Standard Z: Non-motor side	None: Standard GC: Clean	Lead 20-10: 150 to 1050 (50mm pitch) Lead 30: 150 to 1250 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	TS-X	110: 100V/200W 210: 200V/200W	No entry: None R: With RGT	No entry: None L: With LCD	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board
											Battery
											B: With battery (Absolute) N: None (Incremental)

SR1-X						RDV-X					
Controller	10					Driver	2	10			RBR1
	Driver: Power capacity 10: 200W	Usable for CE No entry: Standard E: CE marking	Regenerative unit No entry: None R: With RGT				Power-supply voltage 2: AC200V	Driver: Power capacity 10: 200W or less			Regenerative unit

- Note 1. The model with a lead of 30mm cannot select specifications with brake (vertical specifications).
- Note 2. If selecting 10mm-5mm lead specifications then the origin point cannot be changed to the non-motor side.
- Note 3. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable. See P.614 for details on robot cable.
- Note 4. See P.522 for DIN rail mounting bracket.
- Note 5. Select this selection when using the gateway function. For details, see P.66.

## Specifications

AC servo motor output (W)		200
Repeatability (mm)		+/-0.01
Deceleration mechanism		Ball screw φ15
Ball screw lead (mm)		30 20 10 5
Maximum speed (mm/sec)		1800 1200 600 300
Maximum payload (kg)		Horizontal 25 40 80 100 Vertical - 8 20 30
Rated thrust (N)		113 170 341 683
Stroke (mm)		150 to 1250 (50mm pitch)
Overall length (mm)		Horizontal Stroke+273 Vertical Stroke+303
Maximum dimensions of cross section of main unit (mm)		W94 × H98
Cable length (m)		Standard: 3.5 / Option: 5.10
Linear guide type		4 rows of circular arc grooves × 1 rail
Position detector		Resolvers
Resolution (Pulse/rotation)		16384

- Note 1. Positioning repeatability in one direction.
- Note 2. When the stroke is longer than 700mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table below.
- Note 3. Strokes longer than 1050mm are available only for high lead (Lead 30). (Special order item)
- Note 4. Position detectors (resolvers) are common to incremental and absolute specifications. If the controller has a backup function then it will be absolute specifications.

## Allowable overhang

Horizontal installation (Unit: mm)		Wall installation (Unit: mm)		Vertical installation (Unit: mm)	
Lead	Stroke	Lead	Stroke	Lead	Stroke
30	10kg	30	10kg	20	4kg
	20kg		20kg		6kg
	40kg		40kg		8kg
20	10kg	20	10kg	10	10kg
	20kg		20kg		15kg
	40kg		40kg		20kg
10	10kg	10	10kg	5	15kg
	20kg		20kg		20kg
	40kg		40kg		30kg
5	10kg	5	10kg		
	20kg		20kg		
	40kg		40kg		

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

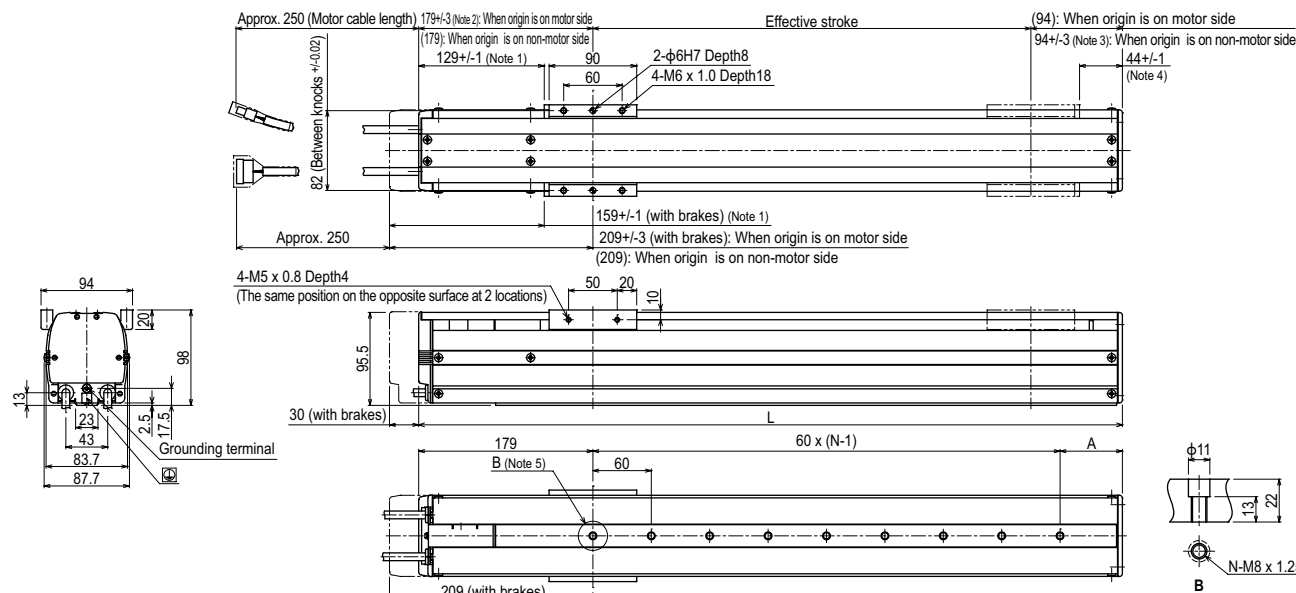
(Unit: N·m)		
MY	MP	MR
86	133	117

## Controller

Controller	Operation method
SR1-X10	Programming / I/O point trace / Remote command / Operation using RS-232C communication
RCX320	
RCX221/222	
RCX340	
TS-X110	I/O point trace / Remote command
TS-X210	
RDV-X210-RBR1	Pulse train control

Note. When using the unit vertically, a regeneration unit is required.

## T9H



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. 181.5±1.4 when the high lead specification (Lead 30) is used.
- Note 3. 94±1.4 when the high lead specification (Lead 30) is used.
- Note 4. 41.5±1.1 when the high lead specification (Lead 30) is used.
- Note 5. When installing the unit, washers, etc., cannot be used in the φ11 counter bore hole.
- Note 6. Minimum bend radius of motor cable is R5.
- Note 7. Weight of models with no brake. The weight of brake-attached models is 0.5 kg heavier than the models with no brake shown in the table.

Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173	1223	1273	1323	1373	1423	1473	1523
A	64	54	44	94	84	74	64	54	44	94	84	74	64	54	44	94	84	74	64	54	44	94	84
N	4	5	6	6	7	8	9	10	11	11	12	13	14	15	16	16	17	18	19	20	21	21	22
Weight (kg)	5.8	6.2	6.5	6.9	7.3	7.7	8.0	8.4	8.8	9.1	9.5	9.9	10.2	10.6	11.0	11.4	11.7	12.1	12.5	12.9	13.3	13.7	14.1
Maximum speed (mm/sec)	Lead 30	1800										1440										810	
	Lead 20	1200										960										540	
	Lead 10	600										480										270	
	Lead 5	300										240										135	
Speed setting		-										80%										45%	

- Note 8. When the stroke is longer than 700mm, resonance of the ball screw may occur depending on the operation conditions (critical speed). In this case, reduce the speed setting on the program by referring to the maximum speeds shown in the table above.
- Note 9. Strokes longer than 1050mm are special order items. Please contact us for speed setting.