

F8

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



Ordering method

F8

Model	Lead designation 20: 20mm 12: 12mm 6: 6mm	Brake ^{Note 1} No entry: No brakes BK: Brakes provided	Origin position change None: Standard Z: Non-motor side	Grease type None: Standard GC: Clean	Stroke 150 to 800 (50mm pitch)	Cable length ^{Note 2} 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)
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TSX

Positioner ^{Note 3} TS-X	Driver: Power-supply voltage / Power capacity 105: 100V/100W or less 205: 200V/100W or less	LCD monitor 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 ^{Note 4}	Battery B: With battery (Absolute) N: None (Incremental)
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SR1-X

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

Driver RDV-X	2 Power-supply voltage 2: AC200V	05 Driver: Power capacity 05: 100W or less	RBR1 Regenerative unit
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- 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.594 for details on robot cable.
 Note 3. See P.498 for DIN rail mounting bracket.
 Note 4. Select this selection when using the gateway function. For details, see P.60.

Specifications

AC servo motor output (W)	100
Repeatability ^{Note 1} (mm)	+/-0.02
Deceleration mechanism	Ball screw (Class C10)
Ball screw lead (mm)	20 12 6
Maximum speed ^{Note 2} (mm/sec)	1200 720 360
Maximum payload (kg)	Horizontal 12 20 40 Vertical - 4 8
Rated thrust (N)	84 141 283
Stroke (mm)	150 to 800 (50mm pitch)
Overall length (mm)	Horizontal Stroke+286 Vertical Stroke+316
Maximum dimensions of cross section of main unit (mm)	W80 x H65
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves x 1 rail
Position detector	Resolvers ^{Note 3}
Resolution (Pulse/rotation)	16384

- Note 1. Positioning repeatability in one direction.
 Note 2. When the stroke is longer than 550mm, 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 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

Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)					
	A	B	C	A	B	C	A	C				
Lead 20	5kg	197	76	120	5kg	104	67	174	Lead 12	1kg	447	448
	10kg	100	32	54	10kg	37	23	72		2kg	214	216
	12kg	85	25	43	12kg	27	15	55		3kg	137	138
Lead 12	5kg	364	89	188	5kg	171	81	340	Lead 6	4kg	98	99
	10kg	203	39	87	10kg	69	32	172		2kg	244	245
	15kg	139	22	51	15kg	33	15	100		4kg	113	113
Lead 6	20kg	103	14	33	20kg	15	6	55	Lead 6	6kg	69	69
	10kg	403	43	113	10kg	94	36	369		8kg	46	46
	20kg	214	16	43	20kg	25	9	157				
Lead 6	30kg	140	6	20	30kg	0	0	14	Lead 6	40kg	0	0
	40kg	113	0	8	40kg	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.

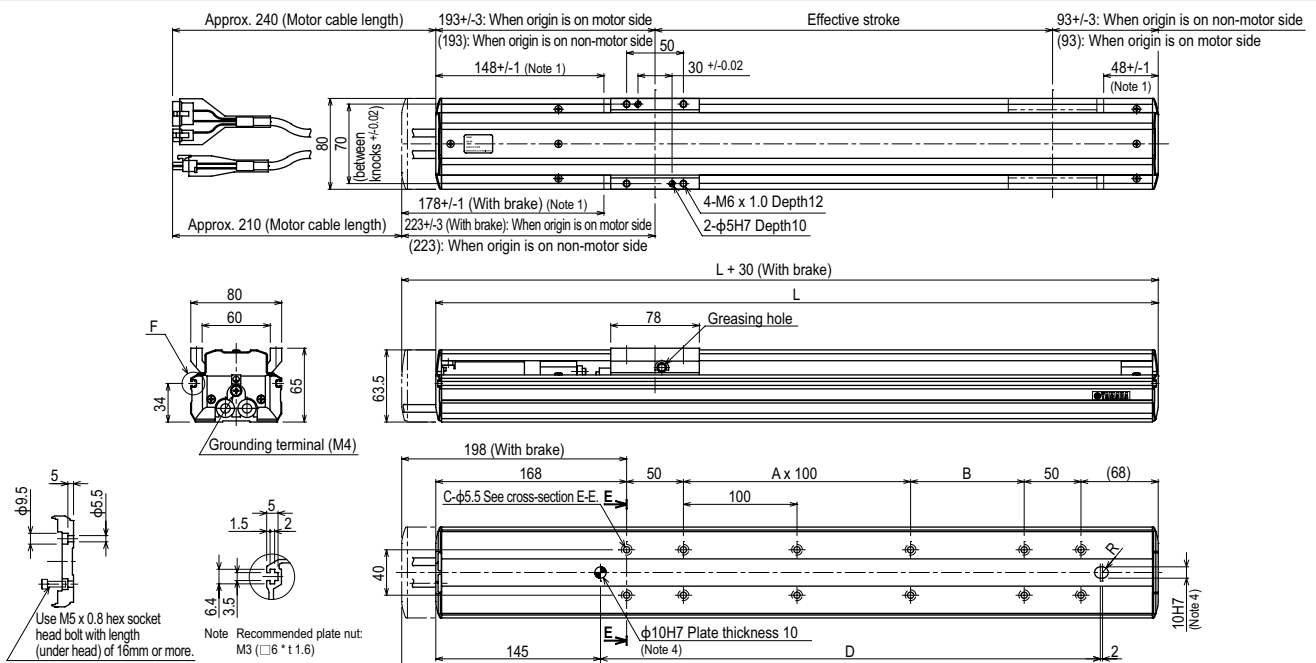
Static loading moment

(Unit: N·m)		
MY	MP	MR
70	95	110

Controller

Controller	Operation method
SR1-X05	Programming / I/O point trace / Remote command / Operation using RS-232C communication
RCX221/222	
RCX240/340	
TS-X105	I/O point trace / Remote command
TS-X205	
RDV-X205-RBR1	Pulse train control

F8



Effective stroke	Stroke (mm)													
	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	436	486	536	586	636	686	736	786	836	886	936	986	1036	1086
A	0	0	1	1	2	2	3	3	4	4	5	5	6	6
B	100	150	100	150	100	150	100	150	100	150	100	150	100	150
C	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	240	290	340	390	440	490	540	590	640	690	740	790	840	890
Weight (kg) ^{Note 5}	3.6	3.9	4.2	4.4	4.7	5.0	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.3
Maximum speed ^{Note 6} (mm/sec)	Lead 20	1200												
	Lead 12	720												
	Lead 6	360												
	Speed setting	90% 75% 65% 60% 50%												

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When installing the robot, do not use washers inside the robot body.
 Note 3. Minimum bend radius of motor cable is R50.
 Note 4. When using this φ10 knock-pin hole to position the robot body, the knock-pin must not protrude more than 10mm inside the robot body.
 Note 5. Weight of models with no brake. The weight of brake-attached models is 0.3 kg heavier than the models with no brake shown in the table.
 Note 6. When the stroke is longer than 550mm, 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.

Controller

SR1-X ▶ 516 TS-X ▶ 490 RDV-X ▶ 504

F8L

- High lead: Lead 30
- Origin on the non-motor side is selectable

Ordering method

F8L						
Model	Lead designation	Brake ^{Note 1}	Origin position change	Grease type	Stroke	Cable length ^{Note 2}
	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	150 to 1050 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

TSX				
Positioner ^{Note 3} TS-X	Driver: Power supply voltage / Power capacity 105: 100V/100W or less 205: 200V/100W or less	LCD monitor 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 ^{Note 4}	Battery B: With battery (Absolute) N: None (Incremental)
SR1-X	05			
Controller	Driver: Power capacity 05: 100W or less	Usable for CE No entry: Standard E: CE marking	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFIBUS	Battery B: With battery (Absolute) N: None (Incremental)
RDV-X	2	05	RBR1	
Driver	Power supply voltage 2: AC200V	Driver: Power capacity 05: 100W or less	Regenerative unit	

- Note 1. The model with a lead of 30mm 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.594 for details on robot cable.
- Note 3. See P.498 for DIN rail mounting bracket.
- Note 4. Select this selection when using the gateway function. For details, see P.60.

Specifications

AC servo motor output (W)	100
Repeatability ^{Note 1} (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	30 20 10 5
Maximum speed ^{Note 2} (mm/sec)	1800 1200 600 300
Maximum payload (kg)	Horizontal 7 20 40 50
	Vertical - 4 8 16
Rated thrust (N)	56 84 169 339
Stroke (mm)	150 to 1050 (50mm pitch)
Overall length (mm)	Horizontal Stroke+300 Stroke+292
	Vertical Stroke+322
Maximum dimensions of cross section of main unit (mm)	W80 × H65
Cable length (m)	Standard: 3.5 / Option: 5, 10
Linear guide type	4 rows of circular arc grooves × 1 rail
Position detector	Resolvers ^{Note 3}
Resolution (Pulse/rotation)	16384

- Note 1. Positioning repeatability in one direction.
- Note 2. When the stroke is longer than 650mm, 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 ^{Note}

	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
Lead 30	5kg 112	80	80	5kg 55	57	77	2kg 236	240	
Lead 20	7kg 78	43	49	7kg 21	19	34	4kg 106	110	
	5kg 211	108	147	5kg 119	89	176	2kg 310	311	
	10kg 116	45	69	10kg 38	26	69	4kg 141	143	
	15kg 76	24	39	15kg 7	0	16	6kg 85	86	
Lead 10	20kg 58	14	26	20kg 0	0	0	8kg 57	58	
	10kg 251	56	122	10kg 85	39	202	5kg 123	124	
	20kg 121	20	46	20kg 7	0	30	10kg 47	48	
	30kg 74	8	20	30kg 0	0	0	15kg 22	22	
Lead 5	40kg 35	0	6	40kg 0	0	0	16kg 19	19	
	20kg 249	23	62	20kg 19	7	140			
	30kg 170	10	29	30kg 0	0	0			
	40kg 138	4	12	40kg 0	0	0			
50kg 51	0	0	50kg 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.

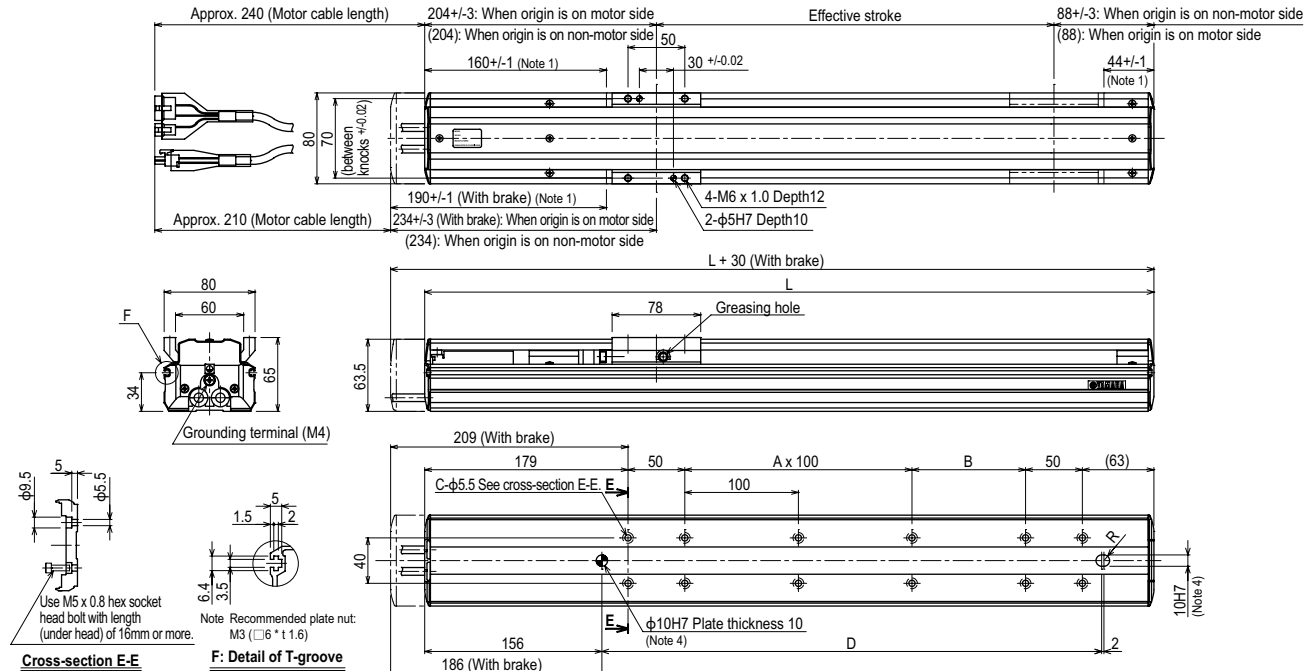
Static loading moment

	MY	MP	MR
(Unit: N·m)	70	95	110

Controller

Controller	Operation method
SR1-X05	Programming / I/O point trace / Remote command / Operation using RS-232C communication
RCX221/222	
RCX240/340	
TS-X105	I/O point trace / Remote command
TS-X205	
RDV-X205-RBR1	Pulse train control

F8L

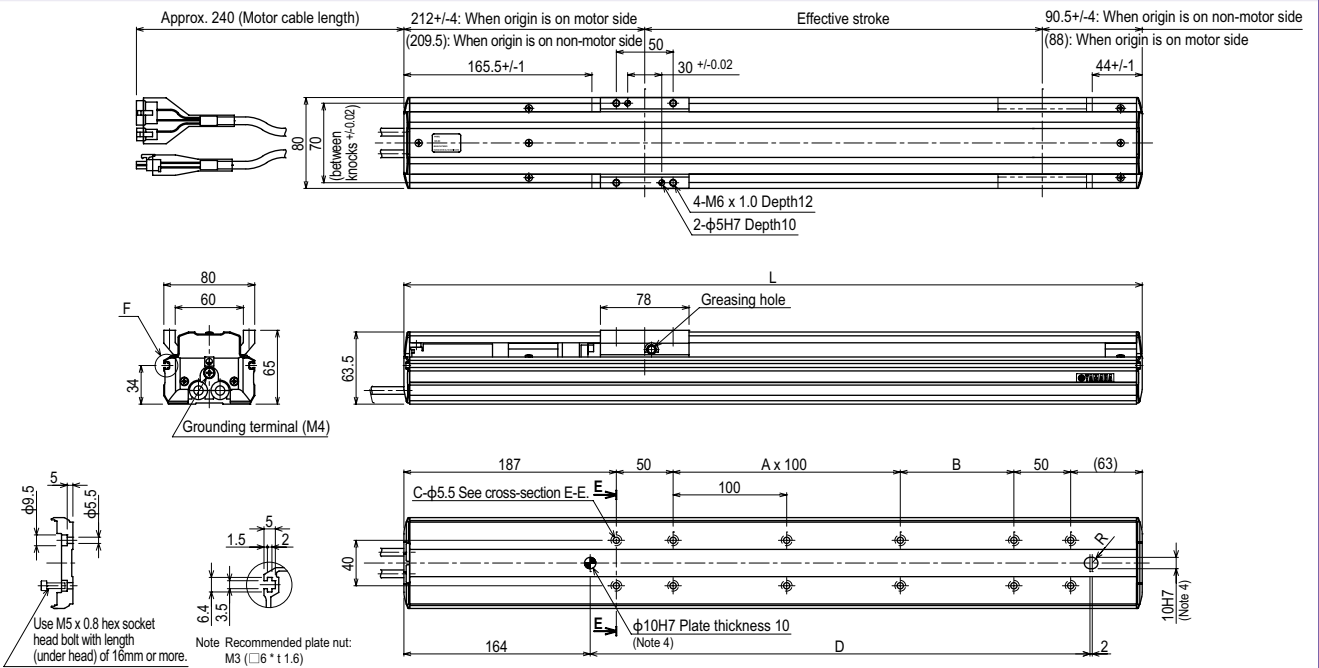


Effective stroke	Cross-section E-E										
	150	200	250	300	350	400	450	500	550	600	
L	442	492	542	592	642	692	742	792	842	892	
A	0	0	1	1	2	2	3	3	4	4	
B	100	150	100	150	100	150	100	150	100	150	
C	8	8	10	10	12	12	14	14	16	16	
D	240	290	340	390	440	490	540	590	640	690	
Weight (kg) ^{Note 5}	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.1	6.4	6.7	
Maximum speed (mm/sec) ^{Note 6}	Lead 20	1200									
	Lead 10	600									
	Lead 5	300									
	Speed setting	-									

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. When installing the robot, do not use washers inside the robot body.
- Note 3. Minimum bend radius of motor cable is R50.
- Note 4. When using this φ10 knock-pin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body. Weight of models with no brake.
- Note 5. The weight of brake-attached models is 0.3 kg heavier than the models with no brake shown in the table.

Note 6. When the stroke is longer than 650mm, 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.

F8L High lead type: Lead 30



Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	
A	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	
B	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	
C	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	
D	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	
Weight (kg)	3.9	4.2	4.5	4.8	5.1	5.4	5.7	6.1	6.4	6.7	7.0	7.3	7.6	7.9	8.2	8.5	8.8	9.2	9.5	
Maximum speed ^{Notes} (mm/sec)	Lead 30	1800																		
	Speed setting	-																		
													85%	75%	65%	60%	55%	50%	45%	40%

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When installing the robot, do not use washers inside the robot body.
 Note 3. Minimum bend radius of motor cable is R50.
 Note 4. When using this φ10 knockpin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body.

Note 5. When the stroke is longer than 650mm, 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.

F8LH

Origin on the non-motor side is selectable

Ordering method

F8LH	Model	Lead designation 20: 20mm 10: 10mm 5: 5mm	Origin position change None: Standard Z: Non-motor side	Grease type None: Standard GC: Clean	Stroke 150 to 1050 (50mm pitch)	Cable length ^{Note 1} 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	TSX	Positioner ^{Note 2} TS-X	Driver: Power-supply voltage / Power capacity 105: 100V/100W or less 205: 200V/100W or less	LCD monitor 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 ^{Note 3}	Battery B: With battery (Absolute) N: None (Incremental)
	SR1-X	05					Controller	Driver: Power capacity 05: 100W or less	Usable for CE No entry: Standard E: CE marking	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFINET	Battery B: With battery (Absolute) N: None (Incremental)	
	RDV-X	2					Driver	Power-supply voltage 2: AC200V		05 Driver: Power capacity 05: 100W or less	RBR1 Regenerative unit	

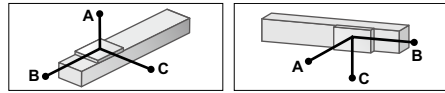
Note 1. The robot cable is standard cable (3L/5L/10L), but can be changed to flexible cable.
See P.594 for details on robot cable.
Note 2. See P.498 for DIN rail mounting bracket.
Note 3. Select this selection when using the gateway function. For details, see P.60.

Specifications

AC servo motor output (W)	100
Repeatability ^{Note 1} (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	20 10 5
Maximum speed ^{Note 2} (mm/sec)	1200 600 300
Maximum payload (kg)	Horizontal 30 60 80
Rated thrust (N)	84 169 339
Stroke (mm)	150 to 1050 (50mm pitch)
Overall length (mm)	Horizontal Stroke+368
Maximum dimensions of cross section of main unit (mm)	W80 x H65
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves x 1 rail
Position detector	Resolvers ^{Note 3}
Resolution (Pulse/rotation)	16384

Note 1. Positioning repeatability in one direction.
Note 2. When the stroke is longer than 800mm, 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.

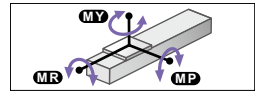
Allowable overhang ^{Note}



	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)		
	A	B	C	A	B	C
Lead 20						
10kg	573	256	176	10kg	147	215 515
20kg	334	116	81	20kg	53	75 255
30kg	279	70	50	30kg	20	29 160
Lead 10						
20kg	629	137	111	20kg	80	99 545
20kg	479	57	47	40kg	15	19 270
60kg	382	30	25	60kg	-	-
Lead 5						
20kg	1094	148	127	20kg	96	112 1005
40kg	851	63	54	40kg	22	26 604
60kg	714	34	29	60kg	-	-
80kg	601	20	17	80kg	-	-

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

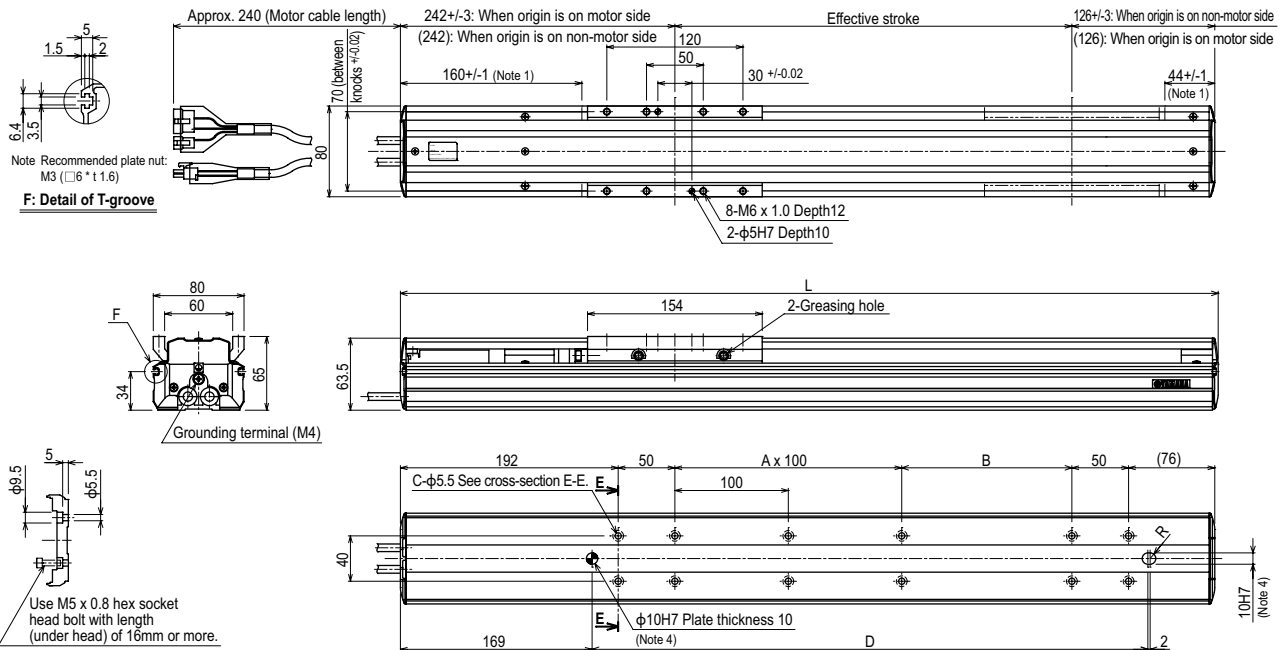


(Unit: N·m)		
MY	MP	MR
128	163	143

Controller

Controller	Operation method
SR1-X05	Programming / I/O point trace / Remote command / Operation using RS-232C communication
RCX221/222	
RCX240/340	
TS-X105	I/O point trace / Remote command
TS-X205	
RDV-X205-RBR1	Pulse train control

F8LH



Cross-section E-E

Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050		
L	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318	1368	1418		
A	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9		
B	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150	100	150		
C	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26		
D	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190		
Weight (kg)	4.7	5.0	5.3	5.6	5.9	6.2	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.7	10.0	10.3		
Maximum speed ^{Note 5} (mm/sec)	Lead 20	1200										1020	900	780	720	660	600	540	480	420	
	Lead 10	600										510	450	390	360	330	300	270	240	210	
	Lead 5	300										255	225	195	180	165	150	135	120	105	
	Speed setting	-										85%	75%	65%	60%	55%	50%	45%	40%	35%	

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. When installing the robot, do not use washers inside the robot body.
Note 3. Minimum bend radius of motor cable is R50.
Note 4. When using this φ10 knock-in hole to position the robot body, the knock-pin must not protrude more than 10mm inside the robot body.
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 above.

F10

● High lead: Lead 30

● Origin on the non-motor side is selectable: Lead 10-20-30

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

Ordering method

F10

Model	Lead designation	Brake	Cable entry location	Origin position change	Grease type	Stroke	Cable length
	30: 30mm 20: 20mm 10: 10mm 5: 5mm	No entry: No brakes BK: Brakes provided	No entry: Standard (S) U: From the top	None: Standard Z: Non-motor side	None: Standard GC: Clean	Lead 20-10-5: 150 to 1050 (50mm pitch) Lead 30: 150 to 1250 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)

- 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.594 for details on robot cable.
 Note 4. See P.498 for DIN rail mounting bracket.
 Note 5. Select this selection when using the gateway function. For details, see P.60.

TSX

Positioner	Driver: Power-supply voltage	Regenerative unit	LCD monitor	I/O selection	Battery
TS-X	Power capacity 105: 100V/100W or less 205: 200V/100W or less	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	B: With battery (Absolute) N: None (Incremental)

SR1-X

Controller	Driver: Power capacity	Usable for CE	Regenerative unit	I/O selection	Battery
05	05: 100W or less	No entry: Standard E: CE marking	No entry: None R: With RGT	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	2: AC200V	05: 100W or less	

Specifications

AC servo motor output (W)	100
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	30 20 10 5
Maximum speed (mm/sec)	1800 1200 600 300
Maximum payload (kg)	Horizontal: 15 20 40 60 Vertical: - 4 10 20
Rated thrust (N)	56 84 169 339
Stroke (mm)	150 to 1250 (50mm pitch)
Overall length (mm)	Horizontal: Stroke+260 Vertical: Stroke+290
Maximum dimensions of cross section of main unit (mm)	W110 x H71
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves x 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

Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
Lead 30	5kg 491	273	215	5kg 206	209	480	1kg 600	600	600
Lead 20	15kg 223	61	63	15kg 45	0	177	2kg 649	691	
	5kg 937	282	259	5kg 250	213	905	4kg 306	347	
Lead 10	10kg 487	121	116	10kg 99	51	438	8kg 142	183	
	20kg 236	40	44	20kg 21	0	149	10kg 102	144	
Lead 5	15kg 389	71	74	10kg 105	53	550	10kg 105	146	
	30kg 179	17	20	20kg 22	0	230	15kg 51	93	
Lead 5	40kg 106	0	0	30kg 0	0	0	20kg 25	66	
	30kg 419	19	20	10kg 107	54	1410			
Lead 5	50kg 0	0	0	20kg 22	0	540			
	60kg 0	0	0	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.

Static loading moment

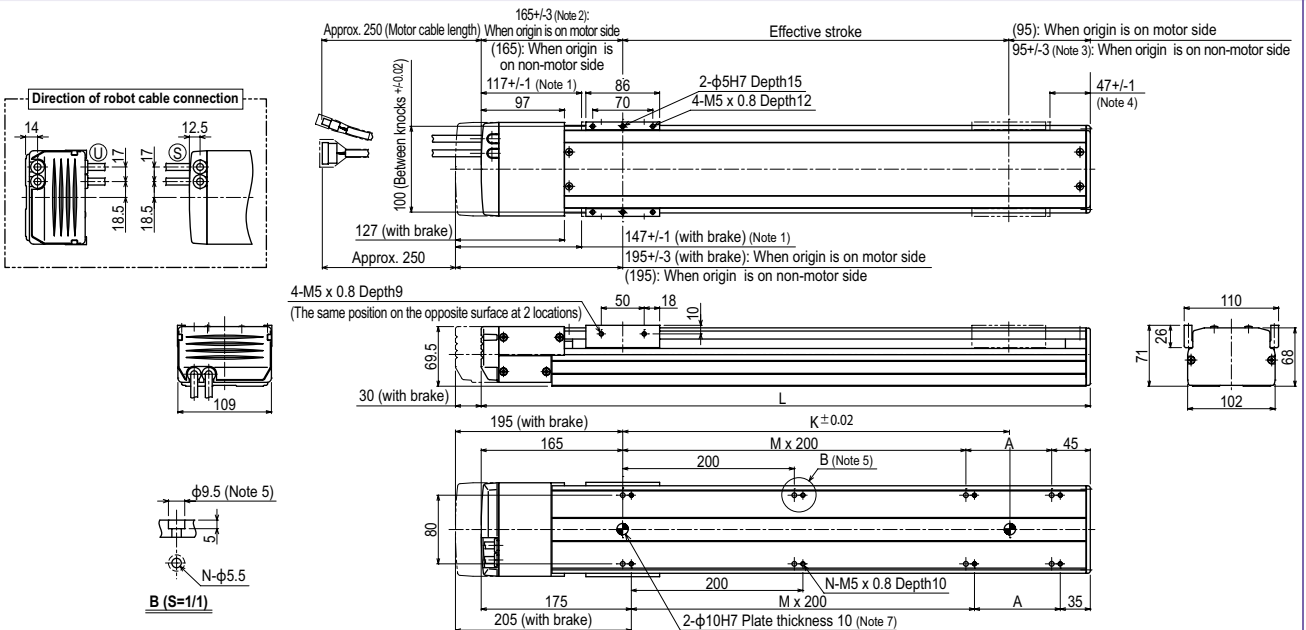
(Unit: N·m)		
MY	MP	MR
131	131	115

Controller

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

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

F10



- 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. 95+/-4 when the high lead specification (Lead 30) is used.
 Note 4. 44.5+/-1 when the high lead specification (Lead 30) is used.
 Note 5. When installing the unit, washers, etc., cannot be used in the φ9.5 counter bore hole.
 Note 6. Minimum bend radius of motor cable is R50.
 Note 7. When using this φ10 knock-pin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body.
 Note 8. Weight of models with no brake. The weight of brake-attached models is 0.6 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	410	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210	1260	1310	1360	1410	1460
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16
K	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
Weight (kg) Note 8	5.5	5.7	5.8	6.2	6.5	6.9	7.3	7.7	8.1	8.5	8.8	9.2	9.6	10.0	10.4	10.8	11.1	11.5	11.9	12.3	12.7	13.1	13.5
Maximum speed (mm/sec) Note 9	Lead 30	1800																					
	Lead 20	1200																					
	Lead 10	600																					
	Lead 5	300																					
Speed setting	Lead 30	80%																					
	Lead 20	65%																					
Lead 10	50%																						
Lead 5	45%																						

- Note 9. 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 10. Strokes longer than 1050mm are special order items. Please contact us for speed setting.

F10H

- High lead: Lead 30
- Origin on the non-motor side is selectable: Lead 10-20-30

Ordering method

F10H

Model	Lead designation	Brake	Cable entry location	Origin position change	Grease type	Stroke	Cable length	Positioner	Driver	Regenerative unit	LCD monitor	I/O selection	Battery
	30: 30mm 20: 20mm 10: 10mm 5: 5mm	No entry: No brakes BK: Brakes provided	No entry: Standard (S) U: From the top	None: Standard Z: Non-motor side	None: Standard GC: Clean	Lead 20-10: 5: 150 to 1000 (50mm pitch) Lead 30: 150 to 1000 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)	TS-X	Driver: Power-supply voltage / Power capacity 110: 100V/200W 210: 200V/200W	No entry: None R: With RGT	No entry: None L: With LCD	N: NPN P: 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 10

Controller	Driver	Power capacity	Usable for CE	Regenerative unit	I/O selection	Battery
	10: 200W		No entry: Standard E: CE marking	No entry: None R: With RGT	N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: Profibus	B: With battery (Absolute) N: None (Incremental)

RDV-X 2 10 RBR1

Driver	Power-supply voltage	Driver	Power capacity	Regenerative unit
	2: AC200V		10: 200W or less	

- 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.594 for details on robot cable.
 Note 4. See P.498 for DIN rail mounting bracket.
 Note 5. Select this selection when using the gateway function. For details, see P.60.

Specifications

AC servo motor output (W)	200		
Repeatability (mm)	±0.01		
Deceleration mechanism	Ball screw (Class C7)		
Ball screw lead (mm)	30	20	10
Maximum speed (mm/sec)	1800	1200	600
Maximum payload (kg)	Horizontal	Vertical	
	25	40	80
	-	8	20
Rated thrust (N)	113	170	341
Stroke (mm)	150 to 1000		
Overall length (mm)	Horizontal	Vertical	
	Stroke+355	Stroke+385	
Maximum dimensions of cross section of main unit (mm)	W110 × H71		
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 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. When the movement distance is short, the speed may not reach the maximum speed according to the payload.
 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 30	10kg	1181	681	219	10kg	193	570	1062	Lead 20	4kg	1650	1650
	20kg	772	298	99	20kg	65	187	549		6kg	1104	1104
	10kg	1961	685	232	10kg	198	570	1786		8kg	832	832
Lead 20	20kg	949	301	103	20kg	65	187	732	10kg	927	927	
	40kg	432	109	38	40kg	0	0	0	15kg	614	614	
	30kg	1615	239	84	30kg	100	283	1981	20kg	458	458	
Lead 10	50kg	1131	112	39	50kg	66	187	1546	15kg	752	752	
	80kg	812	40	14	30kg	43	123	1223	20kg	560	560	
	60kg	3091	112	39	20kg	134	379	7629	30kg	369	369	
Lead 5	80kg	2330	64	23	25kg	93	264	5987				
	100kg	1733	36	12	30kg	66	187	4841				

- 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

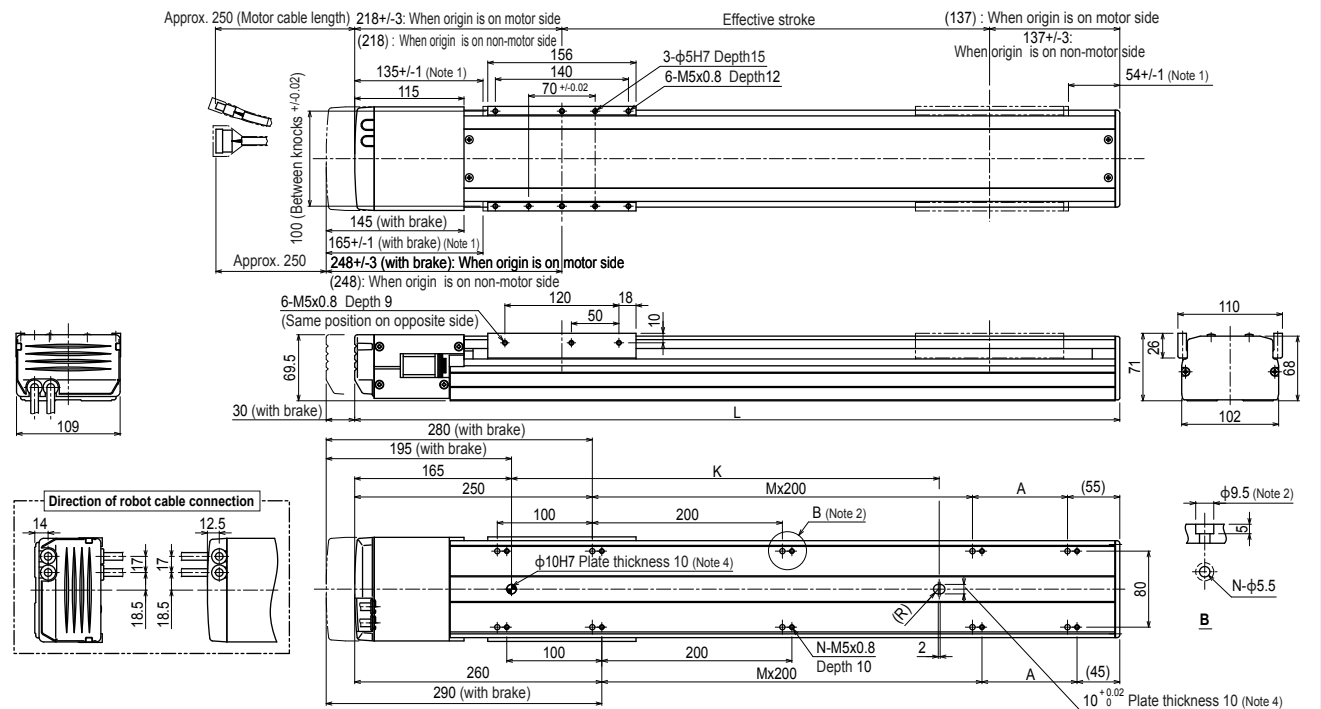
	MY	MP	MR
(Unit: N·m)	348	348	160

Controller

Controller	Operation method
SR1-X10 RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X110 TS-X210 RDV-X210 RBR1	I/O point trace / Remote command / Pulse train control

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

F10H

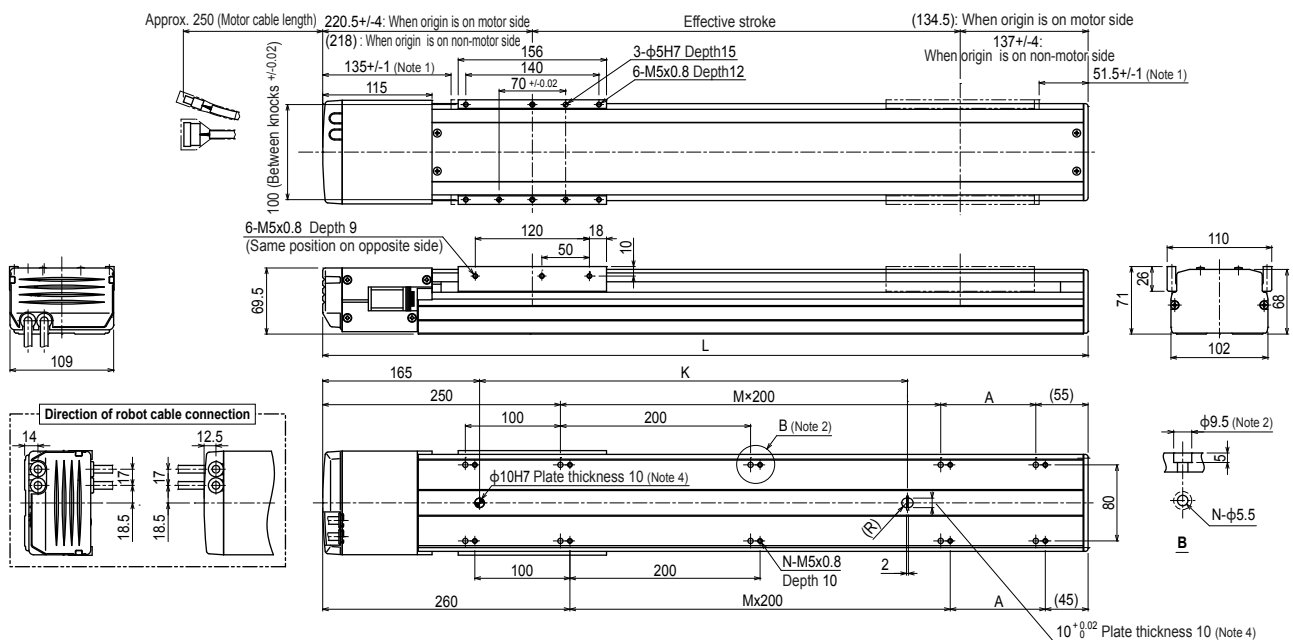


Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
L	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355	
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	
N	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	
K	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	
Weight (kg)	6.9	7.3	7.7	8.1	8.4	8.8	9.2	9.6	10.0	10.3	10.7	11.1	11.5	11.9	12.2	12.6	13.0	13.4	
Maximum speed (mm/sec)	Lead 30	1800																	
	Lead 20	1200																	
	Lead 10	600																	
	Lead 5	300																	
	Speed setting	80%																	

- Note 1. Stop positions are determined by the mechanical stoppers at both ends. When installing the unit, washers, etc. cannot be used in the φ9.5 counter bore hole.
 Note 2. Minimum bend radius of motor cable is R50.
 Note 3. When using this φ10 knock-pin hole to position the robot body, the knockpin must not protrude more than 10mm inside the robot body.
 Note 4. 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.
 Note 5. 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.

Note 6. 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 above.

F10H High lead type: Lead 30



Effective stroke	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
N	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16
K	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.9	7.3	7.7	8.1	8.4	8.8	9.2	9.6	10.0	10.3	10.7	11.1	11.5	11.9	12.2	12.6	13.0	13.4
Maximum speed (mm/sec)	Lead 30											1440	1260	1080	900	720	630	
	Lead 20											960	840	720	600	480	420	
	Lead 10											480	420	360	300	240	210	
	Lead 5											240	210	180	150	120	105	
	Speed setting											80%	70%	60%	50%	40%	35%	

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. When installing the unit, washers, etc., cannot be used in the φ9.5 counter bore hole.
- Note 3. Minimum bend radius of motor cable is R50.
- Note 4. When using this φ10 knock-pin hole to position the robot body, the knock-pin must not protrude more than 10mm inside the robot body.

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 above.

F14

- High lead: Lead 30
- Origin on the non-motor side is selectable

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



Ordering method

F14

Model	Lead designation	Brake	Cable entry location	Origin position change	Grease type	Stroke	Cable length
	30: 30mm 20: 20mm 10: 10mm 5: 5mm	No entry: No brakes BK: Brakes provided	No entry: (Standard (S)) U: From the top R: From the right L: From the left	None: Standard Z: Non-motor side	None: Standard GC: Clean	Lead 20: 10:5 150 to 1050 (50mm pitch) Lead 30: 150 to 1250 (50mm pitch)	3L: 3.5m 5L: 5m 10L: 10m BK/5K/10K (Flexible cable)

TSX

Positioner	Driver: Power supply voltage	Regenerative unit	LCD monitor	I/O selection	Battery
TS-X	Power capacity 105: 100V/100W or less 205: 200V/100W or less	No entry: None R: With RGT	No entry: None L: With LCD	N: 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	Regenerative unit	I/O selection	Battery
05	05: 100W or less	No entry: Standard E: CE marking	No entry: None R: With RGT1	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	2: AC200V	05: 100W or less	RBR1

- Note 1. The model with a lead of 30mm 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.594 for details on robot cable.
 Note 3. See P.498 for DIN rail mounting bracket.
 Note 4. Select this selection when using the gateway function. For details, see P.60.

Specifications

AC servo motor output (W)	100
Repeatability (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
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+255 Vertical: Stroke+285
Maximum dimensions of cross section of main unit (mm)	W136 x H83
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves x 2 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

Lead	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)		
	A	B	C	A	B	C	A	B	C
Lead 30	5kg 1756	1364	863	5kg 951	969	1286	1kg 600	600	600
Lead 20	15kg 1236	467	438	5kg 1066	974	1578	2kg 1200	1200	1200
Lead 10	5kg 2153	1366	980	15kg 402	276	775	4kg 1154	895	895
Lead 5	15kg 1193	465	430	30kg 219	105	678	8kg 634	492	492
Lead 30	20kg 1132	353	361	40kg 140	57	402	10kg 499	387	387
Lead 20	40kg 872	183	218	55kg 92	0	345	10kg 587	456	456
Lead 10	55kg 946	140	184	30kg 246	107	1095	15kg 383	297	297
Lead 5	50kg 1575	158	222	40kg 167	64	798	20kg 281	218	218
Lead 30	60kg 1493	135	194	60kg 88	20	508			
Lead 20	80kg 1466	107	159						

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

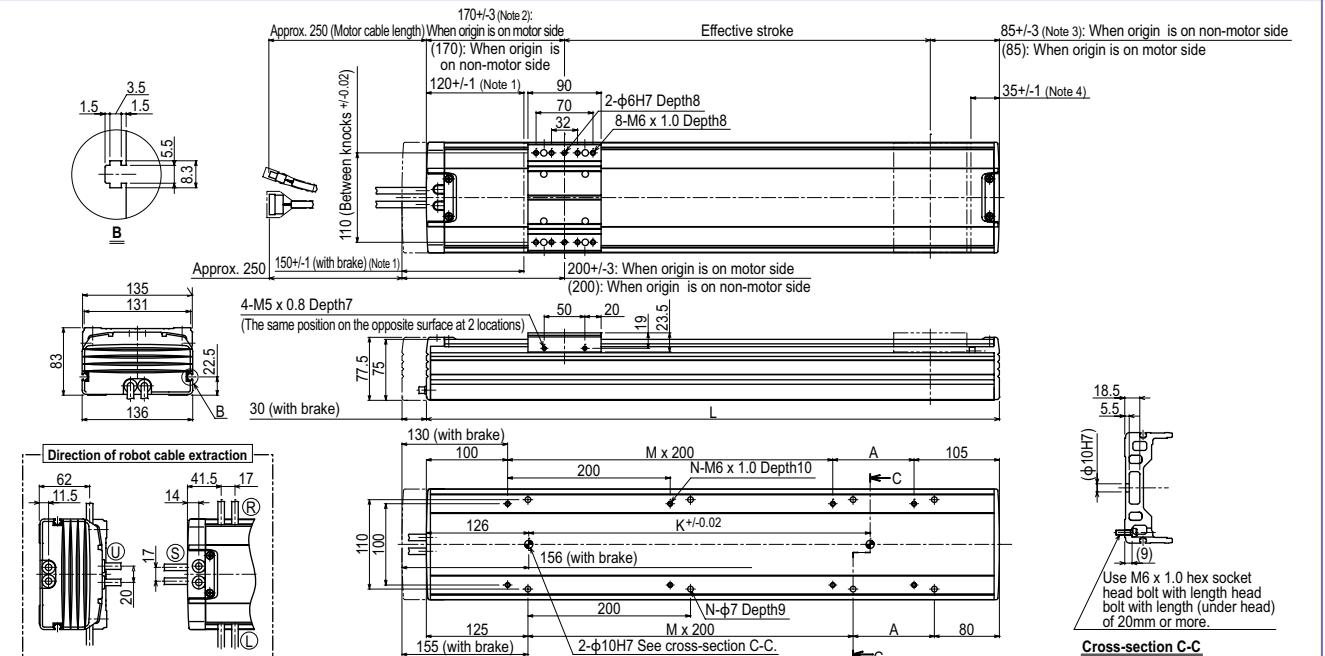
(Unit: N·m)		
MY	MP	MR
232	233	204

Controller

Controller	Operation method
SR1-X05 RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X105 TS-X205 RDV-X05-RBR1	I/O point trace / Remote command / Pulse train control

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

F14



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. 172.5+/-4 when the high lead specification (Lead 30) is used.
 Note 3. 85+/-4 when the high lead specification (Lead 30) is used.
 Note 4. 32.5+/-1 when the high lead specification (Lead 30) is used.
 Note 5. Minimum bend radius of motor cable is R50.
 Note 6. Weight of models with no brake. The weight of brake-attached models is 0.7 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	405	455	505	555	605	655	705	755	805	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355	1405	1455
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16
K	240	240	240	240	420	420	420	420	600	600	600	600	780	780	780	780	960	960	960	960	1140	1140	1140
Weight (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	18.5	19.1	19.8	20.4
Maximum speed (mm/sec)	Lead 30	1800	1200	600	300	-	-	-	-	-	-	-	-	1440	1170	900	810	600	540	480	390	300	270
Speed setting	Lead 20	80%	65%	50%	45%	-	-	-	-	-	-	-	-	80%	65%	50%	45%	-	-	-	-	-	-

Note 7. 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 8. Strokes longer than 1050mm are special order items. Please contact us for speed setting.

F14H

● High lead: Lead 30

● Origin on the non-motor side is selectable: Lead 10-20-30

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

Ordering method

F14H

Model	Lead designation 30: 30mm 20: 20mm 10: 10mm 5: 5mm	Brake ^{Note 1} No entry: No brakes BK: Brakes provided	Cable entry location No entry: Standard (S) U: From the top R: From the right L: From the left	Origin position change None: Standard Z: Non-motor side ^{Note 2}	Grease type None: Standard GC: Clean	Stroke Lead 20-10-5: 150 to 1050 (50mm pitch) Lead 30: 150 to 1250 (50mm pitch)	Cable length ^{Note 3} 3L: 3.5m 5L: 5m 10L: 10m 3K/5K/10K (Flexible cable)
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TSX

Positioner ^{Note 4} TS-X	Driver: Power-supply voltage Power capacity 110: 100V/200W 210: 200V/200W	Regenerative unit No entry: None R: With RGT	LCD monitor 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 ^{Note 5}	Battery B: With battery (Absolute) N: None (Incremental)
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SR1-X **10**

Controller	Driver: Power capacity 10: 200W	Usable for CE No entry: Standard E: CE marking	Regenerative unit No entry: None R: With RGT	I/O selection N: NPN P: PNP CC: CC-Link DN: DeviceNet™ PB: PROFINET	Battery B: With battery (Absolute) N: None (Incremental)
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RDV-X **2** **10** **RBR1**

Driver	Power-supply voltage 2: AC200V	Driver: Power capacity 10: 200W or less	Regenerative unit
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Specifications

AC servo motor output (W)	200
Repeatability ^{Note 1} (mm)	+/-0.01
Deceleration mechanism	Ball screw (Class C7)
Ball screw lead (mm)	30 20 10 5
Maximum speed ^{Note 2} (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 ^{Note 3} (50mm pitch)
Overall length (mm)	Horizontal Stroke+320 Vertical Stroke+350
Maximum dimensions of cross section of main unit (mm)	W136 x H83
Cable length (m)	Standard: 3.5 / Option: 5.10
Linear guide type	4 rows of circular arc grooves x 2 rail
Position detector	Resolvers ^{Note 4}
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

Installation	Horizontal installation (Unit: mm)			Wall installation (Unit: mm)			Vertical installation (Unit: mm)							
	Lead	A	B	C	Lead	A	B	C	Lead	A	C			
Horizontal	30	10kg	2152	1673	934	30	10kg	975	1219	1625	20	4kg	2400	2016
		25kg	1847	691	533		25kg	482	426	1257		6kg	1699	1364
		10kg	2265	1674	961		10kg	999	1220	1711		8kg	1301	1051
		20kg	1402	855	537		20kg	515	558	987		10kg	1370	1106
Wall	30	40kg	1047	445	324	30	40kg	263	227	635	10	15kg	906	732
		20kg	1953	583	485		20kg	419	338	1282		20kg	678	548
		50kg	1655	365	328		50kg	240	162	934		20kg	767	619
		80kg	1720	242	238		80kg	134	62	756		25kg	612	494
Vertical	30	60kg	2443	311	317	30	60kg	209	117	1398	5	60kg	503	407
		80kg	2193	242	253		80kg	135	62	1120		30kg	503	407
		100kg	2000	202	214		100kg	90	29	900				

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

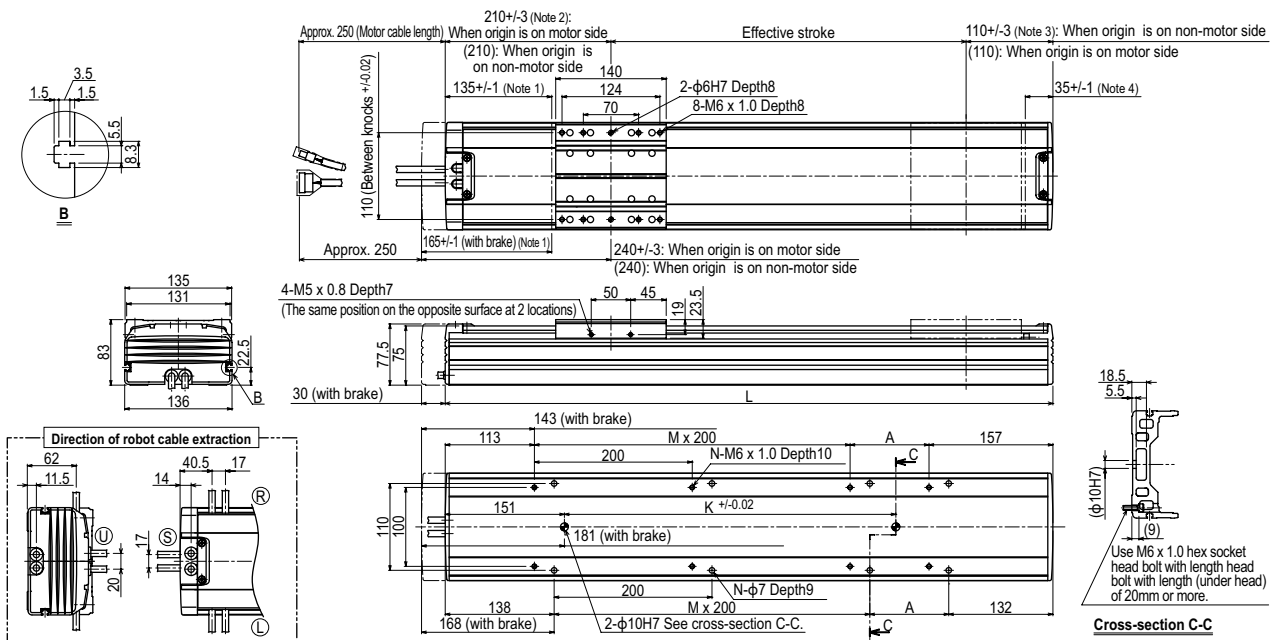
			(Unit: N·m)		
MY	MP	MR	MY	MP	MR
551	552	485			

Controller

Controller	Operation method
SR1-X10 ^{Note} RCX221/222 RCX240/340	Programming / I/O point trace / Remote command / Operation using RS-232C communication
TS-X110 ^{Note} TS-X210 ^{Note} RDV-X210-RBR1	I/O point trace / Remote command / Pulse train control

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

F14H



Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. 212.5+/-4 when the high lead specification (Lead 30) is used.
 Note 3. 110+/-4 when the high lead specification (Lead 30) is used.
 Note 4. 32.5+/-1 when the high lead specification (Lead 30) is used.
 Note 5. Minimum bend radius of motor cable is R50.
 Note 6. Weight of models with no brake. The weight of brake-attached models is 0.7 kg heavier than the models with no brake shown in the table.
 Note 7. 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 8. Strokes longer than 1050mm are special order items. Please contact us for speed setting.

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	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16
K	240	240	240	420	420	420	600	600	600	600	600	780	780	960	960	960	960	960	1140	1140	1140	1140	1320
Weight (kg)	7.5	8.2	8.8	9.5	10.1	10.8	11.4	12.1	12.7	13.4	13.9	14.6	15.2	15.9	16.5	17.2	17.8	18.5	19.1	19.8	20.4	21.1	21.7
Maximum speed (mm/sec)	Lead 30	1800											1440	1170			900						
	Lead 20		1200										960	780			600						
	Lead 10			600									480	390			300						
	Lead 5				300								240	195			150						
Speed setting													80%	65%		50%							

Controller

SR1-X ▶ 516

TS-X ▶ 490

RDV-X ▶ 504